



2013

Annual Activity Report

**Directorate-
General
for Research
and Innovation**

Foreword

This Annual Activity Report covers the activities of the Commission's Directorate-General for Research and Innovation (DG RTD) for 2013, a significant year for the DG.

During this year, DG RTD was very active in the context of the European Semester, the annual cycle of EU economic and fiscal policy coordination, proposing country-specific recommendations in the field of Research and Innovation (R&I). DG RTD also continued to be the main player in the delivery of the Europe 2020 flagship initiative 'Innovation Union'. Progress has been steady since 2010, with 28 commitments already on track or achieved by 2012. In 2013 DG RTD delivered the much-awaited innovation indicator.

As in previous years, progress was made on the European Research Area (ERA) and the ERA Progress Report was published, providing a baseline for an in-depth assessment of progress on the ERA in 2014.

In 2013 DG RTD took a leading role in the adoption of the Horizon 2020 legislative package. Concrete preparations for the launch of the programme's implementation were made through the development of legal documents and the implementation of a comprehensive communication campaign leading up to the launch of the first calls for proposals on 11 December.

The Commission presented the 'Innovation Investment Package', a set of legislative proposals which renew or establish partnerships between the EU and Member States to implement parts of Horizon 2020 through Public-Public Partnerships (P2Ps) or between the EU and the private sector through Public-Private Partnerships (PPPs).

2013 saw the creation of the legal basis for the delegation of a sizeable share of the implementation of Horizon 2020 to Executive Agencies (EAs). This was done in order to guarantee a high quality of programme management service, and to speed up the transformation of DG RTD into a policy DG. Within this context, a significant reorganisation of DG RTD was prepared, which took effect on 1 January 2014.

Part 1 of this report sets out the policy achievements of the DG, and gives a flavour of the wide range of activities being carried out in the DG and what these can add to the research landscape and to the provision of growth and jobs in the European Union.

Parts 2-4 give information on the management of the resources allocated to the DG, and on how the DG is organised internally. These sections contain information about the error rates found in the grants that we fund and the costs and benefits of the different parts of the grant management operation.

It is hoped that the report gives a clear overview of the DG's operations and helps in understanding the different challenges that are faced. For more information please see our website:

<http://ec.europa.eu/research/index.cfm?lg=fr>

Robert-Jan Smits

Director-General

DG Research and Innovation

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INTRODUCTION

The DG in brief

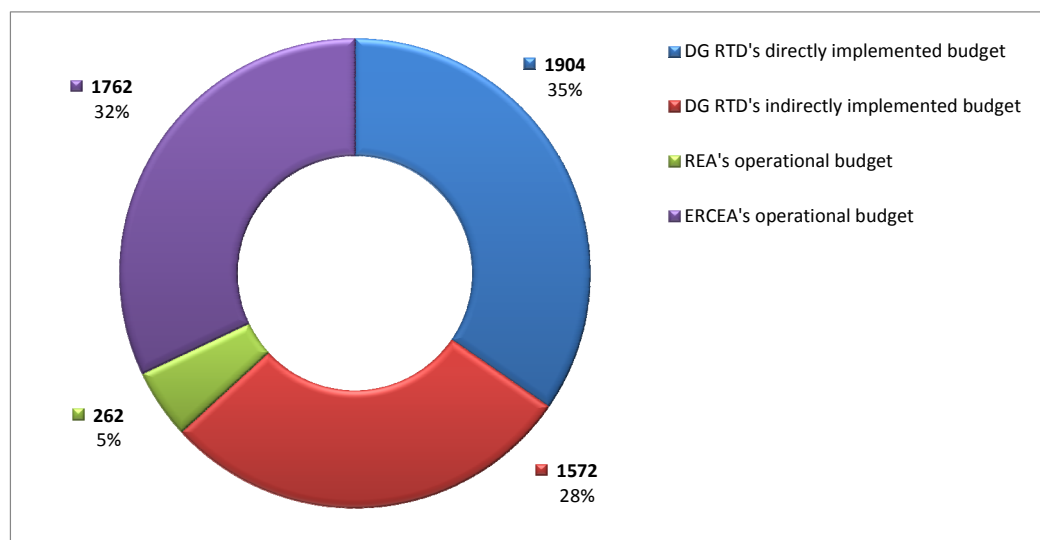
The Directorate-General for Research and Innovation (DG RTD) defines and implements European research and innovation (R&I) policy with a view to achieving the goals of the Europe 2020 strategy and its flagship initiative, the Innovation Union.

To do so, the DG contributes to the European Semester by analysing national R&I policies, assessing their strengths and weaknesses, and formulating country-specific recommendations where necessary. It monitors and contributes to the realisation of the Innovation Union flagship initiative and the completion of the European Research Area. It funds excellent Research and Innovation through Framework Programmes based on strategic programming.

In 2013, DG RTD was structured into twelve Directorates placed under the authority of the Director-General and three Deputy Directors-General. Six Directorates were 'thematic' Directorates, focussing mainly on the implementation of thematic parts of the FP. Three Directorates concentrated mainly on horizontal issues (ERA, International Cooperation and Innovation). One Directorate worked mainly on policy development (Framework Programme). The remaining two Directorates provided support functions (Operational Support, Resources).

In general, expenditure was managed directly by DG RTD but FP7 also allowed for the implementation of the budget through other services and entities. In 2013, 45.22% of the overall commitment appropriations entrusted to DG RTD was managed by entities outside the DG¹, like Executive Agencies (EAs), Joint Undertakings (JUs)², and so-called 'Article 185 initiatives'³.

Figure 1 DG RTD and EAs' C1 appropriations for 2013 (in million €)



- 1 The figure includes operational and administrative appropriations. For the operational appropriations only the figure is 40.46%. These figures do not take into account the budget appropriations entrusted directly to the EAs (around €2 billion, to be compared to €3.5 billion entrusted to DG RTD).
- 2 The term 'Joint Undertakings' covers both the European Joint Undertaking for ITER and the Development of Fusion Energy and the Joint Technology Initiatives (see also footnote 5).
- 3 'Article 185 initiatives' are Public-Public Partnerships (P2Ps) based on Article 185 of the Treaty on the Functioning of the European Union, which mandates the EU to "make provision, in agreement with the Member States concerned, for participation in research and development programmes undertaken by several Member States, including participation in the structures created for the execution of those programmes".

Since 2007, DG RTD and the European Investment Bank (EIB) have been jointly managing an innovative debt instrument: the Risk-Sharing Finance Facility (RSFF).

As part of the process of moving towards a more 'policy-oriented' DG, and to focus better on issues such as the European Semester, Innovation Union, ERA, ex-ante and ex-post evaluations, forward-looking activities and strategic programming, DG RTD has started to delegate many of the implementation functions related to Horizon 2020 to EAs, JUs and 'Article 185 initiatives' while retaining and strengthening its policy role.

To achieve this aim, DG RTD has strengthened the Research Executive Agency (REA) and the European Research Council Executive Agency (ERCEA), the two EAs for which it is responsible⁴. Among the legislative proposals establishing or renewing 'Article 185 initiatives' and Joint Technological Initiatives (JTIs)⁵ adopted by the Commission in 2013, DG RTD is responsible for three proposed 'Article 185 initiatives'⁶ and four proposed JTIs⁷.

Changes are needed to bring DG RTD's staff levels and allocations in line with new DG priorities, Commission-wide staff reduction targets and off-setting targets to allow increases in staff in EAs to which Horizon 2020 activities are delegated. Certain services, common to all DGs of the 'Research family' and essential to the implementation of Horizon 2020, will be centralised, ensuring not only greater efficiency but also consistency and coherence in implementing rules and procedures. Plans were made for a substantial reorganisation of DG RTD, which came into effect at the beginning of 2014.

The year in brief

As in previous years, DG RTD contributed to the Commission's proposals to the Council of the EU for country-specific recommendations in the context of the European Semester. It has continued the work in building an Innovation Union and the ERA. For more details see the sections 'Policy highlights of the year', 1.1.4 ('AWBL activity 04: Building an Innovation Union') and 1.1.5 ('AWBL activity 03: European Research Area Development').

The last FP7 contracts were negotiated and signed in 2013. However, the projects financed, and the management of these projects, will continue for some years to come. 809 contracts were signed, and more than €3.4 billion invested in research projects in 2013.

While the implementation of FP7 was ongoing, DG RTD was deeply involved in the negotiations that led to the adoption of the Horizon 2020 legislative package at the end of the year. The main points of the Commission's proposal were accepted by the Council and the European Parliament, in particular the simplifications proposed and the concentration on grand challenges and impact instead of thematic research areas. The agreement reached between the co-legislators during the negotiations allowed for the first call for proposals under Horizon 2020 to be published in December 2013. Together with other DGs, and in order to implement parts of

4 Other EAs implementing parts of Horizon 2020 will include the European Agency for SMEs (EASME) and the Innovation and Networks Executive Agency (INEA). The Commission parent DG is DG Enterprise in the case of EASME and DG Mobility and Transport (DG MOVE) in the case of INEA.

5 JTIs are JUs, Public-Private Partnerships (PPPs) based on Article 187 of the Treaty on the Functioning of the European Union, which mandates the EU to "set up joint undertakings or any other structure necessary for the efficient execution of Union research, technological development and demonstration programmes".

6 The 'Article 185 initiatives' that will be renewed and for which DG RTD will be responsible are the European and Developing Countries Clinical Trials Partnership (EDCTP), the European Metrology Research Programme (EMPIR) and Eurostars (for SMEs).

7 The JTIs that will be renewed and for which DG RTD will be responsible are the European Joint Undertaking for ITER and the Development of Fusion Energy (F4E), the Innovative Medicines Initiative (IMI), Fuel Cells and Hydrogen (FCH) and Clean Sky. DG RTD will also be responsible for a new JTI on Bio-based Industries (BBI).

Horizon 2020, DG RTD also presented the Innovation Investment Package, consisting of proposals to renew or adopt new partnerships with the public and private sectors.

Horizon 2020's communication strategy, targeting both the general public and stakeholders, was launched. A large number of launch events were held in Member States. A new Horizon 2020 website has been developed and launched in time for the first calls for proposals which, with the preparatory work having been completed, we were able to launch in December.

Executive Summary

The Annual Activity Report (AAR) is a management report from the Director-General of DG RTD to the College of Commissioners. It is the main instrument of management accountability within the Commission and constitutes the basis on which the Commission takes responsibility for the management of resources and the achievement of objectives.

Key Performance Indicators

Result/Impact indicator (description)	Trend	Target (or milestone)	Latest known results																								
Gross Expenditure on R&D as a % of GDP (R&D intensity)	▲	3% of GDP (2020)	2012: 2.06% ⁸ 2011: 2.04% 2010: 2.00% 2009: 2.01%																								
Public Expenditure on R&D as a % of GDP	—	1% of GDP (2020)	2012: 0.75% ⁹ 2011: 0.74% 2010: 0.75% 2009: 0.75%																								
Progress in the implementation of the Innovation Union commitments	▲	33 out of 33 commitments (2020)	28 commitments on track or achieved (2012) ¹⁰																								
Share of EU financial contribution to SMEs	▲ ✓	15% for Cooperation Specific Programme (2013) ¹¹	2013 (Oct.): 17.4% ¹² 2012: 16.4% 2011: 14.9%																								
Time-to-Grant¹³																											
Time-to-Grant FP7 cumulatively (days)	▲	There was no legally binding target for contracts signed in 2013. ¹⁴	2012: FP7: 374 2013: FP7: 354																								
Average per year (days)	▲	In 2012, 55% of grants were signed within 270 days. In 2013, this had risen to 68%.	2012: FP7: 280 2013: FP7: 249																								
<table border="1" style="margin: 10px auto;"> <caption>Time-to-Grant Data</caption> <thead> <tr> <th>Year</th> <th>Signed GA during previous years</th> <th>Signed GA during current period</th> <th>TTG per year avg n° of days</th> </tr> </thead> <tbody> <tr> <td>Year 2009</td> <td>854</td> <td>916</td> <td>427</td> </tr> <tr> <td>Year 2010</td> <td>1 770</td> <td>662</td> <td>372</td> </tr> <tr> <td>Year 2011</td> <td>2 432</td> <td>666</td> <td>346</td> </tr> <tr> <td>Year 2012</td> <td>3 098</td> <td>601</td> <td>280</td> </tr> <tr> <td>Year 2013</td> <td>3 699</td> <td>926</td> <td>249</td> </tr> </tbody> </table>				Year	Signed GA during previous years	Signed GA during current period	TTG per year avg n° of days	Year 2009	854	916	427	Year 2010	1 770	662	372	Year 2011	2 432	666	346	Year 2012	3 098	601	280	Year 2013	3 699	926	249
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<p>▲ = positive trend ▼ = negative trend — = stable trend ✓ = target reached</p>																											

8 Eurostat estimate. All figures, including historical data, refer to EU-28.

9 See footnote 8.

10 See *State of the Innovation Union 2012: Accelerating change* (COM (2013) 149, 21.3.2013).

11 For the budget of the Cooperation SP, the following activities are not included: grants to the European Space Agency (ESA), 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 the COST and the European Metrology Research Programme.

12 For the part of the Cooperation SP implemented by DG RTD (i.e. excluding ICT, Space and Security) the result is 18.2%.

13 'Time-to-Grant' is defined as the time elapsed from a call's closing date (deadline for submission of proposals) to that of a grant signature by the European Commission. It is calculated for the grants signed in the reporting period. In the case of two-stage calls for proposals, it is the second stage call deadline that is used in the calculation of the 'Time-to-Grant'. It is expressed in number of calendar days.

14 As of 2014 the Financial Regulation sets a maximum period of 270 days while the Horizon 2020 legislation sets a maximum period of 240 days (with certain exceptions).

The activities of DG RTD are primarily addressed towards the Europe 2020 priorities of smart, sustainable and inclusive growth and the flagship initiative 'Innovation Union' by developing the foundations of a knowledge- and innovation-based economy. The first Key Performance Indicator (KPI) and the related target – a gross expenditure of 3% of GDP on R&D – is also one of the five headline targets of Europe 2020. The latest result available (2012) shows slight progress, reaching 2.06% of GDP, up from 2.03% in 2011. It will be a challenge to achieve this target by 2020.¹⁵ The second related indicator on public expenditure on R&I shows a stable result over the years. Even in a period of austerity, investment in R&I has been maintained in relative terms.

The third KPI concerns the progress made in delivering on the Innovation Union commitments where, as of 2012, 28 out of 33 commitments were on track or had been achieved.¹⁶ The target for the fourth indicator, on the EU contribution provided to SMEs through FP7, has been reached and exceeded.

Providing timely support to researchers and innovators is crucial, and it becomes even more important because of the increased emphasis on innovation and on support to Small and Medium-sized Enterprises (SMEs). The time taken to sign contracts ('Time-to-Grant' or 'TTG') is therefore an indicator of great importance in the field of R&I. It has decreased significantly over the FP7 period. Although the average TTG for the whole of FP7 so far is 354 days, the average TTG for grants signed in 2013 only is 249 days. The new Financial Regulation, which sets a maximum TTG of 270 days for calls launched as of 1 January 2013, did not apply to DG RTD in 2013.¹⁷ Nevertheless, 68% of grants signed in 2013 would have complied with this target.

Policy highlights of the year

In the context of the European Semester, 9 Member States out of the 13 proposed by DG RTD received country-specific recommendations in the field of R&I¹⁸. DG RTD is now participating in the 2014 exercise, which started with the adoption of the 2014 Annual Growth Survey (AGS)¹⁹ in November 2013.

The State of the Innovation Union report for 2012 was adopted²⁰. The report noted the progress that has been made so far. More than 80% of Innovation Union commitments were on track at the time of adoption and the importance of developing the ERA and of the implementation of Horizon 2020 were also noted.

The adoption of an indicator measuring innovation output²¹ delivered on an important commitment of the Innovation Union. The Conclusions of the October European Council noted that this should allow for a better monitoring of innovation in Europe.²² It should also serve as a methodologically-sound tool for the provision of data serving as a robust basis for policy-making in the coming years.

15 See *Taking stock of the Europe 2020 strategy for smart, sustainable and inclusive growth* (COM(2014) 130, 5.3.2014).

16 See *State of the Innovation Union 2012: Accelerating change* (COM (2013) 149, 21.3.2013).

17 The new Financial Regulation applies to calls launched on 2013 appropriations. DG RTD had published only one call in 2013 but the results were not known by the end of the year.

18 *2013 European Semester: Country-Specific Recommendations – Moving Europe Beyond The Crisis* (COM(2013) 350, 29.5.2013).

19 *Communication from the Commission: Annual Growth Survey 2014* (COM(2013) 800, 13.11.2013).

20 See footnote 10.

21 *Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions: Measuring innovation output in Europe: towards a new indicator* (COM(2013) 624, 13.9.2013).

22 doc. EUCO 169/13.

The ERA Progress Report 2013²³ and accompanying 'Facts & Figures'²⁴ were adopted. Apart from an annual assessment of progress in the development of the ERA, the 2013 report presents an overview of the political context and the steps taken and first achievements in the Member States and in a number of Associated Countries. It also provides a baseline for an in-depth assessment of progress on the ERA in 2014.

DG RTD led the negotiations leading to the adoption of the Horizon 2020 legislative package.²⁵ This allowed the first Horizon 2020 calls to be published on 11 December 2013.²⁶

The Commission presented the Innovation Investment Package consisting of proposals to renew or launch a number of P2Ps and PPPs. P2Ps contribute to the further development of the ERA by pooling and coordinating Member States' public funding while PPPs use public funding to leverage private funding and achieve critical mass to support industrial competitiveness through R&I. DG RTD is responsible for three of the proposed PPPs ('Article 185 initiatives')²⁷ and four of the proposed P2Ps (JTIs).²⁸

The implementation of FP7 continued. For those activities for which DG RTD is responsible²⁹, 2 052 proposals were received (following calls with deadlines in 2013), evaluations involving 1 837 experts were carried out, and 809 grant agreements, involving 10 345 participants for a total of €3 439 million in EU contributions, were signed.³⁰ Most of the targets for indicators directly related to the implementation of FP7 were set for achievement by 2013. Most of them have been achieved, indicating that the programme's performance has been up to standard. Further details can be found in the 'Policy achievements' section for each specific activity under 'Progress towards targets'.

Key conclusions on resource management and internal control effectiveness

In accordance with the governance statement of the European Commission, DG RTD conducts its operations in compliance with the applicable laws and regulations, working in an open and transparent manner and meeting the expected high level of professional and ethical standards.

The Commission has adopted a set of internal control standards, based on international good practice, aiming to ensure the achievement of policy and operational objectives. The Director-

23 'Report from the Commission to the Council and the European Parliament: European Research Area Progress Report 2013' (COM (2013) 637, 20.9.2013).

24 SWD(2013) 333.

25 The package includes:

- Regulation (EU) No 1291/2013 of the European Parliament and of the Council of 11 December 2013 establishing Horizon 2020 - the Framework Programme for Research and Innovation (2014-2020) and repealing Decision No 1982/2006/EC (OJ L 347, 20.12.2013, p. 104).
- Regulation (EU) No 1290/2013 of the European Parliament and of the Council of 11 December 2013 laying down the rules for participation and dissemination in 'Horizon 2020 - the Framework Programme for Research and Innovation (2014-2020)' and repealing Regulation (EC) No 1906/2006 Text with EEA relevance (OJ L 347, 20.12.2013, p. 81).
- 2013/743/EU: Council Decision of 3 December 2013 establishing the specific programme implementing Horizon 2020 - the Framework Programme for Research and Innovation (2014-2020) and repealing Decisions 2006/971/EC, 2006/972/EC, 2006/973/EC, 2006/974/EC and 2006/975/EC (OJ L 347, 20.12.2013, p. 965).
- Council Regulation (Euratom) No 1314/2013 of 16 December 2013 on the Research and Training Programme of the European Atomic Energy Community (2014-2018) complementing the Horizon 2020 Framework Programme for Research and Innovation (OJ L 347, 20.12.2013, p. 948).

26 Horizon 2020 - first calls (European Commission – MEMO/13/1122, 11/12/2013).

27 See footnote 6.

28 See footnote 7.

29 Excluding FP7 activities implemented by other entities and 'ABB activity: 08 20 Euratom – Fusion Energy'.

30 See Table 1 in Annex 10.

General has put in place the organisational structure and the internal control systems suited to the achievement of the policy and control objectives, in accordance with the standards and having due regard to the risks associated with the environment in which it operates.

DG RTD has assessed the effectiveness of its key internal control systems during the reporting year and has concluded that the internal control standards have been effectively implemented. However, to adapt to future challenges, DG RTD will take measures to further improve the efficiency of its internal control systems in the area of:

- staff mobility, in relation to the challenges of implementing Horizon 2020 through EAs and JUs, efficiently handling the legacy of FP7 and increasing the policy emphasis of the DG;
- processes, in relation to the challenge of ensuring harmonised processes for all research services for the Horizon 2020 programme; and
- management supervision – with respect to the supervision of external bodies.

In addition, DG RTD has systematically examined the available control results and indicators, including those related to the supervision of entities to which it has entrusted budget implementation tasks, as well as the observations and recommendations issued by internal auditors and the European Court of Auditors. These elements have been assessed to determine their impact on the management's assurance as regards the achievement of control objectives. Please refer to Part 2 and Part 3 for further details.

In conclusion, management has assurance that, overall, suitable controls are in place and are working as intended; risks are being appropriately monitored and mitigated; and necessary improvements and reinforcements are being implemented. The Director-General, in his capacity as Authorising Officer by Delegation, has signed the Declaration of Assurance, albeit qualified by a reservation concerning the legality and regularity of FP7 payments.

Information to the Commissioner

In 2013, the Commission rules governing the working relations between Commissioner Geoghegan-Quinn, her cabinet and the Directorate-General applied.³¹ These rules require reporting at least twice a year on internal control and the use of resources. In 2013, DG RTD and the two research EAs reported twice on the use of resources, audits, internal control and OLAF cases, and also on the 2012 AAR. The Commissioner is informed of any sensitive information, as well as any event of political significance related to financial management, internal control or audit.

Similar arrangements apply for Commissioner Oettinger for the energy research budget.

The main elements of this report and the Declaration of Assurance, including the reservations envisaged, have been brought to the attention of Commissioner Geoghegan-Quinn, responsible for Research, Innovation and Science and Commissioner Oettinger, responsible for Energy.

31 Annex 2 of the Communication from the President 'The Working Methods of the Commission'.

1. POLICY ACHIEVEMENTS

1.1 Achievement of general and specific objectives

Title XIX of the Treaty on the Functioning of the European Union (TFEU) deals with Research, Technological Development and Space. It sets out the objective that the EU strengthens its scientific and technological bases by achieving the ERA and encourages it to become more competitive, while promoting all the research activities deemed necessary by virtue of other Chapters of the Treaties.³²

Three general objectives were specified in DG RTD's 2013 Management Plan (MP) in line with the provisions of this Title and the Europe 2020 strategy.

NOTE: In the tables, the results for indicators where targets have been achieved are underlined.

³² Article 179 of the Treaty on the Functioning of the European Union.

1.1.1 Policy area: Research and Technological Development and Space (Title XIX TFEU) – Foster investment in research and the transition towards the knowledge-based economy in order to reinforce EU competitiveness

This General Objective implies a commitment to R&I expenditure, both public and private, the latter being encouraged through the development of appropriate policies.

