European Commission

ICT WP2013

July 2012

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European Commission

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Context and trends

ICT: a critical infrastructure for growth

- *key for all vital social and economic processes*

The need for a new approach towards innovation

- *important to translate breakthrough technologies into innovations (new products, processes and services)*
  need to better integrate research and innovation

Social innovation: an important driver

- *development of the emerging ICT-intensive world should not be only technology-driven*
- *bottom-up and user-generated innovation becomes more influential*

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ICT in FP7 - Where do we stand?

Behind us

- **ICT CfPs under WP 2007-08, WP 2009-10 and WP 2011-12**
  - 5025M€ funding committed (15% to SMEs)
  - 1483 projects launched and contracts signed
  - 14365 participations (4644 distinct organisations)
- **Calls under two Joint Technology Initiatives (Artemis and Eniac) and the Ambient Assisted Living Joint Programme (AAL) in 2008, 2009, 2010 and 2011**

Ongoing activities

- **ICT WP 2011-12 Calls 8 and 9 (DL:1/2012; 4/2012)**
  - ~1350 M€ funding
  - Call 8 received 1405 proposals with 12169 participations
  - Call 9 received 645 proposals with 5117 participations
- **ICT WP 2013**
  - ~1484 M€ funding for projects
- **JTIs + AAL WPs 2012 and 2013**

Inputs to WP2013

- *ISTAG*
  - **ISTAG Report on "Orientations for EU ICT R&D and Innovation beyond 2013" (July 2011)**
  - **Draft ISTAG Report on "FP7 ICT WP2013 orientations" (March 2012)**
- *Member States Committee (ICTC)*
- *European Technology Platforms*
- *Workshops and meetings*
- *Studies and analysis*
- *Results of the first 7 calls for proposals (portfolio analysis)*

WP2013: a dual objective

Ensure a certain degree of continuity in priorities

- *original FP7 ICT R&D challenges express mid- to long-term objectives*
- *core technology and application areas will continue to be key challenges*
- *requires a sustained effort until the end of the Framework*

Bridge to activities in Horizon 2020

- *important role to play in preparing for Horizon 2020*
- *adaptation of the strategy towards a more integrated R&I approach*
- *pilot new approaches*

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Main features (I)

Continuity

- **Completion of activities launched since the start of FP7 including Public Private Partnerships (PPP)**

Prepare for the launch of Horizon 2020

- **Reorganising to adapt to H2020 structure**
- **Prepare for new activities**
- **Prepare for new PPPs**

Bridge to innovation

- **New activities to enable testing and validation**
- **Support to a better exploitation and take-up**
- **Continue Pre-Commercial Procurement scheme**

Main features (II)

Involving more SMEs

- **Specific SME-targeted activities**

Prepare FET Flagships

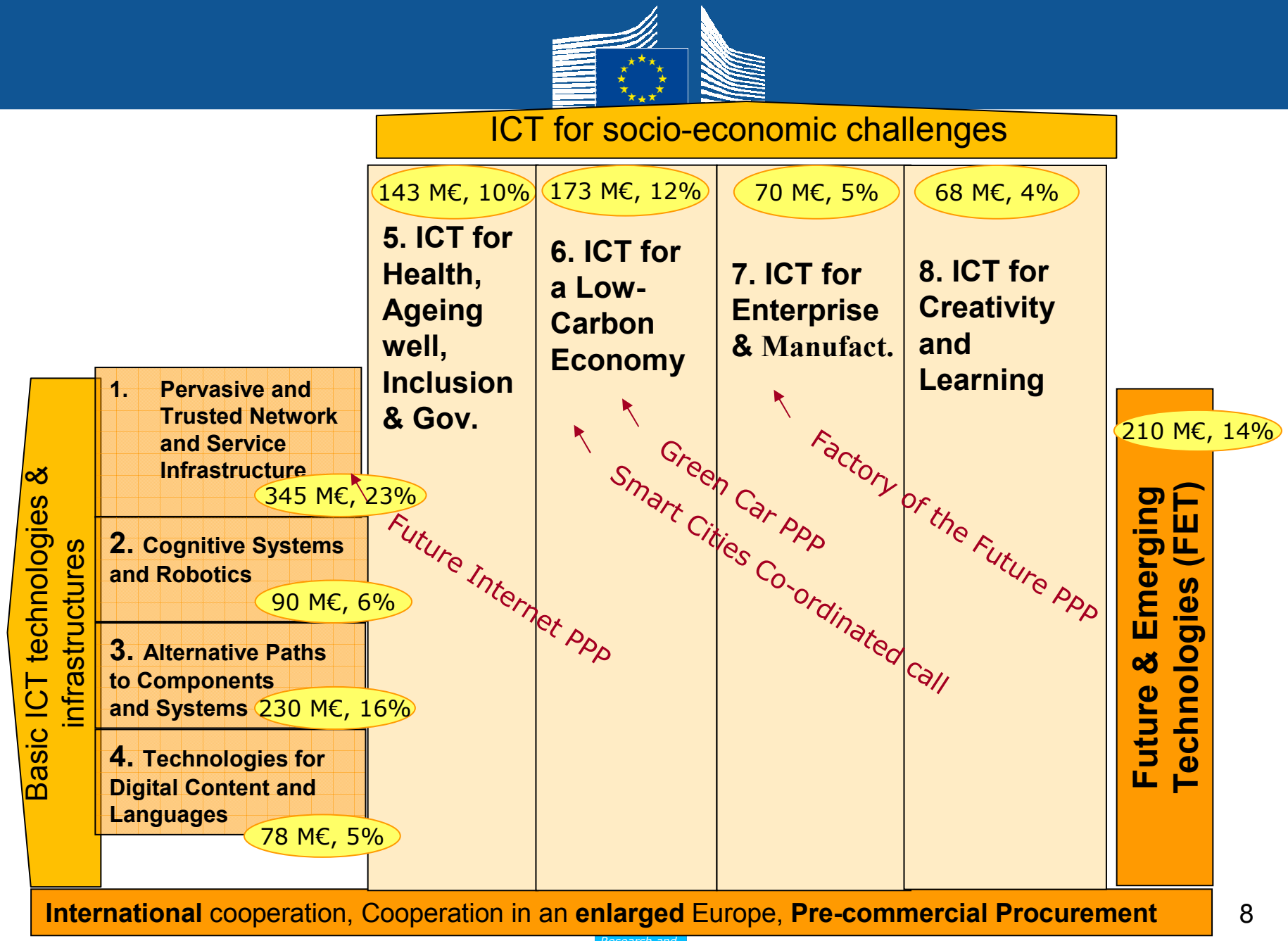
- **Ramp-up phase for two selected flagships**

