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**'NETWORKS OF EXCELLENCE'  
AND 'INTEGRATED PROJECTS'  
IN COMMUNITY RESEARCH POLICY:  
DID THEY ACHIEVE THEIR OBJECTIVES?**



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Special Report No 8 // 2009

# 'NETWORKS OF EXCELLENCE' AND 'INTEGRATED PROJECTS' IN COMMUNITY RESEARCH POLICY: DID THEY ACHIEVE THEIR OBJECTIVES?

(pursuant to Article 248(4), second subparagraph, EC)

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# GLOSSARY

**European Research Area (ERA):** A border-free zone for research, in which scientific resources will be better deployed to create more jobs and to improve Europe's competitiveness.

**RTD Framework Programmes (FPs):** Multiannual programmes establishing, for a given period, the scientific and technological activities to be funded by the Community, their budget and the detailed rules for their technical and financial implementation.

**RTD Instruments:** Different types of projects defined by the FPs. Each instrument addresses specific objectives and involves particular participation arrangements.

**Networks of Excellence (NoE):** Instrument aimed at creating substantial and lasting integration of the research activities of the network partners, thus directly tackling the fragmentation of research activities in Europe in a given area.

**Integrated Projects (IPs):** Instrument designed to achieve ambitious, clearly defined scientific and technological objectives of a European dimension.

**Gross domestic product (GDP):** The total market value of all final goods and services produced in a country in a given year.

**Small and medium-sized enterprises (SMEs):** Enterprises which employ fewer than 250 persons and which have an annual turnover not exceeding 50 million euro, and/or an annual balance sheet total not exceeding 43 million euro.

**SMART objectives:** Specific, measurable, achievable, relevant and timed objectives, as defined by the EU Financial Regulation.

# EXECUTIVE SUMMARY

## I.

European research is held to suffer from insufficient and dispersed investment. As part of the EU actions to remedy this, the Sixth Framework Programme (FP6) introduced two new instruments, 'Networks of Excellence' and 'Integrated Projects'. The aim was, on one side, to create a substantial and lasting integration of the research activities and, on the other side, to achieve ambitious, clearly defined scientific and technological objectives of a European dimension.

## II.

The audit examined to what extent 'Networks of Excellence' and 'Integrated Projects' had contributed to achieve the research policy objectives set by the Treaty as well as their own specific objectives, the Commission had effectively managed the new instruments and FP6 had stimulated RTD investment.

## III.

The Court concluded that:

- (i) The FP6 instruments audited were successful in promoting research collaboration and projects of reasonable quality. However these instruments have operated in the absence of an explicit intervention logic, as well as of SMART objectives and performance indicators.
- (ii) The specific objectives of the new instruments were only partially achieved. 'Networks of Excellence' promoted a good level of research collaboration, but often did not achieve a progressive and self-sustainable integration of the research activities between the network partners. 'Integrated Projects' promoted high-quality research collaboration, but did not attract more resources from individual participants nor additional sources of public and private financing.

## EXECUTIVE SUMMARY

(iii) The Commission's management revealed a number of weaknesses, in particular at the beginning of the implementation of FP6, which affected the effectiveness of the actions, in particular the uncertainty about the new instruments' specific role, an insufficient guidance and weaknesses in project monitoring.

(iv) As compared to FP5, FP6 did not succeed in generating a significant increase in terms of participants' RTD investment. The participation of the private sector even diminished in relative terms. The target of 15 % of the total budget of FP6 thematic priorities for SME participation was not achieved.

### IV.

The Court recalls its previous recommendation that spending programmes should be based upon an explicit intervention logic, linking the instruments to realistic objectives. In this context, the possibility of setting one single objective for each instrument should be considered in order to ensure clarity of the instruments' specific role. For each programme there should be appropriate performance indicators to monitor the expected outputs, outcomes and impacts.

### V.

The Court also recommends that:

(i) The Commission should consider whether NoEs and IP-like collaborative projects have realistic objectives and provide significant advantages as compared with traditional instruments for research collaboration. Concerning NoEs financed under FP6, the Commission should assess on a case-by-case basis whether past achievements, potential EU added value and prospects of self-sustainability justify further funding under FP7.

(ii) The Commission should examine the various reasons underlying the relatively low level of participants' RTD investment compared to the goals pursued and propose specific measures. Appropriate data should be made available to monitor the catalytic effect of EU RTD funding. The realism of expected targets, in particular for SMEs and the private sector, should be reassessed.

(iii) In view of improving in particular the manageability of projects, their adequate implementation and appropriate evaluation, the Commission should ensure clear and timely guidance, a speedier contracting process and better project monitoring.

# INTRODUCTION

## OBJECTIVES AND THREATS FACING COMMUNITY RESEARCH AND TECHNOLOGICAL DEVELOPMENT (RTD)

### POLICY OBJECTIVES

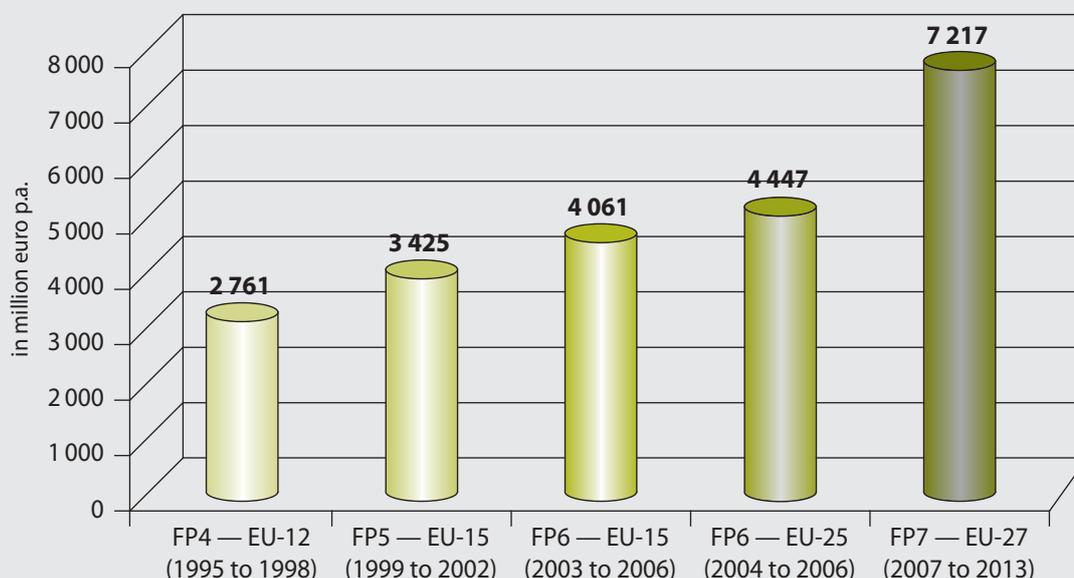
1. Research and technological development (RTD) has a key influence on scientific and technological progress and innovation. Research is an important priority for the European Union and its Member States so that the high living standards of its citizens can be maintained and improved.
2. The overall objectives of the European Community RTD policy<sup>1</sup> are to strengthen the scientific and technological bases of Community industry and encourage it to become more competitive at international level. Undertakings, research centres and universities are encouraged to cooperate with one another in high-quality RTD activities to exploit the internal market potential to the full.

<sup>1</sup> Treaty establishing the European Community, Title XVIII (Research and Technological Development), Articles 163 to 173. The activities are so defined:

- (a) implementation of research, technological development and demonstration programmes, by promoting cooperation with and between undertakings, research centres and universities;
- (b) promotion of cooperation in the field of Community research, technological development and demonstration with third countries and international organisations;
- (c) dissemination and optimisation of the results of activities in Community research, technological development and demonstration;
- (d) stimulation of the training and mobility of researchers in the Community.

FIGURE 1

### AVERAGE ANNUAL RTD EXPENDITURE FROM THE COMUNITY BUDGET (FP4 TO FP7)



Source: Legislative decisions for FP4 to FP7 (excludes Euratom).

- 3.** Since 1984, European Community RTD activities have been implemented through multiannual Framework Programmes (FPs) which define, for a given period, the scientific and technological objectives, the broad lines of the activities, the overall budget and its breakdown by action, and the detailed rules for Community financial participation. Funding in successive EU Framework Programmes has increased over time. FPs are the largest single public source of research funding in the European Union, with an overall share between 4 % and 5 % of total public RTD funding.

<sup>2</sup> See the Commission proposal for Council decisions concerning the specific programmes implementing the Sixth Framework Programme, COM(2002) 43 final of 30.1. 2002, Section 5.1 'Need for Community intervention', p. 71.

<sup>3</sup> The creation of a European Research Area (ERA) was proposed by the European Commission in its communication 'Towards a European Research Area' of January 2000. The objective of creating ERA was endorsed by the EU shortly afterwards at the March 2000 Lisbon European Council.

#### **STRUCTURAL WEAKNESSES AND AMBITIONS OF EUROPEAN RESEARCH**

- 4.** European research is widely held to suffer from structural weaknesses. The Commission has highlighted that<sup>2</sup>:

- (a) there is insufficient and dispersed investment in RTD;
- (b) insufficient human resources are devoted to research;
- (c) there is a limited capacity to translate scientific breakthroughs into innovative and competitive products and services; and
- (d) research policies in Europe are fragmented.

