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Management Plan 2013

Directorate-General for Research and Innovation

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When reading and interpreting the data accompanying the Management Plan's objectives, the following should be borne in mind:

- the realisation of a number of objectives and indicators related to the Innovation Union, the European Research Area and the Coherent Development of Research Policies (08.19) is mainly the responsibility of the Member States, with the Commission playing the role of catalyst and facilitator;
- the realisation of a number of objectives and indicators related to individual research projects financed under FP7 depends on the outcome of these projects, whereas the specificity of research (risky, uncertain, novel) should not be forgotten.

Message from the Director-General

As stressed by President Barroso in his State of the Union 2012 address, *"the European budget is the instrument for investment in Europe and growth in Europe"*. Indeed, the EU's priority today is to fight the economic crisis and to put Europe back on the road to sustainable growth. Tomorrow, the EU's economy must be more focussed on the generation of knowledge and innovation in order to compete in the global economy.

Thus, the Commission will continue its efforts to turn the European Union into an Innovation Union where innovative ideas and breakthroughs can be turned into new products and services that create sustainable competitiveness, growth and jobs. In this context, DG Research and Innovation's first priority for 2013 is to make further progress in the implementation of the 34 Innovation Union commitments by all actors involved.

This strategy for growth and jobs also requires increased investment in R&D at regional, national and EU level. In 2013, DG Research and Innovation will contribute to this priority through the implementation of the final and biggest ever set of calls for proposals (more than EUR 8 billion of EU funds) under the Seventh Framework Programme (FP7). These calls target both innovation and a range of societal challenges, aiming at a smooth transition towards Horizon 2020. In particular, pilot actions will test new instruments dedicated to Small and Medium-sized Enterprises (SMEs) and to close-to-market activities, in particular through pre-commercial procurement.

Furthermore, as from 2014, Horizon 2020 has been designed to become the main instrument to implement the Commission's Research and Innovation policy. An agreement with Parliament and Council must be reached in 2013, maintaining the major simplifications proposed by the Commission. Indeed, Horizon 2020 will need a single set of rules for all activities, in particular the *"one project – one funding rate – a single indirect costs rate"* system. This will facilitate access for all participants, including SMEs, which are key actors in the innovation system.

Since Horizon 2020 will integrate all Commission policies with a research and innovation component, a new tailor-made governance structure will be needed. This new structure will be based on strategic programming, which seeks to identify priorities within a longer-term perspective and to ensure strong integration between activities and between services. Building on an established tradition of dialogue and cooperation with other services, DG Research and Innovation is taking a leading role in this process.

In parallel, substantial preparatory work will be dedicated to pave the way to the increased use of new management modes for Horizon 2020 in order to ensure cost effectiveness in the use of EU funds. This would lead in particular to the extension of the mandate of existing executive agencies and to further use of large public-private partnerships to boost industrial competitiveness and large public-public partnerships to better coordinate national research programmes. This is an important aspect of DG Research and Innovation's progressive transformation into a policy-oriented DG.

Furthermore, DG Research and Innovation will present a number of key policy initiatives, including:

- A set of initiatives in the framework of the Innovation Union. A new innovation headline indicator to support the Europe 2020 strategy will be introduced to measure the innovation performance of the EU and of its Member States, providing a strategic input to a wide range of Commission policies. The DG will also continue to contribute to the Annual Growth Survey in the

framework of the European semester for economic policy coordination, in particular through country-specific recommendations that seek to put research and innovation at the heart of the EU's growth strategy. For this strategy to produce effective results, structural changes are needed to create a unified research area open to the world based on the Internal Market, in which researchers, scientific knowledge and technology circulate freely, i.e. the European Research Area (ERA). In 2013, an assessment of the state of play of the ERA will be performed to serve as a baseline to monitor its future implementation. The ERA Communication of July 2012 provides the basis for such an assessment, in particular as regards the distribution of roles among the actors involved (the Member States, the Commission and the research stakeholder).

- Key legislative proposals to set strategic partnerships under Horizon 2020. Their objective is to generate a substantial leverage effect on investment in strategic sectors in order to boost industrial competitiveness and reinforce the role of Europe as a global actor. The creation and renewal of four public-private partnerships in the sectors of pharmaceuticals, energy, transport, aeronautics and bio-based products will be proposed. The renewal of two public-public partnerships will be tabled to support market-oriented research in R&D-performing SMEs and to provide a scientific basis for standards in emerging technologies. Finally the renewal of a public-public partnership to combat poverty-related diseases in Sub-Saharan Africa will contribute to make progress towards the achievement of the Millennium Development Goals.

The priority initiatives presented above define the principal strategic orientations of DG Research and Innovation over the next year. The pages that follow in this Management Plan describe in more detail the numerous activities that this DG will carry out in the pursuit of these priorities. It also provides an overall state of play of the key public-private and public-public partnerships developed under FP7.

Finally, it offers a good overview of the first results obtained after six years of FP7 implementation. DG Research and Innovation's major achievements are visible in the results of the indicators on which it has some influence, for which 83% of the targets have been achieved or are on track to be achieved. Nevertheless, these results are partial because they are still based on a still low number of finished projects and because they do not include the outcome of the last FP7 calls.

2013 will be a pivotal year. The last year dedicated to the implementation of FP7 priorities, but also the year to finalise and adopt Horizon 2020. The 2013 MP shows how interlinked these two priorities are and, in particular, how our work in the framework of FP7 allows us to perfect the design of Horizon 2020 so it can deliver innovation and growth.

To fulfil our ambitious objectives, we will work closely with the Council, the Parliament and all stakeholders.

Robert-Jan SMITS

Director-General

DG Research and Innovation

1. MISSION STATEMENT

The Directorate General for Research and Innovation's mission is to develop and implement the European research and innovation policy with a view to achieving the goals of Europe 2020 and the Innovation Union.

As such, the DG contributes to making Europe a better place to live and work, improving Europe's competitiveness, growth and job creation while tackling the main current and future societal challenges. To do so, the Directorate General for Research and Innovation supports research and innovation through European Framework Programmes, coordinates and supports national and regional research and innovation programmes, contributes to the creation of the European Research Area by developing the conditions for researchers and knowledge to circulate freely and supports European organisations and researchers in their cooperation at the international level.

2. GENERAL OBJECTIVES

The Treaty on the Functioning of the European Union (TFEU) states that "the Union shall have the objective of strengthening its scientific and technological bases" (Art. 179). Moreover, the TFEU considers the completion of the European Research Area (ERA) as central to achieving this objective.

In line with the Treaty, the Europe 2020 strategy and the Innovation Union flagship initiative, three general objectives for European research and innovation policy can thus be specified:

1. The development of an economy based on knowledge and innovation, which is a key priority of the Europe 2020 strategy. In order to achieve this structural transformation of the European economy, appropriate and comprehensive public policies are required, such as policies that seek to make Europe a world-leader in the creation and growth of high-tech and innovative SMEs. Because research is the main means to produce new knowledge and innovation, it plays a central role in this strategy, as reflected in the 3% of GDP R&D intensity target.
2. Deploying research and innovation in support of other policies is becoming increasingly crucial, especially to address the EU's major societal challenges, such as climate change, energy and resource efficiency, health and an ageing population. EU research and innovation policy is key to the mobilisation and coordination of R&I efforts to tackle these societal challenges, while also taking into account the necessity to adopt appropriate demand-side measures.
3. As stressed by the TFEU itself, in order to strengthen the EU's scientific and technological bases, progress must be made towards the free circulation of researchers, scientific knowledge and technology. Such is the objective of the European Research Area (ERA). The fragmentation of the European research system along national borders remains an important impediment to the EU's research and innovation performance. A well-functioning European Research Area requires that any obstacles to mobility and cross-border cooperation be removed and that the coordination of research efforts and the pooling of resources at EU level are reinforced.

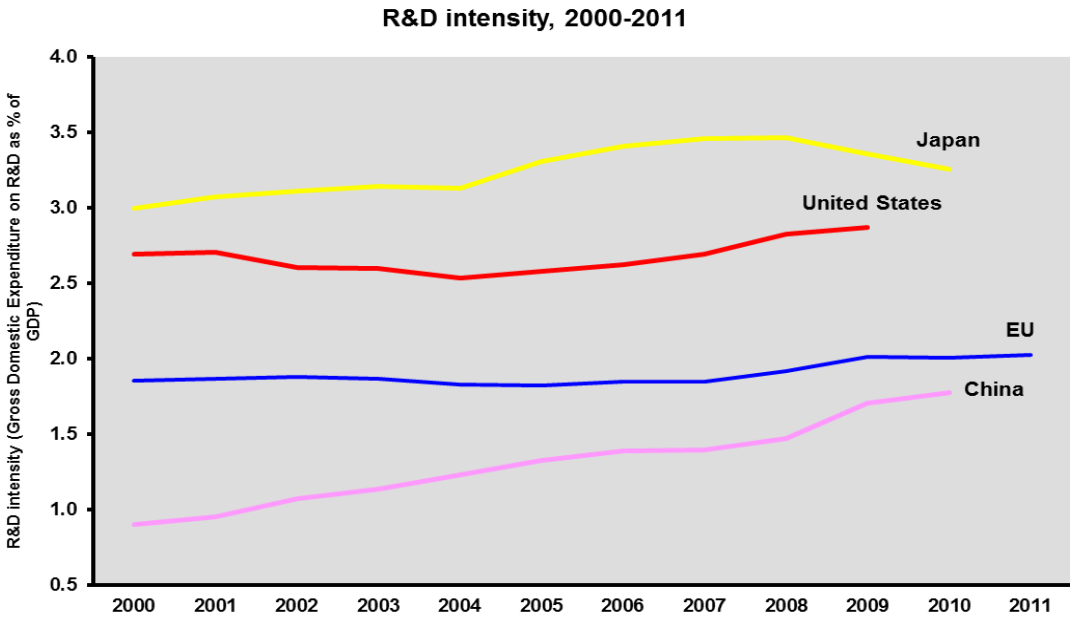
In order to implement these objectives, DG Research and Innovation develops the European research and innovation policy under the umbrellas of the Innovation Union and the European Research Area (see 3.1). The main funding instrument at the disposal of DG Research and Innovation for this purpose is the multiannual research framework programme set out by Art. 182 TFEU, currently the 7th Framework Programme (see 3.2).

GENERAL OBJECTIVE 1	Foster investment in research and the transition towards the knowledge-based economy in order to reinforce EU competitiveness	
Impact indicators	Latest known result	Target
Gross Expenditure on R&D as a % of GDP (R&D intensity)	EU: 2.03% of GDP (2011)	To approach 3% of GDP

R&D intensity (R&D expenditure as a % of GDP) reflects the amount of research and innovation activities undertaken in a given country. The Europe 2020 strategy sets a 3% objective for R&D intensity.

Total R&D expenditure is traditionally split between public and private funding. Public R&D funding shows the commitment of a government to promote research, development and innovation activities both directly and through the leverage effect on business R&D expenditure. Private R&D funding is the main component of total R&D expenditure in more advanced knowledge economies. It reflects the attractiveness of the national innovation system for business investments as well as the structure of the economy.

This indicator shows a **slight increase in 2011** (from 2% in 2010 to 2.03%), which must be attributed to smart fiscal consolidation efforts made by EU Member States. This result shows the resilience of public commitment to increasing R&D investment, although stronger efforts will be needed in order to achieve the 3% target (see also Section 3.2.17).



PCT patent applications per billion GDP (in PPSe ¹)	2009		To reduce the gap between EU and US
	EU	US	
	3.91	3.93	

¹ PPS - Purchasing Power Standards.

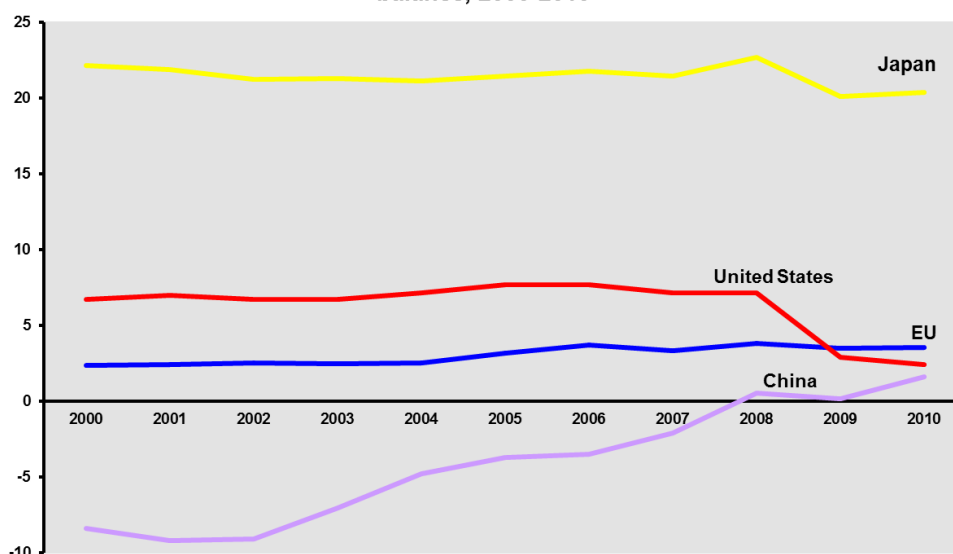
The **Patent Cooperation Treaty (PCT)** offers the possibility to seek patent rights in a large number of countries by filing a single international application with a single patent office (receiving office). Data on the number of PCT patent applications are more internationally comparable but, according to the OECD, they suffer from some methodological issues, such as delays in updating patent databases. Furthermore, the recent rise in patent applications filed under the PCT has not been evenly distributed across countries or technological fields. Thus, trends like the recent reduction of the gap between the EU and the US or the rise of Japan may reflect variations in the degree of adherence to the PCT system in each country/region.

With this important methodological caveat in mind, we can note that **the gap between the EU and the US has been reduced** in the last few years, from a difference of 0.68 applications per billion GDP in 2006 to just 0.02 in 2009.

Contribution of medium and high-tech manufactured goods to the trade balance ²	2010		To reduce the gap between EU and Japan
	EU	JP	
	3.54	20.39	

A positive **contribution of medium-tech and high-tech products to the trade balance** of a country/region indicates a relative competitive advantage in this products category. Since 2000, the EU has progressed on this indicator and it has, in recent years, shown a stronger capacity to sustain its position than the US and Japan. Indeed, **the gap between the EU and Japan has been reduced** in the last few years.

Contribution of medium-tech and high-tech products to the trade balance, 2000-2010



² This indicator is now computed using the "product approach" instead of the "sector approach" as previously. The product approach has a better geographical coverage (in particular all EU MSs) and is used in the Innovation Union Scoreboard.

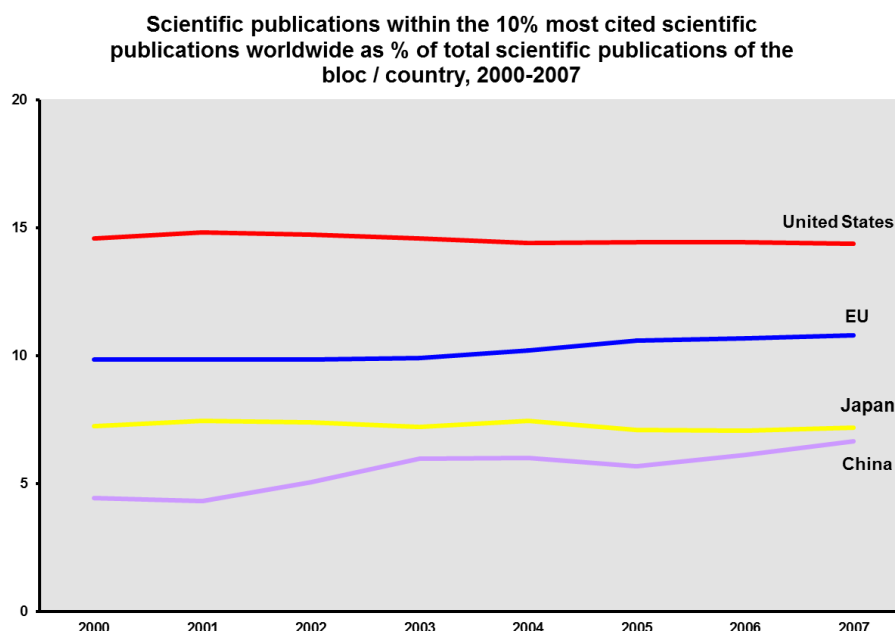
GENERAL OBJECTIVE 2	Mobilise research to support other policies and tackle major societal challenges				
Impact indicators	Latest known result (2009)				Target (by 2020)
PCT patent applications in health-related technologies per billion GDP (in PPSE)	EU	US	JP	CN	EU: 0.7
	0.54	0.88	0.85	0.10	
The result for the EU in 2008 was 0.53. Thus, the EU is not making progress towards its target.					
PCT patent applications in environment-related technologies ³ per billion GDP (in PPSE)	EU	US	JP	CN	EU: 0.7 ³
	0.41	0.28	1.15	0.07	
Due to a change in the methodology used, year-on-year progress cannot be assessed for this indicator.					

³ A new official taxonomy of "Environment-related" technologies has been released by the European Patent Office and the OECD in 2011. It will replace the first ad-hoc OECD taxonomy on Climate-change mitigation related patents for all post-2011 data. DG RTD has decided to adapt the target to this new methodology (from 0.2 to 0.7).

GENERAL OBJECTIVE 3				Strengthen the knowledge base of the European Research Area (ERA) and improve research excellence through increased competition, pooling of resources and cross-border synergies			
Impact indicators		Latest known result (2007: citation window 2007-2010)			Target		
EU scientific publications among the top 10% most cited publications, as % of total EU scientific publications		EU		US		To reduce the gap between EU and US	
		10.8%		14.4%			

The number of citations that a scientific publication receives provides a good indication of the impact of this publication on science. Measuring the capacity of a research system to produce highly-cited publications is a way to assess its scientific performance. The EU places 10.8% (up from 9.9% in 2000) of its researchers' publications among the top 10% most cited worldwide, which is a slightly better performance than the world average (10%).

Even if the US still place 14.4% of its publications among the top 10% most cited worldwide, **the gap between the EU and the US has been slightly reduced** in the last years.



Impact indicators		Latest known result (2010)			Target	
Public-private co-publications per million population		EU	US	JP	EU: 50 by 2020	
		41⁴	71	50		

This indicator shows a **strong increase in 2010** (from 36.2 in 2009 to 41) and the EU is on track to meet its 2020 target of 50.

⁴ This figure includes a possible double-counting of some publications between Member States, which would lead to a slightly overestimation for the EU.

3. SPECIFIC OBJECTIVES

This chapter presents both political (Innovation Union and European Research Area) and operational activities. For each activity, the main actions for 2013 are presented as follows:

- ❖ Policy initiatives for 2013. These sub-sections group all initiatives with political relevance for the Commission, the other European institutions and Member States. They include, in particular, initiatives that fall directly under the Europe 2020 Strategy, priorities included in the Commission Work Programme 2013 or actions requested by the European Council, the EU Council or the European Parliament.
- ❖ Main implementation activities for 2013. These sub-sections group the main activities related to the implementation of the 7th Framework Programme (FP7) or to initiatives adopted in previous years, such as Commission Communications, as well as the preparation work for Horizon 2020 and other future initiatives.

3.1 Political Activities

3.1.1 Innovation Union (AWBL 04)

The Innovation Union (IU) aims to create the best conditions for Europe's researchers and entrepreneurs to innovate. For this purpose, it seeks to remove any obstacles that prevent innovators from translating ideas into new products and services that can be sold on world markets. The main focus of this activity is to ensure progress in the implementation of the Innovation Union's 34 commitments.

Policy initiatives for 2013

Early in 2013, DG Research and Innovation will present a new **Europe 2020 headline innovation indicator**, accompanied by a marker of innovativeness dynamism (on fast-growing innovative enterprises), to benchmark the innovation performance of the EU and its Member States, as part of the Report on the State of the Innovation Union 2012. This indicator will be relevant to a wide range of EU policies and will provide input for policy-making decisions.

In addition, one of the DG's key contributions to Europe2020 strategy will continue to be made through its involvement in the **Annual Growth Survey** conducted in the framework of the **European Semester of economic policy coordination**. This exercise places Research and Innovation at the heart of the EU growth policy through country-specific recommendations. In order to restore the confidence of the private sector and encourage it to increase its investments, priority will be given this year to smart fiscal consolidation, effectiveness of European research systems, innovation-friendly framework conditions, fast-growing innovative enterprises and innovation in public administrations.

