i2010
Intelligent Car Initiative

Safety

EU funded research activities in the area of "Intelligent Vehicles"

European Commission
Directorate General Information Society and Media
Components and Systems

Rosalie ZOBEL
Director

European Commission
Information Society and Media

SEVENTH FRAMEWORK PROGRAMME

Content

- **The 7th FP for RTD**
- The i2010 Intelligent Car
  - Pillar I: The eSafety Forum
  - Pillar II: RTD in ICT
    - 6th FP
    - 7th FP
  - Pillar III: Awareness raising actions

SEVENTH FRAMEWORK PROGRAMME

i2010 Intelligent Car Initiative

European Commission Information Society and Media

FP7 in general

- Lisbon Strategy: become the "most dynamic competitive knowledge-based economy in the world"
- Bundles all research-related EU initiatives under one common roof
- Plays crucial role in reaching goals of growth, competitiveness and employment
- Together with a
  - new Competitiveness and Innovation Programme (CIP)
  - Education and Training programmes
  - Structural and regional funds

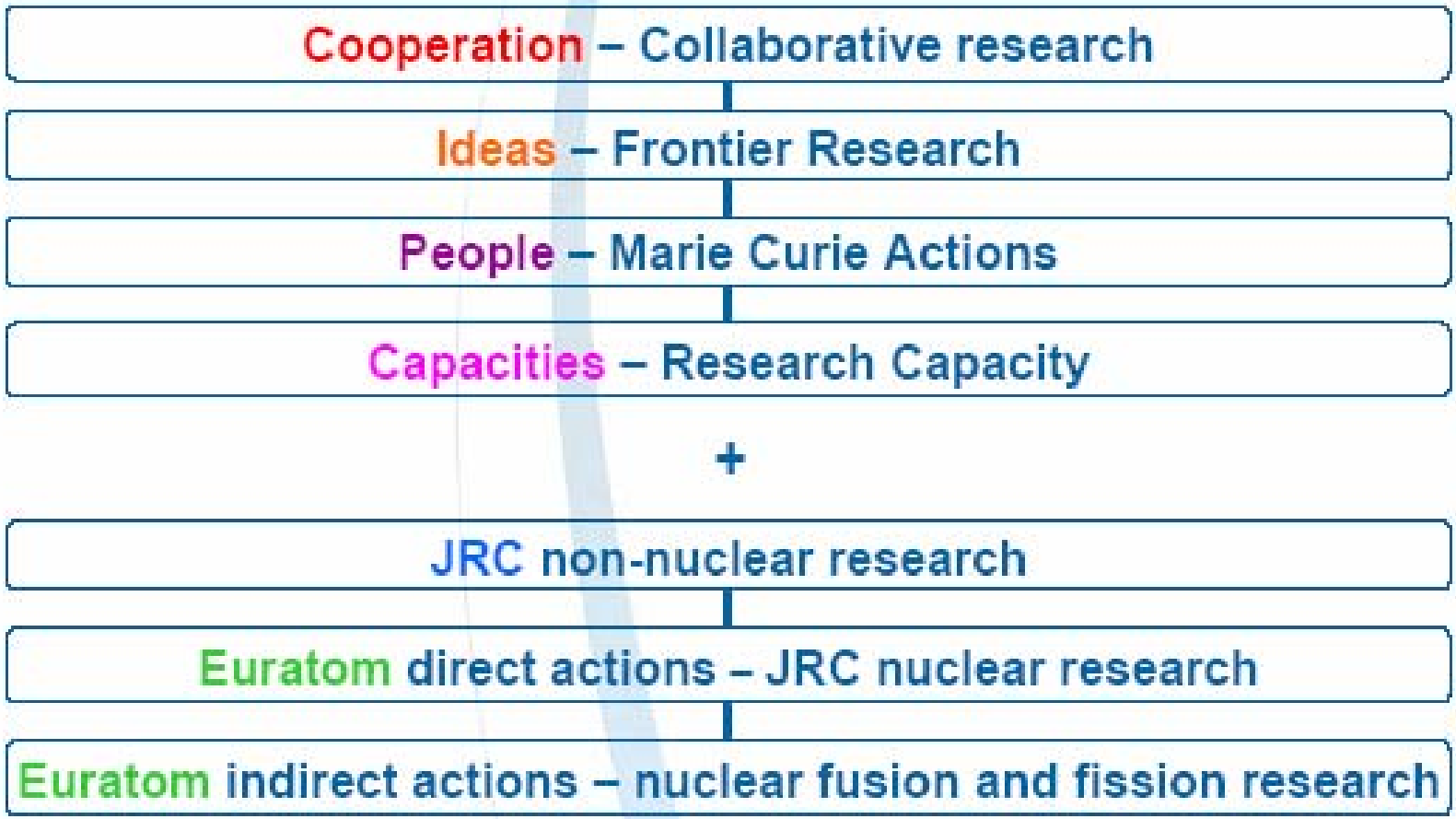
FP7 – What's new compared to FP6?

- Duration increased from 5 to 7 years (except for Euratom FP)
- Annual budget increased significantly
- New structure: Cooperation, Ideas, People, Capacities, Euratom and JRC activities
- Basic research European Research Council (Ideas) ~1 Bill €/year
- Research infrastructures funded
- Flexible funding schemes
- Simpler procedures

