



GOBIERNO
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Instituto de Salud Carlos III

Convocatoria 2024 Programa Infraestructuras de Investigación

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NCP Infraestructuras de
Investigación - ISCIII

Principales Actores Financiación de las Infraestructuras de Investigación Europeas

Nivel regional y nacional- Se financia la construcción y la sostenibilidad de las Infraestructuras (MICIN, AEI, ISCIII, CCAAs)

Nivel internacional- La Comisión Europea a través de Horizonte Europa:

- Programa de Infraestructuras de Investigación
 - La planificación y el diseño de mejoras y nuevas instalaciones
 - Acceso a los servicios de las RIs y su mejora continua/ adaptación de su oferta para hacer frente a los retos de la sociedad
 - Formación de los investigadores de toda la UE
 - Se facilita el networking de redes de RIs nacionales y europeas
- Otros programas también son relevantes para las RIs: Clusters, Misiones y Partenariados.

Horizon Europe (2021-2027)



Pilar 1 Excelencia científica

Consejo Europeo de Investigación (ERC)

Acciones Marie Skłodowska-Curie (MSCA)

Infraestructuras de Investigación

2,4 M€



Pilar 2 Desafíos mundiales y competitividad industrial europea

Ciústeres

- Salud
- Cultura, creatividad y sociedad inclusiva
- Seguridad civil para la sociedad
- Mundo digital, industria y espacio
- Clima, energía y movilidad
- Alimentación, bioeconomía, recursos naturales, agricultura y medio ambiente

Centro Común de Investigación (JRC)



Pilar 3 Europa innovadora

Consejo Europeo de Innovación (EIC)

Ecosistemas europeos de innovación

Instituto Europeo de Innovación y Tecnología (EIT)

Ampliar la participación y reforzar el Espacio Europeo de Investigación

Ampliar la participación y difundir la excelencia

Reformar y mejorar el sistema europeo de I+i

Programa de Infraestructuras de Investigación

OBJETIVO GENERAL

- Creación de Conocimiento Fundamental
- Desarrollo Tecnológico
- Implementación de la Ciencia Abierta

¿CÓMO?

- Coordinación a través de ESFRI (una parte del programa apoya el desarrollo de su hoja de ruta)
- Acceso Transnacional a las RIs

Programa de Infraestructuras de Investigación 2023-2024

- **5 Destinos:** Paquetes de acciones que contribuirán a objetivos específicos con unos impactos esperados
- **7 calls:** 4 calls en 2023 y 3 calls en 2024 (deadline: **12/03/2024**)
- **27 topics**

Otras acciones:

Grants para beneficiarios identificados: monitorización de ERICs; monitorización de EOSC; eventos para las presidencias europeas (Suecia, España y Bélgica); International Conference on Research Infrastructures – ICRI 2024

*~654 M€ total budget: ~320 M€ en topics 2023, ~**334 M€ en topics en 2024***

Principales Novedades (WP2023-2024)

- **Dirigir los servicios a retos concretos:** RI services to enable research linking environmental factors to human health ; RI services for improving clinical research in the paediatric area; RI services for climate-change risks
- Financiación de **estrategias comunes entre amplias comunidades** de RIs, para **desarrollar tecnologías y servicios conjuntos**
- Inclusión de actividades dirigidas a profundizar en el **impacto medioambiental de las RIs**
- Financiación tipo **Lump Sum**

Destinos

- **INFRADEV** : Developing, consolidating and optimising European RIs landscape, maintaining global leadership
- **INFRASERV**: RI services to support health research, accelerate the green and digital transformation, and advance frontier knowledge
- **INFRATECH**: Next generation of scientific instrumentation, tools and methods and advanced digital solutions
- **INFRAEOSC**: Enabling an operational, open and FAIR EOSC ecosystem
- **INFRAJET**: Network connectivity - enabler for collaboration without boundaries (no calls in this WP!)

INFRADEV 2024

3 topics

Deadline 12 March 2024

HORIZON-INFRA-2024-DEV-01-01: Research Infrastructure Concept Development



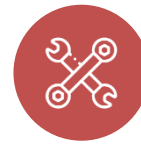
TYPE OF ACTION

- Research and Innovation Action (RIA)



BUDGET

- Total indicative budget for the topic: EUR 14 million
- Expected EU contribution per project: 1 - 3 million
- **Lump sum**



OTHER CONDITIONS

- Indicative number of projects expected to be funded: 5-6



TIMING

- Call opening: 6 December 2023 (tbc)
- Deadline: 12 March 2024

HORIZON-INFRA-2024-DEV-01-01:

Research Infrastructure Concept Development

Scope: This topic aims at supporting the **development of new concepts for the next generation of research infrastructures of European interest.** All fields of research can be considered.

