

ERAC 1208/15

**NOTE**

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From: ERAC Secretariat  
To: ERAC delegations  
Subject: ERAC Opinion on the European Research Area Roadmap 2015-2020

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Delegations will find annexed to this Note the ERAC Opinion on the European Research Area Roadmap 2015-2020.

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# EUROPEAN RESEARCH AREA (ERA) ROADMAP 2015-2020

## INTRODUCTION

The February 2014 Competitiveness Council Conclusions on the 2013 ERA Progress Report called for the “Member States in close cooperation with the Commission, considering the ERAC Opinion and working through ERAC to develop by mid-2015 an ERA Roadmap at European level which should serve the purpose of facilitating and reinforcing the efforts undertaken by the Member States”. The present document, developed in consultation with the European Research Area and Innovation Committee (ERAC), the ERA Related Groups and most of the organisations which make up the ERA Stakeholder Platform, responds to this request. It is a **living document** to guide Member States in structuring their implementation of ERA at national level and is not an objective in itself. It is likely to be updated, adapted and enhanced regularly.

### Purpose of the Roadmap

The wording of the Council Conclusions makes it clear that Member State ownership and action is central to the Roadmap process, as it is to the ERA as a whole. This process however has to be taken forward in close partnership between Member States/Associated Countries<sup>1</sup>, the European Commission and the stakeholder organisations - the “ERA Partnership”. A listing of key documents setting overall policy on ERA, detailed documentation for the different ERA Priorities and important documents produced by stakeholder organisations is at Annex 1.

The December 2014 Competitiveness Council Conclusions on the 2014 Progress Report state that the conditions for the completion of the ERA have already been achieved- however, like the internal market, further work is needed to ensure that it functions in an optimal way. The purpose of the Roadmap is therefore to identify a limited number of key implementation priorities which are likely to have the biggest impact on Europe’s science, research and innovation systems if all the members of the ERA Partnership get them right. It is important to underline that the Roadmap (like the ERA itself) covers both **research and innovation**.

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<sup>1</sup> In all subsequent references, “Member States” should be understood as meaning “Member States and Associated Countries”.

The Roadmap has been drawn up in full recognition that national research and innovation systems across Europe have different characteristics and that this variety is an asset which Europe needs to exploit to the full. It does **not** therefore seek to prescribe a series of actions which must be implemented by every Member State, and in one particular way. The intention is rather to draw attention to key areas where action is likely to pay most dividends for the majority of national research and innovation systems by spreading excellence and strengthening their ability to operate at a high level of effectiveness. It also proposes a number of specific actions which might be taken to implement these priorities, whilst acknowledging that these do not necessarily represent a priority for all Member States.

Member States obviously have full autonomy in identifying the approaches most suited to the structures and dynamics of their national research and innovation systems when it comes to implementing these actions (or other relevant priority actions at national level) - though Annex 3 provides a range of positive examples of good practice. Equally, the focus on a limited range of priority actions under each overarching ERA Priority does not imply that other actions aimed at strengthening the ERA (those identified in previous documents are listed at Annex 2) are of lesser value, merely that the actions which have been highlighted are likely to have a particularly profound impact and provide particular benefits if implemented across Europe. There are particularly strong linkages between some of the Priorities (e.g. between Priorities 1 and 2(a)) while others (Priority 4 on gender and Priority 6 on international cooperation), have clear transversal links to all other priorities which need to be taken into account, as should other cross cutting issues such as the role of social sciences and humanities research and closing the research and innovation divide.

The Roadmap identifies actions at national and European level. This recognises both the leading role of Member States in ERA implementation and the value of Horizon 2020 and other European co-operation in supporting this. There is scope to extract more value from European cooperation, whenever possible building on what Europe already does well rather than launching lots of new initiatives.

While primarily addressed to Member States/Associated Countries and the European Commission in its support to their actions, the Roadmap is also of obvious relevance to the key stakeholder organisations included in the ERA Stakeholder Platform. Many of these are also developing policy approaches aimed at tackling the issues identified in the Roadmap and they too can play a vital role in disseminating good practice across Europe.

### **Monitoring and Success Measures**

There needs to be a clear understanding by all parties to the ERA Partnership that visible progress must be made by 2020 and that it should be possible to demonstrate this progress. The Roadmap therefore must be an integral part of the monitoring associated with future ERA Progress Reports. This monitoring needs to be lean and to avoid creating extra administrative burdens while also being clear and workable at national as well as EU level. It should enable assessment of how far progress is being made at both these levels.

### **Looking Forward**

The Roadmap covers the years 2015-20. Research and innovation are however by definition rapidly evolving areas and it is entirely possible that, as the priority actions identified here are addressed by Member States, other issues will move up the agenda. The content of the Roadmap will therefore have to be kept under review by ERAC and the ERA Related Groups. This review could be linked to the ERA Progress Reporting cycle starting with the 2016 Progress Report. The work of the Policy Support Facility should also contribute to the implementation of the Roadmap at national level.

## **ERA PRIORITY 1 – EFFECTIVE NATIONAL RESEARCH SYSTEMS**

### **High level objective/ rationale**

Effectively designed and efficiently functioning national research and innovation systems<sup>2</sup> responsive to the specific objectives of each individual Member State are central to ERA implementation and the benefit Member States derive from it. This depends, among other things, on a capacity to learn from one's own experiences and from good European practices backed up by the accumulation of knowledge within the policy making process and in research management at all levels. It also depends on a long term commitment from governments to invest in knowledge intensive activities like education, research, innovation and other intangible assets. Member States that do these things are attractive places to conduct research and less likely to suffer from brain drains and other mono-directional flows of knowledge or money.

### **Top Action Priority identified through Member State Consultations.**

Strengthening the evaluation of research and innovation policies and seeking complementarities between, and rationalisation of, instruments at EU and national levels.

### **How does this contribute to the objective?**

Raising the aggregate standard of national policy intelligence tools and procedures through the European Semester will improve understanding of the shortcomings and successes of national R&I systems, provide evidence on the determinants of effectiveness and efficiency and, as a result improve the effectiveness of national policies and align them better with shared European priorities. These tools and procedures should be applied in an open and transparent way and support evidence based policy making. They should also contribute to the process of spreading excellence across Europe and closing the research and innovation divide. Governmental investments going beyond research (e.g. in other knowledge centred activities) may also contribute to spreading excellence and capacity across Europe. The emphasis on evaluation does not detract from the need to ensure wider implementation of action to develop the effectiveness of national research and innovation systems.

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<sup>2</sup> As with the other Priorities, the title of this Priority (effective national research systems) uses the wording inherited from the Commission's 2012 Communication and subsequent Council Conclusions, but it is important to emphasise that it includes innovation and that this broader interpretation is reflected throughout the text of this Roadmap.

## **Actions to promote this**

At *National* level, Member States should promote better alignment of national and European policies, with the goal of making optimal use of public investments in research and innovation. They should therefore strengthen policy intelligence tools and procedures to provide relevant data to inform their national science and innovation policy reviews and evaluations aligned with the European Semester. All public bodies responsible for allocating research funds should apply the core principles of international peer review in all appropriate cases. Member States should enhance competitive funding through calls for proposals and institutional assessments, respecting the need for a satisfactory balance between competitive and institutional funding. They should also invest in wider education, research and innovation systems. Smart specialisation policies and mutual learning activities may be particularly relevant for some Member States.

To achieve these ends, they should make the most of EU and, where relevant, OECD tools (such as the Policy Support Facility and the OECD Innovation Policy Platform). Policy intelligence tools should also be developed for non-EU-countries that play important roles in EU research initiatives (such as Mediterranean countries and the Danube region). Foresight activities are important, as is the work on developing indicators on the impact of knowledge transfer policies mentioned in Priority 5(a).

At *European* level, the European Commission should develop the planned Partnership Instrument (Policy Support Facility) taking into account existing tools such as OECD Innovation Policy Platform. In particular, the mutual learning exercises in the ERAC framework supported by the Policy Support Facility should be further developed.

## **ERA PRIORITY 2(A) - JOINTLY ADDRESSING GRAND CHALLENGES**

### **High Level Objective/Rationale**

The Horizon 2020 goal of working together better to address the grand challenges that face us all is central to Europe's ability to respond to a dynamic and changing world. It underpins both the research and the innovation agenda. Improved cross border collaboration between national research actors should reduce fragmentation and duplication of effort, make best use of resources and help provide the benefits of scale required to tackle issues which require large concerted efforts.

### **Top Action Priority identified through Member State consultations**

Improving alignment within and across the Joint Programming Process and the resulting initiatives (e.g. Joint Programming Initiatives (JPIs)) and speeding up their implementation.

### **How does this contribute to the objective?**

Joint Programming is perceived as the most promising process for intensifying transnational cooperation and aligning national strategies, research programmes and activities in order to achieve the benefits of collaboration in tackling grand challenges. The intention is to avoid unnecessary duplication, make more efficient use of R&D resources and improve the interoperability of national programmes and activities. The potential of joint programming has not yet been fully realised.

## **Actions to promote this**

At *National* level (but obviously with an international perspective), Member States and Associated Countries should ensure that relevant ministries and Research Funding Organisations (RFOs) work more closely together so that national strategies are better aligned with the themes and priorities of the Scientific Research and Innovations Agendas (SRIAs) of the JPIs. It is also essential that RFOs develop enablers such as mutual recognition of evaluation procedures, interoperability of selection procedures, common terminology, and other rules and procedures for implementing R&I programmes. Better integration of calls at national and transnational level would avoid duplication in submitting proposals and in funding, and would promote a more international perspective.

At *National and European* levels authorities should raise the profile of transnational cooperation initiatives (including macro-regional initiatives, inter-governmental organisations, such as COST and EUREKA!, JPIs etc.) with all relevant actors (including regional ones) and seek to raise their participation. This could extend to financial support (including from Horizon 2020, the European Structural and Investment Funds and other relevant funding sources). Foresight exercises should be promoted to support the selection of topics for future joint initiatives.

At *European* level, the Commission and Member States should work together to clarify the division of labour between the EU, Member States and transnational levels - including through the development of Horizon 2020 work programmes. Horizon 2020 can provide support to JPIs where appropriate (e.g. via CSA, ERA-NETs, article 185-based partnerships) while avoiding a confusing proliferation of instruments.



## **ERA PRIORITY 2(B) - MAKE OPTIMAL USE OF PUBLIC INVESTMENTS IN RESEARCH INFRASTRUCTURES**

### **High Level Objective/Rationale**

Research Infrastructures (RIs) are integral to the ERA and the Innovation Union. These include multi-billion Euro long-term investments by Member States, supporting tens of thousands of researchers in both academia and industry. High-quality, accessible RIs are at the heart of the knowledge triangle of research, education and innovation. RIs are also key to Europe's ambition to lead the global movement towards open, interconnected, data-driven and computer-intensive science. They also help tackling societal challenges, by providing researchers and policy makers with the instruments, data and information that underpin evidence-based policymaking.

