



Connecting Europe's Radio Astronomy  
Facilities and Researchers

# European Radio Astronomy Consortium

Izabela Rottmann

RADIOBLOCK Meeting – 9 Oct 2025

# Collaboration in European Radio Astronomy VLBI -> RadioNet

MANCHESTER  
1824

## RadioNet Pre-History

### European Commission and Radio Astronomy

|                  |                                                                                                                                                                                        |                       |
|------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|
| 1983             | Giancarlo Setti et al proposal for expansion of MPIfR Mk3 correlator - unsuccessful<br>Setti + Paolo Fasella (D-G Science, Research and Development) discuss large EVN data processor  |                       |
| 1986             | Further discussion with Fasella by van Lieshout, van der Laan, RTS                                                                                                                     |                       |
| 1988             | 20-station EVN data processor proposal (18 MECU) - unsuccessful                                                                                                                        |                       |
| FP2<br>1987-1991 | Science Stimulation grant (1989)<br>(incl. Penny & Giles playback unit for MPIfR MkIII processor)                                                                                      | 0.44 M<br>ECU         |
| FP3<br>1990-1994 | Access to Large Scale Facilities x 2<br>Fellowships Grouped by Laboratories                                                                                                            | 1.75<br>0.3           |
| FP4<br>1994-1998 | Access to Large Scale Facilities (x 2)<br>Research & technical Development (post-correlation integrator<br>RFI-robust receiver, )<br>Cooperation with Hungary (SGO) and Poland (Torun) | 1.875<br>1.0<br>0.766 |
| FP5<br>1998-2002 | Access to Large Scale Facilities x 2<br>Infrastructure Cooperation Network (RadioNET) began in 2000                                                                                    | 2.1<br>0.8 M€         |

*Richard Schilizzi*

- VLBI requires collaboration: early all-European VLBI experiments from 1971 led to EVN in 1980
  - EVN is now world's largest and most powerful VLBI Network, with (same) MoU + JIVE ERIC (correlation, support, R&D)
- EC-funded projects helped create JIVE and widen access in FP2, 3, 4 & 5, included targeted support for PL & HU



From 2000 to 2020 RadioNet grew in scale,  
added partners & facilities  
changed (elected) coordinator;  
(external) selection of activities



| RadioNet        |                  |        |
|-----------------|------------------|--------|
| 2000-2004 (FP5) | 11 partners (EU) | 0,8 M€ |



| RadioNet FP6    |                          |         |
|-----------------|--------------------------|---------|
| 2004-2008 (FP6) | 24 partners (EU, AU, ZA) | 12,5 M€ |



| RadioNet FP7    |                              |       |
|-----------------|------------------------------|-------|
| 2009-2011 (FP7) | 26 partners (EU, KR, US, ZA) | 10 M€ |



| RadioNet3       |                              |       |
|-----------------|------------------------------|-------|
| 2012-2015 (FP7) | 27 partners (EU, AU, KR, ZA) | 9,5M€ |

Max Planck Institute  
for Radio Astronomy



| RadioNet          |                          |       |
|-------------------|--------------------------|-------|
| 2017-2020 (H2020) | 28 partners (EU, KR, ZA) | 10 M€ |

Max Planck Institute  
for Radio Astronomy



Evolution of RadioNet 2000-2020  
helped to build European SKA coordination,  
supported mm and m-wave collaborations

1990

2000

2020

2025



(1980)



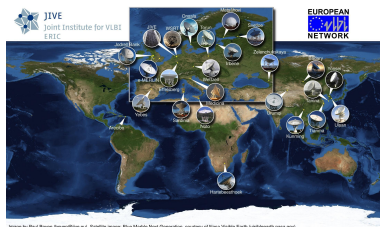
LOFAR



# 'Spin-off' /related projects



## EVN



|              |                   |
|--------------|-------------------|
| EXPRéS       | (2006, FP6 €3,9M) |
| NEXPRéS      | (2010, FP7 €3.5M) |
| Jumping JIVE | (2017, H2020 €3M) |



|         |                     |
|---------|---------------------|
| SKADS   | (2005, FP6, €10,4M) |
| PrepSKA | (2008, FP7 €5,5M)   |
| GO-SKA  | (2011, FP7 €0,9M)   |
| AENEAS  | (2017, H2020 €3M)   |

