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EU research – Building Knowledge Europe: The EU's new Research Framework Programme 2007-2013

On 6 April the European Commission adopted a proposal for a new EU programme for Research. The proposal provides new impetus to increase Europe's growth and competitiveness, recognising that knowledge is Europe's greatest resource. The programme places greater emphasis than in the past on research that is relevant to the needs of European industry, to help it compete internationally, and develop its role as a world leader in certain sectors. The programme will also for the first time provide support for the best in European investigator-driven research, with the creation of a European Research Council. Focus will be on excellence throughout the programme, a requirement if it is to play its role in developing Europe's global competitiveness. Another priority will be to make participation in the programme simpler and easier, through measures addressing the procedures, plus a rationalisation of instruments. In spite of this new approach, there are many elements of continuity: in practice, for the majority of participants, the programme itself will not change, but participation will become simpler.

This note sets out the details of the Commission's proposal, which is now to be debated by the Member States (Council) and European Parliament, before a final Decision is adopted.

What is the Commission's proposal?

The Commission has put forward an ambitious proposal for the EU Seventh Research Framework Programme 2007-2013 (FP7). Subtitled "Building the European research area of knowledge for growth", FP7 is designed to respond to the competitiveness and employment needs of the EU. The Commission proposes in particular to double the FP7 budget compared with FP6, rising to EUR 67.8] billion over the period 2007-2013. According to the Commission proposal, FP7 will be organised in four specific programmes.

1. Cooperation.

Objective: to gain European leadership in key areas through co-operation of industry and research institutions. Support will be given to research activities carried out in trans-national cooperation, from collaborative projects and networks to the coordination of national research programmes.

The Cooperation programme is organised into sub-programmes which will be operationally autonomous and at the same time demonstrate coherence and consistency, and allow for joint, cross-thematic approaches to research subjects of common interest. Nine themes have been identified:

- Health
- Food, agriculture and biotechnology
- Information and communication technologies
- Nanosciences and nanotechnologies, materials and new production technologies
- Energy
- Environment (including climate change)
- Transport (including aeronautics)
- Socio-economic sciences and the humanities
- Security and Space

In addition, two themes are covered by the Euratom Framework Programme:

- Fusion energy research
- Nuclear fission and radiation protection.

2. Ideas

Objective: To strengthen the excellence of our science base by fostering competition at European level. An autonomous European Research Council will be created to support “frontier research” carried out by research teams, either individually or in partnership, competing at European level, in all scientific and technological fields, including engineering, socio-economic sciences and the humanities.

3. People

Objective: To reinforce career prospects and mobility for our researchers. Activities supporting individual researchers, referred to as “Marie Curie” actions, will be reinforced with the aim of strengthening the human potential of European research through support to training, mobility and the development of European research careers.

4. Capacities

Objective: To develop research capacities, so that the European science community has the best possible capacities at its service. Activities will be supported to enhance research and innovation capacity throughout Europe: research infrastructures; regional research driven clusters; stimulating the research potential in the EU’s “convergence” regions; clustering regional actors in research to develop “regions of knowledge”; research for and by SMEs; “science in society” issues; “horizontal” activities of international co-operation.

The details of these programmes will be set out in specific legislative proposals later in the year.

What is different about this Framework programme compared to its predecessors and what stays the same?

There is a strong element of continuity with the past in the proposed Seventh Framework Programme. Projects undertaken by consortia of European partners will remain at the core of the programme, and the themes for these projects will remain more or less as now. The programme will continue to develop the concept of a European Research Area. Funds will be used to develop and increase those elements of previous programmes that worked well: Marie Curie, SME actions, collaborative projects, Networks of Excellence. The aim of continuity will be strengthened through a programme that lasts 7 years (with the possibility of a mid-term review).

There are also several new elements.

