

Lecture 3. Finding your research theme

FP6 is not structured by traditional research disciplines, but by current research objectives. This can appear to be a complex structure but in reality there are just a few key elements necessary to understand the overall picture.

This lecture describes the main structure of FP6 in outline and its IST Priority and tells how and where to get more detailed information:

- ⇒ Gathering information
- ⇒ The main actions under Integrating Research
- ⇒ Strengthening actions
- ⇒ Structuring actions
- ⇒ Overview of FP6 structure
- ⇒ References

Gathering information

Sources

▪ CORDIS

CORDIS is the Commission's dedicated RTD and innovation Web site. It contains all the information necessary for preparation and submission of a proposal. For each of the thematic activities there is a specific information area on CORDIS. These have links to sub-themes and all kinds of background and current information, such as open calls, as well as links to prior work done under FP5.

The documents necessary to prepare a proposal are call- and instrument-specific. For each instrument in each call for proposals, CORDIS provides a specific "information package" *via* the respective call page, comprising the respective work programme, call text and guide for proposers with application forms. To find a specific call, one should start at CORDIS FP6 calls for proposals service <http://fp6.cordis.lu/fp6/calls.cfm>.

▪ National Contact Points (NCPs)

Each Member State and Associated State has a network of National Contact Points for the different priorities of FP6. These are your local experts who should always be your first point of contact for personalised help and advice in your own language. National Contact Points are listed at CORDIS FP6 NCP service <http://www.cordis.lu/fp6/ncp.htm>.

▪ Europa

Europa is the European Union's main public information site: www.europa.eu.int. It carries information about the structure of the EU and its institutions, and about the work of the research Programmes.

▪ Programme infodesks

Each priority within the FP6 has a specific infodesk. Once you have looked through all the published information and contacted the relevant NCP you can email any remaining questions to the priority infodesk listed at European Commission FP6 Infodesks <http://www.cordis.lu/fp6/infodesks.htm>.

Practicalities

▪ Downloading files

All the documents you need in order to understand FP6 and to submit a proposal are downloadable *via* the Web. There are a number of documents for each part of FP6 and so in total the document set is very large and complex. This can cause a number of problems, from server

overload at peak times to your organisation's security systems blocking access to some file types. In order to prevent this most of the documents are in *Portable Document Format (pdf)* and are 'zipped'. This means that opening a document requires that you have installed on your computer the software utilities to unzip files and open *pdf* files. The download pages on CORDIS have links to sites where you can download this free software.

- **What documents do you need?**

As there is a lot of information to download a good tip is to adopt a structured approach from the beginning. It is also a good idea to re-name files in your own way as you download them. The Commission only gives them formalised file names that are part of its document control system. First of all there are a number of documents that give the legal background to the Framework Programmes and FP6.

Further on, each of the Specific Programmes of FP6 has a Work Programme (with subsections by priority) that defines and plans what it is trying to achieve as a Programme. As FP6 is not structured by research disciplines, it is essential to consider what is the innovative element that is at the core of your project idea and to search for this subject within the Work Programmes. A short cut to searching for relevant research subjects rather than looking through all the Work Programmes is to look at the list of activity codes at http://fp6.cordis.lu/fp6/list_areas.cfm.

After having a rough orientation, it is essential that proposers read the work programme at an early stage to identify whether or not their research idea can be made to fit with the detailed objectives of the activity.

The work programme also comprises road maps, *i.e.* time plans for future Calls for proposals. A call often relates to just one specific part of a work programme. Proposers have to take into account this aspect of timing to submit their proposal.

Work programmes also comprise the criteria, which will be the basis for the evaluation of proposals by external experts.

Updating

Describing FP6 involves a massive amount of complex information, some of which can be subject to changes, additions, and amendments at the detailed level. It is important therefore to check for any changes before submitting a proposal. This could be done on the priority site, but there is also a central FP6 calls for proposals service <http://fp6.cordis.lu/fp6/calls.cfm>, where all addenda are published, plus you could make searches for any new documents. An easy way to be kept automatically up to date is to register with CORDIS and set up a Rapidus Quick Pick profile.

The main actions under Integrating Research

Integrating Research is the largest part of FP6 and will account for 80% of the total budget. This integration is to be accomplished by carrying out research projects that have an integrating effect on the researchers and their organisations. Research will be carried out using the three main research instruments 'Integrated Projects', Networks of Excellence' and 'Specific Targeted Research Projects'. In addition, the supporting instruments 'Coordination Actions' and 'Specific Support Actions' will be used.