Progress towards targets

There was a slight increase in the 'Gross Expenditure on R&D as a % of GDP' indicator, similar in scale to the increase between 2010 and 2011.³³ As discussed later, this indicator concerns both a public and a private sector component.³⁴

The trends for the indicators 'PCT patent applications per billion GDP' and 'Contribution of medium and high-tech manufactured goods to the trade balance' were on target.

Results for the Performance Indicators of the Policy Area: Research and Technological Development and Space (Title XIX of the Treaty on the Functioning of the European Union)		<input type="checkbox"/> Spending programme <input checked="" type="checkbox"/> Non-spending	
General Objective	Performance Indicator	Target (long-term)	Latest known result
Foster investment in research and the transition towards the knowledge-based economy in order to reinforce EU competitiveness	Gross Expenditure on R&D as a % of GDP (R&D intensity)	Unspecified 3.00%	As specified 2.06% (2012) ³⁵
	PCT patent applications per billion GDP (in PPS ³⁶)	Reduce difference with the USA	<u>Difference decreasing (2013)</u> ³⁷
	Contribution of medium and high-tech manufactured goods to the trade balance	Reduce difference with Japan	<u>Difference decreasing (2013)</u> ³⁸

33 It will be a challenge to meet the target by 2020. See footnote 15.

34 See also section 1.1.22 (ABB activity: 08 19 Capacities – Coherent Development of Research Policies).

35 Eurostat estimate for EU-28.

36 PPS: Purchasing Power Standards.

37 Decrease of 12% (Innovation Union Scoreboard 2013, section 3.2.1).

38 Marginal decrease (Innovation Union Scoreboard 2013, section 3.2.1).

1.1.2 Policy area: Research and Technological Development and Space (Title XIX TFEU) – Mobilise research to support other policies and tackle major societal challenges

This General Objective recognises the importance of deploying R&I in support of other policy areas in order to tackle societal challenges. Mobilisation and coordination efforts are key for making progress towards this objective and ensuring the biggest impact.

Progress towards targets

The lack of more recent data does not allow for an updated assessment of progress with respect to the two indicators.

Results for the Performance Indicators of the Policy Area: Research and Technological Development and Space (Title XIX of the Treaty on the Functioning of the European Union)		<input type="checkbox"/> Spending programme <input checked="" type="checkbox"/> Non-spending	
General Objective	Performance Indicator	Target (long-term) 2020	Latest known result 2009 ³⁹
Mobilise research to support other policies and tackle major societal challenges	PCT patent applications in health-related technologies per billion GDP (in PPS€)	0.70	0.54
	PCT patent applications in environment-related technologies per billion GDP (in PPS€)	0.70	0.41

39 See section 2 of DG RTD's 2013 Management Plan.

1.1.3 Policy area Research and Technological Development and Space (Title XIX TFEU) – Strengthen the knowledge base of the European Research Area (ERA) and improve research excellence through increased competition, pooling of resources and cross-border synergies

This General Objective recognises the importance of making progress towards the ERA by overcoming the fragmentation of the European research system through the removal of obstacles to mobility and cross-border cooperation and the reinforcement of coordination and the pooling of resources in the field of R&I.

Progress towards targets

The trend for 'EU scientific publications among the top 10% most cited publications, as a % of total EU scientific publications' is on target.

Results for the Performance Indicators of the Policy Area: Research and Technological Development and Space (Title XIX of the Treaty on the Functioning of the European Union)		<input type="checkbox"/> Spending programme <input checked="" type="checkbox"/> Non-spending	
General Objective	Performance Indicator	Target (long-term)	Latest known result As specified
Strengthen the knowledge base of the ERA and improve research excellence through increased competition, pooling of resources and cross-border synergies	EU scientific publications among the top 10% most cited publications, as a % of total EU scientific publications	Reduce difference with the USA	<u>Difference decreasing (2013)</u> ⁴⁰
	Public-private co-publications per million population	50 (2020)	41 (2010) ⁴¹

40 Decrease of 2% (Innovation Union Scoreboard 2013, section 3.2.1).

41 See section 2 of DG RTD's 2013 MP.

1.1.4 AWBL activity 04: Building an Innovation Union

In 2010, the Commission adopted Europe 2020, the EU's growth strategy until 2020, which intends to turn the EU into a smart, sustainable and inclusive economy.⁴² The Europe 2020 agenda includes a number of flagship initiatives, one of which is 'Innovation Union'. Through 33 actions, the Innovation Union will make the EU a world-class science performer, removing obstacles to innovation and changing the way the public and private sectors work together.

Progress towards targets

Two targets have already been achieved. The adoption of a new Regulation on unitary patent protection⁴³ is expected to facilitate patenting and to contribute significantly to improving results for the indicator related to the cost of an EU-28 patent. For most indicators, the targets are only expected to be achieved by 2020.

Results for the Performance Indicators of the ABB activity: AWBL 04 Building an Innovation Union		<input type="checkbox"/> Spending programme <input checked="" type="checkbox"/> Non-spending	
Specific Objective	Performance Indicator	Target (long-term)	Latest known result
Define and implement framework conditions to stimulate innovation demand and R&D investments across the Single Market	Venture capital (seed, start-up, later stage, growth capital rescue / turnaround capital replacement) as a % of EU GDP	0.20% (2020)	0.06% (2012) ⁴⁴
	Total cost of an EU-28 patent for SMEs (incl. maintaining costs for 20 years)	<€50 000 (2020)	€192 000 (2011)
	Average development time of EU standards	18 months (2020)	36 months (2010)
	Budgets for pre-commercial procurements and public procurements of innovative products	€10 billion/year (2020)	<€1 billion/year ⁴⁵
Address societal challenges through the integration of European efforts from research to the market	Number of European Innovation Partnerships (EIPs)	5 (2020)	<u>5 (2013)</u>
Support the improvement of national innovation systems through the review of their performance	Number of Member States peer reviewed in a given year	6 (2012)	<u>6 (2012)</u>
	Number of Member States having used the Innovation Union self-assessment tool to prepare/update their National Reform Programmes	At least half of the Member States (2013)	No longer relevant ⁴⁶
Main outputs for 2013	Commission Communication on the State of the Innovation Union 2012 – Accelerating change, presenting the new Europe 2020 headline innovation indicator	Delivered ⁴⁷	
	Commission proposals to renew all the existing PPPs (Art. 187 TFEU), in the pharmaceutical, energy, aeronautics, electronics ⁴⁸ and air traffic management ⁴⁹ sectors	Delivered ⁵⁰	

42 Communication from the Commission: Europe 2020 – A strategy for smart, sustainable and inclusive growth (COM(2010) 2020, 3.3.2010).

43 Regulation (EU) No 1257/2012 of the European Parliament and of the Council of 17 December 2012 implementing enhanced cooperation in the area of the creation of unitary patent protection (OJ L 361, 31.12.2012, p. 1).

44 Source: Eurostat. Croatia, Cyprus, Estonia, Latvia, Lithuania, Malta, Slovakia and Slovenia are not included.

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

46 Member States agreed to change the tool used.

47 Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions: State of the Innovation Union 2012 - Accelerating change (COM(2013) 149, 21.03.2013).

48 Initiative led by the Directorate-General for Communications Networks, Content and Technology of the European Commission (DG C-NECT).

49 Initiative led by the Directorate-General for Mobility and Transport of the European Commission DG MOVE.

50 See sections 1.1.6 ('ABB activity: 08 02 Cooperation – Health'), 1.1.9 ('ABB activity: 08 05 Cooperation – Energy') and 1.1.11

	Commission proposal to create a new PPP (Art. 187 TFEU) in the sector of biobased industries	Delivered ⁵¹
	Commission Report on the State of the Innovation Union 2013	Withdrawn ⁵²
	Commission Staff Working Paper: Research and Innovation performance in European countries 2013	Delivered ⁵³
	Innovation Union Competitiveness Report 2013	Delivered ⁵⁴

Policy and Main implementation activities

The 2013 Innovation Union Competitiveness report, published in November 2013, provides an in-depth statistical and economic analysis, covering the main features of an efficient research and innovation system.

In the coming years, additional support to policy-makers will also be provided through the innovation indicator adopted in the Communication⁵⁵ of 13 September 2013. It will help establish new actions, or reinforce existing ones, to remove bottlenecks that prevent innovators from translating ideas into products and services that can be successful on the market. The proposed indicator is based on four components chosen for their policy relevance: technological innovation as measured by patents, employment in knowledge-intensive activities as a percentage of total employment, competitiveness of knowledge-intensive goods and services, and employment in fast-growing firms of innovative sectors.

As part of the European Semester, 9 Member States out of the 13 proposed by DG RTD received country-specific recommendations in the field of R&I.⁵⁶ DG RTD's contribution to the 2014 AGS was well reflected in the adopted text of the 2014 AGS⁵⁷ through an increased focus on the protection and promotion of public R&D funding and the reinforcement of structural ERA reforms to increase the efficiency of public research systems.

DG RTD prepared the agenda point related to research and innovation for the October 2013 European Council, highlighting in particular the link between investments in research and economic performance.

Three high-level groups advise the Commission on R&I policies in particular on the Innovation Union and the completion of the ERA. These are the European Research and Innovation Area Board (ERIAB), Innovation for Growth (i4g) and the European Forum on Forward Looking Activities (EFFLA).

In 2013 the ERIAB issued a policy brief on the qualitative and quantitative dimensions of the impact of financial crisis on R&I policies. Other policy briefs were issued on the knowledge divide between EU Member States and on the need for innovation in new business models. The i4g group, which analyses R&I policies as an economic think-tank, organised and co-organised a number of workshops, including innovation in Mediterranean Member States, inclusive growth and global value chains. The EFFLA provided a foresight framework for DG RTD's strategic

('ABB activity: 08 07 Cooperation – Transport').

51 Proposal for a Council Regulation on the Bio-Based Industries Joint Undertaking (COM(2013) 496, 10.7.2013).

52 The withdrawal of this initiative followed the decision to adopt a planned Communication *Research and innovation as new sources of growth* in 2014. See Annex II to the Commission Work Programme for 2014 (COM(2013) 739).

53 *Commission Staff Working Document: Research and Innovation performance in EU Member States and Associated Countries – Innovation Union progress at country level* (SWD(2013) 75, 21.03.2013).

54 *Commission Staff Working Document: Innovation Union Competitiveness Report* (2013 edition) (SWD(2013) 505, 02.12.2013).

55 *Measuring innovation output: Towards a new indicator*, COM(2013) 624, 13.9.2013.

56 See footnote 18. See also table 1 of Annex I of COM(2012) 299.

57 See footnote 19.

programming work. If this framework would be implemented, it would represent a major new impulse for Foresight in Research and Innovation policy-making for the EU.

The new strategy for European Technology Platforms (ETPs)⁵⁸ seeks to maximise the impact of the ETPs while addressing weaknesses and opportunities identified in earlier external and internal reviews. A list of 38 recognised ETPs has been prepared for the launch of Horizon 2020.

Evaluations and Studies

Several important studies examining innovation were published. These included the '2013 EU Industrial R&D Investment Scoreboard', the 'Co-development of Science and Technology at a National Level and the Use of European Funding Instruments', 'Europe's competitive technology profile in the globalised knowledge economy' and 'Internationalisation of business investments in R&D and analysis of their economic impact'.⁵⁹

58 Strategy for European Technology Platforms: ETP 2020 (SWD(2013) 272, 12.07.2013).

59 http://ec.europa.eu/research/innovation-union/index_en.cfm?pg=other-studies.

1.1.5 AWBL activity 03: European Research Area Development

In 2012, the European Council renewed its call for the ERA to be completed by the end of 2014 as an important and integral commitment of the Innovation Union. In fulfilling this commitment, the Commission chose to deepen the benefits of the Partnership approach with Member States, associated countries and stakeholders that was launched in 2008.

Progress towards targets

Substantial progress has been made on a number of targets related to reinforced transnational coordination and competition, building an open labour market for researchers and improving the circulation, access to and transfer of scientific knowledge. It will be difficult to achieve the 3% GDP target of expenditure on R&D (see section 'Policy highlights of the year') and the 1% GDP target for R&D public expenditure by 2020. For most other targets, there is still substantial time, often until 2020, to achieve them.

Results for the Performance Indicators of the ABB activity: AWBL 03 European Research Area Development		<input type="checkbox"/> Spending programme <input checked="" type="checkbox"/> Non-spending	
Specific Objective	Performance Indicator	Target (long-term) (as specified)	Latest known result
Improve the effectiveness of national research systems	Public expenditure on R&D as a % of GDP	1.00% (2020)	0.75% (2012) ⁶⁰
	Amount of Structural funds allocated to core RTDI as % of total Structural funds	20.0% (2015)	14.4 (2011)
	Number of EU universities with Average of Relative Citations (ARC) ⁶¹ > 1.6 ⁶²	45 (2013)	43 (2008)
Reinforce transnational cooperation and competition	Number of national roadmaps defining priorities for jointly setting-up European Research Infrastructures (RIs)	28 (2013)	18 (2013)
	Number of RIs of world class relevance operated jointly at EU level (built or under implementation)	28 ESFRI ⁶³ 1 non-ESFRI 7 EIROforum RIs Total: 35 (2013)	28 ESFRI 2 non-ESFRI 7 EIROforum RIs Total: 37 (2013) ⁶⁴
	Number of Joint Programming Initiatives (JPI)	6 (2013)	10 (2013)
	Number of preparatory actions for coordination of international S&T cooperation programmes ⁶⁵	4 (2013)	4 (2013)
	International scientific co-publications (EU/third countries) per million population	Reduce difference with the USA (2013)	Difference decreasing (2013) ⁶⁶
	Share of EU scientific publications with co-authors from at least two EU Member States ⁶⁷	20% (2020)	14.3% (2011)

60 Eurostat estimate for EU-28.

61 The citation window includes the publication year and the three following years.

62 This indicator had to be amended (from the previous 'Number of EU universities with Citation Impact Score > 1.3') due to a change of methodology.

63 ESFRI: European Strategy Forum for Research Infrastructures.

64 These figures do not necessarily refer to operational RIs.

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

66 Decrease of 2% (Innovation Union Scoreboard 2013, section 3.2.1).

67 Refers to EU-27.

Build an open labour market for researchers	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 (2013)	<u>100% of Member States</u> <u>67% of Associated Countries</u> (2013)
	Number of unique visitors to EURAXESS-In Motion Portal	100 000 unique visitors/month (2013)	80 000 (2013)
	Number of pages views on EURAXESS-In Motion	700 000 page views (2013)	<u>800 000 (2013)</u>
	Number of countries involved in EURAXESS-Link (Abroad)	7 (2013)	<u>8 (2013)</u>
Promote gender equality and gender mainstreaming in research	Percentage of women researchers in the higher education sector and in public research institutions	45% (2020)	41.0% (2011)
	Percentage of A-grade (the highest grade at which research is normally conducted) female academic staff	30% (2020)	20.0% (2010)
	Percentage of female heads of institutions in the higher education sector	25% (2020)	15.5% (2010)
Improve circulation, access to and transfer of scientific knowledge	Number of Member States and Associated Countries having taken and reported actions to improve knowledge transfer between public research organisations and industry	27 Member States 12 Associated Countries (2012)	<u>27 Member States</u> <u>9 Associated Countries</u> (2012)
	Share of licence revenue from abroad ⁶⁸ as a % of GDP	Reduce difference with the USA	<u>Difference decreasing (2013)</u> ⁶⁹
Main outputs for 2013	Commission proposals to renew four existing P2P Partnerships (Art. 185 TFEU) in Health, SMEs, ICT70 and the cross-cutting initiative European Metrology Programme for Innovation and Research (EMPIR)	Delivered ⁷¹	
	Assessment of the ERA State of Play	Delivered ⁷²	
	EC Recommendation to Member States on Structural changes in universities and research institutions to promote gender equality	Withdrawn ⁷³	
	EC Recommendation to Member States on Responsible Research and Innovation	Withdrawn ⁷⁴	

Policy and Main implementation activities

The ERA Progress Report 2013⁷⁵ and the accompanying document 'Facts & Figures'⁷⁶ were adopted. Apart from an annual assessment of progress in the development of the ERA, the 2013 report presents an overview of the steps taken and first achievements in the Member States

68 "Abroad" here means outside EU-28.

69 Decrease of 9% (Innovation Union Scoreboard 2013, section 3.2.1).

70 Initiative led by DG C-NECT.

71 *Proposal for a Decision of the European Parliament and of the Council on the participation of the Union in a European Metrology Programme for Innovation and Research jointly undertaken by several Member States* (COM(2013) 497, 10.07.2013). For the Health and SME initiatives see sections 'ABB activity: 08 02 Cooperation – Health' and 'ABB activity: 08 13 Capacities – Research for the benefit of SMEs', respectively.

72 See footnote 23.

73 This proposal was withdrawn and, instead, a Commission Communication on science, innovation and society is planned to be adopted in 2014.

74 See footnote 73 idem.

75 *Report from the Commission to the Council and the European Parliament: European Research Area Progress Report 2013* (COM (2013) 637, 20.9.2013).

76 SWD(2013) 333.

and in a number of Associated Countries. It also provides a baseline for an in-depth assessment of progress on the ERA in 2014.

EURAXESS, an initiative providing access to information and support services to researchers wishing to pursue their research careers in Europe, held its biennial conference in April in Croatia. The conference discussed how to make the ERA more attractive for international researchers. A study held during 2013 on EURAXESS shows that awareness of the service, coordination and involvement by stakeholders has increased over the year. The study also noted the positive impact the service has had on the networking of European researchers in the US, Japan and China.

The Conference of European Schools for Advanced Engineering Education and Research (CESAER) joined the five-member ERA Stakeholder Platform.⁷⁷ During a meeting in December, the member organisations and the Commission signed a Joint Declaration that restates the political support for the partnership and continues the cooperation in line with the commitments taken.

The Commission continued to support COST (European Cooperation on Science and Technology), an inter-governmental research network. In 2013, support amounted to €43.4 million. Activities notably focused on widening participation from new Member States and neighbouring countries.

Four new research infrastructures were awarded a European Research Infrastructure Consortium (ERIC)⁷⁸. Two Joint Programming Initiatives (JPIs) adopted a Strategic Research Agenda, bringing the total to 6 out of 10 JPIs. It is estimated that JPIs will have invested some €200 million of national resources by 2015.

Workplans covering the period 2014-2015 to implement the Memoranda of Understanding with the European Molecular Biology Laboratory (EMBL) and with the European Organization for Nuclear Research (CERN) were prepared and agreed. A third workplan is under preparation with the European Intergovernmental Research Organisations Forum (EIROforum).

77 The other members of the ERA Stakeholder Platform are the European Association of Research and Technological Organisations (EARTO), the European University Association (EUA), the League of European Research Universities (LERU), NordForsk and Science Europe.

78 See section 1.1.15 (ABB activity: 08 12 Capacities – Research Infrastructures).

1.1.6 ABB activity: 08 02 Cooperation – Health

Health-related activities contribute towards improving European and global health and the competitiveness of European health-related industries and businesses. It contributes in particular to the Europe 2020 flagship initiatives 'Innovation Union' and 'Industrial Policy for the Globalisation Era' and the development of the EU's health and consumer protection policies.

Progress towards targets

Most targets for this activity set for 2013 were achieved. The 2018 targets related to HIV/AIDS, malaria and tuberculosis are likely to be achieved provided that the Commission's proposal for a renewal of the European and Developing Countries Clinical Trials Partnership (EDCTP)⁷⁹ is adopted.

Considerable progress was made on the indicator 'Coverage of topics published in the Work Programmes' with almost all topics being covered.⁸⁰

The result obtained for the indicator on 'Projects that achieved all of their objectives' reflects the fact that research is an inherently risky venture requiring public support. The focus may shift over the lifetime of a multi-annual project; although, as 97% of projects achieved most of their objectives, these changes are not major and do not diminish the scientific value and impact of the results.⁸¹

Results for the Performance Indicators of the ABB activity: 08 02 Cooperation – Health		<input checked="" type="checkbox"/> Spending programme <input type="checkbox"/> Non-spending	
Specific Objective	Performance Indicator	Target (long-term) (as specified)	Latest known result (Nov. 2013)
Enhance the generation of new knowledge in all top priority areas in 'Health' with practical relevance at EU level	Coverage of topics published in the Work Programmes ⁸²	100% (2013)	97%
	Projects that achieved all or most of their objectives ...	90% (2013)	<u>97%</u>
	... of which projects that achieved all of their objectives	75% (2013)	43%
Promote the use and dissemination of research results in the area of 'Health'	Share of EU financial contribution to Industry ⁸³	18% (2013)	<u>20.7%</u>
	Projects with at least one industrial participant ⁸⁴	70% (2013)	<u>77.1%</u>
	Share of EU financial contribution to SMEs	15% (2013) ⁸⁵	<u>18.2%</u>
	Projects with at least one SME participant	60% (2013)	<u>72.3%</u>
	Projects which generate patent applications or other types of intellectual property	20% (2013)	<u>33%</u>
	Average number of publications in peer reviewed journals per project	4 (2013)	<u>38</u>

79 Proposal for a Decision of the European Parliament and of the Council on the participation of the Union in a second European and Developing Countries Clinical Trials Partnership Programme jointly undertaken by several Member States (COM(2013) 498, 10.7.2013).

80 This was the case for all Cooperation SP activities except for 08 04 Cooperation – Nanosciences, Nanotechnologies, Materials and New Production Technologies – NMP.

81 This is common to all Cooperation Specific Programme (SP) activities. The same indicator is also used for activity '08 21 Euratom – Nuclear Fission and Radiation Protection'. (see section 1.1.24).

82 This indicator covers the topics published in the annual calls for proposals launched under the Cooperation SP.

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

84 See also footnote 83.

85 The 15% target refers to the entire Cooperation Specific Programme of FP7 as required in Annex I.1 of Decision 1982/2006/EC establishing FP7. It is not a target for each individual activity under this Specific Programme.

Improve, via new types of Partnerships, research at EU and international levels regarding the drug development process and the fight against major diseases	Number of field tests of vaccines and drugs against HIV/AIDS, malaria and tuberculosis (EDCTP)	HIV/AIDS: 60 Malaria: 40 Tuberculosis: 40 Total: 140 (2018)	HIV/AIDS: 31 Malaria: 34 Tuberculosis: 28 Total: 93
Main outputs for 2013	Commission proposal to renew the Art. 185 TFEU EDCTP	Delivered ⁸⁶	
	Commission proposal Art. 187 TFEU IMI	Delivered ⁸⁷	

Policy and Main implementation activities

Preparations for the EU's participation in a second EDCTP programme (EDCTP2, 2014-2024) culminated in the adoption of the Commission's proposal for EDCTP2 on 10 July and in African countries providing significant political and financial commitments at the high-level meeting on 21 October in Dakar, Senegal.

The Commission adopted a legislative proposal for renewing IMI as 'IMI2' as part of the 'Innovation Investment Package'. Examination by and negotiation with the Council took place in the second half of 2013, leading to a general approach on 3 December. Final adoption is foreseen for April 2014 by the Parliament and for May 2014 by the Council.

The Neurodegenerative Diseases JPI continued its 2012-14 implementation plan by establishing and aligning national strategies on neurodegenerative diseases (8 already established, 8 more in discussion or preparation) and by publishing a €23 million joint transnational call on 'Cross-disease analysis of pathways related to neurodegenerative diseases' and 'Pilot studies on preventive strategies related to neurodegenerative diseases'.