<sup>4</sup> See the Conclusions of the European Council of Lisbon, March 2000, point 5.

<sup>5</sup> See the Conclusions of the European Council of Barcelona, March 2002, point 47.

- 5.** The Commission and the European Council considered that realising an 'European Research Area' (ERA) is a key step to overcome these structural weaknesses<sup>3</sup>. The ERA would constitute an internal market for research and technology, as well as a space for a better coordination of national and regional research activities and policies. The European Council has set for the Union the ambitious goal 'to become the most competitive and dynamic knowledge-based economy in the world, capable of sustainable economic growth with more and better jobs and greater social cohesion'<sup>4</sup>. In this perspective, the European research effort should be increased, with the aim of approaching 3 % of gross domestic product by 2010 (up from 1,9 % in 2000). Two thirds of this new investment should come from the private sector<sup>5</sup>.

## THE SIXTH FRAMEWORK PROGRAMME

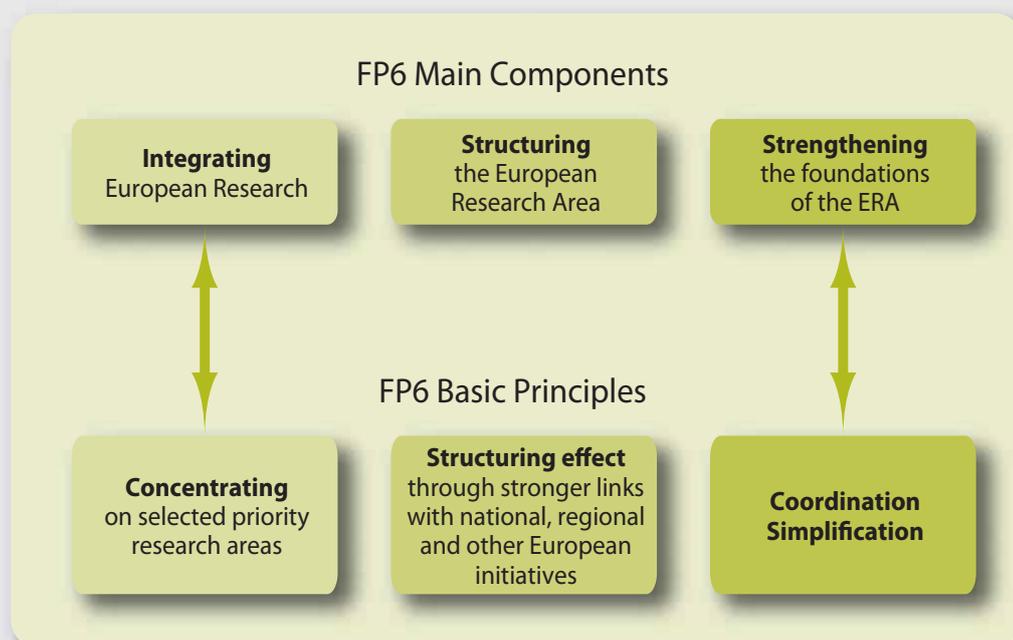
6. The European Community Sixth Framework Programme (FP6)<sup>6</sup> was an instrument intended to assist in achieving the ambitious objectives mentioned earlier. Its aim was to fund activities contributing both to innovation and to the creation of the ERA, by fostering more integration and coordination in Europe's fragmented research sector. FP6 covered, for the period 2002 to 2006, the full spectrum from basic to applied research, the development of scientific and technical excellence and the coordination of European research. The programme was structured around three headings:

- integrating and strengthening the European Research Area;
- structuring the European Research Area; and
- strengthening the foundations of the European Research Area.

<sup>6</sup> Decision No 1513/2002/EC of the European Parliament and of the Council of 27 June 2002 concerning the sixth framework programme of the European Community for research, technological development and demonstration activities, contributing to the creation of the European Research Area and to innovation (2002 to 2006) (OJ L 232, 29.8.2002, p. 1).

FIGURE 2

### FP6 MAIN COMPONENTS AND BASIC PRINCIPLES



Source: Commission's guide 'Participating in European Research', 2nd Edition, February 2004 ([http://ec.europa.eu/research/fp6/pdf/how-to-participate\\_en.pdf](http://ec.europa.eu/research/fp6/pdf/how-to-participate_en.pdf)).

- 7.** With a budget of around 17 billion euro for the years 2002–06, FP6 financed until the end of 2008 ‘indirect’ RTD activities worth 25 billion euro in estimated investments<sup>7</sup>. Most expenditure (around 75 %) was carried out under the heading ‘Integrating and strengthening the European Research Area’, within seven ‘thematic priorities’<sup>8</sup>, i.e. programmes covering specific themes of research.

<sup>7</sup> ‘Indirect’ RTD activities designate actions to be implemented by grant contractors, as opposed to ‘direct’ activities carried out by the Commission through its Joint Research Centre.

- 8.** In view of developing their technological capacity and facilitating their access to high-quality research, FP6 put special emphasis on small and medium-sized enterprises (SMEs). An amount of 1,8 billion euro was earmarked for this purpose, i.e. 15 % of the total budget of the thematic priorities (one third more than in the previous Framework Programme).

<sup>8</sup> The seven ‘thematic priorities’ are: life sciences, genomics and biotechnology for health; information society technologies; nanotechnologies and nanosciences, knowledge-based multifunctional materials, and new production processes and devices; aeronautics and space; food quality and safety; sustainable development, global change and ecosystems; citizens and governance in a knowledge-based society.

#### THE NEW INSTRUMENTS AND THEIR OBJECTIVES

- 9.** In addition to the traditional instruments<sup>9</sup>, two new instruments were introduced by FP6 aiming especially at ‘Integrating and strengthening the European Research Area’:

<sup>9</sup> Specific targeted projects, coordinated actions, specific support projects, Marie Curie actions, integrated infrastructure initiatives and Article 169 actions.

- ‘Networks of Excellence’ (NoEs) were aimed primarily at creating a substantial and lasting integration of the research activities of the network partners, thus directly tackling the fragmentation of research activities in Europe in a given thematic priority.
- ‘Integrated Projects’ (IPs) were designed to generate the knowledge required to implement the thematic priorities, by achieving ambitious, clearly defined scientific and technological objectives of a European dimension.

- 10.** NoEs and IPs could be carried out in any of the seven ‘thematic priorities’ (see footnote 8). These instruments were recognised by the legislator as being the main means to generate added value over and above that which could be achieved through national efforts (European added value), by integrating European research capacities. This was supposed to achieve a critical mass in terms of expertise, activities and resources (staff, skills, competences, finances, infrastructure, equipment). Also the new instruments were supposed to play an important role in achieving the target of spending 15 % of the budget of the thematic priorities on SME (see paragraph 8).

- 11.** Boxes 1 and 2 provide examples of the type of activities carried out in 'NoEs' and 'IPs'.

## PROJECT SELECTION AND MANAGEMENT

- 12.** Within the Commission, FP6 is a joint responsibility of several Directorates-General (DGs)<sup>10</sup>. As in previous Framework Programmes, the Commission published periodically calls for proposals describing the broad areas of activity. Request for funding submitted by potential beneficiaries were assessed with the help of independent experts ('evaluators'). Proposals were evaluated against the scientific and technical criteria defined in the call for proposals, including management criteria linked with the proposers' potential capacity to implement the projects. Projects considered most deserving of EU funding were selected by the Commission and grants awarded.

<sup>10</sup> Together with DG Research, which is the main Directorate-General managing and coordinating FP6 activities, four other DGs also managed parts of specific programmes: DG Information Society and Media, DG Energy and Transport, DG Enterprise and Industry, DG Maritime Affairs and Fisheries. In addition, the DG 'Joint Research Centre' is in charge of those activities which are directly implemented by the Commission.

<sup>11</sup> See paragraph 25 and footnote 19.

- 13.** Project progress was monitored and periodically assessed by the Commission, including by reference to the objectives specifically assigned to each instrument. This monitoring was carried out with the assistance of independent experts (reviewers)<sup>11</sup>.

### BOX 1

#### WHAT SORT OF ACTIVITIES WERE CARRIED OUT IN NoEs?

Every NoE is different. Examples of the specific activities carried out include:

Integration of activities implemented under the NoEs examined included the exchange of PhD students and research staff, the organisation of joint workshops, the creation of virtual Internet-based research working groups, the establishment of virtual labs and institutes, and the organisation of visits intended to provide access to off-site facilities.

Joint research activities implemented under the NoEs examined include the funding of individual research projects, often through internal calls for proposals implemented under the responsibility of scientific task leaders.

Spreading of excellence activities included visits to industry, participation in international conferences, organisation of summer school sessions and other training events, the dissemination of project information through a dedicated web page, newsletters, press releases, and the publication of articles.