In order to focus this research on priorities that have the most relevance to Europe's citizens, seven priority themes have been devised through a process of consultation among politicians, experts, and the public.

The seven thematic priorities

- **Life sciences, genomics and biotechnology for health**

Integrating post-genomic research into the more established biomedical and biotechnological approaches. Involvement of key stakeholders *e.g.* industry, healthcare providers and physicians, policy makers, regulatory authorities, patient associations and experts on ethical matters.

▪ **Information Society Technologies (IST)**

Direct contribution to European policies for the knowledge society and the e-Europe Action Plan; medium and long term RTD on the future generation of technologies integrating computers and networks into the everyday environment; placing the individual at the centre.

▪ **Nanotechnologies and nanosciences, knowledge-based multifunctional materials, and new production processes and devices**

Contribution to the creation of the scientific base for the transition of European production industry from resource-based towards knowledge-based, more environment-friendly approaches.

▪ **Aeronautics and space**

Striving towards higher levels of technological excellence by consolidating and concentrating RTD efforts in the context of the Advisory Council for Aeronautics Research in Europe and the European Strategy for Space.

▪ **Food quality and safety**

Improve health and well-being of European consumers through a higher quality of food, improved control of food production and of related environmental factors. Re-address the classical ‘farm-to-fork’ approach by giving priority to consumers’ demands and rights for high-quality and safe food. ‘Fork-to-farm’ approach as the primary driver for developing new and safer food production chains and foods.

▪ **Sustainable development, global change, and ecosystems**

Strengthening the S&T capacities needed for Europe to be able to implement a sustainable development model in the short and in the long term, integrating its social, economic and environmental dimensions; contributing to international efforts mitigating adverse trends in global change.

▪ **Citizens and governance in a knowledge-based society**

Mobilisation of European research in economic, political, social sciences and humanities that are necessary to develop an understanding of, and to address issues related to, the emergence of a knowledge-based society and new forms of relationships between its citizens, on the one hand and between its citizens and institutions, on the other.

Cross-cutting activities

▪ **New and Emerging Science and Technology**

This programme is an additional ‘open’ theme that is designed to discover any new and emerging areas of research that have not been foreseen in the seven priority themes. It will use the ‘old instruments’ (STREPS) because they are more appropriate for this exploratory work.

It will be implemented through three types of projects:

- ⇒ **Adventure projects** – high-risk multidisciplinary projects to discover and validate new scientific areas
- ⇒ **Insight projects** – rapid-reaction projects to get to grips with new problems as they emerge (*e.g.* in the past BSE and AIDS)
- ⇒ **Pathfinder initiatives** – large scale projects building competence in emerging areas and laying the foundations for them becoming part of the mainstream Framework programmes

Adventure projects and Insight projects are to some extent the ‘feelers’ that will establish the need for research. Pathfinder initiatives will be used to develop the areas identified by one or more Adventure/Insight projects.

- **Research for Policy Support**

Actions under Research for Policy Support will underpin the formulation and implementation of Community policies; in particular the common agricultural policy (CAP), the common fisheries policies (CFP), environment, energy, transport, health, development aid, consumer protection, *etc.* Research in this area will be mainly carried out by means of Specific Targeted Research Projects and Coordination Actions. In duly justified cases, limited use can be made of Integrated Projects (IPs) and Networks of Excellence (NoEs).

- **Specific SME activities**

As well as encouraging SMEs to participate in 'collaborative' projects such as IPs, NoEs, and STREPs where the partners do the research, there are two specific schemes for SMEs having a capacity to innovate but with limited research capacity:

- ⇒ **Co-operative Research** – where the partners commission external research performers (research institutes, universities, *etc.*) to do the work. Projects are relatively short-term: their duration must be at least one year, with a maximum of two years. Other enterprises and end-users will be able to participate in Co-operative Research Projects, under conditions ensuring they do not assume a dominant role. The intellectual property rights of the results belong to the SME participants.
- ⇒ **Collective Research** – Industrial Associations dominated by SMES or other groupings of SMEs may commission RTD performers in order to expand the knowledge base of large communities of SMEs. They will be substantial projects of two to three years duration, conducted on a European basis. An “SME core group” should contribute to the project, from its definition phase to the dissemination of the results obtained. The intellectual property rights belong to the Industrial Associations/Groupings, whilst the SME core group will benefit from the exploitation of the results. Selection of Collective Research proposals will be done in two stages: stage 1 for outline proposals and stage 2 for full proposals. A detailed overview of the measures, which will be implemented to promote the participation of SMEs in FP6 is available at http://sme.cordis.lu/research/fp6_support.cfm.

