FP7 ICT Work Programme 2011-12

Information Day Moscow
20 October, 2010

Morten Møller
European Commission

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Outline

- ICT Programme Objectives
- Why research at European level?
- Where do we stand?
- Programme and Calls overview

FP7 ICT Programme objectives

- Reinforce basic ICT technologies and infrastructures
  - seize new opportunities in emerging fields, build on existing strengths, help share risks and build partnerships
- Reinforce ICT contributions to major socio-economic challenges
  - health and ageing, lower-carbon economy, sustainable manufacturing and services, learning and cultural resources
- Support to international cooperation
- Strengthen cooperation in an enlarged Europe
- Support to pre-commercial procurement

Why research at European level?

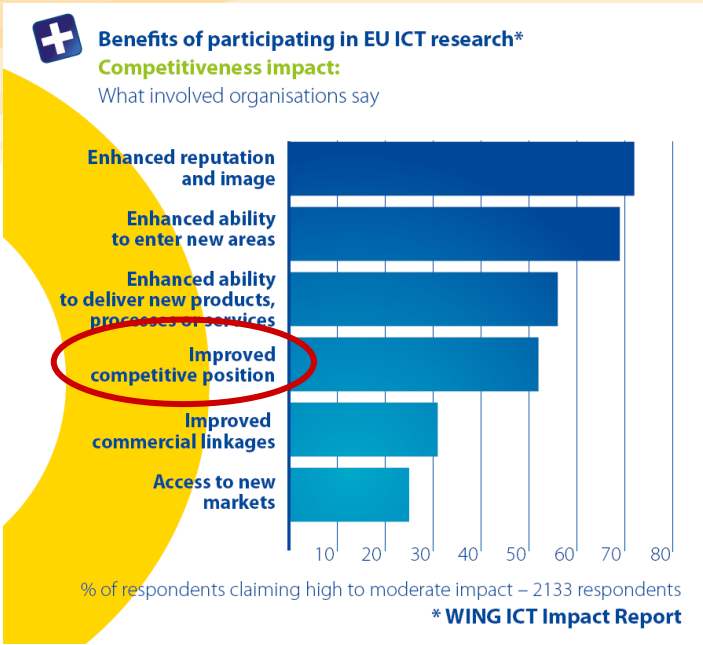
- Working together
  - Achieve critical mass
  - Coordination of national policies
  - Leverage effect on private and public investments
  - Interoperability and complementarity
  - Reinforce position to be successful in global innovation

- Human capacity and excellence in Science & Technology
  - Stimulate training, mobility and career development of researchers
  - Improve S&T capabilities

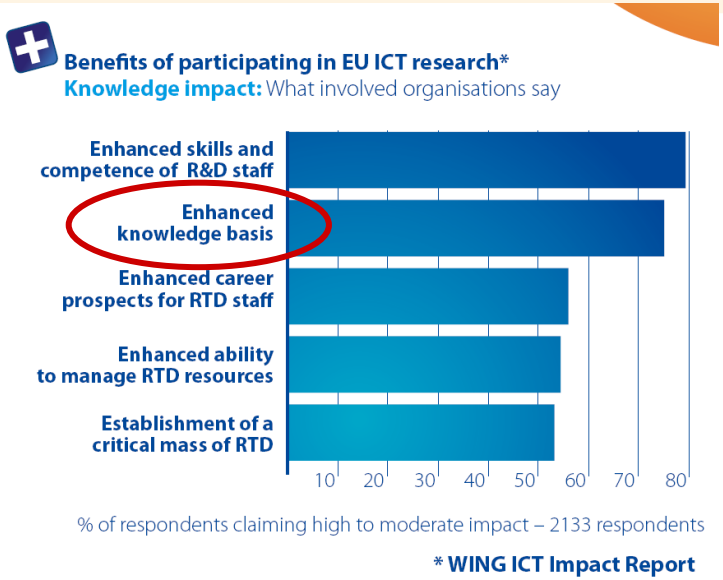
What do participants tell us?

