



Spain – National Embedment (international RI)

1. RI definition	
In which points does the National Roadmap deviate from the ESFRI Roadmap?	
Categories	National Roadmap
Funding	
Categorisation of RI	
Access to RI	
Organisation within national procedure	

2. RI in the National R&I System
RDI policy making is decentralised in Spain. The Spanish national and regional administrative entities are both legitimated to stimulate R&I. The Spanish government sets the RI policy framework and develops the national strategies, including the involvement and cooperation mechanisms between the key stakeholders. Due to great financial autonomy of the Spanish regions with regard to R&I funding, they also play a major role in R&I administration and the political decision-making process. Furthermore, they are responsible for university funding. The funding of construction, running costs, new equipment and other type of investments for RI is mainly coming from the Ministry of Economy, Industry and Competitiveness (Mineco) in coordination with other administration bodies and a co-financing of the autonomous regions.

3. Major national strategies for international cooperation in R&I and strategic integration of RI
In 2011, the Law of Science, Technology and Innovation (LCTI) was adapted. It has the objective to improve coordination with regional and European authorities, improve research careers and to support the transition to an economy founding on knowledge and innovation. The newly established Spanish Research Agency was one of the major results of the LCTI together with the decision to develop a Spanish Strategy for Science, Technology and Innovation. (Fernández-Zubieta & Zacharewicz, 2016, p. 108)
In 2013, this strategy, known under the short form EECTI, was adapted and determines the principles, objectives, priorities and impact indicators for the Spanish R&I policy until 2020.
The Spanish strategy EECTI is implemented through the Spanish State Plan of Scientific and Technical Research and Innovation PECTI (2013-2016), which is a multiannual plan, describing programmes, coordination mechanisms, costs and sources of funding. One of the aims of PECTI is to foster access to research infrastructures and scientific equipment, especially focusing on large-scale facilities at the national and international level.





Spain – National Embedment (ICT)

1. RI definition	
In which points does the National Roadmap deviate from the ESFRI Roadmap?	
Categories	National Roadmap
Funding	
Categorisation of RI	x
Access to RI	x
Organisation within national procedure	x
<p>The term Unique Scientific and Technical Infrastructure (ICTS) refers to facilities, resources, or services for the development of top-quality cutting-edge research, as well as the communication, exchange, and preservation of knowledge, the transfer of technology, and promotion of innovation. They are unique or exceptional in their fields, with a high cost of investment, maintenance, and operation, and are of a strategic importance that justifies their availability to all actors in the field of R&D. The ICTS share three fundamental characteristics; they are infrastructures with public ownership, unique and open to competitive access.</p> <p>The ICTS share three fundamental characteristics:</p> <ul style="list-style-type: none"> • They are infrastructures with public ownership, meaning that they belong to or are managed by public entities, whether they are under the authority of the Spanish Central Administration and/or the Autonomous Communities. In any case, they are mainly financed by public funds. • They are unique, meaning that they are the only one of their kind, including: <ul style="list-style-type: none"> ○ Large pieces of equipment that allow the observation, analysis, or interpretation of phenomena of interest. ○ Complex experimental RI designed to create, reproduce, and study physical, chemical, or biological phenomena of interest. ○ Large experimental RI for the engineering and development of new technologies for application in a variety of fields. ○ Infrastructures necessary for facilitating access for scientists to natural environments that provide and exhibit unique conditions for research. ○ Advanced technology that provides horizontal and fundamental support to any field of science and technology • They are open to competitive access by users in the entire research community, from the public as well as the private sector. <p>In general, although not exclusively, the ICTS are the basis for Spain's participation in the international RI contained in the ESFRI Roadmap.</p>	



2. RI players in the national R&I system

The RI players within the R&I system are displayed in figure 21.

