

## JRC SCIENCE AND POLICY REPORT

# Stairway to Excellence Country Report: Estonia

Author: Ruuta Ruttas-Küttim

Editor: Gérard Carat

2015



**European Commission**  
Joint Research Centre  
Institute for Prospective Technological Studies

**Contact information**

Address: Edificio Expo. c/ Inca Garcilaso, 3. E-41092 Seville (Spain)  
E-mail: JRC-IPTS-S2E@ec.europa.eu  
Tel.: +34 954488318  
Fax: +34 954488300

<https://ec.europa.eu/jrc>  
<https://ec.europa.eu/jrc/en/institutes/ipts>

**Legal Notice**

This publication is a Science and Policy Report by the Joint Research Centre, the European Commission's in-house science service. It aims to provide evidence-based scientific support to the European policy-making process. The scientific output expressed does not imply a policy position of the European Commission. Neither the European Commission nor any person acting on behalf of the Commission is responsible for the use which might be made of this publication.

All images © European Union 2015

JRC97481

EUR 27442 EN

ISBN 978-92-79-51567-5 (PDF)

ISSN 1831-9424 (online)

doi:10.2791/009436

Luxembourg: Publications Office of the European Union, 2015

© European Union, 2015

Reproduction is authorised provided the source is acknowledged.

**Abstract**

In the frame of the Stairway to Excellence project, complex country analysis was performed for the EU MS that joined the EU since 2004, with the objective to assess and corroborate all the qualitative and quantitative data in drawing national/regional FP7 participation patterns, understand the push-pull factors for FP7/H2020 participation and the factors affecting the capacity to absorb cohesion policy funds. This report articulates analysis on selected aspects and country-tailored policy suggestions aiming to tackle the weaknesses identified in the analysis.

The report complements the complex qualitative/ quantitative analysis performed by the IPTS/KfG/S2E team. In order to avoid duplication and cover all the elements required for a sound analysis, the report builds on analytical framework developed by IPTS.

## Contents

1	Introduction .....	5
2	Quality of the governance.....	6
3	Factors that support/limit the national participation in R&D calls funded by SF/ESIF...	10
4	Push – pull factors for R&I performers to participate in FP7/H2020 .....	11
5	Policy instruments facilitating the participation in (FP7)H2020/(SF)ESIF .....	13
6	Evaluation and monitoring mechanisms.....	14
7	Enhancing or limiting the synergies? .....	16
8	Take-up of public sector research results .....	18
9	Country tailored policy suggestions .....	23
10	Regional analysis .....	25
11	Abbreviations .....	26
12	References.....	28

## EXECUTIVE SUMMARY

Estonia can be considered as an open and competitive economy (exports and imports each amount to about 90% of GDP), having dynamic business environment and transparent governance. R&D spending has risen and reforms have improved the effectiveness of innovation policy, but the number of firms collaborating with research institutions is low, especially among Small and Medium sized Enterprises (SMEs)<sup>1</sup>.

Estonia has been quite good in absorbing of European Union (EU) funds - European Commission (EC) contribution per inhabitant (€66.2) is close to EU28 average (€78.9) and higher than the EU13 average (€17.8)<sup>2</sup>. Enterprises and R&D institutions have already good experiences on using different EU funds and Estonia's funding agencies (notably Estonian Research Council, Enterprise Estonia, Archimedes, KredEx) have developed working structures and good skills to support absorbing EU funds. The participation of researchers in H2020 is also boosted by the fact that R&D institutions depend on foreign funding (ca 60% of R&D budget is foreign and ca 80% of government sector R&I funding is project-based).

Recommendations to facilitate better use of ESIF/H2020 funding instruments and promote the innovation potential of the economy:

- Although planning different funds together and considering each other's complementary aims is, as such, a good idea, pushing for an increase in complexity of an already demanding process, as it seems to be envisaged at the moment (ESIF call deadlines have to be aligned with H2020 deadlines, ESIF funds can be reserved for projects that "cannot be co-financed under Horizon 2020 due to unavailability of budget", etc.), will increase bureaucracy (long and complicated process, more staff needed etc.), limit the freedom and flexibility of policy planning and implementation at the national level, and may pose problems to fulfilling commitments made in the ESIF programming documents. In the case of upstream sequential funding, it is arguably more efficient to plan and use ESIF funding so that the results contribute to increasing the quality level of the (potential) H2020 participants and thus also contribute to improving H2020 results.
- Focusing on activities with higher impact on the society. Improve the evaluation system of R&D institutions (and researchers) so that innovation and impact on society has more weight and target more support to innovative products, services etc.
- Offer even more international networking possibilities (especially for FP/H2020), as most of information about calls and cooperation options stem from personal contacts.
- Too much information tends to turn into noise. Instead of 1000 e-mails, one website with an up-to-date database of all funding instruments could do wonders. This kind of very useful tool, consisting of available grants, was available on the Enterprise Estonia website for last programming period, but unfortunately no longer exists.
- High level research groups do not typically have problem with obtaining funding for their activities, the State should be securing basic funding to areas that are not yet in the limelight yet, but might become important in the future.
- The principles of smart specialisation were used to define the areas of Estonia's innovation that will be supported using ESIF. However, lacking a clear strategic vision at the national level might be sometimes less of a problem than too specific focus themes, which may

---

<sup>1</sup> OECD (January 2015): Economic Survey of Estonia 2014

<sup>2</sup> Source: Stairway to Excellence. Cohesion Policy and the Synergies with the Research and Innovation Funds. Estonia (EE) Facts & Figures (2015)

eliminate support to some really innovative ideas. Wider scope and trust of clever entrepreneurs and researchers is sometimes better than a top-down controlled and determined drive to the wrong direction.

- While harmonizing H2020/ESIF rules, regulators must keep in mind climatic, economic and physical differences between countries and also guard against mutually exclusive goals.

## **Acknowledgements**

The author is indebted to Külli Annamaa, Aivar Auväärt, Tiina Kalju, Mati Koppel, Tõnis Meriste, Ülle Must, Mari Lahtmets, Vallo Mulk, Lea Narits, Margit Olle, Marko Piirsoo, Indrek Reimand, Ants-Hannes Viira and Rando Värnik, who provided valuable information for completing this report.

## **Disclaimer**

Copyright of this document belongs to the European Commission. Neither the European Commission, nor any person acting on its behalf, may be held responsible for the use of the information contained in this document, or for any errors which, despite careful preparation and checking, may appear. The report does not represent the official opinion of the European Commission, nor that of the national authorities. It has been prepared by independent external experts, who provide evidence based analysis of the national Research and Innovation system and policy.

# 1 INTRODUCTION

## Background of Stairway to excellence project

The European Commission Framework Programme (FP) for research and technology development has been vital in the development of European knowledge generation. However, there is considerable disparity across EU countries and regions in terms of FP participation and innovation performance.

Horizon 2020 will continue to provide funding on the basis of excellence, regardless of geographical location. However, it will also introduce novel measures for "spreading excellence and widening participation" by targeting low Research & Innovation (R&I) performing countries - most of whom are eligible for innovation funding under Cohesion Policy for the period 2014-2020.

In addition, the new regulations for European Structural & Investment Funds (ESIF) aim to use funds more effectively to build regional/national excellence and capacities. By doing so, the key funding sources (ESIF and Horizon 2020) can complement one another along the entire innovation process.

## Objective of S2E

The Stairway to Excellence (S2E) project is centred on the provision of support to enhance the value of the key European Union (EU) funding sources for research, development and innovation: European Structural and Investment Funds and Horizon 2020 but also the Competitiveness of Enterprises and Small and Medium-sized Enterprises (COSME), Erasmus+, Creative Europe, European Union Programme for Employment and Social Innovation ("EaSI") and the digital services part of the Connecting Europe Facility by actively promoting their combination. The S2E project is funded by the European Parliament and entrusted by DG-REGIO to JRC- IPTS and has two main objectives, namely:

- Providing of assistance to regions and countries that joined the EU since 2004 in closing the innovation gap, in order to promote excellence in all regions and EU countries;
- Stimulating the early and effective implementation of national and regional Smart Specialisation Strategies.

