FORSCHUNGSPORTAL
SACHSEN-ANHALT

Forschungsportal-Mailliste EU-Foerderinfo: Querschnitt europäische Forschungsförderung
ESFRI Roadmap, EGNSS applications for Smart mobility, Dt.-frz. Projekte Geistesw
erstellt am 19.12.2022, gültig bis 01.04.2023, Autor: Dipl.-Ing. Martina Hagen

Inhaltsverzeichnis

1. /DFG/ ANR-DFG-Förderprogramm für deutsch-französische Forschungsprojekte in den Geistes- und Sozialwissenschaften; Termin: 8.2.2023, 13 Uhr MEZ

Seit 2007 ermöglicht das gemeinsame Abkommen zwischen der französischen Agence Nationale de la Recherche (ANR) und der Deutschen Forschungsgemeinschaft (DFG) zur wissenschaftlichen Zusammenarbeit in den Geistes- und Sozialwissenschaften die Förderung integrierter deutsch-französischer Forschungsprojekte. 2023 wird dieses Förderprogramm zum 17. Mal ausgeschrieben.

Das Förderprogramm, das die deutsch-französische Zusammenarbeit in den Geistes- und Sozialwissenschaften ausbauen und stärken möchte, stieß in den vergangenen Jahren auf breite Resonanz in der Wissenschaft und konnte bereits einen Beitrag zum nachhaltigen Aufbau deutsch-französischer Kooperationen und Netzwerke leisten.

Das ANR-DFG-Förderprogramm enthält keine thematischen Vorgaben. Ein besonderes Augenmerk liegt jedoch auf der intensiven deutsch-französischen Zusammenarbeit und dem spezifischen wissenschaftlichen Mehrwert, der durch die Zusammenführung national geprägter Wissenschaftstraditionen in geistes- und sozialwissenschaftlichen Forschungsfeldern erzielt werden kann. In den Bereichen, in denen Deutsch und Französisch als Wissenschaftssprachen eine Rolle spielen, können die Vorzüge der Mehrsprachigkeit auch im Rahmen der wissenschaftlichen Zusammenarbeit genutzt und demonstriert werden.

Seit 2010 wird zudem Postdoktorandinnen und Postdoktoranden die Möglichkeit eröffnet, in Kooperation mit Wissenschaftlerinnen und Wissenschaftlern des Partnerlandes eigene Projektanträge zu stellen.

Bitte beachten Sie, dass für dieses Förderprogramm keine Sondermittel zur Verfügung stehen. Die Anträge konkurrieren mit denen des Einzelverfahrens.

Förderanträge können bis zum 8. März 2023 (13:00 Uhr) bei der DFG und gleichzeitig bei der ANR eingereicht werden.

Handelt es sich bei dem Antrag um Ihren ersten Antrag bei der DFG, beachten Sie, dass Sie sich vor der Antragstellung im elan-Portal registrieren müssen. Ohne Registrierung bis zum 1. März 2023 ist eine Antragstellung nicht möglich. Die Bestätigung der Registrierung erfolgt in der Regel bis zum darauffolgenden Arbeitstag. Französische Antragstellende müssen sich hier nicht registrieren.

Nach einem Beschluss der DFG-Mitgliederversammlung dürfen Fördermittel der DFG seit dem 1. August 2019 nur noch an Einrichtungen vergeben werden, welche die im Kodex zur Sicherung guter wissenschaftlicher Praxis niedergelegten Leitlinien in eigenes Recht umgesetzt haben.

Daraus folgt, dass auch für internationale Anträge Fördermittel durch die DFG nur dann freigegeben werden können, wenn die Leitlinien zur Sicherung guter wissenschaftlicher Praxis (Link siehe unten) von der deutschen Einrichtung umgesetzt sind. Für Fragen und Erläuterungen zu diesem Komplex wenden Sie sich bitte an das innerhalb der DFG-Geschäftsstelle zuständige Team Wissenschaftliche Integrität (Kontakt siehe unten). Weitere Hinweise zur Umsetzung finden Sie auf der Webseite zur Wissenschaftlichen Integrität (Link siehe unten).
Weitere Informationen:

2. /BMWK*/ Aktuelle Ausschreibung im Netzwerk IraSME - Grenzüberschreitende Kooperationen im Netzwerk IraSME

ZIM-Kooperationsprojekte im Rahmen von IraSME

IraSME ist ein Netzwerk von Ministerien und Förderagenturen zur gemeinsamen Unterstützung transnationaler Projekte von Unternehmen in nationalen/regionalen Förderprogrammen.
Netzwerk-Koordination gefördert vom BMWK, ausgeführt von der AiF Projekt GmbH (Projektträger des BMWK)
Partner in der aktuellen Ausschreibung: Belgien (Regionen Flandern und Wallonien), Brasilien, Deutschland, Luxemburg, Österreich, Tschechien und Türkei
Zwei jährliche Ausschreibungsrunden mit Annahmeschluss (Deadline) Ende März und September

Aktuelle Ausschreibung im Netzwerk IraSME

31. Ausschreibung | offen bis 29.03.2023
Übersicht aller Länder/Regionen (und Ausschreibungsunterlagen), mit denen das BMWK im Rahmen des ZIM Fördervereinbarungen unterhält - inkl. IraSME-Netzwerkmitgliedern
Weitere Informationen:
https://www.zim.de/ZIM/Redaktion/DE/Artikel/internationale-ausschreibung-irasme.html

3. /HORIZON EUROPE/ Public sector as Galileo and/or Copernicus user, deadline: 02. March 2023 17:00 Brussels time

Projects are expected to contribute to the following outcomes:
- Stimulate the public sector in Europe to use space downstream products, involving SMEs and midcaps.
- Support to public stakeholders through specific funding tools, to develop, via pre-commercial procurement (PCP) innovative EGNSS and/or Copernicus based solutions
- Encourage the public sector to be the "first customer" for innovative space-based applications and contribute to speeding up the modernisation of the public sector.
- Enable public procurers to collectively implement PCPs to close the gap between supply and demand for innovative solutions that require e.g., precise location (from EGNOS/Galileo), spatial data and earth monitoring capabilities (from Copernicus).
- Bring radical improvements to the quality and efficiency of public services by encouraging the development,validation and certification (when applicable) of breakthrough space-based solutions
- Prepare Galileo and/or Copernicus-based solutions for an integrated approach to support national public authorities to concretely uptake Galileo and/or Copernicus products and use them within their mandate and regulatory tasks and specifically helping them integrating Galileo and/or Copernicus in their regulatory systems, operational procedures and decision-making.
- Decrease of the prices of EGNSS and Copernicus based products/services, a smart use of the procurement budget to remove supplier lock-in and obtain more open, standardized solutions, shorter time-to-market facilitating the access of SMEs and midcaps to the procurement market and increased exploitation of IPRs and R&D results.

This topic is open to proposals for PCP actions in all areas of public sector interest requiring innovative solutions in different market segments that exploit space data. It is open both to proposals requiring improvements mainly based on one specific downstream space technology (e.g Galileo, Copernicus, GovsatCom), as well as to proposals requiring end-to-end solutions that need combinations of different space components.

The topic is dedicated to public administration to procure research and experimental development that exploits space data and services (e.g. Galileo and/or Copernicus) and that meets their needs. In addition, the proposals should build on the procurement needs of the participating organizations, supporting the EGNSS, Galileo and/or Copernicus market take-up across Europe and demonstrating a sustainability of solutions beyond the lifespan of the proposed project. Projects should focus on very specific and more mature applications and market segments, based on clearly identified needs. Promising areas of activities are the following, however, the choice of market segment and application is left to the proposer:

- EGNSS and/or Copernicus for mobility as a service, cooperative ITS, public transport, smart cities and air quality monitoring and forecasting, including support to new green policies,
- Integration of EGNSS into U-Space concept for drones,
- Monitoring of infrastructure with EGNSS and/or Copernicus (rail, road, critical infrastructure)
- Copernicus and/or EGNSS for crisis emergency management, including related to extreme events (i.e. storm surges, coastal floods, earthquakes, volcanic eruptions, space weather)
- Copernicus and/or EGNSS for civil security applications and border management
- Copernicus and/or EGNSS for sustainable development, climate change adaptation, mitigation and resilience services
- Copernicus and/or EGNSS for coastal area monitoring and modelling, also related to coastal planning and operations.

Activities covered should reinforce the national policy frameworks and mobilise substantial additional national budgets, as well as awareness raising, technical assistance and/or capacity building to other procurers beyond the project to mainstream PCP implementation and to remove obstacles for introducing the innovative solutions to be procured into the market.

The requested solutions should be validated through field-testing by the participating procurers in at least two different countries across Europe.

Applicants should take particular attention to ensure giving sufficient time for the different PCP phases. Applicants are recommended to use European data infrastructures such as, for example, the DIAS platforms and the Galileo Service Centre and EGNOS user support facilities.

Proposals addressing PRS (Public Regulated Service) related applications are not in the scope of this action.

Further Information:

https://ec.europa.eu/info/funding-tenders/opportunities/portal/screen/opportunities/topic-details /horizon-euspa-2022-space-02-52;callCode=null;freeTextSearchKeyword=;matchWholeText=true;typeCodes=1,2,8;st s=1,2,8;statusCodes=31094502;programmePeriod=2021%20-%202027;programCcm2Id=43108390;programDivision onCode=null;focusAreaCode=null;destinationGroup=null;missionGroup=null;geographicalZonesCode=null;program ;programmeDivisionProspect=null;startDateLte=null;startDateGte=null;crossCuttingPriorityCode=null;cpvCode=null ;cpvCode=null;performanceOfDelivery=null;sortQuery=startDate;orderBy=asc;onlyTenders=false;topicListKey=topic istKey=topicSearchTablePageState

4. /HORIZON EUROPE/ GOVSATCOM Service developments and demonstrations, deadline: 02. March 2023 17:00 Brussels time

Consolidation of security-related services, demonstrations in a user context and in particular for civilian users and synergies with the services provided by the other components of the Space Regulation (e. g. services for civil protection with Copernicus images).

This topic address service developments in support to all High-Level User Needs, including direct involvement of users and with emphasis on civilian users and interoperability of services. This should include Pooling & Sharing demonstrations, in particular on services enabled by new technology

developments such as ground segment, RPAS, optical communications or Internet of Things. Service development should include an element of awareness building and outreach.
R&I for the consolidation of integrated use cases and demonstration of EU GOVSATCOM service interoperability in real user environment.
- Development of an innovative use case (e.g., in the area of crisis management, surveillance, critical infrastructure etc.) exploiting a combination of secure SATCOM services, such as Mobile Satellite Service (MSS) and Fixed Satellite Service (FSS);
- Interoperability of services based on pooled and shared capacities from different satellite systems;
- Interoperability of governmental satellite-based communication services with terrestrial communication services;
- Development of end to end secure, interoperable, quickly deployable, affordable and user-friendly GOVSATCOM user services
- Integrated application leveraging the synergies with services provided by other Space Programme components (Galileo, EGNOS, Copernicus, SSA);
- Proof of concept in a real user environment;
- Awareness and outreach activities in favour of EU GOVSATCOM user uptake.
R&I Areas to be addressed:
- Interoperability between satellite communication systems' services;
- Seamless handover between satellite and terrestrial communications networks for the provision of governmental communications services;
- Service level interoperability between commercial and MS owned satellite communications systems;
- Integration of EU GOVSATCOM services with services provided by the other components of the Space Regulation.
Further Information:

https://ec.europa.eu/info/funding-tenders/opportunities/portal/screen/opportunities/topic-details
  /horizon-euspa-2022-space-02-61;callCode=null;freeTextSearchKeyword=;matchWholeText=true;typeCodes=1,2,8;st
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5. /HORIZON EUROPE/ Copernicus downstream applications and the European Data Economy, deadline: 02. March 2023 17:00 Brussels time

Projects are expected to contribute to the following outcomes:
- Europe needs to strengthen its position as provider of products and services based on data, enabling new market opportunities. The EU is promoting the use and uptake of Copernicus, a leading European data provider, as a driver of innovation for the European Data Economy.
- Actions under this Topic will contribute to increase the integration and uptake of Copernicus into the economy, and/or to solve societal challenges.
- The integration of Copernicus data assets with data contributed by other vertical domains into sizeable and scalable applications enabled by modern ICT technologies will greatly enhance Copernicus downstream market. Likewise, many vertical domains (such as, for example, agriculture, food security, health, energy, natural resources, environmental monitoring, insurances, tourism, security etc...) will benefit from the use of Copernicus.
Actions under this Topic will bring to market new or improved applications, products and services by exploiting Copernicus data assets and services products.
To achieve the objectives described above, the project are required to adopt state-of-the-art ICT technologies (such as, for example, Big Data and AI technologies in their wider declinations), and make use of existing European data infrastructures, such as Copernicus DIAS platforms, European open data portals, and industrial data platforms.

The technical solutions to be adopted should be user-friendly and work at the scale of the large quantities of data involved. They should be adopted to contribute to the digitization challenges of the European industry by opening up innovative business avenuesopportunities and to support societal challenges. Copernicus data and services products will be at the core of the projects' data value chains and integration activatesactivities needed to fulfil the industrial and users requirements that will drive the actions. Whenever relevant, the link with European satellite positioning/navigation/timing technologies should be exploited.
Applicants are required to present initial qualifying items of their business plan in the proposal, which will then have to be fully developed as part of the project's exploitation plan.
Activities are expected to start at TRL 5 and achieve TRL 8 by the end of the project.
Further Information:

https://ec.europa.eu/info/funding-tenders/opportunities/portal/screen/opportunities/topic-details
   /horizon-euspa-2022-space-02-54;callCode=null;freeTextSearchKeyword=;matchWholeText=true;typeCodes=1,2,8;st
   s=1,2,8;statusCodes=31094502;programmePeriod=2021%20-%202027;programCcm2Id=43108390;programDivision
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6. /HORIZON EUROPE/ Large-scale Copernicus data uptake with AI and HPC, deadline: 02. March 2023 17:00 Brussels time

Projects are expected to contribute to the following outcomes:
- Copernicus is producing increasingly large data volumes that require specific Big Data technologies and Artificial Intelligence (AI) methods to analyse it and manage it. The adoption of Big Data and AI technologies in the space industry represents a significant opportunity to innovate, following industrial requirements to better respond to well identified user needs.
- Moreover, the data infrastructures offering archiving and distribution services for Earth Observation data, including Copernicus, are often data silos that offer today limited discoverability, querying and linking possibilities. The full exploitation of the archives and data stores require specialized Artificial Intelligence technologies, Linked Open Data paradigms and semantic archives able to scale to the full archives data volumes. Enhancing those cloud infrastructures with technological paradigms that are now typical of other data intensive domains (such as multimedia), will contribute to facilitate the development of new products and services with earth observation data at their core, and connect earth observation data to European Data Spaces.
- Copernicus data are part of the European Data Economy and its value chains. As such, this call is promoting the collaboration of ICT actors, both from industry and academia, with the earth observation/space stakeholders and Copernicus users.
To address the expected outcomes described above, applicants are requested to respond to one of the following challenges:
- Develop new and innovative products and services designed by industrial and user requirements, having Copernicus data assets and services products at their core, and scaling up to the increased data volumes of Copernicus' archives, by solving the technological challenges related to Artificial Intelligence, AI, High Performance Computing (HPC,), Big Data processing and management, and the integration with distributed data sources from other industrial domains.
- Develop new, enabling, scalable, operational solutions and technologies to improve capabilities and performance of the Copernicus value chain and supporting infrastructure: from access and discovery of data and information (required to fully integrate Copernicus data archives, including into the wider web of data and connect to European Data Spaces, in a machine to machine modality) to integration with other data sources and analysis to delivery and applications. Proposals can address individual elements of the value chain or the value chain as a whole.

