

Public funding of research projects

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Index

Introduction	5
Objectives	7
1. Resources	9
1.1. Personnel	9
1.2. Infrastructure	10
1.3. Travel accommodation and subsistence	10
1.4. Durable equipment	11
1.5. Fungible	11
1.6. Others	11
2. Costs	12
3. Project proposal	13
3.1. Project title	13
3.2. Summary	13
3.3. Description of the research activity programme	13
3.4. Evaluation schema, specific for the research activity programme and the project	14
3.5. Detailed budget for the proposed research programme	14
3.6. Diffusion and dissemination plan	14
4. Sources	15
4.1. Agency for Administration of University and Research Grants	15
4.2. National R+D+I Plan	17
4.3. 7th Framework Programme of the European Commission	22
Summary	27
Activities	29
Bibliography	30

Introduction

Universities and research centres do not usually have enough resources to carry out research projects. For this reason, researchers or research teams obtain external funding for research that usually comes from public institutions like the European Union or regional or state governments. Each institution has several funding programmes that cover all research fields, i.e. from mathematics to social sciences through engineering. Moreover, every programme is focused in one type of research, for instance, basic research, applied research, international cooperation between two countries, collaboration between universities and companies, etc. Usually, every year there is a funding programme call and the institution publishes the regulatory bases. The bases specify all call aspects, for instance who can participate, the call characteristics, what can be funded, the deadline, the documentation to submit, the evaluation, the justification etc.

In this sense, we should mention that funding programmes are competitive, i.e. every research team (or researcher) submits a proposal that is evaluated. When researchers apply for a grant (pre-doctoral, post-doctoral, travel etc.), they submit their curriculum vitae (CV). The applications with higher score obtain funding, either the same that was requested in the proposal or a lower amount. At the end of the project, the research team reports its scientific results and must justify the project expenditures.

Before applying for a research project, we must define our research objectives. When we know what results we want to obtain, we can foresee the resources that we need. Once we have identified the needed resources, we can estimate the project costs. Next, we must search the funding programmes that best feed with our project and see if the calls are open (remember that there is usually a deadline). The regulatory bases are important because they detail the documentation that we must submit.

The success of our application depends on several issues, for instance, the technical project, our research team and the budget. The project must be well defined and the objectives must be ambitious but achievable according to the proposed planning. The research team is also important, since one part of the score corresponds directly with this issue. When we apply for a grant, our score is basically our CV. Finally, the budget must be reasonable with the project objectives.

This module is devoted to public funding of research projects (PFRP). In the first section, we will introduce the resources that we can obtain through a research project. The second section defines the different types of costs of a research project. The third section presents the standard structure of an ap-

plication of a research project. Finally, in the fourth section, we will introduce the funding programmes of the following public institutions: Catalan Government (Agency for Administration of University and Research Grants), Spanish Government (National R+D+I Plan) and the European Commission (7th Framework Programme).

Objectives

The goals to be achieved by studying this module are the following:

- 1.** To know the resources that we can obtain from a research project
- 2.** To know the different cost of a research project
- 3.** To understand the application structure of a research project
- 4.** To know the public funding sources of research.

1. Resources

Once we know the project objectives, we can anticipate the financial resources we need to carry out the project. These resources can be classified in the following categories:

- personnel,
- infrastructure,
- travel accommodation and subsistence,
- durable equipment (inventorially),
- fungible equipment (consumable cost), and
- others.

In this section, we will describe this classification.

1.1. Personnel

In order to carry out the project, it can be necessary to hire new personnel. The regulatory bases will specify the job category, the wage, the maximum duration of the contract etc. for the personnel that we can contract by means of the project. These personnel can be classified as follows:

a) Senior researchers. Senior researchers hold a PhD and are expert in their fields of research. They produce relevant publications and can be the advisors of pre-doctoral students.

b) Post-doctoral researchers. A post-doctoral researcher is a person who has obtained a PhD within the five previous years. She/he is intended to further deepen expertise in a specialist subject and it is expected that she will produce relevant publications. They can be advisors of pre-doctoral students.

c) Pre-doctoral grant holders. Pre-doctoral students are registered in a PhD programme and work together with a professor (advisor) in order to obtain their PhD degrees.

d) Technicians. The technicians help researchers developing prototypes or doing experiments with the research equipment.

e) Administrative. The administrative staff help researchers with the project management issues.