## Main purpose of the document

In the frame of the project, complex country analysis is performed for all 13 EU MS with the objective to assess and corroborate all the qualitative and quantitative data in drawing national/regional FP7 participation patterns, understand the push-pull factors for FP7 participation and the factors affecting the capacity to absorb cohesion policy funds. This report articulates analysis on selected aspects and country-tailored policy suggestions aiming to tackle the weaknesses identified in the analysis.

The report complements the complex qualitative/ quantitative analysis performed the IPTS/KfG/S2E team. In order to avoid duplication and cover all the elements required for a sound analysis, the report builds on analytical framework developed by IPTS.

## 2 QUALITY OF THE GOVERNANCE

Estonia can be considered as an open and competitive economy (exports and imports each amount over 90% of GDP, as for 9 other EU countries in 2013<sup>3</sup>), having dynamic business environment and transparent governance. R&D spending has risen from 1.4% of GDP in 2009 to 1.74% of GDP in 2013, and reforms have improved the effectiveness of innovation policy, but the number of firms collaborating with research institutions is still low, especially among SMEs. Also exports are concentrated in low and medium technological goods and FDI inflows in high value added activities have been small.<sup>4</sup>

Estonia's R&D system is characterised by a relatively high academic level, but rather low economic impact in the local context as well as weak links with the business sector.<sup>5</sup>

Estonian strategic objectives for R&D, innovation and enterprise policy have been relatively stable over the last decade (since 2004). Policy design and evaluation is carried out mainly by the [Ministry of Education and Research](#) (MER, about 80% of R&I budget) and the [Ministry of Economic Affairs and Communications](#) (MEAC, ca 14% of R&I budget). Other ministries are also responsible for organising and financing R&D activities, drafting and implementing R&D programmes of their area of government for the (remaining 6% of R&D budget).

Estonia used the new possibility to compile only one operational programme for the three Cohesion Policy Funds (ESF, ERDF, CF) for the 2014-2020 period instead of three in 2007-2013 to improve coordination, efficiency and to achieve better results in using the funds. In addition, two programmes have been compiled for European Agricultural Fund for the use of Rural Development (EAFRD) and European Maritime and Fisheries Fund (EMFF).

Designing of the ESIF instruments for R&I funding has been part of preparation of these Operational Programmes. The process has been facilitated by the Ministry of Finance and was based on the analysis of development needs and growth potential with reference to sectoral objectives (from relevant cross-sectoral and sectoral development strategies) and territorial challenges and also taking account of the [National Reform Programme "Estonia 2020"](#) and the country-specific recommendations. RD&I strategic objectives and principles of management and financing have been established in two main strategies – [RD&I strategy "Knowledge Based Estonia 2014-2020"](#) (implemented under coordination of MER) and the ["Entrepreneurship growth strategy for 2014-2020"](#) (implemented under coordination of MEAC).

**In the programming period 2014-2020** the focus will be more on applied research in universities and strengthening the collaboration of universities and enterprises within the country and from abroad. Also the role of sectoral ministries in the R&D of their governance area is expected to increase, especially as concerns applied research. **The main R&I governance and policy changes** already implemented or foreseen for the period 2014-2020 include the following:

- Focusing on economic and social objectives of R&D.
- Focusing on smaller number of R&D areas – growth areas of Smart Specialisation
- Continued opening of RD&I infrastructure for use by the business sector.

---

<sup>3</sup> Eurostat 2015: [Imports and exports as a percentage of GDP by country, 2013](#)

<sup>4</sup> OECD (January 2015): [Economic Survey of Estonia 2014](#)

<sup>5</sup> Ministry of Finance (2014): [Partnership Agreement for the use of European Structural and Investment Funds 2014-2020](#)



- More support for Doctoral Studies in conjunction with enterprises.
- More attention to increase the added value in traditional sectors.
- Increase of investments in R&D, innovation and product development (including design), to move up the value chain.
- Increase in the responsibility of sectoral ministries for applied research and innovation in their area.
- Improve significantly cooperation between R&D institutions, between R&D institutions and enterprises, and between enterprises themselves.
- Decoupling from support and moving towards increased credit and other financial instruments for enterprises.
- More effort and emphasis on demand-side policies.
- Simplifying financing rules.

**SWOT (strengths, weaknesses, opportunities, threats) analysis** of the governance of the Estonian R&I system, with particular focus on the governance of the ESIF.

### **Strengths**

- A functioning R&I legal system
- Working support structure for the business sector – “seasoned” agencies (Enterprise Estonia, KredEx, Estonian Development Fund) and clear rules /legislation
- A number of strong and developing research groups
- Recently modernised infrastructure (buildings and equipment)

### **Weaknesses**

- Limited role of ministries in determining societal needs. (R&D strategy)
- Uneven capacity in the management and coordination of field-specific research and development. (R&D strategy)
- Insufficient motivation and capacity for cooperation between universities and enterprises
- Coordination problems between ministries
- Separation of research from the economy and society, as a result of which the social benefit (efficiency) of RDI is low. (R&D strategy)
- Indicators used for evaluation of R&D institutions and researchers do not support applied research and innovation (too high share of points for publications, very limited share for innovation)
- Small country (less people) inhibits possibilities to participate and to be on excellent level on some fields.
- Small enterprises and also smaller R&D institutions do not have sufficient means (time and money) to apply to FP/H2020 calls.
- Estonian regulators add rules to funding instruments that are occasionally even stricter than EU regulations.
- Modernisation of equipment (funded mostly from structural funds) is not always funded in a sustainable way, as depreciation is not an eligible cost and should be covered from other sources.
- About 80% of R&D funding is competitive and project based which gives advantages to the research groups with high academic quality and more capabilities in basic research (steady funding from different sources) and creates very unstable situation for the research groups with lower academic quality and more capabilities in applied research and practical problem-solving, the system creates highly unstable and occasional funding.

- Public procurement of Innovative Solutions as an R&D and innovation driver for private sector is almost missing.

