

Horizon 2020 Policy Support Facility



PSF Review Denmark: Recommendations summary Ten Steps towards One Big Jump

November 2019

The context for innovation policy

Economic goals

- Are we getting sufficient **economic returns** from our innovation system?

Global context

- How are changes in the **global innovation context** challenging our position?

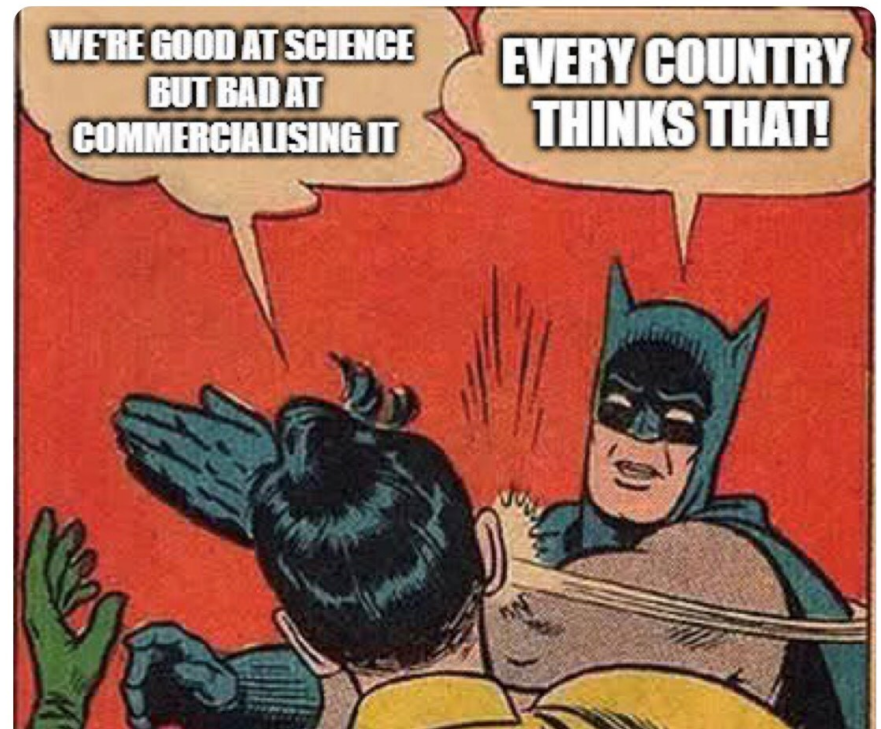
Societal goals

- What is the impact of innovation on the **key societal challenges** we are facing?