Multi  
messenger  
astronomy

|          |                     |
|----------|---------------------|
| ASTERICS | (2015, H2020, €15M) |
| ESCAPE   | (2019, H2020, €16M) |

RadioNet became part of the European Research Area

# RadioNet-projects 15 yrs



- Breakthrough technical developments for EVN, eMERLIN, LOFAR, NOEMA, ALMA and SKA
- Access to Europe's leading radio astronomical facilities  
40367 hours provided – 5,6 yrs of continuous observations
- Expanded and broadened scientific community  
44% new each cycle, 33% female PI
- 180 scientific events;
- >170 training schools;
- >5000 trainees;
- > 530 publications

# RadioNet Strategy studies

Previous RadioNet projects included study groups on future of European radio collaboration (incl TNA):

FP7: Quesera Study Group (M. Garrett)

H2020: SPOOR (M. Garrett)

- Find a way to retain wide collaboration (in absence of EC funding); MoU/Lol-based
- Support key networking/training activities e.g. YERAC (running since Paris, 1968...)

## RadioNet3 Study Group White Paper on: The Future Organisation and Coordination of Radio Astronomy in Europe

Show affiliations

Garrett, M. A. ; Charlot, P. ; Garrington, S. T. ; Klöckner, H-R  ; van Langevelde, H.  ; Mantovani, F. ; Russel, A. ; Schuster, K. ; Vermeulen, R. C. ; Zensus, A.  ; -the QSG Study Group

The QueSERA Study Group (QSG) have been tasked by the RadioNet Board to produce a White Paper on the future organisation and coordination of radio astronomy in Europe. This White Paper describes the options discussed by the QSG, and our conclusions on how to move forward. We propose, that as a first step, RadioNet-work, be established as an entity that persists between EC contracts, and that takes responsibility for preparing or coordinating responses to EC opportunities specific to the field of radio astronomy research

infrastructures. RadioNet-work should provide a safety net that ensures that cooperation and collaboration between the various radio astronomy partners in Europe is maintained with or without EC funding.

