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
- 1993: Treaty on European Union; role of RTD in the EU enlarged
EU research: changing priorities

- Coordination & development
- Training of researchers
- Dissemination & exploitation
- International cooperation
- Socio-economic
- Transport
- Energy
- Life sciences
- Environment
- Industrial & materials technology
- IT and Communications
The Sixth Framework Programme 2002-2006 ("co-decision")

**Qualified majority:**
- F, D, I, UK: 10 votes
- E: 8 votes
- B, GR, NL, P: 5 votes
- A, S: 4 votes
- DK, IRL, SF: 3 votes
- L: 2 votes

Council decides by qualified majority (62 out of 87 votes) except on EP amendments not approved by the Commission.
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
- Broad support at the highest political, scientific and industrial levels
- Being implemented
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

€ Billion

1984-1987: 3.27
1987-1991: 5.36
1990-1994: 6.6
2002-2006: 17.5

Years:
- 1984-1987
- 1987-1991
- 1990-1994
- 1994-1998
- 1998-2002
- 2002-2006
Sixth Framework Programme - Main components -

- **FOCUSING and 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

<table>
<thead>
<tr>
<th>Activities</th>
<th>Budget (€ billion)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. European Community</td>
<td>16.27</td>
</tr>
<tr>
<td>2. Euratom</td>
<td>1.23</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>17.50</strong></td>
</tr>
</tbody>
</table>
### Sixth Framework Programme (EC)

<table>
<thead>
<tr>
<th>Group of actions</th>
<th>Budget (€ million)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Focusing and integrating Community research</td>
<td>13 345</td>
</tr>
<tr>
<td>2. Structuring the European Research Area</td>
<td>2 605</td>
</tr>
<tr>
<td>3. Strengthening the foundations of the European Research Area</td>
<td>320</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>16 270</strong></td>
</tr>
</tbody>
</table>
Sixth Framework Programme

<table>
<thead>
<tr>
<th>Category</th>
<th>Budget (€ million)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Life sciences, genomics and biotechnology for health</td>
<td>2 255</td>
</tr>
<tr>
<td>• Advanced genomics and its applications for health</td>
<td>1 100</td>
</tr>
<tr>
<td>• Combating major diseases</td>
<td>1 155</td>
</tr>
<tr>
<td>2. Information Society technologies</td>
<td>3 625</td>
</tr>
<tr>
<td>3. Nanotechnologies and nano-sciences, knowledge-based</td>
<td>1 300</td>
</tr>
<tr>
<td>multifunctional materials, new production processes and devices</td>
<td></td>
</tr>
<tr>
<td>4. Aeronautics and space</td>
<td>1 075</td>
</tr>
<tr>
<td>5. Food quality and safety</td>
<td>685</td>
</tr>
<tr>
<td>6. Sustainable development, global change and ecosystems</td>
<td>2 120</td>
</tr>
<tr>
<td>• Sustainable energy systems</td>
<td>810</td>
</tr>
<tr>
<td>• Sustainable surface transport</td>
<td>610</td>
</tr>
<tr>
<td>• Global change and ecosystems</td>
<td>700</td>
</tr>
<tr>
<td>7. Citizens and governance in a knowledge-based society</td>
<td>225</td>
</tr>
<tr>
<td>8. Specific activities covering a wider field of research</td>
<td>1 320</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>13 345</strong></td>
</tr>
</tbody>
</table>

* Including non-nuclear activities of the Joint Research Centre: €760 million
The 7 thematic priorities

- Life sciences, genomics and biotechnology for health
  - Advanced genomics and its applications for health
    - Fundamental knowledge and basic tools for functional genomics in all organisms: gene expression and proteomics, structural genomics, bioinformatics, etc.
    - Application of knowledge and technologies in genomics and biotechnology for health: technological platforms, prevention and therapeutic tools, etc.