Pilot new social innovation approaches

- **New dedicated activity**

Contributing to broader policy agendas

- **Support to EIP on Active and healthy Ageing**


ICT for socio-economic challenges
143 M€, 10%
173 M€, 12%
70 M€, 5%
68 M€, 4%
5. ICT for Health, Ageing well, Inclusion & Gov.
6. ICT for a Low-Carbon Economy
7. ICT for Enterprise & Manufact.
8. ICT for Creativity and Learning
Basic ICT technologies & infrastructures
1. Pervasive and Trusted Network and Service Infrastructure
345 M€, 23%
2. Cognitive Systems and Robotics
90 M€, 6%
3. Alternative Paths to Components and Systems
230 M€, 16%
4. Technologies for Digital Content and Languages
78 M€, 5%
Future Internet PPP
Green Car PPP
Smart Cities Co-ordinated call
Factory of the Future PPP
210 M€, 14%
Future & Emerging Technologies (FET)
International cooperation, Cooperation in an enlarged Europe, Pre-commercial Procurement
Research and Innovation

European Commission

Pervasive and Trusted Network and Service Infrastructures

- Continue roadmap based research
- To leverage new constituencies (innovative SMEs)
- Software systems laying the basis for the future European Cloud strategy
- To open the Future Internet PPP platform following an open innovation model

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Pervasive and Trusted Network and Service Infrastructures

48.5 M€

1.1: Future Networks

Call 11

- Next generation heterogeneous wireless and mobile broadband systems; High throughput low-latency infrastructures; Internet architectures; Tighter integration of satellite and terrestrial communications technologies; Coordination and support actions
- http://cordis.europa.eu/fp7/ict/future-networks/home_en.html

41.5 M€

1.2: Software Engineering, Services and Cloud Computing

Call 10

- Advanced computing architectures and software engineering for the cloud and beyond; Innovative software and tools for services; Coordination and support actions
- http://cordis.europa.eu/fp7/ict/ssai/home_en.html

16 M€

1.3: Digital Enterprise

Call 10

- New models for the Digital Enterprise; Applications for the Sensing Enterprise; Coordination and Support Actions
- http://cordis.europa.eu/fp7/ict/enet/home_en.html

20 M€

1.4: A reliable, smart and secure Internet of things for Smart Cities

SMART

- A reliable and secure Internet of Things; A smart Internet of Things; Coordination and Support Actions
- http://cordis.europa.eu/fp7/ict/enet/home_en.html

1.5: trustworthy ICT

- Security and privacy in cloud computing; Security and privacy in mobile services; Development, demonstration and innovation in cyber security; technologies and methodologies to support European trust and security policies; EU-Australia cooperation
- http://cordis.europa.eu/fp7/ict/security/home_en.html

36.5 M€

Call 10

1.6: Connected and Social Media

- Connected Media; Social Media; Coordination and Support
- http://cordis.europa.eu/fp7/ict/netmedia/home_en.html

33.4 M€

Call 10

1.7: Future Internet research Experimentation (FIRE)

- New testbed facilities; Experimentally driven research to conduct multidisciplinary investigation of key techno-social issues; Coordination and Support actions; EU-South Africa; EU-China; EU-South Korea
- http://cordis.europa.eu/fp7/ict/fire/home_en.html

19 M€

Call 10

1.8: Expansion of use Cases (of the FI-PPP)

- Large set of innovative and technologically challenging services and applications in a wide range of Internet usage areas under the auspices of the FI-PPP
- www.fi-ppp.eu

100 M€

Call FI

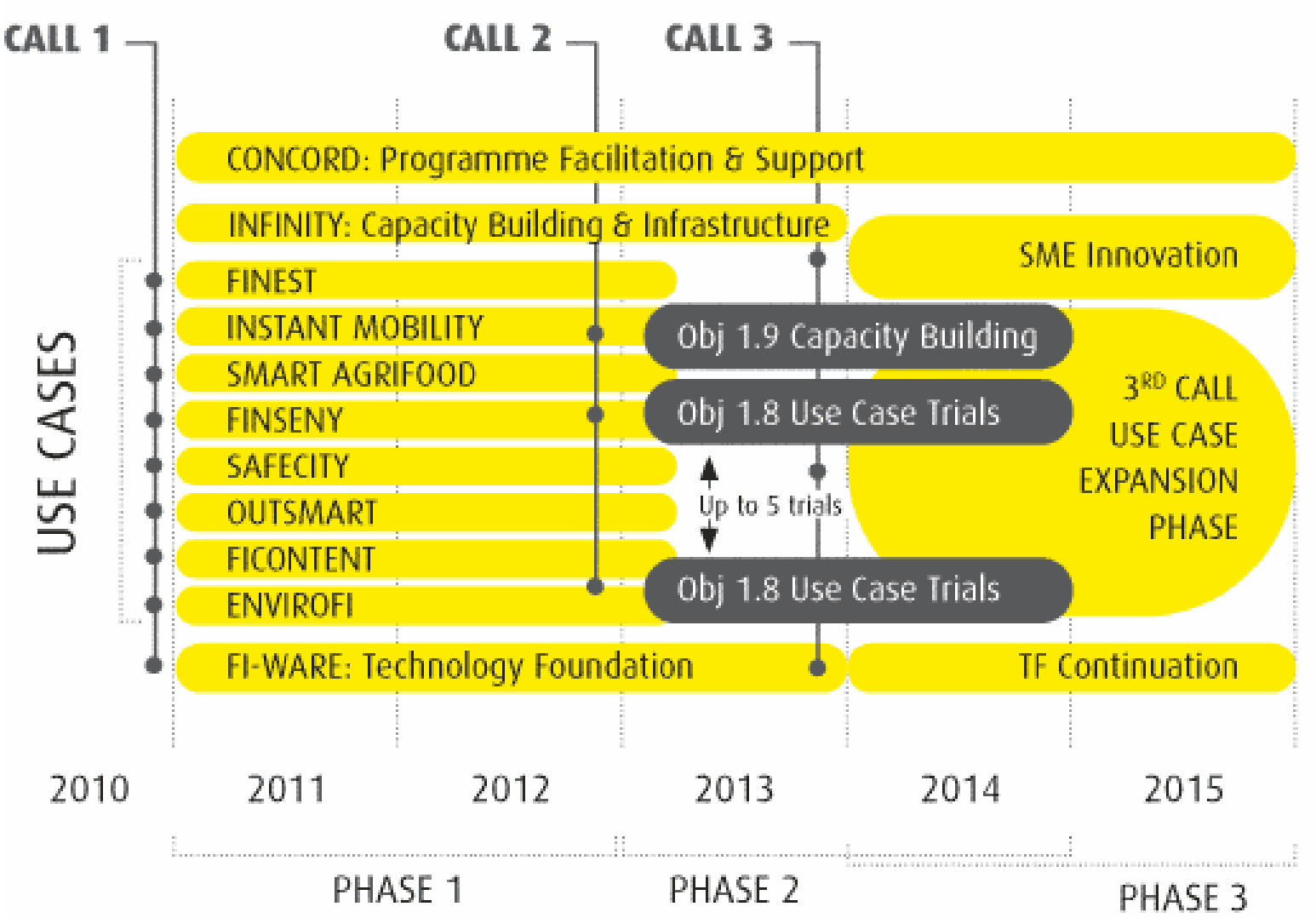
1.9: Technology Foundation Extension and Usage

