

# Research Infrastructures (including e-Infrastructures) in Horizon 2020: Specificità del programma e informazioni sui bandi



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NCP for European  
research  
infrastructures  
(including e-  
Infrastructures)

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# Content

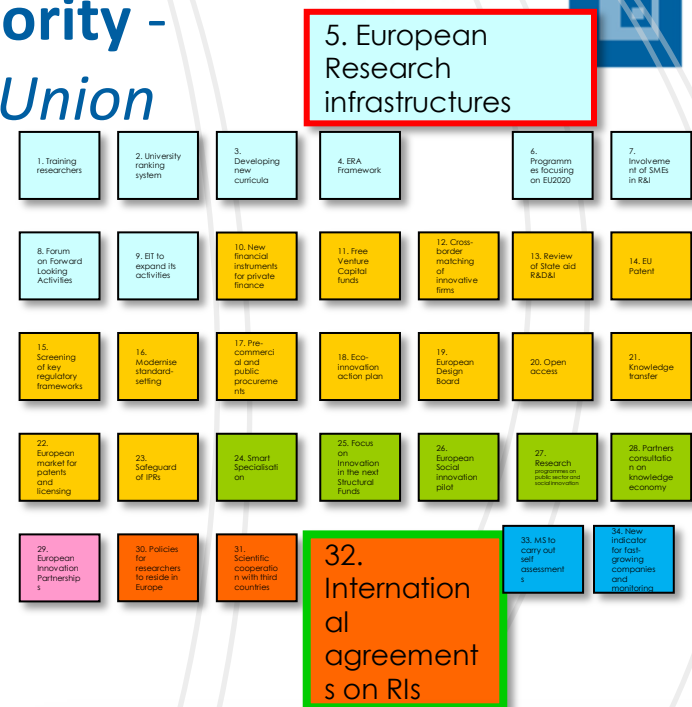
- Research Infrastructures in H2020
- Introduction to the Workprogramme
- Focus: Transnational Access
- Results of the first call
- Highlights: participation of Università degli Studi di Roma "Tor Vergata"

# A short step back...

## Political priority - *Innovation Union*

## EU approach for Research Infrastructures

Research infrastructures are the backbone of modern scientific and technological systems and are therefore instrumental in increasing the competitiveness of European research



Excellent Science	Industrial Leadership	Societal Challenges
<ul style="list-style-type: none"> <li>European Research Council <ul style="list-style-type: none"> <li>Frontier research by the best individual teams</li> </ul> </li> <li>Future and Emerging Technologies <ul style="list-style-type: none"> <li>Collaborative research to open new fields of innovation</li> </ul> </li> <li>Marie Skłodowska Curie actions <ul style="list-style-type: none"> <li>Opportunities for training and career development</li> </ul> </li> <li>Research infrastructures (including e-infrastructure) <ul style="list-style-type: none"> <li>Ensuring access to world-class facilities</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>Leadership in enabling and industrial technologies <ul style="list-style-type: none"> <li>ICT, nanotechnologies, materials, biotechnology, manufacturing, space</li> </ul> </li> <li>Access to risk finance <ul style="list-style-type: none"> <li>Leveraging private finance and venture capital for research and innovation</li> </ul> </li> <li>Innovation in SMEs <ul style="list-style-type: none"> <li>Fostering all forms of innovation in all types of SMEs</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>Health, demographic change and wellbeing</li> <li>Food security, sustainable agriculture, marine and maritime research &amp; the bioeconomy</li> <li>Secure, clean and efficient energy</li> <li>Smart, green and integrated transport</li> <li>Climate action, environment resource efficiency and raw materials</li> <li>Inclusive, innovative and reflective societies</li> <li>Security society</li> </ul>
European Institute of Innovation and Technology (EIT)		
Spreading Excellence and Widening Participation		
Science with and for society		
Joint Research Center (JRC)		
Euratom		