SEVENTH FRAMEWORK PROGRAMME

European Commission
Information Society and Media

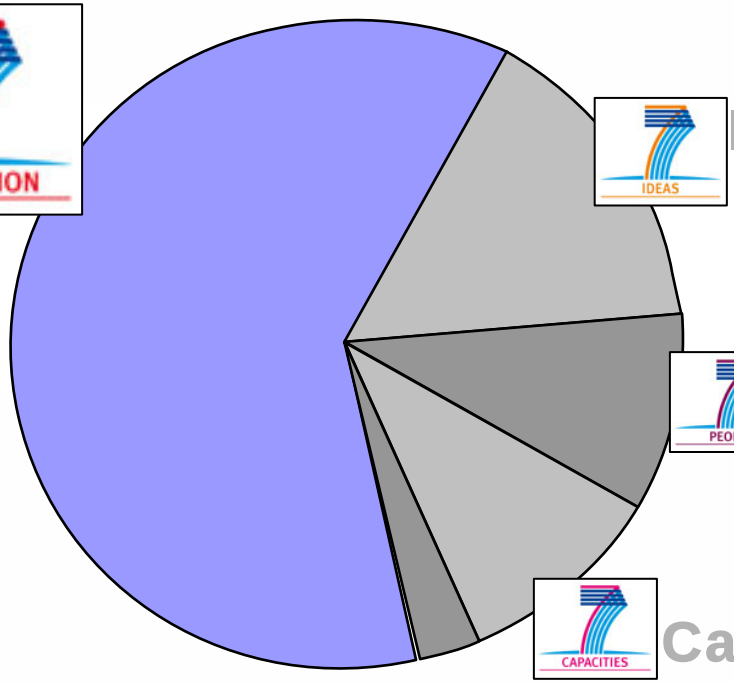
FP7 (2007-2013) | The Structure



Specific Programmes in FP7

Total:50.521 M€
+ EURATOM 2.700 M€

Cooperation: 32.365 M€



Ideas: 7.460 M€

People: 4.728 M€

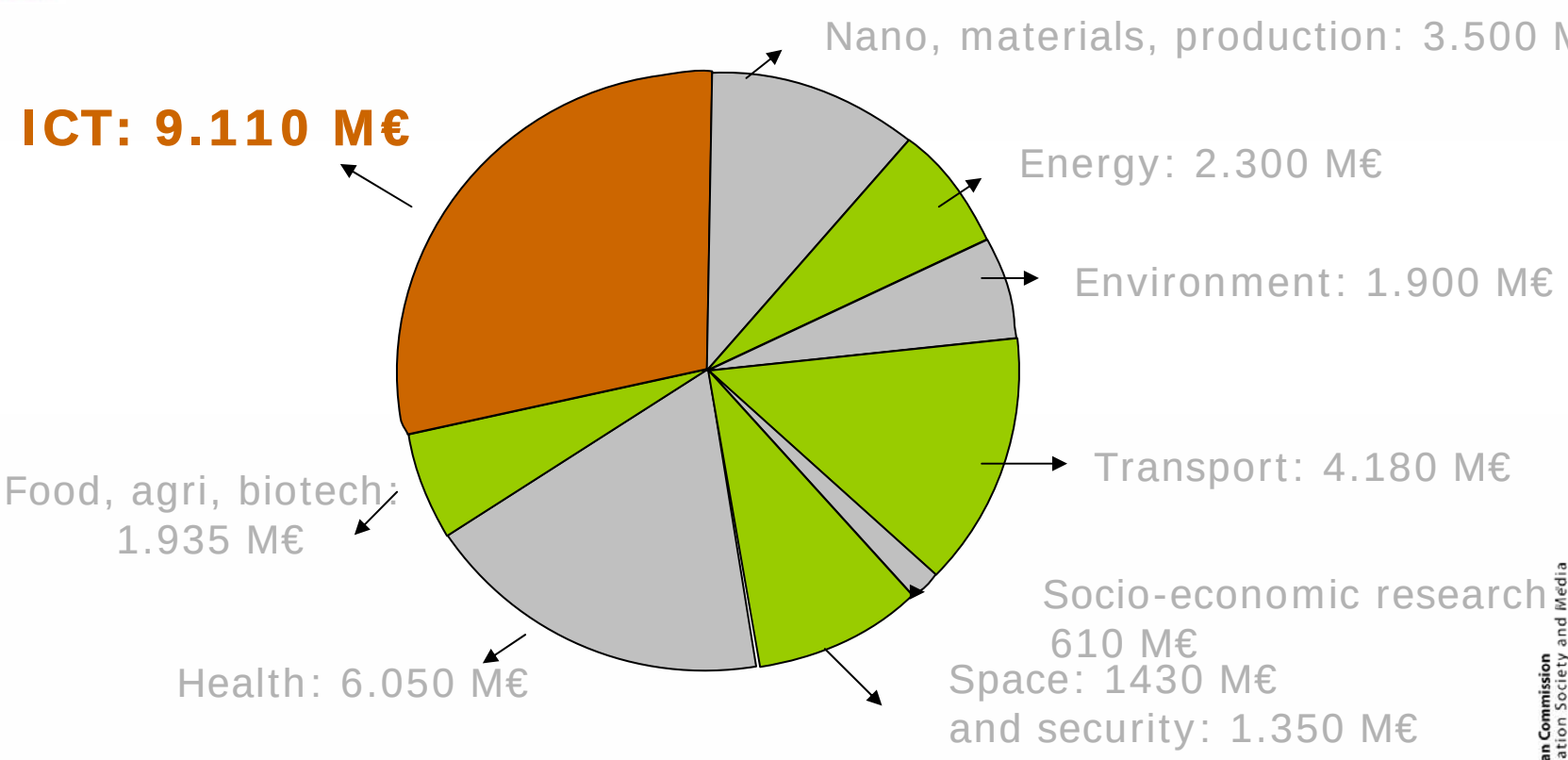
Capacities: 4.217 M€

JRC: 1.751 M€

Status: Council's agreement on 24th July 2006

Cooperation programme

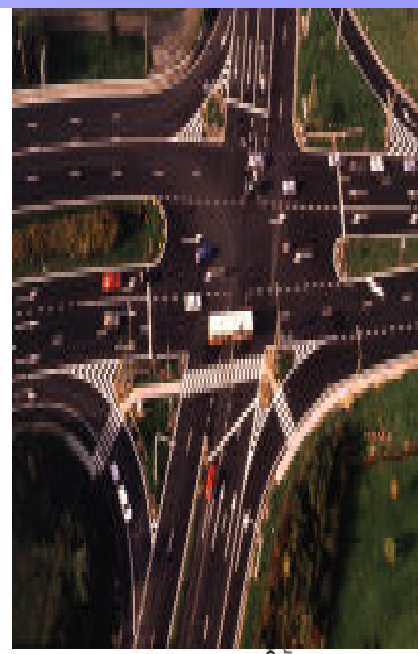
"Cooperation" – Collaborative Research – Themes



Total: 32.365 M€

ICT in FP7 – Objectives

"To enable Europe to master and shape the future developments of ICT so that the demands of its society and economy are met"



Thereby:

- Strengthening the competitiveness of all industry in Europe
  - **Master ICT for innovation and growth**
- Reinforcing the competitive position of European ICT sector
  - **Build industrial and technology leadership**
- Supporting EU policies
  - **Mobilise ICT to meet public and societal demands**
- Strengthening the European science & technology base
  - **A pre-condition for success**

SEVENTH FRAMEWORK PROGRAMME

ICT – Enabling Higher Economic Growth

- ICT investments contribute half of Europe's productivity gains (OECD, van Ark et al.)
  - **~0,7% of 1,4% in 1995-2002**
- Evidence of productivity gains
  - **from industries able to effectively use ICT**
  - **out of ICT producing industries**
- Europe's productivity gap largely explained by weaker investment in knowledge intensive sectors such as ICT

ICT in 7FP - Main Themes and Activities

- **ICT Technology Pillars**
  - pushing the limits of performance, usability, dependability, cost-efficiency

- **Integration of Technologies**
  - integrating multi-technology sets that underlie new functionalities, services and applications

- **Applications Research**
  - providing the knowledge and the means to develop a wide range of ICT-based services and applications

- **Future and Emerging Technologies**
  - supporting research at the frontiers of knowledge

SEVENTH FRAMEWORK PROGRAMME

European Commission
Information Society and Media

ICT in 7FP - Work programme structure

- The ICT WP 2007-2008 is structured around a limited set of **challenges**
- 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
- Each challenge is addressed through a *limited set* of **Objectives** which form the basis of Calls for Proposals

Content

- The 7th FP for RTD
- **The i2010 Intelligent Car**
  - Pillar I: The eSafety Forum
  - Pillar II: RTD in ICT
    - 6th FP
    - 7th FP
  - Pillar III: Awareness raising actions

SEVENTH FRAMEWORK PROGRAMME

i2010 Intelligent Car Initiative

European Commission Information Society and Media

i2010 and the Intelligent Car Initiative

On June 1, 2005 the Commission adopted the initiative
"i2010: European Information Society 2010 for growth and employment"

The **Intelligent Car** is one of the i2010 Flagship Initiatives.