1.2. Infrastructure

The term *research infrastructures* refers to facilities and resources that provide essential services to the research community in both academic or industrial domains. We can classify the infrastructures as follows:

- a) **Single-sited:** single resource at a single location.
- b) **Distributed:** a network of distributed resources, including infrastructures based on Grid-type architectures.
- c) **Virtual:** the service is provided electronically.

Infrastructure examples

Singular large-scale research installations, collections, special habitats, libraries, data-bases, integrated arrays of small research installations, high-capacity/high-speed communications networks, networks of computing facilities (e.g. grids), as well as infrastructural centres of competence which provide a service for the wider research community based on an assembly of techniques and know-how, scientific equipment etc.

1.3. Travel accommodation and subsistence

When more than one institution (universities, research centres or companies) take part in the project, coordination is necessary. This coordination usually implies some face-to-face meetings, for example, the principal researchers of every institution meet every year or at the end of every milestone. A meeting entails travel and, optionally, accommodation and subsistence, for each assistant.

Typically, the research results are published in conference proceedings or, of course, in a research journal. The conference organisation only publishes a work if at least one of the authors is registered and presents the work publicly in the conference. Thus, travel and accommodation costs must be considered.

The means of transport accepted are usually plane, train, bus etc. The distance travelled using one's own car usually is usually not eligible, i.e. the research project will not reimburse this expense.

Accommodation and subsistence costs include food and lodging. However, you must be aware when you book lodging, because nowadays there is a maximum price depending on the country. The research project only will refund you up to this maximum. Usually, telephone calls, laundry and any other extras are not eligible.

1.4. Durable equipment

The durable equipment comprises the cost of equipment purchased or leased for the purpose of the project. The researchers should describe and justify the equipment to be specifically purchased for use under the project.

The funding institution can pay 100% of the equipment or only a part, i.e. the amortisation during the project. For example, it has been established that the amortisation time of a computer is 4 years. Thus, if the project duration is 3 years, the research team must pay 100% of the computer (e.g. 1000 euros) and it will receive 75% (750 euros).

1.5. Fungible

We use the term *fungible* to refer to small equipment or parts that may be replaced, for example, a toner cartridge, paper or pens.

1.6. Others

Based on the regulatory bases of the project, we could consider the estimated patent cost. We can presume that we will obtain a valuable result that could be patented. Thus, we can include the patent cost. If we need external assistance, either technical or administrative, we can include it.

2. Costs

Previously, we have listed the resources needed to carry out the project. These resources are mainly the project costs and can be classified as follows: total cost, direct cost, indirect cost and marginal cost. Next, we will describe them briefly.

a) The **total cost** is the total economic cost of production, and it is made up of variable costs.

b) The **direct cost** is the cost that can be associated with a particular object.

c) The **indirect cost** is the cost that is not directly accountable to a particular function or product. Indirect costs include taxes, administration, personnel and security costs.

d) The **marginal cost** is the additional costs required to make the project.

Table 1. Example of project costs

Concept	I have	I need	Total
Personnel			
Infrastructure			
Travel, accommodation and subsistence			
Durable equipment			
Fungible			
Others			
Total			
		Marginal cost	Total cost

Table 1: Costs of resources for project development.

3. Project proposal

There is not a unique project structure. Every funding institution defines a specific project structure for every call. In this section, we will present a standard structure with the following sections: project title, summary, description of the research activity programme, evaluation schema, detailed budget and diffusion and dissemination plan.

3.1. Project title

The title should be descriptive, without being excessively long. Usually, the project has a short name that is obtained using some letters of the title, i.e. the project acronym. It is a good practice to check whether the web domain of the short title is available, because we could obtain the domain for the project website.

3.2. Summary

The summary, as in a scientific article, must introduce the context of the project, present the problem (or problems) to be addressed and finally the research tasks in order to solve the problems. The summary cannot exceed a fixed number of words, for example, 100 words.

