

BOOSTING EU-WESTERN BALKAN COUNTRIES RESEARCH
COLLABORATION IN THE MONITORING AND CONTROL AREA



The Gateway to the ICT Monitoring & Control Research in the Western Balkans

TRAINING GUIDE

"GETTING STARTED WITH EU ICT RESEARCH"

AUGUST 2012



Supported by the by the European Commission under the 7th Framework Programme for Research in "Information and Communication Technologies" (FP7-ICT)



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Acknowledgments

We would like to thank:

- Klara Heilingbrunner, Budapest University of Technology and Economics
- Tuuli Sokmann, H&K Estonia
- The Research Group of Tallinn Technical University
- The Estonian NCP for FP6-IST
- The Hungarian Association of IT companies
- The Hungarian Association of Content Industry
- The Hungarian IST NCP
- The Agricultural Biotechnology Centre, Hungary,
- Steven Devlin, University of Ulster

and all those who have sent their comments and suggestions for improvements.

Also, we would like to thank the IST-BONUS Project Officer, Ms Margarita Lago, HAGRID Project Officer, Mr Angelos Ktenas and the projects' reviewers, Mr Ciro Maddaloni, Mr John kayser and Mr Eduardo Barrera (IST-BONUS) and Mr Ali Azarian, Mr Bernhard Koelmeel and Ms Eleftheria Vasileiadou (HAGRID) for their valuable comments and guidance.

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FOREWORD

The current document has been produced as part of the **BALCON** project and is based on the final (sixth) edition of the Training Guide developed under the **SCUBE-ICT**, **HAGRID** and **IST-BONUS** projects. All projects were/are Coordination and Support Actions (CSAs) funded by the European Commission (EC) under the 6th and 7th Framework Programmes for Research and Technological Development in the Information and Communication Technologies (ICT) area. CSAs aim to contribute actively to the implementation of FP activities through analysis and dissemination of results or the preparation of future activities, with a view to enabling the EC achieve or define its RTD strategic objectives. In addition, those projects are implemented to stimulate, encourage and facilitate the participation of beginners / newcomers to European funded research. These target audiences include private enterprises (e.g. SMEs, etc.) and research organisations (e.g. research centres, universities, etc.) from either the EU-27 or International Collaboration Partner Countries (ICPCs) enhancing the international collaboration.

- ✓ The first version of the Guide was completed on November 2005 under the IST-BONUS project (FP6-IST) addressing the rules and procedures for participation in FP6-IST Calls.
- ✓ The Guide was further updated and improved throughout the duration of the IST-BONUS project to include initial information on the (coming) FP7-ICT Programme. The 4th edition was released on January 2007 close to the end of the project.
- ✓ The 5th and 6th editions, released on October 2007 and September 2009, were developed under the HAGRID (FP6-IST) and SCUBE-ICT (FP7-ICT) projects respectively providing more details on the procedures and funding opportunities within the first 2 periods of the FP7-ICT programme.
- ✓ Similarly, this document (7th edition of the Guide) is developed under the BALCON project (FP7-ICT) and is focusing on the last period of the FP7 programme (2013).



Title:	"Boosting EU-Western Balkan Countries research collaboration in the Monitoring and Control area" (Contract No 288076)
Duration:	September 1, 2011 – August 31, 2013 (24 months)
Programme	FP7-ICT
Website:	http://www.balcon-project.eu
Coordinator:	International Environment and Quality Services North Greece Ltd (Q-PLAN N.G., Greece, www.qplanng.gr)
Person responsible:	Mr Iakovos DELIOGLANIS +30-2310-411-191 - delioglanis@qplan.gr
Project Overview:	BALCON is a Support Action funded by the European Commission under the FP7-ICT programme aiming to: ✓ <i>reinforce the research cooperation</i> between the academic and industrial communities from the EU and the Western Balkan Countries (WBC) for the design, development and implementation of systems and applications for Monitoring and Control (M&C); ✓ <i>facilitate the preparation of joint R&D initiatives</i>; ✓ <i>promote the research capacity and achievements</i> of competent WBC research actors; and ✓ <i>foster collaboration and bring into contact</i> researchers from EU and WBC.
Consortium:	2. Q-PLAN North Greece Ltd (www.qplanng.gr) - Greece 3. Inno TSD (www.inno-group.com) - France 4. European Embedded Control Institute (www.eeci-institute.eu) - France 5. School of Electrical Engineering, University of Belgrade (www.etf.bg.ac.rs) – Serbia 6. Croatian Institute of Technology (www.hit.hr) - Croatia 7. Ministry of Science of Montenegro* (www.mna.gov.me) – Montenegro 8. Agency for Electronic Communications (www.aec.mk) - FYROM 9. Faculty of Electrical Engineering, University of Sarajevo (www.etf.unsa.ba) – Bosnia and Herzegovina
Project Officer:	Mr Alkis Konstantellos

* The partner Ministry of Science of Montenegro withdraw from the project on November 2011



Title:	"Strategic Cooperation in Ukraine, Belarus and EU in Information and Communication Technologies" (Contract No 231148)
Duration:	January 1, 2009 – December 31, 2010 (24 months)
Programme	FP7-ICT
Website:	http://www.eeca-ict.eu
Coordinator:	International Environment and Quality Services North Greece Ltd (Q-PLAN N.G., Greece, www.qplanng.gr)
Person responsible:	Mr Kostas BOUGIOUKLIS +30-2310-411-191 - bougiouklis@qplan.gr
Project Overview:	SCUBE-ICT was an innovative EU funded initiative aiming to upgrade the cooperation in the field of Information and Communication Technologies (ICT) between EU, Belarus and Ukraine in key areas of mutual interest in order to create substantial socio-economic benefits in all three regions. A wide range of diversified activities were implemented at two levels: Research / industrial level ✓ Analysis of the Belarusian and Ukrainian research and industrial ICT domain, ✓ Creation of a 'pool' of key ICT players from Belarus and Ukraine to promote collaboration with their EU counterparts. ✓ Consultation to highly motivated ICT actors from the three regions and support their collaboration under FP7-ICT research activities. Policy level ✓ Identification and analysis of existing and future commonalities and differences in ICT R&D policies between EU and the targeted countries. ✓ Support and facilitation of policy dialogue towards future cooperation directions in the ICT Research and Development field.
Consortium:	- Q-PLAN North Greece Ltd. (www.qplanng.gr) - Greece - Intelligentsia Consultants Ltd (www.intelligentsia-consultants.com) - UK - ALTEC Software SA (www.altec.gr) - Greece - Technical University of Catalonia (www.upc.edu) - Spain - Belarusian Institute of Systems Analysis and Information Support of Scientific and Technical Sphere (www.belisa.org.by) – Belarus - United Institute of Informatics Problems of the National Academy of Sciences of Belarus (www.uiip.bas-net.by) - Belarus - Belarusian State University of Informatics and Radioelectronics (www.bsuir.by) – Belarus - Lviv Centre of Scientific, Technical and Economic Information (www.cstei.lviv.ua) - Ukraine - V.M. Glushkov Institute of Cybernetics of National Academy of Sciences of Ukraine (www.icyb.kiev.ua) - Ukraine - Institute of Artificial Intelligence Problems (www.iai.gov.ua) - Ukraine
Project Officer:	Mr Vlassios Venner



Title:	"High Added Value Soft Actions Facilitating Participation of NMS & ACC and INCO Organizations in FP7-IST through the Innovative Use of the Concept of 'Grid Computing'" (Contract No 045069)
Duration:	December 1, 2006 – August 31, 2008 (21 months)
Programme	FP6-IST
Website:	www.hagridproject.net
Coordinator:	International Environment and Quality Services North Greece Ltd (Q-PLAN N.G., Greece, www.qplanng.gr)
Person responsible:	Mr Dimitris PAPAGEORGIOU +30-2310-411-191 - papageorgiou@qplan.gr
Project Overview:	HAGRID positioned its centre of gravity in exploiting in a systematic way the collaboration potential and synergies between the different EU-funded projects / networks which support participation in the European ICT research. It provided a Single Point of Access to the services and activities of those projects so as to help organizations that (aim to) participate to the ICT research to fully exploit these supporting structures. HAGRID had two main objectives: (1) to exploit the potential synergies between EU-funded projects / networks supporting participation in ICT research, for the benefit of European and INCO organisations interested in FP7-ICT; and (2) to provide added value services tailored to the needs of beginners / newcomers in the European ICT research.
Consortium:	1. Q-PLAN North Greece Ltd – Greece 2. Middle East Technical University- Software R&D Centre – Turkey 3. Asociatia Romana pentru Industria Electronica si Software – Romania 4. Budapest University of Technology and Economics, National Technical Information Centre and Library – Hungary 5. Hill & Knowlton Eesti AS – Estonia 6. Agency for the Promotion of European Research – Italy 7. The Scientific and Technological Research Council of Turkey – Turkey 8. Institute of Communication and Information Technologies, SP. Zoo. – Poland 9. State Agency for Information Technologies and Communications – Bulgaria 10. Institute of Fundamental Technological Research, Polish Academy of Sciences – Poland 11. Luleå University of Technology – Sweden 12. IIMC International Information Management Corporation Limited – Ireland 13. Gottfried Wilhelm Leibniz Universitaet Hannover - Germany
Project Officer:	Mr Angelos KTENAS

istBonus

Title:	"Identify and Support Research and Business Excellence to Enhance NMS - ACC Participation in the Development and Pilot Implementation – Demonstration of ICT Business Applications and Services" (Contract No 015871)
Duration:	March 1, 2005 – February 28, 2007 (24 months)
Programme	FP6-IST
Website:	www.ist-bonus-net
Coordinator:	International Environment and Quality Services North Greece Ltd (Q-PLAN N.G., Greece, www.qplanng.gr)
Person responsible:	Mr Dimitris PAPAGEORGIOU +30-2310-411-191 - papageorgiou@qplan.gr
Project Overview:	The IST-BONUS project was funded by the EC under the FP6-IST Priority. The project aimed to upgrade the participation of competent organisations in the EU-funded research programmes in two areas: eBusiness & eWork. It targeted research organisations (universities, institutes, centres, etc.), innovative SMEs, mid-range & large enterprises from the New Member States (NMS) and Accession Candidate Countries (ACC). The consortium of IST-BONUS supported the above organisations in their effort to excel in specific areas of expertise and lead European research initiatives.
Consortium:	1. Q-PLAN North Greece Ltd. – Greece 2. University of Bremen – Germany 3. Middle East Technical University - Turkey 4. University of Ulster, i-Living Lab - UK 5. ALTEC S.A. Information and Communication Systems – Greece 6. Applied Research and Communications Fund – Bulgaria 7. BIC Bratislava spol. sr.o. – Slovakia 8. Budapest University of Technology and Economics – Hungary 9. Politechnika Wroclawska – Poland 10. Asociatia Romana pentru Industria Electronica si Software – Romania 11. Hill & Knowlton Eesti AS – Estonia 12. Santucci & Brown International – Malta
Project Officer:	Ms Margarita LAGO

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1 Introduction – Scope of the Guide

This Guide provides useful information and guidelines for beginners / newcomers to European funded research, specifically in the area of Information and Communication Technologies (ICT). The target audience for this guide is organisations involved in ICT research and / or interested in EU-funded ICT research especially under FP7-ICT. However, any organisation / individual interested in participating in international collaborative research projects under the 7th Framework Programme can use the guide. In this sense we hope that it provides useful information and guidance.

For this purpose the Training Guide serves the following objectives:

- Support researchers and companies in setting research objectives based on their capacity and track record, and planning their actions towards successful participation in European Framework Programmes (FPs) for Research and Development (particularly FP7-ICT).
- Familiarise newcomers / beginners in FPs with the research process, from *idea generation* to *identifying research partners* and to *successful elaboration of an EU-funded project*.
- Enhance their ability to write successful proposals and elaborate multinational research projects.

The Guide is structured in the following chapters:

Chapter 2: provides an overview of the 7th Framework Programme (FP7) for Research and Technological Development (the principal implementation tool (funding instrument) of the European Union scientific research policy), with a focus on the Information and Communication Technologies (ICT) research area. It aims at providing the necessary background information on EU funded research structure.

Chapter 3: discuss the necessary actions an organisation interested in funding its research activities through its participation in FP7-ICT projects, should take before even starts thinking of such an opportunity. It focuses on the critical task of positioning itself in the international research scene and setting up a research strategy to achieve its business/scientific objectives.

Chapter 4: addresses the process *from a research idea to a research project*, namely how research idea(s) are/should be formed and how they should be 'transformed' to a proposal to be submitted in a FP7-ICT Call.

Chapter 5: focuses on the project implementation phase providing practical tips for successful collaboration among the project partners which will result to a successful project completion fulfilling all its objectives.

Chapter 6: outlines a strategy for promoting the research competencies and/or research idea(s) of an organisation aiming to form (and lead) a consortium or enter an existing one as a key partner.

Chapter 7: includes a number of case studies (good examples) of successful proposals and organisations that entered the 'EU-funded research domain' and boosted their operations.

The current document is based on the 6th update of the Training Guide developed under the **SCUBE-ICT** project. It incorporates information regarding the last period of FP7, namely participation in EU-funded projects under the FP7-ICT 2013 workprogramme.

Remark: Within the document, the term *organisation* is used to describe any legal entity established either in EU-27 Member States or in the Associated Countries with FP7 or Third countries that signed an RTD Association and Cooperation Agreement with the EU. Such legal entities may generally be:

- a (public) research team/unit/laboratory/department within a university/research institute,
- a private company (of all sizes and business sector)
- non-profit organisations, such as Non-Governmental Organisations, Civil Society Organisations, business groupings (e.g. associations, chambers of commerce, etc).

It should be stressed that, even though this is a general rule for participation in EU-funded research projects, there are cases where the description/nature of activities may require certain type of organisations to be involved.

2 Background information

More information on FP7 at: <http://cordis.europa.eu/fp7>

2.1 THE 7TH FRAMEWORK PROGRAMME

The **Framework Programmes for Research and Technological Development** (FPs) constitute European Union's (EU) main funding mechanisms for supporting and encouraging *international collaborative research and development activities*. Through these programmes the EU offers financial support to research institutions and organisations (both public and private) of all sizes that are based in the EU Member States and a number of 'partner countries' (*Associated and Candidate countries, International Cooperation Partner Countries* - http://cordis.europa.eu/fp7/who_en.html#countries) for collaborative (joint) research activities. The aim is to "*deepen through greater integration and cross-border coordination and widen through enhanced cooperation with international partners the European Research Area increasing Europe's competitiveness and attractiveness*" ("Strategic European Framework for International Science and Technology Cooperation", COM(2008)588 final of 24.09.2008, http://ec.europa.eu/research/iscp/pdf/com_2008_588_en.pdf).

The FPs outline the research priorities of the European Union for a period of 6-7 years. The current FP7 will be active until 2013 and is structured in 4 main Specific Programmes each one focusing on different aspects of implementing the EU's R&D strategy:

- ✓ **Cooperation** – Collaborative research
- ✓ **Capacities** – Research capacities
- ✓ **Ideas** – Frontier research activities
- ✓ **People** – Human Potential, Marie Curie actions

2.2 THE FP7 COOPERATION PROGRAMME

The "**FP7 Cooperation**" Programme fosters collaborative research across Europe and other partner countries through projects by transnational consortia of industry and academia. It is considered as the *core Programme* of FP7 representing 2/3 of the overall budget, and is subdivided into 10 broad research thematic areas (Themes) corresponding to major fields in science and research:

1. Health
2. Food, Agriculture and Fisheries, Biotechnology
3. Information & communication technologies
4. Nanosciences, nanotechnologies, materials & new production technologies
5. Energy
6. Environment (including Climate Change)
7. Transport (including aeronautics)
8. Socio-economic Sciences and the Humanities
9. Space
10. Security

Each research theme is operationally autonomous but also allowing for joint activities cutting across different themes, through a series of funding schemes (i.e. types of projects). The Cooperation programme introduces elements to strengthen European social, economic, environmental, public Health and industrial challenges, and has been designed with a more flexible approach to react to emerging policy needs. Generally, it is intended to facilitate and support pan-European public-private partnerships and the coordination and synergies of national research programmes. It also envisages a more targeted approach to international cooperation, within each defined research theme and across the themes, and encourages a broader participation of SMEs.

Furthermore, the FP7-Cooperation 2013 Programme is designed so that it facilitates a smooth transition towards Horizon 2020, the EU's new research and innovation programme covering the period 2014-2020. The 2013 work programme users in new approaches that will be deployed more fully in Horizon 2020.

2.3 THE FP7-ICT 2013 WORK PROGRAMME

The [FP7-ICT 2013 Work Programme](#) continues to build on European strengths, seizes opportunities in emerging fields and intervenes where public and EU support is needed to share risks and build partnerships. It addresses the following challenges:

✓ **Challenge 1: Pervasive and trusted network and service infrastructures**

Challenge 1 covers tools and platforms for novel Internet application development and deployment through the Public-Private Partnership on Future Internet. At the same time, key technological developments and large scale experimentation in networking, cloud computing, Internet of Things, Trustworthy ICT and connected and social media of the future are targeted.

✓ **Challenge 2: Cognitive systems and robotics**

Challenge 2 initiates a research and innovation agenda, aiming to develop artificial systems that operate in dynamic real life environments, reaching new levels of autonomy and adaptability. There is a strong focus on advanced robotics systems, given their potential to underpin the competitiveness of key manufacturing sectors in Europe and a wide range of innovative products and services across the economy, from home appliances to health, security, space and leisure.

✓ **Challenge 3: Alternative paths to components and systems**

Challenge 3 covers nano/microelectronics and photonics, the heterogeneous integration of these key enabling technologies and related components and systems, as well as advanced computing, embedded and control systems at a higher level. Energy and cost efficiency as well as recycling/end of life issues are major drivers across the Challenge.

✓ **Challenge 4: Technologies for digital content and languages**

Challenge 4 aims at enabling individuals and small organisations to create quality content and innovative services and at allowing people to access and use online content and services across language barriers; it also aims at ensuring reliability of retrieval and use of digital resources across applications and platforms and at scaling up data analysis to keep pace with extremely large data volumes.

✓ **Challenge 5: ICT for health, ageing well, inclusion and governance**

Challenge 5 focuses on development of solutions that empower the individual to improve and manage personal life conditions and participation as a citizen, elderly, patient and consumer. Special emphasis will be given to productivity gains, customer satisfaction, and provision of new capabilities of public interest by spanning across health and social care systems and government and linking up to other areas of ICT R&D.

✓ **Challenge 6: ICT for a lower carbon economy**

Challenge 6 concentrates on the development of ICT to achieve substantial efficiency gains in the distribution and use of key resources such as energy and water, as well as the application of ICT to decarbonise transport and make it safer. This incorporates the ICT contributions to the Public-Private Partnerships on Energy Efficient Buildings and on Green Cars: ICT for the fully electric vehicle.

✓ **Challenge 7: ICT for the Enterprise and Manufacturing**

Challenge 7 will support industry in bringing together suppliers and users for experiments that target the broad uptake of ICT in all domains of manufacturing. Focus is on emerging innovative technologies and processes, which need to be validated and tailor-made for customer needs before being able to enter the market. Special emphasis is on strengthening European SMEs, both on the supply and on the demand side.

✓ **Challenge 8: ICT for learning and access to cultural resources**

Challenge 8 will develop technologies and methodologies that enable people to learn more effectively and support the acquisition of new skills. It also supports production of more powerful and interactive tools for creative industries and anticipate future trends in research and innovation by encouraging interaction in and between different segments of the creative industries.

Furthermore, **Future and Emerging Technologies (FET)** will continue to be funded in order to support frontier research at high risk. The research should be based on interdisciplinary in the exploration and lead to the development of new concepts and to new possibilities for new markets.

Finally, a number of **international cooperation support** actions are foreseen to support European competitiveness and to jointly address, with other regions of the world, issues of common interest and mutual benefit, thereby also supporting other EU policies (sustainable development, environmental protection, disaster response, security etc).

Each "**Challenge**" is structured in specific research areas (called "**Objectives**") each *one* providing more details on the framework of research to be carried out. For the implementation of each workprogramme a number of '**Calls for Proposals**' is defined setting the time plan for research proposals to be submitted (i.e. which research areas should be addressed and when the relevant proposals should be submitted). Through the *Calls for Proposals*, international consortia submit their research ideas on specific dates determined for each Call and in-line with the research priorities (topics) outlined in the *Call's Workprogramme*. Each proposal must outline:

- The progress beyond the current state-of-the-art in the scientific field of focus (i.e. how the work described will advance scientific knowledge);
- How the research will be carried out (i.e. work breakdown, the role and contribution of each partner); and
- The expected outcomes of the joint research work and their potential exploitation (how the research results will address certain socio-economic challenges).

