

Objectives for 2007-2008 ICT for Mobility

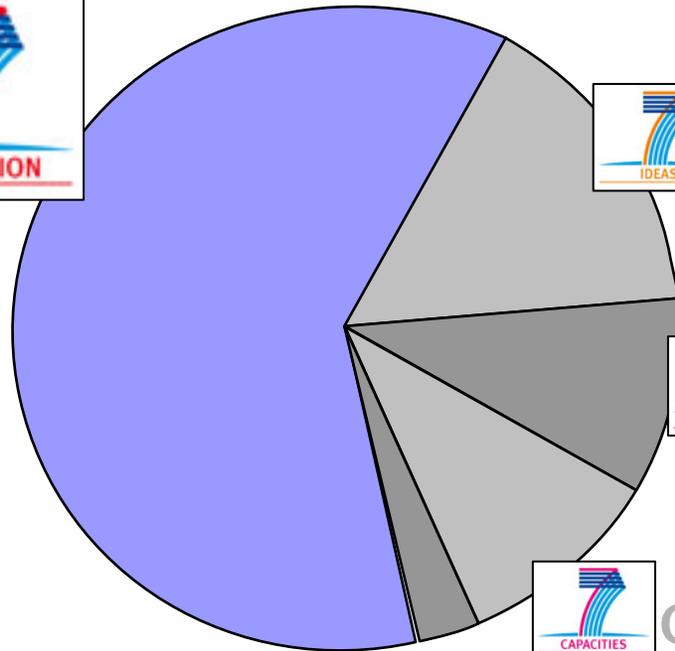
European Commission
Directorate General Information Society and Media
ICT for Transport

- **The cooperation programme**
- The consultation process
- The proposed Work Programme 2007-2008
- Additional information