- Major upgrades of existing infrastructures may also be considered if the end result is significantly transformative and equivalent to a new infrastructure concept (should indeed be assessed as a first option, identifying what is missing and the necessary new developments)
- Proposals for RI concept development will tackle all key questions concerning the technical and conceptual feasibility of new or upgraded fully fledged user facilities.
- Proposals considering just a new component of a research infrastructure are not in scope of this topic

HORIZON-INFRA-2024-DEV-01-02: Strengthen bilateral RI cooperation with Africa



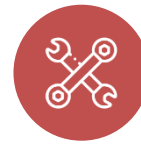
TYPE OF ACTION

- Coordination and Support Action (CSA)



BUDGET

- Total indicative budget for the topic: EUR 1,5 million
- Expected EU contribution per project: 1,5 million
- **Lump sum**



OTHER CONDITIONS

- Indicative number of projects expected to be funded: 1



TIMING

- Call opening: 6 December 2023 (tbc)
- Deadline: 12 March 2024

At least two legal entities established in two different African Union member states

HORIZON-INFRA-2024-DEV-01-02: Strengthen bilateral RI cooperation with Africa

Scope: This topic aims at **fostering EU-Africa cooperation** in Research Infrastructures, **sharing of good practices and experiences** to facilitate the development of a strategic approach for structuring RI capacities at pan-African level in fields other than those addressed by topic HORIZON-INFRA-2021-DEV-01-02 (CLIMA).

Proposals should build on existing cooperation activities between African and European countries and take into account the outcomes of previous and ongoing initiatives. The potential contribution to ongoing global initiatives, where relevant, should be taken into account.

HORIZON-INFRA-2024-DEV-01-03: Individual support for evolution, long term sustainability and emerging needs of pan-European RIs



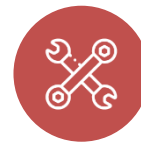
TYPE OF ACTION

- Research and Innovation Action (RIA)



BUDGET

- Total indicative budget for the topic: EUR 8 million
- Expected EU contribution per project: 2 - 4 million
- **funding rate 80%**



OTHER CONDITIONS

- Indicative number of projects expected to be funded: 2-4



TIMING

- Call opening: 6 December 2023 (tbc)
- Deadline: 12 March 2024

At least one of the ESFRI Landmark or ERIC

HORIZON-INFRA-2024-DEV-01-03: Individual support for evolution, long term sustainability and emerging needs of pan-European RIs

Scope: 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).

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.

INFRATECH 2024

3 topics

Deadline 12 March 2024

HORIZON-INFRA-2024-TECH-01-01: Research for the next generation of scientific instrumentation, tools, methods, solutions for RI upgrade



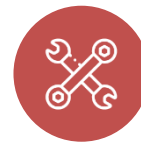
TYPE OF ACTION

- Research and Innovation Action (RIA)



BUDGET

- Total indicative budget for the topic: EUR 62 million
- Expected EU contribution per project: 5-10



OTHER CONDITIONS

- Indicative number of projects expected to be funded: 7



TIMING

- Call opening: 6 December 2023 (tbc)
- Deadline: 12 March 2024

At least 3 world-class RIs: ESFRI RIs, ERICs and/or and/or other world-class research infrastructures that are intergovernmental organisations of European interest. Other technological partners, including industry and SMEs, should also be involved

HORIZON-INFRA-2024-TECH-01-01:

Research for the next generation of scientific instrumentation, tools, methods, solutions for RI upgrade

Scope: to deliver innovative scientific instrumentation, tools, methods and solutions which advance the state-of-art of RIs in the EU and Associated Countries, and show transformative potential in RIs operation. The related developments should lead research infrastructures to support new areas of research and/or a wider community of users, including industrial users.

- Proposals should ensure complementarity with actions funded under the previous 2022 call (topic HORIZON-INFRA-2022-TECH-01-01 in the 2021-2022 work programme).
- R&D of new scientific instrumentation, tools and methods for **RIs taking into account resource efficiency and environmental impacts**
- Technology validation and prototyping
- Training of RI staff for the operation and use of these new solutions. When relevant, developing skills on technical validation to industrial standards
- Potential for applications outside the science market (for industrial and/or for the benefits of the society)

HORIZON-INFRA-2024-TECH-01-02: Development of tools, solutions, modules to enable R&I on the social aspects of the green transition



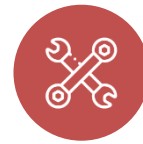
TYPE OF ACTION

- Research and Innovation Action (RIA)



