Report on the Analysis of U.S. Participation in the 6th and 7th Framework Programmes – first update

BILAT-USA

BILAT-USA Project aim to improve the awareness towards EU-U.S. Science & Technology cooperation through setting up a sustainable, knowledge based, and bi-regional dialogue platform between S&T key players as well as stakeholders from the EU-Member States and Associated countries and from the U.S. Project is funded by European Union's Capacities Programme on International Cooperation under the 7th Framework Programme for Research and Technological Cooperation.

More detail information can be found on the project web-site:

http://www.euussciencetechnology.eu/bilat-usa

EXECUTIVE SUMMARY

The overall objective of this report is to assess U.S. participation in the Sixth Framework Programme (2002-2006) and Seventh Framework Programme (2007-2013) for Research and Technological Development, the European Union's main instrument for funding research in Europe. Analytical data on each different programme/ priority/ action will be provided.

The methodology used to study the U.S. participation is based on the **analysis** of data provided by the **European** Commission (Directorate General for Research).

Components assessed in the study led to the following results:

- **Sixth Framework Programme (FP6)**
  Across all programme areas **400** individuals from U.S. organisations, within **358** FP6 projects participated in FP6. The Mobility scheme, **Human Resources and Mobility,** had about **60%** of the U.S. participants, accounting for the majority of participation. Seven thematic priorities received **27%** of U.S. participation, with **Information society technologies** in the lead (**41** participations, and the **Life Sciences** thematic priority next with **22** participants. The three lines of the **Sustainable Development** priority ("Global Change and Ecosystems", "Energy Systems", "Sustainable Transport") together account for **28** participations.

- **Seventh Framework Programme (FP7)**
  In the first three years of the FP7, a total of **2.670** proposals, with at least one U.S. participant in the consortium was submitted, and **395** Grant Agreements (GAs) signed by U.S. organisations. The most successful Programmes, in terms of GAs signed, are **PEOPLE** (**147** GAs signed) and **COOPERATION** (**215** GAs signed).

  As to the Thematic Priorities and the Specific Programmes/ activities, the partial results appear to confirm the trends already traced in FP6. As in FP6, the Mobility scheme is confirming its attractiveness for U.S. participants, as international cooperation and mobility are well accepted among individual researchers.

  With more resources than in FP6 and more open to international collaboration FP7 offers new possibilities for transatlantic partnerships. All topics in FP7 are open for U.S. partners. As in FP6, low- and middle-income states, so-called ICPC (International Cooperation Partner Countries) can participate and be funded in FP7 on the same terms as Member States and Associated Countries. Certain thematic areas have also allowed industrialized countries to receive funding. As a general rule, funding is provided to U.S. partners where important for the projects.

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OBJECTIVE

International cooperation plays an increasingly important role in dealing with the major European and global challenges. Policies to support international collaboration in research have a long history and many initiatives, programmes, collaboration agreements have been put in place. Globalisation has intensified the need to develop these policies more strategically and to make them more effective. The experience of, and factors affecting, the level of international research collaboration of major funding countries and of funding recipients proves to be very heterogeneous.

The U.S. and Europe have a strong tradition of cooperation in Science and Technology (S&T): although their relationship dates back to the 1950s the first formal cooperation took place in 1990 with the Transatlantic Declaration[1], which was followed by a new Transatlantic Agenda and regular EU-U.S. Summits to assess and develop transatlantic cooperation.

In the area of Science and Technology, the EU and U.S. concluded a Science and Technology Co-operation Agreement in 1998 and renewed it in 2004. The EC-U.S. Science and Technology Agreement (STA) is regarded as important to the ongoing transatlantic research dialogue and as recognition that Science and Technology contribute significantly to the economic growth and quality of life in the United States and Europe.

With more resources than its predecessor, FP7 strongly stresses international cooperation. As in FP6 the U.S. is the second most successful Third Country in terms of number of participations, and due to the increasing international collaboration, the rules for participation in FP7 have been designed by targeting Third Countries and fostering strategic S&T cooperation with key Third Countries such as the United States.

The overall objective of this analysis is to assess the U.S. participation in the Sixth and Seventh [2] **Framework Programmes**, by providing detailed and analytical data on number of applications /success rates; areas where most of the interest is observed; cooperation partners, partner profiles (such as from universities, research centers, SMEs, etc).

This study has been conducted with the aim of raising awareness of U.S. participation in the different programmes/ activity areas of FP6 and FP7.

1 http://www.eulib.com/documents/trans_declaration_90_en.pdf

2 Data updated in December 2010

METHODOLOGY

The analysis has been conducted based on data from the database of the European Commission (Directorate General for Research) on Framework Programmes. This database contains the major information on contracts and participants under FPs. Data concerning participation of the U.S. in FP6 and FP7[3] have been made available to the BILAT – USA project by the International Cooperation Unit for the purposes of this study.

The above mentioned data contain information about proposals submitted, contracts and GAs signed under each programme/ priority/ activity, participant information, financial and other relevant data.
Data is not always homogeneous, especially when comparing FP6 and FP7, and in some cases, major information is not available[4] (e.g. for FP7, financial contribution to U.S. participants in the PEOPLE programme).

Depending on data available, the following different features have been indicated for each Programme:[5]

- FP6
  1) Thematic Areas:
     - Thematic distribution of U.S. participations;
     - Success rate of U.S. applicants;
     - EC contribution to U.S. partners.

  2) CROSS – CUTTING RESEARCH ACTIVITIES:
     - Activity distribution of U.S. participations;
     - Success rate of U.S. applicants;
     - EC contribution to U.S. partners.

  3) Structuring the European Research Area (ERA):
     - Activity distribution of U.S. participations;
     - Success rate of U.S. applicants;
     - EC contribution to U.S. partners.

  4) Marie Curie Actions (MCA) - Human Resources and Mobility[6]:

3 "FP6_country_query_USA" and "FP7_country_query_USA"

5 Analysis is based on evaluated proposals

6 This scheme, even if included in the "Structuring the ERA" Specific Programme, has been analyzed in a separate way due to its particular attractiveness and success.

- Numbers on U.S. participation, success rate and EC contribution to U.S. partners.

5) EURATOM
   - Numbers on U.S. participation and success rate

- FP7

6) COOPERATION and CAPACITIES:
   - Detailed data on U.S. applications and results;
   - Thematic/ programme distribution of U.S. participations;
   - Success rate of U.S. applicants;
   - Types of U.S. organisations involved;
   - U.S. involvement by funding scheme;
   - EC contribution to U.S. partners;
   - Cooperation partners.

7) PEOPLE:
   - Distribution of U.S. participations by type of action;
   - Types of U.S. organisations involved;
   - Cooperation partners.

8) IDEAS:
   - Numbers on U.S. participation and success rate.

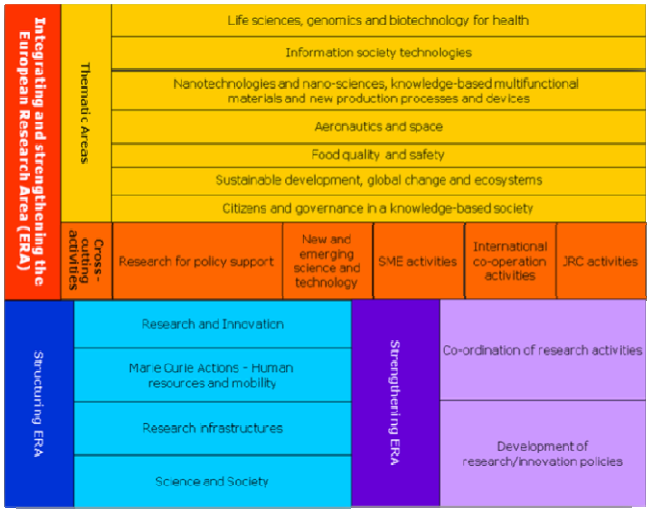
9) EURATOM
   - Numbers on U.S. participation and success rate.

RESULTS

1. International Cooperation in the Sixth Framework Programme (2002-2006)

In January 2000, with a view to fully exploiting Europe's considerable research potential, the European Commission (EC) proposed the creation of a genuine European Research Area (ERA).

Three dimensions were identified for the creation of the ERA: Integrating the ERA, Strengthening the ERA and Structuring the ERA. Cooperation with Third Countries not being a Member State, Candidate Country or an Associated State was an integral part of FP6, with the following three complementary routes for participating and funding:



- The opening of the bulk of EC research activities to Third Country organisations
- Specific measures in support of international co-operation
- International mobility of researchers (fellowships to and from Third Countries)

The reason for this is that the European Research Area must, of necessity, be "outward-looking" i.e. open to the world. The international Science and Technology (S&T) cooperation of the European Union (INCO) has a more then 20-year history of promoting excellence in scientific and technological cooperation with Third Countries in all parts of the world. Such cooperation aims to contribute knowledge-intensive solutions to societal problems through investing in people and their institutions for sustainable development.

The programme is based on dialogue with partner regions and promotes the development of long-term durable research partnerships and uptake of their research results. It increases coordination with Member States bilateral cooperation and supports the implementation of Community policies with respect to Third Countries and other international commitments. Its overarching objective is to help stimulate sustainable socio-economic development and global competitiveness.

It pursues this objective by:

- ✓ enhancing the added value and cost effectiveness that joint research projects can generate by exploiting the resources and scientific excellence of all partners,
- ✓ funding new research that reflect EU and partner priorities,
- ✓ exchanging know-how and transfer technologies whenever possible,
- ✓ providing on-the-job training and work experience

In FP6 there is a diversity of objectives and target groups. Scientific cooperation objectives vary according to the partners involved. Cooperation will not cover the same areas or take the same forms in the industrialised countries as in the developing countries. Yet, irrespective of the country or group of countries, S&T cooperation will be conducted in such a way as to dovetail perfectly with EU's external and development aid policy.

Eligible participants in FP6 are legal entities (for example research institutes, universities and industry including SMEs, but also natural persons) from any country in the world. Different rules for participation and funding apply to different groups of countries. Exact specifications and exceptions from the general rules will be given in the work programmes and calls for proposals. Special rules apply for the Marie Curie actions on mobility, training and excellence recognition.

There are three major routes to international cooperation in FP6:

1. Focussing and integrating Community Research towards the **participation of third-country organisations in the seven thematic priorities** and in the specific activities covering a wider field of research, 285 million € INCO in the Thematic Priorities. In particular as far as U.S. participation is concerned the following table gives an overview for the Specific Programme "Integrating and strengthening the ERA":

Participant's country of establishment	Participation	Financing
Third Countries having a cooperation agreement (Argentina, Australia, Brazil, Canada, China, Chile, India, Japan, Kazakhstan, Russia South-Africa, Ukraine, **U.S.**)	No restriction over and above the minimum consortium composition	EC funding can be requested if the community contribution is necessary and foreseen by the Work Programme.

2. **Marie Curie Actions** "Human Resources and Mobility" make additional funds available for research training of third-country researchers in Europe. These activities are aimed at the development and transfer of research competencies, the consolidation and widening of researchers' career prospects and the promotion of excellence in European research and are open to researchers in all fields of scientific and technological research from the EU Member States, from countries associated with FP6 and from Third Countries.

   In the frame of the "Individual-driven actions" two main tools are developed:

   - ✓ *Marie Curie Outgoing International Fellowships (OIF)*
     These are awarded to experienced researchers from EU Member and Associated States to enhance their scientific excellence by working in a world-class research centre in a Third Country. The scheme includes a first phase abroad followed by a mandatory return phase in Europe.
   - ✓ *Marie Curie Incoming International Fellowships (IIF)*
     These aim at attracting top-class researchers from Third Countries to work in EU Member or Associated States with a view to developing mutually-beneficial research co-operation. For

developing countries, emerging and transition economies, support for fellows to return to their country of origin may be included.

3. **Specific measures in support of international cooperation** (mutual interest activities) involving developing countries, Mediterranean countries (including the Western Balkans), and Russia and the New Independent States (NIS), 346 million €. This amount is a combination of the initial FP6 Council Decision and funds stemming from the 2004 enlargement. In FP6 the specific measures in support of international cooperation were not open to industrialized countries.

INCO Partner countries and activity Areas

A. Developing Countries A1. health and public health A2. rational use of natural resources A3. food security	**B. Mediterranean Partner Countries** B1. environment B2. protection and conservation of cultural heritage B3. health
C. Western Balkan Countries C1. environment C2. health	**D. Russia and the other NIS** D.1. environmental protection D.2. adjusting the system of industrial production and communication D.3. health protection

That is why the European Research Area initiative is open to the world, and therefore seeks to:

- ✓ enable European researchers and industrialists to access knowledge and technology produced elsewhere in the world;
- ✓ harness the S&T resources of the EU and of Third Countries to work together in initiatives that provide a response to significant global problems such as environmental safety (greenhouse effect, desertification, biodiversity and natural resources, access to drinking water and sanitation, seismic risks, etc.), food safety, health and major transmissible diseases;
- ✓ promote S&T activities, on the basis of an equitable working partnership with the countries concerned, in the context of EU external and development cooperation policy;
- ✓ make the Area more attractive to the best scientists so that it becomes their centre of reference.