### **Threats**

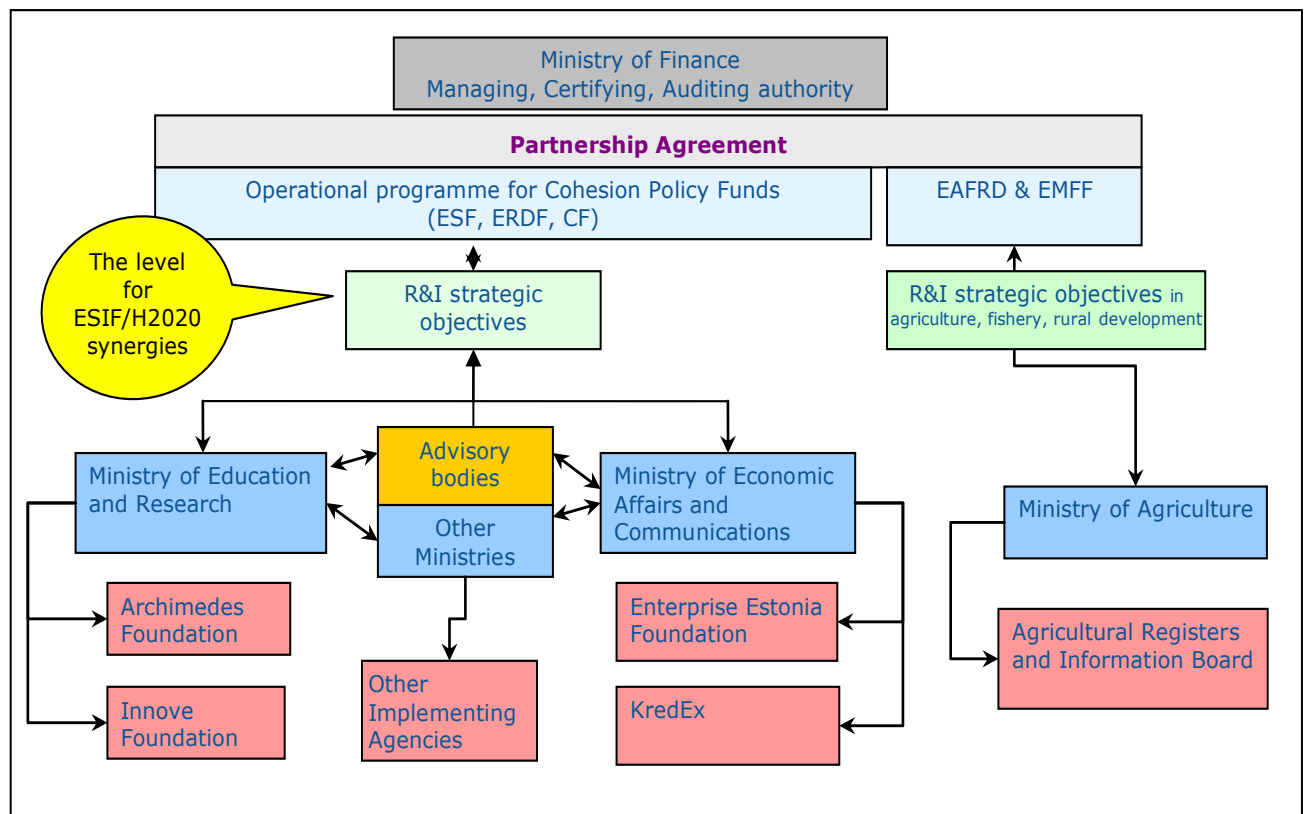
- Brain drain because of the low income level of the Estonian economy and (sometimes) because of lack of high level research options in some areas.
- Small country – limited private money (incl. venture capital), small market, shortage of qualified labour force – as a result mostly all good ideas /research results are sold to foreigners (foreign countries) before they can generate new jobs or profit to Estonia.
- Strong dependence on EU funding sources (60% of total R&D budget in 2013)
- Excessive obedience to EU policies, programmes, directives, etc., which may not be optimum or even harm Estonian economy, vitality of R&D or other interests (partly because of inability to agree on strategic objectives within the country).

### **Opportunities**

- Use EU resources more smartly to make increased impact on economy and society.
- Innovative use of research results and technologies which are available at the world market
- Search for suitable niches and taking an advantage of these opportunities
- Achieve critical mass and greater competence through international (and Baltic) cooperation
- Promoting of Estonian success-stories to raise more foreign private capital.

Strengthening (and marketing) of R&D areas that could attract interest of research-capable foreign firms (which have subsidiaries in Estonia) in commissioning R&D projects in Estonia.

**Figure 1. Organogram – governance of R&D funds (including structural funds for R&D)**



### 3 FACTORS THAT SUPPORT/LIMIT THE NATIONAL PARTICIPATION IN R&D CALLS FUNDED BY SF/ESIF

Estonia has been very good in absorbing of EU funds for R&D - EC contribution per inhabitant (€66.2) is close to EU28 average (€78.9)<sup>6</sup>. Also Estonia has a lot of *project writers* (in universities, municipalities, private firms and individuals) who are offering their services to potential applicants. The absence of private or charitable funds and a very small State budget for R&D leaves R&D performers little choice other than applying for foreign funds.

A number of funding programmes are available and policy instruments are in place to promote the use of ESIF funds (see also ch.5). For the 2014-2020 programming period the number of support measures is planned to be smaller, to achieve better focus and to make administration easier for funding agencies and also for applicants.

The administrative load is heavy, especially for small R&D institutions and SMEs, but larger enterprises and universities who can afford hiring special staff are sometimes also overloaded (for example, different departments of university might ask for help at the same time, etc.), however, smoother coordination would facilitate implementation. The attempt has been made to simplify the rules at the EU level, but for now it seems that simplifying for some parties means “making it even stiffer” for the other parties, as one of respondents said. Estonian regulators have been known for their diligence and tendency to add rules to funding sources that are even stricter than EU regulations. Partly this is due to the need to focus the use of limited resources and, consequently, define the intervention logic less widely than the EU acts would allow (which is in accordance with the general principle that national acts may further specify within the scope identified in EU level acts). For example, modernisation of equipment of R&D institutions was funded mostly from structural funds. Estonia’s Managing Authority added depreciation cost to the list of non-eligible costs, but this little addition means a big change for accounting – if R&D institutions can not calculate depreciation costs, they do not have funds to buy a new piece of equipment, if the one acquired with SF funds, is fully depreciated. On the other hand, it is important for the longer term sustainability of R&D institutions to find solution to this.

The co-financing from the State budget is guaranteed to some extent, but sometimes the co-financing (own financing) can be a problem for applicants, especially for enterprises, which often have to co-finance 50% or even more (due to State Aid regulations). In the decision-making, additional administrative load and expected (financial) gain/risk are calculated, and if the expected gain is too small, entrepreneurs will often decide not to waste the time for applying for limited support.

Estonia’s authorities have been quite successful in managing SF/ESIF funds. Actions that may lead to a more effective management/investment of ESIF could be:

- Very important at EU level – to make sure that State Aid rules (which forbid the gain of competitive advantage) would be reviewed and amended so as to enable certain flexibility for R&D support to increase the competitiveness of EU actors.
- Focusing on activities with bigger impact on society (more support to innovative products, services, etc., as a result of R&D activities in R&D institutions and/or enterprises).

---

<sup>6</sup> Source: Stairway to Excellence. Cohesion Policy and the Synergies with the Research and Innovation Funds. Estonia (EE) Facts & Figures (2015)

- Support cooperation between SMEs (clusters etc) to increase their innovation capacity (finances and people).
- The principles of smart specialisation were used at defining the areas of innovation that will be supported using ESIF. However, lacking a clear strategic vision at the national level might be a lesser problem than too specific focus, which may limit possibilities to support some really innovative ideas and actors. Leaving decision of areas of innovation to researchers and enterprises might be better than forcing them to carry out work that might be harmful in the long run (as for example pushing R&D institutions and enterprises towards bio-fuel production, which quite soon proved to have negative effect on rain forests and food prices).

## 4 PUSH – PULL FACTORS FOR R&I PERFORMERS TO PARTICIPATE IN FP7/H2020

Estonian enterprises and R&D institutions have already good experiences on using different EU funds. Estonia's participation in Framework Programmes has been relatively high and successful and hopefully this will also be the case in H2020, as R&D institutions are used to project-based funding (about 80% of government sector R&I funding). Also Estonia's funding agencies (notably Estonian Research Council, Enterprise Estonia, Archimedes, KredEx) have developed working structures and good skills to support absorbing EU funds.

Obstacles that hinder Estonian R&D institution and enterprises of using FP/H2020 funds are not overwhelming, but still need some tuning.

*Factors that influence participation in H2020 positively:*

- Awareness of H2020 calls through seminars and adequate and timely publicising call on special web site.
- Quality of the NCP support, including NCP-s pro-active approach.
- No competition with national opportunities (lack of comparable national opportunities).
- Relatively large investments into research infrastructure in recent years give good material base; research excellence (human resources) in some areas.
- Participation in projects is vital for R&D institutions – about 80% of R&I funding is competitive and over 60% of public sector R&D funding has been financed under Structural Funds in recent years.
- Evaluation of researchers by the number of publications can influence participation in H2020 positively, but writing articles will not replace applied research and thus may not promote innovation.
- Estonian Research Council provides support at national level and universities have some kind of “project offices” which give institutional support. However, frequent changes in rules still create administrative overload also for research staff (the initial round input for reports comes still from the researcher).

