



Poland – National Embedment

1. RI definition	
In which points does the National Roadmap deviate from the ESFRI Roadmap?	
Categories	National Roadmap
Funding	
Categorisation of RI	Strategic research infrastructure - a research device (or a set of research devices): having a unique character on a national, European or international scale and crucial for the development of scientific research, development works or for the development of IT infrastructure for long-term consolidation of national scientific potential, meeting the criteria of excellence scientific and organizational as well as the principles of open access to conducting and using research results, focused (e.g. large telescope) or dispersed (e.g. a network of observatories with small telescopes), stationary (e.g. synchrotron) or mobile (e.g. driving objects, flying or floating), as well as science IT infrastructure, such as data banks, telecommunications networks and information systems, and knowledge resources such as archives, collections and deposits (e.g., content collected in databases).
Access to RI	
Organisation within national procedure	Apart from a few exceptions, the weaknesses of the projects were aspects of their management, organizational concepts and issues of access to 'national laboratories' by external users. This indicates the need to organize specialized training related to the management of large research centers with significant research infrastructure. In this respect, the Ministry of Science and Higher Education plans to include relevant initiatives taken by ESFRI
<p>RI are facilities, resources and related services that are used by the scientific community to conduct top-level research in their respective fields and covers major scientific equipment or sets of instruments; knowledge-based resources such as collections, archives or structures for scientific information; enabling Information and Communications Technology based infrastructures such as Grid, computing, software and communication, or any other entity of a unique nature essential to achieve excellence in research. Such infrastructures may be 'single sited' or 'distributed' (an organised network of resources).</p> <p>As for the evaluation there is no evaluation mentioned in any documents. The categories about categorisation of RI, Access and organisation within national procedure. The national road mapping procedure is not available on-line, no documents, from 2015 still awaiting for the up-date.</p>	

Source: Data derived from InRoad consultation on RI (2017).



2. RI players in the national research and innovation system

The RI players within the R&I system are displayed in figure 18.

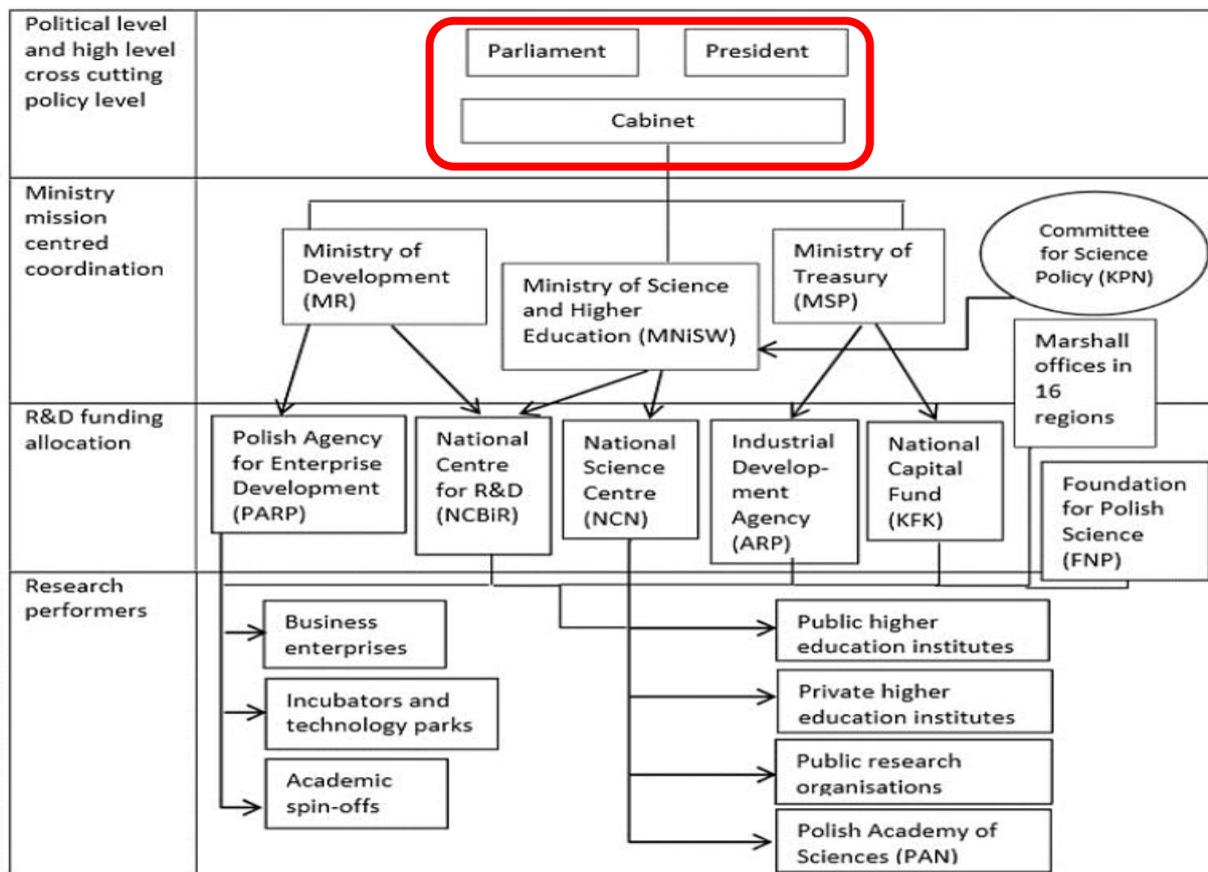


Figure 18: Organisational chart of the R&I system of Poland (Klincewicz and Szkuta 2016, p. 20). Red colour indicates the bodies with the main decision power regarding RI.

