



# **The 7<sup>th</sup> Framework Programme Transatlantic Mobility**

**Delegation of the European Commission  
in Washington DC  
Science, Technology and Education  
Astrid-Christina Koch**





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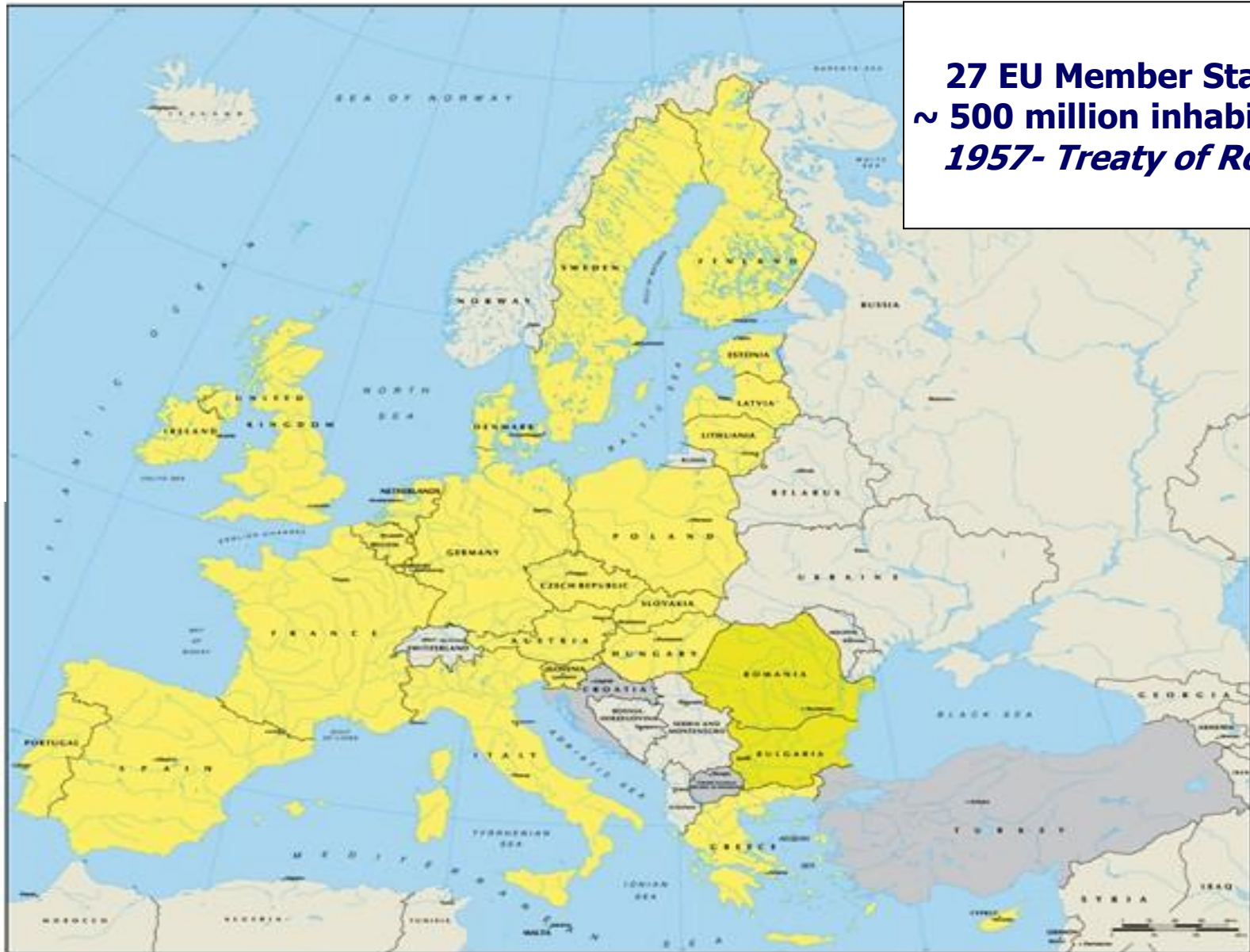
Community research

# Outline

- Background
- International Cooperation
- FP 7 (2007-2013)
- Erasmus-Mundus
- EU-US ATLANTIS programme

# THE EUROPEAN UNION

**27 EU Member States**  
**~ 500 million inhabitants**  
***1957- Treaty of Rome***



# The European Union

- **The first economic institutions were based on energy (such as coal and nuclear), industry (such as steel) and agriculture.**
- **Today, progress in Europe depends on knowledge and innovation (the Lisbon process) including the bio-sciences.**
- **The concept of an European Knowledge Based Economy is emerging.**