- **International Cooperation (INCO)**

INCO represents an important dimension of the Sixth Framework Programme by opening the European Research Area to the world.

It will be implemented through three major routes:

- ⇒ **Opening of "Focusing and Integrating Community Research" to third country organizations** – funding is available for the participation of researchers, teams and institutions from third countries in projects within the seven Priority Thematic Areas of Research and under "Specific activities covering a wider field of research". The funding modalities depend on the status of the researcher's country.
- ⇒ **Specific measures in support of international co-operation** - INCO activity that includes dedicated international cooperation activities, which are relevant to some groups of countries or regions and which are not addressed by the other thematic activities of the programme "Integrating and Strengthening the European Research Area". These specific international cooperation activities will support the Community's external relations and development aid policies, in particular the fight against poverty, the EU Water Initiative and the commitment towards the Millennium Development Goals. They will involve: Developing countries, Mediterranean partner countries, Western Balkan countries, Russia and the other NIS.
- ⇒ **International activities under the heading of Human Resources** - Marie Curie actions will be opened to third country researchers under the normal host-driven schemes. Experienced researchers can apply for a Marie Curie International Incoming fellowship scheme, and organisations in Third countries can host European researchers

under the Marie Curie International outgoing fellowship scheme. The stay in Europe of a third country researchers in case of developing countries and emerging and Transition economies can be complemented, if requested, by a re-integration grant in the country of origin.

Strengthening actions

A second way in which FP6 will contribute to the ERA is described as 'Strengthening the foundations of the European Research Area'. This part of FP6 is aimed at the Member States and regions, as well as non-EU programmes such as COST and 'Eureka!'. It aims to provide funding to help open up programmes for coordination, and cooperation and the exchange of best practice. It could include actions such as foresight exercises, benchmarking, mapping, and improving the regulatory environment.

▪ **Coordination of research activities and ERA-NET**

The objective of the ERA-NET scheme is to improve the cooperation and coordination of research programmes funded at national or regional level through:

- ⇒ The networking of national or regional research programmes
- ⇒ The mutual opening of national and regional research programmes

As well as national and regional programmes, bodies operating at European level that include the pan-European coordination of nationally-funded research as part of their mission may participate in ERA-NET – for example CERN, ESA, ESO, EMBL, ESRF, ILL. There will also be closer cooperation between the framework programme and other European frameworks of research such as COST and EUREKA.

▪ **Development of research/innovation policies**

This action aims to encourage the coherent development of research and innovation policies in Europe by early identification of challenges and areas of common interest and by providing policy makers with knowledge and decision-aiding tools.

It may be implemented for example by:

- ⇒ Analysis and studies relating to foresight, statistics and science and technology indicators
- ⇒ Benchmarking of research and innovation policies at national, regional and European level
- ⇒ Mapping scientific and technological excellence in Europe
- ⇒ Improving the regulatory and administrative environment for research and innovation

Structuring actions

Structuring the European Research Area is about creating a world-class research capability combined with a receptive commercial environment for the application of new technology, and improving the process of moving technology from laboratory to application.

It includes:

- ⇒ Stimulating technological innovation, utilisation of research results, transfer of knowledge
- ⇒ Mobility and training of researchers
- ⇒ Research infrastructures
- ⇒ Science and society

▪ **Research and Innovation**

The Research and Innovation activity relates the research effort to its subsequent exploitation and the growth of innovation. Much of the activity's budget is set aside for specific Commission services and actions such as CORDIS, IRCs, IREs IPR Helpdesk, Gate-2-Growth and the like.

There is also provision for experimental projects trying out new ways of transferring technology into applications. Some of the programme will deal with establishing and supporting technology-based businesses.

This heading may be used to fund projects in the area of:

- ⇒ Foresight and policy input exercises
- ⇒ Co-operation with the European Investment Bank and Structural Funds
- ⇒ Examining and assessing the Innovation Directorate activities

▪ **Human resources and mobility - Marie Curie Actions**

The objective of these actions is the development and transfer of research competencies, the consolidation and widening of researchers' career prospects and the promotion of excellence in European research. Marie Curie actions are open to researchers of all levels of experience regardless of nationality. All fields of scientific and technological research are covered and, as such, the actions are driven entirely by the research proposals submitted by the applicants.

Marie Curie consists of:

- ⇒ Fellowships which sponsor individuals to undertake placements and the host organisations they are employed within
- ⇒ Research Training Networks that link host organisations
- ⇒ High-level scientific conferences
- ⇒ Excellence awards, chairs and prizes

▪ **Research Infrastructures**

This action is aimed at encouraging maximum European-wide use of 'big science' facilities and other substantial infrastructures that may currently be restricted by national boundaries. It will include projects concerning high-speed broadband communication infrastructure such as GRID/Géant projects.

