



Fundação para a Ciência e a Tecnologia

MINISTÉRIO DA EDUCAÇÃO E CIÊNCIA

TOWARDS THE PORTUGUESE ROADMAP FOR RESEARCH INFRASTRUCTURES

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“Research Infrastructures Towards 2020” Workshop

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 4. Goal: a coherent Research Infrastructure ecosystem
-

Towards a National Roadmap for RIs: Context

- |

- ESFRI founded in 2002 as a Member State initiative
 - since then playing a strong role in promoting the development of National Roadmaps for Research Infrastructures
- 2006 - first European level Roadmap (Updates: 2008 and 2010), based on:
 - Information contained in National Roadmaps;
 - Other relevant strategy documents (technology roadmaps, for example)

In 2010

- 48 identified Research

Infrastructures of Pan-European Interest,

- ~70% are distributed RIs across many countries around Europe and beyond.



Towards a National Roadmap for RIs: Context

- II

- ESFRI had then to distinguish between:
 - networks or “collaborations” and
 - effective “distributed research infrastructures”

A **European Distributed Research Infrastructure** is a Research Infrastructure with a **common legal framework** and a **single management board** responsible for the whole RI, with a governance structure responsible for, among others, a Strategy and Development Plan and **one access point for users although its research facilities have multiple sites**.

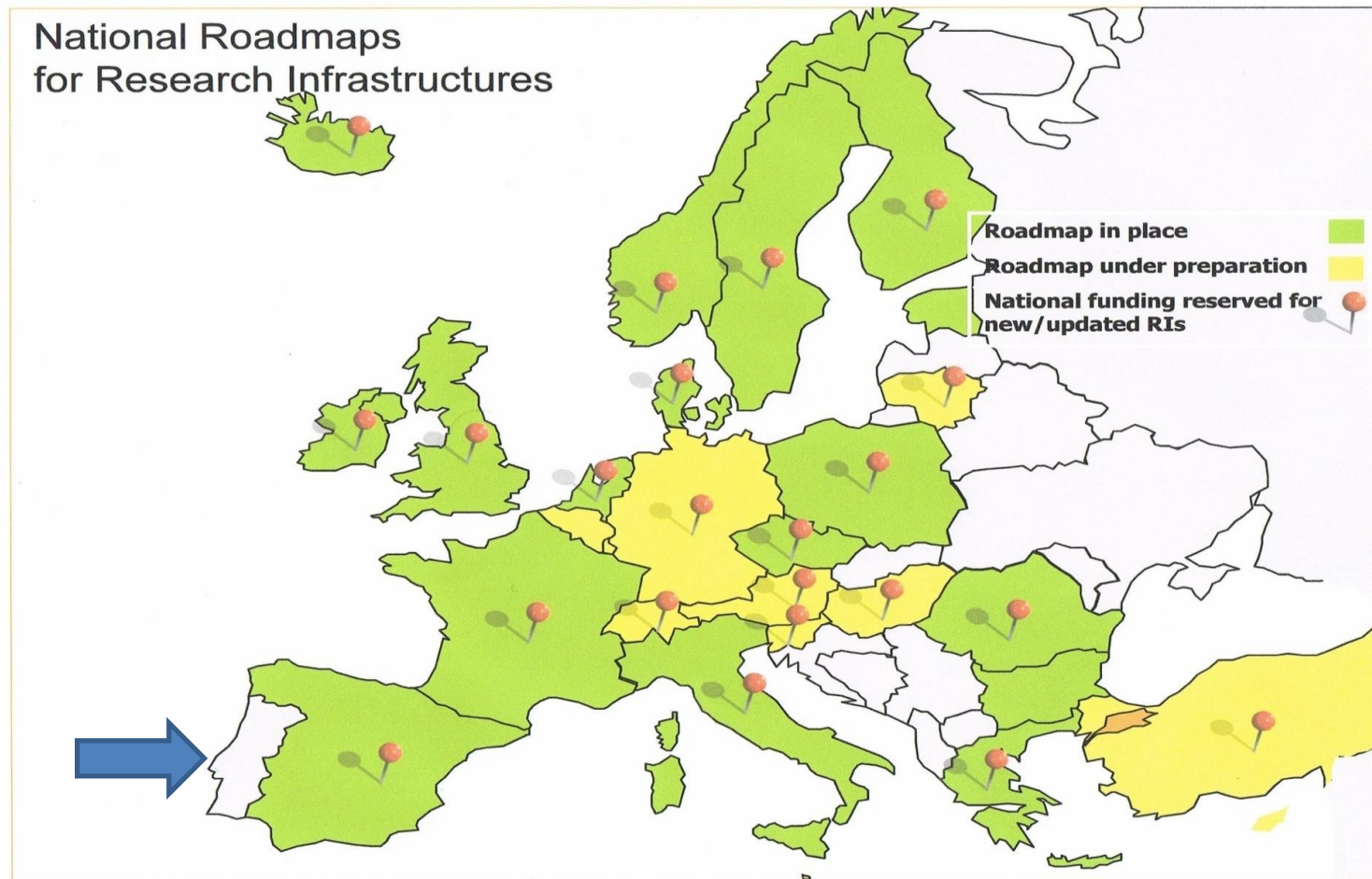
The RI must be of **Pan-European Interest** and bring **significant improvement** in the relevant scientific and technological fields.