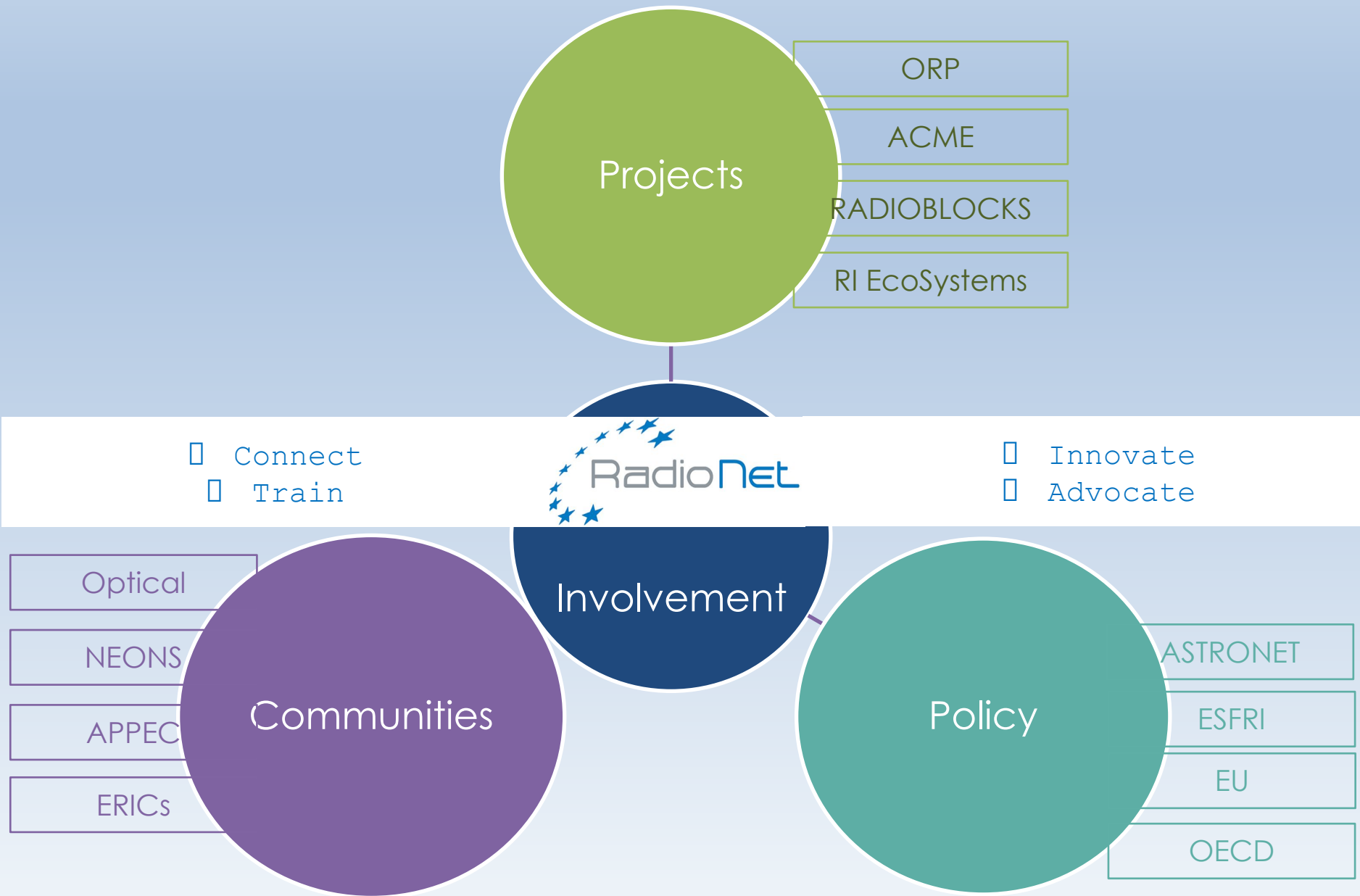


# continues as a **Consortium** since 2021

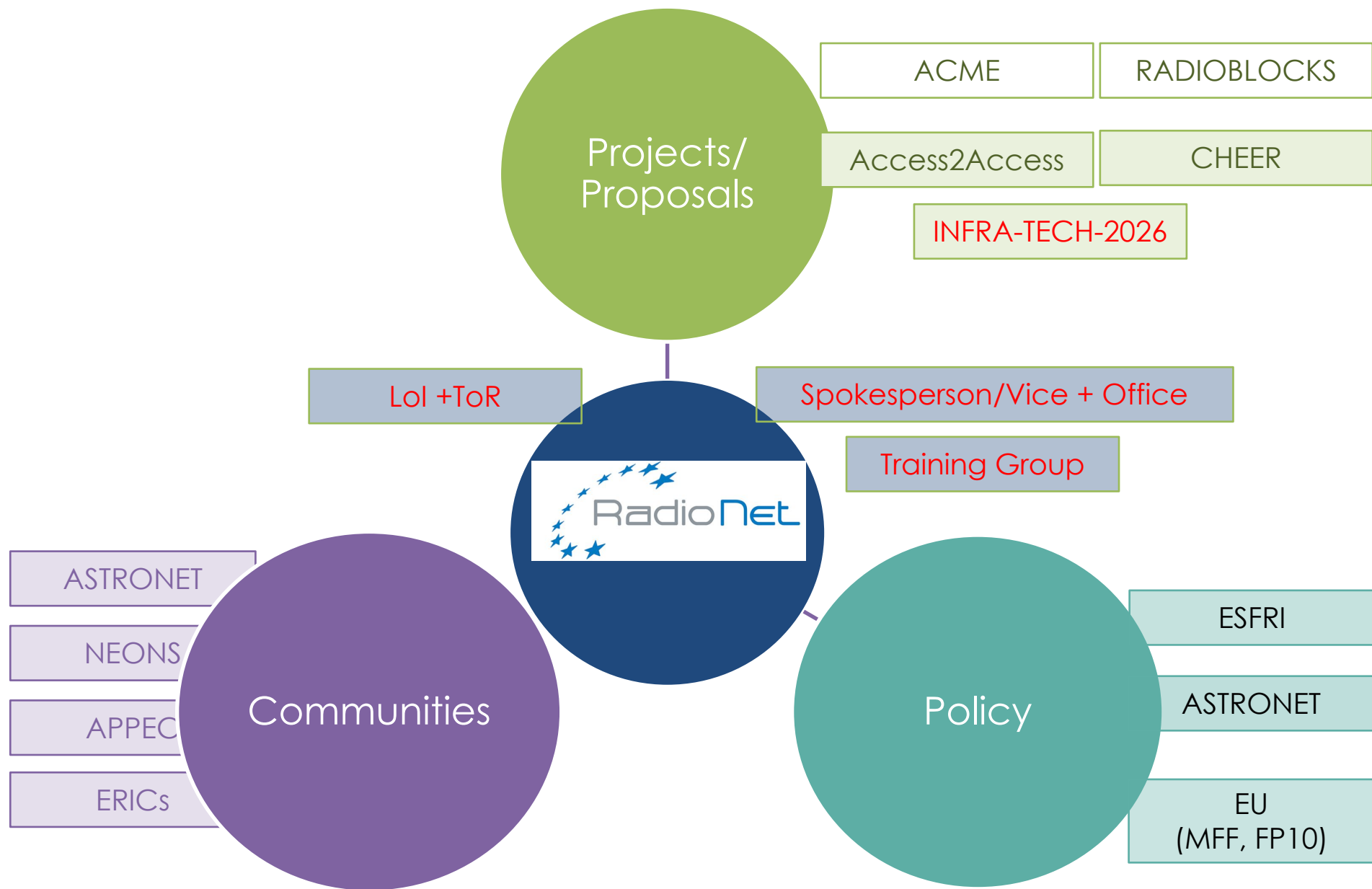
- **Inclusive:** mm to metre wavelengths; technical partners
- Brings together suite of **world-class infrastructures**
- **Loosely bound:** signatories to a Letter of Intent; (implementation □ ToR)
- **Spokesperson:** Anton Zensus; **Office** @ MPIfR Bonn
- Offers a **single voice** to represent radio astronomy interests in Europe



# Building Europe's Radio Astronomy Community: 2021–2025



# RadioNet – Action plan



# Selection of coordinator of infra-tech proposal

- Issued July 9, 2025
- Deadline Sep 20, 2025
- Addressed: RadioNet ++ beyond

Dear Colleagues,

The RadioNet Consortium is seeking an experienced and motivated **Coordinator to lead the development of a strong and competitive proposal for the upcoming Horizon Europe call HORIZON-INFRA-2026-TECH-01-01**. The selected candidate will also assume the role of Project Coordinator should the proposal be successful.

This Horizon Europe call aims to support R&D for next-generation scientific instrumentation, digitalisation, and innovative tools that will upgrade European research infrastructures. Proposals submitted to this EU call must: involve at least three major research infrastructures (e.g., ESFRI Landmarks, ERICs), include active participation from industry and SMEs, and deliver innovative, sustainable, and scalable solutions, targeting Technology Readiness Level (TRL) 3–4. The expected total budget of the project is €5–10 million. A draft of the call is in Annex.

