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EUROPEAN COMMISSION

Brussels, 15.2.2011  
COM(2011) 48 final/2

Corrigendum : chapitre 5, deuxième paragraphe, adresse internet  
Concerne toutes les versions linguistiques

## **GREEN PAPER**

### **From Challenges to Opportunities: Towards a Common Strategic Framework for EU Research and Innovation funding**

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#### 1. PURPOSE

**This Green Paper launches a public debate on the key issues to be taken into account for future EU research and innovation funding programmes.** These programmes will be part of the Commission's proposals for the next Multi-annual Financial Framework (MFF) to be presented in June 2011. Specific proposals for funding programmes are due to be adopted by the end of 2011. **The research, business, government and civil society communities and citizens are called upon to engage in this important debate.**

Delivering on the widely supported Europe 2020<sup>1</sup> objectives of smart, sustainable and inclusive growth depends on research and innovation as key drivers of social and economic prosperity and of environmental sustainability. This is why the European Union has set itself, in the context of the Europe 2020 strategy, the objective to increase spending on R&D to reach 3 % GDP by 2020. The Innovation Union flagship initiative<sup>2</sup> advocates a strategic and integrated approach to research and innovation. This sets the framework and objectives to which future EU research and innovation funding should contribute, based on the provisions of the Treaties<sup>3</sup>.

The Council<sup>4</sup> called for future EU funding programmes to focus more on Europe 2020 priorities, address societal challenges and key technologies, facilitate collaborative and industry-driven research, streamline the instruments, radically simplify access, reduce time to market and further strengthen excellence.

The Budget Review<sup>5</sup> put forward key principles which should underpin the future EU budget: focussing on instruments with proven European added value, becoming more results-driven and leveraging other public and private sources of funding. The Budget Review proposed that the full range of EU instruments for research and innovation work together in a **Common Strategic Framework**. At its meeting on 4 February 2011, the European Council discussed innovation and supported the concept of the Common Strategic Framework to improve the efficiency of research and innovation funding at national and EU levels. This Green Paper identifies key questions on how to achieve these ambitious objectives.

While this Green Paper focuses on research and innovation, there are important links to other EU programmes, as identified in the Budget Review, and notably with the future Cohesion policy Funds and Education programmes.

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<sup>1</sup> 'Europe 2020: A European strategy for smart, sustainable and inclusive growth' - COM(2010) 2020.

<sup>2</sup> 'Europe 2020 Flagship Initiative Innovation Union' - COM(2010) 546.

<sup>3</sup> Treaty on the Functioning of the European Union, Titles XVII 'Industry' and Title XIX 'Research and Technological Development and Space'; Euratom Treaty, Title II, Chapter 1 'Promotion of research'.

<sup>4</sup> Council conclusions on Europe 2020 flagship initiative: Innovation Union. 26.11.2010.

<sup>5</sup> 'The EU Budget Review' - COM(2010) 700.

**EU research and innovation funding and initiatives in the current programming period (2007-2013)**

- *The Seventh Framework Programme<sup>6</sup> (FP7) with its budget of 53.3 billion euro supports research, technological development and demonstration activities across the EU. Its activities are implemented under four Specific Programmes: Cooperation, Ideas, People and Capacities; it also supports research in nuclear energy (Euratom) and the Joint Research Centre (JRC)<sup>7</sup>.*
- *The Competitiveness and Innovation Framework Programme<sup>8</sup> (CIP) has a budget of 3.6 billion euro and aims to encourage the competitiveness of European industry, with SMEs as its main target. It promotes access to finance and supports the development of better innovation support services and policies. It funds trans-national business and innovation support services. It addresses clusters, public procurement and non-technological barriers to innovation. It helps developing the information society by stimulating take-up and use of ICT and promotes the increased use of renewable energies and energy efficiency.*
- *The European Institute of Innovation and Technology<sup>9</sup> (EIT) is an autonomous EU body bringing together the higher education, research and business sectors to stimulate world-leading innovation. Through its highly integrated Knowledge and Innovation Communities (KICs) it strengthens links across the knowledge triangle. The EIT's flexibility aims at making it attractive to the business sector. A contribution of 309 million euro was provided to the EIT from the EU budget.*
- *Through the Cohesion policy<sup>10</sup>, about 86 billion euro (almost 25% of the total Structural Funds budget) is allocated to enhancing the capacity of regional economies to change and innovate. This investment focuses on four key elements: R&D and innovation, entrepreneurship, ICT and human capital development.*