In view of the scale of these undertakings, Member States have developed a collective approach through the European Strategy Forum on Research Infrastructures (ESFRI) and European instruments like Horizon 2020 and the European Research Infrastructure Consortium (ERIC) legal framework<sup>3</sup>.

### **Top Action Priority identified through Member State Consultations**

Making optimal use of public investments in RIs by setting national priorities compatible with the ESFRI priorities and criteria taking full account of long term sustainability.

#### **How does this contribute to the objectives?**

Achieving this goal will speed up the creation of RIs needed by European and global scientific communities and create a more efficient European RI landscape.

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<sup>3</sup> The ESFRI Roadmap addresses all scientific disciplines that require a large scale research infrastructure with a joint effort on European or international scale. These research infrastructures may be single-sited, distributed or virtual.

## **Actions to promote this**

At *National* level Member States and Associated Countries should ensure that the ESFRI roadmap and their national RIs roadmaps are compatible with each other. The latter should take due account of the directions agreed within ESFRI, including such factors as the need for long term sustainability of facilities, smart specialisation and regular monitoring of feasibility, how they fit with needs and their cost effectiveness. Facilitating access to RIs for those Member States which are unable to invest in large infrastructure projects must be a priority.

At *National and European* levels there should be a careful examination of the planned financial contributions, both to proposed new ESFRI projects and to existing ones, in order to ensure their sustainability.

At *European* level, the use of the European Structural and Investment Funds for these purposes should wherever possible be encouraged. Their contractual rules should be reviewed to take into account the specific, scientifically risky, features of these projects.

Horizon 2020 should facilitate support to implementation of the ESFRI projects, establishing specific rules for participation for the ESFRI projects where necessary, and, enabling the widest possible range of actors to benefit from them.

## **ERA PRIORITY 3 - AN OPEN LABOUR MARKET FOR RESEARCHERS**

### **High level objective/rationale**

The goal is a truly open and excellence-driven ERA in which highly skilled and qualified people can move seamlessly across borders, sectors (e.g. academia and industry) and disciplines to where their talents can be best employed to advance the frontiers of knowledge and support innovation throughout Europe and beyond. In an ERA which achieves this goal, research is an attractive career option across Europe and researchers are properly equipped with flexible skills matching current and future needs.

### **Top Action Priority identified through Member State consultations**

Using open, transparent and merit based recruitment practices with regard to research positions.

### **How does this contribute to the objective?**

Lack of open recruitment hinders mobility, the matching of talent to opportunities, and gender equality, thereby impeding achievement of the ERA's full potential.

### **Actions to promote this**

At *National* level, governments and relevant stakeholders (in particular RFOs) should consider how the rules for national funding schemes could better promote the uptake and effective implementation by Research Performing Institutions (RPOs) of the principles of openness, transparency and merit-based recruitment as articulated in the Researcher's Charter and the Code of Conduct for Recruitment of Researchers- ("the Charter and Code"). Where relevant, governments should remove legal barriers or other hindrances to open recruitment of researchers in public sector RPOs and define new structures and approaches to researcher career development.

RPOs in turn should be encouraged to participate in the Human Resources Strategy for Researchers and to review their current recruitment processes in a reflective and self-critical way, amending them where necessary to improve their openness and transparency as benchmarked against the Charter and Code.

At *European and national* levels, authorities should encourage openness and the circulation of international talent by reinforcing a welcoming culture for EU and third-country researchers and reducing obstacles to mobility.

At *European* level, participation in Horizon 2020 should reinforce uptake of the Charter and Code, in particular through Article 32 of the Model Grant Agreement. The role and effectiveness of Euraxess in supporting the open recruitment of researchers should also be reviewed, particularly the impact of the Euraxess Jobs portal.

### **Other issues identified as priorities in the consultation process**

Improving inter-sectoral mobility between public and private sector research bodies in both directions and at all career stages.

This might be addressed in a number of ways, including adoption at national level of the Innovative Doctoral Training principles, generalising the adoption of the European Framework for Research Careers and strengthening initiatives on the professional development of researchers, particularly at an early stage in their careers. Development of a global campaign to promote doctoral programmes in Europe built around the Innovative Doctoral Training principles should be discussed. Stronger involvement of the private sector in all these processes should be explored.

## **ERA PRIORITY 4 - GENDER EQUALITY AND GENDER MAINSTREAMING IN RESEARCH**

### **High level objective/rationale**

Both women and men are needed in research and research policy making if Europe is to achieve its ambitions in research and innovation. The objective is to foster scientific excellence and a breadth of research approaches by fully utilising gender diversity and equality and avoiding an indefensible waste of talent. In spite of national and EU-level strategies, the pace of change is slow and considerable disparities between countries remain. There are persistent gender imbalances within Europe's research and innovation systems (particularly at senior levels), and the gender dimension in research content is commonly overlooked. Addressing these issues will also reinforce the attractiveness of Europe to high quality researchers.

### **Top Action Priority identified through Member State consultations**

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.

### **How does this contribute to the objective?**

The ERA Progress Report 2014 shows a significant positive correlation between the existence of national laws, strategies and incentives specifically aimed at fostering institutional change and concrete action by RPOs (including gender equality plans).

### **Actions to promote this**

At *National* level Member States and Associated Countries should develop policies on gender equality in RPOs, and regularly monitoring their effectiveness and adjusting measures as necessary. RPOs should in turn review and enhance their policies for gender equality in research and ensure their implementation. Special attention should be paid to areas where women are underrepresented (for instance in senior positions and in research management) and to the funding schemes and disciplines where the imbalances are greatest.

At *National and European* level, Member States and Associated Countries should work with the European Commission to identify good practices which could be incorporated into their national systems. Gaps in crosscutting gender equality legislation at EU and national levels should also be addressed: equality is a fundamental value of the EU but research systems tend to display exceptions that foster inequalities.

At *European* level Horizon 2020's approaches to gender mainstreaming and incorporating gender perspectives in research should be promoted as good practice in RFOs, RPOs and other international collaborations. Gender equality plans should be addressed in other relevant ERA priorities (notably Priority 3) and in the JPIs.

## **ERA PRIORITY 5 – OPTIMAL CIRCULATION AND TRANSFER OF SCIENTIFIC KNOWLEDGE**

### **High level objective/rationale**

Removing the legal, political and technical barriers to the wider circulation and greater use of knowledge will lead to increased growth and competitiveness for Europe, with benefits for scientists, research institutions, citizens and businesses of all sizes. The practical focus of this priority should be on a) fully implementing knowledge transfer policies at national level in order to maximize the exploitation of scientific results and b) open access to publications and data in an open science context.

### **Top Action Priorities identified through Member State consultations**

- a) Fully implementing knowledge transfer policies at national level in order to maximize the dissemination, uptake and exploitation of scientific results. RPOs and RFOs should make knowledge transfer second nature by integrating it in their everyday work.

### **How does this contribute to the objective?**

European-scale impact is dependent on effective action in individual Member States and Associated Countries. The 2014 ERA Progress Report acknowledges that the case for knowledge transfer is broadly accepted in all countries, but more needs to be done, particularly on the implementation of policies and provision of incentives. Success does not, however, require all countries to implement uniform institutional structures.

### **Actions to promote this**

At *National* level, Member States/Associated Countries should promote effective knowledge transfer mechanisms in their RPOs with suitable supporting measures to encourage this. In particular RPOs should be actively motivated to establish policies and procedures for the management of Intellectual Property.

Member States/Associated Countries should develop indicators to quantify the economic and social impact of knowledge transfer policies as part of their national policy environment (see Priority 1).

Member States/Associated Countries should promote networking, sharing of know-how and good practices (both national and trans-national) between RPOs and with the private sector. Inter-sectoral mobility as highlighted in Priority 3 is relevant in this context.

Steps should be taken:

- to further professionalise Intellectual Property management and the negotiation of collaborative and contract research at HEIs and other PROs,
- to increase the creation of start-ups and private sector / public sector mobility, for example by training students in entrepreneurship and corporate culture,
- to strengthen collaborative research between public and private research performers.

At *European* level, the IP Recommendation and Code of Practice should be reviewed. Knowledge transfer is becoming a much broader concept and new aspects such as open innovation and co-creation need to be taken into account.

The “European Research Area Guidelines on Intellectual Property (IP) Management in International Research Collaboration Agreements between European and Non-European Partners” should be promoted in international cooperation. See also Priority 6.



b) Promoting Open access to scientific publications

**How does this contribute to the objective?**

Open access to scientific publications, Gold and/or Green<sup>4</sup>, promotes wider and faster circulation of scientific ideas, increasing the benefits both to science itself (through faster communication of scientific concepts, avoiding duplication, improving reproducibility and quality of results) and to society as a whole (through citizen awareness and understanding, stimulation of SME and other private sector activity, better policy making). It is a key part of the wider move to Open Science practices.

**Actions to promote this**

At *National* level Member States and Associated Countries should promote Gold and/or Green Open Access in line with the Commission's 2012 Recommendation on access to and preservation of scientific information (covering both scientific publications and research data)<sup>5</sup>. In particular, they should ensure the further implementation of open access to scientific publications by the most appropriate means in their own research environment.

Member States and Associated Countries should encourage their RFOs to exchange information and good practices during the transition to open access.

Member States and Associated Countries should consider aligning and coordinating their negotiations with scientific publishers on reasonable subscription fees and Article Process Charges (APCs) to support a transition to new and more balanced business models.

Member States and Associated Countries should also facilitate the development of certified repositories for Green Open Access and stimulate self-archiving.

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<sup>4</sup> As defined in Guidelines on Open Access to Scientific Publications and Research Data in Horizon 2020 (December 2013)

[http://ec.europa.eu/research/participants/data/ref/h2020/grants\\_manual/hi/oa\\_pilot/h2020-hi-oa-pilot-guide\\_en.pdf](http://ec.europa.eu/research/participants/data/ref/h2020/grants_manual/hi/oa_pilot/h2020-hi-oa-pilot-guide_en.pdf)

Open access to publications and data in Horizon 2020: Frequently Asked Questions (FAQ) (May 2014)

[http://openaccess.mpg.de/2076881/2014\\_05-H2020-Factsheet-Open-Access-FAQ.pdf](http://openaccess.mpg.de/2076881/2014_05-H2020-Factsheet-Open-Access-FAQ.pdf)

<sup>5</sup> EU Open Access Recommendation to the Member States (July 2013):

[http://europa.eu/rapid/press-release\\_IP-12-790\\_en.htm?locale=en](http://europa.eu/rapid/press-release_IP-12-790_en.htm?locale=en)

Member States and Associated Countries should foster synergies with the fora and working groups of other multilateral organisations such as the OECD, G8, UN and UNESCO in order to advance the implementation of open access in the international environment.

At *National and European* levels the European Commission and Member States could consider adopting an Open Science approach on selected common societal challenges under Horizon 2020 (See also Priority 2a)

At *European* level the European Commission should continue to contribute to open access by including appropriate incentives in the rules, standards and priorities of Horizon 2020, including in the Model Grant Agreements.