- Technology Foundation Extension; Platform availability; platform sustainability; usage and participation
- www.fi-ppp.eu

30 M€

Call FI

Example: Future Internet - PPP



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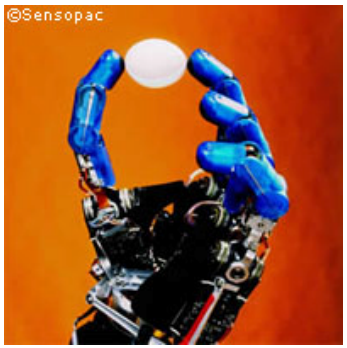
Cognitive Systems and Robotics

- *Further support to cognitive systems, smart spaces and intelligent robotic systems*
- *Special emphasis will be on industrial involvement, use cases and accompanying measures to exploit and support the uptake of promising technologies*



Cognitive Systems and Robotics

2.1: Robotics, Cognitive Systems and Smart Spaces, Symbiotic Interaction

67 M€

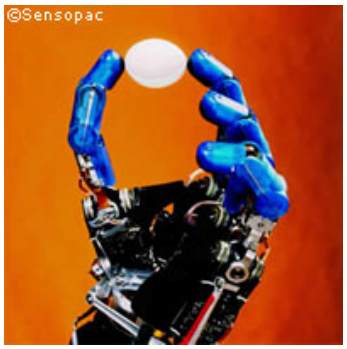
- **Intelligent robotics systems; Cognitive systems and smart spaces; Symbiotic human-machine interaction**

2.2: Robotics use cases and Accompanying measures

23 M€

- **Use cases in service robots; Robotics research roadmap coordination and socio-economic aspects; Robotics networking; Dissemination and outreach**

http://cordis.europa.eu/fp7/ict/cognition/home_en.html



Example Challenge 2

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What are you looking for?

- ***STRONGER INDUSTRY PARTICIPATION***

  3 ROLES:

  - *Involve their R&D departments*
  - *Provide validation scenarios*
  - *Provide platforms*

  *-> DEMONSTRATED **COMMITMENT** TO THE PROJECTS AND GENUINE **INTEREST** IN THE PROJECT **OUTCOME***

  EXPECTED IN:

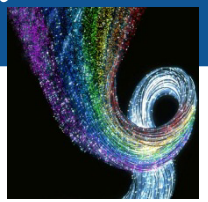
  - *Objective 2.1) S&T*
  - *Objective 2.2) Pilots*
  - *Objective 2.2) Accompanying measures*

- ***STRENGTHEN SCIENTIFIC EXCELLENCE: R&D – Obj 2.1)***
- ***INCREASED VISIBILITY OF EUROPEAN ROBOTICS***

Example Challenge 2

What you do 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 specificity/contribution*
- *Large effort on literature survey -> bring the right expertise on board*
- *Re-submission from other challenges artificially re-shaped for this challenge*
- ***Any ARTIFICIAL ADD-ON** - examples*
  - *Industry with no clear role / added value or no clear commitment to the project*
  - *"Good geographical coverage"*
  - *Huge un-manageable – inefficient IPs with large number of partners*
  - *Consultant for administration/finance (unless proven the most cost efficient solution)*



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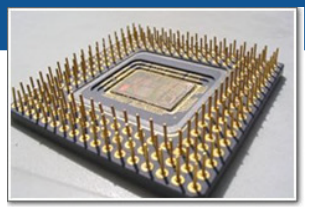
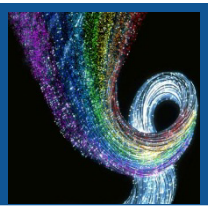
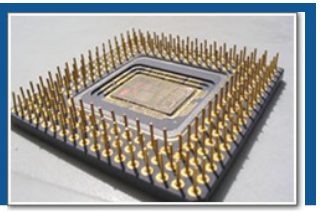


Alternative paths to components and systems

- Consolidation in 4 objectives
- New opportunities in “beyond CMOS”, the “More than Moore”, Photonics and computing
- Focus on the two key enabling technologies INFSO is responsible for in H2020 (micro- and nanoelectronics, photonics)
- Take-up actions with special emphasis on SME users and technology suppliers

Challenge 3





Alternative Paths to Components and Systems

3.1: Nanoelectronics

32 M€

- **Integration of advanced nanoelectronics devices and technologies (16nm and below); Advanced nanoelectronics manufacturing processes; Design, modelling and simulation for advanced nano-electronics technologies; International cooperation**

Call 11

- **http://cordis.europa.eu/fp7/ict/micro-nanosystems/home_en.html**

3.2: Photonics

61 M€

- **Application-specific photonic devices; Cross-cutting technologies for a wide range of applications; Technology take-up and Innovation Support; ERANET-plus action**
- **http://cordis.europa.eu/fp7/ict/photonics/home_en.html**

Call 11

3.3: Heterogeneous Integration and take-up of Key Enabling technologies for Components and Systems

64 M€

- **Integrating heterogeneous technologies; Technology take-up and innovation support**
- **http://cordis.europa.eu/fp7/ict/components/home_en.html**

Call 10

3.4: Advanced computing, embedded and control systems

72.5 M€

- **Next generation of energy- and cost-efficient servers for data-centres; Control in embedded systems with mixed criticalities sharing computing resources; Exploiting synergies and strengths between computing segments; from analysing to controlling behaviour of Systems of Systems; Access to novel computing technologies for industry; Constituency building and road-mapping**

Call 10

- **http://cordis.europa.eu/fp7/ict/embedded-systems-engineering/home_en.html**

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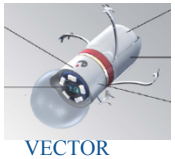
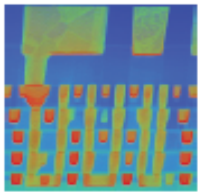
3.3 Heterogeneous Integration and take-up of Key Enabling Technologies for Components and Systems



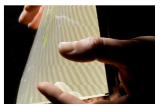
VECTOR
(Endoscopic capsule)

- ✓ ***Integrating heterogeneous technologies***
  - ✓ Miniaturised smart systems
  - ✓ Hybrid integration of organic electronics and micro/nano electronics
  - ✓ Further development and validation in real settings of micro-nano-bio and bio-photonics systems
- ✓ ***Technology take-up and innovation support***
  - ✓ Assessment experiments in nano-electronics and smart systems
  - ✓ Access services
  - ✓ A network of innovation multipliers
  - ✓ eco-system for smart systems integration
  - ✓ deployment of bio-photonics and micro-nano-bio solutions
  - ✓ International co-operation

