



To the members of the Higher Education and Research Committee

Invitation for a meeting organised in the context of the Peer Review of the Danish R&I system under the Horizon 2020 Policy Support Facility

The Horizon 2020 Policy Support Facility is a service provided by the European Union to support the EU Member States in the reform of their country's Research and Innovation (R&I) governance system.

In June 2018, the Danish Minister for Higher Education and Science, Tommy Ahlers, expressed the interest of the Danish authorities for a Peer Review of the country's R&I system by a letter to the Commissioner for Science, Research and Innovation Carlos Moedas.

Even though Denmark has a very strong innovation system, the level of economic and societal impact thanks to knowledge-based innovation is falling short of expectations. The mandate of the PSF Peer Review panel is to assess how Denmark can adjust its efforts from this perspective, based on international best practices, and provide concrete recommendations for the further development of the Danish public R&I policy.

The PSF panel of experts, presented in Annex 1, will visit Denmark for the second time from 6 to 8 May 2019 to meet the Danish authorities involved in R&I policy as well as representatives of the research and business communities. The purpose is to discuss with the various stakeholder groups the panel's findings and preliminary conclusions and recommendations related to the challenges and needs for change in the Danish R&I support system and what might explain this shortfall, and how it could be addressed.

We would appreciate the opportunity to meet you as a member of the Higher Education and Research Committee for such a discussion during our next visit and hope in your positive response to this invitation for a meeting.

If you require further specific information about the Peer Review, please do not hesitate to contact me at Ketels.Christian@bcg.com or for questions regarding the Peer Review process, please contact ana.correia@ec.europa.eu.

Looking forward to our future exchanges,

Christian Ketels

Chair of the PSF Peer Review of the Danish R&I system

Annex 1: Information note on the PSF Peer Review of the Danish R&I system

Information note

PEER REVIEW OF THE DANISH R&I SYSTEM UNDER THE HORIZON 2020 POLICY SUPPORT FACILITY

Horizon 2020 Policy Support Facility (PSF)

To support countries in reforming their research and innovation (R&I) systems, DG Research and Innovation set up a 'Policy Support Facility' (PSF) under Horizon 2020, aimed at "improving the design, implementation and evaluation of R&I policies". The PSF provides best practice, leading expertise and guidance to Member States and Associated Countries (on a voluntary basis) through a broad range of services to address their specific needs.

The PSF offers three principal services: (1) Peer Reviews of national R&I systems carried out by panels of leading experts and policy practitioners, that lead to operational recommendations on reforms to improve their quality and impact on economic growth; (2) mutual learning exercises on R&I policy challenges of interest to various countries around project-based exchanges of good practice; and (3) specific support to countries wishing to address relevant policy issues and implement the corresponding policy actions.

In addition to these three principal services, a PSF knowledge centre has been developed jointly with the Research and Innovation Observatory (RIO) of the Joint Research Centre (<https://rio.jrc.ec.europa.eu/en>). On this website, various relevant outcomes of the PSF activities during 2015 and 2016 are available. These include the reports of the Specific Support to Malta, assisting in the development of a set of key performance indicators to be used to monitor and evaluate the implementation of the national R&I Strategy and the measures in its Action Plan, and the Specific Support to Slovakia, conducted in the context of the national "Strategy to support start-ups and further develop the start-up ecosystem" and the envisaged creation of a start-up committee. Next to these Specific Support actions, also numerous Peer Reviews and Mutual Learning Exercises in support of the EU Member States have been conducted during these years.

Danish R&I system and policy

Main elements of the Commission's analysis of the Danish R&I system

Denmark is one of the few countries in the EU that have reached Europe's 2020 target for R&D intensity of 3% pct. of GDP. After some years of slightly declining business R&D intensity from 2009 to 2014, Denmark has yet again reached the target of 2% pct. (2.,1 %pct. in 2016). However, the business R&D investments are increasingly concentrated on fewer companies. Public R&D intensity has been relatively stable since 2010 at around 1% pct. (1.,1 %pct. in 2017). There is a continuous political commitment by the Danish Government to keep public R&D investments on at least 1 %pct. of GDP.

According to the European Innovation Scoreboard (EIS), Denmark is an Innovation Leader, but its innovation performance varies across the different parameters in the EIS index. Denmark is one of the EU's leaders in human resources in research and scientific output: Denmark has excellent science as measured e.g. by highly cited scientific publications. The economic productive structure relies substantially on high and medium-high technology industries as well as knowledge intensive services when compared to the EU average. Its innovation-friendly environment also contributes to a relatively high level of opportunity-driven entrepreneurship and of patent applications. Denmark is also one of the top EU Member States in terms of business absorption of researchers. However, Denmark is doing less well in terms of innovation activities among SMEs and venture capital investments. There is room for improvement within certain aspects of the innovation spectrum proxied e.g. by transformational entrepreneurship and the share of high-growth innovative firms in the economy.

A key question is whether R&D investments are being efficiently utilized in terms of furthering innovation activities and outcomes in private companies and society in general. Despite the high level of R&D investments, Danish productivity growth has been slowing down in the last decades.

Main orientation of Danish R&I policy

As detailed above, Denmark is today one of the strongest research countries in the world. This is the result of large investments in public funded research as well as a continuous effort into creating optimal conditions for knowledge production. However, knowledge production cannot stand alone. Denmark aims to become a world leader in turning research into innovation. When research and

new knowledge is transformed into new technologies, products and solutions by companies and entrepreneurs, it creates value for society as a whole.

Denmark aims to have some of the world's best environments enabling researchers, entrepreneurs and established companies to transform and make use of knowledge created at the universities and other research institutions. This becomes increasingly important in light of the rapid developments of new technologies posing new demands on the abilities of Danish companies to adapt and develop new technologies, products, and solutions.