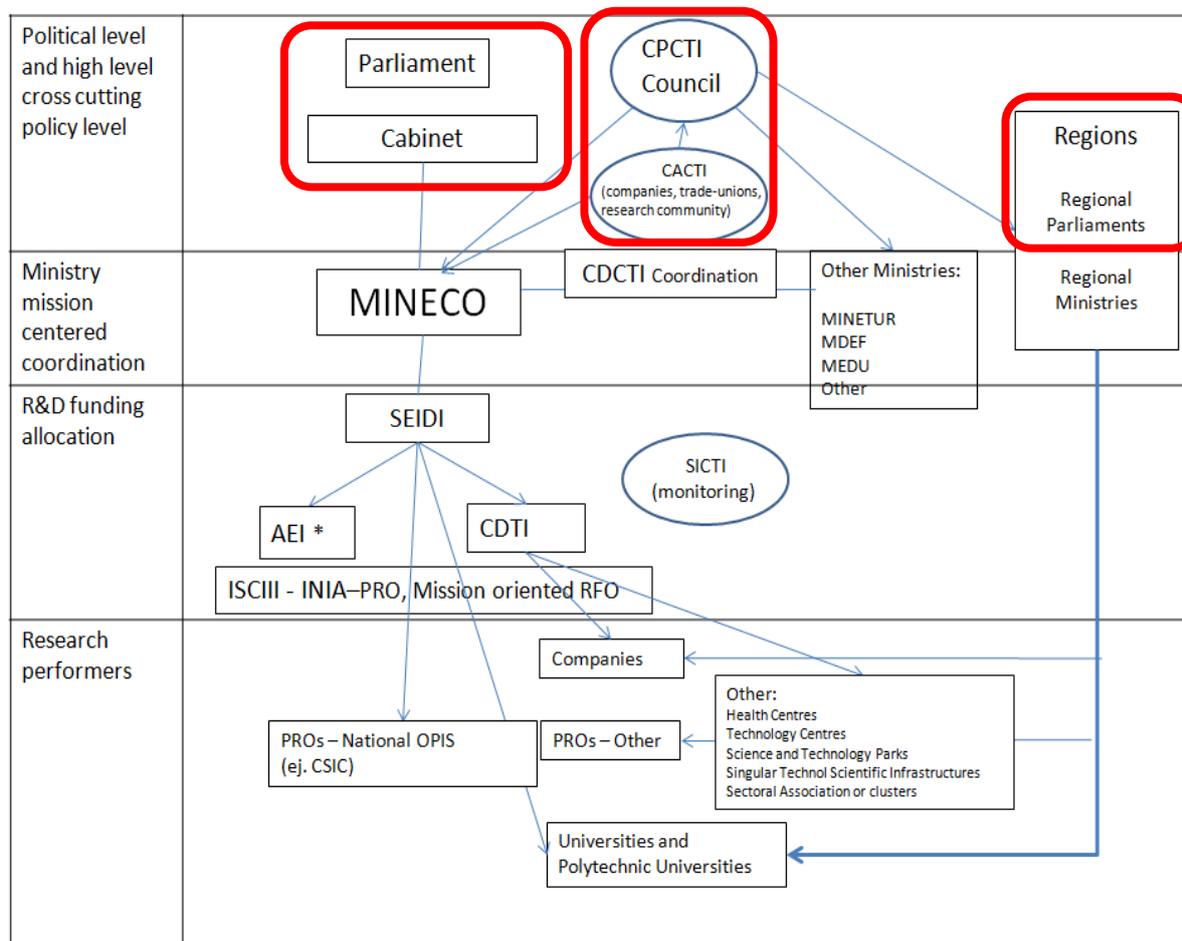


Figure 21: Organisational chart of the R&I system of Spain (Fernández-Zubieta and Zacharewicz 2016, p. 17). Red colour indicates the bodies with the main decision power regarding RI.

National relevance of RI

Article 149.1.15 of the Spanish Constitution lists the promotion and general coordination of scientific and technological research as one of the sole responsibilities of the State. In this context, and under Law 14/2011 regarding Science, Technology, and Innovation, the Spanish Central Administration created the "Spanish Strategy for Science and Technology and Innovation" in the year 2012. Additionally, it took into account the participation of social agents and an extensive group of independent experts belonging to the scientific, technological, and business communities. This Strategy regards R&D activities from a general perspective for the period from 2013 to 2020, and considers that the use of the "Map of Unique Scientific and Technical Infrastructures (ICTS)" as key to the development of the Spanish Science, Technology, and Innovation System, as well as its integration into the European Research Area.

