

EUROPEAN PROGRAMS FOR INTERNATIONAL COLLABORATION

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EU research: the story so far

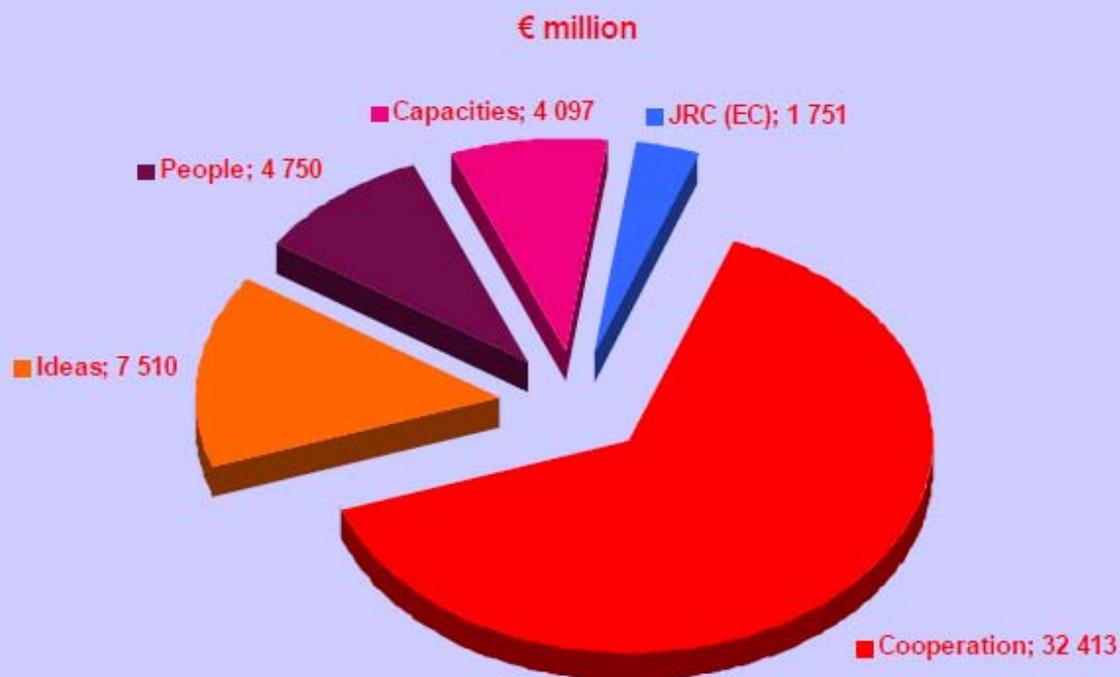
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- **1952:** ECSC treaty; first projects started March 1955
 - **1957:** Euratom treaty; Joint Research Centre set up
 - **1983:** ESPRIT programme
 - **1984:** First Framework Programme (1984-1987)
 - **1987:** 'Single European Act' – science becomes a 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)
 - **2005:** Proposal for the Seventh Framework Programme (2007-2013; 2007-2011 for Euratom)

FP7 is divided into four specific programmes:
Cooperation, Ideas, People, Capacities

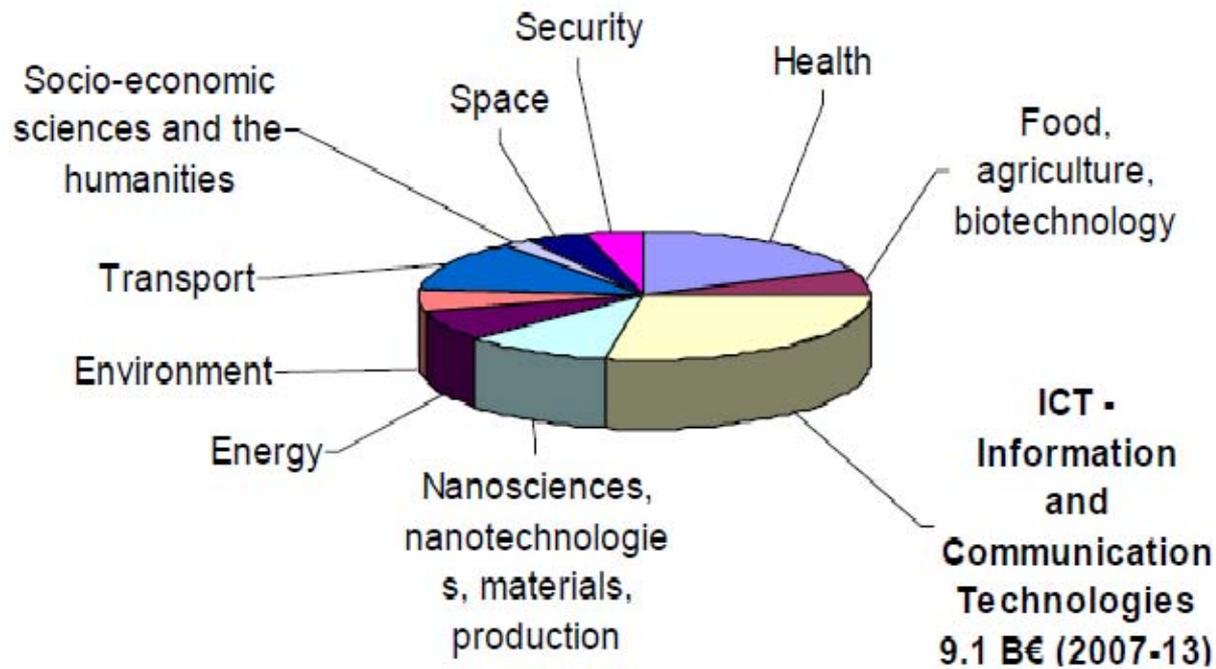
Co-Operation - Collaborative Research - €32.365 billion