### **Actions Relevant to both (a) and (b)**

At European and National levels, the European Commission and Member States should work together to discuss the recommendations relating to Open Science identified by the Working Group on Knowledge Transfer and Open Innovation<sup>6</sup> and identify whether their implementation is adequate within the ERA roadmap.

### **Other issues identified as priorities**

Fostering Open Access to data

Open access to the underlying data is becoming as important as that to publications. Member States, Associated Countries and the Commission should therefore continue to explore the conditions under which open access to publicly funded research data is appropriate and might be promoted and the tools and pilot actions which may be helpful, taking into account scientific disciplinary contexts and the legitimate interests of the parties involved.

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<sup>6</sup> [http://ec.europa.eu/research/innovation-union/pdf/b1\\_studies-b5\\_web-publication\\_mainreport-kt\\_oi.pdf#view=fit&pagemode=none](http://ec.europa.eu/research/innovation-union/pdf/b1_studies-b5_web-publication_mainreport-kt_oi.pdf#view=fit&pagemode=none)

## **ERA PRIORITY 6 – INTERNATIONAL COOPERATION**

### **High level objective/rationale**

Effective international cooperation with third countries is necessary, both at national and EU levels, in order to address grand societal challenges, ease access to new emerging markets and increase the attractiveness of the ERA for talented minds and investors worldwide. The aim is to ensure that Europe as a whole, as well as the individual Member States and Associated Countries, is able to take maximum advantage of the best research and innovation opportunities on a global basis. Building on the diverse bilateral and multilateral relations with third countries, ERA needs a common and coherent strategic international focus in order to assert Europe's leading position in research and innovation in a changing world.

### **Top Action Priority identified through Member State consultations**

Develop and implement appropriate joint strategic approaches and actions for international STI cooperation on the basis of Member States' national priorities.

### **How does this contribute to the objective?**

By making the engagement of Europe and of the individual Member States/Associated Countries with third country partners more coherent, effective and sustainable.

### **Actions to promote this**

At *National* level, Member States and Associated Countries should define national strategies for internationalisation to foster stronger cooperation with key third countries. These should reinforce multilateral STI cooperation approaches in order to build critical mass and maximise impact, for example in tackling grand societal challenges.

At *National and European* levels there should be better coordination of the objectives and activities of the EU, Member States and Associated Countries towards third countries and International Organisations (notably through the Strategic Forum for International S&T Cooperation). Member States and Associated Countries should actively participate in the further development of the Multi-Annual Roadmaps for international cooperation to ensure that their priorities are properly reflected there and can support coherent priority setting. There should be better uptake of the results of multilateral EU and intergovernmental projects and initiatives with an international dimension (e.g. BILAT Projects), and better use of bi- and multilateral agreements between EU Member States and international partner countries.

At *European* and macro-regional level, make better use of opportunities provided by Horizon 2020 to improve coordination with other external policy areas of the Union. The joint S&T committee meetings and policy dialogues should be better coordinated between European Commission, Member States and Associated Countries, who should also be more closely involved in their preparation. The exchange of data on joint initiatives between Member States/Associated Countries and third countries, and on third country participation in programmes of Member States and Associated Countries should be strengthened in this context.

**LIBRARY OF KEY DOCUMENTS ON ERA**

**OVERALL ERA CONCEPT AND POLICY**

Communication of 18 January 2000 from the Commission to the Council, the European Parliament, the Economic and Social Committee and the Committee of the Regions “Towards a European research area”.

<http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2000:0006:FIN:EN:PDF>

Presidency Conclusions of the Lisbon European Council of 23 and 24 March 2000, in particular Paragraphs 12 and 13.

[http://www.europarl.europa.eu/summits/lis1\\_en.htm](http://www.europarl.europa.eu/summits/lis1_en.htm)

Council Resolution of 15 June 2000 on Establishing a European Area of Research and Innovation.

[http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32000Y0719\(01\)&from=EN](http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32000Y0719(01)&from=EN)

Competitiveness Council Conclusions of 9 December 2008 on the definition of a "2020 Vision for the European Research Area".

<http://register.consilium.europa.eu/doc/srv?l=EN&f=ST%2016767%202008%20INIT>

Competitiveness Council Conclusions of 3 June 2008 on “The Launch of the ‘Ljubljana Process’ - towards full realisation of ERA”

<http://register.consilium.europa.eu/doc/srv?l=EN&f=ST%2010231%202008%20INIT>

Communication of 23 July 2012 from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Region on “A Reinforced European Research Area Partnership for Excellence and Growth”.

<http://register.consilium.europa.eu/doc/srv?l=EN&f=ST%2012848%202012%20INIT>

Competitiveness Council Conclusions of 11 December 2012 on “A reinforced European research area partnership for excellence and growth”.

[http://www.consilium.europa.eu/uedocs/cms\\_data/docs/pressdata/en/intm/134168.pdf](http://www.consilium.europa.eu/uedocs/cms_data/docs/pressdata/en/intm/134168.pdf)

European Research Area Progress Report 2013 (20 September 2013).

<http://register.consilium.europa.eu/doc/srv?l=EN&f=ST%2013812%202013%20INIT>

European Council Conclusions 169/13 of 25 October 2013, in particular Paragraph 17.

[https://www.consilium.europa.eu/uedocs/cms\\_data/docs/pressdata/en/ec/139197.pdf](https://www.consilium.europa.eu/uedocs/cms_data/docs/pressdata/en/ec/139197.pdf)

European Research Area Progress Report 2014 (16 September 2014).

[http://ec.europa.eu/research/era/pdf/era\\_progress\\_report2014/era\\_progress\\_report\\_2014\\_communication.pdf](http://ec.europa.eu/research/era/pdf/era_progress_report2014/era_progress_report_2014_communication.pdf)

Competitiveness Council Conclusions of 5 December 2014 on the European Research Area Progress Report 2014

[http://www.consilium.europa.eu/uedocs/cms\\_data/docs/pressdata/en/intm/146063.pdf](http://www.consilium.europa.eu/uedocs/cms_data/docs/pressdata/en/intm/146063.pdf)

### **PRIORITY 1- Effective national research systems**

COMMUNICATION FROM THE COMMISSION- EUROPE 2020- A strategy for smart, sustainable and inclusive growth (2010)

<http://ec.europa.eu/eu2020/pdf/COMPLET%20EN%20BARROSO%20%20%20007%20-%20Europe%202020%20-%20EN%20version.pdf>

Communication from the Commission- Europe 2020 Flagship Initiative Innovation Union

[http://ec.europa.eu/research/innovation-union/pdf/innovation-union-communication\\_en.pdf](http://ec.europa.eu/research/innovation-union/pdf/innovation-union-communication_en.pdf)

COMMUNICATION FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT, THE COUNCIL, THE EUROPEAN ECONOMIC AND SOCIAL COMMITTEE AND THE COMMITTEE OF THE REGIONS Partnering in Research and Innovation (2011)

[http://ec.europa.eu/research/era/pdf/partnering\\_communication.pdf](http://ec.europa.eu/research/era/pdf/partnering_communication.pdf)

COMMISSION STAFF WORKING DOCUMENT. Country fiches Member States of the European Union. Accompanying the document REPORT FROM THE COMMISSION TO THE COUNCIL AND THE EUROPEAN PARLIAMENT- EUROPEAN RESEARCH AREA PROGRESS REPORT 2013.

[http://ec.europa.eu/research/era/pdf/era\\_progress\\_report2013/era\\_facts\\_and\\_figures\\_new.pdf](http://ec.europa.eu/research/era/pdf/era_progress_report2013/era_facts_and_figures_new.pdf)

### **PRIORITY 2a - Jointly Addressing Grand Challenges**

The Joint Programming Process dates back to 2008 when the European Council of March 2008 called on the Commission and Member States to explore the potential of Joint Programming, asking for joint activities to be launched by 2010. The Commission made proposals to launch such a process in July 2008 in a Communication entitled Towards Joint Programming in Research: Working together to tackle common challenges more effectively

[http://ec.europa.eu/research/press/2008/pdf/com\\_2008\\_468\\_en.pdf](http://ec.europa.eu/research/press/2008/pdf/com_2008_468_en.pdf)

The Council endorsed the process in December 2008 and created the High Level Group for Joint Programming (GPC), a high level body, dealing with different aspects of the joint programming process, in the Council conclusions concerning joint programming of research in Europe in response to major societal challenges (OJ C 24 of 2009, p. 3).

Based on the results of the GPC deliberations, the Council, upon a proposal from the Commission, recommended a limited number of areas in which to implement joint programming as priority. On 3 December 2009 the Council in its conclusions (17226/09) adopted a pilot Joint Programming Initiative on Neurodegenerative Diseases (including Alzheimer's disease).

<http://register.consilium.europa.eu/doc/srv?l=EN&f=ST%2017226%202009%20INIT>



On 12 October 2010 the Council in its conclusions (14976/10) launched three joint programming initiatives on:

- 'Agriculture, Food security and Climate Change',
- 'Cultural Heritage and Global Change – A new challenge for Europe', and
- 'A healthy diet for a healthy life'.

<http://register.consilium.europa.eu/doc/srv?l=EN&f=ST%2014976%202010%20INIT>

The other six initiatives were welcomed by the Council in May 2010 (10246/10):

- 'Connecting Climate Knowledge for Europe (Clik'EU)',
- 'Healthy and Productive Seas and Oceans',
- 'More Years, Better Lives - The Potential and Challenges of Demographic Change',
- 'The microbial challenge - An emerging threat to human health',
- 'Urban Europe - Global Challenges, Local Solutions' and
- 'Water Challenges for a Changing World'

<http://register.consilium.europa.eu/doc/srv?l=EN&f=ST%2010246%202010%20INIT>

The Joint Programming Process was reviewed in 2012 by an external Expert Group

[http://ec.europa.eu/research/era/pdf/jp-expert-group-22102012-report\\_en.pdf](http://ec.europa.eu/research/era/pdf/jp-expert-group-22102012-report_en.pdf)

Other documents relevant to the ERA Priority 2a include the following:

GPC 2014 Biennial Report

<http://register.consilium.europa.eu/pdf/en/14/st01/st01310.en14.pdf>

Report of the GPC Working Group on Alignment

<http://register.consilium.europa.eu/pdf/en/14/st01/st01305-re01.en14.pdf>

Report of the GPC Working Group on Framework Conditions for Joint Programming

<http://register.consilium.europa.eu/pdf/en/14/st01/st01304.en14.pdf>

Report of the GPC Working Group on Measuring JPIs Progress and Impact

<http://register.consilium.europa.eu/pdf/en/14/st01/st01308-re01.en14.pdf>

Report of the GPC Working Group on GPC and JPIs

<http://register.consilium.europa.eu/pdf/en/14/st01/st01306.en14.pdf>

Provisional Work Programme 2014-2016 of the High Level Group for Joint Programming

<http://register.consilium.europa.eu/pdf/en/14/st01/st01313.en14.pdf>

GPC contribution to the ERA Roadmap

<http://register.consilium.europa.eu/pdf/en/14/st01/st01311.en14.pdf>

Mandates for GPC Implementation Groups

<http://register.consilium.europa.eu/pdf/en/15/st01/st01301.en15.pdf>

The GPC undertook a process of review/update of its mandate in view of the ERA priorities and ERA Roadmap. A proposal for a renewed mandate of the High Level Group on Joint Programming has been drafted and discussed, the approval of which falls within the remit of the Council.

