



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

Workshop June 3rd, 2015



Table of Contents

Table of Contents	2
Workshop Programme June 3 rd , 2015	3
Agenda.....	4
Background information	5
Preliminary results - actions and tools	7
Preliminary results - technical devices	10
Questions for discussion	12
Interactive deployment sessions.....	12
Promote/mandate safe product design of mobile phones.....	12
Promote/mandate use of products raising road user alertness.....	12
Practical information	14

Workshop Programme June 3rd, 2015

STUDY ON GOOD PRACTICES FOR REDUCING ROAD SAFETY RISKS CAUSED BY ROAD USER DISTRACTIONS

When?	3 rd of June 2015, 10.00 – 16.30
Where?	DG MOVE, Rue Jean André de Mot 24, room DM24 – 03/47, Brussels, Belgium
Objective	The European Commission has contracted a consortium of TRL, TNO and Rapp Trans to conduct a study entitled STUDY ON GOOD PRACTICES FOR REDUCING ROAD SAFETY RISKS CAUSED BY ROAD USER DISTRACTIONS

Workshop for information-gathering

A workshop will be organised on the 3rd of June 2015, in order to discuss the preliminary study findings with a group of selected experts and to gather additional inputs and comments for the study.

At the workshop, the study consortium will present their preliminary findings regarding main risks and possible countermeasures to road user distractions. The workshop participants will be invited to comment on these conclusions and to discuss additional aspects to be taken into consideration. The workshop participants will be asked to share their specific experiences and knowledge regarding potential benefits of the proposed countermeasures and potential barriers to their deployment and implementation.

As part of the workshop attendees will participate in an interactive game where they will provide input for deployment scenarios of selected interventions. The game focuses on stakeholder roles and organizational aspects. The game setting provides an efficient and enjoyable way for participants to express their expectations towards other stakeholders, and to share their insights and stakeholder interests with each other and with the project team. The expectations will then be presented and discussed.

As well as the agenda and the practical information for the workshop, this document presents a high-level overview of the preliminary results. These results will be discussed in more detail during the workshop, however it would be useful if participants can familiarise themselves with the content of this document in advance of the workshop and give some consideration to the discussion questions.

Agenda

from 9:30	<i>Registration and Coffee</i>
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) Frans Tillema, 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	1 st 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	2 nd Deployment session
16:15	Summary and conclusions for the day
16.30	End of Workshop

Language of the Workshop will be English. Participation is at the own expense of the participant.

Background information

Background of the study and workshop consultation

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 study to collect more detailed information about the specific risks linked to distracted and inattentive road users.

If road users move through traffic without paying attention to the surrounding traffic situation, it is obvious that the risk of a crash increases. Distractions could be simple things like eating, talking or paying attention to things on the roadside or to the car's passengers instead of to the road. Today, the proliferation of technical devices has also added new sources of possible distractions. For example smartphones and mobile phones can cause drivers and pedestrians to take their eyes off the road. Cars are becoming increasingly technical. For instance touch-screens can require driver attention for their operation. It is generally accepted that an increased presence of distracting devices will lead to increased number of road traffic crashes caused by distracted and inattentive road users, unless countermeasures are taken.

Objectives of the study

This study is being conducted in a view of recent reports on a high number of fatal road accidents being attributed to distracted and inattentive road users. It has been suggested that the increased presence of distracting technical devices, such as smart phones, might be a part of the explanation to the increased number of pedestrian road fatalities in urban areas during some years. At the same time, new in-vehicle safety systems are developed as countermeasures for increased road user alertness and against distraction risks. A comprehensive overview of these and other actions against distraction will be covered in this study.

The study is targeting the following areas:

- a) The number of serious road traffic crashes linked to distracted road users in the EU today, classified according to the type of distraction.
- b) The evolution over time of the number of serious road traffic crashes linked to distracted road users, including where relevant differences in trends for different types of distractions.
- c) The evolution over time of the presence of technical devices commonly linked to distracted road users.
- d) The characteristics and main risk factors of serious road traffic crashes linked to distracted road users, including where relevant differences in risk factors for different types of distractions.
- e) Road safety risks linked to distracted pedestrians and other road user groups in addition to drivers.
- f) Specific road safety risks of distracted road users in urban and rural areas respectively.
- g) Availability on the EU market of in-vehicle safety systems or cooperative systems (ITS) aimed to reduce road user distraction risks or to increase road user alertness and attention.