2. U.S. Participation in FP6

This section provides an overview and analysis by different activity areas and thematic priorities of U.S. participation in FP6, based on data provided by the European Commission (EC).

When assessing the U.S. participation in FP6 it has to be noted that in FP6 there were no specific instruments available for supporting the cooperation with Third Countries that have S&T agreements with the Community.

Across all programme areas there are **400** participations of U.S. organisations in **358** FP6 projects.

With about **60%** of the U.S. participations, the mobility scheme **Human Resources and Mobility** accounts for the majority of participations.
27% of the U.S. participations are devoted to the seven thematic priorities with **Information Society Technologies** (IST) in the lead (**41** participations); the **Life Sciences** thematic priority comes next with **22** participations. The three lines of the **Sustainable Development** priority ("Global Change and Ecosystems", "Energy Systems", "Sustainable Transport") together account for **28** participations.
The total EC contribution to U.S. participants was a bit more than **12 million €**, that represents **1,68%** of the total EC contribution. As to the types of organisations, the analysis shows that the participation of the U.S. in FP6 is dominated by higher education institutions: **87%** of the participants are from universities and research organisations (universities **73,4%**, research organisations **13,7%**), **9,5%** are from industry and **3,4%** from other organisations.

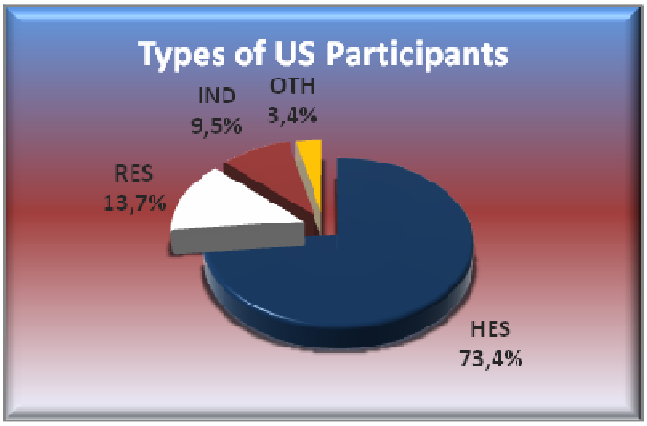


Chart 1: Percentage of different types of U.S. organisations participating in FP6

Only 72 U.S. participations out of 400 (18%) were supported by EC funding.

The table below shows the top 10 U.S. universities regarding FP6 participation based on the number of Grant Agreements (GA) signed.

Participant Name	No. of GAs signed
Massachusetts Institute of Technology	**17**
Princeton University	**15**
University of California Berkeley	**15**
Harvard University	**15**
Stanford University	**11**
Columbia University New York	**10**
University of Wisconsin System	**10**
California Institute of Technology	**9**
University of California San Diego	**9**

Table 1: List of top ten Universities with the highest number of contracts signed under FP6

2.1 Thematic Areas

Thematic Areas represented the core activity of FP6, both in terms of budget share and scientific expectation. This specific activity covered 7 areas[7] where the EU intended to become, in the medium term, the most competitive and dynamic knowledge – based economy in the world, capable of sustainable economic growth with more and better jobs and greater social cohesion.

- **DISTRIBUTION**

116 U.S. organisations have signed a Contract with the EC for a FP6 project within the thematic areas.

The chart on the right shows that the higher number of U.S. proposals, in absolute values has been signed under the **INFORMATION SOCIETY TECHNOLOGIES** thematic priority, with the participation of **41** U.S. organisations in **35** projects, meaning that some projects involve more than one U.S. participant.

It is followed by the **LIFE SCIENCES** thematic priority, that includes a total number of **22** U.S. partners in **16** funded projects, while the **NANOTECHNOLOGIES** thematic priority has reached the higher proportional value of U.S. participants in Grant Agreements signed, **1,4** U.S. organisations per consortium.

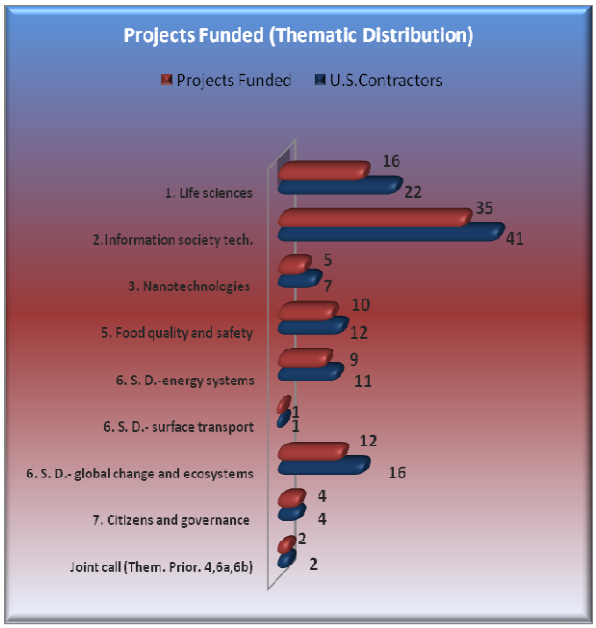


Chart 2: Number of projects funded and of U.S. Partners under each thematic priority

7 "Life sciences, genomics and biotechnology for health", "Information society technologies", "Nanotechnologies and nano-sciences, knowledge-based multifunctional materials and new production processes and devices", "Aeronautics and Space", "Food Quality and Safety", "Sustainable development, global change and ecosystems", "Citizens and governance in a knowledge-based society"

As to the thematic percentage distribution, the chart below shows that more than **60%** of U.S. participants are spread only in **3 thematic** priorities: **INFORMATION SOCIETY TECHNOLOGIES**, **LIFE SCIENCES** and **SUSTAINABLE DEVELOPMENT – GLOBAL CHANGE AND ECOSYSTEMS**.

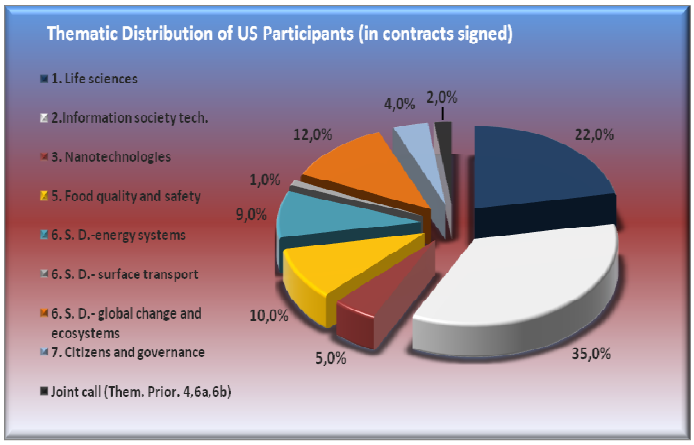


Chart 3: Thematic percentage distribution of U. S. partners

- **SUCCESS RATE**

The success rate of U.S. participation in FP6 is **12,6%** for the whole Thematic priorities area (analysis based in Grant Agreements (GAs) signed).

As to the specific priorities, **NANOTECHNOLOGIES** reached the lowest success rate (**4%**), with **166** proposals submitted, and only **7** GAs signed; as shown by the chart at right, the highest success rate (**100%**) was reached by **SUSTAINABLE DEVELOPMENT – SURFACE TRANSPORT**, because the only proposal submitted has been financed.

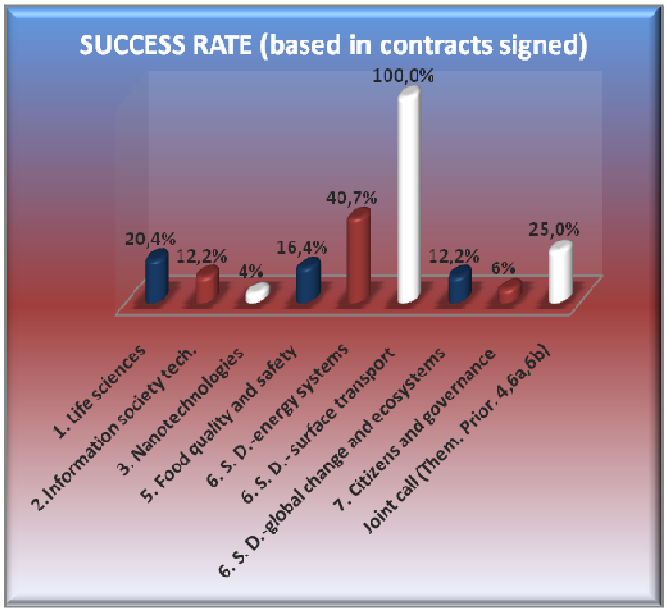


Chart 4: Success rate of U. S. participation under each thematic priority of FP6

The table below shows in detail the number of proposals submitted and the number of GAs signed under each Thematic Priority.

PRIORITY	Proposals Submitted	No. of GAs signed
1. Life sciences	108	22
2.Information society tech.	336	41
3. Nanotechnologies	166	7
5. Food quality and safety	73	12
6. Sustainable Development-energy systems	27	11
6. Sustainable Development - surface transport	1	1
6. Sustainable Development -global change and ecosystems	131	16
7. Citizens and governance	67	4
Joint call (Them. Prior. 4,6a,6b)	8	2
Total	**917**	**116**

Table 2: Number of proposals submitted and contracts signed by U.S. participants under each thematic priority

- **EC CONTRIBUTION**

The total EC contribution to projects involving U.S. participants funded under the Themes of FP6 amounts to **541.173.091€**. **2,05%** of this amount (**11.080.937€**) has been received by U.S. organisations. Projects funded under the **INFORMATION SOCIETY TECHNOLOGIES** thematic priority have **45,9%** of the total contribution.

For the whole Activity area, 31% of U.S. participations were supported by EC contribution (36 out of 116).

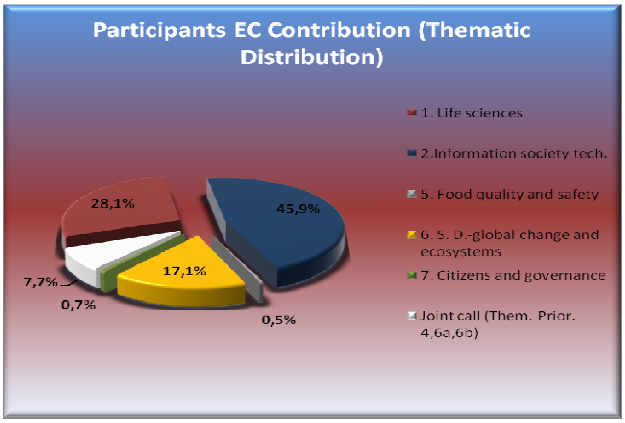


Chart 5: Thematic distribution of EC contribution to projects involving U. S. participants

Themes	EC Contribution	No. Participations Funded	% Participations Funded
1. Life sciences	3.108.649 €	14	63,6%
2.Information society tech.	5.090.250 €	12	29,3%
3. Nanotechnologies	0	0	0
5. Food quality and safety	50.200 €	2	16,7%
6. Sustainable Development-en. systems	0	0	0
6. Sustainable Development - surface transport	0	0	0
6. Sustainable Development – gl. change and ecosystems	1.895.361 €	4	25%
7. Citizens and governance	77.925 €	2	50%
Joint call (Th. Prior. 4,6a,6b)	858.552 €	2	100%
Total	**11.080.937 €**	**36**	**31%**

Table 3: Amounts of EC contribution to U.S. participants, number and percentage of participations funded under each thematic priority

2.2 Cross – Cutting Research Activities

Activities under this heading were complementary to research within the seven thematic areas and concerned the following fields: "Research for policy support", "New and Emerging Science and Technology (NEST)", "Specific SME activities", "International Cooperation Activities", "JRC Activities".

- **DISTRIBUTION**

In total **21** U.S. organisations have signed a contract with the EC for a FP6 project within the Cross – Cutting Research Activities.

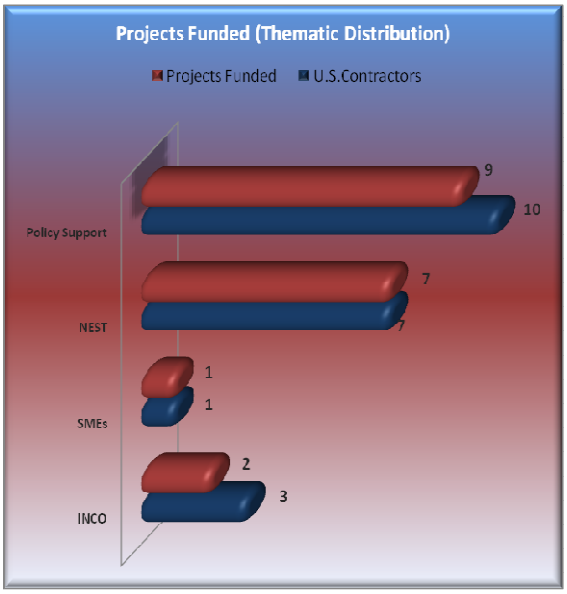


Chart 6: Number of projects funded and of U.S. Partners under each activity

Chart 6 shows that the highest number of U.S. applicants, in absolute values, has signed a contract under the **Research for Policy Support** activity, with the participation of **10** U.S. organisations in **9** projects.