### **PRIORITY 2b- Make optimal use of public investments in Research Infrastructures**

Background on the ESFRI Roadmap and links to the current and past versions of this document

[http://ec.europa.eu/research/infrastructures/index\\_en.cfm?pg=esfri-roadmap](http://ec.europa.eu/research/infrastructures/index_en.cfm?pg=esfri-roadmap)

Background information on the European Research Infrastructure Consortium legal framework

[http://ec.europa.eu/research/infrastructures/index\\_en.cfm?pg=eric](http://ec.europa.eu/research/infrastructures/index_en.cfm?pg=eric)

### **PRIORITY 3- An Open Labour Market for Researchers**

The European Charter for Researchers and Code of Conduct for the Recruitment of Researchers.

The Human Resources Strategy for Researchers (HRS4R).

Full texts of these can be found at

<http://ec.europa.eu/euraxess/index.cfm/rights/index>

For an overview of the current situation at national and European levels, the Researchers' Reports for 2012, 2013 and 2014 are highly relevant, as is the detailed information on researcher careers and mobility contained in the MORE2 survey of researcher mobility and career paths.

Full texts of all the associated documents can be found at

<http://ec.europa.eu/euraxess/index.cfm/services/researchPolicies>

This also contains a full bibliography of other important documents related to researcher careers and mobility issues.

With regard to the implementation priorities identified in the Roadmap, the following items are of particular relevance.

On **Open Recruitment**, the Study on the Open, Transparent and Merit Based Recruitment of Researchers (undertaken by Technopolis) and the Report on the same topic prepared for the 2014 ERAC Mutual Learning Workshop are of particular relevance.

On **Inter-sectoral Mobility**, the Salzburg II Recommendations and the Principles for Innovative Doctoral Training are vital (situated under "Universities" on the above page) are vital. The documents "Exploration of the Implementation of the Principles for Innovative Doctoral Training in Europe" and the Report of the ERA Steering Group on Human Resources and Mobility "Using the Principles for Innovative Doctoral Training" offer important additional material on implementation of the Principles. The Report in Inter-Sectoral Mobility prepared for the 2014 Workshop provides a valuable overview of the issue.

#### **PRIORITY 4- Gender Equality and Gender Mainstreaming in Research**

A library of key European documents in this area can be found at

[http://ec.europa.eu/research/swafs/index.cfm?pg=library&lib=gender\\_equality](http://ec.europa.eu/research/swafs/index.cfm?pg=library&lib=gender_equality)

## **PRIORITY 5- Optimal Circulation and Transfer of Scientific Knowledge**

Commission Recommendation on the management of intellectual property in knowledge transfer activities and Code of Practice for universities and other public research organisations

[http://ec.europa.eu/invest-in-research/pdf/ip\\_recommendation\\_en.pdf](http://ec.europa.eu/invest-in-research/pdf/ip_recommendation_en.pdf)

Commission Communication Towards better access to scientific information: Boosting the benefits of public investments in research (Open Access)

[http://ec.europa.eu/research/science-society/document\\_library/pdf\\_06/era-communication-towards-better-access-to-scientific-information\\_en.pdf](http://ec.europa.eu/research/science-society/document_library/pdf_06/era-communication-towards-better-access-to-scientific-information_en.pdf)

European Research Area Guidelines on Intellectual Property (IP) Management in International Research Collaboration Agreements between European and Non-European Partners

[http://ec.europa.eu/research/innovation-union/pdf/international\\_cooperation\\_guidelines\\_erac\\_kt\\_group.pdf](http://ec.europa.eu/research/innovation-union/pdf/international_cooperation_guidelines_erac_kt_group.pdf)

Mandate for ERAC Working Group on Knowledge Transfer (WG KT)

[http://era.gv.at/directory/137/attach/ST01202EN12\\_MandatFebruar2012.pdf](http://era.gv.at/directory/137/attach/ST01202EN12_MandatFebruar2012.pdf)

ERAC WG KT Work Plan for years 2014-2015

<http://era.gv.at/object/document/1721>

Knowledge Transfer Study 2010-2012

[http://knowledge-transfer-study.eu/fileadmin/KTS/documents/Knowledge-Transfer-Study\\_2010-2012\\_report.pdf](http://knowledge-transfer-study.eu/fileadmin/KTS/documents/Knowledge-Transfer-Study_2010-2012_report.pdf)

Guidelines on Open Access to Scientific Publications and Research Data in Horizon 2020  
(December 2013)

[http://ec.europa.eu/research/participants/data/ref/h2020/grants\\_manual/hi/oa\\_pilot/h2020-hi-oa-pilot-guide\\_en.pdf](http://ec.europa.eu/research/participants/data/ref/h2020/grants_manual/hi/oa_pilot/h2020-hi-oa-pilot-guide_en.pdf)

Open access to publications and data in Horizon 2020: Frequently Asked Questions (FAQ) (May 2014)

[http://openaccess.mpg.de/2076881/2014\\_05-H2020-Factsheet-Open-Access-FAQ.pdf](http://openaccess.mpg.de/2076881/2014_05-H2020-Factsheet-Open-Access-FAQ.pdf)

EU Open Access Recommendation to the Member States (July 2013):

[http://europa.eu/rapid/press-release\\_IP-12-790\\_en.htm?locale=en](http://europa.eu/rapid/press-release_IP-12-790_en.htm?locale=en)

Report of the Working Group on Knowledge Transfer and Open Innovation

[http://ec.europa.eu/research/innovation-union/pdf/b1\\_studies-b5\\_web-publication\\_mainreport-kt\\_oi.pdf#view=fit&pagemode=none](http://ec.europa.eu/research/innovation-union/pdf/b1_studies-b5_web-publication_mainreport-kt_oi.pdf#view=fit&pagemode=none)

## **PRIORITY 6- - International Cooperation**

The following documents provide an overview on the strategic approach and current status of ERA's international dimension:

Commission communication "Enhancing and focusing EU international cooperation in research and innovation: a strategic approach", September 2012

Commission staff working document, accompanying the document "Enhancing and focusing EU international cooperation in research and innovation: a strategic approach", September 2012

Council Conclusions on the Communication "Enhancing and focusing EU international cooperation in research and innovation: a strategic approach", May 2013

Commission report on the Implementation of the Strategy for International Cooperation and roadmaps, September 2014

Full texts of these can be found at <http://ec.europa.eu/research/iscp/index.cfm?lg=en&pg=strategy>

SFIC Opinion on the Report on the implementation of the Strategy for international cooperation in research and innovation (to be adopted in the beginning of 2015)

This text will be published at:

<http://www.consilium.europa.eu/policies/era/sfic/sfic-advice-%28opinions,-reports%29?lang=en>

### **Further documents of interest**

The following documents contain background information regarding international cooperation in the ERA framework as well as the development and the role of the Strategic Forum for International S&T Cooperation.

- Commission Communication “A Strategic European Framework for International Science and Technology Cooperation”, September 2008
- Council conclusions concerning a European partnership for international scientific and technological cooperation (including the mandate of the Strategic Forum for International S&T Cooperation), December 2008
- SFIC Opinion on the ERA Framework, November 2011
- SFIC Opinion on the first ERA Progress Report, November 2013
- Revised mandate of the Strategic Forum for International S&T Cooperation (to be adopted in 2015)

Full texts of these and additional documents on the ERA's international dimension can be found at

<http://www.consilium.europa.eu/policies/era/sfic?lang=en>

<http://www.consilium.europa.eu/policies/era/sfic/sfic-advice-%28opinions,-reports%29?lang=en>

<http://ec.europa.eu/research/iscp/index.cfm?pg=sfic>

Additional publications (<http://ec.europa.eu/research/iscp/index.cfm?lg=en&pg=publications>) and studies (<http://ec.europa.eu/research/iscp/index.cfm?lg=en&pg=studies>) on the EU's international cooperation in research and innovation can be found at the Commission website, for instance regarding the EU-Member State Partnership in international cooperation, international STI agreements or the cooperation with particular partner countries and regions.

## **KEY DOCUMENTS PRODUCED BY STAKEHOLDER ORGANISATIONS AND OTHER RELEVANT ORGANISATIONS**

### **Stakeholder Platform Member Organisations**

#### **European University Association (EUA)**

EUA review of European universities' progress in implementing Salzburg II Recommendations (on innovative doctoral training)

<http://www.eua.be/eua-work-and-policy-area/eua-policy-position-and-declarations.aspx>



## **Science Europe**

Science Europe Statement on the European Research Area (2012)

[http://www.scienceeurope.org/uploads/PublicDocumentsAndSpeeches/120717\\_Science\\_Europe\\_ERA\\_Statement.pdf](http://www.scienceeurope.org/uploads/PublicDocumentsAndSpeeches/120717_Science_Europe_ERA_Statement.pdf)

Science Europe Position Statement on Priority One of the 2012 ERA Communication: 'More Effective National Research Systems' (2014)

[http://www.scienceeurope.org/uploads/PublicDocumentsAndSpeeches/SE\\_Pos\\_ERA\\_WEB.pdf](http://www.scienceeurope.org/uploads/PublicDocumentsAndSpeeches/SE_Pos_ERA_WEB.pdf)

Science Europe Roadmap (2013 )

[http://www.scienceeurope.org/uploads/PublicDocumentsAndSpeeches/ScienceEurope\\_Roadmap.pdf](http://www.scienceeurope.org/uploads/PublicDocumentsAndSpeeches/ScienceEurope_Roadmap.pdf)

## **Other Relevant Organisations and Documents**

### **EUREKA**

EUREKA input to the European Research Area Roadmap (2014)

[http://www.eurekanetwork.org/c/document\\_library/get\\_file?uuid=ca81e1d9-ae5d-4612-bf54-cf89ebd7fe2a&groupId=10137](http://www.eurekanetwork.org/c/document_library/get_file?uuid=ca81e1d9-ae5d-4612-bf54-cf89ebd7fe2a&groupId=10137)

### **Rectors' Conferences and other European University Organisations**

Joint Declaration on Doctoral Training in Europe

[http://eurodoc.net/wp-content/uploads/2014/12/Joint\\_Declaration\\_on\\_Doctoral\\_Training\\_in\\_Europe\\_2014\\_11-1.pdf](http://eurodoc.net/wp-content/uploads/2014/12/Joint_Declaration_on_Doctoral_Training_in_Europe_2014_11-1.pdf)

