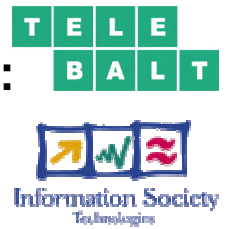


# Lecture 4: Sixth Framework Programme: Participation for Pre-accession States



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## **Sixth Framework Programme: Structure, Budget**

### **Introduction**

The Sixth Framework Programme will be one of the most important instruments to implement the **"European Research Area" (ERA)**. To understand better what the ERA is read the abstract from a Commission Communication "Towards a European Research Area" proposed in January 2000:

*"The European Union's overall research effort, both in the private and public sector, has been steadily declining for 10 years. The gap is widening in relation to the United States and Japan. To tackle the problem, the European Commission has issued a Communication paving the way towards a European research area."*

The European Research Area will permit

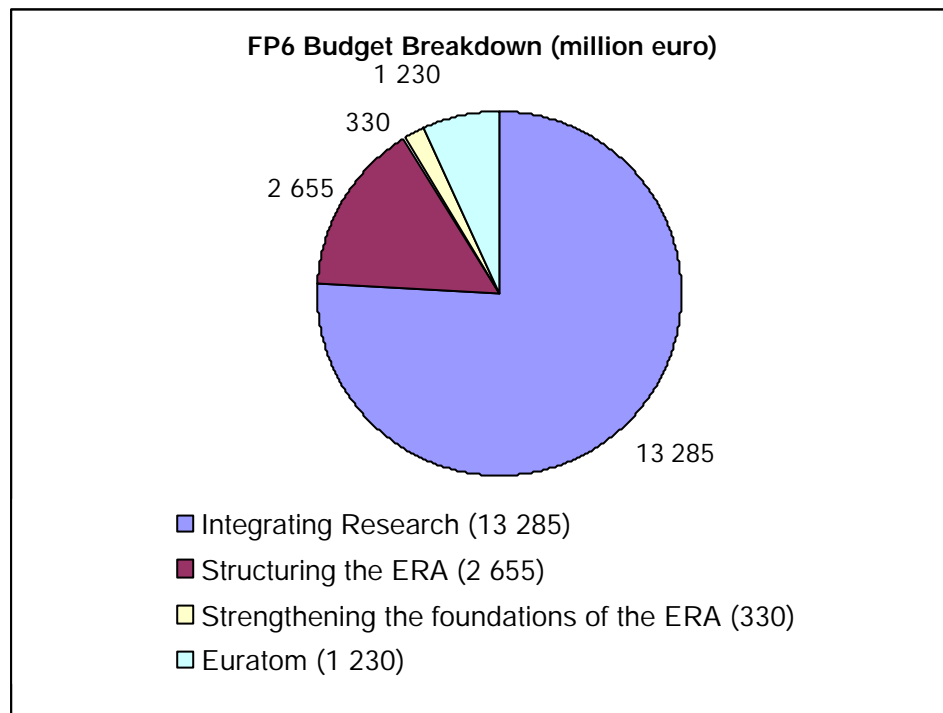
- to create a frontier-free area for research;
- to provide a better use of financial instruments and resources to encourage investments in research and innovation;
- to promote human resources mobility in research, particularly with regards to women and young people.

The Commission introduced a proposal for the Sixth Framework Programme for the period 2002-2006 on 21 of February 2001. The European Parliament and the Council are supposed to adopt the final text and the budget in a co-decision procedure in the middle of 2002. As the previous programme the FP6 comprises two distinct parts: the Sixth Framework Programme of the European Community for RTD (Research and Technological Development) activities and the Sixth Framework Programme of the European Atomic Energy Community for research and training activities in nuclear sector.

The Framework Programme 2002-2006 will be restructured around three main approaches in implementing the European Research Area:

- Integrating European research;
- Structuring the European Research Area (ERA);
- Strengthening the foundations of the ERA.

## FP6 Budget



## Sixth Framework Programme of the European Community for RTD Activities

**1. Integrating European research** are activities that represent the thematic approach of the Programme and are intended to integrate research efforts and activities on a European scale. The efforts will be carried out in a limited number of priority thematic areas, as well as in areas covering a wider field of research in the form of certain specific needs of EU policies or new emerging needs.