- 14.** Projects undertaken under NoEs and IPs attracted almost 50 % of FP6 funds. According to the Commission's data under the Seventh Framework Programme (2007–13) NoEs and those collaborative projects that assume IP characteristics received 16 % of the total FP7 funding allocated up to February 2009.<sup>12</sup>
- 15.** FP6 financed 167 projects as NoEs, involving some 5 000 participants and a cumulative EU contribution of 1,2 billion euro (against eligible investment costs of 1,9 billion euro). On average, each NoE involved around 30 partners and an EU contribution of 7 million euro per contract. Almost 700 projects were financed as 'IPs'. They involved some 17 000 participants and a cumulative EU contribution of 6,5 billion euro (against eligible investment costs of 10,7 billion euro). On average, each IP involved around 25 partners and an EU contribution of 9,5 million euro per contract.
- 16.** Overall, FP6 available funds permitted the financing of only one out of five proposals received. This ratio is similar to that of the US National Science Foundation funding schemes, but lower than that of the previous Framework Programme (26 %). A higher proportion of 'NoE' proposals were financed compared to 'IP' projects.

<sup>12</sup> Decision No 1982/2006/EC of the European Parliament and of the Council of 18 December 2006 concerning the seventh framework programme of the European Community for research, technological development and demonstration activities, (2007 to 2013) (OJ L 412, 30.12.2006, p. 1). Under FP7, 'Collaborative Projects' may include the activities previously carried out by 'Integrated Projects'.

## BOX 2

### WHAT SORT OF ACTIVITIES WERE CARRIED OUT IN IPs?

The activities covered by a project carried under IPs fall within one of the following categories:

- research and technological development activities directly aimed at creating new knowledge, including innovation-related and dissemination activities;
- demonstration activities designed to prove the viability of new technologies that offer a potential economic advantage but which cannot be commercialised directly (e.g. testing of prototypes);
- training activities intended to contribute to the professional development of researchers and other key staff, research managers, industrial executives (in particular for SMEs), and potential users of the knowledge generated by the project.

# AUDIT SCOPE AND APPROACH

## AUDIT SCOPE

### 17. The objectives of the audit were to assess to what extent:

- Networks of Excellence and Integrated Projects contributed to achieve the research policy objectives set by the Treaty as well as their own specific objectives.
- The Commission effectively supported the projects' implementation, by providing the necessary guidance to beneficiaries, managing the contracts and monitoring the progress achieved; and
- FP6 had stimulated RTD investment.

<sup>13</sup> Austria, Belgium, Denmark, Estonia, Finland, France, Germany, Italy, the Netherlands, Poland, Portugal, the Slovak Republic, Spain, Sweden and the United Kingdom.

<sup>14</sup> Round tables were organised with the assistance of the FP6 National Contact Point coordinators in Finland, France, Poland, Spain and the United Kingdom.

## AUDIT APPROACH

### 18. Audit evidence was collected through:

- Review of documentation on FP6 (preparatory documents, legal framework and Commission guidance, implementation data).
- Visits to 36 project coordinators and participants involved in 14 projects in 15 different Member States<sup>13</sup>.
- A series of 'round table' discussions with 60 researchers from 44 different organisations participating in FP6<sup>14</sup>.
- A survey of 387 RTD organisations (274 programme participants, 104 proposers and nine non-participants).
- An analysis of selected management areas playing a key role in the performance of the instruments (including the review of the implementation of eight calls for proposals and an analysis of the conclusions of 399 independent project reviews conducted before 31 December 2007).
- The review of secondary evidence on the effectiveness of the instruments.
- Consideration of the opinions expressed by some associations active in Community research.

# AUDIT OBSERVATIONS

## CONTRIBUTION TO COMMUNITY RTD OBJECTIVES IN GENERAL

**19.** According to the EC Treaty, Community RTD policy has the overall aim to strengthen the scientific and technological bases of Community industry and to encourage it to become more competitive at international level.

**20.** In the framework of a previous audit in the field of research, the Court pointed out the lack of an explicit intervention logic, explaining how the different instruments and programmes were supposed to contribute to Community RTD goals<sup>15</sup>. In addition, no SMART objectives<sup>16</sup> and performance indicators were defined for the individual research programmes, thus undermining the basis for sound monitoring and evaluation<sup>17</sup>.

**21.** Bearing in mind the lack of an explicit intervention logic<sup>18</sup>, the Court has examined the contribution of the new instruments to the Community RTD policy in general as regards the following aspects:

- The effectiveness of the research collaboration put in place; and
- The scientific quality of individual projects as assessed by the experts.

<sup>15</sup> Special Report No 9/2007 concerning 'Evaluating the EU Research and Technological Development (RTD) framework programmes — Could the Commission's approach be improved?' (see paragraphs 22 to 37) (OJ C 26, 30.1.2008).

Intervention logic is defined by the Commission as 'the conceptual link from an intervention's inputs to the production of its outputs and, subsequently, to its impacts on society in terms of results and outcomes' (European Commission, 'Evaluating EU activities: A practical guide for the Commission services', July 2004, pp. 87 and 106).

<sup>16</sup> SMART stands for specific, measurable, achievable, relevant and timed. The definition of SMART objectives constitutes a general principle of the EU Financial Regulation to ensure sound financial management (see Article 27(3) of Council Regulation (EC, Euratom) No 1605/2002 (OJ L 248, 16.9.2002, p. 1)).

<sup>17</sup> See paragraphs 28 and 30 of Special Report No 9/2007.

<sup>18</sup> For example, the impact of the absence of an explicit intervention logic was already highlighted in 2004 by the panel in charge of the Five-year Assessment 1999–2003, which stated that '...panels like ours are asked to fill a gap between, on the one side, evidence mainly collected at project level and, on the other side, the higher level socio-economic goals of research policy. However, at the moment the link is difficult to make due to the way the FP is planned. It lacks an explicit logic connecting the highest objectives to the specific research and knowledge goals' 'Five-year Assessment of the European Union Research Framework Programmes, 1993–2003', Report of the Independent Expert Panel chaired by Erkki Ormala (15 December 2004): Section 6 'Evaluating the Framework Programme', p. 19.

## EFFECTIVE RESEARCH COLLABORATION

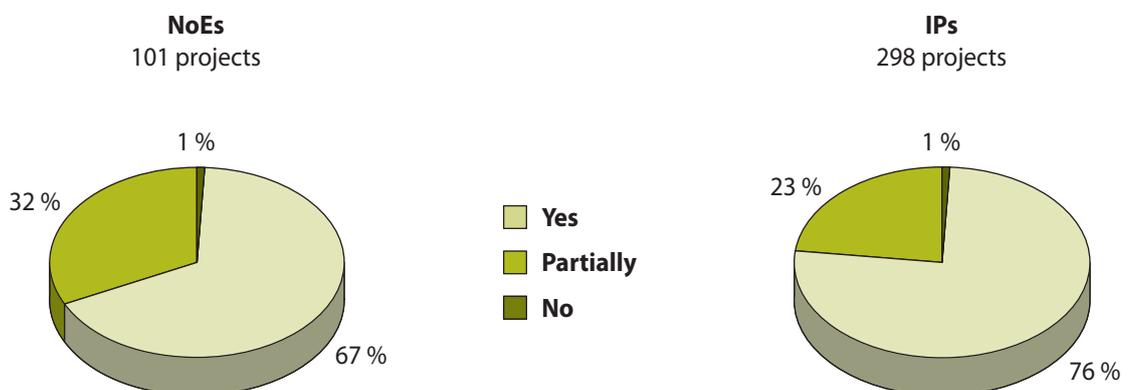
- 22.** The effectiveness of research collaboration was assessed by reference to the actual achievement of project deliverables, the transfer of existing and new scientific knowledge as well as the use of good practices concerning the way in which research is carried out.
- 23.** The Court concludes that the FP6 instruments covered by the audit had promoted a good level of research collaboration between project participants. Indeed:
- In the Court's view all the projects visited were successful in promoting international research collaboration between organisations from different sectors and disciplines.
  - The assessment made by independent experts shows that the collaboration between project participants was effective in a large majority of cases (see **Figure 3**).

FIGURE 3

### REVIEWERS' ASSESSMENT OF RESEARCH COLLABORATION ACHIEVED

#### REVIEWERS' ASSESSMENT OF THE EFFECTIVENESS OF COLLABORATION

*Has the collaboration between the participants been effective?*



Source: European Court of Auditors — Horizontal analysis of project review reports as at 31 December 2007.

24. Moreover, the survey of participants reveals an overall satisfaction with the two instruments audited (see **Figure 4**). NoEs were found to be particularly successful by public research centres and universities, while private partners (including SMEs) considered collaboration less fruitful. Concerning IPs, the cooperation was considered effective by both public and private partners.

FIGURE 4

## PARTICIPANTS' PERCEPTION OF THE PROJECT'S EFFECTIVENESS

<i>How satisfactory do you consider project in terms of ...</i>				
	NoE		IP	
<i>Coordinators</i>	<i>Satisfactory</i>	<i>Unsatisfactory</i>	<i>Satisfactory</i>	<i>Unsatisfactory</i>
... the promotion of high-quality research collaboration between project participants	100 %	0 %	98 %	2 %
... the networking of participants	100 %	0 %	97 %	3 %
... coordinating the strategic planning of the participants' research activities	86 %	14 %	89 %	11 %
... transfer of knowledge between participants	100 %	0 %	97 %	3 %
... the promotion of the mobility of research staff between participants	89 %	11 %	80 %	20 %
<i>Participants</i>	<i>Satisfactory</i>	<i>Unsatisfactory</i>	<i>Satisfactory</i>	<i>Unsatisfactory</i>
... the promotion of high-quality research collaboration between project participants	92 %	8 %	92 %	8 %
... the networking of participants	94 %	6 %	98 %	2 %
... coordinating the strategic planning of the participants' research activities	83 %	17 %	80 %	20 %
... transfer of knowledge between participants	97 %	3 %	88 %	12 %
... the promotion of the mobility of research staff between participants	89 %	11 %	64 %	36 %

Source: Survey conducted by the European Court of Auditors.