3.3. Description of the research activity programme

In this section we introduce the project scope and a rigorous description of the state of the art. Next, we must explain the novelty, feasibility and opportunity of our project. Finally, we present our mission and the objectives of the project.

In order to reach the project objectives we should explain the methodology that we will follow and present a design and work plan for the proposed research. Each objective should be addressed at least by one WP. Otherwise, it is not possible to carry out the objective. The work plan is composed of several work packages (WP). When there are two or more institutions participating in the project, we must specify the package leader and the participating institutions.

The WP must describe the achievements of the team relevant to this WP, the challenges and relation with other work packages. It is important to explain the WP specific objectives and the task list related with the objectives. In order to understand the project, we can include a work plan-timing diagram (i.e. Gantt Chart).

If there are several institutions participating in the project, we can describe the functional structure and the research domains of the project groups. In this case, the coordination is important and we should define the structures and elements needed for the team co-ordination and operation.

3.4. Evaluation schema, specific for the research activity programme and the project

In projects developed over several years, the research team must report the reached research objectives and the quantitative performance indicators. The project application should define the reporting dates and the expected indicators (number of publications, patents, PhD thesis etc.).

3.5. Detailed budget for the proposed research programme

The resources required for a research project, i.e. the cost of personnel to be hired, the direct execution costs (infrastructure, durable equipment, travel and subsistence etc.) are summarised above. In this section, we will specify the budgeted execution schedule in detail. It is important to explain why we need the resources.

The application will obtain a higher score if the research project has been co-funded by other institutions or sources.

3.6. Diffusion and dissemination plan

The diffusion and dissemination plan details how the research team will publicise the search result to the scientific community and the general society.

4. Sources

In this section, we will briefly introduce the funding programmes of the following public institutions:

- a) Catalan Government (Agency for Administration of University and Research Grants),
- b) Spanish Government (National R+D+I Plan), and
- c) the European Commission (7th Framework Programme).

You can visit the web page of the above intuitions if you want to obtain more information. Note that research is very dynamic and the information provided in the module can be obsolete.

4.1. Agency for Administration of University and Research Grants

The Agency for Administration of University and Research Grants (AGAUR) is an instrument of the Ministry of Economy and Science of Catalonia. It is a body for the management of different lines of scholarships and grants for university students as well as programmes to promote research in Catalonia.

AGAUR has he following funding lines: research projects, groups and networks, infrastructure, conferences and symposia, and other grants. In this section, we will list the funding programmes for every funding line. You can find more information in the AGAUR website.

a) Research projects

- INFOREGIO/AJUTS: Grants for funding tractor projects in the areas of e-health, e-culture and e-Infrastructures in the Inforegion.
- VALOR 2010: Grants to promote projects and assessment activities of research and technology.
- ITT-CTP: Grants for funding research projects and technological development in the framework of the Working Community of the Pyrenees.
- PBR: Batista i Roca Projects. Grants for funding research projects on topics in the Social Sciences and Humanities.

- RICIP: Grants for research works in the context of peacekeeping.
- ARAFI: Grants to promote applied research and university education on immigration in Catalonia.
- ISPC: Financial assistance for conducting research projects, study and analysis of security in Catalonia.
- LiderEU: Grants for participation in European R & D projects of the 7th Framework Programme.
- ARIE: Grants to support the development of research projects and innovation in non-higher education institutions.
- SALUT: Grants to support the development of a research project on health and information and communication technologies.
- RDG: Grants for the study of gender inequalities arising in science and university.
- EBRE: Grants "from the Ebro to the Pyrenees: civil-war and the first post-war years" for projects addressed to make an inventory of sites, documenting witnesses and gather historical information regarding the Spanish Civil War (1936-1939) and the first post-war years.
- EXCAVA: Grants for the development of field work surveying sites of archaeological or paleontological significance with international scientific impact.

b) Groups and networks

- SGR: Grants to support the activities of research groups in Catalonia.
- XI-CTP: Grants for the development and consolidation of thematic networks of research in the framework of the working community of the Pyrenees.
- XIRE-R: Renewal of grants to support the promoted networks of educational research.

