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RICH

Research Infrastructures Consortium for Horizon 2020



Agnès ROBIN, European Commission

Research Infrastructures in Horizon
Europe (energy and climate)



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Horizon Europe

Support the creation and diffusion
of high-quality knowledge

Strengthen the impact of R&I
in supporting EU policies

Foster all forms of innovation and
strengthen market deployment

Optimise the Programme's delivery for impact in a strengthened ERA



Pillar 1 Excellent Science

European Research Council

Marie Skłodowska-Curie Actions

Research Infrastructures



Pillar 2 Global Challenges and European Industrial Competitiveness

Clusters

- Health
- Culture, Creativity & Inclusive Society
- Civil Security for Society
- Digital and Industry
- **Climate, Energy** and Mobility
- Food and natural resources

Joint Research Centre



Pillar 3 Open Innovation

European Innovation Council

European innovation ecosystems

European Institute of Innovation
and Technology

Strengthening the European Research Area

Sharing excellence

Reforming and Enhancing the European R&I system

Research Infrastructures in HE Specific Programme

Four intervention areas

**Consolidating and
Developing the
Landscape of European
Research Infrastructures**

**Opening, Integrating and
Interconnecting
Research Infrastructures**

**The innovation potential
of European Research
Infrastructures and
activities for Innovation &
Training**

**Reinforcing European
Research Infrastructure
policy and International
Cooperation**

**Budget (Initial
Commission proposal
of 2018): EUR 2.4
billion**

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!!!Warning: under discussion!!!

RIs to address societal challenges (health research, green & digital transformation), and advance frontier knowledge

Expected impact:

- Boost RIs capacity to provide **services** to support excellent research to **address societal challenges**;
- Enhance and increase society's long-term and consistent **problem-solving capacity** and **evidence-based policy making** in priority areas;
- Enable **new discoveries and knowledge** through access to the best, in some cases, unique state-of-the-art RIs;
- **Educate** a new generation of researchers, ready to optimally exploit all the essential and advanced tools for their research;
- Facilitate **cross-fertilisation** and a wider sharing of knowledge and technologies across disciplines and between academia and industry.

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Main features

- Focus on **trans-national access** in-person or remote and virtual access
- RI service provision to support **challenge driven research and/or curiosity driven research**
- Bring together **several complementary and interdisciplinary** RIs
- Access includes **ad-hoc training** and scientific and technical **support to users**
- **Harmonisation, customisation** and **virtualisation** of RI services also supported
- Adopt the guidelines and principles of the [European Charter for Access to Research Infrastructures](#)
- Address data management, interoperability and the connection of digital services to the **EOSC**
- “**Specific features for Research Infrastructures**” provide specific conditions and requirements relating to access provision
- Type of action: **RIA**

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Next generation of scientific instrumentation, tools and methods and advanced digital solutions

Expected impact:

- Ensure that Europe remains globally competitive and at the forefront of technological excellence in an extremely fast-moving environment
- Enhance the competitiveness of European industry through co-development with industrial actors of advanced RI technologies and technology transfer;
- Pave the way to new areas of research and to the development of new industrial applications/products;
- Develop skills of RI staff to ensure alignment with the advancements of the RI technologies;
- Facilitate cross-fertilisation and a wider sharing of knowledge and technologies across disciplines and between academia and industry;
- Boost the use of AI in research and enhance data-based research across Europe.

- (Mobilising research and fostering innovation) “**research infrastructures** (Pillar 1) that provide resources and services for research communities to conduct research and foster innovation”
- (co-implementation) “...improving the **availability and relevance of data and knowledge, usability of digital tools and services for better understanding of risks** and their management.”
- Example: Protecting human health and wellbeing
“Health risks include morbidity and mortality from for example **heatwaves, forest fires, storms, floods but also from air pollution, illnesses from food, vector- and water-borne infectious diseases**”;...



RIs and Candidate partnerships (examples)

- European Partnership accelerating farming systems transition: **agroecology living labs and research infrastructures**
- European Partnership for rescuing **biodiversity** to safeguard life on Earth
- European Partnership for a climate neutral, sustainable and productive **Blue Economy**
- European Partnership for an Industrial **Battery** Value Chain
- European Partnership for **Clean Energy** Transition
- ...

- Many opportunities under Horizon Europe 1) as **access**/scientific service providers, 2) to **develop/customise** services or 3) **expanding**/upgrading by integrating and sustaining new data & tools from HE projects but...
- **Funding**/resources and **sustainability** remain a challenge despite relevance of many RIs to societal challenges (including energy and climate) – evidencing & measuring impact
- Balancing **openness** and incentives to attract funders
- Balancing agile and fit-for-purpose offer (to address different and interdisciplinary needs, TRLs, sectors) with investments **timescales** (governance, strategy, priorities, impact...)
- **Data**, digital transformation