**Priority areas of research.** There are seven priority areas of research covered by the FP6. They are:

- Genomics and biotechnology for health ( €2.2 billion, or one-eighth of the total budget);
- Information Society technologies (€3.6 billion, one-fifth of total resources);
- Nanotechnologies, intelligent materials, and new production processes ( €1.3 billion);
- Aeronautics and space (€1.1 billion);
- Food safety and health risks (almost €700 million);
- Sustainable development and the environment - energy, transport, global change and ecosystems (€2.1 billion);
- Citizens and governance in an open European knowledge-based society (€225 million).

Let us now revise in brief the areas of research that are provided by the FP6 and that are open for those interested in submitting proposals.

### 1. Genomics and biotechnology for health

This area includes

- Advanced genomics and its application for health:
  - Fundamental knowledge and its applications for health: gene expression and proteomics, structural genomics, bioinformatics, etc.;
  - Application of knowledge in genomics and biotechnology for health: technological platforms, prevention and therapeutic tools, etc.
- Combating major diseases:
  - Application-oriented approach to medical genomics knowledge and technologies: diabetes, cardiovascular diseases, resistance to antibiotics, brain and ageing, etc.;
  - Cancer;
  - Poverty-linked infectious diseases: aids, malaria and tuberculosis.

As stated on the Commission's modified proposal from November 2001, "The activities carried out in this area are intended to help Europe exploit, by means of an integrated research effort, breakthroughs achieved in decoding the genomes of living organisms, more particularly for the benefit of public health and citizens and to increase the competitiveness of the European biotechnology industry in the Member States, the candidate countries and other associated countries. The emphasis will be put on translational research to enable real and consistent progress in medicine and improve quality of life".

Full text of the "Food safety and health risks" chapter of the Commission's modified proposal:

[ftp://ftp.cordis.lu/pub/rtd2002/docs/fp6mod\\_genomics.pdf](ftp://ftp.cordis.lu/pub/rtd2002/docs/fp6mod_genomics.pdf)  
[ftp://ftp.cordis.lu/pub/rtd2002/docs/fp6mod\\_genomics.pdf](ftp://ftp.cordis.lu/pub/rtd2002/docs/fp6mod_genomics.pdf)

## **2. Information society technologies**

This area includes

- Integrating research into technological areas of priority interest for citizens and businesses: security, "ambient intelligence", electronic commerce, etc.;
- Communication and computing infrastructures;
- Components and microsystems;
- Information management and interfaces.

Information Society Technologies - a major theme of research and technological development within the European Union's Fifth RTD Framework Programme (1998-2002) – will be continued in the next Framework Programme (2002-2006). As the main concern of FP6 is a creation of a common research area in Europe, the general idea is therefore to join Europe's researchers and industrialists, to build networks for collaboration, to provide their close cooperation. According to the Commission's proposal "the activities carried out in this area <...> are intended to stimulate the development in Europe of technologies and applications at the heart of the creation of the Information Society in order to increase the competitiveness of European industry and allow European citizens people in all EU regions of the Member States, candidate countries and other associated countries the possibility of benefiting fully from the development of the knowledge-based society."

Full text of the "Information society technologies" chapter of the Commission's modified proposal:

[ftp://ftp.cordis.lu/pub/rtd2002/docs/fp6mod\\_infosoc.pdf](ftp://ftp.cordis.lu/pub/rtd2002/docs/fp6mod_infosoc.pdf)  
[ftp://ftp.cordis.lu/pub/rtd2002/docs/fp6mod\\_infosoc.pdf](ftp://ftp.cordis.lu/pub/rtd2002/docs/fp6mod_infosoc.pdf)

### **3. Nanotechnologies, intelligent materials, and new production processes**

- Nanotechnologies and nanosciences: long-term research, supramolecular architectures and macromolecules, nanobiotechnologies, etc.;
- Knowledge-based multifunctional materials: fundamental knowledge, production and transformation technologies;
- New production processes and devices: flexible and intelligent manufacturing systems, sustainable waste management, optimization of life cycles, etc.

