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Community Research

*Building the Europe of Knowledge*

# Towards the Seventh Framework Programme for Research (2007-2013)

Leonidas Karapiperis  
Research DG  
European Commission  
Speyer, 21 October 2005



# EU research: the story so far

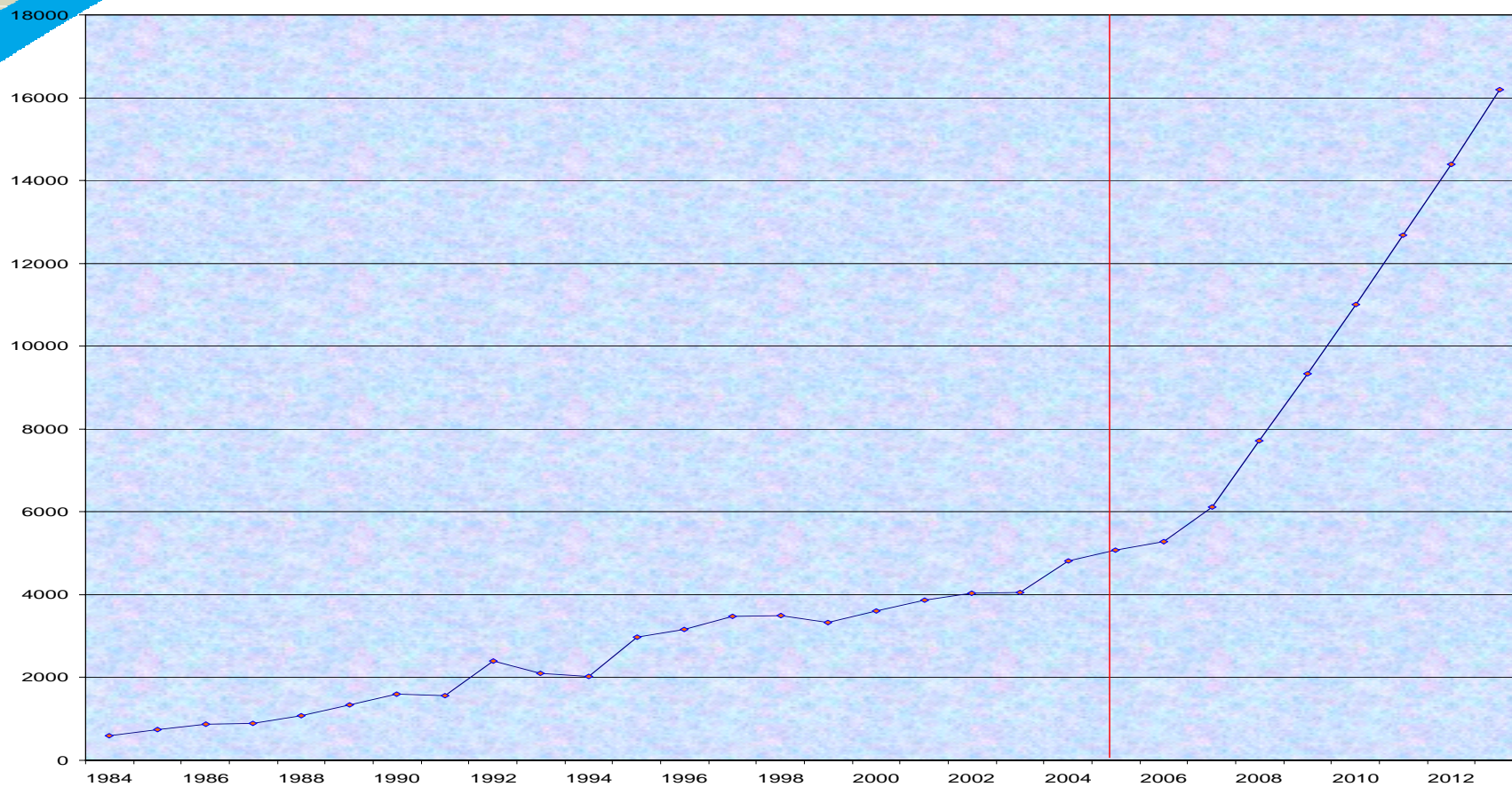
- 
- 1952: ECSC treaty; first projects started March 1955
  - 1957: EURATOM treaty; Joint Research Centre set up
  - 1983: ESPRIT programme
  - 1984: **First** Framework Programme (1984-1987)
  - 1987: “European Single Act” - science becomes a Community responsibility;  
**Second** Framework Programme (1987-1991)
  - 1990: **Third** Framework Programme (1990-1994)
  - 1993: Treaty on European Union;  
role of RTD in the EU enlarged
  - 1994: **Fourth** Framework Programme (1994-1998)
  - 1998: **Fifth** Framework Programme (1998-2002)
  - 2000: European Research Area
  - 2002: **Sixth** Framework Programme (2002-2006)
  - 2005: Proposal for the **Seventh** Framework Programme (2007-2013)