It is followed by the **NEST (New and Emerging Science and Technology)** activity, which includes a total number of **7** U.S. partners. Only one U.S. organisation has signed a contract under the **Specific SME Activities**.

As to the percentage distribution, the chart below shows that more than **80%** of U.S. participants are spread only in **2** priorities: **Research for Policy Support** and **NEST.**

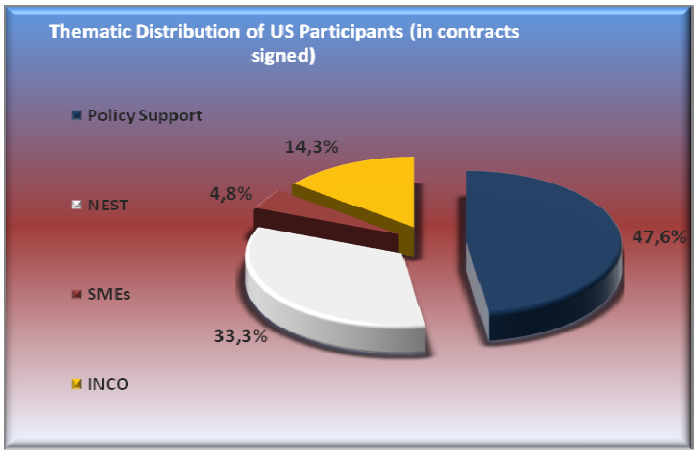


Chart 7: Thematic percentage of U.S. partners

In the **INCO** activity 2 contracts were signed (3 U.S. participants in total), and one contract was signed (one U.S. participant) under the **Specific SME activities.**

- **SUCCESS RATE**

Regarding U.S. participation in FP6 Cross – Cutting Research Activities there is a success rate of **11,3%**, with **21** contracts signed on **204** proposals submitted (analysis based in contracts signed).

As to the specific areas, **Research for Policy Support** reached a success rate of **19,6%**, with **51** proposals submitted and **10** contracts signed. As shown by the chart below, the **NEST** activity shows the lowest success rate (**6,9%**) with only **7** contracts signed on **102** proposals submitted.

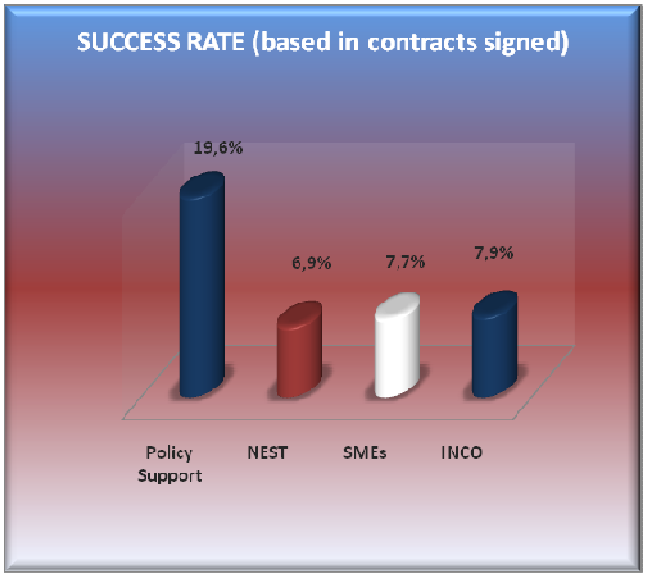


Chart 8: Success rate of U. S. participation under each activity

The table below shows in detail the number of proposals submitted and the number of Grant Agreements (GAs) signed under each activity.

ACTIVITY	Proposals Submitted	No. of GAs signed
Policy Support	51	10
NEST	102	7
SMEs	13	1
INCO	38	3
Total	**204**	**21**

Table 4: Number of proposals submitted and number of contracts signed by U.S. under each activity of the Cross – Cutting Programme

- **EC CONTRIBUTION**

The total of EC contribution to projects involving U.S. participants funded under the Cross-Cutting Research Activities, amounts to **19.954.910€**. **2,33%** of the above mentioned amount (**464.478 €**) has been received by U.S. organisations participating in **NEST** and **Policy Support** funded projects. No contribution was given to U.S. organisations involved in SMEs and INCO projects. For the total area, the EC funded 38,1% of U.S. participations (8 out of 21).

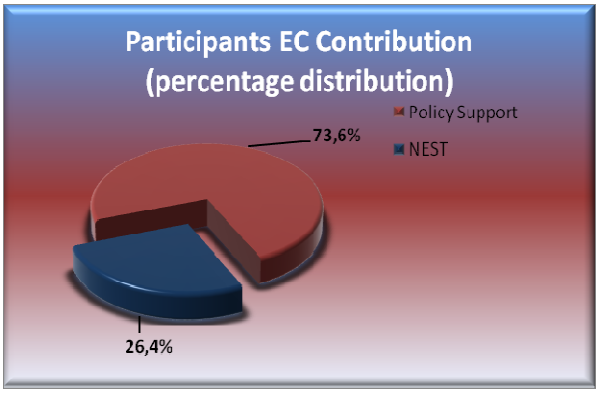


Chart 9: Percentage distribution of EC contribution to U.S. participants in projects funded under NEST and Policy Support activities

ACTIVITY	EC Contribution	No. Participations Funded	% Participations Funded
Policy Support	341.648 €	6	60%
NEST	122.830 €	2	28,6%
SMEs	0	0	0
INCO	0	0	0
Total	**464.478 €**	**8**	**38,1%**

Table 5: Amounts of EC contribution to U.S. participants, number and percentage of participations funded under each activity

2.3 Structuring the ERA[8]

The main aim of this activity area was to fight structural weaknesses of European research. By their nature and means of implementation, the activities carried out within this programme were applicable to all fields of research and technology: "Research and Innovation", "Marie Curie Actions – Human Resources and Mobility", "Research Infrastructures", and "Science and Society".

- **DISTRIBUTION**

In total **23** U.S. organisations have signed a contract with the EC for an FP6 project under the "Structuring the ERA" Specific Programme.

As showed by the chart below, the highest number of contracts signed by U.S. organisations can be found in the **Research Infrastructures** activity (**8** projects involving **17** U.S. organisations).

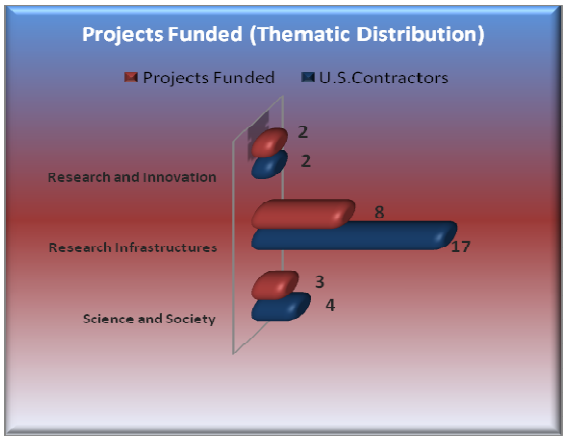


Chart 10: Number of projects funded and U.S. partners under "Structuring the ERA" Specific Programme

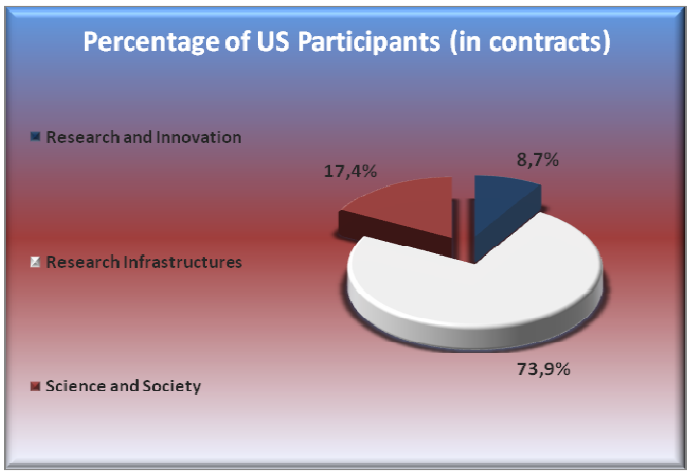


Chart 11: Percentage of U. S. participants under each activity of the "Structuring ERA" programme

In percentage terms, the **Research Infrastructures** activity involves round **74%** of U.S. participants.

8 The "Human Resources and Mobility" Programme is not included in this analysis. Its specific features will be analyzed in a dedicated section (paragraph 1.3.1)

- **SUCCESS RATE**

U.S. organisations involved in the FP6 **Structuring the ERA** Specific Programme reached a success rate of **24,7%**, with **23** contracts signed on **93** proposals submitted (analysis based in contracts signed by U.S. participants). As to the specific activities, the most successful is the **Research Infrastructures** activity, with a success rate of **27%**, (**63** proposals submitted and **17** contracts signed). As shown by the chart below, the **Research and Innovation** activity shows the lowest success rate (**16,7%**) with only **2** contracts signed on **12** proposals submitted.

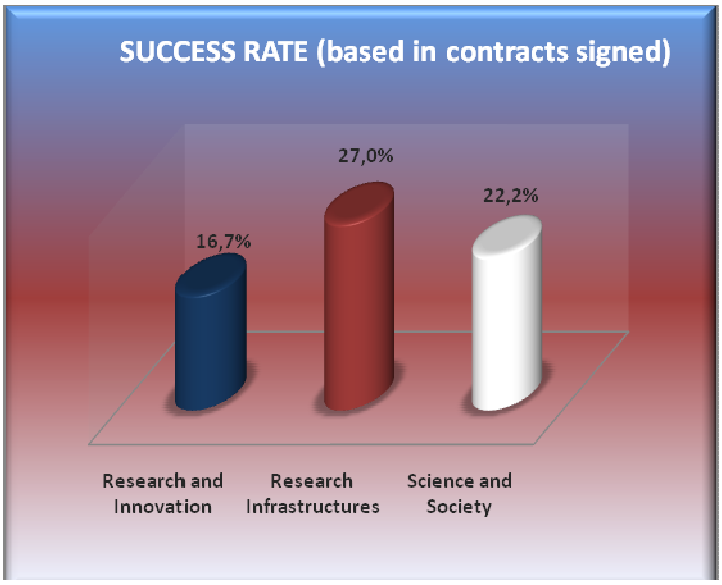


Chart 12: Success rate of U. S. participation under each activity of the "Structuring ERA" programme

ACTIVITY	Proposals Submitted	No. of GAs signed
Research and Innovation	12	2
Research Infrastructures	63	17
Science and Society	18	4
Total	**93**	**23**

Table 6: Number of proposals submitted and contracts signed by U.S. participants under each activity of the "Structuring ERA" programme

- **EC CONTRIBUTION**

The EC contributed to projects funded under the **Structuring the ERA** Specific Programme (projects involving U.S. participants), with a total amount of **97.249.704€.** U.S. participants only received **608.428€** (**0,63%)** of the total contribution. **72,7%** of this amount has been destinated to the **Research Infrastructures** activity. A total of 7 U.S. participations out of 23 (30,4%) has been funded by the EC.

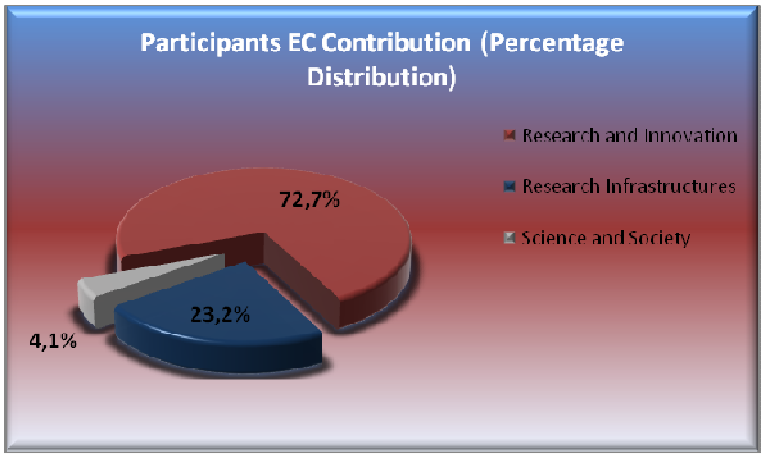


Chart 13: Percentage distribution of EC contribution to U. S. participants under each activity of the "Structuring ERA" programme

ACTIVITY	EC Contribution	No. Participations Funded	% Participations Funded
Research and Innovation	442.284 €	2	100%
Research Infrastructures	141.100 €	2	11,8%
Science and Society	25.044 €	3	75%
Total	**608.428 €**	**7**	**30,4%**

Table 7: Amounts of EC contribution to U.S. participants, number and percentage of participations funded under each activity of the "Structuring ERA" programme

Marie Curie Actions (MCA) - Human Resources and Mobility

The main aim of the Marie Curie Actions (MCA) was to provide broad support for the development of abundant and dynamic world-class human resources in the European research system, taking into account the inherent international dimension of research.

With about **60,9%** of the whole U.S. participations, the mobility scheme 'Human Resources and Mobility' accounts for the majority of participations.

A total number of **240** U.S. organisations have signed a contract with the EC within this programme, with an average of **1,04** U.S. participants per project.

