

*ΗΜΕΡΙΔΑ ICT – 2η ΠΡΟΚΗΡΥΞΗ
ΕΚΤ, Αθήνα, 19–20 Ιουνίου 2007*

*Προγραμμα Εργασίας, Κανονες Συμμετοχής και
Χρηματοδοτικά Σχηματα*

Information Day on ICT Priority, Call 2

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European Commission, Directorate General Information Society & Media,
Micro Systems



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***Aspects of these presentations interpret
legal documents***

***It is the legal documents and not the presentations
that are legally binding***



Presentation outline

The 7th Framework Programme (2007-2013)

ICT Work Programme 2007-08

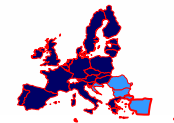
ICT-2nd Call for proposals

Participation, funding schemes, proposal submission
& evaluation



The renewed Lisbon agenda

- Markets & Competition: Europe - A more attractive place to invest & work
 - Extend & deepen the internal market
 - Improve European and national regulation
 - Ensure open & competitive markets inside & outside Europe
 - Expand & improve European infrastructure



EU: Largest
knowledge-based
economy by 2010 ?

- Knowledge & innovation for growth
 - Increase & improve investment in R&D
 - Facilitate innovation & uptake of ICT & the sustainable use of resources
 - Contribute to a strong European industrial base

- Employment & Skills: Creating more & better jobs
 - Attract more people into employment & modernise social protection systems
 - Improve the adaptability of workers & enterprises & the flexibility of labour markets
 - Invest more in human capital through better education & skills

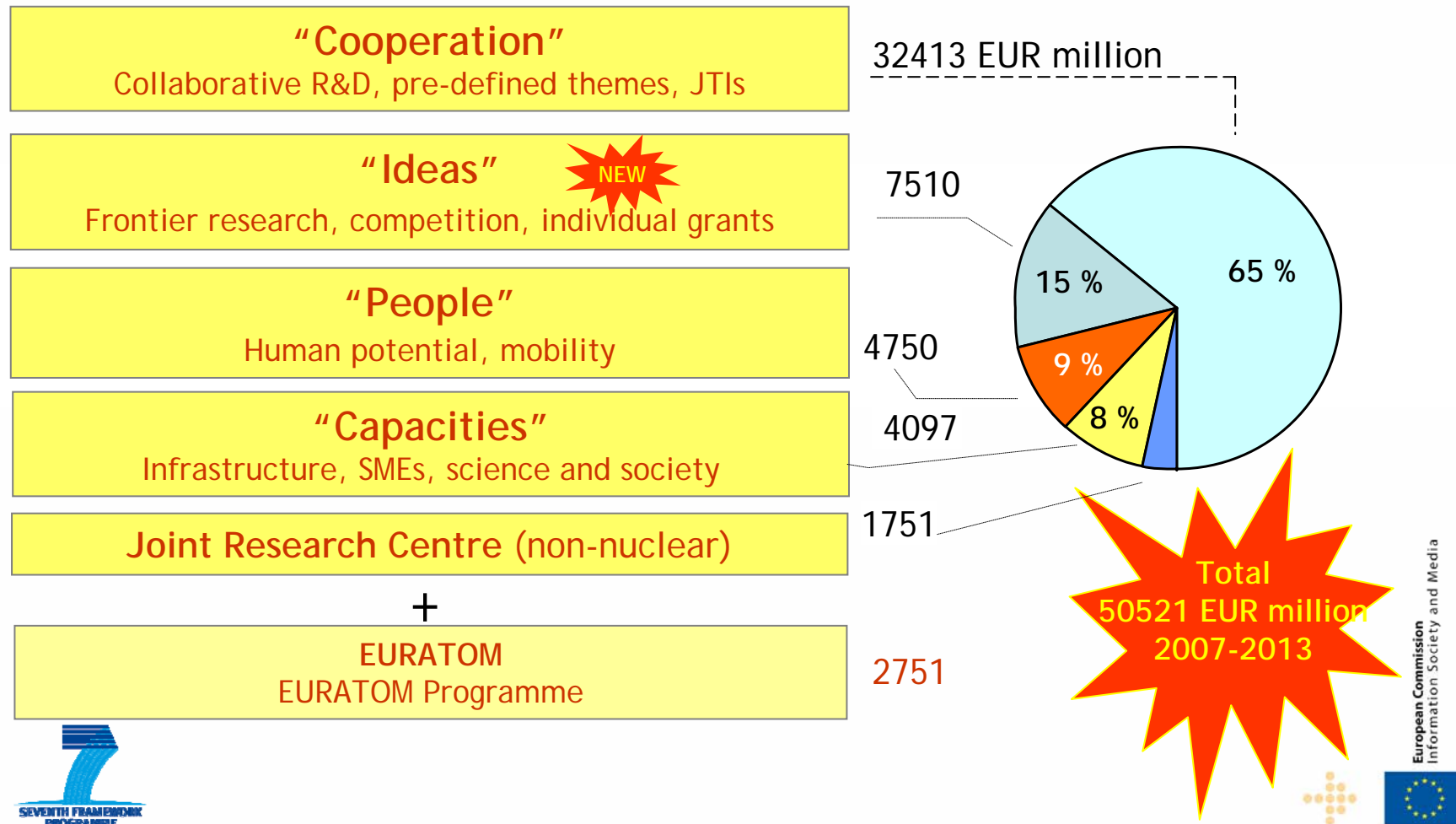
European Strategy for RTD and Innovation

The implementation mechanisms

- European Research Area
“Internal market in research, restructure of research fabric, research policy”
- Framework Programme - IP, NoE, STREP, JTI,
“Master and shape RTD in ICT and related applications”
- Technology Platforms as a gateway to Strategic Research Agendas and Joint European Technology Initiatives
“Industry led Forum involving main public and private stakeholders (industry, research, finance, public bodies) to address technological and related challenges”
- CIP: Competivity and Innovation Programme
“ICT policy support programme to ensure uptake and best use”
- National Programs, Regional Policies
- EUREKA



FP7 Specific Programmes budget agreement (Nov 2006)



FP7 Cooperation: Themes

*Budget [EUR million],
Council's compromise, Nov 2006*

1.	Health	6100
2.	Food, Agriculture & Biotechnology	1935
3.	Information & Communication Technologies	9050
4.	Nanosciences, Nanotechnologies, Materials & new Production Technologies	3475
5.	Energy	2350
6.	Environment (including Climate Change)	1890
7.	Transport (including Aeronautics)	4160
8.	Socio-Economic Sciences & the Humanities	623
9.	Space	1430
10.	Security	1400