The following table provides outlines the main **Calls for Proposals** foreseen for 2013 (<http://ec.europa.eu/research/participants/portal/page/cooperation#ict>). For more details you should refer to the **FP7-ICT 2013 workprogramme** (www.balcon-project.eu/uploads/files/EU_documents/FP7-ICT_2013_workprogramme.pdf)

Table 1: Strategic Objectives addressed in the FP7-ICT 2013 Calls for Proposals

	Future Internet PPP 24/10/2012	Cross Thematic Calls PPP 4/12/2012	Call 10 15/1/2013	SME Initiative on Analytics 15/1/2013	Call 11 16/4/2013
1. Pervasive and Trusted Network and Service Infrastructure					
1.1 Future Networks					IP/STREP, CSA
1.2 Software Engineering, Services and Cloud Computing			IP/STREP, CSA		
1.3 Digital Enterprise			STREP, CSA		
1.4 A reliable, smart and secure Internet of Things for Smart Cities		STREP, CSA			
1.5 Trustworthy ICT			IP/STREP, CSA		
1.6 Connected and Social media			IP/STREP, CSA		
1.7 Future Internet Research Experimentation (FIRE)			IP/STREP, CSA		
1.8 PPP FI: Expansion of Use Cases	CP-CSA				
1.9 PPP FI: Technology Foundation Extension and Usage	IP, CSA				
2. Cognitive Systems and Robotics					
2.1 Robotics, Cognitive Systems Symbiotic Interaction and SmartSpaces,			IP/STREP		
2.2 Robotics use cases & Accompanying measures			STREP, CSA		
3. Alternative Paths to Components and Systems					
3.1 Nanoelectronics					STREP, CSA (CA only)
3.2 Photonics					IP/STREP, CSA
3.3 Heterogeneous Integration and take-up of Key Enabling Technologies for Components and Systems			IP/STREP, CSA		
3.4 Advanced Computing, embedded and Control systems			IP/STREP, CSA		
4. Technologies for Digital Content and Languages					
4.1 Content analytics and language technologies			STREP, CSA		
4.2 Scalable data analytics					IP/STREP, CSA
4.3 SME initiative on analytics				IP, STREP	
5. ICT for Health, Ageing Well, Inclusion and Governance					
5.1 Personalised Health, active ageing and independent living			IP/STREP, CSA, CP-CSA		
5.2 Virtual Physiological Human			STREP, CSA		
5.3 ICT for smart and personalised inclusion			IP/STREP, CSA		
5.4 ICT for governance and policy modelling			STREP, CSA		
5.5 Collective awareness Platforms for Sustainability and Social Innovation			IP/STREP, CSA		

	Future Internet PPP 24/10/2012	Cross Thematic Calls PPP 4/12/2012	Call 10 15/1/2013	SME Initiative on Analytics 15/1/2013	Call 11 16/4/2013
6. ICT for a Low Carbon Economy					
6.1 Smart energy grids					STREP
6.2 Data Centres in an energy-efficient and environmentally friendly Internet		STREP			
6.3 ICT for water resources management					STREP
6.4: Optimising Energy Systems in Smart Cities		STREP, CSA			
6.5 Co-operative mobility			IP/STREP, CSA		
6.6 Integrated personal mobility for smart cities		STREP			
6.7: PPP GC: Electro-mobility		IP, CSA			
7. ICT for the Enterprise and Manufacturing					
7.1 PPP FoF: Application experiments for robotics and simulation		IP, CSA			
7.2 PPP FoF: Equipment assessment for sensor and laser based applications		IP, CSA			
8. ICT for Creativity and Learning					
8.1 Technologies and scientific foundations in the field of creativity			IP/STREP, CSA		
8.2 Technology enhanced learning					IP/STREP, CP-CSA, CSA
9. Future and Emerging Technologies					
FET-Open					
9.1 Challenging current Thinking					
9.2 High-Tech Research Intensive SMEs in FET research					
9.3 FET Young Explorers					
9.4 International cooperation on FET research					
9.5 FET-Open Xtrack					
FET-Proactive					
9.6 FET Proactive: Evolving Living Technologies			STREP		
9.7 FET Proactive: Atomic and Molecular Scale Devices and Systems			IP, STREP		
9.8 FET Proactive: Coordinating communities			CSA		
FET-Flagships					
9.9 FET Flagships					CSA
10. International Cooperation					
10.1 EU-Japan Research and Development Cooperation					
10.2 EU-Brazil Research and Development Cooperation					
10.3 International Partnership building and support to dialogues			CSA		

	Future Internet PPP 24/10/2012	Cross Thematic Calls PPP 4/12/2012	Call 10 15/1/2013	SME Initiative on Analytics 15/1/2013	Call 11 16/4/2013
11. Horizontal Actions					
11.1 Ensuring more efficient higher quality public services through Pre-Commercial Procurement of ICT solutions across sectors of public interest			CP-CSA		
11.2 More efficient and affordable solutions for digital preservation developed and validated against public sector needs through joint Pre-Commercial procurement (PCP)					CP-CSA
11.3 High quality cloud computing environment for public sector needs, validated through a joint pre-commercial procurement (PCP)			CP-CSA		
11.4 Supplements to Strengthen Cooperation in ICT R&D in an Enlarged European Union			IP, STREP		
11.5 Cross border services, investment readiness and legal advice for ICT SMEs, start-ups and entrepreneurs			CSA		
12. Special action					
12.1 Exascale computing platforms, software and applications			IP, STREP		

Funding Schemes (type of projects)

- ✓ **Collaborative Projects (CP)** aim at generating new knowledge, including new technology, or common resources for research in order to improve European competitiveness, or to address major societal needs. They have clearly defined scientific and technological objectives directed at obtaining specific results, which could be applicable in terms of development or improvement of products, processes, services or policy. There are 2 types of CPs:
 - **Small and Medium scale Collaborative Projects (STREPs)** target a specific research objective in a sharply focused approach. They have a fixed overall work plan where the principal deliverables are not expected to change during the lifetime of the project.
 - **Large scale integrating collaborative projects (IPs)** have a comprehensive "programme" approach: including a coherent integrated set of activities dealing with a range of aspects and tackling multiple issues and aimed at specific deliverables; there will be **some degree of autonomy** to adapt content and partnership (all types of stakeholders) and update the work plan, where/as appropriate after Month 18.
- ✓ **Networks of Excellence (NoE)** funding scheme is designed for research organisations willing to combine and functionally integrate a substantial part of their activities and capacities in a given field, with a view to creating in this field a European 'virtual centre of research'.
- ✓ **Coordination and Support Actions (CSA)** aim at coordinating or supporting research activities and policies. There are 2 types of CSAs:
 - **CSA Coordination Actions (CSA-CA)** to coordinate or create a network between other research actions for a specific purpose over a given time; and

- **CSA Support actions (CSA-SA)** to contribute to implementation of the FPs, preparation of future Community research and technological development policy or the development of synergies with other policies, or to stimulate, encourage and facilitate the participation of SMEs, civil society organisations and their networks, small research teams and newly developed or remote research centres in the activities of the thematic areas of the Cooperation programme, or for setting up of research-intensive clusters across the EU regions.
- ✓ **Combination of Collaborative Projects and Coordination and Support Actions (CP-CSA)** consisting of a combination of the Collaborative Projects (CP) and Coordination and Support Actions (CP-CSA) funding schemes to enable the financing, under the same grant agreement, of research, coordination and support activities.

Further info on funding schemes and details can be found in subsection 4.2.4 of the present document as well as in the FP7-ICT Guides for Applicants: (general info on all funding schemes): http://cordis.europa.eu/fp7/what_en.html#funding.

3 Forming Research Strategies

3.1 WHY DO I NEED A RESEARCH STRATEGY?

Having a research strategy means that you do not take unnecessary risks. You have a clear understanding of *where you are currently positioned*, *where you want to go* and you have decided on *those actions you should take to achieve your targets*. Therefore, the major benefit stemming from developing a clear research strategy is that you know where you are going to, **as you have set a specific research agenda / roadmap towards the future.**



A **Research Strategy** defines your research objectives and targets, and specifies how you will achieve them (i.e. which actions to take).

A **research objective or target** can range from developing know-how in a specific field, to the developing a new product / service. Targets are more specific and easier to measure and verify than research objectives.

Generally, when formulating a research strategy, organisations try to answer questions like:

- ✓ *Where are we today?* (i.e. compared to International/ European/ National research arena)
- ✓ *Where do we want to go?* (i.e. in which research sub-areas we want to focus)
- ✓ *What vision / mission should we have?* (i.e. what is our scope and ambition)
- ✓ *What research strategy should we have in the medium to long term?* (i.e. focus on limited selected research topics or open to a larger spectrum of research sub-areas)
- ✓ *What targets should we set?* (i.e. tangible and measurable scientific, technological, managerial, targets per examined period)
- ✓ *What actions should we prepare and follow to achieve our targets?* (i.e. a plan setting actions, resources, budget, responsibilities, timetables, etc)
- ✓ *How are we going to monitor the implementation of our strategy?* (i.e. metrics based on the pre-set targets, procedures to measure, responsibilities, contingency plans, etc)

Certainly, having a research strategy does not necessarily mean it is the right one for your organisation or indeed, that it will be implemented successfully. In many cases organisations believe they have formulated a detailed, clearly defined research strategy, but in practice this is often not the case. A successful organisational **research strategy** should **be realistic** and **supported by** a detailed **action plan** (where task assignments and responsibilities are appointed to the correct people, appropriate monitoring procedures are defined for implementation, etc.) and **adequately motivated people**. It should also be **periodically re-assessed and validated** (i.e. setting milestones to monitor the progress of the action plan) so that necessary updates and adjustments are made. The research strategy is therefore, a living document, which of necessity will evolve with time.

3.2 DESIGNING A RESEARCH ACTION PLAN (RAP)

To support the definition and implementation of a research strategy the elaboration of a **Research Action Plan (RAP)** may prove especially useful. A RAP should be a short document that details all major steps/milestones of strategy formulation and can be an excellent tool to support and monitor implementation. A Research Action Plan (RAP) may involve the following elements:

- Carrying out a Research Audit, i.e. identify organisational interests, strengths and weaknesses;
- Identifying External Factors (potentially) affecting your business, i.e. opportunities and threats arising in the external environment;
- Assessment of the organisation (for example through a S.W.O.T. analysis);
- Formulating a Research Strategy / Clarifying Research Priorities;

- Setting Research Objectives – Targets;
- Designing Research Actions (to achieve your objectives); and
- Implementation and Monitoring of the Research Actions.

The following diagram shows the suggested steps of the Research Action Plan formulation and implementation process.

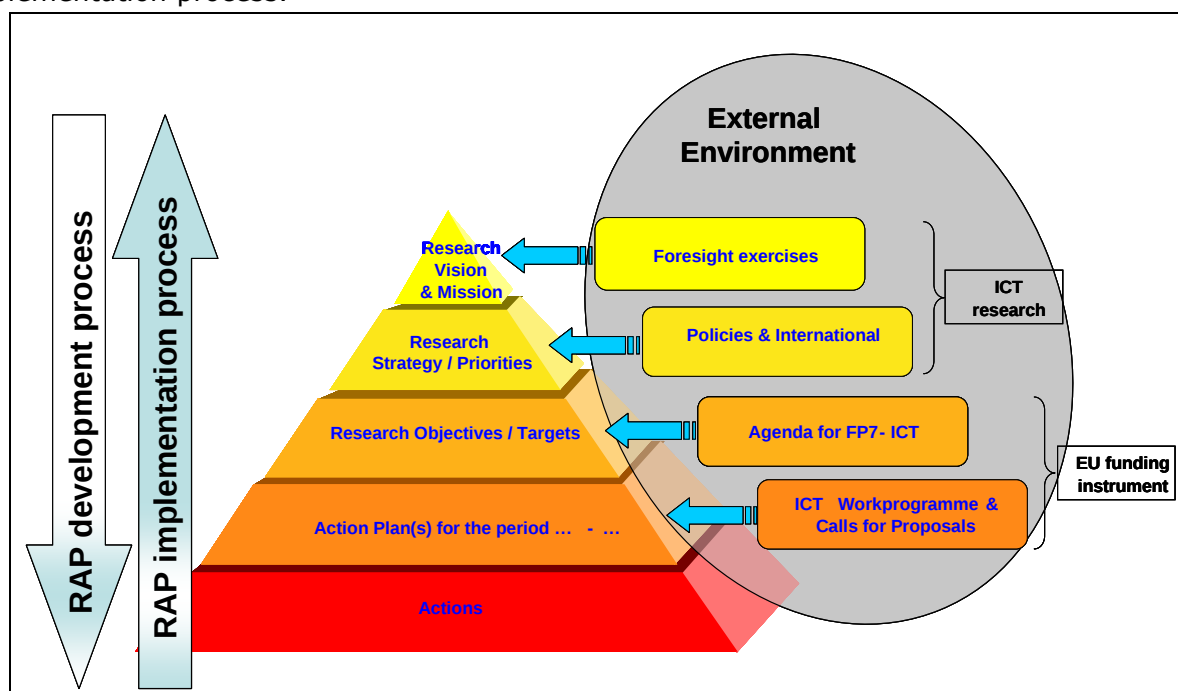


Figure 1: Research strategy formulation process

In the following sub-sections we discuss the most commonly used tools and methodologies for the formulation of a research strategy and for the creation of a Research Action Plan.

3.2.1 Carry Out a Research Audit (Strengths/Weaknesses of your organisation)

Before starting to work on a strategy it is highly recommended to perform an in-depth and as objective as possible analysis of the current status of your organisation and compare / benchmark it with other counterparts so as to position it with respect to leaders in your market environment. In this process a research audit can be particularly useful.

The **research audit** is a process of (self-) assessment that is carried out to define and assess the current status of an organisation. It is highly important as it pinpoints and highlights major organisational **strengths and weaknesses**, while identifies its current position in the international, European and / or national research 'arena'.

A research audit may examine all or some of the assets of the organisation, such as:

- ✓ Domains of Research Excellence (existing achievements),
- ✓ Quality and quantity of Research Workforce (human resources and especially those involved in research activities),
- ✓ Quality and quantity of Research Infrastructure,
- ✓ Financial Resources (means to support the 'investment' in research),
- ✓ Level of Networking (existing business and/or research partners),
- ✓ Degree of experience in managing research projects,

The process usually involves in depth interviews with key personnel in the organisation assisted by structured questionnaires, internal group discussions, use of external experts / auditors, etc. The scope of the process is to identify and assess the **major strengths and weaknesses** of the organisation. It is necessary that all of these are clearly defined **before formulating a strategy** (otherwise the organisation plans where to go without knowing where its actual position is).



Important Notice

A common mistake is when the research strategy / targets / plans, set by an organisation, are not consistent with its strengths and weaknesses, or the available resources and assets. Organisations often have the tendency to overestimate themselves during a self-assessment. For example, defining a research strategy as if an average organisation is among European leaders, will most probably lead to unrealistic planning and may fail to address the organisation's real problems and challenges. This does not mean that you should not be ambitious in the targets set and the plans you make. **Be ambitious, but also realistic.** Set targets that are within your reach (according to your competences / know-how, experience, available resources, timescale, etc.).

A good approach to assist you in the self-assessment process is the use of an **external expert** (consultant) to support you in carrying out the research audit. The main reason is that an 'outsider' can be much more objective in his / her judgment and assessment helping, considerably, the organisation to **MATCH VISION WITH REALITY**.

This also includes the assessment of your organisation when benchmarking with other similar organisations. Therefore you should:

- ✓ Identify organisations (enterprises, research institutes or departments) with similar or complementary research priorities.
- ✓ Compare your organisation with them and position it towards them.
- ✓ Identify potential complementarities and synergies with leading organisations, etc.



Helpful Tips

Benchmark your organisation

One good way to do this is by participating in international activities, establish contacts and network with other organisations, find recent, relevant research / business plans in the public domain for research / business leaders, watch their research agenda and priorities and examine the research projects in which they participate. It is essential that benchmarking activity be repeated at least once per year as the competitive landscape may change quickly.

The European Commission often publishes such reports per research sub-area, describing the EC funded projects, providing lists of participants per project and other useful information.

3.2.2 Identify External Factors (emerging Opportunities / potential Threats)

The examination of external factors will help you identify those forces that come from the external environment of your organisation but may significantly influence it. These factors are independent of the organisation and often correspond to potential **opportunities** or **threats**, such as:

- ✓ New technologies and scientific breakthroughs
- ✓ New research sub-areas and domains
- ✓ Launch of European programmes supporting Research and Development activities (i.e. funding opportunities such as the Framework Programmes, eTen, eCONTENT+, etc)
- ✓ Increase / decrease of state funding to research activities
- ✓ New research institutes active in similar research domains (i.e. new (potential) competitors and/or partners)
- ✓ New industrial actors focusing on similar research areas

To promptly identify and assess the potential impact of the above so as to respond proactively to those changes, you may wish to:

- ✓ Examine technology trend / foresight studies
- ✓ Identify major research trends
- ✓ Select promising research topics
- ✓ Examine opportunities under international, European, national research programmes
- ✓ Think of potential co-operations with research and / or industrial partners
- ✓ Participate in international and national forums and research policy conferences, etc.



Watch external factors

A good way to do this is to collect research reports, on a periodic basis (e.g. quarterly) to analyse and identify future trends in your domains of interest. The EC also funds roadmap projects covering specific research domains, and which produce public foresight reports, technology trend reports, etc. You should also monitor, and if possible participate, in preparatory policy activities in your research domain, clusters, forums, consultation activities, etc., both at a national and European level.

The abovementioned actions could help you to define and prioritise the major **opportunities and threats** that might considerably impact on your organisation and its research targets.

3.2.3 SWOT Analysis

Having carried out a research audit (helping you define organisational strengths and weaknesses) and examined the external factors that may influence your organisation (helping you identify potential opportunities and threats), it is time to assess all of them together. For this purpose you can use the SWOT analysis (**S**trengths, **W**eaknesses, **O**pportunities, **T**hreats), which is one of the standard analytical tools that can be used to formulate a Research Strategy. To facilitate the process, a supportive Matrix may be used. For example:

STRENGTHS ➤ High – skilled multidisciplinary research team ➤ Highly networked on European Level ➤ ➤ ➤	WEAKNESSES ➤ Lack of state-of-the-art research infrastructure ➤ Lack of flexibility in Decision Making / Bureaucracy ➤ Poor experience in Project Management ➤ ...
OPPORTUNITIES ➤ FP7-ICT Calls for Proposals ➤ National Research Projects ➤ National funding 'instruments' (e.g. for the improvement of research infrastructure) ➤ ➤	THREATS ➤ Brain drain in case of lack of funding ➤ Increased competition ➤ ➤ ➤

Figure 2: S.W.O.T. Analysis Matrix

Based on this matrix, the key research personnel / managers of your organisation may discuss the identified S.W.O.T. and start brainstorming on research strategy formulation, namely start thinking of ways to exploit organisational strengths, take advantage of opportunities identified, minimise risks associated with identified threats and / or to decrease / reduce weaknesses, etc.

3.2.4 Formulating a Research Strategy

Before formulating a research strategy you should contemplate two basic steps:

- ✓ define your **research vision** (i.e. write down concisely what your organisation desires to achieve in the long run); and
- ✓ define your **research mission** (i.e. write down what you do / offer as an organisation to your clients, shareholders, society, etc. and what you must do to get there)



Even if in most cases research vision and mission is underestimated, we believe their definition is highly important because it helps the organisation (and its people) to understand **the main ambitions of the organisation** (*vision*) as well as **its target responsibilities** (*mission*).

Defining a research strategy mainly refers to the **research priorities** an organisation sets for the future (e.g. what research sub-areas are we going to focus on over the next 3 years?). Research priorities are usually of great value for an innovative enterprise / research organisation. This is particularly important in the ICT sector where the pace of technological development continuously accelerates, and the sector is particularly affected by (and affects) globalisation (e.g. through internet and internet-based & communication technologies).

Determining the research priorities of an organisation is important for ensuring its long-term competitiveness. Thus, **organisations should set their research objectives, according to their research capabilities / capacity and of the capabilities of their alliances and networks.**

Having carried out a research audit and SWOT analysis, an organisation has assessed its skills, know-how, reputation, etc., and already started matching them with opportunities and threats. If this matching shows adequate potential, then it can become a research priority, into which the organisation starts to channel its resources and define its requirements - needs.

The decision on research priorities will finalise the abovementioned matching and provide the organisation with a framework to set its objectives and define actions for the planning period. With the main research priorities selected, the research objectives / targets can now be set and the actions (to meet these objectives) can be defined and implemented.

Examples of Research Strategies



- Early entrance in an upcoming research domain (for an enterprise product or service)
- Enter into a new research domain (for your organisation)
- Focus on existing research domains and broaden and / or deepen expertise
- Early or late adoption of a technology standard
- Focus on developing new technological applications in well established research domains
- Put the centre of gravity on incremental rather than radical innovation



Setting Research Priorities

Organisations may be assisted in determining their research priorities by analysing current studies in areas of interest, complementing internal know-how and

knowledge. One good way to set your research priorities in the domain of Information and Communication Technologies (ICT) is to study the EC research agenda as depicted in the Framework Programmes¹ (and especially within the 7th Framework Programme for the period 2007-2013). Even if the EC research agenda is focusing on research domains of low interest to your organisation, it can, at least, provide a major indicator of current research trends at European level. Such insight can help organisations align their research priorities and objectives with the policy objectives of the EC R&D programmes in ICT. This will maximize the chance of your organisation to realise its research objectives by participating in EC-funded ICT research.

Detailed info about the FP programmes, the related research topics for ICT and the available opportunities can be found at CORDIS (<http://cordis.europa.eu/fp7/ict/>).

Relevant sources of Information



- ⇒ **European Technology Platforms (ETPs) in ICT** (part of their activities is to develop and periodically update a Strategic Research Agenda suggesting future research trends/priorities in the scientific field of focus)
 - ✓ **ARTEMIS** - Advanced Research & Technology for Embedded Intelligence and Systems (www.artemis-association.org)
 - ✓ **ENIAC** - European Nanoelectronics Initiative Advisory Council (www.eniac.eu)
 - ✓ **ISI** - Integral Satcom Initiative (www.isi-initiative.org)
 - ✓ **Net!Works** - Converged fixed and Wireless Communication Networks (www.networks-etp.eu)
 - ✓ **NEM** - Networked and Electronic Media (www.nem-initiative.org)
 - ✓ **NESSI** - Networked European Software and Services Initiative (www.nessi-europe.eu)
 - ✓ **Robotics** - European Robotics Technology Platform (www.robotics-platform.eu)
 - ✓ **EPoSS** - European Technology Platform on Smart Systems Integration (www.smart-systems-integration.org)
 - ✓ **Photonics21** - Photonics (www.photonics21.org)

For more details refer to ANNEX I at the end of this document

- ⇒ **Technology Roadmaps in ICT** (indicative list)
 - ✓ **HYCON2** - Highly-complex and networked control systems (www.hycon2.eu, September 2010 – August 2014)
 - ✓ **HiPEAC** - High Performance and Embedded Architecture and Compilation (www.hipeac.net, January 2012 – December 2015)
 - ✓ **PlanethPC** - Partnership, Leadership and Assessment Network for HPC (www.planethpc.eu, November 2009 – October 2011)
 - ✓ **REEB** - The European strategic research roadmap to ICT enabled energy-efficiency in buildings and construction (<http://ict-reeb.eu>, May 2008 - April 2010)
 - ✓ **PHS2020** - Road-mapping personal health systems: scenarios and research themes for Framework Programme 7th and beyond (www.phs2020.com, January 2008 – December 2008)

¹ Certainly there are plenty of approaches / ways to form a research strategy. However, as the scope of this Guide is to assist participation in FP7-ICT, we consider the EC research agenda as a major milestone / source for the development of the research priorities of a specific organisation.

✓ **EUROSOI+** - European platform for low-power applications on silicon-on-insulator technology (www.eurosoi.org, January 2008 – March 2011)

3.2.5 Setting the Research Objectives – Targets

Having defined the research priorities, the next step is to set the research objectives – targets for the planned period. That is, you need to set those targets that when they are fulfilled you will have succeeded in your research strategy and reach your research vision.