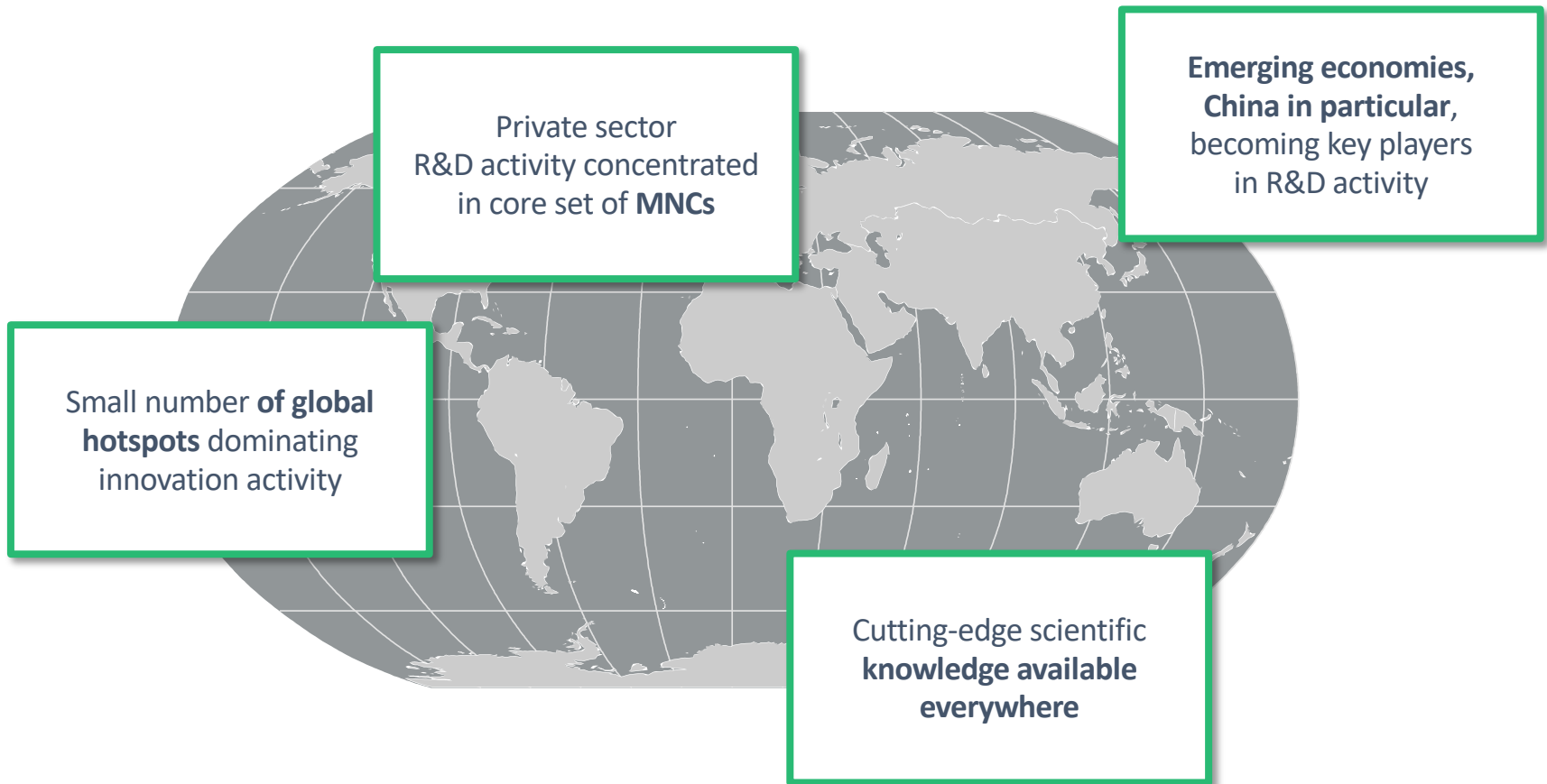


Economic returns
from science:

Challenging
received wisdom



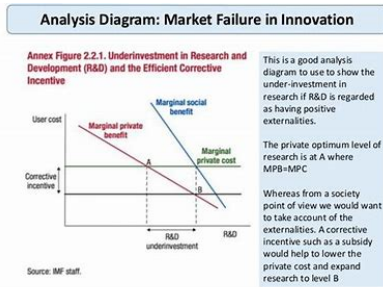
Shifting map of global innovation



Shifting innovation policy approaches

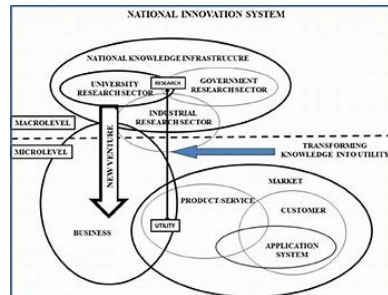
Market failure

Positive externalities of R&D activity



System failure

Impact externalities across innovation system



Transformation failure

Directional externalities across innovation system



Subsidies

IP rights

Public investment

Collaboration

Focus on missing links

Mission-oriented strategies

Reviewing a European Innovation leader



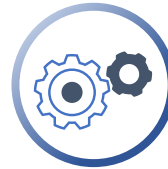


Structure of the report



Assessing the current situation

Assessment of strengths and challenges of current innovation system, including potentially missed opportunities



Addressing current challenges

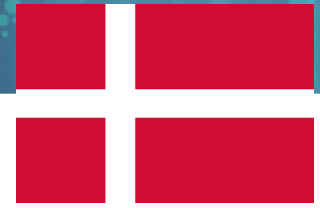
10 recommendations to improve the Danish innovation system within its existing structures



Defining a strategic ambition for Denmark

A pathway towards developing a strategy to achieve a systemic impact on the goals Denmark aims to achieve