BUDGET

- Total indicative budget for the topic: EUR 5 million
- Expected EU contribution per project: 5 million
- **Lump sum**



OTHER CONDITIONS

- Indicative number of projects expected to be funded: 1



TIMING

- Call opening: 6 December 2023 (tbc)
- Deadline: 12 March 2024

At least 2 world-class research infrastructures, being ESFRI, ERICs and/or other world-class research infrastructures that are intergovernmental organisations of European interest

HORIZON-INFRA-2024-TECH-01-02:

Development of tools, solutions, modules to enable R&I on the social aspects of the green transition

Scope:

- The aim of this topic is to **deliver innovative tools, solutions and modules to enable research infrastructures to support studies and assessment on the social aspects of the green transition.**
- Social aspects of the green transition may include: energy poverty and transport poverty, green jobs and skills, gender and equality aspects of the green transition, or other aspects of the fair transition towards climate neutrality.

HORIZON-INFRA-2024-TECH-01-03: New digital twins for destination Earth



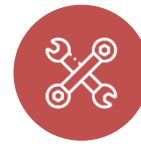
TYPE OF ACTION

- Research and Innovation Action (RIA)



BUDGET

- Total indicative budget for the topic: EUR 45 million
- Expected EU contribution per project: around 15 million
- **Lump sum**



OTHER CONDITIONS

- Indicative number of projects expected to be funded: 3



TIMING

- Call opening: 6 December 2023 (tbc)
- Deadline: 12 March 2024

TRL 6 or higher. Beneficiaries must grant royalty-free access to its results (intellectual property rights), which are needed for further developing, implementing and monitoring the European Commission's Destination Earth initiative

HORIZON-INFRA-2024-TECH-01-03: New digital twins for destination Earth

Scope: Destination Earth, for which the operational capacity building is funded from the Digital Europe Programme, aims to develop a high precision digital model of the Earth to model, monitor and simulate natural phenomena and related human activities. As part of European Commission's Green Deal and the Digital Strategy, Destination Earth (DestinE) will contribute to achieving the objectives of the twin transition, green and digital.

The aim is to develop new digital twin infrastructures that can be integrated with the Destination Earth platform components. These infrastructures should optimally support the scientific and technical performance of the entire digital twin ecosystem of Destination Earth.

HORIZON-INFRA-2024-TECH-04: AR/VR-empowered digital twins for modelling complex phenomena in new RI application areas



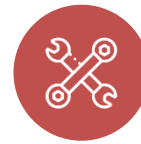
TYPE OF ACTION

- Research and Innovation Action (RIA)



BUDGET

- Total indicative budget for the topic: EUR 24 million
- Expected EU contribution per project: around EUR 12 million
- **Lump sum**



OTHER CONDITIONS

- Indicative number of projects expected to be funded: 2



TIMING

- Call opening: 6 December 2023 (tbc)
- Deadline: 12 March 2024

TRL 6 or higher, royalty free access, include world-class RIs and industry/technological partners. Identified industrial, scientific and/or policy end users should be involved

HORIZON-INFRA-2024-TECH-04: AR/VR-empowered digital twins for modelling complex phenomena in new RI application areas

Scope: The aim of this topic is to **deliver digital twin solutions which advance the state-of-art of European RIs and show transformative potential in RI operations.** The solutions should pave way for new ways to conduct experiments by the RIs through **AR/VR (augmented reality/virtual reality)** empowered digital twins. Mixed reality (XR) technologies can also be considered. **The focus is on newer application areas, such as healthcare, safety and security,** to understand complex real-world systems, particularly **in application areas constrained by specific physical limitations** (like radiation, pressure or temperature).

INFRAEOSC 2024

5 topics

Deadline 12 March 2024

HORIZON-INFRA-2024-EOSC-01-01: FAIR and open data sharing in support of the mission adaptation to climate change



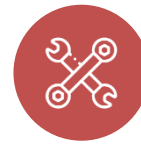
TYPE OF ACTION

- Research and Innovation Action (RIA)



BUDGET

- Total indicative budget for the topic: EUR 16 million
- Expected EU contribution per project: 6 – 8 million



OTHER CONDITIONS

- Indicative number of projects expected to be funded: 2



TIMING

- Deadline: 12
March 2024

HORIZON-INFRA-2024-EOSC-01-01:

FAIR and open data sharing in support of the mission adaptation to climate change

Scope: The overall objective of this topic is to **accelerate research and innovation under the mission climate adaptation through better access, management, interoperability, reuse and citation of digital information**, to be achieved by **using and integrating EOSC resources** ranging from EOSC federated infrastructures, services and data to guidelines, best practices, tools and metrics for the management of FAIR and open data, **and to extend these resources to the relevant climate adaptation domains that are less familiar with EOSC.**