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# Annual budget of the EU Framework Programmes, 1984-2013



**NB: Budgets in current prices. Source: Annual Report 2003, plus FP7 proposal**



# Why research at EU level?

- **Pooling and leveraging resources**
  - Pooling of resources
    - “Critical mass”
    - Inter-disciplinarity
    - Rising costs of R&D
    - “Large” science
  - Leverage effect on private investment
    - Expertise beyond national level
    - Improved commercial opportunities
    - Development of pan-European and world standards
- **Fostering human capacity and excellence in S&T**
  - International mobility and training of researchers
  - Improved S&T capabilities
  - EU-wide competition for research grants
- **Better integration of European R&D**
  - Create scientific base for pan-European policy challenges
  - Coordination of national programmes and policies
  - Efficient dissemination of research results



# European Research Area (ERA)

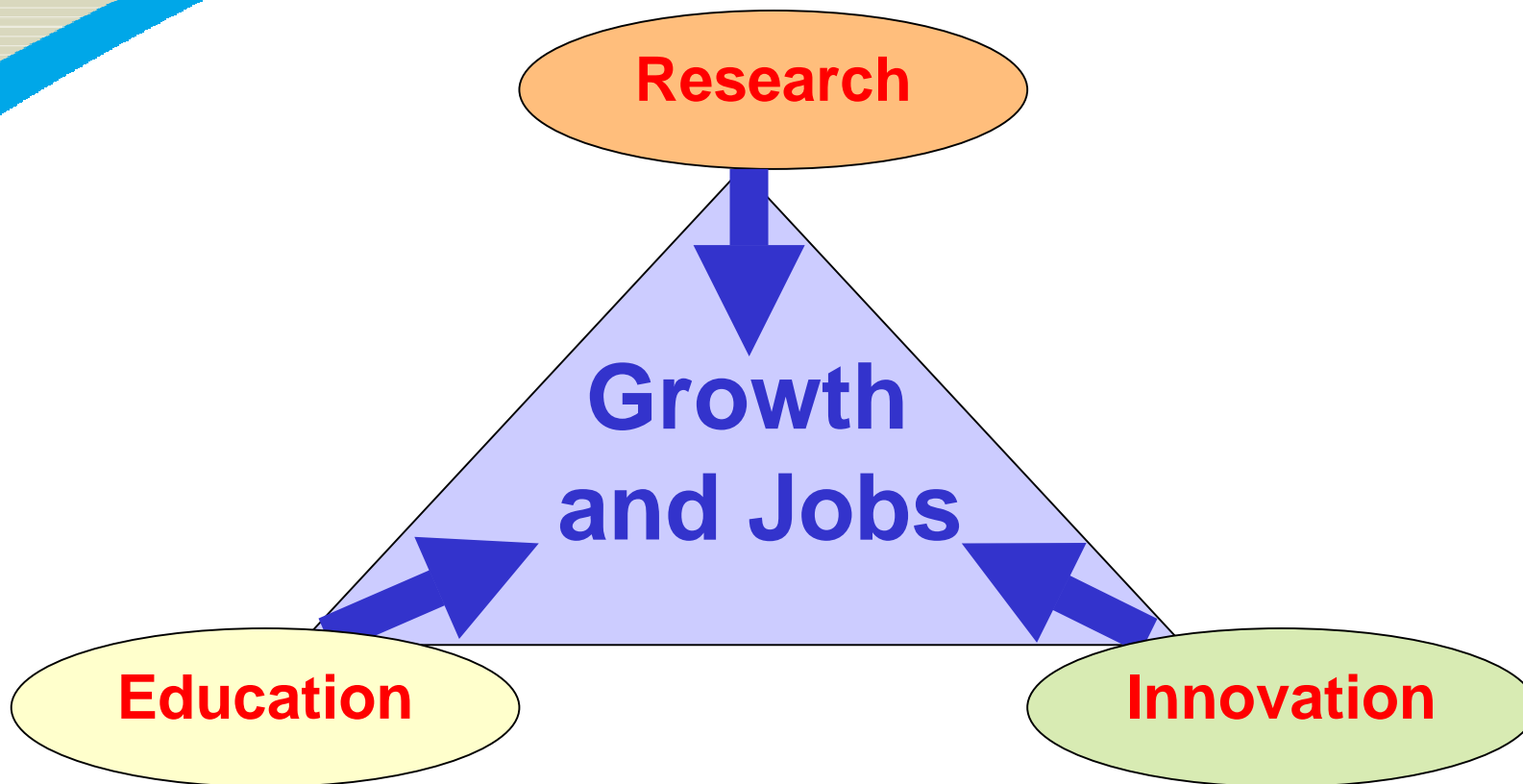
- ❑ **Creation of an "internal market" in research**
    - free movement of researchers, ideas, technology
  