The objective is to improve the quality of the living environment by supporting ICT solutions for **safer, smarter and cleaner mobility of people and goods**.

Intelligent Car: Structure

The i2010 Intelligent Car Initiative will build on the work of the eSafety initiative and follow a three – pillar approach

i2010
Intelligent Car Initiative

Safety Forum

RTD

SEVENTH FRAMEWORK PROGRAMME

Awareness Raising Actions

Working Groups
- eCall Driving Group
- Traffic Data…
-

Projects
- PReVENT
- CVIS
- GST
- SAFESPOT
-
-

Punctual Actions
- Studies
- "Intelligent Car Event"
-
-

SEVENTH FRAMEWORK PROGRAMME

European Commission
Information Society and Media

Content

- The 7th FP for RTD
- The i2010 Intelligent Car
  - **Pillar I: The eSafety Forum**
  - Pillar II: RTD in ICT
    - 6th FP
    - 7th FP
  - Pillar III: Awareness raising actions

First Pillar: The eSafety Forum

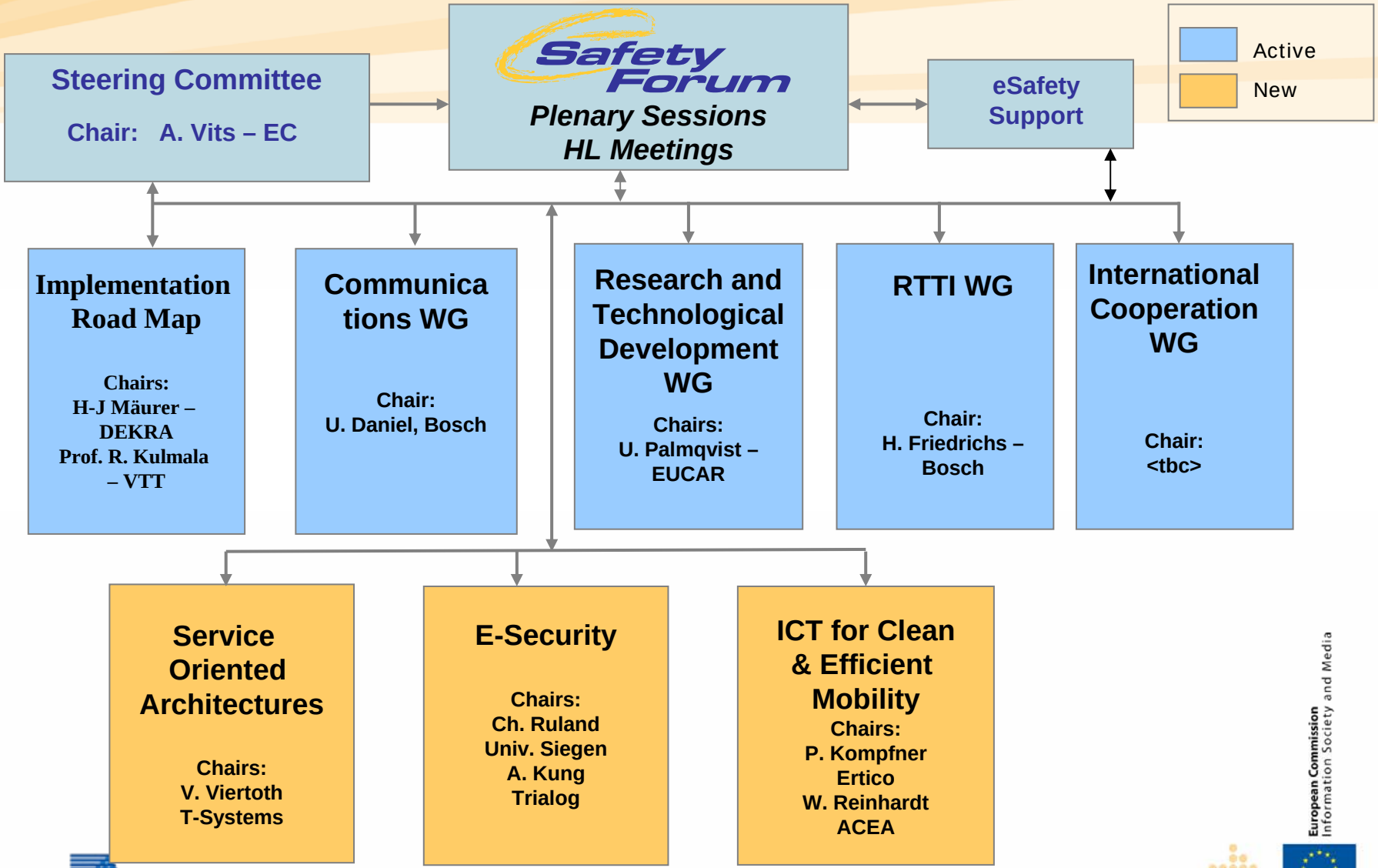
- Established in 2003 and has now over 150 members representing all road safety stakeholders
- Aims at **removing the bottlenecks to market implementation through consensus building among stakeholders** and recommendations to the Member States and the EU
- It has established **industry-led Working Groups** that work on priority topics. It has produced a consistent number of valuable reports

SEVENTH FRAMEWORK PROGRAMME

i2010 Intelligent Car Initiative

European Commission Information Society and Media

eSafety Forum: The Active WGs 2007



SEVENTH FRAMEWORK PROGRAMME

i2010 Intelligent Car Initiative

European Commission Information Society and Media

Next steps

- Support the activities of the “Communication Platform e-Safety Aware” for Intelligent Vehicles systems
- Raise user awareness through regular events, TV series and documentaries & benchmarking
- Establishment of a road map on incentives for “Intelligent Car” safety systems, mid 2007
- **eSafety Forum Plenary:**

  18 September 2007, Versailles/France together with PReVENT event
- Support Lead Market initiative for Intelligent Vehicles and Infrastructure
- Pan-European Deployment of eCall by 2009

Policy Initiatives

- Commission Communication on the first year assessment of the “Intelligent Car”, September 2007
- Update of the 2001 Recommendations on road Real-time Transport and Travel Information (RTTI), fall 2007
- TTE Council: discussion on the implementation of eCall and take up of ESP (end 2007)

Content

- The 7th FP for RTD
- The i2010 Intelligent Car
  - Pillar I: The eSafety Forum
  - **Pillar II: RTD in ICT**
    - 6th FP
    - 7th FP
  - Pillar III: Awareness raising actions

SEVENTH FRAMEWORK PROGRAMME

i2010 Intelligent Car Initiative

European Commission Information Society and Media

Second Pillar: The Research Programme

- The Intelligent Car Initiative activities **build upon the achievements and results of EU Framework Programmes** on research and technological development