Embedding of RI in the national R&I system

MINECO divides its responsibilities with regard to RI in two working units which are interlinked with each other: In international and national initiatives.

The **international** part is integrated in the unit "Internationalisation of Science and Innovation".



This one is responsible for the participation of Spain in International Organisations and infrastructures (ESFRI Roadmap).

National activities are included in the Deputy Directorate General for the Scientific and Technological Infrastructures. This department is responsible for the maintenance and monitoring of the national ICTS Map. When referring to relevant national Research Infrastructures, the term Unique Scientific and Technical Infrastructure (ICTS) is used in Spain.

3. RI in the National R&I System

RDI policy making is decentralised in Spain. The Spanish **national and regional administrative entities are both legitimated to stimulate R&I.** The **Spanish government sets the RI policy framework and develops the national strategies**, including the involvement and cooperation mechanisms between the key stakeholders. Due to **great financial autonomy of the Spanish regions with regard to R&I funding** (Spanish regions comprised 60% of the GBAORD in 2012), they also play a **major role in R&I administration and the political decision-making process.** Furthermore, they are responsible for RI that belong to universities and other regional entities. The funding of construction, running costs, new equipment and other type of investments for RI is mainly coming from the Ministry of Economy, Industry and Competitiveness (MINECO) in coordination with other administration bodies autonomous regions.

4. Major national strategies for international cooperation in R&I and strategic integration of RI

In 2011, the **Law of Science, Technology and Innovation (LCTI)** was adapted. It has the objective to improve coordination with regional and European authorities, improve research careers and to support the transition to an economy founding on knowledge and innovation. The newly established **Spanish Research Agency** was one of the major results of the LCTI together with the decision to develop a Spanish Strategy for Science, Technology and Innovation. (Fernández-Zubieta & Zacharewicz 2016, p. 108)

In 2013, this strategy, known under the short form EECTI, was adapted and determines the principles, objectives, priorities and impact indicators for the Spanish R&I policy until 2020. It also includes the updates on the **"Map of Unique Scientific and Technical Infrastructures (ICTS)"** and emphasizes the strategic importance of RI for the development of the Spanish STI system. The ICTS contains a prioritization of existing infrastructures, efforts to be undertaken regarding the maintenance and a process of renewing the ICTS map.

The Spanish strategy EECTI is implemented through the **Spanish State Plan of Scientific and Technical Research and Innovation PECTI (2013-2016)**, which is a multiannual plan, describing programmes, coordination mechanisms, costs and sources of funding. One of the aims of PECTI is to foster access to research infrastructures and scientific equipment, especially focusing on large-scale facilities at the national and international level. This information is outlined in the paragraph "State Subprogramme for Scientific and Technological Infrastructure and Equipment" (Fernández-Zubieta&Zacharewicz 2016, p. 108); (Map of Unique Scientific and Technical Infrastructures. (ICTS), NN, p. 13)

The update of the ICTS was used among others to better involve regional policy-makers and improve the coordination between the different regional and national authorities. Furthermore, the role of ex ante evaluation was reinforced as prerequisite to apply for funding through the European Regional Development Fund (ERDF). This measurement enabled the ICTS to receive co-financing from the ERDF over the Programming Period 2014-2020. Besides, ICTS are coordinated with ESFRI and other international plans on specific applications, as for example the agendas of the European



technological Platforms (ERAC Peer Review of the Spanish Research and Innovation System, 2014 p. 19; Map of Unique Scientific and Technical Infrastructures (ICTS), NN, p. 13f.).

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Further links

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<http://www.idi.mineco.gob.es/stfls/MICINN/Ayudas/PE_2013_2016/PE_Fomento_Investigacion_Cientifica_y_Tecnica_Excelencia/FICHEROS/SE_Infraestructuras_Cientificas_y_Tecnicas_Equipamiento/ICTS/Convocatoria_ICTS_2016.pdf>.[Last access: 06/2017].

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