The activities carried out in this area are intended to help the Member States, candidate countries and other associated countries of Europe achieve a critical mass of capacities needed to develop and exploit, especially for greater eco-efficiency and reduction of discharges of hazardous substances into the environment, leading edge technologies for the knowledge- and intelligence-based products, services and manufacturing processes of the years to come.

Full text of the "nanotechnologies, intelligent materials, and new production processes" chapter of the Commission's modified proposal:

[ftp://ftp.cordis.lu/pub/rtd2002/docs/fp6mod\\_nano.pdf](ftp://ftp.cordis.lu/pub/rtd2002/docs/fp6mod_nano.pdf)  
[ftp://ftp.cordis.lu/pub/rtd2002/docs/fp6mod\\_nano.pdf](ftp://ftp.cordis.lu/pub/rtd2002/docs/fp6mod_nano.pdf)

### **4. Aeronautics and space**

This area includes

- Aeronautics: competitiveness of the industry (new aircraft, engines etc); reduction of environmental nuisances; safety; increasing the capacity of the aviation system («Single European Sky»);
- Space: research relevant to Galileo (satellite navigation) and GMES (monitoring for environment and security); integrating terrestrial networks and space systems (telecommunications).

The aim of activities carried out in this area is two-fold: to consolidate, by integrating its research efforts, the position of the European aeronautics and space industry vis-à-vis increasingly strong world of competition; and to help exploit the potential of research in the Member States, candidate countries and other associated countries in this sector with a view to improving safety and environmental protection.

Full text of the "Aeronautics and space" chapter of the Commission's modified proposal:

[ftp://ftp.cordis.lu/pub/rtd2002/docs/fp6mod\\_aero.pdf](ftp://ftp.cordis.lu/pub/rtd2002/docs/fp6mod_aero.pdf)  
[ftp://ftp.cordis.lu/pub/rtd2002/docs/fp6mod\\_aero.pdf](ftp://ftp.cordis.lu/pub/rtd2002/docs/fp6mod_aero.pdf)

### **5. Food safety and health risks**

- Safer and environmentally friendly production and processing;
- Food-related diseases and allergies;
- Analysis, detection, «traceability» of contaminants and micro-organisms;

- Organic farming, functional food;
- Traceability processes along the production chain;
- Analysis, detection and control of chemical contaminants and micro-organisms;
- Impact of animal feed.

According to the Commission's modified proposal from November 2001, "The activities carried out in this area are intended to help the Member States, the candidate countries and other associated countries establish the integrated scientific and technological bases needed to develop an environmentally friendly a system of production and distribution of safe and healthy food, in line with consumer requirements, and control food-related risks, relying in particular on biotechnology tools, as well as health risks associated with environmental changes".

Full text of the "Food safety and health risks" chapter of the Commission's modified proposal:

[ftp://ftp.cordis.lu/pub/rtd2002/docs/fp6mod\\_food.pdf](ftp://ftp.cordis.lu/pub/rtd2002/docs/fp6mod_food.pdf)  
[ftp://ftp.cordis.lu/pub/rtd2002/docs/fp6mod\\_food.pdf](ftp://ftp.cordis.lu/pub/rtd2002/docs/fp6mod_food.pdf)

## **6. Sustainable development**

- Sustainable energy systems: clean energy, energy savings, alternative motor fuels, fuel cells, energy carriers/transport/storage, etc.;
- Sustainable surface transport: environmentally friendly transport, interoperability, safety, etc.;
- Global change and ecosystems: greenhouse gas emissions, water cycle, biodiversity, natural disasters, land management, climate modeling, etc.

The activities carried out in this area are intended to strengthen the scientific and technological capacities needed for Europe to be able to implement sustainable development, recognized as a Community objective by the Gothenburg European Council, integrating its environmental, economic and social dimensions, with particular regard to secure sustainable energy and transport. They should enable Member States, the candidate and other associated countries to and make a significant contribution to the international efforts to understand and control global change and preserve the equilibrium of ecosystems.