## Financial Instrument

# Why an EU approach for Research Infrastructures?

- ✓ To **address collectively** the complexity and cost of the design and development of new world class research infrastructures
- ✓ To **open access** to the research infrastructures existing in the individual Member State to all European researchers
- ✓ To **avoid duplication of efforts** and to coordinate and **rationalise the use** of these research infrastructures
- ✓ To trigger the **exchange of best practice**, develop **interoperability** of facilities and resources, develop the **training** of the next generation of researchers
- ✓ To connect national research communities and **increase the overall quality of the research and innovation**
- ✓ To help **pooling resources** so that the Union can also develop and operate research infrastructures **globally**

# Role of ESFRI

- **Set up by the EU Council of Research Ministers in 2002**
- Brings together representatives of Ministers of the 28 Member States, 10 Associated States, and of the European Commission
- Supports a coherent and strategy-led approach to policy making on Research Infrastructures in Europe
- **Mandate to develop a Roadmap and prioritise research infrastructures**
- ESFRI provides a forum for coordination, information sharing, help and best practice, but Member States must be the major source of funding, in variable geometry
- Strong support for these principles

**ESFRI** European Strategy Forum  
on Research Infrastructures

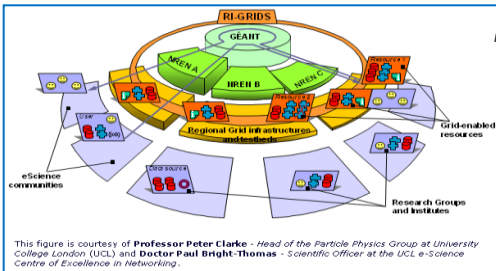
[http://ec.europa.eu/research/infrastructures/index\\_en.cfm?pg=esfri](http://ec.europa.eu/research/infrastructures/index_en.cfm?pg=esfri)

# A definition...

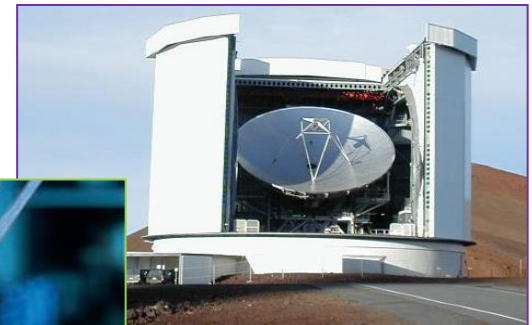
Facilities, resources and services used by the scientific community for conducting research and innovation in their fields.

...essential to achieve excellence in research and innovation

They can be “Single-sited”, “distributed” or “virtual” and, when relevant, may be used beyond research



e-infrastructures



Major scientific equipments

Knowledge-based resources

# Horizon 2020

## Excellent science

- European Research Council
- Future and Emerging Technologies
- Marie Curie actions

- **European Research infrastructures (including e-infrastructures) – 2.383\*  
~~2.488~~ M€**

## Societal challenges

- Health, demographic change, wellbeing
- Food security, sustainable agriculture, marine - maritime research, bio-economy
- Secure, clean and efficient energy
- Smart, green, integrated transport
- Climate action, resource efficiency, raw materials
- Inclusive, innovative and reflective societies
- Secure societies
- Spreading excellence & Widening Participation
- Science with and For Society

## Industrial leadership

- Leadership in enabling and industrial technologies (ICT, space, nanotechnologies, advanced materials and advanced manufacturing and processing, biotechnology)
- Access to risk finance
- Innovation in SMEs



# What the RIs Programme DOES NOT cover

## Building RIs\*



Real-time ELI building :  
[www.elibeam.eu/about/building](http://www.elibeam.eu/about/building)

Collaborative  
Research

**INELIGIBLE**



Towards a Material History of the Ghent Altarpiece.  
Courtesy of University of Perugia



New PUMA synchrotron beamline. Courtesy of  
Synchrotron SOLEIL

Purchasing  
inst.  
Modernizing  
RIs



# What the RIs Programme DOES cover

- Developing the European RIs for 2020 and beyond
  1. Developing new world-class RIs;
  2. Integrating and opening national and regional RIs of European interest;
  3. Development, deployment and operation of ICT based e-Infrastructures.
- Fostering the innovation potential of RIs and their human resources
- Reinforcing European RI policy and international cooperation

} 4.

