

A large graphic of the European Union flag, consisting of a circle of twelve gold stars on a blue background. The text "Towards the Sixth Framework Programme" is centered within the stars.

Towards the Sixth Framework Programme

European Commission
Research DG



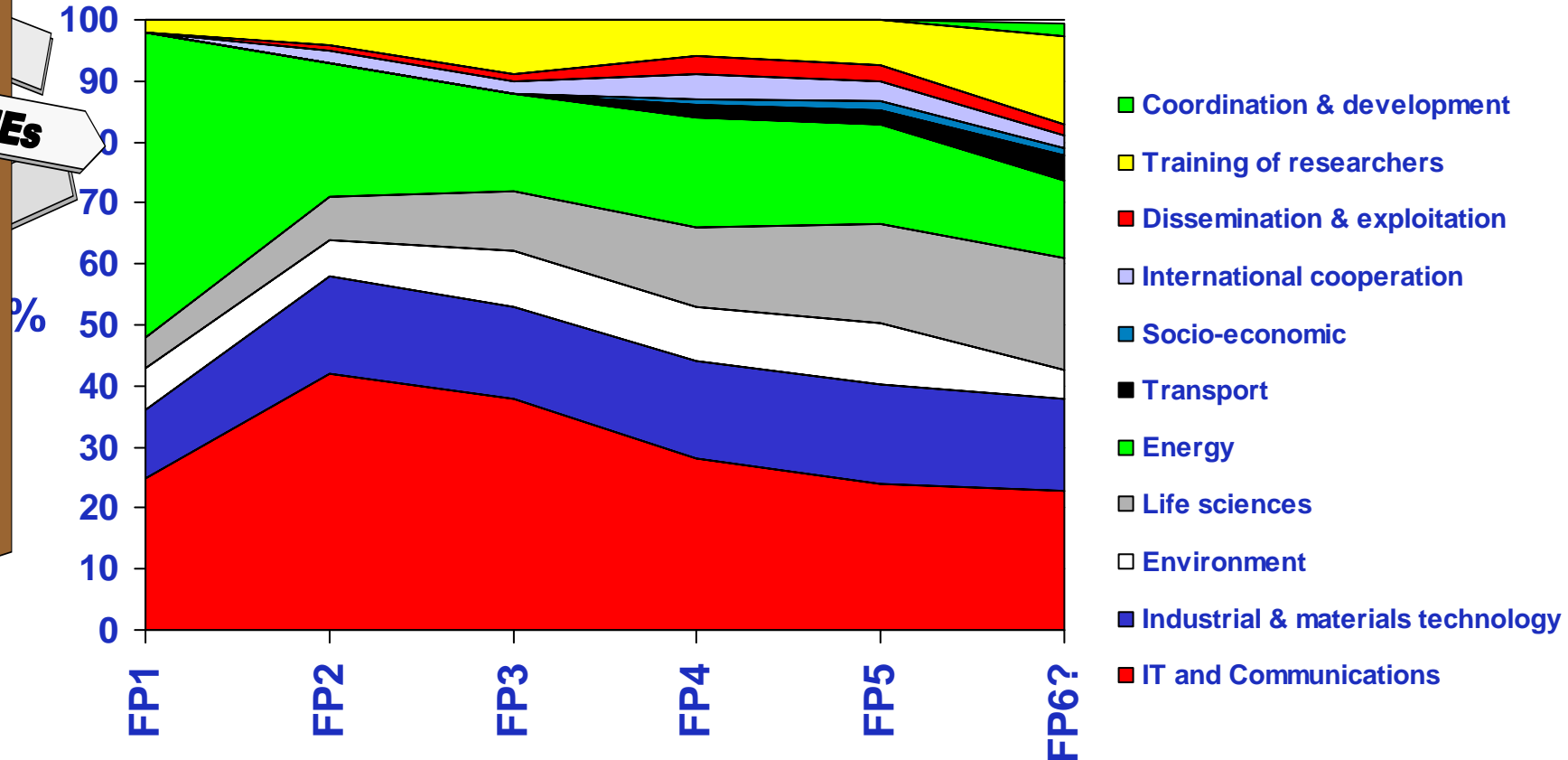
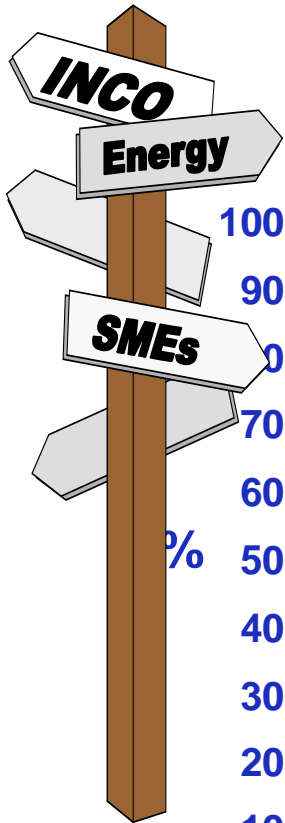
Community RTD

