Study on good practices for reducing road safety risks caused by road user distractions

Minutes of Workshop June 3rd, 2015

Workshop Details

Workshop title:	Study On Good Practices For Reducing Road Safety Risks Caused By Road User Distractions
Date:	3rd of June 2015, 10.00–16.30
Venue:	DG MOVE, Rue Jean André de Mot 24, Brussels, Belgium
EC project officer:	Susanne Lindahl
Study Team:	TRL, TNO, RappTrans NL
Dissemination:	Public

Background information

The Commission's "Policy orientations on road safety 2011-2020" outlines priorities for the European Commission road safety work during this decade. Among the objectives is the increased understanding of crashes and risks. In follow-up to these Policy orientations, the Commission has contracted a consortium led by TRL to collect more detailed information about the specific risks linked to distracted and inattentive road users.

The purpose of the workshop was to discuss the preliminary study findings with a group of selected experts and to gather additional inputs and comments for the study.

In the morning the results of the focus group session and the intermediate results of work packages 3, 4 and 5 were presented. In the afternoon two interactive game sessions were held, where workshop participants identified stakeholder interests and conflicts, and realistic EC measures through role play.

Workshop Agenda

from 9:30	*Registration and Coffee*
10:00	**Welcome and Introduction**
	Short introduction by DG MOVE (Szabolcs Schmidt)
	Background and objectives of the current study
Presentation of preliminary results	
10:15	**Presentation of the results from the focus group session (February 2015)**
	Rapp Trans (NL)
10:30	**Presentation of the intermediate results of work packages 3, 4 and 5.**
	TNO and Rapp Trans (NL)
First discussion: comments on the preliminary findings	
11:00	**Discussion session**.
	The presentations will be followed by a discussion among

	the meeting participants on the preliminary conclusions, their relevance, accuracy and completeness
12.15-13.00	**Lunch Break**
Second discussion: Sharing experiences, specific rules/practices	
13.00	1st Deployment session In this session, the workshop participants will be involved in an interactive serious game where the participants play the role of a stakeholder in the deployment process, and in interaction with other stakeholders identify barriers to deployment and develop counter measures to arrive at a deployment plan.
14:30	**Coffee break**
14:45	2nd Deployment session
16:15	**Summary and conclusions for the day**
16.30	**End of Workshop**

Discussion Sessions

Introduction by Szabolcs Schmidt of EC, DG MOVE

After welcoming the workshop participants Mr. Schmidt emphasized that the workshop should not just be looking at drivers but also other road users, such as cyclists and pedestrians, and in particular vulnerable road users.

The EC's concern is how to ensure the safety of road users in a rapidly changing world. The project's focus is to understand the risk factors and get directions on how to mitigate these risks. Mr. Schmidt further explained what can be expected of the EU legislator to mitigate the risks from distraction, and invited external experts to provide guidance on the final report and outputs from the project.

Direct feedback on presentations.

In response to the presentation of the results of the Focus Group Session held in February 2015 and the intermediate results of work packages 3, 4 and 5 of the study, workshop participants:

- Indicated that specific driver assistance applications, such as Automatic Emergency Braking (AEB) and Forward Collision Warning (FCW) may lead to behavioural adaptation and the study could consider the indirect effect of such systems on promoting secondary task engagement.
- Indicated that a better understanding is needed on the impact of driver assistance systems on alertness and distraction.
- Suggested that automated driving levels SAE 1 and 2 should be considered in the study.
- Suggested that a distinction should be made in the assessment between the primary function of a device/service and its secondary effects

because these can be opposite in terms of their effect on user alertness and distraction.
- Indicated that how products and services are implemented to a large extent determines the impact on user distraction. Although this is difficult to incorporate in the assessment, the Study Team should keep this in mind.
- Asked whether the Study Team considered new modes of movement (for example in car sharing schemes users encounter different systems with different human-machine interactions in each vehicle they use).
- Indicated that a clear definition of 'distraction' is needed, taking into account that what is considered 'distraction' in one situation can be considered to be part of the normal driving task on other situations. An example is driver assistance systems; are these systems actually part of the driving task and therefore cannot be considered as a distractor?
- Indicated that the rating scheme used suggests too much (quantitative) detail for a qualitative assessment.
- Suggested that the cost-benefit analysis of task 5 needs to focus on the effects on distraction rather than on overall safety benefits that may not be related to mitigating distraction.

