Towards innovation-driven approaches in the RTD sector

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Growth and change are driven by innovation (main argument of innovation economics – with sometimes disruptive processes of transformation)

"This process of Creative Destruction is the essential fact about capitalism. It is what capitalism consists in and what every capitalist concern has got to live in. *(Schumpeter 1942).*

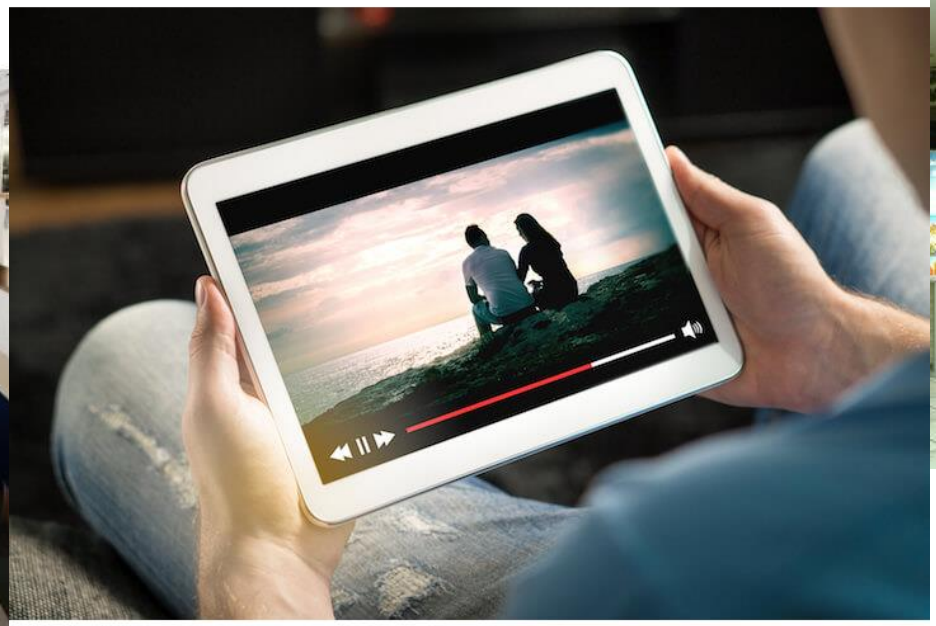
Innovation has impact on jobs, skills, built environment, infrastructure, ecology …

The times they are a changing ....

Internet kills a quarter of U shopping malls

The appeal of internet shopping and discount warehouses have hit the shopping mall
SPENCER PLATT/GETTY IMAGES

Prague Post



Are Video Streaming Services Killing Cinema?

Published on May 8, 2018 — in Cinema — by News Desk

… products ….

… new services/products/infrastructures …

… (new) business models …

Experience selling

St. Gallen Business Model Navigator™

Why Business Model Patterns?
Generating innovative ideas is arguably one of the hardest tasks in the development of new business models. We wish to support you and your company by providing a useful set of cards for you to keep on hand. As part of an extensive research project at the University of St. Gallen, we analyzed important business models from the last 50 years with respect to regularities and systematization within their patterns.

A surprising result from the findings is that more than 90% (!) of all business model innovations can be derived from a combination of 55 fundamental patterns. These patterns can be used as templates for the innovation of new business models. To simplify the process of adapting those patterns, we summarized them in this convenient set of pattern cards.

For additional information on the patterns, consult the accompanying book, "The Business Model Navigator: 55 Models That Will Revolutionise Your Business," or contact us via our website www.bmilab.com.

Innovation Economy

Growth and change also based on technological change = extension of knowledge in way of new products, business processes etc.

