



Euro-CASE

**European Council of Academies of Applied Sciences,
Technologies and Engineering**

Euro-CASE Position Paper on European Research Area

Preamble

The European Council of Academies of Applied Sciences, Technologies and Engineering is an independent non-profit organisation of national academies of Engineering, Applied Sciences and Technology from 21 European countries. Euro-CASE acts as a permanent forum for exchange and consultation between European Institutions, Industry and Research.

Through its Member academies, Euro-CASE has access to top expertise (around 6,000 experts) and provides impartial, independent and balanced advice on technological issues with a clear European dimension to European Institutions, national Governments, companies and organisations.

The major challenges facing society, such as the ageing population, energy, security, migration and health, demand a strong level of international co-ordination, and a concerted effort to leverage the innovative capacity of European researchers. It is thus an urgent necessity that Europe develops a strong focus on the interaction of research and innovation in order to successfully address and overcome these challenges, and to foster growth, competitiveness and well-being in the 21st century. Euro-CASE strongly supports the realisation of the European Research Area as the basis for tackling this innovation challenge, through the provision of a stable framework for the promotion, funding and co-ordination of European research and innovation.

Euro-CASE believes that an ERA can only function if research and innovation policy infrastructure is embedded in the new member states as the basis for future economic growth and social well-being. As the umbrella group bringing together 22 national academies of engineering and technical sciences from the old and new Member states, Euro-CASE believes that it can offer the Commission assistance in identifying and developing engineering excellence in the EU12, and linking it with best-practice in academia and industry in the older Member states.

Euro-CASE considers the following areas to be especially relevant for achieving a strong European research area that supports the sustainability of the European Union in the global competition among knowledge-based economies.

- More intensive support of European careers for young researchers
- Better knowledge transfer between academia and industry to promote innovation
- Increased engagement with industry

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1. Intensified support for European research careers

To drive forward Europe's knowledge-based economy, it is of the utmost importance to train and retain the best young researchers from academia, research institutions and industry. This calls for the ability to offer higher-quality training and more attractive career opportunities than are available today.

Euro-CASE welcomes the various measures initiated so far by the Commission, such as measures for promoting researcher mobility in the ERA (2001), measures for promoting career opportunities (2003), the European Charter for Researchers (2005) and the Code of Conduct for the Recruitment of Researchers. However, too many European university and PhD graduates are leaving academia or taking up research posts outside Europe.

To counteract this trend effectively, the EU and its Member States must work closely together and, above all, they must adopt a joint, coherent and synergetic approach to ensure the successful implementation of a number of measures.

1. Open recruitment procedures, open employment market

The lack of an open employment market is discouraging scientists from taking up careers in research in Europe. This is due to various national laws and procedures that continue to hinder or prevent competitive recruitment practices.

Measures encouraging open recruitment:

- Provision of open, transparent and competitive recruitment practices by granting autonomy to institutions in recruitment matters and the application of tried-and-tested procedures in the recognition of qualifications from other countries.
- Establishment of appropriate information and support services for researchers
- Portability of grants for individuals if this helps shape the research goals and career of researchers more effectively

2. Social insurance and supplementary pensions for mobile researchers

The application of different national laws for mobile employees can sometimes have a negative impact. As researchers often conclude several short-term contracts during their career, clear and straightforward regulations for social insurance and pensions are essential. Existing legislation and working practices in the area of social security must be improved.

Measures for clear regulations for social insurance and pensions:

- Provision of targeted information on the implementation of social insurance regulations within the EU and the effects of cross-border mobility on supplementary pension rights
- Use of existing legal frameworks to draw up exemptions in the interest of researchers
- Implementation of a European pension scheme for scientists to encourage maximum mobility within the ERA

3. Attractive employment and working conditions

Good employment and working conditions are essential for promoting careers in science. Key factors include financial aspects, a successful balance between career and family, the recognition of research achievements and a pleasant working environment.

Measures for attractive employment and working conditions:

- Granting of the greatest possible autonomy for researchers in their research work
- Introduction of attractive training options
- Implementation of a standardised policy to advance gender equality, e.g. harmonisation of career and family, dual careers

4. Improvement of training, skills and experience of European researchers

Against the backdrop of promoting openness in the field of innovation, researchers must be equipped with the skills needed to perform the various tasks demanded by the knowledge-based economy. Building bridges between top public research facilities and industry is an

essential criterion for this. In future, the focus must be on interdisciplinary research, competitive promotion and funding, international cooperation and the translation of research results into innovative products.

