



# **Research Infrastructures in Horizon 2020**

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## **From FP7 to Horizon 2020**

- More focused support to the implementation and operation of world-class infrastructures such as ESFRI infrastructures
- Broader access to and deeper integration of European research infrastructures
- Foster the innovation potential of research infrastructures
- Widen the participation to pan-European research infrastructures
- More support to e-infrastructures
- Reinforce policy support to European strategy on research infrastructures
- Support a challenge driven approach of the actions
- Develop international dimension of the actions





# Horizon 2020– Framework Programme for Research and Innovation (2014-2020)

## Excellent science

- European Research Council
- Future and Emerging Technologies
- Marie Curie actions
- **European Research infrastructures (including e-infrastructures) – 2.382 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 secure societies

## 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

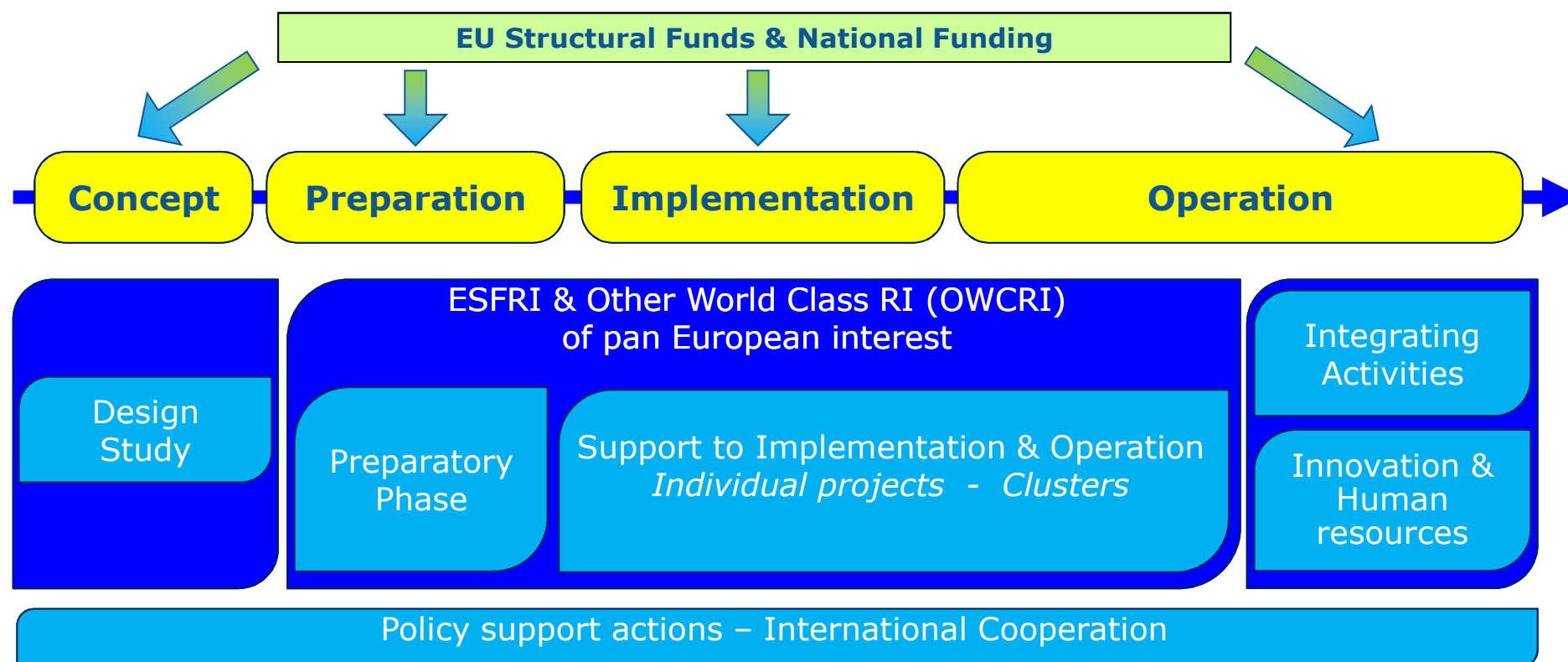


# Research Infrastructures in Horizon 2020

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



# A Coherent Toolbox of Activities





# Research Infrastructures – Calls

4 Calls - 22 topics in total

- 1. Developing new world-class Research Infrastructures**
- 2. Integrating and Opening RI of pan-European Interest**
- 3. *e-Infrastructures***
- 4. Innovation, Human resources, Policy and International cooperation for research infrastructures**





# Developing New world-class RIs

## *Concept & Preparatory Phases*

Help Europe respond to challenges in science, industry & society:

- Support the **conceptual design** of new research infrastructures, which are of a clear European dimension and interest:
  - **bottom-up process**
- Support the **preparatory or pre-implementation phase** of ESFRI projects:
  - **Linked to prioritisation exercise**