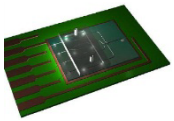
iPHOS (Sub-THZ com)



Metrology Using X-Ray Techniques
Jordan Valley, CEA-LETI,
STMicroelectronics Crolles II,
NXP Crolles R&D



Roll-to-Roll
(Printed Electronics)



(PYTHIA (Lab-on-Chip)

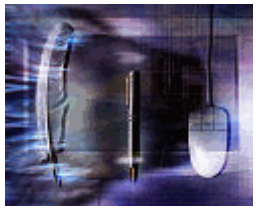
Place-it
(ICs on plastic)

Research and Innovation

European Commission

Technologies for Digital Content and Languages

- *Creating the conditions to become leading supplier of analytics tools*
- *Encompass multimodality (text, speech/audio, video) and unstructured content analytics*
- *Reuse of public sector information*
- *Specific initiative on analytics for SMEs*



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Technologies for Digital content and Languages

27 M€

4.1: Content analytics and language technologies

Call 10

- **Cross-media content analytics; High-quality machine translation; Natural spoken and multimodal interaction; Developing joint plans and services**
- **http://cordis.europa.eu/fp7/ict/language-technologies/home_en.html**

31 M€

4.2: Scalable data analytics

Call 11

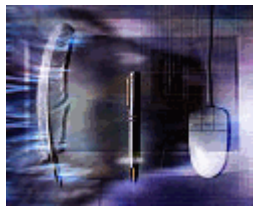
- **Scalable algorithms, software frameworks, visualisation; Big data networking and hardware optimisations roadmap; Societal externalities of Big Data roadmap**
- **http://cordis.europa.eu/fp7/ict/content-knowledge/home_en.html**

20 M€

4.3: SME initiative on analytics

SME-DCA

- **Integrated Open Data Incubator; Easing transfer and take-up of language technologies; Software components and intuitive end user applications based on reuse of open data**
- **http://cordis.europa.eu/fp7/ict/content-knowledge/fp7-call-sme-dca-content_en.html**



Example Challenge 4

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Call 10 - 4.1 Content analytics & language technologies

- **new title** to reflect a broader, cross-disciplinary approach
- **continuity** in terms of research lines:
  - *content analytics*
    aka information extraction, mining of unstructured content, categorisation & summarisation, sentiment analysis…
  - *machine translation*
  - *spoken & multimodal interaction*
- **discontinuity** in terms of ambition & timeframe;
  paving the way for work under H2020, 2014+

Example Challenge 4

- **common features with the previous calls**
  - written and/or spoken language, as required
  - multi-lingual (i.e. multiple in/out languages), where relevant cross-lingual ("translation")
  - handle everyday language, social media & user generated content
  - cope with massive volumes & diverse sources
  - cater for contextualisation & personalisation
  - technologies are adaptive (language, domain, task)
    - but… testing within specific application environments
- **new emphasis** on
  - *beyond pure text or speech:*
    1) **multimedia** content & **multimodal** interaction, and therefore
    2) **cross-disciplinary approaches & partnerships**

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ICT for Health, Ageing Well, Inclusion and Governance

- Adaptation of challenge 5 to support the European Innovation Partnership on Active and Healthy Ageing
- Empower the individual to improve and manage both personal and professional life conditions and participation
- Governance work on interactive platforms for social interaction and crowd sourcing
- A new activity for social innovation

ICT for Health, Ageing Well, Inclusion and Governance

http://cordis.europa.eu/fp7/ict/programme/projects5_en.html

58 M€

5.1: Personalised health, active ageing, and independent living

- Personalised Guidance Services for lifestyle management and disease prevention; Personalised Guidance Services for management of co-morbidities and integrated care; Personalised Services for Independent Living and Active Ageing; Pre-commercial procurement Actions; Coordination and Support Actions

31.9 M€

5.2: Virtual Physiological Human

- Clinical proof of concept of patient specific computer based models; Personal health Forecasting; One Coordination and Support Action

19 M€

5.3: ICT for smart and personalised inclusion

- Accessible and intuitive solutions for personalised interfaces to smart environments and innovative services; Coordination and support Actions

19 M€

5.4: ICT for Governance and Policy Modelling

- Policy modelling and simulation for achieving productivity gains and innovation in public service provision through innovative use of ICT; Coordination and Support Actions

15 M€

5.5: Collective Awareness platforms for Sustainability and Social Innovation

- Supporting grassroots experiments and prototypes; Support; Engaging citizens and society at large; Integrating the scientific base for the multidisciplinary understanding of collective awareness platforms for sustainability and social innovation

Example Challenge 5

What are we looking for: Platforms for Collective Awareness and Action

http://ec.europa.eu/information_society/activities/collectiveawareness/index_en.htm

- platforms for social innovation, supporting informed and sustainability-aware decisions, based on an extended awareness of the environment and of the consequences of our actions

- Harnessing concepts from:
  - IoT - collecting data from environment
  - Social networks - interaction
  - Wikis – coproduction of new knowledge

Research and Innovation

Example Challenge 5

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possible applications:

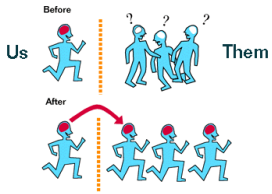
- Informing consumer decisions
  - Product ranking/labelling/development

- Prompting behavioural changes
  - Life Footprint, more efficiency

- Virtual communities for change
  - Stimulating Social Innovation

- Access to simulations/statistics
  - Visual Analytics style

- Anticipating societal changes



Research and Innovation

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ICT for a low-carbon economy

- *ICT to achieve substantial efficiency gains in key resources*
- *Smart grids, energy efficient buildings and public spaces, electric vehicles and energy efficient mobility.*
- *Co-ordinated Call with DG ENER focusing on system integration and validation of ICT infrastructures for energy-efficient neighborhoods*

ICT for a low carbon economy

18 M€

6.1: Smart Energy Grids

- Intelligent systems built over existing and future telecommunications networks and services that will assist in the management of the electricity distribution grid in an optimized, controlled and secure manner

14 M€

- http://ec.europa.eu/information_society/activities/sustainable_growth/grids/index_en.htm

6.3: ICT for water resources management

- Innovative ICT systems and services for efficient water use and reuse, in order to improve household, business and societal awareness, to induce changes in consumer behaviour and to enable the introduction of innovative resource and demand management schemes and adaptive pricing incentives

26 M€

- http://ec.europa.eu/information_society/activities/sustainable_growth/water/index_en.htm

6.5: Co-operative mobility

- Supervised automated driving; Coordination and Support Actions
- http://ec.europa.eu/information_society/activities/esafety/research_activ/index_en.htm

ICT for a low carbon economy

20 M€

6.2: Data Centres in an energy-efficient and environmentally friendly internet

- System level technologies and associated services that will improve the energy and environmental performance of data centres
- http://ec.europa.eu/information_society/activities/sustainable_growth/ict_sector/index_en.htm

40 M€

6.4: Optimising Energy Systems in Smart Cities

- Decision-support systems and/or management and control systems; Coordination and Support Actions
- http://ec.europa.eu/information_society/activities/sustainable_growth/cities/index_en.htm

15 M€

6.6: Integrated personal mobility for smart cities

- Research building on existing Technologies for in-vehicle platforms and traffic management resources and integration with transformative technologies such as future internet and cloud computing
- http://ec.europa.eu/information_society/activities/esafety/index_en.htm

ICT for a low carbon economy

40 M€

6.7: Electro-mobility

- **Advanced System Architectures for fully electric vehicles; Comprehensive Energy Management; Coordination and support actions**
- **http://ec.europa.eu/information_society/activities/esafety/index_en.htm**

Smart Cities Call

- Focus on sustainability and activities at the intersection of energy, transport and ICT.

