Idealist2014 Project 288598

Informal Guide to Call 9 contents for Quality Team
also addresses FI Call 2 and FET Open Continuous call

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Informal Deliverable

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Call 9 closes 17/4/12
FI Call 2 closes 29/10/12
FET Open Call closes 31/12/12

Section 0 Change Control

Version #	Date	Author	Organisation
0,1	30.11.11	Morron	EFPC
0,2	06.12.11	Morron	EFPC
0,3	19.12.11	Morron	EFPC
0,4	28.03.12	Morron	EFPC
0,5	07.10.12	Morron	EFPC
0.6	21.03.13	Morron	EFPC

Change History
Draft 0.1 is the first draft after meetings with Points of Contact.
Draft 0.2 includes updates from clarifications with PoCs
Draft 0.3 version ready for Call 9
Draft 0.4 version corrected as per input from Juergen
Draft 0.5 version has Sharepoint Server address corrected.
Draft 0.6 version has link on cover page corrected

Release Approval

Name	Role	Date
Myer W Morron	Originator Quality Manager	21.03.13
Christoph Peschke	Project Coordinator	26.03.13
Sylvia Ilieva	WP4 Leader	06.03.13
Edina Nemeth	WP5 Leader	06.03.13

All comments, additions or changes should be addressed to the originator at Myer@efpcgroup.com

Please note

There is a subtle change in the Guide for Applicants for STREPs and for IPs relating to ICT Call 8 that means the format and content of section 1 of Part B is different from the past and different from other programs. Briefly they added the words "(Maximum length – one page)" to the text after "Describe the overall strategy of the work plan" on page 46 of the STREP Guide and on page 47 of the IP Guide.

Unlike other programs (such as Security Call 5) they do not explicitly state that the WP descriptions are limited to 2 pages. On further investigation they really mean that section 1.3 be limited to the one page with all the rest of the info being in the unlimited size of the WP descriptions.

I have received the following statement from DG INFSO to substantiate this:

The point 1.3i) is indeed only intended to be a brief statement of the strategy behind how the work is planned the way it is. On point 1.3ii) the timing of the work-packages are shown diagrammatically over the duration of the programme; they are listed on table 1.3a) and the associated deliverables and the overlying milestones are listed at points b) and c)

Table 1.3d) - one for each Workpackage - is where the full description lies. It is placed in a non-page-limited section of the proposal because the experts' criticisms are often couched in terms of "the proposal does not describe...." or "does not sufficiently describe" something or other, and we don't want the proposer to be able to come back to us complaining that this is really our fault because we limited him to only X pages.

Section 1 Contents

Table of Contents

Section 2 Introduction

In our Description of Work it says “Task 4.3.2 NCP seminars on demand. Training seminars on Partner Search

- How to check PS forms
- How to distribute PS at national level
- Quality checking & CORDIS registry
- How to build suitable consortia

Task 5.2 Proposal development support (Task leader: KM RIU Khe, HU)
Based on the Research Objective NCP knowledge acquired in Task 4.2, the role of the Quality Team in this task includes:
Task 5.2.1 Partner search services

- Re-evaluation of user needs to improve system and adjust to changes of the environment (e.g. social networks)

Task 5.2.2 Partner search – Quality Team feedback
The Quality Team members – leveraging the background information and knowledge acquired in Task 4.2 – will be responsible for:

- checking incoming partner searches in their Objectives,
- offering valuable feedback for the improvement.”

This current document was based on the information given by the Call 9 Points of Contact at the NCP briefing on 29 Nov 2011 in Brussels. It was supplemented by telephone and email follow-up. All their presentations are available to all NCPs via Circa. For the sake of completeness I have also added information for the other call: FI Call 2 – but this has been separated at the document end. I have also included in summary fashion the FET Open calls in ICT Call 9. For ease of use I have added the corresponding information from the Workprogram.

These notes are informal supplements and commentary for the Partner Search Quality Team on the formal objectives in the Workprogram for Call 9. **Note that legally, only the information in the formal call should be used in evaluations**.

The PoCs were asked to address the following questions:

1. Are there any informal additional/background documents?
2. What are you looking for?
3. What do you not want?
4. Who are the leading players?
5. Is this new or has it been called before?
6. Is there a key group of actors or ETP driving this?

We wish to emphasise that the contentss must not be attributed - they are purely my interpretation - and should be used internally only as a briefing document. These notes have not been seen by the Points of Contact or approved by them and the Quality Manager should be seen as the sole author.

Section 3 Points of Contact

Following is the list of PoCs. They may forward specific enquiries to others in their Unit.

Obj	Title	Instrument	Topics	Euro	Point of contact
1.8	Use Case scenarios and early trials	See FI Call below			
1.9	Capacity Building and Infrastructure Support	See FI Call below			
2.1	Cognitive systems and robotics b), c), e)	STREP/IP CA	b), c) e)	€80M €2M	Cecile.Huet@ec.europa.eu
4.3	Digital Preservation	STREP IP NoE SA	a) b) c) d)	)€23M))€7M)	Manuela.Speiser@ec.europa.eu
5.2	Virtual Physiological Human a), b), d)	STREP/IP STREP	a),b) d)	€58M €8.5M	Joel.Bacquet@ec.europa.eu amalia-irina.vlad@ec.europa.eu
8.2	ICT for access to cultural resources	STREP/IP IP STREP CSA	a) b) c) d)	))€35M) €5M	Liina.Munari@ec.europa.eu
9.9	FET Proactive – Quantum ICT	STREP/IP ERA-NET+	a)-d) e)	€15M €7M	David.Guedj@ec.europa.eu
9.10	FET Proactive - Fundamentals of collective adaptive systems	STREP/IP	a)-c)	€23M	Wide.Hogenhout@ec.europa.eu
9.11	FET Proactive - Neuro-bio-inspired systems	STREP/IP CSA	a)-c) d)	€22M €1M	Julian.Ellis@ec.europa.eu Christiane.wilzeck@ec.europa.eu
9.12	FET Proactive - Coordinating communities, identifying new research topics etc.		a)- d)	€	Wide.Hogenhout@ec.europa.eu
10.3	International partnership building	STREP/SICA	b)	€2M	Ardiel.Cabrera@ec.europa.eu

PPP Future Internet Call 2 FP7-2012

Obj	Title	Instrument	Topics	Euro	Point of contact
1.8	Use Case scenarios and early trials	IP up to 5	-	€67.5M	Sandro.DElia@ec.europa.eu
1.9	Capacity Building and Infrastructure	IP one	-	€12.5M	Sandro.DElia@e

	Support				c.europa.eu

FET Open

Obj	Title	Instrument	Topics	Euro	Point of contact
9,1	Challenging current Thinking	STREP CSA			
9,2	High-Tech Research Intensive SMEs in FET research	STREP			
9,3	FET Young Explorers	STREP			
9,4	International cooperation on FET research				

1.8 Use Case scenarios and early trials

Please refer to PPP FI Call - below

1.9 Capacity Building and Infrastructure Support

Please refer to PPP FI Call - below

2.1 Cognitive Systems and robotics b), c), e) (Unit E5)

Challenge 2 focuses on artificial cognitive systems and robots that operate in dynamic, non-deterministic, real-life environments. Such systems must be capable of responding in a timely and sensible manner and with a suitable degree of autonomy to gaps in their knowledge, and to situations not anticipated at design time. Actions under this Challenge support research on engineering robotic systems and on endowing artificial systems with cognitive capabilities. Both research strands are intricately intertwined: many functionalities and desirable properties of robotic systems rely on cognitive capabilities. Conversely, robotic systems are suitable platforms for motivating, guiding and validating more basic cognitive systems work.

