



R&D&I for safety and security  
road transport

ETP Session B3

o Kulmala VTT / iCar Support

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# [ eSafety Forum

**Vision:** Safe, smart and clean mobility with zero accidents, zero delays, no negative impact on the environment and connected and informed citizens,  
where products & services are affordable and seamless,  
privacy is respected and security is provided.

Forum provides a platform for all ITS stakeholders in Europe to discuss, define, coordinate and support activities to further innovation, research, development, deployment and use of ICT based transport systems and services

Work in working groups supported by iCarSupport

# [ eSafety RTD Topics 1

**Vehicle cooperation** (accurate up-to-date traffic information, local danger warnings, emergency notification)

**Cooperative solutions relying on intelligent infrastructure** for improved safety, traffic flow, environment-friendliness

**Detailed digitalisation of all road infrastructures** (geometry, characteristics, speed limits, etc.), including solution for real time updating of road/traffic abnormality information

# [ eSafety RTD Topics 2

**In-vehicle open platforms** with a flexible, integrated human-machine interface, integrated with nomadic solutions for seamless connectivity allowing a real multimodal mobility.

Solutions for **safer and more efficient mobility** (green driving, safe driving, pay/earn as you drive

**Supervised autonomous driving** solutions, in dedicated urban areas or highways (e.g. “green corridors” for buses, freight transport platooning)

# [ eSafety RTD Topics 3

Safety of **vulnerable road users** (passive and preventive safety, infra support, road users' passive/active cooperation)

Solutions to manage **vehicle speed and headway**

Promotion of development of standard methods, at European level, to **evaluate the safety level of roads** including both crash risk and consequence

**Driver coaching and road users' education/tutoring**, realistic driving simulator

Solutions to **reduce driver distraction** from primary driving task

# [ R&D&I Topics from eSafety IRM

**Long-term impacts, benefits and costs of intelligent vehicle and infrastructure systems**

**As above, but for system packages and bundles**

**Business models**

**Optimal ways to promote deployment (incentives, awareness building, training, fleets, ...)**

**Improvement of accident data (systems installed in vehicles)**

**Solutions to ensure liability, security, interoperability, ...**

# [ Personal view

## **Nano-simulation**

understanding and simulating road user and driver behaviour in the level of the person; enabling actual safety simulation with human errors leading to accidents and near-accidents

## **Pro-active traffic management**

interpretation of real time vehicle and infrastructure based data to predict incidents and preventing them from taking place, instead of reacting to incidents already occurred



# [ Personal view

## **Innovative procurement**

tendering solutions to well defined problems in transport system performance: innovation in both solutions and project effectiveness (instead of tendering well specified projects)

## **Understanding behavioural adaptation**

designing systems and services taking into account travellers' and drivers' adaptation to them in everyday use

# [ Interdisciplinary aspects

## Intelligent vehicles and infrastructure

Information and communication technology + vehicle engineering + transport engineering

Psychology and sociology

Ecology

Land use planning and architecture

Economics

Legal and organisational expertise

Neurology



# [ Thank you

Further information:

- Working group material available at [www.esafetysupport.org](http://www.esafetysupport.org) (-2010) and [www.icarsupport.org](http://www.icarsupport.org) (2010-)
- Database on safety and other effects [www.esafety-effects-database.org](http://www.esafety-effects-database.org)