  - ❑ **Restructuring of the European research fabric**
    - overcome fragmentation, create critical mass
  
  - ❑ **Development of a European research policy**
    - coordinate national and European programmes and policies
- **FP6 specially designed to promote ERA**



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# FP7: Nurturing the the knowledge triangle



S&T contributes to the **Lisbon** objectives: economic **growth**, **employment** creation, **environmental** protection, addressing **social** challenges



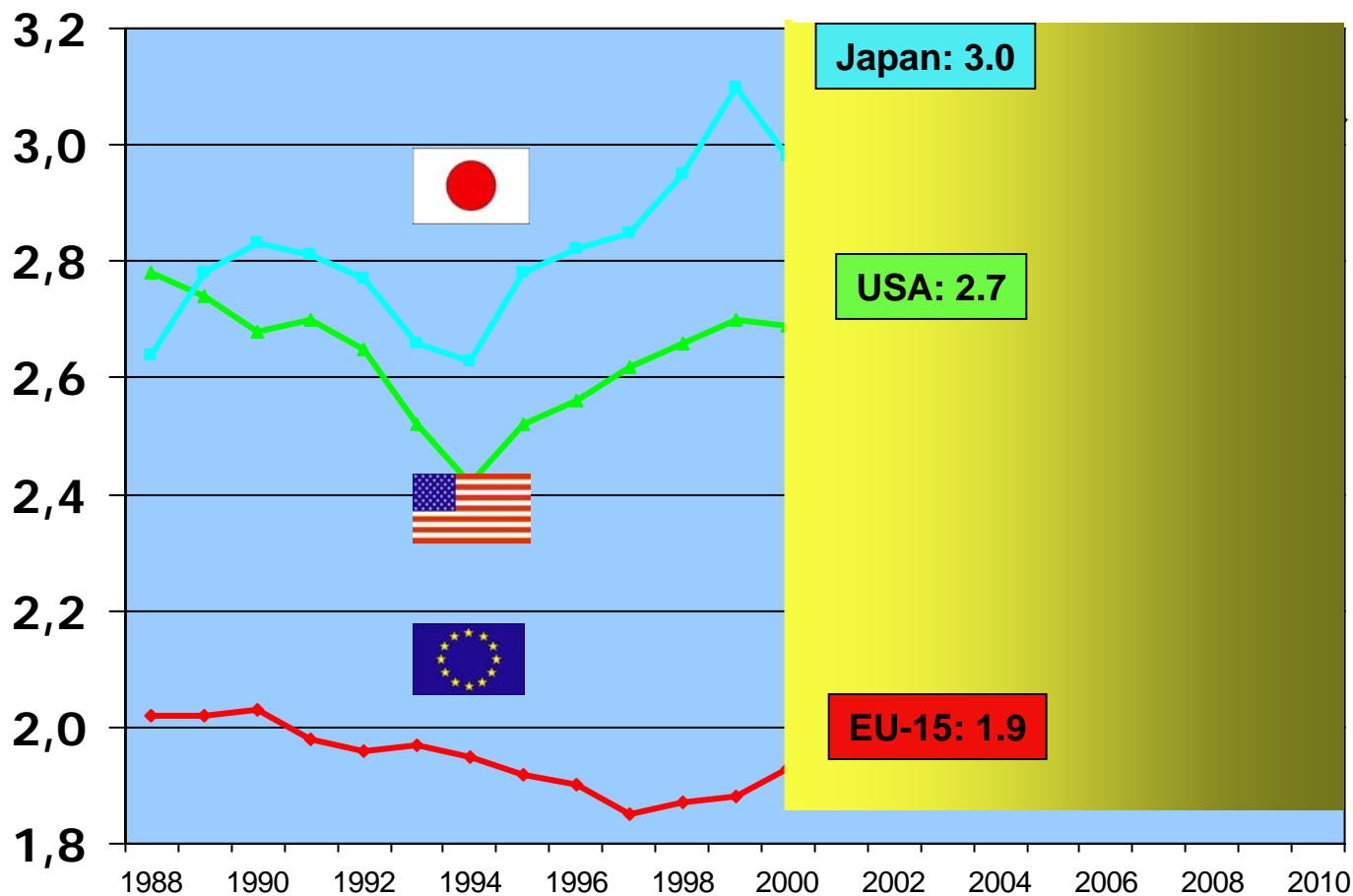
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# Research: Bridging the gap

Total expenditure on R&D, % of GDP

Barcelona Summit, 2001





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# Why double the FP7 budget?