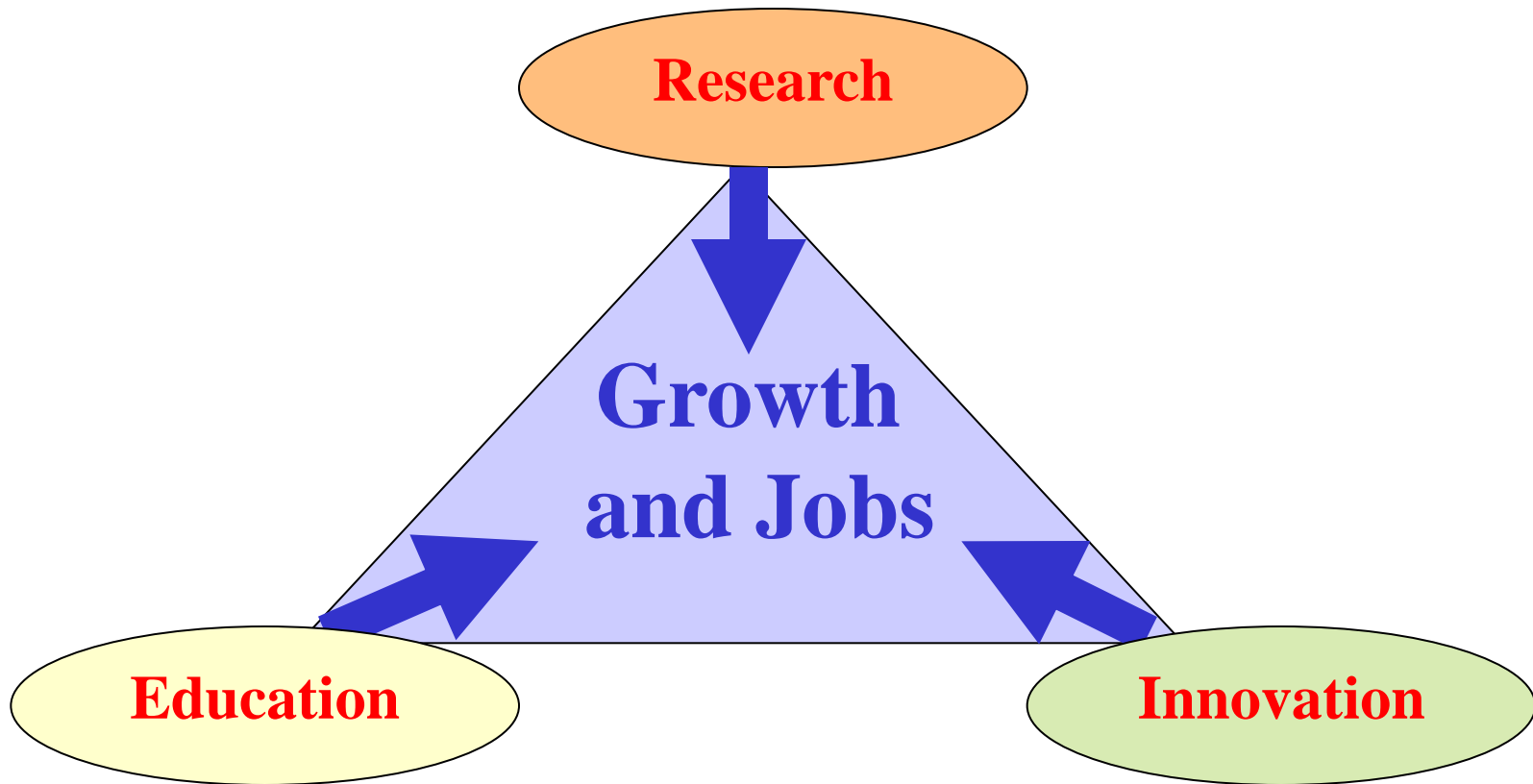


# EU research: the story so far

- 
- 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:** 'Single European Act' – science becomes Community responsibility;  
**Second** Framework Programme (1987-1991)
  - 1990:** **Third** Framework Programme (1990-1994)
  - 1993:** Treaty on European Union; role of RTD in the enlarged EU
  - 1994:** **Fourth** Framework Programme (1994-1998)
  - 1998:** **Fifth** Framework Programme (1998-2002)
  - 2000:** European Research Area
  - 2002:** **Sixth** Framework Programme (2002-2006)
  - 2006:** Proposal for the **Seventh** Framework Programme



# Lisbon strategy



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.)



# FP7 principles

- Scientific excellence
- Transnational cooperation
- Public calls, peer review, competitive selection
- Cost-sharing
- Participants own the results

# EU-U.S. Science & Technology Agreement

- 1998 EU – U.S. Science and Technology Agreement was signed
- 2003 Renewal of S&T Agreement for five years
- 2008 Renewal of S&T Agreement in process  
All Themes of FP7 to be included
- Joint Consultative Group (JCG) is responsible for deepening the intergovernmental cooperation through high-level meetings

# Mechanisms for Cooperation

- **Coordinated Calls / Joint solicitations**
- Cooperation based on reciprocity
- Joint projects by: Coordinated Calls /Dedicated Calls  
Twinning/Clustering
- Task forces
- Joint organisation of workshops and seminars
- Exchange of scientists and technical experts
- Exchange of evaluators for peer review
- Network building though ERA-LINK USA (European Researchers Abroad ) under the umbrella of EURAXESS

# Priority Areas for Cooperation

- Current: Health, Biotechnology, Materials, Nanotech  
New: Energy, Security, Transport
  - Strong ongoing S&T Collaboration in many areas
- No Top-Down approach to prioritization but need to ...
- ✓ Coordinate with MS Science Counselors
  - ✓ Identify obstacles to cooperation (eg IPR)
  - ✓ Better coordinate respective funding schemes