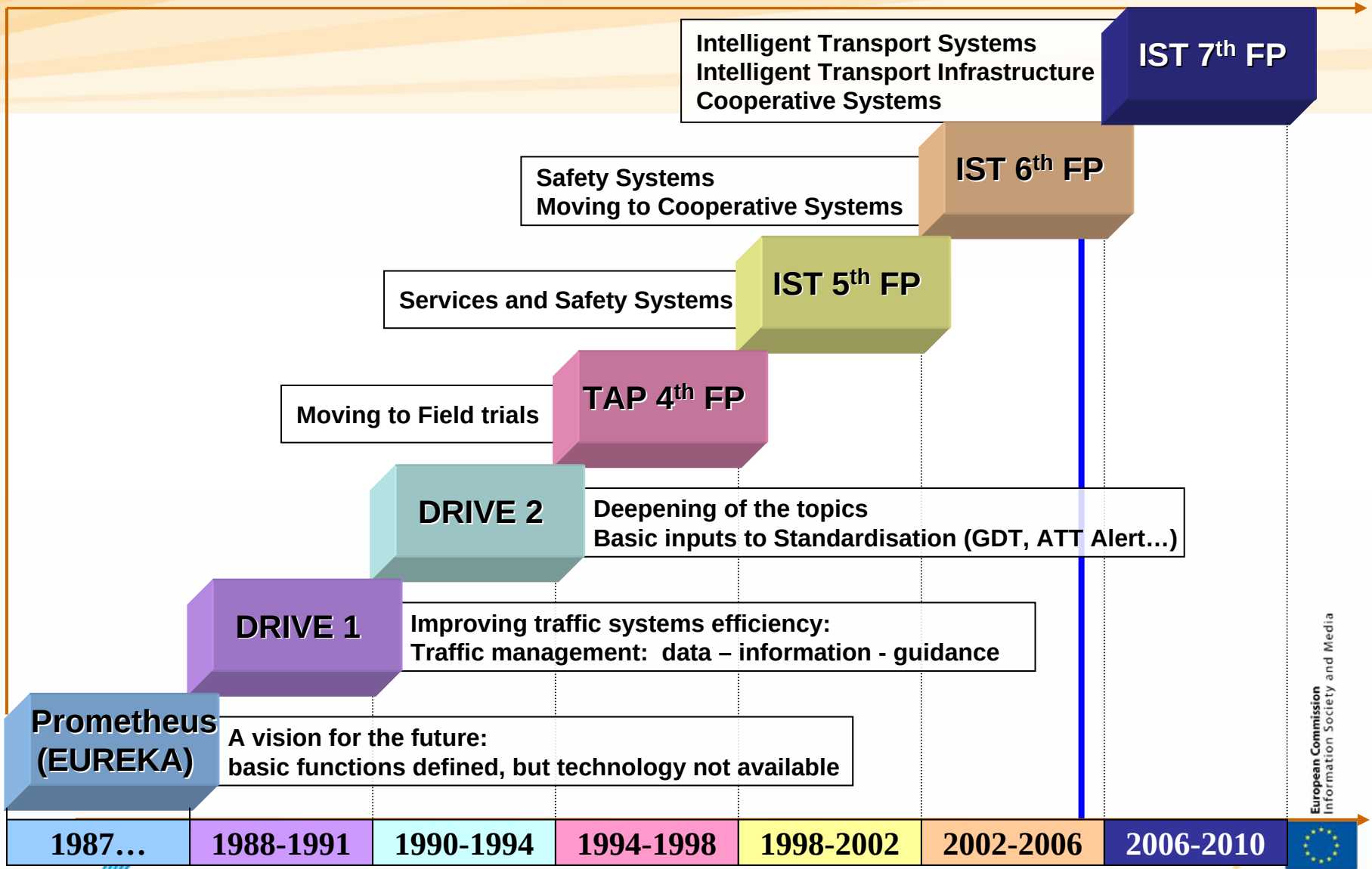
- The long-term objectives of the Intelligent Car Initiative will be **part of the ICT priority in FP7**

- The research priorities of the Intelligent Car fully support the **ERTRAC strategic research agenda**

SEVENTH FRAMEWORK PROGRAMME

i2010 Intelligent Car Initiative

Moving Towards Co-operative Systems



Content

- The 7th FP for RTD
- The i2010 Intelligent Car
  - Pillar I: The eSafety Forum
  - Pillar II: RTD in ICT
    - **6th FP**
    - 7th FP
  - Pillar III: Awareness raising actions

FP6 – ICT for transport

Call 1:
eSafety for Road and Air Transport

Projects	**14**
Grant	**79.9 M€**

Call 4:
Cooperative Systems - C2C and C2I

Projects	**22**
Grant	**91.7 M€**

Call 1 projects …

- **PREVENT, GST and AIDE demonstrate the strategic impact of IPs**
- **The NoE HUMANIST is bringing together research community and RTD potential for the future**

Call 4 projects …

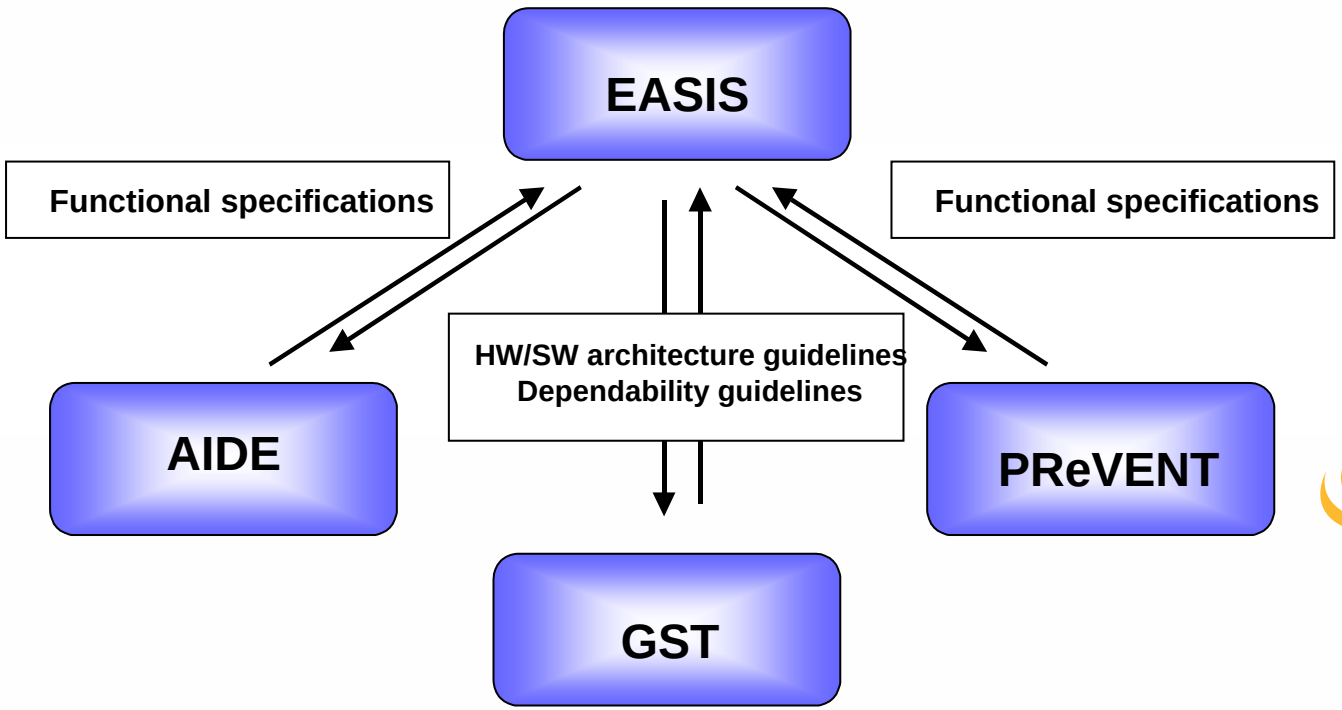
- **CVIS , SAFESPOT and COOPERS lead the way to Co-operative Systems**
- **15 STREPs are complementing and supporting the work**