## PROJECT PLANS BETTER THAN IMPLEMENTED PROJECTS IN A NUMBER OF CASES

- 25.** Project quality is associated with the concept of scientific and technological excellence and the degree of innovation. It is a normal practice for research projects that their quality be assessed by peers. For FP6, independent experts were involved in the initial selection of proposals as well as in the monitoring and evaluation of projects implemented<sup>19</sup>.
- 26.** Project reviewers' *ex post* assessment is based on:
- the progress towards the achievement of its objectives;
  - the adequate use of resources;
  - the degree to which research collaboration has been effective;
  - the soundness of project management, and
  - the use and dissemination of knowledge arising from the project.

<sup>19</sup> 'Evaluators' participate in the evaluation process, assessing the merits of each of the proposals received against the criteria defined by the Commission in the corresponding call for proposals. Based on the evaluators' assessment, the Commission decides which proposals deserve to be funded. 'Reviewers' intervene well after the project has actually started. They periodically assess progress achieved by a given project during a reference period, on the basis of an assessment form prepared by the Commission. Based on this assessment, the Commission decides whether the project may continue or if, on the contrary, it should be terminated before the planned completion date. 'Evaluators' and 'Reviewers' are selected from the same database constituted by the Commission at the start of the programme.

FIGURE 5

### REVIEWERS' ASSESSMENT OF PROJECT QUALITY

#### OVERALL ASSESSMENT OF THE PROJECT'S QUALITY



Source: European Court of Auditors — Horizontal analysis of project review reports as at 31 December 2007.

- 27.** The Court's analysis of the experts' review reports shows that more than one third of projects were qualified as 'good to excellent' (see **Figure 5**). Only six out of 399 projects implemented as NoEs and IPs were considered unsatisfactory. However, a large number of projects (174 projects, or 44 % of all projects reviewed) were assessed as not more than 'acceptable'. Considering that experts had qualified all projects as 'excellent' at the time of their selection by the Commission, the review results indicate that project quality is declining in the implementation phase.

### **ACHIEVEMENT OF THE NEW INSTRUMENTS' SPECIFIC OBJECTIVES**

- 28.** As previously indicated (see paragraphs 9 and 10), NoEs were aimed primarily at creating a substantial and lasting integration of the research activities of the network partners. IPs were designed to generate the knowledge required to implement the thematic priorities, by achieving ambitious, clearly defined scientific and technological objectives of a European dimension. For both instruments, the emphasis was on integrating a 'critical mass' of expertise, activities and resources as a pre-condition for long-term research activities and partnerships as well as for achieving a real impact in scientific, industrial or economic terms. The specific target for SMEs has to be considered in view of their crucial role in the European economy.

### **NOES' INTEGRATION OFTEN REPLACED BY TRADITIONAL FORM OF COLLABORATION**

- 29.** In view of assessing the extent to which NoEs had achieved their specific objective of promoting durable integration of the research activities of the network partners, the Court analysed whether:
- The resources put into the network could be considered significant in relation to each participant's overall budget.
  - NoEs had significant control on the deployment of the resources made available for the project.
  - The high-level researchers initially envisaged had actually been involved in the project.
  - NoEs had progressed towards long-term research activities and partnerships beyond the duration of Community funding.

**30.** The Court considers that, notwithstanding their success in promoting research collaboration and projects of reasonable quality, NoEs audited have not achieved their specific objective. In particular:

- (a) Most participants allocated a relatively small proportion of their research capacities to the network.
- (b) NoEs failed to reach control over resources made available and to ensure the adequate coordination of project activities. Participant organisations did not accept that NoEs' governance structures decide how networked resources should be used.
- (c) In most cases the involvement of key high-level scientists in NoEs was not realised.
- (d) Self-sustainable long-term research activities and partnerships were not achieved for any of the audited NoEs, thus making future collaboration subject to continued public support.

<sup>20</sup> See Evaluation of the effectiveness of the New Instruments of Framework Programme VI. Report of the High-Level Expert Panel chaired by Professor R. Marimon, 21 June 2004 ([http://cordis.europa.eu/fp6/instruments\\_review/](http://cordis.europa.eu/fp6/instruments_review/)).

<sup>21</sup> See Expert Group on the future of Networks of Excellence, Final Report, September 2008, pp. 16 and 47.

**31.** The results of the project reviews carried out by the independent experts show that full restructuring of activities and integration between partners took place in less than two thirds of the NoEs assessed (59 out of 101). Already in 2004, a previous report<sup>20</sup> acknowledged the difficulties of NoEs in achieving the required 'durable integration'. More recently, a study carried out on behalf of the Commission<sup>21</sup> confirmed that only a minority of NoEs have moved convincingly towards self-sustainable integration with prospects for longer-term survival beyond the ending of EU funding.

**32.** NoEs often put in place only traditional forms of research collaboration on individual actions, instead of coherent and long-term joint activities and partnerships.

**33.** Two main factors can explain the difficulty that NoEs have in achieving lasting integration. Firstly, the goal of setting up a new kind of intra-European network, by integrating institutions previously in competition with each other, requires a new approach to research collaboration. The reluctance of many organisations to engage in a long-term commitment did not favour this aim. Public research centres, at the heart of the NoEs' objective, found difficulties in integrating with each other due to their institutional structure and budgetary constraints. For industry, the treatment of intellectual property was a matter of particular concern.

34. Secondly, there are areas where substantial integration can only be achieved progressively. In practice, the maximal duration of five years proved not to be realistic. However, in several cases (five of the eight NoEs visited) the project duration had been even reduced during the negotiation stage.
35. The fact that most NoEs financed under FP6 have not reached durable integration raises the question as to the conditions under which it is justified to continue their financing beyond the initial duration, under the ongoing Seventh Framework Programme (FP7).

**BOX 3****LIGHT AND SHADE CONCERNING NoE PERFORMANCE**

One NoE assessed by the Court concerned a project in the field of information society technologies involving a consortium of a large number of both private (SMEs and large industries) and public participants (universities). The consortium had been assembled in order to structure fragmented European research in the specific scientific field, reduce duplication, boost excellence and spread scientific knowledge.

The Court reviewed the project's achievements based on project documentation and interviews with representatives of three participants audited. The opinion expressed by the independent experts who carried out the project reviews was taken into account. The Court concluded that the project contributed to sharing new knowledge and to transferring pre-existing knowledge. Research collaboration was promoted and new knowledge generated and disseminated through websites, the participation and organisation of conferences, etc. This knowledge had potential commercial applications. A 'Virtual Centre of Excellence' (VCE) was created (a web portal built by project participants containing updated information on public and private research in the specific scientific field). A school in the specific field of the project has been created by several participants.

At the end of the project, the consortium requested additional funding for a second project phase, which was obtained. The participants visited declared that their involvement in the integrating activities undertaken depended on the availability of additional EU funds. Once the funding ceased, it would be impossible to maintain these activities.

### IPS: LARGE PROJECTS, AND RELATIVELY LOW PARTICIPANTS' FINANCIAL INVOLVEMENT

- 36.** Integrated Projects were designed to generate the knowledge required to implement the thematic priorities, by achieving ambitious objectives of a European dimension.
- 37.** The effectiveness of IPs was assessed by the Court for a sample of projects, according to the following criteria:
- Vertical integration of the full 'value-chain' of stakeholders, from those involved in knowledge production through to technology development and transfer.
  - Horizontal integration of a range of multidisciplinary activities.
  - Activity integration: integrating various research activities from fundamental to applied research and with other types of activity, including take-up activities, protection and dissemination of knowledge, and training.
  - Sectoral integration of actors from private and public sector research organisations, and in particular between academia and industry, including SMEs.
  - Financial integration of public and private funding.

#### BOX 4

### LIGHT AND SHADE CONCERNING IPs PERFORMANCE

An Integrated Project was created to develop an innovative environment-friendly packaging based on renewable materials, being of positive value to both producers and the consumers. The IP assembled the main producers of the raw material and of the final product in order to create synergies. The estimated cost of activities to be carried out within the project exceeded 25 million euro (56,5 % of which was financed by the Community).

The project succeeded in integrating stakeholders within several business areas (vertical integration), from the public and private sectors (sectoral integration), from different disciplines (horizontal integration), both fundamental and applied (activity integration). However, the project did not attract any other source of funding contributing to the achievement of the project goals. This situation has prevented the achievement of financial integration, associated with this specific FP6 instrument.

- 38.** The evidence shows that the audited IPs have achieved, in general, the objectives pursued in their research field and have mobilised a significant volume of resources (human, financial, technical). This is due in particular to a longer duration and an increased number of participants when compared to pre-existing instruments<sup>22</sup>. However, the audited IPs have not succeeded in attracting additional public and private funding.

<sup>22</sup> Specific targeted projects.