Based on the planning period, objectives can be short-term (1-2 years), medium-term (3-4 years) and long-term (5 years or above). This separation is only indicative and can differ based on the particularities of the research sub-areas that you focus on. For example, for the research department of an IT company active in e-business commercial platforms, a 4 year target might be considered long term. This depends on you and on how you estimate the speed of the progress in the research areas you focus on.



Extremely Important - Not to forget:

Objectives must be clear, time specific, measurable and controllable (i.e. able to monitor them). Otherwise they can hardly be managed, will often fail to motivate people and / or guide your efforts and in most cases cannot be achieved.

Example

Research Priority: 'Robotics'

Objective 1: "To develop a new generation of flexible and affordable robotic systems for use by professionals"

Target 1.1: "To increase funding for research in the area of robotics for professional use."

This target is rather clear because it refers to the increase of funding & research priority / sub-area funding will be applied.

Nevertheless, **this it is not specific, measurable and controllable, because:**

- It does not include information about the target time period (**time specific**)
- It does not include the desired magnitude of increase – e.g. by 33% or by 165.000 € in the next three years. (**measurable**)
- It does not include any milestones and / or control points in the increase such as – e.g. by 100.000€ in the second year or by 10% annually, etc. (**controllable / able to monitor periodically** – e.g. be able to monitor annually any deviations from its fulfilment and apply corrective action(s), if necessary)

To fulfil all of the above objective, this target can modified as follows:

Target 1.1: "In the next 3 years; to increase the current level of funding (€500,000) for research projects in the area of robotics for professional use by 10% annually, reaching 665.000 € by the third year".

3.2.6 Designing Research Actions

To achieve the objectives you have set in the previous step you need to take actions and design implementation plans. The research actions are plans describing the tasks / actions that should be implemented by the organisation, within a specific timeframe and other constraints, in order to achieve the stated objective(s).

The research actions should address the following questions:

- *what to do* (what kind of actions, description if required, etc)
- *when to do it* (timetable for each implementation, Gantt diagrams, etc)
- *how to do it* (methodology based on budget constraints, personnel, infrastructure, and other necessary internal or external resources, etc)
- *who does what* (assign a responsible person / leader for each action, assign responsibilities for each task / sub-task of an action to specific persons, etc)
- *who to check and what* (assign someone responsible for monitoring implementation / quality, check for deviations, inform upper levels of hierarchy to decide on contingency plans, etc).



Clarification (to avoid confusion)

A Research Action Plan (RAP) is a term used in this guide to describe a concise document that may include the following:

- ✓ Results of the research audit
- ✓ Identified external factors
- ✓ SWOT analysis
- ✓ Research Strategy and priorities
- ✓ Objectives
- ✓ Research actions to achieve objectives and
- ✓ Monitoring methods and tools to monitor the implementation of the whole plan.

A Research Action (as used in this paragraph) is only a part of a RAP that describes the action that needs to be implemented to achieve a pre-set objective / target.

A Research Action Plan may be produced for an individual SME, a research department of a large enterprise, a university laboratory, a research department of a research institute, etc. Thus, a RAP may either be produced for entire organisations or for just a single unit (business or research) of them.

An indicative model of a Research Action Template is provided below:

Indicative model of an Research Action Template

Research Priority 1: Intelligent Agents

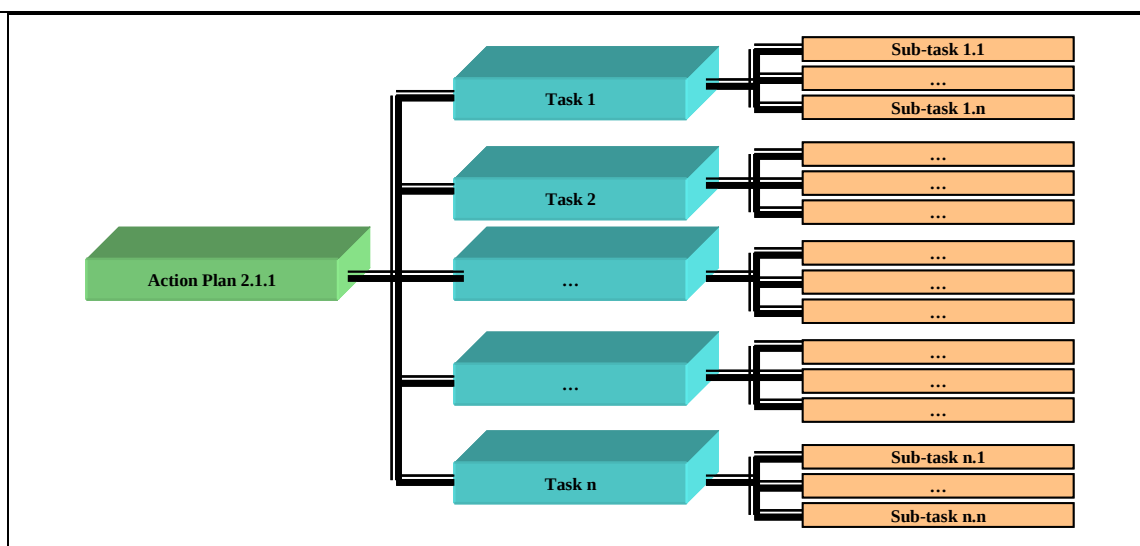
Objective 1: "To develop a new generation of flexible and affordable robotic systems for use by professionals"

Target 1.1: "In the next 3 years; to increase the current level of funding (€500,000) for research projects in the area of robotics for professional use by 10% annually, reaching 665.000 € by the third year".

Research Action 2.1.1: "Participation in a small/medium scale research project with focus on robotics for use by professionals".

Short Description: (1-2 paragraphs)

Schematic figure of Research Action / tasks / sub-tasks:



Timetable / Budget / Responsibilities:

Tasks	Sub-tasks	Start	End	Budget		Status (% of Impl.)	Responsible Person	Remarks
				Planned	Actual			
Task 1	Sub-task 1.1	Jan '13	Dec '13	20.000€		...	Research Manager	Participation on 2 FP7-ICT research proposals
...	...	...	...			...	...	...
...	...	...	...			...	...	...
Task n	Sub-task n.n	...	...			...	...	...

Major Risks / Deviations / Corrective Actions / Contingency Plans

Remark:

GANTT or PERT diagrams can also be used per Research Action, but are usually used only for the whole RAP (including all research actions and tasks per action that have been designed in order to provide schematically a timetable of all research actions (GANTT) and highlight the relationships and the interdependencies among them respectively (PERT).

3.2.7 Implementing and Monitoring Research Action Plans

After drafting the research action plan, organisations must develop or apply (already available) monitoring instruments and procedures. This is directly related to the culture and focus of an organisation. It is good to combine both quantitative and qualitative features for this. For example:

- A university may assess the success of a particular RAP with respect to additional funds secured, or the achievement of a critical mass of publication in leading scientific journals.
- For a company success may be judged on the funds secured, the number and importance of products / services brought to the market, the differentiation with respect to the competition, the degree / potential of commercial exploitation, etc.

In any case, at least three things must be defined:

- ⇒ The **management structure** for monitoring the implementation of the RAP, namely:
 - The scheme under which monitoring is being performed
 - The decision-making mechanism and responsibilities
 - The person(s) responsible for monitoring

- ⇒ The **monitoring procedures** to control implementation, apply corrective actions, etc., aiming to:
 - identify early deviations and potential risks;
 - facilitate proactive response through precautionary actions;
 - provide the framework and the policy for contingency planning;
 - explain the process of decision making in order to achieve rapid responses to deviations; and
 - facilitate improvements, modifications and corrective action in planning and smooth adjustments in new conditions.
- ⇒ The **monitoring indicators** per Research Action, which should be clearly defined, should be quantitative (where possible) and based on the pre-set objectives (another reason why the objectives should be specific, measurable and controllable – see Section 2.2.5). these indicators can refer to: *'progress', 'success', 'failure', 'budget', 'personnel', 'quality', 'technology',* etc



Some useful tips for monitoring the implementation of a RAP

- Check regularly on progress elaborating the Research Actions and related tasks; have they been completed within the specified deadline? If not, determine the reasons and the responsible persons. Adjust your timetable and tasks accordingly.
- Check the quality of the tasks and deliverables. Do they meet the requirements? Are the findings and results in line with the pre-identified action plan? If the quality or the results are not as expected, adjust your action plan. Early action is essential to reducing risk.
- A Research Action may be a single R&D project. In this case you should follow the project workplan and check / control its implementation by assessing project resources, deliverables and other project outcomes. If these are not all within the range required, they should be fine-tuned. This re-work is vital because the research plan should be considered as a chain, and any weakness in one ring of a chain will affect the rest.
- While monitoring the research actions, the researchers involved should be motivated and periodically evaluated. The R&D process is highly dependent on human resources and motivation to maximize the likely outcome. Furthermore, to make the required corrective action, any reasons for low performance should be carefully examined.

4 From a 'Research Idea' to a 'Research Project'



Even though this chapter is focusing on those preparing their own proposals, it is also useful for those wishing to enter research consortia. They can 'use' this information to understand how they should act and what is expected from them in order to become valuable partners and increase their possibility to be invited in a research proposal. Relevant EC guidelines can be found at: http://cordis.europa.eu/fp7/participate_en.html

4.1 GENERAL TIPS BEFORE STARTING

Be prepared for failure! The competition in EU-funded research programmes is tough. On average, less than 20% of submitted proposals are funded. So, **before celebrating** an approved proposal, it is likely you will face one or more unsuccessful attempts. Therefore, we suggest as good practice that you should adopt a strongly realistic perspective on the journey you are about to undertake. If your perspective is simplistic and unrealistic, then it is likely to end up in failure. Being aware of this is probably the most important thing to get right first!

You should have a positive attitude when seeking to participate in collaborative funding, with a realisation that it may fail but **IMPORTANTLY** it is up to you to make your own luck in many cases by being prepared and learning from previous mistakes.

On the way, it is really important to take stock of the elements of a successful proposal preparation process. These elements include targeting an appropriate call for proposals, identifying a core mix of suitable research partners, together with the most important element, a good idea that is well aligned with the specific objectives of the open Call for Proposals ('Call').

If any of these core elements are missing or weak, then take time to decide if it is worthwhile to proceed to develop a proposal. Remember that at this stage you may stop the process without any significant (negative) impact (e.g. dispute between partners).

However, if you have all these elements in place, then you can progress with confidence.

4.2 IDEAS GENERATION, EVALUATION AND EVOLUTION

4.2.1 Ideas Generation

Research needs / ideas can be identified / generated at any time. The main sources of ideas are clients and the people within your organisation. Suppliers and other business / research partners or external consultants can also communicate their needs and / or contribute ideas.

We would advise you to keep a record of all these raw ideas / needs. It can be proved most valuable for you when drawing your research plans and / or try to prepare a research proposal.

There are also certain documents that can help you in generating new ideas that fit to your organisation priorities / activities. Such documents include:

- ♦ The workprogrammes of the FP7-ICT Theme (and of other themes / programmes), which include (among others) a short description of the research priorities of the EC for a specific call or time period (1-2 years). These priorities are beyond the existing state-of-the-art and can help you to set new and / or adjust your own research priorities.
- ♦ Policy papers (e.g. Green and White Papers) or legislative documents (such as recent or under development EC regulations and directives)

- ♦ Other EC documents and reports (e.g. consultation documents, studies, proceedings of EC research or policy-related events, etc.)
- ♦ Papers, roadmap studies, foresight exercises, etc. available at the internet.

In general, networking activities can help you generate or shape better research ideas (through interaction with people that have similar or complementary research interests with you). Similarly, existing research projects can regularly inspire new project ideas.

Idea generation is also affected by organisational culture. For example, organisations with heavily centralised management, which discourage people to take initiatives, will often rely on very few people – typically top management or key clients – to generate ideas. Meanwhile, flexible organisations which thrive on personal creativity, may provide a more favourable environment for ideas generation.

After your organisation has developed several potential research ideas, the most difficult part of the journey starts; it is a long way from raw research idea to proposal submission.

4.2.2 Initial Evaluation

Let us assume that an initial project idea has been elaborated and that you have identified the specific area of an upcoming Call under which it could potentially be submitted. Initial evaluation and further development of the idea is an important stage. It is the most efficient time for ideas to be shelved, rejected, combined, improved, revised, expanded, down-sized, etc.

It is also most useful to get some help from colleague(s) or partners (as they may become part of the core proposal consortium at a later stage).

There are two important questions to be asked about any idea at this stage:

- 1. So, what? (!); and**
- 2. What problem does it solve?**

The first question is intentionally provocative so as to critically question the quality and value of the idea being considered. While an old management consultant trick, if used properly, it can be very effective in guiding a team to closely examine the basic value of any idea.

While related to the first question, the second question directs the team to think about the usefulness of the proposed concept or idea or technological innovation (e.g. benefits to the target users and/or society). There is the old saying about a university professor, who claimed he was carrying out research that was interesting and *perhaps even useful!* You must focus your research on solving scientific, technological, societal and business problems (in line with EC policies and priorities) in order to secure EC funding.

Use techniques such as brainstorming to develop your ideas, and to enrich them with thinking from different stakeholders in the consortium (e.g. ICT researchers, domain experts, policy makers, business people etc.)

4.2.3 Selecting and Clarifying an RTD Idea

While the idea is still fresh, consider carefully how well it matches EC priorities / objectives stated in the relevant workprogrammes. You are now entering an iterative phase, which will result in a continuously revised document that addresses the EC priorities / objectives.

Structure the idea in terms of the required document to be submitted to the call. Outline the (a) needs and problems it addresses, (b) the scientific and technological objectives of your proposal, (c) the current state-of-the-art, and (d) the proposed advances beyond state-of-the-art. Identify an appropriate European Commission Officer working in the target research, make contact, and set up a call or face-to-face visit to discuss your proposal after sending your proposal outline. At this stage the overall document should not be any longer than five pages. It is our experience that the EC Officer will often provide valuable feedback that can improve your proposal.

At this stage, you have increased confidence that the proposal is potentially a good one and that it is worthwhile to continue.

4.2.4 Identifying & Assessing Funding Opportunities

Step 1: Relevant Calls for Proposals and EC Research Priorities

Information on EU-funded research and innovation projects is published on the Participant Portal (http://ec.europa.eu/research/participants/portal/page/fp7_calls), while information on the Calls for Proposals timetable is included in the actual Workprogramme of each FP7 theme.

The calls of FP7-ICT are also published on <http://cordis.europa.eu/fp7/ict/>. However, there are ICT-related priorities in other FP7 themes or programmes as well. For instance, in FP7-Security (http://cordis.europa.eu/fp7/cooperation/security_en.html), in FP7 Capacities Programme etc. For this reason, when searching for the suitable calls, you should not limit the search to FP7-ICT, but extend it also to themes that appear relevant to your research idea / field of interest.

Your initial target is to identify all relevant Calls (in terms of research priorities / objectives and time). It is quite normal that your idea does not match perfectly in the EC priorities / objectives (as those are described in the relevant Workprogrammes). For this reason, you should assess which are the most suitable for you and what kind of adjustments your idea requires to fit the research priorities eligible for funding.

To **select the most suitable Call** you should carefully consider key issues such as:

- (i) time perspective (if the call deadline is too close or too distant),
- (ii) relevance of the EC research priorities (are the priorities / objectives / topics of the EC as described in the Workprogramme close to your research idea?),
- (iii) available funding schemes (does your project idea fit in the EC planning on projects to be funded? See also next paragraph),
- (iv) available budget and expected competition (where available funding is low and number of expected proposals high, the decision on submitting a proposal should be carefully considered),
- (v) other issues depending on each specific call limitations as well as your particularities.

The following documents (available for each call) contain information that will help you to decide which call you will go for: the Call Text, the Workprogrammes and the Guide for Applicants.



The selection of the Call under which to submit a proposal will be a key decision and therefore you will probably need to get some opinions from your partners and / or external experts.

Step 2: Available Funding Schemes

Once you identify relevant Call(s) and priorities under which your proposal can be submitted, you can then decide on which 'funding scheme' (the term 'instrument' was used in FP6) to select. The selection of the funding scheme may affect significantly the scope of the project, the whole process of proposal development, the required resources and the consortium, etc. The table, below, shows the main funding schemes in use in FP7 and the relevant in FP6.

FP7 funding scheme		FP6 instrument	Minimum No of participants ²	Typical No of participants	Typical duration	Typical Funding
Collaborative Projects (CPs)	Small / Medium scale focused research actions (STREPs) ³	Specific Targeted Research Project (STREPs)	3	4 – 8	2-3 years	1-4 M€
	Large scale integrated projects (IPs)	Integrated projects (IPs) ⁴	3	8 – 20	3-5 years	4-25 M€
Networks of Excellence (NoE)		Networks of Excellence (NoE)	3	6 – 20	4 years	2-8 M€
Coordination & Support Actions (CSAs)	Coordination Actions (CAs)	Coordination Actions (CAs)	3	3 – 6 ⁵	1-3 years	0.5-2 M€
	Support Actions (SAs)	Specific Support Actions (SSAs)	1	3 – 6 ⁶	1-3 years	0.5-2 M€

Table 2: Funding Schemes in FP7 and FP6

- ✓ **CP - Collaborative Projects** aim at generating new knowledge, including new technology, or common resources for research in order to improve European competitiveness, or to address major societal needs. They have clearly defined scientific and technological objectives directed at obtaining specific results, which could be applicable in terms of development or improvement of products, processes, services or policy. There are 2 types of CPs:
 - **Small and Medium scale Collaborative Projects (STREPs)** target a specific research objective in a sharply focused approach. They have a fixed overall work plan where the principal deliverables are not expected to change during the lifetime of the project.
 - **Large scale integrating collaborative projects (IPs)** have a comprehensive "programme" approach: including a coherent integrated set of activities dealing with a range of aspects and tackling multiple issues and aimed at specific deliverables; there will be **some degree of autonomy** to adapt content and partnership (all types of stakeholders) and update the work plan, where/as appropriate after Month 18.
- ✓ **NoE - Networks of Excellence** funding scheme is designed for research organisations willing to combine and functionally integrate a substantial part of their activities and capacities in a given field, with a view to creating in this field a European 'virtual centre of research'.
- ✎ **CSA - Coordination and Support Actions** aim at coordinating or supporting research activities and policies. There are 2 types of CSAs:
 - **CSA Coordination Actions (CSA-CA)** to coordinate or create a network between other research actions for a specific purpose over a given time; and
 - **CSA Support actions (CSA-SA)** to contribute to implementation of the FPs, preparation of future Community research and technological development policy or the development

² Legal minimum, two of the three need to be from member or accession states and one associated or accession state. For SSAs the legal minimum is one from Member/accession or associated state.

³ The same term (STREPs) is used in FP7-ICT when referring to Small and Medium scale Collaborative Projects.

⁴ The same term (IPs) is used in FP7-ICT when referring to Large-scale Collaborative Projects.

⁵ Very dependent on the type of activity

⁶ However, there were several cases of SSAs (funded under FP6) with more than 20 participants.

of synergies with other policies, or to stimulate, encourage and facilitate the participation of SMEs, civil society organisations and their networks, small research teams and newly developed or remote research centres in the activities of the thematic areas of the Cooperation programme, or for setting up of research-intensive clusters across the EU regions.

- ✓ **Collaborative Projects / Coordination and Support Actions (CP-CSA)** consisting of a combination of the Collaborative Projects (CP) and Coordination and Support Actions (CP-CSA) funding schemes to enable the financing, under the same grant agreement, of research, coordination and support activities. **<NEW! Introduced in FP7-ICT 2013>**

Further info on funding schemes and details can be found in the FP7-ICT Guides for Applicants: http://cordis.europa.eu/fp7/what_en.html#funding (general info on all funding schemes).

4.2.5 Feasibility of the Idea

At this stage, it pays to validate your idea along several different dimensions. Check again the technical aspects of the concept. *Is it technically feasible to develop within the proposed timescale, and with the proposed budget? Are your objectives / targets measurable and verifiable? Is your idea clearly formulated and is it understandable by others?*

Ask for a colleague in your own organisation or one of the many supporting organisations across Europe to gain some objective assessment of the concept or innovation in your idea.

Critically evaluate the idea against technical, financial and time constraints if funded.

At this stage you may organise **a meeting** of the core consortium to finalise the project idea, engender *esprit de corp* (team spirit), motivate the team, ensure commitment and provide an opportunity to learn more about one other in terms of competences and background.

4.2.6 Developing a Research Methodology and Pre-Assess Required Resources

Assuming that the five page *précis* of your proposal is still valid, before you begin to write the full proposal, you should clarify the proposed research methodology to be used. This involves an assessment of the resources required for the project to be successful (if eventually funded).

Ensure that you are realistic at this stage. If you anticipate a 30-month project duration, then you should judge if this time is adequate to successfully carry out all proposed project work.

Make sure there is a harmonised research methodology that takes account of differing research cultures in multi-disciplinary consortiums. For example, a medical doctor will not understand the software lifecycle, while ICT experts are unlikely to be aware of the intricacies involved in winning ethical approval for medical based research.

Try to develop walkthroughs and use cases (e.g. from the world of software engineering, a use case is a simple description of the use of a technology or a software program) to communicate clearly and simply what the project is attempting to achieve.

English should normally be the working language for documents and communications.

4.3 CONSORTIUM BUILDING

4.3.1 What Makes a Good Partner: General Rules

The *ideal* partner fulfils all of the following requirements:

- ✓ Generates the proposal idea (innovative, in line with the EC priorities)
- ✓ Writes successful proposals
- ✓ Possesses a high research profile and good reputation
- ✓ Is well networked at European level
- ✓ Delivers work of high quality and within the deadlines

As no such partner exists in the real world, it is necessary to set priorities and target a well balanced consortium, which will possess all the competences and characteristics needed.

Usually, most partners simply send the short profiles and CVs of key personnel (often not even in the requested size and format), the A2 forms and their personnel rate and cost model (*refer to section 4.4 for the documents required to submit a proposal*).

From our experience, it is hard to find (core) **partners who will actively participate in the writing** of the proposal and provide valuable input (e.g. write parts of the proposal at the quality needed, check the proposal and suggest improvements). However, such partners become **close allies**, as they share with you part of the risk and the 'cost' of the proposal preparation.