- h) Benefits of technological countermeasures such as in-vehicle safety systems or cooperative systems (ITS) to reduce road user distraction risks or to increase road user alertness and attention.
- i) Benefits of other actions and tools to reduce road user distraction risks or to increase road user alertness and attention.

The expected outcomes of the study are:

- an analysis of the current size and characteristic of the problems of distracted road users.
- an assessment of actions and countermeasures to improve road safety by targeting road user attention and risks of distracted road users, included an updated overview of the regulatory situation in EU Member States.
- a coherent and well-argued set of cost-beneficial, effective and efficient best practices to support EU Member States in their efforts to reduce the number of road fatalities by targeting the road traffic crashes caused by distracted road users.

Preliminary results - actions and tools

This task provided a detailed description on the current status of (theoretical) actions and tools aiming to reduce distraction risks or to increase road user alertness and a detailed analysis of current status, studies and policies in the European Union.

In this activity a research model was developed. Where possible, actions and tools to reduce distraction were measured using quantitative ratings, in order to maximize the input for the overall analyses. The research model forms the basis for structuring the results from the desk research and the questionnaire to be used for the interviews, which are currently underway. Additional stakeholders will be invited to complete a web-based questionnaire (due the first week of June).

The preliminary results of this task are given in the table below. This shows actions and tools identified through the above activities and assessed for their impact on distraction.

Characteristics		Impact on Road User Distraction or Alertness per Type				
Nr	Name	Visual	Auditory	Biomechanical	Cognitive	Average
1	Raise awareness through public awareness campaigns	1	1	1	1	1,00
2	Raise awareness by mandating warnings in advertisements	1	1	1	1	1,00
3	Raise awareness in driver license programmes	1	1	1	1	1,00
4	Educational campaigns in schools	1	1	1	1	1,00
5	Promote use of specific products	0	0	0	1	0,25
6	Mandate use of specific products	-1	-1	-1	1	-0,50
7	Promote specific use under certain conditions	1	1	1	-1	0,50
8	Discourage specific use under certain conditions	1	1	1	-1	0,50
9	Ban specific use under certain conditions	2	2	2	-2	1,00
10	Promote proper installation of nomadic devices	2	2	2	0	1,50
11	Regulate installation requirements nomadic devices	2	2	2	0	1,50
12	Promote development of specific technology or products	1	1	1	1	1,00
13	Promote safe product design	1	1	1	1	1,00
14	Mandate safe product design	3	3	3	3	3,00
15	Discourage use of specific products	1	1	1	1	1,00
16	Ban use of specific products	2	2	2	2	2,00
17	Discourage sale of specific products	1	1	1	1	1,00
18	Ban sale of specific products	2	2	2	2	2,00
19	Promote deployment of roadside / central systems	-1	0	0	1	0,00
20	Mandate deployment of roadside / central systems	-1	0	0	2	0,25
21	Promote safe road infrastructure	0	0	1	1	0,50
22	Mandate safe road infrastructure	0	0	1	1	0,50
23	Discourage distraction sources off the road	1	0	0	1	0,50
24	Ban and regulate distraction sources off the road	2	0	0	2	1,00
25	Enforcement	1	1	1	1	1,00
26	Promote understanding of distraction	1	1	1	1	1,00
27	Legislation	3	3	3	3	3,00
28	Publicity campaigns	1	1	1	1	1,00
29	Financial support	1	1	1	1	1,00
30	Certification	2	2	2	2	2,00
31	Standardisation	1	1	1	1	1,00
32	Recommendations	1	1	1	1	1,00
33	Best practices	1	1	1	1	1,00
34	Agreements	1	1	1	1	1,00