- **Ideas - European Research Council - €7.460 billion**
- **People - Human Potential, Marie Curie Actions - €4.728 billion**
 - **Capacities - Research Capacities (Marie Curie Networks) - €4.217 billion**

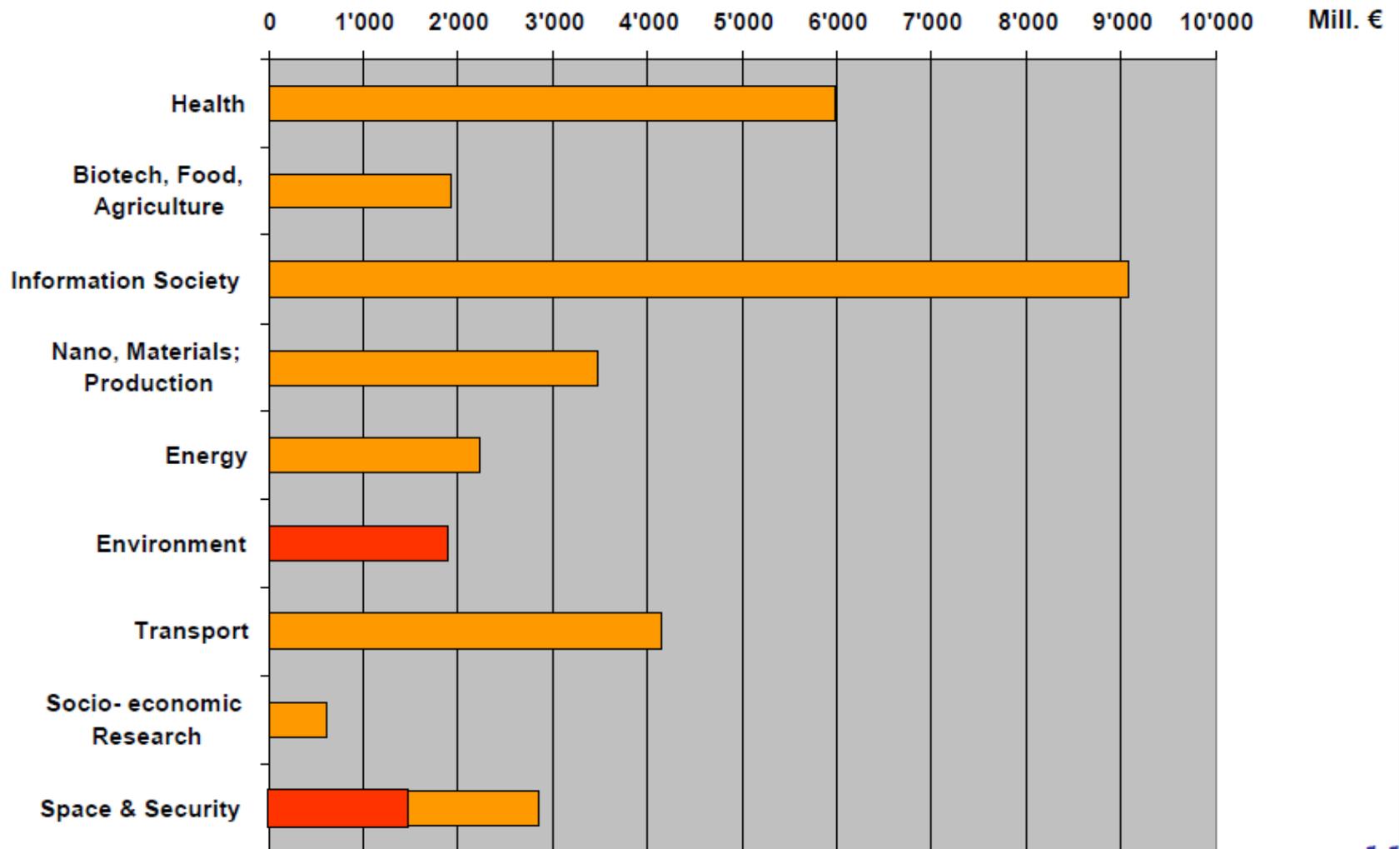
FP7 budget (€ 50 521 million)



