MANAGING KNOWLEDGE FOR GROWTH

Public research programmes for business and academia

COURSE 2
THE EU RESEARCH POLICY
The 7th EU RTD Framework Programme (2007-2013)

1. HISTORY : PAST EC RESEARCH POLICY

2. ANALYSIS : TOWARDS FP7

3. THE 7TH EU RTD FRAMEWORK PROGRAMME (2007-2013)
1. “PAST” EU RESEARCH POLICY
Programming of research

◆ ‘Manhattan project’, 1943

◆ ‘From linear model to circular model’:
  – Research (R&D) -> Invention -> Innovation -> Product/Market

  
  – Research (R&D)  Invention  Innovation  Product/Market

◆ Biggest R&D budgets in 1999
  
  – US (1999) - Private: General Motors ($ 7.9 billion), DaimlerChrysler ($ 7.1 billion) and Ford ($ 6.3 billion)
  – FR (1999) – Public: Space (14%), human sciences (11%), aeronautics (8%) and engineering (8%)
EU research: the story so far

- 1952: ECSC treaty; first projects started March 1955
- 1957: EURATOM treaty; Joint Research Centre set up
- 1983: ESPRIT programme
- 1993: Treaty on European Union; role of RTD in the enlarged EU
- 2000: European Research Area
EU research: some key figures

◆ About 2,000 new projects launched per year

◆ At peak activity:
  • > 30,000 proposals
  • > 4,000 experts per year

◆ EU financial support
  • From 4.0 to 8.0 B€ per year

◆ Average of
  • 7 organisations from 3 countries per project
MANAGING KNOWLEDGE for GROWTH – FP7
Time is ripe for a step change

COLLABORATION and COOPERATION in the EU
(Public Research Programmes only)*

- INTERGOVERNMENTAL: EIROs (CERN, EMBL, EMBO, ESA, ESO, ESRF, ILL) + ESF + COST + EUREKA
- EU COMMUNITY RTD FRAMEWORK PROGRAMMES
- PROGRAMME COOPERATION (Joint Calls in ERA-NET Scheme + Eurocores + Art.169)

*Sources: FP7 & Joint Programming Impact Assessments

Yearly Budget (M€)


1954 CERN
1984: EC RTD Framework Programme
1985 EUREKA
1970 COST
2004: First ERA-NET and Art.169 Joint Calls
Success through co-operation

For the Public

(EuroBarometer poll, 6/08)

By courtesy of Airbus
Success through co-operation

For Researchers

Two examples of world firsts

Biggest campaign ever to study the ozone layer and ozone loss (2000)
> 350 scientists from more than 65 organisations (20 countries)

First full sequencing of a plant genome (2000)
> 150 scientists and technicians from 30 organisations (15 countries)
Success through co-operation

European-Developing Countries Clinical Trials Programme (EDCTP) for Poverty-Related Diseases

For Programme Managers

Visit to Africa (29 August - 1 September 2005)

Mbeya Medical Research Centre, Tanzania

Manhiça Health Research Centre, Mozambique (picture)
2. ANALYSING EC RESEARCH POLICY

Towards the 7th Research Framework Programme (2006-2013)
S&T contributes to the Lisbon objectives: economic growth, employment creation, environmental protection, social challenges: fight poverty, improve human health and quality of life (GSM, remote working, safe roads, etc.)
## R&D – European strength & weaknesses