Full text of the "Sustainable development" chapter of the Commission's modified proposal:

[ftp://ftp.cordis.lu/pub/rtd2002/docs/fp6mod\\_sustainable.pdf](ftp://ftp.cordis.lu/pub/rtd2002/docs/fp6mod_sustainable.pdf)  
[ftp://ftp.cordis.lu/pub/rtd2002/docs/fp6mod\\_sustainable.pdf](ftp://ftp.cordis.lu/pub/rtd2002/docs/fp6mod_sustainable.pdf)

## **7. Citizens and governance in an open European knowledge-based society**

- Knowledge-based society and social cohesion: production/ transmission/utilisation of knowledge; development of a knowledge-based society and variety of transition dynamics at local, national and regional level;
- Citizenship, democracy and new forms of governance: consequences of EU integration, enlargement; new forms of Governance: citizenship and cultural identities, etc.

Europe's transition towards a knowledge-based economy and society, and its sustainable development in the interests of quality of life of all citizens will be all the easier if it takes

place in a way which is properly understood and managed. This requires a substantial research effort concerning the issues of integrated and sustainable economic and social progress based on the fundamental values of justice and solidarity.

Full text of the "Citizens and governance in an open European knowledge-based society" chapter of the Commission's modified proposal:

[ftp://ftp.cordis.lu/pub/rtd2002/docs/fp6mod\\_citizens.pdf](ftp://ftp.cordis.lu/pub/rtd2002/docs/fp6mod_citizens.pdf)  
[ftp://ftp.cordis.lu/pub/rtd2002/docs/fp6mod\\_citizens.pdf](ftp://ftp.cordis.lu/pub/rtd2002/docs/fp6mod_citizens.pdf)

**«Integrating research»: Specific activities covering a wider field of research.**

The budget allocated is €1 320 million. They will complement research within the thematic priority areas of research and comprise the following:

- Supporting policies and anticipating scientific and technological needs: activities in support of EU policies and research responding to new and emerging needs (annual programming);
- Horizontal research activities for small and medium-sized enterprises (SMEs): to boost technological capacities of SMEs in traditional or new areas and develop their ability to operate internationally (co-operative and collective research);
- Specific measures in support of international co-operation: developing countries, Mediterranean countries including the Western Balkans; Russia and the NIS;

## **2. Structuring the European Research Area (ERA)**

These activities are intended to stimulate technological innovation, utilisation of research results, transfer of knowledge and technologies and the setting up of technology businesses in the Community and in all its regions, including in the less developed areas. They will be carried out around four main areas:

### **1. Research and innovation (€300 million)**

- Networking the players and users
- Encouraging trans-regional co-operation
- New tools and approaches concerning technological innovation
- Putting services in place and consolidating them (CORDIS)
- Economic and technological intelligence
- Analyzing innovation in EU-funded research projects

### **2. Human resources and mobility (€1 630 million)**

- Host-driven actions: MC (Marie Curie) research training networks, MC host fellowships for early stage research training, MC host fellowships for the transfer of knowledge, MC conferences and training courses;
- Individual-driven actions: MC intra-European fellowships, MC outgoing/incoming international fellowships;
- Excellence promotion and recognition: MC excellence grants, MC excellence awards, MC chairs;
- Return and reintegration mechanisms.

### **3. Research infrastructures (€665 million)**

- Transnational access to research infrastructures
- Integrating activities
- Communication network development
- Design studies
- Development of new infrastructures

#### **4. Science and society (€60 million)**

- Bringing research closer to society: science and governance, scientific advice and reference systems;
- Responsible research and application of science and technology: ethics, uncertainty, risk, precautionary principle;
- Stepping up the science/society dialogue and women in science: public understanding, young people's interest in scientific careers, women and science.

### **3. Strengthening the foundations of the ERA**

This presupposes measures to simplify and streamline the implementation arrangements on the basis of the intervention methods defined and the decentralized management procedures envisaged.

These measures include:

- support for the co-ordination of activities at the European level and co-ordination of national activities in such areas as health, biotechnology, environment, energy (€280 million);
- coherent development of research and innovation policies in Europe (€50 million).