# FP7 | The Structure

**Cooperation** – Collaborative research

**Ideas** – Frontier Research

**People** – Marie Curie Actions

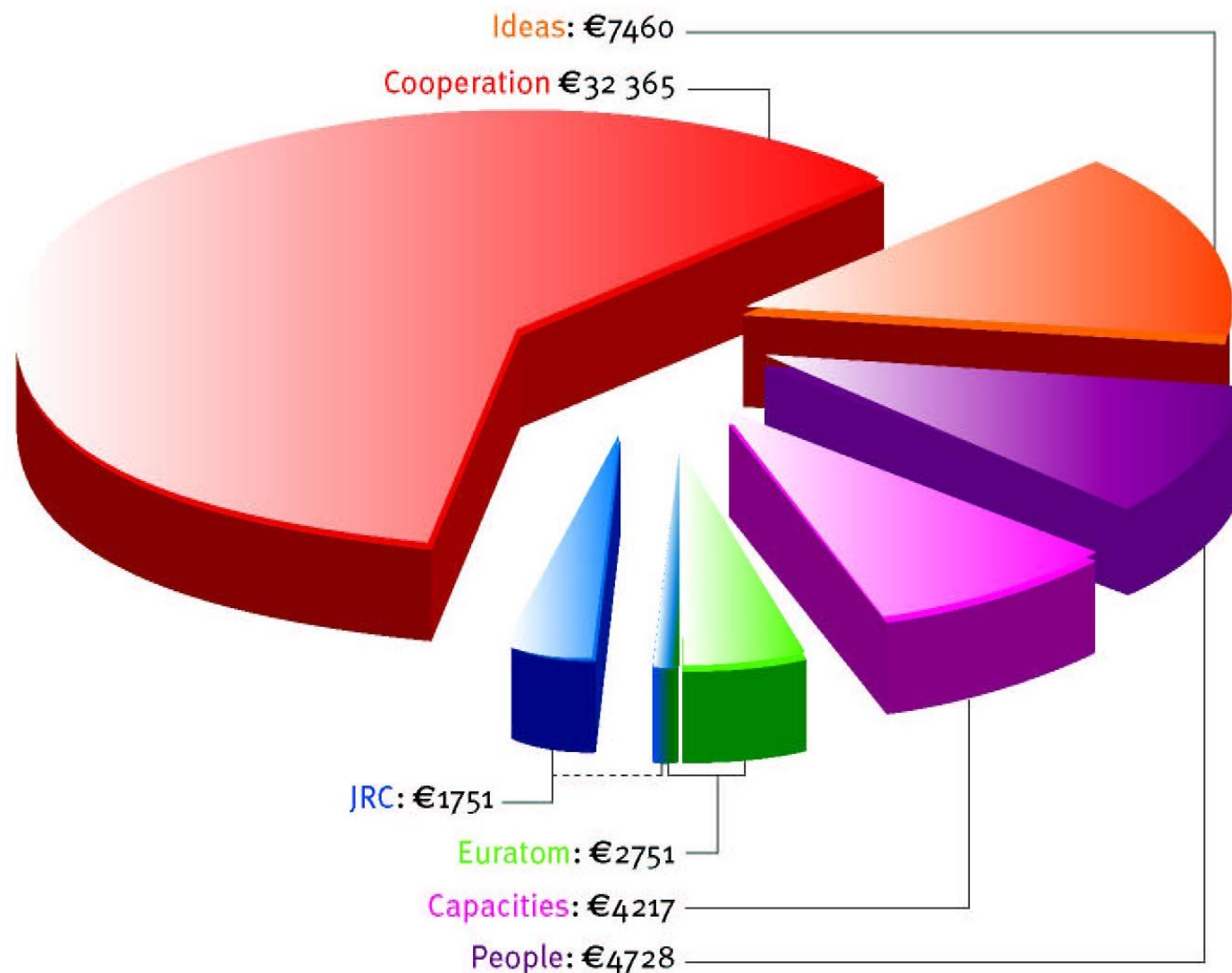
**Capacities** – Research Capacity

**JRC non-nuclear research**

**Euratom** – JRC nuclear research

**Euratom** indirect actions – nuclear fusion and fission research

## FP7 Indicative breakdown (€ million)



# FP7 – Specific Programmes

***Cooperation*** – Collaborative research

***Ideas*** – Frontier Research

***People*** – Human Potential

***Capacities*** – Research Capacity

+

JRC (non-nuclear)

JRC (nuclear)

Euratom

# Cooperation – Collaborative research

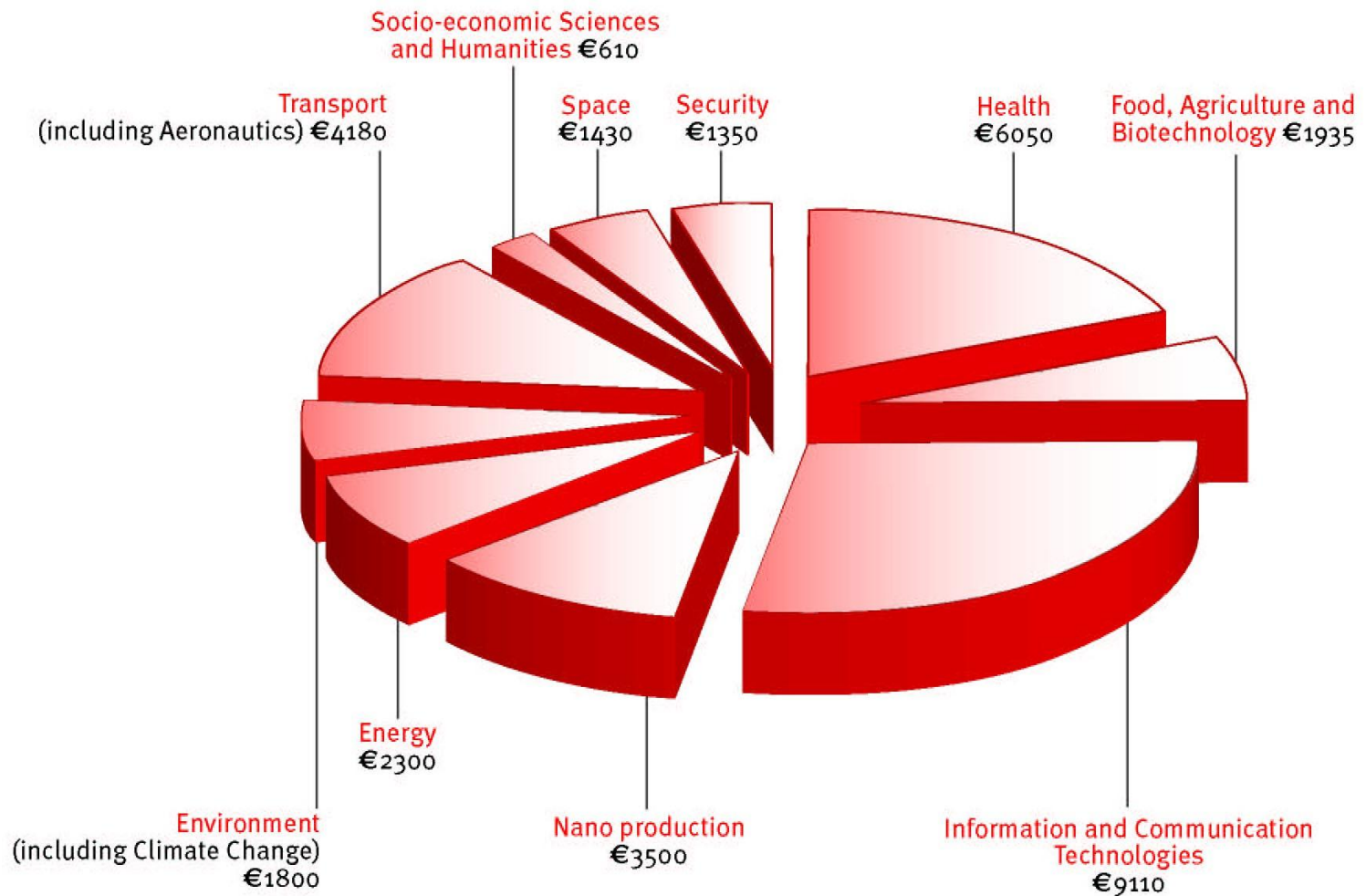
## *10 Thematic Priorities*

	€ M *
1. Health	6.050
2. Food, Agriculture, Fisheries and Biotechnology	1.93
3. Information and Communication Technologies	9.110
4. Nanosciences, Nanotechnologies, Materials and new Production Technologies	3.500
5. Energy	2.300
6. Environment (including Climate Change)	1.900
7. Transport (including Aeronautics)	4.180
8. Socio-Economic Sciences and the Humanities	610
9. Space	1.430
	1.350