For both challenges applicants are requested to provide quantitative measures of the progress beyond the state of the art.
To ensure a balanced portfolio covering the two challenges described above, 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.
Activities are expected to start at TRL 3 and achieve TRL 5 by the end of the project.
Further Information:
https://ec.europa.eu/info/funding-tenders/opportunities/portal/screen/opportunities/topic-details
    /horizon-euspa-2022-space-02-55;callCode=null;freeTextSearchKeyword=;matchWholeText=true;typeCodes=1,2,8;st
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7. /HORIZON EUROPE/ European Global Navigation Satellite System (EGNSS) - EGNSS applications for Smart mobility, deadline: 02. March 2023 17:00 Brussels time

Projects are expected to contribute to the following outcomes:
- Development of EGNSS based accuracy, safety-and liability-critical applications in long lead time market segments such as aviation, maritime, rail, road transportation and multi modal domains.
- EGNSS response to the increasing mobility demands and emerging transport solutions, such as those enabled by autonomous or unmanned platforms, supporting new policies aimed to incentivise green and sustainable transportation of goods and people.
- The action aims at fostering the EGNSS market uptake in transport. Applications should demonstrate the advantage of Galileo and EGNOS specific features and differentiators for their use in smart and green mobility, and should contribute to a resource efficient, safe, climate and environmentally friendly transport, that will be for the benefit of citizens, the economy and society.
Proposals may be submitted in any of the transport areas or propose a multi-mode approach:
- Aviation: EGNSS solutions for modernising and improving air operations and traffic management technologies, addressing Communication, Positioning, Navigation and Timing, as well as Surveillance, targeting new navigation operations powered by EGNSS (e.g. 4D, GBAS DFMC, surveillance), increased airport efficiency (e.g. leveraging SWIM), critical airport and future drone-port infrastructure management (e.g. synchronization, monitoring, surveying), polar routes surveillance against space weather events and facilitating integration of drones in the airspace (drone operations, U-Space services leveraging EGNSS and Earth observation data, dynamic maps), as well as new entrants in the airspace, such as high altitude flights.
- Maritime: EGNSS solutions that reduce emissions in shipping and increase efficiency of operations (e.g. ports operations and logistics, intelligent routing), safety (e.g. fisheries, navigation at sea, coastal and inland waters, surveillance and accident investigation, search and rescue at sea), and resilience, polar routes surveillance against space weather events and drive the modernization of the sector (e.g. Internet of boats, automation, autonomous sea cleaning, GNSS contribution to marine communication networks).
- Rail: EGNSS for cheaper, smarter, higher performance, safer and emission-efficient solutions (e.g. contributing to the deployment of EGNSS based signalling and its inclusion into the evolution of the European Train Control System (ETCS), efficiency-focused innovations enabling cost reductions, capacity increase and automation, infrastructure management, dangerous goods transport, autonomous trains). EGNSS based train localization for critical applications as well as the use of Copernicus for infrastructure related operations should ensure that the EU railways sector keeps pace with rest of the world, where the adoption of space-based services already started. Maintenance of rail existing infrastructure and support to new lines is also considered.

- Road: EGNSS solutions for regulated markets that reduce traffic, optimise fuel consumption, lower emissions, and foster cheaper, smarter, safer and greener transportation, including smart public transportation. EGNSS solutions to support the development of connected and autonomous driving, next generation vehicles and novel user equipment, new capacities for vehicles, e.g. intelligent speed adaptation, and the use of integrated space data for road safety and environment, such as monitorisation of road infrastructures (e.g. landslides and bridge infrastructure), and AI-based cyber threat mitigation (e.g. spoofing attacks on localization). EGNSS solutions that benefit from EGNSS regulations such as the eCall system (e.g. GNSS Tolling for passengers cars, congestion charging in Smart Cities, eParking, traffic information), or of the Smart Tachograph in commercial vehicles (e.g. custom control and cross-border enforcement, cabotage and freight activities).

Proposals should be built on the exploitation of the distinguishing features of EGNOS and Galileo.

The action focuses on the development of close to market EGNSS transport applications and mobility services through the realisation of large-scale demonstration and implementation projects, indicating the necessary scale-up needs to wide adoption in Europe and worldwide and associated standards and certification.

Developed applications should have a clearly defined commercial potential and should respond to user needs. The solution developed is expected to achieve TRL7-9 by the end of the project.

Proposals should deliver new innovative applications, with commercial impact and a clear market uptake. The use of other space components such as Copernicus is highly encouraged. 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:
- 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;
- A Business Plan and evidence of user engagement is compulsory and should be provided as part of the proposal, to demonstrate the user need and sustainability of the project, and opportunities for wide adoption in Europe according to standards and operational needs.

Proposals addressing PRS (Public Regulated Service) related applications are not in the scope of this action.

Applicants are advised to exploit all possible synergies with other transport and mobility specific actions funded under the work programme of Cluster 5 "Climate, Energy and Mobility"

Proposals under this topic should exploit synergies and be complementary to national activities and activities funded by ESA.

Applicants are welcome to use the European space data infrastructures, e g. Galileo Service Centre, EGNOS Data Access Service (EDAS) and the EGNOS user support facilities (ASQF).

Further Information:

https://ec.europa.eu/info/funding-tenders/opportunities/portal/screen/opportunities/topic-details
   /horizon-euspa-2022-space-02-51;callCode=null;freeTextSearchKeyword=;matchWholeText=true;typeCodes=1,2,8;st
   s=1,2,8;statusCodes=31094502;programmePeriod=2021%20-%202027;programCcm2Id=43108390;programDivision
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8. /HORIZON EUROPE/ Designing space-based downstream applications with international partners, deadline: 02. March 2023 17:00 Brussels time

Projects with international cooperation partner countries are expected to contribute to the three following high-level outcomes:
- The use of EGNSS and sharing of expertise with public and/or private entities to introduce EU-space based applications/solutions leveraging their innovative, unique features, in particular Galileo differentiators (authentication, high accuracy) nd EU know-how.
- The use of Copernicus data, to develop jointly algorithms, services and/or products, which serve local user needs and/or enhance the Copernicus global product quality.
- The combined use of EGNSS and Copernicus to develop innovative downstream applications combining positing navigation and timing with Earth observation services.
Projects will also contribute to the following objectives:
- Lead to new or improved products, processes or services - using EU space technologies (Copernicus, EGNSS as enabler - that are capable of generating a marketable solution for the local market.
- Maximise and spread the benefits of space-based applications and solutions enabled by EGNSS and/or by Copernicus, to leverage downstream space excellence in particular of SMEs and universities, to facilitate investments and to foster market uptake.
- Create partnerships with non-EU entities towards commercialization, to trigger public and/or private investment from Europe and beyond to take advantage of market opportunities in Europe or local markets.
Build capacity and awareness raising, around EGNSS and Copernicus based applications and solutions, particularly in the regulated domains.
Proposals can target one or more of the three expected outcomes. Proposal can also include the use of other space based or non-spaced based assets and services, with a preference given to those based in the EU and in the international cooperation partners countries applying to these topics.
The actions should focus on technical developments of EU-space based applications/solutions, dissemination, awareness-raising, as well as provide opportunities for the creation of business-oriented partnerships of European industry with international partners. By doing so the action should be achieving a critical mass of space based-application success stories, demonstrating the advantages and differentiators of EU space-based solutions and services and making it an attractive option for public authorities, private industries and private investors in Europe and elsewhere.
Cooperation with international partners, either public or private, is key to:
- promoting the uptake of satellite navigation, position and timing, to enable non-EU countries to benefit from the advanced and unique features offered by EGNOS and Galileo, particularly in transport and regulated domains.
- promoting the uptake of Copernicus globally, exploiting possibilities for integrating in-situ, space data and information technologies. Building the Copernicus full, free and open data policy, the Commission seeks to facilitate access to Copernicus data and information for interested international partners. Administrative cooperation arrangements on Copernicus data access and Earth observation data exchange have already been signed with several countries; the United States, Australia, Ukraine, Chile, Colombia, Serbia, African Union, India and Brazil. Discussions towards similar cooperation have been started with other countries and regions (including United Nations Agencies and Asia-Pacific countries). Tasks may include joint calibration and validation activities or integration of local in-situ systems to enhance the quality of data and service products. It is important to exploit the value-added of integration of EO observation technologies (both satellite, airborne and ground based) with positioning ones, and ICT (e.g., cloud computing) from international partner countries through the development of applications, and encourage their insertion into the market.
Technology promotion activities can include incentive schemes in the form of financial support to third parties, that will promote the uptake of space downstream applications across Europe and globally.
For proposals under this topic:
- Proposals dealing with EGNSS are encouraged to involve the relevant players on the European side whenever relevant (e.g., European Union Aviation Safety Agency (EASA), European Satellite Service Providers (ESSP) or Member States' Air Navigation Service Providers for EGNOS Safety of Life service to aviation, European Maritime Safety Agency (EMSA), ERA for other transports). Participation of industry, in particular SMEs, is encouraged;

- When dealing with Copernicus based applications, participation of at least one partner from a country that has signed a Copernicus Cooperation Arrangement is required; Proposals are encouraged to use the Copernicus Data and Information Access Services (DIAS), or other existing data access solutions instead of setting up their own download and processing infrastructure. They are also encouraged to integrate third-party data (including in-situ data) and envisage data assimilation into models and products made available on the Copernicus platform of the Copernicus services. Participation of partners involved in international GEO initiatives is encouraged. Participation of industry, in particular SMEs, is encouraged;
- Involvement of public authorities is encouraged, whenever relevant;
- Involvement of post-graduate scientists, engineers and researchers is encouraged, if relevant for the project.
Further Information:
https://ec.europa.eu/info/funding-tenders/opportunities/portal/screen/opportunities/topic-details
    /horizon-euspa-2022-space-02-56;callCode=null;freeTextSearchKeyword=;matchWholeText=true;typeCodes=1,2,8;st
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9. /HORIZON EUROPE/ Research infrastructure services advancing frontier knowledge: co-fund pilots with pan-European RIs and/or national RIs, deadline: 09. March 2023 17:00 Brussels time

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;
- the access programmes to research infrastructures in the EU and Associated Countries enhance their openness at European level, embracing the support, with national funding, to a share of trans-national users in their normal operation;
- breakthrough and leading-edge research enabled by advanced research infrastructure services made available to a wider user community;
- improved and harmonised RI services and broader use of RI 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.
This topic aims at piloting the co-funding, with Member States and Associated Countries, of programmes of access to research infrastructures at EU level. The programme should provide trans-national access (on-site or remote) and/or virtual access to services offered by a set of similar or complementary advanced national or pan-European research infrastructures, to enable curiosity-driven interdisciplinary research. Proposals can address all scientific domains.
Proposals should explain how the EU funding in support of the common access programme will be complemented by other national or international funding sources providing the remaining co-funding rate, and pool the necessary financial resources to implement joint calls for the provision of access to research infrastructures.

The access programme to research infrastructures may be implemented either directly by the consortium, with the provision of trans-national and virtual access by beneficiaries, third parties or external providers of purchased services, or, alternatively, through the mechanism of financial support to third parties. Proposals should clearly specify which of the two options (direct implementation or through financial support to third parties) they will use to implement the co-fund action. In both cases national or international access programme managers, including the legal entities of distributed European RI, are expected to be core partners in the consortia.

In the case of financial support to third parties, the applicants to the open calls, launched under the action to provide financial support to third parties, should be the users together with the research infrastructures they need, including nodes of distributed ESFRI or ERIC infrastructures. The financial support should cover the costs incurred by the infrastructures/nodes to provide access (actual costs, calculated on the basis of unit costs, or a combination of the previous two), as well as the travel and subsistence of users if visits are needed to use the infrastructures, plus any specific work from RI staff and users necessary to customise the RI services. Research infrastructures which are beneficiaries/affiliated entities of the consortia awarded may exceptionally also be recipients of financial support to third parties. Proposals must explain how they will ensure that such beneficiaries/affiliated entities are not involved in the selection procedure of the calls, in order to avoid conflicts of interest and maintain confidentiality.

Access also includes ad hoc users' training and scientific and technical support for preparing and running the user projects. 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 RIs, 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 may also be supported.

While the main goal of this topic is access provision to existing services, limited development of new services, relevant to the specific scientific challenges, can also be supported, including joint/cross-RI 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 involved RIs. The long-term R&D for new instrumentation, tools, methods and advanced digital solutions will continue to be supported under destination INFRATECH.

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

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

Proposals should make available to researchers a wide and rich portfolio of research infrastructure services, including data services, which are relevant for frontier research in the chosen scientific area. To this extent, they should involve the necessary interdisciplinary set of research infrastructures of European interest that provide such services. The relevance of the service portfolio will be taken into account in the Excellence score.

Access could also be open, under certain conditions, to third countries' researchers to work on global scientific challenges. Research infrastructures from third countries may be involved when appropriate, in particular when they offer complementary or more advanced services than those available in Europe. Proposals should include an outreach and engagement plan to actively advertise their services to the research communities in the chosen area.

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/installations made available by the action 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.
Further Information:
https://ec.europa.eu/info/funding-tenders/opportunities/portal/screen/opportunities/topic-details
/horizon-infra-2023-serv-01-03;callCode=null;freeTextSearchKeyword=;matchWholeText=true;typeCodes=1,2,8;statu
=1,2,8;statusCodes=31094502;programmePeriod=2021%20-%202027;programCcm2Id=43108390;programDivisionC
nCode=null;focusAreaCode=null;destinationGroup=null;missionGroup=null;geographicalZonesCode=null;programm
programmeDivisionProspect=null;startDateLte=null;startDateGte=null;crossCuttingPriorityCode=null;cpvCode=null;
cpvCode=null;performanceOfDelivery=null;sortQuery=startDate;orderBy=asc;onlyTenders=false;topicListKey=topicS
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10. /HORIZON EUROPE/ Research infrastructure services to enable R&I addressing main challenges and EU priorities, deadline: 09. March 2023 17:00 Brussels time

Project results are expected to contribute to all the following expected outcomes:
For all areas:
- provision of innovative, customised and efficient RI services enhancing and increasing society's long-term and consistent problem-solving capacity and evidence-based policy making;

For RI 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 RI services to underpin the competitiveness of the European industry and of SMEs active in the field of risk assessment and management of environmental impact on human health.