Global competition for new knowledge – endogenous and external technological progress

Access to and availability of knowledge divides those who have from the have-nots

R&D is a growth business – dark knowledge is growing too

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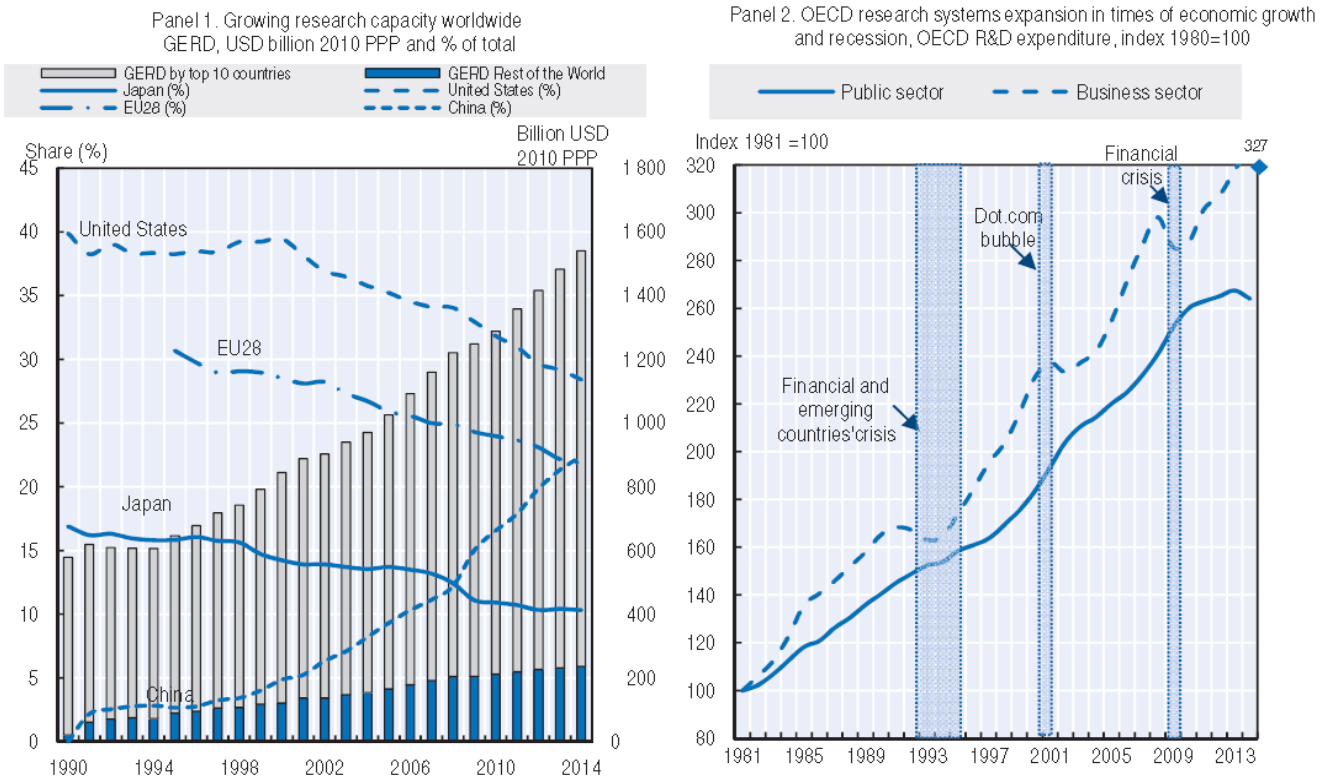
R&D and Innovation

Knowledge is an important basis for innovation, novelty and utility, and value creation

Figure 3.2. **Business and public investment have expanded global research capacity**

Long-term shifts in gross domestic R&D expenditure (GERD)



Sources: Based on OECD (2016a), *Main Science and Technology Indicators (MSTI) Database*, www.oecd.org/sti/msti; Eurostat (2016), *R&D Indicators Databases*, http://ec.europa.eu/eurostat/web/science-technology-innovation/data/main-tables; UIS (2016), S&T Indicators, www.uis.unesco.org/Pages/default.aspx. Data extracted from IPP.Stat (2016) on 22 July 2016, www.innovationpolicyplatform.org/content/statistics-ipp.