General discussion on results

After the presentation of the intermediate results from tasks 3, 4 and 5 by the study team, the workshop participants engaged in a discussion on road user distraction and alertness, touching on the study methodology and results along the way. The following points were noted:

- Awareness campaigns are listed as possible EC actions, but what about roadside advertising as causing distraction? Susanne Lindahl (DG MOVE) indicated this is outside the scope of the project, although distraction 'creeping into' roadside communications infrastructure could be considered.
- A lively discussion on the blocking of texting and calling ensued between participants where opinions diverged on whether texting based on voice recognition and text-to-speech technology is less distracting.
- Behaviour is changing with technology so there is no obvious baseline with which to compare changes related to the introduction of different technologies.
- However, Theo Kamalski noted some potential evidence when the Blackberry data system went down for 3 days, accident rates and fatalities reportedly dropped.
- Cooperative systems outlined in the current report table seem to be very general. These systems are very different and likely to have different impacts. It was requested that the study team differentiate between the most important cooperative applications, e.g. the 'day-one applications' identified by the Amsterdam Group.
- Complex issues require complex solutions; driver education and training should be included in licence assessments. New South Wales for example has training for new drivers on distraction. In addition, the design of devices (promoting design guidelines) should be targeted at industry.

- The US is ahead of the EU with regards to studies of voice interaction technologies, although these are not standardised and there are doubts whether the HMI is ready for deployment.
- It was requested that the study team provide more details for the reader about the assessment tables in the current draft.
- It was remarked that different travel motives can be distinguished, some of which have 'intended distraction', e.g. recreational trips.
- The question was raised why designers are not adhering to the existing standards on human machine interface (HMI) design. It was suggested that designers are not using The European statement of principles (ESOP) because it is a political document and not a practical guideline, and because the costs to obtain standards documents are significant; standards are sometimes counterproductive – this needs to be reassessed in the EU.
- Some participants argued that firm regulation at the EU level is needed on the blocking of texting and calling in traffic.
- It was suggested that car manufacturers and smart phone providers need to standardise communication between the vehicle and nomadic devices.
- Blocking technology is important but drivers will find a way to circumvent barriers. It was stated that the acceptance of blocking is low.
- It was noted that it is not always clear how the driver can be distinguished from the passenger
- Training and incentives can contribute to behavioural change (compare e.g. drunk driving). So long-term behavioural change needs to be brought in alongside technology.
- Some participants argued that blocking should be avoided, with focus instead shifted to better HMI design encouraging use under safe traffic situations (e.g. through an intelligent systems that makes functionality available only when permitted by the current traffic situation). However it was suggested that keyboard texting and playing games are never safe while driving.
- Blocking can be implemented in fleet services successfully. Procurement of fleet services could include a requirement for blocking technology in vehicles (e.g. Government procurement).
- Certification is required to improve HMI standards. There should be more responsibility on technology providers to ensure their products can be used safely when driving. In the nomadic devices market it is impossible to certify all (smartphone) apps. There is however some activity towards certification of apps and blocking of uncertified apps. A comparison was made to NCAP; perhaps a similar approach could be followed for apps.
- In the automotive market the issue is that type approval takes approximately 10 years, and penetration into the vehicle fleet takes another 5 to 10 years, which is too long for telematics applications. So in-vehicle technology will always be lagging the technology curve.
- Sweden has introduced very strict regulations on distraction and should be followed. The regulations are based on the presumption that people should be trusted to make conscious decisions, promoting responsible driving.

Interactive Sessions

As part of the workshop attendees were asked to participate in an interactive game where they provided input for deployment scenarios of selected interventions. The game focused on stakeholder roles and organizational aspects and challenged participants to express their expectations towards other stakeholders, and to share their insights and interests with each other and with the project team. As there were no representatives of insurance companies present, TRL acted in lieu of them.

Interactive Session 1 - on Distraction Warning

In the first session, participants were asked to focus on the deployment of in-vehicle distraction warning systems, identifying the needs and expectation between stakeholders. Each stakeholder group was represented by a flip-chart. Needs, wants and expectations of other stakeholder groups were written on post-its and stuck onto the flip-chart of other stakeholders. The colour of the post-it identified the requesting stakeholder group. Each stakeholder group was then asked to respond to the most interesting or challenging requests of the other stakeholders. The requests are listed below, with the response of the targeted stakeholder group to each request (or general responses to discussion) following the '>' symbol:

Car Manufacturers

- Use standards for HMI > We already do this.
- Test in field trials with wide range of users > We do that already.
- Better integration of smartphones > This is considered an important topic in the automotive industry. We are working on it, and on speech integration.
- Insurance companies and telematics industry require data protection from the car manufacturers > This is recognised as an important issue that will need further attention.
- Make driver assistance more affordable > The competition in the automotive market drives down costs.
- Be open to mandatory regulation > Type approval regulations are already in place and followed.

