

SAFERIDER User Forum  
25 June 2008

# Bringing intelligent systems to the market: the Intelligent Car Initiative and the new challenges of ADAS R&D

**Fabrizio Minarini**  
Head of Sector

**ICT for Transport**  
**Directorate General Information Society and Media**  
**European Commission**

# Challenges at EU Level

## Congestion

- Represents a loss of 1% GDP yearly
- 10% of road network daily

## Energy Efficiency & Emissions

- about 12% of the overall EU CO<sub>2</sub> emissions coming from the fuel consumed by passenger cars.
- While the EU reduced CO<sub>2</sub> emissions by just under 5% (1990-2004), the CO<sub>2</sub> emissions from road transport have increased by 26%

## Safety

- Almost 43.000 deaths on the roads (EU27-2006)
- 1.7 million injured persons (EU27-2006)
- Human error is involved in 93% of the accidents



# ICT as a potential solution

## Intelligent Transport Systems

Present new solutions contributing to solve societal challenges related to transport:

**Reduce the number of fatalities and injuries on the roads by alerting the driver of dangers**

**Increase overall performance of the transport systems by reducing congestion**

**Contribute to a more efficient use of fuels by better vehicle and traffic management**



## Some Examples

**eCall:** automatic emergency call if all vehicles by 2010:

- Save up to 2.500 lives a year
- Savings up to a maximum of 22 billion €
- Reduced congestion times between 10% and 20%.

**Collision avoidance:** with 0.5-second warning time, about 60% of rear-end collisions can be prevented. Rear-end crashes at 80 km/h could be reduced by 75% with brake assist and crash avoidance technology

**Modern Urban Traffic Control** systems can lead to up to 40% less delays and up to 13% increase of vehicles mean speed

Through **Eco-Driving support**, motorists can save up to 25% on fuel consumption & costs with no loss of mobility



# Innovation needs a Deployment Strategy

- In Europe → Pan European Systems
- Create Socio-economic acceptance
- Continue Improving systems efficiency and reduce costs through R&D
- Build a Business case and Stimulate User's Demand

