

Finland as a part of the European Research Area  
Finland's national ERA actions

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## Introduction

The Lisbon Treaty in 2007 provided the legal basis for the European Research Area (ERA) that has been in development since 2000. Its objectives are to realise a unified research area where researchers, scientific knowledge and technology can move freely and to strengthen the Union's and its member states' scientific and technological foundation, competitiveness and ability to jointly respond to great challenges.

In February 2014, the Council recommended that, in cooperation with the Commission, its member states draft a roadmap for the European Research Area for 2015-2020 to act as a guideline for the implementation of the European Research Area that will happen within the limits of the national jurisdictions of its member states. The European Research Area and Innovation Committee (ERAC) was responsible for drafting the roadmap, and also consulted for the theme-specific ERA-related groups and other key actors in the field. At its meeting in April 2015, ERAC approved the ERA roadmap.

The European roadmap has identified the priorities that are considered to have a great effect on research and innovation systems in Europe. It presents a common vision of the research area's principles and concrete measures for their implementation on both at national and European level.

The priorities of Finland's national research and innovation policy as well as the current activities are consistent with the priorities and measures presented in the European roadmap. Finland is implementing many measures for enhancing the efficiency and funding of its research system, promoting joint research programmes and research infrastructures, developing researcher education and research careers, as well as promoting the availability of and innovations in research knowledge. These national development objectives and their concrete measures are described in this document, which utilises the priority headlines that are used in the ERA roadmap.

## 1. Effective National Research Systems

***According to the ERA Roadmap, the main focus of the first ERA priority is strengthening the evaluation of research and innovation policies and seeking complementarities between, and rationalisation of, instruments at EU and national levels.***

### 1.1. Policies

#### *Government Programme*

According to Prime Minister Sipilä's Government Programme, Finland is open and international, rich on languages and cultures. Finland's competitiveness is built upon a high level of competence, sustainable development and unprejudiced renewal utilising experimentation and digitalisation. Finland encourages renewal, creativity and curiosity.

The goal of the government for 2015-2019 is to create an upturn in the quality and impact of research and innovation activities. The Government has initiated key projects for its focus areas, one of which is strengthening collaboration between higher education institutions and business for the purpose of commercialising innovations. The goal is that the resources in science and research are utilised in a more efficient way and that the impact and commercialisation of research results are strengthened. In addition, there is an emphasis on streamlining the profiling of and labour division between higher education institutions and research institutes.

According to the Government programme, the quality of legislative impact assessment will be ensured with the impact assessment body that will act within the government. The Government programme also states that management and implementation that go beyond administrative boundaries and are based on knowledge will be strengthened. The Government will add indicators for monitoring the progress of its strategic objectives and it will monitor them systematically and, if necessary, will begin corrective measures based on the information they produce. Together with the OECD, the Government will develop the indicators for monitoring its objectives.

#### *The Finnish Government's resolution on the comprehensive reform of research institutes and research funding (5 September 2013)*

The objective of the resolution based on analyses and assessments is strengthening multidisciplinary, high-quality and societally-relevant research. In addition, the reform aims to enhance efficiency in research activities and improve the relevance of research by releasing resources from established structures and research support services. Stronger and larger research institutes and the collection of strategically targeted research funding enable the reallocation of resources according to the changing needs of society. The research and assessment activities that support the Government and its ministries are strengthened by gathering to the Prime Minister's Office research funding that is to be used according to the Government's guidelines. The goal is also to deepen collaboration between research institutes and higher education institutions and to ensure and strengthen the strategic steering of research institutes on the Government level.

Part of the research funding has been collected to be allocated through competitive research funding to enhance the relevance, demand-orientation and multidisciplinary of research. The objective is to fund problem-centric, long-term and programme-oriented research that seeks solutions for societal challenges.

The current Government has adopted the resolution, and it is widely implemented on the Government level during 2015-2019. The preparation for the evaluation of the implementation of the resolution has begun and will be implemented during 2017-2018.