The contractual PPP, SEURAT-1, is now developing proof-of-concept studies to convert results of its research programme into new, non-animal, integrated testing strategies for human safety assessment. Its 2013 report has recently been published.

The European Month of the Brain was held in May to raise awareness on brain research and health care issues. Two conferences led to a set of ten key recommendations proposed by stakeholders.⁸⁸

An inter-governmental conference was held in June to outline an indicative scientific and financial framework (2014-2016) for the Human Frontier Science Program (HFSP).⁸⁹

In view of the greater importance to be given to the award of prizes under Horizon 2020, 12 completed applications were received for the Inducement Prize for Vaccines that had been launched in 2012. The prize was awarded at the March 2014 Innovation Convention.

⁸⁶ See footnote 79.

⁸⁷ Proposal for a Council Regulation on the Innovative Medicines Initiative 2 Joint Undertaking (COM(2013) 495, 10.7.2013).

⁸⁸ http://ec.europa.eu/research/conferences/2013/brain-month/index_en.cfm

⁸⁹ http://www.hfsp.org/sites/www.hfsp.org/files/webfm/Executive/Draft%20Joint%20Communique_IGC%2011%20June%20%282%29.pdf

1.1.7 ABB activity: 08 03 Cooperation – Food, Agriculture and Fisheries and Biotechnology

This activity contributes to building a sustainable and competitive bio-based economy in Europe, making contributions to the Europe 2020 flagship initiatives 'Innovation Union' and 'Resource Efficient Europe'. It also supports development of EU policies in these sectors, including agriculture and forestry, aquatic resources, bio-based industries and biotechnology.

Progress towards targets

Most of the targets were achieved or surpassed (sometimes significantly so) or were close to being achieved.⁹⁰ The result for the indicator 'Percentage of projects with publications in peer reviewed journals', which is related to the dissemination of results, was particularly positive.

Results for the Performance Indicators of the ABB activity: 08 03 Cooperation – Food, Agriculture and Fisheries and Biotechnology		<input checked="" type="checkbox"/> Spending programme <input type="checkbox"/> Non-spending	
Specific Objective	Performance Indicator	Target (long-term) (2013)	Latest known result (Nov. 2013)
Enhance the generation of new knowledge in all top priority areas in 'Food, Agriculture and Fisheries and Biotechnology' with practical relevance at EU level	Coverage of topics published in the Work Programmes ⁹¹	100%	97%
	Projects that achieved all or most of their objectives ...	90%	98%
	... of which projects that achieved all of their objectives	75%	41%
Promote the use and dissemination of research results in the area of 'Food, Agriculture and Fisheries and Biotechnology'	Share of EU financial contribution to Industry ⁹²	10%	17.3%
	Projects with at least one industrial participant ⁹³	70%	77.2%
	Share of EU financial contribution to SMEs	15% ⁹⁴	15.9%
	Projects with at least one SME participant	70%	75.2%
	Projects which generate patent applications or other types of intellectual property	40%	30%
	Percentage of projects with publications in peer reviewed journals	55%	96%
Main outputs for 2013	Commission proposal to establish a new PPP on Bio-based industries	Delivered ⁹⁵	

Policy and Main implementation activities

The Commission adopted a legislative proposal on the establishment of a 'bio-based industries' JU as part of the 'Innovation Investment Package'. Examination by and negotiation with the Council took place in the second half of 2013, leading to a general approach on 3 December. Final adoption is foreseen for April 2014 by the Parliament and for May 2014 by the Council.

A 3-year project with the Joint Research Centre (JRC), which will lead to the establishment of a Bioeconomy Observatory, was launched in March. Activities so far have included a stakeholders' conference and the launch of a Bioeconomy expert panel.

On an international level, the first EU-China flagship initiative for research and innovation on

⁹⁰ See also discussion of indicator results for 'ABB activity: 08 02 Cooperation – Health' (section 1.1.6).

⁹¹ See footnote 82.

⁹² See footnote 83.

⁹³ See footnote 83.

⁹⁴ See footnote 85.

⁹⁵ See footnote 51.

food, agriculture and biotechnology was launched at the summit of 21 November. A Transatlantic Research Alliance was entered into with the US and Canada, launched through the Galway Statement on Atlantic Ocean Cooperation.

1.1.8 ABB activity: 08 04 Cooperation – Nanosciences, Nanotechnologies, Materials and New Production Technologies – NMP

The Nanosciences, Nanotechnologies, Materials and New Production Technologies (NMP) activity aims to transform European industry from a resource- to a knowledge-intensive industry, incorporating knowledge into products with higher added-value and more efficient processes and covering the entire range of industrial research activities. It makes major contributions to the Europe 2020 flagship initiatives 'Innovation Union' and 'Industrial Policy for the Globalisation Era'. It also contributes to the 'Raw Materials' European Innovation Partnership (EIP), while a part of its activities is guided by the strategy for Key Enabling Technologies. It also supports the development of EU policies in these sectors.

Progress towards targets

Most of the targets were achieved or surpassed.⁹⁶ The targets for 'Share of EU financial contribution to Industry' and 'Projects with at least one industrial participant' were close to being achieved. In addition, a further examination of projects shows that the percentage of industrial participants is 45%, indicating a strong interest from industry.

Results for the Performance Indicators of the ABB activity: 08 04 Nanosciences, Nanotechnologies, Materials and New Production Technologies – NMP		<input checked="" type="checkbox"/> Spending programme <input type="checkbox"/> Non-spending	
Specific Objective	Performance Indicator	Target (long-term) (2013)	Latest known result (Nov. 2013)
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	Coverage of topics published in the Work Programmes ⁹⁷	100%	<u>100%</u>
	Projects that achieved all or most of their objectives ...	90%	<u>95%</u>
	... of which projects that achieved all of their objectives	75%	38%
Promote the use and dissemination of research results in the area of 'Nanosciences, Nanotechnologies, Materials and New Production Technologies'	Share of EU financial contribution to Industry ⁹⁸	40%	36.8%
	Projects with at least one industrial participant ⁹⁹	95%	93.6%
	Share of EU financial contribution to SMEs	15% ¹⁰⁰	<u>23.6%</u>
	Projects with at least one SME participant	85%	<u>86.2%</u>
	Projects which generate patent applications or other types of intellectual property	40-50%	<u>49%</u>
	Average number of publications in peer reviewed journals per project	5	<u>23</u>

Policy and Main implementation activities

Two contractual PPPs (cPPPs) are being implemented under this activity as part of the European Economic Recovery Plan (EERP): the Energy-Efficient Buildings cPPP and the Factories of the Future cPPP. The basis for a Sustainable Process Industry cPPP (SPIRE) was established and the industry's proposals for the establishment of cPPPs under Horizon 2020 were evaluated.

⁹⁶ See also discussion of indicator results in section 1.1.6 ('ABB activity: 08 02 Cooperation – Health').

⁹⁷ See footnote 82.

⁹⁸ See footnote 83.

⁹⁹ See footnote 83.

¹⁰⁰ See footnote 85.

In addition, together with DG C-NECT, arrangements were defined for the establishment of eight cPPPs to be launched at the beginning of Horizon 2020. Links with the relevant European Technology Platforms were renewed to re-orient their activities towards Horizon 2020.

The Commission hosted the Third Conference on Trilateral cooperation on critical materials between the EU, the US and Japan in May 2013.

A new strategy on nanosafety was adopted including elements such as hazards of exposure and risk assessment, which were covered for the first time with the aim of filling all knowledge gaps identified.

The Nanomedicine Platform focusing on Health and Medicine has published its White Paper on Nanomedicine that outlines a roadmap for translational nanomedicine R&I. The umbrella platform 'NANO futures' has received assistance to continue in-depth work on value chain creation with nanotechnologies and the support of new businesses.

1.1.9 ABB activity: 08 05 Cooperation – Energy

The main goals of this activity are to achieve greater energy security, the decarbonisation of energy systems and the increased competitiveness of the European energy industries. The Strategic Energy Technology Plan ('SET-Plan'), implemented under this activity, supports EU energy and climate policy (such as Energy 2020) and contributes to the Europe 2020 Flagship Initiatives 'Innovation Union', 'Resource Efficient 'Europe' and 'Industrial Policy for the Globalisation Era'.

Progress towards targets

Most targets were achieved or exceeded (sometimes substantially so).¹⁰¹ The result for 'Percentage of projects with publications in peer reviewed journals' was particularly strong.

Results for the Performance Indicators of the ABB activity: 08 05 Cooperation – Energy		<input checked="" type="checkbox"/> Spending programme <input type="checkbox"/> Non-spending	
Specific Objective	Performance Indicator	Target (long-term) (2013)	Latest known result (Nov. 2013)
Enhance the generation of new knowledge in all top priority areas in 'Energy' with practical relevance at EU level	Coverage of topics published in the Work Programmes ¹⁰²	100%	92%
	Projects that achieved all or most of their objectives ...	90%	<u>95%</u>
	... of which projects that achieved all of their objectives	75%	31%
Promote the use and dissemination of research results in the area of 'Energy'	Share of EU financial contribution to Industry ¹⁰³	40%	<u>47.7%</u>
	Projects with at least one industrial participant ¹⁰⁴	95%	<u>95.8%</u>
	Share of EU financial contribution to SMEs	15% ¹⁰⁵	<u>18.3%</u>
	Projects with at least one SME participant	80%	<u>83.7%</u>
	Projects which generate patent applications or other types of intellectual property	30%	<u>43%</u>
	Percentage of projects with publications in peer reviewed journals	55%	<u>85%</u>
Main outputs for 2013	Commission proposal to renew the PPP FCH	Delivered ¹⁰⁶	

Policy and Main implementation activities

The Commission adopted a legislative proposal on the renewal of the European Fuel Cell and Hydrogen Technology (FCH) Platform JU, as 'FCH 2', as part of the 'Innovation Investment Package'. The examination by and negotiation with the Council took place in the second half of 2013, leading to a general approach on 3 December. Final adoption is foreseen for April 2014 by the Parliament and for May 2014 by the Council.

101 See also discussion of indicator results in section 1.1.6 ('ABB activity: 08 02 Cooperation – Health').

102 See footnote 82.

103 See footnote 83.

104 See footnote 83.

105 See footnote 85.

106 *Proposal for a Council Regulation on the Fuel Cells and Hydrogen 2 Joint Undertaking* (COM(2013) 506, 10.7.2013).

DG RTD participated in the preparation of a Communication on Energy Technologies and Innovation.¹⁰⁷

¹⁰⁷ Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions: Energy Technologies and Innovation (COM(2013) 253, 2.5.2013).

1.1.10 ABB activity: 08 06 Cooperation – Environment (including climate change)

This activity supports the research community in pursuit of goals to improve the European and global environment, the development of environmental and climate policies and the competitiveness of European environment-related industries and businesses. It contributes to the Europe 2020 Flagship Initiatives 'Innovation Union' and 'Resource Efficient Europe', to a climate policy that supports a competitive low-carbon economy by 2050 and to the environmental policy based on the Commission proposal for a new Environment Action Programme.

Progress towards targets

Most targets were achieved, exceeded or quite close to being achieved.¹⁰⁸

Results for the Performance Indicators of the ABB activity: 08 06 Cooperation – Environment (including climate change)		<input checked="" type="checkbox"/> Spending programme <input type="checkbox"/> Non-spending	
Specific Objective	Performance Indicator	Target (long-term) (2013)	Latest known result (Nov. 2013)
Enhance the generation of new knowledge in all top priority areas in 'Environment (including climate change)' with practical relevance at EU level	Coverage of topics published in the Work Programmes ¹⁰⁹	100%	91.6%
	Projects that achieved all or most of their objectives ...	90%	98.5%
	... of which projects that achieved all of their objectives	75%	52%
Promote the use and dissemination of research results in the area of 'Environment (including climate change)'	Share of EU financial contribution to Industry ¹¹⁰	10%	14.2%
	Projects with at least one industrial participant ¹¹¹	65%	70.9%
	Share of EU financial contribution to SMEs	15% ¹¹²	13.6%
	Projects with at least one SME participant	65%	72.7%
	Projects which generate patent applications or other types of intellectual property	15%	18%
	Percentage of projects with publications in peer reviewed journals	90%	94%

Policy and Main implementation activities

Through this activity, support was given for the preparation of the Fifth Intergovernmental Panel on Climate Change (IPCC) report. An International Conference on Regional Climate was also organised, which included the presentation of the 5th IPCC report. Preparatory work was undertaken for the Group on Earth Observations (GEO) Ministerial Summit and the post-2015 approach.

A pilot test was carried out on the implementation of the Horizon 2020 'Rio Marker' indicators on sustainability and environment. The FP7 VOICES project gathered opinions and ideas about urban waste from citizens across the EU which will be used for priority setting in the first calls for proposals under the 'Waste' Focus Area of Horizon 2020 work programme for 2014-15.

¹⁰⁸ See also discussion of indicator results in section 1.1.6 ('ABB activity: 08 02 Cooperation – Health').

¹⁰⁹ See footnote 82.

¹¹⁰ See footnote 83.

¹¹¹ See footnote 83.

¹¹² See footnote 85.

1.1.11 ABB activity: 08 07 Cooperation – Transport (including aeronautics)

Transport research aims at developing greener, safer and smarter trans-European transport systems that will benefit all citizens, while reducing environmental impact and increasing the competitiveness of European industries in the global market. It contributes in particular to the Europe 2020 Flagship Initiatives 'Innovation Union', 'Resource Efficient Europe' and 'Industrial Policy for the Globalisation Era'. It also supports the development of EU policies on transport.

Progress towards targets

Almost all targets were achieved or substantially exceeded.¹¹³

Results for the Performance Indicators of the ABB activity: 08 07 Cooperation – Transport (including aeronautics)		<input checked="" type="checkbox"/> Spending programme <input type="checkbox"/> Non-spending	
Specific Objective	Performance Indicator	Target (long-term) (2013)	Latest known result (Nov. 2013)
Enhance the generation of new knowledge in all top priority areas in 'Transport (including aeronautics)' with practical relevance at EU level	Coverage of topics published in the Work Programmes ¹¹⁴	100%	90%
	Projects that achieved all or most of their objectives ...	90%	<u>98%</u>
	... of which projects that achieved all of their objectives	75%	55%
Promote the use and dissemination of research results in the area of 'Transport (including aeronautics)'	Share of EU financial contribution to Industry ¹¹⁵	20%	<u>49.7%</u>
	Projects with at least one industrial participant ¹¹⁶	95%	<u>95.3%</u>
	Share of EU financial contribution to SMEs	15% ¹¹⁷	<u>18.3%</u>
	Projects with at least one SME participant	85%	<u>85%</u>
	Projects which generate patent applications or other types of intellectual property	10%	<u>16%</u>
	Percentage of projects with publications in peer reviewed journals	20%	<u>72%</u>
Main outputs for 2013	Commission proposal to renew the PPP Clean Sky	Delivered ¹¹⁸	

Policy and Main implementation activities

The Commission adopted a legislative proposal on the renewal of the current Clean Sky JTI as 'Clean Sky 2' as part of the 'Innovation Investment Package'. The examination by and negotiation with the Council took place in the second half of 2013, leading to a general approach on 3 December. Final adoption is foreseen for April 2014 by the Parliament and for May 2014 by the Council.

The Green Car Initiative cPPP is being implemented under this activity.

Good progress has also been registered for projects funded under the ERA-Net and ERA-Net Plus schemes. Nineteen research projects have been retained for funding through

¹¹³ See also discussion of indicator results in section 1.1.6 ('ABB activity: 08 02 Cooperation – Health').

¹¹⁴ See footnote 82.

¹¹⁵ See footnote 83.

¹¹⁶ See footnote 83.

¹¹⁷ See footnote 85.

¹¹⁸ Proposal for a Council Regulation on the Clean Sky 2 Joint Undertaking (COM(2013) 505, 10.7.2013).

Electromobility+, one of the largest ERA-Net Plus projects. The first Flagship Call 'Future Travelling', issued under ERA-Net Transport III, closed in November 2013, with 21 proposals submitted while one proposal was retained for funding under the call for the ERA-Net Plus on 'Advanced systems, materials and techniques for next generation infrastructure'.

An Implementing Arrangement was signed in February between the Commission and the US Government for activities aiming to advance cooperation in research, development, technology and innovation in all modes of transport, including multi-modal activities.

A coordinated aeronautics call was launched, boosting the participation of Russian partners in four EU-funded international cooperation projects.

1.1.12 ABB activity: 08 08 Cooperation – Socio-Economic Sciences and the Humanities

Research in this area provides policymakers with cross-cutting, evidence-based scientific analysis to identify the societal challenges that the ERA should address. Thanks to its cross-cutting nature, it contributes in particular to the Europe 2020 Flagship Initiatives 'Innovation Union', 'Agenda for New Skills and Jobs' and 'European Platform against Poverty and Social Exclusion'.

Progress towards targets

Most targets were achieved, exceeded or close to being achieved.¹¹⁹

Results for the Performance Indicators of the ABB activity: 08 08 Cooperation – Socio-Economic Sciences and the Humanities		<input checked="" type="checkbox"/> Spending programme <input type="checkbox"/> Non-spending	
Specific Objective	Performance Indicator	Target (long-term) (2013)	Latest known result (Nov. 2013)
Enhance the generation of new knowledge in all top priority areas in 'Socio-Economic Sciences and the Humanities' with practical relevance at EU level	Coverage of topics published in the Work Programmes ¹²⁰	100%	99%
	Projects that achieved all or most of their objectives ...	90%	<u>99%</u>
	... of which projects that achieved all of their objectives	75%	66%
Promote the use and dissemination of research results in the area of 'Socio-Economic Sciences and the Humanities'	Share of EU financial contribution to Industry ¹²¹	3%	<u>4.1%</u>
	Projects with at least one industrial participant ¹²²	30%	<u>33%</u>
	Share of EU financial contribution to SMEs	15% ¹²³	5.1%
	Projects with at least one SME participant	30%	<u>32.5%</u>
	Percentage of projects with publications in peer reviewed journals	20%	<u>79%</u>
Disseminate the results coming from 'Socio-Economic Sciences and the Humanities'-funded projects, including foresight projects, to policy-makers	Projects producing specific outputs disseminated to policy-makers	75%	<u>95%</u>

Policy and Main implementation activities

A Trans-Atlantic Platform (TA-P) was launched in October, bringing together key 'Humanities and Social Sciences' funders in Europe and the Americas.

On the occasion of the European Year of Citizens, the Socio-Economic Sciences and the Humanities (SSH) programme co-organised the conference 'Citizenship in the European Union: Twenty years after Maastricht' in Budapest in June.

119 See also discussion of indicator results for 'ABB activity: 08 02 Cooperation – Health' (section 1.1.6).

120 See footnote 82.

121 See footnote 83.

122 See footnote 83.

123 See footnote 85.

1.1.13 ABB activity: 08 09 Cooperation – Risk-Sharing Finance Facility – RSFF

This activity contributes to increasing private finance and to closing market gaps in R&I investment arising from the reluctance of capital markets to offer support due to the risk and uncertainty perceived. This is achieved through the Risk-Sharing Finance Facility (RSFF) and by developing new financial instruments in risk-sharing (including guarantees) and equity. This activity is related to the Capacities Specific Programme activity '08 18 Capacities – Risk-Sharing Finance Facility – RSFF'.¹²⁴ Delivering on the RSFF is a commitment that has been made in the Europe 2020 'Innovation Union' Flagship Initiative.

Progress towards targets

The most important targets for this activity, concerning the volume of loans and guarantees, were achieved. There were also improvements in the results for the indicator 'Countries covered by RSFF loans and guarantees' over the previous year.

Results for the Performance Indicators of the ABB activity: 08 09 Cooperation – Risk-Sharing Finance Facility – RSFF		<input checked="" type="checkbox"/> Spending programme <input type="checkbox"/> Non-spending	
Specific Objective	Performance Indicator	Target (long-term) (2013)	Latest known result (Sept. 2013)
Support additional investment in European Research, Development and Innovation (RDI) through the RSFF	Volume of RSFF-supported loans and guarantees provided to RDI projects (loans approved by the EIB)	€11.5 billion	€14.75 billion
	Volume of RSFF-supported loans and guarantees provided to RDI projects (loans signed by the EIB)	€10 billion	€10.7 billion
	Volume of FP7 contribution used to support RSFF loans and guarantees provided to RDI projects	€800 million	€770 million
Promote access to higher-risk finance for RDI projects in Members States and Associated Countries	Countries covered by RSFF loans and guarantees	27 Member States 13 Associated Countries Total: 39 (full coverage)	21 Member States 3 Associated Countries Total: 24
Main outputs for 2013	Amendment No. 6 of the RSFF Cooperation agreement	Delivered	

Policy and implementation activities

Amendment No. 6 to the RSFF Agreement, which addresses key target groups investing in R&I, was signed. This amendment extends the Risk-Sharing Instrument (RSI) to RDI-driven and innovative SMEs and small midcaps in terms of volume and scope and introduces some modifications relating to the new Financial Regulation and its forthcoming Rules of Application. In this way, it prepares a future agreement on financial instruments between the EU and the European Investment Bank (EIB) Group under Horizon 2020.

¹²⁴ See section 1.1.21.

Two new pilot mechanisms for 'midcaps'¹²⁵ were designed and tested within the RSFF: the 'MidCaps Initiative' (MCI), a direct implementation (i.e. EIB makes use of financial intermediaries) and a guarantee scheme similar to RSI but for medium and large midcaps, and the 'Growth Finance Initiative' (GFI), a direct implementation scheme by the EIB, which allows for a variety of financing solutions ranging from senior secured debt to mezzanine financing for innovative medium and large midcaps.

A technical assistance mechanism has been tested as a pilot with the EIB with the objective of improving the investment-readiness of large, complex European projects suffering from sub-optimal investment conditions.

Evaluations and Studies

The second interim evaluation of the RSFF was carried out. The experts performing the evaluation supported RSFF's demand-driven approach and underlined the importance of the adaptability of the instrument to changing circumstances.

They recommended the better targeting of innovative midcaps with specific financing products, strengthening the pilot advisory activity and the governance system, carrying out more awareness-raising and the better definition of objectives.

125 In the 2014-2015 'Access to Risk Finance' Work Programme of Horizon 2020 'midcaps' are deemed to be enterprises comprising 250 to 3 000 employees (in full-time equivalents). They are divided into 'small midcaps' of between 250 and 499 employees and 'medium and large midcaps' of from 500 to 3 000 employees.

1.1.14 ABB activity: 08 10 Ideas

The 'Ideas' Specific Programme supports the best researchers in all fields of research, based on the sole criterion of excellence. It is implemented by the European Research Council (ERC), composed of a Scientific Council and the ERCEA. This activity provides a major contribution to the Europe 2020 'Innovation Union' Flagship Initiative.

Progress towards targets

A trend analysis of the number of scientific publications acknowledging ERC funding indicates that the ERC will not only meet but exceed its target by 2020 (with a cumulative sum of 82 727 publications). The trend analysis forecasted more than 12 000 publications by end-2013 which, was largely surpassed.