# 1. Developing new world-class Ris (2016 – 2017 *DRAFT*)

- the conceptual and technical design of new research infrastructures, which are of a clear European dimension and interest, through **a bottom-up approach (Design Studies)**;
- the **preparatory phases of ESFRI projects**, through a targeted approach; **(Roadmap 2016)**
- the **individual support to ESFRI** and other world-class research infrastructures **with established legal structure and governance** such as an **ERIC\*** through a competitive approach (support mainly to ensure long term sustainability, enlargement of consortia; european coverage, international cooperation...)
- a pilot action addressing the federation, networking and coordination of **pan-European research infrastructures and clouds** for the purpose of increasing research and science data availability and use (...action should build on existing infrastructures and design a stakeholders driven governance framework...).

# Rules for new Roadmap

- Much shorter – only ~25 Projects on the new Roadmap
- Projects that have been on the roadmap and not implemented will automatically roll off after 10 years
- Any project that wants to be considered again after 10 years must reapply, either in a different form or with bottlenecks resolved
- Room for 8-10 new projects on the 2016 roadmap
- Entry level projects will be at a more mature level conceptual design and feasibility done supported by at least three MS
- Every 2-3 years audit of the project by ESFRI Implementation WG
- Opportunities to add more projects in 2018, 2020 as others roll off



## Key dates

- 25 September 2014: open for applications from national delegations and EIROforum (Most countries will have their own internal selection process)
- 31 March 2015: Deadline for new project proposals
- **March 2016: New roadmap presented**

## 2 - Integrating and opening RI of European interest (1)

To open up key national and regional research infrastructures to all European researchers and to ensure their optimal use and joint development:

Emphasis on **management efficiency**, **innovation capacity** (technology transfer, participation of SMEs, instrumentation development), **international dimension**, **management of generated data**...

# 2 - Integrating and opening RI of European interest (2)

## Mandatory Aspects:

- **Transnational Access** activities to support scientific communities in their access to the identified RIs;
- **Networking activities** to foster a culture of co-operation;
- **Joint research activities** for the improvement of RI services.

## Applicants:

- **Starting Communities:** new to the EU RI action. Emphasis on networking, standardisation and common access procedure
- **Advanced Communities:** already involved in previous Integrating Actions projects. Emphasis on access, joint activities, broadening of the consortium, international cooperation, participation of industry and technology transfer

# 2 - Integrating and opening RI of European interest (3)

(2016 – 2017 **DRAFT**)

Domain	Starting communities	Advanced communities
Biological and Medical Sciences	<b>BOTTOM UP APPROACH</b>	7
Energy		2
Environment and earth sciences		7
Mathematics and ICT		1
Material and Analytical Facilities		4
Physics		4
Social Sciences and Humanities		2



# Why should we be interested?

## Trans-national Access (TA)

- 'free of charge' provision of access to a research infrastructure to *selected* researchers or research teams usually working in a country other than the country where the RI is located. TA can be:
  - **in person** ('hands-on'), to users visiting the infrastructure, e.g. access to a research vessel, or
  - **remote scientific services**, no visit needed, e.g. performance of sample analysis
- While **ad-hoc training** on how to use an infrastructure to solve a specific research problems can be a component of the access service provided by the RI, **attendance to training courses, summer schools or seminars** is not considered access to RI.
- General training courses on how to use a RI for a set of potential users can be supported under networking activities.

# Why should we be interested?

## Virtual Access (VA)

- 'Free of charge' provision of access to **widely used resources** needed for research that are **openly and freely available through communication networks**
  - **No** need for a competitive **selection** of users and therefore **no** need to set up a **selection panel**
  - **No** need to **identify** users either. However identification is possible when access provision is subject to specific requirements such as registration, authentication and/or authorisation of users (e.g. for access to sensitive data)
  - **No** need for users to **visit** the infrastructure to get access
  - **No** need to define a **unit of access** and no specific access costs attributable to a given user

**Training courses** on how to use the RI for a set of potential users can be supported under networking activities

# Who can apply?

- A user group is eligible for TA support under the grant when the user group leader and the majority of users work in countries different from where the installation is located
  - *This condition is not necessary when:*
    - the access provider is an International organisation, the JRC, an ERIC or other similar legal entities representing different countries
    - in case of remote access to a set of installations offering the same type of service and located in different countries
- Only user groups that will disseminate the results they generate under the project are eligible, unless users work for SMEs
- Access for user groups with a majority of users working in third countries is limited to 20% of the total amount of units of access provided under the grant,