Characteristics		Impact on Road User Distraction or Alertness per Road User Type							
Nr	Name	Drivers private vehicles	Professional driver	Motor-cyclists	Pedestrians	Cyclists	Children	Elderly	Average
1	Raise awareness through public awareness campaigns	1	1	1	1	1	1	1	1,00
2	Raise awareness by mandating warnings in advertisements	1	1	1	1	1		1	1,00
3	Raise awareness in driver license programmes	1	1	1					1,00
4	Educational campaigns in schools				1	1	1		1,00
5	Promote use of specific products	0	0	0					0,00
6	Mandate use of specific products	0	0	0					0,00
7	Promote specific use under certain conditions	1	1	1	2	2		0	1,17
8	Discourage specific use under certain conditions	1	1	1	2	2	0	0	1,00
9	Ban specific use under certain conditions	2	2	2	3	3	0	0	1,71
10	Promote proper installation of nomadic devices	1	1	0		0			0,50
11	Regulate installation requirements nomadic devices	1	1	0		1			0,75
12	Promote development of specific technology or products	1	1	1	1	1	1	1	1,00
13	Promote safe product design	1	1	1	1	1	1	1	1,00
14	Mandate safe product design	3	3	3	3	3	3	3	3,00
15	Discourage use of specific products	1	1	1	1	1	1	1	1,00
16	Ban use of specific products	2	2	2	2	2	2	2	2,00
17	Discourage sale of specific products	1	1	1	1	1	1	1	1,00
18	Ban sale of specific products	2	2	2	2	2	2	2	2,00
19	Promote deployment of roadside / central systems	0	0	0					0,00
20	Mandate deployment of roadside / central systems	0	0	0					0,00
21	Promote safe road infrastructure	1	1	1	1	1	1	1	1,00
22	Mandate safe road infrastructure	1	1	1	1	1	1	1	1,00
23	Discourage distraction sources off the road	1	1	1					1,00
24	Ban and regulate distraction sources off the road	2	2	2					2,00
25	Enforcement	1	1	1	1	1	1	1	1,00
26	Promote understanding of distraction	1	1	1	1	1	1	1	1,00
27	Legislation	3	3	3	3	3	3	3	3,00
28	Publicity campaigns	1	1	1	1	1	1	1	1,00
29	Financial support	1	1	1	1	1	1	1	1,00
30	Certification	2	2	2	2	2	2	2	2,00
31	Standardisation	1	1	1	1	1	1	1	1,00
32	Recommendations	1	1	1	1	1	1	1	1,00
33	Best practices	1	1	1	1	1	1	1	1,00
34	Agreements	1	1	1	1	1	1	1	1,00

Preliminary results - technical devices

Whereas the presence and use of an increasing number of (in-car) technical systems can provide extra sources of distraction to drivers and other road users, these same devices can provide solutions to reduce or mitigate distraction. Moreover, systems are specifically developed to alleviate distraction on the road. Based on previous findings of the project, on the way in which and to what extent technical developments may cause distraction, this work focuses on how technology can be applied and designed in order to reduce road user distraction or mitigate the effects. The aim of this task was to compile and analyze information relating to in-vehicle safety systems and ITS systems that aim to either reduce road user distraction or increase road user awareness or attention. This task determined what on-the-market products are available in the EU and any evidence for their effectiveness. Further, technology that assists alertness and attention for specific road user groups (i.e., truck drivers, motor drivers, bicyclists and pedestrians) was reported and all findings are summarized in the table below.

System type	System	Road user	Type of countermeasure			Maturity of the technology	Current penetration rate	Acceptance	Safety impact
			Prevention	Mitigation	(Collision) warning				
Information Blocking & guiding applications		Prof. Driver	•			+++	Medium	Medium	+++
		Private driver	•			+++	Low	Low	+++
		Motorist	•			+++	Low	Low	+++
		Cyclist	•			+++	Low	Low	+++
		pedestrian	•			+	Low	Low	++
Workload estimator		Driver	•			++	Low	Low	+++
		Motorist	•			+	Low	Low	+++
Real-time mitigation systems		Prof. driver		•		+++	Low	Medium	++
		Private driver		•		+++	Low	High	++
(Collision) warning systems	FCW	Prof. driver			•	+++	Medium	High	+++
		Private driver			•	+++	Medium	High	+++
		Motorist			•	+	Low	Low	-
	LDW	Prof. driver			•	+++	Medium	Medium	++
		Private driver			•	+++	Medium	Medium	++
		Motorist			•	+	Low	Low	+
	CSW	Prof. driver			•	+++	Low	Medium	++
		Private driver			•	+++	Low	Medium	++
		Motorist			•	++	Low	Low	++
Retrospective feedback systems		Prof. drivers	•			+++	High	Medium	++
		Private drivers				+++	Low	Low	++
Cooperative systems		Prof. driver		•	•	+	Low	Medium	++
		Private driver		•	•	+	Low	Medium	++
		Motorist		•	•	+	Low	Low	++
		Cyclist		•	•	-	-	-	-
		Pedestrian		•			-	-	-
Automated driving technology	Semi-autonomous	Prof. driver		•		++	Low	Medium	++
		Private driver		•		++	Low	Medium	++
	Fully automated	Prof. driver	•			+	Low	-	+++
		Private driver	•			+	-	-	+++

Questions for discussion

During the morning session, these preliminary results will be discussed in more detail. If possible, please give some consideration to the following questions in advance of the workshop:

- What did you think about the results?
- Were any of the ratings different to what you would expect?
- Was there anything else that you didn't expect to see (what, why)?
- Do you have specific experience from real world situations relevant to these results?
- Which barriers to deployment and implementation do you think will be encountered?
- What other aspects should be taken into consideration?