Results for the Performance Indicators of the ABB activity: 08 10 Ideas		<input checked="" type="checkbox"/> Spending programme <input type="checkbox"/> Non-spending	
Specific Objective	Performance Indicator	Target (long-term) (2020)	Latest known result (as indicated)
Enhance the generation of excellent, innovative ideas in frontier research in Europe	Number of international prizes and awards to ERC grant holders	200	134 (July 2013)
	Number of scientific publications by ERC grant holders	~40-60 000	~20 000 (Dec. 2013)

Policy and Main implementation activities

The ERC was represented at the Global Summit 2013 of the Global Research Council (GRC), which took place in Berlin in May. The summit, which was attended by heads of 70 organisations from around the globe, was hosted jointly by the German Research Foundation (DFG) and the National Council of Technological and Scientific Development (CNPq) of Brazil. Discussions focused on open access to scientific publications and research integrity. The GRC endorsed an action plan on open access and a statement of principles on research integrity. Both the Action Plan and the Principles for Research Integrity had been developed at a set of regional meetings, including a meeting in Brussels to which the ERC contributed.

In order to ensure the timely implementation of Horizon 2020, the Scientific Council of the ERC established preliminary positions in anticipation of the Horizon 2020 Specific Programme, including the ERC Work Programme for 2014 (with indicative budget for 2015).

Evaluations and Studies

An external 3-year evaluation of the ERCEA was carried out. The evaluation found that the EA has been beneficial because of its scientific specialisation, its proximity to beneficiaries, its communication and the visibility of the programme and fewer payment delays. Coordination mechanisms between the ERCEA and the Commission were considered to be working satisfactorily.

Savings resulting from the delegation of tasks to the ERCEA have been estimated at €45 million over the period 2009-2012. Moreover, the ERC has built a positive reputation within the international scientific community.

1.1.15 ABB activity: 08 12 Capacities – Research Infrastructures

Research infrastructures are supported to promote access to them by researchers from Europe and abroad, and to increase the attractiveness of European research at international level. The activity contributes, in particular, to the Europe 2020 Flagship Initiatives 'Innovation Union' and 'Agenda for New Skills and Jobs'.

Progress towards targets

The result for 'Number of international scientific users having benefited from access to Research Infrastructures' underestimates the real situation. Many projects selected under the first call for integrating activities have not yet submitted their final report, which includes data on access in their last 18 months. In addition, one of the most intensive projects in terms of served users (around 2 000 users per reporting period) did not succeed in the call following the end of the previous grant. Finally, a sizeable share of foreseen users for some life science projects was declared in relation to service activities, which do not contribute to this indicator.

The quantitative targets for the indicators 'Number of European research infrastructures identified in the ESFRI Roadmap for which an agreement for construction has been signed' and 'Percentage of users satisfied with services offered by research infrastructures participating in Integrating Activities ('good to very good' overall appreciation)' were achieved.

The target for 'Number of European research infrastructures identified in the ESFRI Roadmap which have proceeded into the preparatory phase' was close to being achieved. With the exception of two projects, all projects in the 2010 ESFRI Roadmap and in CERN's European Strategy for Particle Physics have benefited from preparatory phase support.

Results for the Performance Indicators of the ABB activity: 08 12 Capacities – Research Infrastructures		<input checked="" type="checkbox"/> Spending programme <input type="checkbox"/> Non-spending	
Specific Objective	Performance Indicator	Target (long-term) (2013)	Latest known result (Dec. 2013)
Optimise the access to research infrastructures in Europe	Number of international scientific users having benefited from access to Research Infrastructures	30 000	18 300
	Percentage of users satisfied with services offered by research infrastructures participating in Integrating Activities ('good to very good' overall appreciation)	>97%	97%
Encourage the creation of new research infrastructures of pan-European interest	Number of European research infrastructures identified in the ESFRI ¹²⁶ Roadmap which have proceeded into the preparatory phase	51 ¹²⁷	49
	Number of European research infrastructures identified in the ESFRI Roadmap for which an agreement for construction has been signed	28	<u>28</u>
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	Delivered ¹²⁸	

126 ESFRI (European Strategy Forum on Research Infrastructures) supports a coherent and strategy-led approach to policy-making on RIs in Europe and facilitates multilateral initiatives leading to the better use and development of RIs at EU and international level.

127 From the 2010 ESFRI Roadmap and the European Strategy for Particle Physics of the European Organisation for Nuclear Research (CERN).

128 "Delivered" here refers strictly to the performance of the assessment.

Policy and Main implementation activities

Four ERICs were established in November. These were the European Advanced Translational Research Infrastructure in Medicine (EATRIS)¹²⁹, the Biobanking and Biomolecular Resources Research Infrastructure (BBMRI)¹³⁰, the European Spallation Source (ESS)¹³¹ and the European Clinical Research Infrastructures Network (ECRIN)¹³².

129 2013/640/EU: Commission Implementing Decision of 7 November 2013 on setting up the European Advanced Translational Research Infrastructure in Medicine as a European Research Infrastructure Consortium (EATRIS ERIC) (OJ L 298, 8.11.2013, p. 38).

130 2013/701/EU: Commission Implementing Decision of 22 November 2013 on setting up the Biobanks and Biomolecular Resources Research Infrastructure Consortium (BBMRI-ERIC) as a European Research Infrastructure Consortium (OJ L 320, 30.11.2013, p. 63).

131 2013/700/EU: Commission Implementing Decision of 22 November 2013 on setting up the European Social Survey as a European Research Infrastructure Consortium (ESS ERIC) (OJ L 320, 30.11.2013, p. 44).

132 2013/713/EU: Commission Implementing Decision of 29 November 2013 on setting up the European Clinical Research Infrastructure Network (ECRIN) as a European Research Infrastructure Consortium (ECRIN-ERIC) (OJ L 324, 5.12.2013, p. 8).

1.1.16 ABB activity: 08 13 Capacities – Research for the benefit of SMEs

Through this activity, SMEs with little or no research capacity are supported to bridge the gap between research results and the introduction of new products onto the market. It contributes to implementing the Europe 2020 Flagship Initiatives 'Innovation Union' and 'Industrial Policy for the Globalisation Era', as well as to the completion of the ERA.

Progress towards targets

The targets were reached and exceeded.

Results for the Performance Indicators of the ABB activity: 08 13 Capacities – Research for the benefit of SMEs		<input checked="" type="checkbox"/> Spending programme <input type="checkbox"/> Non-spending	
Specific Objective	Performance Indicator	Target (long-term) (2013)	Latest known result (Nov. 2013)
Support SMEs in carrying out or outsourcing research and technological development	Number of SMEs/SME Associations investing in RTD through FP7 SME specific measures	4 000	<u>5 332</u>
	Total budget spent by SMEs on outsourcing research, innovation and demonstration activities to RTD performers in FP7 SME specific measures	€1 000 million	<u>€1 009 million</u>
Main outputs for 2013	Commission proposal to renew the Art. 185 Eurostars	Delivered ¹³³	

Policy and Main implementation measures

The annual SME Conference co-organised with the Irish Presidency of the EU was held in Dublin in June and attracted over 250 regional, national and European businesses, policymakers and other stakeholders.¹³⁴

¹³³ Proposal for a Decision of the European Parliament and of the Council on the participation of the Union in a Research and Development Programme jointly undertaken by several Member States aimed at supporting research performing small and medium-sized enterprises (COM(2013) 493, 10.7.2013).

¹³⁴ <http://eurosme2013.eu>

1.1.17 ABB activity: 08 14 Capacities – Regions of Knowledge

The capacity of regions to invest in and carry out R&I activities is strengthened through innovation-driven clusters consisting of business entities (in particular SMEs), regional and local authorities and academia across Europe. The activity also supports the implementation of the Europe 2020 'Innovation Union' Flagship Initiative which links Structural and Cohesion Funds to R&I, notably through the development of smart specialisation strategies.

Progress towards targets

The targets were reached and substantially exceeded.

Results for the Performance Indicators of the ABB activity: 08 14 Capacities – Regions of Knowledge		<input checked="" type="checkbox"/> Spending programme <input type="checkbox"/> Non-spending	
Specific Objective	Performance Indicator	Target (long-term) (2013)	Latest known result (Dec. 2013)
Strengthen the research potential of European regions, in particular by encouraging and supporting the development of regional 'research-driven clusters'	Number of regions concerned by the support of existing clusters	140	210
	Number of business entities involved in selected projects	245	340 ¹³⁵

Policy and Main implementation activities

The Week of Innovative Regions (WIRE) 2013 conference was organised with the Irish Presidency in June to better position regional actors in enhancing policy formation for effective regional development. More concretely, the conference focused on regional aspects relevant to the final stages of the Horizon 2020 design and legislative process.¹³⁶

During the year, three programme capitalisation workshops on transport, resource efficiency and ICT took place in Brussels. The aim was to facilitate community building across on-going projects through the exchange of best practices for innovation, as well as the identification of issues of common interest.

135 Estimate.

136 <http://www.wire2013.eu>

1.1.18 ABB activity: 08 15 Capacities – Research Potential

To realise Europe's research potential, this activity supports the EU's less-advanced and often remote regions to ensure they are better integrated into the ERA. In this way, the activity provides a valuable contribution to the realisation of the objective of the Europe 2020 Strategy for inclusive growth.

Progress towards target

The target was achieved and significantly exceeded. Results for 2013 were better than expected thanks to efficient negotiations and cost savings.

Results for the Performance Indicators of the ABB activity: 08 15 Capacities – Research Potential		<input checked="" type="checkbox"/> Spending programme <input type="checkbox"/> Non-spending	
Specific Objective	Performance Indicator	Target (long-term) (2013)	Latest known result (Dec. 2013)
Stimulating the realisation of the full research potential of the enlarged Union	Number of research centres in EU's convergence and outermost regions supported	160	<u>185</u>

Preparation for Horizon 2020

A pilot call 'ERA Chairs' was finalised. It will support universities and research organisations located in Convergence and Outermost Regions to significantly improve their level of excellence in a particular field and help them to compete internationally.

Based on the experience of ERAC peer reviews and other policy mutual learning exercises, the concept of a Policy Support Facility was developed to provide on-demand, tailored support to public authorities in charge of formulating or implementing R&I policies.

1.1.19 ABB activity: 08 16 Capacities – Science in Society

Science in Society (SiS) aims at making the European scientific research more responsive to the needs and aspirations of European citizens and society by addressing 'societal challenges'. It takes into account ethical principles, the promotion of gender equality, public engagement with S&T, responsible innovation, the importance of attracting young people to S&T careers and better conditions for the use of science.

In promoting gender equality in R&I the SiS activity helps research organisations to deal with the barriers to female scientists' recruitment and career progression. In so doing, it contributes to the Europe 2020 objective of increasing the number of highly skilled workers in R&I.

Progress towards targets

One of the targets for this activity was fully achieved and even exceeded. The other targets were not quite achieved but the situation will be remedied for Horizon 2020 where Responsible Research and Innovation and SiS (to be renamed 'Science with and for Society') will become cross-cutting activities, fully mainstreamed into the Programme's structure.

Results for the Performance Indicators of the ABB activity: 08 16 Capacities – Science in Society		<input checked="" type="checkbox"/> Spending programme <input type="checkbox"/> Non-spending	
Specific Objective	Performance Indicator	Target (long-term) (2013)	Latest known result (Oct. 2013)
Ensure that EU funded proposals comply with fundamental ethical principles	Percentage of proposals passing the ethical review the first time	100%	97%
Promote a more open governance of scientific research, involving societal actors and organisations in research policy	Number of members registered in SINAPSE ¹³⁷	15 000 members 1 400 organisations	<u>25 284 members</u> <u>1 569 organisations</u>
	Percentage of FP7 projects engaging with societal actors beyond the research community ¹³⁸	70%	61%
	Percentage of publications originated from FP7 projects for which open access is provided ¹³⁹	70%	41%
Strengthen gender dimension in projects financed by FP7	Percentage of FP7 projects for which gender equality actions were carried out	40%	27%
	Percentage of FP7 projects for which gender dimension was taken into account in the research content	25%	18%
Main outputs for 2013	Recommendation to Member States on Structural changes in universities and research institutions to promote gender equality	Withdrawn ¹⁴⁰	
	Recommendation to Member States on Responsible Research and Innovation	Withdrawn ¹⁴¹	

137 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.

138 Takes into account all projects supported through any funding scheme in any research area except for Ideas, Research for the benefit of SMEs, International Cooperation and Coherent Development of Research Policies.

139 Only projects funded through the funding schemes 'Collaborative Projects' and 'Networks of Excellence' in any of the following research areas: Health, Energy, Environment and SSH for the Cooperation SP and RIs and SiS for the Capacities SP. These areas correspond to the scope of the Open Access Pilot initiative (to run until the end of FP7) where beneficiaries commit to ensuring open access to articles resulting from research funded in the above mentioned areas.

140 See footnote 73.

141 See footnote 73.

1.1.20 ABB activity: 08 17 Capacities – Activities of International Cooperation

This activity promotes and facilitates the coherent and strategic development of the EU's International Cooperation policy in R&I. It mainly contributes to the Europe 2020 'Innovation Union' Flagship Initiative.

Progress towards targets

Most of the targets were achieved (even substantially exceeded) or quite close to being achieved.¹⁴² The targets set for the international European Research Area Networks (ERA-NETs) indicators had already been achieved by the end of 2012 and further progress was registered in the course of 2013. When all FP7 data becomes available, it is likely that the results for these two indicators will be about twice as high as the respective targets.

Results for the Performance Indicators of the ABB activity: 08 17 Capacities – Activities of International Cooperation		<input checked="" type="checkbox"/> Spending programme <input type="checkbox"/> Non-spending	
Specific Objective	Performance Indicator	Target (long-term) (2013)	Latest known result (2013)
Increase cooperation between researchers in Europe and in third countries	Participation of third countries in FP7 ¹⁴³	6.6%	6.0%
Strengthen coordination of Member States' and Associated States' policies and activities in the field of international cooperation	Number of joint calls between Member States'/Associated Countries' and third countries' research programmes in FP7 international cooperation ERA-NET projects	11	<u>15</u>
	Amount of joint trans-national funding mobilised for international cooperation in FP7 international cooperation ERA-NET projects	€25.0 million	<u>€47.4 million</u>
Main outputs for 2013	Renewal of S&T Cooperation Agreements with Russia and the USA	Launched	
	Agreements and Memoranda of Understanding (MoUs) on the association to Horizon 2020 for Albania, Bosnia and Herzegovina, the Faroe Islands, the Former Yugoslav Republic of Macedonia, Israel, Moldova, Montenegro, Serbia and Turkey and on the association of Switzerland to Horizon 2020, Euratom and ITER.	Postponed ¹⁴⁴	

Policy and Main implementation activities

The processes for renewing the EU-US and EU-Russia S&T agreements have been launched with adoption expected in early 2014. The joint EU-Russia Year of Science was launched at a major conference in Moscow on 25 November.

The Galway Statement signed in May provided a vision for enhanced cooperation on both sides of the Atlantic and launched the Canada-EU-US Transatlantic Research Alliance¹⁴⁵. During 2013 the Strategic Forum for International Cooperation in S&T (SFIC) has continued to work on country initiatives. These included China, Brazil and the USA.

¹⁴² While not a separate indicator, there was an increase in the percentage of ERC Principal Investigators from third countries. See also section 1.1.14 ('ABB activity: 08 10 Ideas').

¹⁴³ Includes only DG RTD funded projects in the Cooperation and Capacities Specific Programmes, as well as the whole of the Ideas (Principal Investigators for third countries) and Euratom Specific Programmes.

¹⁴⁴ These Agreements and MoUs were postponed until the Horizon 2020 legislative package was adopted and came into effect.

¹⁴⁵ See also section ABB activity: 08 03 Cooperation – Food, Agriculture and Fisheries and Biotechnology.

The EU-Korea summit was held in Brussels in November. An Implementing Arrangement between the Commission and the Korean Ministry for ICT, Science and Future Planning was signed to foster opportunities for ERC grant holders and to host visiting top researchers from Korea.

The EU-Africa High Level Policy Dialogue on R&I cooperation held its second meeting in November in view of the EU-Africa Summit in 2014. Decisions were taken on future cooperation with a focus on a long-term joint research and innovation partnership on food and nutrition security and sustainable agriculture.

Evaluations and Studies

A review of EU-Russia S&T cooperation was carried out. It concluded that S&T cooperation is one of the most successful and promising areas in EU-Russia relations and has a positive effect on the general relationship. The review identified a number of technical and administrative barriers (such as customs and visa issues and differences in funding organisations' procedures) which would need addressing for the cooperation to improve.

Another review was held of EU-South Africa S&T cooperation. The review concludes that South Africa has become an important collaborator and an interlocutor in the EU's relationship with the rest of Africa.

1.1.21 ABB activity: 08 18 Capacities – Risk-Sharing Finance Facility – RSFF

RSFF contributes to increasing private finance and to closing market gaps in R&I investment arising from the reluctance of capital markets to offer support due to the risk and uncertainty perceived. While related to '08 09 Cooperation – Risk-Sharing Finance Facility – RSFF' in the Cooperation Specific Programme¹⁴⁶, this activity supports capacity-building, particularly Research Infrastructures.

Progress towards targets

RSFF does not offer grants but is a demand-driven loan instrument and demand for Research Infrastructure projects has changed, especially due to the economic crisis. While no additional Research Infrastructure-related projects were signed in 2013, promising negotiations are still ongoing and, if successful, additional projects will be funded under the Horizon 2020 successor of the RSFF.

Results for the Performance Indicators of the ABB activity: 08 18 Capacities – Risk-Sharing Finance Facility - RSFF		<input checked="" type="checkbox"/> Spending programme <input type="checkbox"/> Non-spending	
Specific Objective	Performance Indicator	Target (long-term) (2013)	Latest known result (Sept. 2013)
Support additional investment in European Research, Development and Innovation (RDI) through the RSFF	Volume of RSFF supported loans and guarantees provided to European RI projects (loans approved by the EIB)	€800 million	€695 million
	Volume of RSFF supported loans and guarantees provided to European RI projects (loans signed by the EIB)	€800 million	€605 million
	Volume of FP7 contribution used to support RSFF loans and guarantees provided to European RI projects	€200 million	<u>€201.5 million</u>
Main outputs for 2013	Amendment No. 6 of the RSFF Cooperation agreement	Delivered ¹⁴⁷	

Evaluations and Studies

The second interim evaluation of the RSFF was carried out. See section 1.1.13 ('08 09 Cooperation – Risk-Sharing Finance Facility – RSFF').

¹⁴⁶ See section 1.1.13.

¹⁴⁷ See section 1.1.13.

1.1.22 ABB activity: 08 19 Capacities – Coherent Development of Research Policies

This activity strengthens the knowledge base required for the development, monitoring and assessment of EU and national R&I policies ensuring that they are coherent, coordinated and mutually reinforcing. Progress made towards implementation of the Innovation Union and ERA is assessed and input is given to the Commission in preparation of the AGS and to Member States and Associated Countries for the update of their National Reform Programmes (NRPs). The activity contributes to the Europe 2020 Innovation Union Flagship Initiative.

Progress towards targets

The indicators for this activity are related to the Europe 2020 headline indicator on the % of GDP invested in R&I. While public expenditure has been stable, business expenditure has declined slightly over the years, the inevitable result of the economic and financial crisis effecting Europe.

Results for the Performance Indicators of the ABB activity: 08 19 Capacities – Coherent Development of Research Policies		<input checked="" type="checkbox"/> Spending programme <input type="checkbox"/> Non-spending	
Specific Objective	Performance Indicator	Target (long-term) (2020)	Latest known result (2012)
Increase the quantity and quality of public and private R&D expenditure	Public expenditure on R&D as a % of GDP	1.00%	0.75% ¹⁴⁸
	Business expenditure on R&D as a % of GDP	2.00%	1.30% ¹⁴⁹

Evaluations and Studies

An evaluation of research-intensive clusters as potential vehicles for smart specialisation in European regions was carried out. The report concludes that lessons learnt from cluster policies can provide concrete inputs and are likely to be among the key building blocks in developing and implementing smart specialisation strategies.

148 Eurostat estimate for EU-28.

149 Eurostat estimate for EU-28.

1.1.23 ABB activity: 08 20 Euratom – Fusion Energy

Research on fusion energy paves the way for the industrial implementation of this form of energy. This is done through bilateral contracts with research organisations, through the multilateral European Fusion Development Agreement (EFDA), the ITER project and initiatives to foster the involvement of industry. This activity contributes in particular to the Europe 2020 Flagship Initiatives Innovation Union and Industrial Policy for the Globalisation Era.

Progress towards the targets

The targets for 2013 have all been achieved. Other targets concern much later achievement dates.

Results for the Performance Indicators of the ABB activity: 08 20 Euratom – Fusion Energy		<input checked="" type="checkbox"/> Spending programme <input type="checkbox"/> Non-spending	
Specific Objective	Performance Indicator	Target (long-term) (as indicated)	Latest known result (Sept. 2013)
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	Degree of realisation of ITER (number of milestones met by F4E ¹⁵⁰)	100% (2020) First Plasma (Nov. 2020) Deuterium-Tritium operation (Dec. 2027)	23% ¹⁵¹
	Number of scientific publications on Joint European Torus (JET)	~60 manuscripts submitted for publication	~66 manuscripts submitted for publication
	% of R&D work under EFDA Task Agreements completed on time	85% (2013)	90%
	% of R&D work under Contracts of Association completed on time ¹⁵²	85% (2013)	~85%
	Number of fusion researchers and engineers trained for the needs of ITER and the programme	150 researchers or engineers obtaining high-level skills or academic qualification (2013)	157
	Level of researcher mobility in fusion R&D	>100 persons/year (2013)	>120 persons/year
Main outputs for 2013	Commission Staff Working Document on the future structure of the European fusion research programme	Delivered ¹⁵³	

Policy and Main implementation activities

The Commission and the governing Board of F4E have adopted rules on industrial policy, intellectual property and dissemination. The Commission has also signed an agreement with the International Atomic Energy Agency (IAEA) providing for open access to publications in the *Fusion Technology* journal.

Following Croatia's accession, their research activities in fusion have been integrated into the UK fusion programme activities managed under the Euratom Culham Centre for Fusion Energy (CCFE).

150 F4E: Fusion for Energy Joint Undertaking.

151 This represents 29 milestones completed as of September 2013 out of 126 planned for the period 2009-2020. The 23% figure is the overall progress in milestone achievement obtained by applying the 51% indicated in the F4E progress report for achievement of the planned 2013 milestones. Source: 13th Fusion for Energy Progress Report F4E(13)-PR13 June - October 2013 submitted to the Bureau at its meeting on 27 November.

152 "On time" here means due date plus 3 months to allow for reporting.

153 'Commission Staff Working Document: Towards a Modern Euratom Fusion Research Programme' (SWD(2013) 213, 11.06.2013).

The Commission's Staff Working Document setting out the strategy for the structure and implementation of the fusion research programme in Horizon 2020 was presented to the Council Research Working Party in June. This followed a long period of consultation with the research community and high-level discussions with key stakeholders.

1.1.24 ABB activity: 08 21 Euratom – Nuclear Fission and Radiation Protection

Fission research initiatives seek to boost investment in research, JPIs (between Member States and Associated Countries), international cooperation, dissemination of results and transparency. It contributes not only to Europe's energy challenge but also to health through radiation protection and safety. The activity contributes to the Europe 2020 Flagship Initiatives 'Innovation Union' and 'Industrial Policy for the Globalisation Era'.

Progress towards targets

Most of the targets were achieved, exceeded or close to being achieved.