Nevertheless, the participation of **well networked, prominent EU organisations** is of critical importance when making your first steps in the EU-funded research programmes. Such partners will not easily join your consortium, are demanding and often do not contribute to developing the proposal. However, their participation may enhance considerably the chances of success, as their experience and expertise will strengthen the consortium and your proposal will score higher under the criterion 'Quality of the Consortium' (refer to section 4.6 for the proposal evaluation criteria), while the overall attitude of the evaluators against the proposal may also be affected positively. On the other hand, their participation is not an end in itself: you should ensure that they possess experience and expertise in line with your needs and that they do not create imbalances both in the budget and task allocation.



To find partners

You should use not only your existing network of national and international contacts (*networking strategy and tips are presented in Section 6.1*). A good starting point is to participate in networking events of the ICT conferences as well as info-days on Framework Programmes (at local / regional, national or European level) organised by the European Commission, EU-funded support actions, etc.

4.3.2 The Consortium

You should **ensure that the consortium consists** of people and organisations that possess the competences your project needs and include representatives of different stakeholders (research, business, users, associations, etc.). *Reliability, financial stability, relevant experience and commitment* are very important characteristics of the ideal partner. However, you should be ready to select a partner who possesses only some of the above characteristics.

In any case, you should avoid selecting organisations and people just because you know them or you trust them. You really need partners with the desired competences that can do the job required. Even experienced proposal writers can fall into this trap and jeopardize their investment of time in a proposal by including organisations for 'political' reasons as opposed to their competences.

One rule of thumb is to keep the consortium as small as possible for as long as possible, so that the partner list does not have to grow and then be pruned.

In terms of writing a good proposal, it should be transparent that **each partner has a clear role** at work package and task level. Make it easier for evaluators by illustrating partners' competences and mapping them to the research roadmap required to advance the state-of-the-art. This also helps during proposal development as it highlights each of the partner's role to each other.

Sometimes, you will have international partners or other partners fulfilling a role that is not clear. Make sure that these situations do not arise. Justify the role of every partner, and if sub-contracting, for example, making it clear why the work needs to be sub-contracted.

Potential sources to identify partners (*the list is not exhaustive*):

- ⇒ **Your own contacts** (clients/business partners, personal/colleague contacts etc.) in either the private (commercial, non profit) or public (universities, authorities, etc.) sectors
- ⇒ **ICT Results news service** to locate organisations that successfully participated in FP6/FP7 ICT projects (<http://cordis.europa.eu/ictresults>)
- ⇒ **CORDIS database** for:
 - partner search (<http://cordis.europa.eu/partners-service/>) and http://cordis.europa.eu/fp7/partners_en.html)
 - FP6/FP7 ICT research projects (<http://cordis.europa.eu/search/index.cfm?fuseaction=proj.advSearch>)
- ⇒ The databases or partner search tools for **specific EU-funded projects** which offer partner search services, such as:
 - BALCON project: www.balcon-project.eu/find_your_research_partner
 - EECA competence platform: www.eeca-ict.eu/competence
 - IDEAL-IST project: www.ideal-ist.net
- ⇒ The **National Contact Points SME network** (www.ncp-sme.net)
- ⇒ The **Enterprise Europe Network** (EEN) (www.enterprise-europe-network.ec.europa.eu/network_en.htm)
- ⇒ Through **internet search** (by using search engines such www.google.com and key words to define the desired characteristics of the partner)



Check list for evaluating and selecting a potential partner:

- ✓ Experience and expertise (recent relevant projects in which they have participated, their role, recent publications, awards).
- ✓ Type of organisation (SME, large private, public organisation, non profit, association, authority, etc.) – the involvement of complementary stakeholders is usually important.
- ✓ Core activities and geographical coverage (e.g. an organisation with offices in several countries may guarantee wider dissemination – geographical impact of the project).
- ✓ Size of the organisation, available resources and financial viability (e.g. a small organisation with low turnover may not easily justify a large project role, a financially weak partner may create problems during the project elaboration, etc.).
- ✓ Reputation and level of networking with other organisations and the EC.



Check list for evaluating the consortium and identifying potential weaknesses

- ✓ Does it have the capacity to perform required research? (adequate resources, size, etc.)
- ✓ Does it demonstrate adequate skills and competences? (expertise, experience, etc.)
- ✓ Can it guarantee wide geographical coverage? (to ensure impact at EU level and that national particularities are taken into account, etc.)
- ✓ Are the partners complementary to each other? (in terms of competences, role, nature of activities, representation of different stakeholders / interested parties, etc.)

4.3.3 Role, Task Allocation and Budget of Each Partner

The role of each partner should be:

- ✓ As **clear** as possible, to ensure that each partner's responsibilities are well defined at the proposal submission stage and avoid potential disputes in case of a successful evaluation.
- ✓ **Consistent with their competences.** For instance, a 'user' partner can normally contribute at the requirement analysis as well as at the pilot implementation phase, whereas their input to the development of a technology can not usually be justified.
- ✓ **Complementary to the roles of the rest of the partners** (and not conflicting).

For each workpackage of the project (the work is organised in 'packages' and the term 'workpackage' is used), a leader is appointed. Each workpackage (WP) is divided into tasks and sub-tasks and their 'allocation' per partner can clarify roles while facilitate the preparation of the project budget.

The main cost category for the large majority of the research projects is the 'personnel' cost, which can be estimated with a relatively high precision as long as a detailed task allocation has been elaborated. Then based on the experience, expertise and organisation level of each partner you can estimate the required effort (measured in 'man-months') per partner and per task. The 'personnel' cost per partner is calculated based on their 'man-months', monthly rate and cost model. The rest of the cost elements are relatively easier to be estimated (e.g. number of travels and cost per travel, required equipment, sub-contracting, consumables, etc.).

Detailed description of these costs is provided in the Guide for Proposers and also in the Guide to **Financial Issues relating to FP7 Indirect Actions**

(http://ec.europa.eu/research/participants/portal/ShowDoc/Extensions+Repository/General+Documentation/Guidance+documents+for+FP7/Financial+issues/financialguide_en.pdf).

4.4 PROPOSAL WRITING

- ⇒ **What makes a good proposal?** There are numerous and various parameters per type of proposal (funding scheme) and per Call for Proposals that influence the overall quality of each proposal. However, there are some general rules that proposal authors / writers should follow.
- ⇒ **Proposal summary and core partners:** a well structured and clear proposal summary facilitates the elaboration of the next steps (building the consortium and writing the full proposal) and should be used as a guideline for proposal writing.

- ⇒ **Sources of reference** to be used: the Guide for Proposers, the respective FP7-ICT Workprogramme, EC policy papers, relevant reports, 'golden' paragraphs, previous proposals, published papers and other up-to-date information on the state-of-the-art, etc.
- ⇒ Proposed **methodology for proposal writing**: One-man show or team working? – What should you pay attention to?

4.4.1 What Makes a Good Proposal?

To develop a good proposal, the original research idea must be valid and in focus, as it is the area of advancing the state-of-the-art which is of primary importance in differentiating your proposal. Initial innovation aspects will also normally be retained, expanded and highlighted.

So what makes a good proposal? In summary the following areas are all important:

- Orientation of the concept;
- Develop and communicate the 'Idea';
- Methodology & Project management;
- Resources, budget & timetable;
- Quality of the content.

Step 1: Orientation of the Concept of the Proposal

For your good idea to stand its best chance for funding, you have to **impress** a room full of **evaluators** who are pressed by time. So you need to look at your proposal through their eyes and judge its relative strengths and weaknesses against the criteria they must apply to assess the proposal. These are outlined in the relevant Work Programme and Guide for Proposers.

But you need to do more. You need to second-guess their potential dislikes ('weak' points of the idea) for your proposal, and add text to avoid negative comments or thoughts on the proposal (**mitigate weak points**). So, for example, if your proposal involves the management of personal data, then make sure that it is well highlighted in the proposal how you are going to handle this issue. Ethical issues that arise from the use of such data should be identified as well as associated risks, while contingencies need to be worked out. If you do this, then your proposal will be much stronger than a similar proposal that brushes such issues away.

Step 2: Develop and Communicate the 'Idea'

It is imperative that you give full weight in your proposal to the idea upon which it is based. You need to clearly demonstrate that you are aware of the current state-of-the-art in the area. It must also be made clear that you will **advance your research in this proposal beyond the state-of-the-art**. Try to think about the breakthrough that must be achieved. Is it multi-disciplinary? Does it require incremental work across different areas? Does your advance in the state-of-the-art creates new knowledge, or is it an innovative combination of existing state-of-the-art technologies? It really helps your proposal if you can articulate at this level of detail.

And of course, your research should **address a real-world problem / need**. It helps the evaluators if you can present your proposal as an outline of a problem, leading to the solution required, which sets the scene for the state-of-the-art. This will provide the backdrop for the advances required, which is where the proposal big idea is revealed!



Communicate one core idea

Stress from the very first page, *one, clear and specific* idea that your proposal addresses and communicate it in each chapter of your document (research projects are usually complicated and offer a great number of innovations or technologies to be highlighted). The other innovation features will also be presented, but try to **sell one major idea** to the evaluators – because they are under serious time pressure to evaluate a number

of proposals.

Step 3: Methodology & Project Management

Ideally, your project management author will understand the research area and will be fully competent in project management theory and practice. Often this is not the case and proposals sometimes either suffer from weak outlining of the research into a well managed project, or a project management approach that is not appropriate to the research proposed.

Set clear milestones for your proposal, which are clear points in the work, when major consortium decisions can/should be made about changes of direction, selection of research tools, etc. Important project deliverables usually emerge before these milestones. For example, the first release of the software beta tool which is then evaluated, and the result is fed back into the project where a decision is taken about how to proceed - a **classic milestone**.

Present a clear description of the project methodology and management that is appropriate to the scale of the proposal being addressed. If your proposal is a STREP (i.e. small/medium scale research project) with five partners, you do not need to write a 10 page section on contingency planning for partner disputes. Use diagrams where possible to help the evaluators visualise your methodology and the core project idea (i.e. it is strongly recommended that you provide a schematic overview of the project).

The proposal will detail specific work packages to be carried out. Each work package will consist of a number of tasks. It is normal for partner efforts to be listed at work package level, but it may help to clarify the roles of partners if your proposal lists partner effort at task level. Each task normally generates deliverable(s) which are reports, software, etc.

Make sure that the proposal has sufficient coverage and detail in the work packages to deal with issues such as knowledge management, dissemination activities and exploitation of intellectual property. It is also important to discuss **post-project exploitation of the results**. Indicate clearly how resources will be used to publicly disseminate the results of the proposed project.



A (draft) **plan for the post-project exploitation of research results** should be incorporated from the proposal development stage. You should take into account that research is not an end in itself (this applies particularly for researchers in non-profit institutions). In other words, research projects should deliver results that can be commercialised or otherwise be exploited to contribute to development of e.g. new and/or improved products/services, processes, etc

Step 4: Resources, Budget & Timetable

Budget and timetable issues are related to project management but they are also important enough to warrant a section of their own. One of the first checks that an evaluator may carry out is to peek at the consortium budget. At an early stage, the evaluator will be seeking to determine if the budget distribution between the partners is uneven (for example, an SME with

no clear justification getting higher funding than a core research partner). In general, the **budget** of a partner should be **consistent with its role**, and the **role** of each partner should be **consistent with its competences** (expertise & experience) and **their size**.

The budget should be justified and detailed, with all costs described and analysed adequately, with particular attention being paid to the 'personnel' and 'subcontracting' costs. Project duration should be adjusted to suit the project size and complexity, supported by a clear financial plan, which describes the resources to be used.



Important Notice

Financial considerations for FP7 projects

For more details and updated information please check the latest version of the "Guide to Financial Issues relating to FP7 Indirect Actions" at:
http://ec.europa.eu/research/participants/portal/page/fp7_documentation

Direct costs are those eligible costs which can be attributed directly to the project and are identified by the beneficiary as such, in accordance with its accounting principles and its internal rules. Those may be (not exclusively) (a) personnel costs (of those assigned to the project), (b) travel and subsistence allowances for staff taking part in the project, (c) durable equipment (depreciation costs for each reporting period and the portion used for the project), (d) consumables and supplies (provided that are identifiable and assigned to the project), (e) subcontracting, (f) certificate of methodology and certificate of financial statements, and (g) conference fees.

Indirect costs (overheads) are all the structural and support costs of an administrative, technical and logistical nature which are cross-cutting for the operation of the beneficiary body's various activities and cannot therefore be attributed in full to the project.

The **personnel's rate** that an organisation uses in a proposal to calculate the personnel cost can be close to the average personnel cost of the persons who will participate in the project (normally a little bit higher to anticipate rises in the future – throughout the project duration).

- For calculating the *annual average rate* add the annual salaries, the social security charges (holiday pay, pension contribution, health insurance, etc) and other statutory costs included in the remuneration of the persons that will participate in the project. Then divide the sum with the number of people.
- *Monthly average rate*: normally the EC considers that a day has 8 working hours (you should not declare more than 8 hours per day), a month has (on average) 17,5 working days (140 hours)⁷ in a year of 12 working months. Usually in proposals the monthly rate (= annual average rate / 12 months) is used.

Methods for calculation of indirect costs ('cost model'): "Under FP7 ... the beneficiaries must declare their actual costs ... or may opt to declare their actual direct costs plus a flat rate for indirect costs of 20% of the direct costs". The method of choice (and eventually the overhead rate to calculate the indirect costs) of each partner is highly important when preparing the budget. This is because the requested EC contribution and the total budget of the proposal depend on the overheads rate. Available methods:

- **Actual indirect cost**: Beneficiaries who have an analytical accounting system that can identify and group their indirect costs in accordance with the eligibility criteria (e.g. exclude non eligible costs) must report their real indirect costs.
- **Simplified method**: a special case of the previous method to be used in cases when the organisation does not have an accounting system with a detailed cost allocation and thus

⁷ The maximum number of working hours declared during a certain month are calculated as: (Number of working days) X 8 hours / day. However, you cannot declare **more than** 1,680 hours per person per year (=12x140).

does not aggregate its indirect costs at a detailed level (centre, department), but can aggregate its indirect costs at the level of the legal entity.

- **Flat rate of 20%:** (whatever the accounting system the beneficiary is using) the indirect costs are calculated based on the direct eligible costs excluding the costs for subcontracting.
- **Transitional flat rate of 60%:** a special case of the previous method that can be used mainly by public organisations and SMEs up to 2010.
- **Lump sum** (only for organisations from International Cooperation Partner Countries – ICPC): the maximum EC contribution is defined per researchers and per year of the project (according to its country) and an upper funding limit applies depending on the type of organisation and project. There is no distinction on the cost categories but instead lump sum covers all costs of a participant from an ICPC country, including not only the costs of personnel and travel, but also, among others, equipment, consumables, subcontracts and indirect costs.

Step 5: Quality of the Proposal - Content

This aspect of proposal writing is related to the core project idea and the way you present (sell) and analyse it. Ensure that the proposal 'message' is clear, the proposal is easy to read by non-native English speakers, and any terminology, abbreviations or acronyms defined. Adequate references should be provided to justify your arguments.

The proposal structure must conform to the Commission guidelines provided (e.g. Part B of the proposal template). Anything that makes it more difficult for the evaluators to find the necessary information will affect your score.

Do not assume that the reader / evaluator is always an expert in your specific scientific area. Pay special attention to the introductory area of the proposal, which will be read most frequently. Avoid long sentences, generalities and ambiguities especially in this area.

It does help to use diagrams and figures in a proposal to help communicate your ideas.

While it is important to be concise, do not be afraid to repeat certain core elements or key ideas in a proposal, as this can help the evaluator to better understand the proposal.

Example: Content of an FP7-ICT STREP proposal

For each Call for Proposals an information package is released to assist the applicants prepare the information needed. Among other documents, a *Guide for Applicants* (for different type of projects) is made available, which includes useful information on the procedure to be followed, the proposal template the applicants must use, the evaluation criteria, etc.

The content of all proposals must be structured in line with the proposed sections mentioned in the *Guide for Applicants* (of the relevant call and type of instrument). Each Proposal consists of 2 parts:

- ✓ **Part A** which includes standard forms to be filled for administrative purposes
- ✓ **Part B** where the scientific and technical content of the proposal is described in detail.

Below you may find some instructions and tips on how to complete Part B of a STREP proposal.

Part B: STREP Proposal

👉 B.1 - Scientific and/or technical quality, relevant to the topics addressed by the call

In this section you must clearly present the project and answer the question why should the EC fund your project. If your proposal deals with the application of a state-of-the-art technology in a new sector / domain, clearly explain why it is needed (describe existing problems / needs, opportunities) and how you will advance beyond the state-of-the-art.

If you fail to persuade the evaluators in this regard, then you will probably end up with a negative evaluation even if the other sections deserve an overall higher score.

1.1 Concept and objectives

Describe clearly and in detail the Scientific & Technological objectives that you expect to accomplish within the project duration. Show how they relate to the topics addressed by the call. The objectives should be stated in a measurable and verifiable form.

Your project should have a distinct centre of gravity (in terms of S&T objectives) and its aim should be presented in 2-3 lines of text. Figures and diagrams that visualise the project concept should be used to support your description and facilitate understanding.

Be ambitious but also realistic; in case of approval you and your consortium will have to put into practice what you have 'promised' in the proposal; a well designed proposal should facilitate the successful implementation of the project.

1.2 Progress beyond the state-of-the-art

Describe the state-of-the-art in the target area, and the advance the proposed project will make. You should mention the main results of similar / relevant research activities (based on any patent search, search in CORDIS or other databases, etc., you might carried out).

1.3 S/T methodology and associated work plan

A detailed work plan should be presented, broken down into work packages (WPs) which should follow the logical phases of the implementation of the project, and include consortium management and assessment of progress and results. The following should be included:

- i) Overall strategy of the work plan (also visual presentation of the project approach). You may also briefly mention methodology particularities (e.g. describe any innovation aspects of the methodology you have selected, explain why the chosen methodology is the suitable one and how the major project particularities are addressed; you may also include a more detailed description of the selected pilot / demonstration scenarios, if any, etc)
- ii) Timetable (Gantt chart or similar).
- iii) Detailed work description broken down into work packages (incorporating deliverables, milestones, effort), i.e. analysis of each workpackage including specific objectives, task analysis and allocation per partner.
- iv) Graphical presentation of the components and interdependencies (Pert diagram or similar)
- v) Significant risks and outline of contingency plans

Tips: The methodology of the project should be:

- ✓ Appropriate to the complexity and of the project value - size
- ✓ Sufficiently detailed (to justify proposed work and allow progress monitoring, etc.)
- ✓ With clear roles and responsibilities (task and sub-task allocation per partner)
- ✓ Ensure post-project exploitation (the EC is happy to see how project partners will make use of the results / knowledge established from the project after its completion)
- ✓ Include actions for the publicity and wide dissemination of the project activities and results

B.2 - Implementation

2.1 Management structure and procedures

Describe the organisational structure and decision-making mechanisms of the project. You should show how they are matched to the complexity and scale of the project. You should provide a schematic overview of the project's management structure, describe the role and responsibilities of the different levels of the management, internal communication practices, decision making procedures, quality control, IPR management, resolving, conflicts, etc

Keep in mind that although this sub-section may not be so different from project to project, it must be customised to the project idea and size of consortium. The evaluators will normally reward you for this and a 0,5 mark can make the difference between failure and success.

2.2. Individual participants

For each project participant, provide a brief description of the organisation, the main tasks they have been attributed, and the previous experience relevant to those tasks. Provide also a short CV (around 5-10 lines each) of the staff members who will be undertaking the work.

2.3 Consortium as a whole

Describe how the partners collectively constitute a consortium capable of achieving the project objectives, and how they are suited and committed to their assigned tasks. Show the complementarity between participants. Explain how the composition of the consortium is well-balanced in relation to the project objectives. Describe the industrial/commercial involvement to ensure exploitation of the results.

- i) **Sub-contracting:** If sub-contracting exists, describe the work involved and explain why a sub-contract approach has been chosen for it.
- ii) **Other countries:** If one or more of the participants requesting EU funding is based outside the EU Member states, Associated countries and the list of International Cooperation Partner Countries, explain in terms of the project's objectives why their participation is essential.

Indicative structure: consortium & roles (including an introduction – overview of the consortium and a table with the key role and expertise / experience per partner), balance and complementarity of the consortium, sub-contracting, other countries.

2.4 Resources to be committed

In addition to the costs indicated on form A3, and the staff effort shown in section 1.3 above, you should identify other major costs (e.g. equipment) and provide justification.

Describe how the totality of necessary resources will be mobilised, including any resources that will complement the EC contribution. Show how the resources will be integrated in a coherent way, and show how the overall financial plan for the project is adequate.

A table including the analysis of the project budget per partner and cost category is considered quite helpful.

B3. Impact

3.1 Expected impacts listed in the work programme

Describe how your project will contribute towards the expected impacts listed in the work programme in relation to the topic(s) you address. When describing Impact, consider different types of impact: Technical, Economic, Legislative policy, Environmental, Social, and Regional. Mention the steps needed to bring about these impacts. Explain why this

contribution requires a European (rather than a national or local) approach (EU added value). Indicate how account is taken of other national or international research activities. Mention any assumptions and external factors that may determine whether the impacts will be achieved.

Indicative sub-section structure: Business Impact and Competitiveness Issues, Scientific and Technological Impact, Societal Impact, Impact to Policies, Contribution to standards (quote relevant National, European, International standards or initiatives for the development of standards and explain how the project will contribute to them), The need for a European Approach and Added Value (contribution to European Research Area), Account taken of other national or international research activities, External factors influencing the projects' impact.

- ✓ **Reference documents** can be the general Workprogramme, relevant policy documents of the EC concerning Lisbon Council of 2000, the Stockholm Council of 2001 and the Seville Council of 2002, the i2010 Action Plan, consultation documents, etc.
- ✓ **Societal objectives** / impact may include: employment, sustainable and regional development, improvement of the quality of life, greater social cohesion, etc.
- ✓ **Policy objectives** / impact include reinforcement of European competitiveness, support of SMEs and SMEs participation in research, sustainable and regional development, etc.

3.2 Dissemination and / or exploitation of project results, management of intellectual property

You should describe clearly the measures you propose for the dissemination and/or exploitation of project results, and the management of knowledge, of intellectual property, and of other innovation-related activities arising from the project.

There are certain activities that fit almost all projects. However, you must tailor dissemination and exploitation plans that address the requirements of your project. Exploitation activities may include brief presentation of alternative exploitation roadmaps, the elaboration of business / commercialisation plan, IPR management issues, technology transfer activities. Also the general project context under which the exploitation plans will be developed, evolved and finalised should be described (procedures, responsibilities).