Precisely to unlock private investment in key industrial sectors and boost the EU competitiveness, the Commission will propose the **renewal of all the existing Public-Private Partnerships** (Art. 187 TFEU), respectively in the pharmaceutical (see Section 3.2.1.), energy (see Section 3.2.4.), aeronautic (see Section 3.2.6.), electronics (led by DG CONNECT), and air traffic management (lead by DG MOVE) sectors. In addition, the Commission will propose the creation of a new partnership in the sector of bio-based industries (see Section 3.2.2.).

Main implementation activities for 2013

In 2013, the implementation of the Innovation Union commitments will continue to make progress through the foreseen adoption of key framework legislation regarding standards, patents, venture capital and public procurement.

The Commission will adopt a **Report on the State of the Innovation Union 2013**, which will provide an update on the state of play of the implementation of the 34 Innovation Union commitments and inform on recent developments in EU and Member States' innovation policies. It will be accompanied by a **Staff Working Paper, "Research and Innovation performance in European countries 2013"**, which monitors progress towards the national R&D headline targets and provides statistical data and economic analysis to underpin national policy making in support of Innovation Union. In addition, the **"Innovation Union Competitiveness Report 2013"** will bring together in a single document the economic evidence needed to help policy makers and stakeholders in Member States and Associated

Countries to understand the impact R&D and innovation can have to increase competitiveness and tackle societal challenges.

During 2013, **in preparation of Horizon 2020**, DG RTD will reflect on further strategic innovation policy measures, such as open innovation and knowledge transfer, public sector innovation, valorisation of intellectual property, innovation in the retail sector, the follow-up to the Innovation Union stress test from the European Research and Innovation Advisory Board (ERIAB) and support to Member States in preparing their smart specialisation strategies. In addition, the possibility to embed a Technology Transfer Financial Facility (TTFF) in the future Horizon 2020 equity facility will be assessed.

Finally, several important **studies** will be launched to support Innovation Union progress and in particular a study to determine the conditions of success for measures to enhance the valorisation of patents through their sale or licensing. Equally important will be the launch of an expert group to evaluate the European Innovation Partnership (EIP) approach.

Comments on the performance indicators

The indicators for patents and standards are expected to progress once the needed framework conditions are set. One positive step in that direction is the recent adoption of the Regulation on European standardisation, which aims to modernise and improve the European standards setting.

Building an Innovation Union		
SPECIFIC OBJECTIVE 1	Define and implement framework conditions to stimulate innovation demand and R&D investments across the Single Market	
Result indicators	Latest known result	Target (by 2020)
Venture capital (seed, start-up, later stage, growth capital rescue/turnaround capital replacement) as % of EU GDP ⁵	0.10% (2010)	0.2%
Total cost of an EU-27 patent for SMEs (incl. maintaining costs for 20 years) ⁶	EUR 192,000 (2011)	Less than EUR 50,000
Average development time of EU standards	36 months (2010) ⁷	18 months
Budgets for pre-commercial procurements and public procurements of innovative products	Less than EUR 1 billion/year ⁸	EUR 10 billion/year
SPECIFIC OBJECTIVE 2	Address societal challenges through the integration of European efforts from research to the market	
Result indicators	Latest known result	Target (by 2012)
Number of European Innovation Partnerships (EIP)	5 EIPs	5 EIPs (<i>achieved</i>)

⁵ Source: Eurostat. EE, CY, LV, LT, MT, SI and SK are not included. The venture capital phases now used by Eurostat from this year onwards are the ones newly defined by the European Private Equity and Venture Capital Association (EVCA).

⁶ In April 2011, the Commission presented a proposal for a Regulation implementing enhanced cooperation in the area of the creation of unitary patent protection, covering 25 EU Member States. This proposal is currently being discussed by Council and Parliament. If adopted it is expected to drastically reduce the costs of patent for SMEs.

⁷ Source: European Commission, COM(2011) 311 final "A strategic vision for European standards". DG ENTR has not updated this indicator since 2010. However, in September 2012, the Regulation on European Standardisation was adopted; this will lead to the issuing of an annual implementation report by the Commission, which should contain an update of this indicator.

⁸ Current value of innovative public procurement still needs to be accurately estimated.

SPECIFIC OBJECTIVE 3		
Support the improvement of national innovation systems through the review of their performance		
Result indicators	Latest known result	Target
Number of Member States peer reviewed in a given year	6 in 2012	6 in 2012 (<i>achieved</i>)
Number of Member States having used the IU self-assessment tool to prepare/update their National Reform Programmes	3 ⁹	At least half of the Member States by the end of 2013
Main outputs in 2013		
<ul style="list-style-type: none"> - Commission Communication on the State of the Innovation Union 2012 – Accelerating change, presenting the new Europe 2020 headline innovation indicator - Commission proposals to renew all the existing Public-Private Partnerships (Art. 187 TFEU), in the pharmaceutical (see Section 3.2.1.), energy (see Section 3.2.4.), aeronautic (see Section 3.2.6.), electronics (DG CONNECT's initiative), and air traffic management (DG MOVE's initiative) sectors - Commission proposal to create a new Public-Private Partnership (Art. 187 TFEU) in the sector of bio-based industries (see Section 3.2.2.) - Commission Report on the State of the Innovation Union 2013 - Commission Staff Working Paper: Research and Innovation performance in European countries 2013 - Innovation Union Competitiveness Report 2013 		

⁹ The Commission can only confirm that BE, EE and DK have used the IU self-assessment tool in 2011 and 2012, as part of the peer review of their R&I systems. Nevertheless, it is possible that more Member States have used it, at least to a certain extent, when preparing their National Reform Programmes. The Commission will seek to confirm this during the 1st semester 2013 through the annual ERA Committee (ERAC) survey on public R&D investments. It is also expected that a recently issued report drawing lessons from the use of the IU self-assessment tool in these three peer reviews will encourage other Member States to use this tool.

3.1.2 European Research Area (AWBL 03)

The European Research Area (ERA) will ensure that all conditions are in place to optimise the contribution of research to European growth and job creation. Notably, the ERA will aim at ensuring that no barriers remain for the free circulation of researchers, scientific knowledge and technology in the EU. ERA will also contribute to decrease the knowledge divide within the EU.

Policy initiatives for 2013

In 2013, the Commission will propose to renew four of the five existing **Public-Public Partnerships** (Art. 185 TFEU), which were set up to structure the ERA through the joint implementation of national research programmes. Among the three partnerships under the responsibility of DG Research and Innovation, one is presented respectively in the Health Section (see Section 3.2.1.) and another in the SMEs Section (see Section 3.2.11.). The third one is a cross-cutting initiative: the **European Metrology Research Programme (EMRP)**, which focusses on metrology, the science of measurement, with emphasis on standards for emerging technologies. Finally, DG CONNECT is responsible for a fourth Art. 185 initiative, Ambient Assisted Living, which deals with information and communication technologies for the elderly.

In 2013, the Commission will issue a **Recommendation to Member States** on Structural changes needed in universities and research institutions in order to **promote gender equality** and gender issues in research. A second Commission **Recommendation to Member States** will seek to establish the right framework conditions for **Responsible Research and Innovation (RRI)** in Europe. (see Section 3.2.14)

Main implementation activities for 2013

As stressed in December 2012 by the Competitiveness Council, the Commission, the Member States and the Stakeholder Organisations must cooperate to achieve the ERA. In this framework, an **assessment of the ERA State of Play** will be made to establish the baseline to monitor the future implementation of the ERA by all actors involved (ERA monitoring mechanism). It will assess the actions taken by Member States to remove remaining barriers and will include policy guidelines in ERA areas where more action is needed to create the conditions for the ERA to be achieved. Following the signature of a Joint Statement and Memoranda of Understanding in July 2012 with major research Stakeholder Organisations, the implementation of the necessary structural changes in their member organisations will be monitored.

In preparation of Horizon 2020, the **ERA Chairs** pilot action will support research organisations located in Convergence and Outermost Regions to significantly improve their performance in securing competitive research funding (see Section 3.2.13).

Joint Programming Initiatives (JPIs), led by Member States, also provide a substantial contribution to structuring the ERA. DG Research and Innovation currently facilitates the implementation by the Member States of ten JPIs (one of which is led by DG CONNECT), including the cross-cutting JPI Urban Europe, which focusses on urban governance and urban management and develops policy recommendations for the Union, the Member States and cities. The other nine JPIs address societal

challenges through specific research areas (see Table "FP7 Public-Public and Public-Private Partnerships").

Other important initiatives that contribute to the ERA implementation relate to the setting-up of common research infrastructures (see Section 3.2.10).

A number of important **ERA conferences** will be held. The Joint Programming Conference 2013 will take place under the Irish Presidency (1st Semester 2013): it will assess the progress and impact to date of Joint Programming Initiatives and consider future policies. Another conference, under the Lithuanian presidency (2nd Semester 2013), will deal with young researchers. The biennial EURAXESS Conference will focus on the communication aspects of this web-based tool that assists researchers in advancing their careers in Europe and supports research organisations in their search for outstanding research talent. Finally, the "Voice of the Researchers" Conference will seek to collect and channel concerns to improve the researchers' life and working conditions. Other important ERA conferences are mentioned in the different sections of this document, e.g. the Week of Innovative Regions (WIRE) Conference (see Section 3.2.12).

Finally, in order to make progress towards a fully inclusive ERA, discussions will take place in 2013 with COST, a well-established intergovernmental bottom-up mechanism for the creation of scientific networks financed by EU funds, to ensure that COST will give priority to widening its participation.

Comments on the performance indicators

Following the adoption of the ERA Communication in July 2012¹⁰, the 10 specific objectives presented in the 2012 Management Plan have been rearranged into the five specific objectives set out by the Communication. Nevertheless, all the 19 indicators presented in the 2012 Management Plan have been kept, with one exception: "Business expenditure on R&D as % of GDP", which is already included in Section 3.2.17 – Coherent Development of Research Policies.

In parallel to the adoption of the ERA Communication, the Commission signed a Joint Statement and Memoranda of Understanding (MoUs) with key research organisations and research funding bodies. These organisations will carry out or encourage their members to carry out a set of actions by the end of 2013 to contribute to the implementation of the ERA. These actions are expected to have a positive impact on the progress of the indicators presented below towards their respective targets.

¹⁰ COM (2012) 392

ERA Implementation		
SPECIFIC OBJECTIVE 1	Improve the effectiveness of national research systems	
<i>Disclaimer: new indicators are under development to be introduced as from the Management Plan 2014. The indicators below were used in previous MPs. Although they provide insights on national research systems they do not inform on their effectiveness.</i>		
Result indicators	Latest known result	Target
Public expenditure on R&D as % of GDP	0.74% (2011)	1% by 2020
Amount of Structural funds allocated to core RTDI as % of total Structural funds	14.4% (2011)	20% by 2015
Number of EU universities with Citation Impact Score >1.3	30	45 by 2013
SPECIFIC OBJECTIVE 2	Reinforce transnational cooperation and competition	
Result indicators	Latest known result (2012)	Target (by 2013)
Number of national roadmaps defining priorities for jointly setting-up European research infrastructures	17 roadmaps	28 roadmaps ¹¹

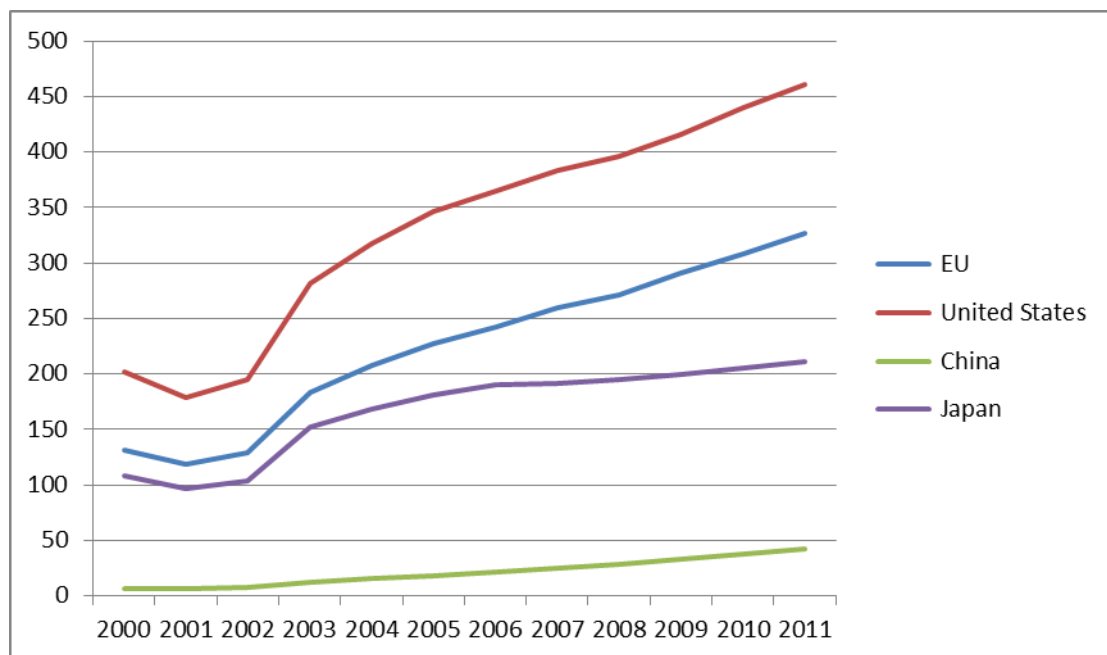
¹¹ There are 33 countries affected: the 27 Member States plus 6 associated countries

Number of Research Infrastructures (RI) of world class relevance operated jointly at EU level (built or under implementation)	- 24 ESFRI* projects - 7 EIROforum** RIs Total: 31	- 28 ESFRI - 7 EIROforum RIs (<i>achieved</i>) Total: 35
<p><i>* The mission of ESFRI (European Strategy Forum on Research Infrastructures) is to support a coherent and strategy-led approach to policy-making on research infrastructures in Europe, and to facilitate multilateral initiatives leading to the better use and development of research infrastructures, at EU and international level.</i></p>		<p><i>** EIROforum is a partnership between eight of Europe’s largest inter-governmental scientific research organisations that are responsible for infrastructures and laboratories (including CERN). Its mission is to combine the resources, facilities and expertise of its member organisations to support European science in reaching its full potential.</i></p>
Number of Joint Programming Initiatives (JPI)	10 JPIs	6 JPIs (<i>achieved</i>)
Number of preparatory actions for coordination of international S&T cooperation programmes ¹²	4	4 initiatives (<i>achieved</i>)

¹² Through the Strategic Forum for International S&T Cooperation (SFIC)

International scientific co-publications (EU/ third countries) per million population	2011		Reduce the gap with the US
	EU27	US	
	327	460	

Although the EU has considerably improved its performance in the latest years (+ 35% in 5 years), the US' performance is even stronger. Thus **the gap with the US is not being reduced; actually, it is slightly widening (+ 9% in five years).**



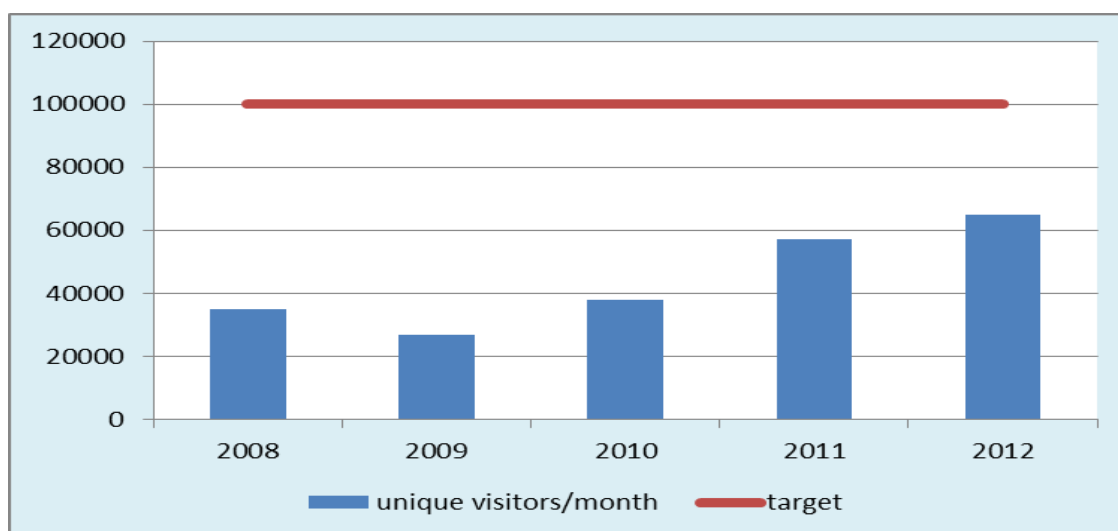
Share of EU scientific publications with co-authors from at least two EU Member States	14.4% (2009)	20% by 2020
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SPECIFIC OBJECTIVE 3 **Build an open labour market for researchers**

Result indicators	Latest known result (2012)	Target (by 2013)
Number of Member States and Associated Countries having taken and reported new actions to enhance researchers' careers and mobility	- 100% of Member States - 67% of Associated Countries	- 100% of Member States (<i>achieved</i>) - 67% of Associated Countries (<i>achieved</i>)

Number of unique visitors to EURAXESS- In Motion Portal	65,000 unique visitors/month	100,000 unique visitors/month
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"EURAXESS - Researchers in Motion" is a unique web portal providing access to a complete range of information and support services for researchers wishing to pursue their careers in Europe and for organisations searching outstanding research talent. EURAXESS is a truly pan-European initiative, supported by thirty-seven participating countries. It provides a single access point to information from all countries including a network of walk-in centres offering personalised assistance to researchers moving to another country.



Number of pages views on EURAXESS-In Motion	692,000 page views	700,000 page views
Number of countries involved in EURAXESS-Link (Abroad) ¹³	8 countries ¹⁴	7 countries (achieved)
SPECIFIC OBJECTIVE 4	Promote gender equality and gender mainstreaming in research	
Result indicators	Latest known result	Target (by 2020)
Percentage of women researchers in the higher	40% (2009)	45%

¹³ Network aiming at linking European researchers abroad with the European Research Area.

¹⁴ USA, Japan, China, India, Singapore. The later serves as a hub for South-east Asia, covering Thailand, Malaysia and Vietnam.

education sector and in public research institutions ¹⁵		
Percentage of A-grade (the highest grade at which research is normally conducted) female academic staff ¹⁵	20% (2010)	30%
Percentage of female heads of institutions in the higher education sector ¹⁵	15.5% (2010)	25%
SPECIFIC OBJECTIVE 5	Improve circulation, access to and transfer of scientific knowledge	
Result indicators	Latest known result	Target
Number of Member States and Associated Countries having taken and reported actions to improve knowledge transfer between public research organizations and industry	- 27 Member States - 9 Associated countries Total: 36 (2012)	- 27 Member States (<i>achieved</i>) - 12 Associated countries Total: 39 by 2012
Share of licence revenue from abroad as % of GDP	0.31% (2011)	Reduce the gap with the US
The gap with the US has remained stagnant for the last years; It has been reduced by only 4% between 2007 and 2010.		
Main outputs for 2013		
<ul style="list-style-type: none"> - Commission proposals to renew four existing Public-Public Partnerships (Art. 185 TFEU) in Health (see Section 3.2.1.), SMEs (see Section 3.2.11.), ICT (DG CONNECT's initiative on Ambient Assisted Living) and the cross-cutting initiative European Metrology Research Programme (EMRP) - Assessment of the ERA State of Play - EC Recommendation to Member States on Structural changes in universities and research institutions to promote gender equality - EC Recommendation to Member States on Responsible Research and Innovation 		

¹⁵ Source: European Commission "She figures 2012. Gender in Research and Innovation" (final figures to be published).

3.2 Operational Activities

3.2.1 Cooperation – Health (08.02)

FP7 Health research fosters transnational cooperation and the integration of activities, concentrating European efforts on improving the health of European citizens and increasing the innovative capacity of European health-related industries and business.