*The Finnish Government's resolution on the comprehensive reform of research institutes and research funding: deeper cooperation between higher education institutions and research institutes 2015-2017*

The objective is to ensure that by 2020 Finland will have strong sectoral and regional expertise clusters of higher education institutions and research institutes that are also internationally known. True clusters of expertise are gradually formed in joint campus areas or as national networks in a phenomenon-based way. These clusters of expertise are reinforced based on the organisations' own starting points so that they support the renewal of sectoral and/or regional business life and business structures. These initiatives are supported with the Government's unified policies for research, innovation and higher education and compatible steering measures, such as funding solutions that encourage cooperation. The impact of the system will grow and the activities will become more efficient when the profiling of the organisations is promoted to complement each other through cooperation and proper division of work.

There are five central measures for realising this vision. The measures concern 1) steering and communications, 2) educational and research collaboration between higher education institutions and research institutes, 3) common field stations and campuses, 4) common research and education infrastructures, and 5) more open and shared information resources and research results. These measures are implemented in deep cooperation between the ministries and actors in the research and innovation system.

The results of the process for deepening cooperation will be evaluated during 2017-2018.

*Reform of the Research and Innovation Council*

The duties and composition of the Research and Innovation Council, which is led by the Prime Minister, were changed according to the conducted evaluation so that the strategic dimensions of the Council's duties and making new initiatives are more strongly emphasised than before.

According to this renewed definition, the Research and Innovation Council exists to develop research and innovation policies that support the well-being, growth and competitiveness of Finland. It supports the Government in the development and coordination of long-term research and innovation policies. Its duties also include monitoring the changes in the sector's national and international operating environments and launching initiatives that are related to research and innovation policies.

## **1.2. Evaluations and assessments**

*Evaluations of the reforms of universities and universities of applied sciences in 2016 and 2018*

In the 2010s, there have been significant reforms to higher education institutions in Finland. Universities began operating as independent legal entities in 2010, and this reform was also extended to universities of applied sciences in 2014-2015. The Ministry of Education and Culture began the evaluation of the impact of

the reforms for universities and universities of applied sciences in the spring of 2015. The first evaluation of the Universities Act amendment will be completed in August 2016. A report on the impact of the reform will be submitted to the Parliament by autumn 2016.

The evaluation of the universities of applied sciences reform will be conducted in 2017–2018, when the legislation for universities of applied sciences will have been in effect for two years. In addition, an overall picture and analysis on the higher education reforms will be made in 2018.

#### *The Academy of Finland's State of Scientific Research in Finland report 2016*

The Academy of Finland's State of Scientific Research in Finland process produces materials that supports the development work of universities and research institutes and strengthens the knowledge base that is in the use of science policy actors. For the time being, the periodic State of Scientific Research reports focus on observations on the state of the whole research system. In 2016, the process assesses the changes in resources for research activities in Finnish universities by each field of science as well as research personnel and research resources in research institutes with the help of statistical data. Scientific impact is measured with bibliometric methods in different scientific fields and research organisations. As a special theme, the impact that reaches beyond the scientific community in some fields, will also be observed. The next report will be completed by the end of 2016.

#### *OECD country review of research and innovation policy 2017*

In the OECD country review of Finland's innovation policy that began in January 2016, the focus of the assessment is on higher education institutions and public research institutes, human resources as well as the internationalisation of research and development activities, the relationship between companies and science, corporate RDI activities and the performance of the economy. In addition, the management of research, development and innovation activities will be assessed. The country review produces an internationally renowned and independent view on the current situation of Finland's research and innovation system, structural and content-related development and renewal needs, as well as measure recommendations. Special focus is placed on impact and how reduced resources and new structures can produce more results in the future. The evaluation will also form the basis for the Government's midterm evaluation in spring 2017.

#### *Other evaluations*

In recent years, several evaluations that have been utilised in the development of the research and innovation system have been completed. Some examples of these include the evaluations of the Academy of Finland (2013) and Tekes (2012), the Research and Innovation Council's evaluation (2014) and an overview on the impact of Tekes and innovation activities (2015).

Finland participates in the European research and innovation policy evaluation collaboration through e.g. the Policy Support Facility's peer learning events. Finland also widely utilises the knowledge base and reports produced by the European Commission (e.g. the Research and Innovation Observatory and the Innovation Scoreboard).

#### **Measures**

- Roadmaps will be implemented and the measures will be adjusted according to the evaluations that have been made/are still ongoing.

- Ensure statistical base, monitor the development of indicators, react to the changing global research environment.
- Enable the necessary knowledge base and information flow for the new Research and Innovation Council's activities.