*Factors that influence participation in H2020 negatively:*

- Not enough qualified professionals/research project managers in small PROs and their insufficient number is also still a problem for universities

- The small size of the country (limited people and money) inhibits possibilities to participate and to be at excellent level in all fields.
- Small enterprises and also smaller R&D institutions do not have enough means (time and money) to apply to FP/H2020 calls (and often they apply without success), as the competition is much tougher than for ESIF in Estonia.

## 5 POLICY INSTRUMENTS FACILITATING THE PARTICIPATION IN (FP7)H2020/(SF)ESIF

Some measures (seminars, training and consultations) supporting the participation of national R&I performers in EU funding instruments have been in place already from the mid 1990s. Measures connected to ESIF and FP funds have been implemented since Estonia joined the EU in 2004. Respondents who have used these measures are satisfied with the quality of services and happy that some financial support is given also for FP/H2020 preparation<sup>7</sup>.

- **Preparation support** for H2020 & COST projects & BALTIC BONUS (up to €3600 for Estonian consortium coordinator, €2400 for individual project, €1200 for WP manager, €1000 Baltic bonus). This support is given to all projects evaluated above threshold, and can be used for covering any type of preparation costs.

In the **policy cycle 2007-2013**, preparation support was given to 121 coordinators and 206 project partners, total €776,645. Preparation support for the coordinator of FP7 or COST projects was €3834.7 and €1278.23 for FP7 Work Package manager<sup>8</sup>.

- Seminars and training for R&I performers have already been organized since the mid-1990s, connected to ESIF and FP funds since Estonia joining the EU in 2004. This service is provided by the Estonian Research Council for H2020; by Archimedes, Innove and Enterprise Estonia for ESF, ERDF, CF; and by Agricultural Registers and Information Board (ARIB) for EAFRD and EMFF.
- Funding agencies also provide **personal consultations** (on technical issues, financing, partners, work programmes, etc.) – National Contact Points in Estonian Research Council for H2020 and Information Centre consultants of Enterprise Estonia, Archimedes, Innove, KredEx, ARIB etc for ESIF.
- Estonian Liaison Office for EU RTD in Brussels (established in March 2012). The aim of the office is to introduce Estonian research in Brussels and to represent the interests of Estonian research at the EU level and with potential partners.
- Estonian Bank LHV Pank and the European Investment Fund (EIF) will allow the bank to enter into new loan agreements with innovative SMEs and small mid-caps (up to 499 employees) for a total of €40m over the next two years (2015-2016). The loans will be guaranteed up to 50% by the European Investment Fund and the EU under InnovFin SME Guarantee, as part of Horizon 2020. The 'InnovFin SME Guarantee' provides guarantees and counter-guarantees on debt financing of between €25,000 and €7.5m in order to improve access to loan finance for innovative SMEs and small midcaps (since February 2015).
- The European Investment Bank (EIB) has established a new €200m loan facility for Estonia to support investments in research and innovation, sustainable transport infrastructure and the development of SMEs. This loan will be available for the State to cover State budget planned co-financing under the Estonian operational programme for the Cohesion Policy Funds and the Rural Development Programme for 2014 – 2020. The EU structural funds will meet a limited maximum share of the costs of eligible projects, with the remaining part

---

<sup>7</sup> [Enterprise Estonia annual management report for year 2013](#), [Mid-term evaluation of business and innovation policies 2014](#) and Estonian Research Council report "[Estonia in 7th Framework Programme](#)".

<sup>8</sup> As support was introduced in 2008, while Estonian kroon was used as currency, these amounts are equivalents in euros (60,000EEK and 20,000EEK respectively).

being covered as own financing from the project applicants, partly through the State budget (which may drawing on this EIB facility). This co-financing will primarily support projects in research, technological development and innovation; transport, water and environmental protection; and infrastructure development in rural areas. (announced in December 2014).

## 6 EVALUATION AND MONITORING MECHANISMS

The basic rules of evaluation and monitoring mechanisms for proposals submitted under ESIF/SF are regulated by the [2014-2020 Structural Assistance Act](#) and specified in related acts and procedures, designed for special measures and funds. For the 2014-2020 period, the number of national horizontal secondary legal acts has been reduced as compared to the previous programming period, and the contents of these acts and their requirements have been optimized and simplified.

Under these horizontal acts, specific legal acts – the so-called “measure regulations” always define priorities, selection criteria and procedures, reporting requirements, eligibility criteria, definition of eligible costs, intellectual property rights, standards for proposal evaluation, funding rates, etc. for each specific support measure of financial instrument.

**Institutions responsible** for the evaluation of R&I related ESIF proposals are funding agencies (1<sup>st</sup> level intermediate bodies):

Funding instrument	Funding agencies
ESF, ERDF, CF	<p><b>Enterprise Estonia</b> (about 270 employees)</p> <p><b>Archimedes Foundation</b> (about 150 employees, about 40 in the Implementing Agency of Structural Support)</p> <p><b>InnoVe Foundation</b> (about 480 employees, about 30 of those in the Structural Funds Agency)</p>
EAFRD and EMFF	<p><b>Agricultural Registers and Information Board</b> (about 270 employees, about 70 of those in the Development department which manages support measures)</p>
<i>For comparison<sup>9</sup>: H2020</i>	<p><b>Estonian Research Council</b> (about 60 employees, 17 of those in Department of International Research Cooperation which manages also H2020)</p>

<sup>9</sup> While comparing the numbers of staff, it is important to remember that tasks on H2020 include only counselling and information sharing, and do not include preparation and implementation of regulations, calls, evaluations etc.



The capacity of institutions of managing ethically the evaluation of SF/ESIF applications is strengthened by the rules of evaluation process, transparency and selection of the evaluators. The main principles and requirements of evaluation and verification mechanisms of the performance of agencies are set in the [2014-2020 Structural Assistance Act](#). Based on this, funding agencies have elaborated detailed rules and application guidelines for every funding programme, which are available on the websites of the agencies (overviews often in English, official documents mostly in Estonian).

The evaluations of SF/ESIF proposals follow the international peer review principles (excellence, transparency, impartiality, efficiency, ethical and integrity, appropriateness). Evaluation criteria are public and available at web sites of funding agencies. Agencies are also responsible for dealing with the disputes and providing the monitoring of the implementation of the projects.

The Agency (2nd level intermediate body) establishes expert panels (some of these international) and the ministry (1st level intermediate body) must approve it. Applications are assessed by the panel or authorised persons (experts) who will then make a suggestion to Enterprise Estonia's management board as to funding or non- funding (or partial funding) of an application. An expert has to be impartial and can not be any interested party (applicant or in close relationship). Expertise and excellence in the relevant field is necessary. There is no specific measures requesting the participation of international reviewers in evaluation, but as Estonia is a small country and the number of experts is limited, it is quite common to use international experts to evaluate applications.

The staff of Funding Agencies is chosen via public competition. The number of staff could always be bigger, but it is well trained and the efficiency of institutions has been fine. However, Estonian Research Council would benefit from the increase of staff, as H2020 has added new responsibilities. The training of the staff is important and surveys show that clients are satisfied with services provided by agencies<sup>10</sup>.

Although R&D institutions or enterprises often subcontract consultancy companies for the drafting of the proposals, this does not constitute problems of corruption, as politicians rarely have hold over them.

As concluded also in a study "[Corruption Risks in Implementation of EU Funds](#)" (Tönnisson, K.; Muuga, M., 2013) corruption is not a serious problem in Estonia. If there are any violations of rules, funding agencies themselves discover most of them. There is no arbitrary changing of the eligibility criteria, but sometimes unintentional mistakes are made. Very few intentional violations are discovered, these have included for example public servants playing with work hours or helping to write proposal; enterprises faking invoices or cheating a bit with own-financing.

Some of these problems are partly due to the size of the country:

- sometimes one person in the funding agency has to be in different roles (adviser and evaluator), but there has to be always more than one person to make decisions (the "4-eye-principle");
- in some fields, there are only very few experts, and everybody knows everybody – sometimes might affect impartiality (personal likes and dislikes). Specific solutions need to be found in such cases.