FP7 COOPERATION PROGRAMME



Total Budget 32'200 M€ for 7 years





Space in FP7: indicative distribution of resources

- € 1.4 billion € for FP7 Space theme
- About 85% for GMES (€ 1.2 billion €), including for dedicated space infrastructures

To respond to the EU strategy in Space – applications for the need of the civil society

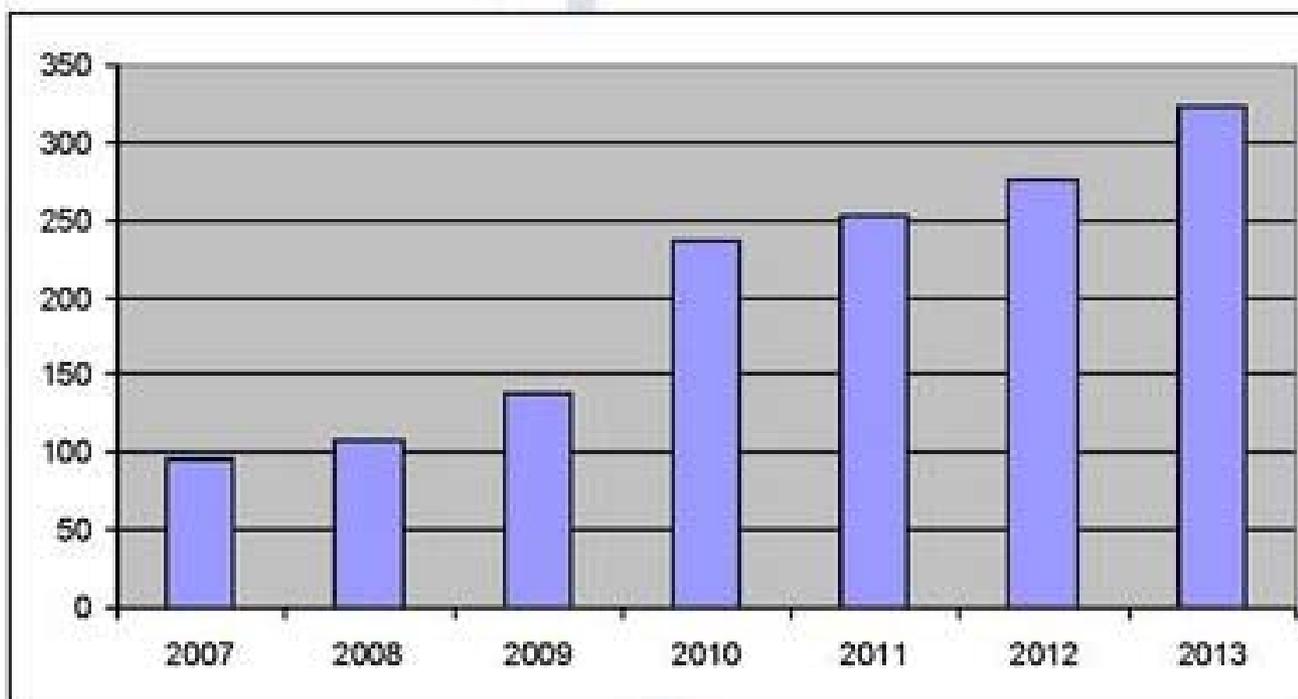
- About 15% for strengthening space foundations and cross-cutting issues

To provide opportunities for those actors/activities which are currently not catered for yet at ESA or national level, thereby adding value to these

