

**How can the EU
Framework Programme for
Research and Innovation
increase the economic and
societal impact of RDI
funding in Finland?**



Finland: Key Figures Horizon 2020 (by 30.9.2016)

Funding

350 M€

Projects

580

Participants

281

Participations

822

Coordinations*

60

Success rate

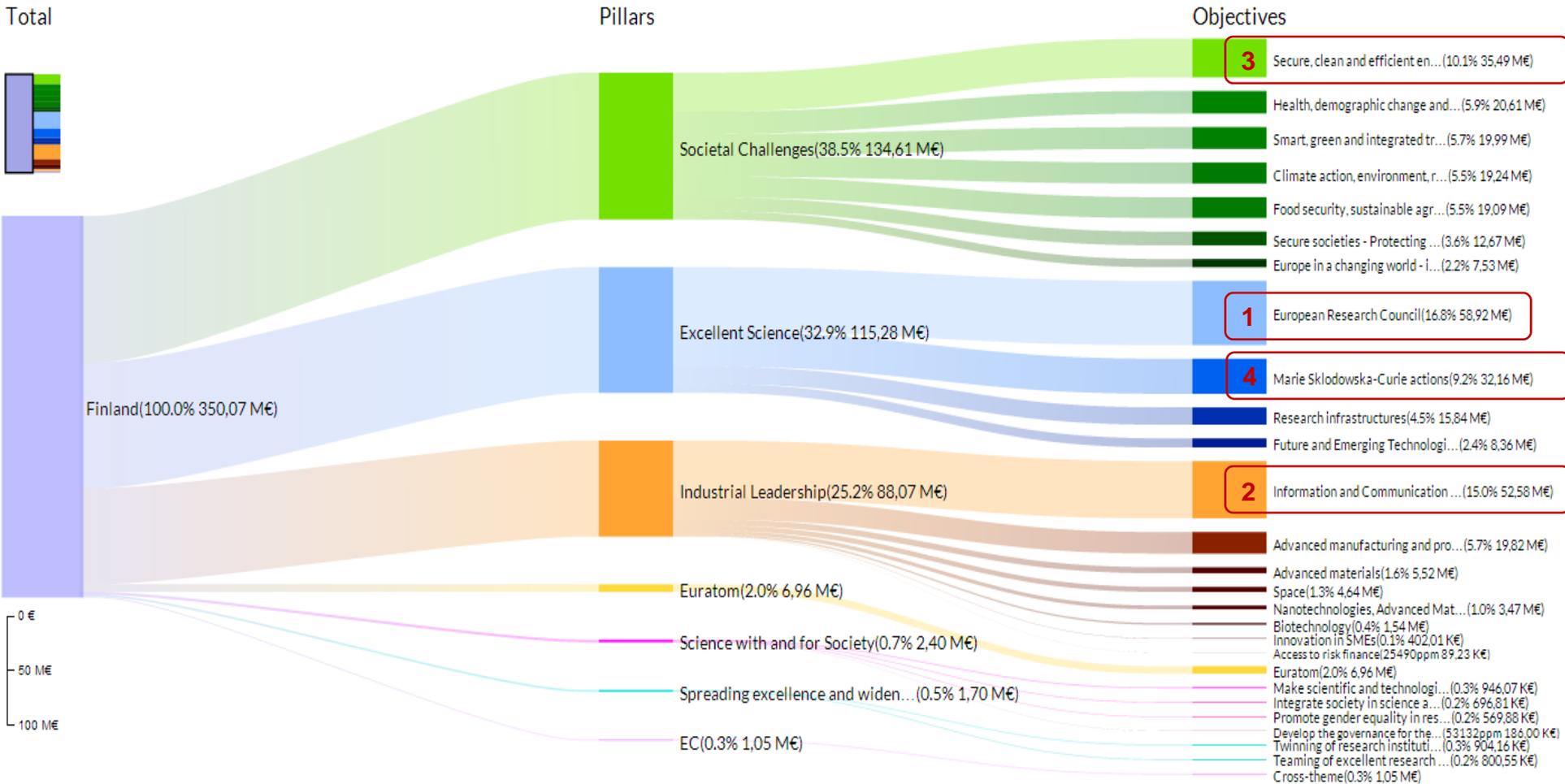
12,85

Finland's share of all grants 2,0 %.