---

<sup>10</sup> [Enterprise Estonia annual management report for year 2013](#), [Mid-term evaluation of business and innovation policies 2014](#) and Estonian Research Council report "[Estonia in 7th Framework Programme](#)"

## 7 ENHANCING OR LIMITING THE SYNERGIES?

Until now, there was no specific initiative in Estonia to support synergies between ESIF and H2020; but there is also no specific regulation to limit it. However, while preparing the national acts setting the basis for the use of ESIF in the RD&I area, it is kept in mind that these support measures should inter alia provide for increasing the competitiveness of Estonian enterprises and researchers within the H2020 calls for proposals.<sup>11</sup>

Neither interviewed policy makers nor research performers can see much additional value added to present practices by introducing synergies the way they are described in the guidelines “Enabling synergies between European Structural and Investment Funds...” (EC 2014), as Estonia’s researchers are accustomed to use different sources of funding. The recommendations for policy makers in the guidelines for early negotiations with potential applicants (which must obviously start before or simultaneously with preparations for Operational Programmes) and reserving ESIF funds will prolong and complicate application process, and the more there are negotiations and consultations, the bigger must be the numbers of the staff. Aligning the timing of ESIF funding decisions to the Horizon2020 time-lines may also cause problems – if H2020 calls were to be delayed, related ESIF work plans and processes would be disrupted in Member States, too. Also, reserving ESIF on the basis of negotiations before an application has been even submitted to H2020; and thus can not yet have positive evaluation; might pave the way to dubious settlements.

Also, long preparation process is in conflict with the unanticipated, surprising nature of innovation and true insights and ground-breaking (positive) accidents might fall into the crack of well-thought funding framework. Besides, the framework for using ESIF has already been defined in the Partnership Agreement (approved in June, 2014) and Operational Programme for the Use of Cohesion Policy Funds (approved in December, 2014), the first drafts of which were negotiated with the European Commission already in summer, 2013. Consequently, at the preparation of “measure level acts” for the use of ESIF, the objectives, main considerations, guiding principles for selection of projects need to be followed. Thus, the ESIF measures can support the activities of H2020 or activities contributing to the results of H2020; but the ESIF framework is not flexible enough to facilitate the take up of project proposals from Horizon 2020.

In cases of oversubscribed calls, although the idea of alternative funding has the advantage of avoiding discarding quality proposals that have passed quality threshold, its implementation could be complicated in some cases.

For instance, in the case of multi-partner H2020 proposals it can be very difficult to have each partner’s regional MAs re-channel ESIF funding<sup>12</sup> at the same time, especially because the oversubscribed H2020 proposal may not always match the relevant RIS3 strategy and ESIF programme of each partner’s respective Managing Authority. That means that the proposal may have to be rewritten in some case.

---

11 Designing of the ESIF instruments for R&I funding has been part of preparation of Operational Programmes, and was based on the RD&I strategies. For 2007-2013, the focus was primarily on developing Estonia’s capability in RD&I (including modernisation of the research infrastructure and equipment). Strategies for 2014-2020 set focus on the use of the created potential for the good of Estonia’s development and economic growth.

<sup>12</sup> See recommendations for the take up, reorientation or alternative funding of project proposals from Horizon 2020 or other centrally managed programmes, for which there is not enough budget available in the respective programmes, in the guidelines “Enabling synergies...” (EC 2014) pp 3, 19, 23, 60-61, 103-104.

In the case of single applicants, the reorientation of H2020 proposals towards ESIF is technically easier, but in some cases, SMEs will prefer to apply only to ESIF: If suitable ESIF programme exists and if the cost models and reporting requirements in an ESIF programme are fully aligned with the H2020 standards (see EC 2014, pp 13, 16, 49, 102), it means that ESIF provides almost the same funding opportunity as H2020, but the application procedure is easier and takes less time, and the application can be written in the applicant's mother tongue.

Regarding the procedure set out in Art. 70(2) CPR, which allows partner A to cooperate with partner B from another MS if partner A's MA has chosen to use up to the 15% of its ERDF programme for this purpose, an additional complication is that the cost levels vary considerably between MS<sup>13</sup>.

Interviewees indicated some limitations which are created at EU level, as the different set up of regulations for ESIF and H2020 and sometimes **incompatible rules at the EU level** may negatively affect **synergies** between ESIF and H2020:

- EU regulations on State Aid are very restrictive to enterprises and do not always promote cooperation between R&D institutions and enterprises;
- different costs are eligible for H2020 and ESIF and Estonia's Managing and Implementing Authorities sometimes have defined depreciation cost as non-eligible costs. (According to the Managing Authority, the rationale behind this is the objective to achieve maximum results (at State level) for the available amount of ESIF since this way the same amount will be sufficient for supporting more projects, while creating the need for applicants to cover depreciation using their own resources which is necessary for securing the sustainable use of obtained facilities and results).

A number of Interviewees pointed out the inclination of Estonia's civil servants of excessive obedience to EU policies, programmes, directives, etc., which may cause problems to Estonia's economy, vitality of R&D or other interests. Partly it is caused by the inability to agree on strategic objectives within the country, but the other reason is the fear of making mistakes and need to minimise the risk of paying back the support. As different auditors from different Estonian or EU institutions occasionally have interpreted regulations differently and this has led to payback requests, the desire to minimise such risk in the future to protect applicants and civil servants is rational and understandable. On the one hand, Estonia has already through the 2007-2013 period been among the Member States supporting the one-audit-principle: for the same project, activity, or audit scope, audit by only one level of auditors would be performed and the other level would only need to deal with this scope in case there are reasons to doubt the way the initial audit was performed. The precondition for this is mutual agreements between the European Commission and the Member State Auditing Authority and gradual improving of the legal framework so as to minimise differences in interpretation. On the other hand, Estonia's public servants are trying to build up fool-proof system and perfect regulations, where every aspect is covered (based on problems detected earlier), occasionally making rules too rigid. The proposition is to consider a real simplification of the regulation – to make an agreement at EU level, a common principle – **if eligibility or other criteria give room for interpretation, it should be interpreted in favour of the applicant.**

As of June 2015, only three ESIF calls under 2014-2020 funds have been opened in Estonia, and none of them is specifically focused on synergies, but do not hold them back either: support for the Development of Clusters (for NGOs in the areas of Smart Specialisation); support for the Centres of Excellence (for R&D institutions with positive regular evaluation results) and the Institutional

---

<sup>13</sup> For example: In 2012 (Eurostat 2015), total labour cost per employee in full-time equivalents for Scientific research and development, per year was in Estonia €17,655, which is 5 times smaller than in Sweden (€89,504), 4.3 times smaller than in Denmark (€76,891) and 3.5 times smaller than in Finland (€61671).

Development Programme (for R&D institutions and universities). The results of these support measures are inter alia intended to promote the quality level of applicants and thus contribute to their possibilities for successful participation in the H2020 projects.

## 8 TAKE-UP OF PUBLIC SECTOR RESEARCH RESULTS

A number of measures to facilitate the **take-up of public sector research results** – knowledge transfer and the creation of university spin-offs, encouraging of partnerships and interactions between research institutions and the private sector – have been under implementation since 2008-2009. The following measures are being funded by MEAC and implemented by [Enterprise Estonia Foundation](#):

- [Technological development centres](#) for 2014-2020 (opened in Nov. 2014, the 3<sup>rd</sup> consecutive programme, the 1<sup>st</sup> started in 2004) – to develop the technologies, products and services necessary for increasing international competitiveness and smart specialisation; develop internationally high-level and competitive technological development centres that eventually will be independent of national financial instruments and provide Estonian entrepreneurs with opportunities for co-operation in the development of new technologies, products and services; increase qualified staff numbers in business-oriented R&D, and their movement between businesses and research institutions.
- [Cluster development Programme](#) – aiming to increase the value added of the companies and the sales of the products/services and exports; to promote cooperation between companies of the same and different sectors, and companies and research institutions.
- [Innovation voucher grant](#) for SMEs for knowledge and technology transfer and co-operation with R&D institutions, including procurement of innovation services related to product or service or production or technology development, design, feasibility studies, standardisation and certification, patent registration, etc.
- R&D grants (in Estonian, [Teadus- ja arendustegevuste projektide toetus](#)) – for SMEs to increase turnover of Estonian enterprises and create new high value added products and services.
- [Knowledge and technology transfer baseline funding \(SPINNO Programme\)](#) - to improve the quality and volume of application of the intellectual property developed in the Estonian research and development establishments and institutions of applied higher education for commercial purposes, through the professional and effective provision of services of transfer of knowledge and technology; to strengthen human resources and their mutual cooperation mechanisms required for the provision of the services of transfer of knowledge and technology in the Estonian research and development establishments and institutions of applied higher education.