## **2. EU RESEARCH AND INNOVATION: FROM CHALLENGES TO OPPORTUNITIES**

Europe and the world are faced with unprecedented challenges requiring innovative solutions. Returning to growth and higher levels of employment, combating climate change and moving towards a low-carbon society require urgent and coordinated action. The impact of demographic developments is increasing and our natural resources need to be used more wisely. Our societies face security challenges which are growing in scale and sophistication. Challenges such as our ageing population or our dependence on fossil fuel do, however, also provide powerful opportunities to develop innovative products and services, creating growth and jobs in Europe.

Europe also needs to meet the challenge of retaining and reinforcing its competitive position in the face of globalisation. The emerging economies are moving from cost competition and

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<sup>6</sup> [http://ec.europa.eu/research/fp7/index\\_en.cfm](http://ec.europa.eu/research/fp7/index_en.cfm)

<sup>7</sup> The JRC is a Commission service providing scientific and technical support for the development and implementation of EU policies.

<sup>8</sup> <http://ec.europa.eu/cip/>

<sup>9</sup> <http://eit.europa.eu/>

<sup>10</sup> [http://ec.europa.eu/regional\\_policy/themes/research/index\\_en.htm](http://ec.europa.eu/regional_policy/themes/research/index_en.htm)

imitation towards strategies based on innovation. Other countries are investing more than ever to safeguard their future. On the other hand, rising living standards in these countries open new markets for European products and services and their growing capabilities create new opportunities for collaboration.

We need to grasp these opportunities, build on our strengths and act swiftly and decisively to build our future, enhance the welfare of our citizens and secure the competitiveness of our businesses. Research and innovation are key drivers of this process, yet Europe is often outperformed by its competitors in these domains<sup>11</sup>.

Europe needs to make a step change in its research and innovation performance. As the Innovation Union pointed out, this requires research and innovation to be better linked. We should break away from traditional compartmentalised approaches and focus more on challenges and outcomes to be achieved, linking our research and innovation funding closer to our policy objectives. Developing a simplified set of instruments and rules is equally crucial, while leaving room for flexibility where it is needed.

At a time of severely constrained public budgets, the most needs to be made out of every euro. Public research and innovation funding in Europe is primarily organised at the national level. Despite some progress, national and regional governments still largely work according to their separate strategies. This leads to costly duplication and fragmentation. EU level actions provide the opportunity to generate greater efficiencies and impact. This could build on the current joint efforts between Member States, industry and the EU, as for instance in the Strategic Energy Technologies (SET)-Plan<sup>12</sup>, the ICT Joint Technology Initiatives (JTIs)<sup>13</sup> and the upcoming Strategic Transport Technology Plan.

EU wide programmes are also critical for closing our gaps with international competitors. Europe's underinvestment in research and innovation, particularly by the private sector, is a major weakness. EU programmes should leverage private investment and make Europe a more attractive investment location.

EU programmes are needed to generate a higher number of world class scientific breakthroughs as they help generate excellence through European wide competition. An integration of policies and EU funding from research to market (as in the European Innovation Partnerships) will make Europe better at turning knowledge into innovation. The provision of services to support innovation processes beyond technological innovation will help seizing market opportunities for innovative solutions.

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<sup>11</sup> EU-27 R&D intensity in 2009 was 2.01 % GDP, compared to 2.77 % in US (2008) and 3.44 % in JP (2007). Further information is available in the Innovation Union Scoreboard 2010, available at [http://ec.europa.eu/enterprise/policies/innovation/facts-figures-analysis/innovation-scoreboard/index\\_en.htm](http://ec.europa.eu/enterprise/policies/innovation/facts-figures-analysis/innovation-scoreboard/index_en.htm)

<sup>12</sup> 'A European Strategic Energy Technology Plan (SET-Plan)' - COM(2007) 723 - and 'Investing in the development of low carbon technologies (SET-Plan)' - COM(2009) 519.