# Where can I find more information?

The screenshot displays the EuroRIS-Net website interface. The top navigation bar includes links for Home, About EuroRIS-Net, and News. The main content area is titled 'Transnational Access Opportunities' and features a search bar with filters for 'Current Call Close date' (Year, Month) and 'Project Acronym'. A sidebar on the left contains links to 'RI Policy', 'FP7 NCP networks' corner', 'FAQs', and 'RI Events Calendar'. The main content area lists three projects: 'UP-GRADE BS-SCENE', 'EUROFLEETS', and 'JERICO', each with a brief description and a link to the project website.

**Transnational Access Opportunities**

View Transnational Access Open Calls

Please find below RI projects offering transnational access opportunities (13 projects, e-infrastructures and other projects offering access opportunities, e.g. ESFRI projects).

Through our project team all data will be revised and updated at a regular basis, aiming to offer the most up-to-date information on the opportunities offered through the existing infrastructures of pan-European interest.

Select ☒ 13 Projects ☐ e-infrastructures ☐ Other projects offering access opportunities

Current Call Close date: -Year -Month

Project Acronym:

Domain: Environment and Earth Sciences

**SEARCH**

**Project: UP-GRADE BS-SCENE | Contract No: 226592 | Project Website: <http://www.blackseascene.net>**

**Up-Grade Black Sea Scientific Network**

Transnational Access Info:  
On-line access to in-situ and remote sensing data, meta-data and products for marine environmental institutes  
More info: <http://www.blackseascene.net>

**Project: EUROFLEETS | Contract No: 228344 | Project Website: <http://www.eurofleets.eu>**

**Towards an Alliance of European Research Fleets**

Transnational Access Info:  
A central aim of EUROFLEETS is to provide access to research vessels for all European scientists and their partners on the sole condition of scientific excellence covering all fields of marine science from environmental and biodiversity protection, to coastal zone management, geodynamics and climate change research. To pursue this aim, fully funded ship time on various European research vessels will be available between 2011 and 2013 to support outstanding research projects  
More info: [http://www.eurofleets.eu/np4/open\\_access](http://www.eurofleets.eu/np4/open_access)

**Project: JERICO | Contract No: 262584 | Project Website: <http://www.jerico-fp7.eu/>**

**Towards a Joint European Research Infrastructure Network for Coastal Observatories**

Transnational Access Info:  
JERICO proposes a Pan European approach for a European coastal marine observatory network, integrating infrastructure and technologies such as moorings, drifters, ferrybox and gliders. Unique twin Trans National Access experiments will be carried out in order to reveal the potential of datasets used in synergy. Central coastal infrastructure in Europe will be opened for international research. This will among other benefits GMES and European contribution to climate change research  
More info: <http://www.jerico-fp7.eu/tna/calls-and-selection/second-call>

**Project: SYNTHESYS | Contract No: 226506 | Project Website: <http://www.synthesys.info>**

## Real-Time Database for High Resolution Neutron Monitor Measurements

Transnational Access opportunities:

Access to real-time Neutron Monitor measurements as well as several data products derived from these measurements

More info: <http://www.nmdb.eu/>


# How can I apply?

← → ↻ [www.synthesys.info/access/tafs/](http://www.synthesys.info/access/tafs/)

App EU Whoiswho Nuovi ← → ↻ [www.synthesys.info/tafs/dk-taf/university-of-copenhagen/](http://www.synthesys.info/tafs/dk-taf/university-of-copenhagen/)

App EU Whoiswho Nuova scheda

## University of Copenhagen



**Partners**

University of Copenhagen [Go](#)

**Institution info**

Copenhagen, Denmark  
<http://www.snm.ku.dk>

### Collections & Expertise

The collections of DK-TAF are, quantitatively as well as qualitatively, in an international top class. They comprise a total of about 20 million specimens of preserved animals, preserved human remains, preserved and living plants, tissues, fossils, minerals and rocks. Collections include approximately 75,000 type specimens, including ca. 8,000 types of insects described by I.C. Fabricius (1800's), the Forsskål, Isert & Thonning plants types, and types of fossil animals and plants from Denmark and Greenland.