The action proposes:

- ⇒ Transnational access
- ⇒ Integrating activities
- ⇒ Preparatory work for the creation of new European scale infrastructures
- ⇒ Optimising existing infrastructures

▪ **Science and Society**

This action is aimed at developing structural links between institutions and activities concerned with the dialogue between the scientific community and society at large.

The priority is divided in the following areas:

- ⇒ Science and Governance
- ⇒ Scientific Advice and reference systems
- ⇒ Ethics and Research
- ⇒ Public Awareness of S&T
- ⇒ Young People and Science
- ⇒ Women and Science

As well as being a separate activity in its own right, Science and Society impacts all projects in that you should always consider the societal issues as an integral part of research. Integrated Projects and Networks of Excellence have a specific requirement to produce a gender action plan.

Overview of FP6 structure

The following table is a schematic overview of the structure of FP6 which shows the relationships of the two Specific Programmes to the activities and actions.

FP6 (EC part): Three Main Blocks of Activities								
Block 1: Focusing and Integrating European Research								
7 Priority Thematic Areas							Specific activities Covering a Wider Field of Research	
Life sciences, genomics and biotechnology for health	Information society technologies	Nanotechnologies and nano-sciences, knowledge-based functional materials, 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	Research for policy support	New and emerging science and technologies (NEST)
							Specific research activities for SMEs	
							Specific international co-operation activities	
Block 2: Structuring the ERA						Block 3: Strengthening the foundations of ERA		
Research and Innovation	Human resources & mobility (Marie Curie actions)	Research infrastructures	Science and society				Co-ordination of research activities	Development of research/innovation policies

Key

- Specific Programme "Integrating and Strengthening the European Research Area"
- Specific Programme "Structuring the European Research Area"

References

- CORDIS FP6 service: <http://fp6.cordis.lu/fp6/home.cfm>
- CORDIS FP6 calls for proposals service: <http://fp6.cordis.lu/fp6/calls.cfm>
- CORDIS FP6 NCP service: <http://www.cordis.lu/fp6/ncp.htm>
- Europa EU main public information site: <http://europa.eu.int>
- European Commission FP6 Infodesks: <http://www.cordis.lu/fp6/infodesks.htm>
- FP6 activity codes: http://fp6.cordis.lu/fp6/list_areas.cfm
- Research site on Europa: http://europa.eu.int/comm/research/index_en.cfm
- Specific programme "Integrating and strengthening the European Research Area": <http://www.cordis.lu/fp6/find-doc.htm#sp>
- New and Emerging Science and Technology (NEST) website: <http://www.cordis.lu/nest/home.html>
- Research for Policy Support: <http://www.cordis.lu/fp6/support.htm>
- SME TechWeb: http://sme.cordis.lu/research/fp6_support.cfm
- International cooperation (INCO) website on CORDIS: http://www.cordis.lu/fp6/inco_policies.htm
- CORDIS website on Coordination of Research Activities: <http://www.cordis.lu/coordination/home.html>
- Development of research/innovation policies: <http://www.cordis.lu/fp6/policies.htm>
- ERA-NET: ftp://ftp.cordis.lu/pub/rtd2002/docs/era-net_0103.pdf
- Specific programme "Structuring the European Research Area": <http://www.cordis.lu/fp6/find-doc.htm#sp>
- Research and Innovation CORDIS web service: <http://www.cordis.lu/fp6/innovation.htm>

- Science and Society CORDIS web service: <http://www.cordis.lu/rtd2002/science-society/home.html>
- Marie Curie actions: www.cordis.lu/fp6/mobility.htm
- Infrastructure actions: <http://www.cordis.lu/fp6/infrastructures.htm>
- Governance website: http://europa.eu.int/comm/research/science-society/science-governance/science-governance_en.html
- Scientific Advice website: http://europa.eu.int/comm/research/science-society/science-governance/sinapse_en.html
- Science and Ethics website: http://europa.eu.int/comm/research/science-society/ethics/ethics_en.html
- Public Awareness of S&T website: http://europa.eu.int/comm/research/science-society/scientific-awareness/scientific-awareness_en.html
- Young People and Science website: http://europa.eu.int/comm/research/science-society/youth-science/youth-science_en.html
- Women and Science website: http://europa.eu.int/comm/research/science-society/women-science/women-science_en.html