National relevance of RI

Up to now 53 projects had been selected on the basis of assessments by expert teams: 14 representing the physical and mathematical sciences, 14 – engineering, 11 - earth and biological sciences, 6 - interdisciplinary issues, 6 - medical science and agriculture, and 2 - social sciences and humanities. As many as 23 projects are international ones.

The Polish Roadmap for Research Infrastructures projects will be implemented in eight science areas: basic research, interdisciplinary research, high quality of life in society, healthcare and increasing the efficiency of pro-health, increasing production efficiency, energy storage and transmission, the development of advanced materials and technologies, the development of intelligent systems and infrastructure, sustainable development of natural and human environment.

The National Information Processing Institute is responsible for launching of a competition for projects (previously National Centre for Research and Development) included on the list of the Polish Roadmap for Research Infrastructures and distribution of the funds based on the condition that The minimum cost of the project should amount to PLN 30 million (approx. € 6.8) , with at least 10% of the amount of investment to be obtained from entrepreneurs. The project could be submitted in the consortia with scientific institutions and enterprises. The total budget for the RI funding program (2014-2020) is PLN 804 million (approx. €182. 7 million). Competition for PRRI projects (Measure 4.2 Development of modern research infrastructure of the science sector) is held within the framework of the Smart Growth Programme, which aims to increase innovation in the



Polish economy through research with an active participation of enterprises. However the total investment in research and higher education including the RI (modern laboratories, research centres, university campuses in the years 2007-2013) but not related directly with the road mapping process – amounts nearly PLN 29 billion (approx. € 6.6 billion).

Embedding of RI in the national R&I system

The MNiSW is the main responsible entity for RI and Roadmapping.

The formation of the PMDIB was preceded by a review of the research base held by the research units and the current investment policy. As a result, it was found that the vast majority of available equipment is small, often not fully utilised devices, which are similar in different scientific units. In addition, a review of large investments carried out since 2007 by research units from the Structural Funds has also been completed.

Using these analyses, it was found that the proposal for a research infrastructure project on PMDIB should describe the idea of creating a research centre, at home or abroad, consolidating national research potential in a given field. Strong research teams with relevant national and international achievements should be involved in this centre. The organization's concept should include the principle of open access to research equipment, based on the criterion of scientific excellence.

Awaiting the new legal basis of The Act on Financing Science in Poland.

3. RI in the National R&I System

The governance structure on the **national level is divided into the parliament as legislative body** and the **cabinet as the executive part** to develop national policies. **The Ministry of Science and Higher Education is the responsible body for research and innovation** and is **also in charge of the RI Roadmapping**. It is **supervised by two major funding agencies**: The National Science Centre (NCN), responsible for financing basic research project and the National Information Processing Institute, former National Centre for Research and Development (NCBiR), in charge of financing applied and innovative development research projects. (Klincewicz and Szkuta 2016, p. 16)

The Ministry of Science and Higher Education's Grants are dedicated to support the participation of the Polish scientific community in international RI projects (mainly ESFRI). The Ministry of Science and Higher Education's annual allocation is earmarked to cover Poland's financial contributions to international institutions or organisations under international agreements. The Polish research system is characterized by the dominance of public funding. R&D expenditures in Poland have improved gradually over the last years. R&D intensity increased from 0.6% of GDP in 2007 to 1% of GDP in 2015, which remains below half of the EU average.

4. Major national strategies for international cooperation in research and innovation and strategic integration of RI

The National Information Processing Institute (previously National Centre for Research and Development) is responsible for launching a competition for projects that are going to be included on the list of the Polish Roadmap for Research Infrastructures and the distribution of the funds. The minimum cost of the project should amount to 30 million PLN (approx. 6.8 million €), with at least 10% of the amount of investment to be obtained from entrepreneurs. The project could be submitted by consortia with scientific institutions and enterprises. The total budget for the RI funding program (2014-2020) amounts to PLN 804 million (approx. 182.7 million €). The competition for PRRI projects is held within the framework of the Smart Growth Programme, which aims to increase innovation in the Polish economy through research with an active participation of



enterprises. However, the total investment in research and higher education including the RI (modern laboratories, research centres, university campuses in the years 2007-2013) but not related directly with the road mapping process – amounts nearly 29 billion PLN (approx. 6.6 billion €).

References

- Klincewicz K., Szkuta K. & M. Marczevska. (2017). RIO Country Report 2016: Poland. <<https://rio.jrc.ec.europa.eu/en/library/rio-country-report-poland-2016-0>>. [Last access: 06/2017].
- Klincewicz K. & K. Szkuta. (2016). RIO Country Report 2015: Poland. <<https://rio.jrc.ec.europa.eu/en/file/9455/download?token=Nc14gUpD>>. [Last access: 06/2017].
- Information included in the InRoad Consultation (survey sent on 02/05/2017).
- Polish Ministry of Science and Higher Education (2013). Proposal form for research infrastructure project to be included in the Polish Roadmap for Research Infrastructures. <www.nauka.gov.pl/g2/oryginal/2013_05/5301ea77f25ff382eb3f2ecb7cdd8888.doc>. [Last access: 07/2017].

Further links

- KPMG (2013) Działalność badawcza i rozwojowa w Polsce w 2020 roku. KPMG, Warsaw. <<https://www.kpmg.com/PL/pl/IssuesAndInsights/ArticlesPublications/Documents/2013/Dzia%C5%82alnosc-BR-przedsi%C4%99biorstw-w-Polsce.pdf>> [Last access: 06/2017].
- MNiSW (2015) Program rozwoju szkolnictwa wyższego i nauki na lata 2015-2030. Ministry of Science and Higher Education, Warsaw, September 2015. <http://www.nauka.gov.pl/g2/oryginal/2015_09/cccde12e22cdc548b16002ab2c199ba7.pdf> [Last access: 06/2017].