This should be achieved through cross-domain, strategic use cases of direct relevance to the implementation plan of the mission climate adaptation and its objective **to support at least 150 European regions and communities to become climate resilient by 2030.**

HORIZON-INFRA-2024-EOSC-01-02: Supporting the EOSC partnership in further consolidating the coordination and sustainability of the EOSC ecosystem



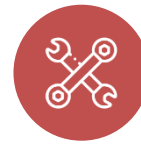
TYPE OF ACTION

- Coordination and Support Action (CSA)



BUDGET

- Total indicative budget for the topic: EUR 4 million
- Expected EU contribution per project: Around EUR 4 million
- **Lump sum**



OTHER CONDITIONS

- Indicative number of projects expected to be funded: 1



TIMING

- Deadline: 12 March 2024

HORIZON-INFRA-2024-EOSC-01-02:

Supporting the EOSC partnership in further consolidating the coordination and sustainability of the EOSC ecosystem

Scope: Support the further implementation of an effective pan-European cooperation framework and a thriving EOSC ecosystem in which stakeholders from all parts of the European Research Area pull together in a strategic and coordinated manner to ensure the achievement of the EOSC Partnership objectives.

HORIZON-INFRA-2024-EOSC-01-03:

Enabling a network of EOSC federated and trustworthy repositories and enhancing the framework of generic and discipline specific services for data and other research digital objects



TYPE OF ACTION

- Coordination and Support Action (CSA)



BUDGET

- Total indicative budget for the topic: EUR 5 million
- Expected EU contribution per project: Around EUR 5 million
- **Lump sum**



OTHER CONDITIONS

- Indicative number of projects expected to be funded: 1



TIMING

- Deadline: 12
March 2024

HORIZON-INFRA-2024-EOSC-01-03:

Enabling a network of EOSC federated and trustworthy repositories and enhancing the framework of generic and discipline specific services for data and other research digital objects

Scope: EOSC, among its objectives, aims at federating European trustworthy repositories to enhance access and use of research data. **The creation of a collaborative network of trusted repositories will be able to enhance the quality and responsiveness of the entire EOSC ecosystem.** Such network could build upon existing initiatives that already highlight a sizeable list of repositories.

HORIZON-INFRA-2024-EOSC-01-04: Long-term access and preservation infrastructure development for EOSC, including data quality aspects



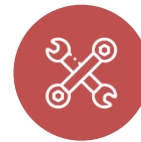
TYPE OF ACTION

- Research and Innovation Action (RIA)



BUDGET

- Total indicative budget for the topic: EUR 8 million
- Expected EU contribution per project: Around EUR 8 million



OTHER CONDITIONS

- Indicative number of projects expected to be funded: 1



TIMING

- Deadline: 12 March 2024

HORIZON-INFRA-2024-EOSC-01-04:

Long-term access and preservation infrastructure development for EOSC, including data quality aspects

Scope: Coordination to harmonise practices and standards within and across the different scientific fields and adequate infrastructures are necessary **to implement the level of curation and preservation needed** and **to offer the related services that differ in practice and effort per discipline**

ant type of data: Establish a minimum set of practices and a general framework to identify what data is candidate to long term preservation based on their use, benefit and quality; Support the creation of long-term preservation and access strategies ; Create an expert curation network ; Identify within EOSC and consolidate a network of repositories and archives for long-term preservation ..

HORIZON-INFRA-2024-EOSC-01-05: Innovative and customizable services for EOSC exchange



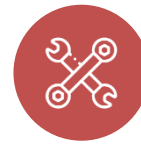
TYPE OF ACTION

- Research and Innovation Action (RIA)



BUDGET

- Total indicative budget for the topic: EUR 28 million
- Expected EU contribution per project: Around EUR 7 million



OTHER CONDITIONS

- Indicative number of projects expected to be funded: 4



TIMING

- Deadline: 12 March 2024

HORIZON-INFRA-2024-EOSC-01-05: Innovative and customizable services for EOSC exchange

Scope: The aim is to provide researchers with a set of highly innovative new services that should be integrated in the EOSC Exchange service platform:

- Improve the technology readiness level (TRL) of the EOSC Exchange components in testing, development and staging.
- Further develop the ecosystem of research data and related services, covering the whole data lifecycle
- Facilitate the collection and analysis of heterogeneous and/or large-scale data sets right from the sources where they are produced.
- Support automatic production of FAIR data at the research instruments and support infrastructures by metadata automation tools and techniques available via EOSC Exchange



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