Specific Programmes

Cooperation: 32.365 M€

Total: 50.521 M€
+ EURATOM 2.700 M€



Ideas: 7.460 M€



People: 4.728 M€



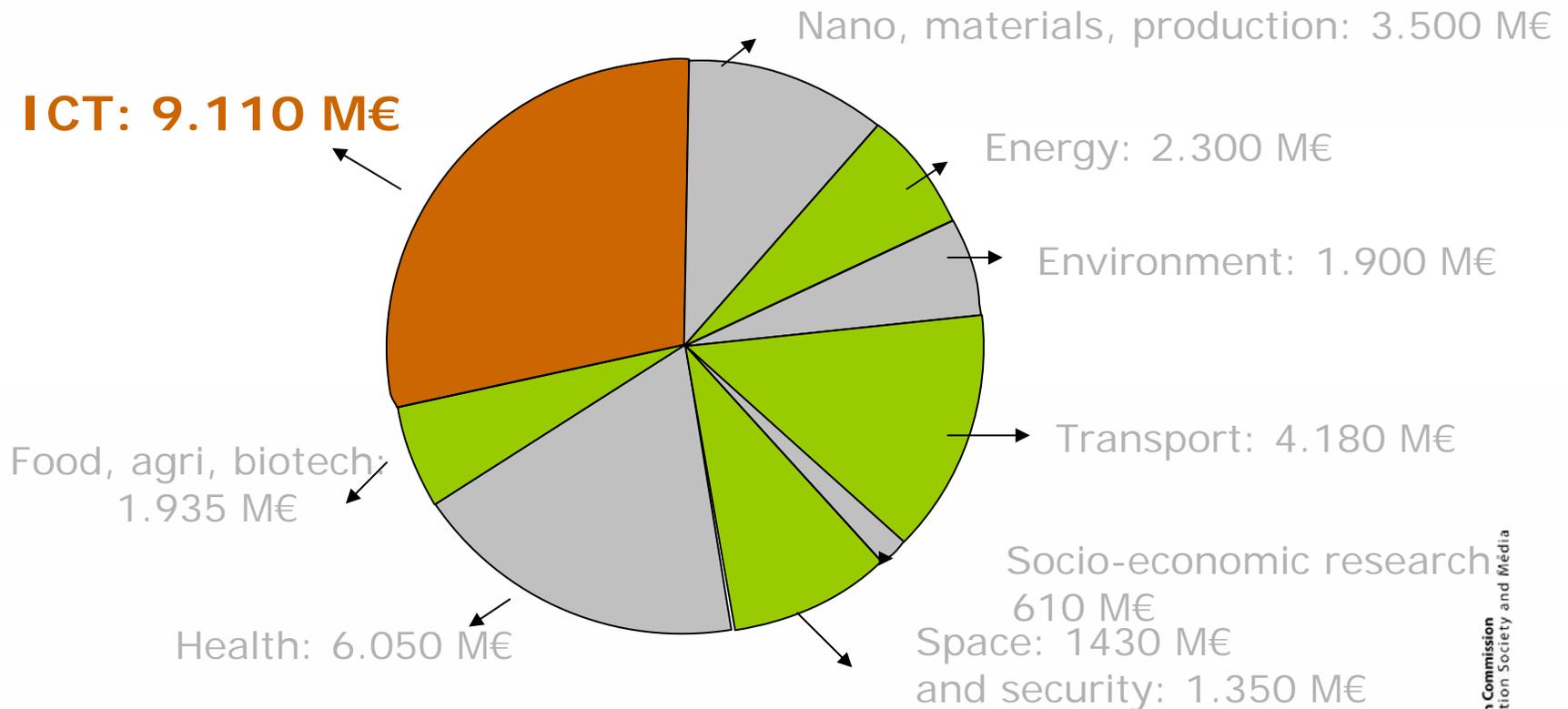
Capacities: 4.217 M€

JRC: 1.751 M€

Cooperation programme



“Cooperation” – Collaborative Research – Themes



Total: 32.365 M€

Status: Council's agreement on 24th July 2006



- The cooperation programme
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The consultation process (1)

Objectives

- Identification of research needs with wide coverage of the constituency
- Discussion, assessment & prioritisation in a transparent process
- Input to the IST work programmes development with both short and mid / long term perspective

Phases

- Five Thematic Workshops (*as per intelligent Car Initiative COM(2006) 59 final of 15 February 2006*)
- Consolidation Workshop
- Public Consultation
- eSafety Forum RTD WG "Stakeholder's Document"
- Strategic Research Agenda for "ICT for Mobility"

Target

- Well justified Strategic Objectives

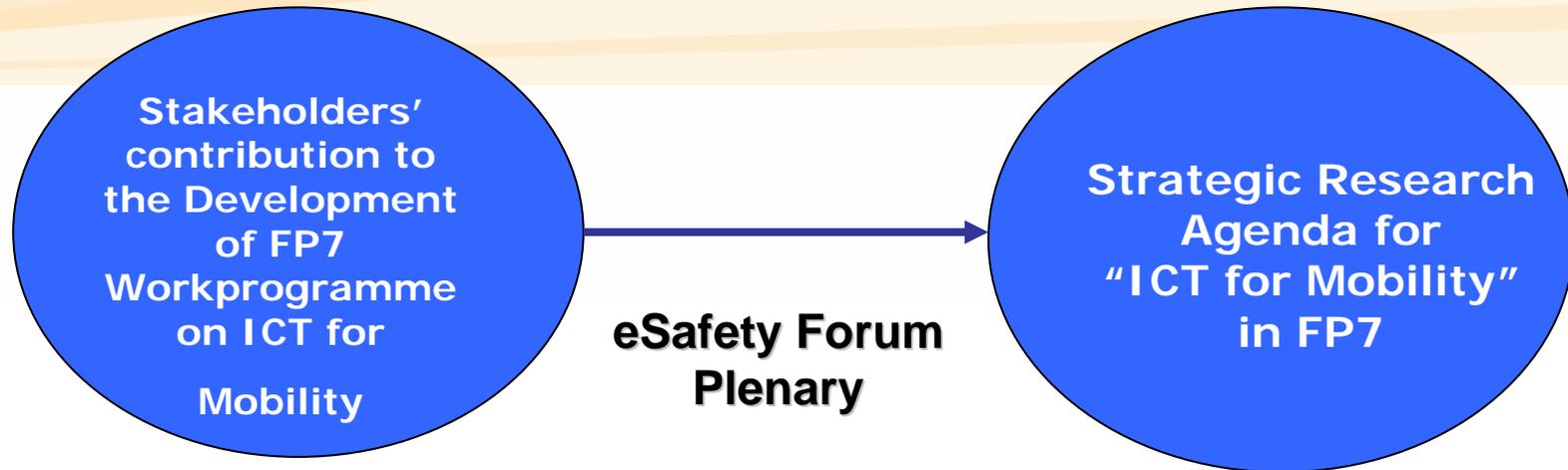
The consultation process (2)

