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Realising the New Renaissance. Policy proposals for developing a world-class research and innovation space in Europe 2030

Second Report of the European Research Area Board — 2010

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Launch event Brussels, 20 October 2010



Background

- Initiated by Commissioner, nominated by EC (similar to ERC ScC procedure), fully operational 1st Quarter, 2008 (mandate ends 2-2012)
- Requested to think:
 - out of the box, long term, not process
 - on demand and own initiative:
 - *The contribution of FP7 instruments to the establishment of a genuine European Research Area (February, 2009);*
 - *Networks of Excellence (December, 2009);*
 - *What ambition and policy design for the Research and Innovation Plan? A conceptual contribution from ERAB, integrating its view on the future of Research and ERA with the Innovation agenda (March, 2010);*
 - *The role of Venture Capital for the R&I strategy (April, 2010);*
 - *The role of public procurement for the R&I strategy (April, 2010);*
 - *The communication 'Simplifying the implementation of the Research Framework Programmes' COM (2010) 187 (May, 2010);*
 - *Achieving Cohesion in European Research and Innovation. Excellence and Cohesion: Two sides of the same policy coin (July 2010).*
- Fully supported by Potočnik and Geoghegan-Quinn



ERAB's key question: What European research and ERA by 2030?

3 fundamental drivers:

- Globalisation of the world and of the world of science (European researchers feel acute global pressure)
 - Virtualisation (more than e-science, → mode 2)
 - Grand challenges
- European research (policy) system as it is not seen as apt to make the changes needed.



New Renaissance

- In order to cope with the challenges ahead we need a ‘New Renaissance’.
- The ‘New Renaissance’, is a paradigm shift in how we think, live and interact, as well as a paradigm shift regarding the role and place of science in society.
- The ‘New Renaissance’ calls for our *rationality* and *creativity* - the fundamentals of science - to face the challenges and to help “*inventing*” a new way of living.
- The ‘New Renaissance’ needs a thriving and open ERA by 2030.



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ERA 2030: ERAB's STRATEGIC VIEW

October 2009



6 strategic approaches for ERA

1. A united ERA across Europe
2. An ERA driven by societal needs to address the 'Grand Challenges'
3. An ERA based on a shared responsibility between science, policy and society
4. An ERA of open innovation between all public and private stakeholders
5. An ERA to deliver excellence
6. An ERA of cohesion across the continent

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1 & 6 → Global challenges

2 & 3 → Grand challenges

4 & 5 → E-science and Europe

The ERA is necessary

Action required by 2030 on 6 fundamental themes

The European Research Area comprises many people and institutions – but unless they work together, in a borderless marketplace for talents and ideas, they will be ineffectual.

We are concerned by the fractured state of the ERA today: still too much driven by inward-looking national priorities, too much centralism and sub-optimal institutional and legal frameworks. In view of the challenges our planet and Europe face, we must act, and act now. Otherwise, Europe will not only become marginalized in a global market, but will fail to contribute to solving our greatest challenges. As a result, bold leadership along six policy themes is needed to achieve a fully functioning ERA by 2030:

1. A united ERA to permit ideas and people to move freely across a dynamic and open society.
2. An ERA driven by societal needs to address the 'Grand Challenges', such as climate change, energy supply, water resources, ageing societies, healthcare and sustainable prosperity for all.
3. An ERA based on a shared responsibility between science, policy and society, where public policy is based on evidence and underpinned by a 'new social contract' between science and society that emphasizes responsibility for action as well as freedom of thought.
4. An ERA of open innovation between all public and private stakeholders so as to strengthen our research base and our economy.
5. An ERA to deliver excellence where risk-taking in research, regardless of its public or private origin, will be the guiding principle for the ERA policy.
6. An ERA of cohesion across the continent to allow all European research actors to take part in the knowledge-based society.



77 recommended actions to realise 27 milestones

ERAB Vision: goals by 2030	Recommended Actions	Impact by 2030
<p>1. The EC's share of ERA-wide public, non-military research funding doubles to 10%.</p>	<p>1.1 The current funding for thematic research programmes is maintained to at least the present levels (Cooperation programme).</p>	<p>The innovation gap with the US and other innovation leaders is reduced to zero and Europe acts as a role model in research and innovation with respect to addressing the "Grand Challenges", such as climate change, energy supply and ageing societies.</p> <p>Europe increases its share of top-ranked universities (see theme IV) and becomes more attractive for private investment on research.</p>
	<p>1.2 The overall research budget is increased by adding a tenth of a percentage point to VAT, for the benefit of research into grand challenges.</p>	
	<p>1.3 30% of the Structural Funds are used for research, development and innovation (RDI), 10% of the Common Agricultural Programme budget goes specifically to agricultural research dedicated to agri-based issues in food, health and energy.</p>	

This was the basis for a big stakeholders' conference in May 2010 (under the Spanish EU Presidency), where Máire Geoghegan-Quinn challenged ERAB to come up with the top 10 integrated recommendations for action (finalised in September 2009 and to be made public on 20 October 2010 as ERAB's 2nd annual report).



