The sustainable safety approach to Road Transport and Mobility

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Quo Vadis?

- According to ETSC (2008) Report:
  - 97% of all transport fatalities in the EU are caused by road transport.
  - Road transport accounts for 88% of all passenger transport in the EU, but accounts for over 100-times more deaths than all other modes together.
  - Between 2001 and 2007, road deaths have been reduced by 20% only.
  - The European Union's yearly reduction in road deaths is no more than 4.2% on average.
- Extensive research conducted in all Road Safety layers by European research projects. From accidentology to autonomous road environments, they need to be sustained and integrated.
- Several proposals have been introduced by European bodies and stakeholders towards the sustainability of Road Safety.
- A vast collection of thorough documents on Road Safety Action Programmes and Plans exists introduced by various European bodies and stakeholders.

Towards an Integrated & Sustainable Safety Research Agenda

The common ECTRI/FERSI proposal

a) FP7 RTD/ TREN WP 2010 Call(s) (1/2)

Action line on “Sustainable Safety” (STREPs, for about 15-20 M€ out of the 120 M€ total), on:

a)Collection, typology and in-depth analysis of Urban Accident data (of all types, including damage only ones), covering all transportation modes and with emphasis on those of vulnerable road users (pedestrians, bicyclists, PTW riders, …).

b)New concepts, materials and electronic measures towards self-explanatory road signing and forgiving road environments, including personalised and safe provision of road traffic (i.e. VMS/VDS) info to drivers and riders and safer road furniture.

c)Cooperative active safety systems focusing on specific challenges, such as pedestrians’ protection, riders’ safety, roundabouts, intersection and other black spots support.

a) FP7 RTD/ TREN WP 2010 Call(s) (2/2)

d) Vulnerable traveller's compatible vehicle design, for the elderly; children and other fragile user groups, both as passengers or traffic opponents.

e) New tools, curricula and systems for long-life training of novice drivers, with emphasis on multimedia, driving simulators, VR/AR simulation tools and the use of new active safety systems (i.e. ADAS/ IVIS) as on-the-job training tools for driver behaviour improvement and promotion of eco-driving concepts.

f) To further develop accident prediction models for a number of European countries slinking combinations of (elements of) road design, traffic and driver behaviour and to formulate criteria for benchmarking the safety performance of the different categories of roads in Europe.

b) FP7 RTD/ TREN WP 2011 Call(s) (1/3)

More significant focus on “Sustainable Safety” (targeting both IPs (2), STREPs and CSAs for about 50 M€), on:

a)SAFETYNET II (IP).

b)Driver/ rider monitoring technologies and tools, to prevent accidents due to driver/rider inattention, excessive workload, fatigue, drowsiness, alcohol, illegal or medical drugs abuse (IP).

c) Joint research initiatives to optimise urban safety, mobility and environmental protection by new TMIC services and coordination of all traffic modes & participants.

d)Individualised and personalised safety measures, adaptable to each traveller/driver cohort, European area and even individual preferences and needs.

b) FP7 RTD/ TREN WP 2011 Call(s) (2/3)

d) Focused research on enhancing safety and security of dangerous, high value and high risk (i.e. flammable products, such as tires, plastics, etc.) goods throughout the transportation corridors, with emphasis on specific areas (i.e. tunnels, bridges), urban agglomerations and areas of environmental protection.

e) Development and deployment of automated enforcement control systems, based on existing and new technologies, with focus on legislative and regulatory barriers.

f) New site-specific measures planning procedures and tools to support effective and efficient countermeasures identification, implementation and results evaluation, also including tools for the assessment of impacts on road safety of modifications of transport demand and/or supply (RIA).

b) FP7 RTD/ TREN WP 2011 Call(s) (3/3)

d) Optimal configuration of Integrated Safety Agenda (including use of new technologies for vehicles, infrastructure, as well as cooperative ones, enforcement, training and awareness creation) for sustainable road safety enhancement (CSA). This can be linked to the European Road Safety Observatory.

e) Large-scale study in 6-10 countries on Naturalistic Driving on driver behaviour and its effects on safety, environment and accessibility, in close cooperation with SHRP2 (U.S.) and several European FoT initiatives (IP).