<sup>23</sup> In addition to the funding foreseen under the thematic priorities, FP6 included a specific programme area intended to support horizontal research activities involving SMEs (EUR 475 million).

#### SME PARTICIPATION TARGET NOT FULLY ACHIEVED

- 39.** SMEs play a key role in the European economy, given their weight in the business sector and their importance in employment. As mentioned in paragraph 8, FP6 sought to take their particular needs into account and set for this purpose a target of at least 15 % of the total budget for the FP6 thematic priorities, as compared to 10 % in FP5<sup>23</sup>.

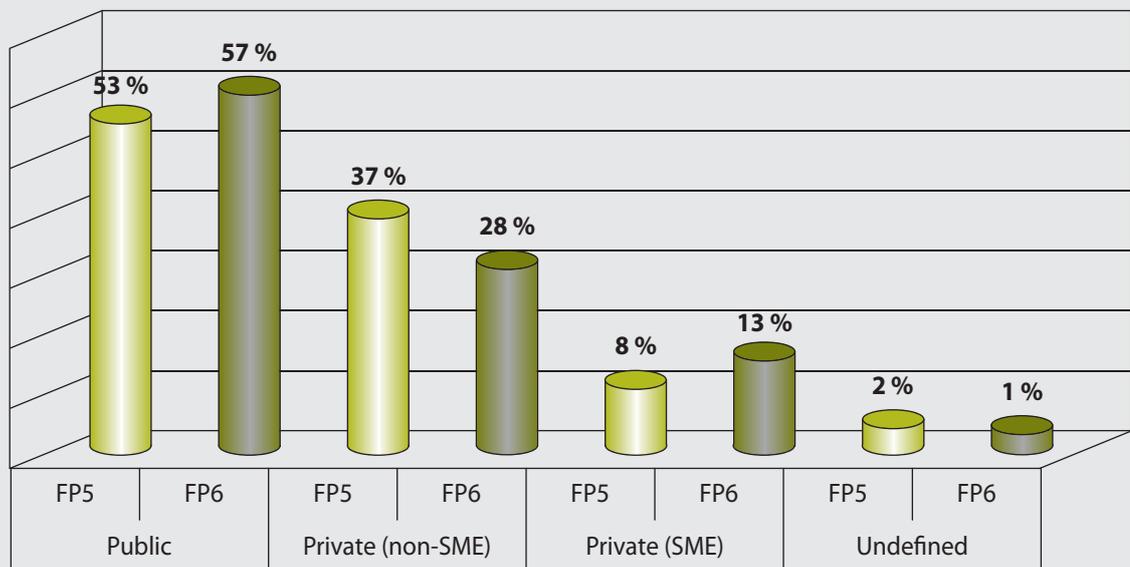
<sup>24</sup> Also FP7 has a similar target for SMEs (at least 15 % of the funding available under the 'Cooperation' part of the programme). Commission data (October 2008) show that SME participation accounts for 8,2 % of project participations and 8,5 % of the EC contribution awarded.

- 40.** *Figure 6* shows that, although more SMEs were involved in RTD projects when compared to FP5, the EC contribution allocated to SMEs under FP6 has decreased both in relative and absolute terms. The Commission's best estimate indicates that no more than 10 % of the total budget for the FP6 thematic priorities was allocated to SMEs, representing some 1,2 billion euro. This is a lower rate than achieved under FP5 Thematic Programmes (12 %, representing around 1,4 billion euro). FP6 has not succeeded in giving a significant stimulus to SMEs' RTD investment in the thematic priorities. Concerning FP7, first results show that the participation of SMEs is further declining<sup>24</sup>.

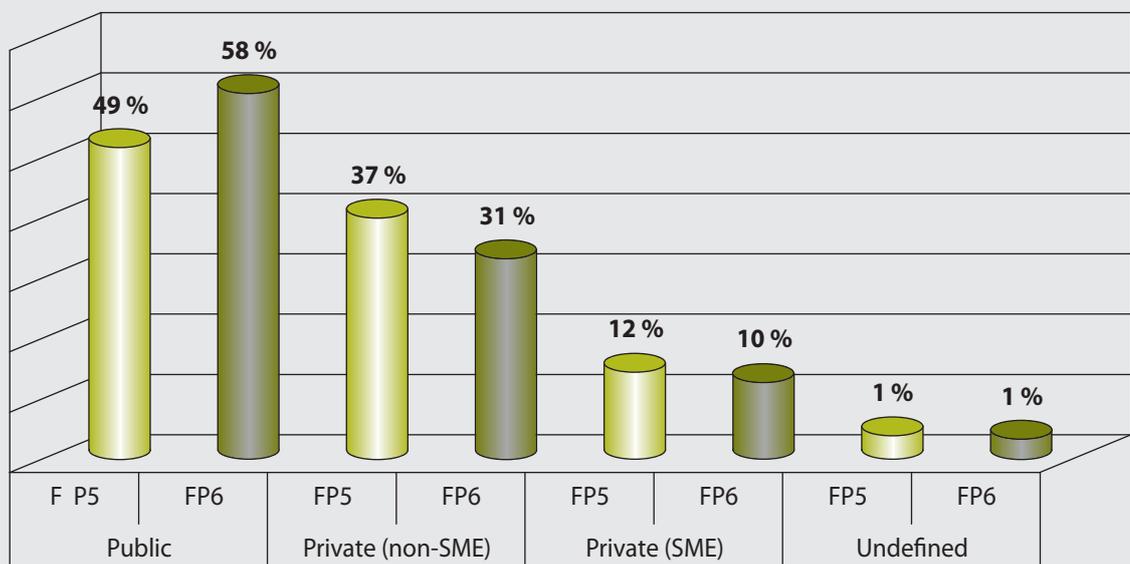
- 41.** There are objective difficulties in raising SMEs' participation. They have a more local/regional dimension and face by nature higher entry barriers, mainly caused by the complex application procedures and the costs of submitting proposals. Cooperation with large research organisations can be hindered by higher financial and technical risks. Also, like for private participants in general, SMEs are not always prepared to subscribe to long-term contractual commitments for fear of losing flexibility to react to changing needs.

FIGURE 6

## EVOLUTION OF FP PARTICIPATION (THEMATIC PRIORITIES)

BREAKDOWN OF FP6 PARTICIPANTS BY PROJECT INVOLVEMENT  
(NUMBER OF INDIVIDUAL PARTICIPATIONS)

## BREAKDOWN OF FP6 PARTICIPANTS BY EC CONTRIBUTION RECEIVED



Source: European Court of Auditors, based on Commission data.

42. Moreover, some FP6 provisions did discourage the participation of private companies. This was the case for the rule establishing consortia's collective technical and financial responsibility towards the Commission for the implementation of the project. This provision was applied to private organisations but not to the public ones, creating *de facto* an additional burden for this target group. Collective financial responsibility has been removed under FP7 and replaced by a guarantee fund financed by part of the advances paid to programme participants.
43. FP6 also included the automatic access to the participants' pre-existing knowledge required for the implementation of the project, unless explicitly agreed otherwise. This provision resulted in a disincentive for private participation, in particular for SMEs which could not compete on equal terms against larger organisations. Under FP7 more freedom is given to consortia when defining access to existing knowledge in terms of Intellectual property rights.

#### **THE COMMISSION'S MANAGEMENT OF NEW INSTRUMENTS**

44. The Commission's management has a decisive role in ensuring the success of FP6 activities, in particular by making it attractive to potential participants and steering project progress. Manageable structures, clarity of objectives, rapid and straightforward procedures, and adequate project monitoring are all determinants of the instruments' effectiveness. In this context, the Court analysed the implementation of eight calls for proposals and examined selected management process having a key impact on the instruments' performance (namely negotiation and project monitoring). The Court's audit highlighted a number of weaknesses.

## UNCERTAINTIES ABOUT THE INSTRUMENTS SPECIFIC ROLE

- 45.** As shown by **Figure 7**, a number of actors (mainly participants and to a lesser extent also coordinators) reached no or insufficient understanding about the specific objectives that the instruments were to achieve and the way in which the instruments were supposed to work. In particular for NoEs, the survey results indicate that they were mainly understood as a networking instrument, while the objective was that of favouring lasting integration among networked partners. The start of FP6 was characterised by some confusion among potential applicants, particularly concerning NoEs. And further problems were caused by inconsistent communication from the Commission services<sup>25</sup>.
- 46.** Understanding of policy objectives is a key factor for effectiveness. The Commission has to ensure that different actors are clear about the goals to be pursued. In this respect the role of the coordinators should be highlighted, as they show a far better understanding than participants. This indicates a problem of communication within consortia, probably aggravated by the high number of participants (see paragraph 51).

<sup>25</sup> See also the Expert Group on the future of Networks of Excellence, op.cit, Section 3.3 (p. 18) and Annex 3 (p. 45).