Towards a National Roadmap for RIs: Context

- III

- ESFRI Roadmap Research Infrastructures must mainly have national support and endorsement
 - Across Europe this support is given through a competitive and strategic transparent process, which is summarized and updated in the National Roadmaps;
 - The EC supports these infrastructures initiatives in three phases:
 - Preparatory Phase
 - Design Phase
 - Implementation Phase
 - **What was the landscape in Portugal?**
 - No National Roadmap;
 - Strong interest and need from the scientific community but below potential participation (0,74% of total funds to national entities / no coordinated projects)
-

National Roadmaps in 2012



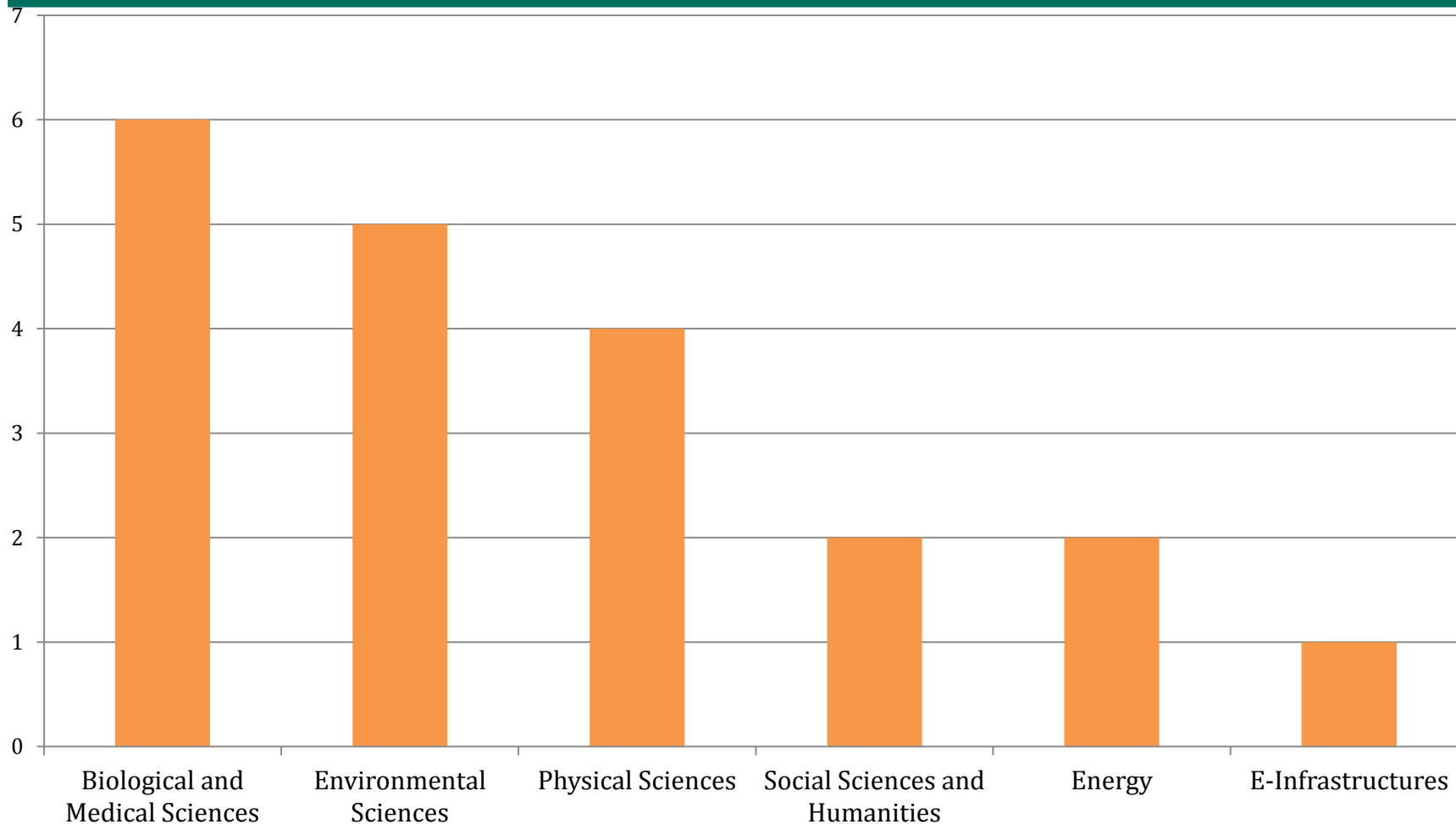
Towards a National Roadmap for RIs:

1st Phase

1st Phase: Public Consultation to identify alignment of scientific community with ESFRI initiatives; very wide and strong interest identified:

- Around 70 responses to a demanding questionnaire at the end of July!
 - Desarticulation among scientific community: several individual responses to the same international ESFRI initiative;
 - Very different maturity levels of both the European RI initiative and the national node organisation;
 - Demonstrated interest in the organisation of new nodes and even new applications to ESFRI 2015 Roadmap;