Expert Workshops: April-May.
50+ participants

eSafety WG RTD
(20+ active members)



The Consultation Process (3)



- **Adopted by the eSafety Forum Plenary, 8 Nov'06**
- **5 + 1 Areas/Domains:**
 1. Mobility Services for People
 2. Mobility Services for Goods
 3. Intelligent Vehicle systems
 4. Cooperative Systems
 5. Field Operational Tests
 6. Horizontal issues

- The cooperation programme
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- **The proposed Work Programme 2007-2008**
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Work programme structure

The ICT WP 2007-2008 is structured around **7 challenges**

Each **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

Each challenge is addressed through a limited set of **Objectives** which form the basis of **Calls for Proposals**

Challenge 6: ICT for Mobility

The societal challenge **ICT for Mobility, Environmental Sustainability and Energy Efficiency**

- focuses on systems for safer and more efficient mobility of people and goods and on raising Europe's capacity for a more sustainable growth
- aims at achieving mobility in Europe that is virtually accident-free, efficient, adaptive, clean and comfortable
- implements the RTD pillar of the i2010 "Intelligent Car" Initiative
- is based on the Strategic Research Agenda of the eSafety Forum RTD WG, and implements part of the ERTRAC agenda

Three objectives address this challenge

- **ICT for the "Intelligent Car" and Mobility Services**
- **ICT for Cooperative Systems**
- ICT for Environmental Management and Energy Efficiency

ICT for the Intelligent Vehicles and Mobility Services

aims at

- new generation advanced driver assistance systems to offer a higher degree of safety through accident prevention based on improved hazard detection, sensing and integration of systems
- mobility services which make transport of people and good safer, more secure, efficient, comfortable and environment-friendly
- ramping up of Field Operational Tests
- focusing on the sub-areas:
 - **Intelligent Vehicle Systems**
 - **Mobility Services for People**
 - **Mobility Services for Goods**
 - **Coordination and Support Actions**

Objective: Intelligent Vehicles & Mobility Services (2)

Expected Impact:

- World leadership of Europe's industry in the area of Intelligent Vehicle Systems and expansion to new emerging markets.
- Improved safety, efficiency and competitiveness of transport systems across Europe, with strong contribution to growth and jobs and towards the objective of reducing fatalities by 50% in EU-25 by 2010.
- New targets for efficiency and environmental friendliness in Europe's transport sector through new mobility services.
- Higher mobility of people and goods across different transport modes through the provision of accessible and reliable information services.

Challenges:

- development of next generation improved, new and cost-effective technologies for accident avoidance
- common platforms integrating several applications
- better understanding of driver behaviour and HMI issues
- ability to support cooperative driving

Objective:

- lower costs of Intelligent vehicle Systems to support wider and larger market penetration, including medium and lower priced cars and commercial vehicles,
- to achieve substantial impact on safety and traffic efficiency

Innovative research:

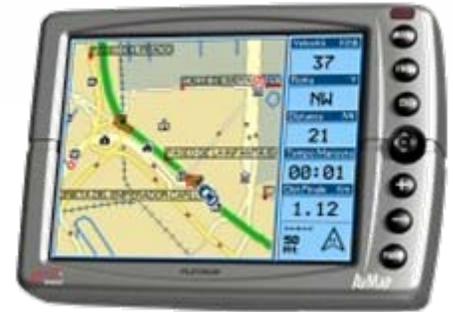
- identify long term approach: what is to come after the now maturing systems and technologies