FIGURE 7

### ACTORS' UNDERSTANDING ABOUT THE AUDITED INSTRUMENTS' ROLE

<i>Do you feel you properly understood the differences between the main collaborative instruments (NoE and IP) when you selected which one to use for the proposal?</i>				
<i>Successful applicants</i>	<b>NoE</b>		<b>IP</b>	
	<i>Coordinators</i>	<i>Participants</i>	<i>Coordinators</i>	<i>Participants</i>
Yes, definitely	86 %	53 %	84 %	62 %
Yes, somewhat	11 %	33 %	13 %	25 %
No, somewhat not	0 %	8 %	3 %	12 %
No, definitely not	3 %	6 %	0 %	2 %
<i>Unsuccessful applicants</i>	<i>Coordinators</i>	<i>Participants</i>	<i>Coordinators</i>	<i>Participants</i>
Yes, definitely	75 %	67 %	60 %	58 %
Yes, somewhat	0 %	33 %	20 %	27 %
No, somewhat not	25 %	0 %	20 %	13 %
No, definitely not	0 %	0 %	0 %	2 %

Source: Survey conducted by the European Court of Auditors.

## MULTIPLE LEGAL PROVISIONS AND NOT ALWAYS SUFFICIENT GUIDANCE

- 47.** The legal provisions governing the instruments were spread across a range of legal texts<sup>26</sup>. At different stages decisions were taken by the Council and the European Parliament to set up the instruments and their specific objectives (stating in which programme areas they might be applied), or by the Commission concerning the provisions for implementing the instruments (specifying in particular the basic Community contribution mechanisms that were narrowly applicable to each instrument) and finally the model FP6 contract (specifying provisions for programme participants implementing indirect RTD actions in the form of specific instruments). The different applicable provisions were not always consistent.
- 48.** Guidance was not complete when the first FP6 calls for proposals were launched in December 2002. The delays affecting the preparation and publication of guidelines were traceable, ultimately, to the late adoption of model contracts.
- 49.** In response to the publication of the 2004 evaluation<sup>27</sup>, the Commission took corrective action aimed at differentiating between the instruments. This resulted in a better understanding of the nature of the instruments, but areas of misunderstanding persisted. As a result, further guidance was provided on several aspects of FP6 project management not addressed by the initial programme guides<sup>28</sup>.

<sup>26</sup> See for example Annex III to Decision No 1513/2002/EC, Annex III to Council Decision 2002/834/EC (OJ L 294, 29.10.2002, p. 1) and Regulation (EC) No 2321/2002 of the European Parliament and of the Council (OJ L 355, 30.12.2002, p. 23).

<sup>27</sup> See Evaluation of the effectiveness of the New Instruments of Framework Programme VI, op. cit.

<sup>28</sup> For example, the guide on competitive calls for NoEs and IPs appeared in November 2004. The guide on Intellectual Property rights appeared in March 2004.

<sup>29</sup> Time to contract is defined as the time elapsed between a call closing date and a contract signature.

<sup>30</sup> See page 60 of Special Report No 1/2004 on the management of 'indirect' RTD actions under the fifth framework programme (OJ C 99, 23.4.2004).

## THE NEGOTIATION PROCESS: MORE LENGTHY AND OFTEN NOT TRANSPARENT

- 50.** Average time-to-contract<sup>29</sup> was about 13 months, to be compared with a duration of nine months for FP5 calls<sup>30</sup>. As a result, consortia had no choice but to start projects before the contract had been signed. This entailed a legal and financial risk for the beneficiaries, which is at odds with the objective of encouraging research activities. On the other hand, the project scope (composition of the consortium, duration, work programme) was modified in several cases (11 out of 14 projects audited) at the initiative of the Commission during the negotiation process, without explicit reference to the objectives of the programme.

### FEWER AND LARGER PROJECTS BUT STILL A LARGE NUMBER OF PARTICIPANTS

- 51.** Although there is not a 'once size fits all' number of participants, it is clear that the larger the number of participants, the more difficult the project is to manage (organisational constraints, costs). Compared to FP5, fewer contracts were signed under FP6 and they involved larger consortia. However, on average, the number of participants per contract is higher in FP6 (NoEs involved on average 30 participants and IPs around 25 partners). Under FP7 the number of participants has been reduced (both NoEs and IP-like collaborative projects involve on average slightly less than 20 partners).

### WEAKNESSES IN PROJECT MONITORING

- 52.** All indirect RTD actions implemented under FP6 were subject to periodic technical monitoring by the Commission. For Networks of Excellence and Integrated Projects, technical monitoring should be supported by project reviews carried out by independent experts (see footnote 11). In particular, the Court found that two Commission departments had failed to fully comply with the legal requirement to have annual project reviews performed by independent experts.
- 53.** Where the Commission's departments did meet this requirement, harmonisation of project reviews was insufficient to allow the effective use of review results as a performance indicator, at both project and programme levels.

## STIMULATION OF RTD INVESTMENT

- 54.** The total value of RTD investment carried out under FP6 thematic priorities amounted to 19 billion euro. The EU budget funded 63 % of this investment. The private sector (including SMEs) contributed up to 22 %. The remaining 15 % was funded by national public sources<sup>31</sup>.

<sup>31</sup> The only data available for analysis correspond to the contractually agreed estimated eligible costs and the related Community contribution. The lack of more detailed information, in particular the total investment actually carried out as a result of the participation in the programme, makes impossible any further analysis.

## MORE EU FUNDS FOR RELATIVELY LESS PARTICIPANTS' RTD INVESTMENT

- 55.** The comparison of FP6 (thematic priorities) with its predecessor (FP5 thematic programmes<sup>32</sup>) shows that total investment and EU contribution have increased in absolute terms (by 8 % and 15 %, respectively). However, the ratio 'Total investment/EU contribution' has declined from 1,69 euro (FP5) to 1,59 euro (FP6). The main reason is that the participation of the private sector in general has declined when compared to FP5 (see **Figure 6**).

<sup>32</sup> FP5 thematic programmes are the predecessors of FP6 thematic priorities. They were four: 'Quality of Life and Management of Living Resources', 'User-friendly Information Society', 'Competitive and Sustainable Growth' and 'Energy, Environment and Sustainable Development'.

- 56.** The Court's audit highlighted a risk of 'low-profile' commitment of public bodies participating in the programme. Cases were found (12 out of 14 projects assessed) where the volume of own resources was much lower (between 30 % and 80 % less) than the costs actually reimbursed by the Commission<sup>33</sup>. In such cases, the stimulation of investment is reduced, with the possibility that EU funds simply substitute participants' own resources.

<sup>33</sup> According to the model applied by a significant number of public bodies (mainly universities), participants should allocate a volume of own resources equivalent to those funded by the Community. In this way the principle of co-financing would be satisfied. However, this condition was not adequately monitored by the Commission.

# CONCLUSIONS AND RECOMMENDATIONS

- 57.** The Court recalls the lack in FP 6 of an explicit intervention logic, explaining how the different instruments and programmes were supposed to strengthen the scientific and technological bases of Community industry and to encourage it to become more competitive at international level<sup>34</sup>. The absence of SMART objectives and performance indicators limits significantly the assessment of the contribution of specific instruments and activities to the RTD objectives, thus undermining the basis for sound monitoring and evaluation (see paragraphs 19 and 20).

<sup>34</sup> See paragraphs 22 to 37 of Special Report No 9/2007.

## RECOMMENDATION NO 1 DEVELOP AN EXPLICIT INTERVENTION LOGIC

The Court recalls its previous recommendation that spending programmes should be based upon an explicit intervention logic, linking the instruments to realistic objectives. In this context, the possibility of setting one single objective for each instrument should be considered in order to ensure clarity of the instruments' specific role. For each programme there should be appropriate performance indicators to monitor the expected outputs, outcomes and impacts.

- 58.** The Court found that the FP6 instruments audited had promoted effective research collaboration between project participants. However, while all projects were qualified as 'excellent' at the time of their selection by the Commission, not more than one third of them kept a rating between 'good to excellent' after implementation (see paragraphs 22 to 27).
- 59.** The assessment of NoEs' and IPs' specific objectives highlights a contrasting picture. Notwithstanding their success in promoting research collaboration and projects of reasonable quality, none of the NoEs audited achieved the specific objective of lasting integration among networked partners, thus making future collaboration subject to continued public support. Among the difficulties there was the reluctance of many organisations to engage in a long-term commitment, but also the fact that the maximal duration of five years proved not to be realistic, particularly in areas where lasting integration can only be achieved progressively. This raises the question as to the conditions under which it is justified to continue their financing beyond the initial duration, under the ongoing Seventh Framework Programme (FP7) (see paragraphs 29 to 35).

- 60.** IPs have, in general, achieved the objectives pursued in their research field. Thanks to a longer duration and an increased number of participants, they have mobilised a significant volume of resources. However, IPs have not succeeded in attracting additional public and private funding. (see paragraphs 36 to 38).

#### RECOMMENDATION NO 2

##### ASSESS THE PERFORMANCE OF NEW INSTRUMENTS COMPARED TO TRADITIONAL RESEARCH COLLABORATION

The Commission should consider whether NoEs and IP-like collaborative projects, which continue to receive funding under the current Framework Programme (FP7), have been given realistic objectives and provide significant advantages as compared with traditional instruments for research collaboration. Concerning NoEs financed under FP6, the Commission should assess on a case-by-case basis whether past achievements, potential EU added value and prospects of self-sustainability justify further funding under FP7.