<table>
<thead>
<tr>
<th>Metric</th>
<th>EU-25</th>
<th>US</th>
<th>Japan</th>
</tr>
</thead>
<tbody>
<tr>
<td>R&amp;D intensity (% of GDP) (^{(3)})</td>
<td>1.97</td>
<td>2.59</td>
<td>3.12</td>
</tr>
<tr>
<td>Share of R&amp;D financed by industry (%) (^{(2)})</td>
<td>55.9</td>
<td>63.1</td>
<td>73.9</td>
</tr>
<tr>
<td>Researchers per thousand labour force (FTE) (^{(3)})</td>
<td>5.5</td>
<td>9.0</td>
<td>9.7</td>
</tr>
<tr>
<td>Share of world scientific publications (%) (^{(3)})</td>
<td>38.3</td>
<td>31.1</td>
<td>9.6</td>
</tr>
<tr>
<td>Scientific publications per million population (^{(3)})</td>
<td>639</td>
<td>809</td>
<td>569</td>
</tr>
<tr>
<td>Share of world triadic patents (%) (^{(1)})</td>
<td>31.5</td>
<td>34.3</td>
<td>26.9</td>
</tr>
<tr>
<td>Triadic patents per million population (^{(1)})</td>
<td>30.5</td>
<td>53.1</td>
<td>92.6</td>
</tr>
<tr>
<td>High-tech exports as a share of total manufacturing exports (%) (^{(3)})</td>
<td>19.7</td>
<td>28.5</td>
<td>26.5</td>
</tr>
<tr>
<td>Share of world high-tech exports (%) (^{(2)})</td>
<td>16.7</td>
<td>20.0</td>
<td>10.6</td>
</tr>
</tbody>
</table>

Note: \(^{(1)}\) 2000 data \(^{(2)}\) 2002 data \(^{(3)}\) 2003 data
Research and economic development

Economic performance vs R&D investment

-2 -1.5 -1 -0.5 0 0.5 1 1.5 2

-2 -1.5 -1 -0.5 0 0.5 1 1.5

DK SE

FI UK NL DE

P E EL
Research: filling the gap
Total expenditure on R&D, % of GDP
Barcelona Summit, 2001

- Japan: 3.0
- USA: 2.7
- EU-15: 1.9

Objective ‘00
Reached 2010
Objective ‘07
THE CHALLENGES:
GLOBALISATION OF RESEARCH

- Over 75% of global research investment is made outside the EU
- Our share is decreasing due to new global players in S&T
- Europe must invest more while opening up to the world
Evolution of World Shares

<table>
<thead>
<tr>
<th></th>
<th>2000</th>
<th>2006 (PATENTS refer to 2005)</th>
</tr>
</thead>
<tbody>
<tr>
<td>US</td>
<td>38,6</td>
<td>34,6</td>
</tr>
<tr>
<td>EU-27</td>
<td>26,4</td>
<td>24,4</td>
</tr>
<tr>
<td>Main Asian Economies</td>
<td>24,4</td>
<td>24,4</td>
</tr>
<tr>
<td>Rest of the World</td>
<td>30,2</td>
<td>10,5 10,8</td>
</tr>
<tr>
<td>US</td>
<td>39,7</td>
<td>33,1</td>
</tr>
<tr>
<td>EU-27</td>
<td>36,0</td>
<td>30,9</td>
</tr>
<tr>
<td>Main Asian Economies</td>
<td>14,5</td>
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</tr>
<tr>
<td>Rest of the World</td>
<td>23,9</td>
<td>12,0</td>
</tr>
</tbody>
</table>

Source: DG Research
Data: Eurostat, OECD, UNESCO

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Data: Eurostat, OECD, UNESCO

Evolution of World Shares

GERD

US
EU-27
Main Asian Economies
Rest of the World

PATENTS

US
EU-27
Main Asian Economies
Rest of the World

%
EU IS INCREASING ITS INVESTMENTS IN RESEARCH

◆ All Member States respond by increasing their R&D investments in real terms

◆ 17 Member States even managed to increase their R&D intensity since 2000
Gross Domestic Expenditure on R&D (GERD) - real growth (%) between 2000 and 2007 (1)