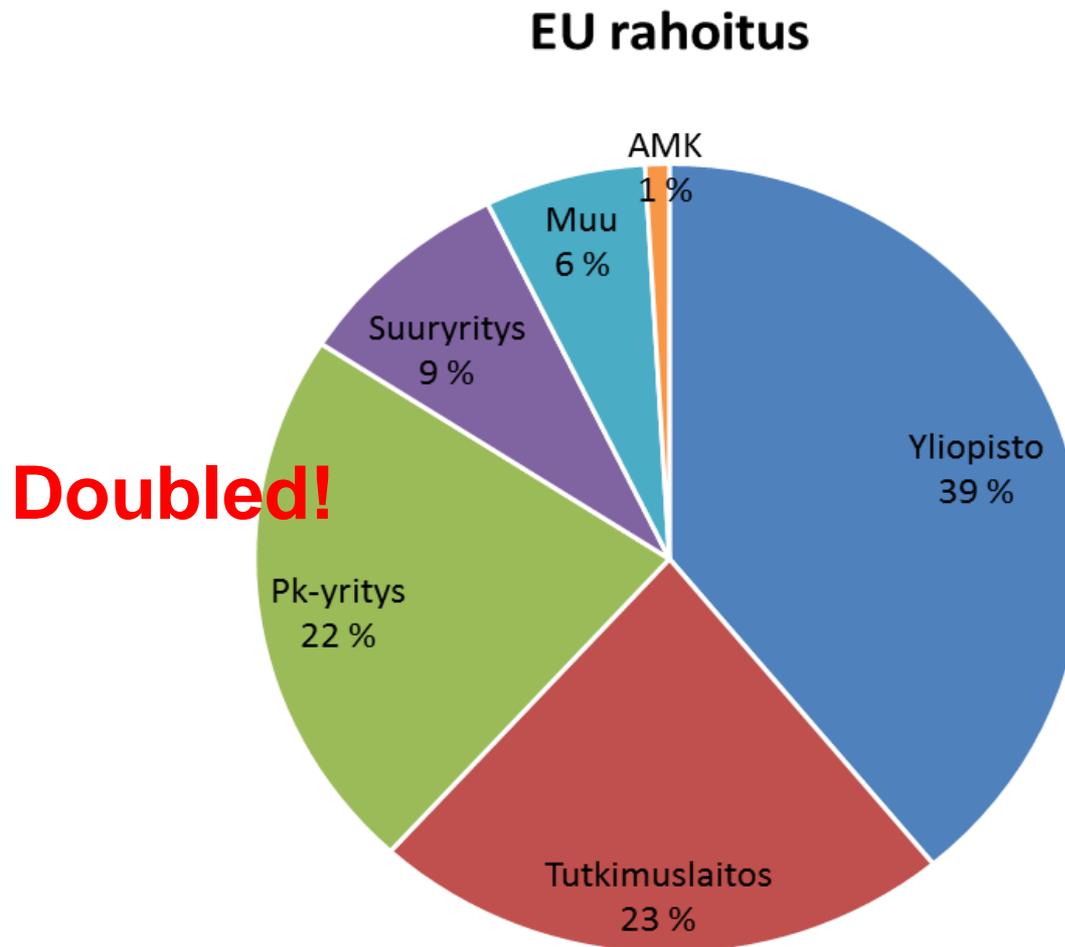
*co-operation projects (consortia)

Finland's H2020 funding

Per 30.9.2016



EU funding in Finland by organisation type



Finland's TOP 10 participants



Organisation
VTT Oy
Helsingin yliopisto
Aalto-yliopisto
TTY
Itä-Suomen yliopisto
Jyväskylän yliopisto
Ilmatieteen laitos
Oulun yliopisto
Wello Oy SME!
Turun yliopisto

H2020: Other benefits (in addition to funding)



- **Wide networking and access to international top knowledge**
- **Speeding up access to international markets**
- **Funding for SMEs is increasing remarkably**
- **European wide lead markets are created through the programme**
- **Global challenges foresight and finding innovative solutions to these challenges with best resources**
- **Increasing quality of research**
- **Advancing utilization and commercialisation of research results**
- **Instruments that cover the whole innovation chain are helping to increase value added in Finland and in Europe**
- **Visibility of Finnish research and innovation in Europe and elsewhere in the world**
- **Benchmarking with other research and innovation funding organisations at national and international level**

Why we need the information?



- **A strong call for a more strategic approach to FPs among RDI stakeholders.**
- **Need for a clearer picture on how national and EU RDI funding complement each others.**
- **Preliminary results of OECD evaluation on Finnish innovation policy point out potential weaknesses in strategic international co-operation.**
- **Next EU research and innovation framework programme is at crucial planning phase during the year 2017. European Commission is open for stakeholder views, national positions and follows closely any additional evaluation done on FP impact.**
- **Negotiations on next FP will be active during the Finland's EU presidency (2019). We need strong evidence base.**

Research questions



- **What kinds of benefits have been obtained to date from the framework programmes, and particularly the Horizon 2020 programme, and what parts of the programme and forms of activity are best for a small economy like Finland from the perspective of the quality and effectiveness that are important for Finland (also in relation to Finnish areas of expertise, e.g. energy transition, new growth areas of the bioeconomy, platform economy, health and social services reform, digitalisation etc. sectors, which will be selected at an early stage of the project in cooperation with the Research and Innovation Council)?**
- **What kind of social, economic or environmental impacts are perceptible/achievable with the programme or with Finnish projects funded from it?**
- **How should, for example, EU preparatory and co-funding and the role of national funding organisations be further developed?**
- **What has been the financial performance of businesses that received funding from EU framework programmes in the period 2000–2013 (turnover, exports, profitability, employee, R&D and other investment) compared with others? ***
- **What kind of innovation effects have arisen from projects of research institutes and universities that received funding from EU framework programmes in the period 2000–2013? ***
- **What kind of conclusions relating to effectiveness are available from comparable countries (e.g. Sweden, the Netherlands, Denmark, Austria, Ireland) from ERAC “ERA in Action” work, for example? ***