- Combating major diseases
  - Application-oriented genomic approaches to medical knowledge and technologies: diabetes, cardiovascular diseases, resistance to antibiotics, brain and ageing, etc.
  - Cancer
  - Major poverty-linked infectious diseases: aids, malaria and tuberculosis
The 7 thematic priorities

- Life sciences, genomics and biotechnology for health
- Information Society technologies
  - Applied IST research addressing major societal and economic challenges: security, societal challenges, ‘ambient intelligence’, electronic commerce, etc
  - Communication, computing and software technologies
  - Components and microsystems
  - Knowledge and interface technologies
The 7 thematic priorities

- Life sciences, 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, nano-biotechnologies, applications in health, chemistry etc
  - Knowledge-based multifunctional materials: fundamental knowledge; production, transformation and processing technologies, etc
  - New production processes and devices: flexible and intelligent manufacturing systems, systems research and hazard control, clean and safe production, optimisation of life cycles, etc
The 7 thematic priorities

- 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
  + Aeronautics: competitiveness of the industry (new aircraft, engines etc); improving environmental impact (emissions and noise); safety; increasing the capacity of the air transport system (‘Single European Sky’)
  + Space: research relevant to Galileo (satellite navigation) and GMES (monitoring for environment and security); satellite telecommunications (integrating terrestrial networks and space systems)
The 7 thematic priorities

- 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**
  - Epidemiology of food-related diseases and allergies
  - Impact of food on health
  - ‘Traceability’ processes all along the production chain
  - Methods of analysis, detection and control
  - Safer and environmentally friendly production methods and healthier foodstuffs
  - Impact of animal feed on human health
  - Environmental health risks
The 7 thematic priorities

- 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 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

- 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 safety and health risks
- Sustainable development and global change
- Citizens and governance in the European knowledge-based society
  - Knowledge-based society and social cohesion: generation/distribution/use of knowledge; development of a knowledge-based society; variety of paths towards a knowledge-based society; etc
  - Citizenship, democracy and new forms of governance: consequences of EU integration, enlargement; new forms of governance; resolution of conflicts; citizenship and cultural identities
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 involving 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 CIS
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

<table>
<thead>
<tr>
<th>Category</th>
<th>Budget (€ million)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Research and innovation</td>
<td>290</td>
</tr>
<tr>
<td>2. Human resources</td>
<td>1 580</td>
</tr>
<tr>
<td>3. Research infrastructures</td>
<td>655</td>
</tr>
<tr>
<td>4. Science and society</td>
<td>80</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>2 605</strong></td>
</tr>
</tbody>
</table>
Structuring the ERA: four categories of activity

- **Research and innovation**
  - 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
  - Analysing innovation in EU-funded research projects
Structuring the ERA: four categories of activity

- **Research and innovation**

- **Human resources and mobility**
  - **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**
Structuring the ERA: four categories of activity

- Research and innovation
- Human resources and mobility
- Research infrastructures
  - Transnational access to research infrastructures
  - Integrating activities
  - Communication network development
  - Design studies
  - Development of new infrastructures
Structuring the ERA: four categories of activity

- Research and innovation
- Human resources and mobility
- Research infrastructures
- Science/society

✦ 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
### Sixth Framework Programme

#### III. Strengthening the foundations of the ERA

<table>
<thead>
<tr>
<th>Activity</th>
<th>Budget (€ million)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Support for the coordination of activities</td>
<td>270</td>
</tr>
<tr>
<td>2. Support for the coherent development of policies</td>
<td>50</td>
</tr>
</tbody>
</table>

**Total** 320
Strengthening the foundations of ERA: two categories of activity

- **Support for the co-ordination of activities**

  ➡ **Co-ordination of national activities 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.