StatLink http://dx.doi.org/10.1787/888933433354

National economies which do not invest in knowledge production and diffusion might in the long term **not be able to master** the speed of progress of knowledge based economies.

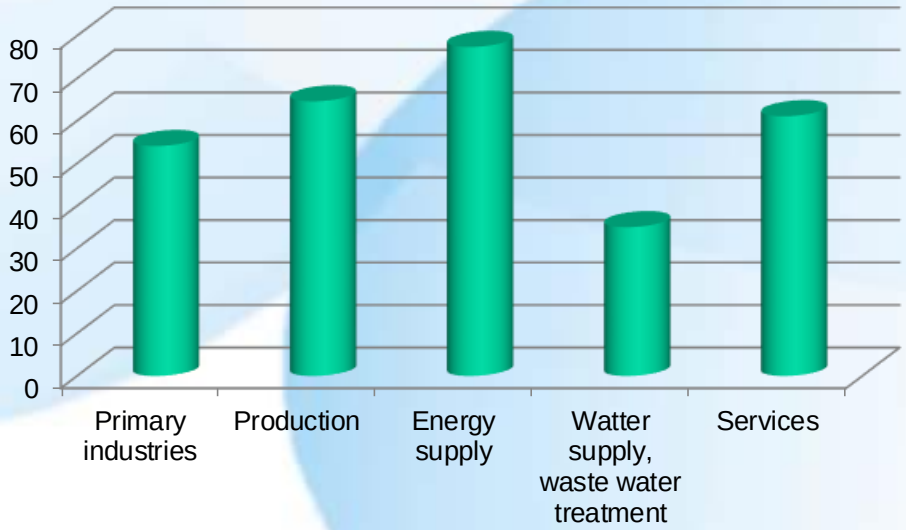
Absorptive Capacity

Positive spill-overs (e.g. of TT) can only develop if the knowledge receiving company (or: institution) has the **ability to make use of it and to enhance it through own contributions.**

For the development of absorptive capacities the quality of **educational institutions (e.g. universities) and policy (e.g. through allocation of resources) play a major role**.

Beware of High-Tech Devoutness

- The importance of non-technological innovation is increasing (e.g. changes in organisations, in processes, in marketing, in design, business models etc.)
- Services can be as innovative as manufacturing firms (e.g. financial sector)!