c) Infrastructure

- PEIR: Grants for equipment and infrastructure assigned to research.

d) Conferences and symposia

- ARCS: Grants for the organisation of conferences, symposia, conferences and seminars with especial relevance in the scientific, social, humanistic and technological fields that are organised in Catalonia.

e) Other grants

- Pre-doc:
 - TEM: Grants to companies for the hiring of research personnel through the company programme Talent - Mode A.
 - FI: Grants for universities and research centres for the recruitment of new research personnel.
- Post-doc:
 - TEM: Grants to companies for the hiring of research personnel through the company programme Talent - Mode B.
 - PREPOST: Programme of loans for postgraduate studies.
 - PREFE: Programme of preferential subsidised loans for university students.
 - PIV: Call for research scholarships for visiting lecturers and researchers in Catalonia.
 - BDH: Post-doctoral grants and subsidies of the DGR Programme - Henkel KGaA (BDH 2009).
 - BFUL: Award of the Autonomous Government of Catalonia-Fulbright postdoctoral.
 - BP: Grants and postdoctoral aid in the Beatriu de Pinós, and
 - BDH: Post-doctoral grants and subsidies of the DGR Programme - Henkel KGaA.

4.2. National R+D+I Plan

The National Scientific Research, Development and Technological Innovation Plan (National R&D&I plan) is the Spanish Science, Technology and Enterprise system's programming instrument to achieve the country's goals and priorities of research, development and technological innovation policy in the medium term, as defined in the Science Act and in the National Science and Technology Strategy (ENCYT).

The National R&D&I plan is divided into four areas:

- 1) generation of knowledge and scientific and technological capabilities,
- 2) promoting cooperation in R&D,
- 3) sectorial development and technological innovation, and
- 4) strategic actions.

Based on the four areas, the national plan provides a set of tools grouped into six instrumental lines of actuation:

- 1) human resources (HR),
- 2) R+D+I,
- 3) institutional strengthening,
- 4) infrastructure,
- 5) knowledge utilisation, and
- 6) articulation and internationalisation of the system.

Moreover, the national plan has three strategic actions:

- 1) health,
- 2) climate change and energy, and
- 3) the telecommunications and information society.

Next, we will enumerate the grants for every instrumental line and strategic action. You can find more information in the website of the grant that is in the corresponding Ministry, i.e. Ministry of Science and Innovation (MICINN), Ministry of Education (MEC) and the Ministry of Industry, Tourism and Trade (MITYC).

a) Instrumental line of action of human resources

- Human resources formation
 - FPI: Researcher Training (MICINN)
 - FPU: University Teacher Training (ME)
 - FPI-INIA: Researcher Training in food and agriculture (MICINN)
 - CSIC-JAE-Predoc: Support for the development of doctoral theses of the "Committee for Advanced Studies" (MICINN)
 - "Salvador de Madariaga" (ME)
- Human resources mobility
 - Mobility of Spanish teachers and researchers in foreign institutions (ME)
 - Mobility of foreign professors and researchers in Spanish institutions (ME)
 - Postdoctoral mobility in foreign centres (ME)
- Human resources recruitment and hiring
 - RYC: Programa Ramón y Cajal (MICINN)
 - JDC: Programa Juan de la Cierva (MICINN)
 - PTA: Recruitment of technical support personnel (MICINN)
 - PTQ: Programa Torres Quevedo (MICINN)
 - JAE-Doc: Recruitment of PhDs of the "Board for Advanced Studies" (MICINN)

- JAE-CSIC-Tec: Recruitment of technical personnel research and knowledge transfer of the "Committee for Advanced Studies" (MICINN)
- DOC-INIA: Recruitment of PhDs in agricultural and food research (MICINN)
- INNCORPORA (MICINN)
- National Research Awards (MICINN)
- CIEMAT: Research Personnel Training (MICINN)