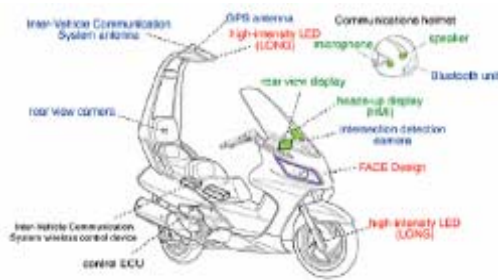
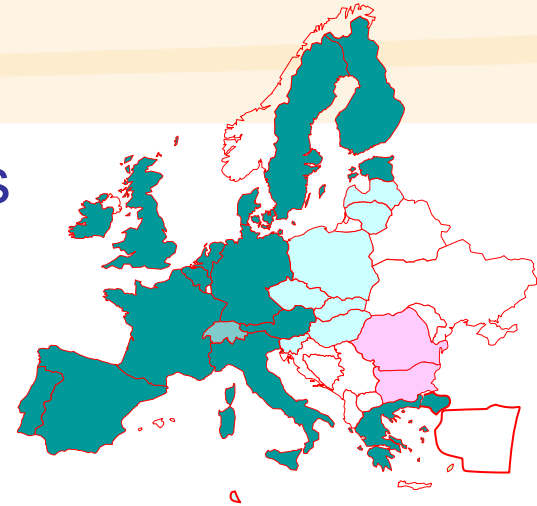
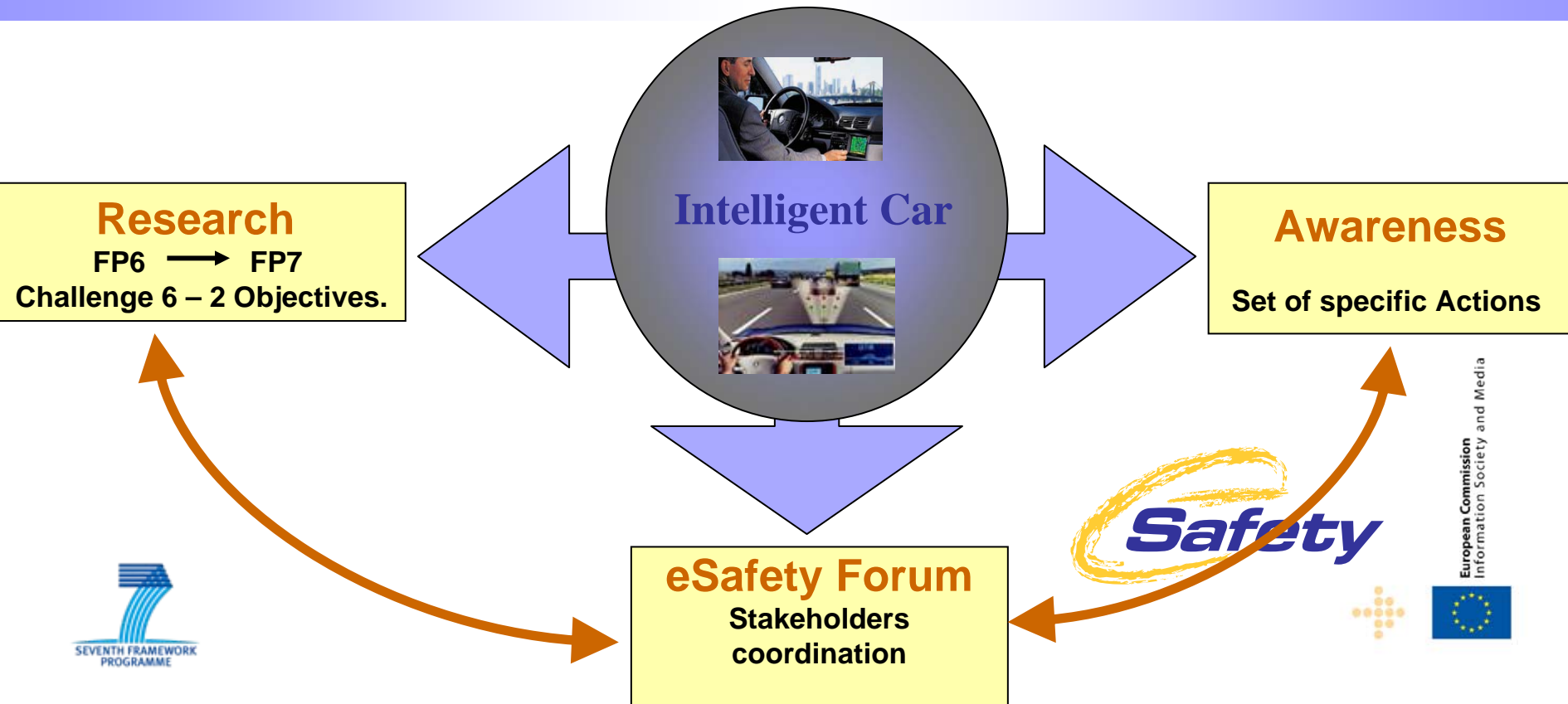


Figure 9: Honda ASV-3 systems



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 Implementation

*2nd  
Commission Communication*

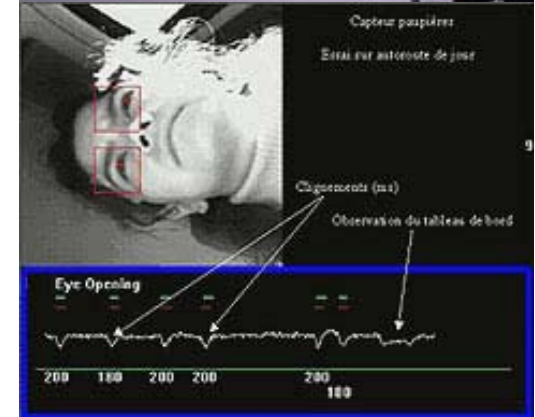
*Adopted 17/9/2007*

**Towards Europe-wide  
Safer, Cleaner and Efficient  
Mobility:  
The First Intelligent Car Report**



## A policy framework for actions in the area of Safer, Cleaner and Smarter Vehicles

1. Coordinate and support the work of relevant stakeholders, citizens, Member States and the Industry through eSafety Forum
2. Support research and development in the area of smarter, cleaner and safer vehicles and facilitate the take-up and use of research results
3. Create awareness of ICT based solutions to stimulate user's demand for these systems and create socio-economic acceptance