<sup>13</sup> As evidenced for instance in the interim evaluation of the ENIAC and ARTEMIS JTIs - COM(2010) 752.

### 3. LESSONS FROM CURRENT EU RESEARCH AND INNOVATION PROGRAMMES

The landscape of EU research and innovation programmes has developed over recent decades and now constitutes a significant share of the EU budget<sup>14</sup>.

The FP7 interim evaluation<sup>15</sup> confirmed its vital role in building and sustaining European networks, including the positive role played by the Marie Curie and research infrastructure actions and the success of novel instruments such as the European Research Council (ERC) and the Risk Sharing Finance Facility (RSFF). It also confirmed the unique contribution of FP7 in funding cross-border collaborative research. It called for better linkage between research and innovation and for a clearer focus on excellence, competitiveness and societal objectives.

The interim evaluation of the CIP<sup>16</sup> confirmed its highly relevant objectives for EU-level intervention. It highlighted the important role of the financial instruments in support of SMEs, the Enterprise Europe Network, the eco-innovation market replication projects and the demand-driven pilots for ICT innovation. It also pointed to the need for further interlinking with other EU programmes, including the Cohesion policy Funds.

The EIT, through its first KICs, is addressing societal challenges (climate change, energy and ICT) and pioneering new innovation governance models. The EIT is due to present its Strategic Innovation Agenda by mid-2011, through which it plans to expand its activities as a showcase for innovation in Europe and map out its future activities.

However, the various evaluations have also identified a number of shortcomings and deficiencies, in particular the lack of a whole chain approach to research and innovation, the complexity of instruments, over-bureaucratic rules and procedures and a lack of transparency. Improvements for future programmes should focus on:

- **Clarifying objectives** and how they are translated into the supported activities, while maintaining flexibility to respond to emerging policy needs.
- **Reducing complexity.** Over time, EU research and innovation programmes have expanded the set of instruments leaving an impression of catering to too many objectives and spreading funding too thinly. A lack of coordination between EU and Member State funding adds to the complexity and leaves a potential for overlap and duplication, for instance as regards State Aid measures to support SMEs or to provide risk capital.
- **Increasing added value and leverage and avoiding duplication and fragmentation.** EU research and innovation funding should provide more added value, increase its leverage effect on other public and private resources and be used more effectively to support the strategic alignment and pooling of national and regional funds to avoid duplication and achieve scope and critical mass.

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<sup>14</sup> 7.41 % of the EU Budget will be devoted to research and innovation in 2013

<sup>15</sup> FP7 interim evaluation available at [http://ec.europa.eu/research/evaluations/index\\_en.cfm?pg=fp7](http://ec.europa.eu/research/evaluations/index_en.cfm?pg=fp7)

<sup>16</sup> CIP interim evaluation available at [http://ec.europa.eu/cip/files/docs/interim\\_evaluation\\_report\\_march2010\\_en.pdf](http://ec.europa.eu/cip/files/docs/interim_evaluation_report_march2010_en.pdf)

- **Simplifying participation** by lowering administrative burdens, reducing time to grant and time to payment and achieving a better balance between cost and trust based approaches. The approach used in the CIP could serve as an example.
- **Broadening participation in EU programmes.** While there is important SME participation in the CIP, the FP7 interim evaluation highlighted the need to further stimulate industry and SME involvement. It also pointed at the need to boost participation of female researchers and participants from newer Member States. A stronger involvement of third countries would offer opportunities to capture the benefits of knowledge produced outside the EU.
- **Increasing the competitiveness and societal impact from EU support.** This would require better uptake and use of results by companies, investors, public authorities, other researchers and policy makers. It also involves supporting broader innovations (including non-technological and social innovation) which are not the result of research activities. Better communication of our objectives and the relevance of our actions to a wider audience is also needed. The ultimate users of innovations (be they citizens, businesses or the public sector) should be involved much earlier in our actions to accelerate and broaden the exploitation of results and to encourage greater public acceptance in sensitive fields such as security or nanotechnology.