- **Tackle under-investment by exerting leverage on national and private investment**
- **Tackle fragmentation of research effort in the EU and enhance its efficiency and effectiveness**
- **Strengthen and broaden the scope of the FP**
- **Help to meet new S&T challenges**
- **Reinvigorate the Lisbon strategy**



# What's new in FP7?

## Main new elements compared to FP6:

- Duration increased from 5 to 7 years
- Annual budget doubled (€5 billion ⇒ €10 billion)
- New structure: “cooperation”, “ideas”, “people”, “capacities”
- Joint Technology Initiatives (possibly using Treaty Art. 171)
- Extension of use of Treaty Article 169
- Frontier research - ERC (~ €1.5 billion per year)
- Enlarged scope of researcher mobility schemes
- European approach to Research Infrastructures
- Flexible funding schemes
- Simpler procedures
- Allocation of certain tasks to Executive Agencies



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# FP7 (2007 – 2013)

Specific Programmes

***Cooperation* – Collaborative research**

***Ideas* – Frontier Research**

***People* – Human Potential**

***Capacities* – Research Capacity**

+

**JRC (non-nuclear)**

**JRC (nuclear)**

**Euratom**



# ***Cooperation* – Collaborative research**

## *9 Thematic Priorities*

1. **Health**
2. **Food, agriculture and biotechnology**
3. **Information and communication technologies**
4. **Nanosciences, nanotechnologies, materials and new production technologies**
5. **Energy**
6. **Environment (including climate change)**
7. **Transport (including aeronautics)**
8. **Socio-economic sciences and the humanities**
9. **Security and space**

+ Euratom: Fusion energy research, nuclear fission and radiation protection



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# ***Cooperation* – Collaborative research**

## **Collaborative research**

**(Collaborative projects; Networks of Excellence; Coordination/support actions)**

## **Joint Technology Initiatives**

**Coordination of non-Community research programmes  
(ERA-NET; ERA-NET+; Article 169)**

## **International Cooperation**



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# Joint Technology Initiatives

**Hydrogen  
and Fuel Cells for a  
Sustainable Energy  
Future**

**Global Monitoring  
for Environment  
and Security**

**Aeronautics and  
Air Transport**

**Innovative Medicines  
for the Citizens  
of Europe**

**Towards new  
Nanoelectronics  
Approaches**

**Embedded systems**

*Other possible themes  
to be identified later...*



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# Article 169 Initiatives

**European Metrology  
Research Programme**

**Joint Baltic Sea  
Research Programme**

**Ambient Assisted  
Living**

**Research-performing  
SMEs**



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# Coordination of Research in the EU through FP7

## Policy level

- ✓ Open method of coordination
- ✓ Mapping, benchmarking, score boards

## Programme level

- ✓ ERA-NET, ERA-NET+
- ✓ Article 169

## Project level

- ✓ Various funding schemes (Collaborative projects, Networks of excellence, etc)



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## ***Ideas* – Frontier Research**

- **Investigator-driven frontier research**
- **Support to individual teams, to promote excellence through Europe-wide competition**
- **Independent scientific governance (Scientific Council)**
- **Dedicated implementation structure (Executive Agency)**
- **Simplified grant mechanism**



# ***People – Human Potential***

## **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 Scheme

## **International dimension**

Outgoing International Fellowships; Incoming International Fellowships

International Cooperation Scheme; Reintegration grants

## **Specific actions**

Excellence awards



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## ***Capacities* – Research Capacity**

- 1. Research Infrastructures**
- 2. Research for the benefit of SMEs**
- 3. Regions of Knowledge**
- 4. Research Potential**
- 5. Science in Society**
- 6. Activities of International Cooperation**



## 6. Activities of International Cooperation

“Horizontal” support actions and measures not carried out in the *Cooperation* or *People* programmes

*Two interdependent objectives:*

**Support competitiveness through strategic partnerships with 3<sup>rd</sup> countries in selected fields and by engaging the best 3<sup>rd</sup> country scientists to work in and with Europe**

**Address specific problems that 3<sup>rd</sup> countries face or that have a global character, on the basis of mutual interest and mutual benefit**