This programme also received a very high number of applications (**1.242**), reaching a success rate (based on contracts signed) of **19,3%.**

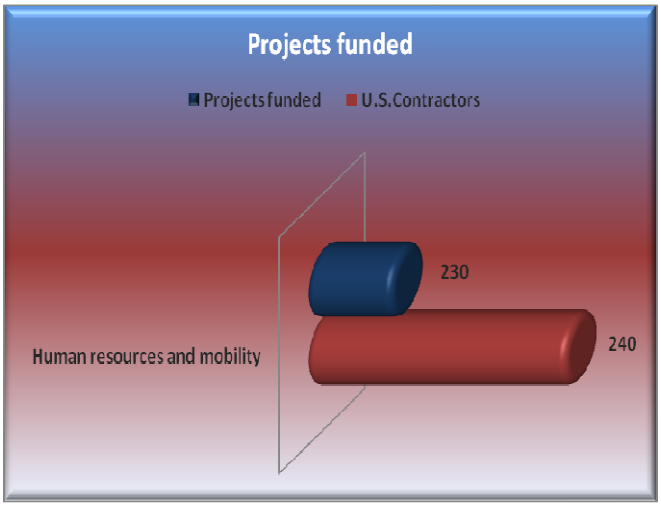


Chart 14: Number of projects funded and U. S. partners under the "Human Resources and Mobility" scheme

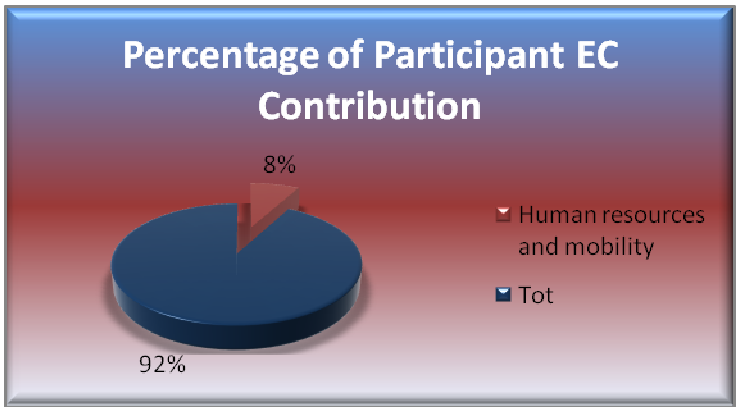


Chart 15: Share of EC contribution to U. S. participants on the total EC contribution to Mobility projects

The U.S. partners received **8%** of total EC contribution to Mobility projects, with a total amount of **1.151.523 €.**

Only 21 U.S. participations out of 240 were supported by EC funding (8,8%).

2.4 EURATOM

U.S. organisations in the Euratom[9] programme have reached a success rate of **27,7%**: **3 contracts** signed (with **3** U.S. participants in total) out of **11** proposals submitted.

These 3 projects are coordinated by **Italy** (ANSALDO NUCLEARE S.P.A.), by **Germany** (Helmholtz Zentrum Muenchen Deutsches Forschungszentrum fuer Gesundheit und Umwelt GMBH), and by the **Netherlands** (Nuclear Research and Consultancy Group) respectively.

9 http://ec.europa.eu/energy/nuclear/euratom/euratom_en.htm

3. International Cooperation in the Seventh Framework Programme (2007-2013)

The launch of the Seventh EU RTD Framework Programme (FP7) places new emphasis on international research cooperation which is increasingly seen as being at the centre of Community policies.

The new approach to international cooperation in FP7 provides mechanisms for promoting international research collaboration, by addressing three interdependent objectives:

- ✓ supporting European scientific and economic development through strategic partnerships with Third Countries in selected fields of science and by engaging the best Third Country scientists to work in and with Europe;
- ✓ facilitating contacts with partners in Third Countries with the aim of providing better access to research carried out elsewhere in the World;
- ✓ addressing specific problems that Third Countries face or that have a global character (e.g. by contributing towards Millennium Development Goals, addressing global climate change, combating biodiversity loss, water and energy scarcity).

The approach on international cooperation under FP7 is significantly different than under FP6. It aims at integrating international research collaboration throughout the Framework Programme and includes both geographical and thematic targeting.

Implementation in the Cooperation Programme

The Cooperation Programme covers ten themes corresponding to major fields in the progress of knowledge and technology ranging from health to security. All ten themes have an important international dimension (with particular considerations in the security theme owing to confidentiality requirements), and most of the FP7 funding for international cooperation will be available under this Programme.

International collaborative research in the Cooperation Programme is supported in two ways to ensure a balanced thematic and geographic participation by Third Countries and regions:

1. The opening of the thematic areas to all Third Countries. This includes, in addition, new dedicated actions and calls for Third Countries (mainly industrialised and emerging economies).
   The general opening of FP7 to international partners will enable participation in the programme by the global scientific community alongside European partners. This opening differs from previous Framework Programmes by placing more emphasis on attracting collaboration with Third Country partners.
2. Specific International Cooperation Actions in each thematic area dedicated to Third Countries where there is mutual interest on the basis of both the S&T level and the needs of the countries concerned.

Implementation in the Capacities Programme

The Capacities programme includes seven activities, one of which is fully dedicated to International Cooperation.

The International Cooperation activity will foster international cooperation through support measures for Third Countries and regions on the International Cooperation Partner Countries list. The objective of these activities is to enable the EU, Third Countries and regions to discuss current and future research priorities, to facilitate debate between the different stakeholders. The outcomes of these dialogues will provide intelligence for developing research policy, provide input to the respective FP7 Specific Programmes and inspire research topics for international cooperation, in particular in the Cooperation Programme.

The activity also supports actions to increase coherence in international research activities with and amongst the Member States that contribute to a better Europe-level coordination on aspects of international S&T cooperation.

The activities supported have three major objectives:

1. To strengthen bi-regional and bilateral dialogues in scientific cooperation and assist in joint identification of topics for collaboration under FP7 thematic programmes;
2. To network different stakeholders (such as universities, industry, government, civil society and donors) in order to strengthen research capacity. This activity will target countries which have an S&T cooperation agreement with the European Community or are in the process of negotiating one. Examples include the development of information facilities in Third Countries to assist in identifying and building research partnerships between different types of research actors.
3. To facilitate the development and implementation of a coherent European-level approach towards international S&T cooperation.

Implementation in the People Programme

The international dimension of the People Programme reinforces international cooperation in FP7 by supporting researcher mobility and their career development. It is directed at increasing the quality of European research, both by supporting European researchers to undertake research abroad and by attracting research talent from outside Europe and fostering research collaborations. It includes two main action lines:

1. Career development/life-long training for EU researchers

a. International outgoing fellowships at postdoctoral level and beyond (with an in-built mandatory return phase): enable European researchers to be trained and acquire new knowledge within high level Third Country research organisations. Promising European researchers will gain research training experience outside Europe and add different or complementary research competences at an advanced level to their experiences.
b. International re-integration grants: encourage European researchers, who have carried out research outside Europe for at least 3 years, to return to a Member State or Associated country in order to contribute to European research and to transfer the knowledge they have acquired in a Third Country.

2. International cooperation for and with researchers from Third Countries
   a. International incoming fellowships for experienced researchers: for knowledge transfer with Europe, and enrichment of research collaboration. Researchers from Third Countries will be offered support to undertake research projects in Europe with a view to enhancing the possibility of future collaborative research links with Europe.
   b. Marie Curie host driven actions: as a general rule (e.g. the Research Training Networks targeting doctoral candidates) all are open to Third Country nationals.
   c. A partnership scheme: these grants focus on staff exchanges between several European research organisations and organisations from countries covered by the European Neighbourhood Policy, and countries with which the Community has S&T Agreements with the EU.
   d. Support to scientific diasporas: a new action to support the expansion of the successful pilot exercise to network European researchers abroad by means of European Researchers Abroad networks - the ERA-Link initiative. These activities will establish links between Europe and expatriate European researchers, promote collaborations with the European research community, as well as support networking activities of Third Country researchers in Europe.

Implementation in the Ideas Programme

The Ideas Programme aims to reinforce European activities in leading edge or 'frontier' research, providing support for individual teams rather than for multinational consortia.

Individual international researchers will be encouraged to join with Europe-led teams, where they will bring specific expertise from outside Europe to enrich the research being undertaken.

Full recognition is given to the need to associate top scientists from elsewhere in the world in reinforcing excellence, dynamism and creativity in European research.

Implementation in Euratom (2007-2011)

International cooperation in the area of research in fission and radiation protection is an important element of the Euratom Programme. High-level agreements between Euratom and certain Third Countries facilitate the cooperation, moreover participation of Third Countries in projects is possible on an ad hoc basis. Dedicated research topics, should ensure greater international cooperation. In fusion research, international collaboration is supported by bilateral or multilateral fusion agreement. An important

example is the ITER Project which provides a major step towards the creation of prototype reactors for fusion power stations. This project is implemented by an international organisation established by Euratom, China, India, Japan, Korea, the Russian Federation and the United States.

4. U.S. Participation in FP7

This section provides an overview and analysis about different Specific Programmes, areas and thematic priorities of U.S. participation in FP7, based on data provided by the European Commission (EC).

It has to be noted that in FP7 International Cooperation is defined as a mainstream activity in the Cooperation Programme. Moreover, specific funding schemes supporting international cooperation with countries that have an S&T agreement with the EC have been introduced. In particular the **IRSES scheme**- International Research Staff Exchange scheme- (People Programme) and the **BILAT -** Bilateral coordination for the enhancement and development of S&T Partnerships- (INCO – Capacities Programme) will also support future EC-U.S. cooperation.

BILAT is supposed to specifically support the provision of information and assistance for U.S. researchers on the opportunities for EU-U.S. S&T cooperation offered through the Framework Programme.

From a first analysis based on preliminary data, it is possible to state that collaboration is increasing compared to FP6.

In the first four years a total of **2.670** proposals with at least one U.S. participant in the consortium has been submitted, and a fairly good number of Grant Agreements (GAs) has been signed by U.S. organisations:

1. **COOPERATION**: **215** Grant Agreements signed;
2. **CAPACITIES**: **26** Grant Agreements signed;
3. **PEOPLE**: **147** Grant Agreements signed;
4. **IDEAS**: **2** Grant Agreement signed;
5. **EURATOM**: **5** Grant Agreements signed.

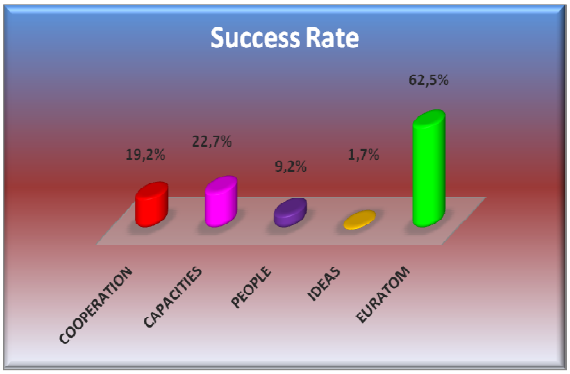


Chart 16: Success rate of U. S. participation under each Specific Programmes of FP7

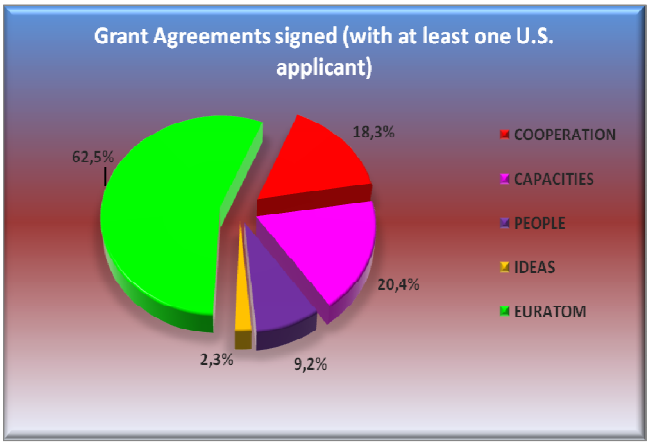


Chart 17: Percentage distribution of projects funded under the FP7 involving at least one U. S. participant

Despite the very low number of proposals submitted (**8**, **all mainlisted**[10]), the **EURATOM** programme is, at the moment the most successful. The **IDEAS** programme had less encouraging results, with **86** proposals submitted (with at least one U.S. participant) and only **two** GAs signed.

10 Mainlisted means that the proposal has successfully passed the evaluation process.

4.1 COOPERATION

The Specific Programme on 'Cooperation' supports all types of research activities carried out by different research bodies in trans-national cooperation and aims to gain or consolidate leadership in key scientific and technology areas. The Cooperation Programme is sub-divided into ten distinct themes, reflecting the most important fields of knowledge and technology where research excellence is particularly important to improve Europe's ability to address its social, economic, public health, environmental and industrial challenges of the future.