# Developing New world-class RIs

## *Implementation & Operation Phases*

Facilitate and support the implementation, long-term sustainability and efficient operation of the ESFRI & OWCRI:

➤ **Individual ESFRI projects** and selected OWCRI with **established legal structure and governance** such as ERIC

➤ **Linked to prioritisation exercise**

➤ **Clusters:** joint activities and implementation of common solutions for RI in specific domains

➤ **Targets ESFRI together with OWCRI, IA, e-infrastructures**





# Developing New world-class RIs

## Support to individual *ESFRI projects*

The action can support:

- Coordination activities;
- Enhancement of the technical architecture, R&D and engineering work; users' access;
- Data management (including possible open access to data);
- Inter-operability, standardisation, outreach, training and international cooperation;
- Development of innovative components and technology transfer activities;
- Integration of new members and development of Regional Partner Facilities.





# Developing New world-class Ris

## *Clusters*

Exploit synergies for joint activities, optimise technological implementation of common solutions, ensure a larger harmonisation, interoperability between research facilities such as:

- Training RI managers
- Developing the innovation capacities of RI
- Development of common devices and/or critical components for data handling
- Common data policies





# Integrating and Opening National RI of pan-European Interest

## *Integrating Activities*

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

- Networking;
- Transnational / Virtual Access;
- Joint Research Activities for the improvement of RI services.

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

- **Simplified implementation** (unit cost...)





# Integrating and Opening National RI of pan-European Interest

## *Integrating Activities*

- **New communities:** emphasis on networking, standardisation and common access procedure
- **Communities already involved in previous projects:** emphasis on access, joint activities, broadening of the consortium, international cooperation, participation of industry and technology transfer

*Topics selected on the basis of the call for expression 2012*





# Exploiting the innovation potential of RI

## *Preparatory action*

The action will support:

- the development of an **opportunity portal** of calls, **tenders** and future needs and **technology transfer** opportunities in RI of pan European interest;
- the networking of **procurement professionals** to encourage exchange of good practices across RI sectors;
- Awareness campaign towards industry on the potential of RIs for their activities in selected R&D areas





# Exploiting the innovation potential of RI

## *Pilot action on instrumentation*

The action will support:

- Pilot action in the field of **scientific instrumentation** exploiting the innovation potential of Research Infrastructures using **Pre-Commercial Procurement (PCP)** and/or **Public Procurement of Innovation (PPI)** schemes.





# Strengthening the human capital of RI

Support the **training of staff managing and operating RI** of pan-European interest, the **exchange of staff** and **best practices** between facilities, and the adequate supply of human resources in key disciplines, including the emergence of specific education curricula.





## Policy measures for RI

- Support **partnerships** between relevant policy makers, funding bodies or advisory groups such as **ESFRI & e-IRG**, support cooperation and exchange of good practises between managers of research infrastructures and stakeholder networks; support survey, monitoring and assessment of the implementation and operation of research infrastructures.
- Support the development of a comprehensive **database targeted at policy-makers on research infrastructures** of more than national relevance in Europe.





# Strategic international cooperation

Facilitate the development of **global research infrastructures** and the **cooperation of European RI with their non-European counterparts**, ensuring their global interoperability and reach, and to **pursue international agreements** on the reciprocal use, openness or co-financing of infrastructures.

➤ **Support to GSO activity on global research infrastructures**

➤ **Support bilateral cooperation with Africa, Russia (Mega Science projects)**

➤ **Support multilateral cooperation with ENP (mapping) and US, Canada, Russia etc... on Arctic research, Marine science and biodiversity**





# Support to the NCP network

**Objective:** Facilitate trans-national co-operation between NCPs with a view to identifying and sharing good practices and raising the general standard of support to programme applicants.

**Activities:** could include benchmarking, joint workshops, enhanced cross-border brokerage events, specific training events and twinning schemes.

Restricted to the network of formally nominated NCPs in the area of research infrastructures (consortium should mix experienced and new NCP).





# Time schedule

- Inter-service consultation: end September 2013
- Discussion with Member States and Associated Countries representatives:
  - **2 October 2013**
  - **25 October 2013 (back to back with FP7 Programme Committee)**
  - **15 November 2013**
- First meeting of the Expert Advisory Group for RI in Horizon 2020:
  - **23 October 2013**
- Written procedure: early December 2013
- Decision on WP2014-2015: 10 December 2013 (tentative)
- Publication first calls: 11 December 2013 (tentative)



**Thank you for your Attention!**

HORIZON 2020

The image features a central globe of the Earth, showing continents and oceans. From the top of the globe, numerous bright blue rays of light radiate outwards, creating a starburst effect. The globe is positioned on a dark, curved surface that resembles the horizon of the Earth. The background is a deep, dark blue, and the overall composition is symmetrical and visually striking.