the story so far

- 
- **1957: EURATOM treaty; Joint Research Centre set up**
 - **1983: ESPRIT programme**
 - **1984: First Framework Programme (1984-1987), followed by 4 successive Framework Programmes (up to 2002)**
 - **1987: “European Single Act” - science becomes a Community responsibility; Second Framework Programme (1987-1991)**
 - **1993: Treaty on European Union; role of RTD in the EU enlarged**
 - **2001: Proposal for the Sixth Framework Programme (2002-2006)**



EU research: changing priorities





Enlargement

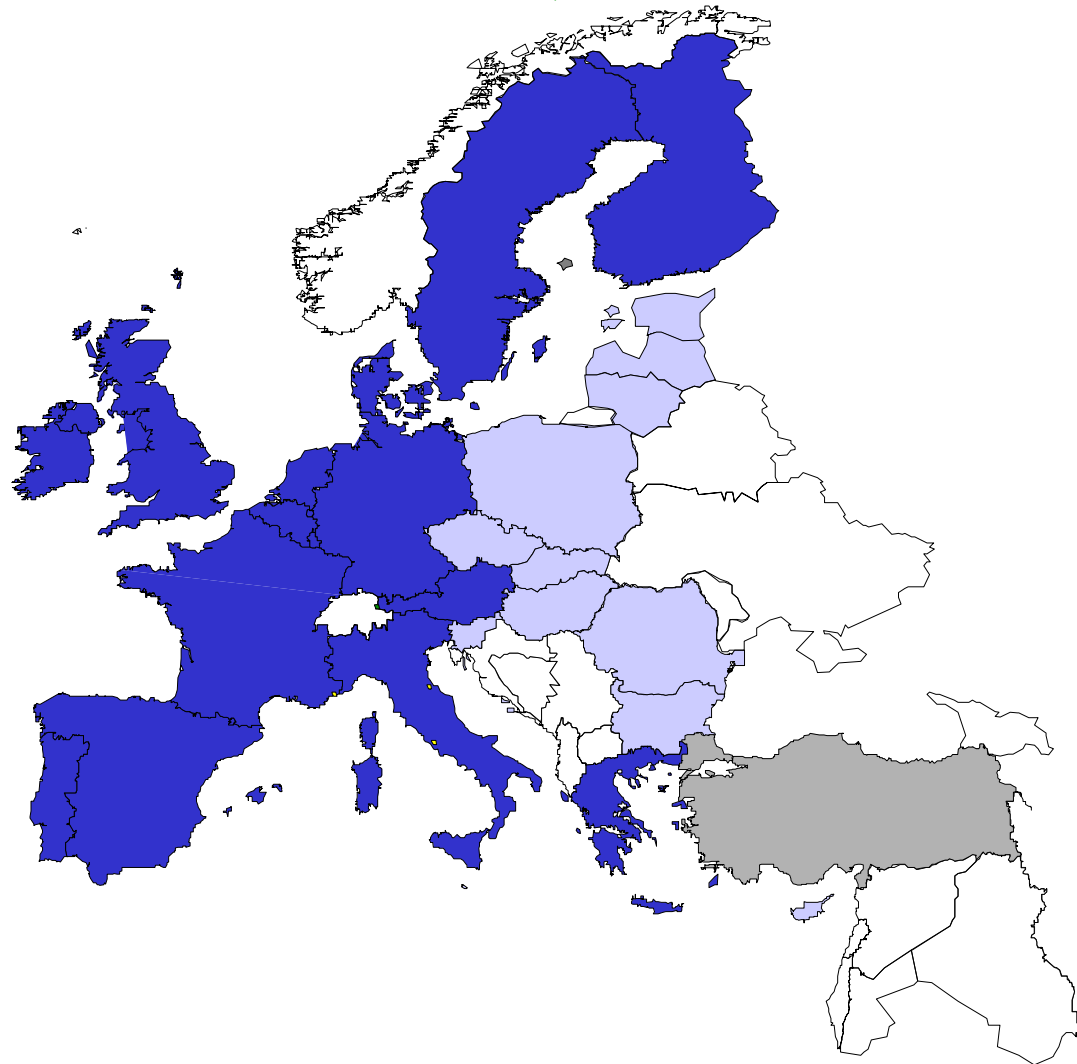


EU



Candidate countries:

- Bulgaria
- Cyprus
- Estonia
- Hungary
- Latvia
- Lithuania
- Malta
- Poland
- Czech Republic
- Romania
- Slovenia
