

Roadmapping Distributed Research Infrastructures in Europe

Krakow, June 9 – 10

Horizon Europe update

N J Mason

Horizon Europe update

Horizon Europe Work Programme 2025

Research Infrastructures

Horizon Europe update

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

Opened May 6

Closing date September 18

opportunities for collaboration

HORIZON-INFRA-2025-01-DEV-01:

- Training and up-skilling of research infrastructures technical staff
- Budget 10.00 per project 1.00 to 1.50 8 projects

Expected Outcome

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

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

HORIZON-INFRA-2025-01-DEV-01:

Individual proposals should focus on one specific domain (or sub-domain for the largest ones) as defined by ESFRI 1. Data, Computing and Digital Research Infrastructures; 2. Energy; 3. Environment; 4. Health & Food; 5. Physical Sciences and Engineering; 6. Social Sciences & Humanities.

but should allocate efforts to contribute to gathering programmes under an overarching training service or entry point across domains to facilitate correlation between training supply and demand and to harmonise and optimise the training services offered.

This requires dedicated activities for collaboration with other projects under this topic and, where appropriate, common entry portal or cross-references among portals.

Proposals should explicitly state which domain (and sub-domain, where applicable) they are addressing. Should include at least one ESFRI Landmark or European Research Infrastructure Consortium (ERIC) as beneficiary. Considering past or ongoing actions identifying training needs is encouraged as well as exploring collaboration with relevant training projects e.g. Marie Skłodowska-Curie Actions with a research infrastructure dimension.

HORIZON-INFRA-2025-01-DEV-01:

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

HORIZON-INFRA-2025-01-DEV-02:

- Early phase implementation of ESFRI Projects that entered the ESFRI Roadmap in 2021
- EBRAINS, SLICES, SoBigData++, MARINERG-I, EIRENE RI, ET, EuPRAXIA, GGP, GUIDE, OPERAS, RESILIENCE.
- Budget EUR 16.50 million. 11 projects

HORIZON-INFRA-2025-01-DEV-03:

- Consolidation of the Research Infrastructure landscape – Individual support for evolution, long term sustainability and emerging needs of pan-European research infrastructures
- Budget EUR 30 million. 8 projects
- Given the funding rate, proposals should ensure a minimum adequate backing by the beneficiaries, who should provide the remaining share for the activities covered by the Grant Agreement and foster the sustainability of the ESFRI Landmark or ERIC.

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

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

HORIZON-INFRA-2025-01-DEV-05:

- Preparatory actions exploring future frameworks for research infrastructures investment plans and funding streams, for integrated and sustained scheme for access and for joint technology development.
- Budget EUR 4.50 million. Number of projects 3

HORIZON-INFRA-2025-01-DEV-05:

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

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

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

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

- Proposal for a new EU access scheme addressed to Research Infrastructure stakeholders (research infrastructures funders, research infrastructures managers, research infrastructures user communities), ensuring effective, flexible and seamless access to world-class scientific services and resources in all science and technology fields, accommodating the diverse nature of research infrastructures and their evolving needs, and overcoming the and disruptive effects of an approach based on short-term projects.
- Analysis of how research infrastructures user communities, including from Widening countries, will benefit from a new EU access scheme that enable wider, simplified and more efficient access so as to boost breakthrough and leading-edge research.
- Better understanding by research infrastructure stakeholders of the governance options, funding and implementation aspects of a future access scheme.

Area 3: Framework for joint research infrastructure technology developments

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

INFRAEOSC - Enabling an operational, open and FAIR EOSC ecosystem

- Destination HORIZON-INFRA-2025-01-EOSC-01: EOSC Nodes with federating capabilities for the EOSC Federation
- HORIZON-INFRA-2025-01-EOSC-02: FAIR Integration for Enhanced Research Data in the EOSC ecosystem and beyond
- HORIZON-INFRA-2025-01-EOSC-03: Advancing AI-readiness and Machine-Actionability in the EOSC Ecosystem
- HORIZON-INFRA-2025-01-EOSC-04: Data stewards, skills and training for Open Science and FAIR practices
- HORIZON-INFRA-2025-01-EOSC-05: Using Generative AI (GenAI4EU) for Scientific Research via EOSC

Destination INFRASERV

- Research infrastructures services to support health research, accelerate the green transition and the digital transformation, and advance frontier knowledge