Telematics Industry

- Build good and affordable systems, with a good HMI > We need to update existing HMI standards.
- Build safe solution > We need standardised tests for distraction / safety for HMIs targeting various user groups.
    - > Access to CAN-bus data would allow us to develop safer systems.
    - > Privacy needs to be solved by design.
    - > Data protection authorities should be involved in the design phase.
    - > We can make data available for researchers.
    - > Feedback from the Safe Applications Working Group: it is impossible to say which apps are safe; there are simply too many smartphone apps. The solution is to certify the ones that are OK for in-car use, and blacklist the most dangerous ones.

Policy Makers

- Car manufacturers ask us to steer away from mandatory requirements > We also want to avoid constraining rules, also with respect to the freedom to design, but we do need some form of regulation.
- Trust users, make them responsible > We can achieve this by having not too many regulations.
- Users request amendment of the driver license regulation > Policy makers agree that this would be a good step.
- Researchers request policy makers to make evidence-based decisions > We can if you give us good research results.
- Car manufacturers request funding for research and innovation and a technology neutral approach > Policy makers agree, but the question is how they can use the knowledge.
- After a short discussion on certification, it is concluded that this not necessarily is a public task. EuroNCAP could play a role for example, but EuroNCAP does not rank nomadic devices and apps.

Insurance Companies

- Everyone wants incentives from the insurance companies: car makers, users ((un)monitored).
- The telematics providers want insurance companies to promote certified systems.
- Researchers want insurance companies to share data and fund research.
- Policy makers want insurance companies to ensure the protection of consumer data, and to cooperate on the establishment of standards for data protection.

Users

- Don't over-rely on technology and understand the capabilities of your vehicle.
- Be willing to pay a reasonable price for services and products.
- Accept blocking of texting and calling.
- Be aware of the risks of distraction > We support education.
- Researchers ask user associations to promote findings of research, and users to participate in research for free > The associations indicate that they try but that there are too many requests to honour.

Research Providers

- > We need real world evaluation to:
  - Correlate accidents with distraction.
  - Determine the effectiveness of systems.
- Users ask research providers to invent an HMI that allows them to safely use apps.
- > More proper research and more trust in research is needed.
- > We need to define warning thresholds.

Interactive Session 2 - What should the EC do

In the second session, participants were asked to suggest practical actions that the EC should undertake from their perspective. Each stakeholder group

wrote down these actions on a flip-over and then presented them to the EC. The requested actions are listed here with comments or questions by the DG MOVE road safety unit following the '>' symbol:

Policy Makers

- EC could encourage the sharing of best practices between Member States > We can do that.
- EC could monitor and obtain data from EU Member States on the role of distraction in accidents, similar to the CARE database. > But are Member States ready for this?
    - All agree that a first step would be to have a common definition of distraction and maybe include it in the cross-border reporting directive.
- Fund development of and/or devise common methods for accident reporting on distraction.
- Research the distraction of billboards/advertisements, and on how to make them less distracting.
- A discussion ensued:
    - In which the general lack of knowledge on distraction was identified as a key issue (e.g. how much is going on, what types, under what circumstances). Data collection is a challenge because of the (increasing) sparseness of accidents.
    - It was noted that only two Member States share data on offences concerning mobile phone use because it is voluntary in the cross-border reporting directive,
    - It was pointed out that offences reflect mostly the enforcement effort, they are unfortunately not representative of the level of / occurrences of distraction.
    - Further, it was suggested that Billboards can also have a positive impact on distraction as it can raise alertness during monotonous driving tasks.
    - It was suggested that the Working Group of North-America, Japan and EU on HMI be asked to develop a common coding scheme for road user distraction since they already successfully standardised other matters including definitions and categorisation. The coding would need to consider how a collision investigator/police officer will interpret and code accidents in relation to the definition and categorisations already developed.
- It was suggested that the EC should increase the dialogue with nomadic device manufacturers and update HMI guidelines to take into account nomadic devices (possible routes through app stores).

Car Manufacturers

- Car manufacturers would like the EC to develop EU-level awareness campaigns. > This seems to conflict with the subsidiarity principle and findings from the interviews. Also it was noted that it is not obvious that EU-led campaigns would be efficient since campaign messages must be adapted to culture, language etc and that EU is not always the most credible sender of messages in all MS.
    - It was suggested that the EC could act as a driving force behind Member State campaigns.

- Don't focus on design-related restrictions, but on performance restrictions
- Standardise HMI requirements. > So you would like the EC to make HMI requirements mandatory?
    - Car manufacturers: no, we already follow the European Principles on HMI design (ESOP) etc. It could be incorporated in ESOP.
    - A representative of the telematics industry noted that PND manufacturers also signed an MoU to follow ESOP, but there are thousands of app developers that have not.
    - > The dialogue with PND manufacturers on updating the HMI guidelines could be further looked into.
    - A researcher suggested that a dialogue with Apple, Google and Microsoft on operating system and app requirements be undertaken.