Hard scientific and technological research issues still need to be tackled in order to make robots fit for rendering high-quality services, or for flexible manufacturing scenarios. Sound theories are requisite to underpinning the development of robotic systems and providing pertinent design paradigms, also informed by studies of natural cognitive systems (as in the neuro- and behavioural sciences).

Research under Challenge 2 will fuel progress for instance from robots that are largely preprogrammed, to robots that are programmable through teaching and learning; from robots that are largely tele-operated, to robots that autonomously plan complex tasks; from robots with rigid components and structures, to those with dexterity and manipulation skills going beyond human level; from robots that operate in tightly controlled environments, to robots that can properly interact and cooperate with people in real-world environments. Future robots will also come in various shapes and sizes (including miniature) and will increasingly incorporate intelligent materials, as well as advanced sensor, actuator and effector, (distributed, braininspired) memory and control technologies, and where needed, they will exhibit physical compliance.

Cognitive systems research extends beyond robotics. Hence, this Challenge will also address issues related to monitoring, assessing, and controlling heterogeneous multi-component and multi-degree-of-freedom systems, where this hinges on implementing cognitive capabilities. At an elementary level, such capabilities include establishing and recognising patterns in sensor-generated data. This is a prerequisite to higher-level operations such as scene interpretation, reasoning, planning, intelligent control, and complex goal-oriented behaviour. Learning, in appropriate modes, is essential at all levels. It is equally important to be able to measure and compare progress towards the ambitious goals set under this Challenge. Developing suitable benchmarks, conducting benchmarking exercises and supporting scenario-based competitions are therefore firmly placed on the agenda.

Although Challenge 2 does not target any specific application area, research will be motivated, guided and validated by realistic, demanding and scalable real-world scenarios, where appropriate backed by industrial stakeholders. Gearing up cross-fertilisation between relevant industry and research communities is a key issue in this respect and industrial participation is therefore greatly encouraged.

Work under Challenge 2 will improve competitiveness in existing and future markets (e.g., manufacturing, professional and domestic services), and provide innovative solutions in areas that include (but are not limited to) assistance and co-working, production, logistics and transport, construction, maintenance and repair, search and rescue, exploration and inspection, systems monitoring and control, consumer robotics, education and entertainment.

Participation in the Open Access Pilot in FP7

Open Access, defined as free access over the internet, aims to improve and promote the dissemination of knowledge, thereby improving the efficiency of scientific discovery and maximising return on investment in R&D by public research funding bodies. Since August 2008, the European Commission has been conducting a pilot initiative on Open Access to peer reviewed research articles in its Seventh Framework Programme (FP7). This pilot covers seven FP7 areas. Beneficiaries funded partially or entirely through this Challenge will be required to deposit peer-reviewed articles resulting from projects into an institutional or subject-based repository, and to make their best efforts to ensure open access to these articles within six months.

Target outcomes

b) Cognition and control in complex systems: Enabling technologies based on the acquisition and application of cognitive capabilities (e.g., establishing patterns in sensor data, classification, conceptualisation, reasoning, planning) for enhancing the performance and manageability of complex multi-component and multi-degree-of-freedom artificial systems, also building on synergies between cognitive systems and systems control engineering. This outcome complements Objective 3.3 / target outcome (d).

Realistic, highly demanding, scalable real-world scenarios will motivate and guide research related to targets a) & b), and serve to validate its results. Specific Targeted Research Projects (STREP) are particularly suited to high-risk endeavours, breaking new grounds, with high potential rewards. They are also appropriate for component-level research for particular domains. Integrated Projects (IP) are preferred for system-oriented efforts; they are expected to encompass all stages of the research and development life-cycle and, where appropriate, cutting across research topics.

c) Gearing up and accelerating cross-fertilisation between academic and industrial robotics research to strengthen synergies between their respective research agendas through joint industrially-relevant scenarios, shared research infrastructures; joint small- to medium scale experimentation with industrial platforms and implementation of comparative performance evaluation methodologies and tools.

e) Speeding up progress towards smarter robots through targeted competitions based on suitably evolving reference scenarios focused on capabilities at issue under this Objective, and involving relevant stakeholders. This includes soliciting private sponsorships, organising and managing pertinent events as well as accompanying dissemination measures and public relations activities.

Expected impact
For b) and c):
- Integrated and consolidated scientific foundations for engineering cognitive systems under a variety of physical instantiations.
- Significant increase in the quality of service of such systems and of their sustainability in terms of, for instance, energy consumption, usability and serviceability, through the integration of cognitive capabilities.
- Innovation capacity in a wide range of application domains through the integration of cognitive capabilities.
- Improved competitive position of the robotics industry in existing and emerging markets for instance in the following sectors: manufacturing; professional and domestic services; assistance and co-working, production, logistics and transport, construction, maintenance and repair, search and rescue, exploration and inspection, systems monitoring and control, consumer robotics, education

and entertainment.
- Consensus by industry on the need (or not) for particular standards. More widely accepted benchmarks. Strengthened links between industry and academia.

For e):
- Greater innovation through competitions which allow to measure and compare progress towards the ambitious goals set under this Challenge.

Funding schemes:
b): STREP, IP;
c) IP;
e) CSA (CA only)

FP7-ICT-2011-9: target outcomes (b), (c), (e)
- IP/STREP: EUR 80 million of which a minimum of 50% to IPs and a minimum of 30% to STREPs
- CA: EUR 2 million

1. Are there any additional/background documents?
FAQ document: cordis.europa.eu/fp7/ict/cognition/docs/call9faq.pdf
Previous projects: cordis.europa.eu/fp7/ict/cognition/projects/areas_project_en.html

2. What are you looking for?
Stronger industrial participation
- Involving their R&D departments
- Providing validation scenarios
- Provision of platforms

Demonstrated commitment to the projects and genuine interest in their outcome

Scientific excellence
R&D – Target b) multidisciplinary control/cognitive systems
Competition – show S&T progression

Increased visibility of European robotics
Competition – Academic and industrial

3. What do you not want?
- Pure theoretical projects with only simulation/lab tests
- Pure application/product development
- Double funding – same topic can be addressed by several projects but each has to justify its specification/contribution
- Large effort on literature survey – bring the right expertise on board
- Re-submission from other challenges artificially re-shaped for this challenges
- Any ARTIFICIAL ADD-ON - examples

4. Who are the leading players?
Large robotics manufacturers
Component providers – User industry
SMEs (manufacturers, components/users)
Excellent academic researchers

Research labs/institutes
BUT WE WANT NEWCOMERS (e.g. application domains not yet covered; more professional service robots (DDD); monitoring and control; more multidisciplinary efforts such as control theory and cognitive systems; ...)

5. Is this new or has it been called before?

Challenge 2 has been called before but now new specific Target on cognition and control in complex systems; Specific effort Industry-Academia (constant effort but this call – specific target/mechanism; Competition is New

6. Is there a key group of actors or ETP driving this?

EUROP ETP: http://www.robotics-platform.eu/
EURON: European Robotics research network: http://www.euron.org/
euRobotics: the European Robotics Coordination Action improves cooperation between industry and academia and enhances public perception of European robotics: http://www.eurobotics-project.eu/cms/index.php
EUCogli:European Network for the advancement of Artificial Cognitive Systems: http://www.eucognition.org/

4.3 Digital Preservation

Objective ICT-2011.4.3 Digital Preservation
Digital preservation research focuses on developing technologies, systems and tools for safeguarding digital content. The objective is to preserve digital content in a more effective and cost-efficient manner while protecting its authenticity and integrity, significantly reducing the loss of irreplaceable information, and ensuring it may be reused in the future.