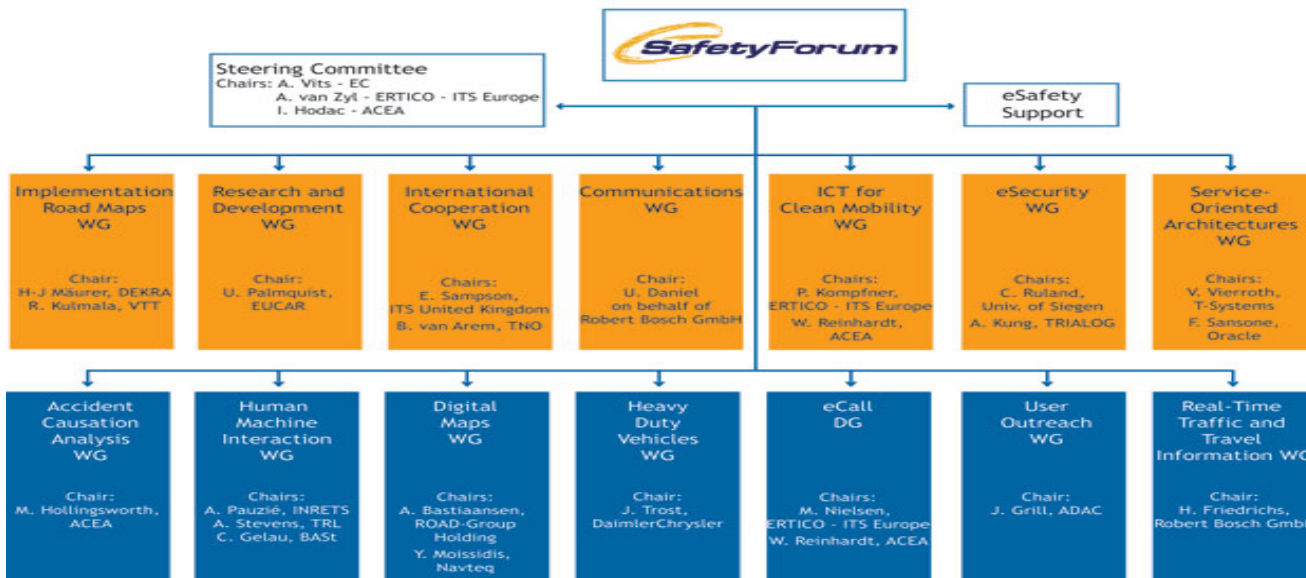
# 1st pillar the eSafety Forum



Established in 2003 is a joint platform involving all road safety stakeholders. Its main objective is to promote and monitor the implementation of the recommendations identified by the eSafety Working Groups and to support the development, deployment and use Intelligent vehicle safety systems.



## eSafety Forum Working Groups



Active  
Concluded

## Call 1

### ICT for Intelligent Vehicles & Mobility Services

#### Focus:

- Intelligent Vehicle Systems
- Mobility Services for People
- Mobility Services for Goods