- Slovakia
- Turkey





The European Research Area

- A blueprint for the future of research in Europe
- Large support at the highest political, scientific and industrial levels
- Being implemented

European Research Area

National programmes

Framework programme

« Open Coordination »

European organisations

European research policy



Sixth Framework Programme 2002-2006

- Commission proposal: 21 February 2001
- Instrumental for implementation of the European Research Area (ERA)

Some figures:

- Proposed budget: EUR 17,5 billion
- = 3,9% of the EU's budget (2001)
- = ~ 6% of the EU's public (civilian) research budget

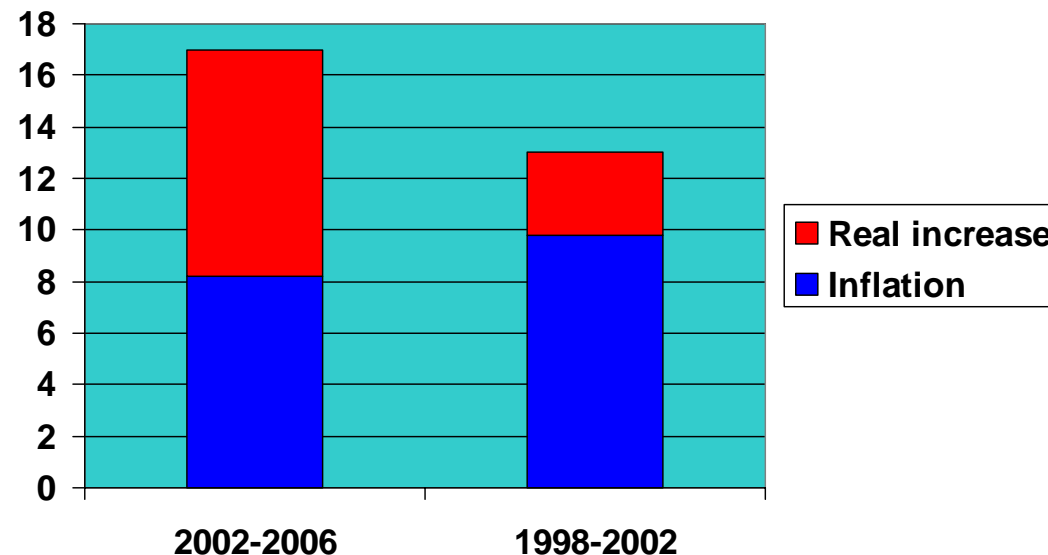


Sixth Framework Programme - Budget -

Rationale:

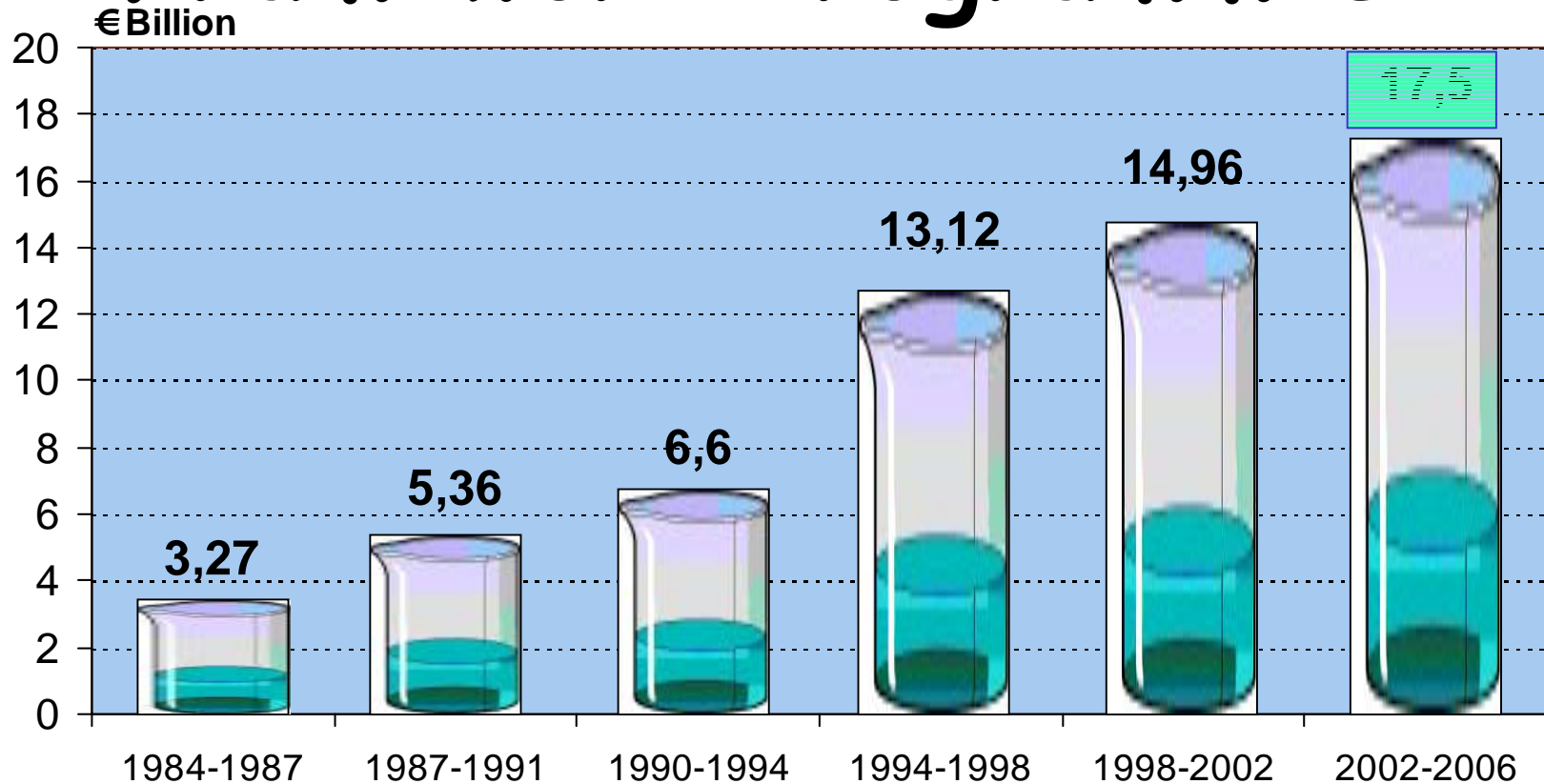
- Maintain economic weight of European investment in research / real growth of European economy
- Financial perspectives
- Increase: 17% (nominal) ; 8,8% (real)

Increase (%)
compared with
previous framework
programme





Budgets of the EU Framework Programmes





Sixth Framework Programme

- Main components -

INTEGRATING
European research

STRUCTURING
the European
Research Area

STRENGTHENING
the foundations of the
European Research
Area

BASIC PRINCIPLES

**Concentration: on
selected priority
research areas**

**Structuring effect :
through a stronger
link with national,
regional and other
European
initiatives**

**Coordination -
Simplification**



Sixth Framework Programme

Activities	Budget (EUR billion)
1. European Community	16,270
2. Euratom	1,230
<hr/> Total	17,500