Insurance Companies

- Guidance on which devices and services should be promoted and which discouraged
- Certification of systems (potentially industry-led, encouraged by EU in a coordination role)
- Educate pedestrians and cyclists on distractions in an EU campaign. > Why campaign at EU-level?
    - TRL: That would lead to consistency
    - UK: Best practice on campaigns is sufficient

Research Providers

- Fund and / or focus more research and field operational tests on road user distraction, including research on:
    - sociological aspects
    - views on driving of the young
    - pedestrian studies
    - distraction/alertness in the transition to automated driving
    - self-regulation of road users and good driving behaviour
    - future trends and challenges
    - new vehicles, e.g. high-speed electric bicycles.
    - how to deal with partial automation
- Focus research on test procedures and certification.
- Harmonise and encourage the collection of data and statistics, e.g. through improved and harmonised guidelines on accident reporting.

Telematics Industry

Requests to the EC:

- Step 1:
    - Make specifications/guidelines on HMI design more concrete (ESOP is complete but it is a political document; it is not understood by developers).
    - Support and drive the update of standards to accommodate technological and market developments (e.g. how to deal with information from multiple sources).
- Step 2:
    - Then develop standardised tests for distraction/safety, like NCAP

- Arrange access to specific safety-related CAN-bus data: speed, direction, day/night, vehicle type.

Users

- Revise the driver license directive to include distraction in the curriculum. > Revisions of the driving licence directive will require further separate studies.
- Possibly promote the inclusion as a priority area in the revision of the cross-border enforcement directive
- Support the development of good practice guidelines for mobile phone enforcement.
- Support (and potentially coordinate) member states to promote the education of distraction safety to all road users (i.e. a soft measure through the Member States), including pedestrians and cyclists. This should involve the exchange of experiences with different campaigns and sharing of good practice.
- EU level ban on handheld phone use, including cyclists and/or encourage member states to ban and enforce phone use. > This is difficult because of subsidiarity issues: criminal legislation is at Member State level. Also, enforcement of such legislation is challenging.
- Support research and development and improved in-depth accident investigation.

Closing Remarks

Study Team

Workshop participants are invited to send relevant documents to Jill Weekley of TRL.

European Commission

Key items that should be addressed are:

- Establish common definitions of road user distraction
- Support awareness building through campaigns and educational programmes
- Blocking of calling and texting functions of mobile phone needs more attention, taking on board the issue of distraction by smartphone apps.

The EC invites stakeholders to send them realistic recommendations on how to proceed.

List of Attendees

Last name	First name	Country	Organisation	Regis-tered	Attended
Barnard	Yvonne	Netherlands	ERTICO	Yes	Yes
Caccia Dominioni	Giancarlo	Italy	Toyota	Yes	Yes
Canel	Annie	France	ASFA	Yes	Yes
Carsten	Oliver	United Kingdom	University of Leeds	Yes	Yes
Ceci	Ruggero	Sweden	Trafikverket	Yes	Yes
Deix	Stefan	Austria	CLEPA	Yes	Yes
Gulde	Gerd	Germany	Daimler	Yes	Yes
Kamalski	Theo	Netherlands	TomTom	Yes	Yes
Kinnear	Neale	United Kingdom	TRL	Yes	Yes
Kluppels	Ludo	Belgium	BIVV	Yes	Yes
Lacroix	Jacqueline	Germany	Deutsche Verkehrs-sichterheit Rat	Yes	Yes
Larsson	Staffan	Sweden	Talkamatic	Yes	Yes
Liebermann	Johannes	Austria	Austriatech	Yes	Yes
Mages	Mark	Germany	Continental	Yes	Yes
Meesmann	Uta	Belgium	BIVV	Yes	Yes
Parvez	Khuram	Denmark	ECF	Yes	Yes
Schäfer	Jochen	Germany	Bosch	Yes	Yes
Shovelton	Elizabeth Ann	United Kingdom	RULIS	Yes	Yes
Simcic	Gabriel	France	FIA	Yes	Yes
Soekroella	Aroen	Netherlands	TNO	Yes	Yes
Stevens	Alan	United Kingdom	TRL	Yes	Yes
Strohbeck	Peter	Germany	University of Heidelberg	Yes	Yes
Szendro	Gabor	Hungary	Institute of Transport	Yes	Yes
Testaferrata de Noto	Audrey	Malta	Transport Malta	Yes	Yes
Townsend	Ellen	Germany	ETSC	Yes	Yes
Van de Ven	Tom	Netherlands	Rapp Trans	Yes	Yes
Van Noort	Martijn	Netherlands	TNO	Yes	Yes
Weekley	Jill	United Kingdom	TRL	Yes	Yes
Willigers	Dolf	Netherlands	FEMA	Yes	Yes