 - Interest and effective participation in 22 ESFRI Research Infrastructures preparatory phases.
-

Towards a National Roadmap for RIs: Result of July 2012 public consultation



Towards a National Roadmap for RIs: 2nd Phase (July 2012– Jun 2013)

- **International Benchmarking** – a comparative analysis of 8 Roadmaps across Europe:
 - Denmark, Finland, France, Italy, Norway, Slovenia, Spain, UK
 - **Conceptual definition** based on:
 - National Roadmaps, ESFRI and MERIL.
 - Articulation with European Commission DG RTD and DG REGIO in the context of the preparation of **H2020 and the EC and Regional Authorities in the context of Smart Specialisation;**
 - **Preparation of Third Phase** – the call for proposals for the selection of RIs and their integration in the National Roadmap of Strategic RIs
-

Towards a National Roadmap for RIs:

3rd Phase (July – Dec 2013)

- **Call for proposals** aimed at selecting strategic interest RIs to integrate the National Roadmap
 - until the end of July 2013
 - Aims of the National Roadmap:
 - Evaluate and select RIs of strategic interest ;
 - Plan medium to long-term investment (until 2020);
 - Prioritise the investment according the strategic relevance, scientific merit and maturity of the project;
 - Build a national research infrastructures database.
-

Towards a National Roadmap for RIs: 3rd Phase (July – Dec 2013)