Research topics:

- Sensor development (improving existing sensors, new sensor concepts, multi-usage and sensor data fusion)
- Positioning systems (accurate and fast) and enriched digital maps
- Hazard detection, warning and automation strategies
- Effective actuators
- Flexible and reliable vehicle systems architecture
- Integration of several applications in one platform
- Human factors issues (including HMI and future cockpit)
- Support for foresighted and cooperative driving
- The 'next wave' of Intelligent Vehicle Systems

Challenges:

- “Always-on” services offering reliable, personalised information.
- Adequate info-mobility services, including pre-trip, on-trip and post-trip.
- Accurate and real-time inter-modality information
- Harmonised, interoperable, pan-European mobility services, context aware, with reliable transport contents and wide availability to users and their interfaces to single and multi-modes of transports.
- Seamless integration of Nomadic Devices into vehicle’s HMI



Objective:

“ICT for user-centered “always-on” mobility services based on location-aware enhanced personalised services such as context-aware personal communications and always-available information access”

Research topics:

- System architecture for multi-service overlay networks.
- Geo referencing data systems and data mining technologies.
- User interface, HMI, Access of External Applications, Nomadic Devices and standardized format for mobility information.
- Always-on context awareness flexible, reliable and accessible systems providing seamless user experience



Challenges:

- High impact on the overall structure and performance of Europe's transport networks and
- High share of the load on these networks

→ *i.e. successful implementation of improvements will deliver immediate benefits on a large scale*



Research topics:

- Creation of seamless, efficient mobility services using ICT as enabler (in both urban and long-haul operations)
- Exploitation of ICT platforms and RFID / Smart Tag technologies as success critical components
- Development of systems offering real modal choices
- Implementation of reliable security with adequate tracking and tracing
- *(with mid-term perspective) Exploitation and demonstration of location-aware services including Galileo satellite based technologies*

ICT for Cooperative Systems aims at

- 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
- large scale test programmes (field operational tests) with comprehensive assessment of the efficiency, quality, robustness and user-friendliness of IT solutions for smarter, safer and cleaner vehicles and real-time traffic management
- focusing on the sub-areas:
 - **Cooperative Systems**
 - **Field Operational Tests**
 - **Coordination and Support Activities**

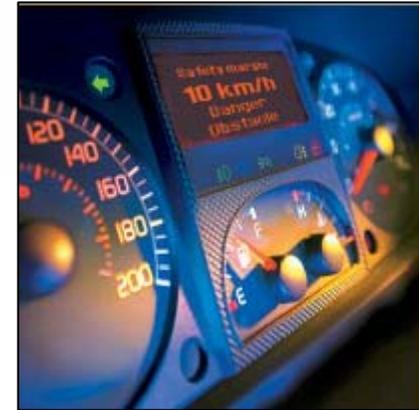
Call 2 mid 2007

Expected Impact:

- World leadership of Europe's transport industry in the emerging area of Co-operative Systems and in road and network operator's tools.
- Common pan-European architecture, standards and deployment model for co-operative systems.
- 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.

Challenge:

- To develop cooperative systems for road traffic making use of communication between vehicles (V2V) and between vehicles and the road infrastructure (V2I) to improve safety and efficiency.
- To retain flexibility and personal mobility and achieve significantly better efficiency and safety whilst still delivering improvements in environment and sustainability for everyone in the society.