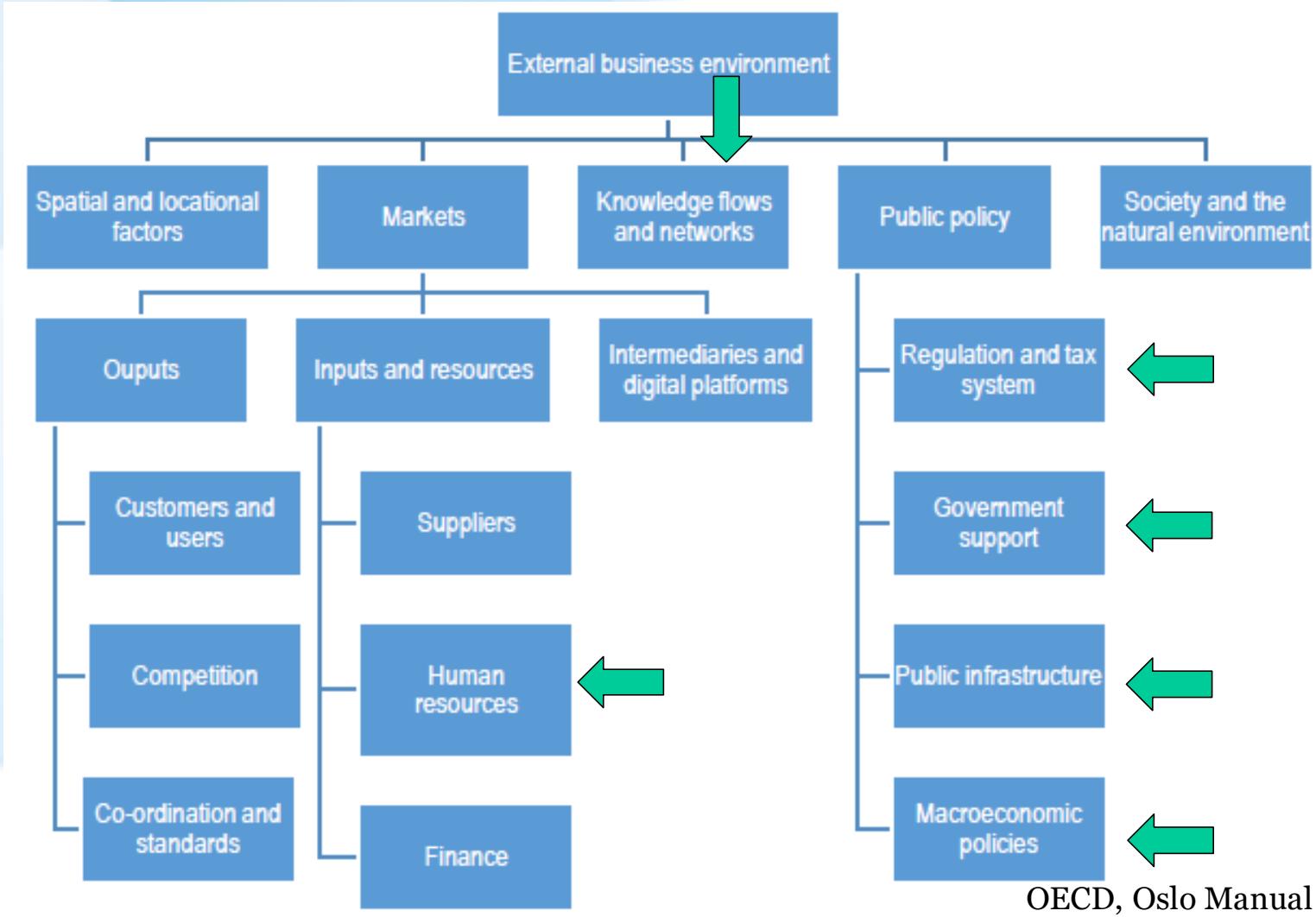


Innovative firms in Austria % of all firms in an industry, 2014-2016

source: CIS 2016

What can the state do to support (the right) innovations?