The Cooperation programme, together with the People programme, is the most attractive for U.S. organisations willing to join research activities under the FP7. From January 2007 to December 2010 a total number of **1118** U.S. organisations has been included in the submission of **868** proposals, with an average of **1,3** U.S. organisations per consortium.
As a result of a global analysis, U.S. participation to this Specific Programme has reached a success rate (based in Grant Agreements signed) of **19,2 %**, and a total number of **159** projects funded, involving **215** U.S. participants, with an average of **1,3** U.S. organisations per consortium.
Extending the analysis to U.S. participants included in the mainlisted proposals (**297** for **198** proposals), the result is a success rate of **26,5%**. However, it is important to note that the above mentioned are aggregate data, and that there are huge differences among the ten thematic priorities of the Cooperation Programme. The **HEALTH** theme is by now the most attractive for the U.S. organisations (**250** U.S. applicants in **179** proposals submitted), while the **SECURITY** theme has collected the application of only **12** U.S. participants in **11** proposals submitted.

The tables below show in detail the number and the outcomes of proposals submitted under each theme.

THEME[11]	Proposals Submitted	U.S. Participants
HEALTH	179	250
KBBE	112	148
ICT	217	238
NMP	95	157
ENERGY	34	40
ENVIRONMENT (Including global change)	105	131
TRANSPORT (including aeronautics)	41	35
SSH	50	56
SPACE	24	36
SECURITY	11	12
Total	**868**	**1118**

Table 8: Number of proposals submitted under each theme and number of us applicants involved, under each theme of the Cooperation Programme

THEME	Mainlisted	U.S. Participants
HEALTH	46	94
KBBE	28	41
ICT	48	56
NMP	22	37
ENERGY	12	15
ENVIRONMENT (Including global change)	24	32
TRANSPORT (including aeronautics)	6	7
SSH	3	3
SPACE	6	8
SECURITY	3	4[12]
Total	**198**	**297**

Table 9: Number mainlisted proposals and U. S. applicants involved, under each theme of the Cooperation Programme

11 KBBE: Knowledge Bio-Based Economy, ICT: Information and Communication technologies, NMP: Nano Material and Process; SSH: Socio-economic Sciences and Humanities

12 One of which in quality of coordinator

THEME	Reserve List	U.S. Participants
HEALTH	12	14
KBBE	49	71
ICT	10	10
NMP	10	17
ENERGY	2	4
ENVIRONMENT (Including global change)	5	8
TRANSPORT (including aeronautics)	6	8
SSH	3	4
SPACE	3	4
SECURITY	0	0
Total	**100**	**140**

Table 10: Number of reserve proposals and U. S. applicants involved, under each theme of Cooperation Programme

THEME	Rejected Proposals	U.S. Participants
HEALTH	118	139
KBBE	30	31
ICT	158	170
NMP	63	103
ENERGY	20	21
ENVIRONMENT (Including global change)	71	84
TRANSPORT (including aeronautics)	26	32
SSH	43	48
SPACE	15	24
SECURITY	8	8
Total	**552**	**660**

Table 11: Number of rejected proposals and U. S. applicants involved, under each theme of the Cooperation Programme

THEME	Ineligible Proposals	U.S. Participants
HEALTH	3	3
KBBE	5	5
ICT	1	2
NMP	0	0
ENERGY	0	0
ENVIRONMENT (Including global change)	5	7
TRANSPORT (including aeronautics)	3	3
SSH	1	1
SPACE	0	0
SECURITY	0	0
Total	**18**	**21**

Table 12: Number of ineligible proposals and U. S. applicants involved, under each theme of the Cooperation Programme

The following sections provide a detailed analysis for each theme concerning numbers and averages on participants, Grant Agreements, funding schemes, EC contributions and success rates.

- **DISTRIBUTION**

From 2007 to 2010 a total number of **215** U.S. organisations has signed a Grant Agreement with the EC for a FP7 project within the Cooperation Programme.

The chart at right shows that the higher number of U.S. participants, in absolute values has been involved under the **HEALTH** theme, with the participation of **68** U.S. organisations in **51** projects, meaning that some projects involve more than one U.S. partner.

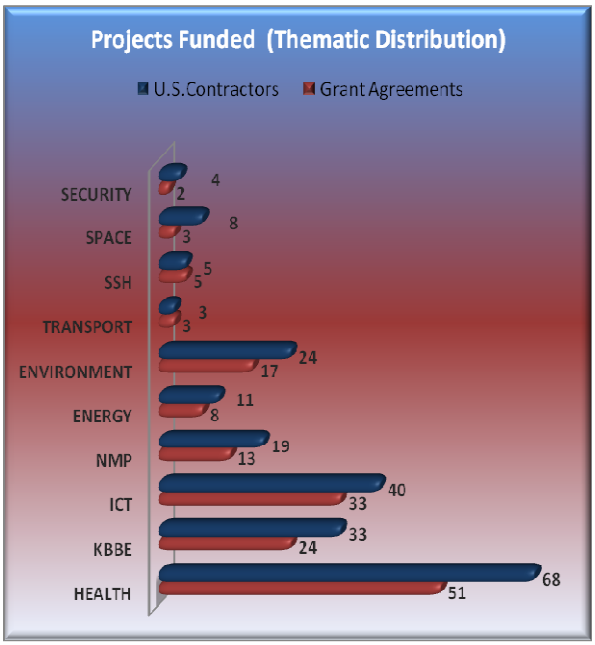


Chart 18: Number projects funded and U.S. partners under each theme of the Cooperation Programme

It is followed by the **ICT** theme that includes a total number of **40** U.S. partners in **33** funded projects, while the **SPACE** theme has reached the higher proportional value of U.S. participants in Grant Agreements signed, with **2,7** U.S. members per project.

The **TRANSPORT** and **SECURITY** themes, respectively with **three** and **five** U.S. contractor, appear as the less attractive priorities under the Cooperation programme, and, in the case of SECURITY, this is also confirmed by the very low number of U.S. applicants in submitted proposals, as only **12** U.S. organizations have been involved in proposal under the above mentioned theme.

The situation is quite similar for the **SSH** theme, under which only **5** U.S. organisations have signed a Grant Agreement for an FP7 project.

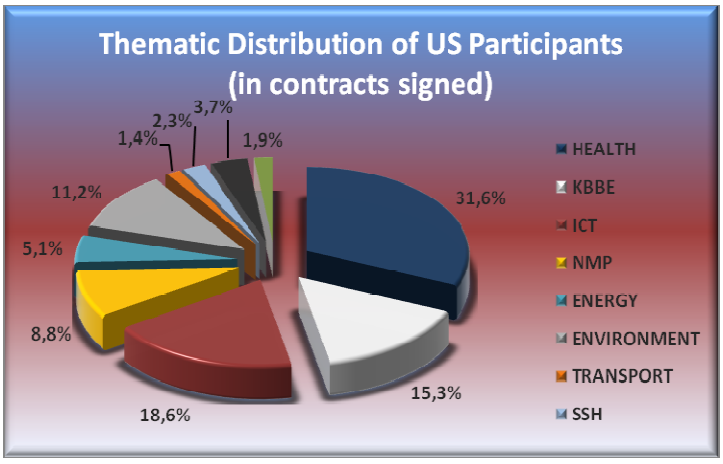


Chart 19: Percentage distribution of U. S. participation under each theme of FP7 Cooperation Programme

As to the thematic percentage distribution, chart 19 shows that more than **60%** of U.S. participants are spread only in **3** themes: **HEALTH**, **ICT** and **KBBE**.

- **SUCCESS RATE**

U.S. participation in the FP7 from 2007 to 2010 shows a success rate of **19,2 %** for the whole Cooperation Programme (analysis based on Grant Agreements – GAs - signed).

The **TRANSPORT** theme appears as the less successful, with a very low success rate **(6%)**, while, also due to the low participation of U.S organizations in proposals, the **SECURITY** theme has reached a high level of success **(33,3%)**.

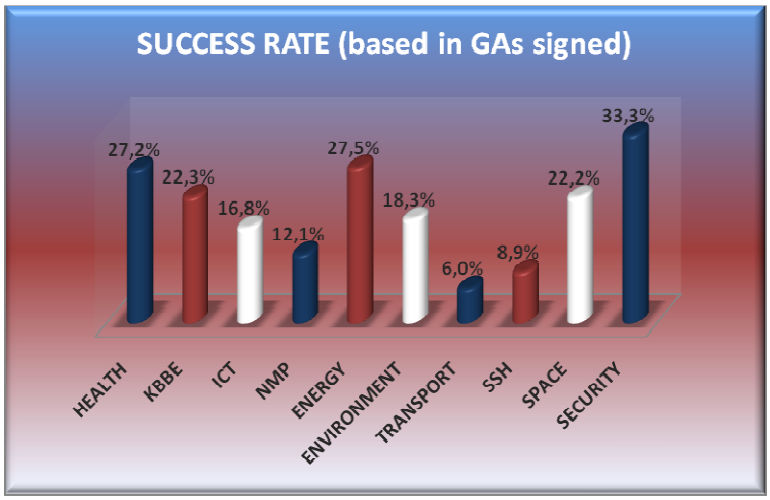


Chart 20: Success rate of U. S. participation under each theme of the Cooperation Programme

- **TYPES OF PARTICIPANTS**

The U.S. participation in the Cooperation Programme is dominated by Higher Education Institutions (HES), with a percentage share of **61,4%**, and a total of **132** participants.

They are followed, with a very significant gap, by Private Companies (PRC), that only cover **14,4%** of U.S. partners.

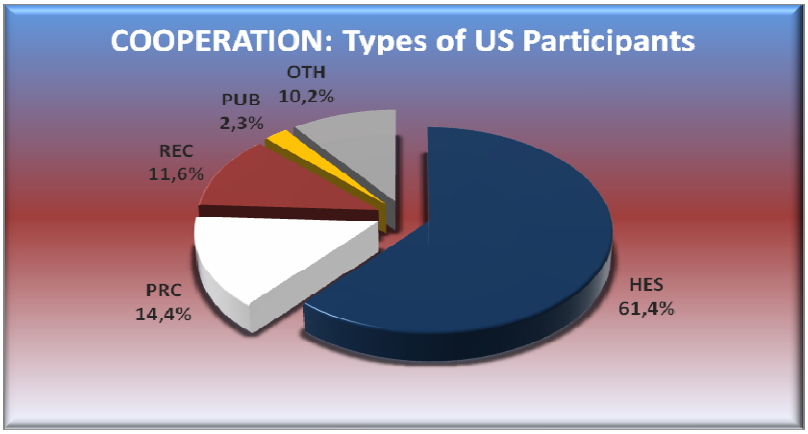


Chart 21: Percentage of different types of U.S. organizations participating in the Cooperation Programme

The tables below show in detail the distribution by type of organization for each thematic priority and the list of U.S. participants involved in more than one project (splitted in different themes).

THEME	HES	REC	PRC	PUB	OTH[13]
HEALTH	36	11	12	1	8
KBBE	21	6	3	0	2
ICT	126	1	8	1	5
NMP	14	2	3	0	0
ENERGY	5	0	1	0	5
ENVIRONMENT	16	2	1	3	2
TRANSPORT	1	0	1	0	1
SSH	2	0	0	0	3
SPACE	8	0	0	0	0
SECURITY	3	1	0	0	0

Table 13: Distribution of U. S. participants by type of organizations under each theme of the Cooperation programme

13 HES: Higher Education; REC: research centres; PRC: private Company; OTH: other

Participant Name	No. of GAs Signed	Themes
THE REGENTS OF THE UNIVERSITY OF CALIFORNIA	14	HEALTH (5); ICT (4); ENV (1); ENERGY (1); SPACE (1); SSH (1); NMP (1)
THE UNIVERSITY SYSTEM OF MARYLAND	6	HEALTH (3); ICT (3)
THE BOARD OF TRUSTEES OF THE LELAND STANFORD JUNIOR UNIVERSITY	4	HEALTH (2); ICT (2); ENERGY
UNIVERSITY OF ROCHESTER	4	NMP (3); ENV (1)
THE TRUSTEES OF THE UNIVERSITY OF PENNSYLVANIA	4	HEALTH (3); ENV
DUKE UNIVERSITY	3	HEALTH (2); NMP
UNIVERSITY OF CALIFORNIA SAN DIEGO	2	ICT; ENV
MICHIGAN STATE UNIVERSITY	2	KBBE; TPT
THE BOARD OF TRUSTEES OF THE UNIVERSITY OF ILLINOIS	2	ICT; ENV

Table 14: List of U. S. participants who signed more than one Grant Agreement and themes under which the projects have been funded

- **FUNDING SCHEMES**

This section provides a quantitative analysis of the participation with respect to the different funding schemes[14] of the Grant Agreements (GAs) signed by consortia including at least one U.S. member.

The great majority of U.S. partners (**88,4%**) are involved within a **Collaborative Project (CP)** funding scheme, the **Coordination and Support Actions (CSA)** cover **11,2%** of Grant Agreements, while only one **BSG** (Research for the Benefit of Specific Groups) has been funded under the **ENVIRONMENT** theme (see table below).

