



Green Paper – From Challenges to Opportunities : Towards a Common Strategic Framework for EU Research and Innovation funding

Questions

1) How should the Common Strategic Framework make EU research and innovation funding more attractive and easy to access for participants? What is needed in addition to a single entry point with common IT tools, a one stop shop for support, a streamlined set of funding instruments covering the full innovation chain and further steps towards administrative simplification?

We welcome the Commission's recognition that there is a need for simplification. We also welcome that the commitment has been echoed by both the European Parliament and Council. More simplification is needed and it must be thought through now, as the Financial Regulation is currently being reviewed. We would like three principles to underpin any future simplification.

A focus on the end user

Simplification must be aimed at simplification for the end users - industry, SMEs and researchers are FP7's clients.

There needs to be a simplified and faster application and payment procedure. We would urge the Commission to address the 'time to grant' period, which leads to long periods of uncertainty. Planning and reporting procedures also need to be simplified.

A science based approach

We would strongly advocate a science based approach for the research element of innovation, as opposed to a results centred approach.

Risk tolerant approach

The tolerable risk of error should be increased and a clear distinction made between error and fraud. The default position should be the acceptance of the usual accounting and management principles and practices of the beneficiary, with the onus on the EU to justify additional practices.

2) How should EU funding best cover the full innovation cycle from research to market uptake?

Expecting EU funding to cover the full innovation cycle without increasing the means available, runs a very serious risk of diluting what is already a relatively small budget. At a time of economic crisis Europe needs to focus more resources on funding that

produces growth and renew its commitment to a knowledge based economy. An EU budget that was committed to growth and jobs, should reconsider the current balance of funding and do more to support excellence in research and innovation.

As well as additional funds as a proportion of the budget, we would also like to see the CSFRI work more coherently with other Funds, most notably, the Structural Funds could do much more to support education, skills, innovation (that is research and its attendant commercialisation) and research infrastructure. The ESF (European Social Fund) should focus on the skills needed to support innovation, at a European level it is most appropriate to encourage the higher level skills, whilst using the Open Method of Coordination, to develop more basic skills.

3) What are the characteristics of EU funding that maximise the benefits of acting at the EU level? Should there be a strong emphasis on leveraging other sources of funding?

The EU should continue to promote the use of EU funds to leverage private funding. In particular, involving industry in PPPs and JTIs are effective ways of ensuring that funding is of relevance to the public at large and is also relevant to innovation.

We believe that much more could be done to leverage private finance. In particular, some European Technology Platforms have demonstrated both a strong commitment to the EU's wider goals, such as sustainability, and good industry involvement to ensure that research investment will also lead to innovation and that new greener technology is widely adopted.

4) How should EU research and innovation funding best be used to pool Member State resources? How should Joint Programming Initiatives between groups of Member States be supported?

The Joint Programming Initiatives should be welcomed as a way to allow for more effective use of resources and to reduce fragmentation and duplication, nevertheless, we would emphasise that they should take a 'bottom up' approach. The 'variable geometry' approach is open and flexible, but also excludes researchers from countries whose national authorities have chosen not to participate in a particular JPI theme. The EU could allow for a more inclusive approach by encouraging JPIs to involve expertise from panEuropean learned societies, such as EuChemS, that could allow for wider dissemination of JPI activities, and encourage the involvement of those countries not currently involved in a JPI. EU involvement could be used to facilitate participation of those researchers who are not nationals of a country that is involved in a particular JPI theme.

5) What should be the balance between smaller, targeted projects and larger, strategic ones?

Smaller, targeted and strategic projects are different instruments with different objectives. Thus, the question is not so much the balance between the instruments, but instead the balance between the general objectives.

6) How could the Commission ensure the balance between a unique set of rules allowing for radical simplification and the necessity to keep a certain degree of flexibility

Radical simplification and flexibility are not contradictory objectives. One of the objectives of simplification should be that it enables flexibility.

The EU provides considerable support to national contact points, to inform and explain the workings of the framework programme. Pan-European learned societies that are also committed to this role, rely heavily on membership fees to fund similar services and provide these services on a European level. EuCheMS provides a single voice for the chemistry in Europe, by working at a European level, EuCheMS already encourages cross EU level partnerships, through our divisions and working groups. The quality of national contact points and understanding of EU funding developments varies enormously across Europe. We believe that the Commission should consider grants to support the work of learned societies in disseminating information on European programmes by supporting bodies like EuCheMS that are non-profit making and committed to reaching all members of their constituent societies, as well as providing this information to all through their websites.

7) What should be the measures of success for EU research and innovation funding? Which performance indicators could be used?

Success should not be measured by outputs, but by outcomes. By focusing on outcomes, the EU has a better possibility of addressing all aspects of the innovation chain, especially the demand led aspects. Without a focus on outcome the EU will not reach its innovation objectives. We suggest using the evaluation criteria which are established in the various scientific and technological areas, but to avoid over-evaluation.

