



# ICT for Mobility

## FP7

# Work Programme

European Commission  
Information Society and Media



EXTRACT FROM WORK PROGRAMME 2009-2010

## Challenge 6: ICT for Mobility

ICTs offer a new, complementary way of reducing CO<sub>2</sub> emissions and increasing safety of the whole transportation system. This includes dynamic transport management and control strategies involving multiple interactions with vehicles.

### *ICT for safe, clean and smart mobility*

ICT continues to provide new intelligent systems that assist the driver to avoid accidents, provide drivers with real time information to avoid congestion, and optimise a journey or the engine performance to improve energy efficiency. Autonomous on-board systems are complemented with vehicle-to-vehicle and vehicle-to-infrastructure co-operative technologies and improved, flexible traffic network management. The future transportation system needs cleaner and more efficient vehicles, energy-efficient intelligent infrastructure (including cooperative traffic control and management systems), as well as new mobility concepts.

Improving safety remains a key objective.

### *ICT and urban infrastructures*

Cities represent a particularly complex environment with acute sustainability challenges. Four out of five Europeans live in urban areas which consume about 80% of the energy in Europe. Cities import huge amount of resources through large infrastructures to

consume them in various processes creating air, water and land pollutions. Urban transport faces congestion problems and accounts for up to 70% of pollutants from transport. Optimal management of urban complexity requires full integration of a wide range of technologies.

Research under this Challenge should take into consideration relevant technologies and other results from successfully completed or ongoing projects.

## Objective ICT-2009.6.1 ICT for Safety and Energy Efficiency in Mobility

### Target Outcomes

**a) ICT for Intelligent Vehicle Systems** for further improving road safety and overall performance of transportation systems. This includes advanced in-vehicle safety systems with improved performance and reduced costs, based on open standard elements; systems supporting autonomous driving (first in restricted environments and later on open environments); new approaches to crash avoidance and collision reduction including development of sensors and sensor networks; human machine interface design principles; advanced methods for traffic situation detection and communication (including vulnerable road users); and technologies for addressing digital footprint, data security and

privacy of in-vehicle applications; numerical and experimental methods and technologies for design and evaluation of systems under real world conditions; methods for the design and evaluation of systems.

Projects need to take an integrated approach to safety, considering together the infrastructure, vehicles, drivers and other transport users.

**b) ICT for Clean and Efficient Mobility** for further improving energy efficiency and reducing CO<sub>2</sub> emissions in all modes of transport. This includes new tools, systems and services supporting energy-efficient driving (eco-driving) based on on-board systems and/or co-operative infrastructure and energy-optimised, adaptive traffic control and management technologies and systems for urban areas and inter-urban road networks. It also includes methodologies for assessing the impact of advanced ICTs in energy efficiency and CO<sub>2</sub> reduction, aiming at international harmonisation and standardisation of the methodologies through co-operation with Japan and the USA.

### **c) Coordination and Support Actions**

A common research agenda for energy efficiency by enhancing international cooperation; increased user awareness and dissemination of research results by supporting the Intelligent Car Initiative and the eSafety Forum, by supporting standardisation and by preparing a common showcase for cooperative systems.

## **Expected Impact**

- World leadership of Europe's industry in the area of Intelligent Vehicle Systems and expansion to new emerging markets, improving the competitiveness of the whole transport sector and the automotive industry.
- Significant improvements in safety, security and comfort of transport. This includes contribution towards the objective of reducing fatalities with 50% in the EU by 2010, and longer term work towards the 'zero-fatalities' scenario.
- Significant improvements in energy efficiency, emissions reduction and sustainability of transport. This includes contribution to reduction in the energy consumption and congestion in road transport.

## **Funding Schemes**

a) and b): IP, STREP; c): CSA

## **Indicative Budget Distribution**

- IP/STREP: EUR 48 million, of which a minimum of 50% to IPs and a minimum of 30% to STREPs
- CSA: EUR 5 million

## **Call**

ICT call 4

# **Objective ICT-2009.6.2 ICT for Mobility of the Future**

## **Target Outcomes**

**a) Field Operational tests for Integrated Safety Systems and Co-operative Systems** to assess improvements in the efficiency of the transport system, in the safety of all road users and in making individual mobility more comfortable. This includes large-scale test programmes aiming at a comprehensive assessment of the efficiency, quality, robustness and user-friendliness of close-to market systems, before their full-scale deployment in Europe. Where needed, performance validation of safety-related co-operative systems can be envisaged in controlled proving ground environments emulating realistic levels of complexity.

Projects need to collect statistically significant data allowing analysis of user acceptance, performance and benefits for road safety and efficiency of both autonomous on-board and cooperative systems, and to assess especially the impact of integration of in-vehicle safety systems with the co-operative systems including naturalistic driving tests, where possible building on initiatives promoted by Member States and/or Associated Countries.

The objective is to support at least two IPs to be funded under a).

**b) ICT-based systems and services for Smart Urban Mobility and new Mobility Concepts** to address the environmental footprint and safety of mobility, while fostering economic growth. This includes innovative new tools, services and methods for demand management, moving from restrictive to permissive systems; ICT tools and services for logistics optimised for urban environments; use of ICT for replacing mobility (virtual mobility, telepresence); and new, multi-modal urban mobility concepts.

#### **c) Coordination and support actions**

In the framework of the Intelligent Car initiative: research agendas, dissemination of results (user awareness campaigns), assessments of socio-economic impact and training.

#### **d) International cooperation**

In accordance with the specific cooperation agreements with Japan and the USA, active exchange of information will be fostered through the creation of bilateral task force(s) and regular workshops which will establish a mechanism for mutual validation and exploitation of programme results, e.g. methodologies, draft specifications and standards, and for accessing Field Operational Tests datasets.

### **Expected Impact**

- Improved safety, efficiency and competitiveness of transport systems across Europe, towards the objective of reducing fatalities within the EU.
- Optimised mobility of people and goods in urban environments across different transport modes, through the provision of accessible and reliable logistics information services.

- Improved quality of life in urban environments, through the provision of innovative demand management and traffic control and management systems, as well as new mobility concepts which meet the increased demand, support economic growth, are environmentally sustainable and capable of accommodating future uncertainties and shocks.
- Wider uptake of intelligent vehicle systems and co-operative systems through proof-of-concept to all stakeholders in Field Operational Tests.
- Increased European research excellence by fostering closer cooperation with leading international partners.

### **Funding Schemes**

a): IP, STREP, CSA; b): STREP; c), d): CSA

### **Call**

ICT call 6

### **Timing of the Calls:**

#### **ICT call 4**

- Call identifier: FP7-ICT-2009-4
- Date of publication: 19 November 2008
- Closing Date: 1 April 2009

#### **ICT call 6**

- Call identifier: FP7- ICT -2009-6
- Date of publication: 24 November 2009
- Closing Date: 13 April 2010

### **For further information:**

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