For RI 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 RI services across Europe to underpin the competitiveness of the European industry and of biotech SMEs developing paediatric medicines and treatment and diagnostic devices;
- joining 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.

For RI services for climate-change risks
- enhanced and integrated cross-disciplinary RI capacities addressing climate related-risks in Europe and in particular support relevant R&I objectives of Horizon Europe clusters 5 and 6, or of the mission on climate adaptation;
- harmonisation of data policies and management of IPRs and ethical issues; interoperability across disciplines and with risk management platforms;
- researchers in the environment and climate change able to optimally exploit the research infrastructure services relevant for their research.

For RI services for sustainable Arctic/polar regions
- enabling/facilitating science for understanding and predicting key processes in polar regions in the context of climate change;
- enhanced and further integrated RI capacities in polar regions in support of EU Arctic Policy, European Green Deal and international climate initiatives.

For RI services for healthy ocean and waters
- enabling/facilitating R&I for clean oceans and waters, as well as for climate change;
- enhanced and further integrated RI capacities in support of the development phase of the Mission "Restore our Ocean and waters by 2030", European Green Deal and international climate initiatives.

For RI services for sustainable aquaculture, fisheries and blue economy
- enabling/facilitating R&I for sustainable aquaculture, fisheries and the blue economy;
- enhanced and further integrated RI capacities in support of the Common Fisheries Policy, the Farm to Fork Strategy, the sustainable blue economy and the European Green Deal.
For RI services for renewable energy technologies and systems
- enabling research and innovation to increase energy efficiency and foster a wider use of renewable energy, supporting the objective of the European Green Deal of a climate neutrality by 2050, the 'Fit for 55' energy targets and the SET-Plan action on integrating renewable technologies in the energy systems;
- wider access for academic and industrial researchers to enhanced and further integrated RI services in support of the green transition.

For RI services for innovative applications of nanoscience and nanotechnology
- enabling research and innovation on innovative nanoscience and nanotechnology applications to support European scientific and industrial competitiveness, including on innovative solid state, biological and soft materials, needed for the green and digital transition;
- cross-fertilisation and transfer of knowledge and technologies across diverse scientific disciplines and material classes;
- wider access for academic and industrial researchers to enhanced and further integrated RI services for fostering the application of nanoscience and nanotechnology to address emerging socio-economic needs;
- enhanced competitiveness of European industry in the field through access to the broadest spectrum of advanced research tools;
- positioning the top-level research infrastructures in the field as reliable innovation partners for world-wide researchers and European innovators;
- enhanced safety of R&D activities on nanomaterials and their use, reducing possible health and environmental risks.

For RI services to enhance the EU capacity for the development of semiconductors
- enabling research and innovation in support to the competitiveness and autonomy of the European semiconductor industry and to the European Chips Act;
- wider access for academic and industrial researchers to enhanced and further integrated RI services in the field;
- transfer of knowledge and technologies between academic-research institutions and the semiconductor industry in order to advance further the digital transition.

For RI services for shaping the future generation society
- scientific evidence for the successful implementation of Next Generation EU, including the societal dimension of the recovery from the crisis as well as the ongoing economic, social and environmental transformations;
- insight on the ways different societal groups, including the young people, can get actively involved and contribute to the development of EU missions;

- contribution to the definition and support to the development of the EU Youth strategy;
- provision of evidence on specific patterns and skills to foster active inclusion of various societal groups as active citizens and actors of positive change.

This topic aims at providing trans-national access (on-site or remote) and/or virtual access to integrated and customised RI 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 RIs, 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.
While the main goal of this topic is access provision to existing services, limited development of new services, relevant to the challenges, can also be supported, including joint/cross-RI 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 RIs. The long-term R&D for new instrumentation, tools, methods and advanced digital solutions will continue to be supported under destination INFRATECH.
Proposals should adhere to the guidelines and principles of the European Charter for Access to Research Infrastructures.
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 duly take into account major European or international initiatives relevant in the domain. Whenever appropriate, they should foster the use and deployment of (open) global standards.
Proposals should make available to researchers a wide 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 interest that provide such services. The inclusiveness of the portfolio of services offered by the proposal will be taken into account in the Excellence score. Proposals including only few of the research infrastructure services relevant to the scope will be scored lower.
Access could also be open, under certain conditions, to third countries' researchers to work on global challenges. Research infrastructures from third countries may be involved when appropriate, in particular when they offer complementary or more advanced services than those available in Europe.
Proposals should consider the inclusion of infrastructures that can facilitate a rapid transition of research findings to innovations and therefore, to society.
Proposals should include an outreach and engagement plan to actively advertise their services to targeted research communities 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/installations 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.
In 2023, this topic will target the following scientific challenges and EU priority areas:
RI services to enable research linking environmental factors to human health
Human health is strongly dependant on exposure to environmental factors[5] as well as socio-economic and lifestyle factors. Proposals should integrate and give access to a wide range of monitoring and

experimental RI 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 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.

Types of services to be offered to users of the infrastructures would include, amongst others: collecting samples and data on environmental risk factors including on socio-economic, occupational and life style factors; high throughput measurements to quantify substances (and/or energy types) of concern including not targeted measurements of chemical mixtures (or other pollutants) as well as exposure markers; integration of diverse data types including human omics data to develop exposure markers; harmonisation and access to advanced bioinformatics tools to investigate the environmental and human health interactions; support for experimental work such as state of the art research models to test for stressor and outcome correlations; access to relevant data available from population cohorts; access to available and relevant data bases on environmental factors (e.g. pollutants, temperature, noise); GDPR-compliant access to relevant sensitive human data including from human biomonitoring i.e. measurements in biosamples.

Actions should customise and further develop RI 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. EIRENE, the European Human Exposome cluster, the IPCHEM database, the EC Knowledge Centre on Cancer, the European Microwave Signature Laboratory, the candidate European Partnership for the Assessment of Risks from Chemicals (PARC), and other H2020 and Horizon Europe relevant projects including the ones emerging from the 2023 and 2024 'Environment and health' calls of Cluster 1 - Health.

Proposals could consider, for their inclusion in the service portfolio, relevant services and expertise offered by the European Commission's Joint Research Centre (JRC), and in particular by its Molecular Ecotoxicology and Microbiology laboratory. The laboratory is equipped with advanced instruments, such as the MinION(TM) for nanopore sequencing, and digital polymerase chain reaction (PCR), and provides access to the next generation sequencing (NGS) facility at the JRC. Furthermore, the laboratory has in house in vitro tests and cell culture facilities for detection of pollutants particularly concerning human health.

For this area an EU contribution between EUR 12.00 and 14.50 million should allow the related outcomes to be addressed appropriately.

RI services for improving clinical research in the paediatric field

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 RI 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, RI 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, proposed Horizon Europe partnerships such as the Innovative Health Initiative, the Transforming Health and Care Systems partnership, a Personalised Medicine, an ERA for Health Research, and the planned partnership

on Rare Diseases research.

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 be FAIRificated to become accessible under the European Open Science Cloud.

For this area an EU contribution between EUR 12.00 and 14.50 million should allow the related outcomes to be addressed appropriately.

RI services for climate-change risks

Climate change and land use are increasing the frequency and severity of natural hazards notably floods, storm surges, landslides, droughts, desertification, cryosphere melting and fires as well as their negative impacts in Europe. Research to advance the understanding of the interlinked processes and to develop new knowledge and tools necessary to better predict, mitigate and adapt to these risks requires an unprecedented integrated and strongly cross-disciplinary approach as well as access to very diverse research infrastructures (such as observatories, experimental facilities, modelling capacities or data infrastructures).

Proposals will bring together key complementary and possibly heterogeneous national and European research infrastructures to provide effective access to an integrated wide range of RI services (e.g.: observations, models and experimental platforms) necessary for highly cross-disciplinary research and innovation addressing climate-related multi-hazard risks in the EU and Associated Countries, including their social dimension. Actions will in particular offer, when appropriate, fit-for-purpose access modalities facilitating the joint selection and or coherent scheduling of cross-disciplinary user project(s) by several research infrastructures, ad-hoc support and training of (new) users, customised R&I data, data products, scientific services including joint services by complementary infrastructures. Actions will develop interoperability among the research infrastructures as well as with relevant initiatives and programmes and facilitate the use of external data and services, such as Copernicus services, to further develop their portfolio of multi- and cross-disciplinary scientific services.

Actions should design customised and/or new RI services taking into account the needs of ongoing research in the field and of existing disaster risk management knowledge platforms and networks (e.g. the JRC Disaster Risk Management Knowledge Centre). Due attention to the latest development of Horizon Europe priorities, its Missions and Partnerships will ensure appropriate links and complementarities. Actions should provide for a flexible approach to address ad-hoc R&I specific requests and to respond to long-term or recurrent needs.

Proposals could consider, for their inclusion in the service portfolio, relevant services and expertise offered by the European Commission's Joint Research Centre (JRC), and in particular by its Molecular Ecotoxicology and Microbiology laboratory [7], for the detection of antimicrobial resistance genes, viral RNA in water by quantitative PCR, metagenomics analysis of water samples, as well as in-house bioassays systems for detection of chemical pollutants' mixture analysis.

For this area an EU contribution between EUR 12.00 and 14.50 million should allow the related outcomes to be addressed appropriately.

RI services for sustainable Arctic/polar regions

Polar regions are facing rapid changes and new challenges due to climate change, biodiversity loss and increasing economic interest. Major research efforts are ongoing to understand and predict these changes including their impact on other regions, identify solutions and provide evidenced-based information such as needed by the European Green Deal and the EU Arctic policy. However, extreme conditions and low population density limit the opportunities to access in-situ platforms and make difficult the collection of data, the monitoring of complex processes.

Proposals should provide access to a wide portfolio of complementary research infrastructures and their services needed to address the scientific challenges of polar regions. Building on past integration of access to terrestrial stations, fixed and mobile observing platforms, research vessels operating in Polar Regions including icebreakers, core repositories and data infrastructures, proposals should further integrate, customise or combine services and adapt modalities of access to facilitate interdisciplinary research on complex processes in Polar Regions. Proposals should ensure appropriate links with relevant European and international initiatives and with projects developing under Horizon Europe and ongoing coordination

efforts such as in the EU Polar Cluster. When appropriate, research infrastructure services should benefit from Copernicus, GEOSS and EMODNET initiatives. Similarly, relevant data generated by the projects should be made available to these initiatives.

Complementarity and synergies with relevant other areas under this topic should be considered.

For this area an EU contribution between EUR 12.00 and 14.50 million should allow the related outcomes to be addressed appropriately.

RI services for healthy ocean and waters

The Mission 'Restore our Ocean and Waters by 2030' aims to deliver on precise targets for protecting and restoring ecosystems and biodiversity, for zero pollution, and for moving towards climate-neutrality, within the EU's ocean, seas and waters. Research and innovation underpinning the solutions and technologies to reach these ambitious objectives will mobilise RI capacities in Europe and beyond and will require complementarity and synergies between national and European efforts, including from other parts of Horizon Europe and for access to the most needed and unique research infrastructures.

Proposals should provide access to a wide portfolio of complementary research infrastructures and their services in support of the research and innovation contributing to the implementation plan of the Mission and of the European Partnership 'A climate neutral, sustainable and productive Blue Economy'. Building on past integration of access to facilities such as marine and freshwater experimental facilities, analytical platforms, fixed and mobile observing platforms and research vessels, proposals should further integrate, customise or combine services and adapt modalities of access to facilitate the development phase of the Mission, Partnership and relevant research and innovation activities for a clean environment and for climate actions. Proposals should ensure appropriate links with relevant European and international initiatives and with projects developing under Horizon Europe. When appropriate, research infrastructures services should benefit from Copernicus, GEOSS, EMODNET and the European Digital Twin of the Ocean (DTO) initiatives. Similarly, relevant data generated by the projects should be made available to these initiatives.

Proposals could consider, for their inclusion in the service portfolio, relevant services and expertise offered by the European Commission's Joint Research Centre (JRC), and in particular by its Molecular Ecotoxicology and Microbiology laboratory. The laboratory is equipped with advanced instruments, such as the MinION(TM) for nanopore sequencing, and digital polymerase chain reaction (PCR), and provides access to the next generation sequencing (NGS) facility at the JRC for microbiome analysis and skilled experts in the field of molecular based methodologies.

Complementarity and synergies with relevant other areas under this topic should be considered.

For this area an EU contribution between EUR 12.00 and 14.50 million should allow the related outcomes to be addressed appropriately.

RI services for sustainable aquaculture, fisheries and blue economy

Sustainable fisheries and aquaculture are part of the Farm to Fork Strategy and also contribute to the Sustainable Blue Economy Strategy[10]. At the same time, advances in biotechnology tools (e.g. -omics, bioinformatics) increasingly expose the potential of aquatic bioresources. However, research and innovation is needed to ensure sustainability and resilience of the blue economy as well as to unlock its potential.

Proposals should provide access to a wide portfolio of complementary research infrastructures and their services needed to address the scientific challenges in support of the Common Fisheries Policy, the Farm to Fork Strategy and the Sustainable Blue Economy Strategy. Building on past integration of access to facilities such as inland and marine aquaculture experimental platforms, marine biological resources and analytical platforms, relevant marine data and observing platforms, proposals should further integrate, customise or combine services and adapt modalities of access to facilitate interdisciplinary research addressing EU priorities. Proposals should ensure appropriate links with relevant European and international initiatives, with projects developing under Horizon Europe and with the European Partnership for a climate neutral, sustainable and productive blue economy. When appropriate, research infrastructures services should benefit from Copernicus, GEOSS, EMODNET and the European Digital Twin of the Ocean (DTO) initiatives. Similarly, relevant data generated by the projects should be made available to these initiatives.

Complementarity and synergies with relevant other areas under this topic should be considered.

For this area an EU contribution between EUR 12.00 and 14.50 million should allow the related outcomes to be addressed appropriately.

RI services for renewable energy technologies and systems

Increased energy efficiency and wider use of renewable energy play a key role in achieving, the European Green Deal goal of a climate neutrality by 2050 and the 'Fit for 55' energy targets. The wide and concerted efforts that researchers and innovators are devoting in finding new solutions to accelerate the green transition, should be supported and enabled by the most advanced research and testing facilities.