32413

Joint Technology Initiatives

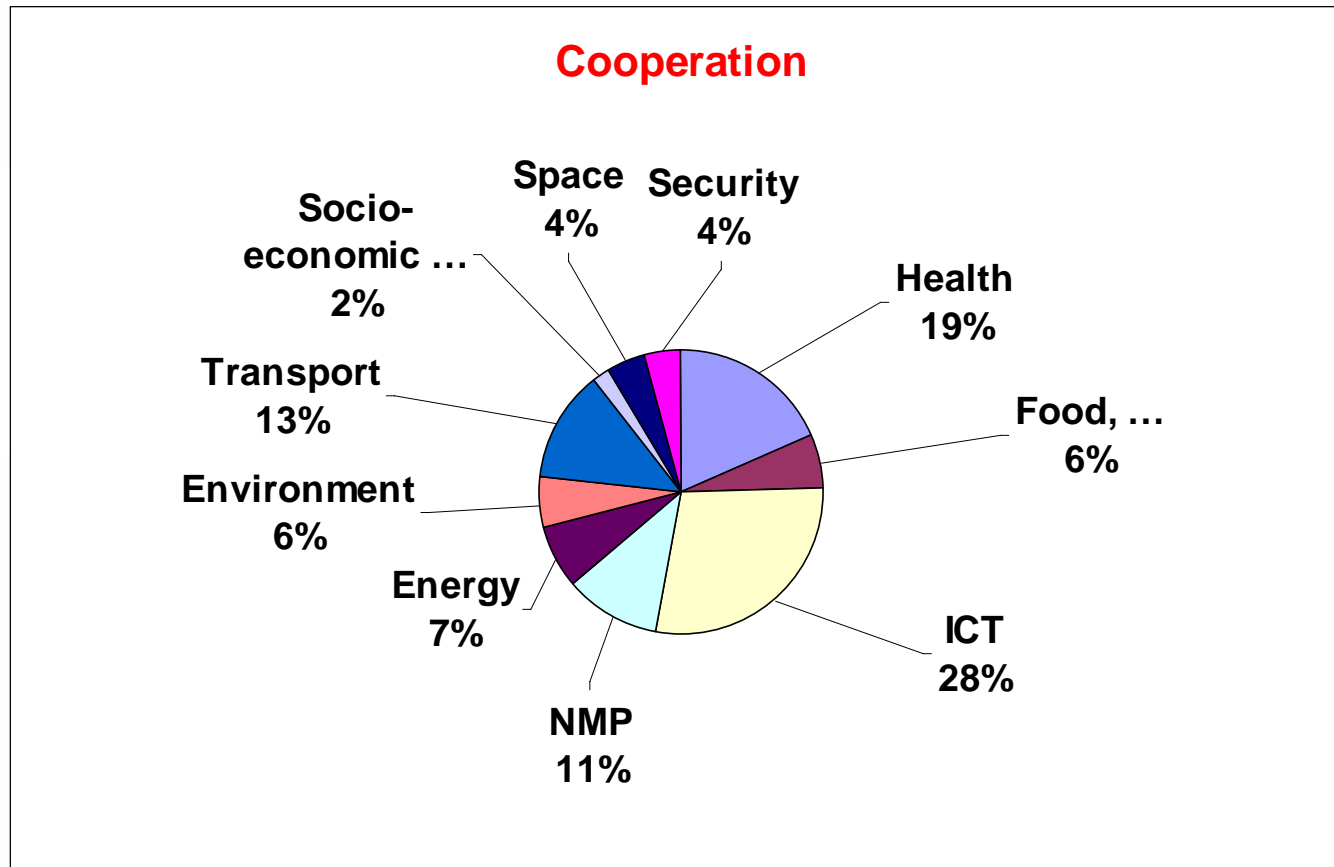
... including

ERA-Nets

International Co-operation

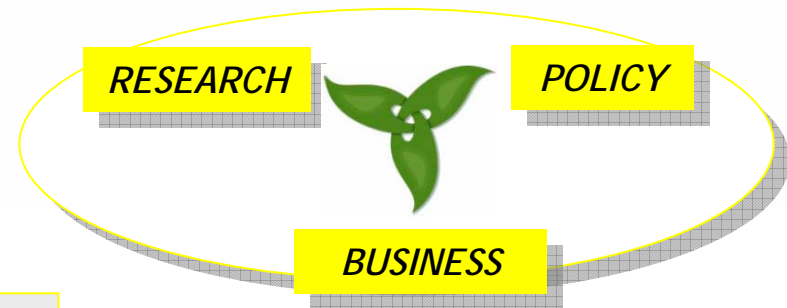


FP7 Cooperation: Themes



European Technology Platforms

A spiral model of innovation capitalising on the multiple reciprocal relationships between public & private stakeholders at various knowledge stages



31 European Technology Platforms launched so far:

- Addressing major technological challenges in specific domains
- Aiming to leverage public & private investment for R&D & innovation
- Involving key R&D stakeholders
 - eg industry, the research community & public authorities
- Bundling fragmented R&D efforts towards agreed goals
 - Vision 2020 document & Strategic Research Agenda

cordis.europa.eu/technology-platforms

European Technology Platforms. A staged approach



- Bottom-up process with key stakeholders in a specific domain
- Key deliverable: Strategic vision document

- Co-ordinated by an Advisory Council
- Consensus-based
- Deployment strategy

- Through collaborative research in FP7 & with other resources, or
- Through a Joint Technology Initiative which integrates funding sources

Nanoelectronics & Embedded Systems Technology Platforms

Nanoelectronics:

addressing the needs of silicon-based technologies & beyond

- shrinking of CMOS logic & memory devices
- development of value-added functions for system-on-chip or system-in-package solutions
- equipment & materials
- design automation



eniac.eu

Embedded Computing Systems:

ubiquitous, interoperable & cost-effective embedded systems

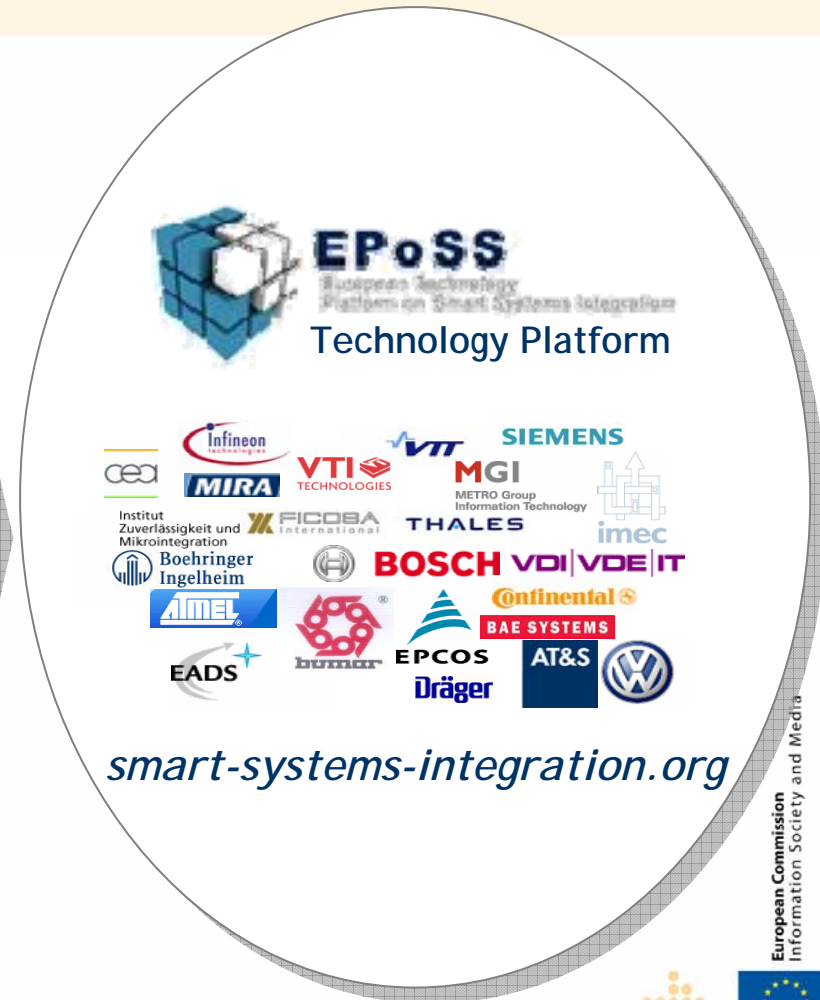
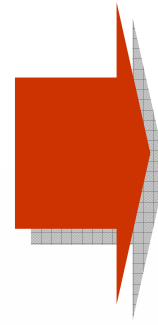
- reference designs and architectures
- middleware for interoperability and seamless connectivity
- integrated design software tools for rapid development & prototyping



artemis-office.org

Technology Platform of Systems Integration: EPoSS

- **A multi-disciplinary endeavour:**
Combining optics, mechanics, electronics, fluidics, thermodynamics, chemistry, biology
- **Converging scientific disciplines:**
Looking at the overlapping areas between nano-, bio-, information & cognitive sciences
- **Multi-material integration:**
Semiconductors, polymers (plastics), ceramics, glass, ...
- **Multi-technology integration:**
Monolithic, hybrid, multichip, large-area, ... miniaturisation techniques
- **Multi-functional integration:**
Combining sensing, processing, actuating



Other ICT Technology Platforms

EUROP
www.roboticsplatform.com

To boost the development of robotics business & bring robotics services to Europe's citizens


www.nessi-europe.com

New software & services architecture based on open standards


www.emobility.eu.org

To reinforce Europe's world leadership in mobile & wireless communications & services


www.photonics21.de

To explore the almost limitless applications of light for ICT, lighting, manufacturing and health applications


www.nem-initiative.org

Convergence of existing and new media technologies creating advanced personalised services


www.isi-initiative.eu.org


An integral Satcom initiative covering all aspects of satellite communications



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WP Input and Consultations

- FP, SP and RfP
 - Policy and research priorities
- Detailed Consultations/Workshops
 - Consultation WS on Micro-Nano-Biosystems. Future R&D and New Challenges. Brussels, 3 May 2006
 - IST Workshop contributing to future Framework Programme VII. Brussels, Tuesday May 30th, 2006
- ETPs Strategic Research Agendas
 - Photonics21
 - EPOSS
 - ENIAC
 - ARTEMIS
- ISTAG reports
 - General orientations



