



Road Safety Data, Collection, Transfer and Analysis

## **Deliverable 5.1**

# **Integration of WP5 Activities in ERSO – Consultation and Model**

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## EXECUTIVE SUMMARY

The overall objective of DaCoTA is to help develop knowledge-based road safety policies in European countries by continuing to develop a European Road Safety Observatory (ERSO) and providing methods to use ERSO data for policy development and implementation.

The objective of Task 5.1 is to examine the integration of DaCoTA Workpackage 5 (WP5) activities regarding safety technologies into ERSO. This report examines what users expect on ERSO, outlines the outputs expected from WP5 activities, proposes how to present these outputs in ERSO and gives a plan to harmonise the presentation of safety system information on ERSO. Also collated are relevant comments from other DaCoTA Workpackages (1, 2 and 4) regarding eSafety issues.

To understand what stakeholders expect of eSafety data and methodologies presented in ERSO a board stakeholder consultation activity has been undertaken to gather views on the following items;

- eSafety content of ERSO - what eSafety data would participants like to be available on the ERSO website?
- what results might be available regarding eSafety - what eSafety data do participants have that could be made available on the ERSO website?
- what thoughts do survey participants have on eSafety policy and technologies that could shape activities in WP5

The background to the methodology used and development of the online survey is given in **Chapter 2**, with the full survey and accompanying letter available in Appendix A. To reach as many people as possible involved in road safety, or with a professional interest in road safety, an online survey has been used, with the link distributed by the DaCoTA EC Project Officer. The survey was open during November 2010 with 380 responses received. It was expected that using the EC stakeholder and Road Safety Charter lists would give a broad spectrum of professionals involved in road safety – rather than just those involved in academic research or industry – and this was the case.

Each survey question and accompanying results are presented in **Chapter 3** under the survey sections; background, current systems, ERSO contents, thoughts on eSafety (legislation and priorities) and further contact. The survey included both coded questions and for many questions the opportunity to provide a comment. Depending on the type of question and comments provided, comments have sometimes been summarised and sometimes given as provided. All comments have been examined for comprehension and those with direct references to specific countries or manufacturers have not been included in this public deliverable.

It is considered that, overall, 380 participants was a high enough number to feel that the results would give a good balance of views and opinions. It is clear that many of the participants have experience of eSafety data, with nearly half using the results of eSafety effectiveness studies. The importance of human behaviour in the study of eSafety is reflected in the high proportion of participants who report using human behaviour information from accident data, followed by information from trials/surveys.

Considering the contents of ERSO, all of the areas suggested were valued to some extent (most useful to possibly useful) by the majority of participants. Most of the comments given support activities that would already be covered, but some add a focused point that would be an interesting addition to activities in WP5. Participants were asked about their thoughts on eSafety legislation and priorities for casualty reduction. Of the participants who gave a yes or no answer, two thirds feel that

legislation is not keeping up with eSafety technologies. In considering evidence base versus market forces in developing eSafety policy, the majority view is one of balance and pragmatism, with an often repeated view that establishing an evidence base and then legislating takes time, whilst technology is moving at a much faster pace. Participants have given priority rankings to new technologies and, where viable methodologies and data exist, they will be considered in further WP5 activities.

There is a good spread of countries representing participants, although the United Kingdom, Germany and Italy are most prominent. Of the 184 participants who indicated that they had eSafety information available or possibly available, 65% responded positively to discussing responses and provided an email address.

**Chapter 4** outlines the methodologies, tools and results that will arrive from WP5 activities. It is proposed that summaries are made of the results for ERSO with links made in relevant ERSO webtexts (articles written by experts in the field - being updated in DaCoTA). Full Deliverable reports will be on the DaCoTA project website.

**Chapter 5** proposes how to present these outputs in ERSO and gives a plan to harmonise the presentation of safety system information. It is proposed that links are created in relevant webtexts to both the full deliverables on the DaCoTA project website and also WP5 output summaries hosted in ERSO. Currently safety technology information is often spread across different areas of ERSO, sometimes with differing references. It is proposed that the updated webtexts created in DaCoTA are reviewed to provide better linking to the relevant safety technology description and importantly duplication of text is avoided. Updated data sources (including any new sources identified from the consultation) will also be integrated into the webtext. A library of references and sources will be created using references from the updated webtext, links to already established eSafety websites and any new sources from the consultation. It is proposed that Task 5.1 activities carry on, after this Deliverable, to support the integration of these methodologies and evaluation results as they arrive from WP5 activities and to work with the updated webtexts.