<table>
<thead>
<tr>
<th>Country</th>
<th>Growth (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>EU-27</td>
<td>19.6%</td>
</tr>
<tr>
<td>Italy</td>
<td>15.6%</td>
</tr>
<tr>
<td>UK</td>
<td>12.2%</td>
</tr>
<tr>
<td>Germany</td>
<td>11.9%</td>
</tr>
<tr>
<td>France</td>
<td>9.8%</td>
</tr>
<tr>
<td>Greece</td>
<td>8.8%</td>
</tr>
<tr>
<td>Portugal</td>
<td>7.9%</td>
</tr>
<tr>
<td>Slovenia</td>
<td>6.7%</td>
</tr>
<tr>
<td>Hungary</td>
<td>6.7%</td>
</tr>
<tr>
<td>Austria</td>
<td>4.8%</td>
</tr>
<tr>
<td>Malta</td>
<td>24.4%</td>
</tr>
<tr>
<td>Denmark</td>
<td>28.6%</td>
</tr>
<tr>
<td>Finland</td>
<td>27.2%</td>
</tr>
<tr>
<td>Bulgaria</td>
<td>26.6%</td>
</tr>
<tr>
<td>Greece</td>
<td>24.4%</td>
</tr>
<tr>
<td>Luxembourg</td>
<td>27.2%</td>
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<td>Finland</td>
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<tr>
<td>Malta</td>
<td>22.8%</td>
</tr>
<tr>
<td>Bulgaria</td>
<td>21.8%</td>
</tr>
<tr>
<td>Greece</td>
<td>20.0%</td>
</tr>
<tr>
<td>Portugal</td>
<td>19.6%</td>
</tr>
<tr>
<td>Spain</td>
<td>15.0%</td>
</tr>
<tr>
<td>Czech Republic</td>
<td>13.3%</td>
</tr>
<tr>
<td>Ireland</td>
<td>12.2%</td>
</tr>
<tr>
<td>Lithuania</td>
<td>11.9%</td>
</tr>
<tr>
<td>Hungary</td>
<td>11.4%</td>
</tr>
<tr>
<td>Austria</td>
<td>10.2%</td>
</tr>
<tr>
<td>Malta</td>
<td>10.0%</td>
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<td>Denmark</td>
<td>9.8%</td>
</tr>
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<td>Finland</td>
<td>9.0%</td>
</tr>
<tr>
<td>Sweden</td>
<td>8.8%</td>
</tr>
<tr>
<td>Poland</td>
<td>7.9%</td>
</tr>
<tr>
<td>Hungary</td>
<td>6.7%</td>
</tr>
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<td>Czech Republic</td>
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<tr>
<td>Portugal</td>
<td>6.7%</td>
</tr>
<tr>
<td>Spain</td>
<td>6.7%</td>
</tr>
<tr>
<td>Cyprus</td>
<td>6.7%</td>
</tr>
<tr>
<td>Bulgaria</td>
<td>6.7%</td>
</tr>
<tr>
<td>Greece</td>
<td>6.7%</td>
</tr>
</tbody>
</table>

(1) Data source: Eurostat.
EU’S OVERALL R&D INTENSITY STAGNATES

- However the EU’s R&D intensity has stagnated ...

- ...while Asia’s is growing strongly and the USA maintains far higher investments
Evolution of R&D Intensity

R&D Intensity (GERD as % of GDP)

<table>
<thead>
<tr>
<th></th>
<th>2000</th>
<th>2007 (1)</th>
</tr>
</thead>
<tbody>
<tr>
<td>EU-27</td>
<td>1.85</td>
<td>1.83</td>
</tr>
<tr>
<td>US</td>
<td>2.73</td>
<td>2.67</td>
</tr>
<tr>
<td>Japan</td>
<td>3.04</td>
<td>3.40</td>
</tr>
<tr>
<td>South Korea</td>
<td>2.39</td>
<td>3.22</td>
</tr>
<tr>
<td>China</td>
<td>0.90</td>
<td>1.42</td>
</tr>
</tbody>
</table>

Univ Trento / Crash course on Research funding...
R&D Intensity (GERD as % of GDP), 2007 (1)

[Graph showing R&D intensity for various countries with bars representing different values for each country, with countries listed in order of their R&D intensity from highest to lowest.]