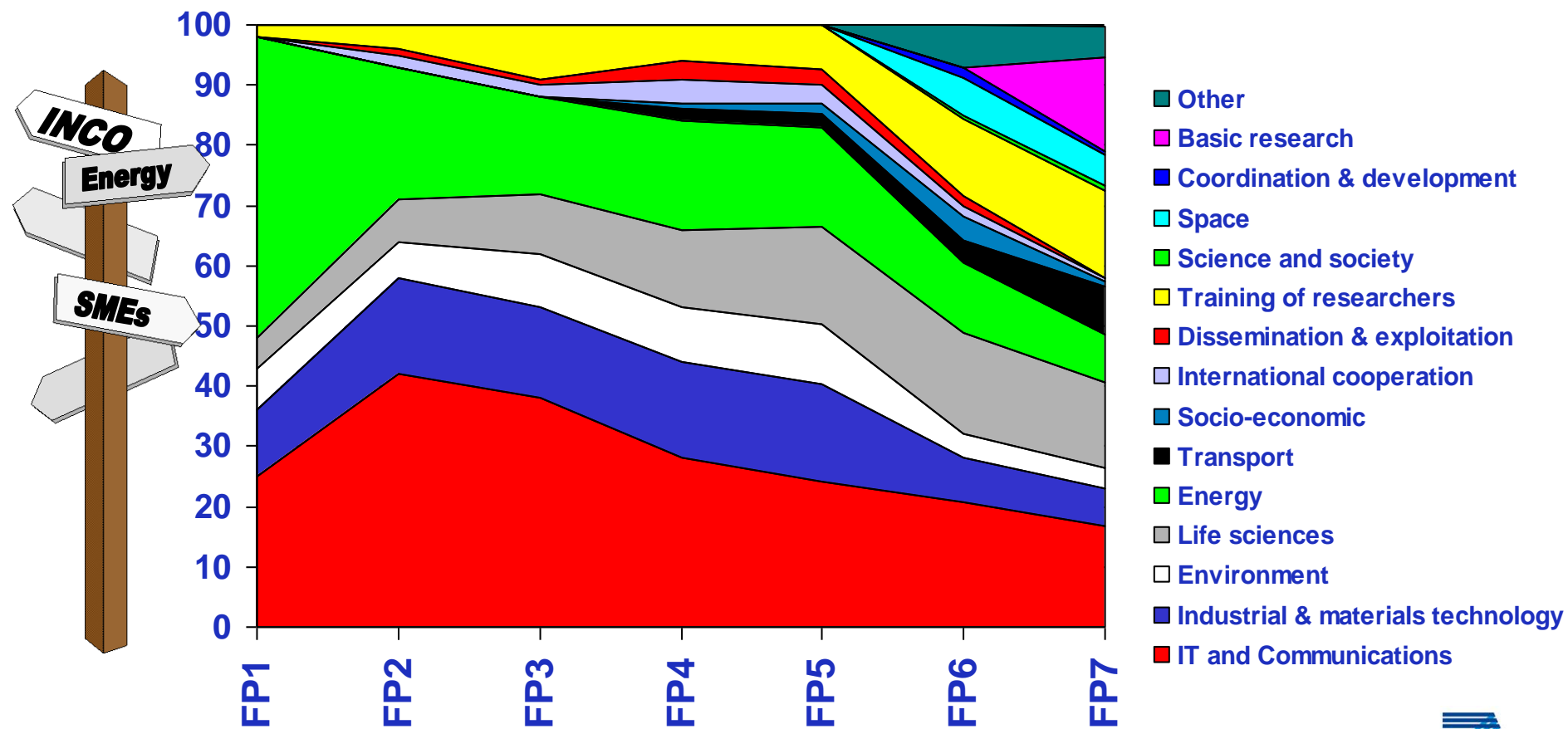
\* Council's agreement of July 2006



## Cooperation programme (€ million)



# EU research: changing priorities



# **FP7 | Ideas** **conducting Frontier Research-** **The European Research Council (ERC)**

- **European Research Council (ERC) – the first pan-European funding agency for Frontier Research**
- **Autonomous scientific governance (Scientific Council)**
- **Support** investigator-driven frontier research
  - over all areas of research
  - competition at EU level
  - excellence as sole criterion
- **Budget ~ €1 billion per year (2007-2013 ~ €7.5 billion)**

# ERC Grant schemes

## Strategic principles

- **All fields of science and scholarship are eligible**
  - 👉 Investigator-driven, bottom-up
- **Excellence is the only valid criterion**
  - 👉 Individual team + research project
- **Investment in research talent**
  - 👉 Attractive, flexible grants, up to five years
  - 👉 Under control of the lead researcher (Principal Investigator)
- **Independent individual teams in Europe**
  - 👉 Nationality and Age of researchers is not relevant
  - 👉 Host organisation to be located in EU or AS

# ERC Grant schemes

## 3 x "R" + 2 schemes

### Retain – Repatriate – Recruit

- Favour “brain gain” and “reverse brain drain”
- improve career opportunities and independence - especially for young researchers
- increase competition, recognition and international visibility - for excellent individual scientists and scholars in Europe
- Raise aspiration and achievement of basic research in Europe - comparability/benchmark for researchers and research systems