Target outcomes

a) **More reliable and secure preservation technologies and methods.** Research should cover techniques and tools for recovering loss and for repairing damaged digital objects as well as solutions guaranteeing the long term availability of newly created resources including 3D objects and models, and conceptual frameworks for quality assurance. Research should also analyse which currently available or emerging methods and technologies are most efficient and in which use context or for which kind of resources. Solutions proposed can go beyond digital objects, and target as well the long-term functionality of system for creation, management and storage of digital resources. This work should be underpinned by research aiming at a deeper understanding of how loss and damage occur and which degree of integrity is required for keeping resources usable.

b) **Technologies and systems for intelligent management of preservation.** Technologies to support the long term usability of digital resources (including high volume, heterogeneous and volatile content) through a life cycle approach to its preservation. Research should help to support human appraisal and selection processes through innovative technologies that embed reasoning and intelligence in the content itself. Keeping resources usable, i.e. meaningful and understandable overtime, includes taking account of and developing a conceptual understanding of evolving semantics, use contexts, and interpretations. Activities may cover solutions to identify and erase obsolete information.

c) **Interdisciplinary research networks** bridging technological domains and scientific disciplines concerned with information, and expertise in end-user needs.

d) **Promotion schemes for the uptake of digital preservation research outcomes** including outreach to new stakeholders and road mapping activities.

Expected impacts:

- Reduced information loss through better recovery and repair techniques and through deeper understanding of the reasons and implications of digital decay and other forms of data loss.
- Sustainable access to information: keeping resources not only available but also meaningful and usable.
- More efficient and effective selection of resources to be preserved and of appropriate preservation processes, methods and technologies.
- Wider adoption of research results by supply-industry and by end-users.

Funding schemes:
a) STREP;
b) IP;
c) NoE
d) CSA

Indicative budget distribution[10]

- IP/STREP: EUR 23 million of which a minimum of 50% to IPs and a minimum of 30% to STREPs
- NoE/CSA: EUR 7 million

1. Are there any additional/background documents?

DigiCult web-site cordis.europa.eu/fp7/ict/telearn-digicult/digicult_en.html

2. What are you looking for?

Broadening of the digital preservation community and range of use cases to e.g.:

- Industries and Services to include aerospace, health care, finance
- Research: astronomy and genomics
- Governmental and broadcaster's archives
- Libraries and web archives

3. What do you not want?

They cannot fund preservation of analogue objects or storage technologies

4. Who are the leading players?

Players are involved in current projects mentioned below. They include leading competence centres such as National Libraries, Technical University of Vienna, University of Southampton and University of Sheffield for example.

5. Is this new or has it been called before?

15 projects have been funded since 2006.

They include: APARSEN, ARCOMEM, BlogForever, ENSURE, LiWA, KEEP, PrestoPRIME, PROTAGE, SCAPE, SHAMAN, TIMBUS, Wf4Ever

6. Is there a key group of actors or ETP driving this?

Not really except for the competence centres mentioned above.

5.2 Virtual Physiological Human a), b), d)

Target outcomes

a) **Patient-specific predictive computer-based models and simulation** of major diseases integrating medical, biological and environmental data. Preference will be given to proposals that manage to explore the interaction and integration of environmental factors with medical and biological factors enabling the development of predictive models and simulation for understanding the evolution and progression of major diseases. These predictive models will allow bio-medical researchers to investigate the influence of environmental factors on major diseases and their interactions with other health factors. The use and benefits of the resulting models must be demonstrated for a specific clinical need covering the onset and the evolution of the disease. All major diseases could be targeted as clinical application.

b) **Development of ICT tools, services and infrastructure to obtain more elaborate and reusable multi-scale models** (e.g. models of diseases, organs) **and larger repositories** to show benefits of having both the data and models readily available. Projects should address at least one of the following activities:

i) the robustness and reproducibility which are essential to allow models to be re-used when a model representing a physiological function is incorporated into a more comprehensive model. Standards for models and data, tools and repositories should be developed to achieve a high level of robustness and reproducibility of models for re-use;

ii) the development of VPH Infostructure including a sustainable VPH model and data repositories. Appropriate tools (e.g. version control, archiving, upgrades…) and attributes such as usability and accessibility should be particularly addressed to ensure VPH community acceptance. The use of open environments and open-source software is expected to improve the accessibly and evolution of the repositories.

d) **Early demonstrators and proof of concept of digital representations of health status** of patients integrating different patient-specific data and models of organs into a more coherent representation of a "Digital Patient". Innovative digital representations of the health status of patients based on relevant data and models (medical, anatomical, physiological and genetic, etc) , are visualised and represented in 4D models and usable for care, personalised prevention and research. (Ensure current modelled organs not duplicated)

Expected Impact

- More predictive, individualised, effective and safer healthcare.
- Reinforced leadership of European industry and strengthened multidisciplinary research excellence in supporting innovative medical care.

For a)

- Accelerated developments of medical knowledge discovery and management in particular through the exploration of environmental factors in predictive models of diseases.

For b)

- Improved interoperability of biomedical information and knowledge.
- Increased acceptance and use of realistic and validated models that allow researchers from different disciplines to exploit, share resources and develop new knowledge.
- Accessibility to existing knowledge by bio-medical researchers through the VPH repositories linking data with models will prove the large scale benefits of having both the data and models readily available.

For d)

- Proven concepts of digital representations of patient health status.

Funding schemes
a-b): IP/STREP;
d): STREP

Indicative budget distribution
IP/STREP in a) and b): EUR 58 million with a minimum of 50% to IPs and 30% to STREPs
- *STREP in d):* EUR 8.5 million
A maximum of EUR 3 million will be reserved for third country participants from USA, Japan, Canada, Australia, New Zealand. **Note: Unique provision for industrial funding**

1. Are there any additional/background documents?
VPH Project portfolio: ec.europa.eu/information_society/activities/health/docs/projects/fp7/binder-fp7vph-projects.pdf
www.vph-noe.eu
www.biomedtown.org
VPH 2010 conference www.vph-noe.eu/vph2010
VPH 2011 conference www.vph-noe.eu/vph2011

2. What are you looking for?
Broadening of current tools and models.
Cooperation with complementary competence centres in rest of the world

3. What do you not want?
Duplication of current projects – 32 current running/recent projects

4. Who are the leading players?
Those in current projects and gave papers at annual VPH conferences.

5. Is this new or has it been called before?
There are currently 32 running/completed projects in this area.
22 STREPs (including 5 INCO STREPs)
6 IPs and one NoE
3 CSAs (including the roadmap on “digital patients”)

6. Is there a key group of actors or ETP driving this?
VPH NoE is the key player and organises the conference and concertation meetings