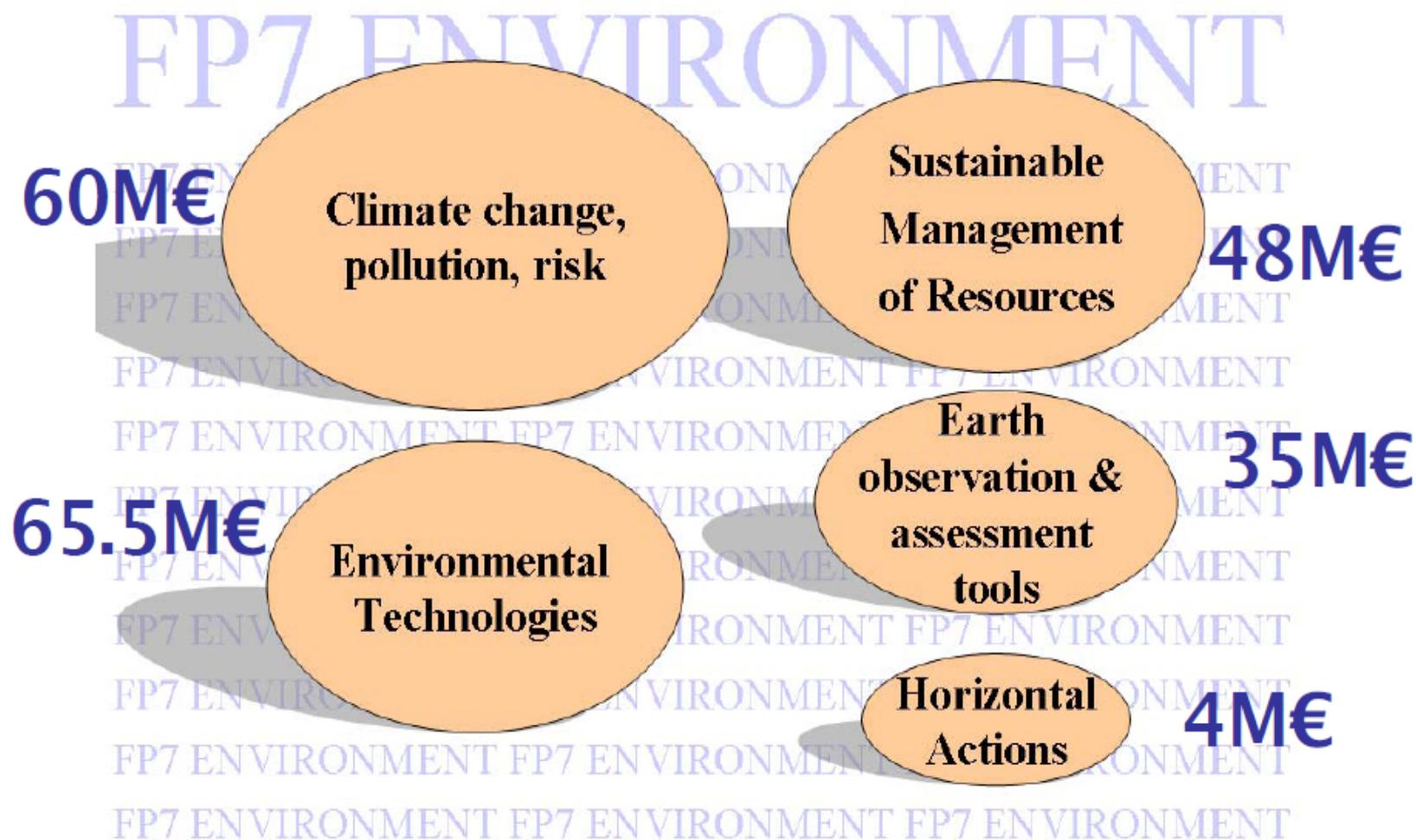


Draft Budget Annual Commitment Profile 2007-2013

(subject to annual adoption by budgetary authorities)