Survey of FP5-6 participants

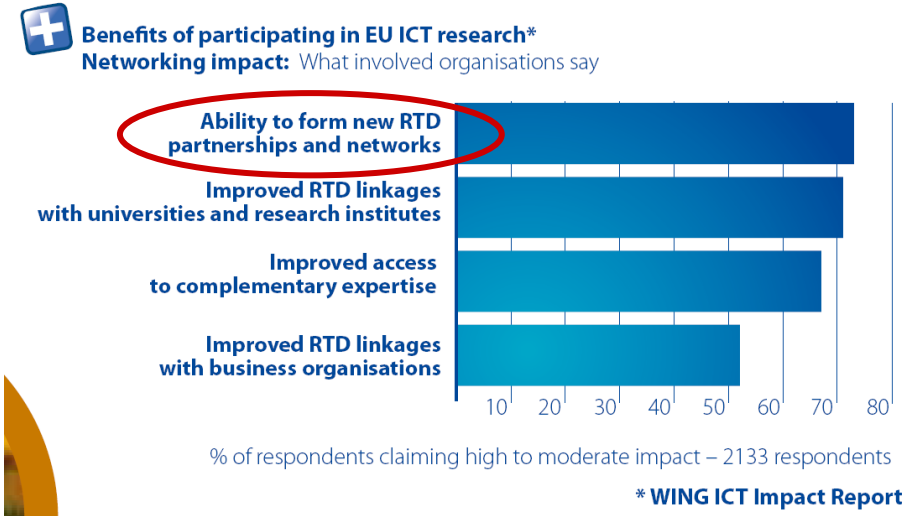
Competitiveness



Knowledge



Networking



- Building excellence
- Sharing risks
- Exploring technological options
- Increasing competitiveness
- Reinforcing the ability to innovate
- Contributing to standard setting and political debate

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ICT in FP7 - Where do we stand?

- Behind us
  - ICT Calls for proposals under WP 2007-08 and WP 2009-10
    - >4200 M€ of EU funding committed
    - >1100 projects launched or to be launched
    - >10000 participations
    - >3600 distinct organisations participating
  - Calls under two Joint Technology Initiatives (Artemis and Eniac) and the Ambient Assisted Living Joint Programme (AAL) in 2008, 2009 and 2010

- Ahead of us
  - ICT WP 2011-12
    - 2422 M€ funding
  - ICT WP 2013
    - >1500 M€ funding
  - JTIs + AAL WPs 2011, 2012, 2013

Next Calls for Proposals - Deadlines

- ICT Call 7……..18 Jan 2011
- EU/Brazil coordinated call ……18 Jan 2011
- FET Flagship Initiatives …….. 2 Dec 2010
- EU/Russia coordinated call ……..12 Nov 2010
- SME initiative on Digital Content and Languages …… 28 April 2010/28 Sept 2011

- FET Open …… Continuously open

- Future Internet PPP Call 1 ……. 2 Dec 2010
- Energy-Efficient Buildings, Green Cars, Factories of the Future PPPs Call 2010... 2 Dec 2010

Why Public Private Partnerships (PPP)?

- Strong focus on industry-led roadmaps
- Cut across themes, technologies and research disciplines
- Cut across policy silos ("supply and technology push" + "demand and market pull“)

- INFSO/ICT PPP
  - Future Internet PPP
- Jointly implemented with other Themes (DG RTD, ENV, ENERGY)
  - ICT in the Factories of the Future PPP
  - ICT in the Green Cars PPP
  - ICT in the Energy Efficient Buildings PPP

Challenge 1

Network and service infrastructures

Deadline: 18/1/11

- 1.3: Internet-connected objects

30 M€

  - distributed networks of cooperating objects (sensors, actuators …)
  - scale, heterogeneity, mobility … integration with service layers …
  - enabling person/object and object/object communications

- 1.5: Networked media and search systems

70 M€

  - digital media delivery platforms: integration with network, adaptation, fusion …
  - end-to-end immersive and interactive media technologies: 3D evolution, MR, QoE …
  - multimedia search technologies: user-centric, context-aware, sensor-based …

- 1.6: Future Internet Research and Experimentation (FIRE)

20 M€

  - facilities for experimentally-driven R&D on Future Internet
  - providing larger scale and diversity to test and validate the developments at conditions close to reality
  - e.g Future Internet research, service platforms, 3D Internet …
  - + 25 M€ in ICT Call 8

Challenge 1

Future Internet PPP

Deadline: 2/12/10

- 1.7-1.10: Future Internet Public Private Partnership
  - Holistic approach
    - towards very high rate mobile access, intelligent service capability, immersive media, secure and trusted platforms, new devices & sensors ..
  - 1.7: Core Platform

41 M€

    - with generic enablers, functionalities that can be composed or reused…
  - 1.8: Use cases