Policy initiatives for 2013

The Commission will propose to renew the **European and Developing Countries Clinical Trials Partnership (EDCTP)**. EDCTP is a Public-Public partnership (Art. 185 TFEU) that tackles poverty-related diseases in developing countries, particularly in sub-Saharan Africa and unlocks public investment for clinical trials in this neglected sector. Two independent reviews concluded that EDCTP has been particularly successful in developing clinical research capacities in sub-Saharan Africa in cooperation with African researchers and clinicians and in providing a unique platform for a genuine dialogue between African and European researchers. It has also provided a meaningful contribution towards the achievement of the Millennium Development Goals, to which the EU is committed. Building on this success, EDCTP 2 would enlarge its scope, conduct approximately 100 new clinical trials, strengthen Africa's capacities for clinical research and train 350 African researchers and medical doctors

The Commission will propose to renew the **Innovative Medicines Initiative (IMI)**. IMI is a Public-Private Partnership (Joint Undertaking – Art. 187 TFEU) with the European pharmaceutical industry, aiming to speed up the development of better and safer medicines. According to its interim evaluation, IMI has achieved a substantial leverage effect on industrial investment in R&D and has promoted collaboration between large-scale industry, SMEs, research organisations, patients and regulators. Therefore, it contributes to reinforce the EU's competitiveness in this critical sector. The proposed second phase will involve other industries (e.g. medical imaging, medical information technologies) to take into account the changing landscape in health-related research and innovation. Also, the focus on major public health issues will be reinforced.

Main implementation activities for 2013

For 2013, the FP7 Health programme places a strong emphasis on innovation and exploitation of the results of FP7-funded research through a special action, for which EUR 95 Million have been earmarked. In addition, a specific effort is made on brain and neurosciences and on antimicrobial resistance, two areas where EU funding will complement the Joint Programming Initiatives previously launched by Member States.

The EDCTP programme is now beyond its active funding period (the last grants involving EU budget were awarded in 2012). Its activities in 2013 will focus on the follow-up and monitoring of on-going granted projects. In addition, the EU-funded EDCTP-Plus project will analyse the achievements and impact of EDCTP, and develop the strategic, operational and administrative capacities needed for an EDCTP 2 programme.

The Innovative Medicines Initiative (IMI) is launching the last calls for proposals under the current programme. This new round of projects will be funded with EUR 210 Millions, matched by in-kind contributions by the pharmaceutical industry, and will focus on antimicrobial resistance, pharmacogenetics and the taxonomy of human diseases. Furthermore, IMI is reinforcing its emphasis on valorising the results from the expanding number of running projects.

The Month of the Brain, a major awareness and communication **campaign**, will take place in May 2013 across the EU and will include conferences and information dissemination through brochures, movies and other supports. It will promote dialogue between stakeholders, such as patient organizations, citizens, employers and public authorities.

08 02 : Cooperation — Health		
SPECIFIC OBJECTIVE 1	Enhance the generation of new knowledge in all top priority areas in 'Health' with practical relevance at EU level	
Result indicators	Latest known result (Nov 2012)	Target (by 2013)
Coverage of topics published in the Work Programmes ¹⁶	96%	100%
Projects that achieved <u>all or most</u> of their objectives...	98%	90%
... of which projects that achieved <u>all</u> of their objectives	47%	75%
SPECIFIC OBJECTIVE 2	Promote the use and dissemination of research results in the area of 'Health'	
Result indicators	Latest known result (Nov 2012)	Target (by 2013)
Share of EU financial contribution to Industry ¹⁷	17.3%	18%
Projects with at least one industrial participant ¹⁷	73.6%	70%

¹⁶ This indicator covers the topics published in the annual calls for proposals launched under the specific programme Cooperation of the Seventh Framework Programme.

¹⁷ Industry participation in this context means the participation of private-for-profit organisations (PRC), with SMEs being a sub-group. It must be noted, though, that, under FP7 rules, SMEs can also be non-profit organisations.

Share of EU financial contribution to SMEs	15.2%	15% ¹⁸
Projects with at least one SME participant	69%	60%
Projects which generate patent applications or other types of intellectual property	34%	20%
Average number of publications in peer reviewed journals per project	28	4
SPECIFIC OBJECTIVE 3	Improve, via new types of Partnerships, research at EU and international levels regarding the drug development process and the fight against major diseases	
Result indicators	Latest known result (Nov 2012)	Target (by 2018)
Number of field testing of vaccines and drugs against HIV/AIDS, malaria and Tuberculosis (EDCTP) ¹⁹	- HIV/AIDS: 26 - Malaria: 11 - Tuberculosis: 18 Total: 55	- HIV/AIDS: 60 - Malaria: 40 - Tuberculosis: 40 Total: 140
Main outputs for 2013		
<p>- Commission proposal to renew the Public-Public partnership (Art. 185 TFEU) European and Developing Countries Clinical Trials Partnership (EDCTP)</p> <p>- Commission proposal to renew the Public-Private Partnership (Art. 187 TFEU) Innovative Medicines Initiative (IMI)</p>		

¹⁸ 15% refers to a legal overall target for the Cooperation Specific Programme (the Decision no 1982/2006/EC establishing FP7 provides that at least 15% of the Cooperation Programme's total budget shall be allocated to SMEs) and is not a target for every activity under this Specific Programme.

¹⁹ The latest figure (55 vaccines and drugs under test) is slightly lower than end 2011 (60) because EDCTP has completed its active funding period and a small number of testing were interrupted on the basis of interim results of the corresponding clinical trials, which were not positive. The 2018 target remains totally realistic if EDCTP 2 is launched.

Main expenditure-related outputs	Budget line (2013)	DB 2013 (May 2012)	
		Output (no.)	EUR million ²⁰
Proposals retained for funding in the area of :			
Horizontal topics for collaborative projects relevant for the whole of theme health		10	88.22
Biotechnology, generic tools and medical technologies for human health		34	122.57
Translating research for human health	08 02 01	70	451.29
Optimising the delivery of healthcare to European citizens		22	50.14
Other actions across the health theme		28	48.57
Others (including horizontal expenses)		-	30.70
Total 08 02 01			791.49
EC Contribution to JTI "Innovative Medicine" – operational costs	08 02 02	1	207.07
EC Contribution to JTI "Innovative Medicine" – running costs	08 02 03	1	4.24
Total	08 02		1,002.80

²⁰ This indicates the total cost of each type of output produced. The EFTA contribution is not included.

3.2.2 Cooperation – Food, Agriculture and Biotechnology (08.03)

This activity aims at building a sustainable and competitive knowledge-based Bioeconomy (KBBE) in Europe to provide a sustainable and efficient management of biological and renewable resources, as well as a resilient food chain, responding to pressures on natural resources linked to food security, climate change, renewable energy and waste reduction.

Policy initiatives for 2013

The Commission will propose to establish a **Bio-Based Industries Joint Technology Initiative** (Art. 187 TFEU). The objective of this Public-Private Partnership will be to promote the technological breakthroughs needed for a cost-competitive and sustainable conversion of biomass into industrial products, fuel or energy, so that they can compete in price and quality with products based on fossil resources. This should be achieved without creating shortages in food and feed supply and while respecting the environment. This ambitious partnership will bring together scattered industrial sectors, including those that use biological resources as their main feedstock (forest-based sector, starch, sugar, biofuels/bioenergy) and those for which biomass is part of the raw material portfolio (e.g. Chemicals, Plastics, Consumer goods).

Main implementation activities for 2013

The FP7 Food, Agriculture and Biotechnology programme focuses on the implementation of priorities set forth in the Bioeconomy Communication²¹. Particular attention is being brought to the challenge of making a better use of biological resources (including waste) to produce, not only safe food and feed, but also bio-based materials and bio-energy.

Following the approach proposed for Horizon 2020, the call for proposals seeks to stimulate innovative solutions and close-to-the-market activities and to attract Industrial participation, in particular SMEs.

International cooperation will be sought on the basis of mutual benefit with strategic partners, such as China on animal infectious diseases or Mediterranean countries on agriculture and agro-forestry.

In 2013, a Bioeconomy Observatory will be established to assess the progress and impact of the bioeconomy in Europe and to inform further policy making. The Observatory will build on existing systems at regional, national and European level and develop common indicators. In addition, in accordance with the Bioeconomy communication, a Bioeconomy Panel will be established to enhance synergies and coherence between policies, initiatives and economic sectors related to the bioeconomy at EU level, linking with existing mechanisms.

In 2013, a comprehensive ex-post **evaluation** of the Food, Agriculture, Fisheries and Biotechnologies programme under FP7 will be initiated. It will be completed by the end of 2014.

²¹ Commission Communication on "Innovating for Sustainable Growth: a Bioeconomy for Europe" (COM(2012) 60) of 13 February 2012

In February 2013, the Bioeconomy Stakeholders **Conference** will be held in Dublin with the title "Bioeconomy in the EU: achievements and directions for the future", under the Irish Presidency.

08 03 : Cooperation — Food, agriculture and fisheries, and biotechnology		
SPECIFIC OBJECTIVE 1	Enhance the generation of new knowledge in all top priority areas in 'Food, agriculture and fisheries, and biotechnology' with practical relevance at EU level	
Result indicators	Latest known result (Nov 2012)	Target (by 2013)
Coverage of topics published in the Work Programmes ¹⁶	97%	100%
Projects that achieved <u>all or most</u> of their objectives...	100%	90%
... of which projects that achieved <u>all</u> of their objectives	40%	75%
SPECIFIC OBJECTIVE 2	Promote the use and dissemination of research results in the area of 'Food, agriculture and fisheries, and biotechnology'	
Result indicators	Latest known result (Nov 2012)	Target (by 2013)
Share of EU financial contribution to Industry ¹⁷	16.1%	10%
Projects with at least one industrial participant ¹⁷	76.4%	70%
Share of EU financial contribution to SMEs	14.7%	15% ¹⁸
Projects with at least one SME participant	74.5%	70%
Projects which generate patent applications or other types of intellectual property rights	47%	40%
Percentage of projects with publications in peer reviewed journals	93%	55%

Main outputs for 2013

Commission proposal to establish a new Public-Private Partnership (Art. 187 TFEU) on Bio-Based Industries

Main expenditure-related outputs	Budget line	DB 2013 (May 2012)	
		Output (no.)	EUR million ²⁰
Proposals retained for funding in the area of:			
1. Sustainable production and management of biological resources from land, forest and aquatic environments	08.03.01	30	136.33
2. Fork to Farm: Food, health and well-being		11	75.91
3. Life sciences biotechnology and biochemistry for sustainable non-food products and processes		24	128.66
Others (monitoring, evaluations, impact assessments, horizontal expenditures)		-	15.83
Total	08.03.01	65	356.73

3.2.3 Cooperation – Nanosciences, Nanotechnologies, Materials and New Production Technologies – NMP (08.04)

The central objective of this activity is to support the transformation of European industry from a resource-intensive (relying on raw materials, labour, energy etc.) to a knowledge-intensive and sustainable industry. The issue for growth and employment is how industry can incorporate knowledge into products with high added value and highly efficient processes.

Main implementation activities for 2013

The FP7 Nanosciences, Nanotechnologies, Materials and New Production Technologies (NMP) programme is putting some of the vital aspect of the upcoming Horizon 2020 in practice.

It places particular emphasis on cross-cutting issues between the six technologies identified as Key Enabling Technologies (KETs). Indeed, this programme makes a major contribution to the European Strategy for KETs through direct support to research in three KETs (nanotechnology, advanced materials and advanced manufacturing systems²²) and indirect support to the three other KETs (micro- and nano-electronics, photonics and biotechnology) through advances in materials and nanotechnology.

Also, as will be the case under **Horizon 2020**, the NMP programme supports research that can provide the basis for tackling societal challenges, in particular: resource and energy efficiency, protection of the environment and improvements in health care. Moreover, it contributes to the Raw Materials Initiative.

Finally, a strong innovation dimension has been introduced. Industrial participation is required in all research activities, and big support is provided to SMEs participation in order to leverage the role of SMEs in generating value added and validating innovative solutions. Additionally we are paying increased attention to demonstration and validation activities, possibly going beyond pilot implementations in industrial settings. Furthermore, the NMP programme aims to enhance the use of project results through Intellectual Property Rights, standardisation, patenting etc. To this purpose, it provides external assistance to identify and address possible obstacles in the exploitation of results.

The FP7 NMP programme continues to support the 2008 European Economic Recovery Plan, through the contractual Public-Private Partnerships (PPPs) **“Factories of the future”**, **“Energy efficient Buildings”** and **“Green cars”** (for the later, see Activity 08.07 – Transport), designed to align research with the needs of industry and to ensure an immediate industrial take-up. The 2013 priorities for the Factories of the Future PPP will deal with of resource-efficient production, human-robot cooperation, and user-centred manufacturing. The Energy Efficient Building PPP will focus on eco-innovative materials for healthier indoor environments, energy-efficient solutions for retrofitting of buildings, and design methodologies for energy-performing buildings and will also support the Smart Cities scheme.

²² See COM(2012)341 of 26 June 2012

International cooperation will be pursued in the interest of EU industry on the basis of "win-win" scenarios. Coordinated calls are launched with China on biomaterials for the biomedical field and with Japan on raw materials. Furthermore, two topics in the Factories of the Future PPP are particularly suitable for collaboration at international level, especially under the IMS (Intelligent Manufacturing Systems) scheme.

In preparation of Horizon 2020, based on the experience acquired in FP7 with the above-mentioned contractual PPPs, a document will be prepared to clarify their role in Horizon 2020 and in particular with respect to the institutional Public-Private partnerships established under Art. 187 TFEU.

08 04 : Cooperation — Nanosciences, nanotechnologies, materials and new production technologies		
SPECIFIC OBJECTIVE 1	Enhance the generation of new knowledge in all top priority areas in 'Nanosciences, nanotechnologies, materials and new production technologies' with practical relevance at EU level	
Result indicators	Latest known result (Nov 2012)	Target (by 2013)
Coverage of topics published in the Work Programmes ¹⁶	100%	100%
Projects that achieved <u>all or most</u> of their objectives...	97%	90%
... of which projects that achieved <u>all</u> of their objectives	34%	75%
SPECIFIC OBJECTIVE 2	Promote the use and dissemination of research results in the area of 'Nanosciences, nanotechnologies, materials and new production technologies'	
Result indicators	Latest known result (Nov 2012)	Target (by 2013)
Share of EU financial contribution to Industry ¹⁷	36.3%	40%
Projects with at least one Industrial participant ¹⁷	93%	95%
Share of EU financial contribution to SMEs	22.8%	15% ¹⁸
Projects with at least one SME participant	84.1%	85%

Projects which generate patent applications or other types of intellectual property rights	48%	40-50%
Average number of publications in peer reviewed journals per project	31	5

Main expenditure-related output	Budget line	DB 2013 (May 2012)		
		Output (no)	EUR million ²⁰	
Proposals retained for funding in the area of:				
Large-scale integrating collaborative projects. Large-scale targets oriented towards industrial applications and include closer-to-market activities, such as demonstration and dissemination.	08.04.0 1	11-14	151.00	
Small or medium-scale focused research projects. Longer-term RTD efforts inviting more academic input to mobilize the best resources to generate knowledge.		21-25	78.00	
SME-targeted projects		10-12	38.00	
Coordination and support actions		10-12	12.50	
ERA-NET			1.30	
Call Ocean		2	6.40	
Coordinated call EU - China		3	4.50	
Coordinated call EU - Japan		3	4.50	
Factory of the Future		32-35	160.00	
Energy Efficient Building		21-23	110.00	
Green Cars		2-3	20.00	
Others			20.46	
Total 08 04 01				606.66
EC contribution to JTI "Fuel Cells and Hydrogen"		08.04.0 2	1	8.79
Total	08.04		615.45	

3.2.4 Cooperation – Energy (08.05)

European energy systems are currently on an unsustainable path and are confronted with major challenges. The main objective of this activity is to identify and develop a new generation of clean, efficient, affordable and secure energy technologies, which is crucial for achieving the EU's energy and climate policy objectives, as well as for supporting the EU's competitiveness and growth.

Policy initiatives for 2013

The Commission will propose to renew the **Fuel Cell and Hydrogen Joint Undertaking** (FCH JU - Art. 187 TFEU). FCH JU is a Public Private Partnership with the industry and the research communities which aims to accelerate the market introduction of FCH technologies, which can contribute to achieve a lower carbon energy system. According to its Interim Evaluation, the FCH JU is perceived by participants as an improvement to the R&D landscape for these technologies. Drawing lessons from the first phase of the FCH JU, the proposed second phase would simplify its procedures, rebalance the funding portfolio towards energy systems and modify its scope in order to be in a position to, among other things, support the early market deployment of some applications.

The Commission will adopt a Communication on **Energy Technologies and Innovation in a future European Energy Policy** (DG ENER is chef de file for this initiative). It will enhance the implementation of the Strategic Energy Technology (SET) Plan by proposing measures to foster energy technologies development in accordance with the Energy Roadmap 2050, to promote energy research at EU level, demonstration and innovation actions at and to remove barriers to the market deployment of energy innovation.

Main implementation activities for 2013

The FP7 Energy programme gives priority to Smart Cities and Communities, renewable energies, smart energy grids and Carbon Capture and Storage.

In line with the approach laid out for Horizon 2020, actions are financed to promote the EU-wide integration of research programmes of research performers (different from the integration of funding agencies' programmes) in the areas of renewable energies, smart grids and energy storage. By pooling research capacities, this novel action will bring coherence among research operators and reinforce excellence in European energy technology research.

In view of the strategic importance of engagement with Southern Mediterranean countries, a specific action seeks research cooperation with these countries in the area of renewable energy.

The Fuel Cells and Hydrogen Joint Undertaking focusses on the large-scale demonstration of Fuel Cell Electric Vehicles (including the build-up of the necessary refuelling infrastructure) and on the production of hydrogen from renewable electricity sources.

Besides, a thorough mid-term external **evaluation** of the impact of EU funded research and demonstration projects under FP6 and FP7 will start in 2013 (in collaboration with DG ENER).

Finally, in May 2013, the sixth SET Plan **Conference** will be organised by the EU Irish Presidency in Dublin. It will focus on the evolution of the SET Plan under Horizon 2020, notably on how the European research and innovation landscape should evolve to respond to the policy objectives of a future EU Energy Policy.

08 05 : Cooperation — Energy		
SPECIFIC OBJECTIVE 1	Enhance the generation of new knowledge in all top priority areas in Energy with practical relevance at EU level	
Result indicators	Latest known result (Nov 2012)	Target (by 2013)
Coverage of topics published in the Work Programmes ¹⁶	92%	100%
Projects that achieved <u>all or most</u> of their objectives...	96%	90%
... of which projects that achieved <u>all</u> of their objectives	36%	75%
SPECIFIC OBJECTIVE 2	Promote the use and dissemination of research results in the area of Energy	
Result indicators	Latest known result (Nov 2012)	Target (by 2013)
Share of EU financial contribution to Industry ¹⁷	49.4%	40%
Projects with at least one industrial participant ¹⁷	95.8%	95%
Share of EU financial contribution to SMEs	18.8%	15% ¹⁸
Projects with at least one SME participant	83.8%	80%
Projects which generate patent applications or other types of intellectual property rights	40%	30%
Percentage of projects with publications in peer reviewed journals	73%	55%
Main outputs in 2013		
Commission proposal to renew the Public-Private Partnership (Art. 187 TFEU) Fuel Cell and Hydrogen		

Main expenditure-related outputs	Budget line	DB 2013 (May 2012)	
		Output (no.)	EUR million ²⁰
Proposals retained for funding in the area of :			
Renewable Energy (Solar, Wind, Bio Energy, Solar Thermal, Geo Thermal or Ocean), and Energy Efficiency and savings	08.05.01	24	128.57
CO2 Capture and Storage		5	27.35
Smart Energy Networks		6	36.53
Others			9.13
Total 08 05 01			
EC contribution to JTI "Fuel Cells and Hydrogen"– operational costs	08.05.02	1	15.01
EC contribution to JTI "Fuel Cells and Hydrogen" – running costs	08.05.03	1	1.24
Total	08.05		217.83

3.2.5 Cooperation – Environment (08.06)

Since environmental systems and phenomena do not respect national borders, joint action at European level is required to address environmental and climate-related challenges. EU research and innovation activities will stimulate the generation of new environmental knowledge and its use in science, policy making and business to promote green growth.

Main implementation activities for 2013

The FP7 Environment programme comprises a smooth transition towards Horizon 2020 by following a challenge-driven approach across the board: for example, the cross-thematic call "The Ocean of Tomorrow: joining research forces to meet challenges in ocean management" promotes research and innovation on marine technologies and on innovative transport and deployment systems.

In 2013, this programme will also emphasise the innovation dimension. Thus, actions will be aimed at innovative products, processes and services, including through broad, non-prescriptive calls for proposals in the areas of eco-innovation and "waste as a resource." Also, actions in support of the European Innovation Partnership 'Water' will seek to stimulate innovation in areas like water efficiency.

As regards international cooperation, priority will be given to enhancing the uptake of research results on subjects of mutual interest in the areas of climate action, resource efficiency and raw materials with four strategic partner regions.