Co-operative Systems will enhance the support available to drivers and other road users

SEVENTH FRAMEWORK PROGRAMME

Call 1: Collaboration and Synergies

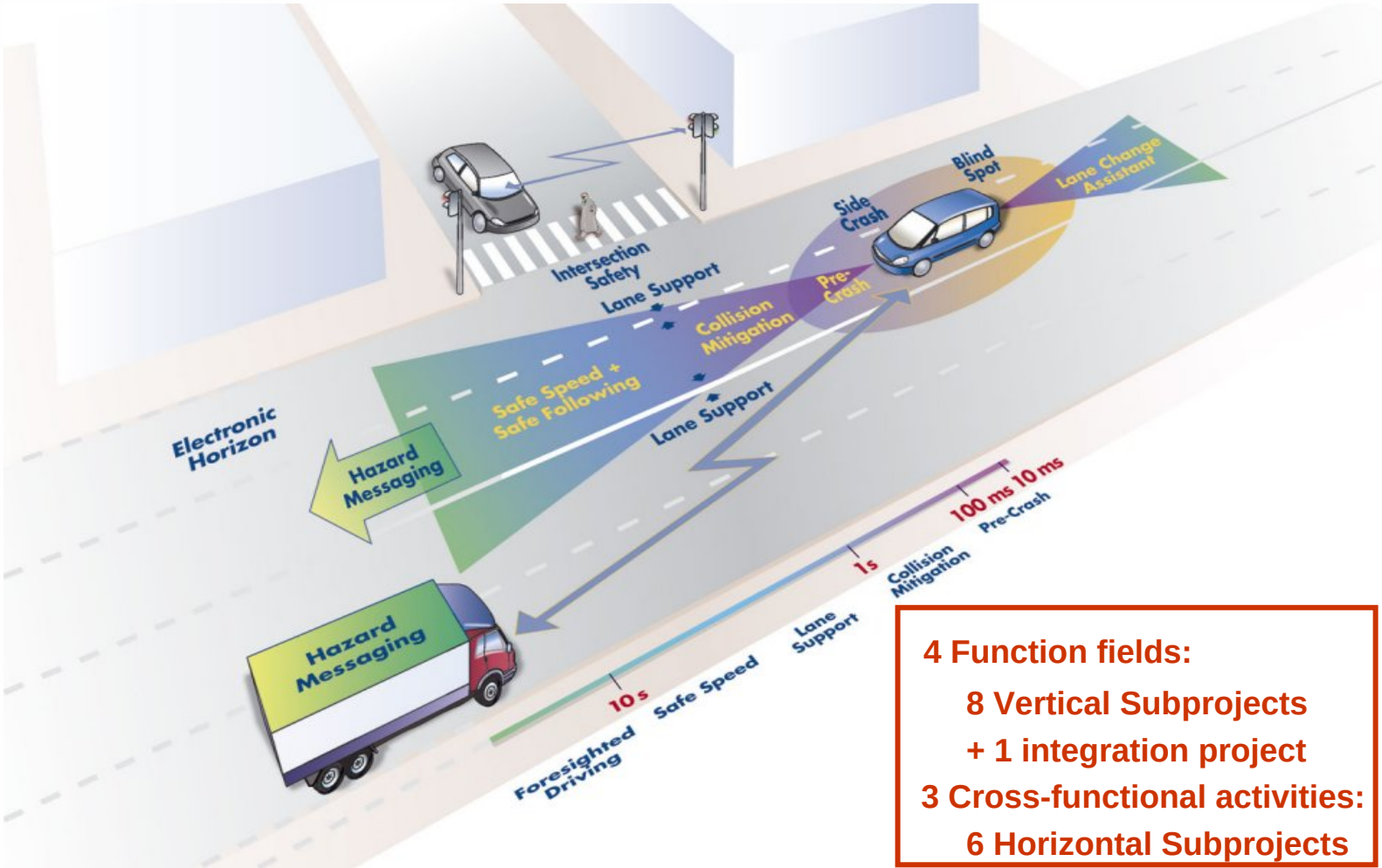
EASIS
will provide transversal architecture support for safety functions



Call 1: Prevent

PReVENT **will develop, test and evaluate safety related applications, using advanced sensor and communication devices integrated into on-board systems for driver assistance**

52 partners
4 years
Cost: 55M€
EU: 30 M€



4 Function fields:
8 Vertical Subprojects
+ 1 integration project
3 Cross-functional activities:
6 Horizontal Subprojects