A key feature of FP7 will be a significant simplification of its operation. Measures are being considered, in line with the future revision of the Financial Regulation, to make the programme as straightforward as possible for potential participants. The European Commission has established a sounding board composed of representatives of small companies and research teams – groups which seem to face the biggest difficulties in participating in the programme. This sounding board will advise on whether measures proposed to make the programme simpler will in fact have the required effect.

By focussing more on themes and less on instruments, the programme will be more flexible and adaptable to the needs of industry, as well as more straightforward for its participants.

The programme will have more focus than in the past on developing research that responds to the needs of European industry, through the work of Technology Platforms and the new “Joint Technology Initiatives”. These will be projects in fields of major European public interest on subjects identified through dialogue with industry, in particular in the European Technology Platforms.

The programme will establish for the first time a “European Research Council”, funding the best of European science, as assessed by peer review of European scientists. This will be the first time that a body like this has existed at European level, identifying the very best of European research wherever and however it is carried out.

International co-operation will no longer just be a separate part of the programme, but will be integrated into all four programmes, allowing projects to be carried out with international partners. In the same vein, the Science in Society action will have specific tasks, but the aim of anchoring science more closely in the needs and wants of European society will be considered in all parts of the programme.

Another new element will be the development of “regions of knowledge”, bringing together research partners – such as universities, research centres, enterprises and regional authorities - in a region to strengthen their research potential.

FP7 will also comprise a “Risk-Sharing Finance Facility” aimed at fostering private investment in research by improving access to European Investment Bank (EIB) loans for large European research actions. This mechanism will enable broader EIB lending to RTD actions.

Has the Commission listened to the research community in developing this programme?

The new proposal is based on a year-long process of consultations with interested parties. The main elements of the proposal have been under discussion for some time and are unlikely to present any surprises. The approach proposed by the Commission in its communication of June 2004, which forms the basis for this proposal, have the strong backing of the scientific community.

In February of this year, an expert panel led by Dr Erkki Ormala, Vice President of Technology Policy at Nokia, presented its evaluation report on the previous 5 years of European Research and Development Programmes. It found that these programmes had made a major contribution to the development of Europe’s knowledge base and had had a positive effect on Europe’s potential for innovation.

However the panel found that if this positive effect was to be continued, more resources would be needed in the future. The panel also recommended more industry participation, especially SMEs; streamlined and simplified administration; and more emphasis on radical innovation and risk-taking.

The Commission has also had numerous meetings with groups of scientists, scientific organisations and other umbrella bodies, at political or technical level, to discuss its ideas for the new programme and to involve the views of the wider community as much as possible.

The European Parliament and Council have given their responses to the June 2004 policy document, which has been extremely useful for the Commission in drawing up this proposal.

How will the Commission go about making the programme simpler?

Simplifying the administrative and financial rules and procedures of the Seventh Framework Programme will be a decisive factor in its success. The Commission is proposing a series of measures to address issues relating to implementation at every level of the programme. These measures include:

- Rationalising the funding schemes – a new approach based on a simpler set of funding instruments
- Using simpler, less bureaucratic languages, that is free of jargon and user-friendly
- Reducing the number and size of documents
- Reducing the number of request to participants and instituting a lights submission procedure
- Reducing a priori controls (i.e. controls before the project is approved)
- Increasing the autonomy of consortia
- Streamlining the selection process
- Exploring new modes of funding and simplifying the cost-based funding system.

Will these increased resources be well spent?

Even with the proposed increase in funds, the European research budget will represent less than 10% of public spending on research and development within the European Union, unless Member States follow the EU's lead and fulfil their commitment to devote more national resources to research and development.

The reasons for proposing the increase in resources for the budget are several:

- The structure of the EU's budget should reflect the political priorities of the EU. This means increasing the amount available for measures supporting growth and jobs, including research.
- Spending on research at EU level has a leverage effect on other sources of private and public funding. Therefore a €70 billion programme at European level, although a small proportion of the total needed of the overall amount (about 0.1% of EU GDP, when the objective is to invest 3% of EU GDP) will nonetheless help to encourage greater spending overall. Each €1 of European money invested in research leads to an additional €1 of private investment
- The political, economic and scientific context requires the development of a number of new actions that must be given sufficient funds if they are to fulfil their objectives.