**FULL RANGE OF ACTIONS FOR MEMBER STATES SET OUT IN PREVIOUS DOCUMENTS**

<b>Actions for MS listed in ERA Communication 17/7/12</b>	<b>Points in ERA Progress Report 20/9/13</b>	<b>Issue listed in 24/2/14 Council Conclusions</b>
<b>More effective national research systems</b>		
<ul style="list-style-type: none"> <li>• Introduce or enhance competitive funding through calls for proposals and institutional assessments as the main modes of allocating public funds to research and innovation, introducing legislative reforms if necessary</li>   <li>• Ensure that all public bodies responsible for allocating research funds apply the core principles of international peer review</li> </ul>	<ul style="list-style-type: none"> <li>• While the balance between competitive and non-competitive funding is a matter of national choice, competitive funding and performance based institutional assessments should be at the core of research funding decisions in Member States, applying the core principles of international peer-review.</li> </ul>	<ul style="list-style-type: none"> <li>• The use, where appropriate, of open calls for proposals evaluated based on international peer review</li>   <li>• Fostering mobility of researchers across different sector, in particular between academia and industry</li> </ul>

Actions for MS listed in ERA Communication 17/7/12	Points in ERA Progress Report 20/9/13	Issue listed in 24/2/14 Council Conclusions
Optimal transnational co-operation and competition		
<p><u>Jointly addressing grand challenges</u></p> <ul style="list-style-type: none"> <li>• Step up efforts to implement joint research agendas addressing grand challenges, sharing information about activities in agreed priority areas, ensuring that adequate national funding is committed and strategically aligned at European level in these areas and that common <i>ex post</i> evaluation is conducted</li> <li>• Ensure mutual recognition of evaluations that conform to international peer-review standards as a basis for national funding decisions</li> </ul>	<ul style="list-style-type: none"> <li>• Member States should better align national research programmes in order to implement commonly agreed strategic research agendas in the context of joint programming. They should also improve interoperability between national programmes in order to facilitate further cross border research cooperation.</li> </ul>	<ul style="list-style-type: none"> <li>• Aligning, where possible, national strategies and research programmes with the strategic research agendas developed within the JPIs to cope with major societal challenges and improving the interoperability between national programmes to facilitate transnational cooperation and sharing of information about activities in priority areas</li> </ul>

<b>Actions for MS listed in ERA Communication 17/7/12</b>	<b>Points in ERA Progress Report 20/9/13</b>	<b>Issue listed in 24/2/14 Council Conclusions</b>
<ul style="list-style-type: none"> <li>• Remove legal and other barriers to the cross-border interoperability of national programmes to permit joint financing of actions including cooperation with non-EU countries where relevant</li> </ul> <p><u>Effective investment in and use of research infrastructures</u></p> <ul style="list-style-type: none"> <li>• Confirm financial commitments for the construction and operation of ESFRI, global, national and regional RIs of pan-European interest, particularly when developing national roadmaps and the next Structural Fund programmes</li> <li>• Remove legal and other barriers to cross-border access to RIs</li> </ul>	<p><u>Research infrastructures</u></p> <ul style="list-style-type: none"> <li>• There is a need for more transparency of the conditions for transnational access to research infrastructures.</li> <li>• Member States should address financial, management and political barriers for the development and implementation of research infrastructures. They should align research infrastructures roadmaps and coordinate their development.</li> </ul>	<ul style="list-style-type: none"> <li>• The progress made by ESFRI to fulfil its new mandate and its continuing efforts in order to prioritise the projects of the ESFRI roadmap</li> </ul>

<b>Actions for MS listed in ERA Communication 17/7/12</b>	<b>Points in ERA Progress Report 20/9/13</b>	<b>Issue listed in 24/2/14 Council Conclusions</b>
Open labour market for researchers		
<ul style="list-style-type: none"> <li>• Remove legal and other barriers to the application of open, transparent and merit based recruitment of researchers</li> <li>• Remove legal and other barriers which hamper cross-border access to and portability of national grants</li> <li>• Support implementation of the Declaration of Commitment to provide coordinated personalised information and services to researchers through the pan-European EURAXESS network</li> </ul>	<ul style="list-style-type: none"> <li>• A co-ordinated effort is needed by Member States and institutions to ensure that all research positions are subject to open, transparent and merit-based recruitment practices.</li> <li>• Member States should remove barriers preventing the implementation of access to, and portability of, national grants, and research funding organisations must intensify cooperation to facilitate the process.</li> </ul>	<ul style="list-style-type: none"> <li>• Using open, transparent and merit-based recruitment with regard to research positions.</li> <li>• Promoting a wider uptake of innovative doctoral training principles, including where appropriate, the use of the European Structural and Investment Funds</li> </ul>

<b>Actions for MS listed in ERA Communication 17/7/12</b>	<b>Points in ERA Progress Report 20/9/13</b>	<b>Issue listed in 24/2/14 Council Conclusions</b>
<ul style="list-style-type: none"> <li>• Support the setting up and running of structured innovative doctoral training programmes applying the Principles for Innovative Doctoral Training</li> <li>• Create an enabling framework for the implementation of the HR Strategy for Researchers incorporating the Charter &amp; Code</li> </ul>	<ul style="list-style-type: none"> <li>• Member States, research funding and research performing organisations are encouraged to promote a wider uptake of the innovative doctoral training principles, including, where appropriate, through use of the European Structural and Investment Funds.</li> </ul>	

Actions for MS listed in ERA Communication 17/7/12	Points in ERA Progress Report 20/9/13	Issue listed in 24/2/14 Council Conclusions
Gender equality and gender mainstreaming in research		
<ul style="list-style-type: none"> <li>• Create a legal and policy environment and provide incentives to: <ul style="list-style-type: none"> <li>– remove legal and other barriers to the recruitment, retention and career progression of female researchers while fully complying with EU law on gender equality</li> <li>– address gender imbalances in decision making processes</li> <li>– strengthen the gender dimension in research programmes</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Member States should implement comprehensive strategies of structural change to overcome gender gaps in research institutions and programmes.</li> </ul>	<ul style="list-style-type: none"> <li>• Stepping up efforts to systematically mainstream gender equality and the gender dimension in R&amp;I policies and programme</li> </ul>

<b>Actions for MS listed in ERA Communication 17/7/12</b>	<b>Points in ERA Progress Report 20/9/13</b>	<b>Issue listed in 24/2/14 Council Conclusions</b>
<ul style="list-style-type: none"> <li>• Engage in partnerships with funding agencies, research organisations and universities to foster cultural and institutional change on gender - charters, performance agreements, awards</li>   <li>• Ensure that at least 40% of the under-represented sex participate in committees involved in recruitment/career progression and in establishing and evaluating research programmes.</li> </ul>		



Actions for MS listed in ERA Communication 17/7/12	Points in ERA Progress Report 20/9/13	Issue listed in 24/2/14 Council Conclusions
Optimal circulation and transfer of scientific knowledge		
<ul style="list-style-type: none"> <li>• Define and coordinate their policies on access to and preservation of scientific information</li> <li>• Ensure that public research contributes to Open Innovation and foster knowledge transfer between public and private sectors through national knowledge transfer strategies</li> <li>• Harmonise access and usage policies for research and education-related public infrastructures and for associated digital research services enabling consortia of different types of public and private partners</li> </ul>	<p><u>Open access to publicly funded research results</u></p> <ul style="list-style-type: none"> <li>• Member States should continue deploying efforts in implementing Open Access to publications, and continue setting an adequate policy framework for Open Access to data, while taking into consideration IPR issues, notably in the case of private sector involvement in research.</li> </ul>	

<b>Actions for MS listed in ERA Communication 17/7/12</b>	<b>Points in ERA Progress Report 20/9/13</b>	<b>Issue listed in 24/2/14 Council Conclusions</b>
<ul style="list-style-type: none"> <li>• Adopt and implement national strategies for electronic identity for researchers giving them transnational access to digital research services</li> </ul>	<p><u>Digital dimension of ERA</u></p> <ul style="list-style-type: none"> <li>• All Member States should ensure that conditions are in place to support: seamless online access to digital research services for collaboration, computing and accessing scientific information; the federation of electronic identities for researchers, which facilitates researchers' cross-border access to services and resources; and harmonised access and usage policies for e-infrastructures and digital research services in order to enable collaborations by multinational research consortia with both public and private partners.</li> </ul>	<ul style="list-style-type: none"> <li>• Promoting and implementing e-infrastructures as an enable of digital Science in ERA</li> </ul>

Actions for MS listed in ERA Communication 17/7/12	Points in ERA Progress Report 20/9/13	Issue listed in 24/2/14 Council Conclusions
	<p><u>Knowledge transfer and open innovation</u></p> <ul style="list-style-type: none"> <li>• Member States need to further define, implement and assess national knowledge transfer strategies to deliver a structural and cultural change in the research and innovation system and as such increase the economic and social impact of research.</li> </ul>	<ul style="list-style-type: none"> <li>• Fostering effective knowledge transfer in research and innovation between public and private sectors</li> </ul>

<b>Actions for MS listed in ERA Communication 17/7/12</b>	<b>Points in ERA Progress Report 20/9/13</b>	<b>Issue listed in 24/2/14 Council Conclusions</b>
International Co-operation		
<p>The external dimension is a vital, cross-cutting and integral part of ERA. It will be addressed later in 2012 as part of a separate Communication on a strategic approach to enhancing and focussing EU international cooperation in research and innovation.</p>	<p>Given separate heading:</p> <p>[The external dimension is a vital, cross-cutting and integral part of ERA. It will be addressed later in 2012 as part of a separate Communication on a strategic approach to enhancing and focussing EU international cooperation in research and innovation.]</p>	<p>Asks Commission to move towards the integration of an international dimension into the EMM</p>

**GOOD PRACTICE EXAMPLES FROM ACROSS EUROPE****ERA PRIORITY 1 - Effective national research systems****Croatia - National legislation to reform publically funded research and innovation supported by the Croatian Scientific Foundation as central, independent funding body for science and research**

The new Act on Science and Higher Education (adopted in July 2013) marked the beginning of a series of reforms. The Act brings changes in the financing and governance system of the public research activities aiming at increasing the efficiency of the RDI system. Part of the money devoted in the state budget to scientific activities is given directly, via multiyear performance based contracts, to the autonomous disposal of public universities and public research institutes, thus increasing their responsibility, accountability and promoting the abandonment of direct state management of science activities.

According to the amendments to the Act on the Croatian Scientific Foundation (CFS) adopted in July 2012 by the Croatian Parliament, the CFS became the central, independent place for the concentration of the national financial instruments of support for the scientific project activities. In this way a strong boost to the transition from state management to state supervision of the scientific sector in Croatia was achieved. An increase of the size and relevance of the scientific projects, support to excellent researchers and projects, set-up of national user labs, establishment of a matching funds scheme for EU framework programs, installation grants for young scientists and synergies with the Unity through Knowledge Fund (UKF) are only some of the provisions implied in the new Act.

