Horizon Europe – Research Infrastructures

What is Horizon Europe?

Horizon Europe is the EU's key funding programme for research and innovation with a budget of €95.5 billion for the period 2021-2027. It tackles climate change, helps to achieve the UN's Sustainable Development Goals and boosts Europe's competitiveness and growth.

The programme facilitates collaboration and strengthens the impact of research and innovation in developing, supporting and implementing EU policies while tackling global challenges. It supports the creation and better sharing of knowledge and technologies.

It also creates jobs, fully engages Europe's talent pool, boosts economic growth, promotes industrial competitiveness and optimises investment impact within a strengthened European Research Area.

For information on UK participation in the programme see UKRO's dedicated factsheet.

What are Research Infrastructures?

Research Infrastructures (RI) are facilities that provide resources and services for the research communities to conduct research and foster innovation in their fields. This definition includes the associated human resources and covers major equipment or sets of instruments; knowledge-related facilities such as collections, archives or scientific data infrastructures; computing systems, communication networks, and any other infrastructure, of a unique nature and open to external users, essential to achieve excellence in research and innovation.

Where relevant, they may be used beyond research, for example for education or public services and they may be 'single sited', 'virtual' or 'distributed'.

'Research Infrastructures' form part of Pillar 1 'Excellent Science" and aim to give Europe world-class sustainable research infrastructures which are open, and accessible to the best researchers from Europe and beyond.

What is funded by the RI part of Horizon Europe?

European RIs have the potential to enhance society's long-term and consistent problem-solving capacity. New efforts are now needed to maintain Europe at the forefront of science and to ensure the provision of customised, multidisciplinary, impact-oriented and integrated RI services and resources to accelerate the transition towards a socially inclusive green and digital future and to support an effective and responsive health system as well as evidence-based policy-making. RI can substantially contribute to the objectives of Horizon Europe clusters, missions and partnerships in Pillar II as well as support its innovation dimension. The RI Work Programme supports the development of innovative cutting-edge scientific instrumentation, software and methods. Training for RI users, as well as strengthening the RI scientific, technical and managerial competencies of staff, underpin all the activities implemented under the Work Programme.

Areas of intervention

The strategic objectives for RIs include:

- Consolidate and enhance the EU research infrastructure landscape
- Support Open Science and data-driven research through the European Open Science Cloud (EOSC) and high-capacity network
- Enable and drive green and digital transformation through research infrastructure services
- Push the limits of frontier research
- Develop cutting-edge technologies for RIs and foster innovation



• Enhance the international dimension of RIs

These strategic objectives will be met by five Destinations in the 2023-24 RI Work Programme:

Destination 1 - Developing, consolidating and optimising the European RIs landscape, maintaining global leadership (INFRADEV)

•Aimed at developing a European strategy for RI, building on the ESFRI RIs and ERICs to develop the RI landscape by stimulating new ideas and consolidating, enhancing RIs for international cooperation, and strengthening accessibility and resilience of European RIs.

Destination 2 - Enabling an operational, open and FAIR EOSC ecosystem (INFRAEOSC)

•Aimed at developing the European Open Science Cloud as a platform for FAIR research data, transform the way data is shared and exploited (better quality and productivity), facilitate multidisciplinary cooperation, improve trust in science through openness.

Destination 3 - RI services to support health research, accelerate the green and digital transformation, and advance frontier knowledge (INFRASERV)

•Providing RI services to enable the advancement of frontier knowledge addressing major societal challenges, including health challenges, the green and digital transformation and resilience to crises.

Destination 4 - Next generation of scientific instrumentation, tools and methods and advanced digital solutions (INFRATECH)

•Aimed at developing ground-breaking RI technologies, i.e. scientific instruments, tools, methods, advanced digital solutions, to enable new discoveries and ensure Europe and RIs are at the forefront of technological excellence, in cooperation with industry.

Destination 5 - Network connectivity in Research and Education – Enabling collaboration without boundaries (INFRANET)

•Aimed at a fast, resilient connectivity to access applications, enable global collaboration of virtual activities, keep Europe at the forefront of global Research & Education by attracting data and talent and borderless collaboration, achieving global connectivity and international collaboration.

Call timings and budgets

Under the 2023-2024 Work Programme, RI has a total budget of over €650 million.

All 2024 calls are closed.

Please note that some topics have specific eligibility criteria, listed under eligibility and admissibility conditions, such as the obligation to include legal entities established in the target country/region. Applicants are advised to check the Work Programme for details relating to their topics of interest.

Relevant EU policy areas and developments

The **European Strategy Forum for Research Infrastructures (ESFRI) Roadmap** is the mechanism used to develop a cohesive approach to the development of major RIs in Europe, identifying new RIs of pan-European interest that match the long-term needs of the European research communities, covering all scientific areas.

Many of the calls in the RI Work Programme are targeted at the RIs listed in the roadmap. The roadmap was updated in December 2021 and contains 22 ESFRI projects and 41 ESFRI landmarks. It is due to be updated again in 2026. It also includes a revamped landscape analysis for environmental, economic and social issues, focusing on the UN Sustainable Development Goals, Covid-19 and the digital transition.

More information

- Horizon Europe website
- 2023-2024 Research Infrastructures Work Programme

Horizon Europe's legal basis:

- Horizon Europe Regulation
- Specific Programme implementing Horizon Europe Regulation

Strategic Plan for Horizon Europe:

• First Strategic Plan for Horizon Europe 2021-24

Background policy papers

- European Strategy Forum on Research Infrastructures (ESFRI)
- European Research Infrastructure Consortium (ERIC)
- Group of Senior Officials (GSO)
- European Open Science Cloud (EOSC)

UKRO Portal

• <u>UKRO Portal</u> (subscriber access required)