- ✓ For dissemination, you should mention your target groups, anticipated dissemination activities / events and the dissemination level (European, national, regional) and roughly the timing.
- ✓ Dissemination activities may include publications, workshops, conferences, joint events etc. and can be supported by promotion material (e.g. project leaflets, posters, demo-CDs, etc.)
- ✓ You may mention that the overall detailed dissemination and exploitation framework will be described in a Dissemination and Use Plan that will be elaborated during the project.
- ✓ You may summarise in a table the main innovation related activities / output of the project (Intellectual Property Protection, Dissemination activities, Socio-economic / Ethical Aspects, Promoting the Exploitation of results)

B4. Ethical Issues

Describe any ethical issues that may arise in the project. You should examine carefully if the research you propose involves directly or indirectly ethical issues. If the project produces an end result whose exploitation raises ethical issues then this also should be covered here.

The standard 'Ethical issues table' should be filled in (included in the EC templates of Part

B).

B5. Consideration of gender aspects

You may give an indication of the kind of actions that would be undertaken during project implementation to promote gender equality in your project, or in your field of research. These could include actions related to the project consortium (e.g. improving the gender balance in the project consortium, measures to help reconcile work and private life, awareness raising within the consortium) or, where appropriate, actions aimed at a wider public (e.g. events organised in schools or universities)

4.4.2 Starting with the Proposal Summary and Core Partners

The initial, rough research idea should be developed into a well articulated project summary. To do so, you should spend time in reading into the background of the area (e.g. see next section about the reference documents and information) and discuss the idea internally (between core partners and / or inside your organisation). The summary should be 2-5 pages long.

The project summary should clearly present the core idea, innovation aspects, the rationale, the main stages of the methodology, the required partners, etc. **Indicative contents** include:

- Title / Acronym
- Background and rationale
- Aim and objectives
- Work content – methodology
- EU added value
- Main deliverables / results / benefits
- Dissemination activities
- Potential partners (required competences, role and responsibilities, geographical coverage)
- Details of the project (programme, call identifier, deadline, type of project, duration, expected budget and funding, desired number of partners, name of the coordinator, etc.)

4.4.3 Sources of Reference to be Used

Guide for Proposers, Workprogramme, Guide for Evaluators / Evaluation Guidelines, EC policy papers, reports, 'golden' paragraphs, previous proposals, published papers and other up-to-date information on the state-of-the-art, other EU-funded projects, etc. Give special attention to the Workprogramme and in particular to the specific strategic objective that your proposal targets to address. Analyse it in sub-objectives and adjust your proposal to them. The Strategic Objective, in which you target to address, as described in the Workprogramme, should be your major guide in shaping your project idea and forming your proposal.

Other sources of information are available on the internet: **CORDIS** for all the documentation regarding the call and for searching other similar research projects, etc. and search engines such as **Google** to identify up-to-date information on the targeted technologies and policy-related initiatives. Other EU websites may also be useful: e.g. www.europa.eu.int, **esp@cenet** (<http://ep.espacenet.com/>, free search engine for patents of the European Patent Office), etc.

At this stage in developing your proposal, you should have read up on the appropriate call documents, as well as spoken with a relevant Project Officer within the Commission. It helps

also to read up on European policy documents, because if the 'thinking' in your proposal is not in line with EU policy, then the evaluators will use this to mark down the proposal. Background policy reading will also aid the communication of the European added value in the proposal.

4.4.4 Proposed Methodology for Proposal Writing

One-man show or team working?

The proposal writing can be divided into the following tasks:

- ✓ Development of the technical content (state-of-the-art, methodology - workplan, S&T objectives, deliverables).
- ✓ Consortium building (identification and communication with potential partners, collection of required data and information from them). This task involves a great deal of communication and (especially in the case of large consortia) is preferably undertaken by a person who does not write the technical content of the project (a task which requires a high degree of concentration / focus and avoidance disturbances caused by frequent communication).
- ✓ Budget preparation (the estimation, analysis and justification of the required resources,).
- ✓ Development of the supporting content (relevance to the objectives of the Call, potential impact, project management, other issues, etc.).
- ✓ Quality control and final improvements of the proposal.
- ✓ Proposal submission (registration via an electronic tool, uploading the data / information and submission of the proposal).

Although one person (who possesses the appropriate scientific / technical expertise) can theoretically prepare and submit the complete proposal individually, this is not recommended. The whole process is time consuming and research projects tend to require a multidisciplinary approach (use / integration of different technologies, different sectors of application, etc.). Therefore, **a small team of 2-4 people is usually involved in the proposal preparation.**

In any case, **the whole process should be coordinated by only 1 person**, who has the overall responsibility for the submission of the full proposal being on time. Close collaboration between all team members is essential for ensuring a high quality outcome.



Usual Problems in partners' contribution (during Proposal Writing)

Very often, you are expecting input to your proposal by some of your partners, based on their expertise. Nevertheless, have in mind that in many cases, as the deadline approaches, content is often sent too late and can be generic in nature. Try to work with reliable partners, who possess the expertise you require. In any case, you should set internal deadlines well before the deadline for proposal submission and allow for back up plans in case that something goes wrong. At the end of the day however, the person who coordinates the proposal writing will be responsible for the quality and completeness of the submitted version.

Ideally the quality control of the proposal is undertaken by the coordinator and at least one person with relevant knowledge not directly involved in preparing the proposal. Improvements identified during this stage can be crucial for the successful evaluation of the proposal.



What makes the difference? Tips for proposal writing

- Think twice before submitting a proposal on a topic heavily funded in a previous call. This will seriously reduce your chances regardless of how good your idea is.
- Your proposal should be based on the concept of helping the EU solve a problem.
- Use numbers, figures, graphs / diagrams and a significant, short quotation. These are more helpful than pages and pages of text. Diagrams are specifically needed to visualise the whole project and your research methodology.
- State clearly what problem you intend to solve and which needs you are addressing.
- It is important to show integration and networking contributing to the European Research Area. Coordination between national and European activities is critical.
- Your exploitation and dissemination plans for project results must be clear, appropriate and effective for your project. When developing an Exploitation Plan, consider for example:
 - *Basic research* > input to education, input to R&D > journals, conf., website, lectures, and Ph.D. projects
 - *Applied research* > input to policy, input to patent > patents
 - *Technical prototype* > input to standards > technical committees.
- A Quality check of the proposal before submission is crucial. Use the evaluation criteria of the EC to identify potential weaknesses of the proposal.
- Try to respect as much as possible the recommended length of each section – provide the key information required as evaluators work under serious time pressure.



Watch out !!!

- **Time:** You should ensure your proposal is completed well before the deadline and is of a high standard, without spending too much time on its preparation.
- **Partners:** The sooner core partners⁸ are confirmed the better. Additional partners can be invited later (although, several weeks before the deadline is recommended).
- To attract partners you may use your own contacts, the contacts of your partners, the NCP network or even the services of EU-funded projects, which help organisations to find partners (see also the section Consortium Building).

4.5 PROPOSAL SUBMISSION

Electronic submission: Proposals can be only submitted in electronic form through the EPSS tool. Access to the EPSS is call- and subscheme-specific, i.e. you have to first choose for which call for proposals and for which sub-scheme within the call you want to prepare a proposal.

Electronic submission has the advantage of multiple submissions until the very last moment of the deadline. However, you should be careful to register for the call and sub-scheme your proposal aims at.

Once you are registered you can directly access the **EPSS System** at <https://www.epss-fp7.org/>. **Detailed guidelines** and **user guide** for the use of EPSS are available at the web address of the above paragraph.



We recommend that you start preliminary submissions of the proposal, at least one week before the deadline (even if it is not in the final form yet).

⁸ Core partners are those partners with a major contribution in the research work of the project from whom you also expect some kind of contribution in the technical content of the proposal.

Before the final submission of the proposal a quality control can have a crucial role in the outcome of the evaluation. This check can be done by the writer of the proposal, but it is strongly preferable that also someone else – not directly involved in the proposal writing, but experienced in proposal writing – reads the proposal. Such a person can be a colleague.

The quality control should be done against the evaluation criteria. Weaknesses of the proposal should be identified and improvements be proposed. It is of paramount importance to check and confirm (based on your experience) that the proposal can (potentially) pass the **thresholds** in all evaluation criteria.

After each submission you get a confirmation that is sent to the email address that you have declared when you register in the EPSS system.

The final acknowledgment of receipt is sent to the same email address about one – two weeks after the call deadline.

4.6 PROPOSAL MARKING / EVALUATION

Generally speaking, the evaluation procedure under the FPs is one among the most objective and impartial.

The evaluation of proposals is carried out by the European Commission with the assistance of 'external' experts. Each proposal is assessed independently by a number of experts (typically by 3 experts but the number may vary depending on the Call), chosen by the Commission from the pool of experts taking part in this evaluation.

All proposals are evaluated against pre-determined evaluation criteria, while additional criteria may apply depending on the Call:

Evaluation criteria applicable to research projects (IP/STREP)		
1. S/T QUALITY "Scientific and/or technological excellence (relevant to the topics addressed by the call)"	2. IMPLEMENTATION "Quality and efficiency of the implementation and the management"	3. IMPACT "Potential impact through the development, dissemination and use of project results"
1.1 Soundness of concept, and quality of objectives 1.2 Progress beyond the state-of-the-art 1.3 Quality and effectiveness of the S/T methodology and associated work plan	2.1 Appropriateness of the management structure and procedures 2.2 Quality and relevant experience of the individual participants 2.3 Quality of the consortium as a whole (including complementarity, balance) 2.4 Appropriateness of the allocation and justification of the resources to be committed (budget, staff, equipment)	3.1 Contribution at the European (and/or international) level, to the expected impacts listed in the work programme under the relevant topic/activity 3.2 Appropriateness of measures for the dissemination and/or exploitation of project results and management of intellectual property.

At an initial stage, independent evaluators (at least 2 per proposal) selected by the EC examine the individual issues comprising of each block of the evaluation criteria and mark the blocks on a scale of 1 to 5. In this scheme, the scores indicate the following with respect to the block under examination (half marks may also be given):

Each criterion will be scored out of 5, while half marks can be given. Thresholds are applied to the scores. The threshold for individual criteria is 3. The overall threshold, applying to the sum of the three individual scores, will be 10. The scores indicate the following with respect to the criterion under examination:

- 0 *The proposal fails to address the criterion under examination or cannot be judged due to missing or incomplete information*
- 1 **Very poor.** The criterion is addressed in a cursory and unsatisfactory manner.
- 2 **Poor.** There are serious inherent weaknesses in relation to the criterion in question.
- 3 **Fair.** While the proposal broadly addresses the criterion, there are significant weaknesses that would need correcting.
- 4 **Good.** The proposal addresses the criterion well, although certain improvements are possible.
- 5 **Excellent.** The proposal successfully addresses all relevant aspects of the criterion in question.

The relevance of a proposal will be considered in relation to the topic(s) of the work programme open in a given call, and to the objectives of a call. These aspects will be integrated in the application of a) the criterion "S/T quality ", and b) the first sub-criterion under "Impact" respectively. When a proposal is partially relevant because it only marginally addresses the topic(s) of the call, or if only part of the proposal addresses the topic(s), this condition will be reflected in the scoring of the first criterion. Proposals that are clearly not relevant to a call ("out of scope") will be rejected on eligibility grounds.

At a second stage, the evaluation progresses to a consensus assessment, representing the common views of the evaluators. This entails a consensus meeting to discuss the scores awarded and to prepare comments. The consensus discussion is moderated by a representative of the Commission.

To be successful a proposal must pass all the thresholds; that is, a mark 3 per criterion (for each of the three criteria) but **10 overall out of 15**. As the competition is, most of the times, harsh, normally a proposal has a good chance to pass if it has collected marks above 4. **This means that the proposal should be evaluated close to excellent!**

4.7 RESUBMISSION OR ... NEGOTIATION PHASE

4.7.1 News from the EC

After the completion of the evaluation by the EC with the support of external evaluators, proposers get the evaluation results. The evaluation results include a brief evaluation report (Evaluation Summary Report, ESR), which however may provide quite useful feedback to the proposers. Those proposals that have passed all the thresholds are *likely* to be invited for negotiations. Nevertheless, in most of the cases only a few of them, based on the priority they have from the Evaluation, get an invitation (usually sent by the EC a few weeks later).

Sometimes, the coordinator or the partners might be able to have some initial **informal** information about a proposal and its ranking after the evaluation. In the past preliminary results were occasionally be disclosed by National Contact Points and more randomly by EC Officers. But, all these are informal!! You must wait for the Evaluation Summary Report to be sure of the evaluation results of your proposal and an Invitation to Negotiations notification to be sure it was finally short listed for funding.

However, for the large scale collaborative research projects (Integrating Projects - IPs) and Networks of Excellence (NoEs) the process is slightly different. IPs and NoEs proposals passing the initial evaluation may then be invited to appear for a Hearing (addressing questions posed

by the evaluation panel). Final decisions on pass, fail and relative rankings of IPs or NoEs will only be made for those after the hearing.

4.7.2 What if the News is Not Good? – Decision for Resubmission

Only a small percentage of the submitted proposals are retained for negotiations (it can be as low as 10%-15% or even lower). Because the level of competition is usually quite high, it is inevitable that some good proposals will not be selected for funding even though they passed the threshold. You should carefully read the evaluation report and decide if and under which circumstances it may be appropriate to resubmit your proposal in another future Call. Occasionally, some improvements (e.g. in the methodology, pilot cases, consortium, budget, etc.) may be needed and also certain adaptation to the specific objectives of a relevant future Call. However, it is possible that much of the work done can be reused.

It is not unusual to resubmit a proposal even 1-2 years after the initial submission. The decision for resubmission is usually taken by the project coordinator and the core partners.

4.7.3 The Desired Invitation to Negotiation

Immediately following preparation of the ranked list by the Commission services, the coordinators of proposals that were positively evaluated and for which funding is available are invited to start negotiations. The EC sends an official letter describing the framework for negotiation, based on recommendations in the Evaluation Summary Report. Proposers must provide further administrative information necessary for the preparation of a project contract and may be requested to take into account in the revised work programme any technical and budget changes proposed during the evaluation (all the requested actions and respective deadlines are defined in the framework for negotiation – which is annexed to the invitation letter).

Remember that it is also possible at this stage to slightly modify the consortium and / or to change Coordination to a different partner, as long as the Commission Services agree. If it proves impossible for a consortium to reach agreement in negotiations with the EC within a reasonable deadline the Commission may impose, negotiations on contract preparation may be terminated and the proposal rejected. (This is unusual, but can happen, especially if a key partner suddenly decides they can no longer participate, or if requested changes to the final Description of Work are rejected by partners affected by the proposed change).

The overall purpose of the negotiation process is to agree on the scientific-technical details of the project and to collect financial and legal information needed for preparing a Grant Agreement (i.e. contract between the Commission and the Consortium) as well as for the project management and reporting on the project execution.

Negotiation of reserve list proposals may begin once it is clear that sufficient budget is available. Subject to budget availability, negotiations usually begin with the proposals at the top of the reserve list and in the order of the final ranking.

4.7.4 Steps of the Negotiation

See Guideline documents for negotiation available on CORDIS: "**FP7 Negotiation guidance**" notes (http://ec.europa.eu/research/participants/portal/page/fp7_documentation)

There are several factors that can affect the process of negotiations:

- **External factors:** Number and size of the requested changes by the EC (stated in the Framework for Negotiations). These changes can be related to the technical content of the proposal, the budget, the EC contribution or even the consortium.
- **Internal factors:** Modifications requested within the consortium. These may include minor changes such as change in cost model and personnel working in the project, or major changes such as a change of role of one or more partners, withdrawal of a partner, etc.

Before signing the Grant Agreement (contract), the EC will request the contract preparation documents, which consist of two parts:

- i) a set of administrative forms (the **Grant Agreement Preparation Forms - GPFs**: including information on the partners, a summary of the project and an overview of the budget and other supporting documentation) and
- ii) the **Description of the Work (DoW)**, including the most of the Part B of the proposal (the DoW becomes later Annex I of the Grant Agreement).

The process is initiated by a letter from the designated Project Officer (on behalf of the EC) to the Project Coordinator (PC) inviting him on behalf of the consortium to enter into negotiations on a contract. In parallel, the PC will receive a package of material and a timetable for the negotiations. Several dates will be suggested for meetings in the EC premises to initiate the negotiations. By that initial meeting the PC will generally have to:

- prepare the first draft of the Description of Work (DoW);
- have the Grant Agreement Preparation Forms (GPFs) ready from each partner; and
- should deal with the Consortium Agreement (where requested).

During the negotiation phase, under some circumstances, there may be an opportunity to change partnership / Coordinator.

To facilitate the negotiation process, the Commission Services provide the interactive online tool called '**Negotiation Facility – NEF**'. The letter of invitation to negotiations gives details on access to it.

There are two aspects of the negotiations phase:

- ✓ **Technical negotiations** aiming to agree on the exact content of the work to be carried out. This content is incorporated in the ANNEX I (Description of Work) of the Grant Agreement, which is based on the Part B of the proposal. In small/medium scale research projects (STREPs) work should be described in considerable detail for the whole project duration, while for large scale integrated projects (IPs) and Networks of Excellence (NoEs) a detailed plan is required for the first eighteen months, with an outline plan for the subsequent project duration.

This provides an opportunity for some modifications, either initiated by the consortium in the light of events since submission of the proposal or more likely as a result of suggestions by the evaluators and / or requests from the Commission. Any such changes are only allowed when in agreement with the Project Officer, who should be concerned that the essence of the proposal has not been altered post-evaluation.

- ✓ **Financial and legal negotiations** aiming on reaching agreement on budgetary matters such as the budget for the full duration of the project and the budget breakdown for the different project periods, as well as issues related to subcontracting and third parties. They also cover the establishment of the amount of the initial pre-financing, timing of project periods and reviews.

Among others, the EC checks the financial capacity of the coordinator and any other applicant with an EC contribution exceeding 500.000€ (except for public bodies, higher and secondary education establishments and entities whose participation is guaranteed by a Member State or an Associated Country).



Important

1. **Funding distribution between partners:** the indicated breakdown is included in the contract but it can be reallocated within the consortium. Thus, understandings on this between the partners should be included in the Consortium Agreement.
2. **Financial Guarantees / Assurances:** although in FP7 the financial responsibility of each partner is limited to its own debt, there is still collective responsibility for carrying out work. Thus, we would still advise potential Coordinators to undertake some check of their own on the potentially financially weaker partners and perhaps request some kind of guarantees (e.g. formal letter stressing the commitment of the organisation to perform its tasks on time and in high quality).

A Participants' Guarantee Fund (PGF) has been created, aiming at covering the financial risks incurred by the EC and the beneficiaries during the implementation of an FP7 project. All beneficiaries must contribute to the PGF for the duration of the project. When transferring the initial pre-financing to a Consortium, the Commission deducts the relevant PGF contribution and transfers it to the holding bank. This deduction equals 5% of the total Community financial contribution and will be recovered by the beneficiaries with the final payment (unless the PGF has incurred losses).

Validation of existence and legal status of the beneficiaries

One of the prerequisites for signing a Grant Agreement in FP7 is validation by the Commission of the beneficiaries' existence as legal entities with a certain legal status. As a principle for FP7, such validation is done only once for each entity.

- For the purpose of one-time validation of the participants' existence and legal status, the Commission provides the central facility **Participant Data Management (PDM)**, linked to the online self-registration tool **Unique Registration Facility (URF)**. The validation process is triggered by self-registration of the organisation in the URF (http://cordis.europa.eu/fp7/pp-valid_en.html).
- Upon successful validation, each entity receives its final unique identifier, the **Participant Identification Code (PIC)**, which is a 9-digit number to be used for identifying the participant in any FP7 related interactions.
- Each legal entity to be validated shall appoint one person, the **Legal Entity Appointed Representative (LEAR)**, authorised to represent the entity and manage its legal information stored in the central database.

Consortium Agreement (CA)

The Consortium Agreement has been a mandatory document for all research projects that must be prepared and **signed by the partners prior to the official start** of the project and by each additional partner prior to him joining the project. The EC does not require specific content for the CA and it is up to each consortium to decide what issues and at what extent will include. However, the EC supports the development of the CA by publishing the "**Checklist for the Consortium Agreement**" which can be found at: http://ec.europa.eu/research/participants/portal/page/fp7_documentation.

The CA sets out the internal management guidelines for the consortium (e.g. decision making, conflicts, distribution of the EC contribution, etc.) and can provide for arrangements relating, for instance, to the granting of specific access rights in addition to those provided for in the standard IPR provisions. **The Grant Agreement with the Commission will always prevail in cases of conflicts with the CA.**

Nothing prevents the contractors to prepare several CAs governing different aspects of their project, or to amend their initial CA or to make bilateral or other arrangements involving

smaller groups of contractors. Since the CA is a "private" agreement involving only the partners, the EC does not sign it and will not even check its contents (only informed that it has been signed by all partners).



General tips for the coordinator

The coordinator should particularly pay attention to the following:

- Respect the deadlines set by the EC. In case that a delay is inevitable you should inform the EC officer as early as possible by telephone and using email, asking for an extension.
- Assess the requested changes and identify which have the largest impact on the project and the consortium. You should try to form a negotiation strategy and set targets you want to achieve. For instance, you may negotiate for some changes and to lighten certain tasks that are not so important to the EC.
- Keep your partners informed about important issues and make clear that they should respond to your requests within the time limits you are setting. Contact them by telephone in case they do not respond to your messages (emails).
- Avoid spending too much time in the negotiations. Your time is not paid by the EC.
- Try to be fair with your partners, particularly when the EC has requested a cut in its contribution (for example such a change may be evenly distributed among the partners in proportion to their initial requested EC contribution).

4.8 CONTRACT SIGNATURE

With the consortia having successfully finalised the negotiation will conclude with signing of a contract establishing the rights and obligations of all participants. All contracts are based on a standard model contract that can be found at: http://ec.europa.eu/research/participants/portal/page/fp7_documentation.

In case of significant changes (e.g. change of partners) occurring during the life of the project the contract shall be amended. The Coordinator is responsible on behalf of the Consortium, to make all the necessary official communications with the EC for the requested changes / amendments.

5 Project Elaboration

5.1 STARTING A PROJECT

Typical sayings:

"Every beginning is hard"
"A good start makes everything easier"

but also:

"A bad beginning makes a bad ending"!!!

A project starts with an initial "kick-off" meeting, the first project coordination meeting, which is usually held in the first month of the project. From our experiences, some kick-off meetings fail in productivity *because they are unnecessarily too formal* and only aim to an exchange of monologues, while at the end an action list is developed quickly that "closes the matter".