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# EU and Global Research

**The EU is partner in several Global research endeavours, such as:**

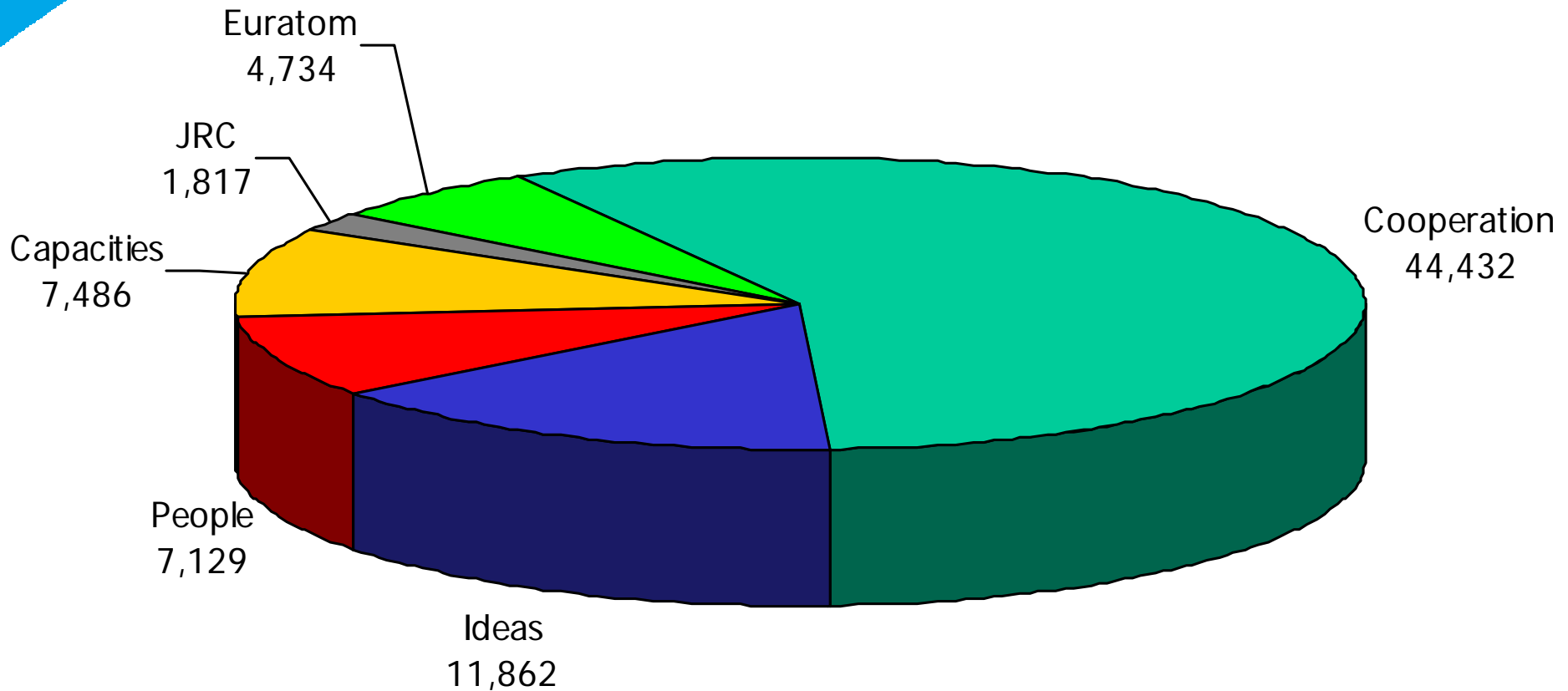
- **ITER**
- **Intelligent Manufacturing Systems (IMS)**
- **Human Frontier Science Programme**
- **INTAS**
- **ISTC**
- **OECD Global Science Forum**



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# FP7 budget (€ billion, current prices)





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# FP7 synergies

## Strong synergies with other EU Programmes

- ❑ **The Structural and Cohesion Funds**
- ❑ **The Competitiveness and Innovation Programme (CIP)**
- ❑ **Education and training Programmes**
- ❑ **Trans-european Networks**