Under previous Framework Programme research infrastructures for various types of renewable energy, for energy efficiency and smart grids have served their respective communities enabling advanced R&D. Building on these experiences these different facilities and testing platforms should now make a further step and integrate their services to create a unique entry point to a wide and integrated catalogue of complementary services for all researchers and innovators working for a more green and efficient energy. Proposals should integrate services provided by the key research infrastructures in the EU and Associated Countries in the fields of solar power (photovoltaic and concentrated solar power), hydrogen, biofuels, offshore renewable energy (ORE), integrated grids and energy storage. Broader access at EU level should be provided to services for research, development and testing of renewable energy systems including grid integration across a range of TRLs. Services can also be customised and combined for an integrated and interdisciplinary support to R&I, along the entire value chain, from materials, technology development to applications.

The provision of effective and integrated RI services will help academic and industrial researchers to address the challenges of the green transition towards higher shares of renewable energy and a more decentralised and low-intensity energy supply. It will also enhance research in areas relevant to the EU missions on Climate change and Emission-free cities, as well as to the Blue Economy Partnership and to the SET-Plan action on integrating renewable technologies in the energy systems.

Proposals should ensure appropriate links with relevant European and international initiatives, including the two above mentioned missions.

For this area an EU contribution between EUR 12.00 and 14.50 million should allow the related outcomes to be addressed appropriately.

RI services for innovative applications of nanoscience and nanotechnology

The advancements in nanoscience and nanotechnology have demonstrated the potential of working at nanoscale for applications in a wide range of industrial sectors, such as electronic, food, and packaging, just to mention few. Nanotechnologies are also crucial for the development of medical devices, including drug delivery systems and biosensors. To enlarge the array of applications and push further the use of nanoscience and nanotechnology 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 (e.g. experimental installations for micro- and nanofabrication, analytical and modelling/simulation facilities, ...), including those relevant for the synthesis and the nanoscale characterization of solid state, biological and soft materials required for innovative applications, 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. Safety issues of nanomaterials, which could come in close contact with humans and be dispersed in the environment, should be taken into account for reducing the possible health and environmental risks early on in the innovation process.

Proposals could consider, for their inclusion in the service portfolio, relevant services and expertise offered by the European Commission's Joint Research Centre (JRC), and in particular by its Nanobiotechnology Laboratory on the physical and chemical characterisation of advanced (nano)materials, nanosystems and macromolecules.

For this area an EU contribution between EUR 12.00 and 14.50 million should allow the related outcomes to be addressed appropriately.

RIs services to enhance the EU capacity for the development of semiconductors

The creation of a competitive European ecosystem for the design and the production of semiconductors is a major EU priority, as underlined by EC President Von der Leyen in her State of Union address. Semi-conductors are nowadays the engine of almost anything we use for economic activities, mobility and leisure and the undoubted basis of the digital transition. The recent production crisis caused by the shortage of semi-conductors demonstrated the worrying dependency of Europe from Asia. The new European Chips Act, announced by the Commission, should precisely address the lack of competitiveness and technological sovereignty of the EU in this field. One of the foreseen actions is to link together and strengthened world-class research, design and testing capacities in the EU.

Waiting for new capacities to be built, the existing research infrastructures (e.g, nano-electronics infrastructure, printing facilities for electronics, facilities for ion beam-modification or cosmic radiation hardening of semiconductors, ...), including the ones which in previous Framework Programme have already integrated and opened their services at EU level, should now come together and create a unique entry point, for academic and industrial researchers, to a wide and integrated catalogue of complementary services enabling R&D on leading-edge semiconductors, including the ones for the next generation of computing paradigms, and new innovative way to produce them. In order to better serve this EU priority and facilitate interdisciplinary research, services should also be customised, combined as necessary, and possibly expanded.

Proposals should ensure appropriate links, synergies and complementarities, also in terms of TRLs, with relevant activities in other parts of Horizon Europe and other initiatives at EU level in this field.

For this area an EU contribution between EUR 12.00 and 14.50 million should allow the related outcomes to be addressed appropriately.

RI services for shaping the future generation society

Proposals should provide effective access to an integrated, wide range of RI services enabling research into the transformation towards a future European society in line with the goals envisaged by Next Generation EU. Research infrastructures, such as relevant surveys, social data archives, collections and repositories, will provide physical, remote or virtual access to relevant resources and make available and integrate existing data through a single point of access. This could include in particular data on the perceptions of various societal groups of the main problems and challenges facing the EU in the next decades and the way these groups can be better represented in the decision-making process and involved in the formulation of policies and actions at EU level, as well as in the implementation of the EU Missions action plans. The specific needs of Young people in Europe, from different backgrounds and belonging to different groups, will be particularly taken into account. By providing services to researchers in this field, research infrastructures will help the implementation of the Next Generation EU priorities and will contribute to the dialogue on the EU Youth strategy. Development of specific skills and competences to better exploit the available resources to address this challenge as well as curation and preparation of data for access (e.g. anonymization) can be included in the services provided by research infrastructures within this topic. The development and implementation of new relevant data-related services can also be supported, provided that these new services are opened and offered already under the actions and that their long term sustainability is ensured by the participant RIs.

For this area an EU contribution between EUR 8.00 and 10.00 million should allow the related outcomes to be addressed appropriately.

Further Information:

https://ec.europa.eu/info/funding-tenders/opportunities/portal/screen/opportunities/topic-details /horizon-infra-2023-serv-01-01;callCode=null;freeTextSearchKeyword=;matchWholeText=true;typeCodes=1,2,8;statu =1,2,8;statusCodes=31094502;programmePeriod=2021%20-%202027;programCcm2Id=43108390;programDivisionC nCode=null;focusAreaCode=null;destinationGroup=null;missionGroup=null;geographicalZonesCode=null;programm programmeDivisionProspect=null;startDateLte=null;startDateGte=null;crossCuttingPriorityCode=null;cpvCode=null; cpvCode=null;performanceOfDelivery=null;sortQuery=startDate;orderBy=asc;onlyTenders=false;topicListKey=topicS stKey=topicSearchTablePageState

11. /HORIZON EUROPE/ Research infrastructure services advancing frontier knowledge, deadline: 09. March 2023 17:00 Brussels time

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 made available to a wider user community;
- improved and harmonised RI services and broader use of RI 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.
This topic aims at providing trans-national access (on-site or remote) and/or virtual access to integrated and customised RI services for curiosity-driven research in wide scientific domains, offered by a wide range of complementary and interdisciplinary top level research infrastructures. Scientific domains are identified on the basis of a Multi-Annual Priority Setting (MAPS) exercise aiming at achieving a balanced coverage of scientific disciplines addressed under the INFRASERV destination as well as complementarities with Horizon 2020 ongoing grants offering access provision. Within identified domains, emerging areas of research can also be served. The MAPS follows the taxonomy used in the ESFRI Roadmap.
In 2023, the scientific domains called under this topic are:
- Biosphere: terrestrial biodiversity and ecosystems, including forest;
- Astronomy and Astroparticle physics;
- Arts and Humanities.
An EU contribution between EUR 12.00 and 14.50 million for the first two domains and between EUR 8.00 and 10.00 million for the third domain, should allow the expected outcomes to be addressed appropriately.
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 RIs, 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.
While the main goal of this topic is access provision to existing services, limited development of new services, relevant to specific scientific challenges in the identified domains, can also be supported, including joint/cross-RI 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 RIs. The long-term R&D for new instrumentation, tools, methods and advanced digital solutions will continue to be supported under destination INFRATECH.
Proposals should adhere to the guidelines and principles of the European Charter for Access to Research Infrastructures.
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 duly take into account major European or international initiatives relevant in the domain. Whenever appropriate, they should foster the use and deployment of (open) global standards.
Proposals should make available to researchers a very wide 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 interest that provide such services. The inclusiveness of the portfolio of services offered by the proposal will be taken into account in the Excellence score. Proposals including only few of the research infrastructure services relevant to the scope will be scored lower.

Access could also be open, under certain conditions, to third countries' researchers to work on global scientific challenges. Research infrastructures from third countries may be involved when appropriate, in particular when they offer complementary or more advanced services than those available in the EU and Associated Countries.

Proposals should include an outreach and engagement plan to actively advertise their services to the research communities 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/installations 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.

Further Information:

https://ec.europa.eu/info/funding-tenders/opportunities/portal/screen/opportunities/topic-details
/horizon-infra-2023-serv-01-02;callCode=null;freeTextSearchKeyword=;matchWholeText=true;typeCodes=1,2,8;statu
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12. /HORIZON EUROPE/ Next generation services for operational and sustainable EOSC Core Infrastructure, deadline: 09. March 2023 17:00 Brussels time

Project results are expected to contribute to all the following expected outcomes:
- Next generation of enabling infrastructure and services for EOSC Core, beyond the current Minimum Viable EOSC platform.
- Enhanced design of the EOSC Core functionalities, including resource registry and catalogues, data and service management system, publishing workflow, persistent identifiers, AAI federation, order management, configuration management, monitoring, accounting and helpdesk, and taking into account the need of the data-driven scientific use cases and multi-disciplinary research projects.
- Advanced integration and composability of data sources, software tools, research outcomes and other assets within the EOSC execution framework that is enabled and supported by the next-generation of EOSC Core infrastructure.
- Sustainable service incubation and technology testbed infrastructure for developing and testing the next generation of the EOSC Core functionalities integrated and staged into the operational EOSC Core platform in production.

The EOSC-Core and EOSC-Exchange provide the technological backbone of the federated EOSC ecosystem, supported by the EOSC Interoperability Framework and guidelines, allowing users to discover, share, and exploit resources on the EOSC platform. Data-driven user experience is a fundamental aspect for further development of the EOSC Core, allowing user feedback for the continuous improvement of the EOSC platform's functionality in an open manner.

Proposals are expected to cover one or several of the following activities:
- Improve the EOSC Core execution framework by enhanced composability and interoperability of cross-domain data, services, tools and other research objects and resources: by using ontologies (or a collection of controlled vocabularies), EOSC Core should make it easier for various scientific user's communities to understand and exchange data and services across disciplines by facilitating better data interoperability. EOSC Core should develop towards applying Digital Rights Vocabulary to clearly express IPR inflation over digital objects.
- Design and develop components of a comprehensive EOSC Integration Service suite as part of the next-generation EOSC Core that supports seamless integration and composability of applications, tools and services. The EOSC Integration Service should, at the minimum, include a library of predefined adapters, connectors and APIs according to the types of scientific and research data, applications, tools and services on which integrations can be performed. An event/messaging hub, based on the publish-subscribe principle, can be provided at the core of the Integration Service suite for asynchronous data/metadata exchange. A user-friendly visual mapper interface can enable the mapping of connections between applications by dragging source connectors onto target adapters.
- Provide open Application Programming Interface (API) registry, management, development and testing workflow, platform and tools for EOSC Core service users. A data-driven API monitoring tool should oversee security, compliance, and performance. It should send alerts towards the EOSC Core monitoring function as well as support built-in integrations with messaging services. An end-to-end API testing solution for testers and developers should facilitate an approach where test cases are in natural languages that helps the conveyance between scientific users and research tool/service providers.
- Support custom-made front-end portal development environment for various scientific communities, utilizing the EOSC Core portal back-end functions via integration services. A potentially low-code development environment for community portal services should offer seamless integration with the EOSC Core functions and other service integration functionalities with the EOSC Exchange applications and services out-of-the-box. Personalization and AI-driven recommendation software should support the ultimate user experience.
- Facilitate an independent EOSC service incubator and technology development environment that can serve as an open experimentation "testbed" for the EOSC stakeholders proposing the next-generation of tools and services for EOSC Core and Exchange in production.
- Ensure financial sustainability assurance and readiness assessment processes, tools, workflows and services applied for the next-generation of EOSC Core and horizontal services to ensure seamless end-user experience and frictionless DevOps cycles.
The activities need to demonstrate alignment with those of the EOSC Partnership and the EOSC MVE platform operators. Proposals should involve and be driven by one or more representatives of the relevant actors of the field, in particular those directly involved in the EOSC Partnership.
The proposals for the next generation of EOSC Core infrastructure services are expected to leverage the functionalities of the Smart Middleware Platform (SMP) developed through the Digital Europe Programme (DEP) for common data spaces.
In this topic the integration of the gender dimension (sex and gender analysis) in research and innovation content is not a mandatory requirement.
Further Information:

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13. /HORIZON EUROPE/ New technologies and solutions for reducing the environmental and climate footprint of RIs, deadline: 09. March 2023 17:00 Brussels time

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 European research infrastructures.
The aim of this topic is to deliver innovative technologies and solutions which reduce the environmental and climate footprint of RIs through the full life cycle of research infrastructures. Proposals should identify common methodologies, among the concerned RIs, to assess environmental impact and strategies to reduce it, as well as efficiency gains in the broader ecosystem.
Proposals should address the following aspects, as relevant:
- new technologies and solutions for research infrastructures enabling transformative resource efficiency (e.g. 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 RI staff for the operation and use of the new solutions;
- action plans to deploy the 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 foster acceptance of the solutions in the local and regional communities.
Consortia should be built around a leading core of at least 3 world-class research infrastructures, being ESFRI infrastructures, European Research Infrastructures Consortia (ERICs) and/or other world-class research infrastructures of European interest[1] and can include a wider set of RIs. Other technological partners, including industry and SMEs, should also be involved, thus promoting innovation and knowledge sharing through co-development of new technical solutions for research infrastructures.
Further Information:

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14. /HORIZON EUROPE/ Concept development for a research infrastructure to manage, integrate and sustain large medical cohort studies, deadline: 09. March 2023 17:00 Brussels time

Projects are expected to contribute to several of the following expected outcomes:
- support to planning and decision making at the national level (e.g. funding bodies, governments) and at European level (e.g. ESFRI) through a sound science case, including expected scientific breakthrough, a gap analysis and a feasibility/design study for a future research infrastructure to manage, integrate and sustain large medical cohort studies;
- ensuring stewardship and long-term availability of data and samples related to existing and future large medical cohort studies for their re-use for secondary research;
- strengthening and integration of existing capacities in the field;

- new services and access opportunities available to the research community, allowing to better tackle medical challenges.

This topic aims at supporting the development of new concepts for a research infrastructure at European level, to manage, integrate and sustain large medical cohort studies. The possibility to extend the scope of already existing infrastructures and/or integrate in a sustainable way existing pan-European and national capacities to cover this need and provide RI services for large medical cohort studies should be assessed as a first option, identifying what is missing and the necessary new developments. Such an infrastructure will also enable an appropriate exploitation of past investments by EU framework programmes or other European funders on the development of medical cohorts.

The numerous and diverse medical cohort studies in Europe, initiated at Member States level or in the context of EU-funded projects, require major resource investments to be set up, mature and serve multiple research queries over long period of times. The research potential (e.g., statistical power or geographical coverage) of individual cohorts can be scaled up, when similar, sufficiently compatible individual cohorts (e.g., in different EU countries) are harmonized and integrated. A research infrastructure could ensure the needed long-term sustainability for cohorts and the technical platform for data integration across cohorts as well as a properly implemented data access governance. Proposals for the new RI concept development will tackle all key questions concerning the technical and conceptual feasibility of an effective RI service offer, at EU level, to manage, integrate and sustain large medical cohort studies.