  ➡ **Co-ordination at the European level**

  - Other co-operation frameworks (COST etc)
  - Joint initiatives of specialised European scientific organisations (CERN, ESA? ESO, EMBL etc)
Strengthening the foundations of ERA: two categories of activity

- Support for the coherent development of policies in Europe
  - Analyses and studies (foresight, indicators etc.)
  - Benchmarking of research and innovation policies
  - Mapping excellence in Europe
  - Regulatory and administrative environment for research and innovation
Instruments

- **Action I Priority thematic areas:**
  - Networks of excellence
  - Integrated projects
  - Article 169 (participation of the Community in programmes implemented jointly by several Member States)
  - Specific targeted research projects
  - Co-ordination actions
  - Specific support actions

- **Action I Specific activities covering a wider field of research:**
  - Specific targeted research projects
  - Specific research projects for SMEs
  - Infrastructures/mobility/support
Instruments

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

- **Throughout the FP:**
  - Specific support actions
  - Co-ordination actions
  - Article 169 (participation of the Community in programmes implemented jointly by several Member States)
Three 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
Three 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
Three 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**
Three 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 focused; 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 (continued)

- 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 (continued)

- 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 (continued)

- 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 (continued)

- 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 (continued)

- 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)

<table>
<thead>
<tr>
<th>Framework programme</th>
<th>Budget (€ million)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Euratom</td>
<td></td>
</tr>
<tr>
<td>1. Management of radioactive waste</td>
<td>90</td>
</tr>
<tr>
<td>2. Controlled thermonuclear fusion</td>
<td>750*</td>
</tr>
<tr>
<td>3. Radiation protection</td>
<td>50</td>
</tr>
<tr>
<td>4. Other activities</td>
<td>50</td>
</tr>
<tr>
<td>4. Activities of the Joint Research Centre</td>
<td>290</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>1 230</strong></td>
</tr>
</tbody>
</table>

* including €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
## Timetable

<table>
<thead>
<tr>
<th>Date</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>21 February 2001</td>
<td>Commission’s proposal</td>
</tr>
<tr>
<td>30 May 2001</td>
<td>Specific programmes</td>
</tr>
<tr>
<td>14 November 2001</td>
<td>First reading at EP</td>
</tr>
<tr>
<td>10 December 2001</td>
<td>Political agreement at Council</td>
</tr>
<tr>
<td>28 January 2002</td>
<td>Common position at Council</td>
</tr>
<tr>
<td>15 May 2002</td>
<td>Second reading and approval at EP</td>
</tr>
<tr>
<td>3 June 2002</td>
<td>Adoption</td>
</tr>
<tr>
<td>11-12-13 November 2002</td>
<td>Launch conference (Brussels)</td>
</tr>
</tbody>
</table>
Rules of participation - General Issues

Commission proposal:
- Reflects main orientations of FP proposal

with the aim of:
- Simplification
- Flexibility
- Autonomy for participants

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

- Three for IP and NoE with two from MS or Associated Candidate Countries
- In other instruments two with one from MS or Associated Candidate 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)

Three different systems:

- Grant to the budget
- Grant for integration
- Flat-rate
## Financing (II)

<table>
<thead>
<tr>
<th>Instrument</th>
<th>EU contribution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Networks of excellence</td>
<td>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</td>
</tr>
<tr>
<td>Integrated projects</td>
<td>Grant to the budget: max 50% for research, 35% for demonstration, 100% for activities such as training</td>
</tr>
<tr>
<td>Specific targeted research or innovation projects</td>
<td>Grant to the budget: max 50% of the budget</td>
</tr>
<tr>
<td>Participation in programmes undertaken by several MS</td>
<td>To be defined in decisions taken on the basis of Art. 169</td>
</tr>
<tr>
<td>Specific research projects for SMEs</td>
<td>Grant to the budget: max 50% of the budget</td>
</tr>
<tr>
<td>Actions to promote and develop human resources and mobility Coordination actions</td>
<td>Grant to the budget: max 100% of the budget, if necessary as a lump sum</td>
</tr>
<tr>
<td>Specific support actions</td>
<td>Grant to the budget: max 100% of the budget, if necessary as a lump sum</td>
</tr>
<tr>
<td>Integrated infrastructure initiatives</td>
<td>Grant to the budget: max 100% of the budget, if necessary as a lump sum</td>
</tr>
</tbody>
</table>
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 on research: http://europa.eu.int/comm/research
- Information on research programmes and projects: http://www.cordis.lu
- Information requests: research@cec.eu.int
The End

Thank you for your attention!

Directorate-General for Research
Information and Communication Unit

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Fax +32-2-295 82 20