By its nature it is difficult to impossible to define performance indicators for frontier based research. If it was possible to assign performance indicators, it would be questionable if the research was 'frontier' research. The best indicator for the European Research Council should be an approach where the sole driver is the commitment to excellence.

Industry alone, cannot provide the research funding necessary for blue skies, breakthrough, technological development – and if the European Union exhortation to be a 'knowledge based economy' has any meaning, it must support ground breaking technological development.

8) How should EU research and innovation funding relate to regional and national funding? How should this funding complement funds from the future Cohesion policy, designed to help the less developed regions of the EU, and the rural development programmes?

As mentioned in the response to question 2, CSFRI's limited budget cannot shoulder sole responsibility for the creation of an Innovation Union. National funding aside, ERDF and ESF, for example, can play a much larger role.

ERDF should promote national and regional innovation systems and open innovation. Programmes like Interreg for inter-regional cooperation should do more to support pan-European innovation in different sectors. ERDF should be used to increase R&I capacities, of SMEs in particular, and strengthen links to Universities and R&D.

Where a country receives cohesion funding, the EU should consider doing much more to support the education and higher education systems of those countries, in particular in supporting science and engineering. It is also important that basic research should not be neglected in these countries. At the moment most ERC grants are awarded to EU 15 countries, most Marie Curie fellowships go to a small number of countries with strong research infrastructures. This trend is hard to change and programmes like ERC must remain dedicated to excellence and not 'juste retour', nevertheless, the Commission should investigate whether the EU's regional funds could do more to support the promotion of basic research in these countries.

The promotion of innovation should not be dictated at an EU level, but from a bottom-up partnership approach involving local experts, businesses, research centres, universities and other important stakeholders.

9) How should a stronger focus on societal challenges affect the balance between curiosity-driven research and agenda-driven activities?

Scientific breakthroughs require advances in fundamental knowledge and support for curiosity driven research. Underpinning scientific knowledge is critical to ensuring future innovation. The EuChemS roadmap for the chemical sciences will have a section on, 'Breakthrough Science' the different areas that should be supported, including : catalysis; formulation; chemical biology; and, synthesis. New technologies require breakthroughs. Developments in these technologies are critical to creating a low carbon, energy efficient, knowledge-based economy, this is essential for the future welfare, prosperity and sustainability of all.

10) Should there be more room for bottom-up activities?

The current Cooperation Programme, identifies European interests that need scientific solutions, research emanating from the Cooperation programme is designed with a specific European objective in mind. The Cooperation Programme takes a more 'top down' approach. Whilst responsive funding is needed, we feel that there should be a better understanding of the innovation chain from basic research to exploitation, a research driven approach should also be encouraged in the Cooperation programme or its successor. Likewise, joint programming initiatives, should place a stronger emphasis on bottom-up activities.

11) How should EU research and innovation funding best support policy making and forward-looking activities?

In 2009 Commission President Barroso made a pledge to the European Parliament to appoint a Chief Scientific Officer for the EU to brief and advise the European Commission to support its policy making role. We would like the Commission to appoint a Chief Scientific Officer. We would also welcome the suggestion that each Directorate General should employ a scientific advisor.

The Chief Scientific Officer should ensure that the best science and engineering advice is brought to bear effectively on Government policy and decision-making. The Chief Scientist should also be seen as an authoritative and independent voice working with the Commission, the scientific community and the media to ensure that the scientific method, risk and uncertainty are understood by the public.

Given the scale of the challenges facing Europe and the World, the Commission's policies must be underpinned by robust science and engineering evidence and long-term thinking.

12) How should the role of the Commission's Joint Research Centre be improved in supporting policy making and addressing societal challenges?

The Joint Research Centre (JRC) has undergone an important transformation during the last years, not only does the JRC support important research, it provides scientific and technical support for the conception, development, implementation and monitoring for EU policies. There are several examples of where the JRC has been active in addressing societal challenges fields, such as, air quality and water are clear examples of where the JRC has played a major role in ensuring a scientifically rigorous approach that protects citizens and the environment. The JRC has also taken a leading role in certifying reference materials

More should be done to disseminate the activities and technical capability of the JRC. There should also be more collaboration with universities by JRCs, even if those universities aren't EU Member States. Access to large facilities and the research infrastructure of JRCs should be strengthened. The possibility of increasing the number of PhDs should also be considered.

JRCs could have a stronger role in supporting the research in less advanced countries, in order to improve the level of research across the EU. In this context knowledge transfer becomes essential and will assist many Member States in building up excellence. The high level achieved by the JRC in the environmental protection, for example, should be transferred to national and regional structures.

The JRC activities should not be limited to the interaction with policy needs of the Commission Services, freedom in research will lead to new ways of learning.

It should also be mentioned that the JRCs have played an important role in international cooperation, for example, in the Assessment of African Protected Areas, the Soil Atlas of Africa, the Global Atlas of Desertification as well as the security policy by means of satellite remote sensing of damaged territories in Lebanon and Georgia.

13) How could EU research and innovation activities attract greater interest and involvement of citizens and civil society?