- 61.** Overall, when compared to FP5, EU funds have increased in FP6 but the investment realised is proportionally less important. The main reason is that the participation of the private sector in general has declined (see paragraph 55). The Court's audit revealed cases where EU funds were far higher than the own resources committed by public bodies participating in the programme, with the possibility that EU funds simply substitute participants' own resources (see paragraph 56).
- 62.** FP6 sought to take SMEs particular needs into account and set for this purpose a target of at least 15 % of the total budget of the thematic priorities (like in the current FP7). Although, when compared to FP5, more SMEs were involved in RTD projects, the Community contribution allocated to SMEs in the thematic priorities was limited to 10 % (against 12 % in FP5). FP7 first results show a further decline (see paragraphs 39 to 40).

- 63.** The Court observes that FP6 has not stimulated a significant increase in terms of participants' RTD investment, in a context where the European Council has set the objective of reaching RTD investments in the EU equivalent to 3 % of gross domestic product, two thirds of which should come from the private sector.

**RECOMMENDATION NO 3****EXAMINE THE REASONS FOR A LOW INVESTMENT LEVEL**

The Commission should examine the various reasons (specific to the Framework Programme or external to it) underlying the relatively low level of participants' RTD investment compared to the goals pursued and propose specific measures. Appropriate data should be made available to monitor the catalytic effect of EU RTD funding on the investments undertaken. The realism of expected targets, in particular for SMEs and the private sector, should be reassessed.

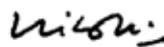
- 64.** The Commission's management has a decisive role in ensuring success and making schemes attractive to potential participants. Manageable structures, clarity of objectives, rapid and straightforward procedures, and project monitoring are all determinants of the Framework Programme's effectiveness.
- 65.** The Court's audit highlighted a number of issues which affected the effectiveness of the actions funded by FP6. These concern in particular the uncertainty about the instruments' specific role, the multiplicity of legal provisions with guidance not always sufficient, a negotiation process that is increasingly long and often not transparent, the rather large number of participants/grant and weaknesses in project monitoring (see paragraphs 44 to 53).

**RECOMMENDATION NO 4**  
**IMPROVE MANAGEMENT CONDITIONS**

In view of improving in particular the manageability of projects, their adequate implementation and appropriate evaluation, the Commission should ensure clear and timely guidance, speedier grant awarding procedures and better project monitoring.

This report was adopted by the Court of Auditors in Luxembourg at its meeting of 4 June 2009.

*For the Court of Auditors*



Vítor Manuel da Silva Caldeira  
*President*

# REPLY OF THE COMMISSION

## EXECUTIVE SUMMARY

### III.

The Commission welcomes the Court's conclusion on the success achieved by the FP6 instruments audited.

#### (i)

The FPs have always been based on a sound intervention logic (in FP7 it is made more explicit). It is challenging, in particular given the inherent uncertainty of research results, to ensure all objectives fit precisely within the strict definitions of 'SMART' criteria. And yet, essential aspects of the 'SMART' rationale were accommodated in all research-related legislative and implementation acts as can be evidenced e.g. by the existence of 'objectives' in the FP6 thematic priorities, despite the fact that this approach was not explicit in the Financial Regulation applicable at the moment of the FP6 preparation and adoption. Under FP7, all work programmes contain expected impact statements, which correspond with the objectives, rationale and activities set out in the Specific Programmes.

#### (ii)

The Commission believes that some 'Networks of Excellence' have been less successful than others but several NoEs reached self-sustained integration. This is normal given the wide range of areas covered, the various participants in dozens of different projects and the realities of collaboration in consortia.

On their side, the IPs were, by common admission, quite successful, for example, in the areas of energy and transport industrially led demonstration IPs. Many projects have led to market deployment and replication after the successful end of the FP6 contracts.

## REPLY OF THE COMMISSION

### (iii)

The Commission considers that its management of the FP6 instruments has played an important role in ensuring the success achieved by these instruments. The Commission has actively sought to address any problems encountered, within the constraints imposed by the existing legislative framework. Draft guidance documents were actually available even before the launch of FP6.

### (iv)

FP6 alone (with its two new instruments, the IPs and NoEs) is not the panacea for the challenges facing the European research landscape, especially since it made up only 5 % of the overall European funding for research. Moreover, at a moment when thousands of projects financed by it continue their course, it is too early to make conclusive comparisons with FP5. Further, the Commission believes that FP6 has provided a significant boost to research efforts and that the achievements of FP6 have been substantial. The Commission acknowledges the Court's findings as regards the participation of the private sector and would like to add that when taking into account public and private organisations engaged in commercial activities (the business enterprise sector) participation rates are similar to those of FP5.

The Commission agrees about the difficulties related to the SME participation under FP6. These issues have been addressed in FP7.

### IV.

The FPs have always been based on a sound intervention logic which has allowed effective evaluation and monitoring. In FP7, the intervention logic is made more explicit, together with the objectives and performance measures that will help further strengthen the evaluation and monitoring system. In FP7, research goals and research policy objectives are clearly and explicitly set in the work programmes. For each topic, the scientific goals, the scope of activities and indications on the results expected are defined.

### V.

#### (i)

The Commission has evaluated IPs and NoEs through various studies and reports. With regard to a continued funding of FP6 NoEs under FP7, the Commission reached a similar conclusion to the Court.

#### (ii)

The Commission is constantly examining the research landscape, monitors the national R & D policies and is actively engaged in endeavours to further research investments through, not least, the open method of coordination.

#### (iii)

The Commission agrees that clear and timely guidance, a speedier contracting process and better project monitoring are very important. The Commission carries out its obligations while it constantly has to balance between two goals that are difficult to reconcile, namely the speediness of disbursement of funds and the need to ensure their accountable distribution to contractors, all in the context of the given legislative environment.

## REPLY OF THE COMMISSION

### INTRODUCTION

#### 10.

FP6 was meant to encourage the participation of SMEs in all areas and all instruments, in particular in the context of the activities carried out in the priority thematic areas.

#### 16.

A lower success rate for proposals under FP6 than under FP5 is attributed to the higher subscription rates under FP6. Subscription rates depend on a number of complex factors, among others the degree of detail of the calls for proposals, the funds available and the evaluation approach.

### AUDIT OBSERVATIONS

#### 20.–21.

In its response to a previous audit of the Court<sup>1</sup>, the Commission maintained that the FPs have always been based on a sound intervention logic, which has been articulated as per the Treaty's provisions in the various legislative and implementation acts. In FP7 this is made more explicit, which will further strengthen the Commission's monitoring and evaluation. It is challenging, in particular given the inherent uncertainty of research results, to ensure all objectives fit precisely within the strict definitions of 'SMART' criteria. Despite the fact that this approach was not explicit in the Financial Regulation applicable at the moment of the FP6 preparation and adoption, essential elements of the 'SMART' approach were nevertheless taken up in the Commission's work programmes under FP6. Under FP7, which was developed on the basis of a detailed *ex ante* impact assessment, all work programmes contain expected impact statements, which correspond with the objectives, rationale and activities set out in the Specific Programmes.

#### 24.

The Commission considers that the high overall satisfaction with the two instruments (NoEs and IPs) expressed by the participants in the Court's survey is very positive. Given the different scope and profile of the two instruments, it is normal that private partners found in particular IPs more suitable to fit their needs.

#### 27.

As proposals correspond to 'expectations' and projects to reality, and as the implementation of projects can result in unexpected difficulties, it is not surprising that the evaluation of some projects could be less positive than the evaluation of the proposals they stemmed from.

#### 30.

The Commission notes that, according to Figure 5, the overall assessment of the projects' quality showed them to be 'acceptable' and 'good to excellent' with a percentage of above 80 %, which suggests that participants adequately allocated their research capacities to the network. One of the most important aspects of these new instruments, repeatedly brought forward in various guidance documents, was the enhanced role of the consortia themselves (and, in particular, of the coordinators) concerning the internal management of the project. It could be too soon to reach a definitive conclusion on how and/or if the objective of 'self-sustainable long-term research activities and partnerships' has been reached.

<sup>1</sup> See the Commission's replies to Special Report No 9/2007.

## REPLY OF THE COMMISSION

The Commission notes that the behaviour of the NoEs has been variable across the Framework Programme. In some thematic priorities such as IST and NMP, NoEs tend to reach greater degrees of sustainable development than in others<sup>2</sup>.

### 31.

The Commission notes the Court's own statement that almost two thirds of NoEs achieved full restructuring of activities and integration between partners, which is a considerable proportion.

### 33.

Certain circumstances may have hindered participants from working together more effectively. This is a normal trait, inextricably linked to the nature of collaboration between various actors with complementary yet different individual research goals.

### 35.

The possibility of continuing the financing of certain promising NoEs under FP7 is addressed on a case-by-case basis. In fact, an FP6 NoE's duration may be prolonged under FP7 to achieve its objectives but without new funding (cases of these currently exist).

### 38.

A distinction has to be made between the possible dimension of financial integration, in the sense of the guidelines issued by the Commission for IPs, and the co-financing principle governing any FP6 project. There has been no requirement on IP participants to attract other sources of funding beyond their own co-financing share. The Commission notes variable behaviour across the thematic areas of the Framework Programme in terms of attracting additional private and public funding.

### 40.

Concerning FP7, it is still too early in the course of this seven-year long FP to suggest any final judgment on the SMEs' participation.