b) Instrumental line of action of R+D+I

- Fundamental Research Projects
 - Non-guided fundamental research projects (MICINN)
 - Complementary actions for non-guided fundamental research projects (MICINN)
 - TRACE: Fundamental research projects for the transfer of knowledge to -companies (MICINN)
 - INIA: Fundamental research projects for agrarian resources and technologies in partnership with autonomous regions, and of complementary actions (MICINN)
 - CONSOLIDER research projects (MICINN)
- Applied Research Projects
 - Applied industrial research (MICINN)
 - Collaborative applied research projects (MICINN)
 - Applied aerospace research projects (MICINN)
 - Applied research projects in technology centres (MICINN)
- Experimental Development Projects
 - Industrial experimental development projects (MICINN)
 - Experimental development projects in technology centres (MICINN)
 - Experimental development projects for the environment and eco-innovation, National Parks subsection (MICINN)
- Innovative Projects
 - InnoEmpresa (MICINN)

- Other activities to promote R&D&I in R&D&I projects
 - CDTI-BANCA line (MICINN)

c) Instrumental line of institutional Reinforcement

- Institutional Reinforcement
 - Support for strategic research programmes to be carried out by excellence centres and institutions (MICINN)

d) Instrumental line of scientific and technological infrastructures

- Scientific-technological infrastructures
 - ICTS: design, viability, access and improvement of the Unique Scientific and Technical Facility (MICINN)
 - ACTEPARQ: Scientific and Technological Activities in Science and Technology Parks (MICINN)
 - CREA: Creation and consolidation of technological centres (MICINN)
 - Acquisition of scientific and technological infrastructure in food and agriculture R&D centres belonging to the INIA and autonomous regions (MICINN)
 - ERDF: Scientific and technological projects co-funded by the European Regional Development Fund (MICINN)
 - Support for the implementation of management systems and R&D&I departments in companies (MICINN)

e) Instrumental line of use of knowledge and transfer of technology

- Technology transfer, assessment and promotion of technology-based companies
 - INNCIDE: Support for the transfer function in research centre (MICINN)
 - CEIPAR: Creation of innovative technology-based companies in science and technology parks (MICINN)
 - NEOTEC (MICINN)

f) Instrumental line of deployment and internationalisation of the system

- National Network Programme (MICINN)
 - AEI: Support for innovative business groups (MICINN)
 - Support for technological platforms (MICINN)

- National Public-private cooperation programme
 - CENIT: Support for national strategic consortia for technical research (MICINN)
 - Support for special strategic projects (MICINN)
 - Support for public-private cooperation programmes related to transport and infrastructures (MICINN)
 - INNPACTO (MICINN)

- National R&D Internationalisation Programme
 - International projects (MICINN)
 - EUROINVESTIGACIÓN (MICINN)
 - FCCI: Promoting international scientific cooperation (MICINN)
 - Specialisation in International Organisations (MICINN)
 - Actions relating to international scientific infrastructures (MICINN)
 - Support for the participation of technology centres in international R&D programmes (INNOEUROPA) - (MICINN)
 - Incentives for international projects led by companies (EUROSTARS, EUREKA, IBEROEKA and bilateral programmes) - (MICINN)
 - TECNOEUROPA (MICINN)

g) Strategic action on health

- Human resources
 - PFIS: Pre-doctoral grant for training in health research (MICINN)

 - FGIN: Pre-doctoral grant for management of research in health (MICINN),

 - Río Hortega Grants for contracts of training in research for health-care professionals who have completed specialist medical training (MICINN)

 - BAE: Bags of further education (MICINN)

 - Sara Borrell post-doctoral grants to improve the research in health (MICINN)

 - Miguel Servet grants for research hiring in the national health system (MICINN)

 - Grants for technical contracts to support research in the national health system (MICINN)

- R+D+I projects
 - Research projects on health (MICINN)

- Scientific and technological infrastructures
 - Scientific-technological infrastructures for the national health system centres (MICINN)
- Institutional reinforcement
 - Institutional reinforcement for the health research institutes

h) Strategic action on energy and climate change

- Strategic projects for R+D+I on energy and climate change (MICINN)

i) Strategic action on telecommunications and the information society

- AVANZA – Formation (MITYC)
- AVANZA - Competitiveness (I + D + I) - (MITYC)
- AVANZA - Digital Citizenship (MITYC)
- AVANZA - Contents of social interest (MITYC)

j) Strategic action on nanoscience and nanotechnology, new materials and new industrial processes

k) Other National Plan grants

- Programme of scientific culture and innovation (MICINN)

4.3. 7th Framework Programme of the European Commission

The 7th Framework Programme (FP7) of the European Commission lasts for seven years, from 2007 until 2013, and has a total budget of over € 50 thousand million. FP7 is a complement of the national research programmes. The activities funded from FP7 must have a European added value. The research projects can be carried out by **consortia** that include participants from different European (and other) countries, or by means of individual teams with no obligation for transnational cooperation.