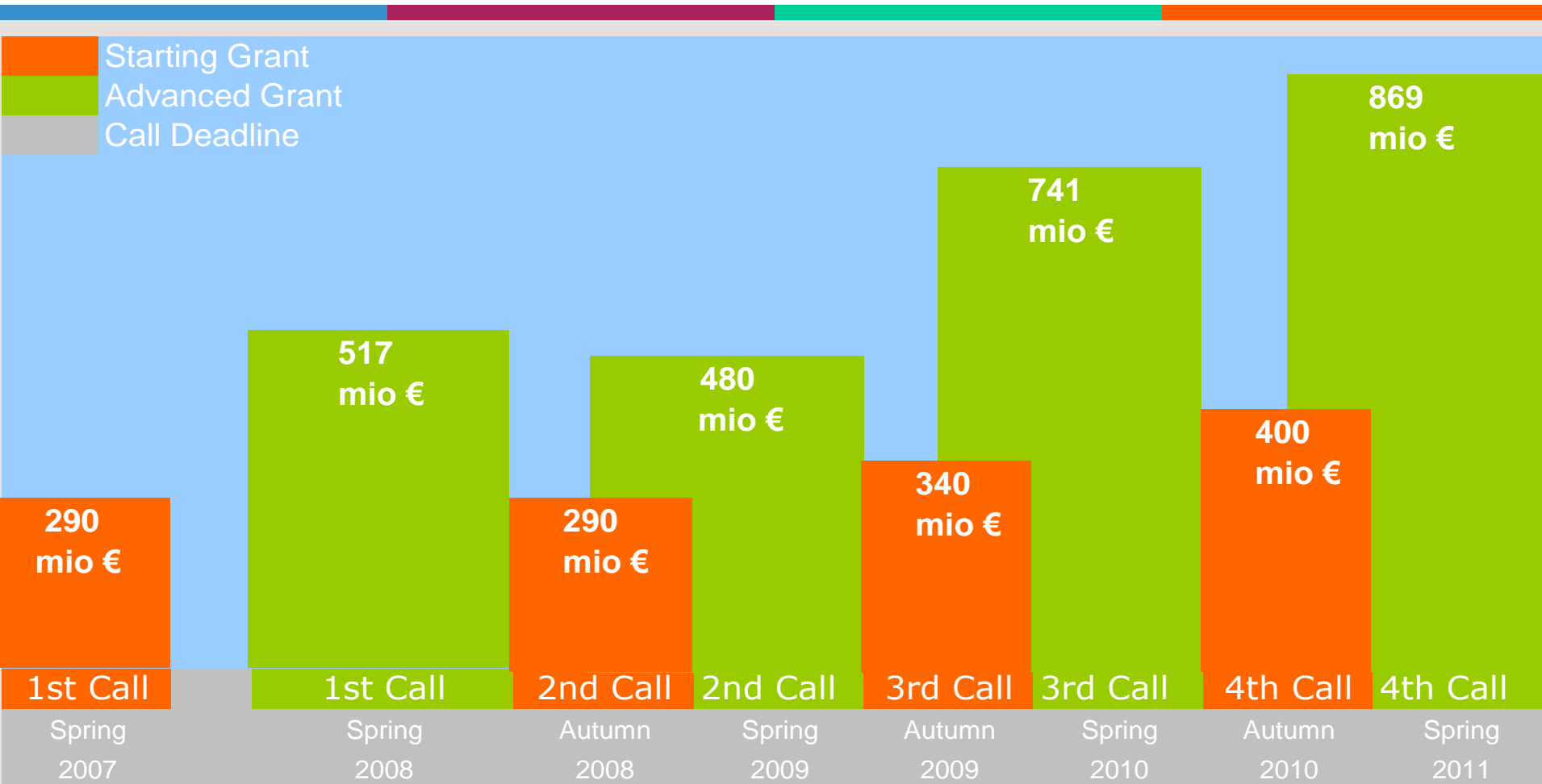
### Two complementary funding schemes

- ERC Starting Grant (StG): attract & retain the next generation of independent research leaders - up to € 2.0 Mio for 5 years
- ERC Advanced Grant (AdG): attract & reward established independent research leaders - up to € 3.5 Mio for 5 years

# ERC Calls and Budget 2006 – 2011

## Prospective Schedule

European Research Council



# ERC Grant schemes

- ERC covers all fields of science, engineering and scholarship
- For operational reasons the ScC agreed on 3 main research domains + 1 horizontal domain:
  - **Physical Sciences & Engineering** – 10 Panels
  - **Life Sciences** (incl. medical) – 9 Panels
  - **Social Sciences & Humanities** – 6 Panels
  - **Interdisciplinary Research** (cross-panel / cross-domain) – Panel Chairs
- The call budget will be pre-allocated to these areas as follows:
  - 39% - 34% - 14% - 13%

# **FP7 | Capacities** **offering excellent infrastructures to** **conduct research**

- **Research infrastructures**
- **Research for the benefit of SMEs**
- **Regions of Knowledge**
- **Research Potential**
- **Science in Society**
- **Coherent development of policies**
- **Activities of International Cooperation**

# FP7 | People

## Marie Curie Actions- Fellowships, Grants, Awards

- Initial training of researchers (Marie Curie networks)
- Life-long training and career development
- Industry-academia pathways and partnerships
- International dimension



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**ACTIONS**

**MARIE CURIE**

**Nobel Prize Physics 1903 and Chemistry 1911**

Transatlantic Mobility European Commission Activities, M11, 23. February 2009





# **PEOPLE programme = Continuation of Marie Curie Actions**

To date:

- **Very successful programme**
- **The volume has been constantly increasing**
- **Approx. 25.000 researchers benefited**

With FP7

- **Increase from FP6: on average 50 % per year**
- **Budget of € 4,75 billion, i.e.**
  - **€430 million in 2007**
  - **to €900 million in 2013**
- **Estimated that 70.000 researchers will benefit.**



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## **People - Marie Curie Actions**

- Opportunities provided for researchers at all stages of their career – experience, not age
- All fields of science and technological interest for the European Community
- Opening of positions for researchers outside Europe for many types of fellowship;
- Mechanisms for return and professional reintegration for Europeans abroad
- Benchmarking gender participation



# People – 10 Specific Actions

## 1. Initial training:

- Initial Training Networks (ITN)