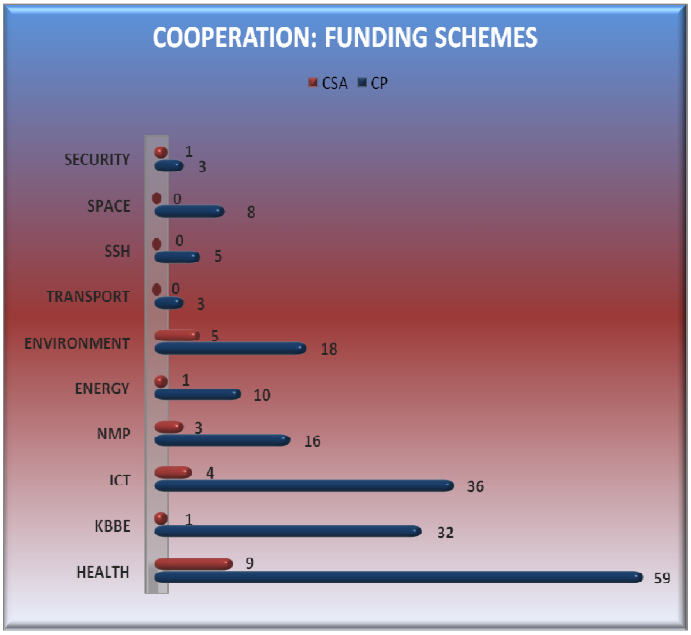


Chart 22: Number of Collaborative Projects (CP) and Coordination and Support Actions (CSA) funded under each theme of the Cooperation programme, involving at least one U.S. participant

THEME	CP	CSA	BSG
HEALTH	59	9	0
KBBE	32	1	0
ICT	36	4	0
NMP	16	3	0
ENERGY	10	1	0
ENVIRONMENT	18	5	1
TRANSPORT	3	0	0
SSH	5	0	0
SPACE	8	0	0
SECURITY	3	1	0

Table 15: Distribution of projects funded under each theme of the Cooperation Programme, by type of funding scheme (projects involving at least one U.S. participant)

14 Main funding schemes are Collaborative Projects (CP), Networks of Excellence (NoE) and Coordination and Support Actions (CSA). Each scheme has a different scope, respectively: funding research activities, funding joint programme of activities among research centres and funding support measure not involving research activities.

- **EC CONTRIBUTION**

The total of EC contributions to projects involving U.S. participants funded under the Cooperation Programme amounts to **909.451.594€**. **3,16%** of this amount has been received by U.S. participants and has increased from **675.771€** in 2007 (only for one **ICT** project), to **15.658.051€** for Grant Agreements signed in 2010, for a total sum of **28.696.630€**.

The **HEALTH** theme received the great majority of contributions each year. In year 2010, for the first time, U.S. partners involved in projects under the **TRANSPORT** and **SECURITY** themes have been funded.

112 U.S. participations out of 215 (52,1%) were retained for funding.

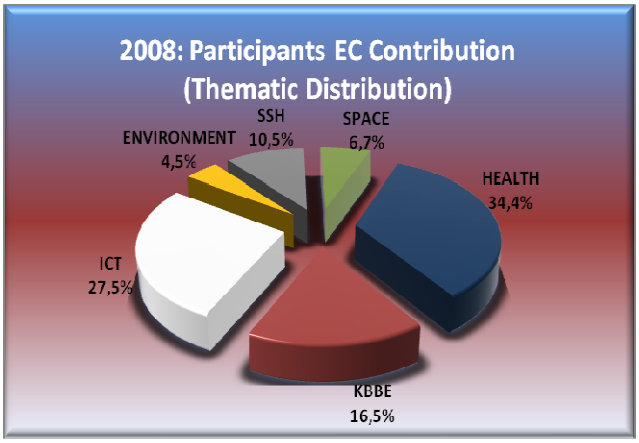


Chart 23: Percentage distribution of EC contribution to U.S. participants under each theme of the Cooperation programme (2008)

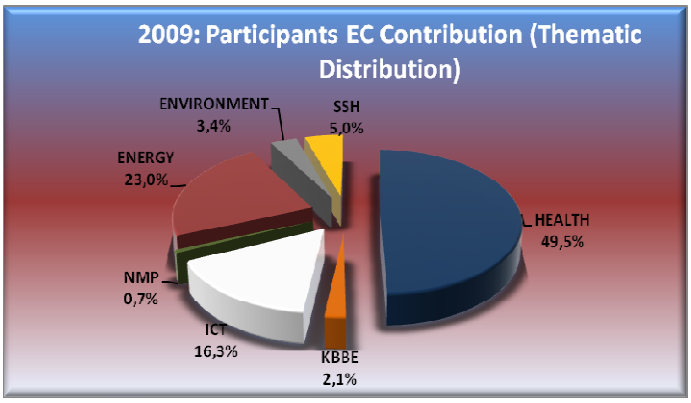


Chart 24: Percentage distribution of EC contribution to U.S. participants under each theme of the Cooperation programme (2009)

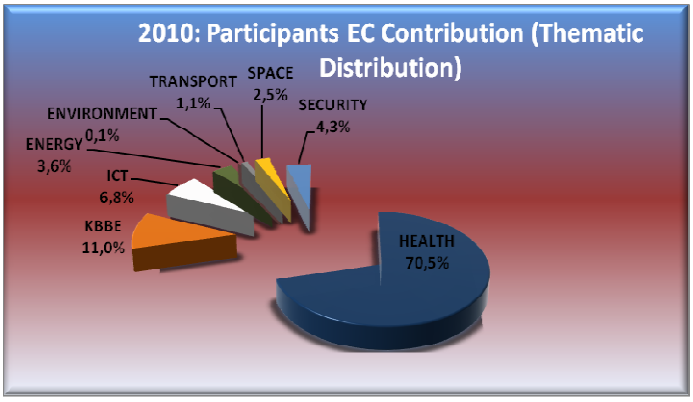


Chart 25: Percentage distribution of EC contribution to U.S. participants under each theme of the Cooperation programme (2010)

The table below shows in detail the annual distribution of EC contribution for each thematic priority, the number and the percentage of participations funded.

THEME	2007	2008	2009	2010	% Participations Funded
HEALTH	0	1.061.210 €	4.748.429 €	11.045.745 €	77,9%
KBBE	0	508.873 €	204.227 €	1.726.526 €	42,4%
ICT	675.771 €	848.722 €	1.561.712 €	1.060.843 €	55%
NMP	0	0	65.457 €	0 €	10,5%
ENERGY	0	0	2.206.950 €	564.232 €	27,3%
ENVIRONMENT	0	137.999 €	330.130 €	12.346 €	25%
TRANSPORT	0	0	0	176.813 €	33,3%
SSH	0	323.600 €	481.850 €	0 €	60%
SPACE	0	207.250 €	0	394.995 €	62,5%
SECURITY	0	0	0	676.551 €	75%
TOTAL	**675.771 €**	**3.087.654€**	**9.598.755€**	**15.658.051 €**	**52,1%**

Table 16: Annual distribution of EC contribution to U.S. participants and percentage of participations funded under each theme of the Cooperation programme

- **COOPERATION PARTNERS**

159 projects, involving at least one U.S. participant, are coordinated by **17** different countries: most of the coordinators **(14)** are EU Member States, **3** are Associated Countries.

In particular, the highest number of successful collaborations, **21,4%**, is concentrated under **UK** coordination, followed by **Germany (17,6%)** and **Italy (8,8 %)**.

The table below shows in detail the distribution of coordinators for GAs signed under each thematic priority.

Coordinator	HEALTH	KBBE	ICT	NMP	ENERGY	ENV	TPT	SSH	SPACE	SEC	TOTAL
UK	8	6	5	4	2	4	1	3	0	1	**34**
GERMANY	13	1	8	1	3	2	0	0	0	0	**28**
ITALY	4	0	6	1	0	1	1	0	1	0	**14**
FRANCE	4	4	1	0	0	3	0	0	0	0	**12**
GREECE	2	1	6	0	0	2	0	0	0	0	**11**
BELGIUM	4	3	1	1	0	0	0	0	0	1	**10**
SPAIN	4	2	1	0	1	1	0	0	1	0	**10**
NETHERLANDS	3	2	0	1	0	2	0	1	0	0	**9**
SWEDEN	4	1	1	1	0	0	0	0	0	0	**7**
IRELAND	2	1	1	1	0	0	0	0	0	0	**5**
DENMARK	0	2	1	0	1	0	0	0	0	0	**4**
FINLAND	0	1	0	1	1	1	0	0	0	0	**4**
AUSTRIA	2	0	1	0	0	0	0	0	1	0	**4**
SWITZERLAND	0	0	1	1	0	0	1	1	0	0	**4**
NORWAY	0	0	0	0	0	1	0	0	0	0	**1**
ISRAEL	0	0	0	1	0	0	0	0	0	0	**1**
POLAND	1	0	0	0	0	0	0	0	0	0	**1**

Table 17: Distribution of Coordinators of projects funded involving at least one U. S. participants under each theme of the Cooperation Programme

4.2 Capacities

The Capacities programme aims to enhance research and innovation capacities throughout Europe and ensure their optimal use. Its specific goals are to:

- support the coherent development of policies;
- complement the Cooperation Programme;
- contribute to EU policies and initiatives in order to improve the coherence and impact of Member States policies;
- find synergies with regional and cohesion policies, the Structural Funds, education and training programmes and the Competitiveness and Innovation Programme (CIP).

From January 2007 to December 2010, a total number of **129** U.S. organisations has been included in the submission of **108** proposals within the **CAPACITIES** programme, with an average of **1,20** U.S. participants per consortium.
As a result of a global analysis, this Specific Programme has reached a success rate (based in Grant Agreements signed) of **20,2% %**, and a total number of **26** Grant Agreements signed by U.S. participants (in **22** projects funded).
It has to be noted that no Grant Agreement has been signed in the "**Research for the benefits of SMEs**" programme.

The tables below show in detail the number and the outcomes of proposals submitted under each programme.

PROGRAMME	Proposals Submitted	U.S. Applicants (as Partners)	U.S. Applicants (as Coordinators)
RI	43	57	0
SMEs	7	7	0
SiS	22	28	0
INCO	36	33	3
Total	**108**	**125**	**3**

Table 18: Number of proposals submitted and U. S. applicants involved (as partners/coordinators) under the Capacities Programme

PROGRAMME	Mainlist	U.S. Applicants (as Partners)	U.S. Applicants (as Coordinators)
RI	17	24	0
SMEs	0	0	0
SiS	8	10	0
INCO	2	1	1
Total	**27**	**35**	**1**

Table 19: Number of mainlisted proposals and U. S. applicants involved (as partners/coordinators) under the Capacities Programme

PROGRAMME	Reserve	U.S. Applicants (as Partners)	U.S. Applicants (as Coordinators)
RI	4	7	0
SMEs	0	0	0
SiS	3	5	0
INCO	1	1	0
Total	**8**	**13**	**0**

Table 20: Number of reserve proposals and U. S. applicants involved (as partners/coordinators) under the Capacities Programme

PROGRAMME	Rejected	U.S. Applicants (as Partners)	U.S. Applicants (as Coordinators)
RI	22	26	0
SMEs	7	7	0
SiS	11	13	0
INCO	30	29	2
Total	**60**	**75**	**2**

Table 21: Number of rejected proposals and U. S. applicants involved (as partners/coordinators) under the Capacities Programme

PROGRAMME	Ineligible	U.S. Participants	U.S. Coordinators
RI	0	0	0
SMEs	0	0	0
SiS	0	0	0
INCO	3	3	0
Total	**3**	**3**	**0**

Table 22: Number of ineligible proposals and U. S. applicants involved (as partners/coordinators) under the Capacities Programme

The following sections provide a detailed analysis for each programme concerning numbers and averages on participants, Grant Agreements, EC contributions and success rates.

- **DISTRIBUTION**

From 2007 to 2010 a total number of **26** U.S. organisations has signed a Grant Agreement with the EC for a FP7 project within the **CAPACITIES** programme, **25** as **participants**, **1** as coordinator (**Link2US** Project).

The charts below show the distribution of U.S. applicants in Grant Agreements signed and the percentage distribution.

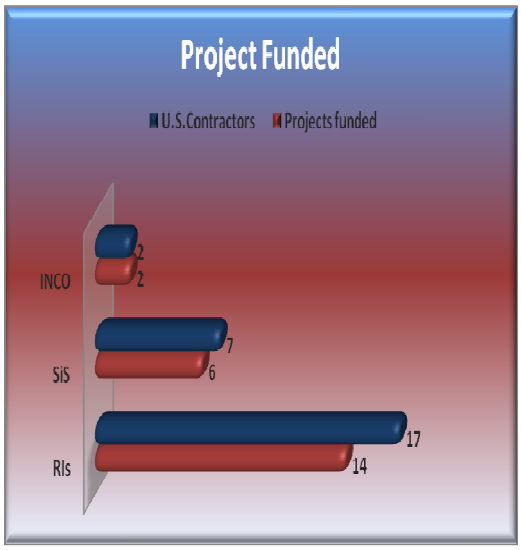


Chart 26: Number of projects funded and U. S. partners under the Capacities programme

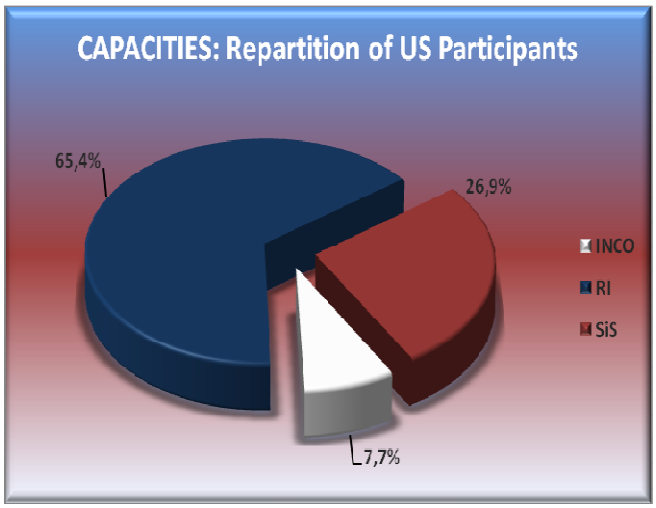


Chart 27: Percentage distribution of U. S. participation in each programme of the Capacities programme

- **SUCCESS RATE**

U.S. participation in FP7 from 2007 to 2010 shows a success rate of **20,2%** for the whole Capacities programme (analysis based in Grant Agreements signed), with a remarkable percentage of **29,8 %** for the **Research Infrastructures** programme.