8.2 ICT for access to cultural resources (Unit E3)

Target outcomes

a) **Technologies for creating personalised and engaging digital cultural experiences**: research should address adaptability of systems for personalised interaction with users. Research should investigate technologies that add value and new meaning to cultural digital artefacts and improve user engagement with cultural resources, for example through smart, context-aware artefacts and enhanced interfaces with the support of features like story-telling, gaming and learning. (IP/STREP)

b) **Open and extensible platforms for building services that support use of cultural resources for research and education**: research should explore seamless and universal, but also customisable access to digital cultural resources across a wide range of technical formats (sound, image, 3D, text), including cultural resources/objects with diverse characteristics (e.g. languages, temporal, spatial). Usability should be demonstrated through large scale pilots and specific contextual use cases (e.g. functionalities that support active research, creation of new knowledge, meaning extraction...). (IP)

- Baseline in the digital libraries research, mature systems/components developed during baseline research
- How does the proposed system relate to SOTA - pros and cons?
- New or improved platform (but do not reinvent the wheel)
- Innovative service layers to be built on top of the architectures
- Content to be used, restrictions to its use?
- Why these services, for whom?
- Specific application field: education and (or) research - First time defined application field!
- Seamless and universal access
- Technical interoperability (wired, wireless, mobile, fixed…)
- Wide and unobstructed access across potential user groups (location - but also skills and competence)
- Customisable: easy tailoring to specific individual / group use
- Cross formats and objects: wide range of technical formats (sound, image, 3D, text), cultural resources/objects with diverse characteristics (e.g. languages, temporal, spatial)
- Usability demonstrated through: Large pilots
    - Large (proportional to the intended use/type of collection) (but « large is large »)
    - System acceptance with real representative sample of users
    - Specific contextual use cases - within education and (or) research!
    - Ease/intuitiveness of use - User behaviour studies encouraged

c) **Improved and affordable technologies for the digitisation of specialised forms of cultural resources, including tools for virtual reconstructions**: the focus is on innovative approaches for capturing, imaging, 3D (including movement) modelling, resulting in enriched virtual surrogates which convey and embed knowledge beyond the original object. (STREP)

Research to address some very specific challenges in digitisation

- cf. Call 1 where mass-digitisation of cultural heritage was the target – this is the opposite

What can not yet be digitised?

- Justify the need for the specific digitisation technology at European level

No size or form restrictions

- small objects or large reconstructions

- "Focus on" capture, imaging, 3D modelling (incl. movement), virtual reconstructions – not exclusively!

Cost-effective advanced technologies

- Specialised (« boutique ») digitisation is very expensive
- Show the « business case »: How much cheaper?

Enriched virtual surrogates

- "Convey and embed knowledge beyond the original object"
- Show the "winning formula" of use of the virtual object over the physical objects (eg can be manipulated, enriched with associated data, use, re-use …)

d) **Awareness raising of research results** through road mapping and support to validation and take up of such results in practical settings. (CSA)

Coordination of activities and networking between the beneficiaries (CA)

- the organisation of events - including conferences, meetings, workshops or seminars
- related studies, exchanges of personnel, exchange and dissemination of good practices, and, if necessary,
- the definition, organisation and management of joint or common initiatives together with management of the action.

Support the implementation of FP7 programme and the Commission (SA)

- Monitoring and assessment
- Conferences, studies, expert groups, scientific awards and competitions
- Operational support and dissemination activities
- Support for transnational access to research infrastructures or preparatory technical work (incl. feasibility studies) for new infrastructures
- Support for coordination with other European research schemes.

Roadmapping

- Roadmapping to support future R&I work in relevant fields (e.g. joint roadmaps of heritage institutions, creative industry, technology providers, national/regional actors, innovation support services...)

Validation and/or take-up

- You want to validate your research results in real-life setting, take them out of the « labo »?
- You need support for take-up of your innovative products or services coming from previous EC funded research?

Expected impact

- Affordability and widespread availability of tools and services for releasing the economic potential of cultural heritage in digital form and for adding value to cultural content in educational, scientific and leisure contexts;
- Wider range of users of cultural resources in diverse real and virtual contexts and considerably altered ways to experience culture in more personalised and adaptive interactive settings;

Note: IP
- Systemic level research, allowed to tackle a whole range of related challenges with more flexibility
- Previously exclusively STREP level research funded
- Short to mid-term (3-5 years)

Note: STREP
- Innovative small scale focused research, also on individual component level
- Continuation from Call 6 (but know and show your knowledge of State of the Art)
- Mid to long term (5-10 years)

Note: This to fund research, not for digitising of collections

Funding schemes
a) STREP/IP
b) IP
c) STREP
d) CSAs

Indicative Budget distribution
- IP/STREP: EUR 35 million with a minimum of 40% to IPs and 30% to STREPs
- CSA: EUR 5 million

1. Are there any additional/background documents?
Digicult webs site: cordis.europa.eu/fp7/ict/telearn-digicult_en.html

2. What are you looking for?
Improved user engagement
Research on improved technologies for speciality digitisation
Affordability
Wider range of users and uses

3. What do you not want?
Projects to digitise collections

4. Who are the leading players?
From two separate camps: National museums and new technology and research providers.
See previous and new projects as well as the web site (above).

5. Is this new or has it been called before?
Has been called in both FP6 and FP7 before. In FP7 in Calls 1, 3 and 6
In Call 6 15 projects were selected
8 projects for digital libraries and 7 projects for digital preservation
Key projects are AXES (IP) and DECIPHER, CULTURA, CHESS, ArtSENSE, PATHS (STREPs)
V-MusT.net (NoE) and DigiBIC (CSA)

6. Is there a key group of actors or ETP driving this?
No ETP in this area but FP6 NoE project EPOCH provided much of the base work.

9.9 FET Proactive – Quantum ICT

The objective is to conceive theoretically and develop experimentally novel and powerful technological applications of quantum coherence and entanglement. In particular, projects should develop a conceptual platform for potentially disruptive technologies, advance their scope and breadth and speed up the process of bringing them from the lab to the real world.

Target outcomes
The results obtained should push forward the boundaries of our knowledge and ensure a constant progress in the quantum ICT area, in particular by

a) Demonstration of quantum simulators capable to operate on quantum many-particle systems and to simulate technologically relevant systems (e.g., coupled systems in condensed matter, new materials and chemical compounds).

b) Demonstration of hybrid systems linking different quantum bit realizations (e.g., by bridging atomic/molecular and optical systems with condensed matter systems). Possible devices include those that interconnect different qubit memories and quantum information carriers, and quantum repeaters.

c) Novel quantum devices exploiting entanglement and quantum coherence as a resource, such as quantum sensing, imaging, measurement and communication.

d) Enabling methods and technologies to support aforementioned outcomes (e.g., the control of coherent operations with many quantum bits in the experimental domain, or the search for new algorithms and protocols in the theoretical domain).

e) A joint call for proposals on QICT, to be funded through an ERA-NET-Plus action between national and/or regional grant programmes.

Expected impact:
- Closer cooperation and greater alignment between the participating national/regional research programmes through an ERA-NET-Plus action

STREPs should address at least one of the research foci a)-d), IPs should address two or more.

Expected impact
- Significant technological achievements with higher performance and superior energy efficiency such as entanglement assisted sensors and metrology
- Better understanding of the dynamics of complex systems and phenomena and design of novel artificial materials with tailored properties through quantum simulators and computers
- Extending the distance of secure quantum links through quantum repeaters

Funding schemes
a)-d): STREP, IP;
e): ERA-NET-Plus
Indicative budget distribution

a)-d): EUR 15 million
e): EUR 7 million (Any funds remaining following the selection of an ERA-NET-Plus action will be

transferred to IP/STREP actions under this Objective)

1. Are there any additional/background documents?

QICT website: cordis.europa.eu/fp7/ict/fet-proactive/qict-consult09-05_en.pdf

2. What are you looking for?

3. What do you not want?

4. Who are the leading players?

5. Is this new or has it been called before?

6. Is there a key group of actors or ETP driving this?

9.10 FET Proactive - Fundamentals of collective adaptive systems

The socio-technical fabric of our society more and more depends on systems that are constructed as a collective of heterogeneous components and that are tightly entangled with humans and social structures. Their components increasingly need to be able to evolve, collaborate and function as a part of an artificial society.