Sixth Framework Programme (EC)

Bloc of actions	Budget (EUR million)
1. Focussing and integrating Community research	13 285
2. Structuring the European research area	2 655
3. Strengthening the foundations of the European research area	330
Total	16 270



Sixth Framework Programme

I. "Focussing and integrating research" Budget (EUR millions)

1. Genomics and biotechnology for health	2 200
• Advanced genomics and applications for health	1 150
• Combatting major diseases	1 050
2. Information Society technologies	3 600
3. Nanotechnologies and nano-sciences, knowledge-based multifunctional materials, new production processes	1 300
4. Aeronautics and space	1 075
5. Food quality and safety	685
6. Sustainable development, global change and ecosystems	2 120
• Sustainable energy systems	810
• Sustainable surface transports	610
• Global change and ecosystems	700
7. Citizens and governance in a knowledge-based society	225
8. Specific activities covering a wider field of research	1 320

Total

13 285

Non-nuclear activities of the Joint Research Centre: EUR 760 million



The 7 thematic priorities

- **Genomics and biotechnology for health**
 - ✚ **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



The 7 thematic priorities

- Genomics and biotechnology for health
- **Information Society technologies**
 - ✚ 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



The 7 thematic priorities

- Genomics and biotechnology for health
- Information Society technologies
- **Nanotechnologies and nanosciences, knowledge-based multifunctional materials, and new production processes and devices**
 - ✚ 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, optimisation of life cycles, etc



The 7 thematic priorities

- Genomics and biotechnology for health
- Information Society technologies
- Nanotechnologies and nanosciences, knowledge-based multifunctional materials, and new production processes and devices
- **Aeronautics and space**
 - ✦ **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 7 thematic priorities

- 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**
 - ✦ 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



The 7 thematic priorities

- 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 safety and health risks
- **Sustainable development and global change**
 - ✦ 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 modelling, etc



The 7 thematic priorities

- 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 safety and health risks
- Sustainable development and global change
- **Citizens and governance in the 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



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

● 7 thematic priorities

● **Specific activities covering a wider field of research :**

- + 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 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



International co-operation activities

- Participation of third countries in the thematic priorities



- Specific activities (in support of the EU's foreign policy and development aid policy)

Third countries : countries which are not members of the EU and not associated with the Framework Programme.



SMEs

● General activities

- + At least 15% of the total budget allocated to SMEs
- + Taking into consideration specific regional economic and social situations
- + Support for technological needs of SMEs

● Specific activities

- + « Co-operative research »: carried out by research centres for SMEs or by high-tech SMEs in collaboration with research centres and universities
- + « Collective research »: carried out by research centres for industrial associations or industry groupings in entire sectors of industry dominated by SMEs



Sixth Framework Programme

II. “Structuring the ERA”

**Budget (EUR
million)**

1. Research and innovation	300
2. Human resources	1 630
3. Research infrastructures	665
4. Science and society	60

Total	2 655
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« Structuring the ERA »: 4 categories of activities

● Research and innovation

- + Networking of stakeholders in the European innovation system
- + Encouraging trans-regional co-operation
- + New tools and approaches concerning technological innovation
- + Information services (CORDIS)
- + Economic and technological intelligence



« Structuring the ERA »: 4 categories of activities

● Research and innovation

● Human resources and mobility

- ✦ Support measures for organisations, hosting European and third country researchers
- ✦ Individual support measures (grants) for European and third country researchers
- ✦ Measures in support of return and professional (re)integration schemes
- ✦ Contribution to national mobility programmes open to researchers from other European countries
- ✦ Support for teams of the highest level of excellence
- ✦ Scientific prizes



« Structuring the ERA »: 4 categories of activities

- Research and innovation
- Human resources and mobility
- **Research infrastructures**
 - ✚ Transnational access to research infrastructures
 - ✚ Integrated initiatives to provide European scale services
 - ✚ High-capacity and high-speed European communication infrastructure
 - ✚ Feasibility studies and work in preparation of the creation of new European infrastructures
 - ✚ Limited support for the development of new infrastructures (supplementing contributions from EIB or the Structural Funds)



« Structuring the ERA »:

4 categories of activities

- Research and innovation
- Human resources and mobility
- Research infrastructures
- **Science/society**
 - ✚ Bringing research closer to society: science and governance, scientific advice, foresight etc.
 - ✚ Responsible use of scientific and technological progress: risk, expertise, ethics, precautionary principle, ethics etc.
 - ✚ Stepping up the science/society dialogue: new forms of dialogue; knowledge of science by citizens; young people's interest in scientific studies and careers etc.