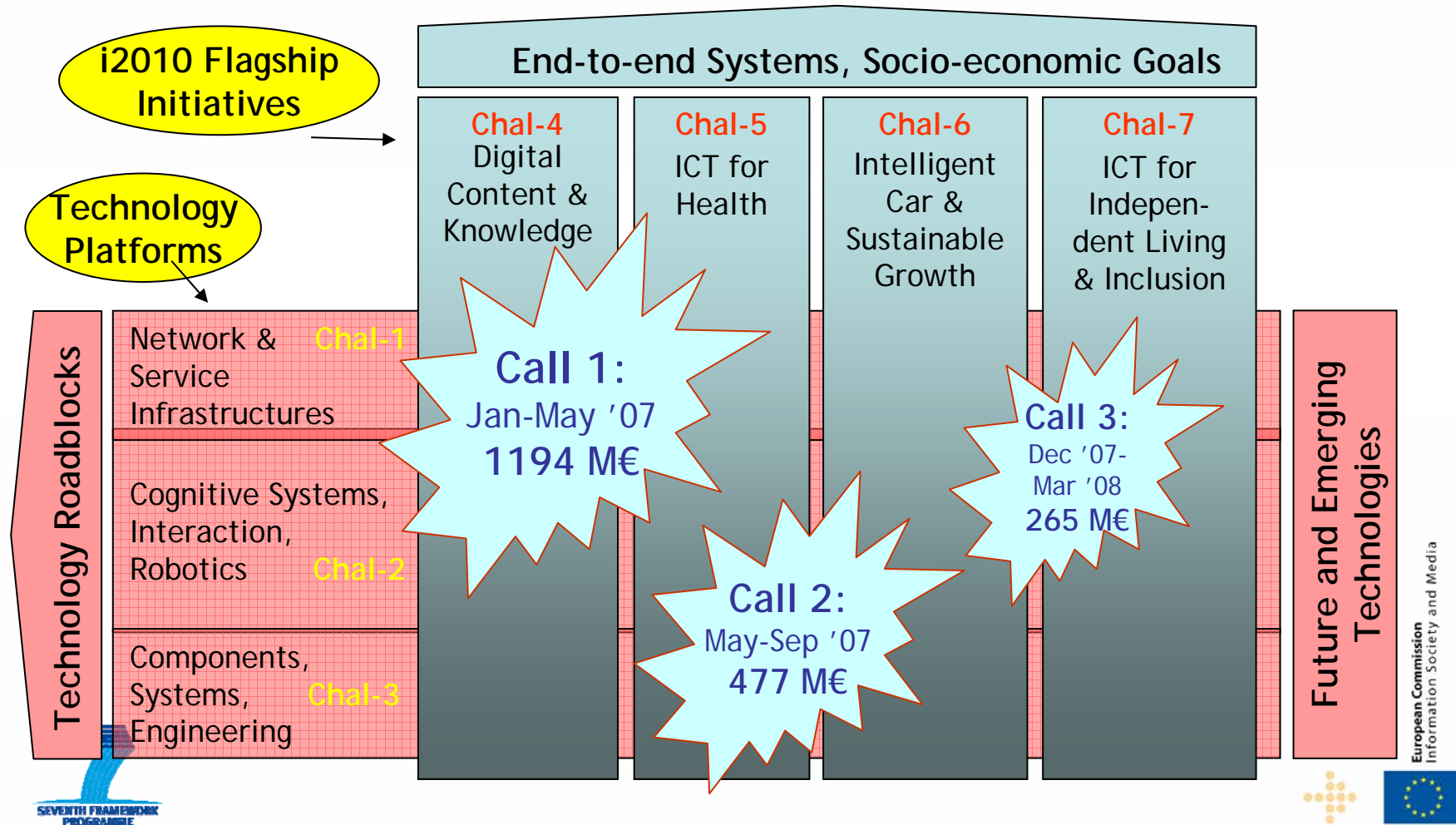
WP Main Objectives and Structure

- A WP structured around a limited set of “Challenges” that should be addressed if Europe is to be among the world leaders in next generation ICT and their applications.
- A Challenge is
 - Focused on concrete goals that require effort at Community level and where collaboration is needed
 - Ambitious and strategic proposing a European vision on ICT for the next 10 to 15 years
 - Described in terms of achievements to reach and not in terms of means to realise achievements
 - A set of research objectives will be called for in 2007. For each objective, the WP defines the target outcome and its expected impact on the European economy and society.

ICT Challenges

- 3 ICT **Technology challenges** for European industry to be among the leaders in IST in the next ten years. Identified with the help of ETPs in ICT:
 - Converged communication and service infrastructure
 - More robust, context-aware and easy-to-use ICT systems
 - Increasingly smaller, cheaper and more reliable electronic components and systems
- 4 ICT Challenges driven by **socio-economic goals**, in line with the flagship initiatives of i2010
 - Digital libraries, knowledge and content development tools and applications
 - Sustainable health systems
 - Intelligent and safe cars and technologies for sustainable growth
 - Inclusion and independent living

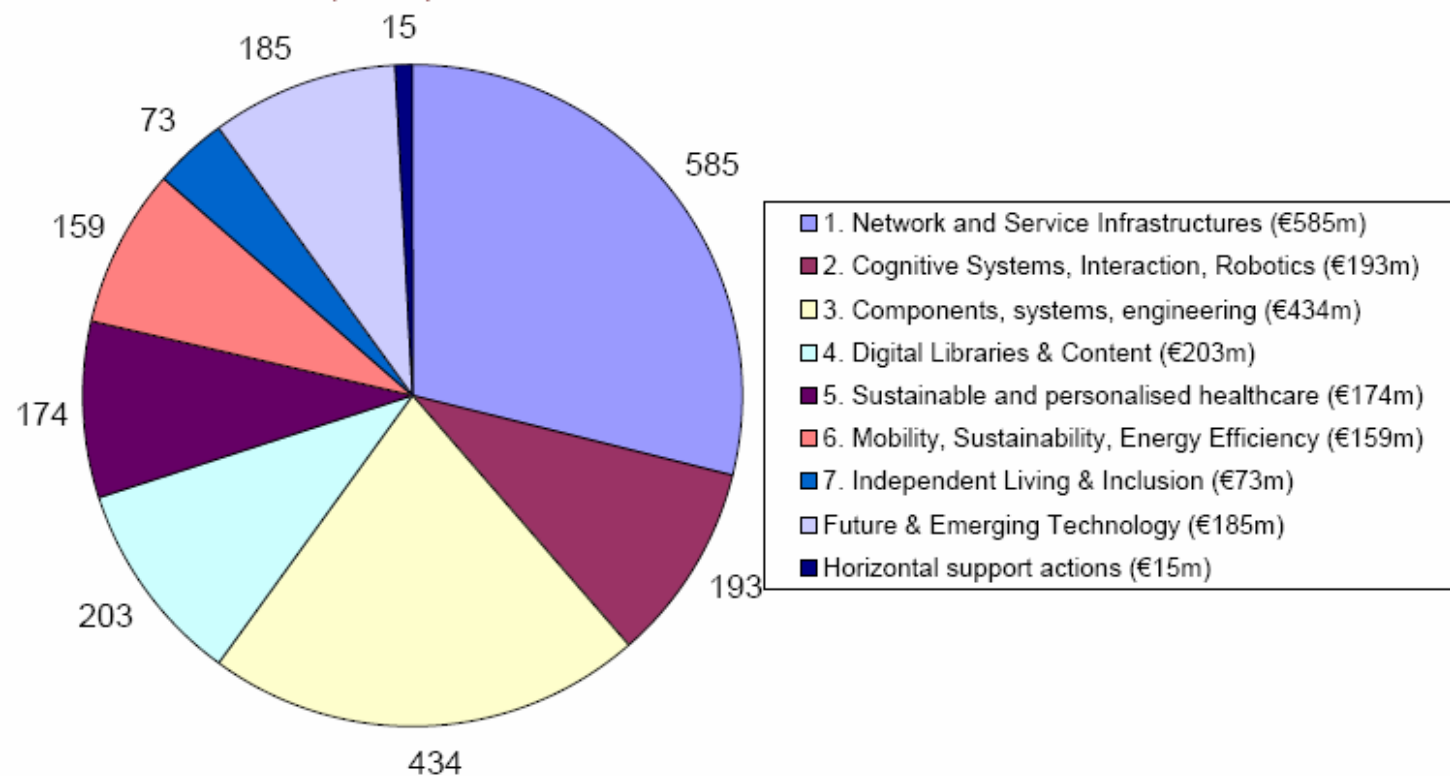
ICT Work Programme 2007-08



ICT Work Programme 2007-08: Budget breakdown

BUDGET BREAKDOWN, 2007-2008 (DRAFT)

(mid November, 2006)



The ICT Theme's budget for the first two years of FP7 will be just over €2 billion. The e-Infrastructures budget (not shown) is an additional ~€600m over the entire Framework Programme. All figures are draft, and are in millions of euros.