Realising the New Renaissance

Policy proposals for developing a world-class research
and innovation space in Europe 2030

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ERAB 2nd report – October 2010

SHORT-TERM (immediate action)

- 1 Create a single **EU-wide patent** and an **Open Innovation Charter**
- 2 Agree on a fast track timeline for a **full and widespread implementation of pre-commercial procurement** of Research and Development (R&D).
- 3 **Concentrate Research & Innovation (R&I) funding** around a selection of themes relevant for "Europe 2020"
- 4 Create an annual "**City/region of Innovation in Europe**"
- 5 Make an **EU Framework Directive on Research & Innovation** focusing on creating a single market for RDI.

MID-TERM (3-5 years)

- 6 **Fully implement pre-commercial procurement** of Research and Development (R&D) around a few commonly agreed big projects
- 7 **Concentrated and streamline** all R&D funding in the Eight Framework Programme (FP8) by minimising management obligations for all funding schemes and by earmarking 30% of the Structural Funds and 10% of the Common Agricultural Policy (CAP) for RDI projects
- 8 **Foster an acceptable degree of risk taking and excellence** throughout **all** RDI programmes
- 9 Create a **European Venture Capital fund** capable of investing in early stage "proof of concept" and business development prior to commercial investment

LONG-TERM (5+ years)

- 10 Make **result and risk-oriented funding** of research and innovation projects the dominant criterion for R&I funding of the EC

TIME TO GO GLOBAL



RECOMMENDATIONS FOR IMMEDIATE ACTION

1. Create a single EU-wide patent and an Open Innovation Charter.

- ▶ ERAB recommends the Belgium Presidency to make the Community Patent a reality as soon as possible.
- ▶ ERAB recommends that awareness among EU researchers on Intellectual Property Rights should be raised and that academic credibility and ratings place more importance on these marks of esteem.
- ▶ ERAB recommends developing an Open Innovation Charter, to be ready for endorsement by key stakeholders in 2012. This OI Charter should build on the 2008 EC Recommendation on the management of intellectual property in knowledge transfer activities and Code of Practice for universities and other public research organizations.
- ▶ ERAB recommends against imposing mandatory adherence to the Open Innovation Charter by all beneficiaries of such programmes or even by all RDI actors, to prevent a regulatory straightjacket stifling innovation and in line with the Union's efforts towards "Better Regulation and Simplification."
- ▶ ERAB recommends that these restrictions need to be clarified (as elaborated in the Responsible Partnering Handbook) in the forthcoming revision of the State aid framework and have to be complemented by operational guidance in the Open Innovation Charter.



2. Agree on a fast track timeline for a full and widespread implementation of pre-commercial procurement of Research and Development (R&D).

- ▶ ERAB recommends agreeing on a fast track timeline for a full and widespread implementation of pre-commercial procurement of R&D.
- ▶ ERAB recommends the following immediate actions:
 - Accept that Public procurement of innovative solutions and technologies entails risks and promote the acceptance of a certain degree of risk among governments, politicians and the general public at large.
 - Provide public procurers with tools for managing rather than avoiding risks.
 - Develop smart incentives from the EU budget for public procurers to use PCP, to share risks and bundle procurement among Member States to create more interesting markets.
 - Make (part of) EU co-funding in the context of the Structural Funds conditional to procurement of innovative technologies and R&D, also as a means of gearing cohesion policy more towards stimulating R&D and innovation.
 - Clarify that PCP will be assumed to take place at market conditions (and hence without State aid) if the tendering process ensures maximum competition, transparency, openness, fairness and pricing conditions.



3. Concentrate RDI funding around a selection of themes relevant for "Europe 2020: A strategy for smart, sustainable and inclusive growth".

- ▶ ERAB recommends that a focused, fast and efficient implementation of a limited number of high impact research programmes is pursued.

4. Create an annual "City/Region of Innovation in Europe".

- ▶ ERAB recommends that, analogous to the European Capital of Culture, the European Union should award the title of the European Capital/Region of Research, Development and Innovation in open competition.



5. Issue an EU Framework Directive on Research & Innovation focusing particularly on creating a single market for Research Development and Innovation.

- ▶ ERAB recommends that the EC sets out its big ambitions in a Framework Directive. This directive should allow action to:
 - Harmonise and strengthen public and pre-commercial procurement schemes;
 - Create a European Research Certificate/Passport to enhance mobility of researchers;
 - Support pan-European Graduate/Research Schools focused on Grand Challenges, including the possibility of developing a high level European/International PhD;
 - Foster flexible cross border research funding;
 - Establish a European Peer review College for projects addressing Grand Challenges.



