



Denmark – National embedment

1. RI definition	
Please see the answer to point 3	
Categories	National Roadmap
Funding	
Categorisation of RI	
Access to RI	
Organisation within national procedure	
<p>Research infrastructure is the collective term for a wide variety of equipment, measuring instruments, test facilities, databases, laboratory facilities, test plants, supercomputers and other tools and resources employed in research processes and in generating new knowledge. RI may be in the form of a single-sited physical facility (a single resource at a single location, whether static or mobile); a distributed network (comprising collections, laboratories or measuring stations); or a virtual facility (offering online access). RI is utilised within all of the main scientific disciplines, but takes different forms from one discipline to the next. One common denominator, however, of all types and forms of contemporary and advanced RI is that they constitute an essential 'tool box' for developing and supporting Danish research, education and innovation at an internationally competitive level. This gives them a key role in boosting Danish knowledge and growth.</p> <p>The Danish roadmap includes proposals for new or major upgrades of larger scale national RI (typically with total investment needs for construction and/or implementation of approx. 3-14 million €) and memberships and/or nodes to European RI, e.g. those in the ESFRI roadmaps. The RI are single-sited, distributed and/or virtual and within all scientific areas. Memberships of convention-based international RI (e.g. CERN, ESO) and some other national RI collaborations are not part of the roadmap process.</p>	

2. RI players in the national R&I system
<p>National relevance of RI</p> <p>A priority for Denmark is the access of its researchers to state-of-the-art facilities in order to sustain their ranking among the global elite in the future. Equally, access to up-to-date RI is a competitive parameter in the retention and recruitment of top students and researchers, while RI also serve as hubs for knowledge, innovation and technology transfer between research and industry. (Danish Agency for Science, Technology and Innovation 2015, p. 7)</p> <p>Embedding of RI in the national R&I system</p> <p>Responsibilities for RI are shared between the Danish Ministry of Higher Education and Science, including the Danish Agency for Science, Technology and Innovation (which receives advice from the National Committee on Research Infrastructures (NUFI)), and the Danish research performing institutions.</p>



3. RI in the National R&I System

Main responsibilities for R&I are located at the national level. The Ministry of Higher Education and Science is mainly in charge for R&I in Denmark. Additionally, the **Ministry of Business and Growth has certain tasks related to business development** as well as several sectoral ministries, namely the Ministry of Energy, Utilities and Climate, the Ministry of Environment and Food and the Ministry of Foreign Affairs, have larger R&I programs. **The ministries have specific agencies which implement the respective policies.** Regions do not play a decisive role in the R&D governance process. (Grimpe and Mitchell, 2016, p. 13)

The "Danish Council for Research and Innovation Policy" is the central advisory body for the Ministry of Education and Science. It is made up of renowned Danish researchers and advises the ministry and parliament on issues related to research, technology and innovation in Danish society. The "Danish Agency for Science, Technology and Innovation" (DASTI), which was assigned to the Ministry of Education and Science, was the national Danish research and innovation promotion agency. DASTI was also responsible for the quality assurance and evaluation of Danish research. Owing to a reorganisation of the Ministry of Higher Education and Science, DASTI no longer exists and was replaced by the Danish Agency for Science and Higher Education (DAFSHE) to which the division for research infrastructures has moved as well. The Danish National Research Foundation, the Danish Council for Independent Research and the Innovation Fund Denmark are the three main funding agencies for R&I (Grimpe and Mitchell, 2016, pp. 13-14)

The Minister of Higher Education and Science allocates funds from National Fund for Research Infrastructures (part of the Ministry's section of the National Budget) to proposals from the roadmap. They are given as a one-time grant and to be used over an initial period of up to 5 years. **The decision is based on advice from the Danish Agency for Science and Higher Education** (which in turn is advised by the NUFI). There are also annual allocations in the National Budget for Denmark's memberships in international convention-based RI and other special national RI collaborations. **The national research institutions (e.g. universities) receive at least half of the funding for the construction/implementation of RI. The funding is requested by the involved research institutions.** (Grimpe and Mitchell, 2016, pp. 13-15)

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

In 2012 Denmark launched its first comprehensive innovation strategy "Denmark- a nation of solutions" In which all relevant stakeholders of the Danish R&I system were involved. The strategy focuses on three areas:

1. Innovation is to be driven by societal challenges to a larger extent than today,
2. more knowledge is to be translated to value,
3. education is to increase the innovation capacity.

The innovation strategy contains 27 policy initiatives regarding research, innovation and education. It focuses on a better knowledge exchange between companies and knowledge institutions, across borders and between the public and private sector. (Ministry of Higher Education and Science, 2012)

References

- Danish Agency for Science, Technology and Innovation (2015). Danish Roadmap for Research Infrastructures 2015. <<http://ufm.dk/en/publications/2016/danish-roadmap-for-research-infrastructures-2015>> [Last access: 08/2017].
- Grimpe, C. & J. Mitchell (2016) RIO Country Report 2015: Denmark. <https://rio.jrc.ec.europa.eu/sites/default/files/riowatch_country_report/DK_CR2015_0.pdf> [Last access: 08/2017].
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- Knudsen, M.P., Christensen, J.L & Christensen, P. (2017) RIO Country Report 2016: Denmark <<https://rio.jrc.ec.europa.eu/en/file/10752/download?token=a-WKKfOj>>. [Last access: 08/2017].



- Ministry of Higher Education and Science (2012) Denmark– a nation of solutions. Enhanced cooperation and improved frameworks for innovation in enterprises. <<http://ufm.dk/en/publications/2012/files-2012/innovation-strategy.pdf>> [Last access: 08/2017].

Further links

- Research Infrastructure - Report Schedule <http://ufm.dk/forskning-og-innovation/tilskud-til-forskning-og-innovation/administration-af-bevilling/skemaer/rapportskemaer/copy_of_euopstart-skema-til-slutrapport>. In Danish. [Last access: 08/2017].
- Research Infrastructure - Financial Reporting <<http://ufm.dk/forskning-og-innovation/tilskud-til-forskning-og-innovation/administration-af-bevilling/skemaer/regnskabsskemaer/euopstart-regnskabsskema-med-erklaring-om-egenfinansiering>>. In Danish. [Last access: 08/2017].