In this respect, proposals should address all following aspects:
- demonstrate relevance in relation to ERA, including to the existing landscape, and the advancement with respect to the state-of-art of the new sustainable integrated service or infrastructure;
- highlight the research challenges the new sustainable integrated service or research infrastructure will make possible to address, including at global level;
- indicate the gaps in the research infrastructure landscape it will cover and the synergies with other existing infrastructures at European and global level, including those co-financed from other EU instruments (e.g.: Cohesion policy);
- indicate, when relevant, the potential impact of this research infrastructure at regional level.

Proposals should also convincingly demonstrate that the project will effectively:
- identify suitable IT technologies and the architecture (e.g., single site or distributed, ...) for the research infrastructure;
- identify scientific user communities (and their related needs) that will benefit from access to RI services, including scientific data and instrumentation, and plan the research services to be offered to users;
- assess and identify suitable governance models and implement strategies for institutional/stakeholders' commitment and engagement;
- develop initial financial plans for the implementation and operation of the infrastructure as well as preliminary ideas for long-term sustainability, including synergies with other funds and programmes (e.g.: ERDF);
- develop plans for an efficient data curation and preservation and for the provision of GDPR compliant access to data managed by the infrastructure, in line with the FAIR principles to the extent possible.

Projects could pilot the harmonization of a limited number of European strategic cohorts, that are sustained in the long-term for generating evidence in a given field, aiming at integrating their respective data sets so as to enable cross-cohort queries. Synergies with successful proposals under the HORIZON-HLTH-2023-DISEASE-03-05 topic should be sought.

When relevant, environmental (including climate-related) impacts and the optimisation of resource and energy use, as well as the gender dimension of cohort studies, should be integrated in the concept development of the new research infrastructures.

Further Information:

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15. /HORIZON EUROPE/ Preparation of common strategies for future development of RI technologies and services within broad RI communities, deadline: 09. March 2023 17:00 Brussels time

Project results are expected to contribute to all the following outcomes:
- More comprehensive analysis of research infrastructure services available to European scientists;
- Analysis of technology needs and service gaps in European research infrastructures at strategic level;
- Common long-term strategies for development of technologies and services in pan-European Research Infrastructures;
- More effective RI landscape in Europe;
- Increased capacity of European RIs to respond to emerging needs;
- Better integration of the research infrastructure communities across the thematic areas.
Proposals should analyse long-term scientific developments and trends in wide scientific domains, and how to enhance research capacities to support them. In the chosen domain, proposals should identify the future research infrastructure needs for technology or innovation, as well as service gaps in relation to key scientific challenges and policy priorities. The objective is to define common plans or roadmaps for future RI technology and services, including their digitalisation when relevant, and their long-term development pathways, taking into account the current state of the art, the international landscape and their environmental (including climate-related) impact and energy consumption.
Actions under this topic should be carried out by thematic consortia of research infrastructures. Closer collaboration with and involvement of ESFRI clusters and related research infrastructures is needed to ensure appropriate thematic coverage of the RI landscape, foster a coordinated development of these common plans or roadmaps, reducing the risk of overlaps between future services, and improve the division of tasks among research infrastructures. Other partners needed to address the above mentioned objective can also be included in the consortia.
Proposals should plan for structured and long-term engagement with other relevant stakeholders and foresee dedicated activities to develop synergies and complementarities with the other projects selected under this topic, earmarking appropriate resources.
Further Information:
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16. /HORIZON EUROPE/ Consolidation of the RI landscape - Individual support for evolution and long-term sustainability of pan-European research infrastructures, deadline: 09. March 2023 17:00 Brussels time

Project results are expected to contribute to several of the following expected outcomes:
- better structured and strengthened European research infrastructure landscape;
- 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 support EU industry;
- 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;
This topic targets the consolidation of the EU RI landscape through the support, together with member countries, to the strengthening, long-term sustainability, reorientation or evolution of ESFRI Landmarks or other European Research Infrastructure Consortia (ERICs). Activities aimed at ensuring long-term sustainability include enlargement of the membership or broadening the base of participating countries, international cooperation, revision of business/funding plan, development of managerial and technical skills for RI staff, and structuring and strengthening of national nodes. Support can also be provided to the development of solutions helping the recovery from the COVID-19 pandemic consequences on service provision, such as extension of remote and virtual access, or on the management of the infrastructure itself. Activities for reorientation or evolution should fill gaps in the RI landscape, enabling the RI to address new research or societal challenges and/or serve new user communities, increasing and improving service capacity and/or integrating new resources/facilities. Proposals should explain any synergies and complementarities with previous or current EU grants.
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 - including the social innovation potential - of the infrastructures, and to their integration into local, regional and global innovation ecosystems.
Further Information:
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17. /HORIZON EUROPE/ Development of community-based approaches for ensuring and improving the quality of scientific software and code, deadline: 09. March 2023 17:00 Brussels time

Project results are expected to contribute to all the following expected outcomes:
- A framework of community curation is established and promoted that ensures quality of software and code across the different disciplines.
- Infrastructure, tools and services are deployed that allow researchers to properly develop, describe with proper metadata, version, archive, share and reuse research software.

- The notion of software quality is defined in the context of EOSC and builds upon established practices by the FAIR and other communities.
- Baseline quality indicators along the notion of "minimum quality" are defined for the different types of digital objects targeted (software, code, etc), taking into account the concept of "fit for purpose".
- The quality of research software, both from the technical and organizational point of view for research software is improved, both in general (e.g., software for data analysis) and in particular for software used in the services offered through EOSC.
- Software is developed in a sustainable way and its reuse is maximised.

Research software and code are digital objects that are becoming increasingly important for the EOSC ecosystem and beyond. The overall objective of this topic is to improve the quality of software and code, as well as the quality of other digital objects based on code such as workflows, computational models, etc. Software sustainability is being mainstreamed across Europe and quality software is key for improving the reproducibility of research and can also represent a first-class research output on par with publications and datasets. Preservation and sustainability of software are vital areas of development in the EOSC ecosystem and best practices from various communities need to be aligned to maximise software reuse. Proposals should therefore cover the following activities:

- Foster alignment of existing initiatives by promoting coherence and developing community guidelines.
- Promote the use of already existing common technical specifications, standards or infrastructure, endorsed by the various scientific communities.
- Define software delivering and packing best practices towards software reusability, including deployment descriptions, packaging methodologies, integration on problem solving collaborative environments such as notebooks.
- Ensure integration of infrastructure, tools and services not just for software but also for computational models, workflows and anything that is code-based. This should include a Continuous Integration & Continuous Deployment (CI/CD) setup for codes and live testing on relevant data.
- The systems and services developed within the scope of the topic should be flexible and scalable in their deployment by making use of cloud technologies, such as containers, to allow an easy integration with the future EOSC Core infrastructure.
- Define a baseline of Source Code quality based on coding principles and coding best practices, including API and documentation. Provide tools for the automatic testing of conformance.
- Develop minimum quality certification frameworks through automated checks, pipelines and digital badges. Provide indication of code maturity within the software life cycle.
- Allow for the integration of automatic testing for security vulnerability and license infringements.
- Ensure optimal and sustainable software archival practices and mainstream software citation and correct attribution for inclusion in novel research assessment frameworks.
- Incentivise open, community-driven and sustainable software development, involving labs as well as individuals (long-tail of science). Establish software green houses which nurture and support new codes and integrate with software quality tools.
- Develop FAIR metrics frameworks for digital objects such as software, code, computational models, workflows, etc.
- Develop or align pre-existing training materials for software development skills, digital badges, etc.

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. Proposals should also take into account the work of the EOSC Synergy project with its Software Quality as a Service approach.

In addition, proposals should take into account and collaborate with the resulting projects from the topics HORIZON-INFRA-2023-EOSC-01-03 and HORIZON-INFRA-2024-EOSC-01-04, aligning common elements of quality between data and software, as well as adopting novel metrics for assessing research impact. Synergies should also be developed with the resulting project from the topic HORIZON-INFRA-2021-EOSC-01-05, especially with potential metrics and indicators to assess the FAIRness of digital objects.

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

Further Information:

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18. /HORIZON EUROPE/ EOSC Architecture and Interoperability Framework, deadline: 09. March 2023 17:00 Brussels time

Project results are expected to contribute to all the following expected outcomes:
- Robust governance structure, coordination and maintenance of the EOSC Interoperability Framework and guidelines to support operations.
- Well-established design, specification and review processes for the EOSC architectural building blocks that compose the EOSC Interoperability Framework.
- Independent, multi-stakeholder Architecture Board collecting feedback and functional requirements from cross-community use cases to share, access, analyse and re-use resources via services.
- Support for standards development, adoption and certification. EOSC cannot enable FAIR and support interoperability without standards to describe and understand digital objects.
- Scientific and research community engagement for the EOSC Interoperability Framework.
The EOSC Architecture and Interoperability Framework coordination and governance seeks to ensure that interoperability is built, encouraged and maintained with structure, fairness and transparency. Achieving interoperability is essential in order to federate services, integrate data and enable interoperation with applications or workflows for analysis, storage and processing. The EOSC Interoperability Framework (EOSC IF) provides the procedures and services required to support a flexible framework of standards and guidelines that facilitate the interoperability and composability of EOSC resources in the EOSC-Exchange via the EOSC-Core. The overall EOSC architecture should be overseen by an independent Architecture Board.
Proposals are expected to cover the following activities:
- Provide structure to manage, update, circulate and promote the EOSC Interoperability Framework and guidelines to support and enable interoperability within EOSC. Such a governance structure should include:
- A high-level body that has the oversight and the responsibility for the EOSC IF, is formally responsible for endorsing new and/or deprecating guidelines into the EOSC IF.
- Independent sub-groups that can assess that requests for inclusion into the EOSC IF are compliant with a minimum set of requirements namely: maturity, community uptake, the existence of a group that maintains the item that has been proposed for inclusions and some governing model that allows for its evolution.
- Coordinate the establishment of IFs and the making of existing IFs available through a library/repository, support the dialogue on establishing IFs. The EOSC Interoperability Framework governance should define:
- A process for submitting, consulting and accepting guidelines/other frameworks.
- A structured proposal template and library providing information about the EOSC IF and guidelines.
- Community consultation to achieve ratification.
- A registry/repository for accepted guidelines and frameworks, where artefacts will be curated using an agreed EOSC profile.
- Publicity, documentation and training about EOSC IF.
- Support communities in making their IFs available through EOSC IF library.

- Provide organizational framework for establishing an independent, multi-stakeholder Architecture Board that can collect feedback and recommendations from the stakeholders, oversee and advice the EOSC MVE[1] deployment and operation.
- Define processes and guidelines to enable EOSC Core delivery and to ensure openness of EOSC so that it can adapt with the evolving requirements of the EOSC stakeholders.
The activities should demonstrate alignment with those of the EOSC Partnership and the EOSC MVE platform operators. Proposals should involve and be driven by one or more representatives of the relevant actors of the field, in particular those directly involved in the EOSC Partnership.
Activities should be aligned with those of the scientific communities, many of which have already their interoperability practices in place. The Architecture Board should work in close cooperation with the EOSC MVE platform operators and act as advisory function to the architecture deployment.
The beneficiaries are expected to work closely with the national Competence Centres, liaise with the EOSC Association working groups and task forces producing interoperable specifications and align to relevant community governance (e.g., RDA, IETF, Science Clusters, etc.), to ensure that a sustainable governance framework is adopted that collaborates with the other relevant bodies in the field.
Further Information:
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19. /HORIZON EUROPE/ Research ethics for environmental and climate technologies, deadline: 09. March 2023 17:00 Brussels time

In order to promote a responsible implementation of the EU Green deal, the projects are expected to contribute to the following outcomes:
- Design an operational ethics and integrity framework, which preserves and promotes the key ethics principles while supporting a rapid and effective green transition in the European Union;
- Promote awareness, ethics education and training about climate and environmental aspects of research activities, as well as insight in ethical aspects of the development of related knowledge and applications (for example: new agricultural and breeding techniques, environmental protection, geoengineering, tools facilitating energy efficiency and behavioural change).
Becoming the world's first climate-neutral continent by 2050 is the greatest challenge and opportunity of our times. For this reason, the European Commission adopted the European Green Deal, the most ambitious package of measures that should enable European citizens and businesses to benefit from a sustainable green transition. In order to support the green transition, it is a priority for the European Research Area to build an encompassing framework for research and innovation activities.
The high magnitude and multi-fold nature of the consequences that we would face, if we do not tackle the global environmental risks, necessitate adapting the way we work, protect the world's scarce resources, and decide on policy priorities. This inevitably raises important ethical questions and dilemmas including some related to the production of scientific knowledge and the development of novel technologies.
There is a growing awareness that biodiversity loss and ecosystem degradation at local, regional and global scale pose direct and existential threats to human life and wellbeing. At the same time, actively pursuing the preservation of the environment can, in some cases, lead to some tensions between the pure environmental objective and the protection of human rights. This is the case in particular when the implementation of anthropomorphic models gives to natural elements the same status as human beings.

An important aspect that characterises global challenges is that they, by nature, go beyond the well-being of persons and touch the whole society notably in terms of solidarity and social justice. Mid and long-term socio-economic consequences are also more prominent in these complex research contexts, not only those affecting vulnerable populations exposed to environmental degradation, but also those caused by a green transition depending on social and geographic circumstances.

Some research topics intrinsically also have a complex environmental and ecological ethics dimension including for example research and innovation in the area of electro-magnetic fields and the high frequency communication systems that are necessary to achieve a European gigabit society, or the digital innovation and biotechnology in food production practices that should not only remain safe for human health and the environment, but also allow a fair and sustainable system.

In this context, the action should conduct an analytical work covering the following aspects:

- What characterises the different dimensions and concepts associated with climate and environmental ethics in the context of research and development;
- Identify the ethics and integrity challenges related to the production and use of scientific knowledge in designing and implementing novel technologies and approaches to the global environmental challenge facing the European Union and the Planet;
- Develop strategies to uphold the integrity of scientific research in addressing climate change issues.

Elements to tackle by this action should encompass the issues related to the role of ethics and integrity experts (as advisors, for example), informed consent of communities and individuals, undue inducement and opt out approach, as well as equitable sharing of benefits arising from research.

The action should clearly highlight what cannot be accepted or neglected in the name of addressing environmental issues. This notably includes the need to always conduct, prior to the start of a research, an independent ethical review, which remains a necessary safeguard for the individuals involved and enhances the trust from the impacted communities and the society as a whole, in the name of the 'do no harm' principle. Environmental concerns justify immediate actions and should not lower ethics and integrity standards.