## **Denmark - ERAC Peer review contributes to national innovation strategy in 2012 followed up by simplification of existing funding bodies into Innovation Fund Denmark in 2014**

Following an open broad dialogue with various stakeholders and the ERAC peer review of the Danish innovation system, the Danish Government launched a new national innovation strategy in December 2012. The strategy focuses on the efficient translation of knowledge into economic growth and the solution of societal challenges through public-private partnerships on innovation. At operational level, a catalogue of societal challenges, where public-private partnerships can provide innovative solutions, was outlined in dialogue with stakeholders (“The Innovation+ Catalogue”), and accompanying funding was allocated on the national budget.

Furthermore, a new Innovation Fund Denmark has been established in 2014 by the merger of three previous funding bodies aiming to provide a more demand driven and simplified funding system for strategic research and innovation.

See <http://ufm.dk/en/publications/2012/files-2012/innovation-strategy.pdf>

<http://en.innovationsfonden.dk/>

## **Switzerland- Swiss universities are funded based on institutional assessment, with Complementarity of Swiss and EU research funding schemes**

Swiss universities are funded based on a process of performance evaluation that focuses on both teaching activities and research. The Swiss Higher Education Act (HEdA) regulates federal support to Swiss universities and requires them to monitor, safeguard and improve the quality of their teaching and research activities (Art. 27). Furthermore, the HEdA defines the review of the performance quality of a university as a prerequisite for federal subsidies (Art. 28). The requirements in respect of quality assurance of universities and the conduct of the audit by the Swiss Center of Accreditation and Quality Assurance in Higher Education (OAQ - AAQ as of 1.1.2015) are laid down in the ‘Quality Assurance Guidelines’. These are compatible with the ‘European Standards and Guidelines for Quality Assurance in the European Higher Education Area (ESG)’, that were developed by the European Association for Quality Assurance in Higher Education (ENQA).

Swiss and EU research funding schemes complement each other in an optimal way: While the most part of EU research funding programs are top-down organized, the Swiss research funding system is mostly bottom-up organized with regards to topic definition. Most of the Swiss National Science Foundation's (SNSF) funding schemes provide Swiss researchers with several tools in order to develop their own research agenda based on their own scientific priorities, in order to achieve key scientific results that are crucial to specific scientific fields. Complementarity also exists with respect to funding amounts: Success rates are lower in EU than Swiss programmes, but grant sizes are substantially larger.

Similarly, the Commission for Technology and Innovation (CTI), Switzerland's innovation promotion agency, supports researchers in implementing their own innovative project ideas in collaboration with private partners or in starting a business.

## **ERA PRIORITY 2a - Jointly Addressing Grand Challenges**

### **Italy- National Funding supporting JPIs**

The Ministry of Health channels its 2015 funds for research on anti-microbial resistance through the JPI on Anti-Microbial Resistance.

### **Norway- Collaboration on global challenges using Joint Programming Initiatives integrated into national research programmes and governance**

To ensure optimal functioning of the JPIs, good communication between the national stakeholders is important. Each JPI has one ministry appointed as the responsible ministry. This ministry administers an interdepartmental group consisting of 1-3 other relevant ministries. The responsible ministry appoints the delegate and the expert to the governing board of the JPI, and defines the role of the Research Council (RC) in the JPIs. In the RC, each JPI is organized as separate programmes with a committed JPI coordinator, as well as an advisory board or network that supports the Norwegian representatives in the governing board. The JPI coordinators in the RC meet regularly to discuss management of the JPIs, and are closely connected to relevant national research programmes. Each JPI has a reference group, consisting of scientists from different relevant research institutions in Norway.

### **Switzerland- Mutual recognition of evaluations (Lead Agency) and Money Follows Researcher/Cooperation Principle**

The mutual recognition of evaluations is becoming more and more important. Therefore, the Swiss National Science Foundation set up the D-A-C-H framework together with Germany (DFG) and Austria (FWF), a multi-lateral agreement, according to which submission and evaluation takes place in one of the three countries, while funding is on a national basis. Further bilateral Lead Agency agreements were signed with the National Research Fund (FNR) of Luxembourg and the French ANR. Discussions with regard to the mutual recognition of evaluations are underway with some other countries.



In order to reduce barriers for cross-border collaboration in Europe, the SNSF implemented the so-called “Money follows Researcher” and “Money follows Cooperation Line” principles. The “Money follows Researcher” process is aimed at researchers who move abroad and would like to finish already granted projects. In principle, portability of the grant is possible to any country. The project can either continue in Switzerland while being managed from abroad or the funds can be transferred to the new location, while reporting continues with the original funding agency.

The “Money follows Cooperation Line” process is aimed at researchers in Switzerland who carry out projects in which a small subproject is conducted abroad. The sub-projects abroad are funded by the SNSF. This is currently possible in Germany and Austria (very small sub-projects) and in the UK (only in the humanities and social sciences).

## **ERA PRIORITY 2b - Make optimal use of public investments in Research Infrastructures**

### **Czech Republic/Hungary/Romania Trilateral collaboration to develop a research infrastructure as part of the ESFRI roadmap using EU structural funds**

ELI – Extreme Light Infrastructure is the first ESFRI Roadmap Research Infrastructure project to be implemented in new EU Member States and funded by the European Regional and Development Funds (ERDF).

ELI is a Research Infrastructure of the pan-European and worldwide importance. It is included in the ESFRI Roadmap issued in 2010. ELI is a laser facility that aims to host some of the most intense lasers worldwide, develop new interdisciplinary research opportunities with light from these lasers and secondary radiation derived from them, and make them available to an international scientific user community.

The facility will be based on 4 sites. Three of them are presently being implemented in the Czech Republic (ELI Beamlines facility in Dolní Břežany near Prague), Hungary (ELI Attosecond Light Pulse Source in Szeged) and Romania (ELI Nuclear Physics facility in Magurele). The overall investment volume exceeds 850 million EUR, most of it covered by the European Regional and Development Funds (ERDF). Location of the 4th pillar – ELI Ultra High Field Facility – is still to be decided. Scientific profile of all ELI pillars will be complementary, while the operation, starting in 2018, will be unified under one single legal umbrella of a European Research Infrastructure Consortium ELI – ERIC.

The present implementation phase, following a 3-year Preparatory Phase 2007 – 2010, is coordinated by the ELI – Delivery Consortium International Association, an international non-profit organisation established after the Belgian law (AISBL). It supports the 3 pillars during their constructions phase, ensures the character of ELI as one unified pan-European research infrastructure project, conducts the negotiations towards the ELI – ERIC and prepares the establishment of ELI's 4th pillar, planned to push the frontiers of laser power by yet another order of magnitude into the sub-exawatt regime.

### **France - Strengthening links between ESFRI and digital infrastructures**

France supports the initiative aligning the work of ESFRI with that of the e-Infrastructures Reflection Group (e-IRG) with a view to facilitating the access to and the sharing of digital infrastructures (data, computing, data, network, cloud) with all ESFRI facilities. This concept of "e-infrastructure commons" needs to be promoted at all levels (political and scientific). The result will be to better take into account the aspects related to science (interoperability, access, sharing, curation, archiving) in order to increase the European scientific competitiveness. In addition, ESFRI facilities could build new competences on the existing expertise and resources around the sharing of scientific data in the frame of the major European e-infrastructure initiatives (GEANT, PRACE, EUDAT, RDA-Europe, HelixNebula).

## **Hungary - National database of research infrastructures developed in response to ESFRI roadmap.**

The establishment and regular maintenance of a broad Hungarian RI database has been one of the objectives of the National Research Infrastructure Survey and Roadmap (NEKIFUT) project launched in 2008. The update and upgrade of the Register started February 2014, as the National Innovation Office invited new applications from the research infrastructures operating in Hungary so as the Register includes the broadest possible scope of research infrastructures. The evaluation has been a multi-stage process, primarily based on the work of the Working Groups of the three large disciplines (physical sciences, biology sciences and social sciences and humanities) and numerous external experts, the result of which is was approved by the NEKIFUT Steering Board late 2014. The updated and upgraded Register contains strategic research infrastructures, research infrastructures and registered research infrastructures. The register was established in response to ESFRI call so it is harmonized with the given standards of that.

In the framework of the Smart Specialization Strategy (S3) consultation was held about the development of research infrastructures in accordance with the ESFRI methodology. In addition to the consultation, the Research Infrastructures Working Group was established in 2014: it consists of national experts and has a general decision-preparing role in every issue concerning research infrastructures. The composition of the RI Working Group ensures that all major disciplines are represented, and that both the university, the academic community and the governmental bodies are present.

In the Smart Specialization Strategy of Hungary (accepted by the Government of Hungary in November 2014) the strategic concepts (directions of development of research infrastructures, foreign infrastructures recommended for participation, principles of evaluating infrastructures) on development of Hungarian research infrastructures are laid down.

The updated register and the principles presented in the S3 strategy serve as a solid basis for the ongoing work of Hungarian roadmap of research infrastructures. Uniqueness and openness (access for other researchers and institutions) among other (ESFRI harmonized) criteria will be the key elements of the evaluating process.

Regarding the next steps, National Research, Development and Innovation Office is responsible for evaluate the applicants for ESFRI Roadmap 2016 and the elaboration of the Hungarian roadmap until October 2015.

### **ERA PRIORITY 3 - An Open Labour Market for Researchers**

#### **Note -**

The 2014 ERA Researchers Report contains a useful compendium of good practice examples relating to all aspects of this Priority; see

[http://ec.europa.eu/euraxess/pdf/research\\_policies/Researchers%20Report\\_2014\\_GOOD%20PRACTICES\\_FINAL.pdf](http://ec.europa.eu/euraxess/pdf/research_policies/Researchers%20Report_2014_GOOD%20PRACTICES_FINAL.pdf)

#### **Germany- FindYourPension portal**

Pension systems in Europe are as diverse as the member states themselves. But diversity is not an obstacle to cross-border mobility. [www.FindYourPension.eu](http://www.FindYourPension.eu) gives valuable advice to researchers from Europe, third countries as well as their European employers. The platform provides concise information on the pension landscapes all over Europe. Researchers find customised information on the possibilities and conditions of their individual retirement provision in Europe.

The German Federal Government is funding the supplementary pensions agency for federal and Länder employees (VBL) for developing the interactive platform. FindYourPension is supported throughout Europe by many public sector employers, research institutions and other stakeholders in the field of research. Two major pension associations - ESIP (European Social Insurance Platform) and EAPSPI (European Association of Public Sector Pension Institutions) - cooperate with FindYourPension in order to maintain and improve the quality of information and to make the website known to stakeholders and users.

The portal thus contributes effectively to reducing obstacles for internationally mobile researchers from Europe and beyond.