According to the [Mid-term evaluation of innovation and enterprise support policies](#) (MEAC, 2014), these measures have been mostly successful and **R&D grant** was rated the most positive with the strongest effect and has enabled companies to reach commercialisation more easily.

**Innovation voucher** recipients showed positive developments in employee numbers and labour costs. The importance of grant awards to company development was rated at 5.1 points out of 7 by recipients, but on the negative side, many pointed out that no follow-up projects were carried

out after receiving the innovation grant, mainly because small companies just do not have sufficient means.

Three-quarters of companies active in the field of R&D took their product innovations to the market and two out of three did it thanks to the support provided under the EAS measure. Of all R&D investments in the private sector, 90% were made with support provided by EAS. An interesting fact is that every fifth recipient of an R&D grant award has since terminated its activities.

According to the [Interim evaluation of the cluster programme](#) (MEAC, 2013), both the cluster managers and enterprise managers gave a positive evaluation to the cluster programme. Of the enterprises in the cluster, 65% would not make any change to the cluster strategy. According to an enterprise that was not satisfied with the cluster strategy, the strategy should include more clearly measurable objectives and an action plan framework, a sharper focus, and could involve more enterprises as well as research and education institutions. During the next review of cluster strategies, these proposals will be considered.

Interviews with the cluster managers (MEAC, 2013) revealed that one of the greatest values and assets for an enterprise participating in the cluster programme are the cooperation opportunities it creates. Cooperation with research institutions is viewed very differently among both cluster managers and enterprises within the clusters. In most cases the cooperation is sporadic in its nature, with cooperation that is broader in scope and steadier having been initiated in very few cases. About a half of the cluster enterprises find that cooperation with universities through the clusters has contributed to the development of their organisation, and that such cooperation is expected to increase further in the future.

As cooperation with research institutions progresses slowly and is time-consuming, increase in cooperation may not be attainable through the development of the clusters, but rather with a combination of other measures in the field of innovation. R&D institutions mainly conducted surveys on the issues of common interest of cluster members.

[ERAC Peer-Review](#) (ERAC, 2012) makes a suggestion focussing more on building business driven clusters where all relevant research, education and technology institutions in a certain technology area or a certain scientific area should participate.

**Table 1. Estonian clusters<sup>14</sup>**

<b>Business fields</b>	<b>Clusters</b>
Clean Technologies, Recycling	Road Cluster Waste Recycling Cluster Wind Power Cluster
Creative Industries	Film Industry Cluster
Defence&Security	Defence- and Security Cluster
Finance	FinanceEstonia
Forestry, Furniture, Wood processing	Furniture Cluster Wooden Houses Cluster
ICT	ICT Cluster ICT Export Cluster Smart City e- and m-Services Cluster
Logistics	Logistics Cluster
Medicine, IT, Biotechnology	Cell Therapy Cluster Connected Health Cluster

<sup>14</sup> More information about clusters is available at [http://www.estonianclusters.ee/?page\\_id=48](http://www.estonianclusters.ee/?page_id=48)

	Health Tourism Cluster Healthtech Cluster Medical Services Export Cluster Medicine Est. Sports Medicine Cluster SportEST
--	---

[Technological development centres](#) programme<sup>15</sup> was introduced in 2004 and has been very successful in producing products, services, patents etc (see Table 2 below). However, [ERAC Peer-Review](#) (ERAC, 2012) points out that more emphasis should be given to matchmaking activities between knowledge institutions and enterprises and not only on large R&D-collaboration projects with a limited number of enterprises.

**Table 2. Competence Centres and examples of their products, services, patents etc.**

<b>Competence Center</b>	<b>Product, service, licence, patent etc</b>
Bio-Competence Centre of Healthy Dairy Products (OÜ Tervisliku Piima Biotehnoloogia Arenduskeskus) <a href="http://www.tptak.ee">www.tptak.ee</a>	<b>Products:</b> <ul style="list-style-type: none"> <li>• Functional jam,</li> <li>• Silage additive NordSil,</li> <li>• Harmony “heart-friendly” cheese</li> </ul>
Estonian Nanotechnology Competence center (Eesti Nanotehnoloogiate Arenduskeskus AS) <a href="http://encc.ee">http://encc.ee/</a>	<b>Patents:</b> <ul style="list-style-type: none"> <li>• Method for preparing oxide material</li> <li>• Method of preparation of surface coating of variable transmittance and an electrooptical device</li> <li>• Method and device for ultra fast temperature switch for microscopic objects</li> <li>• Method for producing optically transparent and electroconductive fibres and the sensor of scanning probe microscope made of this fibre</li> <li>• Method of cleaning the atomic force microscopy tip and the sample</li> <li>• Method and device for measuring the chemical and biological analyte or viscosity and surface tension of the liquid</li> <li>• Method and technical realization thereof for spraying the substance or a carrier liquid containing the substance from the ionization chamber into the mass spectrometer</li> </ul>
Competence Center of Fermentation and Food Technologies (CCFFT/Estonia) (AS Toidu- ja Fermentatsioonitehnoloogia Arenduskeskus) <a href="http://www.tftak.eu/Home">http://www.tftak.eu/Home</a>	<b>Service packages:</b> <ul style="list-style-type: none"> <li>• Superior microbial cell factories</li> <li>• Bioprocess optimization</li> <li>• Optimum cultivation media</li> <li>• Comprehensive study of cell physiology</li> </ul> <b>Specific services:</b> <ul style="list-style-type: none"> <li>• Cell cultivation</li> <li>• Analytical methods</li> <li>• Computational methods</li> </ul>
ELIKO Technology Competence Centre in Electronics-, Info- and Communication	<b>Patents:</b>

<sup>15</sup> In Estonian “Tehnoloogia arenduskeskuste programm” has been translated now (2014-2020 period) as “Technological development centre programme”, but has been translated earlier as Competence Center programme.