SEVENTH FRAMEWORK PROGRAMME

Vision: An Adaptive Integrated Driver-Vehicle InterfacE

Integration of ADAS, IVIS and nomad devices into the driver's environment

28 partners
4 years
Cost: 12.5 M€
EU: 7.3 M€

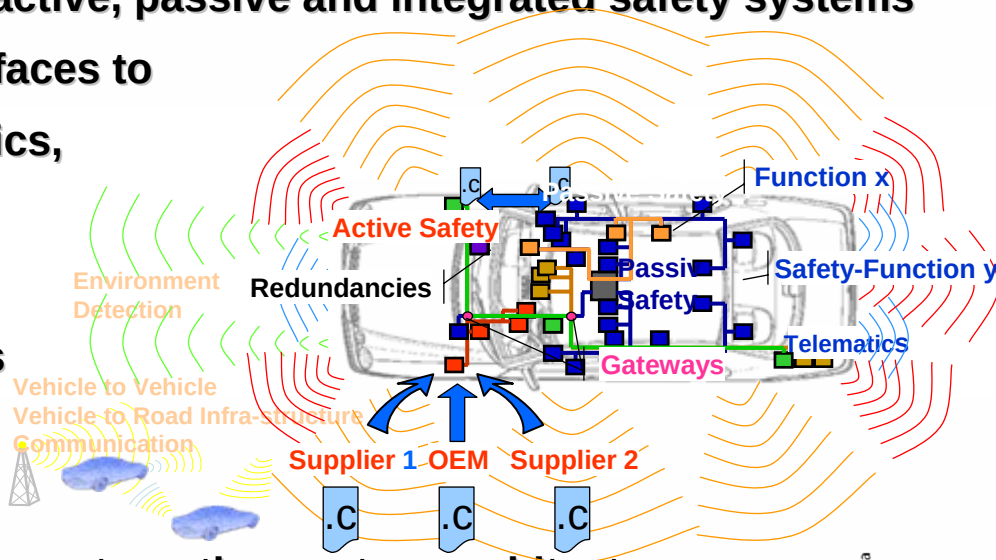
www.aide-eu.org

Call 1: EASIS

Electronic Architecture and System Engineering for Integrated Safety Systems

The enabling technology for the introduction of integrated safety systems

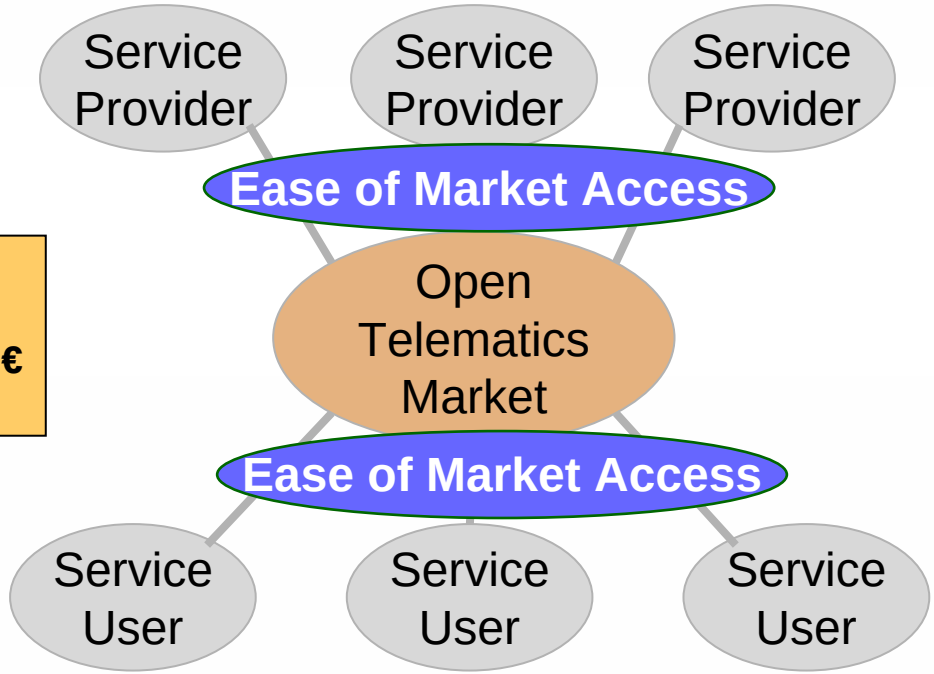
- A modular scalable E/E-architecture for active, passive and integrated safety systems
- Standardised signal and functional interfaces to environment detection systems, telematics, powertrain, chassis, and HMI
- Embedded system safety analysis
- Prototype implementation and validators
- Means to handle high system complexity in the development process
- Provision of a migration path into existing automotive system architectures
- Provision of a high availability and safety even in case of single component failures
- Preparation for standardisation



21 partners
3 years
Cost: 9.4M€
EU: 5 M€

Call 1: GST

Goal: open and standardised framework architecture enabling end-to-end in-vehicle telematics services



49 partners
3 years
Cost: 21.5M€
EU: 11 M€

Technological Subprojects:

– Open Systems
– Certification
– Security
– Service Payment

Safety Services Subprojects:

– Rescue
– Enhanced Floating Car Data
– Safety Channel

www.gstproject.org

SEVENTH FRAMEWORK PROGRAMME

European Commission Information Society and Media

Co-operative Systems will enhance the support available to drivers and other road users

Research & Development

Projects:
- CVIS
- Safespot
- Coopers
- …

Wider Adoption
Best Use

- COMeSafety
- Sevecom
- …

Right Regulatory Environment

- Spectrum policy (CEPT)
- eSafety WG on communications
- …

Call 4: Collaboration and Synergies

Communication Architecture Co-operation

CVIS
COOPERATIVE VEHICLE-INFRASTRUCTURE SYSTEMS

Coordinator: **ERTICO**
Total budget: € 41 Million
EC contribution: € 22 Million
Consortium: 61 partners - 12 countries

SAFESPOT

Coordinator: **Fiat Research Centre**
Total budget: € 38 Million
EC contribution: € 20,5 Million
Consortium: 51 partners - 12 countries

coopers

Coordinator: **Austria tech**
Total budget: € 16,8 Million
EC contribution: € 9,6 Million
Consortium: 37 partners - 14 countries

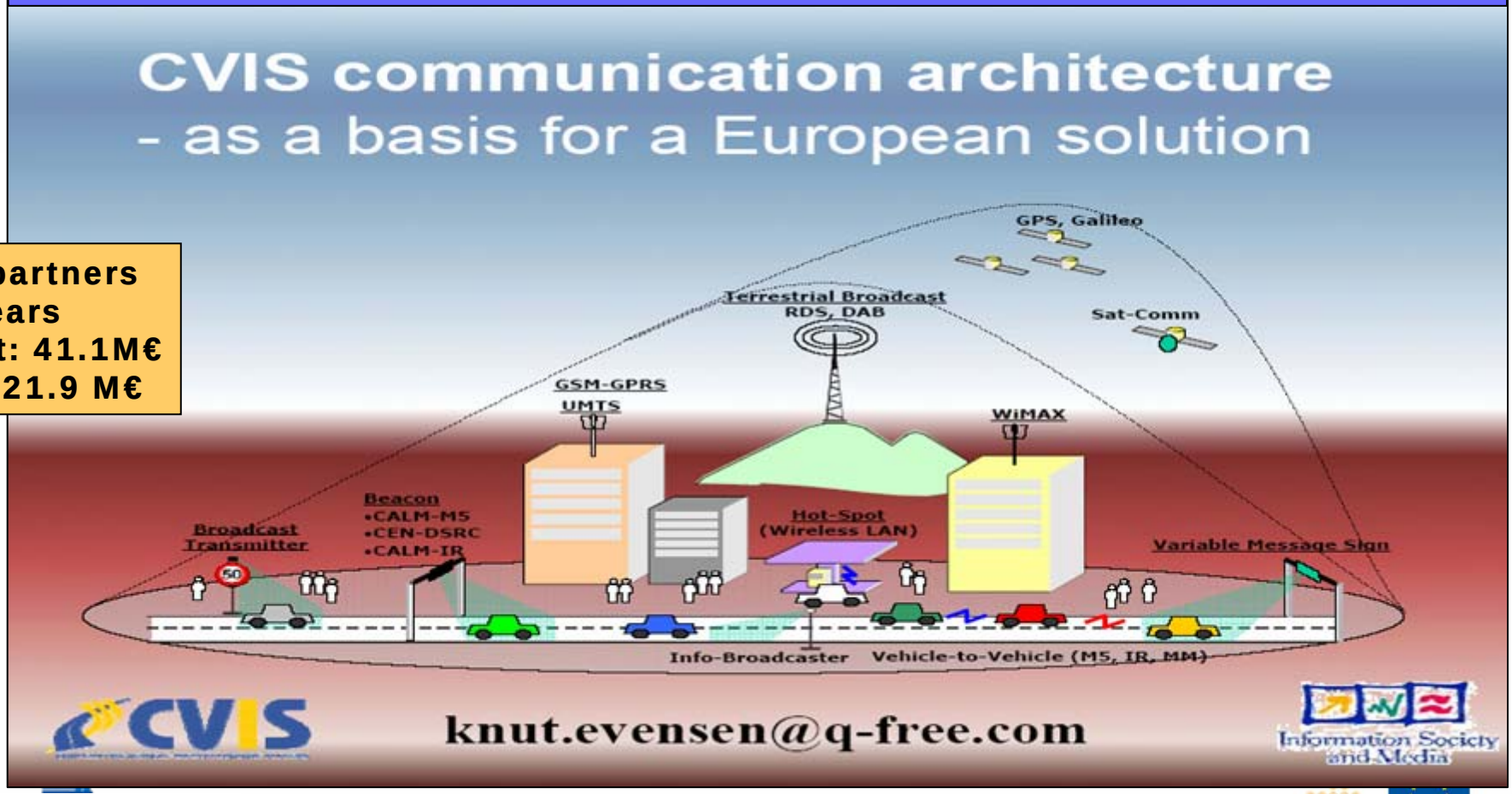
Co-operating projects also includes: **SEVECOM, COMeSafety, Car-2-Car Communications Consortium (C2C-CC), Network on Wheels (NoW), INVENT ACTIV (Germany), CVHS (UK), IVSS (Sweden)**