## 2. Life long training and career development:

- Intra European Fellowships (IEF)
- European Reintegration Grants (ERG)
- Co-funding of national/regional/international programmes

## 3. Industry dimension:

- Industry-academia partnership and pathways (IAPP)

## 4. International dimension:

- International Outgoing fellowships (IOF)
- International reintegration grants (IRG)
- International Incoming fellowships (IIF)
- International Research Staff Exchange Scheme (IRSES)  
(S&T, ENP)

## 5. Specific actions

*EURAXESS: Researchers night*



## ***Initial training: Marie Curie Networks for early stage training***

- Allowances given to “early-stage” ( up to five years after graduation, time for PhD +) researchers and senior « visiting scientists » positions

**Networks linking, participants from 3 MS and Ass. Countries as the hosts of high quality training programmes – additional host from third countries possible**

- Desirable, the involvement of private business sector
- open to researchers from third countries
- Vacancies will be published and can be looked up on the “mobility portal” – EURAXESS
- Containing short training events (conferences, summer schools, training courses) – “mobility portal”



# Returns to Europe under FP6

## "International Return Grants"

- 436 ~
- 80% of those from the US
- Returns to countries that have improved in research after serious brain drain in the past
  - 63 to Spain,
  - 41 to Greece,
  - 32 to Turkey,
  - 12 to Cyprus,
  - 11 to Poland etc
- But also back to UK (55)
- to FR (50)
- to IL (35)



## **Marie Curie *Intra European* fellowships for career development**

*Life-long training & career development (4 years + after graduation  
= post doc but also later)*

In two modes

- 1. Traditional mode:** selection/funding of fellows through call at EC level
  - – international **not excluded, but more sense** to go for the international directly
- 2. New « Co-funding » mode** – with structuring effect - date: 2007 not fixed
  - **Selection for « co-funding » of existing or new national, regional and international fellowship programmes**
  - **Researchers apply to the co-funded national programmes; programmes operate following own standards** "Vacancies" → **mobility portal**



## ***Marie Curie **Industry partnerships and pathways*****

- Enhance cooperation and skills exchange between academia and industry on a **common research project**
  - At least **two different** Member States or Associated countries (one from EU 27) and **in addition possible: third partners**
  - At least **one organisation from each sector**
  - Funding for **3-4 years**
  - Networking activities, **workshops/conferences**, including for researchers from outside the partnership



## International dimension Incoming fellowships

Incoming individual fellowships **for top class researchers to upgrade their qualification in the EU and Ass and be trained in competences they could not acquire in the home country.**

- at least **four years** after graduation (post doc)
- to develop cooperation
- Proposal is submitted by the researcher **together with the host organisation**
- For **1 to 2 years**
- **Salary** plus contribution towards **research related costs**



## International dimension Outgoing fellowships (from EU)

Career development/ *life-long training for EU researchers* :  
EU outgoing individual fellowships, **to be trained in a third country institute or organisation**

- ***at least 4 years after graduation***
- ***Funding for up to 3 years in total***
  - -- with **1-2 years abroad**
- ***To establish cooperation***
- ***Based on a personal 'career development plan'***
- ***Mandatory return fellowship***



## IRSES “International Research Staff Exchange scheme”

- for EU Neighbourhood Countries and
- Countries with S&T Agreement (and in negotiation)
  - To establish or deepen partnership **between min 2 research organisations within EU/associate and one or more organisations in third countries.**
  - Joint exchange programme to/from Europe (**not between EU/AS partners**)
  - 24 - 48 month **partnership**
  - Short term exchanges (**up to 1 year per person**)
  - Partner institutes **select their staff for exchange (Researchers, management, technical staff )**



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# IRSES

## International Research Staff Exchange Scheme

### Objectives

- To establish or deepen partnerships between min. 2 research organisations within Member States/Associated Countries and one or more organisations in Countries covered by European Neighbourhood policy and Countries with S&T Agreement through a joint programme of exchange of researchers





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# IRSES

## International Research Staff Exchange Scheme

### Participation rules

- Partnership: min. 2 independent EUMS /AC research organisations of at least 2 different countries **and** one or more organisations in an eligible third country (S&T agreement and Neighbourhood policy)
- Coordinator from EU MS/AC
- Duration of Partnership: 2- 4 years





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# IRSES

## Exchange programme

- Multi-annual joint exchange programme
- No restriction for size of programme
- Exchanges to/from Europe
- Partner institutes select their staff for exchange: early-stage or experienced researchers, management, technical staff
- Short term exchanges (up to 1 year per person in total)



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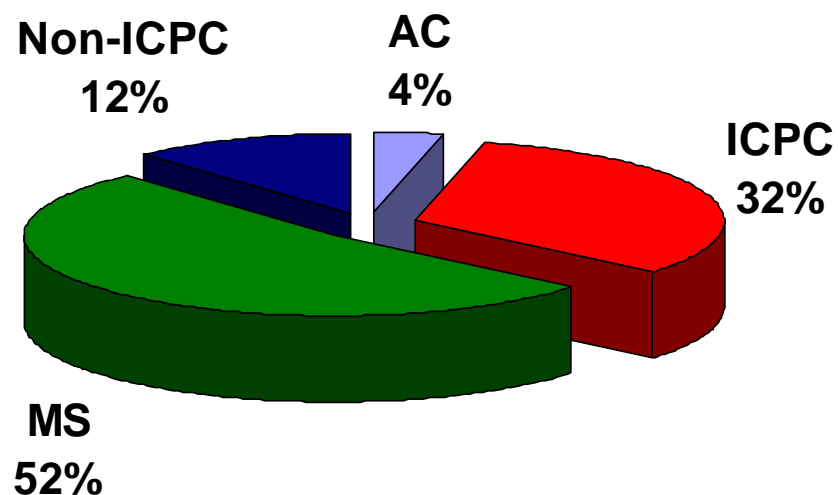
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# IRSES

**Call 1:** balance of researchers – months  
(MS/AC- ICPC/non ICPC)

## Total Cost breakdown

(non ICPC are not eligible for funding: matching funds)