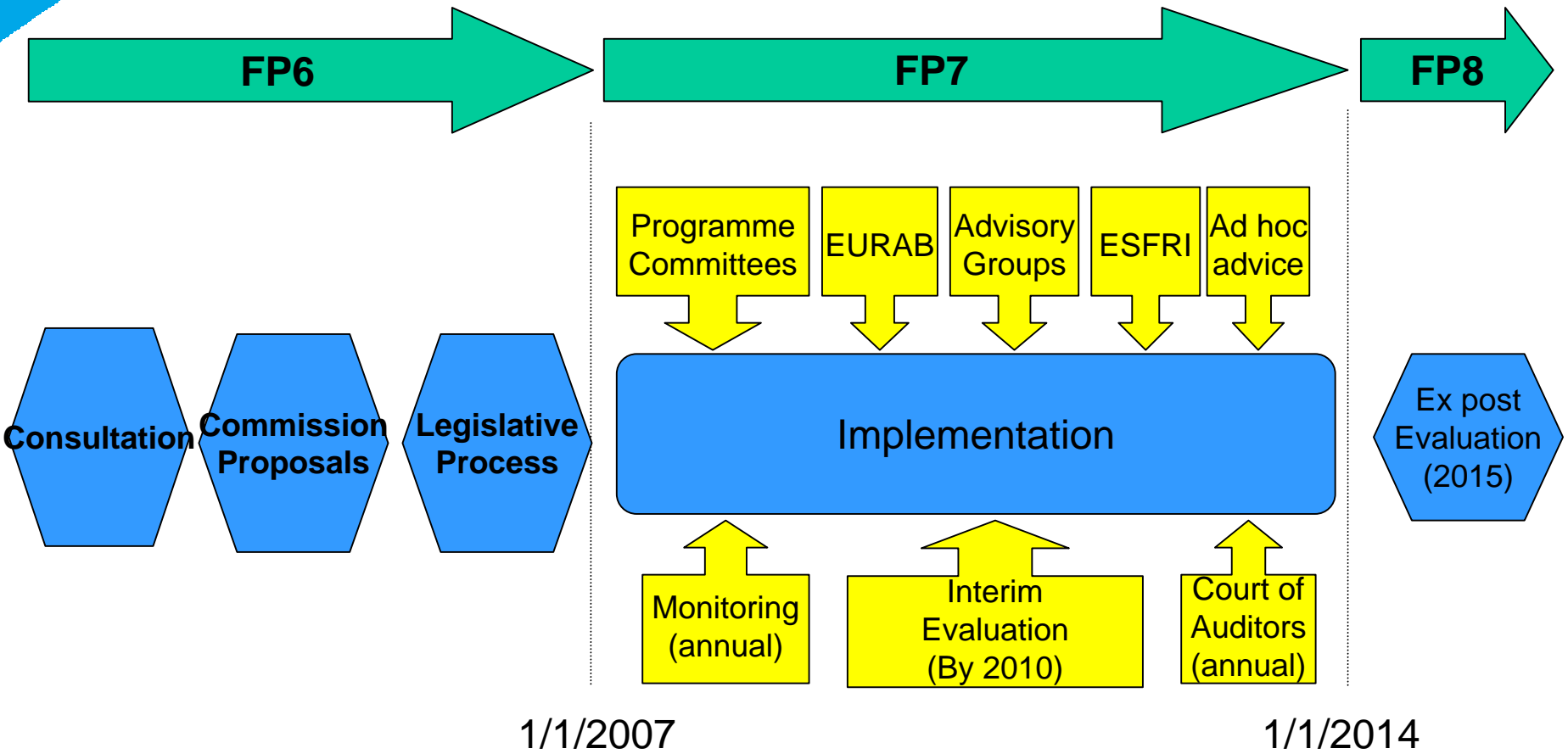


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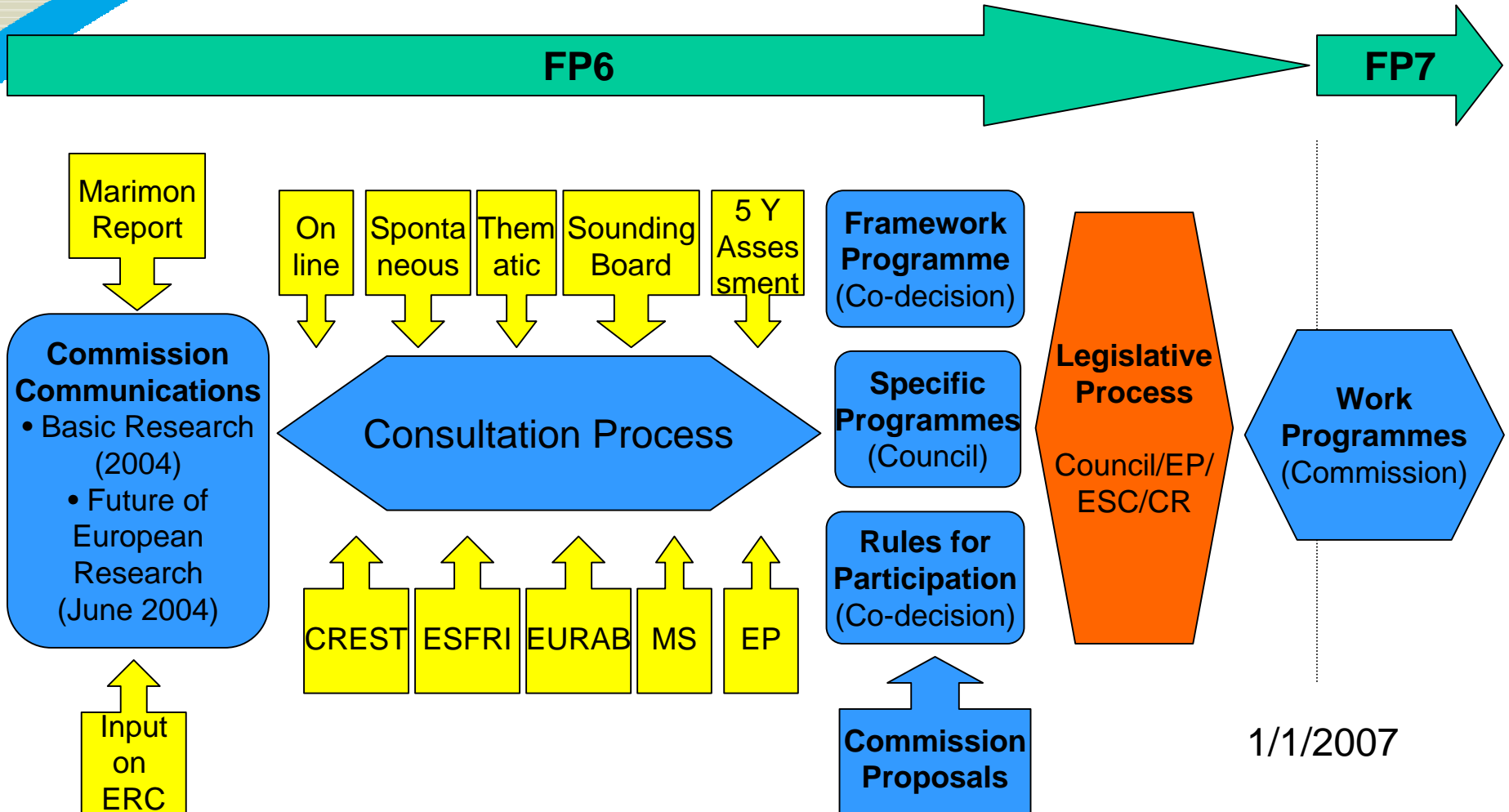
**FP7:**