<p>Technologies (ELIKO Tehnoloogia Arenduskeskus OÜ) <a href="http://www.eliko.ee/">http://www.eliko.ee/</a></p>	<ul style="list-style-type: none"> <li>• Method for determining digital content preferences of the user</li> <li>• Method and device for broadband analysis of systems and substances</li> <li>• Method for determination of digital content relevance</li> <li>• Method and device for frequency response measurement</li> <li>• Method and device using shortened square wave waveforms in synchronous signal</li> </ul>
<p>Competence Centre for Cancer Research (CCCR) (Vähiuuringute Tehnoloogia Arenduskeskus AS) <a href="http://www.vtak.ee">www.vtak.ee</a></p>	<p><b>12 patents, 1 utility model</b>, including:</p> <ul style="list-style-type: none"> <li>• VIREXXA – endometrial cancer drug research</li> <li>• Novel chemically modified oligonucleotides as anti-cancer drugs</li> <li>• Cellular immunotherapy</li> <li>• Modulation of miRNA levels in cancer cells</li> <li>• Anticancer vaccines based on Plant Virus Coat Protein Virus Like Particles</li> </ul> <p>12 development projects, 4 of them in diagnostics and 8 in drug development. Oncogenetic tests implemented in Estonian medical Practice.</p>
<p>Software Technology and Applications Competence Centre (STACC) (Tarkvara Tehnoloogiate ja Rakenduste Arenduskeskus OÜ) <a href="http://www.stacc.ee/">http://www.stacc.ee/</a></p>	<p><b>Products:</b>  <b>Plumbr</b> - a memory leak detection algorithm within Java applications  <b>Quretec</b> - data mining methods, algorithms and visualisation tools to process discharge data containing free text of primary care and hospital  <b>Browserbite</b> - cloud-based service to execute image comparison using image analysis methods  <b>Reach-U</b> - mobile positioning data analysis platform for collecting and analysing of passive location updates from the mobile operator's networks  <b>Cybernetica</b> - Sharemind privacy-preserving data processing platform  <b>E-HEALTH</b> - capacity to work with the large sets of data  <b>Skype</b> - memory-efficient methods calculating shortest paths in the very large graphs  <b>Zeroturnaround</b> - prototyping of features in dynamic update of enterprise application package  <b>Fits.me</b> - Online Shopping Assistants</p>
<p>Competence Centre on Health Technologies (Tervisetehnoloogiate TAK AS) <a href="http://www.ccrmb.ee/">http://www.ccrmb.ee/</a></p>	<p><b>Projects:</b></p> <ul style="list-style-type: none"> <li>• <u>Usage of novel approaches for human infertility diagnostics</u></li> <li>• <u>Advances for human and animal assisted reproductive technologies</u></li> <li>• <u>Microecological approaches for human reproductive biomedicine</u></li> <li>• <u>Personalised Medicine</u></li> <li>• <u>Drug Development</u></li> <li>• <u>Reproductive Medicine</u></li> </ul>
<p>Innovative Manufacturing Engineering Systems Competence Centre (IMECC) (Innovaatiliste Masinaehituslike Tootmissüsteemide Tehnoloogiate</p>	<p><b>Projects:</b>  <b>e-Manufacturing:</b> Integration of business and manufacturing planning based on e-manufacturing and Product Lifecycle Management systems.</p>

Arenduskeskus) <a href="http://www.imecc.ee">www.imecc.ee</a>	<b>Integrated Environment Development</b> - Development cost and time efficient solutions for SMEs for process automation and innovative emerging manufacturing technologies <b>Factory Design</b> - Self-organising systems with online monitoring and diagnostics
--	--

Estonia's capacity to participate in different **international initiatives** is limited because of the size of the country –human and/or financial resources are insufficient to participate in every action , consequently choices have to be made for optimum use of those resources. H2020 supports cooperation in large, long-term public-private partnerships (KICs, cPPPs) with Europe's leading industries in priority growth sectors. Estonia's access to those instruments is limited. For example, the KICs co-location Centers are located in only 11 countries and as participants have to contribute €0.1-0.2m annually, Estonia's universities can not afford this. The expected size and number of stakeholders in the projected CLCs, level of industry commitments, and access to markets also limit Europe-wide successful participation in KICs.

**Table 3. Estonia's participation in international initiatives**

EURAMET	AS Metrosert (participated in 12 projects) University of Tartu (UT), associated member
Joint Programming Initiative - JPI	FACCE – Ministry of Agriculture CliK'EU – Ministry of Environment Cultural Heritage and Global Change - Ministry of Culture Antimicrobial Resistance – Ministry of Social Affairs A Healthy Diet for a Healthy Life - Ministry of Social Affairs
Joint Technology Initiative - JTI	Innovative medicine (IMI2) - Estonia in the working group of member states, UT in 2 projects. Fuel Cells and Hydrogen (FCH) - Estonia in the working group of member states Electronic Components and Systems (ECSEL) - Estonia in the working group of member states EAS and ETAg). Previously 3 successful projects by Tallinn University of Technology (TTU), OÜ Elvior and OÜ Skeleton Technologies. Biomass based Industries (BBI) - Representation in Estonia via 5 international companies who have local offices (Holmen, Metsä, Roquette, StoraEnso, UPM) and 3 professional associations (Copa*-Cogeca, European Seed Association, Food-Drink Europe).
Knowledge and Innovation Communities – KIC	No participation in any ongoing KIC. There has been interest in participating in the 2014 call for proposals. as a member in consortium: TTU (Raw materials KIC) and UT and Gene Bank (Healthy Lifestyles KIC as a associated member in 2 competing projects).
FET Flagship	Estonian research groups participate in <b>2</b> FET Flagship projects: <b>Graphene flagship</b> and <b>Human Brain Project</b> .



## 9 COUNTRY TAILORED POLICY SUGGESTIONS

Recommendations to facilitate better use of ESIF/H2020 funding instruments and promote the innovation potential of the economy:

- The harmonization of rules (eligibility criteria etc) of the different instruments to the highest possible extent will help to increase participation. Among most important steps for simplification would be reaching an agreement (at EU level) on a common principle – if eligibility or other criteria give room for interpretation, disagreements should be interpreted in the favour of the applicant. Very important at EU level is to make sure that State Aid rules (which prevent the gain of competitive advantage) do not inhibit achieving the aim of R&D support – to increase the overall competitiveness of EU actors.
- While harmonizing H2020/ESIF rules, regulators must keep in mind differences between countries – from climate and to the economic and physical size and capacities. As it is impossible to build or plant in the wintertime in Estonia and some other countries in the same climate zone, the project cycle (including reporting) in agriculture and construction should be planned accordingly and this should be allowed in the requirements. Instruments should not be so demanding and costly for participants that some countries can never succeed.
- Although planning the use of different funds together and in view of each other's complementary aims as such is a good idea, pushing for increase in complexity of already demanding processes, as it seems to be envisaged at the moment (ESIF call deadlines have to be aligned with H2020 deadlines, ESIF funds should be reserved for projects that “cannot be co-financed under Horizon 2020 due to unavailability of budget”, etc.), will increase bureaucracy (longer and complicated process, more staff etc.), limit the freedom and flexibility of policy planning and implementation at the national level, and may pose problems to fulfilling commitments made in the ESIF programming documents. It is more efficient to plan and use ESIF so that their results contribute to increasing quality level of the (potential) H2020 participants and thus also contribute to improving H2020 results. If regulations are developed so as not to forbid or prevent synergies, this will enable the researchers to find better ways than any regulator could foresee.
- Focusing on activities with higher impact on the society. Target more support to innovative products, services, etc. Improve the evaluation system of R&D institutions (and researchers) so that innovation and impact on the society would have more weight than the number of publications (in some areas, producing less publications would leave more time for dealing with applied research and innovation). The need to promote the use of RD&I results should clearly be of priority in order to maximise the value added of using EU taxpayers' money for funding such activities.
- Offer even more international networking possibilities (especially for FP/H2020), as most of information about calls and cooperation options stem from personal contacts.
- Too much information tends to turn into noise. Instead of sending e-mails, one website with a database of all funding instruments, available for (Estonian and other) researchers (with possibilities to sort information according to beneficiaries, different fields, basic/applied

research, innovation etc) would be of use<sup>16</sup>. The necessary precondition would be to provide for quality and regular update of such database.

- High level research groups do not typically have problem with obtaining funding for their activities, the focus of the government should be securing basic funding to areas that are not in the limelight yet, but might become important in the future.
- The principles of smart specialisation were used at defining the areas of innovation that will be supported using ESIF. However, lacking a clear strategic vision at the national level might be a lesser problem than too specific focus, which may limit possibilities to support some really innovative ideas and actors. Leaving decision of areas of innovation to researchers and enterprises might be better than forcing them to carry out work that might be harmful in the long run (as for example pushing R&D institutions and enterprises towards bio-fuel production, which quite soon proved to have negative effect on rain forests and food prices).

---

<sup>16</sup> This kind of very useful tool, consisting of available grants, was available on the Enterprise Estonia website for last programming period, but unfortunately no longer exists.

## **10 REGIONAL ANALYSIS**

Estonia as a whole is one NUTS2 region.

