



## eIMPACT

eIMPACT, "Socio-economic Impact Assessment of stand-alone and co-operative intelligent vehicle safety systems (IVSS) in Europe", is an European Specific Targeted Project co-funded by the European Commission Information Society Technologies and Media. This 6<sup>th</sup> Framework project, coordinated by TNO, started in January 2006 and will end in December 2007.

## Progress

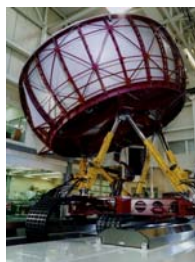
Partners made significant progress in the first year of eIMPACT. In addition to producing the first 3 deliverables (see information about D3 below), we developed market penetration scenarios for 2010 & 2020 and traffic, safety and efficiency methodologies. Related to perspectives on the market introduction of IVSS, the definition of policy instruments and interviews with key stakeholders is underway. Deliverables can be downloaded from the website.

## Deliverable D3

Deliverable D3 - Socio-economic Impact Assessment of Stand-alone and Co-operative Intelligent Vehicle Safety Systems (IVSS) in Europe – was delivered in December 2006.

This deliverable provides the methodological framework for the socio-economic impact assessment of stand-alone and co-operative IVSS, which is based on the findings of the SEiSS study. The framework applies cost-benefit analysis as the most prominent economic assessment tool to prove the profitability of a measure on society level. Since relying on cost-benefit analysis will not be sufficient to safeguard the successful market deployment of IVSS, cost-benefit analysis is embedded in a wider framework. The overall society perspective will be complemented by stakeholder analyses for key interest groups. The methodology also makes a proposal for the synthesis of the assessment results which lead to a decision path approach. The aim of this approach is to check whether there are constraints to a successful deployment of IVSS. With these results, the project provides valuable decision support to the eSafety groups and the Intelligent Car Initiative for the development of a future European IVSS roll-out strategy.

## WILLWARN Driving Simulator Results by DaimlerChrysler



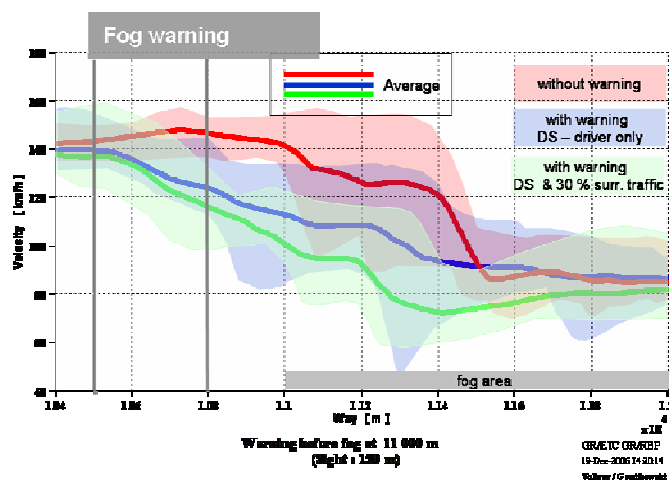
In the work package 3200 - traffic impact analysis – the driver behaviour of drivers receiving a warning of the WILLWARN system was investigated. WILLWARN is a subproject within PReVENT and one of the systems chosen in eIMPACT for analysis. 41 test persons participated in a realistic simulated drive in the DaimlerChrysler driving simulator with a simulated WILLWARN-system.

Two cases were simulated: driving into fog on a 3-lane highway, and the appearance of an obstacle behind a curve on a rural road. Some of the test persons were informed 500 m before the hazards. The differences in driving behaviour between drivers who were and were not was compared.

The following 6 major results for the WILLWARN system were found:

- The warning should be time dependent and not space dependent.
- The warning time before the hazard should be between 10 – 15 sec. Drivers begin to ignore find warnings provided earlier.
- Warned drivers reduce their velocity in the first 10 seconds by about 18 %.
- The average deceleration after a warning is only  $-1\text{m/s}^2$ .
- No unadjusted high brake pedal usages after a warning are observed.
- At a penetration rate of 30% for the WILLWARN-system, drivers in unequipped vehicles also benefit from the WILLWARN system.

The following figure illustrates some of these statements. The red line shows the reference case, that is, the average velocity of the test drivers driving in the fog scenario without WILLWARN. The blue line shows the average velocity of all warned test drivers in the fog scenario. Finally, the green line shows the average velocity of the test drivers if 30 % of the surrounding simulated drivers were also warned. The coloured areas show the spread of velocities.



## PREVAL

PREVAL is a subproject of PREVENT that started in 2006 and will run through January 2008. The goal of PREVAL is to provide a methodology to assess the safety impact of ITS applications, and apply this methodology to a number of PREVENT systems. This evaluation focuses on estimating the number of fatalities that the PREVENT systems can prevent in the EU. It explicitly takes technical and HMI performance into account in order to accurately estimate the effectiveness of the system, as well as user acceptance, preference and behaviour.

Furthermore, PREVAL will make recommendations for further work in the development of effective preventive safety functions

Several of these PREVENT systems are also being evaluated in eIMPACT. PREVAL will closely cooperate with eIMPACT in estimating potential safety impacts.

## TRACE

The TRACE General Assembly was held in Prato, Italy on the 17th and 18th of January 2007. The Assembly gathered about 50 attendees, TRACE partners, sub-contractors and also representatives from the SafetyNet, eIMPACT, PREVENT and PREVAL projects. Reports from WP1 (Road Users), WP3 (Risk Factors), WP4 (Evaluation), WP5 (Human Factors) and WP6 (Safety Functions) will be available from the TRACE website in May or June 2007.

## Future events

Coming events organized by the eIMPACT project:

- Stakeholder workshop, September 2007, date to be determined. If you are interested, please contact Tom Alkim, tom.alkim@rws.nl.

Other important events where eIMPACT will be represented are:

- Symposium Cooperative vehicle-infrastructure systems at TNO, Eindhoven, 28 March 2007, [www.tno.nl/trafficandtransport](http://www.tno.nl/trafficandtransport)
- ITS Aalborg, Denmark, June 18-20, 2007, [www.itsineurope.com](http://www.itsineurope.com).
- PREVENT roadshow: 18 - 22 September 2007. The IP Exhibition will demonstrate the systems and vehicles developed in PREVENT, [www.prevent-ip.org](http://www.prevent-ip.org).
- ITS World Congress Beijing, China, October 9-13, 2007, [www.itsworldcongress.cn](http://www.itsworldcongress.cn).

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