40 M€

    - application scenarios using e.g. context-awareness, RT info processing, ad-hoc service composition …
  - 1.9: Infrastructure support

3 M€

    - requirements for experiments and validation …
  - 1.10: Programme facilitation and support

6 M€

    - coordination and accompanying measures …
  - + 80 M€ in FI PPP Call in 2012

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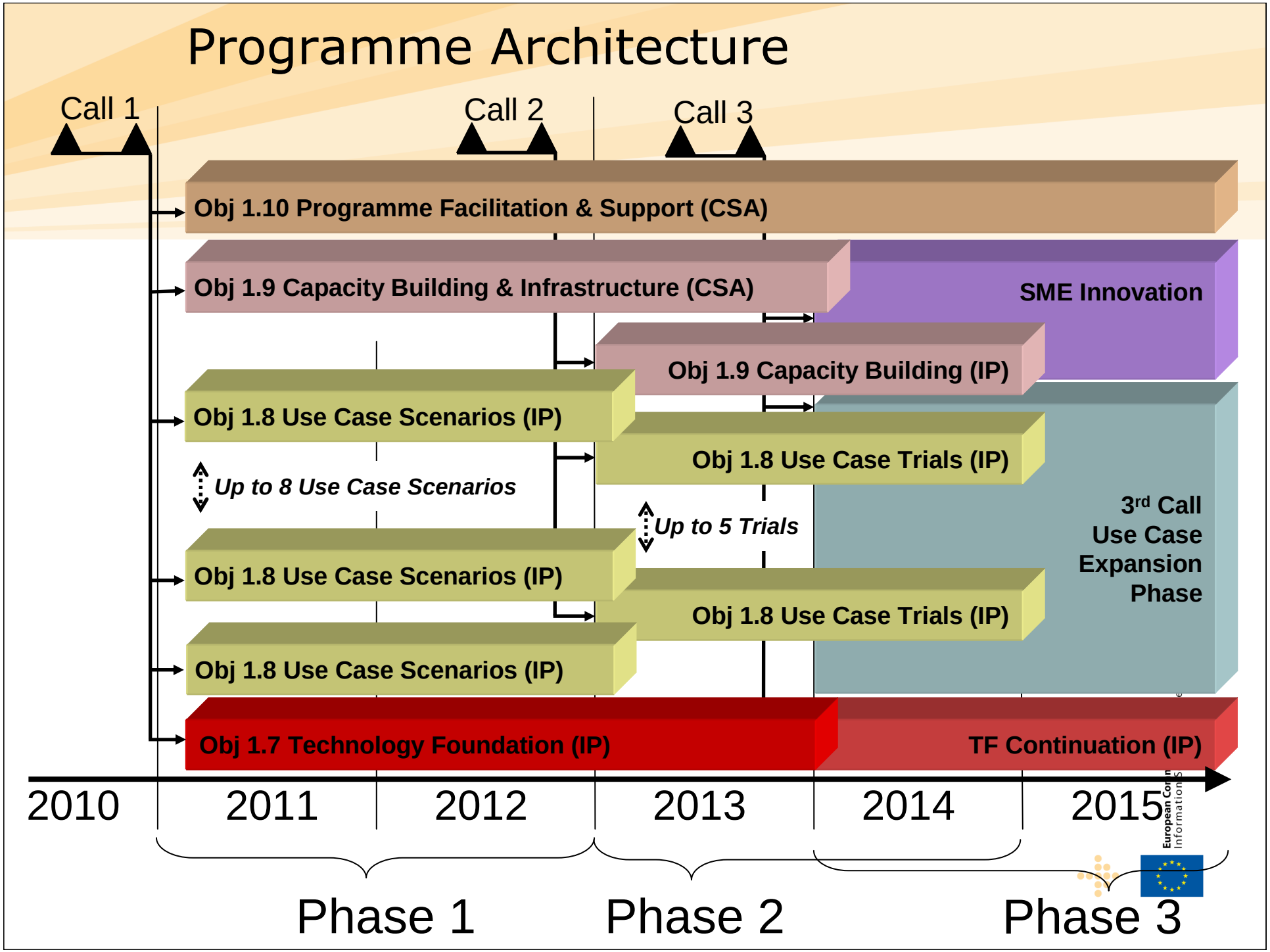