April 2011 - 22
Possible reason: low intensity of private sector R&D investments

Evolution of GERD financed by sector as % of GDP

Source: DG Research
Data: Eurostat, OECD
Notes:
2. CN: The sum of the sectors does not add to the total.
3. US: Most or all capital expenditure is not included; A breakdown for Abroad is not available.
4. KR: R&D in the social sciences and humanities is not included.
5. Values in italics are estimated or provisional.

Possible reason: low intensity of private sector R&D investments
MANAGING KNOWLEDGE for GROWTH – FP7

...linked to the EU’s industrial structure?

![Bar chart](chart.png)

- **Manufacturing Value Added - % Distribution by Type of Industry**

  - **EU-27**
  - **US**
  - **JP**

  **Types of Industry:**
  - High-tech
  - Medium-high-tech
  - Medium-low-tech
  - Low-tech

  **Regions:**
  - EU-27
  - US
  - JP

The graph illustrates the manufacturing value added distribution by type of industry across different regions, highlighting their contribution to the industrial structure.
EU’S ASSETS IN RESEARCH

- The EU is still the largest producer of scientific publications
- The EU has a growing pool of researchers
- The EU is increasingly attractive for foreign research investments
Number of doctoral graduates in 2005
Average annual growth 2000-2005

Source: DG Research
Data: Eurostat
STC Key Figures Report 2008
R&D expenditure of affiliates of US parent companies abroad

R&D expenditure flows between EU-15 and the USA (billion PPP$), 2003 and 2005

Source: DG Research
Data: OECD (Activity of Foreign Affiliates database)
EC Framework Programmes Budgets

Commission asked for a doubling of funding (10 B€/ year), Council agreed +60%.
Framework Programmes: significant impacts on S&T and the economy

◆ Economic benefits.
  – €1 (research) at European level € 4-7 (long-run, econometric models).
  – Enterprises participating in FP benefit of:
    • reduced commercial risk
    • increased turnover and profitability
    • enhanced productivity and market share

◆ Innovative performance. Enterprises participating in FP:
  – tend to be more innovative
  – more likely to patent
  – engage in innovative cooperation with other firms and universities

◆ Scientific performance:
  – FP project up to 9 peer reviewed publications (international co-publications)

◆ Human resources development:
  – Over 7000 proposals for Marie Curie in 2004, thousands of researchers in top trans-national teams, benefiting from training and knowledge sharing
Framework Programmes: strong impact on the integration of the ERA

- **180 000** cooperation links (FP5): academia, industry, public research labs
- Better coordination of national research efforts (ERA-NET etc)
- Counter-acting fragmentation of ERA. Average number of MS per project: 3 (FP2) ≤ 6.7 (FP6)
- Concentration of research efforts through larger projects with critical mass.
  - Average number of participants per project: 4.7 (FP2) ≤ 14 (FP6).
  - Average EU funding per project: 1.2 M€ (FP2) ≤ 4.6 M€ (FP6)
- Top-level scientists: e.g. 6 Nobel Prize winners involved in FP6 fundamental genomics projects
- ERA more attractive to researchers worldwide. Number of participating countries from across the world: 30 (FP2) ≤ 140 (FP5)
Why double the FP7 budget (1) ?

◆ Tackle under-investment by exerting leverage on national and private investment
  – Increase EU spending on R&D: 1.97% of GDP vs 2.59% (US)
  – Help leverage business R&D (EU wide projects, solutions and market)
  – Brings EU public R&D spending to 0.96% of GDP (close to 1% target)
  – Encourage Member States

◆ Tackle fragmentation of research effort in the EU and enhance its efficiency and effectiveness
  – Achieve critical mass, share knowledge and facilities
  – Better dissemination across the EU
  – More excellence through EU wide competition
  – Less fragmentation through stronger coordination
Why double the FP7 budget (2)?