#### 4. TOWARDS A COMMON STRATEGIC FRAMEWORK FOR EU RESEARCH AND INNOVATION FUNDING

In line with the priorities of the Europe 2020 strategy and the provisions of the Treaties, the Common Strategic Framework will focus on addressing societal challenges, encouraging the competitiveness of Europe's industries and the excellence of its scientific and technological base.

##### 4.1. Working together to deliver on Europe 2020

At EU level, various programmes support research and innovation, covering activities across the innovation cycle, yet often operating independently of each other. The Budget Review identified a way forward in this respect through the development of a **Common Strategic Framework**. This would cover all relevant EU research and innovation funding currently provided through FP7 and CIP and EU innovation initiatives such as the EIT on the basis of coherent goals and shared strategic objectives.

The Common Strategic Framework offers large potential for making EU funding more attractive and easy to access for participants. It would allow the development of a single entry point with common IT tools<sup>17</sup> or a one stop shop for providing advice and support to participants. Furthermore, it would enable the development of a simpler and more efficient structure and a streamlined set of funding instruments covering the full innovation chain in a seamless manner.

The Common Strategic Framework also offers clear possibilities for administrative simplification through the development of a more standardised set of rules covering all

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<sup>17</sup> Building on the development of the FP7 Participant Portal:  
<http://ec.europa.eu/research/participants/portal/appmanager/participants/portal>

participants in EU research and innovation programmes. These rules should seek commonalities between the different types of activities whenever possible. This should build on ongoing progress towards simplification<sup>18</sup>, yet consider additional measures such as a wider use of lump sums or the general acceptance of beneficiaries' own accounting practices<sup>19</sup>.

Allowing for flexibility will be necessary to cater for the diversity of funding needed to cover the full innovation cycle or for requirements linked to specific conditions. Flexibility and speed of delivery are also essential to attract business stakeholders (in particular SMEs). This may justify distinctive mechanisms and implementing rules as, for example, in the case of the EIT.

EU programmes operate in an environment in which most public funding for research and innovation is administered by Member States. Yet still too often this fails to take proper account of the trans-national nature of research and innovation, leaving synergies with the programmes of other Member States or those of the EU largely unexploited.

Experiences with pooling Member State resources (through the Article 185 Initiatives, ERA-Nets and the first steps towards Joint Programming Initiatives) have demonstrated the potential impact and efficiencies offered by leveraging other public sources of funding. Their effectiveness does, however, depend on strong commitments, also in financial terms, from national and regional public authorities.

An important role needs to be played by the future Cohesion policy, which serves to build research and innovation capabilities at the regional level through smart specialisation strategies, yet within the context of the EU's broader policy objectives. The Commission Communication on the future of Cohesion policy<sup>20</sup> points to reinforced strategic programming, increased concentration of resources and greater use of conditionality and incentives to enable a stronger impact on Europe 2020 priorities including research and innovation. The Common Strategic Framework for EU research and innovation funding should therefore build strong complementarities with the future Common Strategic Framework for cohesion policy.

In addition, Rural Development funding currently provides for a broad range of measures fostering innovation in agriculture. The Communication 'The CAP towards 2020: meeting food, natural resources and territorial challenges of the future'<sup>21</sup> points to innovation as one of the guiding themes of rural development besides environment and climate change.

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<sup>18</sup> 'Simplifying the implementation of the research Framework Programmes' - COM(2010) 187 and Commission Decision C(2011) 174 of 24 January 2011

<sup>19</sup> The Commission has proposed a review of the Financial Regulation - COM(2010) 815 - that allows for more radical simplification in the next financial framework, including an extended use of lumps, reimbursement based on accounting practices of the beneficiary and an 'ideal house' for public-private partnerships.

<sup>20</sup> 'Conclusions of the fifth report on economic, social and territorial cohesion: the future of cohesion policy' - COM (2010) 642.

<sup>21</sup> COM(2010) 672



## 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?
2. How should EU funding best cover the full innovation cycle from research to market uptake?
3. What are the characteristics of EU funding that maximise the benefit of acting at the EU level? Should there be a strong emphasis on leveraging other sources of funding?
4. How should EU research and innovation funding best be used to pool Member States resources? How should Joint Programming Initiatives between groups of Member States be supported?
5. What should be the balance between smaller, targeted projects and larger, strategic ones?
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 and diversity to achieve objectives of different instruments, and respond to the needs of different beneficiaries, in particular SMEs?
7. What should be the measures of success for EU research and innovation funding? Which performance indicators could be used?
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?