In preparation of Horizon 2020, work will continue in 2013, in close cooperation with, in particular DGs CLIMA, ENV and ENTR, to prepare the implementation of Societal Challenge "Climate Action, Resource Efficiency and Raw Materials" proposed under Horizon 2020. The objectives are to set up advisory and Member State consultation structures and to establish a reliable process to mainstream climate action and sustainable development all across Horizon 2020. Importantly, the later task entails the development of a method to follow up the completion of two targets, laid down in the Horizon 2020 proposal: at least 60% of the overall Horizon 2020 budget should be related to sustainable development and climate-related expenditure should exceed 35% of the budget. Finally, a pilot project will seek the participation of citizens in articulating Europe's research and innovation needs as regards the usage of waste as a resource; its results will feed into the debate for the first wave of calls for proposals under Horizon 2020.

In 2013, a number of important **studies** will be launched, including an ex-post evaluation of the FP7 Environment programme and a study on the impact of Research & Innovation policies and programmes on climate action, resource efficiency and raw materials.

Several high-level **events** with policy implications will also be held. These include the International Conference on Air Quality in January (the results of which will feed into the review of existing legislation on air quality and emissions) and a Conference on Transatlantic marine and maritime cooperation, in June, under Irish Presidency.

08 06 : Cooperation — Environment (including climate change)		
SPECIFIC OBJECTIVE 1	Enhance the generation of new knowledge in all top priority areas in Environment (including climate change) with practical relevance at EU level	
Result indicators	Latest known result (Nov 2012)	Target (by 2013)
Coverage of topics published in the Work Programmes ¹⁶	91%	100%
Projects that achieved <u>all or most</u> of their objectives...	96%	90%
... of which projects that achieved <u>all</u> of their objectives	54%	75%
SPECIFIC OBJECTIVE 2	Promote the use and dissemination of research in the area of Environment (including climate change)	
Result indicators	Latest known result (Nov 2012)	Target (by 2013)
Share of EU financial contribution to Industry ¹⁷	13.8%	10%
Projects with at least one industrial participant ¹⁷	70.6%	65%
Share of EU financial contribution to SMEs	12.8%	15% ¹⁸
Projects with at least one SME participant	71.4%	65%
Projects which generate patent applications or other types of intellectual property rights	19%	15%
Percentage of projects with publications in peer reviewed journals	96%	90%

Main expenditure-related outputs	Budget line	DB 2013 (May 2012)	
		Output (no.)	EUR million ²⁰
Proposals retained for funding in the area of:			
Coping with climate change	08.06.01	8	65.00
Sustainable use and management of land and seas		12	85.00
Improving resource efficiency		16	96.00
Protecting citizens from environmental hazards		7	40.00
Mobilizing environmental knowledge for policy, industry and society		12	25.00
BONUS		1	11.30
Others		-	10.33
Total 08 06 01			
EC contribution to JTI "Fuel Cells and Hydrogen"	08.06.02	1	3.95
Total	08.06	57	336.58

3.2.6 Cooperation – Transport (08.07)

The knowledge-intensive transport sector is a driver of Europe's economic competitiveness; it is also responsible for 25% of CO₂ emissions and contributes to congestion, pollution and noise in urban areas. Therefore, European transport research seeks to develop innovative transport systems that are greener, more efficient, smarter and more socially inclusive.

Policy initiatives for 2013

The Commission will propose to renew the **Clean Sky Joint Technology Initiative**, a Public-Private Partnership (PPP) (Joint Undertaking – Art. 187 TFEU) that develops technologies contributing to reduce emissions and noise in the aeronautics sector. By enhancing the innovation capacity of the aeronautics industry, Clean Sky strengthens the European industrial leadership in this field. The interim evaluation of Clean Sky indicates that it has stimulated progress towards the strategic environmental targets and the introduction of game-changing innovations. Based on this success, the new phase of Clean Sky will focus on aircraft and rotorcraft as a whole, integrating all the technological advancements to understand interactions, risks and synergies.

Main implementation activities for 2013

In line with the activities proposed for the Transport challenge of Horizon 2020, the FP7 Transport Research Programme will focus on three challenges in 2013 : **eco-innovation; safe and seamless mobility; and competitiveness through innovation**. The innovation dimension has been further reinforced by focusing on demonstrators, prototypes, standardisation and social innovation in order to transfer research results to the market.

The international dimension is will be strengthened by the signature of an implementing arrangement with the US, which allows advanced collaboration between partners on both sides. Furthermore, a specific joint initiative with Russia has been launched and cooperation is also sought with other emerging economies and with southern Mediterranean countries. Finally, as a support to the strengthening of the European Research Area, an ERA-Net Plus activity will support transnational cooperation and leverage national public investment on innovative road infrastructure.

In addition, the Technology Roadmaps for the priority fields of the **Strategic Transport Technology Plan**²³ (STTP) will be adopted (DG MOVE is chef de file for this initiative). The STTP Technology Roadmaps will involve the private sector and the Member States, as well as the Commission and will provide a structured framework for a shared definition and pursuit of technology development objectives to be reached through transport research. The STTP will support the implementation of the funding programmes proposed by the Commission for the next multiannual financial framework, including Horizon 2020 as well as other sources of EU and national funding.

An **ex-post evaluation** of the overall implementation, management, achievements and impacts of the FP7 Transport Research Programme is programmed for 2013.

²³ Identified in the Communication "Research and innovation for Europe's Future Mobility" COM (2012) 501 of 13 September 2012

Under the contractual PPP **European Green Cars Initiative** (part of the 2008 European Economic Recovery Plan – see Activity 08.04 NMP), the focus for 2013 is on electric vehicles.

08 07 : Cooperation – Transport (including aeronautics)		
SPECIFIC OBJECTIVE 1	Enhance the generation of new knowledge in all top priority areas in Transport (including aeronautics) with practical relevance at EU level	
Result indicators	Latest known result (Nov 2012)	Target (by 2013)
Coverage of topics published in the Work Programmes ¹⁶	92.2%	100%
Projects that achieved <u>all or most</u> of their objectives...	99%	90%
... of which projects that achieved <u>all</u> of their objectives	49%	75%
SPECIFIC OBJECTIVE 2	Promote the use and dissemination of research results in the area of Transport (including aeronautics)	
Result indicators	Latest known result (Nov 2012)	Target (by 2013)
Share of EU financial contribution to Industry ¹⁷	48.3%	20%
Projects with at least one industrial participant ¹⁷	94.7%	95%
EU financial contribution to SMEs	17.7%	15% ¹⁸
Projects with at least one SME participant	87.2%	85%
Projects which generate patent applications or other types of intellectual property rights	14%	10%
Percentage of projects with publications in peer reviewed journals	68%	20%
Main outputs for 2013		
Commission proposal to renew the Public-Private Partnership (Art. 187 TFEU) Clean Sky		

Main expenditure-related outputs	Budget line	DB 2013 (May 2012)	
		Output (no.)	EUR million ²⁰
Proposals retained for funding in the area of:			
Aeronautics and Air Transport	08.07.01	42	146.58
Sustainable Surface Transport		39	146.58
Others		-	18.73
Total 08 07 01			311.89
EC contribution to the Clean Sky Joint Undertaking	08.07.02	1	226.51
	08.07.03	1	2.89
EC contribution to the JTI "Fuel Cells and Hydrogen"	08.07.04	1	17.53
Total	08.07		558.82

3.2.7 Cooperation – Socio-Economic Sciences and the Humanities (08.08)

Socio-economic sciences and the humanities (SSH) research is essential for increasing the knowledge and understanding of European societies and for informing and guiding European and national or even regional policies in many inter-related areas.

Main implementation activities for 2013

Within the 2013 Work Programme, research is funded on, among other things, Social Innovation and Cultural Heritage. For social innovation, research seeks to understand e.g. the economic underpinnings of social innovations, in other words what is needed for economically successful social innovations to take place and how public policy can facilitate them. As for cultural Heritage, funding will be provided for research that identifies the untapped potential of the European cultural heritage for stimulating jobs and economic growth, improving social and territorial cohesion and defining new types of artistic careers.

So as to assess how researchers in various parts of the world understand the impact of globalisation in their respective regions, a **Transatlantic SSH platform** will be launched to encourage strategic international cooperation on globalisation. In addition, international participation will be particularly sought for those research topics covering world issues, such as the transition in the Mediterranean region or security and democracy in the Caucasus.

In preparation of Horizon 2020, efforts will focus in 2013 on the preparations needed to "embed" social sciences and humanities (SSH) research in each of the general objectives of Horizon 2020. Two different approaches will be used, depending on the characteristics of each Societal Challenge: either separate SSH topics will be introduced in the Societal Challenge calls for proposals or an interdisciplinary approach will be used. Another aspect of "embedding" concerns the different implementation stages (Strategic Programme, Work Programme, evaluations, monitoring): e.g., a suitable representation of evaluators from the social sciences and humanities will be ensured. Finally, monitoring tools will be developed to follow the implementation of this strategy.

In 2013, a project will be launched to **evaluate**, monitor and compare the impacts of EU-funded research on socio-economic sciences and the humanities (SSH).

During the Irish Presidency (1st semester 2013), an **event** on Social Sciences and Humanities will take place in Ireland. During the Lithuanian Presidency (2nd semester 2013) a conference will take place in Vilnius on the input of Socio-economic Sciences and Humanities for European and global development. Finally, 2013 being the year of citizenship, a major conference on citizenship will take place in Budapest in the first semester of 2013.

08 08 : Cooperation – Socioeconomic sciences and the humanities		
SPECIFIC OBJECTIVE 1	Enhance the generation of new knowledge in all top priority areas in 'Socio-economic sciences and the humanities' with practical relevance at EU level	
Result indicators	Latest known result (Nov 2012)	Target (by 2013)
Coverage of topics published in the Work Programmes ¹⁶	99 %	100%
Projects that achieved <u>all or most</u> of their objectives...	98%	90%
... of which projects that achieved <u>all</u> of their objectives	68%	75%
SPECIFIC OBJECTIVE 2	Promote the use and dissemination of research results in the area 'Socio-economic sciences and the humanities'	
Result indicators	Latest known result (Nov 2012)	Target (by 2013)
Share of EU financial contribution to Industry ¹⁷	4%	3%
Projects with at least one industrial participant ¹⁷	33.3%	30%
Share of EU financial contribution to SMEs	4.6% ²⁴	15% ¹⁸
Projects with at least one SME participant	32.8%	30%
Percentage of projects with publications in peer reviewed journals	73%	50%

²⁴ N.B.: Under FP7 rules, SMEs can be non-profit organisations. This explains that the value for the indicator "share of EU financial contribution to SMEs" is in the case higher than the value for the indicator "share of EU financial contribution to Industry".

SPECIFIC OBJECTIVE 3	Disseminate results coming from socio-economic sciences & humanities funded projects, including foresight projects, to policy-makers	
Result indicators	Latest known result (June 2012)	Target (by 2013)
Projects producing specific outputs disseminated to policy makers	95%	75%

Main expenditure-related outputs	Budget line	DB 2013 (May 2012)		
		Output (no.)	EUR million ²⁰	
Proposals retained for funding in the area of:				
Growth, employment and competitiveness in a knowledge society – the European case	08.08.01	6	18.00	
Combining economic, social and environmental objectives in a European perspective		6	18.00	
Major trends in society and their implications		6	18.00	
Europe and the world		2	5.00	
The Citizen in the European Union		6	18.00	
Foresight activities		1	2.50	
Specific Cooperation Actions dedicated to international cooperation		5	12.00	
Coordination and support actions		4	5.50	
ERA-NET		1	5.00	
Others		-	10.18	
Total		08.08.01		112.18

ANALYSIS COMMON INDICATORS

Common indicators across the Cooperation Specific Programme and the Euratom Fission Programme: graphical representation

Coverage of Topics

Date	Cooperation							Euratom
	08.02 Health	08.03 Food	08.04 NMP	08.05 Energy	08.06 ENV	08.07 Transport	08.08 SSH	08.21 Fission
Coverage of topics published in the Work Programmes								
11-2012	96%	97%	100%	92%	91%	92%	99%	93%
Target	100%							

Analysis: Almost all topics published in the FP7 Work Programmes have been covered until now, i.e. at least one project has been funded (only the results of the last call for proposals, related to the Work Programme 2013, are missing to have the overall picture for FP7).

The main reason why some topics have not been covered is that no quality proposal has been retained after the external evaluation process.

The Commission is legally committed to cover all activities mentioned in the FP7 Cooperation Specific Programme. This has been achieved for every activity.

Achieving Objectives

Date	Cooperation							Euratom
	08.02 Health	08.03 Food	08.04 NMP	08.05 Energy	08.06 ENV	08.07 Transport	08.08 SSH	08.21 Fission
Projects that achieved all or most of their objectives.... (target: 90%)								
11-2012	98%	100%	97%	96%	96%	99%	98%	100%
..... of which projects that achieved all of their objectives (target: 75%)								
11-2012	47%	40%	34%	36%	54%	49%	68%	82%

Research Area	Projects that achieved all or most of their objectives (%)	Projects that achieved all of their objectives (%)
08.02 Health	98%	47%
08.03 Food	100%	40%
08.04 NMP	97%	34%
08.05 Energy	96%	36%
08.06 ENV	96%	54%
08.07 Transport	99%	49%
08.08 SSH	98%	68%
08.21 Fission	100%	82%

Number of finished projects								
11-2012	131	25	64	25	50	71	44	11
As a share of all signed projects								
11-2012	17%	6%	11%	10%	12%	14%	24%	11%

Analysis: these results are based on a higher number of finished projects than those reported in 2012 MP: this explains that in some cases the year-on-year variations are wide. Thus, this year's results are more accurate but they are still tentative because they are based on an average of just over 52 finished projects.

The 90% target for the share of projects that have achieved all or most of their objectives has been exceeded in all research areas.

Apart from Fission, the ambitious target of 75% for the share of projects that have achieved all of their objectives has not been achieved for any of the research areas.

Intellectual property rights

Date	Cooperation							Euratom																											
	08.02 Health	08.03 Food	08.04 NMP	08.05 Energy	08.06 ENV	08.07 Transport	08.08 SSH	08.21 Fission																											
Projects which generate patent applications or other types of intellectual property rights																																			
11-2012	34%	47%	48%	40%	19%	14%	-	0%																											
Targets	20%	40%	45%	30%	15%	10%	-	10%																											
<table border="1" style="margin: 10px auto; border-collapse: collapse;"> <caption>Data for Intellectual Property Rights Bar Chart</caption> <thead> <tr> <th>Research Area</th> <th>11-2012 (%)</th> <th>Targets (%)</th> </tr> </thead> <tbody> <tr> <td>08.02 Health</td> <td>34%</td> <td>20%</td> </tr> <tr> <td>08.03 Food</td> <td>47%</td> <td>40%</td> </tr> <tr> <td>08.04 NMP</td> <td>48%</td> <td>45%</td> </tr> <tr> <td>08.05 Energy</td> <td>40%</td> <td>30%</td> </tr> <tr> <td>08.06 ENV</td> <td>19%</td> <td>15%</td> </tr> <tr> <td>08.07 Transport</td> <td>14%</td> <td>10%</td> </tr> <tr> <td>08.08 SSH</td> <td>-</td> <td>-</td> </tr> <tr> <td>08.21 Fission</td> <td>0%</td> <td>10%</td> </tr> </tbody> </table>									Research Area	11-2012 (%)	Targets (%)	08.02 Health	34%	20%	08.03 Food	47%	40%	08.04 NMP	48%	45%	08.05 Energy	40%	30%	08.06 ENV	19%	15%	08.07 Transport	14%	10%	08.08 SSH	-	-	08.21 Fission	0%	10%
Research Area	11-2012 (%)	Targets (%)																																	
08.02 Health	34%	20%																																	
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08.07 Transport	14%	10%																																	
08.08 SSH	-	-																																	
08.21 Fission	0%	10%																																	
Number of finished projects (large instruments)																																			
11-2012	98	15	42	15	27	28	-	2																											
As a share of all signed projects (large instruments)																																			
11-2012	15%	5%	9%	7%	9%	8%	-	3%																											

Analysis: This indicator only refers to the large FP7 projects, namely the Collaborative Projects and Network of Excellence, since Coordination and Support Actions are not designed to generate intellectual property rights. These results are based on a higher number of finished projects than those reported in 2012 MP: this explains that in some cases the year-on-year variations are wide. Thus, this year's results are more accurate but they are still tentative because they are based on an average of just over 32 finished projects.

The targets have been exceeded in all research areas. The only exception is Fission, where the number of finished projects (just 2) is insufficient to take into account the resulting value.

These results reflect the tendency of these research areas to lead to new products and services, although it must be pointed out that innovation in some research areas (e.g. Health) does not necessarily lead to intellectual property rights.

This indicator is not reported for the programme Socio-economic Sciences and the Humanities because this field generates intellectual property rights only marginally.

Publications in peer reviewed journals

Date	Cooperation							Euratom
	08.02 Health	08.03 Food	08.04 NMP	08.05 Energy	08.06 ENV	08.07 Transport	08.08 SSH	08.21 Fission
Projects with publications in peer reviewed journals								
11-2012	-	93%	-	73%	96%	68%	73%	100%
Targets	-	55%	-	55%	90%	20%	50%	50%
Average number of publications in peer reviewed journals per project								
11-2012	28	-	31	-	-	-	-	-
Targets	4	-	5	-	-	-	-	-

Area	11-2012 (%)	Targets (%)
08.03 Food	93%	55%
08.05 Energy	73%	55%
08.06 ENV	96%	90%
08.07 Transport	68%	20%
08.08 SSH	73%	50%
08.21 Fission	100%	50%

Area	11-2012 (Avg)	Targets (Avg)
08.02 Health	28	4
08.04 NMP	31	5

Number of finished projects (large instruments)								
11-2012	98	15	42	15	27	28	37	2
As a share of all signed projects (large instruments)								
11-2012	15%	5%	9%	7%	9%	8%	-	3%

Analysis: This indicator only refers to large FP7 projects, namely Collaborative Projects and Networks of Excellence, since Coordination and Support Actions are not designed to generate publications in peer-reviewed journals. These results are based on a higher number of finished projects than those reported in 2012 MP: this explains that in some cases the year-on-year variations are wide. Thus, this year's results are more accurate but they are still tentative because they are based on an average of just over 32 finished projects.

The targets have been largely exceeded in all research areas.

Most of the EU-funded research projects produce results that are published in peer-reviewed journals. Projects funded by Health and NMP lead to a particularly high number of publications, with an average of 30 publications per project.