A key feature of Collective Adaptive Systems (CASs) is that they:

- Comprise many units/nodes, which have their own individual properties, objectives and actions.
- Decision-making is distributed and possibly highly dispersed, and interaction between the units may lead to the emergence of unexpected phenomena.
- They are open, in that nodes may enter or leave the collective at any time, and boundaries between CASs are fluid.
- The units can be highly heterogeneous (computers, robots, agents, devices, biological entities, etc),
- Each operating at different temporal and spatial scales,
- Having different (potentially conflicting) objectives and goals.
- The objective is to establish a foundational framework for CASs.

Target outcomes

a) **Operating Principles**: principles by which CASs can operate. These should go beyond existing control and optimisation theories, taking into account the diversity of objectives within the system, conflicts resolution, long term stability, and the need to reason in the presence of partial, noisy, out-of-date and inaccurate information

b) **Design Principles**: principles necessary to build and manage CASs, such as enabling the emergence of behaviour and facilitating prediction and control of those behaviours. These principles should exploit the inherent concurrency and include methods for system validation.

c) **Evolutionary Properties**: properties concerning the evolutionary nature of CASs, e.g. open-ended (unbounded) evolutionary systems, the trade-off and interaction between learning and evolution, and the effect of evolution on operating and design principles.

IPs should address all three target outcomes. STREPs should have a main focus.

Ethical issues should be properly addressed.

Expected impact

- New functionalities for adaptive ICT systems enabled through novel principles, methods and technologies for designing and operating collective adaptive systems.
- New insights into the general properties of large scale distributed systems.

Funding schemes
IP, STREP

Indicative budget distribution[10]
EUR 23 million
Call
FP7-ICT-2011-9

1. Are there any additional/background documents?
Web site: ec.europa.eu/fp7/ict/fet_proactive/nbis_en.html

2. What are you looking for?

3. What do you not want?

4. Who are the leading players?

5. Is this new or has it been called before?
Called previously

6. Is there a key group of actors or ETP driving this?

9.11 FET Proactive - Neuro-bio-inspired systems

Brains are remarkable computing systems which clearly outperform conventional architectures in many real-world tasks. Computational neuroscience has made tremendous progress in uncovering the key principles by which neural systems process information, and ICT has advanced to a point where it is possible to integrate a comparable number of transistors in a VLSI system as neurons in a mammalian brain. Yet we are still unable to build artificial systems with basic "thinking" abilities comparable with even simple insect brains.

In particular, this objective addresses the need to:

- learn more about the relationship between structure, dynamics and function in neuronal circuits and assemblies, and how information is represented or “coded” in a brain.
- develop deeper and more comprehensive theories of neural processing, possibly building on results obtained in the domains of dynamic and complex systems.
- close the gap between neuroscience and engineering by motivating interdisciplinary work that ties data with theories, novel computing paradigms, models and implementations.

Target outcome
a) Developing and applying radically new neural recording, imaging or interfacing concepts and designs for a deeper understanding of neural information processing.

b) New multi-scale dynamical theories of neural representation for the development of neuro-bio-ICT systems that can perform high-level tasks (e.g. robust object recognition, or classification), going beyond purely sensory-driven information processing.

c) Development and prototyping of modular brain-like computing architectures that combine neural processing primitives to give a better understanding of brain function and facilitate the design of more complex processing systems for real-time and optimized performance.

d) World-class global research cooperation and alliances in this area, and links with similar actions outside Europe, in particular with participants from USA and Japan.

IP/STREP proposals should address at least 2 of a), b) or c). CSA proposal should address d).

Expected impact

Target outcome a-c):
- New computing paradigms leading to advanced bio-inspired sensing and processing systems, which are naturally able to learn and adapt
- New concepts leading to new brain-computer interface technologies

Target outcome d):
- New EU and global collaborations between researchers in multiple disciplines spanning engineering, physical and life science domains.

Funding schemes
a-c): IP, STREP
d): CSA
Indicative budget distribution10

- IP/STREP: EUR 22 million
- CSA: EUR 1 million
Call
FP7-ICT-2011-9

1. Are there any additional/background documents?

2. What are you looking for?

3. What do you not want?

4. Who are the leading players?

5. Is this new or has it been called before?

6. Is there a key group of actors or ETP driving this?

9.12 FET Proactive - Coordinating communities, identifying new research topics etc.

Target Outcome

a) Actions supporting the coordination and cooperation of the targeted research communities, assessing the impact and proposing measures to increase the visibility of the initiative to the scientific community, to targeted industries and to the public at large. These actions should also foster the consolidation of research agendas.

b) Actions supporting and promoting cooperation with non-EU research teams in foundational research on FET topics, with a balanced participation from partners in the EU and from target countries.

c) Short duration actions (typically 6-12 Months) to organise consultations of multidisciplinary communities to formulate novel FET research topics, focussing on new emerging research areas. The main objective should be to identify and motivate one or more new research avenues from a global perspective, the associated fundamental challenges, and to analyse the expected impact on science, technology and society.

d) Actions to organise conferences and workshops which should foster dialogue between science, policy and society on the role and challenges of interdisciplinary ICT related long-term research, increasing Europe's creativity and innovation base and bridging diverse European research communities and disciplines.

Proposals should focus exclusively on one of the target outcomes.

Expected impact
- Reinforced coordination of research projects in FET Proactive Initiatives in current or previous calls, strengthening research excellence and co-operation with partners from outside Europe.
- Early identification and increased awareness of new trends emerging on a global scale in support of future proactive initiatives
- Novel widely supported and well motivated research topics to be considered as inputs for future ICT work programmes.
- Increased visibility of the FET community and links between European research communities

Funding Scheme
CSA

Indicative Budget Distribution

FP7-ICT-2011-9 (foci a, b, c and d)

1. Are there any additional/background documents?

2. What are you looking for?

3. What do you not want?

4. Who are the leading players?

5. Is this new or has it been called before?

Has been called before – example existing projects:
Coordination Actions: ASSYST, AWARE, COBRA, CSN, ETERNALS, HC2, NANOICT, PERADA, QUIE2T, ZEROPOWER
Support Actions: COMPLEXENERGY, EVOBODY, INBIOSA, ITSY, MULT.EU.SIM, VISIONEER, VPH-FET
ERA-NET Project: CHIST-ERA

6. Is there a key group of actors or ETP driving this?

10.3 International partnership building and support to dialogues

Target outcome

b) **Enable Partnership building** in low and middle income countries
The aim is to leapfrog from traditional promotion support action projects and launch a set of targeted research projects (STREP/SICAs) addressing at the same time technology and business model innovations. Specific technological targets could include for example low-cost technologies, technologies promoting or enabling use of ICT, intuitive user interfaces and local content provisioning.