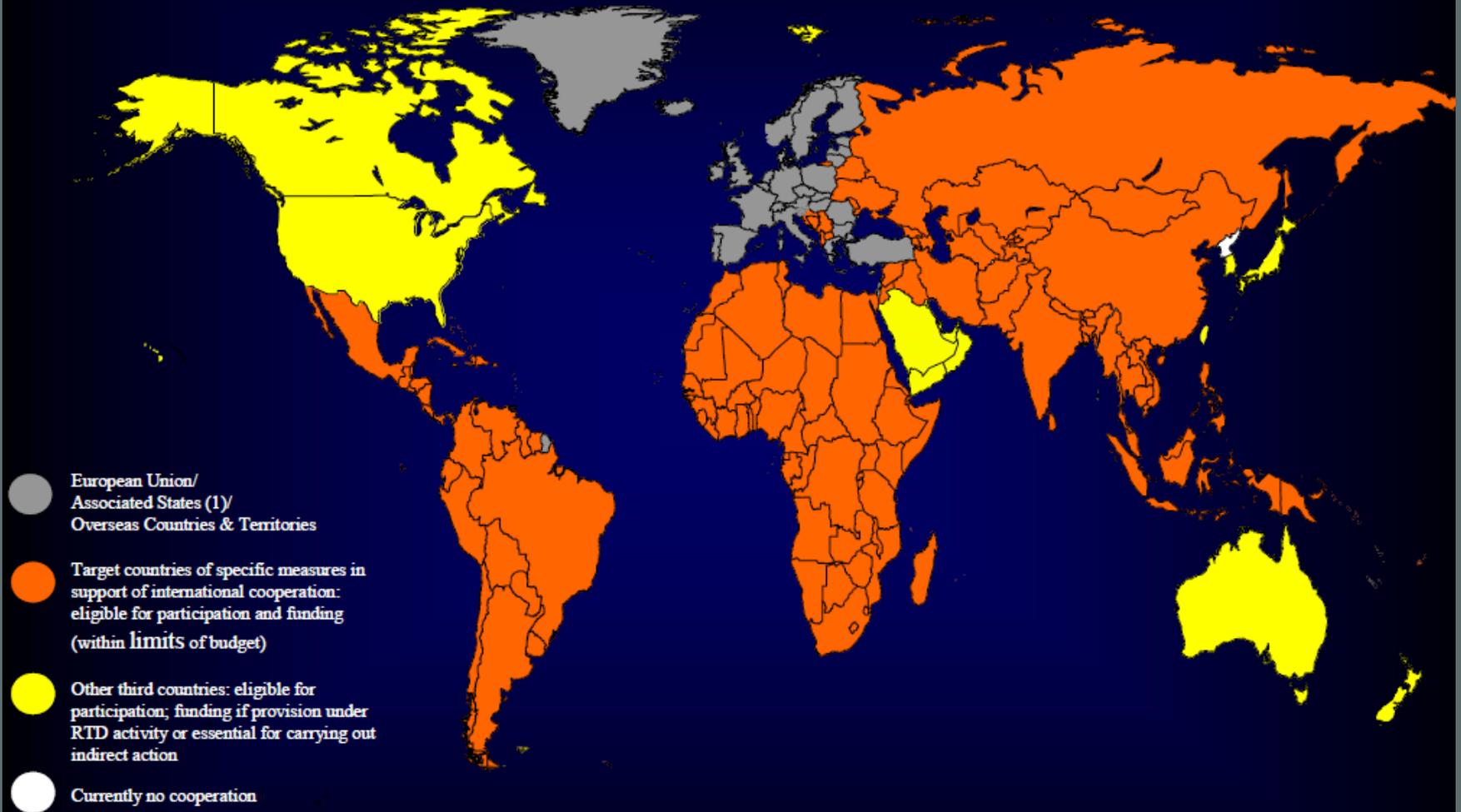


Relative 2009 Budgets



7th Framework Programme

Participation by legal entities from third countries



Eligible countries

While FP7 participants can in principle be based anywhere, there are different categories of country which may have varying eligibility for different specific and work programmes:

MEMBER STATES - The EU-27;

ASSOCIATED COUNTRIES – with science and technology cooperation agreements that involved contributing to the framework programme budget;

CANDIDATE COUNTRIES – currently recognised as candidates for future accession;

THIRD COUNTRIES - the participation of organisations or individuals established in countries that are not Member States, candidates or associated should also be justified in terms of the enhanced contribution to the objectives of FP7.

Other Third Countries(OTC) can be only funded if specific agreement is foreseen between the country and EU, or in very exceptional cases where funding is essential for the training programme

Cooperation

Collaborative research

1. All themes open to third countries

- Minimum 3 different EU Member State (MS) or Associated Countries (AC)
- Beyond this minimum, all 3rd countries can participate
- ICPC would generally be funded
- Industrialised countries funded only if indispensable for the project
- Targeted calls possible

FP7 funding schemes

- **Large-scale integrating projects** aims at generating knowledge to increase Europe's competitiveness or solving major societal needs (average: 3-5 years, ± 15 participants, 6-12 million €)

- **Small- or medium-scale focused research actions** research, demo, or innovation projects, same objectives as for IP (average: 2-4 years, ± 8 participants, 3 million €)
- **Projects targeted to SMEs (PTS)**, FRP where 40% of requested EC contribution has to be allocated to SME(s)

- **Coordination actions** (studies, conferences, summer schools,...)

More Info.....

- EU research:
<http://ec.europa.eu/research>
- Seventh Framework Programme: <http://ec.europa.eu/research/fp7>
- Information on research programmes and projects:
<http://cordis.europa.eu/fp7/>
- RTD *info* magazine:
<http://ec.europa.eu/research/rtdinfo/>
- Information requests:
<http://ec.europa.eu/research/enquiries/>



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Research Funding



7th Framework Programme (FP7)
Official portal for participation

[Calls](#) | [Partners](#) | [Contacts](#) | [Projects](#) | [Documents](#)

Previous Framework Programmes: [FP6](#) - [FP5](#) - [FP4](#)



Practical guide for EU Funding
Find your way to the right funding scheme



European Research Area (ERA)
Free movement of knowledge

Latest news and publications

Events

Workshop on ICT research and creative enterprises, Torino, Italy
[Event Date: 2009-11-04]

Biodiversity research conference, Brussels, Belgium
[Event Date: 2009-11-04]

Symposium on the future of higher education institutions, Stockholm, Sweden
[Event Date: 2009-11-05]

Conference on sustainable industrial policies, Brussels, Belgium
[Event Date: 2009-11-05]

Training course on preparing and submitting FP7 proposals, Malta
[Event Date: 2009-11-05]

[All events](#) ▾

[See all](#) ▾

- Health / 4 Open calls
- Food, Agriculture and Fisheries, and Biotechnology / 4 Open calls
- Information and Communication Technologies / 6 Open calls
- Nanosciences, Nanotechnologies, Materials and new Production Technologies / 10 Open calls
- Energy / 5 Open calls
- Environment (including Climate Change) / 6 Open calls
- Transport (including Aeronautics) / 9 Open calls
- Socio-economic sciences and Humanities / 5 Open calls
- Space / 1 Open call
- Security / 1 Open call
- General Activities / 1 Open call