Sixth Framework Programme

III. “Strengthening the foundations of the ERA”

Budget (EUR million)

- | | |
|---|-----|
| 1. Support for the coordination of activities | 280 |
| 2. Support for the coherent development of policies | 50 |

Total	330
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« Strengthening the foundations of ERA »: 2 categories of activities

● Co-ordination of research in Europe

➔ Support for:

- ⊕ Mutual opening of national programmes
- ⊕ Networking of research activities conducted at national and regional level
- ⊕ Activities carried out in other European co-operation frameworks
- ⊕ Joint initiatives of European organisations (e. g. CERN, ESA etc)

➔ In areas such as:

- ⊕ **Health:** major diseases, diseases linked to poverty, development of European databases, co-ordination of clinical trials etc.
- ⊕ **Biotechnology:** non-health and non-food applications
- ⊕ **Environment:** urban environment, marine environment, seismic risk
- ⊕ **Energy:** new generation of power plants, energy storage etc.



« Strengthening the foundations of ERA »: 2 categories of activities

● Coherent development of research and innovation policies in Europe

- ⊕ Analyses and studies (foresight, indicators etc.)
- ⊕ Benchmarking
- ⊕ Mapping of excellence
- ⊕ Regulatory and administrative environment



Instruments

- **Action I Priority thematic areas:**
 - + Networks of excellence
 - + Integrated projects

- **Action I Specific activities covering a wider field of research:**
 - + Specific targeted research projects
 - + Specific research projects for SMEs

- **Actions II and III:**
 - + Specific targeted research and innovation projects
 - + Integrated infrastructure initiatives
 - + Actions to promote human resources and mobility



Instruments (ctd)

● Throughout the FP:

- + Specific support actions
- + Coordination actions
- + Participation of the Community in programmes implemented jointly by several Member States (Article 169)



3 new instruments

- Networks of excellence
- Integrated projects
- Programmes implemented jointly

In priority thematic areas, the new instruments:

- Will be used from the start of FP6
- As a priority means, while maintaining the use of specific targeted projects and co-ordination actions
- Will be assessed in 2004



3 new instruments

● **Networks of excellence:**

- ✚ Lasting integration of research capacities
- ✚ Long-term and multidisciplinary objectives
- ✚ Implemented by a joint programme of activities
- ✚ Genuine 'virtual centres of excellence'
- ✚ High level of management autonomy
- ✚ Gradual integration of work programmes
- ✚ Selected on the basis of calls for proposals

● **Integrated projects**

● **Programmes implemented jointly**



3 new instruments

- Networks of excellence
- **Integrated projects:**
 - ✚ To boost competitiveness or to address major societal needs
 - ✚ To provide results applicable to products, processes or services
 - ✚ Research activities may be complemented by demonstration, innovation activities
 - ✚ High level of management autonomy
 - ✚ Implemented through overall financing plans
 - ✚ Selected on the basis of calls for proposals
- Programmes implemented jointly



3 new instruments

- Networks of excellence
- Integrated projects
- **Programmes implemented jointly**
 - ✚ Joint implementation of national/regional programmes (article 169 of the Treaty) e.g. through harmonised work programmes and common, joint or co-ordinated calls for proposals
 - ✚ Specific implementation structure
 - ✚ May be used in all FP activities



Other instruments

- **Specific targeted research or innovation projects:**
 - ✦ Specific targeted **research** projects: to improve competitiveness; need to be sharply focussed; either a RTD project (to gain knowledge) or a demonstration project (to prove the viability of new technologies which cannot be commercialised directly)
 - ✦ Specific targeted **innovation** projects: to test, validate and disseminate new innovation concepts and methods
- Specific research projects for SMEs
- Actions to promote and develop human resources and mobility
- Co-ordination actions
- Specific support actions
- Integrated infrastructure initiatives