# The whole life process



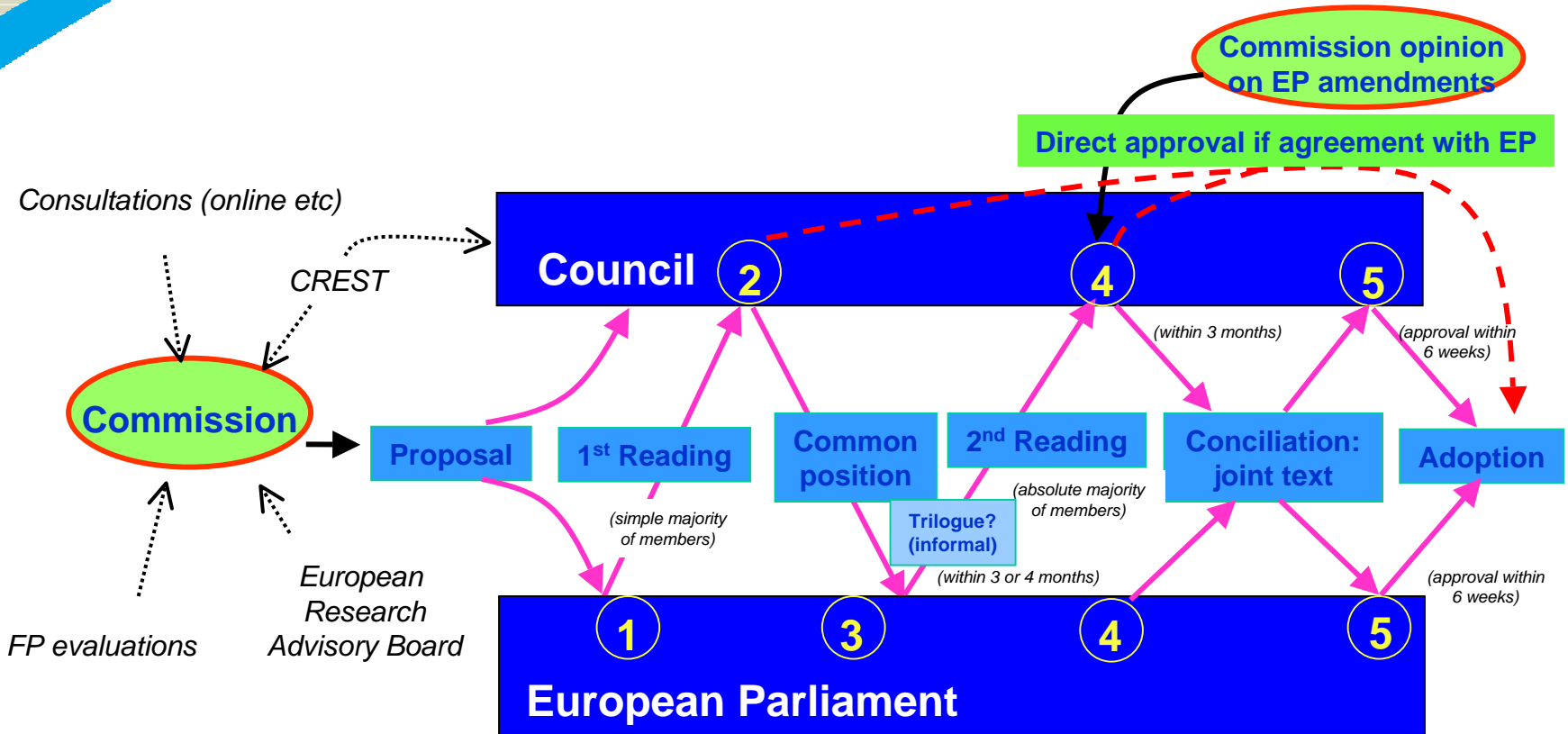


# Towards FP7: The preparatory phase





# Towards FP7: "Co-decision" – FP7, Rules

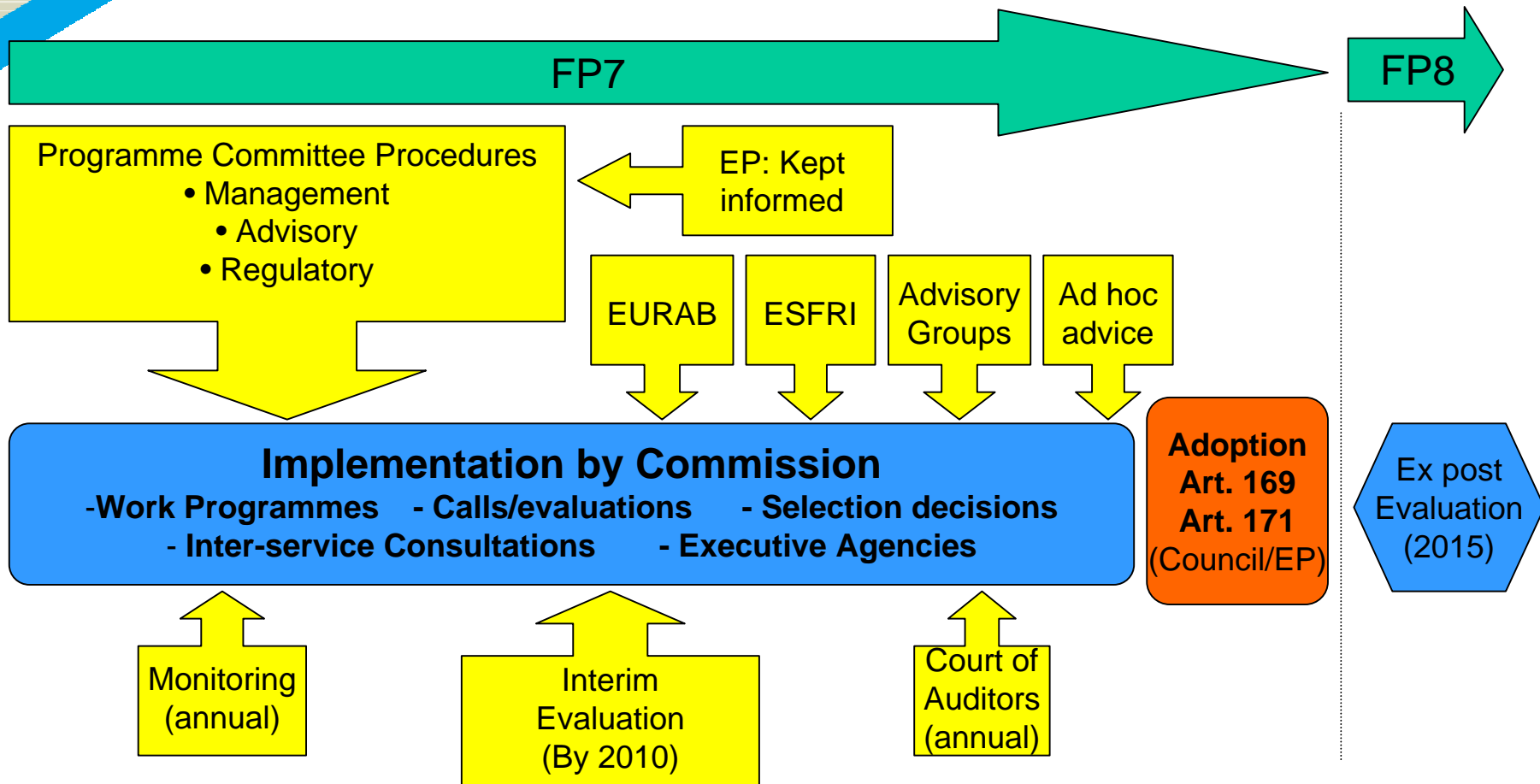


Council decides by qualified majority except on EP amendments not approved by the Commission



# FP7:

# Implementation



1/1/2007

1/1/2014



# Information

- EU research: <http://europa.eu.int/comm/research>
- Seventh Framework Programme:  
[http://europa.eu.int/comm/research/future/index\\_en.cfm](http://europa.eu.int/comm/research/future/index_en.cfm)
- Information on research programmes and projects:  
<http://www.cordis.lu>
- RTD info magazine:  
<http://europa.eu.int/comm/research/rtdinfo/>
- Information requests:  
[research@cec.eu.int](mailto:research@cec.eu.int)