RECOMMENDATIONS FOR MEDIUM-TERM ACTIONS

6. Fully implement pre-commercial procurement of Research Development and Innovation around a few commonly agreed big projects.

- ▶ ERAB recommends creation of a body that would implement the process for this pre-commercial procurement of RDI.

This could be a further development of the European Institute of Technology or a similar body able to take high risks and to look for projects that genuinely tackle new technologies.

Every effort should be used to present these procurement projects in a high profile way. It is essential that all citizens own the success or failure of such programmes.



7. Concentrate and streamline all R&D funding in the Eighth Framework Programme (FP8) by minimising management obligations for all funding schemes and by earmarking 30% of the Structural Funds and 10% of the Common Agricultural Policy (CAP) for RDI projects.

- ▶ ERAB recommends a more integrated approach to the total spend on RDI that ensures that all Commission supported programmes are assessed to ensure optimisation of investment and to avoid duplication.

- ▶ ERAB recommends the following measures:
 - A greater element of risk is taken in the use of structural funds and that a certain proportion is held centrally to support projects that are specifically pan-European interest and potentially contributing to solving the Grand Challenges;

 - Urgent attention is paid to the way structural funds are administered such that they are used to maximise the return on investment not only in monetary terms directly but also in other areas such as training, mobility, and the raising of standards of research and innovation;

 - The training of project managers for creating and operating large research projects and infrastructures is a priority for long term funding within the structural fund programme.

 - One of the acknowledged Grand Challenges is the provision of healthy food and drinkable water for all citizens.

 - ▶ ERAB recommends that this is supported using funds from the Common Agriculture Policy in order to bring further innovation into this sector.



8. Foster an acceptable degree of risk taking and excellence throughout all Research Development and Innovation (RDI) programmes.

► ERAB recommends:

- Establishing a set of arm-length agencies as a basis for the governance system for European research funding building on the successful model of the European Research Council.
- Developing “Gold Standards” and train reviewers, auditors and researchers across Europe.



9. Create a European Venture Capital fund capable of investing in early stage "proof of concept" and business development prior to commercial investment.

- ▶ ERAB recommends the establishment of a major European Venture Capital Fund with co financing from the European Commission, the European Investment Bank group and private institutional investors.

- ▶ Its should include:
 - Complementarity to similar national schemes within the ERA;
 - A multi-billion contribution from the EU budget, to attract sufficient contributions from co-investors;
 - Complementarity to the Risk-Sharing Finance Facility (RSFF) for investing in R&D and innovation;
 - Management with a strong selection step guided by Venture Capital specialists, milestone driven cut-off points, and an appreciation of the difference in timelines between different sectors (e.g. biotech vs. ICT);
 - Focus on early-stage support to young innovative firms for “proof of concept” and business development;
 - Preferential access to FP beneficiaries, with the combined benefits of adding value to FP research, driving FP research closer to innovation, attracting more SME s to the FP, and building on pre-screened excellent research;
 - Recycling of returns on investments into the fund, as this should allow the initial impulse from the EU budget to create a revolving fund in the longer term.



- ▶ To further increase the availability of venture capital, the following additional measures are required:
 - The establishment of an integrated Venture Capital market within the EU by removing fiscal, regulatory and bureaucratic obstacles to cross- border investments;
 - The creation of efficient, integrated, pan-European trading platforms and quoted stock market(s) for young innovative companies;
 - The stimulation of business angel investments;
 - The provision of fiscal incentives for individual, corporate and institutional investors, Venture Capitalists, business angels and young innovative companies.



RECOMMENDATIONS FOR LONGER TERM ACTIONS

10. Make result and risk-oriented funding of research and innovation projects the dominant criterion for R&I funding of the EC.

This requires a paradigm shift in the way all stakeholders view Research and Development funding.

► ERAB recommends that by 2030 50% of EC research funding should go to frontier, high-risk research and development.



TIME TO GO GLOBAL

Europe takes the lead to address the Global Challenges: "A Davos for Research, Development and Innovation"

- ▶ ERAB recommends that Europe should take the lead in inviting all global stakeholders to participate on an annual basis to make top-level policies and monitor progress on common Research and Innovation (R&I) actions for tackling the Global Challenges.
- ▶ ERAB recommends that the EC starts putting together ideas on the modus operandi of such a forum that can then be discussed with high level officials from other regions.

This group should be set up immediately with a time line for the first meeting of the forum to be held within two to three years and thereafter the forum should meet on a yearly basis to start new programmes and to review progress.