

Peer review of the Icelandic Research and Innovation System

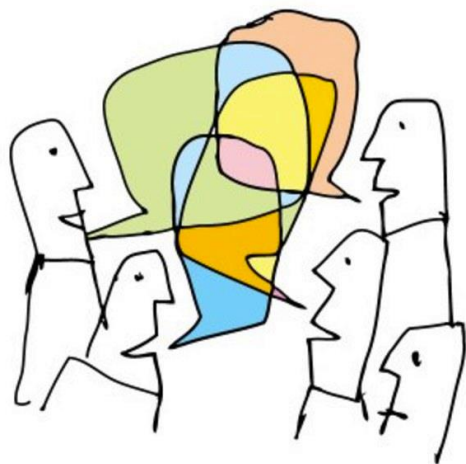
*Time to take responsibility and **act!***

Feedback mission to the Government of Iceland
Reykjavik, 28 & 29 August 2014

Topics

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 - The process
 - Thematic focus of the Iceland review
- Three key messages, translating into four key areas for action

Background



- ❑ In 2003, Open Method of Coordination in support of 3% target
- ❑ In 2013, after a series of 'pilot' reviews in different countries (Belgium, Estonia and Denmark), Iceland requested a peer review of its research and innovation system
- ❑ Basis: self-assessment to identify key challenges and potential reforms
- ❑ Overall objective: to provide external advice to the Icelandic authorities in the process of evaluating its research and innovation system
- ❑ Empowered and facilitated by:



The composition of the expert panel



John Dooley is head of Science, Technology and Innovation policy at Forfás, Ireland's national policy advisory board for enterprise, trade, science, technology and innovation.

Arnold Verbeek is Senior Policy advisor specialising in Science and Innovation and Manager of the Competitiveness and Innovation Unit at IDEA, Brussels (independent expert and rapporteur)

Riitta Maijala is Director of the Science Policy Section of the Department of Higher Education and Science Policy, Ministry of Education and Culture in Finland.

Diana Senczyszyn, Policy officer, DG Research and Innovation (observer)

Francien Heijs, Counsellor for Science at the Permanent Representation of the Kingdom of The Netherlands, for the Ministry of Education Culture and Science

The process

Preparation phase

- Kick-off meeting Brussels (Dec 2013)
- Kick-off meeting Iceland (Feb 2014)
- Self-assessment by Iceland
- Programme for the interview phase

Interviews

- Preparation and briefing of peers (March 2014)
- Interviews with Icelandic stakeholders (Apr 2014)
- Debriefing among peer review team

Reporting

- Reporting
- Feedback mission to Iceland (August 2014)
- Presentation of results to ERAC plenary (October 2014)

Thematic focus of the Iceland review

How to optimise the links between science, technology, and innovation policy and its implementation?

How to promote and enable the growth of companies/SMEs?

How to build a more effective science and innovation strategy in a small country within a globalised world?

How to strengthen relations between SMEs, research institutions and higher education institutions?

How to increase innovation capacity throughout the educational system?

Context of the peer review



- ❑ Major steps forward (action plan, R&D tax incentive scheme, increased technology development fund, tackling institutional fragmentation, ...)
- ❑ Economic crisis; capital controls (lower supply of capital, challenging for companies/SMEs, access to capital)
- ❑ Necessary budget cuts in STI and education (in some case with strong consequences)
- ❑ Top-talent moving away from Iceland, risks that companies do the same
- ❑ Icelanders: creative, entrepreneurial, hard working and very 'self-aware'

Three key messages, translating into
four key areas for action



3 key messages

1. *Political commitment and action are urgently needed...*
2. *Change is required at all levels, also from the actors in the system....*
3. *Invest in evidence, evidence, evidence...*

4 Fundamentals (1)

1: Political will and support to (continued) STI reforms and investments

- ✓ Debate in parliament or subcommittees on role, importance and benefits of STI
- ✓ STI actors should show and explain their impact for economy and society
- ✓ Communicate importance of STI broadly, involve citizens

2: Future-oriented vision and strategy

- ✓ Develop a real long-term coordinated vision and strategy for Iceland, based on socio-economic challenges, needs and comparative strengths
- ✓ Develop bi-annual roadmaps and action plans, based on inputs of all ministries, clear SMART objectives and milestones, responsibilities, monitor

4 Fundamentals (2)

3: Transparency, responsibility and accountability

- ✓ Assess and define actions to increase the transparency and openness in the system: roles and responsibilities, input (funding) and output indicators of research organisations, principles of allocation competing funding etc.

4: Evidence-based policy making

- ✓ Urgently professionalise the overall STI policy support system (including support to the activities of the Council and its committee's) incl. evaluation capability and expertise (ex-ante and ex-post), impact assessment and the needed international intelligence. E.g. no policy measure should be launched without a thorough ex-ante evaluation on its cost-benefit ratio.

More detailed reflections and recommendations



How to optimise the links between science, technology, and innovation policy and its implementation?