Interactive deployment sessions

As part of the workshop attendees will participate in an interactive game where they will provide input for deployment scenarios of selected interventions. The game focuses on stakeholder roles and organizational aspects. The game setting provides an efficient and enjoyable way for participants to express their expectations towards other stakeholders, and to share their insights and stakeholder interests with each other and with the project team. The expectations will then be presented and discussed.

Two sessions will be held, each focusing on a different intervention. In each session, stakeholders will first be given the opportunity to express their expectations towards other stakeholders. After that, they will evaluate and present these expectations to the group. Some examples of interventions that may be selected are listed below.

Promote/mandate safe product design of mobile phones

Distraction by mobile phones can be prevented by blocking or filtering a driver's mobile phone functions while the vehicle is in motion, for example by apps on the phone. They are triggered when the phone's motion exceeds some threshold, so they work only on GPS-equipped smartphones. Other systems are integrated into the vehicle and affect all cell phones in the vehicle through a small transmitter. These solutions can for example block incoming calls, texts and emails while in motion or when moving in a specific geographic area. Each system has a different strategy for addressing the "passenger problem" – whether and how to allow calls by someone in motion who is not a driver, such as a passenger in a car or a rider on a bus or train.

Promote/mandate use of products raising road user alertness

Fiscal discounts or legislative incentives are a well-known way to promote the use of products that can decrease distraction of road users. As previous research shows, several products can help avoiding distraction. The most common products for car drivers are: drowsiness warning/fatigue warning systems and lane warning and guidance systems.

Fatigue warning systems have been introduced in cars and trucks in order to reduce the number of (severe) accidents that are caused by driver fatigue. There are several technological solutions for driver fatigue monitoring which can reduce fatigue related crashes:

- Systems that monitor steering patterns; use steering inputs from electric power steering systems
- Vehicle position in lane monitoring; use lane monitoring camera's
- Driver eye and face monitoring; use camera's to watch the drivers' face
- Physiological measurement; use body sensors like heart rate monitors, skin conductance monitors and muscle activity monitors.

Lane warning and guidance systems have been introduced as warning systems to keep vehicles in lane, meaning potentially they can help mitigate the effects of road user distraction. The results of the systems could be positive, if the systems achieve a high (technical) performance and there will be a high performance among drivers.