- Cooperation with DG ENER and DG RTD and DG INFSO to bridge current activities with H2020 Smart Cities and Communities – A joint call of 209M€ in WP2013.

- Cooperation within the ICT Theme: Challenge 1 IoT (20 M€) and Challenge 6 – sustainability (60M€) and mobility (15M€).

Example Challenge 6

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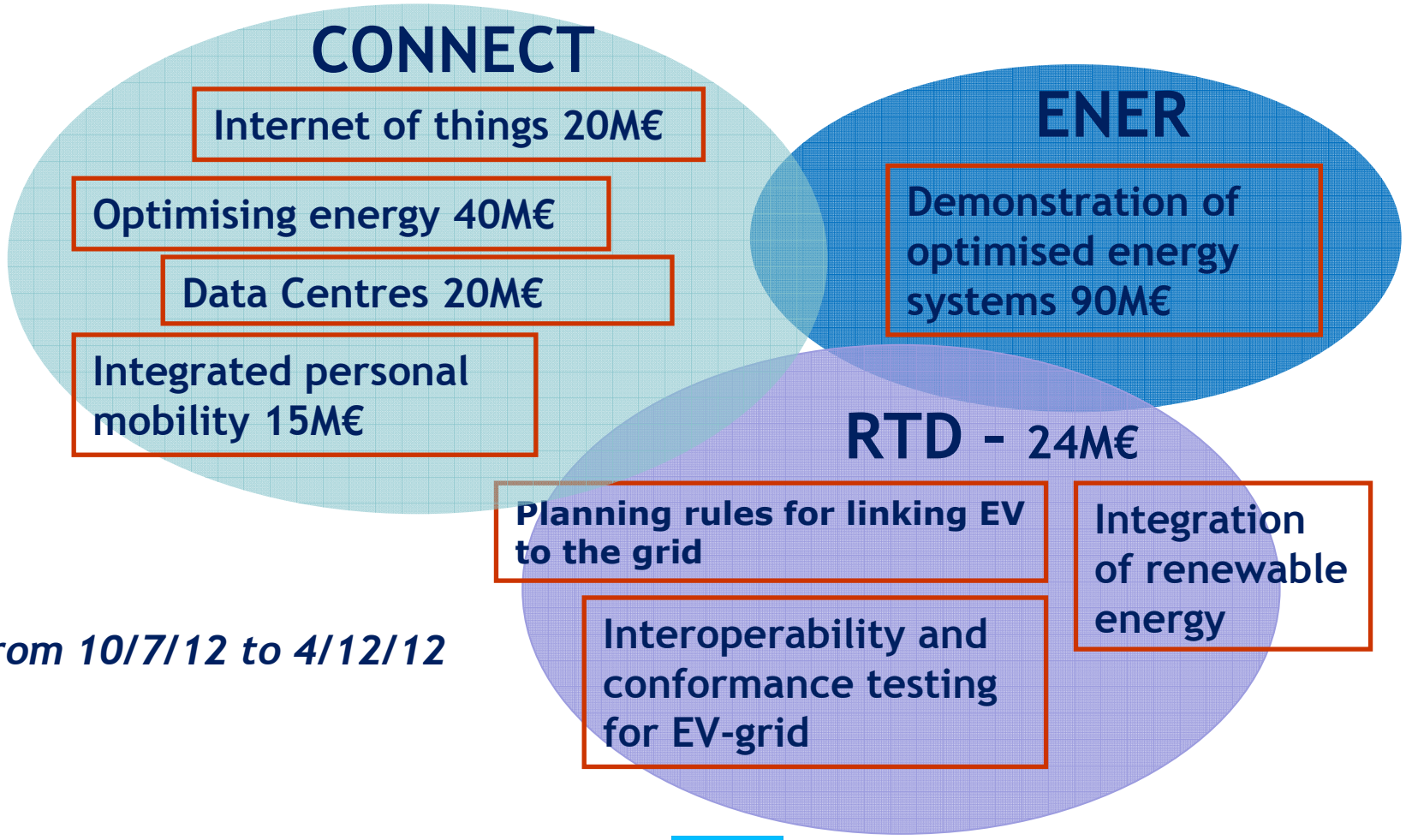
Smart cities: Joint Call between ENER, CONNECT and RTD



From 10/7/12 to 4/12/12

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ICT for Enterprise and Manufacturing

- The ICT contribution to FoF aims at improving the efficiency, adaptability and sustainability of manufacturing and advanced robotics systems
- The focus of the work is on take-up initiatives
- The aim is to bring together ICT suppliers and users with a special emphasis on SMEs

ICT for the Enterprise and Manufacturing

35 M€

7.1: Application experiments for robotics and simulation

- Robot solutions for new manufacturing applications; Simulation services for engineering and manufacturing; Constituency building and road-mapping

35 M€

7.2: Equipment assessment for sensor and laser based applications

- Intelligent equipment solutions in custom manufacturing and/or re-manufacturing; Innovative laser applications in manufacturing: Equipment assessment; Establish a network of innovative multipliers; Support a rapid build-up of new manufacturing skills

->7.1 & 7.2 are part of Public-Private Partnership on Factories of the Future

http://cordis.europa.eu/fp7/ict/programme/challenge7_en.html

http://cordis.europa.eu/fp7/ict/micro-nanosystems/ict-for-fof_en.html

Example Challenge 7

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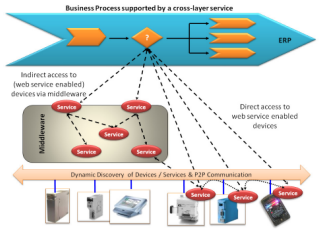
Factories of the Future: ICT Vision

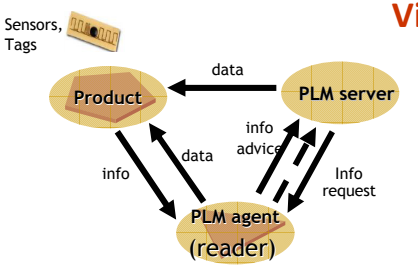


Smart Factories:

- Goal:
  More automation, better control & optimisation of factory processes
- Means:
  Software, lasers & intelligent devices embedded in machines & factory infrastructure

Factory productivity

- Less waste
- Less energy use
- Faster time-to-market
- Better quality

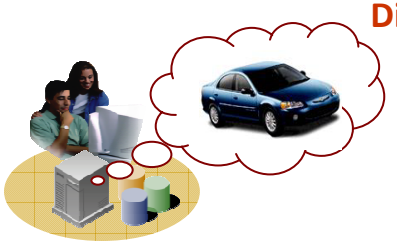


Virtual Factories:

- Goal:
  To manage supply chains; to create value by integrating products & services
- Means:
  Software to holistically interconnect & manage distributed factory assets; new business models & value propositions

Supply-chain productivity

- High-value products
- Keep jobs in Europe
- Process transparency
- IPR security
- Lower CO_2 footprint



Digital Factories:

- Goal:
  To "see" the product before it is produced
- Means:
  Software for the digital representation & test of products & processes prior to their manufacture & use

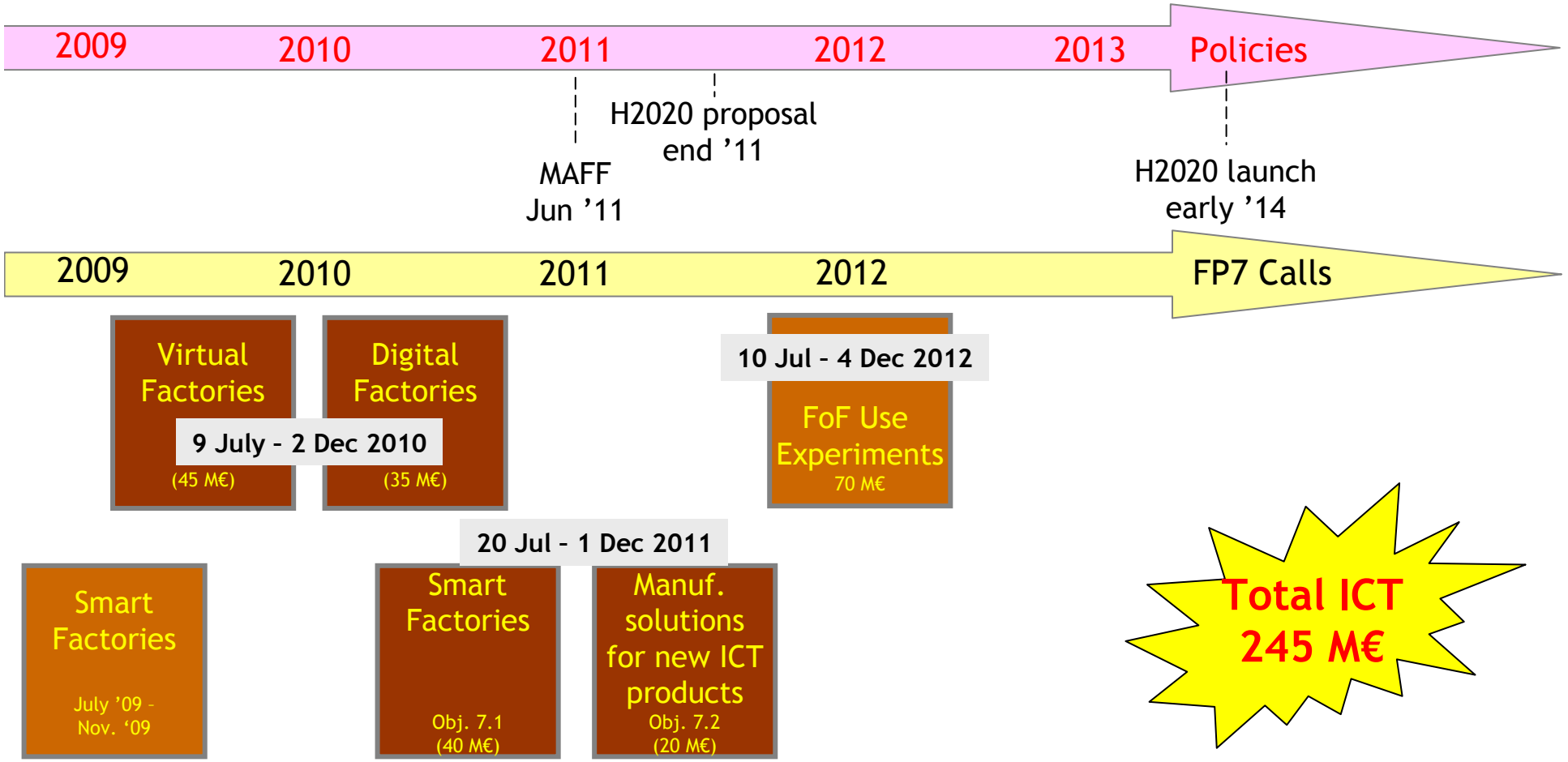
Design productivity

- Reduce design errors
- Better & efficient products
- Less waste + rework
- Faster time-to-market

Example Challenge 7

European Commission

FoF ICT Calls Overview



Example Challenge 7

European Commission

Last Call FP7 Work Program 2013 (ICT)

Mainly ICT Use Experiments (2 types):

- **Application experiments (SME users)**
- **Equipment assessments (SME suppliers)**

4 Thematic Areas:

- **Robot solutions for new manufacturing applications**
- **Simulation services for engineering & manufacturing**
- **Intelligent equipment in custom manufacturing and/or re-manufacturing**
- **Innovative laser applications in manufacturing**

How:

- **IPs coordinated by R&D institutes or industry associations: launching open calls**
- **IP size: 6-10M€, 3-4 year-experiments**
- **Experiments: around 500 k€ (2-3 years duration)**

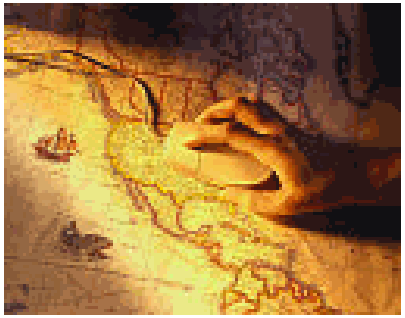
Budget:

- **70 M€**

European Commission

ICT for Creativity and Learning

- *Mobilize small and medium enterprises that produce tools for the creative industry*
- *Integrated learning and knowledge solution building blocks that can support formal learning contexts led by the public sector*