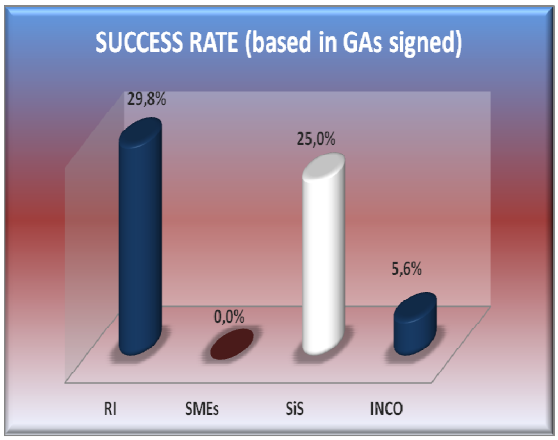


Chart 26: Success rate of U. S. participation in each programme of the Capacities programme

- **TYPES OF PARTICIPANTS**

The U.S. participation in the Capacities programme is dominated by Higher Education Institutions (HES), with a percentage share of **69,2%**, and a total of **18** participants.

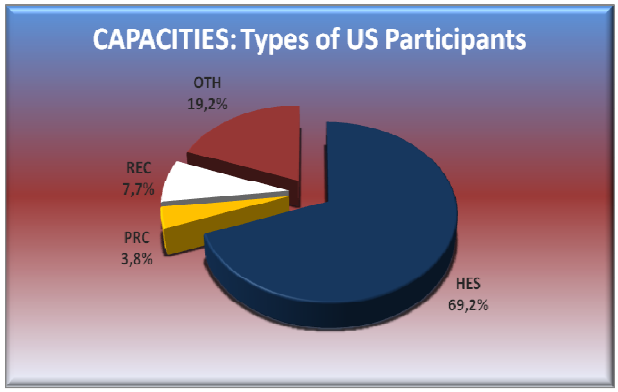


Chart 29: Percentage of different types of U.S. organizations participating in the Capacities programme

The tables below show the distribution by organisation type for each programme and the list of U.S.partners.

PROGRAMME	HES	REC	PRC	OTH
INCO	0	0	0	2
RI	15	0	1	1
SiS	3	2	0	2

Table 23: Distribution of U. S. participants by type of organization under each programme of the Capacities programme

- ## COOPERATION PARTNERS

22 projects, involving at least one U.S. participant, are coordinated by institutions from **9** different countries: most of the coordinators **(7)** are from EU Member States, **2** projects are coordinated by **Switzerland** (Associated Country) and **1** from the **U.S.**

In particular institutions from **UK** and **Italy** coordinate the highest number of projects involving U.S. participants **(6 and 4 respectively).**

The table below shows in detail the distribution of coordinators for GAs signed under each programme.

Coordinator	INCO	RI	SiS	TOTAL
UK	0	6	0	**6**
ITALY	0	1	3	**4**
CYPRUS	0	3	0	**3**
SWITZERLAND	0	2	0	**2**
NETHERLANDS	0	1	0	**1**
GERMANY	0	1	2	**3**
SWEDEN	0	0	1	**1**
AUSTRIA	1	0	0	**1**
U.S.	1	0	0	**1**

Table 24: Distribution of Coordinators of projects funded involving at least one U. S. participants under each programme

- **EC CONTRIBUTION**

The total of EC contributions to projects involving U.S. participants funded under the Capacities programme, amounts at **75.880.202 €**. **1,01%** of this amount has been received by the U.S. participants, and has increased from **179.493,35€** in 2008 to **797.534€** for Grant Agreements signed in 2009, for a total sum of **977.027€** (no Grant Agreements have been signed in 2007 and no contribution was given to U.S. participants in 2010).

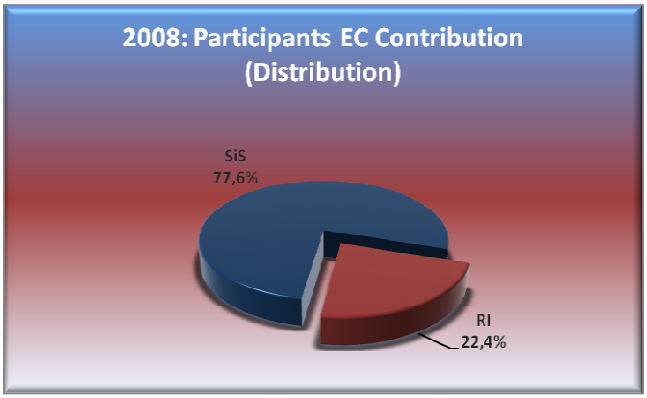


Chart 30: Percentage distribution of EC contribution to U.S. participants under each programme (2008)

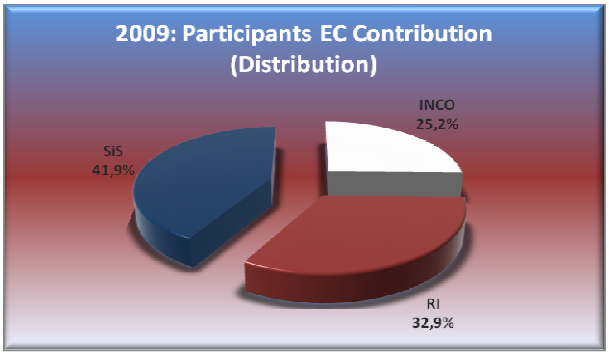


Chart 31: Percentage distribution of EC contribution to U.S. participants under each programme (2009)

The table below shows in detail the annual distribution of EC contribution for each programme, the number and percentage of U.S. participations funded.

PROGRAMME	2008	2009	No. Participations Funded	% Participations Funded
INCO	0	211.489€	2	100%
RI	40.205€	275.409€	3	17,6%
SiS	139.288€	350.841€	6	85,7%
Total	**179.493€**	**837.739€**	**11**	**42,3%**

Table 25: Annual distribution of EC contribution to U.S. participants under each Programme, number and percentage of participations funded

4.3 People

The 'Marie Curie Actions' have long been one of the most popular and appreciated features of the Community Framework Programmes for Research and Technological Development. They have developed significantly in orientation over time, from a pure mobility fellowships programme to a programme dedicated to stimulating researchers' career development. The 'Marie Curie Actions' have been particularly successful in responding to the needs of Europe's scientific community in terms of training, mobility and career development. This has been demonstrated by a demand in terms of highly ranked applications that in most actions extensively surpassed the available financial support. The 'Marie Curie Actions' under the Sixth Framework Programme were part of the Specific Programme dedicated to structuring the European Research Area. In the Seventh Framework Programme, the 'Marie Curie Actions' have been regrouped and reinforced in the 'People' Specific Programme.

- **DISTRIBUTION**

From 2007 to 2010 a total of **147 GAs** have been signed by U.S. organisations for the **People Programme**, with a success rate of **9,2%.** During this period of time the Marie Curie Action with the major number of submitted proposals **(1408 out of 1601)** is the **International Outgoing Fellowship** (**IOF**), thus indicating that U.S. is still seen as an important Third Country partner for researchers willing to acquire new competencies and progress with their career. **143** Grant Agreements have been signed under this Specific Programme (**97,3%** of total GAs signed)

With regard to the international dimension of the programme, the **Staff Exchange Scheme** (**IRSES**) has seen a total of **93** submitted proposals (**1** GA signed). IRSES is an action aimed at strengthening research partnerships through staff exchanges and networking activities between European research organisations and organisations from Third Countries with which the Community has an S&T agreement (or are in the process of negotiating one). Compared to existing Marie Curie actions, which provide mobility possibilities to individual researchers, this action will provide support to research organisations to establish or reinforce long-term research co-operation through a coordinated joint programme of exchange of researcher staff for short periods.

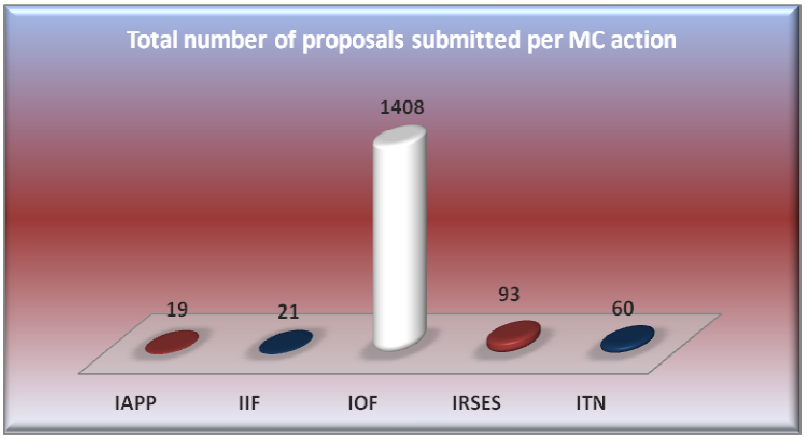


Chart 32: Proposals submitted by different schemes of Marie Curie actions, involving at least one U.S. participant

For the Initial Training Networks (**ITN**) of researchers a total of **60** proposals has been submitted. This latest figure is quite high considering that the scheme does not require in terms of consortium eligibility the participation of Third Countries, thus meaning that U.S. is still perceived as an important partner in terms of initial training and development of career for EU researchers.

The chart at left clearly shows that the peak of number of U.S. proposers has been reached in 2009, while, the other years show a balanced trend.

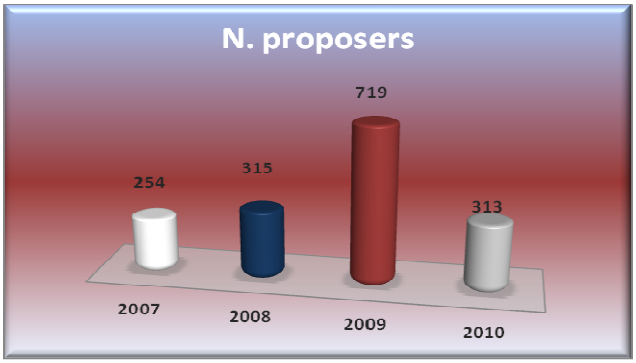


Chart 27: Annual distribution of U. S. proposers under the PEOPLE programme

- **TYPES OF PARTICIPANTS**

The U.S. participation in the PEOPLE programme is dominated by Higher Education Institutions, with a percentage share of **83,7%**, and a total of **123** participants.

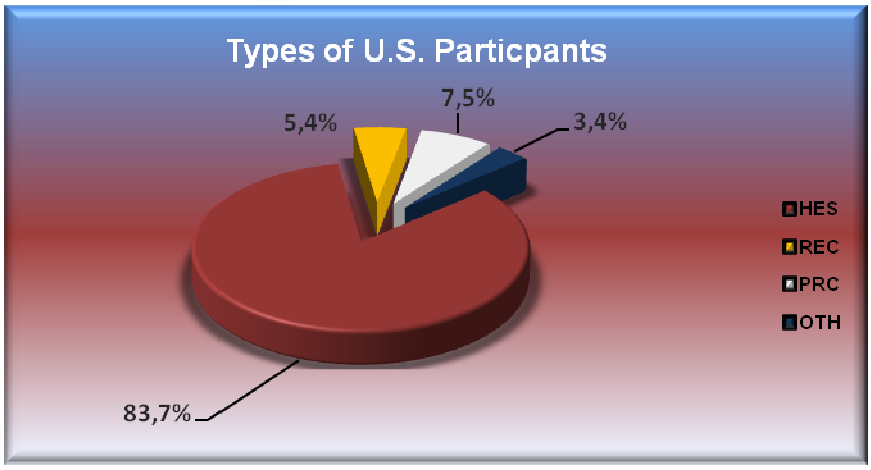


Chart 28: Percentage of different types of U.S. organizations participating in the PEOPLE programme

The table below shows the list of U.S. participants involved in more than two project.