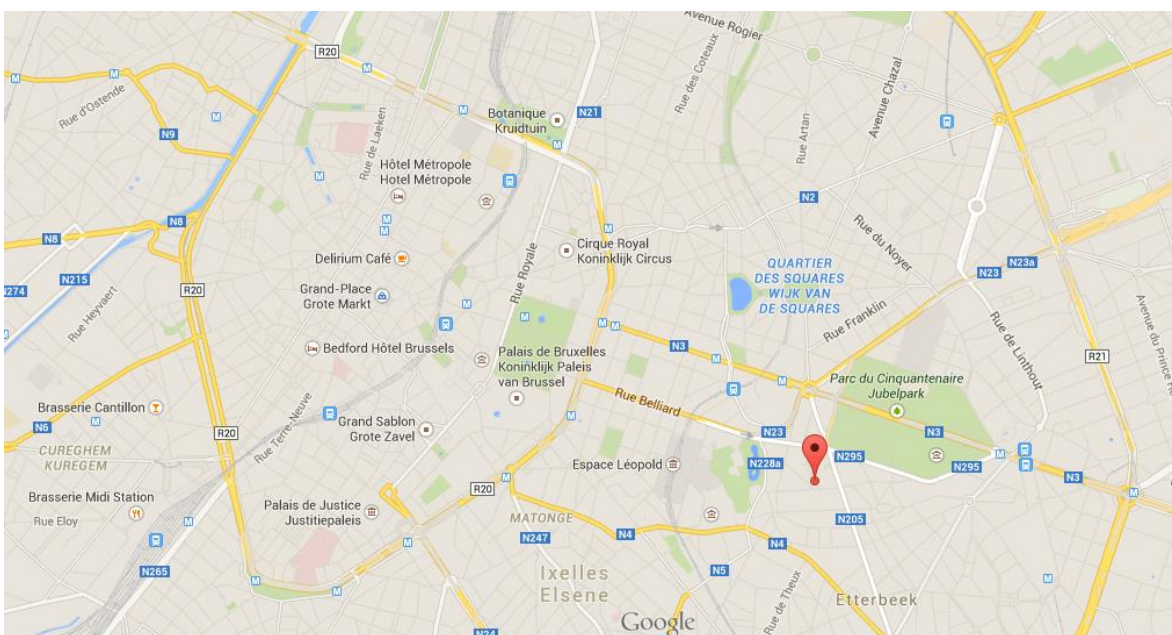
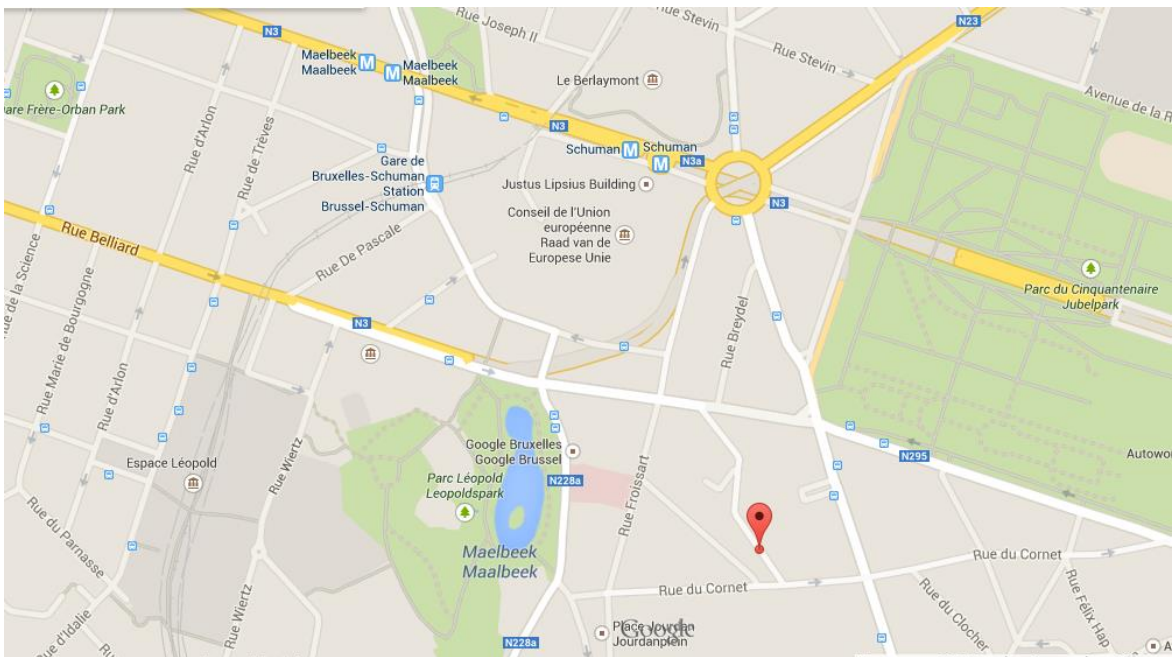
Practical information

The workshop will take place on:

**3rd June 2015, 10:00AM – 16:30PM,
DG MOVE, Rue Jean André de Mot 24 in Etterbeek, Brussels,
Room DM24 03/047.**

How to get there:

<http://ec.europa.eu/transport/about-us/dgmove-map.pdf>



From Brussels Airport:

Take busline 12 from Brussels Airport. Get off at Bus Stop “Schuman”. Walk via Rue Froissart. Walk into the first street on the left Rue Belliard and then into first street on the right Rue Jean Andre de Mot. Number 28 is at the end of the street on your left hand.

Duration walk: 5 minutes.

From Brussels Central Station / Gare de Bruxelles Central

Take metroline 1 or 5 to metrostation ‘Schuman’. Walk via Rue Froissart. Walk into the first street on the left Rue Belliard and then into first street on the right Rue Jean Andre de Mot. Number 28 is at the end of the street on your left hand.

Duration walk: 5 minutes.