Industrial involvement¹⁷

Date	Cooperation							Euratom
	08.02 Health	08.03 Food	08.04 NMP	08.05 Energy	08.06 ENV	08.07 Transport	08.08 SSH	08.21 Fission
Share of EU financial contribution to Industry								
11-2012	17.3%	16.1%	36.3%	49.4%	13.8%	48.3%	4.0%	18.1%
Targets	18%	10%	40%	40%	10%	20%	3%	20%
Projects with at least one industrial participant								
11-2012	73.6%	76.4%	93.0%	95.8%	70.6%	94.7%	33.3%	77.2%
Targets	70%	70%	95%	95%	65%	95%	30%	75%
Number of signed projects								
11-2012	757	420	574	259	405	507	180	101

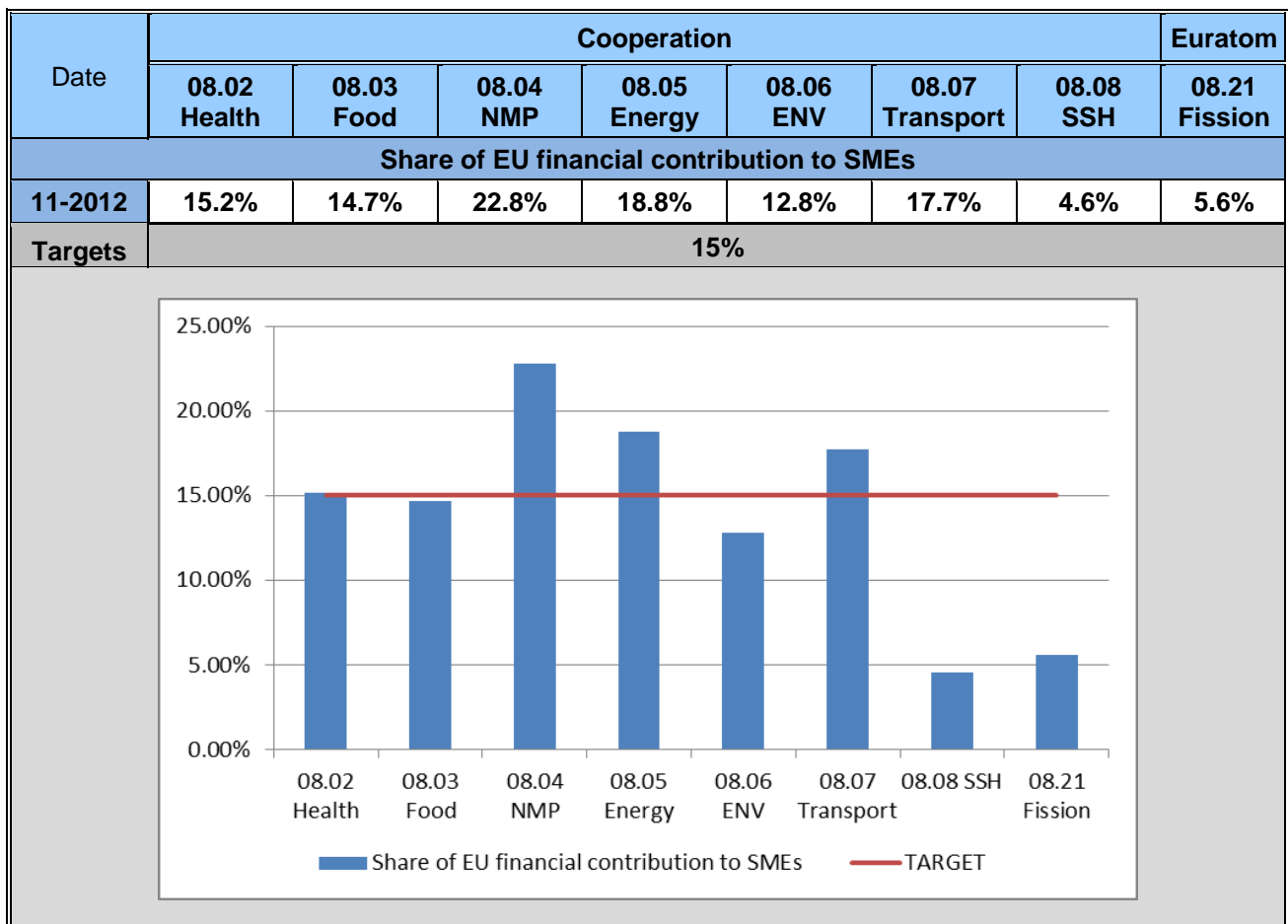
Analysis: The targets have been reached or almost reached in all research areas.

The indicator "Share of EU financial contribution to Industry" shows three groups:

- Energy, Transport and NMP, where industry receives the highest share of the EU financial contribution, between 36% and 49%.
- Fission, Health, Food, Environment, which industry receives between 14% and 18% of the EU financial contribution.
- SSH, where industry receives a marginal share of the EU financial contribution, which is inherent to the nature of its activities.

The indicator "Projects with at least one industrial participant" shows that, apart from SSH, between 70% and 96% of the projects has at least one industrial partner, who has access to knowledge and can use the project's results to develop new technologies or products.

SME involvement¹⁷



Date	Cooperation							Euratom																											
	08.02 Health	08.03 Food	08.04 NMP	08.05 Energy	08.06 ENV	08.07 Transport	08.08 SSH	08.21 Fission																											
Projects with at least one SME participant																																			
11-2012	69.0%	74.5%	84.1%	83.8%	71.4%	87.2%	32.8%	53.5%																											
Targets	60%	70%	85%	80%	65%	85%	30%	50%																											
<table border="1" style="display: none;"> <caption>Data for SME Participation Chart</caption> <thead> <tr> <th>Activity</th> <th>Actual %</th> <th>Target %</th> </tr> </thead> <tbody> <tr> <td>08.02 Health</td> <td>69.0%</td> <td>60%</td> </tr> <tr> <td>08.03 Food</td> <td>74.5%</td> <td>70%</td> </tr> <tr> <td>08.04 NMP</td> <td>84.1%</td> <td>85%</td> </tr> <tr> <td>08.05 Energy</td> <td>83.8%</td> <td>80%</td> </tr> <tr> <td>08.06 ENV</td> <td>71.4%</td> <td>65%</td> </tr> <tr> <td>08.07 Transport</td> <td>87.2%</td> <td>85%</td> </tr> <tr> <td>08.08 SSH</td> <td>32.8%</td> <td>30%</td> </tr> <tr> <td>08.21 Fission</td> <td>53.5%</td> <td>50%</td> </tr> </tbody> </table>									Activity	Actual %	Target %	08.02 Health	69.0%	60%	08.03 Food	74.5%	70%	08.04 NMP	84.1%	85%	08.05 Energy	83.8%	80%	08.06 ENV	71.4%	65%	08.07 Transport	87.2%	85%	08.08 SSH	32.8%	30%	08.21 Fission	53.5%	50%
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08.21 Fission	53.5%	50%																																	
Number of signed projects																																			
11-2012	757	420	574	259	405	507	180	101																											

Analysis: For the indicator "share of EU financial contribution going to SMEs", **apart from SSH and Fission, which are below the target of 15%, the other activities have reached or almost reached the target.** In SSH, industrial participation, including SMEs, is marginal due to the nature of its activities. Fission research, on the other hand, is historically dominated by a small number of large entities.

15% refers to a legal overall target for the Cooperation Specific Programme (the Decision no 1982/2006/EC establishing FP7 provides that at least 15% of the Cooperation Programme's total budget shall be allocated to SMEs) and is not a target for every activity under this Specific Programme.

In order to facilitate SMEs participation in RTD projects, DG RTD implemented concrete strengthening measures in 2012. These included the publication of more than 90 research topics specifically addressed to SMEs in the Work Programme 2012. As a result, the proportion of funding going to SMEs increased from 14.9% in 2011 to 16.4%²⁵ in 2012. Thus, the 15% target has been

²⁵ For the budget of the Cooperation Specific Programme, the following activities are not included: grants to European Space Agency (ESA), Joint Technology Initiatives (JTIs), General Activities such as the CORDIS services, the horizontal ERA-NET scheme, Research organisations in the EU, strengthened coordination with EUREKA, scientific and technological cooperation activities carried out in COST, European Metrology Research Programme.

significantly exceeded in 2012 because the right conditions were in place to encourage SMEs to get connected to Research & Innovation. In the case of the activities managed by DG RTD the result concerning the participation of SMEs was even more encouraging: 16.7% of EU contribution going to SMEs).

The indicator "Projects with at least one SME participant" shows that, apart from SSH, between 53% and 87% of the projects has at least one SME participant. For a SME, the access to knowledge and the possibility to use the project's results to develop new technologies or products can represent an important opportunity.

Where there is a higher EU financial contribution to Industry (Energy, Transport and NMP), if the "share of EU financial contribution to Industry" is compared to "share of EU financial contribution to SME", it can be concluded that for both Energy and Transport there is a comparatively more important participation of large entities. For NMP those charts show that there is an important participation for SME's.

For the research areas Health, Food and ENV, most of the EU financial contribution that goes to industrial participants goes to SMEs instead of large entities.

3.2.8 Cooperation – Risk-Sharing Finance Facility – RSFF (08.09)

The RSFF addresses the European economy's need to increase private finance and close the market gap in investment in Research, Development and Innovation (RDI). By supporting riskier RDI investments which usually do not receive sufficient funding from capital market, the RSFF helps to stimulate and support private investment in RDI.

Policy initiatives for 2013

In 2011, the **RSFF Co-operation Agreement** was substantially modified²⁶. In 2013, the Agreement will be further amended (Amendment No. 6) in order to reflect the evolution of the RSFF and prepare it for the period until the end of 2013 and beyond. **Amendment No. 6** will be signed by Commissioner M. Geoghegan-Quinn and European Investment Bank (EIB) President W. Hoyer.

The aim of this new amendment is to:

- better address key target groups investing in research and innovation²⁷;
- extend the *Risk-sharing Instrument for research driven and Innovative SMEs and small midcaps* (RSI) in terms of volume (additional EU funding of EUR 150 million) and scope (a new counter-guarantee scheme);
- design and launch technical and financial advice activities with the aim to prepare a limited number of key relevant and ambitious projects (e.g. tuberculosis vaccine, fuel cells and hydrogen vehicles) for potential financing and to establish a network of national experts in the field of debt financing;
- introduce modifications related to the new Financial Regulation and its Rules of Application as far as monitoring and reporting are concerned.

Main implementation activities for 2013

In 2013, the EIB Group and the Commission will continue to roll out, for its second year of implementation, the Risk-sharing Instrument as a major priority. This instrument's budget will more than double with the twofold objective to better satisfy market demand and to address the market sector represented by promotional banks with riskier loan portfolios. This will result in effectively covering a wider spectrum of lending initiatives in support of innovative SMEs and companies with smaller capitalizations.

Besides, a Group of high-level Independent Experts will undertake the **second interim evaluation of the RSFF**. This will also be a forward-looking exercise whose main aim will be to contribute to the design of financial instruments to be supported under Horizon 2020.

²⁶ Through the Amendment No. 4, which introduced a new risk sharing approach (First Loss Piece Portfolio) and a new facility for SMEs and companies with small or middle capitalizations (RSI) – C (2011) 8606 of 5 December 2011

²⁷ Universities and public research organisations, as well as companies with medium or large capitalizations

Comments on the performance indicators

Regarding the specific objective 2, a series of awareness-raising events focused on less-covered countries have been organised to stimulate demand. More such events will be organised in 2013. Performance indicators, including a geographical dimension, have also been introduced in the RSFF/RSI agreement, to achieve the largest possible coverage.

These indicators show the strong leverage effect of the RSFF for RDI projects. The EU budget has contributed EUR 798 Million to an overall financing for such projects of EUR 8.1 Billion, i.e. a leverage factor of 10.

The targets have been raised for the first two indicators (from EUR 8 billion for both in the 2012 MP to EUR 11.5 billion and EUR 10 billion) for three reasons: (1) contrary to other grant-based instruments used by DG RTD, the RSFF is a market demand-driven loan and guarantee instrument and market demand for RDI projects has changed; (2) the risk-sharing approach agreed between the EU and the EIB was modified through Amendment No. 4, as explained above, and (3) the budget for the Risk-Sharing Instrument (RSI) as part of the RSFF implementation has been increased.

08 09: Cooperation — Risk-sharing finance facility (RSFF)		
SPECIFIC OBJECTIVE 1	Support additional investment in European Research, Development and Innovation (RDI) through the RSFF	
Result indicator	Latest known result (Sept 2012)	Target (by 2013)
Volume of RSFF supported loans and guarantees provided to RDI projects (loans approved by the EIB)	EUR 11.25 billion	EUR 11.5 billion ²⁸

²⁸ The initial targets (MP 2012 – EUR 8 billion by 2013) have been increased due to the Amendment to RSFF Cooperation Agreement that changed the risk-sharing approach on 5 December 2011, as a follow-up of the RSFF mid-term evaluation. The Cooperation part of RSFF is composed of 3 windows now:

1- loans and guarantees concluded under EU and EIB windows before amendment No. 4 to RSFF Agreement;

2- loans and guarantees post amendment No. 4:

2a- Compartment 1: the EU covers the first-loss piece (of 16%) of the portfolio of new loans of a nominal value superior or equal to €7.5 million;

2b- Compartment 2: under the new RSI (Risk-Sharing Instrument for SMEs and companies with smaller capitalizations) the expected additional loan volume for innovative SMEs and companies with middle capitalization is around €1 bn, with a guarantee of 20% composed of a first loss piece provided by the EU (up to €120 million) and a second Loss Piece provided by the EIF (up to €380 million).

Volume of RSFF supported loans and guarantees provided to RDI projects (loans signed by the EIB)	EUR 8.1 billion	EUR 10 billion ²⁸
Volume of FP7 contribution used to support RSFF loans and guarantees provided to RDI projects	EUR 798 million ^{29 30}	EUR 800 million ³¹
SPECIFIC OBJECTIVE 2	Promote access to higher-risk finance for RDI projects in Members States and Associated Countries	
Result indicator	Latest known result (June 2012)	Target (by 2013)
Countries covered by RSFF loans and guarantees	- 19 MS - 2 Associated Countries Total: 21	- 27 MS - 13 Associated countries Total: 39 (full coverage)
Main outputs for 2013		
Amendment No.6 of the RSFF Co-operation agreement.		

Main expenditure-related outputs	Budget line	DB 2013 (May 2012)	
		Output (no.)	EUR million
Commission Decision/Agreement with EIB ³²	08.09.01	1	0
Total	08.09.01		0

²⁹ Primary credits, not including EFTA and Third country Appropriations- since 2007

³⁰ In compliance with the two step-approach required by the European Parliament and the Council of the European Union in the FP7 basic acts, the EU financial contribution is broken down in two parts: a first tranche of EUR 500 million (out of which EUR 400 million from SP Cooperation) for the period 2007-2010; a second tranche, following the positive result of an interim evaluation in 2010, of EUR 500 million (out of which EUR 400 million from SP Cooperation) for the period 2011-2013.

³¹ To cover expected and unexpected losses related to RSFF operations concluded before the end of 2011 and to provide First Loss Piece Portfolio for operations post-2011.

³² One agreement for the whole 7th Framework Programme and for both the Cooperation and Capacities Specific Programmes.

3.2.9 IDEAS (08.10)

By financing the highest quality research at the frontiers of knowledge, the "Ideas" Specific Programme seeks to reinforce excellence, dynamism and creativity in European research. Thanks to its European-wide competitive funding structure, the programme can draw on a wide pool of talent and ideas. The "Ideas" Specific Programme is managed by the European Research Council (ERC).

Main implementation activities for 2013

In implementing the "Ideas" Specific Programme, the ERC funds frontier research in all areas of science, applying a bottom-up principle, with no pre-defined research topics.

The 2013 'Ideas' Work Programme includes five funding instruments: "ERC Starting Grant" and "ERC Consolidator Grant" (the second instrument was created to deal with the very high and increasing workload on the Starting Grant evaluation panels); "Advanced Grant"; "Proof of Concept". Finally, the "Synergy Grant" was introduced in 2012 to enable small groups of researchers to bring together complementary skills, knowledge, and resources, in order to jointly address research problems at the frontier of knowledge going beyond what the individual researchers could achieve alone.

The ERC will continue to actively participate in the works of the **Global Research Council (GRC)**, a virtual organization, comprised of the heads of science and engineering funding agencies from around the world, dedicated to promoting the sharing of data and best practices. The ERC will, in particular, take part to the preparation of the global "Statement of Principles on Research Integrity" and of an "Action Plan for implementing Open Access", both scheduled to be endorsed by the GRC Members in May 2013.

Comments on the performance indicators

The indicator "Number of international prizes and awards by ERC grant holders" only measures the number of prizes and awards received after the ERC Grantee has been awarded the grant. A system to analyse this information, relying on more data sources, is being developed. It is important to underline that the **ERC counts among its grantees 5 Nobel Prize winners and 3 Field Medallists.**

As regards the "Number of scientific publications by ERC grant holders" (measured as publications acknowledging ERC funding), the ERC has enacted a trend analysis on the basis of the current figures assuming a linear trend. The result shows that ERC would not only meet but would exceed its target by 2020.

08 10 : Ideas		
SPECIFIC OBJECTIVE 1	Enhance the generation of excellent, innovative ideas in frontier research in Europe	
Result indicators	Latest known result (Dec 2012)	Target (by 2020)
Number of international prizes and awards to ERC grant holders	76	200
Number of scientific publications by ERC grant holders ³³	Around 7,900	~40-60,000

Main expenditure-related outputs	Budget line	DB 2013 (May 2012)	
		Output (no.)	EUR million ²⁰
Proposals retained for funding in the area of:			
ERC Starting Independent Researcher Grants (StG)	08.10.01	~240	Starters
		~270	386.47
			Consolidators
			507.00
Advanced Investigator Grants (AdG)		~290	646.00
Proof of Concept		~65	10.00
ERC Synergy Grant (SyG)		~10	150.00
Support actions		2	0.69
Other activities		-	7.00
Total	08.10.01		1,707.16

³³For this indicator on scientific publications, the ERC relies on bibliometric data, while for the indicators for activities under the Cooperation Specific Programme and the Euratom Fission Programme, DG RTD relies on reporting from the projects' coordinators.

3.2.10 Capacities – Research Infrastructures (08.12)

The existence of recognised world-level research infrastructures allows Europe to remain at the forefront of top-class scientific and technological development and innovation. This activity seeks to ensure a wide access to existing research infrastructures, to coordinate their development and networking and to foster the emergence of new infrastructures of pan-European interest.

Policy initiatives for 2013

In December 2012, the Competitiveness Council stressed *"the need for renewing and adapting the mandate of [European Strategy Forum on Research Infrastructures (ESFRI)] to adequately address the existing challenges and also to ensure the follow-up of implementation of already on-going ESFRI projects after a comprehensive assessment, as well as the prioritisation of the infrastructure projects listed in the ESFRI roadmap."*

In this framework, in 2013, a high level Expert Group, launched in 2012, will assess progress towards the Innovation Union objective of launching or completing the construction of 60 % of the ESFRI projects by 2015. To assess the maturity of these projects, the Expert Group will examine in particular their financial and managerial integration. The results will provide an input to the priority-setting to be operated by ESFRI and suggest possible synergies and activities in Horizon 2020.

Main implementation activities for 2013

In 2013, efforts in this activity will be oriented towards the objective of setting up 8 research infrastructure projects as **European Research Infrastructure Consortia** (ERIC). The creation of these consortia is based upon a 2009 Council Regulation³⁴, which the Commission is proposing to amend in order to fully recognize the contribution of an Associated Country to an ERIC.

Other actions foreseen for 2013 seek to support the attainment of the Innovation Union Commitment n. 4: "Opening of Member State operated research infrastructures to the entire European user community". For this purpose, additional budget will be dedicated to support a larger number of the Integrating Activities in this area in order to favour wider trans-national and on-line access to the best research facilities in Europe.

In addition, implementing the Communication on the European Research Area (ERA) of July 2012, the Commission and the research infrastructures stakeholders³⁵ will develop a **Charter of Access** setting out common standard, as well as harmonized access rules and conditions for the use of Research infrastructures. In order to help combine funds from different sources, common evaluation principles, impact-assessment criteria and monitoring tools will also be developed with stakeholders.

In preparation of Horizon 2020, a panel of independent experts will submit a report mapping the research infrastructures needs in order to help the identification of topics for future integrating activities, on the basis of the results of a public consultation held in 2012.

³⁴ Council Regulation No 723/2009 of 25 June 2009

³⁵ Including in particular the European Strategy Forum on Research Infrastructures (ESFRI) and the e-Infrastructures Reflection Group

The Commission will continue to participate and support the work of the **Group of Senior Officials (GSO) on Global Research Infrastructures**. At least one further meeting of the GSO is currently foreseen for 2013. Activities will include the finalisation of the consolidated activity report and the benchmarking of the framework for international cooperation in global research infrastructures based on case studies of national facilities with the potential to become global.

08 12 : Capacities — Research infrastructures		
SPECIFIC OBJECTIVE 1 ³⁶	Optimise the access to research infrastructures in Europe	
Result indicators	Latest known result	Target (by 2013)
Number of international scientific users having benefited from access to Research Infrastructures	5,400 ³⁷	30,000
Percentage of users satisfied with services offered by research infrastructures participating in Integrating Activities ³⁸ (good to very good overall appreciation)	98% ³⁹ (June 2012)	>97 % (<i>achieved</i>)

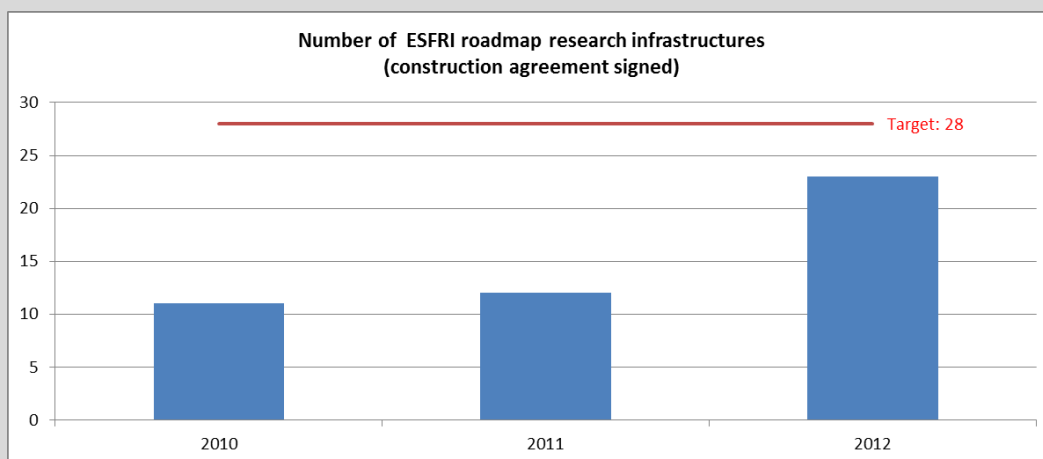
³⁶ The indicator "Percentage of European research infrastructures having more than 50% of foreign users" is not presented in this Management Plan because it has not been possible to update it since it was introduced in the Management Plan 2009.