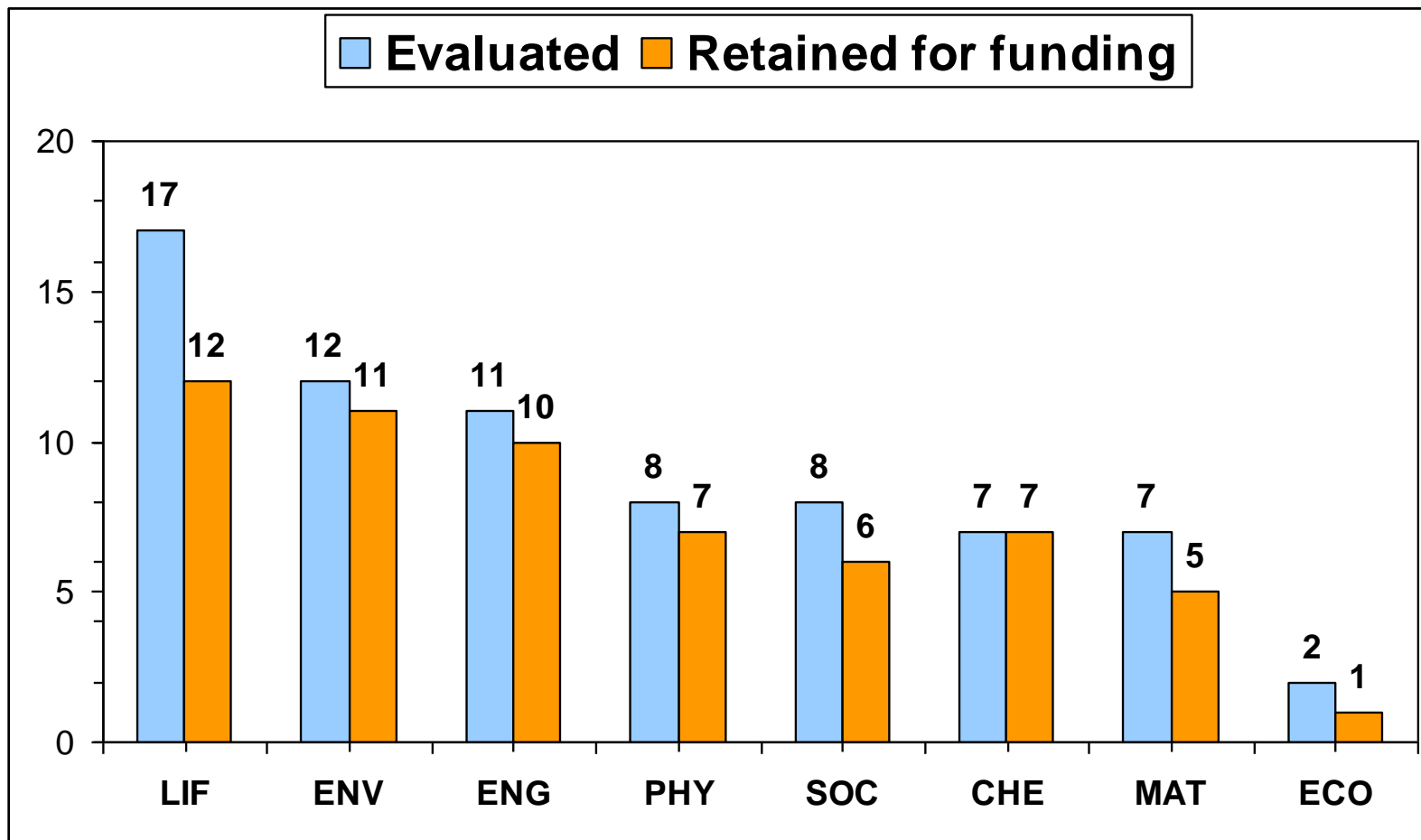


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# IRSES

## Distribution of proposals retained for funding by scientific panel



# EURAXESS Links USA

- EURAXESS Links USA is a network of thousands of European researchers, scientists and scholars throughout North America.
- This multidisciplinary network includes members at all stages of their careers.
- It allows them to connect with each other and with Europe - ensuring that they are recognized as an important resource for European research, whether they remain in the U.S. or return to Europe.
- More than 3500 members.



# EURAXESS Links USA members by nationality

- Austria 3%
- Belgium 5%
- Bulgaria 1%
- Cyprus 1 %
- Czech Republic 1%
- Denmark 1%
- Finland 1%
- France 8 %
- Germany 17%
- Greece 7%
- Hungary 2%
- Ireland 2%
- Italy 13%
- Lithuania 1%
- Netherlands 3%
- Poland 2%
- Portugal 3%
- Romania 2%
- Slovakia 1%
- Spain 7%
- Sweden 1%
- United Kingdom 7%
- ALL EU 75%
- Other 25%



# EURAXESS Links USA members by field of research

- **Biology 26%**
- **Engineering 13%**
- **Social Sciences 13%**
- **Medicine – Veterinary Medicine 12%**
- **Physics 11%**
- **Chemistry 7%**
- **Mathematics – Computer Science 6%**
- **Humanities – Arts – 5%**
- **Earth sciences 3%**
- **Agricultural – Food Sciences 2%**
- **Science policy 1%**





# Our activities

- Monthly newsletter with articles specifically of interest to the European science community in the US.
- Regular updates signaling job, funding and collaboration opportunities.
- Occasional meetings and events.
- Co-organization of career fairs with US partners to provide forum for researchers to meet with European funding agencies and employers, both public and private.
- A website with targeted information on sources of research funding in Europe and US, research policies, career opportunities, collaboration opportunities, conferences and training courses .



# The EURAXESS Links USA web-site

Euraxess Links - European Commission - Windows Internet Explorer

http://cordis.europa.eu/euraxess-links/usa/index.cfm?fuseaction=h.display&uuid=11089E5E-BCDC-BBA0-DCD1E4C69C3D4E7C

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### EURAXESS-Links USA

EURAXESS-Links is a networking tool for European researchers in the USA. It provides information about research in Europe, European research policy, opportunities for research funding, for international collaboration and for trans-national mobility. Membership is free.