### **4.2. Tackling societal challenges**

Europe 2020 and its flagship initiatives formulated ambitious policy objectives in areas such as climate change, energy security, demographic ageing or resource efficiency. The Innovation Union called for linking future EU funding programmes more closely to these objectives by putting a stronger focus on tackling societal challenges. However, careful consideration is needed to identify those challenges where EU level interventions can truly make a difference, while avoiding overly prescriptive scientific and technological choices.

Current EU funding programmes have put considerable effort in tackling societal challenges, predominately through a thematic technology push. Bringing researchers from across Europe together in collaborative networks has been at the heart of this approach and will continue to be vital in sustaining a European research fabric. Experience has shown, however, the limitations of this approach in achieving the necessary flexibility, creativity and cross-disciplinary research needed.

The Innovation Union introduced the concept of European Innovation Partnerships to bring together supply and demand side measures in addressing societal challenges. They have an important role to play in coordinating efforts and focusing activities across the innovation cycle. The strategic approach of the SET-plan with its clear priorities, well-defined governance structures and progress assessment function can serve as an example here.

Questions:

9. How should a stronger focus on societal challenges affect the balance between curiosity-driven research and agenda-driven activities?
10. Should there be more room for bottom-up activities?
11. How should EU research and innovation funding best support policy making and forward-looking activities?
12. How should the role of the Commission's Joint Research Centre be improved in supporting policy making and addressing societal challenges?
13. How could EU research and innovation activities attract greater interest and involvement of citizens and civil society?

#### **4.3. Strengthening competitiveness**

Europe needs to step up its performance in creating impact from research and innovation funding. Obstacles remain in transferring research outcomes from the laboratory through to the development, commercialisation and application phases. As indicated in the Innovation Union, this requires an essential role for industry in setting priorities and through public private partnerships. It also involves broadening support across the full innovation cycle (including proof of concept, testing, piloting and demonstration), including covering issues such as post-project follow-up, pre-normative research for standard setting, support to patenting and to non-technological innovation.

Securing a strong position in key enabling technologies such as ICT, nanotechnology, advanced materials, manufacturing, space technology or biotechnology is of vital importance to Europe's competitiveness and enables the development of innovative goods and services needed for addressing societal challenges.

FP7 introduced novel approaches to strengthen industry participation. The European Technology Platforms (ETPs) helped define industry relevant priorities. The Joint Technology Initiatives (JTIs) put industry in the driving seat through establishing formal public private partnerships. The European Economic Recovery Plan introduced more informal public-private partnerships (PPPs) in key sectors. Experience shows that their success depends on strong commitments from the stakeholders involved, and simple and efficient governance and implementation structures.

Within the framework of its Strategic Innovation Agenda, the EIT will continue to strengthen its business-driven approach through a focus on generating results and impact but also on leveraging substantial funds from the private sector. In the context of the SET-plan, European Industrial Initiatives were launched to allow the public and private sector to jointly develop technology roadmaps. The CIP aims to strengthen the competitiveness of Europe's industry, with a particular focus on SMEs. It takes into account the fact that innovation requires many

competences and activities other than research, which are non-technological in nature, such as design, creativity, standard setting, exploitation and new combinations of existing technologies, new business models, user involvement or capturing the many and diverse possibilities offered by social innovation.

Through their flexibility and agility, SMEs play a pivotal role in developing novel products and services. Outstanding and fast growing SMEs have the potential to transform the structure of Europe's economy by growing into tomorrow's multinational companies. The CIP has been successful in reaching SMEs (100,000 SMEs received loan guarantees, 70 % of beneficiaries of eco-innovation market replication projects are SMEs) and although particular attention has been paid to increasing SME involvement throughout FP7, SMEs are still finding it challenging to participate. A strengthened approach to SMEs could learn from the experience gained with the current SME actions, take into account the innovation and growth needs of different types of SMEs and the fact that the needs of many SMEs are best served through support provided at the regional level, including through the Cohesion policy Funds.