In addition, issues related to refining environmental risk assessment in various fields of research and innovation should be addressed. The action should explore also how the quality of data estimating environmental impact is assessed and fed back in policy design. This action supports ERA Policy Agenda actions 11 and 12.

The action should result in:

- Producing an operational ("how-to") guideline to support the work of research teams' ethics committee members and integrity experts, taking into account the concept of climate justice, including intergenerational justice as well as gender justice. The guidelines should include, among others, clear guidance for addressing ethical challenges related to the development of novel technologies and approaches to address climate change (e.g., in relation to technologies encouraging behavioural change, geo-engineering) and the application of the precautionary approach in different fields of research and innovation;
- Assessing the need to complement the European Code of Conduct for Research Integrity with specific guidelines and if relevant propose short documents complementing the Code, focusing on the need to ensure an "inclusive and just transition those leaves no one behind";
- An effective incorporation of the objectives of the "Do No Significant Harm" Principle;
- Developing traditional and online training material (reflecting the guidelines) for students, early career and experienced researchers. The material must be made available on the e-platform Embassy of Good Science. The priorities of the European Digital Education Plan must be taken into account;
- The action should in this context foresee the training of 400-450 Horizon Europe ethics appraisal scheme experts, paying close attention to gender balance, as well as to gender equality and diversity related ethical aspects, and make use of their feedback to improve the trainings.

Overall, the work should be based on existing know how and have a bottom-up approach, involving all relevant stakeholders (e.g., researchers, research funders, policy-makers, publishers, citizens, civil society organisations) through the organisation of participatory events (workshops, consultations, 'town hall" meetings). Every effort should be made to achieve a 45% - or higher- female participation, especially among students, researchers, and ethics experts.

- The activities should propose ways and means to encourage changes in the research culture and promote openness, communication, dialogue and stronger links among stakeholders. This work should involve relevant ethics and integrity networks, such as ENRIO or European networks of (early) career researchers and educators in the field of research ethics and integrity.
In order to improve the impact of the expected output (such as effectiveness of training courses, guidelines, toolboxes, etc.), cooperation with research management offices and ethics officers in Research Performing Organisations is highly recommended. In addition, National Contact Points should be provided with all the materials relevant to support their advisory activities.
Proposals should ensure that the publicly available results from relevant EU funded research projects (e.g., SOP4RI, Integrity, TRUST, Path2Integirty, TechEthos) are taken into account. Budgeted cooperation (including the necessary technical aspects) with Embassy of Good Science should be included.
In order to achieve the expected outcomes, cooperation with at least two participants from Japan, China, the Republic of Korea and/or African countries non-associated to Horizon Europe is required.
Consortia with EU partners or partners from Associated Countries that have not previously collaborated are encouraged to participate.
For all published articles and deliverables produced in the context of the activities, an authorship contribution statement must be added, in accordance with a recognised standardised taxonomy developed for this purpose (e.g., CRediT).
Further Information:
https://ec.europa.eu/info/funding-tenders/opportunities/portal/screen/opportunities/topic-details
/horizon-widera-2023-era-01-11;callCode=null;freeTextSearchKeyword=;matchWholeText=true;typeCodes=1,2,8;stat
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20. /HORIZON EUROPE/ Strengthening the international dimension of ESFRI and/or ERIC research infrastructures, deadline: 09. March 2023 17:00 Brussels time

Project results are expected to contribute to several of the following expected outcomes:
- new or enhanced, effective cooperation of European research infrastructures with key international partners;
- strengthened position of European RIs in the global RI landscape;
- increased opportunities for the development of global research infrastructures;
- increased capacity to address societal challenges with a global dimension;
- reinforced global competitiveness and performance of the European Research Area.
This topic aims at supporting the cooperation of pan-European research infrastructures with their international (non-European) counterparts, and/or at fostering the international engagement of ESFRI and ERIC research infrastructures through their involvement in global research infrastructure initiatives.
Proposals should deal with shared objectives and governance, building on the criteria developed by the Group of Senior Officials on Global Research Infrastructures. Proposals will look in particular at the following:
- the long-term sustainability of joint activities;
- opportunities (access and data sharing) available to European scientists in these research infrastructures;
- ensuring global interoperability and reach;
- reaching international agreements on the reciprocal use, openness or co-financing of infrastructures;
- launching pilot access initiatives;
- exchanging good practices between user communities and managers of research infrastructures as regard for instance harmonisation of tests, standards, reference materials, interoperability and data

handling.

While the main target of this topic is the cooperation between an individual pan-European infrastructure and its international counterparts in one or more third countries, proposals could also involve a set of pan-European infrastructures with their international counterparts if appropriate, in particular when cooperation is necessary for addressing complex phenomena with a global dimension. Proposals should duly justify and explain the EU benefit of any EU contribution requested by non-associated third countries, to allow the assessment of their appropriateness.

Further Information:

https://ec.europa.eu/info/funding-tenders/opportunities/portal/screen/opportunities/topic-details
   /horizon-infra-2023-dev-01-07;callCode=null;freeTextSearchKeyword=;matchWholeText=true;typeCodes=1,2,8;status
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   Code=null;focusAreaCode=null;destinationGroup=null;missionGroup=null;geographicalZonesCode=null;programme
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   tKey=topicSearchTablePageState

21. /HORIZON EUROPE/ Programme level collaboration between national R&I policy-makers, deadline: 09. March 2023 17:00 Brussels time

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

The actions funded under this topic will coordinate national and regional R&I funding programmes by pooling national resources and contributing to the alignment of national research and innovation policies. The expected outcomes:

- Identification of common research and innovation priorities agreed among the participating national and regional R&I programmes, taking into account international developments where relevant and leading to the development of coordinated R&I funding agendas;
- Implementation of multiannual joint calls, resulting in the funding of transnational collaborative R&I projects;
- Implementation of other joint activities supporting technology development, market introduction, regulatory aspects and societal uptake of results;
- Contribution to participating states meeting Global Challenges, including relevant contributions to the SDGs.

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 Member States and Associated Countries and their research and innovation funding programmes has become a cornerstone of the ERA, with annual investment from Member States of more than EUR 800 million per year. More than 250 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 by identifying upfront candidate European co-funded, co-programmed and institutionalised partnerships in the Strategic Plan. The first Strategic Plan also identified 5 EU missions to be supported through Horizon Europe.

Co-funding to R&I partnerships of European relevance is under Horizon Europe limited to European Partnerships identified in the Strategic Plan for Horizon Europe.

The ERA part of Horizon Europe complements this new strategic approach by providing the possibility for Member States, Associated Countries and civil society organisations such as foundations, to maintain existing and establish new collaborations on priorities of their choice, thereby continuing the spirit of the successful ERA-NET scheme, and extending it also to the domain of EU missions.

Successful proposals should align national and regional research funding programmes on agreed priorities that are 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 other joint activities. Applicants should demonstrate clear commitments from participating programmes to pool resources and ensure complementarity between activities and policies with those of the Framework Programme and relevant European Partnerships and EU missions.

Proposals should pool the necessary resources from the participating national (or regional) research programmes as well as, where appropriate, leverage resources 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.

The proposals should also demonstrate potential impact at national, regional and transnational level. The proposals should demonstrate that activities exclude overlaps with on-going actions co-funded by the EU under Horizon 2020 or Horizon Europe.

The actions should envisage a duration appropriate to the ambition and complexity of the proposed topic.

Further Information:

https://ec.europa.eu/info/funding-tenders/opportunities/portal/screen/opportunities/topic-details /horizon-widera-2023-era-01-01;callCode=null;freeTextSearchKeyword=;matchWholeText=true;typeCodes=1,2,8;stat =1,2,8;statusCodes=31094502;programmePeriod=2021%20-%202027;programCcm2Id=43108390;programDivisionC nCode=null;focusAreaCode=null;destinationGroup=null;missionGroup=null;geographicalZonesCode=null;programm programmeDivisionProspect=null;startDateLte=null;startDateGte=null;crossCuttingPriorityCode=null;cpvCode=null; cpvCode=null;performanceOfDelivery=null;sortQuery=startDate;orderBy=asc;onlyTenders=false;topicListKey=topicS stKey=topicSearchTablePageState

22. /HORIZON EUROPE/ Development of new approaches to the macroeconomic modelling of research and innovation, deadline: 09. March 2023 17:00 Brussels time

The successful proposal will improve the integration of R&I within macro-economic modelling, while at the same time bringing fresh light on the role of R&I to tackle current societal challenges, with a particular focus on the European context. Project results are expected to contribute to the following expected outcomes:
- Support research at the knowledge frontier of macroeconomic models;
- Contribute to the development of innovative and interdisciplinary approaches to modelling of Research and Innovation (R&I) and R&I policy in Europe;
- Better integrate R&I activities in macro-economic models, leading to better measurement of their impact and a better understanding of the channels through which research and innovation lead to impact (direct and indirect) in Europe;
- Investigate new approaches to R&I macroeconomic models that link R&I-related drivers to economic, scientific and societal outcomes;
- Improve macro-economic modelling for the evaluation of R&I policy on different outcome variables, at different levels of policy intervention (EU, national, regional);
- Produce a novel macro-economic model able to simulate the economy, including the R&I dimension, linking R&I to sustainable and fair growth;
- Provide the full description of the models, codes and datasets, to allow easy access to forefront modelling ideas to the European scientific community and broader audience.
Existing macroeconomic models still fall short in providing sound ex-ante estimates of the various impacts of R&I. Therefore, the European Commission has engaged in a medium- to long-term agenda to improve the treatment of research and innovation (R&I) in macroeconomic models by supporting and financing cutting edge research on macroeconomic modelling able to attract the best researchers to work and develop new models capable of supporting the rising demand for policy evaluation tools in the EU. This agenda started in 2014 following the Commission Communication "Research and innovation as sources of renewed growth". The Council of the European Union called on the Commission to promote further

research to build the evidence base for R&I policy making and for budgetary decision making, including by further improving the way R&I is accounted for in macro-economic models.

On the one hand, R&I are acknowledged as key engines for long-term growth and societal prosperity by an extensive body of economic literature. On the other hand, there is still need to develop further evidence about the quality, relevance and impact of R&I investments and the role that related policies have in scientific, technological, economic and social development. There is a crucial need for more developed and nuanced tools that would be able to account for the heterogeneity of different economic actors and that would be able to simulate the effects of a wide range of policies along different dimensions relevant for societal wellbeing. In addition, it is important that models are able to distinguish between the innovation process and the adoption / diffusion process.

Against these backdrops, the proposals, building upon the current state of the art existing in the literature, should develop and provide new macro-economic models with R&I, capable to integrate socio-economic challenges.

Further Information:

https://ec.europa.eu/info/funding-tenders/opportunities/portal/screen/opportunities/topic-details /horizon-widera-2023-era-01-04;callCode=null;freeTextSearchKeyword=;matchWholeText=true;typeCodes=1,2,8;stat =1,2,8;statusCodes=31094502;programmePeriod=2021%20-%202027;programCcm2Id=43108390;programDivisionC nCode=null;focusAreaCode=null;destinationGroup=null;missionGroup=null;geographicalZonesCode=null;programm programmeDivisionProspect=null;startDateLte=null;startDateGte=null;crossCuttingPriorityCode=null;cpvCode=null; cpvCode=null;performanceOfDelivery=null;sortQuery=startDate;orderBy=asc;onlyTenders=false;topicListKey=topicS stKey=topicSearchTablePageState

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23. /HORIZON EUROPE/ Exploitation and valorisation of results relevant for the ERA Policy Agenda, deadline: 09. March 2023 17:00 Brussels time

Projects are expected to contribute to the following expected outcomes:
- Boosting the dissemination, valorisation and broad uptake of results stemming from the different ERA Policy Agenda actions;
- Supporting mutual learning between Member States and stakeholders on their implementation of ERA Policy Agenda action;
- Building of an ERA community and branding at national and European level;
- Recommendations for policy-makers and stakeholders on how to best implement institutional changes related to ERA policies.

The ERA Policy Agenda, the 20 actions and their implementation will be supported with a range of actions under the different parts of the Horizon Europe Work Programme, and in particular, under the WIDERA work programme. Many of these actions will produce results that require a broad uptake by Member States, Associated Countries and their stakeholders. At the same time, important actions under Horizon Europe support the transformation and institutional change of universities, research organisations and enterprises. The action will implement a facility to disseminate results widely, facilitate their use, tailor them to the needs of the different communities and build a community of practitioners that support mutual learning and exchange of good practices in institutional change in the spirit of the New ERA. It will furthermore design measures for mutual learning among Member States and stakeholders, with a focus on those ERA Policy Agenda actions where no other configuration support this. It will provide expertise to countries participating in the implementation of an ERA Policy Agenda action to address bottlenecks and increase stakeholder engagement. It will contribute to the building of an ERA community, including, with regular events at European level, and support a coherent approach to communication activities and their branding at national level. This will also allow the consortium to provide recommendations on how the necessary institutional and structural changes can best be achieved, including identifying gaps in methodologies and tools that would help to address these.

The action consists of four parts, all of which should be addressed:
- Design and implement a dissemination and valorisation facility covering the relevant actions of the ERA Policy Agenda;
- Support the coordination, sharing of information, mutual learning and awareness raising, across Member States and stakeholders, with the help of meetings, workshops, working groups and other tools to exchange experience, identify, monitor and showcase case studies, including good practices and lessons learnt, with a focus on those ERA Policy Agenda actions where no other configuration support this;
- Community building, with regular events at European level, and support to coherent communication on ERA Policies, outcomes and results at national and European level;
- Design a process to develop and share guidance and recommendations for policy-makers and stakeholder organisations, across the European Union.
In order to support the achievement of the ERA objectives across the EU, the consortium should demonstrate that it covers the Member States in a geographically comprehensive way, as well as the capacity to provide or access expertise related to all relevant ERA Policy Agenda actions. Proposals should describe how they intend to collaborate closely with the Commission services, and build on the ERA Policy Platform in order to avoid additional IT developments.
The actions should envisage a duration appropriate to the ambition and complexity of the proposed topic, but not exceed 36 months.
Further Information:
https://ec.europa.eu/info/funding-tenders/opportunities/portal/screen/opportunities/topic-details
   /horizon-widera-2023-era-01-05;callCode=null;freeTextSearchKeyword=;matchWholeText=true;typeCodes=1,2,8;stat
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24. /HORIZON EUROPE/ Build on the science cluster approach to ensure the uptake of EOSC by research infrastructures and research communities, deadline: 09. March 2023 17:00 Brussels time

Project results are expected to contribute to all the following expected outcomes:
- Support all researcher communities across Europe to contribute to and benefit from a user-oriented EOSC;
- Populate EOSC Exchange with FAIR data, horizontal services and thematic services of relevance to users in several scientific domains and beyond;
- Develop and demonstrate through cascading grants concrete scientific benefits of open science and FAIR practices through cross-disciplinary use cases;
- Increased alignment of operation of ESFRI and international RIs at the subdomain, domain and interdisciplinary levels in function of the progressive deployment of the EOSC Core, EOSC Exchange and EOSC sustainability models;
- Provide feedback and requirements for the evolution of the EOSC ecosystem.
This topic aims to extend the level of cross-domain collaboration and EOSC alignment initiated in Horizon 2020 with the science cluster projects. It also capitalises on the experience gained by these cluster projects in enabling open science practices, FAIR implementation and managing open calls for disciplinary and multi-disciplinary science projects to involve smaller or less structured communities with less experience in open science, and to support communities lacking relevant competence centres.
Proposals should cover the following two activities:

- Consolidate common EOSC approaches between the RI communities involved in the five science clusters, help to sustain composable EOSC-onboarded services from and across RIs participating in these clusters and support community-based competence centres for continued EOSC-alignment and extended outreach towards new or underrepresented user communities.