Participant Name	No. of GAs Signed
MASSACHUSETTS INSTITUTE OF TECHNOLOGY	9
UNIVERSITY OF CALIFORNIA, BERKELEY	9
PRINCETON UNIVERSITY	8
UNIVERSTIY OF WASHINGTON	7
NEW YORK UNIVERSITY	5
THE BOARD OF TRUSTEES OF THE LELAND STANFORD JUNIOR UNIVERSITY	5
THE TRUSTEES OF COLUMBIA UNIVERSITY IN THE CITY OF NEW YORK	5
CALIFORNIA INSTITUTE OF TECHNOLOGY	5
CORNELL UNIVERSITY	3
HARVARD MEDICAL SCHOOL	3
NORTHWESTERN UNIVERSITY	3
The Regents of the University of California	3

Table 26: List o f U. S. universities involved in more than two projects of the People Programme

- **COOPERATION PARTNERS**

The **147** projects involving at least one U.S. participant are coordinated by **18** different countries: most of coordinators **(15)** are EU Member States, **3** are Associated Countries (**Israel, Switzerland, Cyprus**).

In particular, the highest number of successful collaborations, **21,1%**, is concentrated under **Spanish** coordination, followed by **France (20,4%)** and **UK (12,2%)**.

The table below shows in detail the distribution of coordinators for GAs signed.

Coordinator	No. of GAs Signed
SPAIN	31
FRANCE	30
UK	18
GERMANY	12
ITALY	11
ISRAEL	9
GREECE	7
NETHERLANDS	8
BELGIUM	4
SWITZERLAND	4
DENMARK	3
AUSTRIA	2
CZECH REP.	2
IRELAND	2
SWEDEN	1
POLAND	1
CYPRUS	1
PORTUGAL	1

Table 27: Distribution of Coordinators of projects funded involving at least one U.S. participant under the PEOPLE programme

4.4 Ideas

The objective of the Specific Programme 'Ideas' is to reinforce excellence, dynamism and creativity in European research and improve the attractiveness of Europe for the best researchers from both European and Third Countries[15], as well as for industrial research investment, by providing a Europe-wide competitive funding structure, in addition to and not replacing national funding, for 'frontier research' executed by individual teams. Communication and dissemination of research results is an important aspect of this programme. The basic rule for this specific programme is the participation of only one organization, hosting the Principal Investigator and his/her team to carry out the research proposed. The Host Institution must be based in a EU Member State or Associated Country. Organizations based in Third Countries are not eligible as Host Institutions. Nevertheless, it is possible to include in the proposals other organizations as "additional participants"; in some cases it is possible to involve additional participants from Third Countries, including the US, but this participation must be essential to the project and are subject to the opinion of the evaluators. So, participation and funding of additional participants from Third Countries are evaluated case by case. In summary, researchers from US are allowed to apply, but only in the case they decide to move to an European institution to carry out the research proposed.

Communication and dissemination of research results is an important aspect of this programme.

So far, the Ideas programme is the less successful within FP7, with a success rate of **1,7%.**

Even if **119** U.S. organisations have been included in **86** proposals submitted, only **2** Grant Agreements have been signed by U.S. organizations as additional participants, with United Kingdom (University of Durham) and Belgium (Katholieke Universiteit Leuven) as main Host Institutions.

15 As far as their research is carried out in Europe

4.5 Euratom

The Euratom programme has reached a success rate of **63%**: **8** U.S. organisations have been included in **8** proposals submitted (all mainlisted), and **5** Grant Agreements have been signed: two are coordinated by France (Institute de Radioprotection et de Surete Nucleaire and Agence Nationale pour la Gestion des Dechets Radioactifs), one by Germany (Helmholtz Zentrum Muenchen Deutsches Forschungszentrum fuer Gesundheit und Umwelt GMBH) and one by the United Kingdom (Health Protection Agency).

Conclusions

International cooperation in FP6 was opened for worldwide participation and, while funding conditions were similar for EU Member States, Associated Countries and emerging or developing countries, developed or industrialized countries were, as a general rule, not eligible for funding.
About 16.5% of all contracts (1.669 contracts) issued under FP6 involved one or more Third Country. In total 3.451 institutes from Third Countries were involved in these contracts. Most 'active' Third Countries in FP6 were the U.S. (followed by Russia, China and Canada). A share of 7% of total EC contributions to Third Countries went to developed countries, of which, by far, the largest part accrued to the U.S. As pointed out in the FP6 Ex post Evaluation, this 'constitutes a very narrow link to the strongest scientific nation on earth'.
The Mobility scheme has been the most attractive programme within FP6 with a very huge number of applications (1.242) and counting, by itself, more than half of contracts signed by U.S. participants under the whole FP6. This means that the Mobility scheme has been a very effective leverage in facilitating researchers from both parties to gain more chances to access international careers and extend their international networks.
As to the scientific fields and priorities, ICT, Life Sciences (that included "Health") and Sustainable Development resulted as the most appealing for the creation of a U.S. – EU scientific collaboration. The three above mentioned scientific areas recorded nearly a quarter of the total U.S. participation in FP6 (a share of 22,7%; 91 contracts signed out of 400), and this is a clear signal of a common will to lay the foundation to create a strong basis for future cooperation. This strong partnership demonstrates not only that both parties are aware of the opportunity to advance the knowledge-base and benefit from each others' experiences and know-how, but also the consciousness of their responsibility to join forces in order to address the global challenges that are indicated in the Millennium Development goals in a more concrete and effective and efficient way.

Then, some other areas like Research Infrastructures (RI) have demonstrated that there are encouraging opportunities for potential collaboration.
As to the type of participants, the scene has been quite dominated by Higher Education Institutes and Research Center (with a share of 87%), while actors coming from the industrial sector represent only a small part.

With more resources than its predecessor and more open than ever to international collaboration FP7 offers new opportunities for transatlantic partnerships. There are opportunities in FP7 where all topics are open for U.S. partners, as in FP6 the U.S. resulted as the second most successful Third Country in terms of number of participations. As in FP6, low- and middle-income states, so-called ICPC (International Cooperation Partner Countries) can participate and be funded in FP7 on the same terms as Member States and Associated Countries but certain thematic areas have also allowed industrialized countries to receive funding. As a general rule, funding is provided to U.S. partners that are essential for the projects.

During its first three years, FP7 received a total of 2670 proposals submitted with at least one U.S. participant in the consortium, and 395 Grant Agreements (GAs) have already been signed by U.S. organisations.

As to the thematic priorities and the Specific Programmes/ activities, the partial results appear to confirm the trends already traced in FP6.

As in FP6, in fact, Mobility is confirming its attractiveness for U.S. participants, as international cooperation and mobility is becoming almost a condition for the individual researchers. A total number of 147 GAs has already been signed by U.S. participants under the PEOPLE Programme. 143 GAs out of 147 fall under the IOF (International Outgoing Fellowship) showing that the U.S. are significant focus country for researchers willing to acquire new competencies and progress with their career. Even if the IRSES (International Research Staff Exchange scheme) is the potential main instrument under the PEOPLE programme to strengthen research partnerships through staff exchanges and networking activities between European research organisations and organisations from the U.S., participation is still too low: only one GA has been signed out of 55 proposals submitted. It could be necessary to foster and improve awareness of this specific action in the U.S. in order to increase their participation in the remaining years of FP7.

The ICT priority, together with ENVIRONMENT and HEALTH has also confirmed their attractiveness in the U.S. with a total of 132 U.S. partners in 101 project consortia. More significantly, for the first time in FP7 a whole thematic area has been reciprocally opened between the U.S. and EU (NIH /Health in FP7).

This recent opening of is an interesting development, but it is too early to assess what this will imply for EU-US collaboration within research in Health and Life Sciences in general.

An encouraging success has also been obtained under the NMP and KBBE themes, while some other important priorities such as ENERGY and SECURITY have not been sufficiently included in the U.S. interests concerning FP7.

While the Research for the benefits of SMEs programme received only 7 U.S. applications (and no GAs signed), confirming that the industrial sector is still too far from FPs, the RIs programme is following the positive trend already started with FP6. 57 U.S. organisations have already applied as project partners within this programme and 17 GAs have been signed (3 of which received funding). FP7 has contributed to networking of a large number of national infrastructures and opening them to European scientists via the concept of 'Transnational Access': RIs are playing an increasingly important role in the advancement of knowledge and technology. They are a key instrument in bringing together a wide diversity of stakeholders to look for solutions to many of the problems society is facing today. This Specific Programme offers unique research services to users from different countries, attract young people to science, and help to shape scientific communities. Europe has taken a major step forward in the development of a more coordinated approach for policy-making in the field of RIs with the establishment of the European Strategy Forum on Research Infrastructures (ESFRI) in 2002; potential new RI (or major upgrade) identified are likely to be realized in the next 10 to 20 years.

The IDEAS Specific Programme has the potential to attract researchers from the U.S. – both U.S. nationals and others – to Europe, even though awareness about this programme seems to be too low due, perhaps to the obligation of performing research in Europe. So far, the Ideas programme is the less successful within the FP7, with a success rate of 1,7%. Even if 119 U.S. organisations have been included in 86 proposals (as additional participants), only two Grant Agreements have been signed by U.S.

institutions. Concerning the type of participants, the features are the same as in FP6, with an absolute predominance of Universities and Research centers, and a very low participation of SMEs and the industrial sector in general.

Policies to support international collaboration in research have a long history and many initiatives, programmes, collaboration agreements have been put in place. The international competitiveness of modern economies is linked increasingly to their ability to generate, adapt and use new knowledge, and the strong economic performance of the U.S. in recent years has demonstrated the actual value of a knowledge-based economy in which research, its potential commercial applications, and other intellectual activities play a crucial role in driving economic growth and prosperity. The European experience in collaborative research is certainly a feature of interest for the U.S and participation in the Framework Programmes provides also an opportunity for U.S. researchers of learning to work in large consortia. A strong collaboration in Science and Technology is the main instrument for the EU and the U.S. not only to address global challenges, such as in Environment and Health, but also to advance knowledge and scientific understanding by benefiting from each others' experiences and know-how. In general, the most important outcomes are access to complementary knowledge and the production of new knowledge, followed by the possibility to address more ambitious problems and the opportunity to establish new partnerships for future transatlantic research cooperation. That's why it is fundamental to encourage collaboration on long-term basic research and develop exchanges of good practices to support science and innovation.

The Framework Programmes represent only a small portion of total R&D investment in Europe, but they are a key element in providing a basis for strategic coordination and cooperation and therefore better utilization of resources. Although the new international dimension of FP7 attempts to lay the groundwork for increasing U.S. participation, it is still low and there is a huge potential for improvement. An important structural difference that could be an obstacle to a complete understanding of Framework Programmes and their importance is that in the U.S. research is mainly directed by a principal investigator, who may often be the only senior participant in the project. So the cooperative aspect is usually not a required component in U.S. funding: funding is mainly given to individuals and not to teams. This is very different from the 'spirit' of the FPs: further steps are surely needed for creating greater awareness in the U.S. of opportunities for EC-US S&T cooperation within FP7.

Science, technology and innovation are the main pillars of a competitive and dynamic economy. The U.S. and the EU have long acknowledged their importance and the value of strong cooperation in this field. Cooperation in research is the main instrument to develop a critical mass of expertise and capacities needed to address global challenges, particularly in grand challenges where EU-U.S. cooperation is essential for success.

Sources

1. EC Commission

2. Horvat M.,Harrap K.A. - Review of the Science and Technology Cooperation between the European Community and the United States of America 2003 – 2008 (http://ec.europa.eu/research/research-eu)

3. Report of the Expert Group - Evaluation of the sixth Framework Programme for Research and Technological Development 2002-2006 (http://ec.europa.eu/research/evaluations/index_en.cfm?pg=fp6)

4. http://cordis.europa.eu

List of Abbreviations

Abbreviation	Full-Term
BILAT	Bilateral Coordination for the enhancement and development of S&T partnerships
BILAT-USA	Bilateral Coordination for the Enhancement and Development of S&T Partnerships between the European Union and the United States of America
CP	Collaborative Project
CSA	Coordination and Support Action
DG	Directorate General
EC	European Commission
ENV	Environment
ERA	European Research Area
ESFRI	European Strategy Forum on Research Infrastructure
EU	European Union
EURATOM	The European Atomic Energy Community
FP6	6th Framework Programme for Research and Technological Development (2002-2006)
FP7	7th Framework Programme for Research and Technological Development (2007-2013)
GA	Grant Agreement
HES	Higher Education Institutions
ICPC	International Cooperation Partner Countries
IIF	Marie Curie Incoming International Fellowships
INCO	International Cooperation
IND	Industry
IRSES	International Research Staff Exchange Scheme (PEOPLE Programme)

IST	Information Society Technologies
ITN	Initial Training Network (PEOPLE Programme)
KBBE/FAFB	Food, Agriculture and Fisheries, and Biotechnology
MC/MCA	Marie Curie Actions (Human Resources and Mobility/PEOPLE Programme)
NEST	New and Emerging Science and Technology
NMP	Nanosciences, Nanotechnologies, Materials and new Production Technologies
NoE	Network of Excellence
OIF	Marie Curie Outgoing International Fellowships
OTH	Other Organisations
PRC	Private Research Cernter
PUB	Public Organisations
R&D	Research & Development
REC/RES	Research Centres/Research Organisations
RI	Research Infrastructures
RTD	Research and Technological Development
S&T	Science & Technology
SiS	Science in Society
SME	Small and Medium sized Enterprises
SSH	Socio-economic Sciences and the Humanities
STA	Science & Technology Agreement
U.S.	United States of America
USA	United States of America