SEVENTH FRAMEWORK PROGRAMME

Call 4: CVIS

The Integrated Project focuses on **V2V** and **V2I** cooperative systems **for greater transport efficiency**

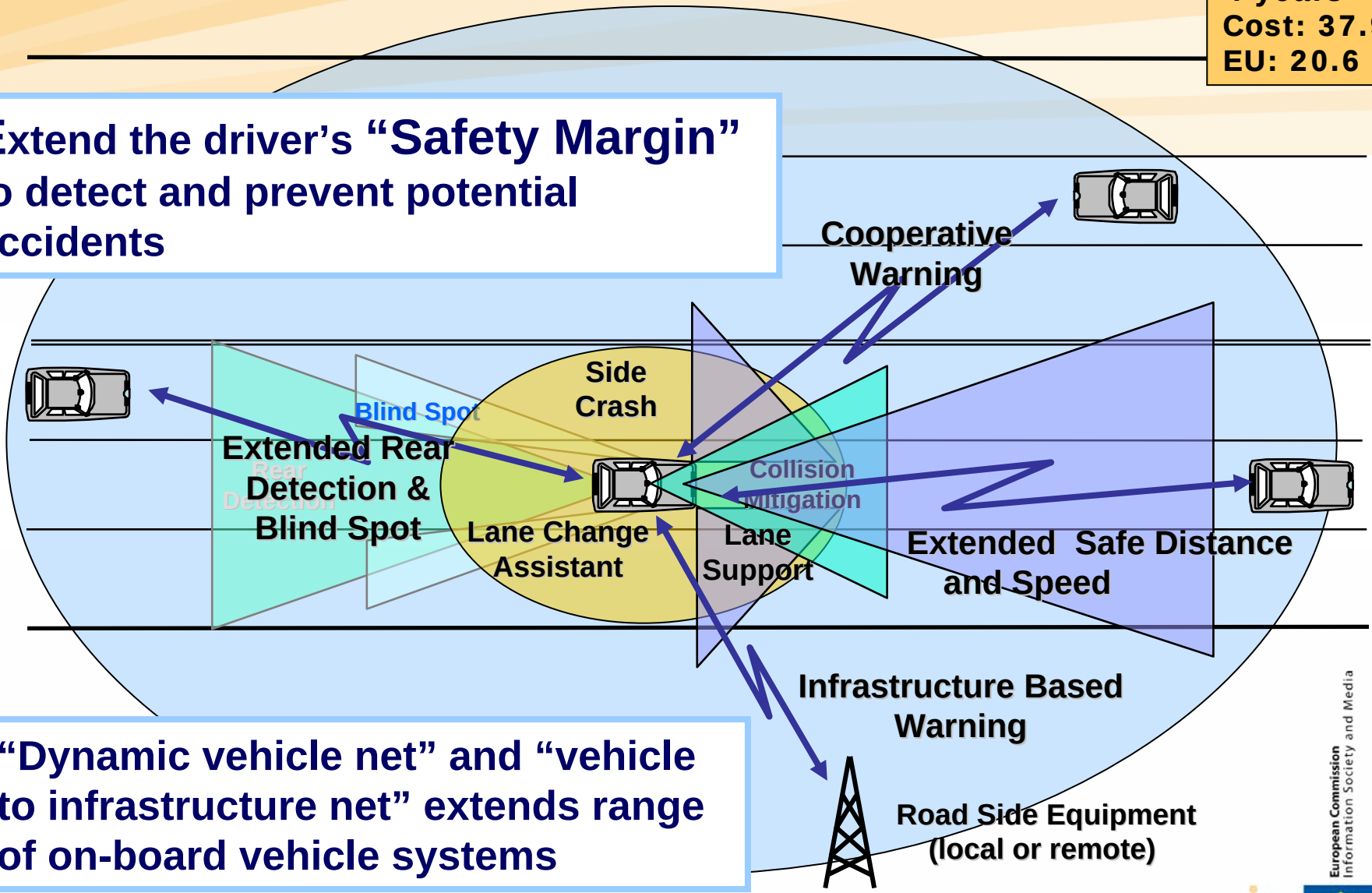
75 partners
4 years
Cost: 41.1M€
EU: 21.9 M€



Call 4: SAFESPOT (IP)