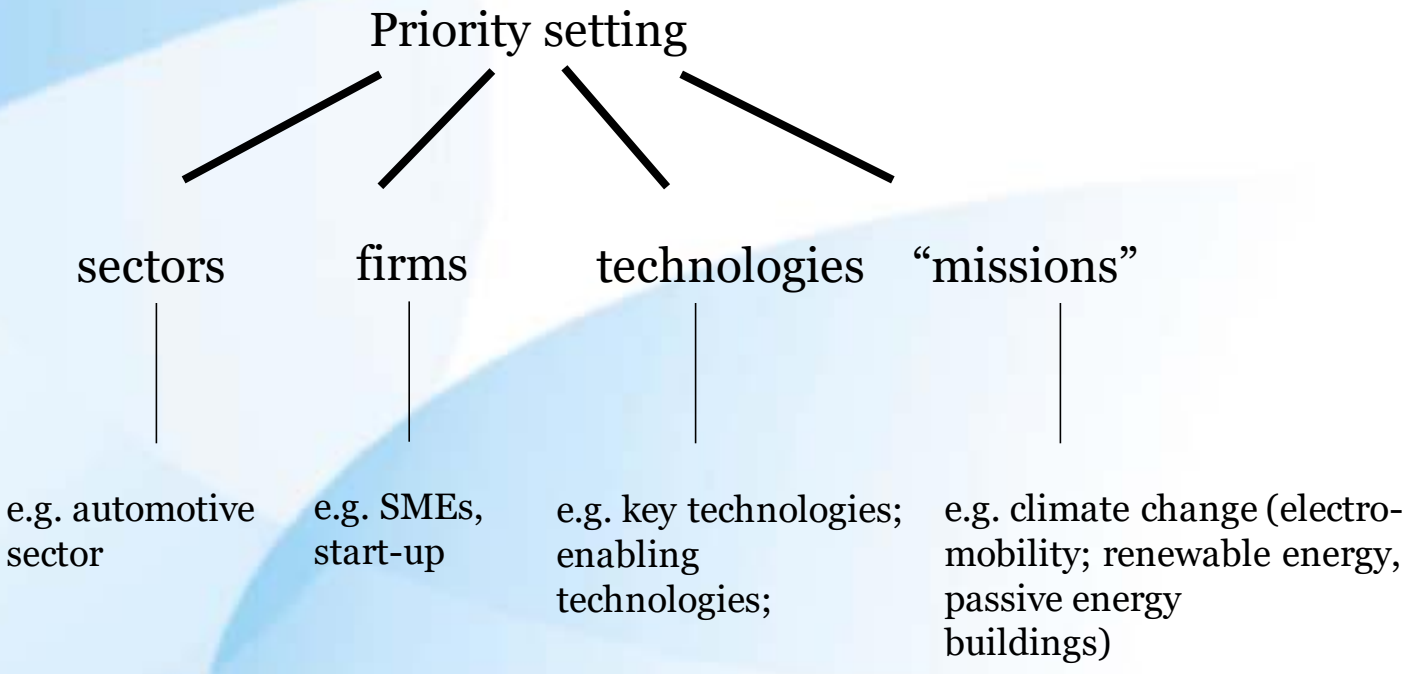
External Environment for Business Innovation



OECD, Oslo Manual 2018, p. 147

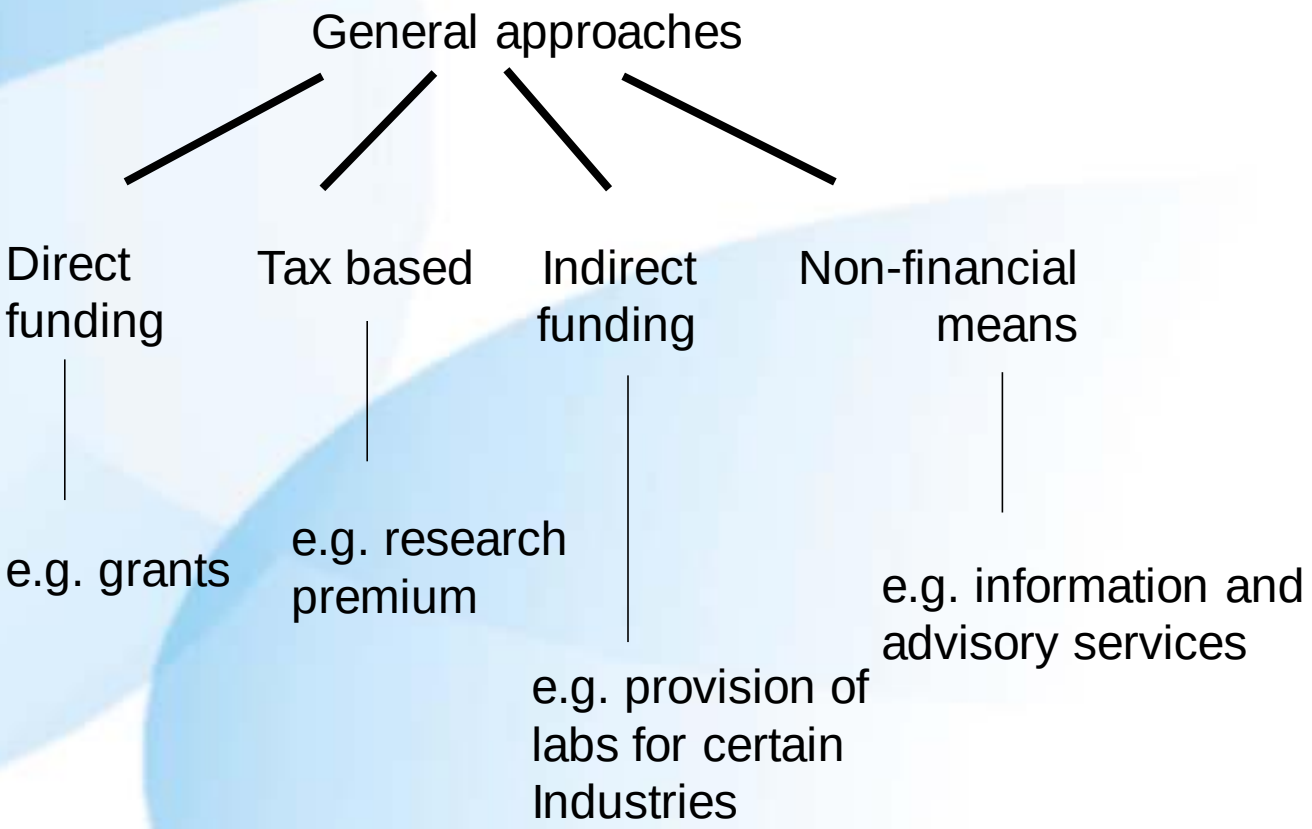
Innovation as cross-cutting cross-level cross-policy theme