## 2. Cross-border cooperation

### 2.1. Common research programmes

***According to the ERA Roadmap, the main focus of section a of the second ERA priority is improving alignment within and across the Joint Programming Process and the resulting initiatives (e.g. Joint Programming Initiatives (JPIs)) and speeding up their implementation.***

Joint programming on a European scale means joint planning and implementation of research programmes between different countries.

The objective of joint programming is to increase research cooperation and bring together national resources for solving grand societal challenges. This means large research activities that could not be implemented with just national level research work. In Finland, especially research funding organisations and part of the sector ministries participate in joint programming.

Finland has been an active participant in European joint programming. It currently participates in nine Joint Programming Initiatives (JPIs). The Academy of Finland participates in six initiatives. The other main responsible actors have been e.g. the Ministry of Agriculture and Forestry, the National Institute for Health and Welfare, and the Finnish Meteorological Institute. In the Water JPI, the Academy of Finland participates in the initiative's coordination projects. Finland and the Academy of Finland are actively participating in the ERA-NETs that support JPIs.

The Academy of Finland conducts funding cooperation selectively within the EU and especially in connection with Academy Programmes. With its Academy Programmes, the Academy is targeting research and research funding to fields that are renewing scientific research and anticipate future research needs. The programmes emphasise multidisciplinary and cross-disciplinary research and international cooperation. When the topics are compatible, the Academy Programmes are linked to European programme initiatives and ERA-NETs.

In 2015, the Strategic Research Council that operates within the Academy began its work. Its purpose is to support the Finnish research and innovation system with a new type of funding instrument for research that serves the development of long-term, problem-centric and scientifically high-quality societal politics and societal functions to meet the needs of significant challenges and problems of Finnish society. The strategic research programmes and Joint Programming Initiatives have many things in common and present great synergistic possibilities.

Tekes' programmes are funding and expert service entities often include European collaboration. Tekes also participates in some ERA-NETs and the funding of ERA-NET Cofund programmes. Tekes also participates in the funding of European industry-led joint projects and Eurostars projects.

The coordination in JPI and ERA-NET functions has been developed by utilising the national Horizon 2020 network (the Horisontti haltuun network). In many thematic areas, there is already sufficient cooperation and coordination. The connections to European research have strengthened networking and expertise and have created new kinds of possibilities and expanded the national horizon. Stakeholders, including those utilising and applying research results, must be involved at the right time and the initiatives must be managed both nationally and on the European level. The focus of activities in initiatives is expected to further expand to functions other than implementation of joint calls. .



## Measures

- Decisions on how diminished resources can be used in the most optimal way will be made more carefully than previously.
- The Academy of Finland will arrange national discussion and information exchange events on joint programming.
- In addition to exchanging information, the flexibility of funding practices and different actors' long-term commitment to initiatives will be increased.

### 2.2. Research infrastructures

***According to the ERA Roadmap, the main focus of section b of the second ERA priority is making optimal use of public investments in Research Infrastructures (RIs) by setting national priorities compatible with the European Strategy Forum on Research Infrastructures (ESFRI) priorities and criteria taking full account of long term sustainability.***

Research infrastructures are entities that are comprised of research instruments, equipment, materials and services that enable high-quality research activities. Research infrastructures can be small or large, inexpensive or expensive. A functional research system requires local, distributed and virtual research infrastructure entities.

The first national research infrastructure strategy and roadmap was completed in 2009 and updated in 2014. The roadmap assesses national level research infrastructures and Finland's participation in international research infrastructure projects.

Finland is a member of 14 European ESFRI roadmap projects and acts as the host country for one of these (ICOS ERIC). In addition, Finland is coordinating the preparation of two ESFRI roadmap projects (Euro-Bioimaging and ACTRIS) and is also participating in the preparation of almost ten ESFRI roadmap projects.

The Research Infrastructure Committee (TIK) appointed by the Academy of Finland is responsible for the implementation of the national strategy and roadmap and makes decisions on the funding of national or international level projects with around EUR 18.5 million annually. The Academy of Finland also pays Finland's membership fees to international research infrastructures (e.g. CERN, ESO, EMBL), around EUR 20 million annually. In addition to the Ministry of Education and Culture's funding for research infrastructures that is channelled through the Academy of Finland, other ministries fund their sector's research infrastructures.