Possible research topics:

- Road map: From today to deployment for tomorrow
- Simulation and testing for evaluation of concepts and systems
- System integration, configuration management, service monitoring
- Intelligent infrastructure and its use
- Real-time optimization of traffic management
- Large-scale pilot V2V and V2I applications demonstrations.
- Communication technologies for V2V and V2I.
- Enhanced digital maps
- Positioning systems with sufficient accuracy

Challenges:

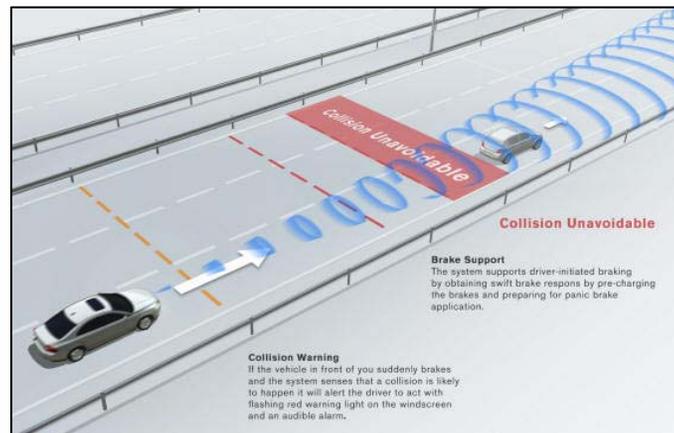
to Investigate

- the behaviour of the user in the real traffic environment when being equipped with new ICT systems for safety and efficiency as compared to the user's behaviour without the ICT systems
- the short and long term effect of the use of such systems to provide the necessary assurance for the technical and commercial feasibility



Research Topics

- Methods and Procedures for planning, running and evaluating FOTs
- FOTs on technically mature ICT systems, including technical, user acceptance, efficiency and deployment aspects



Points of attention

Beyond the scientific / technical objectives of the project...

- **Socio / economic RTD** should be part of the project (try to quantify the benefits..., what if...)
- Careful consider **ethical and privacy issues**
- **SME participation** as motor for innovation
- Supporting **European Competitiveness** through research partnership **with third countries** within project through partnership and through specific targeted actions

Coordination and Support Activities

Aiming at

Horizontal issues common to several applications or generic prerequisite for successful deployment of functions and services

Target outcome



- Preparation of standards, agreed specifications and ramping up of Field Operational Test
- Related to Mobility services for people
- Related to Mobility services for goods



- International Cooperation
- Standardisation
- Training activities (strengthen the research capacity of European research institutes, increase professional experience and end-users' awareness)
- Assessment of socio-economic impact
- Cooperative systems

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Instruments

Basic “Funding Schemes” remain (almost) unchanged:

- **Collaborative projects (CP)** - 3 types:
 - Small or medium-scale focused research projects (STREP)
 - Large-scale integrating projects (IP)
 - Projects targeted to special groups such as SMEs
- **Networks of Excellence (NoE)**
 - Joint programme of activities of a number of research organisations
- **Coordination and support actions (CSA)** - 2 types:
 - Coordination (or networking) actions (CA)
 - Support actions (SA)

Further funding possibilities

International Cooperation under Objective 3.9.1.1

Horizontal Support Actions:

(CSA) Call 1: 5M€ & Call 3: 5M€ (target countries)

- promoting the EU ICT programme
- identifying co-operation opportunities
- networking existing co-operation projects
- strengthening Information Society policy dialogues with main partners.

Specific International Cooperation Activities (SICA):

(CSA or STREPs)

- **SICA e-adoption: Call 1: 5M€ (target countries)**
 - low-cost approaches for access devices and software, peripherals and infrastructures (e.g. Adas, Intelligent transport Systems...)
 - deployment of wireless services and mobile web applications (e.g. Cooperative Systems, V2V & V2I communications...)
- **SICA Open source software (OSS): Call 3: 5M€ (target countries)**
 - promoting interoperability and the emergence of global open standards and practices (e.g. Intelligent Transport Systems, Cooperative Systems...)

More information

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eSafety Web-site:

http://europa.eu.int/information_society/programmes/esafety/index_en.htm

eSafety on CORDIS website:

www.cordis.lu/ist/so/esafety/home.html

eSafetySupport website

www.eSafetySupport.org



*Thank you
for your attention*