Innovation Policy Priorities



Alternative: innovation system’s approach

General Innovation Support Approaches - Overview



Modes of Funding

- *Grants*
- *Subsidised loans*
- *Support to risk capital*
- *Support to venture capital*
- *Guarantees*
- *Tax incentives*
- *Payments (innovation procurement)*
- *Awards*

Policy Mix to stimulate R&D investment (1)

Rationale: R&D for more complex innovations – difficult to imitate – nuclei for structural change in the economy (and research system)

- ***Promoting the establishment of new indigenous R&D performing firms*** (e.g. academic spin-offs programmes [exploitation spin-offs or competence spin-offs]; innovation and start-up centres; risk capital formation)
- ***Stimulating greater R&D investment in R&D performing firms*** (e.g. stand-alone R&D project funding for companies; indirect R&D instruments)
- ***Stimulating firms that do not perform R&D yet*** (innovation voucher schemes; incubators; technology centres; advisory providers)

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Policy Mix to stimulate R&D investment (2)

Attracting R&D performing firms from abroad (e.g. targeted programmes for this target group; infrastructures such as the Campus Vienna Biocenter or the Software Park Hagenberg; PPPs like the Institute of Molecular Biotechnology; labs for industrial testing and measurement)

Increasing extramural R&D carried out in cooperation with the public R&D sector (e.g. collaborative programmes; technology transfer offices)

Increasing R&D in the public sector (institutional funding; competitive R&D funding)

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Ukraine 2 years after PSF review – change is promoted but inertia remains

pro

- Important new/transparent governance elements introduced
- National Council
- National Research Foundation
- Push towards an Innovation Strategy
- Evaluation of NASU institutes
- Increasing internationalisation
- H2020 largest competitive fund in Ukraine
- Activated NCP system

con

- R&D budgets very low
- Competitive R&D funding lower (market-pull)
- Science and industry: two separate world-views
- Turbo for cross-government approach not yet ignited
- NASU needs to become open and responsive (org. innov.)
- Innovation focus to be broadened (S3) - supported by adequate infrastructure (broadband)
- In FP – more focus on SME's and innovation

Innovation Policy changes too

Innovation is **not the end of the flagpole**

Public support for innovation is **not to support innovation per se, but the right innovations** (otherwise leave it to market forces and concentrate on framework conditions)

Innovation is not just the business of business but also of society – thus, open up to other disciplines (e.g. SSH), the public sector, and civil society!

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