Challenge 3: Components, Systems, Engineering

To enable Europe's industry to stay at the forefront of electronics developments & applications through chip making, integration & embedded systems capabilities



www.eniac.eu



www.artemis-office.org



www.smart-systems-integration.org



www.photonics21.de

R&D objectives are in line with Strategic Research Agendas of European Technology Platforms & support international co-operation under the Intelligent Manufacturing Systems initiative



cordis.europa.eu/ims



Challenge 3: Components, Systems, Engineering

Objectives

Call 1

- IST-2007.3.1: Next generation nanoelectronics components and electronics integration
- IST-2007.3.2: Organic and large area electronics and displays
- IST-2007.3.3: Embedded systems design
- IST-2007.3.4: Computing systems

Call 2

- IST-2007.3.5: Photonic components and subsystems
- IST-2007.3.6: Micro/Nanosystems
- IST-2007.3.7: Networked embedded and control systems



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ICT Work Programme 2007-08

ICT-2nd Call for proposals

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- Call identifier: FP7-ICT-2007-2
- Date of publication: 12 June 2007
- Closure date: 9 October, 2007, at 17:00, Brussels local time¹
- Indicative budget: 477 M€
- Topics called:

Challenge	Objectives	Funding schemes ²
3.1: Pervasive and Trusted Network and Service Infrastructures	<u>ICT-2007.1.6</u> New paradigms and experimental facilities	CP, NoE, CSA
3.3: Components, systems, engineering	<u>ICT-2007.3.5</u> Photonic components and subsystems	CP, NoE, CSA
	<u>ICT-2007.3.6</u> Micro/nanosystems	CP, NoE, CSA
	<u>ICT-2007.3.7</u> Networked embedded and control systems	CP (STREP only), NoE, CSA
3.5: Towards sustainable and personalised healthcare	<u>ICT-2007.5.3</u> Virtual physiological human	CP, NoE, CSA
3.6: ICT for mobility, environmental sustainability and energy	<u>ICT-2007.6.2</u> ICT for cooperative systems	CP, NoE, CSA
	<u>ICT-2007.6.3</u> ICT for environmental management and energy efficiency	CP, CSA
3.7: ICT for independent living and inclusion	<u>ICT-2007.7.2</u> Accessible and inclusive ICT	CP, CSA

Objective ICT-2007.1.6: New Paradigms and Experimental Facilities

Target outcome

- a) **Advanced networking approaches to architectures and protocols**, designed to cope with increased scale, complexity, mobility and requirements for security, resilience and transparency of the Future Internet coupled with their **validation in large scale testing environments** based on a combination of physical and 'virtual' infrastructures.
- b) **Interconnected test beds** addressing novel distributed and reconfigurable protocol architectures; novel distributed service architectures, infrastructures and software platforms; and advanced embedded or overlay security, trust and identity management architectures and technologies. Test beds for systems that provide trusted access to e-services with users requiring no administration and security skills.
- c) **Coordination and support actions** for: i) standardisation and conference support; ii) coordination with related national or regional programmes or initiatives.

Expected Impact

- Strengthened European position in the development of the Future Internet.
- Wider take-up of technological developments in networks and service infrastructure facilitated by a comprehensive validation of the technological and service choices.
- Global consensus towards standards and strengthened international co-operation through interconnected test beds and interconnection capabilities offered to third countries.
- Higher confidence in the secure use of the Internet through test beds enabling trusted access to e-Services.

Funding schemes: CP, NoE, CSA

Indicative budget distribution: 40 M€:

- CP 36 M€ of which a minimum of 12 M€ to IPs and a minimum of 15 M€ to STREP
- NoE 3M€; CSA 1M€

Contact: [Max Lemke \(Max.lemke@ec.europa.eu\)](mailto:Max.lemke@ec.europa.eu)

DG INFSO-F4, New Paradigms and Experimental Facilities

Future Internet Research and Experimentation Initiative: <http://cordis.europa.eu/fp7/ict/fire>



Objective ICT-2007.3.5: Photonic components and subsystems

Target outcomes

- a) **Core photonic components and subsystems:** (1) High performance lasers. (2) High brightness, power efficient solid-state light sources for ICT and general lighting applications. (3) Optical fibres for high performance and for specific functions. (4) High performance image sensors. (5) Sensors exploiting innovative sensing principles.
- b) **Application-specific photonic components and subsystems** for application fields: (1) truly cost effective broadband core networks at 40 Gb/s or beyond per channel. (2) scalable, future-proof and economic broadband access and local area networks. (3) minimally invasive medical diagnosis and prevention. (4) sensing for environment, well-being, safety and security. RTD on photonic components and subsystems may also cover related materials and fabrication technologies, and related photonic system concepts.
- c) **Underlying technologies:** (1) *Integration and manufacturing technologies:* Holistic approaches for: reducing the size and cost of photonic components and subsystems; improving their performance, manufacturability and testability; increasing their degree of functional integration; advancing photonic/electronic convergence. (2) *Design methodologies and tools:* Holistic and widely applicable approaches for designing photonic components to improve design quality and efficiency.
- d) **Complementary measures**
 - *Joint assessment* by users of prototype components, subsystems and equipment from European suppliers.
 - *Networking, integration and structuring* of advanced photonics RTD capacities and activities.
- e) **Support measures**
 - Access to centres of expertise and foundries to facilitate the deployment of advanced technologies.
 - Raising the interest of young people in careers in photonics, and stimulating crossnational schemes for graduate education.
 - Supporting the development of RTD strategies through roadmapping, coordination with MS or AS, international cooperation etc.

Expected Impact

- Leading position of European industry in high-value photonic products.
- New photonic based applications in several industrial sectors with emphasis on communications, health, environment, safety, security, etc.
- Continued European leadership in RTD in photonics from components to systems, securing the necessary human resources and knowledge to design, produce and use new generations of photonic components.

Funding schemes a-c): CP; d): CP, NoE; e): CSA

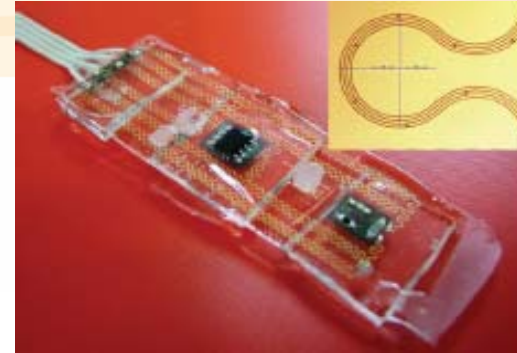
Indicative budget 90 M€: CP 76 M€ (minimum of 26 M€ to IP and minimum of 30 M€ to STREP); NoE 9 M€; CSA 5 M€

Contact: Gustav Kalbe: Gustav.kalbe@ec.europa.eu ; Photonics21 : www.photonics21.org



Objective IST-2007.3.6: Micro/Nanosystems

- Next generation smart systems
Sensor- & actuator-based systems
High density mass storage
- Micro/Nano-Bio-ICT convergence
Biosensors, lab-on-a-chip, bioMEMS,
autonomous implants
- Integration of smart materials
Integration of micro-nano technologies and smart systems into new &
traditional materials, e.g. textiles, glass, paper
- From smart systems to viable products
Microsystems manufacturing technologies
- Smart systems for communications & data management
Smart micro/nanosystems enabling wireless access & facilitating
intelligent networking
- Support actions
Technology access, education & training, coordination &
dissemination at EU level



Courtesy STELLA

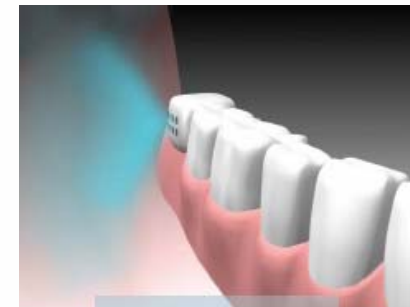


Image courtesy of project Intellidrug
Courtesy INTELLIDRUG

Call 2 83 M€(*)

75 M€ CP (min 20 M€ IPs and 32 M€ STREPs)

4 M€ NoE

4 M€ CSA

(*) Total amounts to be confirmed after a new financing decision for the 2008 budget

Objective 3.6 (b): Nano-Bio-ICTechnologies convergence

Outcome

- Converging micro/nano, bio and information technologies
- Application areas including environmental monitoring, agriculture and food quality, safety, security, biomedical and lifestyle
- Address packaging, interfacing, as well as ethical and societal issues.



Courtesy of project OPTOLABCARD

biosensors, lab-on-chip, biorobots,, nanoimplants, bioMEMS, microsystems for food, safety, environment

Objective 3.6 (c): Integration of Smart Materials

Outcome

- Integration of micro-nano technologies and smart systems into new and traditional materials, e.g. textiles, glass, paper, etc.
 - Active opto/electronic fiber devices & addressable arrays of meshed devices, integration of smart systems into flexible substrates
 - Emphasis on SFIT (Smart Fabric Interactive Textiles) using micro/nanosystems at the fiber core, microelectronics, user interfaces, power sources, all-in-one fabric, for personal (wearable) or other applications.