◆ Widen the scope of the FP
  – Launch essential new initiatives
  – Reinforce existing successful actions

◆ Help to meet new S&T challenges
  – Rising costs of research mean that higher funding is needed to produce same impacts
  – New research fields are emerging (hydrogen economy etc)

◆ Reinvigorate the Lisbon strategy
  – Objective: to become the most dynamic knowledge-based economy
  – Supports the integration and attractiveness of the ERA
  – Contributes to increased competitiveness
  – Contributes to sustainable development
### Projected FP7 economic impacts
(by 2030, as compared to a business-as-usual scenario)

<table>
<thead>
<tr>
<th>Indicators</th>
<th>Stop FP, No national compensation</th>
<th>Doubling funding under FP7, moderate growth thereafter</th>
<th>Doubling funding under FP7, rapid growth thereafter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Extra GDP (%)</td>
<td>- 0.84</td>
<td>+ 0.45</td>
<td>+ 0.96</td>
</tr>
<tr>
<td>Extra GDP when taking account of increases over time in the quality of products (%)</td>
<td>- 1.31</td>
<td>+ 0.69</td>
<td>+ 1.66</td>
</tr>
<tr>
<td>Extra employment (#)</td>
<td>- 840,000</td>
<td>+ 418,000</td>
<td>+ 925,000</td>
</tr>
<tr>
<td>Extra jobs in research (#)</td>
<td>- 87,000</td>
<td>+ 40,000</td>
<td>+ 214,000</td>
</tr>
<tr>
<td>Increase in R&amp;D Intensity (% of GDP)</td>
<td>- 0.089</td>
<td>+ 0.059</td>
<td>+ 0.228</td>
</tr>
<tr>
<td>Change in exports to outside Europe (%)</td>
<td>-1.92</td>
<td>+ 0.64</td>
<td>+ 1.57</td>
</tr>
<tr>
<td>Change in imports from outside Europe (%)</td>
<td>+ 1.43</td>
<td>- 0.27</td>
<td>- 0.88</td>
</tr>
</tbody>
</table>
Towards the Seventh Framework Programme 2007-2013 ('co-decision')

6 April 2005 23 December 2007

Council

Proposal Opinion Common position Amendments Conciliation: joint text Adoption

Commission

Proposal Opinion Common position Amendments Conciliation: joint text Adoption

European Parliament

Consultations (on-line, etc.) CREST FP evaluations European Research Advisory Board

Commission opinion on EP amendments

Direct approval if agreement with EP

Council decides by qualified majority except on EP amendments not approved by the Commission
3. THE 7TH RESEARCH FRAMEWORK PROGRAMME (2006-2013)
EU research: changing priorities

- Other
- Basic research
- Coordination & development
- Space
- Science and society
- Training of researchers
- Dissemination & exploitation
- International cooperation
- Socio-economic
- Transport
- Energy
- Life sciences
- Environment
- Industrial & materials technology
- IT and Communications
What’s new?

MAIN NEW ELEMENTS COMPARED TO FP6:

- Duration increased from five to seven years
  - except for Euratom FP
- Annual budget increased significantly (5 to 7 B€/year on average)
- Basic research (~ €1 billion per year)
- New structure: cooperation, ideas, people, capacities
- Flexible funding schemes
- Joint Technology Initiatives
- Simpler procedures
- Logistical and administrative tasks ➔ external structures
### FP7 2007 –2013

**Specific Programmes**: 55 Billion Euro

<table>
<thead>
<tr>
<th>Category</th>
<th>Amount (B€)</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cooperation – Collaborative research</td>
<td>32.4</td>
<td>60%</td>
</tr>
<tr>
<td>Ideas – Frontier Research</td>
<td>7.5</td>
<td>13%</td>
</tr>
<tr>
<td>People – Marie Curie Actions</td>
<td>4.8</td>
<td>9%</td>
</tr>
<tr>
<td>Capacities – Research Capacity</td>
<td>4.1</td>
<td>7%</td>
</tr>
<tr>
<td>JRC non-nuclear research</td>
<td>1.8</td>
<td>4%</td>
</tr>
<tr>
<td>Euratom direct action – JRC nuclear research</td>
<td>4.5</td>
<td>7%</td>
</tr>
<tr>
<td>Euratom indirect actions – nuclear fusion and fission research</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Ten themes