Characteristics of the Call and RI Roadmap:

- Annual budget earmarked for Research Infrastructures in the National Roadmap;
 - First projects funded already in 2013;
 - Roadmap revision every 3 years;
 - Accompanying committee (FCT + External experts) will monitor implementation
-

Lessons learnt:

Role for RIs in the national roadmap

- Backbone of Research & Innovation;
 - Contribute to the high-level training of young researchers;
 - Attract excellent national and international researchers;
 - Strengthen and promote the insertion of national teams in international research networks and their capacity to participate in international competitive calls;
 - Encourage innovation and contribute to stronger links to industry;
 - Contribute to systemic regional innovation.
-

Lessons learnt:

Definition of “RIs” in the National Roadmap

An organisational system **used by scientific communities to develop excellent research and innovation** in the respective scientific domains.

It includes **large scientific equipment or groups of scientific instruments, collections** and other knowledge based resources, **archives and scientific data, computational and programming systems, communication networks** that promote open digital access or others of a unique nature deemed essential for the **development of excellent research and innovation**.

Lessons learnt: Definition of “RIs” in the National Roadmap

NOT just a piece of equipment

- RIs can be geographically concentrated or an organised network of resources;
 - Must have professional management, capable of implementing a strategic action plan and the aims therein defined;
 - Capacity to deliver the adequate and needed services to the educational, industrial and scientific community;
 - Provide clear access conditions to national and international researchers.
-

Policy Context of the National Roadmap



ESFRI



Smart
Specialization



FCT

National Roadmap for Research Infrastructures

Public Call for RIs of National Strategic Interest - I

Aim: to identify large-scale Research Infrastructures aligned and non-aligned with ESFRI

ESFRI Initiatives

The diagram consists of two horizontal bars. The top bar is red and contains the text 'ESFRI Initiatives'. The bottom bar is green and contains the text 'Other National RIs of Strategic Interest'. Each bar is connected to a vertical line on its left side, which then extends horizontally to the right, ending in a small vertical line segment. This creates a visual structure that suggests a flow or categorization of the information.