Collection	Highlights
Botanical	<p>Plants, mosses, lichens and fungi from Greenland, N Atlantic islands, Denmark, Scandinavia, E and NE Africa, Thailand</p> <p>Seeds of Triticeae (wild relatives of wheat, rye and barley, more than 10,000 samples)</p> <p>Culture collection of algae, marine phytoplankton, in the Scandinavian Culture Centre for Algae and Protozoa</p> <p>World's only off-site collection of Galapagos plants</p> <p>ca. 30,000 specimens of plant pathogenic fungi. Rare and unique collection of cones</p>

# Support to Access Provision: under which type of project ?

## ➤ Integrating Activities

- access provision is a mandatory component of the project
- access provision should be implemented in an integrated and coordinated way such as to improve the overall services available to the research community

## ➤ Individual implementation and operation of ESFRI projects *(NEW)*

## ➤ Cluster implementation and operation of ESFRI and other relevant RI initiatives *(NEW)*

- limited to pilot provision of trans-national access by new research infrastructures to promote exchange of best practise and service provision harmonization



# 3- E-Infrastructures

## (2016 – 2017 **DRAFT**)

### 1 - Integration and consolidation of e-infrastructure platforms supporting European policies and research and education communities

*....coordination of regional, national and European operations and funding ....synergies between operational e-infrastructures ....*

*....continuous upgrades of infrastructure without service disruption.*

### 2 - Prototyping innovative e-infrastructure platforms and services for research and education communities, industry and the citizens at large

*...e-Infrastructure platforms and services need to evolve through innovation actions to respond to the long-term needs of research and education communities, industry and the citizens at large*

#### **Mandatory Aspects:**

- Networking;
- Virtual Service;
- Joint Research Activities.

# Work Programme 2016-2017: timeline

Jan – mid-May	<b>Preparation of draft WP parts, including:</b> <ul style="list-style-type: none"> <li>➤ Input on WP content from the Advisory Groups</li> <li>➤ Discussions on WP drafts with the PC configurations</li> <li>➤ Parallel interactions with Policy DGs through the internal Horizon 2020 Groups; and with horizontal directorates on key novelties and features</li> </ul>
Mid-May to Start-June	<b>Checking of draft WP parts, interactions with horizontal directorates and preparation of CIS file</b>
June	<b>Inter-service consultation (CIS)</b>
During July	<b>Translation and Opinions of PC configurations</b>
Start-Sept	<b>Preparation of written procedure for the adoption</b>
Second half of September	<b>Adoption of the WP for 2016-2017 + publication of the calls for proposals</b>




# HORIZON 2020

## PRIMI RISULTATI 2014

### Infrastrutture di Ricerca (comprese le e-Infrastructures)

- Data pubblicazione: 11 Dicembre 2013
- Scadenza: 2 settembre 2014\*
- Budget totale 2014: 277 MEUR
- Dati derivati dalle calls: INFRADEV, INFRAIA, EINFRA and INFRASUP

# Bando 2014 - Infrastrutture di Ricerca (comprese le elnfrastructures)

No. topics	Budget «finanziato» M EUR	Proposte presentate 	Proposte finanziate 	Tasso di successo 
16	258,83M	182	43	<b>23,6%</b>

## Partecipazione



No. Partecipanti IT in proposte presentate	No. Partecipanti IT finanziati	Tasso di successo partecipanti IT
202	63	31%

Contributo finanziario per l' Italia (retained)