50 partners
4 years
Cost: 37.9M€
EU: 20.6 M€

Extend the driver's "Safety Margin" to detect and prevent potential accidents

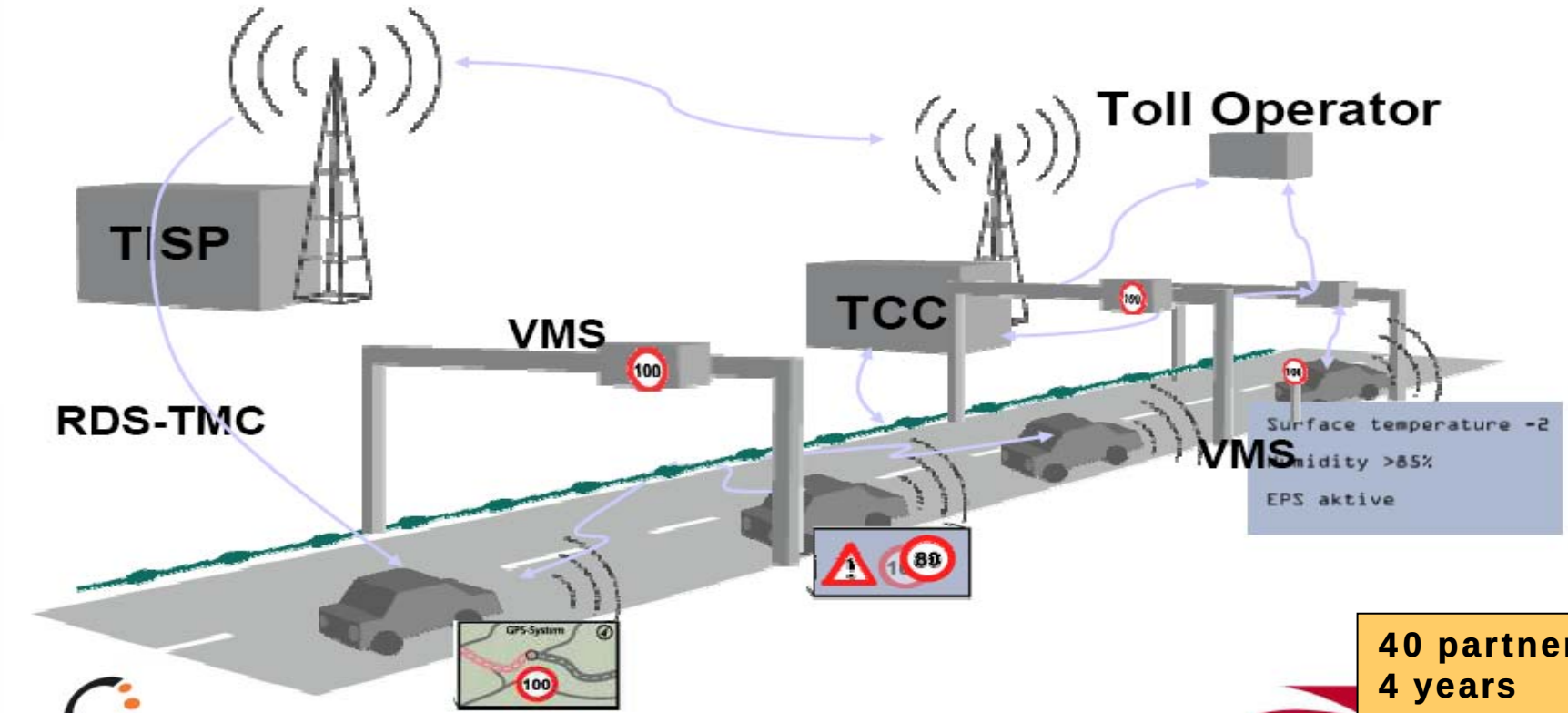


"Dynamic vehicle net" and "vehicle to infrastructure net" extends range of on-board vehicle systems

European Commission
Information Society and Media

Call 4: COOPERS (IP)

COOPERS aims at developing innovative solutions for an I2V Communication Infrastructure, which will be integrated with V2V communication systems



coopers

40 partners
4 years
Cost: 16.8 M€
EU: 9.8 M€

SEVENTH FRAMEWORK PROGRAMME

Content

- The 7th FP for RTD
- The i2010 Intelligent Car
  - Pillar I: The eSafety Forum
  - Pillar II: RTD in ICT
    - 6th FP
    - **7th FP**
  - Pillar III: Awareness raising actions

ICT meeting societal challenges for mobility

Examples…

- Integrated ICT-based **in-vehicle safety systems** based on open, secure and dependable architecture and interfaces
- Interoperable cooperative **traffic management** **and** **safety systems**
- Personalised, location-aware **info-mobility services**, including navigation
- **Field Operation Tests** to produce validated cost/benefits data

Workprogramme 2007-2008 Challenge 6: ICT for Mobility

- The societal challenge **ICT for Mobility, Environmental Sustainability and Energy Efficiency** is
  - focused on systems for safer and more efficient mobility of people and goods and on raising Europe's capacity for a more sustainable management of natural resources and waste
  - aims at achieving mobility in Europe that is virtually accident-free, efficient, adaptive clean and comfortable
  - is embedded in the i2010 "Intelligent Car" Initiative
- Three objectives address this challenge
  - **ICT for the "Intelligent Car" and Mobility Services**
  - **ICT for Cooperative Systems**
  - ICT for Environmental Management and Energy Efficiency

Call 1

Objective ICT-2007-6.1: ICT for Intelligent Vehicles & Mobility Services

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:**

    (related to Standardisation and Agreed Specifications; Ramping up of Field Operational Tests; Mobility Services for People and Goods)

Indicative budget 57 M€

Call 1 deadline 8 May, evaluation ongoing

SEVENTH FRAMEWORK PROGRAMME

European Commission Information Society and Media

Call 2

Objective ICT-2007.6.2: Cooperative Systems

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 Actions:**

    (related to Cooperative Systems; Standardisation; Assessment of Socio-economic Impact; International Cooperation; Training Activities)

Indicative budget 48 M€*

* Amount to be confirmed after a new financing decision for the 2008 budget

Call 2 opened 12th June 2007

SEVENTH FRAMEWORK PROGRAMME

European Commission Information Society and Media

Content

- The 7th FP for RTD
- The i2010 Intelligent Car
  - Pillar I: The eSafety Forum
  - Pillar II: RTD in ICT
    - 6th FP
    - 7th FP
  - **Pillar III: Awareness raising actions**

Third Pillar: Awareness Actions

- The awareness pillar of the Intelligent Car Initiative will promote, active information dissemination to a wide audience:
- To raise drivers and policy maker's **knowledge about the potential of intelligent vehicle systems**
- To stimulate **user's demand** and create socio-economic acceptance.
- To **facilitate the deployment** of mature technologies and systems in the initial phase of market penetration
- To encourage stakeholders initiatives supporting i2010Initiation of reflection on new challenges: i.e. testing and certification of IVSS

Awareness actions

- **Eurobarometer survey**:
  - **Extra safety, not extra prices for intelligent systems**
  - More than 80% want ESP in next car
  - More than 70% want eCall in next car
- **Communication Platform "e-Safety Aware"** for Intelligent Vehicles systems
  - « Choose ESC » campaign launched with high level public event 8/5/07 in Rome
- **Benchmarking Study** on Activities in Promoting and Deploying **Intelligent Vehicle Safety Systems** in the EU
- **Feasability Study** for Setting up a Performance Testing Programme for **ICT Based Safety Systems** for Road Transport

More information

Mail Boxes:
INFSO- intelligent-car@ec.europa.eu
INFSO-eSafety@ec.europa.eu

Intelligent Car Initiative on CORDIS:
http://ec.europa.eu/information_society/activities/esafety/intelligent_car/index_en.htm

eSafety Web-site:
http://europa.eu.int/information_society/programmes/esafety/index_en.htm

eSafetySupport website
www.eSafetySupport.org

SEVENTH FRAMEWORK PROGRAMME

European Commission
Information Society and Media

Thank you

for your attention