The FP7 has the following strategic objectives:

- a) To strengthen the scientific and technological base of European industry.
- b) To encourage its international competitiveness, while promoting research that supports EU policies.

The FP7 is complex, so that every country has a National Contact Point (NCP). NCPs give personalised help and advice to researchers and organisations in order to help them with their applications.

The FP7 allows for a wide variety of participants and is open to participation from any country in the world. EU Member States enjoy the broadest rights and access to funding. Below there is a list of candidates who can participate in a FP7 project:

- research groups at universities or research institutes,
- companies intending to innovate,
- small or medium-sized enterprises (SMEs),
- SME associations or groupings,
- public or governmental administration (local, regional or national),
- early-stage researchers (postgraduate students),
- experienced researchers,
- institutions running research infrastructures of transnational interest,
- organisations and researchers from third countries, and
- international organisations and civil society organisations.

The FP7 is structured in five areas:

1) Cooperation. It represents two thirds of the overall budget and is a collaborative research network across Europe and other partner countries through projects by transnational consortia of industry and academia. Thematic areas are the following: health, food, agriculture and fisheries, biotechnology, information and communication technologies, nanoscience, nanotechnologies, materials and new production technologies, energy, environment (including climate change), transport (including aeronautics), socio-economic sciences and the humanities, space and security.

2) Ideas. The ideas objective is to support frontier research solely on the basis of scientific excellence. Research may be carried out in any area of science or technology, including engineering, socio-economic sciences and the humanities. There is no obligation for cross-border partnerships and can be implemented by individual teams around a principal investigator. The programme is implemented via the new European Research Council (ERC).

3) People. The programme supports researcher mobility and career development, both for researchers inside the European Union and internationally. It is implemented via a set of Marie Curie actions (fellowships) and comprises the following actions: initial training of researchers - Marie Curie Networks, industry-academia partnerships, co-funding of regional, national and international mobility programmes, intra-European fellowships, international dimension - outgoing and incoming fellowships, international cooperation scheme, reintegration grants and, Marie Curie Awards.

4) Capacities. The programme includes the following activities: research infrastructures, research for the benefit of SMEs, regions of knowledge, research potential, science in society and specific activities of international cooperation.

5) Nuclear Research and training activities. The objectives are the following: research, technological development, international cooperation, dissemination of technical information and exploitation activities, as well as training. It has two specific programmes: first programme (fusion energy research, nuclear fission and radiation protection) and second programme (Joint Research Centre –JRC– in the field of nuclear energy, nuclear waste management, and environmental impact, nuclear safety and nuclear security).

The FP7 has the following funding schemes:

a) Collaborative projects. They are focused on research projects with clearly defined scientific and technological objectives and specific expected results. Consortia made up of participants from different countries and from industry and academia to carry them out.

b) Networks of Excellence. They are designed for research institutions willing to combine and functionally integrate a substantial part of their activities and capacities in a given field, in order to create a European virtual research centre in this field. This is achieved through a joint programme of activities based on the integrated and complementary use of resources from entire research units, departments, laboratories or large teams. The implementation of this joint programme of activities will require a formal commitment from the organisations integrating part of their resources and their activities.

c) Coordination and support actions. They are actions that cover not the research itself, but the coordination and networking of projects, programmes and policies, for example: coordination and networking activities, dissemination and use of knowledge; studies or expert groups assisting the implementation of the FP; support for transnational access to major research infrastructures; actions to stimulate the participation of SMEs, civil society and their networks; and support for cooperation with other European research schemes (i.e. frontier research).

d) Individual projects. These projects are carried out by individual national or multinational research teams, lead by a principal investigator, and are funded by the European Research Council (ERC).

e) Support for training and career development of researchers. The researchers from across the European Union and its research partners can participate in training programmes and career development. The support actions are named after Marie Curie.

f) **Research for the benefit of specific groups – in particular SMEs.** The programme includes research and technological development projects that are carried out by the following actors: Universities, Research centres, legal entities.