Euro-CASE believes that the innovations of the future will come from international research networks working at the intersection of traditional disciplines. Yet too often, younger researchers in both academia and industry do not receive opportunities to conduct research outside their narrow disciplinary silos. For this reason, it collaborates with the US National Academy of Engineering in organising annual EU-US Frontiers of Engineering symposia-meetings which bring together the best European researchers under the age of 40 from industry and academia with their US counterparts to discuss cutting edge interdisciplinary research in strategically important areas, and to seed future collaborative research activity.

Measures for improving the training, skills and experience of European researchers:

- Development of research sabbatical programmes for European scientists to improve mobility at all career stages
- Improving the flexibility of exchange programmes between companies and public institutions to foster their interdependence
- Provision of financial support by industry for PhD candidates and involvement of industry in training initiatives
- Support for EU level activities to increase the international interdisciplinary networks of promising younger researchers, such as the EU-US Frontiers of Engineering symposia

2. Innovation and Knowledge Transfer between Academia and Industry

The science and technology push for innovation must be complemented by an industry perspective for innovation and a market-demand led need. In particular the Commission must move from a narrow model of innovation which concentrates on commercialising academic discoveries ("from research to commercialisation") towards a more effective and inclusive innovation stimulation strategy addressing both academic research and research in commercial firms. An adequate understanding of innovation has to consider the social as well as the technological aspects of innovation processes. That is why the social sciences and the humanities will play an important role in successfully implementing innovations, for example, through studies on technology acceptance, market and societal impacts, and risk analysis.

Measures to be taken:

- Support for a trans-European incubator systems – incubators have been successfully implemented in EU individual countries; Israel can be taken as a role model
- Harmonization of the public procurement system and the general terms and conditions used in the member states
- Innovation procurement to be linked into a common strategic framework for EU research and innovation funding
- Support implementation of a Small Business Innovation Research (SBIR) system
- Further harmonization of business and legal frameworks in order to allow for economies of scale and profitable innovation
- Improved access to early stage venture capital in Europe
- Full implementation of the EU patent

3. Increased engagement with industry

In order to strengthen the EU's innovation potential, and to increase Europe's competitiveness, greater emphasis must be placed on the integration of industry into

European research and innovation activity. Euro-CASE notes with concern a decline in industry participation in successive framework programs (FPs), from 39% in FP4 to 25% in FP7. The decline in participation among SMEs is even more startling: while SMEs accounted for 21% of funding in the 4th FP, this figure had fallen to just 9% in the 6th FP, representing an absolute fall in SME research funding. Euro-CASE believes that the European Research Area can create the right conditions to encourage industry involvement in research and innovation at a European level, by simplifying procedures, cutting down on bureaucracy, and making research schemes more attractive to both large and small businesses.

Measures to be taken:

- Provide funding for a larger number of bigger projects that are also of sufficient interest to industry, particularly in the area of key enabling technologies.
- Expand the options for participating in EU programmes (SMEs, new Member States, third countries).
- the excellence of science and industry in all European Member States, e.g. by strengthening joint bilateral structures for technology and innovation transfer, expanding network activities to strengthen cooperation in different geographic regions, new structures, joint research and/or innovation projects, etc.
- Make alternative methods of financing available, such as loans from the European Investment Bank, and promote venture capital.
- Intensify shared processes and projects to identify promising areas of research, competitive products and services through interaction between industry, business and government.
- Continue and drive forward the JTI by standardising and streamlining the administrative structures.

Measures to simplify procedures and minimise bureaucracy:

- Create a clear, flexible and uncomplicated form of European cooperation between SMEs and industry on the one hand and universities and research institutes on the other through defined partnerships and model contracts.
- Ensure greater transparency when awarding research funding, particularly a standardised interpretation of the guidelines.
- Remove obstacles that hamper the formation of consortiums to generate the best possible results, e.g. ease involvement of third parties, encourage acceptance of small project teams, finance international partnerships.
- Speed up the processing and approval of applications.
- Simplify and minimise bureaucracy, e.g. avoid duplication of reporting where there are several channels of funding and other redundant steps and administrative outlay.
- Introduce 100% funding for all direct project costs (including management, research, demonstration, etc.) for SMEs and industry as well as academia.
- Define clear benchmarks with which to measure success, and introduce clearer regulations for taxation of research activity.

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