Biocompatible, bioconnective, flexible, durable materials

Related FP6 Activities - SFIT Cluster: www.csem.ch/sfit



Objective ICT-2007.3.7: Networked Embedded and Control Systems

Target outcomes:

- a) **Middleware:** seamless connectivity and inter-working of embedded systems through new platforms that support composability, scalability and minimal power consumption while offering open interfaces to third parties for application development. Emphasis is on (1) programmability; (2) dynamic reconfiguration and ontologies; (3) enabling privacy, security and trust; and (4) predictable connectivity and QoS awareness. Priority application domains: private/home/building, nomadic and manufacturing.
- b) **Cooperating objects and Wireless Sensor Networks:** spontaneous cooperation of objects in spatial proximity in order to jointly execute a given task. This will require (1) new methods and algorithms to support different cooperation concepts and modes; (2) hardware/software platforms including operating systems or kernels and communication protocols to enable distributed optimal execution; and (3) programming abstractions and support tools to facilitate third party programming of self-organising systems composed of heterogeneous objects. Research challenges also include dynamic resource discovery and management, semantics that allow object/service definition and querying for data and resources, advanced control that makes the systems reactive to the physical world, as well as security and privacy-enabling features.
- c) **Control of large-scale complex distributed systems:** New engineering approaches that ensure efficient, robust, predictable, safe and secure behaviour for manufacturing and process plants and for large scale infrastructures such as distributed energy production, energy distribution, airports or seaports etc. Key challenges include (1) developing generic modelling and design methods, dynamically reconfiguring architectures, languages and scalable algorithms for the control of evolvable, distributed and adaptable systems; (2) mastering complexity, temporal and spatial uncertainties such as delays and bandwidth in communications and node availability; and (3) integrating advances in sensor networks for closing the control loop. International cooperation with the USA, Russia and W. Balkans is encouraged.

Expected impact:

- Control of 10 times more complex systems at 10% of today's effort. Achieve 100% plant availability, reduce maintenance time and cost by 50% and industrial accidents by 30%.
- New services and applications that are tailored to specific needs, seizing new market opportunities.
- More efficient, flexible, secure, easier to maintain and more productive large infrastructures, etc.
- Enable low-cost monitoring of the environment and natural resources.

Funding schemes

- a) CP (STREP only), CSA for source code sharing and for standardisation initiatives
- b) CP (STREP only), NoE
- c) CP (STREP only), CSA for international cooperation

Indicative budget distribution 47 M€: CP 41 M€; NoE 4 M€; CSA 2 M€

Contact: Alkis.Konstantellos@ec.europa.eu ; Merce.Griera-I-Fisa@ec.europa.eu



Objective ICT-2007.5.3: Virtual Physiological Human

Target outcomes

Patient-specific computer models for personalised and predictive healthcare and ICTbased tools for modelling and simulation of human physiology and disease-related processes.

- a) **Patient-specific computational modelling and simulation** of organs or systems targeting specific clinical needs such as prediction of diseases, early diagnosis, disease quantification, surgery planning, treatment and training.
- b) **Data integration and new knowledge extraction:** Innovative SW tools for data mining, representation, formalisation and image processing able to integrate heterogeneous multimedia information from distributed databases.
- c) **Clinical applications and demonstration of tangible benefits of patient-specific computational models:** (1) Intelligent medical simulation environments for surgery training, planning and interventions; (2) Prediction of disease or early diagnosis (3) Advanced environment for simulation and assessment of the efficacy and safety of specific drugs.
- d) **Networking action** on integrating European research in the field of multilevel modelling and simulation of human anatomy and physiology. Sustainable integration will be achieved through a rather limited partnership with demonstrated scientific excellence.
- e) **Coordination and support actions** on (1) Enhancing security and privacy in VPH, in particular for patient data processed over distributed networks. The proposed solutions will address the implications of the use of genetic data, e.g. genetic predispositions, and identify the required technology developments and implementation challenges. (2) Specific International Cooperation Action on healthcare information systems based on Grid capabilities.

Expected impact

- New environments for predictive, individualised, evidence based, more effective and safer healthcare. Reduced medical errors and improved patient safety through simulation of adverse drug effects on patient models, etc
- Improved semantic interoperability of biomedical information and contribution to a common health information infrastructure.
- Strengthened leadership of EU medical imaging industry contributing to attracting back to Europe the research activities of the pharmaceutical industry.
- Increased European multidisciplinary research excellence in biomedical informatics and molecular medicine

Funding schemes a-c): CP; d): one NoE; e): CSA

Indicative budget distribution 72 M€: a-c): CP 62 M€ (a minimum of 22 M€ for IP and a minimum of 22 M€ for STREP)

d): NoE: 8 M€; e): CSA 2 M€ - One CSA per topic with a maximum EC funding of 1 M€

Contact: Joel.bacquet@ec.europa.eu

Research and Policy site http://ec.europa.eu/information_society/ehealth;



Objective ICT-2007.6.2: ICT for Cooperative Systems

Target outcome

- a) ICT research in **Co-operative Systems** will deliver advanced, reliable, fast and secure vehicle-to-vehicle and vehicle-to-infrastructure communication for new functionalities, real-time traffic management and new levels of support to active safety systems in vehicles and to the driver. By combining technologies such as accurate positioning and improved sensor networking, research is expected to lead towards "zero-accident" scenarios. An increasing number of vehicles with ICT-links to the transport infrastructure will make it possible to optimise traffic management at large scale.
- b) **Field Operational Tests** are large-scale test programmes aiming at a comprehensive assessment of the efficiency, quality, robustness and user-friendliness of ICT solutions for smarter, safer and cleaner vehicles and real-time network management.
- c) **Coordination and Support Actions** in the framework of the Intelligent Car initiative aim at international co-operation, standardisation and training activities as well as to assess socio-economic impact.

Expected impact

- Common pan-European architecture, standards and deployment model for cooperative systems.
- World leadership of Europe's transport industry in the emerging area of Co-operative Systems and in road and network operator's tools.
- Significant improvements in safety, security, energy efficiency, emissions reduction, comfort and sustainability of transport. This includes contribution towards the objective of reducing fatalities with 50% in EU-25 by 2010, and on longer term work towards the "zero-fatalities" scenario and a contribution to a significant reduction in the energy consumption and congestion in road transport.
- Proof-of-concept to all stakeholders through Field Operational Tests ensuring the wider take up of intelligent vehicle systems and co-operative systems.

Funding schemes

a): CP, NoE, CSA; b): CP; c): CSA

Indicative budget distribution 48 M€: CP 43 M€ of which a minimum of 19 M€ for IPs and a minimum of 12 M€ for STREP; NoE 2.5 M€; CSA 2.5 M€

Contact: Juhani.jaaskelainen@ec.europa.eu (Unit G4 ICT for Transport)



Objective ICT-2007.6.3: ICT for Environmental Management and Energy Efficiency

Target outcome

- a) ICT RTD in **Collaborative Systems for Environmental Management** aims to integrate environmental monitoring and management with an enhanced capacity to assess population exposure and health risks, to report to and alert targeted groups and to organise efficient response. The target is a Single Information Space for the Environment in Europe in which environmental institutions, service providers and citizens can collaborate or use available information without technical restraints. The activities will aim at dependable, flexible and user-centric shared solutions for sustainable use of natural resources and for better management of ecosystems
- b) One **Coordination and Support Action** in each of the following areas shall address (1) the rapid adoption of standards, protocols and open architectures, in support of the INSPIRE, GMES and GEOSS³³ initiatives in a holistic way; (2) coordination and roadmapping aspects of research in the field of ICT for natural or industrial disaster risk reduction and emergency management; (3) building the ERA in the field of ICT for environmental sustainability.
- c) New and affordable **ICT for Energy-intensive Systems** for: (1) design and simulation of energy use profiles covering the entire life-cycle of energy-intensive products; (2) intelligent and interactive monitoring of energy production, distribution, trading and use; and (3) innovative tools, business models & platforms for energy efficiency services
- d) **Coordination and Support Actions** for the definition of research agendas, dissemination of research results in ICT-enabled energy-efficiency, promotion of best practice and awareness-raising activities Europe and world wide.
- e) **Specific International Cooperation Action (SICA)** in ICT for environmental disaster reduction and management, the assessment of natural hazards and communities.