See (in English and German): [www.findyourpension.eu](http://www.findyourpension.eu)

### **Ireland- Development of a national EURAXESS website Business portal to encourage greater use by the private research sector in recruitment advertising**

All publicly funded (and research-active private) organisations are encouraged to advertise research positions on the EURAXESS Ireland portal ([www.euraxess.ie](http://www.euraxess.ie)) and can request access to the national and EU researcher CV database. Information on entry conditions, transfer of social security and pension contributions, accommodation and administrative assistance is available at EURAXESS Ireland. EURAXESS Ireland provides a range of information services for researchers and their families wishing to enter the country or to go abroad. SFI jobs are published on the SFI website and on the EURAXESS Jobs portal.

In order to encourage greater use of the EURAXESS services by the private sector, a new EURAXESS Business portal has been developed, which was launched in May 2013. This is a dedicated entry point for companies to the EURAXESS services and focuses on advertising jobs, the CV database and the Fast Track visa scheme. In addition, there is a search tool where companies can seek out business and R&D funding opportunities. This search facility is honed to the company's location, specialty and size.

Impact: The main impact of EURAXESS Ireland has been the increase in open advertising of research positions both in Higher Education Institutions and, in recent years, in the private sector. The portal has activated 43 739 job searches as of March, 2014 with 457 Job applications made directly via the portal application facility and 3 783 organisation profile searches. A total of 8 358 jobs had been uploaded and the extranet which supports the EURAXESS Jobs facility had been activated 5 589 times. By the end of 2013, 7 090 queries brought to EURAXESS Ireland had been resolved. There were 5 546 registered users on the national portal and 200 458 visits to the portal had been recorded.

The number of private organisations using the portal has increased by 97% since the launch of the EURAXESS Business portal and funding database.

### **Norway- Developing recruitment practices which are clear and transparent to applicants**

Using open, transparent and merit based recruitment practices with regard to research positions in Norway. The application process including division of responsibilities between the actors involved, time frame, and information is clearly described and followed. Normally an expert committee consisting of an academically representative group evaluates the academic qualifications of the candidates followed by a selection committee that also evaluates the candidates with regard to strategic priorities at the unit of employment and gender balance.

Applicants to permanent positions (Associate Professors and Professors) will receive a statement from the expert committee and may comment on this before the selection committee decides the final ranking.

## **ERA PRIORITY 4 - Gender Equality and Gender Mainstreaming in Research**

### **Austria- Establishment of Laura Bassi Specialist Centres of Expertise**

Excellent women do research at the interface between science and economy.

Innovation through diversity: the “Laura Bassi Centres of Expertise” are close to industry and practice a new research culture. In answer to current requirements in science, they operate on the basis of transdisciplinary and interdisciplinary research, team orientation, targeted personnel development and an efficient management culture. Because a modern job profile in research these days includes project management and communication skills. These modern foci make the seven Laura Bassi Centres of Expertise unique in Europe. Headed by highly qualified female experts, it is their task to do innovative research in the natural sciences and technology.

The Centres took up their work in autumn 2009. This was preceded by a specially designed selection process, in which not only the female researchers’ scientific achievements to date were evaluated; their future potential in the areas of management, team leadership and career planning were also taken into account in the assessment. The aim of this unique impetus programme is to make the research achievements of highly qualified women visible and to implement a higher degree of equal opportunities in the European research landscape in order to accelerate the research dynamics – because diversity is a motor for innovation.

Four years of conceptual preparations preceded the Laura Bassi Programme. In 2005, w-fORTE commissioned a survey with the Austrian Society for Environment and Technology (OGUT) in order to identify the structural obstacles for women’s careers in cooperative research. Reasons given included non-transparent awarding procedures, male alliance structures impeding women’s chances of advancement, and too little opportunity to network with industry. Based on these insights, a two-stage selection process including new types of evaluation criteria and an ensuing hearing was devised in order to make the competences of excellent female researchers more visible. This is also in line with the objectives of the European Union.

In 2013, the fourth year of the Laura Bassi Centres of Expertise, a mid-term evaluation according to the programme document was carried out by external experts. The evaluation confirmed the success of LBCE as a unique impetus programme and all centres were recommended for a second funding period. The eight Laura Bassi Centres conduct research in the areas of medicine, life sciences and IT.

In the first funding period following results could be achieved:

230 Publications, 21 PhD Thesis, and 41 Diploma and Master Thesis, 2 new patents and 2 licenses.

The programme is named after the Italian physicist Laura Bassi who, in the 18th century, was the first female professor to be called to a European university. The impetus campaign “Laura Bassi Centres of Expertise” is implemented on commission of the Austrian Federal Ministry of Economy, Family and Youth by the programme “w-ffORTE – economic impulses by women in research and innovation” in the scope of the Austrian Research Promotion Agency (FFG). The seven Laura Bassi Centres of Expertise have a term of up to seven years, with a total funding budget of 15 million euros.

Further information:

Laura Bassi website

<http://www.w-fforte.at/at/laura-bassi-centres/laura-bassi-centres/laura-bassi-centres-of-expertise.html>

<https://www.ffg.at/laura-bassi-centres-expertise-0> (only in German language available)



Laura Bassi Programme Document

[http://www.wfforte.at/fileadmin/Redaktion/Intern/Unterlagen\\_Laura\\_Bassi/Programmedocument\\_en.pdf](http://www.wfforte.at/fileadmin/Redaktion/Intern/Unterlagen_Laura_Bassi/Programmedocument_en.pdf)

LBC- Brochure: At the interface of science and industry:

[https://www.ffg.at/sites/default/files/downloads/140113\\_laura\\_bassi\\_broschuere\\_en\\_final.pdf](https://www.ffg.at/sites/default/files/downloads/140113_laura_bassi_broschuere_en_final.pdf)

### **Luxembourg- Gender balance in the decision-making process**

As regards gender balance in decision-making in Luxembourg new draft laws on the National Research Fund and Public Research Centres (CRP) state that the proportion of members of Administration Boards and Scientific Councils is not to fall under 40 % for either gender.

These laws came into force on 1st November 2014 and 1st January 2015 respectively and the expectation is that there will be a change in the general culture as regards gender mainstreaming within the research organisations and research funding organisation.

The Swiss Federal Equal Opportunity at Universities Program has been designed to promote gender equality at Swiss universities since the year 2000. For the years 2013-16, the Swiss federal government has allocated CHF 9.8 million to support the universities in their work to promote and ensure gender equality. Universities receiving federal funding must dedicate matching funds to gender equality work (usually 50% over the four-year period) and elaborate individual action plans. These plans must address the issue of gender equality on a structural level in all key areas of activity: teaching, research and community service.

The goal of the Federal Program is to achieve a quota of 25% female professors at Swiss universities, and 40% women at the level of assistant professor; in addition, the proportion of women in leading academic positions and management bodies at universities and related institutions should be increased.

### **Romania- Guidance to Teachers**

The Follow up activities of ISE -Institute for Science of Education in Bucharest Romania that in collaboration with the Ministry of Education and Research and UNICEF Romania fostered the results of the Project "Gender Dimension in Science" and continued to issue several Guides for teachers in primary and secondary schools for literature and Communication, Natural Science, Mathematics, Music etc. These included Glossaries of terms like " role models", "gender partnerships", "clichés to be avoided", " gender identity" etc.

### **United Kingdom- Equality organisation, funded by national higher education funding bodies and the sector's representative bodies, creates a charter for advancing women's careers in in science, technology, engineering, maths and medicine (STEMM) employment in academia.**

Equality Challenge Unit's (ECU)( <http://www.ecu.ac.uk/>) Athena SWAN Charter recognises commitment to advancing women's careers in science, technology, engineering, maths and medicine (STEMM) employment in academia. The Charter has been working with higher education institutions (HEIs) in the UK since 2005; there are now 123 member institutions holding more than 380 institutional and departmental awards.

In the Athena SWAN process, institutions and departments are required to demonstrate a solid foundation for eliminating gender bias and a commitment to developing an inclusive culture. They must engage in a process of self-assessment to identify the institution's key issues regarding gender equality in quantitative and qualitative terms. They must create a plan for action that builds on this assessment and which embeds the principles of the Charter in the organisational structure. An independent evaluation of the Charter by Loughborough University (<http://www.ecu.ac.uk/publications/evaluating-athena-swan/>) found that the Athena SWAN process is a driver for improving gender diversity in UK institutions. The evaluation also found evidence that the Charter brings about sustainable change.

The Athena SWAN Charter is progressive and expanding; in 2013, eligibility was extended to UK research institutes which do not hold HEI status and are not a constituent unit of a HEI. Additionally, the Charter has expanded a pilot scheme in Ireland funded by the Higher Education Authority in Ireland. ECU is using the knowledge learnt from Athena SWAN to inform the FP7 funded GENDER-NET project (<http://www.gender-net.eu/>), the first ERA-NET dedicated to the promotion of gender equality.

## **ERA PRIORITY 5 - Optimal Circulation and Transfer of Scientific Knowledge**

**Note -** The European Commission's Expert Group on Knowledge Transfer and Open Innovation identified a series of good practice examples in this field- see attached

[http://ec.europa.eu/research/innovation-union/pdf/b1\\_studies-b5\\_web-publication\\_mainreport-kt\\_oi.pdf](http://ec.europa.eu/research/innovation-union/pdf/b1_studies-b5_web-publication_mainreport-kt_oi.pdf)

### **Austria- Establishment of Knowledge Transfer Centres to strengthen ties between basic research, applied research and industry**

The new programme “Knowledge Transfer Centres and Exploitation of IPR” was launched by the Austrian Federal Ministry of Science, Research and Economy (BMWFV) to strengthen cooperation between science and business and to promote entrepreneurship at Austrian universities. The programme has a funding volume of approximately € 20 million and is designed to enhance the ties between basic research, application-orientated research and industry. Responsibility for managing the project rests with Austria Wirtschaftsservice GesmbH (aws). The new funding programme comprises three modules and was established by the BMWFV to further improve cooperation between universities with one another and with non-university research institutions and companies (Module 1), to boost strategic patent funding (Module 2) and to facilitate the translation of scientific knowledge into commercial practice and thus to accelerate the exploitation of university inventions by providing funding for prototypes (Module 3).

For more details see

<http://wissenschaft.bmwfv.gv.at/home/research/national/knowledge-transfer-centres-and-exploitation-of-ipr/>

## **Denmark – National strategy on Open access to scientific articles with stretching targets for levels of open access**

In June 2014 the Danish Minister of Higher Education and Science announced a national strategy on Open Access to scientific articles. The targets of the strategy are ambitious:

To achieve by 2017 via digital archives – repositories – unimpeded, digital access for all to 80 per cent of Danish peer-reviewed scientific articles from Danish research institutions published in 2016.

To achieve from 2022 and onwards unimpeded, digital access for all to 100 per cent of all Danish peer-reviewed scientific articles from Danish research institutions published from 2021 and onwards.

Furthermore, the minister has appointed a National Steering Committee on Open Access for 3 years. The objective of the National Steering Committee for Open Access is to implement and further develop the national strategy for the implementation of Open Access.