³⁷ Data from the first submitted periodic reports covering the period 2009-2010 (First FP7 Grant Agreements providing transnational access started in 2009)

³⁸ Integrating activities aim to ensure that European researchers may have access to the best research infrastructures to conduct their research. Integrating activities also aim at structuring better, on a European scale, the way research infrastructures operate, and at fostering their joint development in terms of capacity and performance.

³⁹ Data extracted from questionnaires submitted by users online at http://cordis.europa.eu/fp7/capacities/research-infrastructures-doc_en.html.

SPECIFIC OBJECTIVE 2	Encourage the creation of new research infrastructures of pan-European interest	
Result indicators	Latest known result	Target (by 2013)
Number of European research infrastructures identified in the ESFRI ⁴⁰ roadmap which have proceeded into the preparatory phase	49 (Nov. 2012)	51 ⁴¹
Number of European research infrastructures identified in the ESFRI roadmap for which an agreement for construction has been signed	23 (June 2012)	28



Main outputs for 2013

Assessment of progress towards the Innovation Union objective of launching or completing the construction of 60 % of the ESFRI projects by 2015

Main expenditure-related outputs	Budget line	DB 2013 (May 2012)	
		Output (no.)	EUR million ²⁰
Proposals retained for funding in the area of:			
Integrating Activities	08.12.01	10	74.55
Other activities		-	0.10
Total	08.12.01		74.65

⁴⁰ The mission of ESFRI (European Strategy Forum on Research Infrastructures) is to support a coherent and strategy-led approach to policy-making on research infrastructures in Europe, and to facilitate multilateral initiatives leading to the better use and development of research infrastructures, at EU and international level.

⁴¹ Included in the 2010 ESFRI Roadmap and in the European Strategy for Particle Physics of the European Organisation for Nuclear Research (CERN)

3.2.11 Capacities – Research for the benefit of SME's (08.13)

This activity supports access to R&D funding for small and medium-sized enterprises (SMEs) that have little or no research capacity themselves, helping them to bridge the gap between research results and market introduction of new products and services. This activity seeks to complement and enhance the impact of actions undertaken at national and regional level.

Policy initiatives for 2013

The Commission will propose to renew the **Eurostars programme**, which provides financial support to market-oriented research projects initiated and driven by R&D-performing SMEs. Eurostars is a Public-Public Partnership for the joint implementation of national research programmes (Article 185 TFEU) that concerns the 27 EU Member States and 6 associated countries and has a particularly strong leverage effect on national public funds. The proposed second phase would seek, among other improvements, a further harmonization of national procedures and reaching out to more SMEs.

Main implementation activities for 2013

The *standalone* Demonstration activity emphasises the economic impact of the project results achieved by the SMEs themselves.

In preparation of Horizon 2020, efforts will be devoted to the preparation of a single, comprehensive, simple and easily identifiable scheme for SMEs, similar to the US' Small Business Innovation Research (or SBIR). Based on a new approach, this instrument will cover the whole innovation cycle, including access to finance and is expected to attract more SMEs to the Framework Programme and to increase the commercialisation of project results. In addition, a report will analyse the proposed SMEs performance indicator to assess the effects of EU research funding on innovation by SMEs. The study shall provide a base for further development and application of the indicator under Horizon 2020. Finally, in preparation of the SME-specific 'mentoring scheme' (a direct face-to-face mentoring and coaching support to SMEs proposed under Horizon 2020), support is provided to a project that will analyse the state of the art of such schemes at national level. The project could also comprise direct actions that serve as a pilot experience for the forthcoming scheme.

DG RTD also continues to monitor the SME Participation in FP7 (15% target) which will result in two progress reports.

An Interim **evaluation** of the participation of SMEs in FP7 (Cooperation and Capacities Programmes) will also be launched in 2013.⁴²

A new SME **Conference** will be organised jointly with the Irish Presidency and held in Dublin in June 2013.

⁴² The study shall assess the relevance, efficiency and effectiveness of the two initiatives and the impacts on the participating SMEs and on the society overall (including impacts on economic performance, European Added Value (EAV), behavioural additionality and innovation)

Comments on the performance indicators

The final figures will only be available by the end of 2014 (following the proposal evaluation, negotiation and signature of the grant agreements).

08 13 : Capacities — Research for the benefit of small and medium-sized enterprises (SMEs)		
SPECIFIC OBJECTIVE 1	Support SMEs in carrying out or outsourcing research and technological development	
Result indicators	Latest known result (Oct 2012)	Target (by 2013)
Number of SMEs/SME Associations investing in RTD through FP7 SME specific measures	3,060 ⁴³	4,000
Total budget spent by SMEs on outsourcing research, innovation and demonstration activities to RTD performers ⁴⁴ in FP7 SME specific measures	EUR 767 ⁴⁵ million	EUR 1 billion

Year	EUR Spent (Million)
2008	~280
2009	~250
2010	~520
2011	~620
2012	~780

Legend: ■ EUR (blue bars), — Target (red line)

Main outputs for 2013
Commission proposal to renew the Public-Public Partnership (Article 185 TFEU) Eurostars

⁴³ The results are based on signed contracts: 713 as of 21 November 2012

⁴⁴ RTD performers are research service providers, i.e. universities and research centres.

⁴⁵ Refers to contracts signed including commitments made based on the whole FP7 budget (final figures available by the end of 2014)

Main expenditure-related outputs	Budget line	DB 2013 (May 2012)	
		Output (no.)	EUR million ²⁰
Proposals retained for funding in the area of:			
Research for SME Associations	08.13.01	26	55.00
Research for SMEs		150	163.00
Coordination and support actions		-	1.00
Yearly transfer agreement for Eurostars Art. 185 of the TFEU)		1	20.00
Demonstration activities (pilot action)		25	27.00
Others		-	4.55
Total		08.13.01	

3.2.12 Capacities – Regions of Knowledge (08.14)

The 'Regions of knowledge' initiative aims to strengthen the research potential of European regions, in particular by encouraging and supporting the development, across Europe, of regional 'research-driven clusters', associating universities, research centres, enterprises and regional authorities.

Main implementation activities for 2013

This activity puts an emphasis on supporting projects aiming at improving integration of business entities, research actors and institutions in regional economies and at boosting the competitiveness of the regional research-driven clusters via dedicated internationalisation measures.

Since Regions of Knowledge will not be continued under Horizon 2020, DG RTD will actively participate in the transition of the support to research intensive clusters to the territorial co-operation part of the EU Cohesion policy (formerly known as INTERREG. DG RTD continues to be actively involved in the related consultation and planning process) in order to build on the acquired experience. To support this work, a dedicated expert group will assess the role of research driven clusters as vehicles for smart specialisation in the European regions based on the portfolio of on-going Regions of Knowledge projects.

Also **in preparation of Horizon 2020**, efforts will be focussed on the development of the tools that will seek to widen participation across the EU (see next Section: 3.2.13)

In addition, the fourth edition of the Week of Innovative Regions (WIRE IV), a two-day **conference**, will be held in Cork (Ireland) in June 2013, during the EU Irish Presidency. This conference contributes to developing a more inclusive ERA by focusing on cluster development policy in the context of the transition from the Seventh Framework Programme for RTD (FP7) to Horizon 2020, with particular emphasis on the enhancement of innovation performance and regional development (see Section 3.1.2).

Comments on the performance indicators

These results refer to the outcome of the Call for proposals that covered both the 2012 and 2013 Work Programmes. Therefore, we can conclude that this programme has reached its targets.

08 14 : Capacities — Regions of knowledge		
SPECIFIC OBJECTIVE 1	Strengthen the research potential of European regions, in particular by encouraging and supporting the development of regional “research-driven clusters”	
Result indicators	Latest known result (June 2012)⁴⁶	Target (by 2013)
Number of regions ⁴⁷ concerned by the support of existing clusters	152	140 (<i>achieved</i>)
Number of business entities ⁴⁸ involved in selected projects	266	245 (<i>achieved</i>)

Main expenditure-related outputs	Budget line	DB 2013 (May 2012)	
		Output (no.)	EUR million ²⁰
Proposals retained for funding in the area of :			
Transnational cooperation of clusters	08 14 01	17	26.49
Total	08 14 01		26.49

⁴⁶ These results refer to the outcome of the Call for proposals that covered both the 2012 and 2013 Work Programme. They are based on the evaluation results and includes the regions which will effectively be involved when the final financing decisions is taken.

⁴⁷ According to the 'Regions of Knowledge' Work Programme, the delineation of the regions is left to the self-definition of the applicants and therefore is not necessarily based on Nomenclature of Territorial Units for Statistics (NUTS).

⁴⁸ Business entities correspond to large enterprises and SMEs as defined in the EC recommendation 2003/361/CE of 6 May 2003, OJ L 124/36, 20/05/2003).

3.2.13 Capacities – Research Potential (08.15)

The aim of the Research Potential programme is to unlock and develop the potential of excellent research groups in the convergence and outermost EU regions⁴⁹, in particular by stimulating and strengthening the capacities of the best research entities established in these regions to participate successfully in research activities at EU level.

Main implementation activities for 2013

Activities in this area focus on the support to excellent research entities of significant scientific size with a high potential to innovate. These research entities, public or private, should demonstrate a high level of human, material and organisational capacity, allowing the hosting of several new experienced researchers and engineers.

In preparation of Horizon 2020, efforts will be focussed on the development of the tools that will seek to widen participation across the EU:

- The **ERA-chair** is a **pilot action** aiming to support universities and research organisations with a demonstrated potential for excellence to achieve the level of research excellence required to be competitive at international level on a sustainable basis. A pilot call focusing on institutions from convergence and outermost regions has been launched in 2012 and will be implemented in 2013. Around five chairs are expected to be launched.
- The teaming and twinning activities will aim at strengthening a defined field of research in an emerging institution (twinning) and at supporting the creation of new centres of excellence (teaming) by linking them with leading counterparts in Europe. Work in 2013 will focus on the development of evaluation criteria and implementation mechanisms to ensure a well-targeted approach.
- The Policy Support Facility would seek to improve national and regional innovation policies. Through a call for expression of interest, a pool of experts that can address a broad range of R&I policy issues will be elaborated.

DG RTD will continue to actively participate in the establishment of increased synergies between Horizon 2020 and Cohesion funds under the next Multi-annual Financial Framework (2014-20), in particular through dialogue with DG REGIO and Member States in the context of the Smart Specialisation Strategies. To support this work, an expert group will examine the (potential) role of universities and research centres in the process of smart specialisation picking up on the experience with the programme Research Potential.

Comments on the performance indicators

These results refer to the outcome of the Call for proposals that covered both the 2012 and 2013 Work Programmes. Therefore, we can conclude that this programme has reached its target.

⁴⁹ Convergence regions are listed in the C(2006)3475 and are defined as those regions having a per capita gross domestic product (GDP) of less than 75 % of the average GDP of the EU-25. Outermost regions are defined according to Article 349 of the Treaty on the Functioning of the European Union: Guadeloupe, French Guiana, Martinique, Réunion, Saint-Barthélemy and Saint-Martin (France), the Canaries (Spain), and the Azores and Madeira (Portugal).

08 15 : Capacities — Research potential		
SPECIFIC OBJECTIVE 1	Stimulating the realisation of the full research potential of the enlarged Union	
Result indicators	Latest known result (Oct. 2012)	Target (by 2013)
Number of research centres in EU's convergence and outermost regions ⁴⁹ supported	162	160 (<i>achieved</i>)

Main expenditure-related outputs	Budget line	DB 2013 (May 2012)	
		Output (no.)	EUR million ²⁰
Proposals retained for funding in the area of:			
Research Potential	08.15.01	25	73.81
Others		-	0.12
Total	08.15.01		73.93

3.2.14 Capacities – Science in Society (08.16)

This activity seeks to promote societal engagement to address the major European societal challenges defined in the Europe 2020 Strategy. Its objective is to ensure that the relevant players in society (researchers, research organisations, civil society, industry and policy-makers) are all involved in the search for adequate responses to address long-term needs.

Policy initiatives for 2013

In 2013, the Commission will issue a **Recommendation to Member States** to promote Structural changes needed in universities and research institutions across Europe in order **to promote gender equality** (in particular to foster equal representation of women and men at all levels of seniority) and gender issues in research.

A second Commission **Recommendation to Member States** will seek to establish the right framework conditions for **Responsible Research and Innovation** in Europe. The objective is to ensure that research activities take into account the main concerns they create in the European public.

Main implementation activities for 2013

Funding is provided to the creation of partnerships that put together complementary perspectives, knowledge and experiences (Mobilisation and Mutual Learning Action Plans) to tackle challenges in, among other areas, Infectious diseases, the water challenge, or the societal engagement for integrated urban development.

In the area of Open Access to scientific information, funding is provided to training actions for stakeholders (such as academic staff and policy-makers) that allow them to fully comprehend its policy and practical implications.

In preparation of Horizon 2020, a pilot action will aim at introducing a citizen dimension in the preparation of the calls for proposals for the first year of the forthcoming programme.

The 25th European Union **Contest** for Young Scientists (EUCYS) will be held in 2013. It will bring together the brightest young minds in European science with a view to highlighting the importance of innovation and research for future generations.

In 2013, two **studies** will be launched to analyse and evaluate the impacts of research funded through the programme Science in Society in FP6 and FP7.

Several important **conferences** will be held. Under the Irish Presidency (1st semester 2013), a conference will deal with the role of the media in RRI, while under the Lithuanian Presidency (2nd semester 2013), another conference will focus on structural changes needed to promote gender equality in research organisations.

Comments on the performance indicators

The EC Recommendation on Structural changes in universities and research institutions to promote gender equality, which is expected to be adopted in 2013, should have a positive impact on the

indicators measuring the progress of gender aspects in research, which is an important aspect of ERA (see Section 3.1.2 European Research Area).

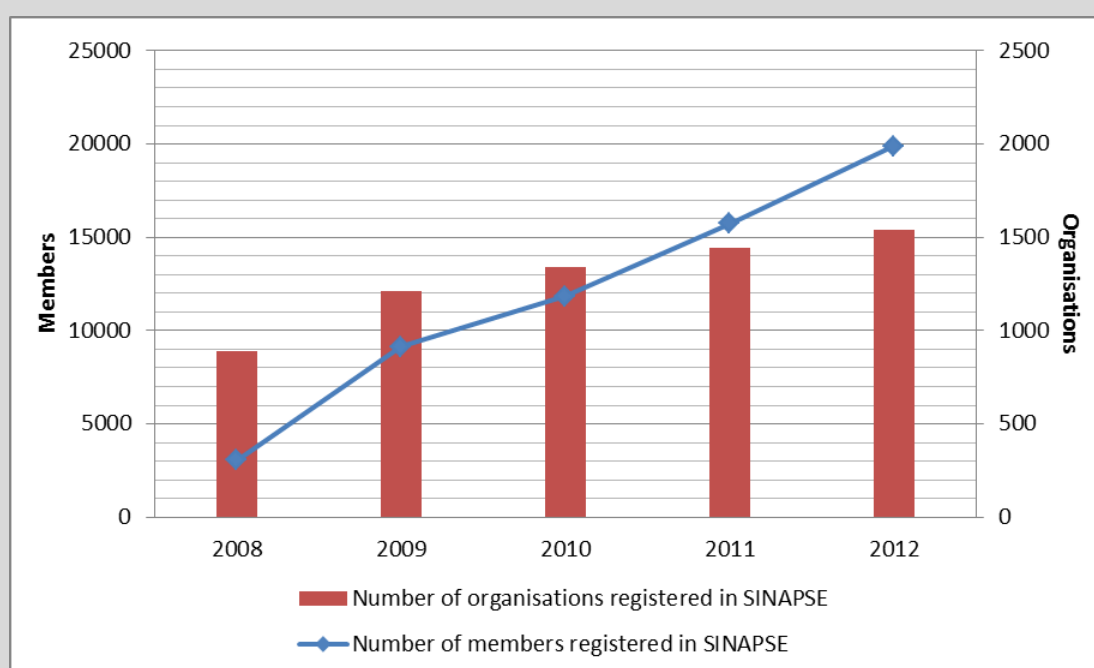
As for SINAPSE (Scientific information and expertise for policy support in Europe), the targets fixed have already been met. It shows that this network has fulfilled its role and mission for the benefit of the different organisations and members which adhere to it.

The result for the indicator on Open Access is lower than in 2011 (37% compared to 42%). This is due to the change in the methodology used, which has provided us with more accurate results, on the basis of collaboration between CORDIS and OPENAIRE, a tool to measure Open Access publications.

08 16 : Capacities — Science in society (SIS)		
SPECIFIC OBJECTIVE 1	Ensure that EU funded proposals comply with fundamental ethical principles	
Result indicators	Latest known result (Nov. 2012)	Target (by 2013)
Percentage of proposals passing the ethical review the first time	97%	100%

SPECIFIC OBJECTIVE 2	Promote a more open governance of scientific research, involving societal actors and organisations in research policy	
Result indicators	Latest known result (Oct. 2011)	Target (by 2013)
Number of members registered in SINAPSE*	- 19,897 members - 1,538 organisations	- 15,000 members (<i>achieved</i>) - 1,400 organisations (<i>achieved</i>)

***SINAPSE (Scientific information and expertise for policy support in Europe)** is an e-network whose basic aim is to make better use of expertise in policy-making and facilitate the emergence of new forms of governance by offering the possibility to easily involve a wide range of research actors.



Percentage of FP7 projects engaging with societal actors beyond the research community ⁵⁰	64.6%	70%
Percentage of publications originated from FP7 projects for which open access is provided ⁵¹	37% ⁵²	70%

⁵⁰ The projects funded through all funding schemes under all research areas, except IDEAS, Research for the benefit of SMEs, International Cooperation and Coherent Development of Research Policies, are taken into account.

⁵¹ Only the projects funded through the funding schemes "Collaborative Projects" and "Networks of Excellence" under the following research areas: Cooperation: Health, Energy, Environment, Socio-economic sciences and the humanities; Capacities: Research infrastructures, Science in society, are taken into account. These areas correspond to the scope of Open Access Pilot initiative. In the Pilot, beneficiaries commit to ensure open access to articles resulting from research funded in the above mentioned areas. The pilot will run until the end of FP7.

SPECIFIC OBJECTIVE 3	Strengthen gender dimension in projects financed by FP7	
Result indicators	Latest known result (November 2012)	Target (by 2013)
Percentage of FP7 projects for which gender equality actions ⁵³ were carried out	28%	40%
Percentage of FP7 projects for which gender dimension was taken into account in the research content ⁵⁴	24%	25%
Main outputs for 2013		
<ul style="list-style-type: none"> - EC Recommendation to Member States on Structural changes in universities and research institutions to promote gender equality - EC Recommendation to Member States on Responsible Research and Innovation 		

⁵² Source: OPENAIRE (Open Access Infrastructure for Research in Europe), FP7 project.

⁵³ The following actions may have been carried out: ex. design and implement an equal opportunity policy; set targets to achieve a gender balance in the workforce; actions to improve work-life balance; organise conferences and workshops on gender. The following areas have been taken into account: Cooperation: Health, Energy, Environment, Socio-economic sciences and the humanities; Capacities: Research infrastructures, Science in society.

⁵⁴ Only the projects funded through the funding schemes "Collaborative Projects" and "Networks of Excellence" under the following research areas: Cooperation: Health, Energy, Environment, Socio-economic sciences and the humanities; Capacities: Research infrastructures, Science in society, are taken into account.