Targeted countries: Low and middle income countries including Africa (but not exclusively Africa) See http://data.worldbank.org/about/country-classifications/country-and-lending-groups
Africa has been emphasised in the text of the work programme, but it does not exclude participation of non-African low and middle income countries. Quoting Africa as an example means they would like to see African participation – they mean all of Africa, both sub-Saharan plus North Africa).

Expected impact
- Reinforcement of strategic partnerships with selected countries and regions in areas of mutual interest and added value in jointly addressing important issues.
- Reinforced international dimension of the EU ICT research programme and higher level of international cooperation with low and middle income countries in ICT R&D with a focus on areas where the EU has a comparative advantage and where there are new leadership opportunities for Europe.

Activities under this objective should be covered in balanced partnership with relevant third country organisations. Consortia are strongly encouraged to include, as appropriate, leading research centres/universities, relevant industry representation, third country multipliers (e.g. national research authorities/agencies), communication specialists and/or experienced market research organisations.

STREP/SICA: at least 4 independent legal entities, of which at least 2 must be established in different Member States or Associated Countries and at least 2 must be established in different ICPC countries in the target regions.

Funding schemes
b): STREP/SICA
Indicative budget distribution
Total EUR 2 million for part b)

Objective 10.3(b) did not have a phase 1. Call 9 opened on 18/01/2012 and will close on 17/04/2012.
The previous objective 10.3(a), from call 7, covered coordination and support actions (CSAs), and this new objective, 10.3(b) would be a kind of next step; like the ICT Work Programme 2011-2012 says, a leapfrog from CSAs to STREPS, this is, from policy/dialogue/networking oriented projects to more research focused projects.
Participation in objective 10.3(b) is not conditional to previous participation on objective 10.3(a) or any other.

PPP Future Internet

1. Are there any additional/background documents?

2. What are you looking for?

3. What do you not want?

4. Who are the leading players?
Not appropriate really for SMEs

5. Is this new or has it been called before?
Phase 1 was previously called.
Proposers should probably already be involved in Phase 1.

6. Is there a key group of actors or ETP driving this?

The FI-PPP addresses the need to make public service infrastructures and business processes significantly smarter (i.e. more intelligent, more efficient, more sustainable) through tighter integration with Internet networking and computing capabilities. The **aims of the FI-PPP** are:
i) to increase the effectiveness of business processes and of the operation of infrastructures supporting applications in sectors such as transport, health, or energy;
ii) to derive possible innovative business models in these sectors, strengthening the competitive position of European industry in domains like telecommunication, mobile devices, software and service industries, content providers and media. This requires to (i) identify, define and up-date the Future Internet requirements coming from the different innovative use cases (ii) specify an open standardised generic framework (specification, standards, implementation and research/usage validation trials) combining the required network, data, computing and services components (iii) adapt and complement to the specific needs of use cases.

The FI-PPP follows an industry-driven, **holistic approach** encompassing R&D on network and communication infrastructures, devices, software, service and media technologies; and their experimentation and validation in real application contexts. Projects under the FI-PPP are required to draw upon the wealth of results already achieved through earlier European research and to valorise them further through a systematic integration with a complete system perspective. The FI-PPP brings together the demand and the supply sides, and also requires to involve users early into the research life-cycle. The platform to be developed will thus be used by many actors, in particular by SMEs and public administration services, to validate the technologies in the context of smart applications and their viability to support "user driven" innovation schemes.

In technical terms the FI-PPP targets a versatile (multi-use case) and open network and service platform, supported by reusable, standardised and commonly shared technology enablers (horizontal foundation) serving a multiplicity of use cases in "smart applications" (vertical sectors). Platform validation is supported through large scale trials in environments including smart urban areas and smart regions. The target platform may draw upon resources from several independently controlled domains, which drives strong requirements towards standardised interfaces. Integration of sensor/actuator networks in the platform to provide "physical world" information in support of context-aware smart applications and services is an important technological driver.

The FI-PPP is based on a three-phased approach with four tightly related Objectives: Phase 1 was already called; this call is for Phase 2. A third Call is planned under Work Programme 2013.

The **major building blocks**, each of them implemented through one objective, are:
- Core Platform (1.7 -): design, develop and implement a generic, trusted and open network and service Core Platform supporting generic enablers with standardised interfaces serving multiple use cases, and making use of and integrating advanced Internet features.
- Use cases and trials (1.8 -): identify trial scenarios and derive the Internet platform requirements for a particular usage area; design, develop and implement a domain-specific instantiation of the core platform building on a selection of core platform generic enablers complemented by domain-specific capabilities; provide a limited scale testing infrastructure; validate the platform through early and large scale trials.
- Infrastructure support (1.9 -): identify existing and future advanced experimental infrastructures across Europe and integrate, federate and upgrade them towards serving large scale trials.

Programme facilitation and support (1.10 -): Facilitate the development of an overall programme view and collaboration across all FI-PPP projects, support standardisation, SME involvement, link

with regulatory and other relevant policy activities, dissemination and awareness raising.

Programme Architecture Overview
The Programme is implemented through the following **phases**:

Phase 1 (Work Programme 2011-12)
- Derive the architecture and identify the common enablers of the core platform; start developing components.
- Define the usage area requirements on the Future Internet for supporting their business processes, identify the scenarios for early trials including the infrastructure to support them; and start implementing domain specific functionalities.
- Start the evaluation of test infrastructures and consider where investments need to be made to bring infrastructures to the level necessary to enable trials.
- Establish the programme support and coordination structures.

Phase 2 (Work Programme 2011-12)
- Ensure the availability of the necessary test infrastructure for the early trials,
- Develop the core platform and the use case specific functionalities, and instantiate them on the test infrastructure.
- Finalise selection, prepare and run early trials for all use cases.
- Prepare large scale trials in terms of SME participation as application and service developers and infrastructure integration across Europe.

Phase 3 (Work Programme 2013)
- Provide and maintain a stable infrastructure for the large scale trials, expand the core platform, the use case specific functionalities and their demand-driven instantiations.
- Run large scale trials populated with a variety of applications challenging the overall platform, and proving the viability of the concept.
- Prove the value of services mash-up across use cases as the bases for a new dimension of services and application.
- Involve SMEs at large as developers and providers of services and applications.

Implementation Requirements
In order to achieve a good balance between "application pull" and "technology push" and to produce viable results within a medium term time perspective (~5 years), the FI-PPP activities are implemented through a **coherent programme** with strong interdependencies between the different

Objectives:
- Projects under all FI-PPP objectives are expected to pro-actively collaborate, manage their dependencies, and synchronise their activities under common FI-PPP collaboration and coordination structures facilitated by the programme support actions under Objective 1.10. It is key in the approach that boards and other advisory structures are put in place, with representatives from all FI-PPP projects, on issues such as the architecture of the core platform and its interfaces, user requirements, standardisation and certification, dissemination, large scale trials and their infrastructure, SME participation, acceptance and take-up, independent monitoring and advise, etc.
- Projects of all objectives are expected to run in parallel: collaboration between them must take place taking a spiral approach: vertical projects continuously fuel the horizontal projects with core platform and trial infrastructure requirements, whilst horizontal projects fuel the vertical projects with technological and system constraints and awareness.

In terms of intellectual property rights and dissemination, it is expected that the FI-PPP projects

under Objectives 1.7 to 1.10 agree on a programme level regime.

Proposers are expected to describe their commitment to, means and extent of collaboration with participants in the other projects under this PPP.

The FI-PPP initiative requires that the networking and services industries in Europe play a prominent role, and agree on a common specification of the Future Internet Core Platform to be developed, including its interfaces. Research and academic organisations should bring into the development their specific expertise, notably in terms of innovation and in building on earlier results achieved in relevant domains.