The strategy and roadmap for research infrastructures 2014-2020 has defined the national vision as follows: "By 2020 Finland will have gained recognition for its internationally competitive science and high-quality research infrastructures, which will also enable the renewal of teaching, society and the business sector." To realise this vision, the following measures will be required:

1. Long-term development of all research infrastructures
2. Improvements of access to and collaborative use of research infrastructures
3. Shoring up of the funding base of research infrastructures
4. Provision of a firm basis, by the roadmap, for the methodical development of research infrastructures
5. Evaluation of the significance and impact of research infrastructures

The Finnish research infrastructures data bank has been opened in 2016 ([infrascience.fi](http://infrascience.fi)). The data bank seeks to enhance the joint use of research infrastructures and openness by showcasing research infrastructures and their services in a unified way.

### **Measures**

- The interim-evaluation of Finland's research infrastructure strategy and roadmap (2014-2020) will be completed in 2017. The next strategy and roadmap update will be done by 2020 at the latest.

### 3. An open labour market for researchers

*According to the ERA Roadmap, the main focus of the third ERA priority is using open, transparent and merit based recruitment practices with regard to research positions.*

During the past decade, the Ministry of Education and Culture has appointed three wide-ranging working groups for finding solutions for streamlining researcher careers. At the beginning 2016, the latest working group, appointed by the Ministry of Education and Culture to deepen the cooperation between higher education institutions and research institutes in researcher career questions, made its suggestions for developing researcher careers in the research and innovation system. The working group concluded that, as a consequence of broad global trends, the nature of science and of conducting research is changing at an increasing pace. The difficult situation in the national economy is also shaping the research system. More visible results from the public investments made in our research and innovation system must be made available. Comprehensive and coordinated work is needed in the research system in order to improve researcher careers. More and more employees, who work in research, will also work in different sectors, different countries or different fields during their careers.

The low level of internationalisation is a weakness in Finnish working life and this must be addressed in depth also when developing the research and innovation system. The diversifying careers among those people who have received researcher education create a variety of career possibilities, but also requires stronger cooperation. The system cannot be in the hands of one person or one instance alone, but different actors in different roles are together responsible for the entire system. The content of doctoral education as well as guidance quality and quality assurance will be further developed to enable doctors to apply for and be capable of performing a wider range of work.

The working group recommends that e.g. ministries create incentives to the personnel in research institutes for participating in the education as teachers and supervisors and that the ministries, research funding organisations and higher education institutions develop incentives to deepen cooperation across organisational boundaries. In addition, according to the working group, universities and research institutions must open their teaching and research positions for applications internationally on a larger scale. The Ministry of Education and Culture must collect information about recruitment of teaching and research staff in higher education institutions more comprehensively than it does at the moment.

As a rule, Finnish research organisations recruit for permanent positions through open application procedures. After the university and university of applied sciences reforms, higher education institutions have a great deal of autonomy in their personnel policies. Finnish universities have been active participants in strategic processes related to the human resources of research organisations (Human Resource Strategy for Researchers, HRS4R). 10 universities have already received the European Commission's commendation for their good personnel policy for researchers. The Academy of Finland maintains the national researcher mobility portal Euraxess.

#### Measures

- The Ministry of Education and Culture promotes the given recommendations and develops researcher career activities in collaboration with other ministries, higher education institutions, research institutes

and research funders as part of the multi-annual process for deepening cooperation between higher education institutions and research institutes.

- A key measure in the implementation are the agreements between the higher education institutions and the Ministry. During 2013-2016, according to the agreements with the higher education institutions, the higher education institutions develop their personnel policies and researcher career systems by increasing international recruitment. The higher education institution agreements for 2017-2020 that are under preparation display a high-quality and open personnel policy.
- The Ministry of Education and Culture is starting the national annual survey on recruitments in higher education institutions.
- The Academy of Finland encourages researchers to participate in international, national and cross-sectoral mobility. Beginning in autumn 2016, applicants to both the postdoctoral researcher and academy researcher positions must either apply for funding in a place other than where they completed their doctorate work or they must have worked for at least six months in another organisation in research tasks or in tasks that support their researcher career.
- The Academy of Finland recommends that, whenever possible, the personnel that are to be hired with its research funding should be recruited with open procedures.