***) task to be coordinated with Tekes databases and evaluation unit.**

Impact framework



- **Impact has to be widely understood: societal, economical, environmental...**
- **Applicants are invited to present an impact framework they will use, including aspects on (non-exclusive list):**
 - Different impact paths for different kind of impacts
 - Added-value of international co-operation in producing impact from RDI
 - Conclusions from different evaluations and impact studies on general effectiveness of RDI funding, previous impact studies on FPs in Finland etc.
 - Creating impact by directing funding to societal challenges/mission –driven initiatives
 - Creating impactful public-private co-operation
 - Creation, growth and impact of innovation ecosystems
 - Different RDI stakeholder’s roles in producing impact
 - Strategic use of RDI funding and networks
 - Programme (national and/or EU level) design scenarios to maximise impact
 - ...

European Commission perspectives on new framework programme planning from maximising impact point of view:



Example: H2020 High Level Group Issue Papers

https://ec.europa.eu/research/evaluations/index_en.cfm?pg=hlg

- **Contribution to Juncker priorities and current challenges**
- **Open Innovation**
- **Open Science**
- **Open to the World**
- **Defence research**
- **Industrial competitiveness**
- **Widening participation**
- **Mission-oriented vs investigator-driven R&I**
- **Simplification**
- **Interim Evaluation of FP7**
- **Ex-Post Evaluation of FP7**

Expected to be published:

- **European Research Area**
- **Social Sciences and Humanities**
- **Responsible research and innovation**
- **Alignment**

What can be the contribution of STI policy to achieve Finland's objectives?



Tackling Finland's economic challenges requires:

- **Re-balancing R&D policy: Increase applied R&D and strengthen the support system**
 - Strengthen applied R&D & key enabling technologies
 - Stakeholder coordination
- **Boosting innovation in the business sector and extend innovation to SMEs**
 - Target radical innovation projects
 - Enhance SME's participation
 - Sector/industry innovation (PPPs)
- **Enhancing the contribution of HEIs**
 - Complete reforms and foster specialisation and consolidation
 - Revise institutional funding formula
- **Improving internationalisation**
 - FDI and foreign R&D attraction
 - Incentives packages
 - Attract talent from abroad
- **Relaunching governance and a new vision**



The need for internationalisation (1)

- **Business Sector:**

- Finland has not been very successful in attracting FDI – compared to neighbours, especially Sweden and Denmark and MNE's participation in BERD is more than half the share reported in Sweden –according to 2013 data. The ratio of FDI to GDP in Finland is lower than Denmark and Sweden
- FDI can provide a link between Finland-based technological capabilities and the R&D performed by Finland-based MNEs outside the country.

- **Higher Education and Academic Research:**

- Finland has a relatively small share of international students: In 2014 only 19% of all doctoral students were international students, which is lower than in all the other Nordic countries and 8 percentage points lower than the OECD average.
- Finnish researchers co-publish with international co-authors only a little less than their counterparts in the other Nordic countries.



The need for internationalisation (2)

- **(1) Integrate the Finnish innovation system (both business and public research) with global knowledge networks:**
 - Reinforce efforts to attract foreign R&D (foreign firms and institutions) through initiatives such as the creation of global Centres of Excellence in key areas (e.g. digitalisation; clean-tech and health-tech, etc.).
- **(2) Foster inward and outward mobility. Strengthen incentives for talent attraction:**
 - Establish a fund to head-hunt leading international researchers. This will involve competitive conditions to attract talents from abroad (both Finnish and foreign) and could be an integral feature of cooperative arrangements
 - Ensure that immigration laws are conducive to attract talents, including timely and reasonable working permit conditions for foreign researchers and their spouses.
 - Increase the proportion of higher education conducted in English.
 - Open faculty recruitment to global competition, based on scientific excellence.



Other suggestions/questions having potential links with EU RDI funding

- **Complement SRC (important instrument for research 'on real world problems', evidence-based decisionmaking and multidisciplinary) with efforts to strengthen strategic research (e.g. on enabling technologies) and long-term strategic research and innovation partnerships between industry, academia, research institutes and other stakeholders**
- **Could institutes play a stronger role in internationalization and international collaboration on societal challenges?**
- **HEIs' contribution to innovation and societal development (both through research and education) under-incentivized at all levels?**
- **Revisit education needs for a changing world (skills, programmes, transferability between programmes and universities)**
- **Continue to encourage profiling, strategy, defragmentation, excellence (in education, research and interaction) and internationalization (e.g. STINT Internationalization Index)**
- **Performance-based funding: is good in principle! But: smaller share? Long-term perspective; Incentivize interaction**
- **Strengthen interaction across disciplines (in research and education); don't forget humanities!**