By being relevant to their day to day lives, by improving their economic well being and quality of life and by contributing to solutions to global problems, such as, energy efficiency and climate change. The EuCheMS Roadmap for the Chemical Sciences, that is currently being developed, will address many areas of daily

relevance to citizens, including : water; health; food; energy; and, resource efficiency.

14) How should EU funding best take account of the broad nature of innovation, including non technological innovation, eco-innovation and social innovation?

This has been addressed in question 2.

15) How should industrial participation in EU research and innovation programmes be strengthened? How should Joint Technology Initiatives (such as those launched in the current Framework Programme) or different forms of 'public-private partnerships' be supported? What should be the role of European Technology Platforms?

This has been addressed in question 3.

16) How and what types of Small and Medium-sized Enterprises (SME) should be supported at EU level; how should this complement national and regional level schemes? What kind of measures should be taken to decisively facilitate the participation of SMEs in EU research and innovation programmes?

No comment.

17) How should open, light and fast implementation schemes (eg building on the current FET actions and CIP eco-innovation market replication projects) be designed to allow flexible exploration and commercialisation of novel ideas, in particular SMEs?

FET and CIP actions have been successful in supporting SMEs, therefore we recommend maintaining the current structure for future programmes. An increase of funding allocated for actions to support SMEs would be beneficial as one of the criticisms of CIP has been its limited funds.

Combine loan guarantees and small grants depending on the development stage of the SMEs.

18) How should EU level financial instruments (equity and debt based) be used more extensively?

Venture capital schemes supported with ERDF (European Regional Development Fund) and EIB (European Investment Bank) schemes must be less risk averse and provide greater support to knowledge transfer, innovation centres and university spin-off companies. We believe that the Commission should build on the success of the Risk Sharing Finance Facility (RSFF).

19) Should new approaches to supporting research and innovation be introduced, in particular, through public procurement, including through rules on pre-commercial procurement, and/or inducement prizes?

No comment.

20) How should intellectual property rules governing EU funding strike the right balance between competitiveness aspects and the need for access to and dissemination of scientific results?

No comment.

21) How should the role of the European Research Council be strengthened in supporting world class excellence?

The best way to ensure an enduring impact is for the ERC to continue to promote excellence. We congratulate the EU for the creation of the ERC and a researcher driven approach. A bottom-up approach is the best way to ensure that the most cutting edge and inventive solutions are produced, these solutions will be the most enduring. The ERC has been a success and funding for this area must be increased if the EU wants to remain as a leading economic player at a global level.

22) How should EU support assist Member States in building up excellence?

As already mentioned in the response to question 2, the EU could do much more to support excellence, particularly in new EU Member States. The EU can also support excellence by playing showing leadership in funding excellence through the ERC.

23) How should the role of Marie Curie Actions be strengthened in promoting researcher mobility and developing attractive careers?

Marie Curie actions have made a very important contribution to supporting high quality research throughout Europe, their research impact should not be underestimated. Increased mobility and training should ensure that Europe has the most up to date skills. We know that skilled researchers with the most up to date skills are best placed to turn basic research to economic benefit. The Marie Curie Industry-Academia Pathways and Partnerships (IAPP), is a particularly good example of a tool to support this sort of knowledge transfer.

24) What actions should be taken at EU level to further strengthen the role of women in science and innovation?

Further steps to increase female participation in EU research programme are needed. Measures to boost female participation should be reinforced. More needs to be done to address gender gaps, especially where women face specific obstacles. The Commission should consider a dedicated scheme under the Marie Curie actions. We agree with the expert evaluators of FP7 that the 40% target for female participation in Programme and Advisory Committees should be sensitively but rigorously implemented.

We would also like to highlight that EuCheMS has published a book on 'European Women in Chemistry' as part of our celebrations for the International Year of Chemistry.

25) How should research infrastructures (including EU-wide e-Infrastructures) be supported at EU level?

EuCheMS would like to see continued funding for the capacities element in the current framework programme. European Research Infrastructures (ERIC) should look at access by SMEs to research infrastructure and look examine how Structural Funds could be used to support research infrastructure.

26) How should international cooperation with non-EU countries be supported e.g. in terms of priority areas of strategic interest, instruments, reciprocity (including on IPR aspects) or cooperation with Member States?

There are many examples of where strong international cooperation with non-EU countries is currently being encouraged. For example, work with Japan on superconductivity. There are many other areas where cooperation outside the EU-27 and associated states is proving beneficial. Research is a global business, Europe must do more to attract the best talent.

The issuing of 'Research Green Cards' that allows and encourages talent from outside the EU to live and work in Europe would be a positive signal to the international research community. A system that allowed researchers to benefit from the possibility of living and working across the EU and not just in the EU country where they had legal residence would send a message that Europe welcomed talent.

27) Which key issues and obstacles concerning the ERA should EU funding instruments seek to overcome, and which should be addressed by other (eg legislative) measures?

Issues associated with mobility have already been mentioned in response to question 23.