Today, Danish public policy efforts for knowledge-based innovation is embedded in the activities of universities, the Danish Innovation Fund, Advanced Research and Technology Organisations (GTS institutes), the national innovation networks and the innovation incubators.

In order to support a well-functioning ecosystem for knowledge-based innovation, technology development and effective bridges between research strongholds and the application of new knowledge in companies and society, public policy efforts for knowledge based innovation should be continuously developed.

In December 2017, the Danish Government published its research and innovation strategy, Denmark – ready to seize future opportunities, outlining its goals and objectives for future research and innovation policy. Committed to The Government's objectives for Danish research and innovation the Danish Ministry of Higher Education and Science aims to use the services of the Horizon 2020 Policy Support Facility (PSF) with regards an initiative for Denmark's efforts in knowledge-based innovation.

Purpose, objectives and scope of the Peer Review

Purpose of the Peer Review

The purpose of the Peer Review is to provide recommendations for how Denmark's effort in knowledge-based innovation can rank among the global elite, and support stakeholders working effectively and in close cooperation towards common overall objectives. More precisely, in his letter of 4 June 2017, the Minister of Higher Education and Science indicated that the work of the PSF panel should focus "on how to build the most effective bridges between research-based knowledge building and the application of this knowledge in business and society".

Objectives of the Peer Review

- Based on international best practices, assess how Denmark can adjust efforts on knowledge-based innovation.
- Provide concrete recommendations on further developing the Danish public policy efforts on knowledge-based innovation.

Scope of the Peer review

The Peer review will examine the Danish knowledge-based innovation system as a whole, including the value chain from research to innovation in established and new companies. It will start with an assessment of the present situation of the Danish knowledge-based innovation system, notably in relation to the three following focus areas:

- 1) Knowledge based technological service for businesses;
- 2) Collaboration, networking and matchmaking, and
- 3) Knowledge-based entrepreneurship.

The Peer Review will draw upon the conclusions of the parallel evaluation of Innovation Fund Denmark and the review of the universities' technology transfer activities – both of which are initiatives from the Danish Government's research and innovation strategy, Denmark – ready to seize future opportunities.

Some examples of successful public policy efforts ("good practice") in relation to knowledge based innovation globally will be outlined in the final report. Based on the assessment of the present situation and on those good practice, the panel will provide concrete recommendations on further developing the Danish public policy efforts on knowledge-based innovation, notably in the three focus areas.

Timeline and deliveries

Tentatively the Peer Review is to be finalised by July 2019 including the publication of the final report.

The main expected outcome of the Peer Review is a report¹, which should be finalised by July 2019 and will include a set of concrete operational recommendations. The recommendations will be backed by evidence, best practice and analyses of similar approaches and reforms introduced in other countries and it should be feasible to implement them in the national context. The report should include a solid policy-oriented executive summary presenting these recommendations in the European R&I policy context.

The PSF independent Expert Panel for this peer review

This PSF project is undertaken by a panel of five independent experts and four peers.

The experts jointly ensure the large spectrum of expertise that will allow them to share the analytical and drafting tasks:

- expertise in R&D and innovation policy and governance
- expertise in the evaluation and monitoring of research and innovation policies
- expertise in public policies to foster science-business links, knowledge and technology transfer and commercialisation of research results
- expertise in public policies to foster collaboration among R&I actors, such as cluster policies and structured public-private partnerships
- expertise in public policies to foster knowledge-based entrepreneurship
- expertise in public policies to foster business R&D investments and development and growth of innovative firms, including through demand-side measures
- expertise in public policies to mobilize research to address societal challenges
- expertise in public policies to foster market-creating, disruptive innovation
- robust knowledge of R&I systems and policies in other "innovation leader" countries, in the EU and also outside the EU (e.g. United States, South Korea, Singapore)

Composition of the panel of experts carrying out the PSF Peer Review of the Danish R&I system	
Chair	Christian Ketels , Chief Economist of Boston Consulting Group
Rapporteur	Margareta Drzeniek-Hanouz , Managing Partner, Horizon Group
Specific Experts	Jackie Hunter , Board Director, BenevolentAI CBE
	Stefan Kuhlmann , Chair of the Department of Science, Technology, and Policy Studies, University of Twente
	Tony Raven , CEO Cambridge Enterprise
Peers	Uri Gabai , Chief Strategy Officer (CSO), Head of Strategy and Economics Division, Israel Innovation Agency
	Pieter Heringa , Senior advisor Ministry of Education, Culture and Science, The Netherlands
	Göran Marklund , Deputy Director General, director and head of division, Operational Development, VINNOVA, Sweden
	Christopher Palmberg , Program Manager, Developing Markets/Business with Impacts, Portfolio Management and Platforms, Business Finland

The PSF panel will visit Denmark twice. First, on 4-7 March 2019 to meet the Danish authorities involved in R&I policy as well as the wide range of institutions and relevant stakeholders. A proposal for the structure, main messages and draft recommendations of the Peer Review report will follow and the PSF panel will present and discuss preliminary findings to the Danish stakeholders during a second field visit on 6-9 May 2019.

¹The previous reports of the PSF Peer Reviews can be found here: <https://rio.jrc.ec.europa.eu/en/policy-support-facility/peer-reviews>

Based on the various documents received and analysed, as well as in-depth discussions with various experts and the comments received at the meetings during the two field visits, the PSF panel will prepare the Peer Review report by July 2019. The report and the recommendations will be presented to the Danish R&I community in September 2019.

For all questions regarding the design and the activities of the Horizon 2020 Policy Support Facility, please contact RTD-PSF@ec.europa.eu.