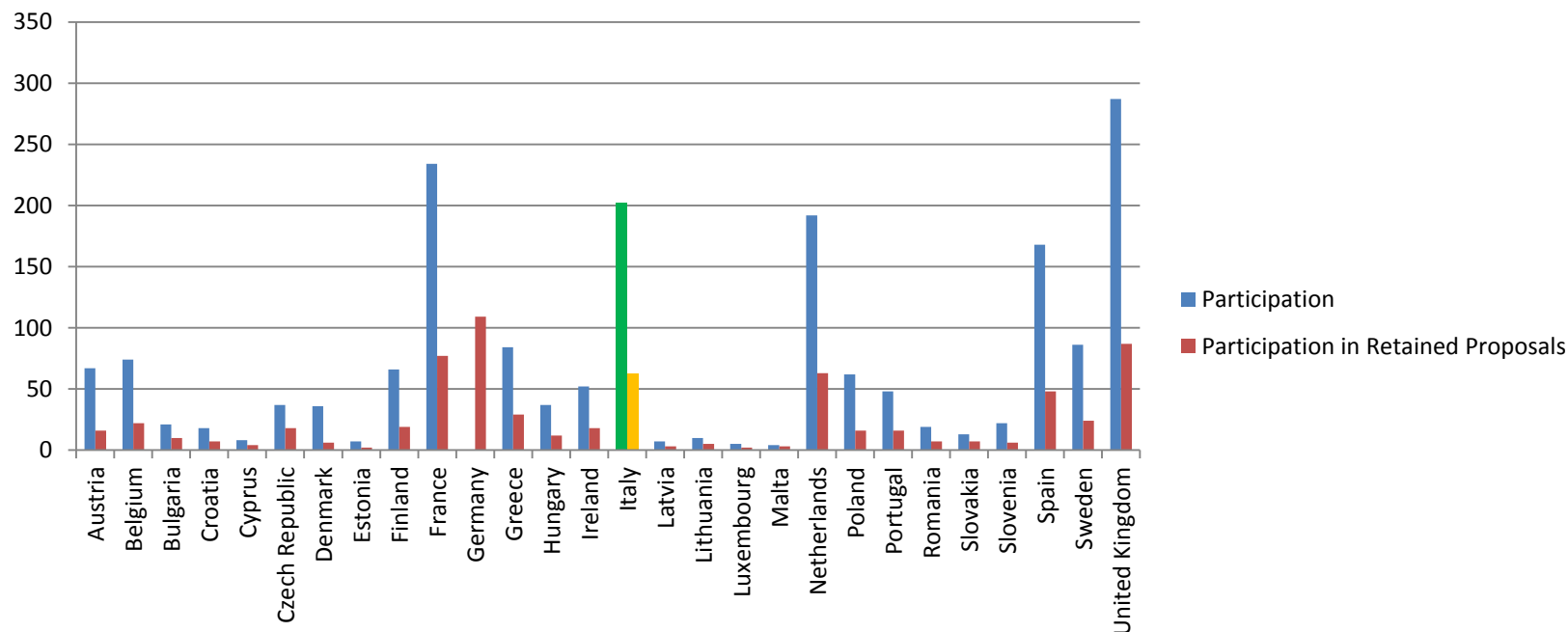
29,72 M€  
11,4% del budget totale

## Coordinamento



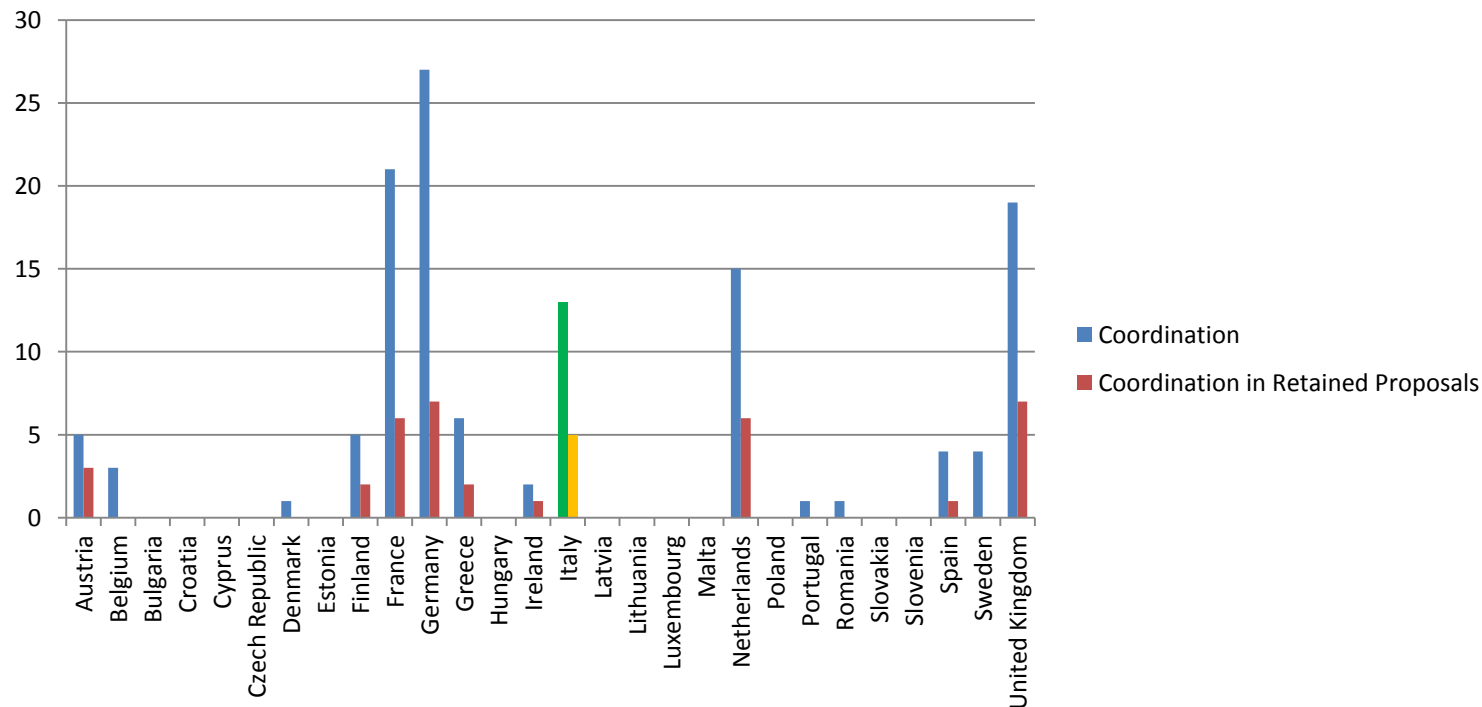
No. Proposte presentate a coordinamento IT	No. Coordinamenti IT finanziati	Tasso di successo coordinatori IT
13	5	38,4%

# Totale della partecipazione italiana



**Tasso di successo italiano:  $\pm 31\%$**   
**202 partecipazioni in proposte presentate**  
**63 partecipazioni in proposte finanziate**

# Progetti a coordinamento italiano



**Tasso di successo italiano:  $\pm$  38%**  
**13 proposte presentate a coordinamento**  
**5 proposte finanziate a coordinamento**



# Highlights: participation of Università degli Studi di Roma "Tor Vergata"

## H2020 Proposal:

INFRADEV-1- GREST , Getting Ready for EST (RIA)

## FP7 projects:

[SCIDIP-ES](#) - Science Data Infrastructure for Preservation – Earth Science

[ETSF](#) - European Theoretical Spectroscopy Facility I3

[EST](#) - EST: The large aperture European Solar Telescope

[RADIONET-FP7](#) - Advanced Radio Astronomy in Europe

[SOLARNET](#) - High-Resolution Solar Physics Network

[EUHIT](#) - European High-performance Infrastructures in Turbulence

## Scientific domains

[e-Infrastructures](#)

[Physical Sciences and Engineering](#)

# **RICH – Research Infrastructures Consortium for H2020**

NCP network for Research  
Infrastructures

# **RICH**

Research Infrastructures Consortium for Horizon 2020



[www.rich2020.eu](http://www.rich2020.eu)

# RICH – Research Infrastructures Consortium for H2020

Facilitate trans-national **co-operation** between NCPs for research infrastructures with a view to identifying and **sharing good practices** and **raising** the general **standard** of support to programme applicants, taking into account the **diversity of actors** that make up the constituency of the Research Infrastructures Part.

## Scope

- Promotion of trans-national and virtual access,
- Synergies with other NCPs networks,
- Cooperation with other policy and international cooperation oriented measures for research infrastructures
- Build on the past experience and achievements gained in EuroRis-Net+ project.

# Grazie per l'attenzione !

[www.apre.it](http://www.apre.it)

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