1. **Health**  
   - Cost: 6.1 B€  
   - Percentage: 19%

2. **Food, agriculture and biotechnology**  
   - Cost: 1.9 B€  
   - Percentage: 6%

3. **Information & communication technologies**  
   - Cost: 9.1 B€  
   - Percentage: 29%

4. **Nanosciences, nanotechnologies, materials and new production technologies**  
   - Cost: 3.5 B€  
   - Percentage: 11%

5. **Energy**  
   - Cost: 2.4 B€  
   - Percentage: 7%

6. **Environment (including climate change)**  
   - Cost: 1.9 B€  
   - Percentage: 6%

7. **Transport (including aeronautics)**  
   - Cost: 4.2 B€  
   - Percentage: 13%

8. **Socio-economic sciences & the humanities**  
   - Cost: 0.6 B€  
   - Percentage: 2%

9. **Security**  
   - Cost: 1.4 B€  
   - Percentage: 4%

10. **Space**  
    - Cost: 1.4 B€  
    - Percentage: 4%

**TOTAL**  
- Cost: 32.4 B€
1. Health

- Biotechnology, generic tools and technologies for human health

- Translating research for human health

- Optimising the delivery of healthcare to European citizens
2. Food, Agriculture and Biotechnology

- Sustainable production and management of biological resources from land, forest, and aquatic environments
- ‘Fork to farm’: Food, health and well being
- Life sciences and biotechnology for sustainable non-food products and processes
3. Information and Communication Technologies

- ICT Technology Pillars
- Integration of Technologies
- Applications Research
- Future and Emerging Technologies
4. Nanosciences, Nanotechnologies, Materials and new Production Technologies

- Nanosciences and nanotechnologies
- Materials
- New production
- Integration of technologies for industrial applications
5. Energy

- Renewables, clean energy, CO$_2$ emissions, efficiency, etc.

- Nuclear fission and radiation protection (under Euratom FP)

- Fusion energy research (under Euratom FP)
6. Environment (inc. climate change)

- Climate change, pollution and risks
- Sustainable management of resources
- Environmental technologies
- Earth observation and assessment tools
7. Transport (inc. aeronautics)

◆ Aeronautics and air transport

◆ Surface transport (rail, road and waterborne)

◆ Support to the European global satellite navigation system (Galileo)
8. Socio-Economic Sciences and the Humanities

- Growth, employment and competitiveness in a knowledge society
- Combining economic, social and environmental objectives in a European perspective
- Major trends in society and their implications
- Europe in the world
- The citizen in the European Union
- Socio-economic and scientific indicators
- Foresight activities

More on SSH
9. Security

- Protection against terrorism and crime
- Security of infrastructures and utilities
- Border security
- Restoring security in case of crisis
- Security systems integration and interoperability
- Security and society
- Security research Coordination and structuring

More on Security & Space
10. Space

- Space-based applications at the service of the European society
- Exploration of space
- RTD for strengthening space foundations
Cooperation – Collaborative Research (2)

◆ Collaborative research
  – Collaborative projects;
  – Networks of Excellence;
  – Coordination/support actions

◆ Joint Technology Initiatives

◆ Coordination of non-Community research programmes
  (ERA-NET; ERA-NET+; Article 185 Initiatives)

◆ International Cooperation
Joint Technology Initiatives

- Hydrogen and Fuel Cells
- Aeronautics and Air Transport
- Global Monitoring for Environment and Security (to ESA)
- Innovative Medicines
- Embedded Computing Systems
- Nanoelectronics

Other possible themes to be identified later…

More on Technology Platforms and JTIs
Coordination of non-Community research programmes