The basic principle of funding in FP7 is co-financing. EC gives grants to projects, thus contributing a certain percentage to the overall costs. The standard reimbursement rate for research and technological development activities is 50%. Nonetheless, certain legal entities (non-profit public bodies, SMEs, research organisations, higher education institutions) can receive up to 75%. For demonstration activities, the reimbursement rate may reach 50%, and for other activities (consortium management, networking, training, coordination, dissemination etc.), the reimbursement can be up to 100% of the eligible costs. The 100% rate applies also to frontier research actions under the European Research Council.

Next, we describe the steps to apply for a FP7 project.

The first step is searching the call of our interest. The concrete plans for implementing the specific programmes are announced by the European Commission in annual work programmes. These work programmes include the schedule of calls for proposals. The annual work programmes and the full texts of the calls are published on the FP7 section of CORDIS. Each call usually covers specific research areas. We may wait until the publication of a call that covers our exact area of interest. The calls are published in the EU's Official Journal. Once there is an open call of our interest, we can submit the proposal at any time until the deadline. We should use a web based electronic online tool called EPSS (Electronic Proposal Submission Service). This is the obligatory channel for submission of proposals. After the deadline for the call, a panel of independent evaluators assesses all the submitted proposals. The panel will check the proposals against a published set of criteria to see if the quality of research proposed is worthy of funding. For every item evaluated, the score must be higher than 3/5 and the total score should be higher than 24/30.

Evaluation criteria

Relevance	3/5
Potential impact	3/5
S&T excellence	4/5
Quality of the consortium	3/5
Quality of the management	3/5
Mobilisation of resources	3/5
Overall threshold	24/30

The successful proposals enter financial and scientific/technical negotiations with the European Commission (EC). A grant agreement between each participant and the EC is drawn up. This sets out the rights and obligations of the beneficiaries and the EC, including the EU's financial contribution to the research costs of the project.

Summary

This module is devoted to public funding of research projects. By studying this module, the basic skills for applying for funding of a research project should be acquired.

In the first section, we introduced the resources that we might need to obtain for a research project. We can hire new personnel (senior researchers, post-doc researchers, pre-doc researchers, technicians and administrative). We might need to obtain new infrastructures, funding for durable equipment and resources for journeys and accommodations.

Throughout the second section, we defined the different cost types of a research project (total cost, direct cost, indirect cost and marginal cost).

In the third section, we presented the standard structure of an application for funding of a research project. Thus, we described the following sections: project title, summary, description of the research activity programme, evaluation schema, detailed budget, and diffusion and dissemination plan.

Finally, in the fourth section, we introduced the funding programmes of the following public institutions: Catalan Government (Agency for Administration of University and Research Grants), Spanish Government (National Plan R+D+I) and the European Commission (7th Framework Programme).

Activities

1. You are a member of the organising committee of an international conference. Your task is to apply for a grant to the AGAUR for the conference.

- Choose the correct funding programme,
- obtain the regulatory bases of the programme, and
- prepare one application for funding the programme.

2. You are a member of the organising committee of an international conference. Your task is to apply for a grant to the MICINN for the conference.

- Choose the correct funding programme,
- obtain the regulatory bases of the programme, and
- prepare one application for the programme.

Bibliography

Agency for Administration of University and Research Grants: <http://agaur.gencat.net>

Ministry of Science and Innovation (MICINN): <http://www.micinn.es>

Ministry of Industry, Tourism and Trade (MITYC): <http://www.mityc.es>

Ministry of Education (MEC): <http://www.mec.es>

European Commission: CORDIS:

<http://www.ec.europa.eu/research/fp7/>

<http://www.ec.europa.eu/research/enquiries>

<http://www.cordis.europa.eu/fp7/>

<http://www.erc.europa.eu>