Open, light and fast implementation schemes would enable SMEs and other stakeholders from industry and academia to explore new ideas and opportunities as they emerge, in a flexible way, hereby opening new avenues for innovation. This could for example build on the current use of open calls and simplified application procedures in the Future and Emerging Technologies (FET) actions in the FP7 ICT Theme as well as on the CIP eco-innovation market replication projects.

Intellectual property rights governing EU research and innovation funding are decisive for efficient exploitation and technology transfer, while at the same time they need to ensure access to and rapid dissemination of scientific results. They are also of relevance for international cooperation in areas of strategic interest.

The low level of private finance for research and innovation is a major bottleneck in Europe. The FP7 Risk Sharing Finance Facility and CIP financial instruments have demonstrated how the EU budget in partnership with the European Investment Bank Group can succeed in overcoming market gaps in this area. Building on this experience, future EU research and innovation programmes should make full use of financial instruments (through the EU Equity and Risk Sharing Platform mechanisms proposed in the Budget Review) to support the commercialisation of research results, the growth of innovative businesses and investments in major infrastructures.

New approaches could also be considered, particularly those stimulating the demand side and aiming to involve public and private end users earlier and more closely in the innovation process<sup>22</sup>. The Innovation Union calls for unleashing the public sector's purchasing power to spur innovation through public procurement including pre-commercial procurement<sup>23</sup>. This could build on pilot actions in the CIP and FP7. The US has a long standing tradition in this<sup>24</sup>, while in the EU this opportunity is left too largely unexploited.

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<sup>22</sup> See policy recommendations recently published by the European Research Area Board, [http://ec.europa.eu/research/erab/pdf/erab-2nd-final-report\\_en.pdf](http://ec.europa.eu/research/erab/pdf/erab-2nd-final-report_en.pdf)

<sup>23</sup> The Commission adopted on 27 January 2011 a Green paper on the modernisation of EU public procurement policy 'Towards a more efficient European Procurement Market' (COM(2011)15), consulting on whether public procurement rules should be modified to allow other policy objectives such as promotion of innovation.

<sup>24</sup> See e.g. the Small Business Innovation Research initiative (<http://www.sbir.gov>)

Similarly, inducement prizes incentivise researchers to achieve stretching targets through the prospect of obtaining a financial award. They have a long history as a tool for policy makers, but have virtually not been used within EU programmes.

Questions:

14. How should EU funding best take account of the broad nature of innovation, including non technological innovation, eco-innovation and social innovation?
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?
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?
17. How should open, light and fast implementation schemes (e.g. 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 by SMEs?
18. How should EU level financial instruments (equity and debt based) be used more extensively?
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?
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?

#### **4.4. Strengthening Europe's science base and the European Research Area**

Europe's science base is among the most productive in the world, yet it does not contain sufficient pockets of world class excellence where ground-breaking research results are generated which are able to drive structural change.

The main responsibility for building a competitive public science base lies with the Member States. EU support can clearly add value as it has in the past through various initiatives contributing to the construction of the European Research Area (ERA). It is essential to consider how funding provided through the Common Strategic Framework can be used to speed up progress towards a genuinely unified ERA.

The setting up of the ERC was a major step forward in raising the excellence of Europe's science base<sup>25</sup>. A strengthening of its role could involve both the weight it occupies and the instruments it uses. Important lessons must be drawn from the experience of those regions and countries which have managed to nurture the world's most excellent public research institutions, through concentration of funding and a combination of project grants and institutional support schemes.

In the long term, world class excellence can only thrive in a system in which all researchers across the EU are provided with the means to develop into excellence and eventually compete for the top spots. This requires Member States to pursue ambitious modernisation agendas for their public research base and sustain public funding. EU funding, also through the Cohesion policy Funds, should assist to build up excellence where and as appropriate.

A major achievement in training and transfer of knowledge are the EU Marie Curie actions, which have boosted cross-border mobility and research collaboration by many thousands of researchers. Marie Curie actions have also played an important role in equipping the next generation of researchers with innovative skills, in particular through industry-academia exchanges.