◆ Coordination of national and regional programmes actions will use the tools:
  – ERA-NET
  – ERA-NET PLUS
  – Article 185
  May cover subjects beyond the ten themes

◆ Coordination with European programmes
  – Addresses principally intergovernmental structures such as EUREKA, COST, EIROFORUM, etc.
Ideas – Frontier Research (1)

◆ Frontier Research is a key driver to innovation and economic performance

◆ Establish European Research Council (ERC) – the first pan-European funding agency for Frontier Research

◆ Support investigator-driven frontier research over all areas of research

◆ European added-value through competition at European level
Ideas – Frontier Research (2)

- Budget ~ €1bn p.a. (2007-2013 ~ €7.46)
- Autonomous scientific governance (Scientific Council)
- Support projects of individual teams
- Excellence as sole criterion
- Simple, user-friendly
Ideas – Frontier Research (3)

◆ ERC Launch Strategy provides for two streams of funding activities starting in 2007:
  – ERC Starting Independent Researcher Grant scheme (ERC Starting Grant)
  – ERC Advanced Investigator Researcher Grant scheme (ERC Advanced Grant)

◆ 300 Starting Grants in 2008 over 6000 proposals!
People – Marie Curie Actions

- Initial training of researchers
  - Marie Curie Networks*

- Life-long training and career development
  - Individual Fellowships
  - Co-financing of regional/national/international programmes

- Industry-academia pathways and partnerships
  - Industry-Academia Knowledge–sharing Scheme*

- International dimension
  - Outgoing & Incoming International Fellowships
  - International Cooperation Scheme
  - Reintegration grants;
  - Support to researcher ‘diasporas’

- Specific actions
  - Mobility and career enhancement actions
  - Excellence awards

* Open to third-country nationals
Capacities – Research Capacity

1. Research infrastructures 1.715 M€ - 43%
2. Research for the benefit of SMEs 1.336 M€ - 33%
3. Regions of Knowledge 126 M€ - 3%
4. Research Potential 340 M€ - 8%
5. Science in Society 330 M€ - 8%
6. Coherent development of policies 70 M€ - 2%
7. Activities of International Cooperation 180 M€ - 5%

Total 4.097 M€
1. Research Infrastructures

◆ Support to existing research infrastructures:
  – Integrating activities
  – Research e-infrastructures

◆ Support to new research infrastructures:
  – Construction of new research infrastructures and major updates of existing ones
  – Design studies
2. Research for the benefit of SMEs

- Research for SMEs
- Research for SME associations
- Encourage and facilitate SME participation across FP7 (Objective: 15% of “cooperation” = 4860 M€)

+ under the Competitiveness and Innovation Programme (CIP):
  - Support services provided by networks to encourage SME participation in FP7 (awareness, identification of needs, assistance)
3. Regions of Knowledge

- Strengthen their capacity for investing in RTD and carrying out research activities
- Produce research strategies that contribute to regional economic development

Through the development of regional ‘research-driven clusters’
4. Research Potential

◆ Objectives for EU’s convergence and outermost (RUP) regions

- Unlock and develop their research capacities
- Foster an increase in their participation to Community research activities

◆ Fully realise the European Research Area in the enlarged Union

- Transnational two-way secondments and recruitment of staff
- Development of research equipment and the material environment
- Workshops and conferences for knowledge transfer
- ‘Evaluation facilities’
5. Science in Society

- Strengthening the European science system (inc. scientific advice)
- Broader public engagement on science-related questions
- Promoting better science through ethics research and ethical review
- Science and technology and their place in society
- Gender research, gender dimension, and the role of women in research
- Science education – curiosity and the participation of young people
- Policy for the role and engagement of universities
- Communication between scientists, policy-makers, media and the public
6. Coherent Development of Research Policies

- Monitoring and analysis of research related public policies/industrial strategies:
  - Information and intelligence service (ERAWATCH)
  - Industrial research investment monitoring
  - Indicators on research activity and its impact on the economy