European Commission

ICT for Creativity and Learning

43 M€

8.1: Technologies and scientific foundations in the field of creativity

Call 10

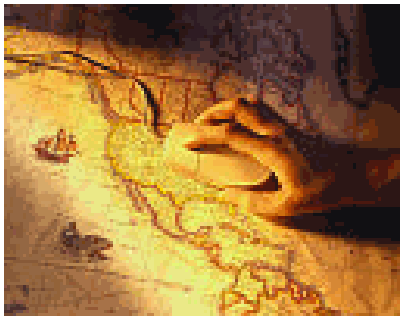
- **Creative experience tools; Intelligent computational environments stimulating and enhancing human creativity; progress towards formal understanding of creativity; Roadmaps for future research and innovation**

25 M€

8.2: Technology-enhanced learning

Call 11

- **ICT-enabled learning environments; Learning analytics, educational data mining; Holistic learning solutions; Support for organising competitions**
- **http://cordis.europa.eu/fp7/ict/telearn-digicult/telearn_en.html**



European Commission

FET

Future and Emerging Technologies

- *Continue the open and proactive schemes*
- *New and lighter submission process in FET Xtrack*
- *FET Proactive proposes to address activities including:*
  - **Embodied evolution of artificial systems**
  - **Atomic scale devices and systems**
- *The FET Flagships preparatory phase. In WP2013 two flagship will be launched and the ramp-up phase will be supported*
- **http://cordis.europa.eu/fp7/ict/programme/fet_en.html**

European Commission

FET Open

Future and Emerging Technologies

34 M€ *9.1: Challenging current Thinking*

6 M€ *9.2: High-Tech Research Intensive SMEs in FET research*

8 M€ *9.3: FET Young Explorers*

2 M€ *9.4: International cooperation on FET research*

Cut-off dates:

Batch	Short STREPs	Full STREPs and CSAs
14	10/4/2012	25/9/2012
15	11/9 2012	12/3 2013

15 M€ 9.5: FET-Open Xtrack

FET Proactive and Coordination

- 16 M€ **9.6: Evolving Living technologies (EVLIT)**
- 16 M€ **9.7: Atomic and Molecular Scale devices and Systems**
- 3 M€ **9.8: Coordination communities**

FET Flagships

- 110 M€ **9.9: FET Flagships**

FET

Objective Title	*Budget*	*Call*
9.1 Challenging current Thinking	**34**	*FET O*
9.2 High-Tech Research Intensive SMEs in FET research	**6**	*FET O*
9.3 FET Young Explorers	**8**	*FET O*
9.4 International cooperation on FET research	**2**	*FET O*
9.5 FET-Open Xtrack	**15**	*XTRACK*
9.6 FET Proactive: Evolving Living Technologies	**16**	*10*
9.7 FET Proactive: Atomic and Molecular Scale Devices and Systems	**16**	*10*
9.8 FET Proactive: Coordinating communities	**3**	*10*
9.9 FET Flagships (a)	**108**	*FLAGS*
9.9 FET Flagships (b)	**2**	*11*

European Commission

FET Flagships

Ambitious, unifying goal
Science-driven, highly interdisciplinary
Large-scale
Visionary initiatives with transformative impacts
Federation

FET Flagships are science-driven, large-scale, multidisciplinary research initiatives oriented towards a unifying goal, with a transformational impact on science and technology and substantial benefits for European competitiveness and society. The goals of such initiatives should be visionary and highly ambitious in terms of scientific challenges, resources required and coordinated efforts. They require cooperation among a range of disciplines, communities and programmes, extending over a long period (in the order of 10 years duration). FET Flagships are based on partnerships that enable effective coordination of efforts.

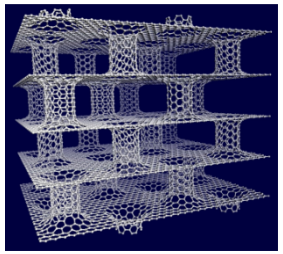
FET Flagship Pilots

FuturICT

The FuturICT knowledge accelerator

understanding and managing complex, global, socially interactive systems, with a focus on sustainability and resilience

Graphene



Graphene S&T for ICT and beyond

exploiting properties of graphene and related two-dimensional materials for the emergence of a graphene-based translational technology and innovative applications

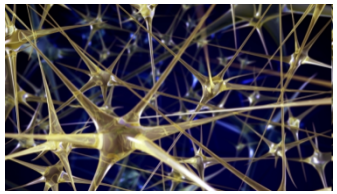
Guardian Angels

Guardian Angels for a smarter planet

smart, energy-efficient devices for personal assistance based on zero-power sensing, computation and communication technologies

FET Flagship Pilots

HBP

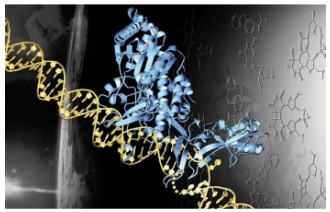


The Human Brain Project

building a European facility to simulate the working of the human brain by developing and using supercomputers and neuromorphic hardware, and involving the collection and integration of large amounts of medical and neurophysiological information

ITFoM

Molecular modelling in health and medicine



building individual computational models of the biological processes that occur in every human for personalised healthcare

RoboCom

Robot Companions

unveiling the secrets underlying the embodied perception, cognition, and emotion of natural sentient systems and using this knowledge to build robot companions based on simplexity, morphological computation and sentience

European Commission

Exascale Computing platforms, software and applications

22 M€

- *Continuation of the exascale initiative started in the WP2011-12*
- *Leveraging the existing European strengths in computing to develop autonomous technology for building the next generation of extreme performance computing*

International Cooperation

9 M€

10.1: EU-Japan research and development Cooperation

Call EU-Japan

- **Optical Communication; Wireless Communications; Cybersecurity for improved resilience against cyber threats; Extending the cloud paradigm to the Internet of Things- Connected objects and sensor clouds within the service perspective; Global scale experiments over federated testbeds: Control, tools and applications; Green & content centric networks**

5 M€

10.2: EU-Brazil research and development Cooperation

Call EU-Brazil

- **Cloud Computing for Science; Sustainable technologies for a smarter Society; Smart Services and applications for a Smarter Society; Hybrid broadcast-broadband TV applications and services**

8 M€

10.3: International partnership building and support to dialogues – Horizontal International Cooperation Actions

Call 10

- **Support to dialogues between the EU and strategic partner countries and regions and to foster cooperation with strategic third country organisations in collaborative ICT R&D.**

In addition a number of "targeted openings" for research cooperation with other third countries is available within specific objectives

European Commission

Horizontal activities

- **Support to SMEs**

  Cross border services., investment readiness and legal advice for ICT SMEs, start-ups and entrepreneurs

- **Pre-Commercial Public Procurement (PCP)**

  Significant increase. Five different activities are available:

  Digital preservation
  ICT for Health
  Cloud computing
  ICT-enabled learning environments
  Generic PCP to prepare for H2020

- **Enlarged Europe**

  Reinforce the cooperation across the enlarged Union and to strengthen the integration of the European research area