## 4. Gender equality and gender mainstreaming in research

***According to the ERA Roadmap, the main focus of the fourth ERA priority is translating national equality legislation into effective action to address gender imbalances in research institutions and decision making bodies and integrating the gender dimension better into R&D policies, programmes and projects.***

According to the agreements between the Ministry and higher education institutions for 2013-2016, the higher education institutions will work to promote equality in education. The objective is to promote non-discrimination and gender equality, dismantle segregation, and reduce the impact of socio-economic background in interest in and access to education. On the development of higher education institution communities, the agreements state that higher education institutions will be competitive, equal, accessible and interesting environments for work and learning. In addition, according to the agreements, the higher education institutions will continue their measures for making equality mainstream and for implementing non-discrimination. The wellbeing and ability to work and study of personnel and students will be promoted. Higher education institutions have a statutory obligation to make equality plans for both their personnel policy and teaching.

The Academy of Finland's current performance agreement and the agreement for the coming season state that the Academy promotes gender equality and non-discrimination in its activities. In accordance with the Academy of Finland's equality plan for 2014-2016, when deciding on research activities and funding, one must take care of open expert procedures where the merits of applicants of different genders are assessed in a non-discriminatory and just way.

Gender equality legislation requires that research institutes and other research funders must draw up equality plans for the workplace. For research institutes and other research funders, the requirements in their performance agreements for promoting equality vary.

According to the Government's equality programme for 2016-2019, the Government strives to reduce wage differences between men and women by e.g. implementing the equal pay programme together with market actors. The objective is to reduce the creation of male and female fields and professions in the labour market. Furthermore, according to the programme, the Government improves the chances for women and men to fit together their work and family life in different life stages and to reduce employer's family leave costs. The goal of the Government is to strengthen equality knowledge in early childhood education and later education and to ensure that the education of those who work in teaching and education and student counselling provides the tools for practical equality work.

### Measures

- The Ministry of Education and Culture promotes the given recommendations in collaboration with other ministries, higher education institutions, research institutes and research funders. A key measure in the implementation are the agreements between the higher education institutions and the Ministry for 2017-2020.
- The Ministry of Education and Culture monitors the progress of equality regularly with both quantitative indicators and reports.

## 5. Optimal circulation and transfer of scientific knowledge

### 5.1. Knowledge transfer

***According to the ERA Roadmap, the main focus of the fifth ERA priority's section a is fully implementing knowledge transfer policies at national level in order to maximise the dissemination, uptake and exploitation of scientific results. Research Performing Organisations (RPOs) and Research Funding Organisations (RFOs) should make knowledge transfer second nature by integrating it in their everyday work.***

During 2015-2019, the government will implement reforms in five focus areas, which will be implemented with 26 key projects. Many of the key projects are connected to R&I policy, such as the key project for strengthening cooperation between higher education institutions and business life for the utilisation and commercialisation of research results.

In the key project, the Academy of Finland will implement a new funding model that is targeted towards researchers that have received Academy funding and will fund the measures for utilising results as suggested by the researcher. This will strengthen especially the possibility of younger researchers conducting scientific research and utilising the results of this research. Tekes' current and new instruments for the utilisation of research are targeted even more than before at commercialising research results and for solving societal challenges (e.g. The new information and business from research ideas instrument and the new Challenge Finland, Research Benefit and Innovation Scout instruments). In the key project, these measures will be allocated with EUR 59 million for Tekes and EUR 30 million for the Academy of Finland for 2016-2018.

The basic idea of the Open Innovation Platform (OIP) that is under preparation at Tekes is to provide companies and other actors that are seeking solutions with ideas, inventions and immaterial rights from around the globe. The goal is that OIP will become the common platform for several organisations in Finland that produce research-based ideas that have a solid interface for international technological transfer platforms and for meeting technology providers and utilisers in innovation marketplaces outside of Finland, the dissemination of ideas and combining expertise into commercial entities. In connection with the experiment, European forums are sought to support this sort of activity.

#### Measures

- The utilisation of research will be better taken into account in e.g. other public research and innovation funding. In addition, the utilisation of research results will be more present than before in higher education institution agreements and funding for 2017-2020.
- The Ministry of Education and Culture and the Ministry of Employment and the Economy as well as the Academy of Finland and Tekes will deepen their cooperation in improving the availability and usability of research knowledge.
- Tekes is preparing an experimental project for an open innovation platform that gathers together idea owners and utilisers of new solutions.