Results for the Performance Indicators of the ABB activity: 08 21 Euratom – Nuclear Fission and Radiation Protection		<input checked="" type="checkbox"/> Spending programme <input type="checkbox"/> Non-spending	
Specific Objective	Performance Indicator	Target (long-term) (2013)	Latest known result (Nov. 2013)
Generate new knowledge in all top priority areas in nuclear fission and radiation protection	Coverage of topics published in the Work Programmes ¹⁵⁴	100%	91%
	Projects that achieved all or most of their objectives ...	90%	<u>100%</u>
	... of which projects that achieved all of their objectives	75%	<u>78%</u>
Promote transformation of research results into industrial applications and/or increased protection of man and the environment	Percentage of projects with publications in peer reviewed journals	50%	<u>83%</u>
	Projects which generate patent applications or other types of intellectual property rights	10%	<u>17%</u>
	Share of EU financial contribution to Industry ¹⁵⁵	20.0%	17.1%
	Projects with at least one industrial participant ¹⁵⁶	75%	<u>78.5%</u>
	Share of EU financial contribution to SMEs	15%	5.6%
	Projects with at least one SME participant	50%	<u>54.6%</u>

Policy and Main implementation activities

The European Commission and the European Economic and Social Committee co-organised a symposium in Brussels in February, emphasising research needs for a sustainable, secure, reliable and competitive energy mix, including nuclear fission. The results of the symposium were used as input for the discussions on Horizon 2020 at preparatory meetings of the Council of the EU.

The FISA 2013 and EURADWASTE '13 conferences were held in October and covered a broad range of research activities in the areas of nuclear fission, reactor safety systems, waste management and geological disposal.

154 This indicator covers the topics published in the annual calls for proposals launched under the FP7 Cooperation SP.

155 See footnote 83.

156 See footnote 83.

1.1.25 ABB activity: 08 22 Completion of previous Framework Programmes and other activities

DG RTD is tasked with bringing projects selected for funding under previous FPs to a successful conclusion. Efforts are made to get projects that have suffered delays back on track and to secure their successful conclusion and the delivery and dissemination of project results.

Progress towards target

Considerable efforts were made to have more project results published in the CORDIS database. This was reflected in the improved results for FP6 projects.

Results for the Performance Indicators of the ABB activity: 08 22 Completion of previous Framework Programmes and other activities		<input checked="" type="checkbox"/> Spending programme <input type="checkbox"/> Non-spending	
Specific Objective	Performance Indicator	Target (long-term) (2013)	Latest known result 2013
Enhance previous FPs' outputs through exploitation and dissemination of results	Percentage of results published in the CORDIS database under FP6/FP5 ¹⁵⁷	70%	57% ¹⁵⁸

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

158 By FP, this figure translates into 58% for FP5 and 55% for FP6.

1.1.26 ABB activity: 08 23 Programme of the Research Fund for Coal and Steel

Coal and steel, while key industrial sectors, are subject to fierce worldwide competition and raise serious environmental concerns. The competitiveness of coal mining and clean coal technologies and the full spectrum of steel production and its utilisation are researched through this activity. The Research Fund for Coal and Steel (RFCS) is financed through interest generated by the residual assets of the former European Coal and Steel Community and is managed separately from the Framework Programme.

Progress towards targets

Most of the targets were achieved or exceeded.

Results for the Performance Indicators of the ABB activity: 08 23 Programme of the Research Fund for Coal and Steel		<input checked="" type="checkbox"/> Spending programme <input type="checkbox"/> Non-spending	
Specific Objective	Performance Indicator	Target (long-term) (2013)	Latest known result
Enhance the generation of new knowledge in coal and steel with practical relevance at EU level	Percentage of selected proposals with 'very good to excellent' scientific and technical approach	40%	<u>46%</u> (2013)
	Percentage of selected proposals with a 'very good to excellent' innovative content	40%	<u>46%</u> (2013)
	Percentage of selected proposals with 'very good to excellent' EU added value	60%	50% (2013)
Promote the transformation of research results into commercial and industrial applications	Percentage of participation of industrial beneficiaries in RFCS projects	40%	<u>46%</u> (2012)

1.2 Specific efforts to improve 'economy' and 'efficiency' of the DG's activities

The respect of the principles of economy and efficiency is continuously pursued through the implementation of internal procedures and practices.

DG RTD is continuously fine-tuning its internal arrangements in order to improve the efficiency and economy of its operations. The following two initiatives show how these principles are implemented in our DG:

1.2.1 The workload assessment exercise and (re-)attribution of staff

In 2013 DG RTD carried out an exercise to assess the workload of each of its units, as part of an exercise to prepare the DG for future challenges. These challenges are particularly the transfer of some operational activities to EAs for Horizon 2020, the move to a more policy-related DG, and the Commission's commitment to a considerable reduction in staff resources.

The 2013 exercise was therefore designed to prepare the way to meet these challenges, by cataloguing and measuring activities, and so preparing the way for an objective allocation of scarce human resources in the future. The exercise has already been used in assessing where to focus staff reductions in 2014, and this will continue as additional staff reductions are made, activities transferred to EAs and policy work increased.

1.2.2 Creation of a Participant Portal

The Research family of services has created a Participant Portal, a web portal that will channel all communications between project participants, experts and the Commission, to provide electronic services for Horizon 2020, including online registration of participants, proposal submission, and scientific and financial reporting. Compared to past systems it will avoid the paper transmission of documents, allow for quicker treatment of files through automated controls and, in time, allow participants to verify the progress in treatment of their file.

2. MANAGEMENT OF RESOURCES

Assurance is an objective examination of evidence for the purpose of providing an assessment of the effectiveness of risk management, control and governance processes. This examination is carried out by management, who monitors the functioning of the internal control systems on a continuous basis, and by internal and external auditors. Its results are explicitly documented and reported to the Director-General. The reports produced are:

- The reports submitted by the Directors, which include the outcome of the internal control monitoring taking place in each Directorate;
- The reports from Authorising Officers in other Directorates-General managing budget appropriations in cross-delegation;
- The reports on control results from entrusted entities in direct management as well as the results of the Commission supervisory controls on the activities of these bodies;
- The contribution of the Internal Control Coordinator (ICC), including the results of internal control monitoring at Directorate-General level;
- The annual report on the ex-post audit function;
- The opinion of and observations from the Internal Audit Capability (IAC);
- The observations and recommendations reported by the Internal Audit Service (IAS);
- The observations and recommendations reported by the European Court of Auditors (ECA).

This section reports on the control results and other relevant elements that support managements' assurance on the achievement of the internal control objectives¹⁵⁹. It is structured in three separate sections: (1) the assessment of its own activities for the management of its resources; (2) the assessment of the activities carried out by other entities to which the DG has entrusted budget implementation tasks; and (3) the assessment of the results of internal and external audits, including the implementation of audit recommendations.

¹⁵⁹ Effectiveness, efficiency and economy of operations; reliability of reporting; safeguarding of assets and information; prevention, detection, correction and follow-up of fraud and irregularities; and adequate management of the risks relating to the legality and regularity of the underlying transactions, taking into account the multiannual character of programmes as well as the nature of the payments (FR Art 32).

2.1 Management of human and financial resources by DG RTD

This section reports and assesses the elements identified by management that support the assurance on the achievement of the internal control objectives. **Annex 5** outlines the main risks together with the control processes aimed to mitigate them and the indicators used to measure the performance of the control systems.

DG RTD has set up internal control processes aimed to ensure the adequate management of the risks relating to the legality and regularity of the underlying transactions, taking into account the multiannual character of programmes as well as the nature of the payments concerned, and balanced with the achievement of the research policy objectives. The general control objective for 7th Framework Programme (FP7) has always been to ensure that the residual error rate does not exceed a cumulative level of 2% by the end of the programme implementation. However, DG RTD has in recent years underlined the negative effects that an over-emphasis on this target and on excessive controls can have, in terms of the attractiveness of the policy and international competitiveness. The key aim is to achieve a good balance between legality and regularity and the achievement of policy objectives, and between trust and control, rather than a concentration on one legality and regularity indicator.

2.1.1 Human resources

The results of comprehensive survey¹⁶⁰ conducted in DG RTD in 2013 show that around 51% of the DGs human resources are used on policy and programme design to support the wider DG RTD policy. The outcomes of this policy-related work are non-financial, and are set out in Part 1 of this report. Another 35% of staff work on programme implementation - managing grants to participants in the Framework Programmes. Over time the proportion of staff working on policy-related work can be expected to increase, especially as much of Horizon 2020 will be managed by external entities. The shift to a policy DG will therefore accelerate over the next years. The final 14% of staff work in support and coordination functions.

2.1.2 Financial resources (in grant management)

The Research Framework Programmes are implemented through 'direct' and 'indirect' management, through co-financed contracts signed with external parties (research organisations, companies).

In 2013, last year of FP7

809 grant agreements

signed with

10 345 participants

for the EC contribution committed of

€3 439 million

In 2013, €3 439 million was committed in relation to 809 new FP7 projects and €3 414 million was paid for Grant Agreements signed in 2013 or earlier. In order to achieve both operational (research-related) and financial objectives DG RTD has established a control framework to prevent, detect and deter irregularities at the different stages of the grant management process. This control framework must, however, be cost-effective and not cause excessive administrative burdens to researchers and participants. DG RTD therefore operates a

160 Survey of all staff, followed by interviews with managers

system of targeted controls before payment. It bases its main assurance on in-depth checks carried out at a sample of the beneficiaries' premises after costs have been incurred and declared.

The Research Directorate-Generals have defined and implemented a common control strategy, the key elements of which are the ex-post audit strategy and the recovery process. These elements are intended to provide reasonable assurance on the legality and regularity of expenditure on a multi-annual basis by systematically detecting and correcting errors. Since 2012, as an extension of the ex-post audit strategy, a Common Representative audit Sample (CRaS) was used to identify the common error across the whole of FP7 operations. This Common Representative audit Sample has been instrumental in lowering the audit burden on large beneficiaries who, before the implementation of this new approach, would have been audited by several Commission services.

Materiality is assessed for the FP7, as well as for the Coal and Steel Research Fund, in accordance with **Annex 4**. In 2013, DG RTD also managed financial operations under the 6th Framework Programme but, given their limited amounts, and the fact that these are the residual payments for programmes that are now closed, these are not covered in this report. To give an indication of the relative weight of each of them, **Table 1** shows the distribution of payments in 2013.

Table 1 DG RTD payments in 2013 (in million €)¹⁶¹

	Operational expenditure (both EC and Euratom)				Administrative expenditure	% of total	Total
	Pre-financing	Payments against cost statements	Experts' appointments	Implementing bodies ¹⁶²			
Previous programmes ¹⁶³	0.00	59.53	0.00	17.92	0.00	1.8%	77.45
FP7	1 869.15	1 436.84	5.63	616.13	165.02	97.0%	4 092.78
Coal and Steel	38.34	10.06	0.05	0.00	0.00	1.2%	48.45
TOTAL	1 907.49	1 506.43	5.68	634.05	165.02	100%	4 218.68
Total direct payments	3 413.92						

The control systems are divided into four distinct stages, each with specific control objectives. Key indicators have been defined for each stage.

Stage one: Programming and evaluation

The first stage concerns the preparation of calls, the calls for proposals, and the evaluation of proposals. The overall control objective of this stage is to evaluate the project proposals in order to ensure scientific excellence (selection of the best projects) and the achievement of the operational objectives set out in the specific work programmes, as adopted by the Council and the Parliament. Proposals are reviewed by panels of external reviewers, who are experts in the scientific field.

161 The difference in Table 2 in Annex 3 results from the salaries, the payments made for correction and the payments that could not be linked to a framework programme because they do not mention a local position; none of these are included in Table 3.1. The table does not include payment made through PMO.

162 This amount includes the financial contributions to the Joint Undertakings for a total of €556.7 million. These bodies are subject to a separated Discharge procedure, distinct from that of the Commission.

163 Closure of previous programmes and other costs. This includes FP6 (€53.6 million) and costs in the area of nuclear fusion expenditure not linked to FPs.

The FP7 Work Programmes for 2013 contained a list of 72 calls (publication or evaluation stage in 2013) in which DG RTD was involved. For 38 of them, DG RTD was responsible in terms of direct budget implementation - we refer to these calls as the DG RTD FP7 2013 work programme. The following indicators refer to DG RTD's work programme, except for the redress procedure, which is organised in common with other services implementing FP7.

All over FP7 (2007-2013)

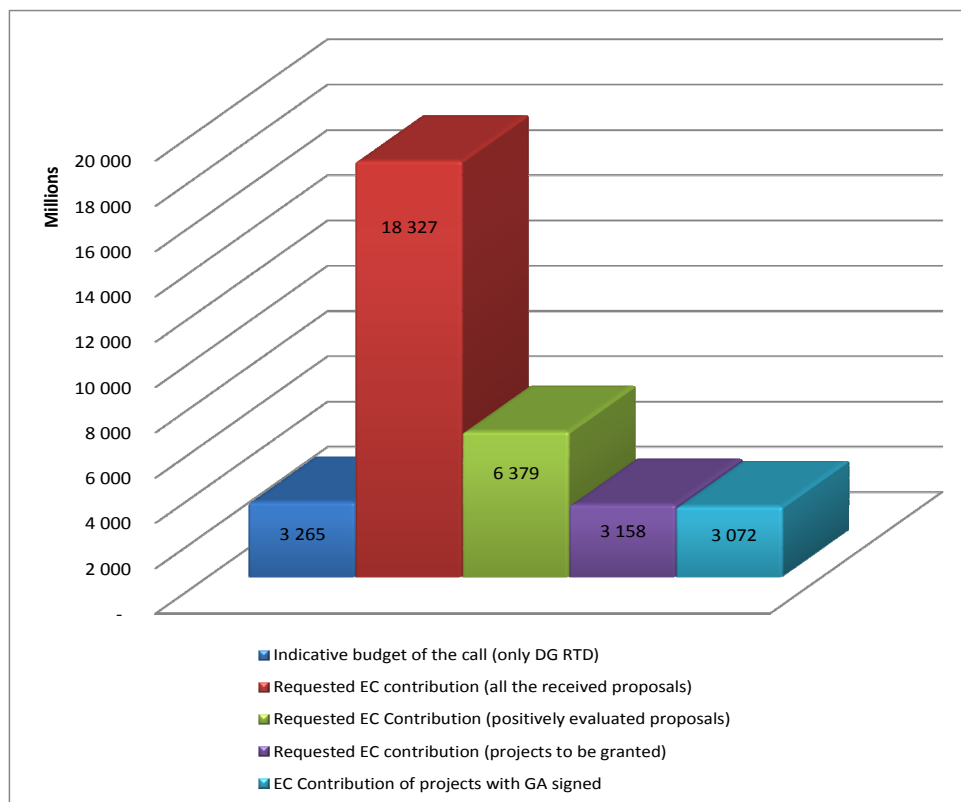
6.4 proposals received for each grant agreement signed

100% of the 38 DG RTD calls were published and implemented as planned (one cancelled). The indicators show that, on average, calls are over 6 times oversubscribed. This demonstrates the continuing popularity of the programmes managed by the DG and the competitiveness of the call process. It also

underlines the importance of a good evaluation process, as the most excellent projects need to be chosen from a large number of proposals.

The chart below demonstrates, based on the DG RTD's FP7 work programme for 2013, that 94.1% of the indicative budget of the calls¹⁶⁴ has been granted in 2013 (this should reach about 96% with grants to be signed in 2014), which proves an optimal use of the resources at this stage.

Figure 2 FP 7 budget implementation (2013 WP, in million €)



¹⁶⁴ This budget is an indicative figure used for only this stage's indicators, it may be amended following the outcome of the calls, so it isn't to be compared to the year's appropriations, which has been 100% implemented.

Key controls include the screening of proposals for eligibility, the choice of independent evaluators, the evaluation by a minimum of three evaluators, and a panel review for the ranking of proposals. The list of approved proposals is checked for legal compliance by the AOSDs before it is submitted for a Commission inter-service consultation.

These are key checks to ensure the excellence of the science to be funded and the legality and regularity of operations, since a compliance deficiency in the selection process would affect the regularity of all the ensuing grants.

Furthermore, a redress procedure provides applicants with the possibility of making a complaint if they think that there were shortcomings in the handling of their proposal during the evaluation. A redress committee, working independently, analyses eligible complaints and, where suitable, may recommend the re-evaluation of the proposal. The final decision on follow-up actions is taken by management. The indicators on the redress procedure presented in **Table 2** provide an indication of the quality and effectiveness of the proposal evaluation process, which constitutes a key element of the grant award process in Title VI of the Financial Regulation.

Please note that the statistics on the redress procedure refer to the whole of FP7, separate statistics for DG RTD alone are not retained.

Table 2 Redress procedure¹⁶⁵

	Total WP2012	Total WP2013
Number of proposals received for the Work Programme	18 654	16 605
Number of redress requests received for the Work Programme	514	454
Number of redress requests received as % of number of proposals received	2.75%	2.73%
Number of redress cases leading to a re-evaluation	27	16 ¹⁶⁶
Number of redress cases leading to a re-evaluation as % of number of proposals received	0.14%	0.10%

The low shares of redress requests and cases upheld – 2.73% and 0.10% respectively – provide a good indication of the robustness of the grant award process and assurance with respect to the effectiveness of the internal control system.

Estimated costs of evaluation in 2013

€29 million total costs

€16.3 million for internal costs

€12.7 million for the total costs of independent evaluators

€14 110 cost per proposal (internal and external costs)

For DG RTD the total costs of evaluation were €14 110 per proposal. The benefits of this stage are not quantifiable, but are the assurance that the most excellent projects are selected out of the many projects proposed. The oversubscription described above underlines the importance of this stage of the process, and why the costs are justified.

165 The figures for the respective years are based on the proposals submitted to calls published in the work programme for the relevant year (and not on the call deadline). Since the detailed evaluation rules can change in line with the annual work programme updates, this ensures that each annual statistic refers to one set of evaluation conditions. Although since 15 June 2009 Marie Curie and SME calls have been managed by the REA, the relevant figures are included here. The redress cases of ERCEA are addressed separately and reported in its own Annual Activity Report.

166 The figures for the re-evaluation may not be complete as for some calls the redress evaluation is undergoing.

Stage two: Contracting

The second stage concerns the negotiation and award of contracts. The overall objective of this stage is the translation of each of the retained scientific research proposals into a legally binding contract allowing for the management of both the scientific and financial aspects of the project. The negotiation process should exclude work not directly contributing to the achievement of the scientific objectives; substantiate the project costs; and determine the duration of the project and the contribution from the EU budget. It is an important tool for ensuring the economy and efficiency of the use of the budget appropriations.

Costs of contracting

€11.4 million total costs

€14 095 per contract signed

or

0.33% of the amount granted

Although the reduction of costs at this stage is not an objective in itself, one measure of the achievement of the economy and efficiency control objective is measured by the indicator on the financial impact of the negotiation process. The financial impact of the negotiation process is defined as the reduction (expressed as a percentage) of the EC contribution to the grant agreements as a result of the negotiation process. The 2013 average adjustment resulting from contracting process was 3.6%, or €128 million. Detailed figures are shown in **Table 3**.

Table 3 Financial impact of the contracting process

	2012	2013
Number of grant agreements signed	815	809
EC contribution requested in the proposals (in €)	3 217 530 641	3 567 693 751
EC contribution provided through signed grant agreements (in €)	3 111 453 682	3 439 415 212
% Reduction in the EC contribution as a result of the negotiation process	3.30%	3.60%

Another key indicator concerns the length of the time period between the closure date of the call for proposals and the date of the signature of the contract with the coordinator, the so-called 'Time-To-Grant' (TTG). This is important as participants, especially Small-and-Medium-Sized Enterprises, want a quick answer to their proposals. Nevertheless, it needs to be noted that a shorter TTG does bring some risks as it reduces the time available for the Commission to carry out extensive checks before signing grants.

Time-to-Grant in 2013

249 days

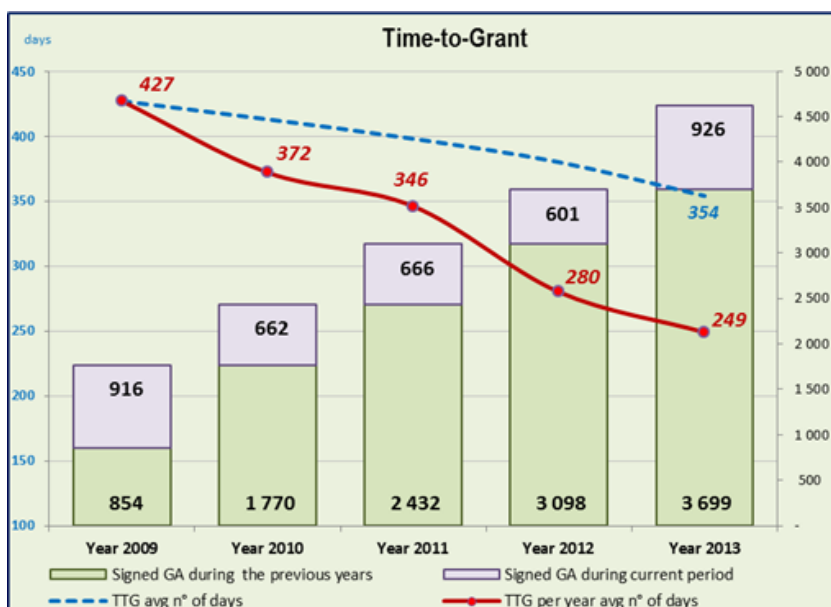
178 days less than the average in 2009 (-42%)

TTG has declined significantly over the FP7 period. Although the cumulative average TTG for the whole of FP7 so far is 354 days, the average TTG for grants signed in 2013 only is 249 days. The new Financial Regulation, which sets a maximum TTG of 270 days for calls as of 2013 onwards, did not apply to DG RTD in 2013¹⁶⁷. Nevertheless 68% of grants signed in 2013 would have complied with this target.

167 The new FR applies to calls launched on 2013 appropriations. DG RTD had published only one call in 2013 but the results were not known by the end of the year.

This is an important indicator of the efficiency and effectiveness of the negotiation process, and shows the progress made within the DG. For Horizon 2020 the deadline has been set at 240 days¹⁶⁸, which will require greater efforts still by the DG.

Figure 3 FP 7 Time-to-Grant evolution, 2009-2013



While there are some financial benefits (see **Table 3**) the main benefits at this stage are unquantifiable, being mainly related to assuring that excellent research is obtained within a good legal framework.

Stage three: Monitoring the execution of projects

The third stage concerns the management of the project and the contract. This stage comprises the normal management of the contract over its lifetime, and also ex-ante checks of participants' cost claims. These ex-ante checks include audit certificates on cost statements established by external auditors, and the processing of transactions through Commission financial circuits. An important indicator is 'Time-To-Pay' (TTP), which is defined as the percentage of payments made within the binding deadlines, as shown in **Table 4a**.