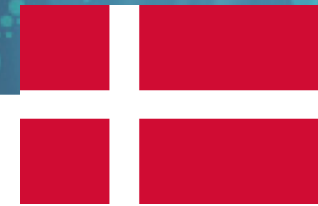




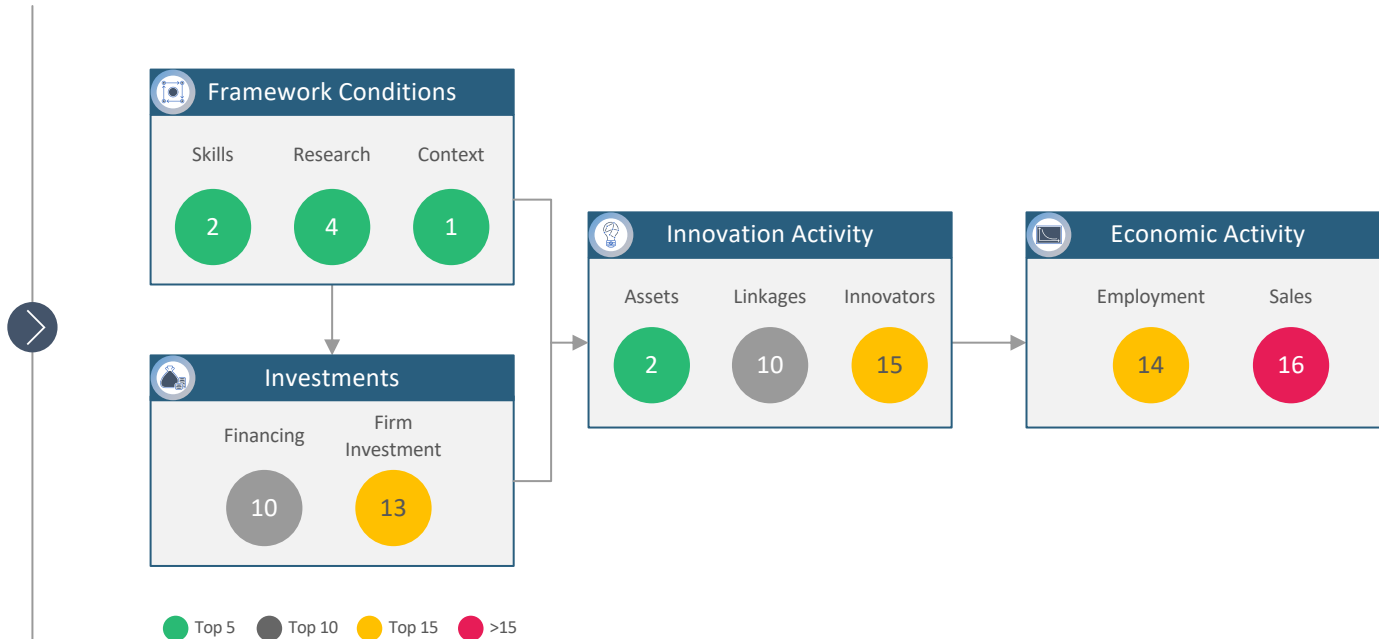
The Danish economic context

- High level of prosperity
- Widely shared
- With strong beyond GDP performance
- Based on an overall highly competitive business environment
- With globally competitive firms in a range of sectors
- Slow post-crisis productivity growth
- Weakening trend growth ahead, at home but also in the surrounding European economy
- Need to manage climate change, aging, and other societal challenges