This activity should contribute to firmly install the connection to the EOSC ecosystem (including the EOSC onboarding of digital resources), the implementation of open science practices and the management of FAIR research digital objects into the core operation of ESFRI projects and landmarks and other relevant world class research infrastructures with a European dimension. The activity should increase the use and impact of RI resources especially through increased customisation and composability of services, higher amount of FAIR and open data for reuse and strengthened exploitation of the EOSC-Exchange.

Through pilots, the activity should test models by which services intended for users of one infrastructure are made available cross-border to a wider audience via the EOSC Exchange, as well as financial models for cross-RI service provision through the EOSC.

This activity should also further develop and extend existing networks of competence centres on FAIR and open practices and EOSC resources provisioning, enhancing relevant support to all research communities. Focus should be put on aligning and networking those competence centres to also support and train less-engaged, less-structured communities. The activity should establish a mechanism to collect operational needs coming from the user communities and to interact with future operator(s) of the EOSC platform.

- Demonstrate and pilot the use of EOSC resources by multiple research communities through cross-RI and/or cross-domain open science projects and services.

This activity aims to engage with multiple research communities (academic and industry) to address multi-disciplinary questions of high societal relevance and to accelerate their uptake of RI and EOSC resources (data, services, policies, interoperability framework). Targeted user communities for these open science projects and services should extend beyond the RI communities involved in the H2020 science clusters. Special attention should be put on involving user group(s) also from outside the H2020 INFRAEOSC community including - when relevant - citizen scientists and "the long tail" of science. Proposals should demonstrate how the project plans to reach out to multiple scientific communities. The role of University Associations or Learned Societies to trigger community engagement in this activity should be explored.

This activity should be implemented through open calls for cross-RI and/or cross-domain science projects and services through a cascading grant mechanism. Given that the financial support to third parties is a primary aim of the action, at least EUR 18 million of the EU contribution for this topic should be used in this scope. The activity should build on the experience already gained by the science clusters in calling for expressions of interests, implementing open calls and carrying out science projects. The financial support to third parties related to these open calls should be sized between EUR 100 000 and 250 000 for a duration of 12 to 24 months. The open calls should encourage, where applicable cross-RI and/or cross-domain collaborations. They should foresee the use of data and services already on-boarded to the EOSC platform and/or bring new research digital objects and RI services to the EOSC Exchange. The proposals should support the FAIR principles and take up relevant FAIR metrics and EOSC policies. The open calls under this activity should respect the conditions laid out in Section B of the General Annexes, including transparency, equal treatment, conflict of interest and confidentiality. Research infrastructures which are beneficiaries/affiliated entities of the consortium awarded may exceptionally also be recipients of financial support to third parties. Proposals must explain how they will ensure that such beneficiaries/affiliated entities are not involved in the selection procedure of the calls, in order to avoid conflicts of interest and maintain confidentiality.

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 relevant actions awarded under the topics of the HORIZON-INFRA-2021-SERV-01 call, and under the topics HORIZON-INFRA-2022-EOSC-01-06 and HORIZON-INFRA-2022-EOSC-01-03. To this extent, proposals should provide for dedicated activities and earmark appropriate resources.

In this topic the integration of the gender dimension (sex and gender analysis) in research and innovation content is not a mandatory requirement.
Further Information:
https://ec.europa.eu/info/funding-tenders/opportunities/portal/screen/opportunities/topic-details
   /horizon-infra-2023-eosc-01-01;callCode=null;freeTextSearchKeyword=;matchWholeText=true;typeCodes=1,2,8;statu
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25. /HORIZON EUROPE/ Programme level collaboration between national R&I policy-makers, deadline: 09. March 2023 17:00 Brussels time

Projects are expected to contribute to all of the following expected outcomes:
The actions funded under this topic will coordinate national and regional R&I funding programmes by pooling national resources and contributing to the alignment of national research and innovation policies.
The expected outcomes:
- Identification of common research and innovation priorities agreed among the participating national and regional R&I programmes, taking into account international developments where relevant and leading to the development of coordinated R&I funding agendas;
- Implementation of multiannual joint calls, resulting in the funding of transnational collaborative R&I projects;
- Implementation of other joint activities supporting technology development, market introduction, regulatory aspects and societal uptake of results;
- Contribution to participating states meeting Global Challenges, including relevant contributions to the SDGs.
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 Member States and Associated Countries and their research and innovation funding programmes has become a cornerstone of the ERA, with annual investment from Member States of more than EUR 800 million per year. More than 250 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 by identifying upfront candidate European co-funded, co-programmed and institutionalised partnerships in the Strategic Plan. The first Strategic Plan also identified 5 EU missions to be supported through Horizon Europe.
Co-funding to R&I partnerships of European relevance is under Horizon Europe limited to European Partnerships identified in the Strategic Plan for Horizon Europe.
The ERA part of Horizon Europe complements this new strategic approach by providing the possibility for Member States, Associated Countries and civil society organisations such as foundations, to maintain existing and establish new collaborations on priorities of their choice, thereby continuing the spirit of the successful ERA-NET scheme, and extending it also to the domain of EU missions.
Successful proposals should align national and regional research funding programmes on agreed priorities that are 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 other joint activities. Applicants should demonstrate clear commitments from participating programmes to pool resources and ensure complementarity between activities and policies with those of the Framework Programme and relevant European Partnerships and EU missions.

Proposals should pool the necessary resources from the participating national (or regional) research programmes as well as, where appropriate, leverage resources 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.

The proposals should also demonstrate potential impact at national, regional and transnational level. The proposals should demonstrate that activities exclude overlaps with on-going actions co-funded by the EU under Horizon 2020 or Horizon Europe.

The actions should envisage a duration appropriate to the ambition and complexity of the proposed topic.

Further Information:

https://ec.europa.eu/info/funding-tenders/opportunities/portal/screen/opportunities/topic-details
  /horizon-widera-2023-era-01-01;callCode=null;freeTextSearchKeyword=;matchWholeText=true;typeCodes=1,2,8;stat
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    nCode=null;focusAreaCode=null;destinationGroup=null;missionGroup=null;geographicalZonesCode=null;programm
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    cpvCode=null;performanceOfDelivery=null;sortQuery=startDate;orderBy=asc;onlyTenders=false;topicListKey=topicS
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26. /HORIZON EUROPE/ Planning, tracking, and assessing scientific knowledge production, deadline: 09. March 2023 17:00 Brussels time

Project results are expected to contribute to all the following expected outcomes:
- Data Management Plans (DMPs) are standardised across disciplines to the extent possible. Their machine-actionability is supported by their integration in pertinent automated workflows, and by a pervasive and comprehensive use of Persistent Identifiers for a wide array of digital objects (e.g., publications, data, software, workflows, storage, organisations, projects, funders, services, researchers, facilities, companies, etc.) to exploit the underlying interconnection.
- The evaluation of DMPs (assessing their completeness and adequacy) is increasingly automated relying on, for example, semantic web technologies, and building on existing and new evaluation metrics.
- Scientific Knowledge Graphs (SKGs) are widely adopted to enable a transparent research ecosystem, promoting provenance tracking and facilitating an increasing consideration to diverse research outputs in research assessment.
- Policies, models, licencing frameworks, workflows, and tools enable a cross-country and cross-discipline collaborative implementation of metrics to assess and improve the FAIRness of a wide range of digital objects beyond publications and data, including software, workflows, etc.

Scientific knowledge production rapidly increases, and coherent methodologies, workflows and tools are needed to carefully plan research activity, track its impact and contribution, and assess its compliance with the FAIR principles to ensure a maximised gain from previous efforts.

Data Management Plans (DMPs) have become essential companions to the research practice to ensure adequate planning and anticipate and overcome hurdles linked, for example, to the production and storage of data. However, DMPs are heterogeneous and limited efforts have taken place to promote their machine-actionability or to automatise their evaluation.

Science Knowledge Graphs (SKGs) are essential and flexible tools to monitor and track events of science linked to provenance, publishing, citation, data processing, data and software usage, service consumption. SKGs provide an underlying interconnected graph of science events that DMPs can link to, but their application goes far beyond this, and related impact services can allow SKGs to visualise the research activity, through open science indicators, bibliometrics, quality, performance, impact, popularity, etc. Evolving practices on the assessment of research give increasing value to open science contributions, to the diversity of research activities and outputs beyond publications and data, and to their potential

impact. A wide range of digital objects beyond publications and data, including preprints, software, code, workflows, and processes, such as open peer-reviews, require an enhanced traceability. In addition, coherent and comprehensive metrics are required to assess and improve the FAIRness of a wide range of digital objects.

Proposals should address all the following activities, aimed at improving:
- Planning of research activities
- Contribute to the standardisation and homogenisation of domain-agnostic elements in DMPs, building on previous efforts (e.g., Science Europe guidelines, HE DMP template, etc.), develop guidance on how DMPs can be made FAIR (including through deposition, publication, etc.) and seek integration in pertinent automated workflows;
- Ensure the pervasive and comprehensive use of PIDs for preprints, publications, open peer-reviews, data, software, workflows, storage, organisations, projects, funders, services, researchers, facilities, companies, patents, etc., and their interconnection with DMP standards;
- Develop use cases and proof of concept instances of machine-actionability of DMPs, in alignment with developments of Scientific Knowledge Graphs (SKGs) to maximise the interconnection between the different elements in the research ecosystem;
- Automate, to the extent possible, the evaluation of DMPs (assessing their completeness and adequacy) through, e.g., semantic web technologies, building on new and existing DMP evaluation metrics (e.g., Science Europe evaluation rubric);
- Tracking research contributions and their impact
- Promote the adoption of interoperable SKGs at international, national, regional, cross-border, cross-discipline level. Foster the interoperability across SKGs by supporting common models including agreed metadata formats, protocols to enhance the traceability of digital objects and enable the use of SKGs for research assessment metrics;
- Assessing compliance with the FAIR principles
- Extend FAIR metrics guidance, tools, and models, (e.g., FAIR Data Maturity Model) to meet the needs of thematic domains, and to cover a wide range of digital research objects;
- Define a trusted governance to measure successful compliance with metrics/tests and identify mechanisms by which adherence to trusted community-specific standards (e.g., minimal information requirements, representation schemas, terminologies, etc.) can be objectively and transparently measured. Encourage community endorsement of the mechanisms by which FAIRness of digital objects is measured;
- Define minimum levels of FAIRness for a wide spectrum of digital objects;
- Explore the relevant boundary conditions, mechanisms, and requirements through which services, processes and activities can be FAIR-inducing, and lead to FAIR-by-design digital objects and investigate their impact in mainstreaming FAIR across the research practice.

Proposals should acknowledge, build upon, and, where relevant, collaborate with, Working and Interest Groups (WG, IG) of the Research Data Alliance (e.g., FAIR Data Maturity Model IG, Data Management Plan WG, etc.).

Concerning the activities on "Tracking research contributions and their impact", proposals should establish strong links and effective collaboration with projects funded under the topic HORIZON-INFRA-2021-EOSC-01-04, that will develop a framework for interlinking and managing community-based SKGs and related services.

Additionally, complementarities should be sought with the resulting project from the topic HORIZON-INFRA-2021-EOSC-01-05, and with the ESFRI clusters, especially concerning the implementation of metrics to measure the FAIRness of digital objects. Synergies should be exploited with the resulting projects from the topic HORIZON-INFRA-2022-EOSC-01-01 in what regards the development of SKGs, which should build on the information provided through the services and tools that will gather and monitor information and data on the use and uptake of research outputs, and of open science practices across borders and disciplines. Synergies and collaboration should also be developed with the resulting projects from topics HORIZON-WIDERA-2021-ERA-01-45 and HORIZON-WIDERA-2023-ERA-01-11 that are expected to pilot and implement new metrics for rewarding open science practices and for the broader 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 this topic the integration of the gender dimension (sex and gender analysis) in research and innovation content is not a mandatory requirement.

Further Information:

https://ec.europa.eu/info/funding-tenders/opportunities/portal/screen/opportunities/topic-details
   /horizon-infra-2023-eosc-01-03;callCode=null;freeTextSearchKeyword=;matchWholeText=true;typeCodes=1,2,8;statu
   =1,2,8;statusCodes=31094502;programmePeriod=2021%20-%202027;programCcm2Id=43108390;programDivision
   nCode=null;focusAreaCode=null;destinationGroup=null;missionGroup=null;geographicalZonesCode=null;programm
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27. /HORIZON EUROPE/ Preparatory phase of new ESFRI research infrastructure projects, deadline: 09. March 2023 17:00 Brussels time

Project results are expected to contribute to several of the following expected outcomes:
- structuring effect on ERA;
- the scientific excellence of the European landscape of sustainable RI enhances problem-solving capacities to address challenges in science, industry and society;
- solid ground for the decision making on new research infrastructures is available to MS/ACs, their funding bodies and other relevant stakeholders (e.g.: international organisations, third countries; foundations; etc.);
- long-term perspective for RI investments;
- consistent and well-functioning European research infrastructures ecosystem through the development of synergies and complementarities between new and existing research infrastructures, including technology infrastructures and infrastructures financed by ERDF.

This topic supports the preparatory phase of new ESFRI research infrastructure projects identified in the 2021 update of the ESFRI Roadmap, which have never been supported before for their preparatory phase. These ESFRI projects have been selected for the excellence of their scientific case and for their strategic importance for the European Research Area and the structuring of the European research infrastructure ecosystem.

Proposal consortia should involve all the stakeholders necessary to move the project forward, to take the decisions, and to make financial commitments, before construction can start (including, but not limited to, national/regional ministries/governments, research councils or funding agencies from the countries that have already declared their commitment in the application to ESFRI). Operators of research facilities, research centres, universities, and industry may also be involved whenever appropriate.