### 41.–43.

The Commission agrees about the difficulties related to the SME participation under FP6. These issues have been addressed in FP7. In addition, on top of the funding provided following calls for proposals, FP7 supports the Eurostars Joint Programme for SMEs based on Article 169 of the Treaty by up to 100 million euro. The programme is jointly undertaken by Eureka countries, supporting transnational projects initiated and led by R & D performing SMEs. Eurostars is expected to contribute to building the European Research Area by integrating the participating national programmes into a joint programme at European level.

### 44.

The Commission considers that the Court's conclusion that the FP6 instruments audited had promoted effective research collaboration between project participants (see paragraph 58) reflects well on the Commission's overall management of these instruments. The Commission has actively sought to address any problems encountered, within the constraints imposed by the existing legislative framework, and continues to do so under FP7.

<sup>2</sup> IST and NMP refer to the FP6 thematic priorities 'Information society technologies' and 'Nanotechnologies and nanosciences, knowledge-based multifunctional materials, and new production processes and devices'.

## REPLY OF THE COMMISSION

### 45.

The Commission provided guidance material to the actors involved in order to facilitate their understanding of the new instruments. A very high percentage of coordinators and participants in the survey apparently did understand the distinction between the two instruments (see the Court's Figure 7). It is also to be expected that coordinators would have a better understanding of these than other participants. The European research community by and large understood and used well the new instruments, as evidenced by Figure 7 itself.

### 46.

One of the most important aspects of these new instruments, repeatedly brought forward in various guidance documents, was the enhanced role of the consortia themselves (and, in particular, of the coordinators) concerning the internal management of the project.

### 47.

The Commission implemented the FP in the best possible manner to ensure compliance with the different applicable provisions.

### 48.

The Commission has acted as quickly as possible given the late adoption of the FP6 legal acts by the legislators. Detailed brochures and 'Provisions for implementing' for all the instruments were already available in November 2002, well before the production of the model contracts. A large number of guidance documents have been produced and published on the internet. Additionally, targeted events for coordinators, to which all projects have been invited, addressed in particular any questions they might have had on the specificities of the instruments.

### 49.

The Commission is pleased that the Court appreciates its continuous efforts to promote better understanding of the new instruments under FP6, including its quick response to external evaluations. The European research community by and large understood and used the new instruments well.

### 50.

The introduction of new instruments unavoidably brought the need for proposers to become familiar with new notions in terms of the negotiations to be carried out and the data to be submitted, elements that very often made necessary further contacts and exchanges between participants themselves, an always time-consuming process. Further, the obligation imposed on the Commission by the legislator (the Council, in this case) to receive a (positive) opinion on all IPs and NoEs to be funded (irrespective of the amount of Community contribution) contributed to making the time-to-contract longer. Moreover, the time is comparable to that of other major funding agencies in the world. As regards the negotiation process, modifications on the project scope were always done in the context of the FP's legal framework.

### 51.

The Commission acknowledges the Court's comments. However, the Commission recalls that one of the most important aspects of these new instruments, repeatedly brought forward in various guidance documents, was the enhanced role of the consortia themselves (and, in particular, of the coordinators) concerning the internal management of the project.

## REPLY OF THE COMMISSION

### CONCLUSIONS AND RECOMMENDATIONS

**52.**

The Commission strongly endorses the importance of project monitoring, carried out through a variety of means including the detailed attention of project officers. It recognises however, that there have been some cases, often for individual and specific reasons, where independent review was not carried out.

**53.**

A common template for the reviewers' report was prepared for all Research DGs. A basic common guidance document was also prepared and given to the different services to adapt to their own needs.

**55.**

The Commission acknowledges the Court's findings. The Commission would like to stress, however, that the EU contribution to the private sector under FP6 increased significantly by more than 1 billion euro in comparison to FP5. It is also true that the situation differs by sectors. The Commission considers that FP6 had a positive influence on industrial competitiveness. Furthermore, it would like to add that when taking into account public and private organisations engaged in commercial activities (the business enterprise sector) participation rates are similar to those of FP5.

**57.**

The Commission considers that the FPs have always been based on a sound intervention logic. Under FP6, the legislative acts and the Commission's work programmes and information material of various types provided a coherent stream and wealth of information on intervention logic, objectives, justification of the efforts and their European added value, actions envisaged, rationale and operational framework of application for all instruments to be used and other helpful information for the proposers and project participants. It is challenging, in particular given the inherent uncertainty of research results, to ensure all objectives fit precisely within the strict definitions of 'SMART' criteria. Despite the fact that this approach was not explicit in the Financial Regulation applicable at the moment of the FP6 preparation and adoption, essential elements of the 'SMART' approach were nevertheless taken up in the Commission's work programmes under FP6. Under FP7, all work programmes contain expected impact statements, which correspond with the objectives, rationale and activities set out in the Specific Programmes. The Commission considers that FP6 was properly monitored and evaluated.

## REPLY OF THE COMMISSION

### Recommendation No 1

The Commission considers that the FPs have always been based on a sound intervention logic which has allowed effective evaluation and monitoring. Under FP7, which was developed on the basis of a detailed *ex ante* impact assessment, all work programmes contain expected impact statements, which correspond with the objectives, rationale and activities set out in the Specific Programmes. This will help further strengthen the evaluation and monitoring system. Under FP7, instead of being encapsulated in the 'instruments', research goals and research policy objectives, including those aiming at structuring research efforts, are clearly and explicitly set in the work programmes. For each topic on which proposals are invited, the scientific goals, the scope of activities and indications on the results expected are defined.

### 58.

The Commission welcomes the Court's conclusion that the FP6 instruments covered by the audit had promoted a good level of research collaboration between project participants. As proposals correspond to 'expectations' and projects to reality, and as the implementation of projects can result in unexpected difficulties, it is not surprising that the evaluation of some projects could be less positive than the evaluation of the proposals they stemmed from.

### 59.

There was a large number of NoEs where lasting integration among partners was achieved and the overall quality of projects was deemed high (the overall assessment in Figure 5 shows the NoEs' quality to be 'acceptable' and 'good to excellent' with a total percentage of above 80 %). Almost two thirds of NoEs achieved full restructuring of activities and integration between partners. The possibility of continuing the financing of certain promising FP6 NoEs under FP7 is addressed on a case-by-case basis. In fact, an FP6 NoE's duration may be prolonged without new funding (cases of these currently exist). Moreover, new NoEs could be envisaged in duly justified cases.

### 60.

A distinction has to be made between the possible dimension of financial integration and the co-financing principle governing any FP6 project. There has been no requirement on IP participants to attract other sources of funding beyond their own co-financing share. The Commission notes variable behaviour across the thematic areas of the Framework Programme in terms of attracting additional private and public funding.

### Recommendation No 2

The Commission has evaluated these FP6 instruments through various means. With regard to a continued funding of FP6 NoEs, the Commission reached a similar conclusion following the Report of the Expert Group on the future of Networks of Excellence.

## REPLY OF THE COMMISSION

### 61.

The Commission acknowledges the Court's findings. Still, it points out that this did not diminish the FP's role as a contributor to the promotion of industrial competitiveness.

Furthermore, it would like to add that when taking into account public and private organisations engaged in commercial activities (the business enterprise sector) participation rates are similar to those of FP5.

### 62.

Concerning FP7, it is still too early in the course of this seven-year-long FP to suggest any final judgment on the SMEs' participation.

### 63.

FP6 makes up a very small part (close to 5 %) of the overall funding provided for research in Europe and, hence, its scope for influence in a domain where Member States have the first role to play is by definition limited. Yet the Commission believes that FP6 has provided a significant boost to research efforts.

#### Recommendation No 3

The Commission is constantly examining the research landscape, monitors the national R & D policies and is actively engaged in the endeavours to further research investments through, not least, the open method of coordination.

### 65.

The Commission has actively sought to address any problems encountered, within the constraints imposed by the existing legislative framework. The Commission notes that the large number of projects under the new instruments, which points to the involvement of thousands of participants in them, as well as the overall good results that were registered for them, shows that any shortcomings have not been important for the overall use of the IPs and the NoEs.

#### Recommendation No 4

The Commission agrees that clear and timely guidance, a speedier contracting process and better project monitoring are very important elements for the implementation of a European FP for research. The Commission carries out its obligations while it constantly has to balance between two goals that are difficult to reconcile, namely the speediness of disbursement of funds and the need to ensure their accountable distribution to contractors, all in the context of the current legislative environment.



European Court of Auditors

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THE SIXTH FRAMEWORK PROGRAMME WAS SET UP BY THE EU TO PROMOTE EUROPEAN RESEARCH AND TECHNOLOGICAL DEVELOPMENT DURING THE PERIOD FROM 2002 TO 2006. THE COURT ANALYSED THE EXTENT TO WHICH THE TWO MAIN INSTRUMENTS, 'NETWORKS OF EXCELLENCE' AND 'INTEGRATED PROJECTS'; HAD EFFECTIVELY CONTRIBUTED TO THE ACHIEVEMENT OF THE OBJECTIVES OF THE PROGRAMME. THE COURT CONCLUDED THAT THESE INSTRUMENTS CONTRIBUTED TO THE GENERAL OBJECTIVE OF PROMOTING EFFECTIVE RESEARCH COLLABORATION BUT THEIR SPECIFIC OBJECTIVES WERE ONLY PARTIALLY ACHIEVED.



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