- Coordination of research policies:
  - Implementing the Open Method of Coordination
  - Bottom-up initiatives undertaken by several countries and regions (OMC-NET)
7. Activities of International Cooperation

- ‘Horizontal’ support actions and measures not carried out in the Cooperation or People programmes

  Support competitiveness through strategic partnerships with third countries in selected fields

  Address specific problems that third countries face or that have a global character, on the basis of mutual interest and mutual benefit
JRC – Research-based policy support

Five policy themes for FP7

- Sustainable growth
- Conservation and management of natural resources
- Citizenship
- External responsibility and global security
- Euratom programme

More on the JRC
Management

Increased FP budget + No increase in Commission staff

- Need new structures to manage the increase
- ‘Externalise’ part of the FP management to executive agencies for the first time

More on Management
MANAGING KNOWLEDGE for GROWTH – FP7

Simplification of procedures?

◆ Objectives:
  – Eliminate procedures, rules and requests with no added value
  – Cut the number of requests to participants
  – Avoid red tape and increase user-friendliness
  – Reduce delays

◆ Principles:
  – Rationalisation of all procedures
  – Communication
  – Strike a new balance between risk and control to provide
    • Greater trust
    • Increased risk-taking
Work Programmes

- Strategy/approach, timing and content of calls (topics, funding schemes, budgets etc.)
- Evaluation criteria (S&T quality, impact, implementation)
- Particular requirements for participation, evaluation, implementation
Preparation of Work Programmes

◆ Annual process

◆ Following consultation and expert advice:
  – Advisory Groups
  – European Technology Platforms
  – Open consultations
  – Workshops, expert meetings, etc
  – Consultation with other Commission directorate generals

◆ Subject to opinion by Programme Committees (Member State representatives)
Funding Schemes, General principles

▸ **FP6**: new instruments
  – Structure research efforts
  – Overcome fragmentation

▸ **FP7**: flexible use of funding schemes
  – Alone or in combination
  – Fund actions throughout the Framework Programme

▸ Programme decisions and calls will mention
  – The type(s) of scheme(s) used for different actions
  – The eligible participants
  – The eligible types of activity

▸ Work programmes may specify the scheme used for each element of the call
Competitiveness & Innovation Programme (CIP) Complementarity with FP7

- Complementary and mutually reinforcing actions
- Competitiveness and dissemination remain key elements of FP7
- Designed to operate side by side in support of Lisbon objectives
- Close coordination

**FP7: Dissemination of knowledge and innovation-related activities (within projects)**

**CIP: Innovation support networks and take-up of proven technologies**
## How FP7 and CIP complement each other

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<tr>
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<th>FP7-RTD</th>
<th>CIP</th>
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<tbody>
<tr>
<td>Funding of projects</td>
<td>Research, technological development and demonstration</td>
<td>Take-up of proven technologies: environmental, ICT and energy-efficiency</td>
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</table>
| SMEs’ participation in Research | • Simplification  
• Definition of thematic content  
• Specific schemes for SMEs | Actions promoting SMEs’ participation in FP7                         |
| Access to finance    | ‘Risk Sharing Finance Facility’ for large European RTD projects and infrastructures (with EIB) | • Risk capital (start-up and expansion)  
• SMEs guarantee facility  
• SMEs loan securitisation |
| Dissemination of knowledge | • Within projects  
• In thematic areas | Networks providing innovation support services (IRCs, EICs) |
| Regions              | Research-driven clusters                                                 | Innovation clusters                                                  |
Information

- EU research: http://ec.europa.eu/research
- Seventh Framework Programme: http://ec.europa.eu/research/fp7
- Information on research programmes and projects: http://www.cordis.europa.eu/
- Assistance for participation from National Contact Points: http://cordis.europa.eu/fp7/get-support_en.html
- RTD info magazine: http://ec.europa.eu/research/rtdinfo/