Nanosciences, Nanotechnologies, Materials and new Production Technologies

Calls for proposals

Call Identifier ▲ ▼	Call Title ▲ ▼	Publication Date ▲ ▼	Deadline ▲ ▼
FP7-NMP-2010-CSA-4	Theme 4 - NMP - Nanosciences, Nanotechnologies, Materials and new Production Technologies - CSAs	2009-07-30	2010-02-02
FP7-ERANET-2010-RTD	ERA-NET Call 2010	2009-07-30	2010-01-19
FP7-2010-GC-ELECTROCHEMICAL-STORAGE	Sustainable automotive electrochemical storage	2009-07-30	2010-01-14
FP7-NMP-2010-EU-Mexico	Theme 4 - NMP - Nanosciences, Nanotechnologies, Materials and new Production Technologies - EU-MEXICO	2009-07-30	2009-12-15
FP7-NMP-2010-LARGE-4	Theme 4 - NMP - Nanosciences, Nanotechnologies, Materials and new Production Technologies - LARGE 2010	2009-07-30	2009-12-08
FP7-NMP-2010-SMALL-4	Theme 4 - NMP - Nanosciences, Nanotechnologies, Materials and new Production Technologies - SMALL 2010	2009-07-30	2009-12-08
FP7-NMP-2010-SME-4	Theme 4 - NMP - Nanosciences, Nanotechnologies, Materials and new Production Technologies - SMEs	2009-07-30	2009-12-08
FP7-NMP-2010-EU-USA	Theme 4 - NMP - Nanosciences, Nanotechnologies, Materials and new Production Technologies - EU-United States	2009-07-30	2009-11-30

Call Title: Theme 4 – NMP - Nanosciences, Nanotechnologies, Materials and new Production Technologies – Coordinated call EU-USA 2010

- Call identifier: *FP7-NMP-2010-EU-USA*

- Date of publication: 30 July 2009

Deadline: For Collaborative Projects - Small or medium-scale focused research projects– **30 November 2009 at 17.00.00 (Brussels local time).**

- **Indicative budget: EUR 6 Million 2 by EC- NMP Theme.**

The budget for this call is indicative. The final budget of the call may vary by up to **10% of the total value** of the indicated budget for the call.

- The following US funding agencies: Environmental Protection Agency (EPA); National Science Foundation (NSF), National Institute for Occupational Safety and Health (NIOSH), National Institute of Environmental Health Sciences (NIEHS) and United States Department of Agriculture (USDA) are expected to make funding available for the US projects.



FP7 Cooperation Programme

Theme 4. Nanosciences, Nanotechnologies, Materials and new Production Technologies

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



FP7 Cooperation Programme

Theme 9. Space

- Space-based applications at the service of the European society
- Exploration of space
- RTD for strengthening space foundations

Space has to be considered a privileged sector for developing international activities, in particular with major and emerging space powers, such as Russia, the **United States**, China, India, Canada, **Japan**, Ukraine and other countries carrying out space activities.

Specific Programme: Cooperation

- **FP7-SPACE-2010-1**
- Electronic Proposal Submission Service (EPSS) is now available for this call for proposals
- **Identifier: FP7-SPACE-2010-1**
- **Budget: €114 000 000**
- **Deadline: 08 December 2009 at 17:00:00 (Brussels local time)**
- **Theme: Space**



People – Marie Curie Actions

Source: European Commission

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

Programme-Marie Curie Actions

Who are the participants ?

- National organisations (e.g. universities, research centers, etc... whether private or public)
- Commercial enterprises, especially SMEs
- Non-profit or charitable organisations (NGOs, trusts, etc...)
- International European Interest Organisations (CERN, EMBL, ...)
- The Joint Research Center of the EC
- International organisations (WHO, UNESCO, etc...)

Main features:

- International network of participants
- Joint Research Training Programme:
 - (i) training through research
 - (ii) complementary competences modules
 - (iii) exposure to both public and private sectors
- Industry involvement
- Mutual recognition of the quality of the training
- Four years contracts

Marie Curie Actions in FP7: ITN

ITN typically set-up as:

Type of ITN	Country of Participants
Multi-site ITN	≥3 Participants from 3 different countries
	<ul style="list-style-type: none"> - Participant 1: MS-1 OR AC - Participant 2: MS-2 OR AC - Participant 3: MS-3 or AC - Additional Participants: MS, AC, ICPC or OTC* <p>* Can only be funded if a special agreement is foreseen between the country and the EU, or in very exceptional cases where funding is essential for the training programme</p>



There is no predefined size. Networks of 6 to 10 partners have proven to be well manageable.

Participants from which country ?