#### Selected proposals:

2 IP

9 STREP

3 SA

**56.6 M€funding**



## Call 2

### ICT for Cooperative Systems

#### Focus:

- Cooperative Systems
- Field Operational Tests

#### Projects under negotiation

#### Selected proposals:

2 IP

6 STREP

3 SA, 1 NoE

**48 M€funding**



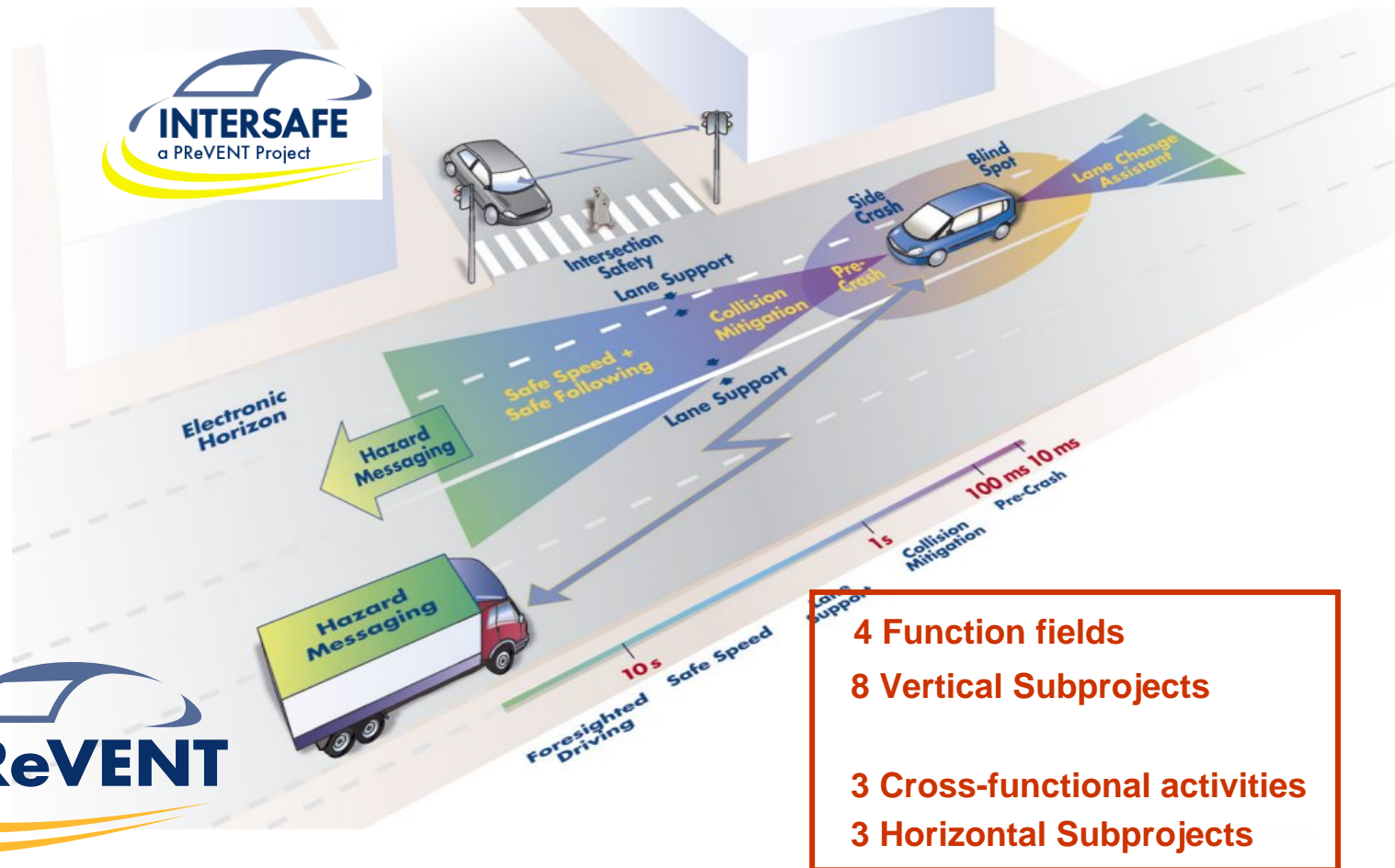
PReVENT Is the largest Integrated Project on Preventative and active safety applications. It developed, tested and evaluated safety related applications, using advanced sensor and communication devices integrated into on-board systems for driver assistance.