Table 4a Share of payments made on time (%)

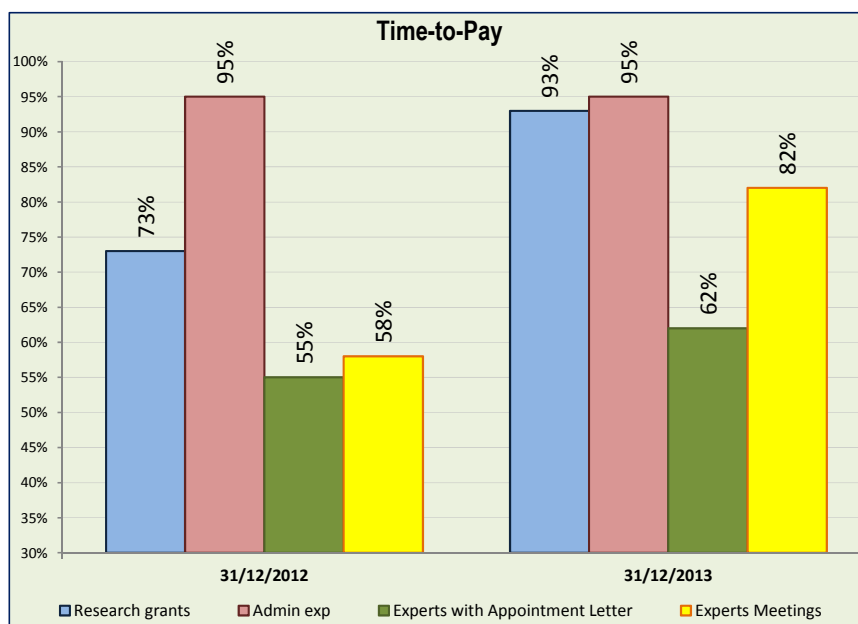
Expenditure type	2012 ¹⁶⁹	2013	Target FR
Research grants FP7 payments	73%	93%	90 days
Administrative expenditure	95%	95%	30 days
Experts with appointment letters	55%	62% (PMO: 45% ¹⁷⁰ , DG RTD 91%)	30 days
Experts without appointment letters (Meetings)	58%	82%	30 days

168 Except in exceptional, duly justified cases, in particular where actions are complex, where there is a large number of proposals or where requested by the applicants.

169 Calculated based on the new shorter deadlines imposed by the FR in 2013.

170 DG RTD decided that, with effect from 1 April 2014, these payments will be made by the REA.

Figure 4 Time-to-Pay evolution, 2012-2013



As demonstrated in **Figure 4** the share of payments made on time i.e. within the deadlines imposed by the new Financial Regulation, has significantly increased for the Research grants compared to the previous year. This means that beneficiaries receive money more quickly.

As shown in **Table 4b** the average total time taken to pay is within the payment time limits imposed by the Financial Regulation and the respective contracts. However, DG RTD is aware that, in some cases, the total ('gross') time to pay is longer, because of the possibility, set out in the Financial Regulation, to suspend the payment deadline if information is missing or incomplete. DG RTD is committed to smoothing the process by further simplification of internal procedures and better IT tools and guidance to beneficiaries.

Table 4b Average net and gross Time-to-Pay by type of expenditure in DG RTD in 2013

Expenditure type	Number of payments made	Average time to pay (calendar days)		
		Net	Suspension	Gross
Research grants FP7 payments	2 746	49.1	39.3	88.4
Administrative expenditure	1 278	18.1	1.1	19.2
Experts with appointment letters	2 008	20.5	3.1	23.6
Experts without appointment letters (Meetings) (PMO related payments)	6 866	29.5	0.0	29.5

In 2014, DG RTD will continue its efforts to further reduce the number of late payments, against the background of tighter deadlines imposed by the new Financial Regulation. Additionally, DG RTD is working to reduce the total time needed for beneficiaries or experts to receive their payments.

Every cost claim over €375 000 must be accompanied by a 'certificate on the financial statement' (CFS), given by a qualified auditor or a Certified Public Official. DG RTD, as well as the European Court of Auditors, have identified that these certificates do not always identify all ineligible expenditure in the cost claim. To assess the effect of this weakness DG RTD carried out a study that showed that cost claims with a CFS had an average error rate 50% lower than those without one. This shows that, while not perfect, these CFS do have a significant positive effect, especially as the average cost of a CFS is just €2 611.

It has therefore been decided to continue with the system in Horizon 2020. Additional efforts have been made during the communication campaign on the most likely errors to target auditors (around 300 of the 3 100 people participating in the communication events were auditors). Additional guidance, and clearer templates, will be prepared for Horizon 2020. The simplifications proposed in Horizon 2020 will also make the job of the auditors easier.

Around 68% of DG RTD expenditure was subject to a CFS. As these CFS lead to a rate of error 50% lower than those without a CFS, this has a significant effect in reducing the error rate.

Costs of monitoring the execution of projects

DG RTD estimates that this stage of the process costs around €29.2 million for the normal management of the contract and ex-ante controls over payment claims. This is 0.85% (€29.2 million/€3 414 million) of the total amount paid in relation to FP7 Grant Agreements in the year. The number of the running projects in 2013 was 3 539.

For the normal management of the contract the benefits are unquantifiable, being mainly linked to the assurance that the project is running adequately and so will produce the research and innovation desired.

Costs of monitoring the execution of running projects in 2013

€8 245 average monitoring cost per project

13.77 projects per FTE (full time equivalent)

average number of projects managed 'per' staff member

€76.15 million per FTE

average value (total costs) managed 'per' staff member

For the ex-ante controls it is difficult to provide an accurate estimate of quantifiable benefits at this point. Many cost claims and associated information are corrected by beneficiaries after comments from DG RTD staff without formal registration. This will be helped by the introduction of the 'single submission' IT tool in 2014/2015. This system will provide a more formal record

of all the interactions between the Commission and the participant. In addition there is no proportional relationship between reductions in costs declared and reductions in the EU contribution, as many projects have additional eligible costs in excess of the budget.

The amount recorded in the accounting system (ABAC) for recoveries in 2013 is €53 million. Excluding recoveries from ex-post controls (€16.7 million) gives a first estimate of the savings through these controls of €36.3 million. This is higher than the costs (€29 million), although the figures are not directly comparable. Firstly, a significant part of the cost relates to normal contract management and the analysis of scientific deliverables, and this management and analysis can be valuable to ensure excellent science, and its appropriate feedback into policy considerations, even if it does not lead to a financial saving. Secondly, it should be noted that, even with no control, there would still be a considerable cost for the processing of payments. As stated above, the main aim at this stage is to ensure successful projects and good quality scientific deliverables. No financial benefits can be put on this main aim.

Stage four: Ex-post controls and recoveries

General remarks

The fourth stage includes the ex-post audits as well as the recovery of any amounts found to have been paid in excess of the amount due.

Detailed ex-ante controls represent a considerable administrative burden on beneficiaries and the Commission, as they require the transfer of large amounts of information and its detailed checking. This has a seriously negative impact on the time to grant for contracts and the time to pay for beneficiaries. For this reason the Research family has decided to obtain most of its assurance from ex-post controls.

Table 5 provides an overview of the human and financial resources used in DG RTD for ex-post audits.

Table 5 Resources used in DG RTD directly for ex-post audits

	2012	2013
Internal resources for ex-post audits	31.4 FTE	33.1 FTE
Cost of externalised auditing (in €)	2 990 257	3 105 881

Costs of the audit process

The direct costs are estimated at €7.1 million or €23 294 per audit.^{171,172} The total number of audits closed in 2013 by DG RTD ex-post audit function (including FP7 and other programmes) was 306 audits.

Estimation of the annual costs of the ex-post audit

direct costs (internal and external)

€7 127 881

average cost per audit completed in 2013

€23 294

total costs of the audit function

€9 592 881

Average total cost of an audit

€31 349

The total full cost of the audit function (including support staff) is estimated at €9 592 881, or a total of €31 349 per audit (€6 487 000 excluding the cost of externalised auditing).

The main legality and regularity indicator is the error rate detected by ex-post audits. Because of its multi-annual nature, the effectiveness of the control strategy of the Research Directorates-General can only be fully measured and assessed in the final stages of the Framework Programme, once the ex-post control strategy has been fully implemented and systematic errors have been detected and corrected.

Since 2007, the Research Directorates-General have adopted a common audit strategy intended to ensure the legality and regularity of expenditure on a multi-annual basis including detecting and correcting systematic errors. The audits examine only interim and final claims by beneficiaries. Transactions relating

¹⁷¹This figure includes both salaries and allowances as well as all other expenses such as buildings, furniture, IT and office equipment for staff members carrying out the audits. Management and support staff in the ex-post audit unit as well as costs incurred in other units to support the auditors are excluded.

¹⁷² Compared to €22 300 in 2012 (footnote 61 on page 41 of the DG Research and Innovation's 2012 Annual Activity Report).

to pre-financing are not included in the population subject to audit. The approach to the Coal and Steel Research Fund is slightly different because of the limited number of transactions involved.

Up to 2011, each of the seven Authorising Officers by Delegation of the Commission services involved in implementing the research budget - the Research family - established a representative error rate for his/her own portion of the budget. This led to considerable planning constraints and multiple audits of the same beneficiaries by different services.

Therefore a Common Representative audit Sample (CRaS) was introduced in 2012 across the Research family. This reduced the audit burden on beneficiaries by reducing the number of repeat audits whilst continuing to provide a representative view of the implementation of FP7. As a result, the total number of planned audits could be reduced by 1 291 for the Research family as a whole and by 313 for DG RTD specifically.

The Common Representative audit Sample is intended to estimate the overall level of error in FP7, across all services involved in its management. It is complemented by 'risk-based' audits, audits selected according to one or more risk criteria.

Up to mid-2012, there was also a considerable emphasis on 'preventive' audits, i.e. early audits on beneficiaries participating in many projects and which had not been audited before. This initiative was taken with the intention of 'cleaning' the budget, and with a more general aim of bringing the residual rate of error in FP7, after taking recoveries and corrections into account, to below 2%. In the light of developments this element has now been scaled down, and resources which were used on preventive audits before have been reallocated to risk-based audits.

Different indicators are calculated to provide a comprehensive view of legality and regularity:

Overall Detected Error Rate: This is the error rate derived from the results of all audits, whether audits on a representative sample of beneficiaries or audits implemented for other reasons (large beneficiaries, preventive audits, risk factors, etc.).

Representative Error Rate: This is the error rate derived solely from the results of audits on a representative sample of beneficiaries, extrapolated by a statistical method to the overall population. This error rate provides an estimate of the level of error in FP7 at the time of the audits but says nothing about the follow-up and corrections/recoveries undertaken by Commission services after the audit, nor of the net final financial impact of errors. This error rate is calculated for FP7 as a whole.

Residual Error Rate: The residual error rate, on a multi-annual basis, is the extrapolated level of error remaining after corrections/recoveries undertaken by Commission services following the audits that have been made. The calculation of the residual error rate, as shown in **Annex 4**, is based on the following assumptions:

- (1) all errors detected will be corrected;
- (2) the residual error rate for participations subject to extrapolation is estimated to be equal to the non-systematic error rate; and
- (3) all participations subject to extrapolation are clean from systematic material errors.

The residual error rate develops over time and depends on the assumptions set out above. DG RTD would like to underline that this indicator is reliable and acceptable for the purposes for which it was intended, i.e. as a legality and regularity indicator on the

progress made, through its ex-post strategy, in dealing with errors over a multi-annual basis. However, it remains an estimate (range) given that not all extrapolation cases have been yet fully implemented.

Net Financial Impact of Errors: Not every error of legality and regularity in fact leads to a financial loss to the Community. This is because many participants incur expenditure going well above the budget set in the contract and so ineligible expenditure could be replaced with eligible expenditure. Ineligible expenditure identified during an audit may therefore have no effect on the Community contribution. This indicator is an estimate of the effect of this phenomenon across the population of contracts closed to date.

The net financial impact of errors is not directly used in reaching an assessment of the level of error in FP7 (as set out in **Annex 4**). However, it is an important result for arriving at a balanced picture of the management of the Framework Programme.

Result of ex-post audits

FP7 Audits

In the case of FP7, the year 2013 was the fifth year of implementation of the audit strategy. The

FP7 audit coverage

Number of audits closed by DG RTD in 2013

272

Total number of audited beneficiaries in FP7
(by the Research family)

2 148

% of audited beneficiaries in FP7

7.39%

% of the FP7 budget audited (DG RTD)

62.54%

(6.96% direct coverage and 55.59% indirect coverage by extrapolation)

audits performed intend to achieve two separate goals. A random MUS sample of participations is audited in order to produce a statistically representative estimate of the error rate present in the FP7 population. A separate sample, selected on the basis of size and risk criteria, is audited in order to detect and correct as many errors as possible and to identify possibly fraudulent operators. The audits are respectively referred to as 'representative' or 'corrective' depending on their main purpose.

Detailed data on DG RTD FP7 audit coverage are shown in the box and the table below.

Table 6 Indicators for DG RTD on FP7 audit coverage

	Planned cumulative period	Achieved cumulative period	Planned in 2013	Achieved in 2013
Number of closed audits	1 787	977 ¹⁷³	250	272
Total amount audited (EC share in €)	n.a.	582 667 799	n.a.	147 717 781

173 There are currently 275 FP7 RTD ongoing audits, with another 182 under preparation to be launched by the end of April 2014.

The error rates resulting from DG RTD FP7 audit work are:

- **Overall Detected Error Rate:** Based on 997 audits, this error rate amounts to **3.95%**¹⁷⁴.
- **Common Representative Error Rate:** Based on 156 cost statements for which the audit is completed (96% out of a sample of 162), this error rate is **4.14%**. The remaining cases are still subject to contradictory procedures with the beneficiaries; consequently, the Common Representative Error Rate may still develop. Based on the expected results of audits that are not yet closed it is estimated that this error rate will finish at around 5%. The Common Representative Error Rate is in a similar range to the one referred to in the Financial Statement accompanying the Horizon 2020 proposals.
- **Residual Error Rate:** At this point in time, this error rate amounts to **2.88%** if all extrapolations are implemented. Based only on the extrapolations already implemented it would be **2.99%**. These rates may increase slightly following the development of the Common Representative Error Rate.
- **Net Financial Impact of Errors:** Based on an analysis of 1 552 closed projects, DG RTD estimates that the Net Financial Impact of Errors will amount to **2.09%**. This is an estimate based on the final amount of reductions in payments to beneficiaries, taking into account budgetary ceilings.

Based on the audits completed and in progress under the CRaS, it is considered that the current Common Representative Error Rate resulting from audits of FP7 is around 5%. The residual error rate for DG Research and Innovation is estimated at around 3%. Although DG Research and Innovation has an action plan to address some causes of errors, it is already clear that the maximum 2% residual error target will not be attained without a massive increase in the number of audits, or a considerable increase in the administrative burden imposed on participants through widespread ex- ante controls.

Therefore, although the Residual Error Rate remains above the target of 2%, account should be taken of the cost of achieving this target. As was stated in the Financial Statement accompanying the Horizon 2020 legislation, the attempts to achieve the 2% target have caused a number of unexpected and/or undesirable side-effects. Among beneficiaries and the legislative authorities, the feeling has been strong that the control burden has become excessive. This increases the risk of lowering the attractiveness of the Union's Research programme, thereby negatively affecting Union research and innovation.

The European Council of 4 February 2011 concluded that:

"it is crucial that EU instruments aimed at fostering R&D&I be simplified in order to facilitate their take-up by the best scientists and the most innovative companies, in particular by agreeing between the relevant institutions a new balance between trust and control and between risk taking and risk avoidance". (see EUCO 2/1/11 REV1, Brussels 8 March 2011)

¹⁷⁴ This is lower than the representative rate as it includes a number of preventive audits carried out at the beginning of FP7.

The European Parliament - in its Resolution of 11 November 2010 on simplifying the implementation of the Research Framework Programmes - explicitly supported a higher risk of errors for research funding and:

"expresses its concern that the current system and the practice of FP7 management are excessively control-oriented, thus leading to waste of resources, lower participation and less attractive research landscapes; notes with concern that the current management system of 'zero risk tolerance' seems to avoid, rather than to manage, risks".

The European Parliament also stated, in its report on the Court of Auditors' special report in the context of the 2012 Commission discharge:

"Emphasises the necessity to strike the right balance between less administrative burden and effective financial control; notes that due to the specifics of the research field, a risk-tolerant and science-based approach should be encouraged so as to achieve research excellence and better impact of projects; believes that this approach will allow the Commission to uphold the balance between trust and control".

There is, therefore, an acceptance among stakeholders and institutions that the current approach needs to be reviewed. There are other objectives and interests, especially the success of the Union's research policy, international competitiveness, and scientific excellence, which should also be considered. At the same time, there is a clear need to manage the budget in an efficient and effective manner, and to prevent fraud and waste.

Taking these elements in balance, and in the light of the results of the FP7 audit campaign, DG RTD considers that its overall control strategy ensures that trust, control and other policy objectives are kept in balance. Aiming to achieve a residual error rate of 2% at all costs is not a viable approach.

For this reason, Article 23 of the Horizon 2020 Regulation explicitly states that:

"The control system shall ensure an appropriate balance between trust and control, taking into account administrative and other costs of controls at all levels, so that the objectives of Horizon 2020 can be achieved and the most excellent researchers and the most innovative enterprises can be attracted to it".

It also states that audits of expenditure on indirect actions shall be carried out in a coherent manner *"to minimize the audit burden for participants"*.

The reserve in the declaration of assurance for the FP7 expenditure is addressed in Section 4.2.

Development of error rates

As was reported in the 2012 AAR, a modification of the FP7 legal framework is no longer an option. The services responsible for Research will continue to provide guidance to beneficiaries and certifying auditors, and will continue their control and audit operations, including recovery and extrapolation of errors to non-audited contracts wherever appropriate. This should have some effect on the error rate, particularly in lowering the residual error rate, but will not provide fundamental changes. A second 'representative sample' will be taken to provide another estimate of the representative error rate. It is hoped that the learning effect from the

first audits will have some effect, but this is unlikely to be substantial.

Overall then, the representative error rate in FP7 audits can be expected to remain around 5%, and the residual error rate at 3% or a bit lower over the course of the programme. As was noted in the 2012 AAR:

“Taking into account the FP6 experience, and the need to balance legality and regularity with other objectives such as the attractiveness and the success of research policy, international competitiveness, scientific excellence, the wish to encourage participation of SMEs and the cost of controls, it is not expected that by the end of the programming period the Residual Error Rate will be below the materiality threshold”.

In the Financial Statement accompanying the proposal for Horizon 2020, the Commission set out its analysis of the likely future trend of error rates. It stated that the simplifications introduced in Horizon 2020 could be expected to lower the representative error rate from 5% to 3.5%, with the Residual Error Rate being as close as possible to 2% (but without necessarily being below 2%). This analysis still holds true, as the simplifications proposed were generally accepted.

However, some elements have been introduced in the legislation that will increase the risks in the programme. Firstly, there is the target for an increased participation of Small and Medium-Sized Enterprises (SMEs). As was noted in the 2012 AAR, SMEs have an error rate more than twice the rate for non-SMEs (6.61% as opposed to 3.07%). This is not entirely surprising, but the involvement of SMEs is vital to increasing innovation and boosting jobs in the EU. However, it does mean that an increased participation of SMEs increases risk.

Secondly, Horizon 2020 includes a commitment to widening the participation in the Programme, i.e. to having more new participants. However, as shown last year, new participants have an error rate nearly three times as high as recurrent participants (8.32% as opposed to 2.94%). Widening, though a positive element for the European research landscape, increases risk.

Finally, during the discussions on the legislative package for Horizon 2020, provision was made for support to participants with large research infrastructures. This provision should support some of the major European research organisations, who might otherwise have had difficulty funding their advanced research infrastructure, but does insert an additional complication into the rules, and with it an increased risk.

The Commission will take actions to try to mitigate the risk arising from these three new elements (guidance, training, ex-ante assessments for large infrastructure) but these will only mitigate, not avoid, the risks.

Overall then, DG RTD still believes that residual error rates should still fall over the course of FP7. They should also be reduced in Horizon 2020 thanks to the simplifications introduced in the legislation. However, it underlines that the level of reduction in Horizon 2020 is subject to the effect of elements introduced during the legislation which, although perfectly understandable in terms of improving support for European research and innovation, may have the effect of increasing risks.

Implementation of FP7 audit results

By the end of 2013, adjustments have been made for 992 audited participations. The amount to be recovered was €24.6 million in favour of the Commission. The percentage of total adjustments effectively recovered was 59.2% by the end of 2013.

Table 7 Implementation of FP7 audit results (cumulatively)

Cumulatively	Results from external audits		Adjustments pending implementation		Adjustments temporarily suspended		Adjustments implemented	
	Number of participations R=S+T	Funding adjustments set by AOSDs A=B+C	Number (S)	Value (B)	Number (S)	Value (B)	Number (T)	Value (C)
FP7	992	24 608 463 €	323	9 471 702 €	14	571 967 €	655	14 564 793 €

For 2013 alone, €9.17 million was recovered for FP7. In addition €4.29 million was recovered relating to implementation of FP6 audit results. There are currently 449 FP6 and FP7 cases pending implementation for the total value of €19.23 million with additionally 34 adjustments temporarily suspended.

Implementation of extrapolation

As regards extrapolation, systematic errors have been corrected for 276 participations, of which 22 in favour of the beneficiary. The implementation rate of FP7 extrapolation recommendations was 53.2% at the end of 2013. This shows considerable progress compared to 2012 (36.7%). As most cases have been identified in 2012 or later and there might be 18 months before new declarations are received, it is not unexpected to have a large number of open cases at this stage.

Table 8 Implementation of FP7 extrapolation (cumulatively)

Cumulatively	Number of contracts with expected systemic errors (A) = (B)+(C)+(D)+(E)	Number of contracts without systemic errors (B)	Implemented cases (C+D)				Number of cases to be implemented (E)
			In favour of the COMMISSION		In favour of the BENEFICIARY		
			Number (C)	Amount €	Number (C)	Amount €	
			FP7	2 190	889	254	

As for 2013 only, €0.94 million was recovered from FP7 extrapolation and €2.28 million from FP6 extrapolation. On the 31 December 2013 there were still 2 204 FP6 and FP7 extrapolation cases to be implemented.

Audits have a deterrent effect within the programme, as many beneficiaries will take extra care with respect to the preparation of their cost claims knowing that audits may follow. The

Total ex-post recoveries in 2013

from all sources of recoveries
€16.68 million

FP6 and FP7 ex-post audits
€13.46 million

FP6 and FP7 extrapolation
€3.22 million

auditors can also avoid future errors by guidance to participants. At the beginning of FP7 this was a specific aim of some audits.

In addition, the experience of auditors on the ground has been important in many improvements proposed in the legislation and rules for Horizon 2020. For example, one of the drivers for a flat rate of indirect costs was the regular identification by auditors of errors in the use of real indirect costs, and the understanding of the complexities of real indirect costs for participants.

Liquidated damages

Liquidated damages continue to be applied systematically where ineligible expenditure has been included in cost claims. In many cases, they do not result in a recovery order due to the application of the *de minimis* rule¹⁷⁵. By the end of 2013, out of the 1 013 cases processed¹⁷⁶, 457 were assessed as requiring recovery orders or liquidated damages. Pre-information letters were sent to beneficiaries in 52 of these cases and recovery orders were already been issued for 405 cases for a total value of €3 974 362. This is an increase from the last year (318 recovery orders worth €3 563 821)¹⁷⁷. The amount implemented by liquidated damages is a part of the total amount recovered through implementation of audit results and extrapolation cases.

Total costs and benefits of the audit and recovery process in 2013

It should be noted that, while costs should remain constant, the level of recoveries can be expected to rise over the next few years, as there is always a time lag between audits and recoveries. Overall, the audit and recovery process is cost-effective. However, the number of audits must also be balanced against the policy considerations set out above, in particularly assuring a good balance of trust and control, and minimising the burden for participants.

Coal and Steel Research Fund

Expenditure (final payments) on the Coal and Steel Research Fund in 2013 amounted to around €10 million, less than 1% of total DG RTD expenditure.