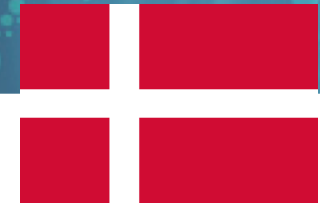


Denmark's innovation performance

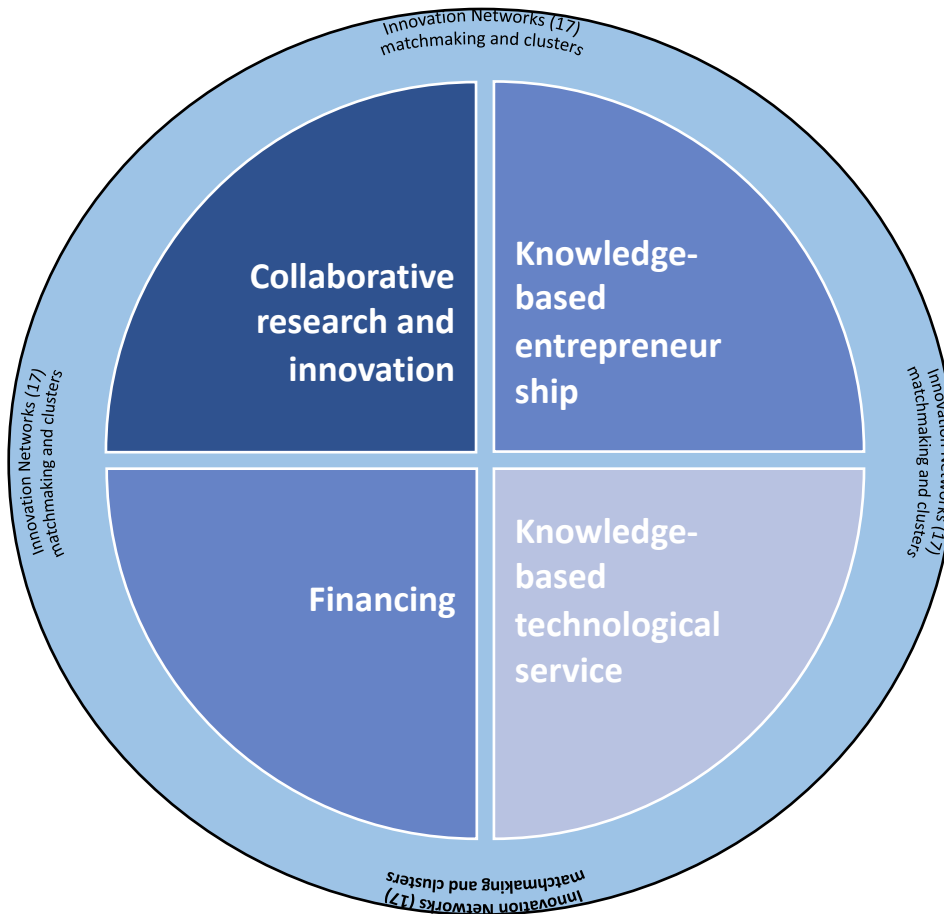


Note: Rank among 36 European and neighboring countries
Source: European Innovation Scoreboard 2018



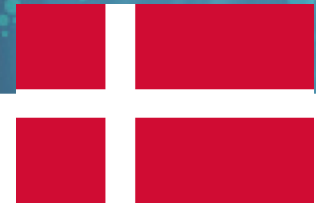


The Danish Innovation System



- Strong science and skill base
 - Sectoral research and industrial strengths
 - Sophisticated local demand
 - Business environment qualities
 - Proximity to advanced markets
 - Strong global reputation
-
- High taxes, limited risk capital
 - Small domestic market size
 - Small absolute size of the Danish innovation and support system
 - Strong, but few large R&D intensive companies with rising dominance
 - Limited linkages between large and small companies in innovation activities





Untapped Opportunities

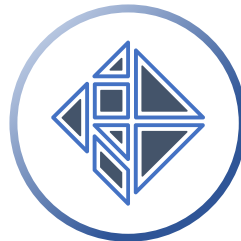
- 1 Attract more **foreign companies' investments** into existing knowledge pools (e.g. by establishing R&D centres)
- 2 Encourage cross-pollination in **non-science driven innovation and entrepreneurship** (creative industries, sustainability)
- 3 Leverage strengths in areas that have clear relevance for **global societal challenges** (urbanism, sustainability, social innovation)
- 4 Enhance efficiency through better strategic alignment and coordination with **private sector foundations**
- 5 Strengthen set up of **technology transfer offices** and better align **universities' mission** with innovation objectives