Other instruments (ctd)

- Specific targeted research or innovation projects
- **Specific research projects for SMEs**
 - ✦ **Co-operative** research projects undertaken for the benefit of a number of SMEs on themes of common interest
 - ✦ **Collective** research projects carried out for industrial associations or industry groupings in sectors where SMEs are prominent
- Actions to promote and develop human resources and mobility
- Coordination actions
- Specific support actions
- Integrated infrastructure initiatives



Other instruments (ctd)

- Specific targeted research or innovation projects
- Specific research projects for SMEs
- **Actions to promote and develop human resources and mobility**
 - ✦ To promote training, development of expertise or transfer of knowledge
 - ✦ To support actions undertaken by individuals, host structures (including training networks) and European research teams
- Coordination actions
- Specific support actions
- Integrated infrastructure initiatives



Other instruments (ctd)

- Specific targeted research or innovation projects
- Specific research projects for SMEs
- Actions to promote and develop human resources and mobility
- **Coordination actions**
 - ✦ To support co-ordinated initiatives undertaken by a range of stakeholders involved in research and innovation (with the aim of improving integration)
 - ✦ Actions: conferences, meetings, studies, exchange of personnel, exchange of good practices, information systems, expert groups etc
- Specific support actions
- Integrated infrastructure initiatives



Other instruments (ctd)

- 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**
 - ✚ To complement FP6 implementation
 - ✚ To prepare future RTD activities (monitoring, assessment, etc)
 - ✚ Actions: conferences, meetings, studies, awards, information and communication activities, support of research infrastructures (e.g. feasibility studies) etc
- Integrated infrastructure initiatives



Other instruments (ctd)

- 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**
 - ✦ To reinforce and develop research infrastructures in order to provide services at European level
 - ✦ Must combine networking activities with support (e.g. transnational access) or research (e.g. to improve performance)
 - ✦ Financing for new infrastructures is excluded (see 'Specific support actions')



Sixth Framework Programme (Euratom)

**Framework programme
Euratom**

**Budget (EUR
million)**

1. Waste treatment and storage	150
2. Controlled thermonuclear fusion	700*
3. Other activities	50
4. Activities of the Joint Research Centre	330
Total	1 230

* including EUR 200 million for participation in ITER



EURATOM activities

- **Waste treatment and storage:**
 - Long-term storage etc.
 - Reducing the impact of waste and the hazards associated with waste etc.
- **Controlled thermonuclear fusion:**
 - Fusion physics and technology
 - Activities related to « Next Step »/ITER
- **Other activities:**
 - Radiation protection
 - Safer processes for the exploitation of nuclear energy
- **Joint Research Centre :**
 - Nuclear safety and security
 - Measurements and reference materials



Provisional timetable

February 2001	Commission's proposal
30 May 2001	Specific programmes
14 November 2001	First reading at EP
10 December 2001	Political agreement at Council
January 2002	Common position at Council
May 2002	Second reading at EP
September 2002	Conciliation procedure (if necessary)
October 2002	Adoption
11-12-13-November 2002	Launch conference (Brussels)



Rules of participation - General Issues

Commission proposal:

- Reflects main orientations of FP proposal
- Sets out the rules for the new instruments

with the aim of:

- Simplification
- Flexibility
- Autonomy for participants

http://europa.eu.int/eur-lex/en/com/pdf/2001/en_501PC0500.pdf



Rules for participation

- Funding mechanisms: "grant for integration" (for networks of excellence) and "grant to the overall budget" (integrated projects), **i.e. the financing principle will no longer be the "eligible costs"**
- Mainly on-going and ex-post control (rather than ex-ante);
- Changes in partnerships (addition or withdrawal) may be decided by partners, with tacit agreement by the Commission
- Candidate countries associated to the FP will participate under same conditions as EU Member States;
- European research organisations (e.g. CERN, ESA, EMBO, etc.) will be treated as any entity from member states;
- Intellectual Property Rights (IPR) rules simplified; relevant agreements to be established by consortium partners.