As the European radio astronomy community prepares for this strategic opportunity, the RadioNet Task Force emphasizes the importance of a united and coordinated approach. It is our strong preference that a single, community-supported proposal be developed under the umbrella of RadioNet, representing the collective vision, strengths, and ambitions of radio astronomy in Europe.

To that end, we encourage all interested parties to align efforts and avoid parallel or competing initiatives within the same scientific domain. This will help ensure the highest possible impact and credibility of our shared ambitions at the European level.

## Application Process

Interested candidates are invited to submit a brief proposal (maximum 2 pages) that addresses the following:

- Motivation for coordinating the project,
- Description of the proposed coordination team,
- Initial concept and setup of the proposal.

Please submit your application by **September 20, 2025**, to [radionet@mpfr.de](mailto:radionet@mpfr.de).

We look forward to your interest and commitment to advancing the next generation of research infrastructure in Europe. For any questions or suggestions regarding additional recipients for this mailing, please contact us at the same address.

Best regards,

**Anton Zensus**  
*RadioNet Spokesman*

October 6, 2025 - RadioNet Board  
selected JIV-ERIC to lead  
the INFRA-TECH Proposal



## Thank You

### Contacts

[radionet@mpifr.de](mailto:radionet@mpifr.de)

[www.radionet-org.eu](http://www.radionet-org.eu)



# OECD Policy Brief

Unlocking the potential of research infrastructure ecosystems to tackle societal challenges

## Key messages

- **Although Research Infrastructures (RIs) play a critical role in all fields of science, most RIs still serve a restricted expert user community.** Many RIs have unexploited potential to expand their user communities and broaden their scope of activities, including through international partnerships.
- **Collaborative arrangements among RIs can exploit complementarities and foster new interdisciplinary partnerships,** supporting excellent science and innovation.
- **RI ecosystems, i.e. dynamic and evolving partnerships between RIs which are developed around a set of shared strategic objectives, represent unique opportunities to accelerate the pace of scientific discovery and address complex societal challenges.**
- **Policymakers and funders play a critical role in ensuring the conditions for sustainable and successful RI collaborations.** The successful development of an RI ecosystem is not solely dependent on the operational organisation of the partnership but also on the supporting incentives and policies put in place by funders and governments. Integrating RI ecosystems into strategic planning exercises and developing specific funding mechanisms that promote and recognise the value of collaboration between RIs are important for maximising the return on investment in RIs both individually and collectively.

# HORIZON-INFRA-2026-TECH-01-01:

- R&D for the next generation of scientific instrumentation, tools, methods, digitalisation and solutions for RI upgrades

- Opening March 2026
- Budget 5-10 M€
- ≥3 RIs (ESFRI Landmark, ERIC, or RI being international European research org.),
- involve SMEs, industry, & startups

| Focus Areas                                                                     | Expected Outcomes                                                              |
|---------------------------------------------------------------------------------|--------------------------------------------------------------------------------|
| <b>R&amp;D of new instrumentation, tools, methods, and digital solutions</b>    | Enhanced competitiveness and capacity of European RIs                          |
| <b>Technology validation and prototyping</b>                                    | Increased efficiency of RIs and readiness for new research areas               |
| <b>Training of RI staff, incl. technical validation to industrial standards</b> | Stronger collaboration with universities, research organisations, and industry |
| <b>Potential industrial and societal exploitation</b>                           | Promotion of innovation, industrial uptake, & entrepreneurial culture          |
| <b>Address greening and resilience aspects</b>                                  | Greener and more resilient RIs                                                 |
| <b>Complementarity with previous Horizon-INFRA-TECH calls (2022 &amp; 2024)</b> | Builds on prior developments and ensures strategic continuity                  |