The total number of projects financed under the Coal and Steel Research Fund is limited (575, of which 268 running projects). It is, therefore, not cost-efficient to audit a representative sample selected on a statistical basis. For that reason, each year, a number of the largest beneficiaries are selected for audit. 22 audits have been completed since 2008, and a total amount of €20.1 million of EC financial contribution from 67 participations has been audited.

The detected error rate for the audits completed so far is 1.97%. This error rate is not statistically representative but, given the relatively high rate of audit coverage for the Coal and Steel Research Fund, it is considered to be a reasonable estimate of the total amount of error in the population. In addition the residual rate of error and the net financial impact of errors will clearly be lower than this.

Overall, DG RTD considers that expenditure under the Coal and Steel Research Fund is not marked by a material level of error.

175 Liquidated damages will only be applied where the unjustified contribution exceeds 2% of the total contribution claimed for the given period.

176 These figures also include the Coal and Steel Research Fund.

177 The figures for the year 2012 have been corrected following a data quality exercise.

Overall Cost and Benefits of controls

Table 9 Cost of controls

	FTE		Other (external) inputs	Total costs
	Officials	Contractual staff		
Stage 1 – Programming and evaluation	100.76	42.79	€12 661 789	€28 957 077
Stage 2 – Contracting	70.51	29.94	0	€11 403 257
Stage 3 – Monitoring the execution (financial circuits)	180.43	76.62	0	€29 179 935
TOTAL EX-ANTE	351.7	149.35	€12 661 789	€69 540 269
Stage 4 – Ex-post controls and recoveries	64.54	27.41	€3 105 881	€13 544 511
TOTAL EX-POST	64.54	27.41	€3 105 881	€13 544 511
TOTAL COSTS	416.24	176.76	€15 767 670	€83 084 780

Overall costs of control

Total cost of controls and financial management FTEs / total value of operational payments made in 2013

€83 084 780 / €4 030 100 000 = **2.06%**

Benefits of controls

The benefits of the grant management control system are considered here as a whole, as they cannot only be expressed in monetary terms. The benefits are quantitative and qualitative and a simple cost-benefit evaluation would not reflect this reality.

The first objective of the control system is to achieve the main policy objective – to create growth and jobs, especially by contributing to more and better science in Europe. In this sense, the controls aim to ensure good work programmes, select the best proposals to be funded and verify the scientific deliverables. The benefits are much wider than the budget implemented in the given year.

The second objective of the control system is to ensure that the EC contribution paid to the beneficiaries is materially free of irregularities or errors. The challenge of this objective, and our success in achieving it, has been extensively developed above.

Nevertheless, during the different control stages, some economies are made for the EU budget: reductions of the requested EC contribution in the grant agreements during the contracting stage (€128 million in 2013), rejected costs during the contract management stage (an estimate of €36.3 million), and ex-post recoveries of irregular expenditure (€16.7 million in 2013). These amounts demonstrate the effectiveness and rigour of the controls carried out, and can give information about the overall regularity of the DG's implementation of the programme. The totality of the appropriations would be at risk in case the controls would not be in place.

Overall, given:

- the achievements of research policy as set out in Part 1;
- the quantitative and qualitative benefits arising from the control systems adopted;
- the error rates set out above, that are within a range considered as tolerable for the policy area, especially in the light of the need for a balance between trust and control;

- the costs of the control system compared to total expenditure;

it is considered that a cost-effective control system has been put in place, balanced with the objectives of research and innovation policy.

Fraud prevention and detection

As required by the Commission's overall anti-fraud strategy¹⁷⁸, DG RTD has developed its anti-fraud strategy and updated it in 2012. The related Action plan, largely completed by the end of 2013, focussed on three domains: assessing and analysing the fraud risk; raising the awareness of fraud risks; improving the capacities and the cooperation to counter it.

Anti-fraud measures and actions are embedded in various ex-ante and ex-post controls for prevention and detection purposes. There is an organised follow-up of fraud cases and fraud suspicions including coordination with OLAF. In this respect, during 2013 ten cases were referred to OLAF for examination and possible investigation. This compares to eight cases in 2012. In addition, in 2013 OLAF has initiated eleven cases which concern the activities of DG RTD based other sources of information (eight cases in 2012).

By December 2013, a total of 377 (144 in 2013) staff from all operational functions had attended the DG Research and Innovation fraud awareness training. The course has now been opened to staff of the EAs and JUs.

In order to better target the analysis and the actions to take, a fraud-awareness survey was carried out in May 2013. The results demonstrated a clear positive impact of the fraud-awareness training course given in DG RTD.

Analyses have been undertaken into potential fraud risk schemes, such as double funding and plagiarism. From these analyses improved definitions and provisions have been integrated into the Horizon 2020 regulations, although significant risk levels have not been identified. These analyses help to allocate resources to the mitigating measures in a risk-based and cost-effective manner.

The Anti-Fraud Strategy, which will be subject to revision in due course, will continue to improve fraud risk awareness through communication activities and training for operational staff, by linking databases and information with other Research DGs and Services for intelligence analysis, and through risk-based audit preparation and selection.

178 COM(2011) 376 24.06.2011.

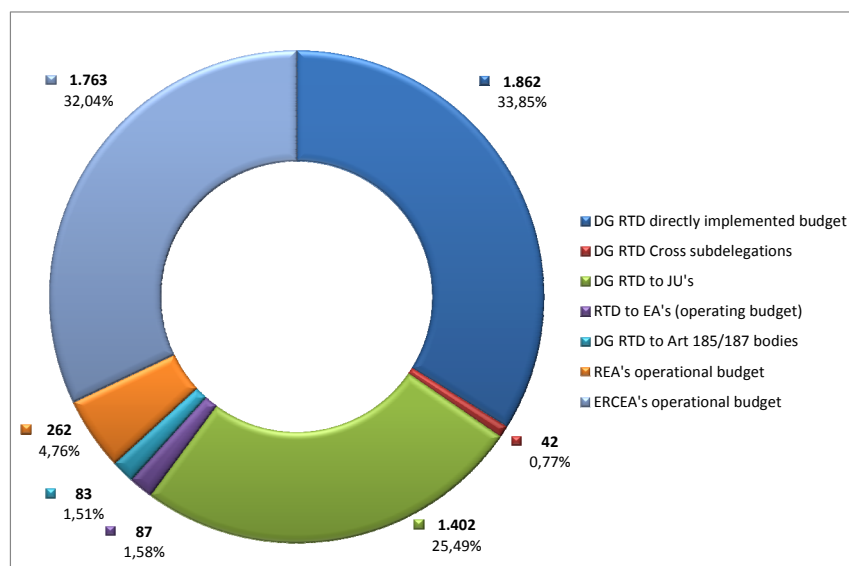
2.2 Budget implementation tasks entrusted to other services and entities

This section reports and assesses the elements that support the assurance on the achievement of the internal control objectives as regards the results of the DG's supervisory controls on the budget implementation tasks carried out by other Commission services and entrusted entities distinct from the Commission.

As mentioned in 'The DG in Brief', DG RTD has entrusted parts of its budget for implementation (commitment appropriations) to other Commission services, EAs, JUs, other bodies linked to Article 185 initiatives, and to the EIB.

The amount implemented by these entities, already over 65%, is expected to rise to around 75% in Horizon 2020. In all these cases, the DG's supervision arrangements are based on the principle of controlling 'with' the relevant entity.

Figure 5 – Distribution of expenditure by DG RTD and its EAs (in million € and as %)



2.2.1 Cross-sub-delegations

As in previous years, DG RTD has cross-sub-delegated a number of activities to different services within the Commission, in order to arrange the provision of certain operations more efficiently. In 2013, €42.19 million was subdelegated, out of which €25 million dedicated to a RTD/MOVE joint call for proposals. Being a Commission service itself, the AOD of the cross-delegated service is required to implement the appropriations subject to the same rules, responsibilities and accountability arrangements.

The cross-delegation agreements require the AODs of cross-delegated services to report on the use of these appropriations. The reports on the sub-delegations received from other DGs and offices did not provide any indication of any particular unfavourable observation with regard to the regularity and legality of the transactions concerned.

Please refer to **Annex 10** for the complete list of the DG RTD activities covered by crossed sub-delegation in 2013.

2.2.2 Executive Agencies

In 2013, DG RTD was the lead DG for the EAs REA and ERCEA. These agencies implemented a total of €2 025 million for the operational budget¹⁷⁹, and received €87 million of administrative budget. In DG RTD, it is estimated that 12.5 FTE¹⁸⁰ were employed in supervision and coordination activities related to these bodies. This relates to a total cost of around €1.26 million, or 0.06% of the amount of expenditure.

The monitoring arrangements include the membership of the Steering Committees and the assessment of the Annual Activity Reports (AARs), which are communicated to the College as an annex to the AAR of the parent Directorate-General. Agencies report quarterly to the Directorate-General on the use of resources. The preparation of the EAs' budgets and annual work plans is coordinated with the Directorate-General.

The EAs are subject to audit by the Internal Audit Service of the Commission and by the European Court of Auditors – DG RTD uses their reports as an element of the supervision of these bodies.

Moreover, the management of these EAs are staff of DG RTD on detachment.

The supervision of the EAs has continued throughout 2013. The preparation of the Annual Activity Reports of these Agencies was coordinated and reviewed by DG RTD and the Steering Committees of the Agencies. No unexpected issues arose that would need to be raised in this report. The reserves of the REA EA on a part of its expenditure mirror what is already reflected in this report.

2.2.3 Joint Undertakings and Public-Public partnerships

The JUs IMI, FCH, and Clean Sky implemented in 2013 a total operational budget of €458 million, using €39 million of administrative budget. In DG RTD, around 3.5 FTE are allocated to the supervision and coordination of each of them.

Table 10 – Contributions to Joint Undertakings

JU	Type of C1 appropriations	Amount	Total
IMI	operational appropriations	€196 029 206	€216 029 206
	administrative appropriations	€20 000 000	
Clean Sky	operational appropriations	€221 513 959	€233 998 269
	administrative appropriations	€12 484 310	
FCH	operational appropriations	€40 276 699	€47 011 920
	administrative appropriations	€6 735 221	

The monitoring, supervisory and accountability arrangements include the following:

- The Commission is a member of the Governing Board. Arrangements are in place within the DG to ensure that all proposals to the Governing Board are properly assessed and the Commission position agreed;
- Each JU is required to produce an Annual Activity Report;

179 Not a direct part of the DG RTD budget.

180 Cost Benefit Analysis for the delegation of certain tasks regarding the implementation of Union Programmes 2014-2020 to the Executive Agencies, 19 August 2013.

- The JU Director signs a declaration of assurance in line with the one used in the Commission;
- The Commission prepares an Annual Progress Report on JTI JUs that presents achievements and problems, if any. This report is submitted to Parliament and Council;
- The JU is required to inform the Commission without delay of any significant developments in the areas of risk management, control and audit;
- The JUs have harmonised their ex-post audit strategies with the Commission; DG RTD is aware of the results of the ex-post audits carried out;
- DG RTD may request any additional information deemed necessary and has the right to audit the JTI JUs' operations;
- The Commission's Internal Audit Service (IAS) may carry out audits in the JTI JUs, and DG RTD will receive the reports for action if necessary;
- The European Court of Auditors is the external auditor of the JTI JUs, and DG RTD receives copies of the reports for action if necessary;
- There are extensive informal and formal contacts regarding research matters, as well as on questions of internal control, audit (the JTIs are members of the Committee on Audit in Research), internal control, etc.

As far as the JTIs are concerned, neither the Annual Activity Reports, nor the regular supervision of these bodies, raised particular issues that would need to be included in this report.

It is noted that one of the JTIs (IMI) received, for its 2012 accounts, a qualified opinion from the European Court of Auditors on the legality and regularity of the transactions underlying the accounts. The ex-post audits carried out by the JTI revealed errors that suggested that the residual rate of error may be above 2%. Many of the beneficiaries of this JTI are also beneficiaries of the Research DGs. The basic rules applied to grants awarded by this JTI are the same as for the Commission's research services. Thus it is not a surprise that audits undertaken by the JTI identify the same types of errors as the Commission services. This does not signal a failure on the part of the JTI. The ex-post audit work carried out by these bodies continues, harmonised as far as possible with the work of Commission departments. DG RTD continues to keep this situation under review, based on its own work and also the reports of the European Court of Auditors, but does not consider that there is a failure of the IMI itself or of its own supervision of the JTI.

Nevertheless, for reasons of prudence, the total amount of operational payments made to the IMI JU has been added to the scope of DG RTD FP7 reservation.

Overall, DG RTD considers that its supervision of these JUs is effective and appropriate. Total costs of supervision are estimated at €1.06 million, compared to budgets of 497.04 million.

2.2.4 European Joint Undertaking for ITER and the Development of Fusion Energy (F4E)

The European Joint Undertaking for ITER and the Development of Fusion Energy (F4E) was created to provide Europe's contribution to ITER, the world's largest scientific partnership that aims to demonstrate fusion as a viable and sustainable source of energy. ITER brings together seven parties that represent half of the world's population – the EU, Russia, Japan, China, India,

South Korea and the United States. ITER will allow scientists and engineers to acquire the knowledge and technologies needed to develop fusion power stations that will produce electricity. It is building a fusion power station in Cadarache (France).

The EU provides about 80% of the F4E resources and the Commission is represented by DG RTD in the Governing Board (GB) and the Executive Committee (ExCo) of F4E. Nevertheless, it should be noted that the Council decision of 2007 establishing F4E gives the Commission only a limited number of votes on the GB (5 votes out of 67).

The GB receives and approves the main documents regarding the governance of F4E and its activities (the Work Programme, the Project Plan, the Resource Estimates Plan, the Budget, etc.). The Commission monitors and supervises the activities of F4E based on the regular reporting of the F4E Director to the GB and in particular the Annual Activity Report, which is accompanied by a declaration of assurance signed by the F4E Director.

The annual accounts of the Joint Undertaking are subject to the audit by the European Court of Auditors. Following the observations from the Court of Auditors on the 2012 F4E annual accounts, there is a need to put in place global strategies for: (a) the procurement of certain contracts and tools, (b) the regular monitoring of overall cost estimates and, (c) reporting on potential cost deviations. However, the report did have an unqualified opinion.

In addition, F4E's structure includes an internal audit function and an Audit Committee. The Internal Audit Service of the Commission provides the internal audit service of F4E.

Given the importance of the project, DG Research and Innovation also has a unit of 17 people dedicated to following the implementation of the ITER project. There are a large number of formal and informal contacts at all levels to ensure that adequate monitoring is in place.

Both the Council and the European Parliament have contracted private audit firms to examine the operations of F4E. DG Research and Innovation has seen and assessed both of these reports. The European Parliament has, in 2013, carried out a number of visits to the ITER site, and examined the operations of ITER and F4E closely.

Overall then, it is concluded that there is adequate monitoring of the activities of F4E, by DG RTD but also by the other EU Institutions.

The different reports and monitoring reveal the difficulties that F4E has in implementing the project, arising largely from the complexity of the project (no fusion reactor has ever been built on this scale before), the limited level of competition (given the size and complexity of the parts that have to be built) and the complex governance structures for an international project. The major risk arising is that the current budget for the project will be insufficient to complete the construction of the parts of the project for which the EU is responsible. This is exacerbated by the removal, by the Council, of any contingency during the last negotiations on the budget.

Actions to mitigate the risk, especially by cost containment mechanisms, are underway, but these can only reduce, not avoid, the risk.

This does not represent a risk to legality and regularity however, nor a lack of supervision by DG RTD, so is not reported as a reservation.

In 2013, €865.5 million of operational budget was allocated by F4E, with €39 million of administrative budget.

2.2.5 Article 185 initiatives

Article 185 of the Treaty on the Functioning of the European Union (TFEU) enables the EU to participate in research programmes undertaken jointly by several Member States, including participation in the structures created for the execution of national programmes.

The actions supported may cover subjects not directly linked to the themes of the Framework Programme (FP), as far as they have a sufficient EU added value. They will also be used to enhance the complementarity and synergy between the FP and activities carried out under intergovernmental structures such as EUREKA and COST.

In 2013, DG RTD allocated a total of €83 million to Article 185 initiatives.

Table 11 – Contributions to Article 185 initiatives

Article 185 initiative	Mission	Entrusted amount
Eurostars	Joint research programme for R&D-performing SMEs and their partners, undertaken by 33 countries, in the context of EUREKA	€20 000 000
EMRP	Joint European Research Programme in the field of Metrology, the science of measurement, undertaken by 22 countries	€41 900 494
Bonus	Joint research programme in the field of Baltic Sea research	€21 317 588

2.2.6 Risk-Sharing Finance Facility (RSFF)

The RSFF is a credit risk-sharing scheme set up with the European Investment Bank (EIB) within the framework of FP7, in order to improve the access to debt finance of participants in RTD actions. A Cooperation Agreement between the Commission and the EIB, in respect of the RSFF, was signed on 5 June 2007. Under this agreement both parties made available €1 billion (since increased) to cover risks associated with loans provided for investments in Research, Development and Innovation (RDI). The €2 billion allocated by FP7 EC and the EIB to the RSFF was expected to allow the EIB to make total loans between €8 and 13 billion.

Following the interim evaluation of RSFF and Parliament and Council requests, the Commission and the EIB amended on 5 December 2011 the RSFF Co-operation Agreement and a specific new sub-facility for SMEs and small mid-caps, the so-called 'Risk-Sharing Instrument' (RSI) which is implemented by the European Investment Fund (EIF), was developed.

The RSFF is managed by the EIB in accordance with its own rules, policies and procedures. Its implementation is supervised by a Steering Committee composed of at least 4 members from the EIB, and members from the Commission representing different interested DGs. The Steering Committee acts by consensus.

The Director-General of DG RTD is the authorising officer by delegation for the payment of the EU contribution to the RSFF. He is represented in the daily implementation of the RSFF Cooperation Agreement by a unit within the DG. DG ECFIN is the Asset Management Designated Service, and is responsible for monitoring the management by the EIB of the EU Financial Assets available on the EU RSFF Account. It approves the Asset Management Guidelines as well as the annual investment strategy which are to be followed by the EIB.

To decide on the eligibility of loans proposed by the EIB, an 'Eligibility Committee' has been established including members of DG RTD and relevant representative(s) of other Research family DGs.

The total EU Contribution from FP7 paid out by DG RTD since the start of the scheme is €1.23 billion (for RSFF: €961 million; for RSI: €270 million). The total portfolio of RSFF loans comprises 114 signed loans with a total amount of €11.3 billion. Under RSI, a total guarantee volume of €1.14 billion has been committed to support loan finance of, at least, €2.28 billion to innovative SMEs and small midcaps.

Total fees paid to the EIB for the management of the RSFF portfolio (over the whole period up to 2013) amounts to around €24.3 million (1.97% of the RTD contribution). There is so far only one impairment, with an amount of €4.5 million. For the implementation of RSI, fees paid to the EIF amounted to €3.8 million for administrative fees and risk remuneration. An amount of €7.8 million has been provisioned by the EIF to serve guarantee call claims from financial intermediaries.

DG RTD considers that the operational and financial reporting requested from, and provided by, the EIB Group in the context of the RSFF implementation is sufficient and provides relevant information and figures to ensure a sound and efficient management and follow-up. It considers that its internal structures, including the involvement of the expertise of ECFIN and of other DGs (including DG BUDGET) are adequate to ensure a satisfactory supervision of the RSFF. DG RTD will further adapt its reporting according to the requirements of the new Financial Regulation and in particular its Title VIII.

2.2.7 Conclusion on indirect management

For the 2013 reporting year, the cross-delegated AODs, EAs, JUs, 'Article 185 initiatives' and the RSFF have themselves reported reasonable assurance on the delegated budget managed by them on our behalf. They have signalled no serious control issues.

From our own monitoring and supervision work done, which includes regular contacts/representation or at least the desk reviews of relevant management reports and audit reports, as a Parent DG we have no indications that their reporting would not be reliable. We are aware of the reservations given by REA and IMI, and do not consider that these represent a failure by the organisation or of our supervision.

The costs of monitoring and supervision controls have not yet been fully calculated for all bodies. However, for EAs it represents 0.06% of the total entrusted budget amount and for JUs (excluding F4E) is 0.21%.

Consequently, in view of our responsibility as Parent DG for the indirect management of the parts of our budget via the cross-delegated AODs, EAs and entrusted entities mentioned above, we can conclude that there are no control weaknesses affecting assurance, except for the need to expand the scope and exposure from our own reservation for FP7 (see section 2.1) to include the related budget parts entrusted to IMI. (see section 4.1.)

2.3 Assessment of audit results and follow-up of audit recommendations

This section reports and assesses the observations and conclusions reported by auditors which could have a material impact on the achievement of the internal control objectives, and therefore on assurance, together with any management measures taken in response to the audit recommendations.

2.3.1 Internal Audit Service (IAS)

During 2013, the Internal Audit Service carried out a number of audits on DG RTD, which led to the following conclusions:

- The *'Audit on the Management and Monitoring of Staff Allocation in the Commission Services'* was concluded on 25/01/2013. It assessed that the mechanisms in place to manage and monitor staff allocation provide reasonable assurance, but recommended better information concerning the Human Resources allocated to the DG's existing tasks and their associated priorities; a better basis for comparing the workload of different units/directorates; and the development of an HR plan. DG RTD considers that two of the three very important recommendations have been implemented, while the implementation of the third one is still ongoing.
- The IAS concluded on 22/03/2013 the *'Limited Review of the Calculation and the Underlying Methodology of DG RTD's Residual Error Rate for the Reporting Year 2012'*. The auditors did not issue an opinion but considered that the residual error rate calculated for the AAR may be over-optimistic given the performance in the closure of FP6 extrapolations (78.8% at the time). This has been taken into account in section 'Stage four: Ex-post controls and recoveries' above.
- The IAS started in May 2013 the *'Audit on the Management of the Sygma IT Project (Phase 1)'* that involved both DG RTD and DG C-NECT. The draft report was presented in December 2013 and the final report was issued on 30/1/2014. The report contained 7 recommendations, 2 of them very important. However, the Sygma project is to support Horizon 2020 and so has no impact on 2013 assurance.
- The IAS launched in November 2013 an audit on 'Implementation of FP7 Control Systems (including supervision of external bodies)'.
- The IAS carried out a 'Follow-up of the audit on Development of IT systems to support the management of the Horizon 2020 Research Programme', which resulted in closing 6 out of 7 recommendations.

2.3.2 Internal Audit Capability (IAC)

The Internal Audit Capability completed five audits¹⁸¹, 6 follow-up engagements and 4 Desk Reviews in 2013.

Based on the results of the audits the Internal Audit unit expressed an overall opinion that the internal control system in place provides reasonable assurance on the achievement of the business objectives set up for the processes audited, except for the following issues:

- The accountability structure in DG RTD foresees that the Directors are, as Authorising Officers by Sub-delegation (AOSD), responsible for putting in place the internal control framework guaranteeing the legality and regularity of transactions, although, according to the Internal Rules, the results and liabilities of the AOSD are assessed in the light of compliance with the internal control system and procedures laid down by the Director-General as the Authorising Officer by Delegation (AOD). The IAC noted that the adopted

¹⁸¹ These were: Audit on Research Fund for Coal and Steel, Audit on Security Management, Audit on Business Processes, Audit on Negotiation of Grants, and Audit on Missions.

business processes sometimes contain different options and are not always sufficiently developed to ensure harmonised practises and interpretation throughout the DG. (Audit on *'Business processes'*)

- The internal targets set for Time-to-Grant were achieved only in half of the calls for proposals under 2012 work programme. The main reason for this shortfall is the lack of a harmonised streamlined procedure aimed at improving time to grant. The agreed targets for Horizon 2020 are even more ambitious and will require radical overhaul of the business processes for negotiation/finalisation of grants. (Audit on *'Negotiation of Grants'*)
- The information in the database used for the selection of experts is not always complete and there is an issue related to data protection for processing experts' personal data. The requirement to publish the list of all types of experts that have assisted the Commission has not been fully respected since the beginning of FP7. (Audit on *'Management of independent Experts' currently at the draft report stage*)
- Procedures shall be put in place to ensure that revenues and repayments generated by the EU contribution to the Risk Sharing Finance Facility are recorded in the budget as assigned revenue appropriations for the Horizon 2020 RSFF successor. (Audit on *'Management of the Risk-Sharing Finance Facility', currently at the draft report stage*)

All of the recommendations relating to final reports have been accepted and are covered by management action plans set up for the effective implementation of audit recommendations.