## **Sixth Euratom Framework Programme**

This programme is a continuation of the Fifth Euratom Framework Programme. The Programme includes the following activities:

#### **1. Management of radioactive waste (90 million euro)**

It implies projects on long-term storage, reducing the impact of waste and the hazards associated with waste, etc.

#### **2. Controlled thermonuclear fusion (750 million euro)**

The theme presupposes activities in areas of fusion physics and technology, activities related to 'Next Step'/ ITER, etc.

#### **3. Radiation protection (50 million euro)**

#### **4. Other activities (50 million euro)**

They imply radiation protection, safer processes for the exploitation of nuclear energy, etc.

#### **5. Activities of the Joint Research Center (290 million euro)**

Activities in the fields of nuclear safety and security, in measurements and reference materials.



## **Instruments of FP6**

As stated on the European Commission speaking notes the following instruments will be available for implementing the FP6 priority thematic areas and for funding research:

- Integrated projects;
- Networks of excellence;
- Article 169 participation of the Community in programmes implemented jointly by several Member States) (for the joint implementation of national programmes);
- as a "stairway of excellence"
- specific targeted research projects,
- coordination actions;
- specific support actions.

This is a somewhat wider range of instruments than was available for the key actions of the Fifth Framework Programme (FP5), since it now contains a mix of the "new" instruments driven by the concepts of the European Research Area (ERA) and of the more "traditional" instruments similar to those in FP5.

These "new" instruments, notably the integrated projects and the networks of excellence, are characterized by their capacity to mobilize the critical mass of expertise needed to achieve ambitious objectives. They are also characterized by the structuring and integrating effects that they will have on the fabric of European research.

In priority thematic areas three new instruments (integrated projects; networks of excellence and programmes implemented jointly) will be used from the start of FP6 while maintaining the use of specific targeted projects and co-ordination actions and will be assessed in 2004.

Networks of excellence include lasting integration of research capacities, long-term and multidisciplinary objectives, implemented by a joint programme of activities, genuine 'virtual centers of excellence', high level of management autonomy, gradual integration of work programmes and selected on the basis of calls for proposals.

Integrated projects imply that research activities may be complemented by demonstration, innovation activities. This new instrument is to boost competitiveness or to address major societal needs, to provide results applicable to products, processes or services. Integrated projects are selected on the basis of calls for proposals and implemented through overall financing plans.

Third new instrument of FP6, programmes implemented jointly, means joint implementation of nation/regional programmes (article 169 of the Treaty), for example, through harmonized work programmes and common, joint or coordinated calls for proposals. It may be used in all Framework activities and has got specific implementation structure.

Above other instruments there are

- Specific targeted research or innovation projects;
- Specific research projects for SMEs;
- Actions to promote and develop human resources and mobility;

- Coordination actions
- Specific support actions
- Integrated infrastructure initiatives.

**Specific targeted researches** are aimed to improve competitiveness and need to be sharply focused. **Specific targeted innovation projects** are to test, validate and disseminate new innovation concepts and methods.

**Specific research projects for small and large enterprises** include cooperative research projects undertaken for the benefit of a number of SMEs on the themes of common interest, and collective research projects carried out for industrial associations or industry groupings in sector where SMEs are prominent.

To promote training, development of expertise or transfer of knowledge and to support actions undertaken by individuals. Host structures (including training networks) and European research teams there is forth instrument of FP6 - **actions to promote and develop human resources and mobility**.

**Coordination actions** are to support coordinated initiatives undertaken by a range of stakeholders involved in research and innovation (with the aim of improving integration). Above such actions the following could be mentioned: conferences, meetings, studies, exchange of personnel, exchange of good practices, information systems, expert groups, etc.

Awards, information and communication activities, support of research infrastructures (e.g. feasibility studies) form **specific support actions**, which focus on complementation of FP6 implementation and preparation of future RTD activities, such as monitoring and assessment.

**Integrated infrastructure initiatives** urge to reinforce and develop research infrastructure in order to provide services at European level. This instrument must combine networking activities with support (e.g. transnational access) or research (e.g. to improve performance).