Participation

Who can participate?

- Every legal entity
- **New**: Associated candidate countries = Member States (MS)
- **New**: International European interest organisations = MS



Participation

Minimum number

- 3 for IP and NoE with 2 from MS or Ass. Cand. Countries
- In other instruments 2 with 1 from MS or Ass. Cand. Country
- Single participation possible for fellowships and specific support actions
- minimum number can be increased by work-programmes



Participation

Third country participation

- Participation in “Integration” part for all countries
- Financing for INCO countries in “Integration” part
- Participation for countries with co-operation agreement under applicable conditions in activities outside the “Integration” part
- Participation for other countries in all activities outside “Integration” part if necessary



Evaluation

Same principles as in FP 5:

- Transparency
- Equal treatment
- Impartiality



Evaluation

Core criteria & criteria for new instruments:

- to be specified and complemented in work programmes according to instrument and activity

Exclusion criteria:

- Violation of fundamental ethical principles
- Financial irregularities



Implementation

Objectives:

- Define basic rights and obligations
- Provide autonomy to consortia
- Precise legal rules for evolution of consortia



Financing (I)

3 different systems:

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



Financing (II)

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
Specific targeted research or innovation projects	Grant to the budget: max 50% of the budget
Participation in programmes undertaken by several MS	To be defined in decisions taken on the basis of Art. 169
Specific research projects for SMEs	Grant to the budget: max 50% of the budget
Actions to promote and develop human resources and mobility	Grant to the budget: max 100% of the budget, if necessary as a lump sum
Coordination actions	Grant to the budget: max 100% of the budget
Specific support actions	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 (III)

Modalities:

- Periodical (yearly) advances
- Participants' own accounting rules
- Audit certificate by external auditor
- Marginal cost
- Possibility of average rates by type of expenditure



Control and Sanctions

Objective:

- Reinforcing ex-post controls
 - + To simplify and streamline ex-ante controls
 - + As a counterbalance to increased autonomy for participants

Sanctions:

- Exclusion criterion: financial irregularity
- Recovery decisions (art. 256 EC Treaty)
- Other sanctions in contracts



Intellectual Property Rights (IPR)

**Complete and comprehensive
in one document**

Based on:

- Experience with FP 5 rules
- Consultation with academia and industry



Intellectual Property Rights (IPR)

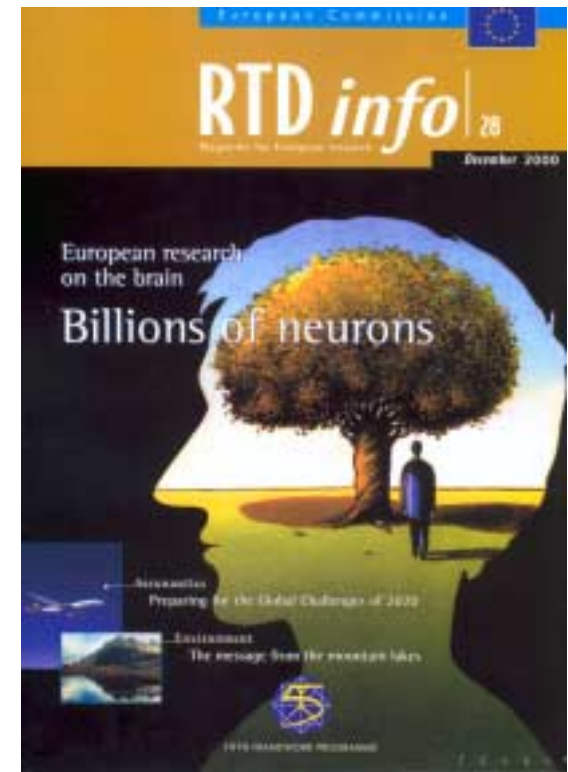
As in FP 5:

- Participants own results they have generated
- Emphasis on use of results, dissemination if appropriate or if results are not used
- SMEs own results generated in SME-activities



Information

- General information:
<http://europa.eu.int>
- General information on research:
<http://europa.eu.int/comm/research>
- Information on research programmes :
<http://www.cordis.lu>
- Information requests:
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The End

Thank you for your attention!

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