Expected impact

- Innovative applications and breakthrough ICT solutions in environmental monitoring and management,
- World-best technological capability to respond adequately to major environmental threats,
- World leadership in ICT-enabled energy efficiency and in support of Europe's objective to save 20% of energy consumption by 2020,
- Wide take-up of ICT systems to enable future buildings to become at least energy-neutral • Position Europe in the international context for development of new ICT-supported approaches to produce, distribute and trade energy efficiently.
- Reduction in personal energy usage through analysis of information coming from the developed monitoring systems.

Funding schemes a): CP; b): CSA; c):CP (STREP only); d): CSA; e): CP (STREP only / SICA); CSA

Indicative budget distribution: 54 M€: a-b-c-d) CP 41 M€ of which a minimum of 9M€ for IPs and a minimum of 20 M€ for STREP; CSA 9 M€; e) CP: 2 M€; CSA: 2M€

Contact: manuel.monteiro@ec.europa.eu

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



Objective ICT-2007.7.2: Accessible and Inclusive ICT

Target outcome

- a) New approaches and solutions for **deeply embedding generalised accessibility support** within future mainstream ICT-based products and services. Examples are user interfaces and content representations adaptable to people with specific needs. It includes open, plug & play accessibility architectures and standards enabling a seamless integration of personalised assistive solutions for ICT access. The research is expected to develop and demonstrate the proposed solutions in a realistic user context and strong industrial participation is envisaged to promote consensus building and facilitate exploitation.
- b) New methods and tools for **computer simulation of the user interaction and computer-based validation frameworks** (e.g. immersive environments)
- c) **Advanced self-adaptive ICT-enabled assistive systems based on non-invasive Brain to Computer Interaction (BCI)**, possibly combined with other interaction modalities. The multi-disciplinary research should aim to combine a critical mass of European research to integrate progress in sensor technology, self-adaptive systems and assistive technologies into effective BCI-based systems usable outside the laboratory, e.g. in a home environment.
- d) Targeted and exploratory ICT research on innovative communication and shared creative environments aimed at **facilitating social inclusion of marginalised young people**. A limited number of small scale preparatory actions should contribute to a future research agenda.
- e) In the field of accessibility: Coordination of national research activities (CA-only). In the field of assistive technologies: Coordination of constituencies and development of future research agendas; international co-operation with North America and Asia; achieving a better understanding of ethical issues; market requirements, barriers and cost-benefit aspects.

Expected impact

- New market opportunities for European industry and promote a global leadership in inclusive ICT.
- Mainstreamed accessibility of ICT and radical improvement in accessibility of future ICT products and services
- Open, standards based and seamless interfacing of general purpose
- Facilitated development and production of accessible ICT products and services
- Wide spread practical use of BCI-based assistive technologies to demonstrate a potential quantum leap in self-learning assistive solutions. (c)
- Stronger RTD capacity through delivery of proof of concept for ICT solutions (d)

Funding schemes

a): CP (IP only); b-c): CP (Up to one IP, STREP); d): CP (STREP only); e): CSA

Indicative budget: 43 M€: CP 40 M€ (a minimum of 20 M€ to IP and a minimum of 8 M€ to STREP); CSA 3 M€

Contact: Francois.junique@ec.europa.eu; Joseph.bremer@ec.europa.eu; Unit ICT for Inclusion (H3)



Timetable of ICT Call 2

- Opening of EPSS Online submission: 12 June
- Deadline for submission of proposals: **17h00 - 9 October 2007**
- Evaluation of proposals: *Start early November*
- Invitation letter to Hearings: *Start 12 November*
- Hearings: Start *26 November*
- Evaluation Summary Reports: *Mid December*
- Invitation to negotiations: Late December
- Letters to successful applicants: From January 2008
- Signature of first grant agreements: **March- April 2008**

Presentation outline

The 7th Framework Programme (2007-2013)

ICT Work Programme 2007-08

ICT-2nd Call for proposals

Participation, funding schemes, proposal submission
& evaluation



7FP: Participation and general rules

- Min. 3 indep. part. from 3 MS or AC (EU, CR, TU, CH, IC, IS, LI, NO)
- Support actions: min.1 part.
- 3 **evaluation criteria**: S&T quality, Impact, Implementation
- The **Community financial contribution**:
 - R&D activities: maximum of 50% of eligible costs, except for:
 - Public Bodies, SHE, Research organisations, SMEs: 75%
 - Demonstration activities: 50% of eligible costs
 - Other activities, including management: 100%
 - Coordination and support actions: 100%
 - Frontier research: 100% for all entities.
- No **financial collective responsibility**: a **guarantee fund** is introduced to cover the **financial risk** of a participant's failure

Funding schemes

3 funding schemes - 5 "instruments"

- Collaborative Projects (CP)
 - Small or medium scale focused research actions ("STREP")
 - Large Scale Integrating Projects ("IP")
- Networks of Excellence (NoE)
- Coordination and Support Actions (CSA)
 - Coordinating or networking actions ("CA")
 - Support Actions ("SSA")

ICT Workprogramme - 2007/08:
budget pre-allocation to funding schemes!



Funding schemes in ICT

- Funding schemes are defined in an Annex to the Workprogramme and in the Guides for Applicants.
- The Commission does not change the type of “instruments” of submitted proposals.

A proposal submitted to the EC as an Integrating Project is evaluated using the IP evaluation criteria, and is ranked against the other Integrating Project proposals submitted in the call.

- Be sure you are using the right instrument for your project idea.

CP - Integrated Projects (IPs) & Focused projects (STREPs)

Funding Scheme	Purpose	"Target " audience	Activities covered by EU contribution	Form of reimbursement	Average duration	Flexibility	Enlargement of partnership within the initial budget	Specific characteristics
Large-scale integrating project (IP)	Projects aiming at developing new knowledge, new technology, products, demonstration activities or common resources for research.	Industry, including SMEs Research institutes Universities (Possibly) Potential end-users	Research Demonstration Training Innovation linked activities Management of the consortium	Based on eligible cost , unless other forms are foreseen in the work programme ²	36-60 months	The description of work (annex 1 to the grant agreement) is normally fixed. If needed an update will be provided for in the grant agreement.	Possible	The number of participants and volume of resources should be compatible with overall objective and manageability of the whole endeavour. In FP6, IPs typically had 10-20 participants and total EC contribution of 4-25 M€

Funding Scheme	Purpose	"Target " audience	Activities covered by EU contribution	Form of reimbursement	Average duration	Flexibility	Enlargement of partnership within the initial budget	Specific characteristics
Small and medium-scale focused research project (STREPs)	Projects aiming at developing new knowledge, new technology, products, demonstration activities or common resources for research.	Industry, including SMEs Research institutes Universities (Possibly) Potential end-users	Research Demonstration Management of the consortium	Based on eligible cost , unless other forms are foreseen in the work programme ³	18-36 months	The description of work (annex 1 to the grant agreement) is normally fixed.	NA	The number of participants and volume of resources should be compatible with overall objective and manageability of the whole endeavour. In FP6, STREPs typically had 6-15 participants and total EC contribution of 1-4 M€

Networks of excellence (NoEs)

Funding Scheme	Purpose	"Target " audience	Activities covered by EU contribution	Form of reimbursement	Indicative average duration	Flexibility	Enlargement of partnership within the initial budget	Specific characteristics
Network of Excellence (NoE)	Durable integration of the participants' research activities/capacities	<p>Research institutes</p> <p>Universities</p> <p>Mainly <u>indirectly</u>:</p> <p>Industry (<u>possibly</u> through steering committees, governing boards, scientific committees)</p>	<p><u>Joint programme of activities (JPA):</u></p> <p>Integrating activities</p> <p>Joint research programme</p> <p>Spreading of excellence</p> <p>Management of the consortium</p>	Based on eligible cost or lump sum (as specified in the work programme ⁴)	48-60 months	The description of work (annex 1 to the grant agreement) is normally fixed. If needed an update will be provided for in the grant agreement.	Possible	<p>The number of participants and volume of resources to be integrated should be compatible with:</p> <p>a) the overall objective of a meaningful durable integration of the research capacities of the participants and</p> <p>b) the manageability of the whole endeavour.</p> <p>In FP6, NoEs typically had 6-12 participants and total EC contribution of 4-10 M€</p>

Coordination or Networking actions (CAs) Support actions (SAs)

Funding Scheme	Purpose	"Target " audience	Activities covered by EU contribution	Form of reimbursement	Average duration	Flexibility	Enlargement of partnership within the initial budget	Specific characteristics
Coordination action (CA)	Coordination of research activities and policies	Research organisations Universities Industry including SME	Networking, coordination and dissemination activities Management of the consortium	Based on eligible cost unless other forms are foreseen in the work programme ⁵	Between 18 and 36 months	The description of work (annex 1 to the grant agreement) is normally fixed.	NA	No funding of research, development or demonstration In FP6, CAs typically had 13-26 participants and total EC contribution of 0.5-2 M€