→ 4 categories

- EU Member States (MS)
 - Associated Countries (AC):
Iceland, Liechtenstein, Norway, Croatia, Serbia, Turkey, FYROM, Switzerland, Israel
 - International Cooperation Partner Countries (ICPC)
based on three categories according to income per capita (low-income, lower-middle-income, or upper-middle-income).
 - Other (non-AC, non-ICPC) Third Countries (OTC)
- } Funding under conditions

Trans-national mobility:

- Researchers can be nationals of any country other than the country of the premises of the host institution
- Nationals of ICPC or OTC can only be recruited by hosts located in MS or AC
- Researchers must not have resided or carried out their main activity in the country of the host for more than 12 months in the 3 years immediately prior to their recruitment

Marie Curie Actions in FP7: ITN

Eligible researchers: Member States, AC, ICPC and OTC

	Eligibility Criteria at the time of recruitment	Duration of appointments	
INITIAL TRAINING	Early stage researchers ($\geq 80\%$)*	0 \leq Research experience \leq 4 years No PhD	3-36 months
	Experienced researchers	PhD or at least 4 years of research experience & Research experience \leq 5 years	3-24 months
Transfer of NEW COMPETENCES	Visiting scientists (<i>a limited number</i>)	Experienced researchers (experience \gg 4 years) with outstanding stature in international training and collaborative research	\geq 1 month Multiple stays

Transnational mobility

*ESR/ER balance based on person months

NCSR “DEMOKRITOS”, Institute of Materials Science
Advanced Ceramics Laboratory
Current Space-related projects:

“**RASTAS SPEAR**” (Coordinated by ASTRIUM/EADS)

- Radiative study for an ablative TPS for high-speed earth re-entry
- production of a full-size demonstration shield

“**HybridTPS**” (Demokritos, funded by ESA)

- Novel SHS ceramic-ablator hybrid TPS with good impact strength and minimal recession

“**BioPICA TPS**” (under development, Demokritos)

- Very low cost ablator TPS based on natural pre-cursor materials

“**Lunar regolith**” (planned, Demokritos, ISMAN Russia)

- Processing technologies for Lunar regolith in-situ resource utilization, for fabricating shaped construction elements (plates, beams, bricks).

“RASTAS SPEAR”

“Radiation-Shapes-Thermal Protection Investigations for High Speed Earth Re-entry”

Participant organisation name	Short name	country
ASTRIUM-ST SAS	AST-F	France
Centro Italiano Ricerche Aerospaziali	CIRA	Italy
CFS Engineering	CFS	Switzerland
NCSR DEMOKRITOS	DEMOKRITOS	Greece
Laboratory of Ecole Centrale	EM2C	France
Institute of Aviation	IOA	Poland
Kybertec	KYBERTEC	Czech Republic
Lomonosov Moscow State University	MSU	Russia
ONERA	ONERA	France
Von Karman Institute	VKI	Belgium