Programme Architecture
Call 1
Call 2
Call 3
Obj 1.10 Programme Facilitation & Support (CSA)
Obj 1.9 Capacity Building & Infrastructure (CSA)
SME Innovation
Obj 1.9 Capacity Building (IP)
Obj 1.8 Use Case Scenarios (IP)
Obj 1.8 Use Case Trials (IP)
Up to 8 Use Case Scenarios
Up to 5 Trials
3rd Call Use Case Expansion Phase
Obj 1.8 Use Case Scenarios (IP)
Obj 1.8 Use Case Trials (IP)
Obj 1.8 Use Case Scenarios (IP)
Obj 1.7 Technology Foundation (IP)
TF Continuation (IP)
2010
2011
2012
2013
2014
2015
Phase 1
Phase 2
Phase 3

Challenge 2

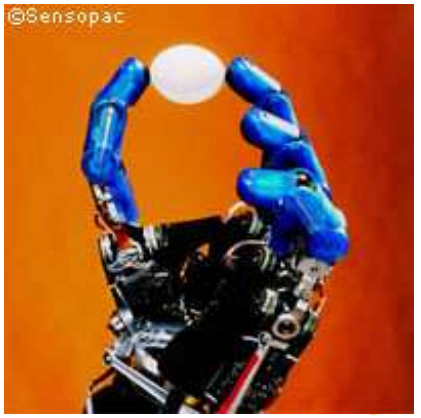
Cognitive systems and robotics

Deadline: 18/1/11

- 2.1: Cognitive systems and robotics

73 M€

  - robotic systems operating in dynamic, non-deterministic, real-life environments
    - research on engineering robotic systems and on endowing robotic systems with cognitive capabilities
    - 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
  - cooperation between robotics and cognitive systems research communities
  - + 82 M€ in ICT Call 9



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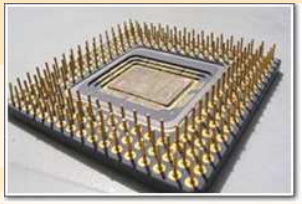
Challenge 3

Smart systems, embedded systems computing systems

Deadline: 18/1/11



- 3.2: Smart components and smart systems integration

41 M€

  - integration of new functionalities (sense, actuate, process, comm, energy scavenging …) for next generation of application-specific components and smart systems (SoC, SiP …)
  - convergence of microelectronics, nano-materials, biochemistry, measurement technology and ICT – complementary to the ENIAC Joint Technology Initiative
  - + 39 M€ in ICT Call 8

- 3.3: Emdedded systems, monitoring and control

50 M€

  - design, modelling and operation of systems composed of a large number of independent, heterogeneous and interacting embedded systems, as well as their monitoring and control
  - management of interconnected large, yet autonomous systems (systems-of-systems)
  - complementary to the ARTEMIS Joint Technology Initiative

- 3.4: Computing systems

45 M€

  - parallelisation and programmability methods
  - allow adaptation of existing software to multicore computing architectures and systems
  - embedded devices/general-purpose/high performance computing

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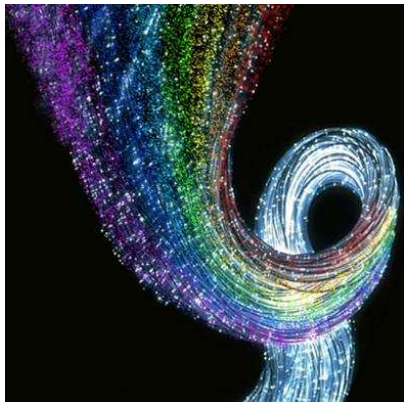
Challenge 3

Photonics, organic electronics

Deadline: 18/1/11

- 3.5: Core and disruptive photonic technologies (25 M€)
  - lasers, waveguides, photodetectors, amplifiers, LEDs, optical fibres, etc
  - new components and systems for: laser systems, optical fibres, quantum comm, biophotonics, imaging systems, lighting, info displays, memory, storage …
  - + 92 M€ in ICT Call 8

- 3.6: Flexible, organic and large area electronics and photonics (50 M€)
  - advanced, low temperature processing, printable devices and systems on large area and/or flexible substrates
    - Eg. light emitting and sensing devices, photovoltaics, displays, printed electronics for smart tags, or wearable smart textiles



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Challenge 4

Technologies for digital content and languages

Deadline: 28/4/11//28/9/11

- 4.1 SME Initiative on digital Content and Languages
  - Special initiative for making it easier for innovative SMEs to exploit and contribute to large digital resource pools