Finally, the Internal Audit unit was in the process of finalising four additional engagements at the end of the year: an audit on *'Contribution to JTIs'* and an audit on *'Implementation of Ex-Post Audit Results and Management of Extrapolations'*.

2.3.3 European Court of Auditors (ECA)

The Court's overall assessment of the supervisory and control systems in the Research area is that they are 'partially effective' (**Table 12**). The Court concluded that the most likely error rate for the expenditure area 'Research and other internal policies' was 3.9%.

Table 12 Impact indicators: Impact on the declaration of assurance

	2012	2013
European Court of Auditors: overall assessment of supervisory and control systems	Partially effective	Partially effective

The Court assessed the 2012 Annual Activity Report and the accompanying declarations of the Director-General for Research and Innovation and concluded that:

“[The AAR] provides a fair assessment of financial management in relation to the regularity of underlying transactions, and the information corroborates the Court's findings in most respects. The AAR of DG Research and Innovation is an example of good practice, providing a clear and comprehensive analysis of the factors affecting the regularity of expenditure.”

DG RTD thanks the Court for this recognition of its efforts to provide a full and transparent picture of its operations.

The Court recommended that in the area of the research FPs, the Commission should:

- (i) Further intensify its efforts to address the errors found in interim and final payments and clearings, in particular by reminding beneficiaries and independent auditors of the eligibility rules and the requirement for beneficiaries to substantiate all declared costs;
- (ii) Remind research FP project coordinators of their responsibility to distribute the funds received to other project partners without undue delay;
- (iii) Review the cases of weaknesses in ex-ante checks identified by the Court in order to assess if the checks require modification;
- (iv) Reduce delays in the implementation of ex-post audits and increase the implementation rate for extrapolation cases.

The Commission accepted the Court's recommendations.

As regards the first issue, DG RTD has reinforced its efforts to provide guidance and feedback to participants and certifying bodies on the most common errors. Based on a document listing the 10 most common errors, it launched a communication campaign in 2012. By the end of 2013 there had been presentations in 24 Member States and Associated countries with 3 100 people attending. DG RTD has, in addition, put in place a process for providing feedback to certifying auditors on instances in which ex-post audits identify material differences between the certified cost statements and its own findings.

As regards the second issue, DG RTD will remind coordinators of their responsibility. However it has identified that at least some of the delay is caused by late admission by participants to the consortium agreement, which has caused a delay in the transfer of funds.

As regards the third issue, the analysis of cases has revealed that most of them concerned subcontracting that was in the interests of the research project, but had not been properly notified to the Commission in advance to allow the contract to be modified. DG RTD has modified the rules for Horizon 2020 so that this sort of situation will not give rise to an irregularity, thus simplifying the rules and reducing administrative burden. In this respect it thanks the Court for bringing these cases to its attention.

On the fourth issue the implementation rate for audit results is as follows:

Table 13 Implementation of ex-post audit results FP6 and FP7

	2012 (value and number of cases)	2013 (value and number of cases)
FP6	81.8%, 92.2%	81.6%, 92.3%
FP7	38.3%, 60.2%	59%, 66%

and the implementation rate for extrapolation is 84.1% for FP6 (78.8% in 2012) and 53.2% for FP7 (36.7% in 2012).

In 2013 the Court published a performance audit of FP7 (*'Has the Commission ensured efficient implementation of the Seventh Framework Programme for Research?'* SR2/2013). This was a welcome report which presented a balanced view of the strong and weak points in the management of the 7th Framework Programme, and will allow DG RTD to improve its processes, partly for FP7 but even more for Horizon 2020. The Court identified the following major points:

- the Commission has taken a number of steps to simplify the rules, but more can be done;

- some harmonisation measures have been taken, but some aspects of FP7 implementation are affected by a lack of coherence;
- attention has focused mostly on ensuring high-quality spending, less on efficiency;
- processes can be shortened further, and in particular Time-to-Grant (i.e. to sign contracts) is decreasing, but there have been differences between services during the first five years of FP7;
- quality controls are sound with only few weaknesses;
- financial controls have been rationalised but are still not risk-driven;
- new instruments (RSFF, JUs) have met the need for which they were created, but there are deficiencies in implementation.

The Court issued 7 recommendations, which were all accepted. They will be implemented over the next few years. One of the major actions has already been implemented by the creation of a Common Support Centre for all Research services. This Centre brings together legal advice, audit, IT, business processes and information services for all services managing Horizon 2020. This should ensure a more harmonised approach to beneficiaries, as well as allowing efficiency savings in the management of research expenditure.

DG RTD is aware of the Court of Auditor's reports on EAs and JUs.

2.3.4 Follow-up of action plans for audit from previous years (IAS, IAC, and ECA)

The implementation of recommendations issued by the Internal Audit Service has progressed during 2013. Six recommendations from IAS audits of previous years have been closed and there is only one open recommendation left from the *'Audit on Management and Monitoring of Staff Allocation in Commission Services'*, which will be implemented in 2014.

Concerning the work of DG Research and Innovation's Internal Audit unit, the recommendations from audits have been implemented within the original deadlines, with the exception of six 'very important' recommendations from four different audits: *'Document Management'*, *'Communication'*, *'Nuclear Fusion Expenditure'* and *'Research Fund for Coal and Steel'*. The progress of pending actions is closely monitored and residual risks resulting from the non-implementation of the overdue recommendations were addressed by the revised action plans.

The Internal Audit unit also carried out the follow-up of the audits concerning *'FP7 Grant Management'*, *'Cut-Off Procedures'*, *'FP7 Payment of Grants'*, *'Coordination Activities Related to FP7 Innovative Initiatives'* and desk reviews on *'Public Procurement'*, *'IT General Controls'* and *'International Cooperation Activities'*, which concluded that there had been effective implementation of the recommendations. Nevertheless, the follow-up audit on *'FP7 Grant Management'* resulted in the formulation of a new recommendation.

The European Court of Auditors has analysed the progress made on the recommendations from previous years. In this respect, regarding the 2009 recommendation on making beneficiaries and independent auditors aware of the eligibility of expenditure, the Court noted that the Commission has embarked on a communication campaign. As regards the 2008 recommendation related to penalties to and making recoveries and adjustments in case of undue reimbursement of claimed costs, the Court noted that the Commission "has imposed

systematically liquidated damages on participants that have been found to have overstated expenditure". As regards former DAS exercises, there are no recommendations from the Court left open.

Overall, internal and external audit work contributes significantly to the continuing improvement in DG RTD systems and operations. The IAS and IAC make recommendations that are subject to a systematic follow up by the Directorate-General. At the end of 2013, thirteen recommendations (26% of the 49 still open) are still open after the target date originally set. It is normal that this should happen in a certain number of cases due to changes in priorities, additional complications not foreseen at the time of setting the original target date, etc. After reviewing these cases, it is concluded that internal audit work does not reveal weaknesses that would require a reserve in this report.

The findings and recommendations of the European Court of Auditors are similarly subject to a systematic follow-up. Action plans have been put in place and implemented. The overall findings of the ECA in respect of the error rate are supported by the findings of the Commission's own controls, and the effect of this on the Director-General's declaration of assurance is set out in section 4.2 below.

3. ASSESSMENT OF THE EFFECTIVENESS OF THE INTERNAL CONTROL SYSTEMS

The Commission has adopted a set of internal control standards, based on international good practice, aimed to ensure the achievement of policy and operational objectives. In addition, as regards financial management, compliance with these standards is a compulsory requirement.

DG RTD has put in place the organisational structure and the internal control systems suited to the achievement of the policy and control objectives, in accordance with the standards and having due regard to the risks associated with the environment in which it operates.

Effective implementation of the internal control standards

The effectiveness review carried out in 2013 concluded that all Internal Control Standards were effectively implemented in DG RTD. However, the Internal Control Framework is reviewed continuously, and different initiatives will be taken with respect to different Internal Control Standards.

In 2013, Internal Control Standard 3: Staff allocation and mobility was prioritised.

Throughout 2012, significant shortages of qualified staff were reported. As a result of a number of recent developments, the issue of staff allocation will remain on the agenda in the years to come. There is first of all the 5% reduction of staff decided by the Commission for the period 2014-2020. In addition, the Commission will externalise the implementation of much of Horizon 2020, mainly through currently existing EAs. Thus around two thirds of the Horizon 2020 budget will be implemented externally. More externalisation implies that, in the future, DG Research and Innovation will focus its mission more on policy-making and less on project management, which has an impact on the required profile of its human resources.

To meet these challenges, and to address recommendations of the Commission's Internal Audit Service and the European Court of Auditors regarding staff allocation, questions relating to staff mobility, allocation and competencies required more attention.

During 2013 DG RTD carried out an exercise to assess the resources used on its different activities. The intention is to then develop workload indicators to ensure a good match between workload and resources, identify negative priorities, enable more resources to be targeted on new priorities and increase efficiency.

In addition, in 2013, DG RTD prepared the ground for the transfer of some grant management functions to EAs. This included the legislative base, but also an assessment of the staff needs for the Agencies. The objectives linked to the reasons for prioritisation in 2013 have been met, but new challenges mean that this standard is again prioritised, although for different reasons, in 2014.

As a continuous development of corporate Internal Control, it was decided to prioritise three Internal Control Standards for 2014. This decision reflects DG RTD's strong intention to establish a simpler and more efficient management system for Horizon 2020. The Standards chosen are those where important efforts are planned for 2014;

- ICS 3 (Staff allocation and mobility),

- ICS 8 (Processes and procedures),
- ICS 9 (Management supervision).

The reasons for choosing ICS 3 have already been discussed above.

ICS 8 is prioritised due to the current development of a number of business procedures for Horizon 2020. The objective is to produce simple, yet robust, procedures that allow both the granting body and the beneficiary to perform the necessary administrative procedures as swiftly and efficiently as possible. Another important objective is harmonisation; i.e. that the procedures followed should be the same in all bodies implementing Horizon 2020 (DGs, EAs, JUs as well as internally within a given body).

ICS 9 was chosen because of the extension of DG RTD's supervision responsibilities under Horizon 2020. In 2014, it will become parent DG of four EAs; adding INEA and EASME to its existing agencies REA and ERCEA. For the two new agencies DG RTD will not be lead DG. Therefore, work has started to lay down Memoranda of Understanding containing detailed supervision and coordination arrangements.

It should be noted that the efforts to review and complete DG RTD's supervision structure do not only concern the EAs, but also the JUs and Public-public bodies. In this area too, DG RTD's intention is to set up a simple, efficient and robust system.

4. MANAGEMENT ASSURANCE

This section reviews the assessment of the elements reported in Parts 2 and 3 and draws conclusions supporting the declaration of assurance and namely, whether it should be qualified with reservations.

4.1 Review of the elements supporting assurance

The information reported in Parts 2 and 3 stems from the results of management and auditor monitoring contained in the reports listed. These reports result from a systematic analysis of the evidence available. This approach provides sufficient guarantees as to the completeness and reliability of the information reported and results in a complete coverage of the budget delegated to the Director-General of DG RTD.

The information reported in Parts 2 and 3 does not result in any major issues meriting a reservation. As regards section 2, assessment by the management, the analysis of the results of the controls in place, as shown in the indicators outlined above, and the examination of the evidence available, all suggest that DG Research and Innovation's management is in a position to provide unqualified reasonable assurance on the following areas:

- Policy-development activities;
- The processes relating to the selection of contractors and beneficiaries for FP7 projects and its underlying financial operations (legal and financial commitments);
- FP7 payments relating to administrative expenditure and procurement;
- FP7 pre-financing payments for grants;
- Expenditure on the Coal and Steel Research Fund.

Concerning expenditure on reimbursements against cost statements, the situation for FP7 is set out in section 4.2 below.

4.2 Reservations and overall conclusion on assurance

4.2.1 Reservation

	DG RTD
Title of the reservation, including its scope	Reservation concerning the rate of the residual errors with regard to the accuracy of cost claims in the Seventh Research Framework Programme (FP7).
Domain	Direct management grants paid by DG RTD, and the budget implemented by the IMI JU in the Seventh Research Framework Programme.
ABB activity and amount affected (= "scope")	08 02 – 08 08; 08 10 – 08 17; 08 19 – 08 21. Payments made in FP7 by RTD (including the prefinancing cleared in 2013) plus the operational budget paid to the IMI JU by DG RTD: €3 664 million .
Reason for the reservation	At the end of 2013, the residual error rate is not yet below the materiality threshold foreseen for the multi-annual period.
Materiality criterion/criteria	<p>The materiality criterion is the residual error rate, i.e. the level of errors that remain undetected and uncorrected, by the end of the management cycle.</p> <p>The control objective is to ensure that the residual error rate on the overall population is below 2% at the end of the management cycle. As long as the residual error rate is not (yet) below 2% at the end of a reporting year within the FP's management lifecycle, a reservation would (still) be made.</p>
Quantification of the impact (= actual exposure")	The maximum impact is calculated by multiplying the residual error rate in favour of the Commission by the amount of FP7 payments based on cost statements authorised in 2013 plus the estimated amount of the pre-financing expenditure cleared in 2013. The Representative Error Rate for 2013 is 4.14% but may still develop as the remaining cases are still subject to contradictory procedures with the beneficiaries. Based on the expected results of audits that are not yet closed, it is estimated that this error rate will finish at around 5%. The Residual Error Rate is between 2.88% and 2.99% . The estimated impact in 2013 is between €105.5 million and €109.5 million .
Impact on the assurance	<p>Legality and regularity of the affected transactions, i.e. only payments made against cost claims (interim payments and payments of balance). The impact on assurance is limited by the reduced net financial impact that will occur in some cases where eligible expenditure is limited by budget ceilings.</p> <p>It is estimated that the Net Financial Impact generated by the errors identified is around 2.09%.</p>
Responsibility for the weakness	<p>The main reason for errors is :</p> <ul style="list-style-type: none"> - the complexity of the eligibility rules as laid down in the basic acts decided by the Legislative Authorities, based on the reimbursement

	<p>of actual eligible costs declared by the beneficiaries;</p> <ul style="list-style-type: none"> - the fact that there are many thousands of beneficiaries making claims, and not all can be fully controlled. <p>The different control provisions set out by the Commission services, along with the audit certificates on financial statements and ex-post audits, can mitigate these risks to a certain extent, but can never be carried out on 100% of the cost claims received.</p>
Responsibility for the corrective action	<p>The possibilities to simplify the FP7 rules have been exhausted, although there is some evidence that the simplification measures introduced in 2011 have had a positive impact on error rate. The remaining scope to reduce errors will be addressed in particular through the following actions:</p> <ul style="list-style-type: none"> - continuing its on-going efforts to give guidance and feedback to the participants and certifying auditors to prevent errors occurring; - continuing with its control and audit work in order to further reduce the FP7 residual error rate.

FP7 reservation

For FP7, the representative error rate from the Common Representative audit Sample, based on 156 results out of a sample of 162, is 4.14%.

The Residual Error Rate calculated is between 2.88% and 2.99%.

The estimated Net Financial Impact of Errors is 2.09%, once additional eligible expenditure declared has been taken into account. This provides an indicator of the effective loss to the Community budget.

Taking into account the FP6 experience, and the need to balance legality and regularity with other objectives such as the attractiveness and the success of EU research policy, international competitiveness, scientific excellence, the wish to encourage participation of SMEs and the costs of controls, it is not expected that by the end of the programming period the Residual Error Rate will be below the materiality threshold defined in **Annex 4** 'Materiality Criteria'. For that reason, DG RTD maintains the reservation for FP7 (including operational payments made to IMI).

Action plan to address the reservation for FP7

The following framework conditions need to be borne in mind when considering remedial actions to further reduce the error rate under FP7. These were set out in more detail in the 2012 AAR:

A) Legal Framework

At a moment when the rules for participation for Horizon 2020 have been adopted and all of the contracts have been already signed under FP7, a modification of the legal framework for FP7 is no longer an option. Over the course of FP7, however, DG Research and Innovation has attempted to simplify the system within the existing legal framework, for example the simplification measures adopted by the Commission on 24 January 2011 (Decision C (2011) 174).

Horizon 2020 foresees a radical simplification of the legal framework for the Framework Programme for Research and Innovation (2014-2020), in order to meet the expectations of both stakeholders and legislative authorities.

B) Guidance to beneficiaries and certifying auditors

2013 saw the continuation of a communication campaign targeting beneficiaries and certifying auditors, based on a document setting out the 10 most common causes of error. Around 3 100 people have participated in the 24 events held so far. DG RTD aims to continue this campaign in 2014.

This is in addition to the possibilities that already exist for participants to ask for guidance – for example the Research Enquiry Service and the National Contact Points.

Furthermore, the results of analysis presented in pages 48-49 of the 2012 AAR clearly show that SMEs and new participants present particular risks, and this analysis will be used to tailor guidance at all stages of the process to these participants, but without discouraging them from applying for grants or unnecessarily increasing their administrative burden.

C) Continued control and audit

The DG will carry out an appropriate number of ex-post audits based on cost-effectiveness considerations, as referred to above, together with the subsequent recovery actions to ensure a further reduction of the residual error rate. However, it cannot greatly extend its audit campaign without adversely affecting the other objectives of the research programme (attractiveness, reduction of administrative burden, widening, etc.)

Within these framework conditions and constraints, the remaining scope to reduce errors will be addressed by DG Research and Innovation through the following actions:

- Continuing its on-going efforts to give guidance and feedback to the participants and certifying auditors to prevent errors occurring (see B above);
- Continuing its control and audit work in order to further reduce the FP7 residual error rate (see C above).

4.2.2 Overall conclusions on the combined impact of the reservations on the declaration as a whole

In respect of DG Research and Innovation's operational activities, no qualification is made on its policy activities. There is also no reservation on the procedures relating to the selection of contractors and beneficiaries for FP7 projects and its underlying financial operations (legal and financial commitments). This is also the case for FP7 payments relating to administrative expenditure and procurement, as well as for pre-financing payments in the case of grants, and payments from the Coal and Steel Research Fund.

The amount that may be affected by the errors is expenditure against cost statements in 2013 and the contribution to the IMI JU. Comparing the amounts at risk as shown above to the total

expenditure in 2013¹⁸² allows the conclusion to be drawn that it is possible to give assurance regarding the 97.57-97.66% of the budget implemented in 2013.

182 Total payments (excluding prefinancing paid in 2013) and pre-financing cleared in 2013 and operational payments to the IMI Joint Undertaking.

DECLARATION OF ASSURANCE

I, the undersigned, Mr Robert-Jan Smits,

Director-General of DG Research and Innovation in my capacity as Authorising Officer by delegation

Declare that the information contained in this report gives a true and fair view¹⁸³.

State that I have reasonable assurance that the resources assigned to the activities described in this report have been used for their intended purpose and in accordance with the principles of sound financial management, and that the control procedures put in place give the necessary guarantees concerning the legality and regularity of the underlying transactions.

This reasonable assurance is based on my own judgement and on the information at my disposal, such as the results of the self-assessment, ex-post controls, the work of the internal audit capability, the observations of the Internal Audit Service and the lessons learnt from the reports of the Court of Auditors for years prior to the year of this declaration.

Confirm that I am not aware of anything not reported here which could harm the interests of the institution.

However the following reservations should be noted:

The reservation concerning the rate of residual errors with regard to the accuracy of cost claims in the Seventh Framework Programme (FP7) grants.

Brussels, 31 March 2014

[signed]

*Robert-Jan Smits
Director-General*

183 True and fair in this context means a reliable, complete and correct view on the state of affairs in the service.

List of acronyms used

AAR	Annual Activity Report
AGS	Annual Growth Survey
AO(S)D	Authorising Officer by (Sub)Delegation
AWBL	Activity Without Budget Line
BBI	Bio-based Industries
BBMRI	Biobanking and Biomolecular Resources Research Infrastructure
CERN	European Organisation for Nuclear Research
CFS	Certificate on the Financial Statement
cPPP	Contractual PPP
CRaS	Common Representative audit Sample
DAS	Declaration of Assurance
DG	Directorate-General (European Commission)
DG RTD	Directorate-General for Research and Innovation (European Commission)
EA	Executive Agency (European Commission)
EATRIS	European Advanced Translational Research Infrastructure in Medicine
ECA	European Court of Auditors
ECRIN	European Clinical Research Infrastructures Network
EDCTP	European and Developing Countries Clinical Trials Partnership
EFDA	European Fusion Development Agreement
EIB	European Investment Bank
EIF	European Investment Fund
EIP	European Innovation Partnership
EIROforum	European Intergovernmental Research Organisations Forum
EMPIR	European Metrology Research Programme
ERA	European Research Area
ERA-NET	European Research Area Network

ERAC	European Research Area Committee
ERIC	European Research Infrastructure Consortium
ERC	European Research Council
ERCEA	European Research Council Executive Agency
EFFLA	European Forum on Forward Looking Activities
ERIAB	European Research and Innovation Area Board
ERIC	European Research Infrastructure Consortium
ESFRI	European Strategy Forum for Research Infrastructures
ESS	European Spallation Source
F4E	Fusion for Energy
FCH	Fuel Cells and Hydrogen Joint Undertaking
FP	Framework Programme (Article 182 of the Treaty on the Functioning of the European Union)
FP7	Seventh Framework Programme for research, technological development and demonstration activities (2007-2013)
FTE	Full time equivalent
GA	Grant Agreement
ICC	Internal Control Coordinator
ICS	Internal Control Standard
IAC	Internal Audit Capacity
IAS	Internal Audit Service
i4g	Innovation for Growth
IMI	Innovative Medicines Initiative
IPCC	Intergovernmental Panel on Climate Change
JPI	Joint Programming Initiative
JTI	Joint Technology Initiative
JU	Joint Undertaking
MoU	Memorandum of Understanding
NMP	Nanosciences, Nanotechnologies, Materials and new Production Technologies
PCT	Patent Cooperation Treaty

P2P	Public-Public Partnership
PPP	Public-Private Partnership
PPS	Purchasing Power Standards
R&D	Research and Development
R&I	Research and Innovation
RDI	Research, Development and Innovation
REA	Research Executive Agency
RFCS	Research Fund for Coal and Steel
RI	Research Infrastructure
RSI	Risk-Sharing Instrument
RSFF	Risk-Sharing Finance Facility
S&T	Science and Technology
SFIC	Strategic Forum for International S&T Cooperation
SiS	Science in Society
SME	Small- or Medium-sized Enterprise
SP	Specific Programme
SSH	Socio-Economic Sciences and Humanities
TFEU	Treaty on the Functioning of the European Union
TTG	Time-to-Grant
TTP	Time-to-Pay
WP	Work programme