Main expenditure-related output	Budget line	DB 2013 (May 2012)	
		Output (no)	EUR million ²⁰
Proposals retained for funding in the area of:			
Shaping governance for Responsible research and innovation	08.16.01	5	14.00
Engage all societal actors in the research and innovation process to address societal challenges		6	24.00
Create transparency between societal actors to ensure trust and co-responsibility by providing free access to scientific knowledge		2	3.50
Ensure a balanced participation of women and men in research and innovation at all levels as well as integrate Gender in research content		4	10.90
Build up a scientifically literate society to allow the participation of societal actors in the research and innovation process		2	4.50
Others (incl. Grant to named beneficiaries, public procurement, expert groups, evaluation)		-	6.47
Total		08.16.01	

3.2.15 Capacities – Activities of International Cooperation (08.17)

The activities of International Cooperation of the Capacities Programme seek to promote and facilitate a greater openness of the 7th Framework Programme to international partners and to support the coherent and strategic development of EU International Cooperation policy in research and innovation, as well as a closer involvement of international partners where mutual benefit can be achieved.

Policy initiatives for 2013

In 2013, Science and Technology **Cooperation Agreements** will be renewed with both **Russia** and the **United States of America**. Negotiations are also foreseen to **associate 10 third countries to Horizon 2020**.

Main implementation activities for 2013

In line with the Horizon 2020 objectives, priority is given in 2013 to cooperation on innovation activities closer to market and to societal challenges: bi-regional and bilateral cooperation activities (INCO-NET, BILAT) will promote cooperation across the whole chain of science, technology and innovation. The aim is to foster the translation of research results into innovative market products and services.

A new activity, called R2I-ENP, will target European Neighbourhood (ENP) countries to specifically address the gap between research and innovation. R2I-ENP will focus on improving competences and cooperation between producers and users of knowledge to tackle societal challenges of common interest, complementing INCO-NET and BILAT actions with ENP countries.

In preparation of Horizon 2020 and implementing the Commission Communication "Enhancing and focusing EU international cooperation" of September 2012⁵⁵, strategic areas for international activities will be identified in the societal challenges and enabling technologies. Work on other aspects of the Communication, such as the definition of relevant indicators, will also continue during 2013 in preparation for the launch of Horizon 2020.

Specific activities will be launched to reinforce our relations with key partners:

- Progress on establishing **Russia** as a strategic EU partner in research and innovation will be a main priority, with a joint Year of Science, Technology and Innovation in 2014, to be launched towards the end of 2013.
- Following the signature of the Joint Declaration on Innovation Cooperation during the last EU-**China** Summit in September 2012, a first high-level dialogue on innovation cooperation will take place in 2013.

⁵⁵ COM (52012) 497

- Further to the Joint Declaration signed at the EU-**India** Summit in February 2012, and the Brussels Communiqué of May 2012, a governance structure for supporting Europe-India research and innovation cooperation, involving the Commission, Member States and India, will be set-up.
- Increasing cooperation with **Korea** will be recognised during the joint Science & Technology committee meeting, celebrating the fifth anniversary of the EU-Korea S&T Agreement.
- Following the Barcelona Conference of April 2012 and the Informal Competitiveness Council of July 2012, work will continue with a core group of countries started work on a possible Public-Public Partnership (Art. 185 TFEU) for R&I cooperation in the **Euro-Mediterranean** region.
- In the context of the **Eastern Partnership Multilateral Platform**, a Panel on R&I will be established in cooperation with DG EAC, DG DEVCO and the EEAS. The first meeting of this Panel is planned during the Lithuanian Presidency event on Eastern Partnership in September 2013.
- A high level policy dialogue on R&I cooperation will continue with the **African Union** in view of a possible Ministerial conference in 2013 or 2014.

Finally, two streams of **evaluation** are scheduled to be launched in 2013. a) Evaluation of the cooperation with countries with an S&T agreement will target China, Morocco, Mexico and New Zealand. b) an Ex-post evaluation of the International Cooperation Activities of the Capacities Programme, which will feed into the overall ex-post evaluation of FP7 analysing the impact of these activities with third countries in the Framework Programme.

Comments on the performance indicators

By November 2012, 6.3% of successful applicants to FP7 programmes managed by DG Research & Innovation came from third countries, excluding FP7 associated countries. The result for FP7 as a whole, including programmes managed by other DGs (People, ICT, Space and Security), is 7.7%.

08 17 : Capacities — International cooperation activities		
SPECIFIC OBJECTIVE 1	Increase cooperation between researchers in Europe and in third countries	
Result indicators	Latest known result (Nov 2012)	Target (by 2013)
Participation of 3 rd countries in the 7 th Framework Programme	6.3%	6.6%
SPECIFIC OBJECTIVE 2	Strengthen coordination of Member States/Associated States policies and activities in the field of international cooperation	
Result indicators	Latest known result (Nov 2012)	Target (by 2013)
Number of joint calls between Member States/Associated Countries and third countries research programmes in FP7 international cooperation ERA-NET projects ⁵⁶	11	11 (<i>achieved</i>)
Amount of joint trans-national funding mobilised for international cooperation in FP7 international cooperation ERA-NET projects	EUR 34.5 million	EUR 25 million (<i>achieved</i>)
Main outputs for 2013		
<p>- Renewal of Science and Technology Cooperation Agreements with Russia and the United States of America</p> <p>- Association to Horizon 2020 of: Switzerland (Agreement) Israel (MoU), Moldova (MoU), Albania (MoU), Bosnia and Herzegovina (MoU), Macedonia (MoU), Montenegro (MoU), Serbia (MoU), Turkey (MoU), Faroe Islands (Agreement)</p>		

⁵⁶ These calls are joint pilot calls implemented in the frame of the 5 on-going International Cooperation ERA-NET projects i.e. New Indigo, Black Sea ERANET, KORANET, ERA-NET RUS and SEA ERANET PLUS.

Main expenditure-related output	Budget line	DB 2013 (May 2012)	
		Output (no)	EUR million
Proposals retained for funding in the area of:			
Bi-regional coordination of S&T cooperation including priority setting and definition of S&T cooperation policies: INCO-NET	08.17.01	5	12.70
Bilateral coordination for the enhancement and development of S&T Partnerships: BILAT		5	5.00
Coordination of national policies and activities of Member States and Associated States on international S&T cooperation: ERA-NET and ERA-NET PLUS		3	8.00
Supporting the transnational cooperation activities between NCPs: INCO-NCP		1	2.00
Reinforcing cooperation with European Neighbourhood Policy countries on bridging the gap between research and innovation: ENP-R2I		9	9.00
Others		-	2.98
Total	08.17.01		39.68

3.2.16 Capacities – Risk-Sharing Finance Facility - RSFF (08.18)

The existence of recognised world-level research infrastructures allows Europe to remain at the forefront of top-class scientific and technological development. In addition to its core support for a better and improved access to finance for RDI-driven entities (Cooperation Programme – see Section 3.2.8.), the Risk-Sharing Finance Facility (RSFF) also supports investments related to the implementation of research infrastructures (Capacities Programme, see in particular Section 3.2.10), notably those which are of particular interest for the EU as a whole.

Policy initiatives for 2013

In 2011, the **RSFF Co-operation Agreement** was substantially modified⁵⁷. In 2013, the Agreement will be further amended (Amendment No. 6) in order to reflect the evolution of the RSFF and prepare it for the period until the end of 2013 and beyond. Amendment No. 6 will be signed by Commissioner M. Geoghegan-Quinn and European Investment Bank (EIB) President W. Hoyer. In the field of research infrastructures, the aim of **Amendment No. 6** is to design and launch technical and financial advice activities to prepare a limited number of key relevant and ambitious projects⁵⁸ for potential financing and to establish a network of national experts in the field of debt financing.

Main implementation activities for 2013

The focus is on maximising the implementation level for target groups that have so far been relatively less attracted to the RSFF, in particular research infrastructures. The Commission and the EIB Group continue to implement the major changes introduced in the RSFF cooperation agreement with an additional EU financial contribution of EUR 50 million. In particular, the signature of a loan for an emblematic research infrastructure⁵⁹ included in the roadmap of the European Strategy Forum on Research Infrastructures (ESFRI) is foreseen.

In addition, a Group of high-level Independent Experts will undertake the second interim **evaluation** of the RSFF. They will notably assess to what extent the Commission and the EIB Group have implemented the recommendations of the initial RSFF interim evaluation (2010) for a better support to research infrastructures. This will also be a forward-looking exercise whose main aim will be to contribute to the design of financial instruments under Horizon 2020.

Comments on the performance indicators

These indicators show the strong leverage effect of the RSFF for European research infrastructures projects. The EU budget has contributed EUR 151 Million to an overall financing for such projects of EUR 595 Million, i.e. a leverage factor of 4.

The targets have been reduced from the first two indicators (from EUR 2 billion in the 2012 MP to EUR 800 million) for two reasons: (1) contrary to other grant-based instruments used by DG RTD, the

⁵⁷ Through the Amendment No. 4, which introduced a new risk sharing approach (First Loss Piece Portfolio) and a new facility for SMEs and companies with small or middle capitalizations (RSI) – C (2011) 8606 of 5 December 2011

⁵⁸ Like the European Spallation Source (ESS) of the European Strategy Forum on Research Infrastructures – ESFRI.

⁵⁹ The European Southern Observatory Extremely Large Telescope (ESO-ELT) of ESFRI

RSFF is a market demand-driven loan and guarantee instrument and the market demand for research infrastructure projects has changed; (2) the risk-sharing approach between the EU and the EIB was modified through Amendment No. 4, as explained above.

08 18: Capacities — Risk-sharing finance facility (RSFF)		
SPECIFIC OBJECTIVE 1	Support additional investment in European Research Infrastructures through the RSFF	
Result indicators	Latest known result (end March 2012)	Target (by 2013)
Volume of RSFF supported loans and guarantees provided to European research infrastructures projects (amount of approved loans by the EIB)	EUR 695 million	EUR 800 million ⁶⁰
Volume of RSFF supported loans and guarantees provided to European research infrastructures projects (amount of signed loans by the EIB)	EUR 595 million	EUR 800 million
Volume of FP7 contribution used to support RSFF loans and guarantees provided to European research infrastructures projects	EUR 151 million ⁶¹	EUR 200 million of FP7 contribution for covering of expected and unexpected losses related to RSFF operations
Main outputs for 2013		
Amendment No.6 of the RSFF Co-operation agreement.		

Main expenditure-related outputs	Budget line	DB 2013 (May 2012)	
		Output (no.)	EUR million

⁶⁰ The Amendment to RSFF Cooperation Agreement changed the risk-sharing approach on 5 December 2011, with a higher risk taken by the EU. The EU contribution covers now the first-loss piece of the Research-Infrastructure portfolio (PFLP), due to the risky nature and particularities of the related loans. In July 2012 the RSFF Steering Committee has decided to lower the needed PFLP from 50% to 25% taking into account the risk profile of several Research Infrastructures loans currently in the pipeline. As a consequence, the targeted portfolio by 2013 should amount around four times of the EU contribution under Capacities, i.e. 200m x 4 = EUR 800m.

⁶¹ In compliance with the two step-approach required by the European Parliament and the Council of the European Union in the FP7 basic acts, the EU financial contribution is broken down in two parts: a first tranche of EUR 500 million (out of which EUR 100 million from SP Capacities) for the period 2007-2010; a second tranche, following the positive result of an interim evaluation in 2010, of EUR 500 million (out of which EUR 100 million from SP Capacities) for the period 2011-2013.

Proposals retained for funding in the area of:			
Commission Decision/Agreement with EIB ⁶²	08.18.01	1	50.00
Total	08.18.01		50.00

⁶² One agreement for the whole 7th Framework Programme for both Cooperation and Capacities Specific Programmes.

3.2.17 Capacities – Coherent Development of Research Policies - CDRP (08.19)

The aim of this activity is to ensure that the research policies and actions of Member State and of the EU are developed in a coherent, coordinated and mutually reinforcing manner. These policies are an essential part of the EU agenda to turn Europe into a smart, sustainable and inclusive economy.

Main implementation activities for 2013

Activities in 2013 aim at strengthening the economic evidence of the contribution of Research and Innovation to growth and jobs, identifying more effective policies and supporting policy mutual learning in the context of the European Research Area Committee. These activities are expected to pave the way for the roll-out of the future Policy Support Facility under Horizon 2020.

In the context of the **European Semester**, DG RTD will assess the research policies of the different Member States, including through the exploitation of the new Innovation headline indicator. It will also provide the necessary direction and support in the conceptual development of a "Research and Innovation Observatory" to be managed by the Joint Research Centre.

In 2013, the "Innovation Union Competitiveness report 2013" and the Staff Working Paper "Research and Innovation performance in European countries 2013" will be issued (see Section 3.1.1).

Other important highlights include the **European Prize for Innovation in Public Administration**⁶³, as well as continued support to the high level groups, i.e. European Research and Innovation Board (ERIAB), European Forum on Forward Looking Activities (EFFLA) and the Innovation for Growth (I4G).

In preparation of Horizon 2020, where inducement prizes are set to become an important funding instrument, a set of criteria and specifications will be elaborated for inducement prizes to be used in five societal challenges under Horizon 2020. Besides, to prepare not only Horizon 2020, but also the Cohesion Programme under the next programming period (2014-2020), support will be provided to less developed Member States to help them formulate their smart specialisation strategies, in particular through the launch of up to 15 expert groups.

Several **studies** will be carried out to support policy coordination to increase synergies and consistency across the EU: a study to gain a full understanding of the State support schemes for Research, Development and Innovation used by the EU's international competitors; a study to monitor knowledge transfer performance of higher education and public research organisations. An evaluation of the CDRP programme will also be launched to assess the support and to make recommendations for its continuation under Horizon 2020.

⁶³ In the following 3 categories: initiatives for **citizens** (e.g. special assistance for the elderly; eco-friendly public transport; participatory budgeting); initiatives for **firms** (e.g. providing networking platforms for start-ups; supporting rural entrepreneurs with e-trade tools) and initiatives for **education** and **research**

Comments on the performance indicators

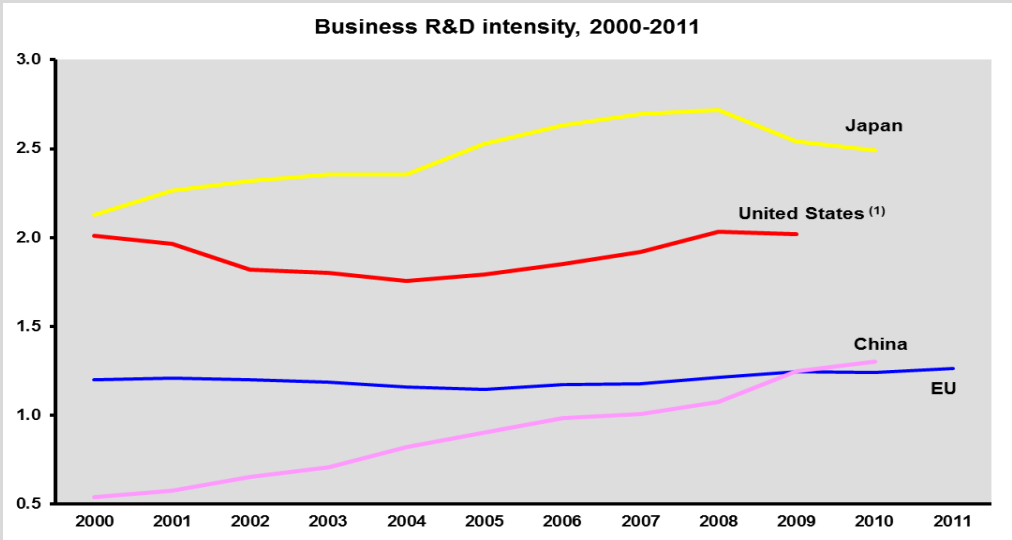
Public R&D expenditure, which represented 0.64% of GDP in 2000, increased to 0.74 % of GDP in 2011 (+0.1%). The resilience of public R&D expenditure to the crisis shows that, in line with the Europe 2020 Strategy, Member States have largely implemented the smart fiscal consolidation principle: when consolidating their public finance, most Member States have prioritized public funding of R&D.

In the same period (2000-2011), Business R&D expenditures increased only from 1.21% of GDP to 1.26% (+0.05%, compared to +0.1% for public expenditure), showing that several framework conditions continue to be less conducive for firms to create and invest in Europe than in some of our main competitors.

08 19 : Capacities — Support for coherent development of research policies																																																																					
SPECIFIC OBJECTIVE 1	Increase the quantity and quality of public and private R&D expenditure																																																																				
Result indicators	Latest known result (November 2012)			Target (by 2020)																																																																	
Public expenditure on R&D as % GDP	2011	2010		2009	1% GDP																																																																
	EU27	JP	CN	US																																																																	
	0.74	0.71	0.47	0.73																																																																	
<p>Important progress has been made in the last years towards the achievement of the target. In spite of the current difficulties for public finances, the 15% increase achieved in the period 2007-2009 has not been eroded in the last two years. By now, the EU's public-sector R&D intensity may be the highest among the countries in the comparison.</p>																																																																					
<p style="text-align: center;">Public Sector, R&D intensity, 2000-2011</p> <table border="1"> <caption>Public Sector, R&D intensity, 2000-2011 (Estimated Data)</caption> <thead> <tr> <th>Year</th> <th>EU</th> <th>Japan⁽²⁾</th> <th>United States⁽³⁾</th> <th>China</th> </tr> </thead> <tbody> <tr><td>2000</td><td>0.64</td><td>0.73</td><td>0.58</td><td>0.36</td></tr> <tr><td>2001</td><td>0.65</td><td>0.73</td><td>0.63</td><td>0.38</td></tr> <tr><td>2002</td><td>0.66</td><td>0.72</td><td>0.67</td><td>0.42</td></tr> <tr><td>2003</td><td>0.66</td><td>0.71</td><td>0.68</td><td>0.43</td></tr> <tr><td>2004</td><td>0.65</td><td>0.71</td><td>0.67</td><td>0.41</td></tr> <tr><td>2005</td><td>0.66</td><td>0.71</td><td>0.67</td><td>0.42</td></tr> <tr><td>2006</td><td>0.65</td><td>0.71</td><td>0.66</td><td>0.40</td></tr> <tr><td>2007</td><td>0.65</td><td>0.70</td><td>0.66</td><td>0.39</td></tr> <tr><td>2008</td><td>0.68</td><td>0.69</td><td>0.68</td><td>0.39</td></tr> <tr><td>2009</td><td>0.75</td><td>0.74</td><td>0.73</td><td>0.46</td></tr> <tr><td>2010</td><td>0.74</td><td>0.72</td><td>0.72</td><td>0.47</td></tr> <tr><td>2011</td><td>0.74</td><td>0.71</td><td>0.73</td><td>0.47</td></tr> </tbody> </table>					Year	EU	Japan ⁽²⁾	United States ⁽³⁾	China	2000	0.64	0.73	0.58	0.36	2001	0.65	0.73	0.63	0.38	2002	0.66	0.72	0.67	0.42	2003	0.66	0.71	0.68	0.43	2004	0.65	0.71	0.67	0.41	2005	0.66	0.71	0.67	0.42	2006	0.65	0.71	0.66	0.40	2007	0.65	0.70	0.66	0.39	2008	0.68	0.69	0.68	0.39	2009	0.75	0.74	0.73	0.46	2010	0.74	0.72	0.72	0.47	2011	0.74	0.71	0.73	0.47
Year	EU	Japan ⁽²⁾	United States ⁽³⁾	China																																																																	
2000	0.64	0.73	0.58	0.36																																																																	
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Business expenditure on R&D as % GDP	2011	2010		2009	2% GDP
	EU27	JP	CN	US	
	1.26	2.49	1.30	2.02	

In contrast to public expenditure, business R&D intensity has stagnated for the last ten years and has now fallen behind China's to become the lowest among the countries in the comparison. Assuming a continuation of this trend, **the achievement of the target seems unlikely.**



Main expenditure-related outputs	Budget line	DB 2013 (May 2012)	
		Output (no.)	EUR million ²⁰
Proposals retained for funding in the area of:			
Development of RDI policies in ERA context	08.19.01	9	2.32
Monitoring and analysis of national RDI policies		1	0.15
Support to the European Research and Innovation Area Board		1	0.48
Improvement of the business environment		2	1.28
Improvement of links between business and academia		3	1.04
Support to cross-cutting aspects related to the implementation of European Innovation Partnerships		1	0.20
Strengthening of the evidence base and monitoring of innovation performance		1	4.00
Support to Member States policy co-ordination and mutual learning activities		4	0.90
Support to the European Forum for Forward Looking Activities		1	0.30
Support to the running of the Innovation for Growth group of economists - I4G		1	0.30
Analysis of state support schemes for RDI in the EU's international competitors in the field of science and R&I		1	2.44
Total		08.19.01	

3.2.18 EURATOM – Fusion Energy (08.20)

The ultimate objective of this activity is the realisation of fusion as a viable energy source, a major scientific and technological challenge that would greatly contribute to tackling problems like climate change and the long-term security of our energy supply. The completion of ITER, the European-based large scale international fusion project, represents in this context the most important objective towards the development of fusion energy, and is supported by an extensive research programme focusing on preparation for ITER operation and exploitation of results.