Funding Scheme	Purpose	"Target " audience	Activities covered by EU contribution	Form of reimbursement	Average duration	Flexibility	Enlargement of partnership within the initial budget	Specific characteristics
Support Action (SA)	Support to research activities and policies	Research organisations Universities Industry including SME	Conferences, seminars, workshops, working groups, studies, fact finding, monitoring, strategy development, awards and competitions, working or expert groups, operational support and dissemination, information and communication activities Management of the consortium	Based on eligible cost unless other forms are foreseen in the work programme ⁵	Between 9 and 30 months	The description of work (annex 1 to the grant agreement) is normally fixed.	NA	No funding of research, development or demonstration Normally focused on one specific activity and often one specific event. Possibility of one single participant In FP6, SAs typically had 1-15 participants and total EC contribution of 0.03-3 M€

Evaluation in FP7

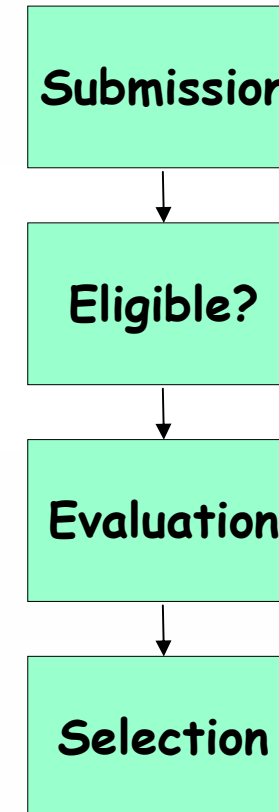
... the evaluation process has developed to a very high standard. It compares well with ... other prestigious national or international granting agencies

Report of Independent Observers, Dec. 2005

- No major change for FP7
- But improved and streamlined, based on experience
- Adapted to the new features of FP7 where necessary
- What's new?
 - Eligibility criteria (includes "scope")
 - Evaluation criteria (3 instead of 5 or 6)

Overview

- Information for proposers
- Submission of proposal
- Eligibility check
- Evaluation
- Evaluation Criteria
- Selection
- Specific rules for FET Open
- Writing your proposal
- Getting help
- Experts
- Timetable for IST Call 1

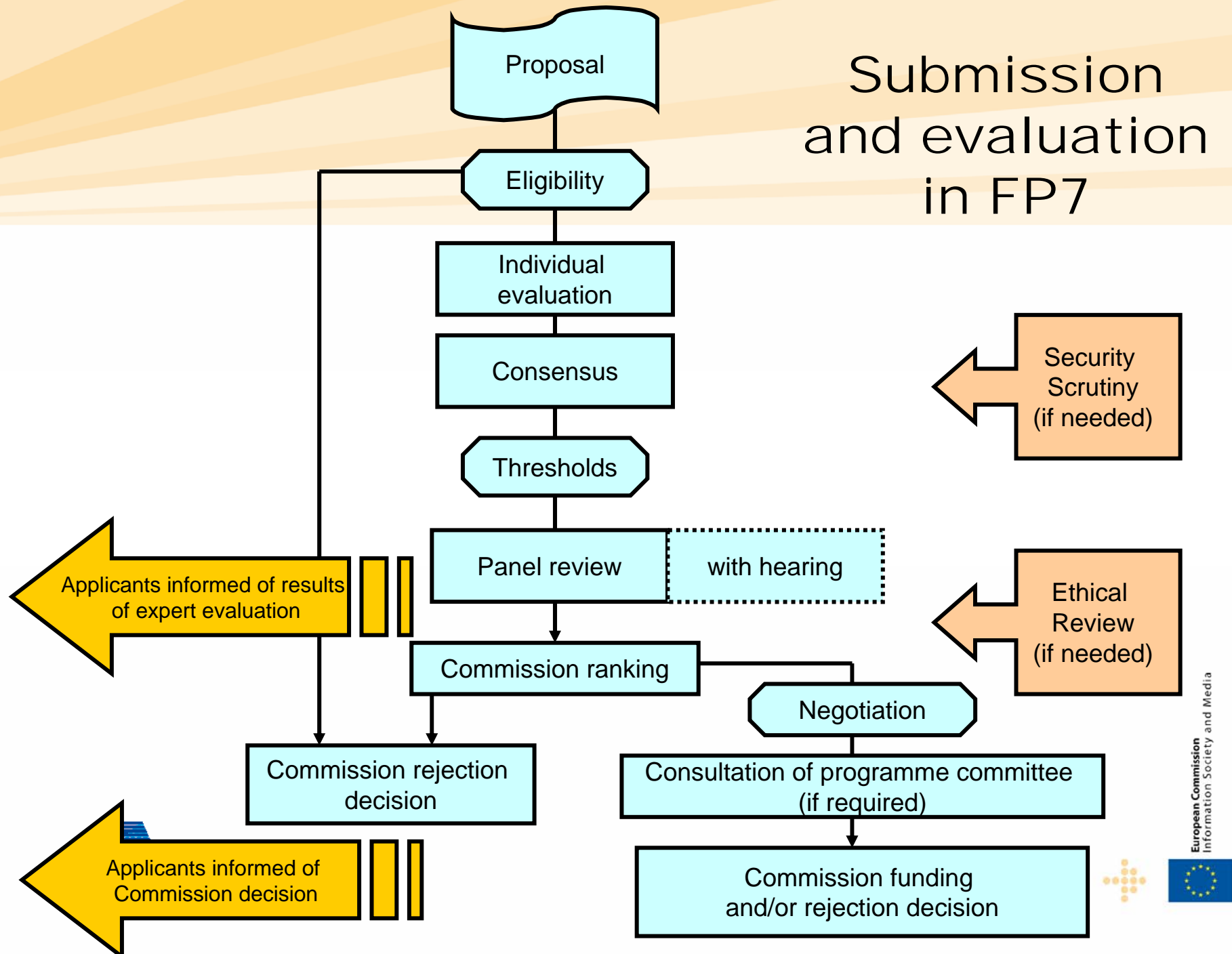


Information for proposers

- Workprogramme 2007-2008 (cordis.europa.eu/fp7/ict)
- Guide for Applicants (*Guidance notes for evaluators and the Background note on the funding scheme*)
- Understanding FP7 (+FP7 Fact Sheets)
http://cordis.europa.eu/fp7/understand_en.html
- Evaluation forms with notes
- EPSS manual
- Model grant agreement
- Rules on submission of proposals, and the related evaluation, selection and award procedures
- 'Köln 2007' web site:
ec.europa.eu/information_society/events/koln_2007/index_en.htm



Submission and evaluation in FP7



Submission

- Fixed deadline call 2
17h00 Tuesday October 9 2007
- One stage submission
- Electronic submission only





Electronic Submission

EPSS - Electronic Proposal Submission System

- **Online preparation only!**
- Improved validation checks before submission is accepted
- FP6 Failure rate = $\pm 1\%$
- Main reason for failure - waiting till the last minute
 - Technical problems
 - Panic-induced errors
 - Too late starting upload, run out of time

*Submit early, submit often!
If in trouble, call the helpdesk !*



Proposal Part A (online)

- **A1**
 - Title, acronym, objective etc.
 - free keywords
 - 2000 character proposal abstract
 - previous/current submission (in FP7)
- **A2 (per participant)**
 - Legal address/administrator address/R&D address
 - Clear identification as SME/Public body/Research centre/Educ. establishment
 - Proposer identification code PIC (later calls)
- **A3**
 - More cost details (direct/indirect costs distinguished)

The image shows a screenshot of the 'Proposal Submission Forms' for the 'Seventh Framework Programme'. The form is titled 'A1' and is divided into several sections. The top section is for 'Proposal Number' and 'Proposal/Activity'. Below that is a section for 'Proposal Title' (max. 2000 characters) and 'Keywords'. The next section is for 'Proposer Identification' (PIC) and 'Proposer Address'. The bottom section is for 'Proposal Abstract' (max. 2000 characters). The form is presented in a structured, tabular layout with various input fields and labels.