For what concerns the use cases and scenarios for large scale trials, it is expected that a prominent role is played by user organisations outside the core ICT industry, covering all relevant usage levels of the value chain, and including service and application providers building on horizontal business models cutting across usage areas. Here the public dimension is emphasised with public administrations having a key role in validating the technologies in environments such as smart urban areas and regions.

SMEs are expected to have a strong role across the initiative from being involved in technology development to offering services and applications in large scale trials thereby becoming a key pillar in the Future Internet ecosystems targeted by the initiative.

Objective FI.ICT-2011.1.8 Use Case scenarios and early trials

Target outcomes:

The work focuses on vertical use case scenarios whose intelligence, efficiency, sustainability and performance can be radically enhanced through a tighter integration with advanced Internet-based network and service capabilities.

The target use cases should cover innovative applications scenarios with high social or economic impact making use of advanced Future Internet capabilities. Without being restrictive, examples of such target use cases include systems for utilities like the electricity grid, for traffic and mobility management, for health, and for ubiquitous access to networked digital media. Each proposed use case is expected to utilize technologies and functionalities leapfrogging current innovative Internet technologies, such as context awareness and sensor networks, advanced real time information processing capabilities handling huge volume of information, ad-hoc service composition and mash-ups, managed broadband connectivity and services, embedded media support for interfaces easing the interpretation of processed contextual data, etc.

The work includes use case characterization; specification of platform requirements; development and technological validation prototypes, and large scale experimentation and validation. Of particular importance for each selected use case is the identification of usage specific requirements versus generic requirements that can be implemented through Generic Enablers. The latter will be developed by the Objective 1.7 which takes a central role in collecting requirements and defining generic enabling capabilities and interfaces, feeding them back into the specifications for the use case experiments. It is expected that a prominent role is given to user organisations covering all relevant usage levels of the value chain. The definition and preparation of the experimentation sites may be complemented by the provisions made under the Objective 1.9. Multiple sites throughout Europe are targeted for the implementation of experimentations and validations.

Target outcomes after **phase 2:**

i) Working experimentation sites building upon common components and Generic Enablers as provided under the Core Platform Objective complemented by the identified use case specific capabilities;
ii) Selected test applications implemented on these experimentation sites;
iii) Validation of the openness and versatility of the Core Platform and its software development kit, through implementation of mixed use case scenarios originating from more than one use case project;
iv) A detailed plan for how to move into phase 3, including detailed plans for the large scale expansion of platform usage facilitated by local and regional stakeholders including SMEs.

In order to reach the target outcomes, the proposed work need to demonstrate:

- The valorisations of earlier Future Internet research within a complete system perspective;
- The commitment, backed by appropriate mechanisms, to collaborate with other FI-PPP activities;
- Openness and related approach towards standardization.
- The potential for innovation and related market impact, which is the main driving
- requirement of the FI-PPP implementation.

Links to other activities

The projects implemented under this objective provide:

i. Members to boards and advisory structures implemented under Objective 1.10, requiring representatives of all active projects in the FI-PPP;

ii. Scenarios, functional specifications, enabler requirements, interface requirements, reference implementation for trials, test case scenarios to the projects implemented under objectives 1.7, 1.9, 1.10; relevant information to the other projects implementing Objective 1.8, in the same phase or in a following one.
iii. Standardisations requirements and contributions to the Co-ordination action under 1.10

Phase 2
Funding schemes
- Up to 5 IPs, with priority given to maximising the spectrum of use cases covered. Indicative budget distribution and duration*10*
- 13.5 M€ per use case project; at least 10% of the budget is expected to be allocated through Open Calls to allow for local solution providers and system integrators to get involved.
- Duration: maximum 24 months

Objective FI.ICT-2011.1.9 Capacity Building and Infrastructure Support

Target outcomes

The goal is to leverage existing public investments in advanced infrastructures to support advanced experiments demonstrating the versatility of the Core Platform across a multiplicity of heterogeneous environments and use cases: Several European regions or urban areas are increasingly becoming equipped with advanced infrastructures (e.g. sensor platforms, advanced broadband wireless networks, server farms and service environments, energy grids, content delivery networks). Where applicable, it is also encouraged to leverage EU-wide infrastructures. The FIRE initiative is building a dynamic experimental infrastructure for Future Internet research and experiments whilst the national research networks together with GÉANT are providing a European high capacity and high performance inter-domain communication infrastructure with virtualisation capabilities, which is connected across the world.

The aim is hence to identify, taking a pan European perspective, those infrastructures that could eventually be integrated with the Core Platform to support large scale experimentation and validation, and to identify the related interoperability requirements. These interoperability requirements will also help the definition of Generic Enablers under the Core Platform Objective, as they will drive the required level of virtualisation making it possible to seamlessly integrate various heterogeneous infrastructures and to federate them according to use case requirements.

This Objective requires putting in place a partnership strategy with the infrastructure owners or operators, public or private, and a detailed understanding on the operational usage taking into account that these supporting infrastructures will be used in different trials. Finally, supporting infrastructures need to be upgraded according to research results driving additional requirements and constraints to support the target use cases.

Target outcomes after **phase 2:**

i. The integration of some of the identified infrastructures relevant to support or complement the early trials of phase 2, satisfying the interoperability requirements characterised by the generic enabler definition of the Core Platform .

ii. The necessary adaptation, upgrade and validation of the infrastructures in view of supporting usage requirements stemming from the experimented use cases and a mix of those.

iii. The assembly of a pan-European federation of test and experimental infrastructures satisfying the interoperability requirements, equipped with the functionality of the core platform by the start of phase 3 to support the validation through large scale trials in representative environments.

iv. In order to reach the target outcomes, the proposed work need to demonstrate the commitment, backed by appropriate mechanisms, to collaborate with other FI-PPP activities.

Links to other activities

The projects implemented under this objective provide:

i. Members to boards and advisory structures implemented under Objective 1.10, requiring representatives of all active projects in the FI-PPP;

ii. Supported functionalities, interfacing requirements, virtualisation requirements, usability constraints to the projects implemented under objectives 1.7, 1.8, 1.10;

iii. Where appropriate, standardisations requirements and contributions to the Co-ordination action under 1.10.

Phase 2

Funding schemes
- One IP
Indicative budget distribution and duration[10]
- EUR 12.5 million
- Indicative duration: 2 years

FET Open

FET Open is a light, topic-agnostic and deadline free scheme specifically designed to be open and continuously responsive to novel and fragile ideas that challenge current thinking, whenever they arise and wherever they come from. It aims at foundational breakthroughs that can open radically new directions for information and communication technologies in the future.

Although FET is open to broad participation, two new objectives specifically aim to give leadership to young researchers and high-tech research-intensive SMEs. As young researchers will be the future leaders in science, technology and innovation, FET aims to empower them to jointly explore radical directions that may not fit within current academic research agendas. Likewise, high-tech, research-intensive SMEs are instrumental for pushing forward alternative visions and for turning novel research results into a competitive advantage for creating new markets. FET aims to increase their role in cooperative research to further enhance their disruptive innovation potential and to unlock longer-term scientific and industrial leadership. This work programme devotes at least 20% of the FET Open scheme budget to support collaborative projects empowering young researchers and high-tech, research-intensive SMEs.