Policy initiatives for 2013

A Staff Working Paper on the new structure of the **European fusion research programme** will be presented to the EU Council, containing the detailed analysis of possible options for the future implementation of the programme. This paper will frame the Commission's position for the Council discussions on the Euratom part of the Horizon 2020 proposal.

As regards ITER, the EU has proposed to hold a ministerial meeting between the ITER parties (China, EU, India, Japan, Korea, Russia & US) in 2013 at the ITER site in Cadarache (France). It will focus on the ITER Organization's proposed actions to address risks related to the project's cost and schedule.

Main implementation activities for 2013

The EURATOM Fusion programme continues to fund, as a priority, the **construction of ITER** as well as the **exploitation of Joint European Torus (JET)**. As for JET, 2013 will show continued exploitation of the newly installed 'ITER-like wall', which provides important information and data in support of ITER construction and operation.

Co-funding of fusion R&D in national labs is foreseen as part of a continuing and coordinated fusion research effort in Europe. JET and other specific joint activities are coordinated under the EFDA (European Fusion Development Agreement) umbrella. All research will increasingly be aligned to the common EFDA roadmap agreed in October 2012 which covers all research in support of ITER and eventual electricity production from fusion. As part of these efforts, continued support for training and mobility are also essential in order to prepare the 'ITER generation' of European scientists and engineers.

In preparation of Horizon 2020, major efforts will be required in 2013 to put in place the new structure of the **European fusion research programme** in readiness for the start of Horizon 2020, on the basis of the discussion with the EU Council.

Comments on the performance indicators

Concerns exist in relation to ITER and F4E specific indicators (milestones and production of first plasma) where both the schedule and costs are periodically reviewed. These parameters are constantly addressed by the Commission with the ITER International Organization and F4E Joint Undertaking.

08 20 : Euratom — Fusion energy		
SPECIFIC OBJECTIVE	Ensure timely and cost controlled progress in the construction of ITER, prepare for its future operation, and lay the foundations for future demonstration power plants.	
Result indicators	Latest known result	Target (result)
Degree of realisation of ITER (number of milestones met by Joint Undertaking Fusion for Energy, F4E)	17.5% of milestones met. (22 milestones completed as of September 2012 out of 126 planned for the period 2009-2020 ⁶⁴)	100% of milestones met by F4E by 2020. First Plasma in November 2020. The start of Deuterium-Tritium operation is planned for December 2027
Number of scientific publications on JET	>30 publications ⁶⁵ on the 'ITER-like wall'	About 60 submissions of manuscripts for publication in journals resulting from about 100 days of JET operation
% of R&D work under EFDA ⁶⁶ Task Agreements completed on time ⁶⁷	80% by October 2012	85% by 2013
% of R&D work under Contracts of Association completed on time ⁶⁷	85% by October 2012	85% by 2013
Number of fusion researchers and engineers trained for the needs of ITER and the programme	145 by end of 2012 ⁶⁸	At least 150 researchers/engineers obtaining high-level skills and/or academic qualification by 2013

⁶⁴ Source: Project Plan (Edition 2012) presented for recommendation at the 41st Meeting of the Executive Committee of Fusion For Energy (Barcelona, 14 November 2012)

⁶⁵ JET operation restarted only in Sept' 2011 following a 2-year shutdown for upgrade. Info is taken from scopus.com, though in view of delays before publication, figure corresponds only to last 3-months of operation in 2011.

⁶⁶ EFDA stands for European Fusion Development Agreement.

⁶⁷ "on time" refers to: due date + 3 months (to allow for reporting)

⁶⁸ Researchers / engineers in Goal-Oriented Training (3 years) plus research fellows (2-yr fellowships) since the start of FP7

Level of researcher mobility in fusion R&D	Every year, more than 100 persons/year of work at other laboratories by more than 800 researchers under the fusion Mobility Agreement	Maintain the level of mobility at more than 100 persons/year in 2013
Main outputs for 2013		
Commission Staff Working Paper on the future structure of the European fusion research programme		

Main expenditure-related outputs	Budget line	DB 2013 (May 2012)	
		Output (no.)	EUR million
Support for the European fusion research laboratories including training projects and fellowships	08.20.01	26	46.59
Support for the collective scientific exploitation of the Joint European Torus (JET)		30-40	19.59
Support for the mobility of researchers		1	4000
Others ⁶⁹		-	1.67
Total 08 20 01			
Construction of ITER	08.20.02	1	865.51
Total	08 20		937.36

⁶⁹ Includes costs of preparatory studies (by appropriate procurement procedure) and evaluations.

3.2.19 EURATOM – Nuclear Fission and Radiation Protection (08.21)

The objective of the Euratom nuclear fission and radiation protection programme is to contribute to reaching the EU's long-term energy targets and to address societal concerns in areas such as nuclear safety, radioactive waste management and radiation protection in industrial and medical practices.

Policy initiatives for 2013

In February 2013, a **symposium** on "nuclear fission research for a low carbon economy", with 400 high-level participants, will be organised in Brussels (jointly with the European Economic and Social Committee). The organisation of this event follows a **request formulated by the EU Council** during the adoption of the current Euratom Programme (2012-2013).

Main implementation activities for 2013

The Euratom fission programme focusses on nuclear safety, nuclear materials and radiation protection.

More specifically, research is supported in areas like plant life management, the prevention and mitigation of severe accidents (taking also into account Fukushima lessons) or the development of common strategies for plant safety at EU level for existing and advanced reactors. As regards radiation protection, support will be provided for a better integration of research efforts on risks related to low-dose radiation, aiming to significantly optimise the protection afforded to the workforce, the public and the environment.

In 2013, following the approach proposed for Horizon 2020, the Euratom fission programme will also pay particular attention to reinforcing the interactions between the existing platforms of research organisations ('Sustainable Nuclear Energy Technology Platform' (SNETP), the 'Implementing Geological Disposal – Technology Platform' (IGD-TP), the 'Multi-disciplinary European Low Dose Initiative' (MELODI)) and other stakeholders fora. The final objective is the implementation of joint programmes under Horizon 2020, possibly based on Public-Public and/or Public-Private Partnerships, with increased efficiency and consistency, as well as better visibility and attractiveness at international level.

An interdisciplinary **study**, prepared in the course of 2012, will address the actions needed at European level to maintain and further develop nuclear research and training capabilities (both energy and non-energy applications), and secure Europe's leadership in these fields.

In October 2013, two high-level **conferences**, co-organised with the Lithuanian Presidency, will take place in Vilnius: FISA 2013 (Fission Safety - 400 participants) and EURADWASTE 2013 (Waste Management - 250 participants).

08 21 : Euratom — Nuclear fission and radiation protection		
SPECIFIC OBJECTIVE 1	Generate new knowledge in all top priority areas in nuclear fission and radiation protection	
Result indicators	Latest known result (November 2012)	Target (by 2013)
Coverage of topics published in the Work Programmes ¹⁶	93%	100%
Projects that achieved <u>all or most</u> of their objectives...	100%	90%
... of which projects that achieved all of their objectives	82%	75%
SPECIFIC OBJECTIVE 2	Promote transformation of research results into industrial applications and/or increased protection of man and the environment	
Result indicators	Latest known result (November 2012)	Target (by 2013)
Percentage of projects with publications in peer reviewed journals	100%	50%
Projects which generate patent applications or other types of intellectual property rights ⁷⁰	0%	10%
Share of EU financial contribution to Industry	18.1%	20%
Projects with at least one Industrial participant ⁷¹	77.2%	75%

⁷⁰ On the basis of only two finished projects. In the field of Nuclear Fission and Radiation Protection, the intellectual property acquired during the project implementation could result in patent applications not only during the lifetime of the project and Euratom Framework Programme, but also in the 10-15 years after the end of the project.

⁷¹ Excluding projects in radiation protection, that attracts funding only from public funding agencies.

Share of EU financial contribution to SMEs ⁷²	5.6%	15%
Projects with at least one SME participant	53.5%	50%

Main expenditure-related outputs	Budget line	DB 2013 (May 2012)	
		Output (no.)	EUR million ²⁰
Proposals retained for funding in the area of:	08.21.01		
Geological disposal of radioactive waste		2-4	10
Reactor Systems (includes nuclear safety & waste management as part of fuel cycle – i.e. P&T)		4-6	20
Radiation Protection		3-5	15
Human Resources, mobility and training; infrastructures; regional dimension; cooperation with 3 rd Countries		5-7	10
Others ⁷³		-	0.84
Total	08.21.01		55.84

⁷² SMEs participation in the Nuclear Fission and Radiation Protection programme is marginal.

⁷³ Includes costs of evaluation, small studies (via call for tender) and occasional subscription payments mentioned in the WP.

3.2.20 Completion of previous Programmes and other activities (08.22)

This Activity addresses the necessity to ensure the execution of the on-going actions resulting from previous Framework Programmes, mainly the Fifth and Sixth Framework Programmes and the dissemination and the exploitation of their outputs.

Main implementation activities for 2013

In 2012 the operations of the FP6 Marie Curie Actions came to an end, which represent around 4500 projects. Dissemination activities, raising awareness on the best practices resulting from these projects were undertaken. In 2013, a number of activities remain to be completed.

Comments on the performance indicators

The indicator presented below measures the dissemination of results from the 5th and 6th framework programmes through CORDIS, the Community R&D Information Service, which is an interactive information portal to support European R&I cooperation. The dissemination of research results is binding for all R&D projects funded by the EU, but the use of CORDIS for this purpose is not compulsory.

As showed by the latest results, dissemination for FP6 has already reached the same level as FP5, which finished five years earlier. The use of CORDIS for the dissemination of FP project results started during FP5, which explains the low level of dissemination for this FP. The use of CORDIS has been improved for FP6 projects, but still suffers from technical limitations, which are reflected in the target set.

Given that the overall result for 2011 was 47%, i.e. a 10-point increase in 2012, it is possible that the 2013 target will be met.

08 22 COMPLETION OF PREVIOUS FRAMEWORK PROGRAMMES AND OTHER ACTIVITIES				
SPECIFIC OBJECTIVE:	Enhance previous Framework Programmes outputs through exploitation and dissemination of results			
Result indicator	Latest known result (June 2012)			Target (by 2013)
Percentage of results published in the CORDIS database under FP6/FP5 ⁷⁴	FP5	FP6	Total	70%
	58%	55%	57%	

⁷⁴ The FP5 projects may have more than one result, but they are counted only once in the CORDIS database.

3.2.21 Programme of the Research Fund for Coal and Steel (08.23)

Coal and steel remain key global industrial sectors and play a vital role for the EU economy. The main objective of the Research Fund for Coal and Steel (RFCS) is to promote industrial research to support the competitiveness of coal mining technologies, clean coal technologies, and the full spectrum of steel production and utilisation. The Fund's annual budget of €55-60 million comes from interests generated by the residual assets of the ECSC (European Coal and Steel Community) and is managed separately from the Seventh Framework Programme.

From the R&D financed by the RFCS budget, 72.8% covers all aspects of production and use of steel, an infinitely recyclable material which permeates all aspects of our economy and is key to a number of innovative sectors, from construction to automotive to energy. The remaining (27.2%) covers critical issues of mine safety and the environmental impacts of coal, notably CO₂ emissions, which can be reduced or eliminated through innovation and the resulting improvements in technology.

Main implementation activities for 2013

The RFCS runs an open-call, "bottom-up" approach to its projects, in line with the Council Decision which set up the programme.

In 2013, the RFCS will publish the **Monitoring and Assessment report** of the programme, already discussed in draft at the end of 2012. The report will provide convincing evidence regarding the relevance of the RFCS to European coal and steel industry and is expected to have an impact on the management of the programme.

Comments on the performance indicators

The positive results of the indicators relating to the quality of the projects, after evaluations, should also be judged on the basis of the bottom-up approach of the RFCS. To a certain extent, this approach limits the Commission's ability to steer quality in the project submission process, and the positive results are proof of the capacity of the RFCS to attract good proposals from a solid basis of participants.

The good participation from industry bears witness to the strong industrial focus of the programme, while including a good balance of research institutions and universities in its projects.

08 23 : Research programme of the research fund for coal and steel (RFCS)		
SPECIFIC OBJECTIVE 1	Enhance the generation of new knowledge in coal and steel with practical relevance at EU level	
Result indicators	Latest known result (2012 call)	Target (by 2013)
Percentage of selected proposals with "very good to excellent" scientific and technical approach ⁷⁵	44%	40% (<i>achieved</i>)
Percentage of selected proposals with a "very good to excellent" innovative content ⁷⁵	50%	40% (<i>achieved</i>)
Percentage of selected proposals with "very good to excellent" EU added value ⁷⁵	58%	60%
SPECIFIC OBJECTIVE 2	Promote the transformation of research results into commercial and industrial applications	
Result indicators	Latest known result (Sept 2012)	Target (by 2013)
Percentage of participation of industrial beneficiaries in RFCS projects	43%	40% (<i>achieved</i>)

⁷⁵ As defined in the Coal and Steel individual evaluation form (criteria 1, 2 and 5, respectively) See: ftp://ftp.cordis.europa.eu/pub/coal-steel-rtd/docs/evaluation-form-pr-2011_en.pdf

FP7 Public-Public and Public-Private Partnerships

Category / Legal basis		Initiative	Lead DG	RTD ABB Code	
Public-Public Partnerships (P2Ps)	Art. 181 TFEU	Joint Programming Initiatives (JPIs)	Neurodegenerative diseases (in particular Alzheimer's)	RTD	8.02
			The Microbial Challenge -- An Emerging Threat to Human Health	RTD	
			Agriculture, food security and climate change	RTD	8.03
			Healthy diet for a health life	RTD	
			Healthy and productive seas and oceans	RTD	
			Connecting Climate Knowledge (CliK'EU)	RTD	8.06
			Water challenges for a changing world	RTD	
			Cultural heritage and global change	RTD	
			Urban Europe	RTD	8.14
			More years, better lives	CNECT	
		European Innovation Partnerships (EIPs)	Active and Healthy Ageing	SANCO	AWBL 04
			Agricultural productivity and sustainability	AGRI	AWBL 04
			Raw materials	ENTR	AWBL 04
			Smart cities and Communities	ENER MOVE CNECT	
	Water		ENV		
	Art. 185 TFEU	European-Developing Countries Clinical Trials Partnership (EDCTP)	RTD	08.02	
		Baltic Sea (BONUS)	RTD	08.06	
		Eurostars	RTD	08.13	
		European Metrology Research Programme (EMRP)	RTD		
Ambient Assisted Learning (AAL)		CNECT			
ERA-Net Plus	ERA-Nets Plus	RTD	(15 by end 2012)		
Integrated Research Programmes	European Energy Research Alliance of the SET Plan	RTD	08.05		

Category / Legal basis			Initiative	Lead DG	RTD ABB Code		
P2Ps	Art. 187	ERIC	Survey of health aging and retirement in Europe (SHARE)	RTD	08.12		
			Common language, resources and infrastructure (CLARIN)	RTD			
Public-Private Partnerships (PPPs)	Euratom		Fusion for Energy (F4E)	RTD	08.20		
	Art. 187 TFEU	Joint Undertakings (JUs) Joint Technology Initiatives (JTIs)	Single European Sky (SESAR)	MOVE			
			Innovative Medicines Initiatives (IMI)	RTD	08.02		
			Fuel Cells and Hydrogen (FCH)	RTD	08.05		
			Clean Sky	RTD	08.07		
			Nanoelectronics (ENIAC)	CNECT			
			Embedded Computing (ARTEMIS)	CNECT			
			Contractual PPPs	<u>European Economic Recovery Plans (EERPs)</u>		Green Cars	RTD
	Energy-efficient buildings	RTD					
	Factories of the Future	RTD					
	Future Internet	CNECT					
	<u>Strategic Energy Technology Plans (SET-Plans)</u> European Industrial Initiatives (EIIIs)			CO2 capture and storage	RTD	08.05	
				Electricity Grids	RTD		
				Solar photovoltaic	RTD		
				Wind	RTD		
				Bioenergy	RTD		
				Sustainable nuclear	RTD		08.20 & 08.21
	Other			Cosmetics Europe - The Personal Care Association	RTD	08.02	

Acronyms

AC: Associated Country
AdG: Advanced Investigator Grants
AWBL: Activities Without Budget Line
ARIF: Average Relative Impact Factor
CAP: Common Agriculture Policy
CFP: Common Fisheries Policy
COMM: Communication of the Commission
CORDIS: Community Research & Development Information Service
CO2: Carbon Dioxide
CWP: Commission Work Programme
DG AGRI: Directorate-General for Agricultural and Rural Development
DG ENTR: Directorate-General Enterprise and Industry
DG ENV: Directorate-General for the Environment
DG INFSO: Directorate-General Information Society and Media
DG MARE: Directorate-General for Maritime Affairs and Fisheries
DG SANCO: Directorate-General Health and Consumers
DIS: Dedicated Implementation Structure
ECSC: European Coal and Steel Community
EDCTP: European and Developing Countries Clinical Trials Partnership
EFDA: European Fusion Development Agreement
EFPIA: European Federation of Pharmaceutical Industries and Associations
EFTA: European Free Trade Association
EGCI: European Green Cars Initiative
EIB: European Investment Bank
EIP: European Innovation Partnership
ENP: European Neighbourhood Policy
EPO: European Patent Office
EPR: European Partnership for Researchers
ERA: European Research Area
ERAC: European Research Area Committee
ERANET: FP scheme for coordination of national and regional research programmes.
ERAWATCH: Integrated Information system for ERA
ERC: European Research Council
ERCEA: European Research Council Executive Agency
ESFRI: European Strategy Forum for Research Infrastructures
ESNII: European Sustainable Nuclear Industrial Initiative
EU: European Union
EURATOM: European Atomic Energy Community
EUREKA: Pan-European framework for research and development cooperation
EUROSTAT: Statistical Office of the European Communities
FCH JU: Fuel Cells and Hydrogen Joint Undertaking
FP: Framework Programme
FP6: Sixth Framework Programme

FP7: Seventh Framework Programme
F4E: Fusion for Energy
GDP: Gross Domestic Product
GERD: Gross Expenditure in R&D
GMO: Genetically modified organism
GSO: Group of Senior Officials
HIV/AIDS: Human immunodeficiency virus / Acquired immune deficiency syndrome
ICPC: International Cooperation Partner Countries
ICT: Information and Communication Technologies
IEG: Group of Independent Experts
IMI: Innovative Medicines Initiative
IMS: Intelligent Manufacturing Systems
INCO: International Cooperation
ISG: International Study Group
ITER: International Thermonuclear Experimental Reactor
IU: Innovation Union
JAP: Joint Action Plan
JET: Joint European Torus
J(E)TI: Joint (European) Technology Initiative
JP: Joint Programming
JPI: Joint Programming Initiative
KIS: Knowledge Intensive Service
KBBE: Knowledge Based Bio-Economy
MEP: Member of the European Parliament
MoU: Memorandum of Understanding
MS: Member State
NCP: National Contact Point
NMP: Nanoscience, Nanotechnology, Materials and New Production Technologies
NRP: National Reform Programme
OECD: Organisation for Economic Cooperation and Development
PC: Programme Committee
PCT: Patent Cooperation Treaty
pm: pro memoria
PPP: Public-Private Partnership
PPS: Purchasing Power Standards
PPY: Professional per Year
PRO: Public Research Organisation
RDI: Research, Development, Demonstration and Innovation
REA: Research Executive Agency
REGPOT: Regional Potential Project
RFCS: Research Fund for Coal and Steel
RI: Research Infrastructures
ROI: Return on Investment
RRI: Responsible Research and Innovation
RSFF: Risk-Sharing Finance Facility

RTD: Research and Technological Development
R&D: Research and Development
SBIR: Small Business Innovation Research
SCAR: Standing Committee on Agricultural Research
ScC: Scientific Council
SET: Strategic Energy Technology Plan
SFIC: Strategic Forum for international S&T cooperation
SICA: Specific International Collaboration actions
SINAPSE: Scientific Information for Policy Support in Europe
SiS: Science in Society
SME: Small and Medium-sized Enterprise
SP: Specific Programme
SPP: Strategic Planning and Programming
SRA: Strategic Research Agenda
SSH: Social Sciences and Humanities
StG: Starting Independent Researcher Grants
S&T: Science & Technology
TFUE: Treaty on the Functioning of the European Union
US(A): United States (of America)
WP: Work Programme