A monologue on the monologues... (not recommended actions)

Examples **to avoid** in a kick-off meeting:

- **Before:** you must prepare some slides. Often, these are prepared under pressure too close to the event itself. As a result, they can sometimes be prepared without though being sufficient about the target audience. *(If all partners have participated in European funded research before, then the presentations are primarily focused on how to achieve the project goals. If some of the partners are new to European funded research, then more emphasis must be placed on administrative and other practical issues to ensure all partners have a common understanding).*
- **During:** you listen to the other people's monologues, moving your head (this body language sign implies: "I understand what you are saying and I agree") while periodically you broadcast a "hmmm" message to the speaker and the others (sign that you follow the presentation). While you do your presentation, others provide positive reinforcement, but there is no discussion to ensure everyone is "on the same page".
- **After:** you are asked by the Coordinator to circulate your slides, but there is limited or no contribution to meeting minutes, and no changes made to the presentations based on feedback.

The above is not an exaggeration of the reality faced in many projects and is indicative of the lost opportunities for creating a true climate of familiarity and understanding within a consortium. It is normal for questions to be asked at the start of a project as the work now begins in earnest. However, cultural differences may result in lost opportunities for clarifying important issues.



Socialise before, during and after the meeting!!!

It is important to bring people together, to socialise and get to know one another in a relaxing environment. But, how can you bring people together? This could be by arranging drinks for those arriving the night before the meeting, a dinner on the evening of the meeting, or even arrange a cultural event / excursion the morning after the meeting.

Projects run by project' teams. It is very important to create a team spirit in the consortium and this can not be based only on speeches for team spirit. Use social activities to reinforce the links between the people and try to create personal relationships / friendships.

Everybody (including the EC officer and the reviewers) **should enjoy working on the project.**

The next issue is to organise the structure of the work in terms of:

- Time planning (phases, what leads to which result, milestones, etc)
- Workpackage structure (also related to the above)
- Outcomes / Deliverables as result of the previous (i.e. the WPs)

For this, rather than assigning the responsibility of presenting the WorkPackages to each WP leader (usually done by editing section from the Technical Annex of the project), it is better to go through the Description of Work in an almost conversational way, thus making it more comfortable for people to make remarks, comments and raise questions.

Another way is to form parallel working groups, in the meeting, per WP or major part of the research. Following parallel discussion, a representative of each working group presents the results to the rest of the consortium. Structuring work into WorkPackages and Tasks serves the purpose of establishing small, efficient teams who can work in parallel to achieve project results.

This may drastically help in saving time and resources from e.g. adding unnecessary complexity and making better assignments within the consortium – a key result of the kick-off meeting!

Both the **Coordinator** and the **WP leaders** should play an important role in kick-off meetings. Frequent prior communications before the kick-off meeting are essential to a successful outcome.

Meetings should run as long or as short as required to achieve the goals set for that meeting. As having a face to face meeting is important, meetings should not simply stop at 18:00 because this was pre-planned, in case that good progress is being made and important and difficult issues are being addressed. If progress is not being made, then a short break can be beneficial. To reschedule a dinner or even come back to the meeting after the dinner is not unusual in the business world – it has rather become an exception in the world of European research projects.

A tip is: if you choose places for your meetings that are attractive for people to leave the meeting place, you are always running a risk. Think of choosing places that are easy-to-access but not central to tourist attractions e.g. at an international airport hotel. In the case of a two day meeting, the agenda for the second day should always be flexible to allow for progress or lack of progress during the first day of the meeting.

To maximise benefits of meetings, key people should be equally involved in the minutes and follow-up actions. At the start of the next meeting, the Coordinator should go through the action list to check on completion of all tasks and match the commitments made with real outcomes.

5.2 WORKING IN MULTI-DISCIPLINARY AND MULTI-CULTURAL RESEARCH TEAMS

Our perception of other cultures is often formed not on facts, but on cultural references, stereotypes, old myths, and other people's opinions subconsciously gathered during our lives. The more we work with other people, the more we understand that we have misconceptions of other cultures and try to correct them.

Similar is the case of defining characteristics according to "disciplines": we expect a different attitude from a computer scientist than from a psychologist, a humanities scientist, an accountant, a business analyst, a statistician.



Though old and before EU enlargement, this poster shows the most common stereotypes that each one of us might have for their trans-national collaborators and partners ...
(Drawn by J.N. Hughes-Wilson)

The problem is: how to cope with this?

- With respect to the country of origin e.g. Germans, Greeks, Portuguese?
- With respect to the profession: consultants, academics, software developers?
- With respect to the position in the hierarchy and seniority: undergraduate students, recently promoted and ambitious junior managers, EU projects' veterans, etc.

The issue is that in the area of Information and Communications Technologies, people involved in the research, come from different countries, cultures, educational systems, working environments and may also come from different domains and a cross-over of different disciplines.

One would expect this 'thousand flowers' picture to be brightly-coloured; however, and unfortunately, for many reasons this is not the case at all. Though one might still see the glass either half-empty or half-full, the collaboration taking place at the trans-national level in projects is not the one that European collaborative research visionaries have been foreseeing.

This is normal – in all professions related with other people that also involve heavy communication, this excessive demand for communication, team working, meetings, coordination, etc, may become an important lasting factor.

We should always bear in mind that the main asset one can bring to this adventurous journey that are European research projects is **openness** – in all aspects: although, bare in mind, in the communication with others, in the recognition of (own) faults. Other qualities like dignity, integrity, fairness are very difficult and also dangerous to approach with definitions – at the end you might find yourself in the wrong side. However, openness and the capability to build bridges with people is one that is critical and finds itself at the core of the trans-European collaboration.

The evolution of FP6, and the current state of FP7, is a story of people that despite the fact that they do not share the same culture, were educated in different contexts and in different milieus, but through communication, they succeeded in developing something tangible together.

There is no single 'best' way to do this – but getting to know one another well, and thus better understanding cultural and linguistic differences as well as different expectations is essential.

5.3 MANAGING A RESEARCH PROJECT (SCIENTIFIC – TECHNICAL AND ADMINISTRATIVE)

The aim of project management is to ensure successful completion of the project, both from the point of view of the EC and of the partners themselves.

What is a successful research project?	
Success for the European Commission	Success for the project partners
Smooth completion of the technical and financial content of the project, namely: ▪ project deliverables sent on time (according to ANNEX I of the Contract) ▪ acceptable quality of the deliverables ▪ accomplishment of the project targets and goals (as set in ANNEX I) ▪ adequate dissemination activities and exploitation plan ▪ completion of the project and submission of a complete final report on time ▪ provision of adequate justification for the payment of the whole EC contribution	Achievement of effective financial management and creation of the targeted added value, namely: ▪ accomplishment of research - business goals (e.g. regarding project outcome, exploitation plans, etc.) ▪ smooth payments of the EC contribution (according to planning) ▪ use of no additional resources other than the initially planned

Project management of research projects may be divided into **administrative management** (which includes: reporting to EC, communication aspects, financial management, monitoring progress, etc.) on one hand, and **technical – scientific management** (coordination and management of the scientific work, guidelines / specifications for the elaboration of project deliverables, quality control of the scientific work, etc.) on the other.

The management of a research project is governed by a) the *Contract* and *its Annexes* (having been finalised during negotiations), b) the *Consortium Agreement* (agreed among partners before the start of the project) and c) the *Management and Quality Plan* (the latter is not obligatory, but can become essential for the successful project outcome).

Management and Quality Plan for Research Projects

The Management and Quality Plan – as long as it is used wisely - can become a valuable tool for ensuring efficient project management and smooth project elaboration. It includes the detailed provisions for the project management and elaboration and should be complementary to the Contract (and specifically ANNEX I) and to the Consortium Agreement.

Normally, it should be accompanied by the detailed work-planning of the project (at sub-task level). An indicative list of contents for the Quality Plan is presented below:

1. General (Aim of the Management & Quality Plan, Structure of the Management & Quality Programme, Control of the MQP)
2. Organisational Issues (Management Structure, Roles and Responsibilities, Procedures, Partners contact details)
3. Records – Control of Deliverables
4. Project Communication (internal & external)
5. Work planning, Monitoring and Control (Work-planning, Project Meetings, Progress Monitoring, Reports to the EC, Risk Management, Corrective action/Contingency plans)
6. ANNEX 1 – Project Team per Partner
7. ANNEX 2 – Relevant / Complementary Documents & Forms (Deliverables check list, Analytical Workplanning, etc.)

A typical size of the Quality Plan (together with its annexes) should be about 20-35 pages. Nevertheless, in Integrated Projects (IPs) and Networks of Excellence (NoEs), where the management approach is usually much more complicated, more detailed management and quality plans are usually expected.



Tips for effective Project Management

- ✓ **Cultivate a close and truthful relation with the EC Project Officer (PO):** You (the project manager) and the PO have a major common interest: the successful project elaboration (based on the provisions of the Contract and its Annexes).
- ✓ **Early face to face meetings with the PO can significantly help communication.**
- ✓ **Design and apply risk management and quality assurance procedures.**
- ✓ **Ensure appropriate quality of deliverables**
- ✓ **Ensure on-time delivery of project's deliverables:** each project deliverable (or adequate evidence proving its completion) should be sent to the EC at the due date mentioned in the ANNEX I. In case of a delay the EC should be notified in advance. Discuss the specific deliverable with WP leader or responsible partner at least one month before the deadline.
- ✓ **On time delivery of reporting based on EC guidelines and templates.** Give specific guidelines and a timetable for reporting to partners. Usually, Coordinators give partners document templates for the periodic reporting, and Excel .xls templates for monitoring expenses. Be sure that each partner has understood how those templates should be filled. Check their input on time and ask them immediately of any necessary changes.
- ✓ Particularly about monitoring the expenses: **The Coordinator should ask periodically, together with the filled template Excel .xls file, the hard copies of expenses per partner** (to make a quick verification). In many cases, serious mistakes have been identified and corrected before the submission of the respective management report to EC (e.g. A former version of the 'monitoring expenses' file had been sent, not including all the costs incurred).

5.4 EXPLOITATION / COMMERCIALISATION OF RESULTS

The exploitation and commercialisation of the results in an ICT research project should be in the forefront of the Consortium Agenda. This seems obvious, as so many partners are putting a great amount of resources in order to implement the research and benefit from the results. Nevertheless, in the reality this is not so obvious.

Very often in research projects partners concentrate on the research / technical work and underestimate the potential business value that may be created. While for academics and research institutes this may partially seem reasonable (while it shouldn't be, as spin offs and other forms of business exploitation of research results are still open for them), this paradox also takes place with the industrial / business partners in a consortium. This is either because extra resources are needed to shift research results into the market, or the Intellectual Property Rights (IPR) issues are very complicated to proceed to business exploitation, or because the priorities of the company changed in the last 3 years (time when the proposal was originally submitted), etc.

Instead of running research and potential exploitation sequentially, or in parallel, currently, exploitation is rather regarded as a less important part of a project's scope; the centre of gravity lies in the R&D and technical tasks – the rest is viewed as administrative and paper work. Wrong!!

Actually, a radical approach is to couple these two activities (research and exploitation) together – as we insulate a channel by a second one to form a coaxial cable. This metaphor helps us to visualise the tight coupling that should exist between the two activities. If we think of the project as a business, then a marketing working group should be established and examine from Day 1 the business potential as well as the business paths the consortium should follow.

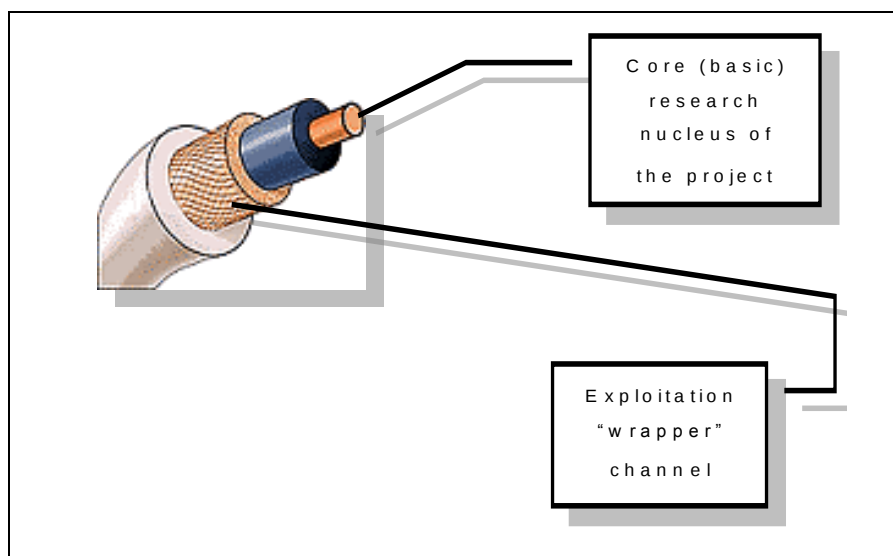


Figure 3: Research and (its) exploitation are bound together

To achieve this, a possible approach is to 'connect' them right from the beginning, i.e. from the proposal stage. A usual misconception regarding business plans is that they actually have to talk about a ready-to-ship product or service; this simply is not true. A research proposal is a (special type of) business plan; people prepare one in order to get funding for achieving their goals. One idiosyncratic aspect of the RTD proposals is that they actually form a class of meta-business plans (or business meta-plans) as they ask for funding which, if appropriately used, enables the creation of new businesses or the sustainability and improvement of existing ones.

For this, consortium members need to be able to answer some simple questions, including:

- *What explicitly is it that we are proposing / developing?*
- *How are we going to use it? Or sell it? What is the business model we should follow / design?* For this last, you have to check whether the products you intend to use or sell really make sense from a business point of view. This has to do with issues such as not reinventing the wheel – or in the event that you are ambitious enough to introduce some new type of a wheel – you have to provide some evidence to the outside world (and in the case of the Commission that co-finances the project, it is a matter of honesty and integrity to our investor) that it will really sell / contribute to the economy.
- *Who is going to use it?* You have to think of and define who the potential target groups for the new technology / knowledge / service are and what their main characteristics are. Why they should prefer your product / service instead of other?
- *Who is going to sell it?* For this last, you have to check whether the entities (partners of the consortium) to perform these tasks are actually capable of performing them or are they just pretending. You should also check other means and the scope of launching a new business (establish a new company).
- *Etc.*

Examples of exploitation actions during project elaboration

- ✓ *Elaboration of a Technology Implementation plan:* Also including the design of the required activities in order to adjust the research results so as to become a commercial product / service.
- ✓ *Preliminary marketing activities:* As an initial step towards exploitation, the partners may employ marketing techniques to highlight awareness of the developed technology to their current customers and seek out new customers through sponsored events, press releases, demonstrations etc.
- ✓ *Business Plan:* One way to put the exploitation aspect in the fore front is to have the submission of a business plan as a deliverable in the project (which becomes part of the contractual obligations of a project).
- ✓ *Technology transfer activities:* These can be the organisation of seminars towards industrial commercial actors (value chain actors) in respect to the new knowledge / technology / service produced.

5.5 MANAGEMENT OF INTELLECTUAL PROPERTY RIGHTS (IPR)

Parties join and participate in an EU-funded Framework Programme project with different objectives, mostly originating from its own interests. That could be interests such as, developing a larger network of cooperation partners, improving knowledge within a certain area of technology or trade area, etc.

It is certain that cooperation is the most efficient way to improve business knowledge, provided the Parties working together realise this and feel they can rely on each other. One of the ingredients for establishing this is a clear and agreed agenda for the IPR project management.

As the Parties' objectives are different, discussions about how the project results (*Foreground*) are going to be disseminated or what Background that has to be put into the project, have to start in the very beginning of the project planning. However, most of the time, it is the Parties' researchers that start discussions what to perform within the project, without involving the business or legal departments or experts where the former do not exist. It's therefore recommended to involve them from the very beginning when the project proposal is written.

No matter the Parties' wishes, an FP7 project has objectives which have to be fulfilled in order to justify the EC contribution, as "**The Rules for Participation under the 7th Framework Programme**" states in Article 45:

(http://ec.europa.eu/research/participants/portal/ShowDoc/Extensions+Repository/General+Documentation/Legal+basis/Rules+for+participation/ecrulesforparticipation_en.pdf)

Article 46

Use and dissemination

1. The participants shall use the foreground which they own, or ensure that it is used.
2. Each participant shall ensure that the foreground of which it has ownership is disseminated as swiftly as possible. If it fails to do so the Commission may disseminate that foreground. The grant agreement may set out time-limits in this respect.
3. Dissemination activities shall be compatible with the protection of intellectual property rights, confidentiality obligations, and the legitimate interests of the owner of the foreground.
4. Prior notice of any dissemination activity shall be given to the other participants concerned.

Following notification, any of those participants may object if it considers that its legitimate interests in relation to its foreground or background could suffer disproportionately great harm. In such cases, the dissemination activity may not take place unless appropriate steps are taken to safeguard these legitimate interests.

The meaning of the definitions "*Use*" and "*Dissemination*" can be found in "**Annex II – General Conditions**" to the Grant Agreement (II.1 Definitions, p. 2):

5. "*dissemination*" means the disclosure of *foreground* by any appropriate means other than that resulting from the formalities for protecting it, and including the publication of *foreground* in any medium;
8. "*use*" means the direct or indirect utilisation of *foreground* in further research activities other than those covered by the *project*, or for developing, creating and marketing a product or process, or for creating and providing a service;

That means, the EC expects that the *Foreground* is used and disseminated within the project and that the Parties have to plan and show this in the project description.

With this in mind consider what has to be done from the beginning when the project is planned. Certain steps can be recommended;

1. Consider if a 'Letter of Intent' (LoI) or a 'Memorandum of Understanding (MoU)' is needed to secure confidentiality and to minimize the risk for a Party leaving the project planning with sensitive information or joins another project with ideas discussed.
2. Discuss and agree the project objective according to the purpose for EC contribution.
3. Consider if the project has optimised the possibility for use and dissemination or what has to be done according to this.
4. Consider if there is need for a separate work package handling this matter in a later stage when the results have been evaluated and there are many and severe questions that have to be considered and agreed upon (maybe the result can be the base for a new plant within a party or base for a new company),

If the project consists with Parties showing big interest in commercialization project results and if it's expected to be discussions about 'Use', 'Dissemination' or 'Access Rights', consider if there is a need for an IPR Management group within the project to support the Parties in discussions and decisions regarding questions related. This IPR Management group can consist of representatives from the parties Business and Legal departments and also, if so agreed, be the first instance for dispute resolution between the Parties according to IPR related questions.

5.6 DISSEMINATION AND PUBLICITY

Dissemination work in an RTD project should be organised as a set of parallel work and activity streams that communicate the research content and project results to different audience categories, with an emphasis on leveraging both scientific and market potential of the project.



From the beginning of a project try to create a simple table with dissemination goals, measurable targets and means to achieve them.

There is no single road to perform this task optimally; different modes and approaches may be employed – the critical and important question to answer is whether these serve the particular nature and idiosyncrasies of the project. Imagine, for instance the very same project led by:

- either a university, or by
- an industrial company.

It is natural to anticipate that they both have a different understanding of the term dissemination, which represents that they both have different ideas of the particular:

✓ dissemination media and modalities:

- for a University Professor, an ACM Special Interest Group publication or an established IEEE journal seem to be ideal places to communicate one's research work, while
- for a company, a Business conference with high visibility or a newspaper with national or pan-European coverage (e.g. Financial Times) are ideal for presenting their work.

✓ dissemination channels:

- for universities, the submission of a paper containing findings and project results in a journal or a conference are considered the usual channels for disseminating project work,
- for companies, press releases are a low-cost and no-risk channel. They promote their activities by organising their participation in business events, relevant exhibitions and fairs.

Dissemination Strategy and Goals

It is quite normal for partners and consortia to start in disarray, protesting about the solutions to be produced and the technologies to be developed in the project. And it is also quite normal

that this period of extroversion fades after the first months. It is therefore essential to come up with a set of no more than 5 tangible dissemination goals which will be continuously monitored and progress shall be checked against each of them with quantitative and qualitative results.

First of all you have to ask "*What **exactly** do we wish to communicate to the others?*":

- Inform them about our freshly acquired competencies?
- 'Show off' and promote our participation in a European project?
- Share our business or research interests with them?
- Sell them 'something' specific or 'anything'?
- All of the above?

Answering these questions will help you form your project's dissemination strategy and agree on dissemination priorities and goals. For example, in the case of a project aiming to develop a new Internet Search Technology the dissemination goals might include keeping potential users and future customers abreast with project aims and progress of the work. In the case of an ambitious consortium, this might also include current competitors.

This high-level dissemination **goal** might be translated into two dissemination **products**;

- a Website containing RSS Feed services with updates on each new feature developed or any new finding researched; and
- a newsletter appearing monthly or bimonthly and including all news organised in thematic streams, or according to their possible utility. Such a newsletter might get the form of special issues with coverage of special markets or domains (e.g. Search engines for the banking sector, Search engines for the domestic users, etc.).



Try to be active and clever

Quite unsurprisingly, many consortia lack a coherent view to dissemination matters. Despite the fact that they could easily link several of the project activities to events and activities that are part of their normal business, they rather lack on creativity or imagination.

For example, it is easy for a university professor to include a dedicated session for their students, either graduate or postgraduate, on the project topic. Alternatively, such a session could take the form of a workshop, where students could be providing input in terms of competing approaches or other findings that are carried out by other projects or research groups.

Respectively, it's easy for a company to include project's dissemination in its usual dissemination activities (newsletters, participation in conferences, business workshops, etc).

Dissemination results

- These should all be tangible and – hopefully also – quantifiable results developed as part of the project dissemination activities.
- Outlining the various available dissemination channels that IST projects use to communicate their results to a wider audience, the list that follows has been drafted:
 - Posters / Brochures
 - Give-aways (coffee mugs, t-shirts, pencils, stationery gadgets, etc.)
 - Presentation CDs / DVDs
 - Press Communications and Releases
 - Exhibitions
 - Thematic Mailing Lists

- Clustering and cooperation with other projects
- Web-Site
- Articles in scientific and professional journals / Books
- Conference presentations
- Contribution to Standards / Contribution of open source implementations
- Collaboration with scenario and foresight development agencies
- Local User Groups / Thematic User Groups / Special Interest Groups
- Observing Partners

This list constitutes a superset of various dissemination *tools*. It is obvious that each one of these has special characteristics, and differs both at the target group it aims for and at the level of "depth" the dissemination can reach.