Other National RIs of Strategic Interest

Public Call for RIs of National Strategic Interest - II

The contents of the Application Form

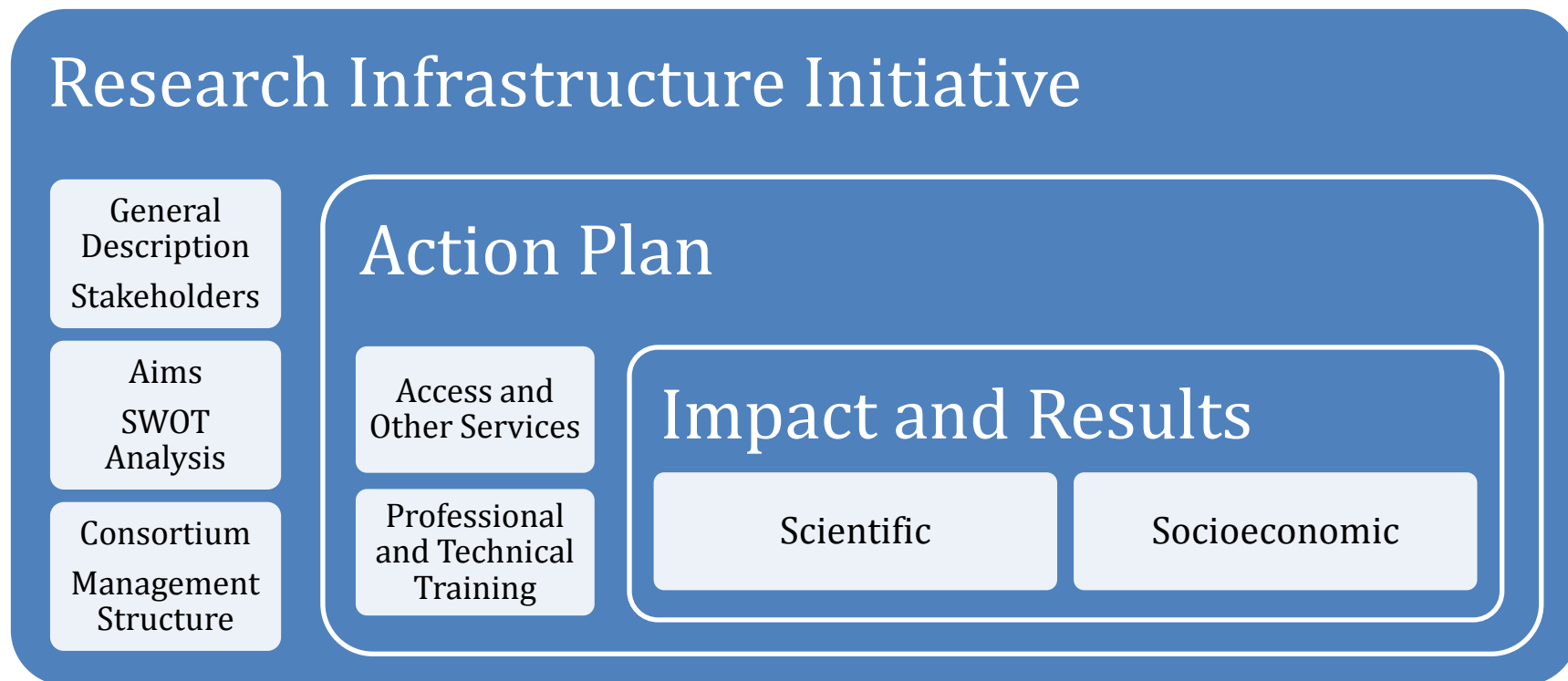
Two Key parts:

Characterisation and description of the RI (including people, equipment, integration in an international RI, access conditions and management structure)

Research Infrastructure Proposal – Strategic action and diagnosis of future investment needs and potential funding sources (including scientific aims, an action plan, expected results and expected impact)

Public Call for RIs of National Strategic Interest - III

Picture of the overall information requested in the application form



Public Call for RIs of National Strategic Interest - IV

Thematic areas aligned with the European ESFRI panels:

- Social Sciences and Humanities;
- Environmental Sciences;
- Biological and Medical Sciences;
- Materials and Analytical Facilities;
- Energy;
- Physical Sciences and Engineering.

The applicant can choose a main area and a secondary area

Public Call for RIs of National Strategic Interest - V

Budget of the proposal divided in two parts

- **Investment Plan**, per year, per institution;
 - **Financing Plan**, indicating estimated funding sources per year, per institution
 - **Budget for a period of 6 years starting in 2014**
 - **Eligible expenses:** Human resources, equipment, facility adaptation and construction, other costs.
-

Public Call for RIs of National Strategic Interest - VI

Evaluation criteria

- Scientific merit

- a. Contribution to high quality scientific activity and to the development and differentiation of the national scientific and technological system;
- b. Management capacity and implementation of the proposed action plan;
- c. Budgetary reasonability and sustainability.

- Strategic relevance

- a. Contribution of the RI to the national and regional development goals/strategy;
 - b. Contribution to international competitiveness;
 - c. Socioeconomic impact and innovation.
-

A national roadmap = a coherent ecosystem of research infrastructures

Funding instruments

Efficient and combined use of funding sources

- regional;
- national;
- European;
- International;
- public and private;

Core Needs

Serves the core needs of the scientific and innovation community

- Professional Management;
- Access to the *state of the art* knowledge and equipment
- Supports high level researcher training and technical RI training;
- Facilitates pre-competitive research and value creation;

Excellence, Innovation, Impact

Supports excellent research and innovation

- Promotes integration in international research infrastructure networks;
- Increases participation capacity and leadership in international projects and programs;



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