Proposals for research infrastructure preparatory phases will tackle all key questions concerning legal, financial and technical issues leading to the establishment of a new research infrastructure and ensuring commitment of Member States/Associated Countries to their long-term operation and use in all fields of science.

In this respect, proposals should address all following aspects:
- the development of legal and financial frameworks/plans relating to the setting-up, construction and/or integration of national resources, operation and decommissioning of the research infrastructure as well as its Governance structure; the complementarities between national and EU instruments (such as the European Structural and Investment Funds or the European Investment Bank) and/or innovative financing solutions (e.g.: pre-commercial procurement; public-private partnerships);
- the preparation of legal and financial agreements, including site, governance, internal rules, financing of the new research infrastructures. These are deliverables that should be finalised before the end of the

project (e.g.: through a Memorandum of Understanding; a 'signature-ready' document for the setting-up and the actual implementation of the research infrastructure);
- the establishment of plans for logistics and human resources management, in relation to the construction/integration and future operation, including RI service provision as well as for an efficient data curation and preservation and for the provision of access to data collected or produced by the future infrastructure, in line with the FAIR principles;
- the technical challenges concerning the joint development, transfer of knowledge and implementation of key RI technologies and the completion of the final technical design of the infrastructure;
- the development of plans for the provision of RI services to identified scientific user communities;
- the relevance of the RI for science and society, including its socio-economic impacts at local/regional level and links with the smart specialisation strategies at regional level.
Environmental (including climate-related) impacts as well as the optimisation of resource and energy use should be integrated in the Preparatory phase of new research infrastructures.
Proposals should explain any synergies and complementarities with previous or current EU grants.
Further Information:

https://ec.europa.eu/info/funding-tenders/opportunities/portal/screen/opportunities/topic-details
    /horizon-infra-2023-dev-01-08;callCode=null;freeTextSearchKeyword=;matchWholeText=true;typeCodes=1,2,8;status
    1,2,8;statusCodes=31094502;programmePeriod=2021%20-%202027;programCcm2Id=43108390;programDivisionC
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28. /HORIZON EUROPE/ Trusted environments for sensitive data management in EOSC, deadline: 09. March 2023 17:00 Brussels time

Project results are expected to contribute to all the following expected outcomes:
- Expansion of EOSC's access to resources provided by public authorities, including national agencies, in highly sensitive areas, such as the health sector, governmental statistics or geo-spatial applications, that ensures the opening of these valuable data sets for novel research through a standard set of methods able to effectively enable sensitive data sharing/processing/analysis;
- Emergence of trusted environments for management and sharing of sensitive data in order to facilitate new ways of using sensitive data sets;
- Demonstration that FAIR data workflows with sensitive data are securely possible and can benefit both the data providers and the wider science community.
The data sets of public authorities are often very sensitive and therefore restricted for access. Sensitive data is not only offered by public authorities, but also commercial entities. It is vital for EOSC to enable its users to engage with such sensitive data sources.
Safe rooms, safe pods and secure remote access environments all present challenges to physical and logical security even within a single discipline, whilst transdisciplinary norms and transnational legislation present additional challenges. The providers of the sensitive data need environments with high standards of security and privacy guarantees that these datasets require. At the same time the solutions should enable easy access for users and offer practical solutions for working at large scale of data sources, computational resources, and users.
The aim of this topic is to develop and implement a robust set of methods, practices and environments to effectively enable sensible data sharing/processing. They should be general enough to be applicable in a certain country/region and in cross-border scenarios. Proposals should take into account the existing and forthcoming work and policies in the area (e.g. Medical Informatics Platform, European Health Data Space) but also engage with additional challenges and domains, for example where governmental statistical data or location and time sensitive data are required for analytics, machine learning and/or artificial

intelligence.

Proposals are expected to cover the following activities:

- Explore the possibility of creating specific Public Authorities' Government Zones in EOSC, providing tailored access control and engaging closely with public authorities to establish safe and secure access to their data for FAIR data processing.

The proposed work should include:

- exploring possible solutions to move all or parts of a workflow on sensitive data to a secure data storage and to allow users to receive only aggregated and desensitised results;
- support for publishing anonymised data into repositories that are compliant with the EOSC Interoperability Framework;
- exploration and demonstration of possible solutions and approaches for data anonymization, including (subsets of) sensitive metadata;
- exploration and demonstration of possible solutions and approaches, such as blockchain, for access control management and maintenance of a secure and decentralized record of transactions of trusted and non-trusted parties;
- data processing workflows that keep sensitive data encrypted on disk and memory, including assessment of the cost of the encryption;
- investigation on data protection legislations on national and European level on the impact of using sensitive data in cloud hosted workflows across computer centres in different countries/regions;
- explore and demonstrate compliance with federated architecture solutions.

To ensure complementarity of outcomes, proposals are expected to demonstrate how they intend to cooperate and align with activities of the EOSC Partnership. They should also demonstrate how they will coordinate with other relevant EOSC projects and provide concrete plans and sustainable solutions on how to integrate with the operational EOSC to benefit future users. The proposals should engage with public authorities, and if appropriate also private sector, to showcase the benefit of this data-sharing for their own research and data analytics. The proposals should include data from more than one sector to demonstrate the general applicability of the proposed solutions.

The proposed work should demonstrate how the impact of developed solutions on data governance and stewardship is documented. It should highlight good practices for providing sensitive data in a cloud environment and provide solutions on how a high-level of security can be maintained in a fast changing (cloud) technology landscape. Appropriate handling of sensitive data through third-party security audits and approaches and standards to record access to sensitive data for monitoring purposes should be considered. Links to related projects from relevant topics, e.g., HORIZON-HLTH-2022-IND-13-02 should be established.

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

Further Information:

https://ec.europa.eu/info/funding-tenders/opportunities/portal/screen/opportunities/topic-details
/horizon-infra-2023-eosc-01-06;callCode=null;freeTextSearchKeyword=;matchWholeText=true;typeCodes=1,2,8;statu
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29. /HORIZON EUROPE/ Early phase implementation of ESFRI Projects which entered the ESFRI Roadmap in 2018, deadline: 09. March 2023 17:00 Brussels time

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

- enhanced ERA excellence and attractiveness through the availability of additional capacities;
- consistent and well-structured research infrastructures ecosystem in Europe;
- 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, including technology infrastructures and infrastructures financed by ERDF.

This topic targets the research infrastructure projects which entered the ESFRI Roadmap in 2018, 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. 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, also considering additional difficulties linked to the COVID-19 pandemic and the current energy crisis. 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 possible open access to data); development of access policies and users' strategies; consolidation of the international dimension; consolidate their service offer, assessing possible expansion to new user communities/new needs; addressing staff and procurement related issues. Proposals should focus on the activities addressing the identified bottlenecks.

Proposal consortia 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.

Further Information:

https://ec.europa.eu/info/funding-tenders/opportunities/portal/screen/opportunities/topic-details
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30. /HORIZON EUROPE/ Consolidation of the RI landscape - development of complementarities, synergies and/or integration between a set of pan- European research infrastructures, deadline: 09. March 2023 17:00 Brussels time

Project results are expected to contribute to several of the following expected outcomes:
- better structured, integrated and strengthened European research infrastructure landscape;
- solid concepts and/or comprehensive plans for the integrated research infrastructures, to support decision making at national and European level, leading to increased sustainability, operational and financial efficiency;
- increased synergies between research infrastructures;
- increased capacity to address EU policy priorities and/or support EU industry;

- reinforced global competitiveness of the European Research Area.
This topic targets the consolidation and improved functioning of the EU RI landscape through the support to the development of complementarities, synergies and/or integration between a set (two or more) of ESFRI Landmarks and/or other European Research Infrastructure Consortia (ERICs).
Proposals could address either a tighter operational integration between infrastructures, or instead the feasibility and the planning of a merging between infrastructures, which could be targeted in future by a specific topic. The rationale and the potential benefits of the planned consolidation action should be clearly spelled out in the proposals.
- When addressing an operational integration, projects will develop complementarities and/or synergies between infrastructures, at thematic and/or cross-disciplinary level, to optimise the functioning of the RI landscape. The development of complementarities (e.g., through service level agreements for the sharing of horizontal/common services/tools, including external ones) should lead to increased efficiency and prevent unnecessary duplications. Synergies should be exploited to address complex research challenges and EU priorities and should be implemented through cooperation mechanisms ensuring sustainable and long-term integration of services and resources (e.g., common horizontal services, joint scientific services). The needed joint staff skill development, including exchange programmes among the participating RIs, could also be supported. The expected EU contribution for this first option should range between EUR 2 and 5 million.
- When addressing a merging between infrastructures, proposals should provide evidence that the project will effectively involve the funders of the different infrastructures, develop the concept of the merged infrastructure in all its dimensions, including governance, legal form and operation, and define the operational steps and the financial forecast for the actual merging process. The expected EU contribution for this second option should be around EUR 2 million.
Proposals should explain any synergies and complementarities with previous or current EU grants.
Further Information:
https://ec.europa.eu/info/funding-tenders/opportunities/portal/screen/opportunities/topic-details
/horizon-infra-2023-dev-01-04;callCode=null;freeTextSearchKeyword=;matchWholeText=true;typeCodes=1,2,8;status
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31. /HORIZON EUROPE/ Strengthen the bilateral cooperation on research infrastructures with Latin America, deadline: 09. March 2023 17:00 Brussels time

Project results are expected to contribute to several of the following expected outcomes:
- contribution to the EU-CELAC Strategic roadmap, in particular its 'Research Infrastructures' pillar;
- strengthening EU-LAC bi-regional scientific collaboration;
- enhanced EU-LAC cooperation on research infrastructures in strategic areas;
- enhanced research capacities in the LAC region and in the EU.
Actions under this topic, in line with the EU-CELAC SOM strategic approach, will build on the outputs of the EU-CELAC Research Infrastructure Working Group, and will address one of the two following objectives:
Cooperation in strategic areas:
Proposals should:
- Support the rollout of bi-regional cooperation in one or more of the priority areas identified by the EU-CELAC Research Infrastructure Working Group through the Horizon 2020 grant EU-LAC RESINFRA (energy, health, biodiversity and climate change, food security and information and communication technologies);

- Implement specific actions aimed at enhancing RI performance and impact in both regions, such as joint initiatives in management and staff development, developing new services (in particular remote access), sharing data or supporting reciprocal access. Activities should take into account the Sustainability Plan developed by the EU-CELAC Research Infrastructure Working Group through the grant EU-LAC RESINFRA. Proposals should focus in particular on collaboration agreements in the long term that would remain open to potential new participants in the LAC region.

For proposals with the objective 'cooperation in strategic areas' the Commission estimates that an EU contribution of between EUR 1.00 and 1.50 million would allow these outcomes to be addressed appropriately.

Policy coordination:

Proposals should:

- Monitor the development of EU-LAC bi-regional cooperation projects;
- Identify future cooperation priorities based on the respective road-mapping exercises;
- Foster the exchange of best practices between the EU and LAC on issues of common strategic relevance such as regional road-mapping processes, research infrastructure management, RI funding along the life-cycle, sharing of data as well as co-development of research and innovation capacity. This will be done through the organization of dedicated workshops and meetings between relevant communities in both regions (research infrastructures, ministries, funding agencies), through study visits or bi-regional staff exchanges, or through dedicated training programmes;
- Identify remaining bottlenecks to research infrastructures cooperation between the two regions, stimulate the development of favourable framework conditions and develop specific initiatives involving research infrastructures;
- Support the development of RI staff by stimulating the establishment of shared staff exchange and training programmes between EU and CELAC (with attention to female and young researchers).

For proposals with the objective 'policy coordination', the Commission estimates that an EU contribution of around 0.75 million would allow these outcomes to be addressed appropriately.

Selected actions under both objectives will be expected to report on their progress to the EU-CELAC Research Infrastructures Working Group.

Further Information:

https://ec.europa.eu/info/funding-tenders/opportunities/portal/screen/opportunities/topic-details
   /horizon-infra-2023-dev-01-06;callCode=null;freeTextSearchKeyword=;matchWholeText=true;typeCodes=1,2,8;status
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32. /Helmholtz Stiftung/ Helmholtz Young Investigator Groups, deadline: 28. April 2023

The Helmholtz Young Investigator Groups program aims to win the best international and national recognised researchers (2 to 6 years of academic age) for a first leadership position in science. It offers Young Investigator Group leaders the opportunity to establish their own independent research group at a Helmholtz Center in cooperation with a partner university. As a Young Investigator Group leader, they can access the research infrastructure, grow to their full potential as a leader in science as well as strengthen and further develop their networks in the scientific community.

The focus of the group must be of relevance to a Helmholtz research program. Young Investigator Group leaders collaborate closely with a partner university to establish research cooperation in areas of joint interest. In particular, the cooperation with the partner university allows them to gain experience in teaching and PhD supervision. Further qualification entails a structured leadership training at the Helmholtz Leadership Academy. As a consequence of a positive evaluation, the results of which must be

available at the end of the fourth year of funding, Young Investigator Group leaders are granted a permanent position at the Helmholtz Center.

Funding will be granted for up to nine Helmholtz Young Investigator Groups working in the research fields of Energy, Earth and Environment, Health, Information, Matter, and Aeronautics, Space, and Transport.

The funding provided by the Initiative and Networking Fund (INF) amounts to 150,000 Euros maximum per annum. The Helmholtz Center (and the partner university if applicable) are expected to provide co-funding with an equivalent of 150,000 Euros minimum. Thus, Young Investigator Groups receive a minimum of 300,000 Euros a year for a five-year period. The funding covers costs for:

- the group leader position, normally at E 14/15 TVöD (collective agreement 14/15 for civil service employees),
- scientific and/or technical staff (normally three or four),
- expenses for materials, travel, and investments.

The Helmholtz Association supports Young Investigator Group leaders who experience unavoidable downtimes during the funding. Group leaders who take parental or care leave, become severely ill or experience other plausible forms of unavoidable scientific downtime can prolong their funding period to a maximum of six years.

The Helmholtz Association aims to win outstanding postdoctoral researchers to establish their own Young Investigator Group at a Helmholtz Center. Helmholtz looks for candidates who have demonstrated exceptional scientific excellence and show the potential to take up a leadership position in science. Women scientists are particularly encouraged to apply.

Further Information:

https://www.helmholtz.de/forschung/aktuelle-ausschreibungen/ausschreibung/helmholtz-nachwuchsg
  ruppen-ausschreibung-2021/

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33. /Sonstige/ Contact Research Funding Advice of the Otto von Guericke University Magdeburg

For questions about funding opportunities, specific calls for proposals, help with submitting applications and project support, please contact the department for Research Funding Advice/EU-University Network of Otto von Guericke University Magdeburg.

Information on current events, funding structures and contact online at:

https://www.ovgu.de/en/ContactResearchFundingAdvice
https://www.euhochschulnetz-sachsen-anhalt.de/en/

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