For more information please visit

[http://www.europa.eu.int/comm/research/fp6/pdf/fp6-presentation\\_en.pdf](http://www.europa.eu.int/comm/research/fp6/pdf/fp6-presentation_en.pdf)

<http://www.cordis.lu/rtd2002/fp-activities/instruments.htm>

## **Participation in FP6**

### **Rules of participation**

First of all we should answer a question 'who can participate in the Sixth Framework Programme'. There are three types of participants that can be involved in it:

- Every legal entity
- Associated Candidate Countries
- International European interest organizations.

It is stated that candidate countries associated to the FP and international European interest organizations will participate under that same conditions as EU Member States (MS).

The minimum number of partners in each participating consortium should be as follows:

- For networks of excellence and integrated projects – three participants with two from Member States or Associated Candidate Countries;
- In other instruments two participants with one from MS or ACC;
- Single participation is possible for fellowships and specific support actions.

The minimum number can be increased by work-programmes.

### **Eol and Project Proposal**

Even before the formal adoption of FP6 and the first call for proposals the Commission would like to consult the research community on its readiness to implement research projects using, in particular, the new instruments and to prepare in a more elaborate manner the first call and the Work Programmes. This was done by way of an invitation to submit Expressions of Interest (Eol) by those researches who would like to participate in the Programme. The results of analysis of the Expressions of Interest submitted will be available at the web-site in September 2002. All information relevant to the Eol you may find at the following address: [www.cordis.lu/fp6/eoi-instruments](http://www.cordis.lu/fp6/eoi-instruments).

According to the timetable of FP6 the adoption of the Programme takes place on the 3 of June, 2002 and the Launch Conference is scheduled for 11-13 November, 2002. The first call for proposals will be made at the end of 2002 – beginning 2003. All information on this subject will be available on its forthcoming later at the web-sites of FP6 (the addresses are given in the lectures).

### **Evaluation**

Every submitted proposal will be evaluated on the basis of three main principles that were in force during the Fifth Framework Programme. These principles are transparency, equal treatment and impartiality of evaluation.

So that the project proposal is adopted it should be specified and complemented in work programmes according to instrument and activity. Violation of fundamental ethical principles and financial irregularities are the criteria that lead to disapproval of a proposal.

### **Implementation**

So that the implementation of a project that is approved and gets financial support is successful basic rights and obligations of all the consortia participants should be clearly defined, autonomy of the consortia should be provided, and legal rules for evaluation its activity should be précised before the work begins.

## Financing

There are three types of funding (financial support) available in FP6. They are the following systems:

- Grant to the budget
- Grant for integration
- Flat- rate

The table below presents conditions of financial support rendering by EU.

Instrument	EU contribution
Networks of excellence	Grant for integration: max 25% of the value of the capacity and resources proposed for integration as a fixed amount to support the joint programme of activities
Integrated projects	Grant to the budget: max 50% for research, 35% for demonstration, 100% for activities such as training
Participation in programmes undertaken by several MS	Grant to the budget: max 50% of the budget
Specific research projects for SMEs	To be defined in decisions taken on the basis of Art. 169
Actions to promote and develop human resources and mobility	Grant to the budget: max 50% of the budget
Coordination actions	Grant to the budget: max 100% of the budget, if necessary as a lump sum
Specific support actions	Grant to the budget: max 100% of the budget
Integrated infrastructure initiatives	Grant to the budget: max 100% of the budget, if necessary as a lump sum
Integrated infrastructure initiatives	Grant to the budget: max 100% of the budget, if necessary as a lump sum

Financing is provided in periodical (yearly) advances by participants' own accounting rules. Financial audit is carried out by an external auditor.

## Control

Control over the project implementation is exercised in two ways: controls ex post and controls ex ante. To increase the efficiency of FP6 projects it is supposed to reinforce the former and to simplify and streamline the latter.

## Contact Information

To get any necessary information about the Sixth Framework Programme, its structure, budget, rules and conditions of participation, its functioning, etc., please, do not hesitate to address to the corresponding web-sites. They contain complete data concerning the Programme and other useful links.