A closer look at the root causes



No overarching strategic direction



Organizationally fragmented, aiming to minimize the need for coordination

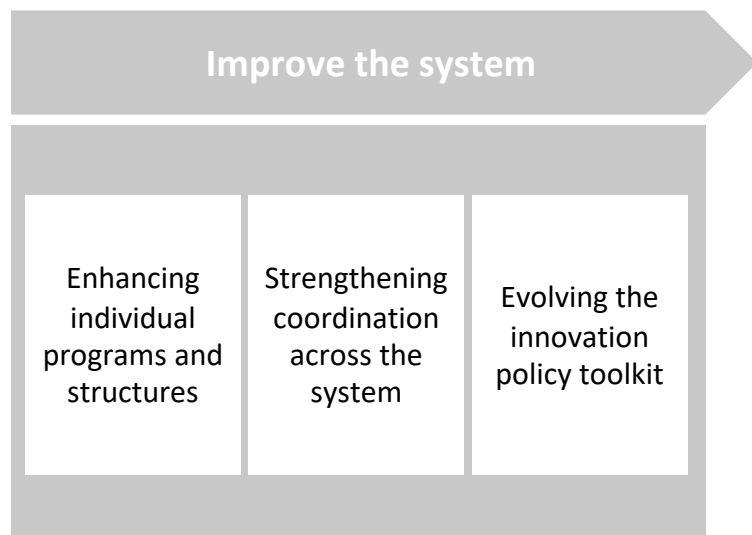


Past reforms focused on efficiency of individual parts



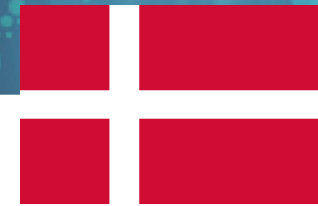
The panel's recommendation: a two-pronged approach

Ten steps...



...towards an ambitious jump!





1

Strengthen universities' role in innovation and technology transfer

2

Create strategic instruments that **enable ecosystems** and domain development

Improve the system

Enhancing individual programs and structures

Strengthening coordination across the system

Evolving the innovation policy toolkit

3

Improve **facilities and accessibility of physical ecosystems** for innovation (accelerators, incubators, science parks)

4

Better define RTO's role within the National Innovation System, review their funding model and encourage collaboration with universities





5

Stimulate collaboration with private foundations and with public funders of research

Improve the system

Enhancing individual programs and structures

Strengthening coordination across the system

Evolving the innovation policy toolkit

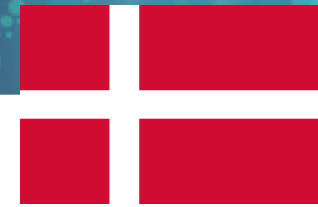
6

Improve alignment across the system through KPIs, increased labor mobility, a joint foresight exercise and an Inter-ministerial Committee

7

Create stronger international linkages through contact points for internationalization, by enabling clusters, attracting investments of foreign MNCs and reviewing incentives for attracting EU funds





8

Leverage traditional strengths in non-science-driven areas by connecting and strengthening relevant clusters and engaging more systemically with social innovation initiatives

Improve the system

Enhancing individual programs and structures

Strengthening coordination across the system

Evolving the innovation policy toolkit

9

Leverage government procurement in innovation by embedding relevant tools into procurement practices and creating efficient linkages and coordination mechanisms

10

Renew focus on evidence and impact assessments through, amongst others, a comprehensive impact assessment strategy



How do leading countries compete in global innovation?

USA (Silicon Valley)



Scaling global innovation-driven businesses

Ireland



Providing a platform for innovation-driven MNCs to serve Europe

Germany



Continuously upgrading industrial excellence

Israel



Creating innovation-driven businesses

Singapore



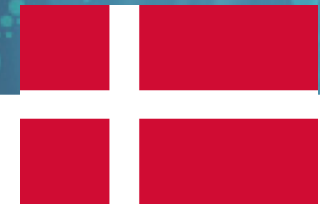
Enabling high-tech activity for an Asian market

China



Attracting, adapting, and developing innovations for China (and then the world)





Towards a Danish strategy



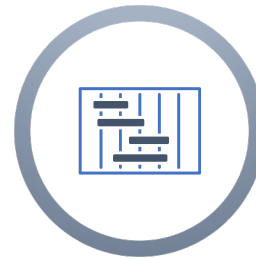
Ambition

What outcomes
to achieve?



Positioning

What value
to offer?



Action priorities

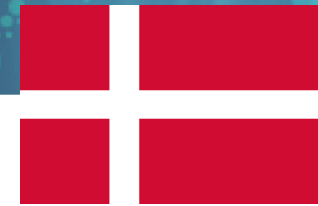
What actions
to take?



Implementation

What delivery
structures to use?





Illustrative options for Denmark



Become a launch pad for Danish start-ups in areas of Danish economic and research strengths



Focus on key areas that combine Danish strengths with broader societal needs: Life sciences, sustainable energy, ...



Innovation lab for multinational companies that want to tap into the Danish skill and research base



Innovation system as a support system to the Danish economy: sectoral priorities given by economic strengths, and stronger focus on skill supply, research services, and knowledge provision

And you can't choose all:

No choice -> no positioning, no prioritization of actions, no impact



Making it happen...

- Collaboration
- Persistence
- ...and a willingness to face choices