FP7/Space/9.2.1

Jan 2010 – Dec 2011

Possible design of a sample-return mission capsule

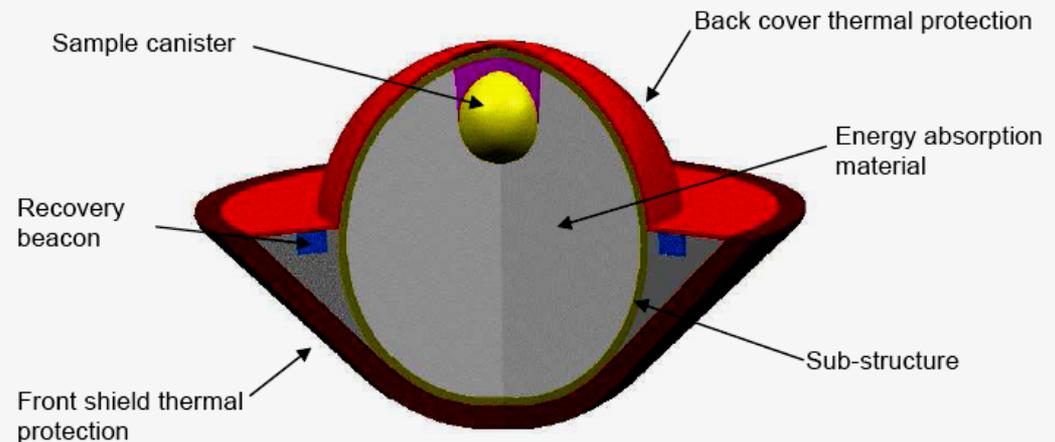
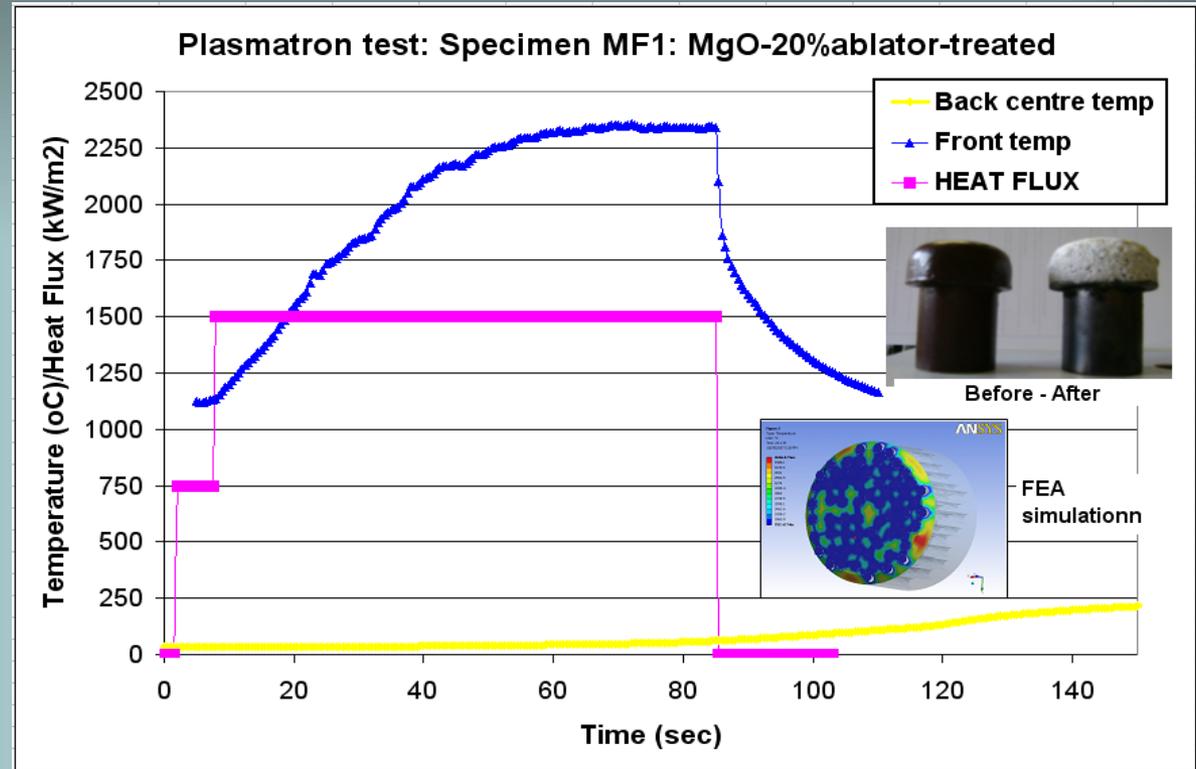
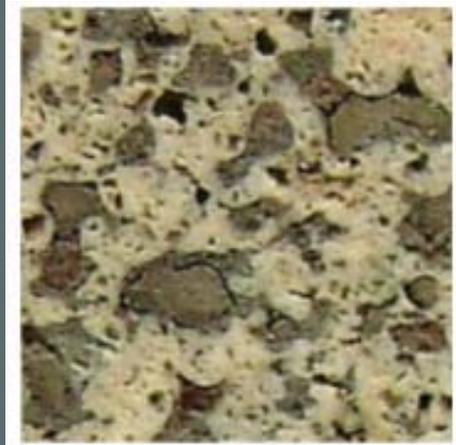


Figure n°1 Earth Entry Vehicle concept

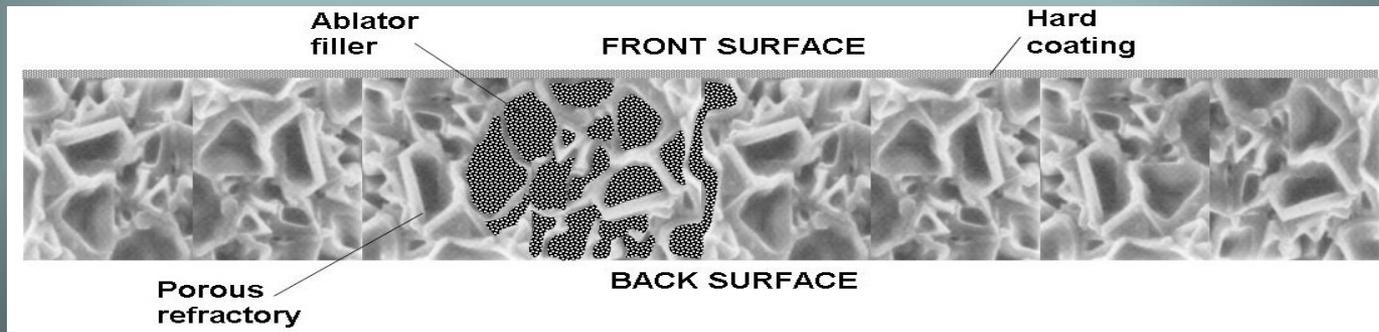
“HybridTPS”

Hybrid ceramic-ablator TPS

SHS-produced Mg-Spinel structure filled with a phenolic ablator



High impact strength (ceramic structure) and minimal recession



Thank you for your attention



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