Because of its foundational nature, FET research is especially well placed for global collaboration. This work programme provides opportunities to extend on-going FET projects through new collaboration components involving the best researchers worldwide, so as to create global interest and raise the level of ambition around research avenues incepted within FET.

FET Open consists of four objectives:

9.1 FET Open Challenging Current Thinking
9.2 FET Open High-Tech Research Intensive SMEs in FET research
9.3 FET Open FET Young Explorers
9.4 FET Open International cooperation on FET research

See following pages for descriptions.

9.1 FET Open Challenging Current Thinking

Target Outcome

This objective supports the exploration of new and alternative ideas that, because of their risky or non-conventional nature, would not be supported elsewhere in the ICT Work Programme. It seeks: - foundational breakthroughs as crucial steps towards radically new forms and uses of information and information technologies within a clear long-term vision that is far beyond the state of the art;

- ambitious proof-of-concept and its supporting scientific foundation, where novelty comes from new, high-risk ideas rather than from the refinement of current ICT approaches;
- new inter-disciplinary collaborations, possibly with prominent and internationally recognized non-EU research teams where these can provide a significant added value.

This objective also supports Coordination and Support Actions for creating the best conditions within which FET research can flourish and achieve the transformative impacts that it aspires to. These activities may be, for example:

- actions, including networking and dissemination activities, aiming at the emergence of new research communities or collaborations involving a broad diversity of disciplines and actors into FET research;
- actions towards the increased active involvement of high-tech research intensive SMEs in exploratory research directions relevant to future ICT markets;
- actions that stimulate excellence and future leadership of pioneering teams of young researchers along new, exploratory research directions relevant to future ICT;
- actions aiming to strengthen the international dimension of FET.

The two step submission process applies for STREPs only and it does not apply to the FET Open Objective ICT-2011.9.4 on International Cooperation in FET research.

Expected Impact

For STREP projects:

- Opening new avenues of research towards future ICT that may be radically different from present day ICT;
- Strengthening the future potential for high-risk / high-impact research and innovation;
- New research alliances in transformative research, exploiting synergies in the global science and technology scene for increased impact and excellence.

For CSA actions:

- Catalyse transformative effects on the communities and practices for high-risk and high impact research and on the mechanisms to support the global nature of such research;
- New, engaged and risk-taking research communities prepared to develop new and non-conventional approaches for addressing future challenges in science and society.

Funding schemes

STREP, CSA

Indicative budget distribution

EUR 75 million, out of which a maximum of EUR 7.5 million for CSA.

Call FP7-ICT-2011-C

Proposals are continuously receivable until 11 September 2012 (STREP) and 12 March 2013 (CSA). FET Open applies a two-step submission scheme and FET Open specific eligibility and evaluation criteria

9.2 FET Open High-Tech Research Intensive SMEs in FET research

Target outcomes
This objective fosters the participation of high-tech, research intensive SMEs in a driving role in collaborative research projects targeting visionary, multi-disciplinary research. This will: - link novel ideas, results or paradigms from science on the one hand, and marketable ideas on the other, that can lead to new, visionary and non-mainstream business opportunities and create future markets;

- generate a new scientific and technological asset base on which the SMEs can establish themselves firmly as future innovation players in areas with a high potential for future commercial or societal impact.

This objective does not seek short term commercial outcomes. It will therefore not support, for example, the incremental improvement of state-of-the-art technology, mainstream research aimed at short term product or service development, the incremental improvement of existing lines of business activity, research aimed to catch-up with the competition, forsighting or market studies, or the mere development of new business models or business plans.

The consortium will contain at least one research intensive high-tech SME42 with an established and proven in-house research capacity and that will play a driving role in setting EUR 37 million are from the 2011 budget and EUR 38 million are from the 2012 budget.

Indicative budget which is expected to be committed for successful proposals from the cut-off dates 06/07/2010 up to and including 10/04/2012 (batch 9 to batch 13 included) and executing the research agenda of the project. This objective is expected to be addressed by small STREPs proposals, each with a funding in the order of EUR 1 million, where the largest share of the resources is allocated to the participating SME(s).

Expected Impact

- Opening new avenues of research towards future ICT that may be radically different from present day ICT;
- In-house research capacity and research eco-system of the SMEs secured and broadened, thus leading to sustainable future innovation potential;
- High-Tech, research-intensive SMEs recognised as first-class players in FET research; • Increased visibility, exposure and impact of FET research.

Funding scheme
STREP
Indicative budget distribution
EUR 9 million
Call:
FP7-ICT-2011-C
Proposals are continuously receivable until 11 September 2012. Two-step submission and evaluation process with specific eligibility and evaluation criteria.

9.3 FET Open FET Young Explorers

Target outcomes
This objective aims at capturing the creative potential of young researchers by fostering their leadership and participation in collaborative research projects targeting first-ever and exploratory, multi-disciplinary research.
This exploration should be grounded in scientifically plausible ideas that can provide a novel basis for the development of radically new concepts and visions that extend the conventional boundaries of ICT. New multi-disciplinary approaches and unconventional methodologies are encouraged.

This objective is expected to be addressed by small STREP proposals, each requesting a grant in the order of EUR 1 million. A project must be led by a young researcher, and the leadership by young researchers of all work packages is also required. No more than six years should have elapsed between the award of a Ph.D. (or equivalent) for each such young researcher and the date of submission of the short proposal.[45]

Expected Impact
- Opening new avenues of research towards future ICT that may be radically different from present day ICT;
- Empower the next generation of European science and technology leaders through their increased leadership of collaborative ICT research;
- Promote early independence of young high potential researchers.

Funding scheme
STREP
Indicative budget distribution[10]
EUR 6 million[46,47]
Call
FP7-ICT-2011-C
Proposals are continuously receivable until 11 September 2012. FET-Open applies a two-step submission scheme and FET-Open specific eligibility and evaluation criteria

9.4 FET Open International cooperation on FET research

Target outcomes
This objective aims to increase and accelerate the impact of FET research projects by cooperating with non-EU partners of excellent global standing. It targets the extension of ongoing FET projects with complementary research activities in which collaboration with non-EU48 research partners brings significant added value.

The research content is expected to focus on new activities that expand the research challenges and reinforce the impact of the ongoing project. The outcome of that research is expected to be made freely and openly available for the benefit of the research community.

Funding can be requested by the partners from the ongoing FET project and by the new non-EU research participants to cover the coordination and joint research activities necessary to complement the ongoing project. Proposals must be presented by the coordinator of the ongoing project.

Expected Impact

- Enhanced outcomes, global reach and impact of ongoing FET research projects through research collaboration with non-EU participants with complementary expertise;
- Research cooperation between world-class EU and non-EU researcher teams reinforced, thus facilitating the emergence of global alliances per child born after the PhD award) & paternity leave (accumulation of actual time off for children born after the PhD award) and leave taken for long-term illness, national service.

EUR 3 million are from the 2011 budget and EUR 3 million are from the 2012 budget.
Indicative budget which is expected to be committed for successful proposals from the cut-off dates of 17/05/2011 up to and including 10/04/2012 (batch 11 to batch 13 included)
The new participating organisations cannot be located in EU Member States or in Associated Countries

Funding scheme
Additional funding to existing grant for on-going FET IP and STREP projects ending at least 18 months after the submission date of the proposal.

Indicative budget distribution
EUR 3 million
Call
FP7-ICT-2011-C
Proposals are continuously receivable until 12 March 2013. One-step submission and evaluation process and specific eligibility and evaluation criteria.