#### Collaboration opportunities



The Science and Technology Co-operation Agreement between the European Union and the United States, originally signed in 1998 and renewed in 2004, brings a pan-European dimension to transatlantic S&T; co-operation to complement the many bilateral arrangements with individual Member States and between individual scientists...

[More >](#)

#### Useful links

DG Research Website:  
[http://ec.europa.eu/research/index\\_en.cfm](http://ec.europa.eu/research/index_en.cfm)

#### Newsletter USA

This archive contains every issue of ERA-Link News published since our launch in November 2007.

[More >](#)

#### Join the EURAXESS-Links USA

Click [here](#) to Join or contact: [Karin Peeters](#)

#### National networks of European Researchers in the USA





#### Collaboration opportunities

- Useful links
- Useful hints for members
- Newsletter USA
- Join the EURAXESS-USA
- National Network of European researchers in USA

#### Members Login

Username:

Password:

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# Towards the European Higher Education Area

- ✓ The **Bologna Declaration of June 1999** has put in motion a series of reforms needed to make European Higher Education more **compatible** and **comparable**, more **competitive** and more **attractive** for Europeans and for students and scholars from other continents.
- ✓ The Bologna Process aims to create a **European Higher Education Area (EHEA)** by 2010.



# The European Credit Transfer and Accumulation System - ECTS

- ✓ Used for credit transfer (student mobility) and credit accumulation (learning paths towards a degree)
- ✓ Provides a common basis to formally recognize study period abroad.





# ERASMUS MUNDUS

- ✓ EU flagship programme since 2004
- ✓ Promotion of European Joint/double master degrees (103 masters courses funded so far)
- ✓ Attracting talented students from other parts of the world (By the end of first phase (2004-2008), more than 6,000 students from outside Europe and more than 1,000 teaching staff from third countries)
- ✓ Erasmus Mundus II: new enlarged phase from 2009 to 2013 with a 950m€ budget (230m€ for 2004-2008)





## ERASMUS MUNDUS II Actions

- ✓ **Action 1**: Joint masters programs and joint doctoral programs of outstanding academic quality, including a scholarship scheme
- ✓ **Action 2**: Partnerships between EU and 3C HEI in specific regions as a basis for structural co-operation and mobility at all levels of higher education
- ✓ **Action 3**: Measures enhancing the attractiveness of the Europe Union education destination





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# ERASMUS MUNDUS II

## Novelties

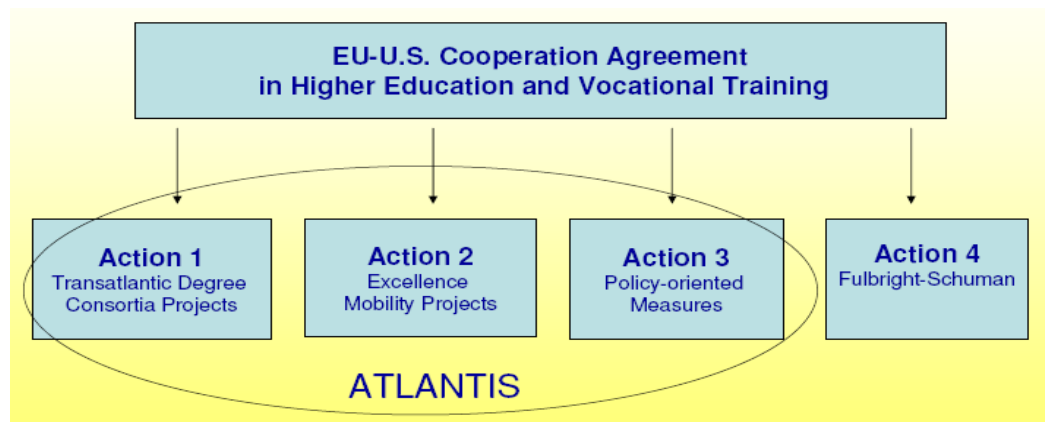
- ✓ **Wider scope: inclusion of external policy objectives**
- ✓ **Collaborative partnerships with 3C HEIs (Action 2)**
- ✓ **Action 1:**
  - ❑ **Joint doctoral programmes + scholarships**
  - ❑ **Possible inclusion of 3C HEIs in joint programmes**
  - ❑ **Better scholarships for EU students**
  - ❑ **Stronger focus on continuous quality monitoring**
- ✓ **Action 3: information grants for National Structures**





# EU-US Co-operation in Higher Education and Vocational education and Training

- ✓ In 2006, the EU and the US signed a new agreement on higher education and vocational training for another eight-year period (2006-2013). The new agreement renewed and reinforced the EU-US cooperation programme established in 1995.
- ✓ The co-operation agreement includes co-operation actions grouped under the title of Atlantis and the Fulbright-Schuman





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# EU-US Co-operation in Higher Education and Vocational education and Training

The operational objectives are to:

- support collaboration between higher education and vocational training institutions with a view to promoting joint study programmes and mobility;
- improve the quality of transatlantic student mobility by promoting transparency, mutual recognition of qualifications and periods of study and training, and, where appropriate, portability of credits;
- support collaboration between public and private organisations active in the field of higher education and vocational training with a view to encouraging discussion and exchange of experience on policy issues;
- support transatlantic mobility of professionals with a view to improving mutual understanding of issues relating to EU-US relations



NEW  
ME

# Atlantis

- ✓ Unique joint EU-US initiative since 1995.
- ✓ Support innovative transatlantic joint/dual degrees.
- ✓ Over 100 curriculum development and exchange projects so far and over 4000 students in two-way exchanges for at least one semester.
- ✓ Small budget (5m€ per year) but effective public diplomacy tool for the benefit of HE institutions, students and faculty.





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# Websites



Education and Culture DG

ERASMUS MUNDUS

## Erasmus Mundus:

[http://ec.europa.eu/education/external-relation-programmes/doc72\\_en.htm](http://ec.europa.eu/education/external-relation-programmes/doc72_en.htm)



## Atlantis:

[http://ec.europa.eu/education/programmes/eu-usa/index\\_en.html](http://ec.europa.eu/education/programmes/eu-usa/index_en.html)



## Study in Europe:

<http://www.study-in-europe.org>



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# Delegation of the European Commission in Washington

**Thank you for your attention !**

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