Horizontal Actions

Objective Title	*Budget*	*Call*
11.1 Ensuring more efficient higher quality public services through Pre-Commercial Procurement of ICT solutions across sectors of public interest	**4**	*10*
11.2 More efficient and affordable solutions for digital preservation developed and validated against public sector needs through joint Pre-Commercial procurement (PCP)	**5**	*11*
11.3 High quality cloud computing environment for public sector needs, validated through a joint pre-commercial procurement (PCP)	**10**	*10*
11.4 Supplements to Strengthen Cooperation in ICT R&D in an Enlarged European Union	**9**	*10*
11.5 Cross border services, investment readiness and legal advice for ICT SMEs, start-ups and entrepreneurs	**5.7**	*10*

Next Call for proposals

Call Title	*Opening*	*Closing*
SME Initiative	*10 July 2012*	*15 January 2013*
Green cars and FoF	*10 July 2012*	*4 December 2012*
Smart Cities	*10 July 2012*	*4 December 2012*
ICT Call 10	*10 July 2012*	*15 January 2013*
FET Flagships	*10 July 2012*	*23 October 2012*
FET Open	*12 September 2012*	*12 March 2013*
FET Open Xtrack	*12 September 2012*	*29 January 2012*
EU Brazil	*12 September 2012*	*12 December 2012*
ICT Call 11	*18 September 2012*	*16 April 2013*
EU Japan	*2 October 2012*	*29 November 2012*
FI PPP	*16 May 2013*	*10 December 2013*

Successful proposals

Preparing a successful proposal

Pre-proposal check

Use the pre-proposal check service and the contact persons list to make sure your proposal is eligible and in scope for this call…..*

…….And do it before you prepare your proposal, not afterwards

**described in the Guide for applicants*

ICT Helpdesk

Use the FP7 Research enquiries service to check any financial or legal elements you are uncertain about…..*

…….And do it before you prepare your proposal, not afterwards

**address in the Guide for applicants*

Self-evaluation

Use the Instructions and Forms** we prepare for our evaluators*

1. *Give the instructions and your draft proposal to experienced colleagues*
2. *Then re-write your proposal following their recommendations*

**appendix in the Guide for Applicants*

*** available on the ICT Call page in the Participants' Portal*

When writing your proposal….

Divide your effort over the evaluation criteria

Many proposers concentrate on the scientific element, but lose marks on project planning or impact description

Think of the finishing touches which signal quality work:

- **well-organised contents, following the Part B structure**
- **useful and understandable diagrams**
- **no typos, no inconsistencies and obvious paste-ins, no numbers which don't add up, no missing pages …**

When writing your proposal….

Make it easy for the evaluators to give you high marks. Don't make it hard for them!

- *Make sure you submit the latest, complete version of your proposal (Last minute changes generate errors!)*
- *Don't write too little; cover what is requested*
- *Don't write too much*
- *Don't leave them to figure out why it's good, tell them why it's good*

Instructions given to evaluators

"Evaluate the proposal which the proposer sent us. Make no additional assumptions, do not read between the lines"

"Look through to the essentials of the proposal – a weak proposal can be deceptively well written, a strong proposal may be handicapped by language difficulty"

Success factors in research proposals

Focus your effort: support <u>one</u> proposal and make it a winner

- *Show innovation; describe the state of the art, show you understand it, show how you advance it*
- *Check the timeline for ongoing research, especially in the ICT programme, don't duplicate existing work*
- *You <u>must</u> explain how you will achieve impact*

Success factors in research proposals

- *Find good partners. Critical mass; no gaps, no passengers*
- *Academia cooperating with industry*
- *Involvement of users*
- *Make the proposal compelling for a busy reader (the first 5-10 pages are key!)*
- *Key individuals, relevant expertise and achievements, not long boring lists*

Reasons for failure in research proposals

RTD content

- **not reflecting the goals of the objective**
- **lack of innovation: state of art not explained or understood**
- **narrow scope**
- **lack of focus, aims too varied**

Planning

- **lack of coherence between objectives and project workplan**
- **risk factors not addressed, no contingency plans**
- **no monitorable indicators, decision points (milestones)**

Reasons for failure

Management

- **consortium not balanced, gaps/overlaps in the skills mix**
- **lack of integration between partners/vague management structure**
- **weak or narrow dissemination plans**
- **ill-defined exploitation prospects**

European Commission

Getting help with your proposal

The ICT theme supports

- *Information days and briefings in Brussels and elsewhere*
- *Partner search facilities (http://www.ideal-ist.net/)*
- *A supporting website of advice, information and documentation – the Participant Portal*
- *A general FP7 Helpdesk, an ICT Information desk and a Helpdesk for electronic proposal submission)*
- *A list of contact persons for the objectives in each call*
- *A pre-proposal check service*

And a network of National Contact Points in Europe and beyond:

http://cordis.europa.eu/fp7/ncp_en.html

Information days - when, where, who

Date

26 & 27 September 2012
(Wednesday & Thursday)

Location

Warsaw, Poland

Co-hosted by

- Polish Ministry of Science and Higher Education
- NCP Poland

European Commission

Draft programme at a glance

		Hall n° 1			Hall n° 3		1st floor		
		Room 1 "Networks" (dir E)	**Room 2** "Components & systems" (dir A)	**Room 3** "Media, data & FET" (dir C & G)	**Room 4** "ICT for people" (Ch. 5)	**Room 5** "ICT for low carbon economy" (Ch. 6)	**Room A**	**Room B**	**Room C**
Day 1	11:00 - 12:30	Obj 1.1	Obj 2.1	FET-Open	Obj 5.1	Make proposal	NCP meeting	??? Face2face ???	Face2face
	13:00 - 14:30	Obj 1.2	Obj 2.2	FET-Flagships	Obj 5.2	Obj 6.1	Obj 11.5 (SMEs)		
	14:45 - 16:15	Obj 1.3	Obj 7.1 & 7.2	FET-Proactive	Obj 5.3	Obj 6.2	Obj 10.3 (Inco)		
	16:30 - 18:00	Obj 10.1 (Inco)	Obj 10.2 (Inco)	Obj 8.1	Obj 5.4	Make proposal	e-Infra		
Day 2	9:00 - 10:30	Obj 1.6	Obj 3.1	Obj 8.2	Make proposal	Obj 6.3			
	10:45 - 12:15	Obj 1.7 & 1.8	Obj 3.2	Obj 4.1	Obj 5.5	Obj 6.4			
	12:45 - 14:15	Obj 1.4	Obj 3.3	Obj 4.2	Obj 11.1-3 (PCP)	Obj 6.5			
	14:30 - 16:00	Obj 1.5	Obj 3.4	Obj 4.3	Make proposal	Obj 6.6			

Useful links

- *http://ec.europa.eu/research/participants/portal*
- *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*

Experts

Appropriately qualified individuals may apply to work as experts in FP7 evaluations

- *Application via website*

  https://cordis.europa.eu/emmfp7/

- *Selection per call to ensure broad ranging and expert group; avoiding conflicts of interest*