



Estonia: putting research and innovation at the heart of new growth strategy

The most important driver of economic growth and productivity is innovation, especially innovation based on research and development (R&D). An independent expert panel supported by the Horizon 2020 Policy Support Facility (PSF) has presented the Estonian government with their recommendations to improve the country's research and innovation system and policy.

Estonia offers favourable framework conditions for business, including foreign investment and entrepreneurs. It has an attractive start-up scene, excellent broadband capacity and business-friendly regulation, with a track record of successful companies, principally in software- and Internet-based firms. Furthermore, the quality and openness of the Estonian science base is increasing year on year.

On the other hand, despite this improvement, Estonia still does not leverage companies' R&D activities and investments enough and there is a weak link between public research and the economy. The country benefits from a skilled population but skills gaps and mismatches are nonetheless among the main obstacles to reach its full innovation potential.

The Estonian government asked the PSF to support the Ministry of Economic Affairs and Communications (MEAC) and Ministry of Education and Research (MER) in preparing their research, development, innovation and entrepreneurship strategy for the period 2021-27 and beyond.

The European Commission's Directorate General for Research and Innovation appointed five independent experts and three national peers from Austria, Ireland and Switzerland to provide high-level expertise in research and innovation systems. This panel worked from October 2018 to September 2019, including five missions to Estonia, to consult stakeholders through more than 60 interviews.

The expert panel presented their [final report, along with their conclusions and tailored practical recommendations](#), at a final event in Tallinn on 11 September 2019. Here, national authorities and research and innovation (R&I) stakeholders debated the panel's roadmap and its implications for the country's new joint strategy for R&I and entrepreneurship. In addition, the Deputy Director General for Research and Innovation, Ms Signe Ratso, represented the European Commission in this final event.

Research and innovation as drivers of development and growth

Behind the expert group's analysis and recommendations lie three fundamental findings about R&I.

- The most important driver of economic development and growth is innovation, especially innovation based on research and development
- Innovators do not, by and large, innovate alone but in national and international 'innovation systems' that involve many actors and institutions. Policymakers need to ensure that the mix of policies relating to different parts of the system are in balance and that interventions across the innovation system are coordinated
- These national innovation systems need to be able to learn, generate the necessary human capital, keep up with international scientific and technological progress and maintain their productivity and competitiveness.

The PSF panel worked, through their visits and consultations, to gain the understanding of the country's research and innovation system necessary to tailor recommendations relevant to Estonia's specific situation.

For example, Estonia has invested large sums (principally from EU Structural Funds) in supporting research, business and business development. However, there is a gap in the private sector's 'absorptive capacity', i.e. its ability to use R&D in making the most of innovation opportunities. In addition, there is a gap in government support for developing that capacity, which needs to be addressed urgently in order to improve Estonian innovation performance.

Filling these gaps requires two things. First, a set of R&D activation and support programmes that address the whole range of companies, from those with minimal absorptive capacity to those with enough R&D capacity to serve as motors of development. Second, the creation of research organisation to support industry with innovation services as seen in other European countries.

Most national innovation systems benefit from 'intermediary organisations' in the form of research and technology organisations (RTOs, such as Fraunhofer, Germany; VTT, Finland; or SINTEF, Norway) or university industrial extension services, whose job is to keep at least one step ahead of industry's innovation knowledge needs and to provide research and technical services to industry based on that more advanced knowledge.

The challenge for Estonia is that such an approach is difficult to apply directly in a small country. The panel have used their experience and understanding in order to tailor the recommendations below.

Five priority policy recommendations: from more funding to an innovation agency

The experts identified five major needs to receive priority in Estonian policy in order to increase the national effort in R&I and create distinct competitive advantages:

1. Ensure political commitment to R&I in national policy and a 1% target for government spend on R&D.

A substantial part of the increase in R&D spending should encourage increased R&D and innovation by both business and government, and not only be used in research and higher education.

2. Establish and implement thematic priorities for R&I policy, in the light of the societal challenges and Estonia's smart specialisation strategy.

Successful R&I policy uses a mixture of bottom-up and thematically focused instruments. The thematic focus needs to take account both of the knowledge and human capital needs of society today and those of areas that are expected to grow. International efforts to tackle societal challenges will shape new markets and opportunities. Estonia needs to decide which of these to address, otherwise it risks being excluded.

3. Establish an innovation agency to support R&D and build absorptive capacity

Enterprise Estonia should take on the role of innovation agency – building new technological and programming skills and involving both academic and business communities in the design and governance of its innovation programmes – in order to support companies at different levels of developing absorptive capacity.

4. Strengthen the system of 'intermediary organisations' able to support industrial innovation

Estonia is too small to support a strong RTO across many technologies, so it is better to support university extension services – strengthening the national innovation system and making it more relevant by providing information and incentives for universities to address specific national needs.

5. Modernise and 'profile' research in the universities, improving the division of labour among them, increasing their critical mass in their areas of strength and making

them better adapted to innovation and the production of human capital to meet national needs

Reforms intended to professionalise management should require public universities to have an external majority on their governing board, who should appoint the rector. The largest universities should appoint vice rectors for education, research and knowledge exchange with society. While academic affairs should remain in the hands of an academic body, implementation of strategy and resource allocation should be in the hands of the appointed management.

The report also includes further suggestions for more operational changes in policy and practice.

For further information:

[The Final Report of the Horizon 2020 Policy Support Facility \(PSF\) Peer Review of the Estonian Research and Innovation system](#)

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Seeking to improve the design, implementation and evaluation of research and innovation policies, the PSF provides expertise and practical support to Member States in a number of ways: Peer Reviews of national R&I systems, Specific Support to policy reforms, and project-based Mutual Learning Exercises to improve policy-making and implementation. It is founded under Horizon 2020, the EU's research and innovation programme, with up to €20 million.