## 11 ABBREVIATIONS

ARIB	Agricultural Registers and Information Board (Põllumajandusregistrite ja informatsiooni Amet (PRIA))
CF	Cohesion Fund
EC	European Commission
EAFRD	European Agricultural Fund for Rural Development
EMFF	European Maritime and Fisheries Fund
ERA	European Research Area
ERA-NET	European Research Area Network
ERAC	European Research Area Committee
ERDF	European Regional Development Fund
ESIF	European Structural & Investment Funds
ESF	European Social Fund
ESFRI	European Strategy Forum on Research Infrastructures
EU	European Union
FP	Framework Programme
FP7	7th Framework Programme
H2020	Horizon 2020, EU Research and Innovation programme
ICT	Information and communications technology
IPTS	Institute for Prospective Technological Studies
JRC	Joint Research Centre-Institute for Prospective Technological Studies
MEAC	Ministry of Economic Affairs and Communication (Majandus- ja Kommunikatsiooniministeerium)
MER	Ministry of Education and Research (Haridus- ja Teadusministeerium)
MF	Ministry of Finance (Rahandusministeerium)
PRO	Public Research Organisations

OECD	Organisation for Economic Co-operation and Development
R&D	Research and development
R&I	Research and Innovation
RI	Research Infrastructures
SF	Structural Funds
SME	Small and Medium Sized Enterprise
UT	University of Tartu
TTU	Tallinn University of Technology

## 12 REFERENCES

- ERAC (2012): Peer-Review of the Estonian Research and Innovation System: Steady Progress Towards Knowledge Society, European Commission, 2012  
[http://www.mkm.ee/public/ERAC\\_EE\\_Peer-Review\\_Report\\_2012.pdf](http://www.mkm.ee/public/ERAC_EE_Peer-Review_Report_2012.pdf)
- Estonian Enterprise (2014): Enterprise Estonia annual management report for year 2013 (in Estonian "Ettevõtluse Arendamise Sihtasutuse 2013. aasta tegevusaruanne")  
<http://www.eas.ee/images/doc/sihtasutusest/aastaaruanne/tegevusaruanne-2013.pdf>
- Estonian Research Council (2014): Estonia in 7th Framework Programme (in Estonian "Eesti Euroopa Liidu teadus- ja arendustegevuse 7. raamprogrammis") <http://www.etag.ee/wp-content/uploads/2012/11/Eesti-EL-7.-raamprogrammis.pdf>
- European Commission (2014): Enabling synergies between European Structural application: and Investment Funds, Horizon 2020 and other research, innovation and competitiveness-related Union programmes. Guidance for policy-makers and implementing bodies.  
[http://s3platform.jrc.ec.europa.eu/documents/10157/267027/Guide%20on%20synergies\\_en.pdf](http://s3platform.jrc.ec.europa.eu/documents/10157/267027/Guide%20on%20synergies_en.pdf)
- Karo, E. et al (2014): TIPS study 5.1. Estonian research funding instruments and the socio-economic impact of publicly funded research in Estonia (in Estonian "TIPS uuringu 5.1 lõppraport. Eesti teadusfinantseerimise instrumendid ja teaduse rakendatavus majanduses: poliitikaanalüüs tänase TAI süsteemi väljakutsetest ja võimalustest")  
[http://dspace.utlib.ee/dspace/bitstream/handle/10062/40964/TIPS\\_5.1\\_loppraport.pdf?sequence=1](http://dspace.utlib.ee/dspace/bitstream/handle/10062/40964/TIPS_5.1_loppraport.pdf?sequence=1)
- Läänelaid, S. (2011): End users (SMEs and stakeholders) needs, requirements and feedback to overcome barriers for innovation activities. National report for Estonia. (INVENT)
- Ministry of Finance (2014): (Estonia's) Operational Programme for Cohesion Policy Funds 2014-2020 [http://www.struktuurifondid.ee/public/EE\\_OP\\_EN\\_2\\_12\\_2014.pdf](http://www.struktuurifondid.ee/public/EE_OP_EN_2_12_2014.pdf)
- Ministry of Finance (2014): Partnership Agreement for the use of European Structural and Investment Funds 2014-2020  
[http://www.struktuurifondid.ee/public/EE\\_Partnership\\_Agreement\\_EN.pdf](http://www.struktuurifondid.ee/public/EE_Partnership_Agreement_EN.pdf)
- MEAC (2012): Estonia's enterprise and innovation policy's evaluation 2012 (in Estonian, [Ettevõtlus- ja innovatsioonipoliitika vahehindamine 2012](#)).
- (MEAC (2013): Interim evaluation of the cluster programme  
<http://www.eas.ee/images/doc/sihtasutusest/uuringud/ettevotlus/klastriprogrammi-vahehindamine-2013.pdf>
- MEAC (2014): Mid-term evaluation of business and innovation policies 2014 (in Estonian, Ettevõtlus- ja innovatsioonipoliitika vahehindamine 2014)  
<http://www.struktuurifondid.ee/public/ettevotlustoetuste-vahehindamine-2014.pdf>
- MEAC (2013): Entrepreneurship Growth Strategy 2020  
[http://kasvustrateegia.mkm.ee/index\\_eng.html](http://kasvustrateegia.mkm.ee/index_eng.html)
- MER (2014): RD&I Strategy 2014-2020 "Knowledge-Based Estonia"  
[www.hm.ee/sites/default/files/estonian\\_rdi\\_strategy\\_2014-2020.pdf?ga=1.101330693.584123060.1418315820](http://www.hm.ee/sites/default/files/estonian_rdi_strategy_2014-2020.pdf?ga=1.101330693.584123060.1418315820)

- OECD (January 2015): Economic Survey of Estonia 2014  
<http://www.oecd.org/eco/surveys/economic-survey-estonia.htm>
- Riigi Teataja (2014): 2014-2020 Structural Assistance Act  
<https://www.riigiteataja.ee/en/eli/531102014003/consolide>
- State Chancellery (2014): National Reform Programme “Estonia 2020”  
<https://riigikantselei.ee/en/supporting-government/national-reform-programme-estonia-2020>
- Tönnisson, K., Muuga, M. (2013): Corruption Risks in Implementation of EU Funds  
[http://transint.xred.cz/doc/EU\\_funds\\_watch\\_Report\\_Estonia.pdf](http://transint.xred.cz/doc/EU_funds_watch_Report_Estonia.pdf)

Europe Direct is a service to help you find answers to your questions about the European Union  
Freephone number (\*): 00 800 6 7 8 9 10 11

(\*): Certain mobile telephone operators do not allow access to 00 800 numbers or these calls may be billed.

A great deal of additional information on the European Union is available on the Internet.  
It can be accessed through the Europa server <http://europa.eu>.

#### **How to obtain EU publications**

Our publications are available from EU Bookshop (<http://bookshop.europa.eu>),  
where you can place an order with the sales agent of your choice.

The Publications Office has a worldwide network of sales agents.  
You can obtain their contact details by sending a fax to (352) 29 29-42758.

European Commission

**EUR 27442 EN – Joint Research Centre – Institute for Prospective Technological Studies**

**Title: Stairway to Excellence. Country Report: Estonia**

Author(s): Ruuta Ruttas-Küttim

Luxembourg: Publications Office of the European Union  
2015 – 29pp. – 21.0 x 29.7 cm

EUR – Scientific and Technical Research series – ISSN 1831-9424 (online)  
ISBN 978-92-79-51567-5 (PDF)  
doi:10.2791/009436



## JRC Mission

As the Commission's in-house science service, the Joint Research Centre's mission is to provide EU policies with independent, evidence-based scientific and technical support throughout the whole policy cycle.

Working in close cooperation with policy Directorates-General, the JRC addresses key societal challenges while stimulating innovation through developing new methods, tools and standards, and sharing its know-how with the Member States, the scientific community and international partners.

*Serving society*  
*Stimulating innovation*  
*Supporting legislation*

doi:10.2791/009436

ISBN 978-92-79-51567-5