## 5.2. Open science

*According to the ERA Roadmap, the main focus of section b of the fifth ERA priority is promoting Open access to scientific publications.*

In Finland, it has been nationally stated that by easing up the use of public knowledge, we can increase the value of our joint knowledge capital, create opportunities for new business, research and education, develop better services for citizens and improve decision-making, enhance the efficiency of Government activities and increase its opacity. The Ministry of Education and Culture has for several years led the development work that is connected to open science.

According to the national roadmap for open science and research 2014-2017, the objective is to promote science with open methods and to increase its societal impact by improving the management and utilisation of the produced research knowledge. The goal is that by 2017, Finland will become a leading country for open science and research and that the possibilities of open science are widely utilised in our society. The roadmap is a progression plan for Finnish researchers, research groups, research organisations, decision makers, funders as well as citizens for promoting the prerequisites, utilisation and practical application of open science and research in 2014-2017.

The goal is that research results (research publications, research data, research methods and the tools required for producing research publications) are openly and permanently available and in use in information networks with standardised interfaces in accordance with the ethical principles of research and respecting the legal operating environment. Openness within research infrastructures will always be pursued when it is legally and contractually possible. Further use of research results is not unnecessarily restricted, and the terms and conditions of their use are clearly defined.

The roadmap is implemented via four sub-objectives, which are:

- Reinforcing the intrinsic nature of science and research, so that openness and repeatability increase the reliability and quality of science and research.
- Strengthening expertise related to openness so that the actors in the Finnish research system know how to utilise the possibilities of openness to increase competitiveness.
- Ensuring a stable foundation for the research process, so that good, clear basic structures and services enable new opportunities to be harnessed at the right time and ensure a stable basis for research.
- Increasing the societal impact of research so that open science and research create new possibilities for researchers, decision makers, business life, public bodies and citizens.

### Measures

Each sub-objective of the national roadmap has been provided with a group of measures for its implementation. The implementation of the objectives is evaluated by monitoring the progress and impact of the individual measures. The monitoring is promoted by increasing visibility, analysing common knowledge bases, impact monitoring and with the necessary support measures and assessments.

The indicators for monitoring the progress of the roadmap's measures have been identified and the national objectives that are related to them have been set. The objective is that the share of open publications in Finnish scientific publications is:

- 65% in 2017,
- 75% in 2018, and
- 90% in 2020.

The annually conducted maturity level assessment of the open science culture in organisations is at the highest level (openness has become a strategic strength),

- in 10% of higher education institutions in 2017
- 25% in 2018, and
- 50% in 2020.

Of the researcher education programmes

- 90% will include an open science education section in 2018 and
- 100% in 2020.



## 6. International cooperation

***According to the ERA Roadmap, the main focus of the sixth ERA priority is developing and implementing appropriate joint strategic approaches and actions for international Science, Technology and Innovation (STI) cooperation on the basis of Member States' national priorities.***

One of the current Government goals for knowledge and education is that during the Government term the internationality of education and research increases and the obstacles to education exports have been removed.

Strengthening the internationality of higher education and research during the government term will require a goal-oriented attitude, activity and strong national and international networking from higher education institutions and research institutes. Close collaboration with higher education institutions, Centre for International Mobility CIMO, the Academy of Finland, different ministries and business life as well as other actors is the prerequisite for success.

The international success of Finland and Finnish actors has been promoted with Team Finland cooperation that is based on the networked operating model of the Government. The Team Finland strategy creates a solid foundation for realising the ERA priorities. The Team Finland country priorities are a natural basis for strengthening European level cooperation with third countries. These country priorities are the United States, Russia and China, as well as India, Brazil, Japan, Korea & the ASEAN countries, as well as some African countries.

Based on previous national policies, the common internationalisation activities of Finnish higher education and research have been aimed to be strengthened in proportion to the activities with countries outside of Europe both nationally and regionally. In addition, common activities in proportion to the EU's education, research and innovation programmes as well as the dialogue with the EU's and third countries' and regions' education, research and innovations have increased.

### Measures

- In 2016, a proposal will be drafted for the internationalisation of higher education and research through 2025 and the guidelines for strengthening the visibility and impact of Finnish higher education and research in Europe and globally will be prepared in wide national collaboration.
- The significance of international research and innovation activities for national policies throughout the Government will be emphasised as a central focus area.