Key reflections

- The role and evolution of the Council positive on different levels, a lot of positive results can be presented like mergers, quality board, network of public universities, tax incentives scheme, formal agreements on teaching, action plan etc.
 - But still complex, fragmented and not as efficient as possible
- Despite these major steps, general feeling that “nothing/not enough is happening”
- Lack of clear vision, long term strategy for Iceland, role STI in particular; strong need for leadership

How to optimise the links between science, technology, and innovation policy and its implementation?

Key recommendations

- Reconsider the composition of the Committees and the Council; not only policy making but also implementation
- Define/Refine the policy making cycle: STI ministries provide input, Council integrates and provides a vision and concrete objectives, implementation and monitoring

Intelligent proactive prioritisation: governing a small country in a globalised world

Key reflections

- There is increasingly global consensus about the need to prioritise: costs, make the difference on the global scene, ...
- Iceland's R&D government contribution (spend by all sectors) is about 110 million EUR, on a global scale matching the expenditure of a middle-sized multinational
- Prioritisation has different faces: thematic, sectorial, funding...
- Also in Iceland there is prioritisation, but on what basis, by whom and to what end?

Intelligent proactive prioritisation: governing a small country in a globalised world?

Key recommendations

- The Icelandic government should further prioritise its efforts and concentrate its resources in a 'smart' way
- Focus on 'internal cooperation' and 'external competition'!
Perspective should be international
- Focus on the whole innovation cycle (attention to services sectors) and assess the current mix of support measures
- Strive for balance between block versus competitive funding

How to strengthen relations between SMEs, research institutions and higher education institutions?

Key reflections

- In terms of competitiveness, Iceland dropped 29 places since 2006
- Iceland has a strong (to excellent) science base in various areas, but the 'deployment' is limited (e.g. less focus on patents)
- Underdeveloped technology transfer/IP mechanisms
- Current fragmentation of the system, universities operating independently from key research institutions (under ministries), lack of cooperation and trust, no incentives

How to strengthen relations between SMEs, research institutions and higher education institutions?

Recommendations

- Professionalise and strengthen the technology transfer support activities, preferably one integrated support service for Iceland
- Formalise the principle preparedness of both industry and academia into a kind of 'innovation partnership', reflecting a long-term relationship with a specific objective (EU innovation partnerships)
- Universities and public research institutions should also be made accountable for their industry outreach (concrete objectives and results should be taken-up in the management contracts)

How to promote and enable the growth of companies/SMEs?

Key reflections

- Growth of Icelandic companies mainly to take place abroad, while there is currently less support towards internationalisation
- Concerning financial support (political issue but government responsibility):
 - Technology Development Fund plays an important role
 - Tax incentive scheme for R&D important, but allegedly, refund ceiling is rather low?
 - Access to venture/growth capital is problematic
 - Capital controls, problematic for inflow of new capital

How to promote and enable the growth of SMEs?

Recommendations (1)

- Explore the possibility for pension funds to ‘prudently’ participate in investment funds
- Stimulate private investments and ‘crowd funding’ for companies by making it financially attractive (through tax breaks)
- Maintain and even strengthen the tax incentive scheme for R&D, on the condition that an independent evaluation study shows positive impacts on economy and the society (cost-benefit analysis). Open a fact-based dialogue with the Ministry of Finance, and other Ministries if needed
- Consider enlarging the Technology Development fund; put incentives to close the ‘gap’ with the Research fund (whole innovation cycle)

How to promote and enable the growth of SMEs?

Recommendations (2)

- Focusing on ‘new’ growth sectors is certainly essential. But at the same time there needs to be sufficient attention to the ‘old’ sectors as these sectors often form the foundation of a nation.
- Cluster policies are indeed the way forward. The Panel welcomes the creation of new clusters if based on a strong knowledge and industry base, or at least be ‘plugged into’ a strong knowledge and industry base (value chain perspective).
- Expertise needs to be built up with respect to support of companies in internationalisation, particularly the regulatory/legal aspects hereof. Companies need to be facilitated in dealing with licenses and permits, standards and IPR (knowledge development). Where possible, synergies need to be developed with other Nordic and/or EU countries.

How to increase innovation capacity throughout the educational system?

Key reflections

- Block funding main financing instrument (versus competitive)
- Top-research environment, the Panel is concerned about the working conditions for PhDs and post-doc lecturers, due to:
 - Low funding levels, hard to obtain scholarship or grant (work on the side, longer 'time to PhD')
 - Insufficient attention to transferable skills
 - Insecure future prospects
 - Disconnect between academia and industry, lack of guidance on how to valorise the PhD outside academia

How to increase innovation capacity throughout the educational system?

Recommendations

- PhD training in Iceland should be evaluated against the broadly accepted and embraced principles for 'Innovative Doctoral Training'
 - More attention should be paid to transferable skills and structure training, better working conditions, industry exposure where relevant
 - Consider the introduction of an industrial PhD
- Reaching out/interaction with industry could be part of the evaluation and valuation of researcher activities/academic staff
- It certainly seems to the Panel that more (competitive) money is needed here urgently in order to continue the 'stairway to excellence' and to provide an attractive perspective for tomorrow's researchers.