6 Joining Project Consortia

You wish to participate in a project that someone else is co-ordinating. You have a specific technology and / or capability to contribute and you are looking for a suitable proposal. You believe that your technology could be used in many research projects and / or your contribution could be even as Work Package leader in a project, where your speciality is a contributing element. You also believe that you have the managerial experience to act as a co-ordinator in a research project (though remember that there is only one Coordinator per project and usually the Coordinator is the initiator of the proposal and / or the consortium building process). All of the above are cases where you can try to enter a consortium. This is also the best way to "bootstrap" your organisation into the program.

The level of networking (*networking is the act of meeting new people in a business context*) is considered as one of the most important aspects of being part of the research map and of joining project consortia. It is now more than ever a 'necessary' step towards successful participation in European research projects.

Organisations with a higher networking level are usually invited more often to join winning proposals and can find more easily competent partners for their own projects, compared to organisations with lower networking level.

There are several different approaches with respect to networking:

- Network yourself with stronger actors so that you gain from their strengths and their knowledge of the 'game';
- Network yourself with weaker actors so that you have a leading / decisive position, which shall enable you to influence research course in line with your specific objectives, enabling you to set rules and control better the mechanisms of the 'game';
- Network yourself with actors that are in areas complementary or supplementary to yours, so that you avoid any direct competition problems while you are also in a position to favourably 'trade' your own individual competencies and skills;
- Network yourself with actors that are in the same areas as you, so that you increase and deepen your knowledge in the core area(s) of which you are active, while enabling you the potential of useful synergies and economies in scale with them.

Quite unsurprisingly, today people and organisations do all of the above, i.e. they prefer to engage themselves in mixed approaches, according to which they split their portfolio of research activities to all the above approaches – some of them even concurrently. This is not a bad sign when applied for some purposes related to their own research plans and not in order to simply serve a *money-seeking approach* (that is, focus on the funding and not in the research itself, even if it concerns topics irrelevant to their research priorities). The table below provides some networking tips we feel that maybe proved useful to you:

	Action	Impact			
		Find key players	Networking	Awareness on developments	Invited to consortia
1	Using Contacts During Existing Project	✓	✓✓	✓✓	✓
2	Using Your Own Research / Business Contacts	✓	✓✓	✓✓	✓
3	Participating in Relevant Events	✓✓✓	✓	✓✓✓	✓
4	Participating in the relevant European Technology Platforms (ETPs)	✓✓✓	✓✓	✓✓✓	✓
5	Participating in relevant European Industrial or Trade Associations	✓	✓✓	✓	✓
6	Using CORDIS Partner Search	✓	✓	✓	✓
7	Using the services of SSA projects supporting participation in ICT	✓	✓✓	✓✓	✓✓
8	Using IDEAL-IST partner search	✓	✓	✓	✓✓
9	Identifying Participants in Recent and Actual Research Projects	✓✓✓	✓	✓✓	✓

Table 3: Suggested Networking Actions

The above actions are briefly analysed below:

1. Using Contacts from Existing Projects

This is among the best methods open to those already involved in European funded research. Once you are in, you will have the chance to demonstrate your capabilities and to be a partner in future initiatives. For example events such as concentration or co-ordination workshops are organised for participants in projects by technical areas to discuss mutual issues and this is an ideal forum to forge new alliances and generate ideas for a new project.

2. Using Your Own Research / Business Contacts

You may use your existing business / research contacts to examine the possibility of setting up a research project and / or join consortia that are related to your contacts.

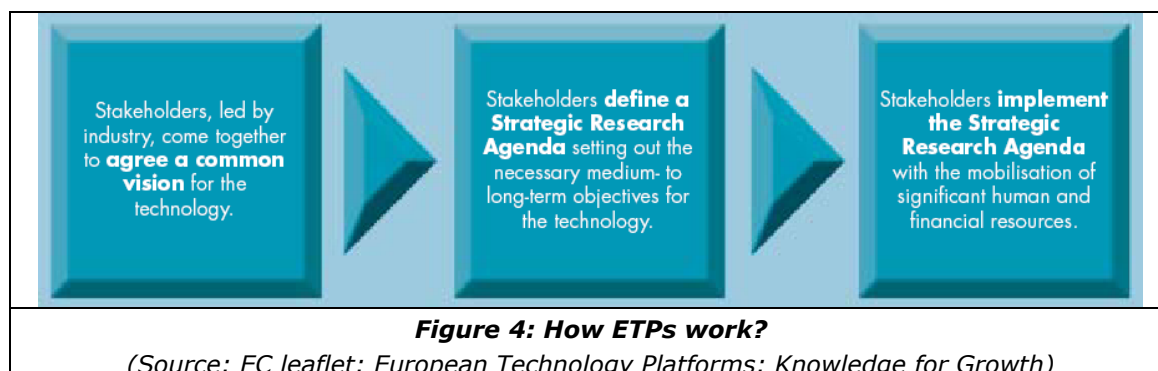
3. Participating in Relevant Events

Conferences, consultation workshops, etc. are key places for networking among participants. Face-to-face meetings are extremely valuable. Info-days (e.g. on FP7 calls for proposals) may have a considerably lower networking potential, but are nevertheless valuable.

In general, such events offer a good opportunity to meet representatives of the EU, key persons from organisations which have been participating in EU funded programmes and promote your competences ('sell yourself') to them.

4. Participating in Relevant European Technology Platforms (ETPs)

The European Technology Platforms (ETPs) are initiatives that bring together stakeholders, led by industry, to define medium to long-term research and technological development objectives and lay down markers for achieving them. Each ETP is covering a specific research – technology area.



ETPs gather major players operating in the targeted area and can be found on the internet at http://cordis.europa.eu/technology-platforms/home_en.html. You can visit the above web-address, identify those ETPs that are of interest for you and visit their websites. This will allow you to identify and contact experienced organisations in the specific areas of your interest, be informed about relevant events and join the Platform. A short presentation of the ICT-related ETPs is provided in a separate section in this Guide.

5. Participating in Relevant European Industrial or Trade Associations

In some areas such groupings play key roles in formulating the ideas for the program in cooperation with the Commission.

6. Using CORDIS Partner Search

On this online database (http://cordis.europa.eu/fp7/partners_en.html) you can record the type of project you wish to join. However this database although large it is horizontal (containing profiles of organisations interested potentially in all programmes and themes of FP7) and allows search only by key words, programme and country. Therefore it is not so useful when performing searches for specific type of organisations and expertise / experience.

7. Using the Services of EU-funded projects that supporting participation in ICT

There are numerous projects funded by EC that can provide you support in joining research consortia in the ICT area. Support may involve information, training and networking activities (through the websites of the projects or through events they organise such as info-days / workshops, seminars, networking events, etc.), web-databases to upload profiles, partners search web-tools, and a variety of other services. Also, the partners of these projects can be quite helpful in assisting you to join research consortia which are under development.

8. Identifying Participants in Recent and Actual Research Projects

This is an extremely effective way to identify experienced partners. In CORDIS there are online searchable databases that contain synopses of all current and previous projects by technical area. They also provide a list of partners / contractors per project. So it is possible for example to find all previous projects in a specific area for a specific organisation. Or it is possible to identify past and actual projects by setting key words and identifying the participants (partners / contractors), etc.

(<http://cordis.europa.eu/search/index.cfm?fuseaction=proj.advSearch>)

7 Case studies

7.1 GOLDEN TIPS FOR SUCCESS IN EU ICT PROJECTS: THE CASE OF METU – SOFTWARE R&D CENTRE

The Middle East Technical University (METU) – Software R&D Center (<http://www.srdc.metu.edu.tr>) is one of the pioneer organisations in **Turkey** which participates in the European Commission Framework Programmes. This participation dates back to FP5 where at first the Turkish Participants could not get funding as a primary contractor, however METU-SRDC showed its determinism for the European Commission IST projects by entering the field as an exceptional case funded by the European Commission. As it can be seen from the small summary of METU-SRDC, this exceptional case has reached the co-coordinator position with **hard-work** and **determination**. The major tips for success in the European Commission IST Projects can be found below from METU-SRDC:

- **Hard-Working:** The main philosophy of METU-SRDC is working hard to reach the targeted objectives. No matter what you are working on; METU-SRDC has tried its best to reach the goal, while showing its utmost effort on the subject.
- **Set your Vision:** METU-SRDC has set its vision, target domains and research strategies based on the recent requirements of the European Industry. For instance, healthcare is one of the main domains that METU-SRDC is working on. The ARTEMIS Project is the first project in this domain and with successful results and reputation; METU-SRDC continues its achievements in healthcare with the SAPHIRE and RIDE projects.
- **Rely on Deadlines:** One of the main sources of success for METU-SRDC is relying on deadlines. Deliverables, meetings, call for proposals and all other time-dependent activities are achieved within the declared time. This is important for both the collaborating partners and the European Commission. If you provide your deliverable or promise in the time that you have previously stated, this will produce the trust and synergy in the group, consortium and bilateral activities.
- **Reach both Academy and Industry:** METU-SRDC has tried to reach both the academy and industry with various tools. METU-SRDC has mainly an academic background; the ideas, innovations and new approaches are disseminated through publications in respectful conferences. Producing publications with the results of the IST Projects takes attraction from the industrial and research communities and it can create new project ideas. METU-SRDC also produces concrete implementations, prototypes which create impact over the Industry as to-be businesses. The generated prototypes are analysed by some companies and may be requested to be adapted into their current business.
- **Get on Well With Your Partners:** The vision of METU-SRDC is based on the long-term success so working with good partners is important. More vital is to continue the partnership with new project opportunities. METU-SRDC has some long term partnerships which have gone beyond than just one project. One of the first key factors of the project success is having good partners and a good consortium.

METU – SRDC Presentation

The Middle East Technical University (METU) (<http://www.metu.edu.tr>) is the leading technical university in Turkey. The Software Research and Development Center (SRDC) was established by the Scientific and Technical Research Council of Turkey (TUBITAK) in October 1991 and is operating under the Faculty of Engineering in METU. The aim of this centre is twofold: to lead large scale software research and development projects (<http://www.srdc.metu.edu.tr/projects.html>) and to foster international co-operation. SRDC is involved in a number of research and development projects supported by the government, industrial companies, international organisations and the European Commission. METU-SRDC has expertise on Semantic Web Technologies, Web Services, Ontology's, P2P networks, Agent Technologies, Semantic Interoperability, e-Health, Sensor Networks and GRID Systems.

Apart from the local projects supported by the Turkish State Planning Organisation, TUBITAK and by METU, METU-SRDC has assisted in the research of a prototype for AWACS Man-Machine

Interface Prototype for NATO Mid-Term Modernization Programme in co-operation with Gallium Software Inc. (Canada); and also developed a health care information system which has been successfully commercialised in Turkey.

METU-SRDC has experience in developing large scale software projects: METU Interoperable DBMS (MIND) Project is a multi-database system based on OMG's distributed object management architecture. METU Object-Oriented DBMS (MOOD) Project is an object-oriented DBMS prototype. METU-SRDC has successfully completed several European Commission supported projects, including, INCO-DC 97 2496 MARIFlow project (as a Scientific and Technical Coordinator of the project) and IST-1999-20216 LEVER (as a subcontractor), IST-2000-26429 HERMES project (as the scientific and technical coordinator), IST-2000-31050 Agent Academy (as a partner), and IST-2000-31046 HUMANTEC (as a partner), EUMEDIS MEDFORIST (as a partner). MARIFlow project has produced an inter enterprise workflow management system for data and control flow over the Internet. METU-SRDC has recently produced an ebXML compliant e-Business infrastructure prototype.

METU-SRDC was the **coordinator** of the following four projects in FP6 IST program:

- IST-1-002104-STP SATINE: Semantic-based Interoperability Infrastructure for Integrating Web Service Platforms to Peer-to-Peer Networks
- IST-1-002103-STP ARTEMIS: A Semantic Web Service-based P2P Infrastructure for the Interoperability of Medical Information Systems
- IST-4-[027074](#)-STP SAPHIRE: Intelligent Healthcare Monitoring based on a Semantic Interoperability Platform
- IST-4-[027065](#)-CA RIDE: A Roadmap for Interoperability of eHealth Systems in Support of COM 356 with Special Emphasis on Semantic Interoperability

Additionally, METU-SRDC had **partner roles** in the following projects (indicative list):

- EUMEDIS DAEDALUS: Delivery of Mediterranean Destination Links in Unified Environments
- IST-3-015871-SSA IST-BONUS: Identify and Support Research and Business Excellence to Enhance NMS - ACC Participation in the Development and Pilot Implementation-Demonstration of ICT Business Applications and Services
- IST-4-027306-STP ABILITIES: Application Bus for Interoperability In enlarged Europe SMEs

7.2 THE COGKNOW PROJECT: FROM IDEA TO CONTRACT WITH THE EUROPEAN COMMISSION

COGKNOW (1 September 2006 – 31 August 2009, www.cogknow.eu) was a three year European research project, involving eleven partners with a wide range of scientific and medical expertise from Estonia, Malta, UK, Scandinavia, Spain, France and Netherlands. The project aimed at helping people to remember, maintain social contact, perform daily life activities and enhance their feelings of safety. The research objective was to research and prototype a portable, easily configurable, device suitable for people with memory lapses and other symptoms of dementia and associated disorders.

The project commenced in September 2006 but preparation to win funding support for the work was under way for years beforehand. In fact, in October 2003, University of Ulster from Northern Ireland and Telefónica Investigación y Desarrollo from Spain had worked together to submit a research proposal that was unsuccessful.

↗ **4 months before submission**

Developing & refining the project idea

In May 2005, Telefónica contacted Ulster to explore the potential for a new proposal to address the Strategic Objective of eInclusion (2.5.11). This was in IST Call 5, where a key objective of the action line was "to develop next-generation assistive systems that empower persons with (in particular cognitive) disabilities and ageing citizens to play a full role in society, to increase their autonomy and to realise their potential."

The Centre for Distance-Spanning Healthcare at Luleå University of Technology in Sweden, Telematica Instituut from the Netherlands and the University of Ulster had been developing the basis of a research idea resulting from a meeting and discussion at a conference during this time. So, the core issue of the research roadmap that would advance the state-of-the-art was sketched out by this team of three researchers. Put together with Telefónica's skill at project co-ordination, a consortium was born.

↗ **3 months before submission**

Building the consortium & writing the proposal

In July 2005, three months before the proposal submission deadline of September 2005, the key competences required to realise the research objectives were agreed by the core consortium and the process of identifying and inviting new members into the project began in earnest.

At this stage, the consortium did not wish to reveal too much about the proposal unnecessarily. A two page summary was developed and circulated to potential new members. The key competences required were clinical medical expertise and access to mobile and web server based technologies.

The consortium made use of the IST-BONUS and IDEAL-IST services and quickly identified good candidate partners for the project.

↗ **2 months before submission**

Finalisation of roles and improvements in the proposal

The majority of the final configuration of partners for the project finally met in Paris on 8 September 2005, around fourteen days before submission deadline! Fortunately, the roles were well-defined and partners contributed to defining the final draft of the proposal. The consortium used phone conferencing to ensure strong group interaction and consensus in the development of the ideas into a proposal document, and the Paris meeting enabled this document to be 'fine-tuned'.

2 ½ months after submission ↗

Evaluation results

Around 13 December 2005, the consortium received the good news from the Commission in the form of a positive ESR (Evaluation Summary Report) about COGKNOW. Around 86 STREP (Strategic Targetted Research Project) projects were submitted to the eInclusion Strategic Objective (2.5.11) with the top eight gaining funding support. COGKNOW was placed second out of the 86 and was thus guaranteed to proceed to the negotiation stage.

4 ½ months after submission ↗

Invitation to negotiations & negotiation process

On 13 February 2006, a core team representing project management, ICT and clinical competences within COGKNOW were invited to Brussels by the Commission. This was a **first meeting** with the assigned project officer and the purpose of the meeting to identify administrative, procedural and financial issues that were required to be dealt with before negotiation could proceed.

There then followed a series of key deadlines. The 28 February 2006 was the deadline for the first version of the Description of Work (DOW) and the Contract Preparation Forms (CPF). The DoW (ANNEX I of the Contract) a document which evolves from the original proposal, but is adapted as the Commission's requests regarding the structure and management of the project are adopted by the consortium. The CPFs are administrative documents on partner information.

The 9 March 2006 was another key date for the development of the proposal towards a project. This was the date set for the **negotiation meeting** proper, in Brussels. At this meeting we were advised to work towards the date of 19 April 2006, which was the date on which the Commission wished to have completed all negotiations in our Strategic Objective.

After the March meeting, the consortium agreed to start the project at the beginning of September 2006 to facilitate user trials in the Spring of 2007.

11 ½ months after submission ↗

Signing of the Contract & start of the project

The final contract for the project was signed in early September 2006. The project kick-off meeting took place on 10-13 September in Valladolid in Spain at the premises of Telefónica.

Identity of COGKNOW Project

(1 September 2006 – 31 August 2009, www.cogknow.eu)

A. Project Main Goals

The core scientific and technological objective of COGKNOW was to achieve a breakthrough in the development of a successful, user-validated cognitive prosthetic device with associated services for people with mild dementia. At about 2% of the elderly population, this equates to around 1,900,000 people. The project aimed to practically helping people navigate through their daily activities, namely to:

- ↗ remember,
- ↗ maintain social contact,
- ↗ perform daily life activities and
- ↗ enhance their feelings of safety.

B. Key Issues

While there is some research and development in cognitive prosthetics, there are very few relevant tools, solutions or technologies specifically for people with mild dementia. It is important to note that there exists no one solution in the market or research laboratories that proffers a solution in line with the scientific and techno-logical objectives identified by our research - objectives which have been developed from academic studies that involve users and carers. However, splitting the state-of-the-art into the four areas of remotely configurable reminding functionality; communication and interaction functionality; supportive technology for performing daily life activities; and anomaly detection, there are solutions and tools that address to a greater or lesser extent each one of these areas.

The analysis of the state-of-the-art carried out was that research has delivered devices and services which have had mixed or little success when applied to actual living conditions among ageing people with mild dementia. However, they have proven useful in pointing towards where gaps in service and autonomy may be filled. The COGKNOW consortium believed that to address the social objectives as well as the scientific objectives, it was important for the device to be able to take cognisance of a situation and decide whether or not to intervene / raise an alarm. This went beyond the state-of-the-art in context-aware research in computing, as it required a remote system capable of predicting context, in order to decide, for example, whether an intervention is necessary or advisable.

C. Technical Approach

The project initially **analysed** the user needs, state-of-the-art, healthcare models, technological infrastructures and existing standards in EU member states and used this information to guide the implementation of COGKNOW. The **selection** of tools (wearable systems, interfaces, network and platform, telecommunications solutions and portable / mobile units) and their **integration** was based on their proven effectiveness and innovativeness in previous EU and especially IST eInclusion projects (in which many of the consortium partners have been involved or led) which have demonstrated services and systems; and also based on the wish to integrate these services and systems to **validate their use in combination**, thus building on previous European successes.

Implementation was addressed in two complementary work packages. In the first instance the development of the cognitive prosthetic to be used by the person and the associated home-based services was addressed. Secondly, the overarching infrastructure was developed. Developments of these two components provided a cognitive reminder paradigm, which extended upon previous developments and subsequently enhanced the state-of-the-art. Such a solution met the project objectives of enhancing (actual and perceived) autonomy and quality of life of persons with dementia, especially in the selected aspects of daily living, i.e. remembering, maintaining social contacts, performing daily life activities and feeling safe.

Evaluation within the project was supported via the results of three field tests performed in each year of the project at three differing sites (Ireland, The Netherlands and Sweden)) and was supported via Human Factor Analysis.

Expected Achievements / Impact

i. *Societal Impact*

Approximately **1,9 million elderly people** in Europe experience mild dementia. This is the potentially excluded section of Europe's population that the project targeted. This figure is expected to be **redoubled** in the coming four decades (*Health Council, 2002; European Commission, 2005*). Thus, the COGKNOW proposal had the potential for a **fundamental and sustainable impact** on the development of future applications and services to support ageing people with dementia and improve their quality of life.

Due to the growing number of ageing people, there are, and will be, long waiting lists for sheltered housing projects, homes for the elderly, nursing homes and other care facilities. The majority of people with dementia will have to "survive" in their own homes. This will generate great pressure on informal carer(s), such as spouses, children, other family members and friends. The COGKNOW proposal helped **address these societal problems** by investigating how technology can be used to improve the autonomy and the quality of life of elderly people, so that people with dementia can stay longer in their own homes with a better quality of life. It is to be expected that supportive measures that increase the autonomy and quality of life of the persons with dementia will not only help the patient but will also relieve the burden for the carer.

ii. Strategic Impact

Technology can directly **improve** and extend the **quality of life** of older people and people with disabilities by helping them to lead fuller and more independent lives. It can also improve the efficiency and effectiveness of **services provided** to older people and people with disabilities and so help constraining the cost and improving the quality of care. Such technology can also extend their economically active life. Technology has significant potential for curbing the ever-increasing costs of caring for the elderly and the disabled.

7.3 A SUCCESSFUL PROPOSAL IN FP7-ICT

Background

This case describes the process behind a successful proposal in FP7 ICT. The proposal scored 14 out of 15 points and was chosen for negotiations. Most of the partners in this project were behind an Integrated Project (IP) proposal in the 6th Framework Programme. The focus was different, and being an IP there were quite a lot of other partners involved. The proposal for FP6 was somewhat successful (good reviews and hearings in Luxembourg), but was not called for negotiation. During the work with the FP6 proposal, the partners got to know each other, including a feel for who is good on what. This made things easier for the current proposal.

Pre-call meeting

Although that the FP6 proposal failed, the consortium partners decided to make a new proposal in the same field under FP7. Existing and potential new partners came together for an idea session just before the 7th Framework Programme was released, and discussed in which "objective" of the call the proposal best fitted (based on draft versions of the call). Some partners who were unable to attend the meeting had already made comments in writing. During this session, which occupied the greater deal of a normal working day, discussions rather quickly homed in on one specific objective of the call. The rest of the day was more focused on ideas on what to do, and whether the proposal should be for a *large scale integrating project* (IP), or for an *small or medium-scale focused research action* (STREP). At this point, the IP approach were generally agreed upon, partly since no one wanted to decrease the number of partners. Several partners could however also see benefits of pursuing a STREP.

At the meeting, it was agreed that all the old partners (that were not present) should be contacted with a description of what had been agreed upon, and the general ideas that came up in the meeting, and ask if they still were interested in participation of this proposal.