- It is also the case that there are already significant numbers of high quality proposals that have to be rejected due to a lack of available funds. An increase in resources at European level would give an added boost to a whole range of scientific activities at European level that have up to now been left aside.

The European Commission will be responsible for implementing and managing FP7. There are strong reasons to keep the Commission involved in the management of research programmes, including the fact that it has successfully executed substantial budget increases in preceding Framework Programmes, its unique experience and overall knowledge of the European research scene, the trust Member States have in this formula, as well as the very useful feedback it provides for EU research policy-making. However, changes are proposed for FP7.

As the Commission will manage a doubled R&D budget without an increase in staff numbers, it proposes to have all logistical and administrative tasks, i.e. not related to policy, undertaken outside its services. As a consequence, part of the activities it currently carries out will be transferred to external structures operating under the Commission's responsibility, in particular those tasks which generate a large number of small operations, without providing significant feedback for the definition of programmes and policies. The activities of the European Research Council will also be part of an external structure, working autonomously under the governance of an assembly of eminent scientists.

Why is European research important?

Knowledge is Europe's best resource. Investing in knowledge is certainly the best, and maybe the only, way for the EU to foster economic growth and create more and better jobs, while at the same time ensuring social progress and environmental sustainability.

Prosperity and solidarity, reconnecting the EU with its citizens, and making the Union a strong global partner have been set as priority goals for the EU.

The EU's research policy, and the proposal for the new Framework Programme that will help implement it, play an important role in delivering these goals. Research is at the core of the EU's plan to stimulate growth and jobs: together with education and innovation, it is a key component of the 'Knowledge Triangle'. Europe must increase its research effort to 3% of EU GDP and better exploit its capacities in this field, transforming scientific results into new products, processes and services, as part of its efforts to fulfil its goal of becoming the "most dynamic and competitive knowledge-based economy in the world".

Investment at European level, while remaining a small part of the total needed to achieve the 3% target, can have a considerable effect. For example, identifying key infrastructures at European level, encouraging public/private partnerships to identify research needs and co-ordinating national research policies in a particular area are all actions that can enhance the overall efficiency of research spending, whether public or private. By increasing its investment in research, the European Union will set a clear example, to be followed by Member States and private investors. European-level investment in research will be spent in areas that maximise the leverage effect on other types of investment.

How will the money be spent?

The attached table gives the Commission's proposed breakdown per programme.

7th Framework Programme of the European Community (EC) (Maximum overall amount (EUR million, 2004 constant prices), respective shares and indicative breakdown, 2007-2013)											
	Themes	Health	Biotech, Food, Agriculture	Information Society	Nano, Materials, Production	Energy	Environment	Transport	Socio-economic Research	Security and Space	
COOPERATION	Using all funding schemes. Including international cooperation.	7350	2170	11197	4270	2590	2240	5250	700	3500	39267
IDEAS	European Research Council										10483
PEOPLE	Marie Curie Actions										6300
CAPACITIES	Research Infrastructures										3500
	Research for the benefit of SMEs										1680
	Regions of Knowledge										140
	Research Potential										490
	Science in Society										490
	International Co-operation										315
JRC	Joint Research Centre										1617
TOTAL EC	Total										64282
EURATOM (2007-2011)¹											2800

¹ The 7th framework programme of the European Atomic Energy Community (Euratom) for nuclear research and training activities (2007 to 2011) comprising fusion energy research, nuclear fission and radiation protection and the Nuclear activities of the JRC. The total budget is 2.800 million EUR for the five years whereof the JRC 490 million EUR. The projected budget for EURATOM in 2012 – 2013 in 2004 prices is 1393 million EUR.