- 52 partners
  - Industry
  - Public Authorities
  - Research Institutes

- 1/2/04  
4 years

- Cost 55M€

- EU funding 30 M€



4 Function fields

8 Vertical Subprojects

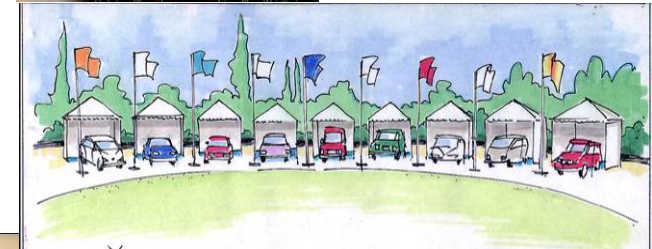
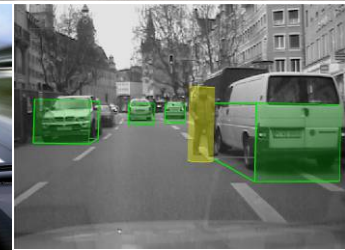
3 Cross-functional activities

3 Horizontal Subprojects

# Intelligent Car Event

## PReVENT days 18-21 September 2007

- Almost 1000 participants
- 25 PReVENT intelligent cars and trucks
- Total of 35 applications of the PReVENT results demonstrated
- More than 2300 in-vehicle demonstrations over 3 days
- Display of all vehicles during the Public day in front of the Versailles castle (estimated 12000 persons passing every day)