Destination INFRA SERV

- HORIZON-INFRA-2025-01-SERV-01: Research infrastructure services to enable R&I addressing main challenges and EU priorities related to the health domain
- HORIZON-INFRA-2025-01-SERV-02: Research infrastructure services to enable R&I addressing main challenges and EU priorities
- HORIZON-INFRA-2025-01-SERV-03: Research infrastructure services advancing frontier knowledge
- HORIZON-INFRA-2025-01-SERV-04: Research infrastructure services advancing frontier knowledge (bottom-up)

Destination INFRA SERV

- HORIZON-INFRA-2025-01-SERV-02: Research infrastructure services to enable R&I addressing main challenges and EU priorities
- Area 1: research infrastructure services for advanced biotechnology and biomanufacturing:
- Area 2: research infrastructure services for access to novel radionuclides and facilities:
- Area 3: research infrastructure services to improve the understanding and prediction of future climate changes and their impact:
- Area 4: research infrastructure services for new aviation fuels and combustion technologies

Destination INFRA SERV

- HORIZON-INFRA-2025-01-SERV-03: Research infrastructure services advancing frontier knowledge
- Area 1: Environment: atmospheric chemistry and dynamics
- Area 2: Physical sciences and engineering: hadron physics.

Destination INFRA SERV

- HORIZON-INFRA-2025-01-SERV-04: Research infrastructure services advancing frontier knowledge (bottom-up)
- Budget EUR 20.00 million.. Projects 4
- **Excluding the following domains/sub-domains:** Environment/Biosphere: terrestrial biodiversity and ecosystems, including forest; Physical sciences and engineering/Astronomy and Astroparticle physics; Arts and Humanities; Environment / atmospheric chemistry and dynamics; Physical sciences and engineering:/ particle and nuclear physics.
- Proposals should include at least one ESFRI Landmark⁷⁶ or European Research Infrastructure Consortium (ERIC) as beneficiary.

HORIZON-INFRA-2025-01-SERV-04:

Outcome

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

HORIZON-INFRA-2025-01-SERV-04:

Scope

Providing trans-national access (on-site or remote) and/or virtual access to integrated and customised research infrastructure services for curiosity-driven research while fostering the sustainability of the access scheme. Training is allowed 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.

Proposals are expected to address one domain and must explicitly state which domain (and sub-domain if appropriate)

HORIZON-INFRA-2025-01-SERV-04:

Scope

The main goal of this topic is access provision to existing services: this should be clearly reflected by the proposed activities and the allocated resources.

The improvement and optimisation of the offered services and the development of new services, relevant to specific scientific challenges in the identified domains, can also be supported, including joint/crossresearch infrastructure services, provided that the resulting services are opened and offered already under the actions (short-term R&D) and that the long-term sustainability of such services is ensured by the participant research infrastructures.

This topic will not support longer-term R&D for new instrumentation, tools, methods and advanced digital solutions.

Destination INFRA TECH

- Next generation of scientific instrumentation, tools, methods, and advanced digital solutions of research infrastructures and foster innovation and co-creation with industry.

Destination INFRA TECH

- HORIZON-INFRA-2025-01-TECH-01: New technologies and solutions for reducing the environmental and climate footprint of research infrastructures
- HORIZON-INFRA-2025-01-TECH-02: Implementing research infrastructure technology roadmaps
- HORIZON-INFRA-2025-01-TECH-03: AI-powered impact simulations in support of the Destination Earth
- HORIZON-INFRA-2025-01-TECH-04: AI-generated digital twins for science

Other actions

European programmes with USA

- Collect news and data on disruption, funding cancellations, infrastructure risk (environmental monitoring, NIST databases)
- European initiatives to support US based researchers to come to Europe - *Planned Europlanet webinar*

- The European Research Council (ERC) has increased its support for leading researchers moving to Europe has today been formally adopted. On top of its standard grants, the ERC offers additional 'start-up' funding to help new grantees establish their laboratories or research team in Europe. This funding is now being doubled from up to €1 million to up to €2 million.
- Many National Schemes e.g. - France Holland, Ireland, Spain, UK

Danish Presidency – autumn 2025

- Next RI and ESFRI meeting
- Increased focus on infrastructures for research and innovation as strategic assets of the European Research Area.
- Contributions to streamlining priorities for European investments in the European landscape of research infrastructures, also considering the policy agenda on technology infrastructures.
- Maximising the exploitation of the innovation potential of complementary infrastructures for research and innovation in supporting EU priorities on, e.g. green and digital transitions, and in ensuring EU strategic autonomy and strengthened competitiveness and resilience.
- This meeting of DRIs will focus on industry engagement with RIs and maybe ‘dual use’

2026

- Cyprus January-June 2026
- Ireland July-December 2026