35 M€

    - Bootstrapping date economy (maximise and foster reuse, develop new services)
    - Community building and best practise exchange
    - Sharing Language resources (more efficient acquisition and sharing of language resources)
    - Consensus building and common services
- 4.2: Language technologies
  - allowing people to access and use online content and services across language barriers, in their preferred language

Deadline: 18/1/11

50 M€

    - human language as communication me… …t processing
    - as information: information access & m…
    - as interaction: natural spoken interacti…
    - roadmaps, evaluation & standards

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Challenge 5

ICT for health

Deadline: 18/1/11

- 5.1: Personal Health Systems (PHS)

60 M€

  - remote management of diseases, rehabilitation and treatment at the point of need
  - analysis of multi-parametric data

- 5.2: Virtual Physiological Human (VPH)

1.5 M€

  - CSA to develop roadmap for grand challenge on "Digital Patient"
    - patient-specific models for better prediction and treatment of diseases
  - + 66.5 M€ in ICT Call 9
    - focused on more elaborate and reusable multi-scale models and a VPH information infrastructure of larger repositories

- 5.3: Patient Guidance Services (PGS)

35 M€

  - enable patients' active participation in care processes
  - semantic interoperability to enable integration of patient information from multiple sources and locations
  - ubiquitous and secure access to personal EHR

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Challenge 5

ICT for ageing well, inclusion and governance

Deadline: 18/1/11

- 5.4: ICT for Ageing and Well-being

37 M€

  - service and social robotics and highly intelligent environments
  - self-learning, context-awareness, adaptation, user interaction …
  - complementary to the Ambient Assisted Living (AAL) Programme

- 5.5: ICT for smart and personalised inclusion

35 M€

  - solutions for social and economic inclusion through inclusive design, accessible, personalisable and human-ICT interfaces
  - social computing and solutions for learning and skills acquisition
  - Brain-Neural Computer Interfaces

- 5.6: ICT solutions for governance and policy modelling

25 M€

  - to help deal with future scenarios involving greater complexity and citizens' involvement
  - modelling, simulation, visualisation …

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Challenge 6

ICT for a low-carbon economy

- 6.2: ICT systems for energy efficiency

35 M€

Deadline: 18/1/11

  - energy efficient design and decision support tools
  - optimizing the energy performance during systems development and operation
  - e.g. simulation and planning, enterprise management systems, data centres ...

- 6.4 : ICT for energy-efficient buildings and spaces of public use

20 M€

Deadline: 2/12/10

  - building energy management systems
  - interoperation with other ICT-based sub-systems
  - part of Public-Private Partnership on Energy-Efficient Buildings

- 6.6: Low-carbon multi-modal mobility and freight transport

50 M€

Deadline: 18/1/11

  - technologies and services for multi-modal freight and logistics
  - ICT for clean and efficient multi-modal mobility for further improving energy efficiency and reducing CO2 emissions
  - all modes of transport for passengers and goods

- 6.8: ICT for fully electric vehicles (FEV)

30 M€

Deadline: 2/12/10

  - building blocks of FEV
    - energy storage systems, energy/comm/thermal management, stability control, electric drive, functional safety and durability …
  - integrating FEV with infrastructures
    - vehicle-to-grid interface, vehicle-to-cooperative transport infrastructure integration …
  - part of Public-Private Partnership on Green Cars

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Challenge 7

ICT for the enterprise and manufacturing

Deadline: 2/12/10

- 7.3: Virtual factories and enterprises

45 M€

  - end-to-end integrated ICT for higher management efficiency in networked business operations
  - supporting the emergence of 'smarter' virtual factories/enterprises

- 7.4: Digital factories: manufacturing, design and product lifecycle management

35 M€

  - engineering platforms
    - info sharing, workflow integration …
  - simulation and virtual prototyping
    - using more accurate digital models …
  - holistic modellling and simulation
    - of full complex products/processes …

FET Open

Future and Emerging Technologies

- 75 M€ 9.1: Challenging current Thinking
- 9 M€ 9.2: High-Tech Research Intensive SMEs in FET research
- 6 M€ 9.3: FET Young Explorers
- 3 M€ 9.4: International cooperation on FET research
- Cut-off dates:

Batch	Short STREPs	Full STREPs and CSAs
10	8/6 2010	7/12 2010
11	30/11 2010	17/5 2011
12	3/5 2011	25/10 2011
13	25/10 2011	10/4 2012
14	10/4 2012	25/9 2012
15	11/9 2012	12/3 2013