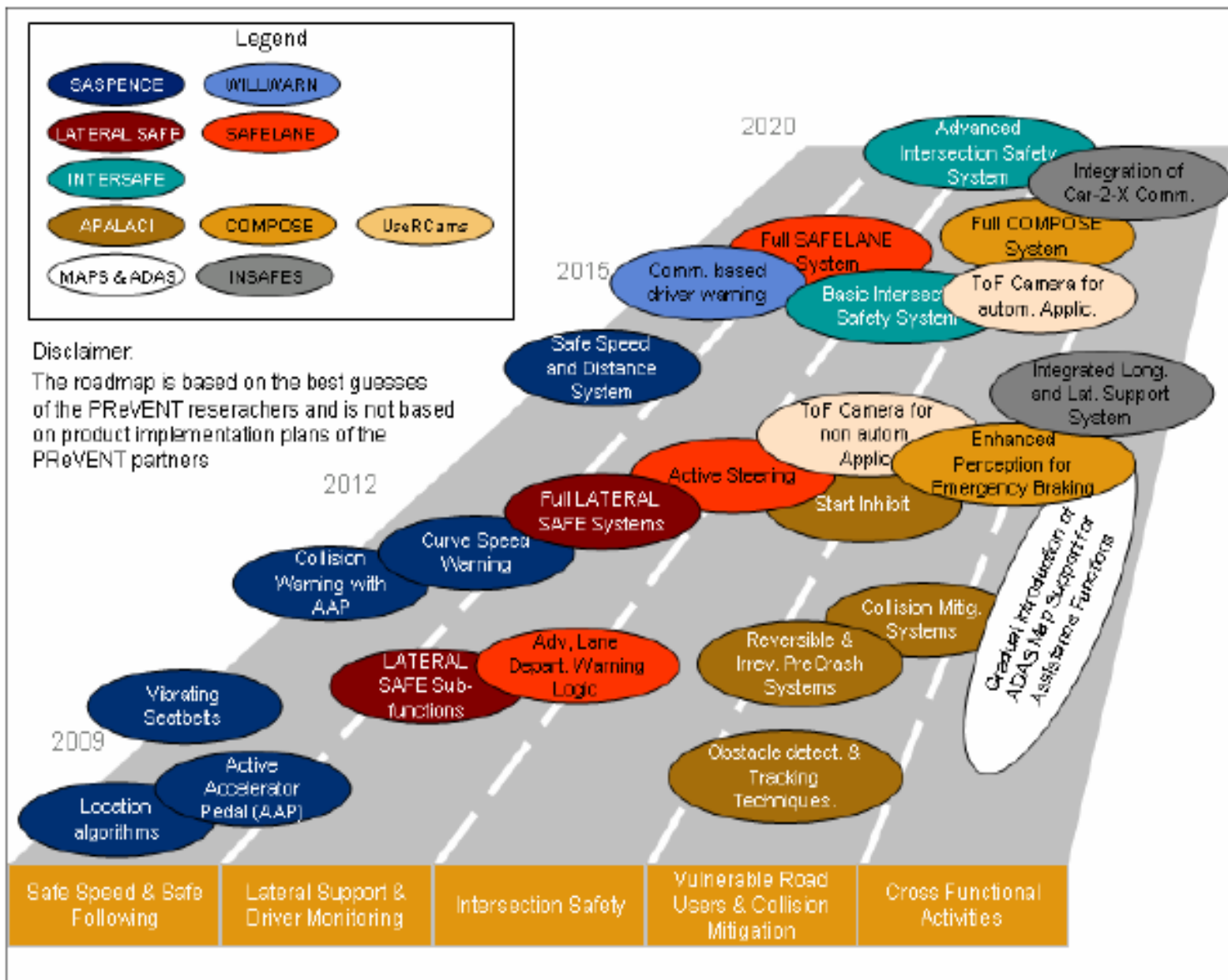


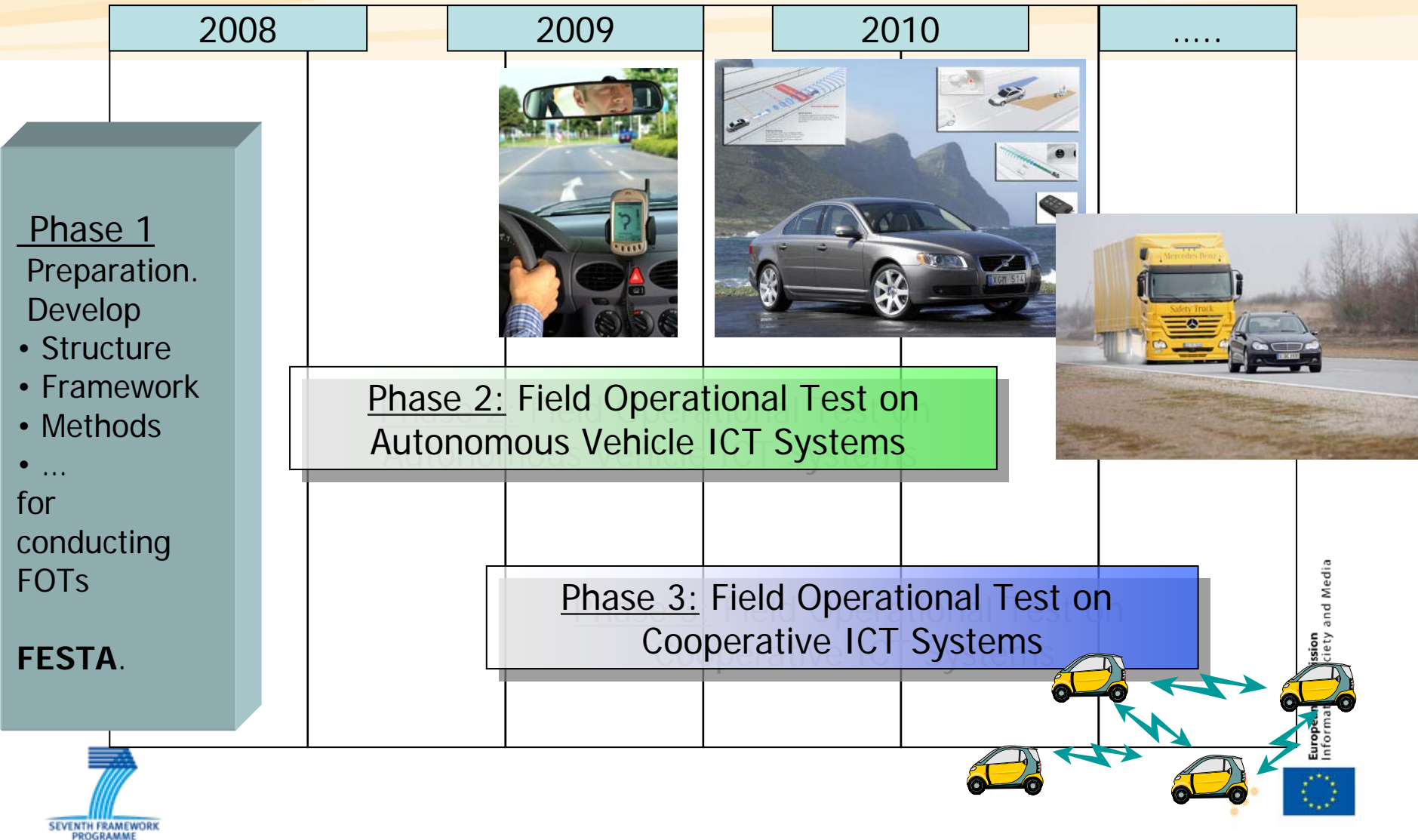
Figure 2.1: PREVENT Deployment Roadmap

# Field Operational Tests

## Objective of FOT in FP7

1. Validate the effectiveness of ICT based systems for safer, cleaner and more efficient transport in a real environment
2. Analyse driver behaviour and user acceptance
3. Analyse and assess the impact of intelligent safety and efficiency functions using real data
4. Improve awareness on the potential of intelligent transport systems and create socio economic acceptance
5. To obtain technical data for system design and product development
6. To ensure the transferability of the FOT results at National European and International level.

# Field Operational Tests (FOT) in FP7: Evaluation of ICT functions and their effects in real traffic



# 3rd Pillar: Awareness

- **eSafetyAware a non profit association in Belgium with 37 partners**

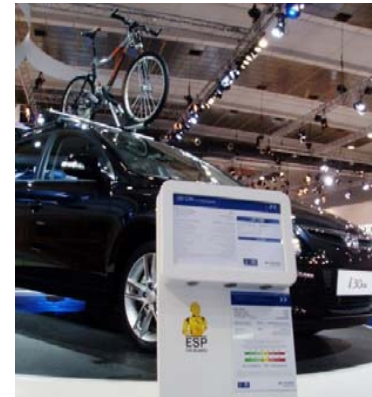
ACEA, ADAC, Bosch, Continental, Dutch Ministry of Transport, FIA Foundation, FIA, UK Department for Transport, Thatcham, Hyundai, ERTICO, Luxembourg Transport