Proposal Part B (pdf format only)

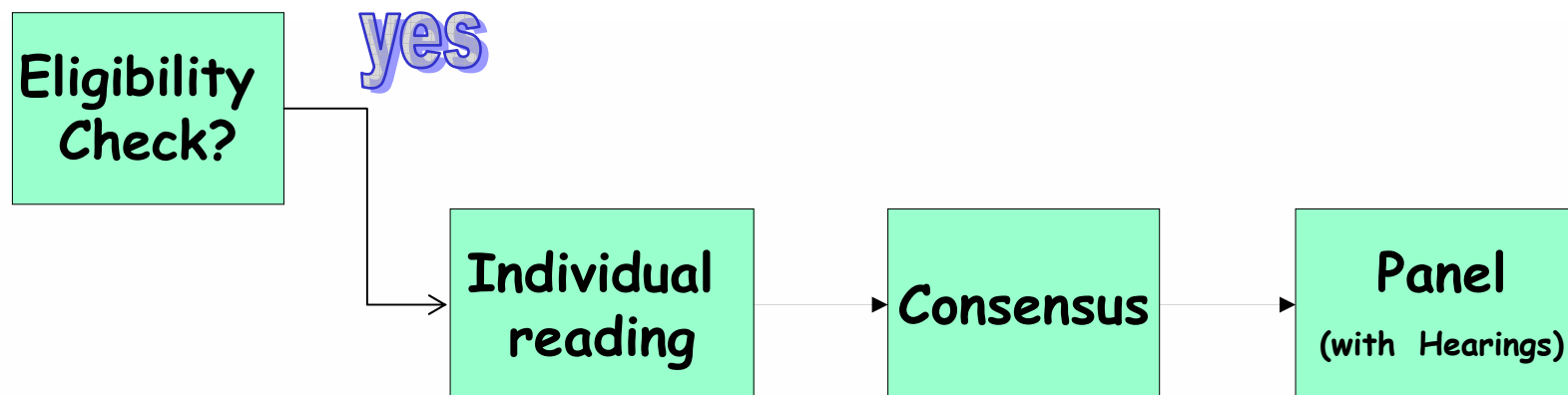
- Part B format directly linked to evaluation criteria
 - Summary
 - S&T quality (bullet points = sections)
 - Implementation (*idem*)
 - Impact (*idem*)
 - Ethical issues
- Section lengths recommended

Eligibility checks

- Date and time of receipt of proposal on or before deadline
 - Firm deadlines - except for Continuously Open Calls
- Minimum number of eligible, independent partners
 - As set out in work programme/call
- Completeness of proposal
 - Presence of all requested administrative forms (Part A) and the content description (Part B)
- Scope
 - Proposal needs to be in scope of the topics or funding schemes as set out in the workprogramme

Evaluation Process

- On-site evaluation
- One step evaluation
- Independent experts



FP7. Evaluation Criteria

Criteria adapted to each funding scheme

- Divided into three main criteria:
 1. S&T Quality (including relevance to the topic of the call): concept, objective, work-plan
 2. Implementation (operational capacity of participants)
 - Individual participants and consortium
 - Estimation and allocation of resources
 3. Impact
 - Contribution to expected impacts listed in work programme
 - Plans for dissemination/exploitation

Evaluation criteria

1. Scientific and technical quality

- Soundness of concept, and quality of objectives (ALL)
- Progress beyond the state-of-the-art (CP)
- Contribution to long term integration of high quality S/T research (NoE)
- Contribution to the coordination of high quality research (CSA)
- Quality and effectiveness of the S & T methodology and associated workplan (CP)
- Quality and effectiveness of the joint programme of activities and associated workplan (NoE)
- Quality and effectiveness of the coordination/support action mechanisms and associated workplan (CSA)

Evaluation criteria

2. Implementation

- Appropriateness of the management structures and procedures (ALL)
- Quality and relevant experience of the individual participants (ALL)
- Quality of the consortium as a whole*
 - (including complementarity, balance) (CP)
 - (including ability to tackle fragmentation of the research field and commitment towards a deep and durable institutional integration) (NoE)
- Appropriate allocation and justification of the resources to be committed (budget, staff, equipment) (CP and CSA)
- Adequacy of resources for successfully carrying out the joint programme of activities (NoE)

*for Support actions, only if relevant

Evaluation criteria

3. Impact

- Contribution at the European or international level to the expected impacts listed in the workprogramme under the relevant activity (ALL)
- Appropriateness of measures for the dissemination and/or exploitation of project results, and management of intellectual property (CP)
- Appropriateness of measures for spreading excellence, exploiting results and disseminating knowledge through engagement with stakeholders and the public at large (NoE and CSA)

Evaluation criteria scoring

- Scale of 1-5 (and 0)
- No weighting
 - except FET Open
- Criterion threshold 3/5
- Overall threshold 10/15

Ethical issues

- New annex “ICT-Ethics” in the Guide for Applicants
- Post-evaluation review for any selected proposals which have ethical issues, *based on the contents of the original proposal*

Does your proposal show...?

- that you fully understand the ethical issues involved in your planned action
- that you have adequate plans to deal with them
- that there are clear lines of responsibility
- that you will review and report on these issues on a regular basis

Other issues

- Subcontracting
- Justification and integration of any third country participation

Selection



- Marking and Priority order of proposals by experts
 - ▶ You will receive an evaluation summary report (ESR) with your evaluation result
- Commission Decision on selected proposals for funding
 - ▶ As successful proposal - the Commission will invite you for negotiations
 - ▶ After successful negotiation - you will sign the grant agreement and start the project



A good Proposal ...is based on a good idea

- BUT a very good idea alone does not make a good proposal
- Work on your idea before you start investing time and effort
 - Is your idea innovative or visionary enough?
 - Does it advance the state of the art?
 - Does it have a clear impact?
 - Which could be the major beneficiaries?
 - Does it support European policies and standards?
 - Is it feasible?
 - Is it ethical?
 - Is there a topic in the IST WP open for this idea?
- If you get positive answers to these questions ... you can start thinking of preparing a proposal! Otherwise ... STOP!

Define your idea clearly

- Objectives
 - What are the objectives of the proposal?
 - Which are the main R&D challenges?
 - Which are the innovative aspects of it?
 - How do you differentiate from existing projects?
 - Does it address the objectives of the call?
- Motivation
 - Why does the proposal need to be supported at the European level?
 - What is the potential impact from technological, industrial, economic and societal point of view?
 - Are there clear benefits for certain European constituencies beyond the lifetime of the project?
 - Maybe it is too close to the market! In which case ICT is not the right place to submit it!

Define your idea clearly (2)

- Workplan
 - How should your idea be implemented?
 - How should the work be organised? Define tasks with inputs and outputs
 - What are the deliverables, the intermediate results?
 - What are the milestones?
 - What is the timing of them?
 - What constitutes a risk? How can it be addressed?
 - Which are the most adequate management structures?
- Resources
 - Analyse the effort needed for every task and for every partner
 - Which categories of costs are envisaged? Is this list complete
 - Are the costs sound?

Define your idea clearly (3)

- Consortium
 - For each identified task define roles of partners and analyse their potential profile
 - Which competencies are required?
 - Develop a list of potential partners. Identify the core and the non-core ones
 - Associate roles of partners with real participants. Is the consortium of the appropriate size?
 - Is there a balance in partners' workload?
 - Are the participants committed?
 - Does it contain leading European players?
 - Do you achieve critical mass with your consortium?
 - Are the right people involved?
 - Are there overlaps among partners?
 - Do you need background IPRs? Who owns them?

Form a Consortium

- A good proposal is not a one man show!
- Involve your partners during the whole process
- Start preparing the proposal early
- Organise regular consortium meetings prior to final proposal submission
- Sign a consortium agreement if possible
- Solve any conflicts with your partners before you submit the proposal
- Replace partners that show no interest in the proposal preparation
- Allocate tasks and responsibilities during the proposal writing
- Agree on a co-ordinator; give him/her the power to quickly decide upon pending issues

When writing your proposal.... 1

Read all the documentation, especially the Guide for Applicants, carefully

Divide your effort over the evaluation criteria

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

Think of the finishing touches which signal quality work:

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

When writing your proposal....2

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
- 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
- Leave nothing to the imagination

Getting help with your proposal

The ICT theme supports

- Information days and briefings in Brussels and elsewhere
- Partner search facilities
 - http://cordis.europa.eu/fp7/ict/participating/partner_en.html
- A supporting website of advice, information and documentation
 - <http://cordis.europa.eu/fp7/ict/>
- A Helpdesk for proposers' questions, reachable by email or phone (and a Helpdesk for electronic proposal submission)
 - ict@ec.europa.eu
- Global FP7 webpage: <http://cordis.europa.eu/fp7/>

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

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



Experts call

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

- Call for experts for FP7
- FP6 experts have been invited* to transfer to FP7 and to update their CV
(* using the email address in FP6 database!)
- Nacional contact points can suggest names for experts

For more information

European research on the web:

<http://cordis.europa.eu>

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

<http://ec.europa.eu/comm/research/future/>

Information Society and Media:

http://ec.europa.eu/information_society/

<http://cordis.europa.eu/ist>



Micro/Nanosystems

Thank you!

Websites:

http://cordis.europa.eu/ist/directorate_g

<http://cordis.europa.eu/ist/mnd/>

Contact:

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