Core working group

The first meeting also resulted in a group of core members, and more specifically specific persons in the organisations, established a core working group to write the proposal. This group consisted of persons with good knowledge of the EU framework programmes in general, as well as persons with specialist knowledge in the target research field. Not all organisations were represented in this group, since it was a rather small group, focused on "producing texts".

EU expert team

One of the organisations that took responsibility for the proposal, has a team of experts working with EU-related issues. This includes people with good knowledge of writing proposals (including knowledge of all the procedures around this), legal experts and financial experts, as well as other experts. All in all this help makes the process easier (but not easy) to get through.

Regular telephone conferences

During the process of refining the proposal ideas and texts, the core working group had regular phone conferences, and other partners gave feedback to drafts produced during this process.

Project web tool

A web tool was used for sharing documents between all partners. The web tool kept track of different versions of documents, and had an activity list to show the most recent activities that had occurred in the portal.

Changing from IP to STREP

One of the big decisions in elaborating the proposal was the decision to go for a STREP instead of an IP. One reason for the change was that the aim of the proposal changed to avoid covering areas already being addressed by other projects. Another reason was the difficulty in finding suitable (big) industry partners for our proposal. It also was a general agreement on that the suggested idea was not ready for a large-scale exploitation, but instead should be tested in a more experimental project – therefore a STREP seemed suitable in all sorts of ways.

The change from IP to STREP led to that some partners in the project needing to step aside due to the size of the consortium. Two new partners were included to fill gaps in the consortium. The reduction to a STREP also meant that all partners were part of the *core working group*.

Managing the writing process

Most of the writing were handled by the core working group, with the *proposal expert* leading the work, as well as providing structure and working with all the text as a whole. The members in the core working group usually wrote texts around their expertise area, and provided feedback on more or less the rest. The individuals in the core working group also requested help from other members in their organizations when needed. Financial and legal support were provided by the EU expert team.

Submission

The closer to the submission deadline, the more telephone meetings were held, and the more intense the writing and feedback became. The last three weeks before the submission were quite intense – and changes occurred more or less constantly (which makes it important to keep track of versions, the web tool proved useful here).

At the actual submission day, one preliminary version was submitted in the morning, just to make sure that something exists in the submission system in case of problems with the system just before deadline. During the day it was polished some more and a couple of hours before deadline, a final version was uploaded in the submission tool.

Evaluation

After the submission, a period of waiting begins. In this case it took approximately 3 months before the results from the evaluation arrived. Since the results of the evaluation were good, it was now time to prepare for the negotiations. Included in the evaluation is comments about what is good, and what could be better, and work began immediately on the weak spots.

Negotiations with EC

The negotiations are spread over several rounds, were you together with the commission gradually refine the proposal to fit even better into what both the commission and the consortium want. In the negotiations it is common that the budget is up for discussion, and that was also the case here – although this time the commission was prepared to give slightly more money to the project than requested, if the consortium agreed to do more work in some areas seen as extra important. It was also suggested that an extra WP should be added, to cope with demonstration activities (that previously was included in another work package). Apart from those major discussions, there were negotiations about how the budget should be split, and as a consortium you should always be prepared to motivate why a certain partner is involved in the first place, and why they should have that much, or so little, of the budget. In this case the consortium was well balanced, and none of the partners were there as window dressing, so there was no problem in motivating how the consortium was set up.

7.4 A NEWCOMER'S WAY TO EU-FUNDED RESEARCH – ITTI LTD. (POLAND)

This case study gives an overview of a newcomer's entry to the Community's research projects. The newcomer presented in the case is ITTI, a SME from Poland, that – in 1998 – started working towards securing European funding and has subsequently been successful.

The beginnings...

- as ITTI had its roots in Poznań's EFP (Franco-Polish School of New Information and Communication Technologies) – there existed some personal experience from previous EC-funded projects (however, mainly of academic character)
- ITTI also 'inherited' some projects from EFP
- Its own activities aiming at involvement in EC programmes started later:
- 1998: FP5 – Poland could take part in Framework Programme for the first time
- ... so could ITTI – one person was devoted (part-time) to examine the possibilities and to make an effort to get engaged in a project that would fit firm's interests and expertise
- first impressions – not so good... not very informative conferences, no experienced persons/organisations in Poland
- decision to start a "mass marketing campaign" – some three hundred faxes sent to participants in existing projects identified as potentially interested in using ITTI's expertise
- answers came with... statistical probability – 1%...
- additionally, the answers were only letters from the more gentle addressees that felt obliged to answer and... to "(...) thank for the very interesting letter but..."
- so, the first approach to the Framework Programme was rather unsuccessful

A few words on ITTI:

- founded in 1996 as a continuation of the consulting activities of the Franco-Polish School of New Information and Communication Technologies (EFP)
- about 40 consultants, premises in Poznań, Poland
- mission - independent consulting within the area of communications and IT technologies and business aspects related to these two domains
- activities: advisory services, research, trainings
- accredited to the Polish Agency for Enterprise Development (PARP)
- certificates: PRINCE2, ITIL, BS7799
- sales: about. EUR 1 million per year

First project proposal submitted...

- ITTI didn't give up, though
- more conferences and workshops – some in Brussels – (Also required a strategic decision from the company's board to devote not only human, but also financial resources to it)
- the previously mysterious topics became more and more clear
- personal contacts were made
- and... all these actions together finally resulted in an e-mail that came to ITTI with a question: "Would you like to join our project proposal?" – Of Course!
- so the work on the proposal started – for ITTI it wasn't extremely difficult as it was headed by an experienced organisation and people who knew their job
- project submitted to the call concerned raising awareness of EC's research programmes among Candidate Countries⁹ and ITTI was supposed to be a representative for Poland

First project...

- the proposal submission did not mean the first project was certain to start
- it appeared that the consortium had to wait for the evaluation results much longer than expected – more than a year of waiting!!!
- finally – the answer came: "Proposal accepted!"
- it wasn't the end of waiting yet, because the negotiations with the European Commission

⁹ Candidate Countries – states which were preparing to the EU accession

had to follow – fortunately, they were successful

- then 'only': signing the contract and, at last, a kick-off meeting in Brussels
- the project name was "**EMERGE**", and the full title: "Dissemination and Technology Transfer of Emerging IST Results to European Union Associated Countries"
- being an Accompanying Measure, EMERGE was an excellent way for the consortium members to learn more about the Framework Programme; some actions within the project included:
 - participation in conferences (national and international),
 - organizing own events,
 - writing press articles.
- the conferences and events were the opportunity to know **new people** and to **increase the knowledge** on FP6 → lots of contacts, much bigger knowledge, huge experience

Another, 'regular' project begins

- Soon after the start of the EMERGE project, ITTI started realization of another one: UPTTEL – within the Leonardo da Vinci Programme.
- UPTTEL project is the proof that the "regular" way of getting projects might be effective – the proposal was written by ITTI, sent to the EC, evaluated positively and retained for funding. It was also a very good example of collaboration between a SME (ITTI) and academia (ATR Bydgoszcz) – as ATR was the project coordinator and ITTI supported it both in organisational matters and in the core of the project (in the phase of proposal preparation and during the project).
 - UPTTEL: Upgrading the Telecommunications curricula towards the needs of the employment market
 - participants: ATR Bydgoszcz and ITTI (PL), Lucent Technologies (PL), University College of London (UK), CSELT and Politecnico di Torino (IT), Moher Technologies (IE)
 - budget: 190.000 EUR
 - duration: 20 months
 - aim: modernization of methods of vocational training on telecommunication studies according to needs of labour market and extending the educational programme for telecommunications on University of Technology and Agriculture in Bydgoszcz.
- again, that project was an opportunity to strengthen the presence in the „European project area” – numerous visits to partner countries that were planned in the workprogramme enabled ITTI to acquire new, valuable contacts

The contacts pay off...

- a direct result of UPTTEL was another invitation to a consortium preparing a project, that came to ITTI some time after the UPTTEL's visits took place
- the invitation came from Ireland, project concerned extension of the previously achieved results towards the Central and Eastern Europe – within a FlexWork project (flexible working and its use in rural and outlying regions)
- again – work, submission, waiting (in that case – not as long as with EMERGE) and... the proposal was accepted by the Commission
- negotiations, contract, kick-off.... that order of events slowly began to become a norm ;-)
- ... and that was only the beginning!

Things are rarely what they look they are

- new project facilitated new contacts; it was very important that participation in and organisation of workshops and seminars was part of the work – that helped to build grounds for prospective joint undertakings

- again, as a result of the increasing presence in the „European contexts“, ITTI got involved in preparation of another project – that time of a large Integrated Project for the first call of the 6th Framework Programme
- it wasn't a piece of cake... the work on the proposal only didn't look at all as anything ITTI had experienced before, in smaller projects...
- ... it required numerous meetings in different countries, it required significant part of 2-3 people's work through the period of almost a year, it required a lot of skills, knowledge and... patience
- finally, some time after submission, the consortium received a surprising message that – even though the evaluation results were very good – the project would not be proposed for funding
- explanation given was so vague that the consortium decided to fight for the proposal – it took a few weeks and interventions on political level to... change the assessment results!
- unfortunately, the Commission's suggestion was not to fund the project, but to merge it with another one that partly covered the same research issues...
- ...that meant additional work (reconstruction of the workplan and tasks) and... decreasing the number of partners in each of the proposals being merged...
- only then the real expertise, as well as readiness to work hard were necessary; time for proposal preparation was very short, competition among the partners rather high (everybody wanted to stay in the 'game'), and the eventual success depended on how many nights you were able to devote to writing, travelling and discussions, and how many task you were able to take responsibility for!
- finally, ITTI stayed in the consortium – as one of the only few SMEs – next to giants like Deutsche Telekom, Telefonica, Telenor, Siemens, Lucent Technologies and others
- it was ITTI's first participation in an Integrated Project – its preparation required a lot of (un-paid) work and time, but it was worth it: the company started to accumulate unique knowledge and expertise which makes it a desirable partner for many research and commercial undertakings and gives competitive edge

Recognition comes as well

- submitting proposals in subsequent calls (of FP6 and then FP7) became a natural and usual thing – ITTI acted mainly as a partner but also sometimes as a coordinator.
- the company submitted successive proposals with the **partners they knew**, the **partners' colleagues**, the **colleagues' colleagues** and even with... some new organisations ;-)
- altogether, since 1998 ITTI has taken part in more than 25 different projects – of various character: from dissemination, to research and implementation, to analyses and roadmaps – in many areas: IT, telecommunications, security, e-learning, e-business, flexible employment, and other
- work recognised in Poland where ITTI is among the top (in terms of number and size) FP5/6/7 participants – not only in the SME sector, but generally.
- in 2005 ITTI won the Best Practice Project competition for the FlexWork project (www.flexwork.eu.com) realized within 5FP between 2002 and 2004
- in November 2006 ITTI received the „Cristal Brussels“ Prize that is bi-yearly awarded by the Polish National Contact Point and the Ministry of Science for the best Polish participants of the Framework Programmes (in 2002 the company was already among the five nominees for the prize that summarised the achievements in the 5th FP)

The story continues...

- using the experience from the EC-funded projects they have participated in, ITTI have started co-operation with many Polish companies (of different size and area of operation) and institutions (public and local administration, academia, health service entities)
- it is also very often perceived as a „contact point“ – both to other Polish potential partners and to entities from the Central and Eastern Europe (which, in many cases, allows to get involved in new undertakings)

- it offers its advice on accessing the European funds – in programmes on the Community level and within the Structural Funds available in Poland

Lessons learnt

Goals and strategy

- you have to have them...
- goals are important to know what you aim at (it's not about *getting* the EU funding, it's about *using* it for the development of your organisation)
- strategy should tell you where to look for funding, what programmes to choose, how long-term projects you're able to get involved in

Expertise

- absolutely necessary to get involved in the competitive "world of proposals"
- the success rate has been falling throughout the consecutive FPs: from ca. 20 % in FP5, to 10 % on average in FP6, to... around 5 % in FP7 (as it stems from the results of the initial calls for proposals)

Presence

- you have to show that you are there
- you have to be present on major events (so what they're generally held in Brussels?)
- you have to use different methods to disseminate information about yourself and your expertise (databases are good, but much better are for example your professional presentations and papers during workshops or conferences)

Liaisons

- contacts and networking are the key tools in this "business"
- most of new projects are acquired through the previous contacts, colleagues and friends

Perserverance

- together with patience – absolutely necessary to survive
- sometimes the waiting does not limit itself to the period of proposal evaluation; it has happened that the consortium started work (based on oral confirmation from the project officer) without their contract in place and without pre-payment on their accounts!

Collaboration

- the projects are collaborative!
- you're working in teams – teams of multi-national, multi-cultural, multi-organisational character
- as such they require not only technical skills – management, communications and 'soft-skills' are equally important!

Good luck!!!!

ANNEX I: ICT-related European Technology Platforms (ETPs)

The European Industrial Initiatives, mostly known as European Technology Platforms (ETPs), are joint initiatives of the European industry, which are supported but **not** funded by the European Commission and aim to:

- ✚ Provide a framework for stakeholders, led by industry, to define research and development priorities, timeframes and action plans on a number of strategically important issues.
- ✚ Play a key role in ensuring an adequate focus of research funding on areas with a high degree of industrial relevance. As such, they are expected to be powerful actors in the development of European research policy, in particular in orienting the Seventh Research Framework Programme to better meet the needs of industry.
- ✚ Address technological challenges that can potentially contribute to a number of key policy objectives which are essential for Europe's future competitiveness, including the timely development and deployment of new technologies, technology development with a view to sustainable development, new technology-based public goods and services, technological breakthroughs necessary to remain at the leading edge in high technology sectors and the restructuring of traditional industrial sectors.

The initiative to set up an ETP comes from industry and platforms are developed entirely by their stakeholders. The Commission believes strongly in their potential to contribute to the knowledge economy and will, where appropriate, provide support.

Therefore, under the Seventh Framework Programme, ETPs will continue to define their own operational modalities and activities and the Commission services will maintain their role of facilitation and encouragement. For the implementation of their SRAs, platforms will be eligible for financial support through the regular funding schemes. The Commission will also continue to facilitate the coordination and the sharing of best practice on key issues such as openness and transparency, SME participation and third country involvement, financial engineering and cross-platforms interaction, for example through communication activities and the organisation of inter-platform meetings.

Currently there are more than 30 ETPs (http://cordis.europa.eu/technology-platforms/home_en.html), while 9 of them focus on ICT.

I.1 ADVANCED RESEARCH & TECHNOLOGY FOR EMBEDDED INTELLIGENCE AND SYSTEMS (ARTEMIS)

www.artemis.eu

ARTEMIS is the Technology Platform for Embedded Systems. Embedded Systems are computers that do not look like computers that are "embedded" in electronic products like mobile phones, cars or even planes. ARTEMIS is an Industry-led initiative to reinforce the position of the EU as a leading worldwide player in the design, integration and supply of Embedded Systems. It brings together leading industrial and academic groups with national and European bodies to establish and implement a coherent and integrated European research and development strategy for Embedded Systems. No action would lead to the same situation as the desktop computing market which is dominated by a few non-European players.

ARTEMIS strategy is to establish common technology to support the development of high value-added Embedded Systems across these application contexts. The common technology will include:

- reference designs, that offer standard architectural approaches for a range of applications to address the complexity challenge and build synergies between market sectors.
- middleware that enables seamless connectivity and wide-scale interoperability to support novel functionality, new services and build the ambient intelligent environment
- systems design methodologies and associated tools for rapid design and development
- generic enabling technologies derived from foundational science.

I.2 EUROPEAN NANO ELECTRONICS INITIATIVE ADVISORY COUNCIL (ENIAC)

www.eniac.eu

Microelectronics has changed our world drastically: computers, mobile phones, digital television, DVD players, car navigation and security features, medical screening and health care equipment have all become essential parts of our everyday lives. Nanoelectronics is just the next evolutionary step, as the number of transistors that can be integrated on a single chip reaches one billion, but it indeed represents a revolution marking a dramatic step forward. ENIAC's main goal is to reflect on and contribute to the realisation of the future research and innovation priorities necessary to support the further development of a truly competitive nanoelectronics industry in Europe.

I.3 THE INTEGRAL SATCOM INITIATIVE (ISI)

www.isi-initiative.eu.org

ISI is focused on all aspects of satellite communications, including broadcasting, broadband, and mobile applications, and their convergence. ISI promotes European industrial competitiveness, growth and employment in a sustainable way, in synergy with National priorities. Representative sectors of interest include ICT, Space, Security, Transport, Development, and Environment. Specific policy initiatives of interest include i2010, the European Space Policy, bridging the digital divide, as well as civil security, disaster relief, and crisis management.

I.4 CONVERGED FIXED AND WIRELESS COMMUNICATION NETWORKS (NET!WORKS)

www.networks-etp.eu

The successor of eMobility ETP, which was launched in 2005 and focused on mobile and wireless communications with an emphasis on the lower layers. However, in the context of future broadband communications, fixed and mobile systems will increasingly cooperate and converging. Therefore, the "new" ETP Net!Works is establishing a closer cooperation with the Photonics21 ETP, because optical communication will provide the backbone for broadband mobile systems.

I.5 NETWORKED AND ELECTRONIC MEDIA (NEM)

www.nem-initiative.org

Networked and Electronic Media (NEM) is one of the European Industrial Initiatives, also known as Technology Platforms, established by relevant key European stakeholders, which address the convergence of media, communications, consumer electronics, and IT as a wide opportunity for future growth, by taking advantage of generalized broadband access, increased mobility, availability of richer media formats and contents, as well as new home networks and communications platforms.

I.6 NETWORKED EUROPEAN SOFTWARE AND SERVICES INITIATIVE (NESSI)

www.nessi-europe.com

NESSI aims at shaping a vision and building an ecosystem that together enable the emergence of a service-oriented economy in Europe. Its ambition is to develop a visionary unified European strategy and implementing technologies for secure and trusted services architectures, software and grid infrastructures, and trustworthy policies to boost the development of software and service-oriented architectures in Europe. This strategy will target both technological developments and business eco-systems. NESSI Strategic Research Agenda is organised in three volumes. Volume 1 "Framing the service economy", Volume 2 "a strategy to build NESSI" and Volume 3 "the short, mid and long term roadmaps" are currently under preparation.

I.7 EUROPEAN ROBOTICS PLATFORM (EUROP)

www.robotics-platform.eu

Robotics is a rapidly developing technology with products starting to emerge in many new areas from robots assisting surgeons to automated vacuum cleaners. Europe has a leading position in industrial robots and the EUROP initiative is being set up to ensure that Europe will continue to be a leader as the robots are gradually moving into our homes, offices and public spaces. EUROP builds upon research carried out in EURON, the European academic network of excellence in robotics. The EUROP platform brings together more than 50 companies and leading research centres with the common objective of strengthening and developing the current and future generation of European robotics industry.

I.8 EUROPEAN TECHNOLOGY PLATFORM ON SMART SYSTEMS INTEGRATION (EPoSS)

www.smart-systems-integration.org

Smart Systems are miniaturised devices which are able to describe and diagnose a situation. They are able to decide or help to decide in critical conditions and to identify and address each other. They also may be energy autonomous and networked. In this light a group of major industrial companies based in Europe decided to coordinate their R&D activities and to set-up EPoSS, the European Technology Platform on Smart Systems. EPoSS is a major, transnational, pan-European, mission-oriented initiative aiming at strengthening Europe's capacity to organise and to deliver innovation in the area of smart systems technologies and integration. EPoSS embraces all key players, public and private, in the value chain.

I.9 PHOTONICS21

www.photonics21.org

Photonics21 is a voluntary association of industrial enterprises and other stakeholders in the field of photonics in Europe. It unites the majority of the leading Photonics industries and relevant R&D stakeholders along the whole economic value chain throughout Europe. It undertakes to establish Europe as a leader in the development and deployment of Photonics in five industrial areas (Information and Communication, Lighting and Displays, Manufacturing, Life Science and Security) as well as in Education and Training. Its mission is the coordination of the research and development activities in Europe among all the contributing partners from education, basic research, applied research and development to manufacturing and all relevant applications.

ANNEX II: Abbreviations

CA	Consortium Agreement
CIP	Competitiveness and Innovation Programme
CSA	Coordination and Support Action funding scheme under FP7 (the term Specific Support Actions was used under FP6) (CSA-CA: Coordination Action / CSA-SA: Supporting Action)
DoW	Description of Work (the Annex I of the Grant Agreement / Contract between the EC and the coordinator of a research project funded under the FP7 / FP6)
EU	European Union
EC	European Commission
ETP	European Technology Platform
FP	European Framework Programme for Research and Technological Development ▪ FP6: The 6th FP covering the period 2002-2006 ▪ FP7: The 7th FP covering the period 2007-2013
GPF (CPF)	Grant Agreement (Contract) Preparation Form
IST	Information Society Technologies Priority under FP6
ICPC	International Collaboration Partner Countries
ICT	Information and Communication Technologies Theme under FP7
IPR	Intellectual Property Rights
IPs	Integrated Projects (or Collaborative Projects Large is a funding scheme under FP7-ICT; the term has firstly been used in FP6)
LEAR	Legal Entity Appointed Representative
NCP	National Contact Point
NEF	Negotiation Facility
NoE	Networks of Excellence (funding scheme / instrument under FP7/FP6)
RAP	Research Action Plan (a plan which helps you to identify and assess your research-related strengths, weaknesses, opportunities and threats and document your research strategy, objectives and targets and how you will implement them)
R&D	Research and Development
RTD	Research and Technological Development
STREP	Specific Targeted Research Projects (or Collaborative Project small - medium are funding schemes under FP7-ICT; the term was firstly used in FP6)
S.W.O.T	Strengths, Weaknesses, Opportunities, Threats
PIC	Participant Identification Code
Research Strategy	The strategy that an organisation sets with respect to research. Such a strategy positions your organisation at the national, European and international research landscape, defines your organisation research objectives and targets and tells you how you will achieve them.
Research Objective	can be e.g. the development of know-how in a specific field, the development of a new product / service, etc.
Research Target	A quantified, measurable and verifiable goal that aims at fulfilling (part of) a research objective. Compared to objectives, targets are more specific and easier to measure and verify.
Research vision	a short / concise text that describes what your organisation / department / research team desires to become at research level.
Research Mission	a short / concise text that defines what you do / offer as an organisation at research level
Research Action	(as used in this document) is only a part of a RAP that describes the action that need to be implemented to achieve a pre-set objective/ target
URF	Unique Registration Facility