Ministry, Toyota, TRW, Valeo, ACI, Bridgestone, FITSA, DEKRA, DVR, ITS SPAIN, CLEPA, ÖAMTC, OVE, RACC, RoadSafe, Rockingham, Transport Canada, SARA, eSafety Support, ICCS, Ygomi, Knorr Bremse, SRA, Finnish Ministry of Transport, Euro NCAP, Norwegian National Centre on Emergency Health-Care Communication

- **Strengthening of the international cooperation**
- **Campaign with demonstration activities on ESC**
- **Targeting the next technology and new campaigns**



# ChooseESC! ([www.ChooseESC.eu](http://www.ChooseESC.eu))

- Launch of ESC campaign in May 2007
- Production of information material
- Production of videos
- Policy cooperation with US, Australia, Canada, Japan
- Close cooperation with Euro NCAP and the European Commission
- ESC demonstration events
- Labelling and marketing support



*Thank you  
for your attention!*

[www.ec.europa.eu/intelligentcar](http://www.ec.europa.eu/intelligentcar)

[www.ec.europa.eu/information\\_society/activities/esafety/index\\_en.htm](http://www.ec.europa.eu/information_society/activities/esafety/index_en.htm)

[www.esafetysupport.org](http://www.esafetysupport.org) [www.esafetyaware.eu](http://www.esafetyaware.eu)