In this connection, the Steering Committee is, through coordination at national and international levels and in consultation with relevant parties, to ensure the further development of the infrastructure for Open Access at the research performing institutions in Denmark.

Among other initiatives, the Steering Committee has set up two task forces regarding 1) the set up of an Open access barometer monitoring the progress on Open Access in Denmark and 2) identifying a technical solution to offer the Danish scientific journals (paper versions) in order to create an incentive for them to go online in Open Access. The task forces presented their basis for decision to the Steering Committee in January 2015 and based on that, the Steering Committee has decided to recommend the implementation of the two initiatives in 2015 to the Minister of Higher Education and Science.

See <http://ufm.dk/en/research-and-innovation/cooperation-between-research-and-innovation/open-science/open-access-to-research-publications/engelsk-version-national-strategy-for-open-access.pdf>

## **Finland - Launch of national Open Science and Research roadmap with ambition to become the leading country for openness in science and research by 2017**

The Finnish Open Science and Research Roadmap 2014–2017 was released in November 2014. The goal is for Finland to be the leading country for openness in science and research by 2017, and for the opportunities afforded by open science to be extensively harnessed in Finnish society.

One key objective is to publish publicly funded research results and data, and the methods used, so that they can be examined and used by any interested party. Openness will always be the goal when it is legally and contractually possible. Further use of research results will not be unnecessarily restricted, and the terms and conditions of their use will be clearly defined.

The goal is a situation in which research results move freely throughout society – from one researcher or research team to another, between disciplines, to innovative businesses, and to decision-makers and citizens. Promoting open science and research requires not only extensive involvement from the research community, but also cooperation and coordination, internalising new ways of working, and developments in research environments, researcher services and research infrastructures.

Open science and research should increase significantly the quality and competitiveness of Finland's research and innovation system. By increasing openness in research, the aim is to simultaneously improve the reliability, transparency, and impact of science. Openness will create additional opportunities for everyone to participate in scientific advancement and enables easier and more effective utilisation of research results.

The Finnish Open Science and Research Roadmap 2014–2017 is available at website of the Finnish Open Science and Research Initiative: [www.openscience.fi](http://www.openscience.fi)

## **France- Establishment of a National Technology Transfer Fund**

A Call for a « National Technology Transfer Fund » was launched in July 2010 as a part of the French National Investment Plan. The objectives were :

- To enhance technology transfer from public research;
- To put an end to the current fragmentation of technology transfer services, to increase their efficiency in order to better connect both research and academic communities and the business community.

900 M€ were dedicated to create 14 “joint technology transfer offices” (SATT) between universities, research organisations and the French Government. SATTs have a double mission: they aim to pool resources and professionalize technology transfer services at the local level and they fund proof of concept and maturation studies, in close cooperation with the Competitive Clusters. Some of them will also act as incubators.

Link to relevant information on SATTs:

<http://www.enseignementsup-recherche.gouv.fr/cid51354/valorisation-de-la-recherche.html>

## **Hungary - National network promoting Open Access to scientific publications**

The Hungarian Academy of Science (MTA) operates a research network of 15 centres and institutions with about 3 000 researcher and has an open access mandate to ensure open access to all scientific publication submitted for publication after 1 January 2013. The related data so far shows that compliance in the natural and life sciences is over 50%. Moreover the MTA operates a small central fund for open access Article Processing Charges (APCs) to help the scientists, whose project or institute cannot cover APCs.

In parallel with its mandate, the MTA concluded an agreement with Elsevier, (a world-leading provider of information solutions enhancing performance of science) governing the green open access activities in the MTA research network.

The predecessor of the National Research, Development and Innovation Office (Hungarian Scientific Research Fund-OTKA) has also had an open access mandate for all its grantees since 2009. The National Research, Development and Innovation Office is expected to follow open access policies similar to that of OTKA.

In Hungary the individual scientist and research institutes uses the Hungarian Scientific Bibliography (hereinafter: MTMT), a national system collecting all scientific output from the Hungarian higher education institutions, independent research institutes and centres. This system is a mandatory tool to evaluate research grants, individual scientist and research institutes. This bibliography is continuously updated and provides tools to record and monitor the open access status of each publication and various statistics on compliance. All PhD dissertations are required by law to be freely available on the internet . Repositories and MTMT are collecting the dissertations and their access links. Furthermore, all major universities already have their own up-to-date open access repositories or have one in the final stages of development. Repositories are going to be linked to the Hungarian Scientific Bibliography (MTMT).

Moreover the Library and Information Centre of MTA also operates a search engine aggregating open information in the OAI PMH website linking the Hungarian repositories together.

Last but not least, to ensure synergies among national e-infrastructures at European and global level, Hungary participates in PASTEUR4OA Project (Open Access Policy Alignment Strategies for European Union Research) and the so called DART-Europe E-theses Portal, which makes the theses of 8 Hungarian universities available.



### **Ireland - National Intellectual Property (IP) protocol published with the aim of providing industry with easier access to IP from publically funded research**

With a view to driving the commercialisation of publicly-funded research, a national Intellectual Property (IP) Protocol was published in 2012 with the aim of helping to provide industry with easier access to IP arising from publicly funded research.

A key initiative linked to the IP Protocol is the establishment of a central Technology Transfer Office, Knowledge Transfer Ireland ( <http://www.knowledgetransferireland.com>) located in Enterprise Ireland, and funded by EI with co-financing from the Irish Universities Association (IUA). KTI plays a key role in the Irish innovation system by providing a responsive interface between companies and the wealth of technology, skills and “know how” available in the higher education system. One of the many functions of the new office is the provision of a central hub that enables companies to explore, through a web interface, the research resources available to them throughout Ireland.

Expected Impact: State funded technology, ideas and expertise transferred to the maximum extent into the hands of business to drive innovation.

### **United Kingdom - Academia and industry brought together in National Centre for Universities and Business (NCUB) following a national review of university-business collaboration**

The National Centre for Universities and Business (NCUB) was launched in April 2013, building on the twenty-five year history of its predecessor body the Council for Industry and Higher Education (CIHE). Sir Tim Wilson’s review of university-business collaboration published in February 2012 recommended that the CIHE develop to become the focal point of university-business collaboration as a membership charity.

The National Centre acts as a body to increase the prosperity and wellbeing of the UK through world-leading university and business collaboration. It brings universities and business together as equals to nurture the right talent, innovation and expertise for the UK's future growth. Through the NCUB website ([www.ncub.co.uk](http://www.ncub.co.uk)) and flagship reports such as the State of the Relationship report ([www.ncub.co.uk/sor.html](http://www.ncub.co.uk/sor.html)) it showcases and gathers evidence on the best of university-business collaboration across the UK. Through their Task Forces, such as the one they are running on the Food Economy (<http://www.ncub.co.uk/our-initiatives/our-initiatives-food-economy.html>), they bring together leading business and university leaders to understand and tackle issues affecting both the development of research and innovation opportunities as well as the attraction and development of the right talent into the sector.

The National Centre plays an important role gathering evidence on what is happening across for example entrepreneurship and employability activities such as placements (<http://www.ncub.co.uk/placements-hub.html>). NCUB and has also been tasked by the UK government to establish a Smart Specialisation Advisory Hub to support effective design, delivery and alignment of EU, national and local Research and Innovation policies.

Working with UK Research Councils, Funding Councils and Innovate UK, NCUB is developing for launch in 2015, an online brokerage platform to help link business and researchers.

## **ERA PRIORITY 6 - International Cooperation**

### **Germany – National strategy for the internationalisation of science and research from 2008 and 2014 Action Plan of the Federal Ministry of Education and Research**

The German Federal Government adopted a national ‘Strategy for the Internationalisation of Science and Research’ in 2008 which pursues four main goals: strengthening research cooperation with global leaders, international exploitation of innovation potentials, intensifying the cooperation with developing countries in education, research and development and finally assuming international responsibility and mastering global challenges. Following this strategy, Germany has considerably increased and intensified international cooperation by implementing a broad range of measures and through networking at bi- and multilateral level and in the EU context. The strategy is currently further developed under the leadership of the BMBF on the basis of an action plan on international cooperation adopted in October 2014. Several of the actions in the BMBF action plan address the international dimension of the European Research Area and contribute to its further development.

## **Europe - Association of Canada and Korea to the European Research Initiative EUREKA**

The European Research Initiative EUREKA, which covers around 40 European member states and which targets to foster transnational cooperation projects in the field of applied research, has identified cooperation "beyond Europe" as an important new element of its strategy, in the context of its role of supporting the competitiveness of European industry. Beyond "project-by-project" cooperation (which has for long time been possible), the Republic of Korea (since 2009) and Canada (since 2012) have been integrated into the EUREKA network by being granted and "association status", so that 1:1-project cooperation is now also possible with these countries. First assessments are very positive, and Canada and Korea meanwhile rank amongst the most active EUREKA countries. Recently (2014), the Republic of South Africa has been added to the list of associated countries, further might follow within the next years. The association of the Republic of Korea has been the entry point for the country also to join the Eurostars-2-program (joint program of EUREKA and the European Commission according to Art. 185-TFEU to fund collaborative transnational R&D-projects of research-performing SMEs), a participation of Canada to this program is foreseen within shortly. In the context of the collaboration with the countries mentioned, EUREKA has proved to be an important cornerstone of the collaboration spectrum, covering the aspect of (mainly) bottom-up-oriented applied research cooperation.

## **Switzerland- Integrated Policy Approach**

The Swiss government's foreign policy in education, research, and innovation is based on a dedicated international strategy which aligns well with initiatives being taken by the Strategic Forum for International S&T Cooperation (SFIC). The main instruments for research cooperation with target partner countries outside Europe are:

- bilateral programmes with selected countries to promote joint research and exchange projects;
- a network of science and technology counsellors, based at Swiss Embassies;
- the "swissnex" platforms for scientific and technological exchange, which are located in scientific hubs abroad and help to implement this strategy by raising the level of awareness of Switzerland as a location for education, research and innovation.

The Swiss National Science Foundation plays an important role in implementing Switzerland's international research policy with specific instruments. The SNSF is responsible for the management of the joint research projects in the framework of the above mentioned bilateral programmes. Furthermore, the SNSF and the Swiss Agency for Development and Cooperation (SDC) have jointly implemented programmes supporting scientific collaborations between researchers in Switzerland and Eastern Europe or Central Asia (SCOPEs programme) or between researchers in Switzerland and in developing and emerging countries in Africa, Asia and Latin America (r4d programme). While SCOPEs is designed to strengthen individual research capacities, r4d is geared towards research on global development and poverty reduction.

Finally, at the individual level, the Swiss government, through the Federal Commission for Scholarships for Foreign Students (FCS), awards various scholarships to foreign scholars, researchers and artists. These so-called Government Excellence Scholarships provide re-searchers and artists from all fields with the opportunity to pursue doctoral or postdoctoral research in Switzerland at a public university or recognised research institution.