FET Proactive – Special initiatives

- Preparation for FET Flagships (10 M€)
  - 9.5: integrate fragmented research efforts around large-scale, visionary & goal-driven, multidisciplinary research initiatives

Deadline: 2/12/10

- Coordination and support (3 M€)
  - 9.12: Coordinating Communities, Identifying new research topics for FET Proactive initiatives and Fostering Networking of National and Regional Research Programmes
  - + 5.5 M€ in ICT Calls 8 and 9

Deadline: 18/1/11

- 9.13: Exa-scale computing, software and simulation (25 M€)

Deadline: 18/1/11

  - computing platforms with potential for extreme performance (100 petaflop/s in 2014 with potential for exascale by 2020)
  - optimised application codes driven by the computational needs of science and engineering of today's grand challenges eg. climate change, energy, industrial design and manufacturing, systems biology

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International collaboration

Horizontal actions

- 10.1: EU-Brazil R&D cooperation
  - 5 topics targeted: Microelectronics/Microsystems + Networked Monitoring and Control + Future Internet/experimental facilities + Future Internet/security + e-Infrastructures

5 M€

Deadline: 18/1/11

- 10.2: EU-Russia R&D cooperation
  - 3 topics targeted: Programming Models and Runtime Support + Performance Analysis Tools for High-Performance Computing + Optimisation, Scalability and Porting of Codes

4 M€

Deadline: 12/11/10

- 10.3: International partnership building & support to dialogues
  - Support to dialogues with strategic partner countries and regions
  - Analysis of ICT research priorities in third countries, events …

4 M€

Deadline: 18/1/11

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Network of NCP, Cooperation in Enlarged EU

Horizontal actions

Deadline: 18/1/11

- 11.2 Trans-national Co-operation Among NCPs

4 M€

  - promoting further trans-national cooperation within this network
  - proposals are expected to include or enable the active participation of all NCPs
    which have been officially appointed by the relevant national authorities (EU + associated countries)

- 11.3: Supplements to Strengthen Cooperation in ICT R&D in an Enlarged EU

10 M€

  - reinforce the cooperation across the enlarged EU
  - support to the participation of additional partners in on-going FP7/ICT IP and STREP projects ending after 30 June 2012
  - increase the level of expertise, broaden the scope and/or speed up developments
  - additional partners must be located in countries not already present in the existing consortium
  - funding requested should not exceed 30% of the Commission funding of the existing project or EUR 1 million, whichever is lower

Deadline: 18/1/11

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Coordination actions

Designed to:

- promote and support the ad hoc networking and co-ordination of research and innovation activities at national, regional and European level over a fixed period for a specific purpose

- by establishing in a coherent way coordinated initiatives of a range of research and innovation operators, in order to achieve improved cooperation of the European research

May combine the following two types of activities

- Co-ordination activities
- Consortium management activities

Some figures:
typically 19-36 months
3-40 participants – avg 11
0.3-3 m€ funding – avg 1

(Coordination actions do not conduct S&T research !)

Support actions

Designed to

- underpin the implementation of the programme
- complement the other FP7 funding schemes,
- help in preparations for future Community research and technological development policy activities and
- stimulate, encourage and facilitate the participation of SMEs, civil society organisations, small research teams, newly developed and remote research centres, as well as setting up research clusters across Europe
- Cover one off events or single purpose activities

May combine the following two types of activities

- Support activities
- Consortium management activities

Some figures:
typically 9-30 months
1-21 participants – avg 8
0.2-3 m€ funding – avg 0.9

(Support actions do not conduct S&T research !)

Getting help with proposals

FP7 ICTWeb

- http://cordis.europa.eu/fp7
- National Contact Points:http://cordis.europa.eu/fp7/ncp_en.html
- Partner search facilities: http://www.ideal-ist.net/
- Information desk: ict@ec.europa.eu
- IPR Helpdesk: http://www.ipr-helpdesk.org/index.html
- Electronic proposal submission helpdesk: support@epss-fp7.org

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ICT Proposers' Day 2011
19 - 20 May 2011, Budapest
Networking for European ICT R&D

- Prepare for Calls 8 and 9
- Networking and partnerships building
  - first-hand information from >100 EC officials
- Structure:
  - thematic sessions with presentations of proposal ideas
  - information stands & meeting points
- Registration:
  free of charge, open from January 2011

eu 2011.hu

http://ec.europa.eu/ictproposersday

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