Through the actions of the research infrastructures programme and building on the work of the European Strategy Forum for Research Infrastructures (ESFRI), a strong impetus has been given to the planning, preparation and construction of large scale research infrastructures, and to ensuring access to existing infrastructures. In this context, the further deployment of e-Infrastructures is important to allow remote and virtual access to research facilities and to scientific information.

The approach to international cooperation has evolved considerably since the launch of FP7. The EU's funding programmes are amongst the most open in the world, but this openness should be reciprocated. This concerns not only access to funding, but also market access and IPR protection. The work of the Strategy Forum for International Cooperation (SFIC) has strengthened the strategic approach to international cooperation and the complementarity between the activities of the Member States and those of the Union. For future programmes, consideration is needed on a more differentiated approach according to the specificities of different types of third countries and also to striking the right balance between the goals of strengthening Europe's competitiveness and solving global challenges.

Funding measures to support ERA have over the past years been complemented with a range of non-funding policy initiatives, such as the five ERA initiatives launched in the wake of the ERA Green Paper<sup>26</sup> or actions aimed at stimulating a stronger participation of women in science. The Innovation Union stated the ambition to put the necessary measures in place for achieving ERA by 2014, including through legislation. A careful reflection is needed on how funding measures can assist in this respect and how they can be made more efficient. This requires better articulation, complementarities and synergies between funding and non-funding measures.

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<sup>25</sup> This complements other schemes aimed at raising scientific excellence such as the FET flagship initiative: <http://cordis.europa.eu/fp7/ict/programme/fet/flagship/>

<sup>26</sup> 'The European Research Area: New Perspectives' - COM(2007) 161.

## Questions:

21. How should the role of the European Research Council be strengthened in supporting world class excellence?
22. How should EU support assist Member States in building up excellence?
23. How should the role of Marie Curie Actions be strengthened in promoting researcher mobility and developing attractive careers?
24. What actions should be taken at EU level to further strengthen the role of women in science and innovation?
25. How should research infrastructures (including EU-wide e-Infrastructures) be supported at EU level?
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?
27. Which key issues and obstacles concerning the ERA should EU funding instruments seek to overcome, and which should be addressed by other (e.g. legislative) measures?

## **5. PUBLIC DEBATE AND FURTHER STEPS**

The Commission believes that the issues and questions raised above are the key aspects to be considered in further developing a common strategic framework for EU research and innovation funding and its related instruments.

Member States, the Parliament, and other countries are invited to promote the debate with their stakeholders. To support the debate on these questions, a variety of social media will be used, including a public consultation website (<http://ec.europa.eu/research/csfr>).

The Commission asks organisations who wish to submit comments in the context of public consultations to provide the Commission and the public at large with information about whom and what they represent. If an organisation decides not to provide this information, it is the Commission's stated policy to list the contribution as part of the individual contributions. (Consultation Standards, see COM(2002) 704, and Communication on ETI Follow-up, see COM(2007) 127 of 21.3.2007)

The consultation will close on **20 May 2011**. The broad debate on this Green Paper will be complemented by targeted consultations, such as on the ERA framework and the EIT's strategic innovation agenda. It will also draw on the results of the public consultation on the future of the CIP<sup>27</sup>.

On 10 June 2011, an event will be organised to wrap up the public consultation and discuss the results with the stakeholder community. The Commission plans to put forward its formal legislative proposals for a Common Strategic Framework for EU research and innovation

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<sup>27</sup> Information available at [http://ec.europa.eu/cip/public\\_consultation/index\\_en.htm](http://ec.europa.eu/cip/public_consultation/index_en.htm)

funding by the end of 2011. These proposals will be accompanied by ex-ante impact assessments, providing the necessary evidence base for the proposed options.

The Commission believes that research and innovation are central to people's future livelihoods, and thus require better public understanding and debate. It will therefore pursue a broad communication strategy to accompany this public consultation and the subsequent inter-institutional debate and ultimately the implementation of the next EU funding programmes.

This should show to the public at large how EU funding matters to them, making use of audiovisual and written media, organising public events, and exploiting to the full the possibilities offered by new social media.