There are other Workpackages (1, 2 and 4) in DaCoTA that have already carried out consultation activities and have touched upon eSafety issues. Relevant comments from their results are reported in **Chapter 6**. Comments from Deliverable 4.1<sup>1</sup> (that reinforce results from the online survey here and are also relevant to eSafety evaluations cover the areas of;

- the need for standardized assessment tools to observe safety effects
- road safety policy-making should be based on knowledge
- databases on vehicles (characteristics of the vehicle fleet, of newly registered vehicles, pass/failure results of the periodical vehicle tests) are required
- crash cost data is required
- vehicle data, make, model, safety equipment, results of the last technical tests, etc. Exposure data needs to be improved
- In-depth analysis of crashes is found as an essential tool. A common methodology and training material should be made available
- In-depth knowledge of behavioural patterns

**Chapter 7** provides discussion and summary conclusions. Some experiences of carrying out the survey, useful for further activities in DaCoTA, are also included.

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<sup>1</sup> Muhlrad, N, Dupont, E (Eds.) (2010) Consultation of a panel of experts on the needs for data and technical tools in road safety policy-making, Deliverable 1.1/4.1 of DaCoTA

# 1.INTRODUCTION

## 1.1. General Goals of Workpackage 5, “Safety & eSafety”

The overall objective of DaCoTA is to help develop knowledge-based road safety policies in European countries by continuing to develop a European Road Safety Observatory (ERSO) and providing methods to use ERSO data for policy development and implementation.

Road safety has been increasing in motorized countries now for 30 years and this increase shows that political willingness and efficient countermeasures can actually produce positive results. The last couple of decades have seen a promising increase in e-safety systems directly linked to technological progress. These systems are complementary to traditional safety countermeasures (regulation, education, enforcement, advertising and information campaign, car crashworthiness, infrastructure improvements, etc.). E-safety systems address accident prevention (preventive safety), accident avoidance (active safety), injury mitigation (passive safety) and rescue and health care improvement.

A European Road Safety Observatory must then take the broad and extended e-safety issues into consideration by analyzing what types of safety problems are addressed by technologies, and, if and how technologies are effectively and efficiently addressing these problems.

The consideration of e-safety as a potential means for accident and injury prevention encompasses four main aspects, in sequential order:

- ✓ The determination and/or the updating of accident and injury causation issues
- ✓ The identification and the update of the road users' needs in terms of accident and injury risk reduction based of this prior knowledge about causation (if, for example, accident causation analysis reveals a problem in driver's perception of the pedestrian in unlit urban areas, the driver need could be an enhanced vision in unlit urban areas).
- ✓ The determination of whether current or future technology can address these needs (for example, do the current night vision applications, and the technology behind, really target, in its complexity, the needs for a better detection of pedestrian in unlit urban areas)
- ✓ The assessment of all the potential benefits, and not exclusively the safety benefits, of the most promising needs-relevant safety applications in terms of:
  - Impact on traffic capacity
  - Impact on drivers tasks
  - Impact on crash and injury counts
  - Impact on population health
  - Impact on quality of life, including environment
  - Impact on the economy

The question now is: how can we structure a European Road Safety Observatory in such a way that the above-mentioned elements are stored, available, accessible, analyzable and useful for any kind of stakeholders, including the public authorities and the industry? This is actually the objective of the WP5. Therefore, this work package is proposing to:

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- ✓ Help building the structure of an ERSO that addresses these e-safety issues
- ✓ Help identifying the nature of the data that has to be stored in such an observatory and in such a way that the data is easily interpretable and usable.
- ✓ Implement suitable methods for an appropriate analysis of the data, and especially for an optimized diagnosis of the safety problems, how the technology addresses these problems and for the assessment of the most promising counter-measures based on technology.

These objectives are consistent with the development of a European Road Safety Observatory that aims to:

- ✓ Identify and store relevant data about traffic safety (accident data and other types of information)
- ✓ Develop best practices in accident investigation and traffic safety analysis
- ✓ Select performance indicators in traffic safety

## 1.2. Specific Goals of the Task

The objective of Task 5.1 is to examine the integration of Workpackage 5 activities regarding eSafety into ERSO. It is therefore interesting to understand what stakeholders expect of eSafety data and methodologies presented in ERSO. A broad stakeholder consultation activity has been undertaken to gather views on the following items;

- eSafety content of ERSO - what eSafety data would participants like to be available on the ERSO website?
- what results might be available regarding eSafety - what eSafety data do participants have that could be made available on the ERSO website?
- what thoughts so survey participants have on eSafety policy and technologies that could shape activities in Workpackage 5

To reach as many people as possible involved in road safety, or with a professional interest in road safety, an online survey has been used, with the link distributed by the DaCoTA EC Project Officer.

There are other Workpackages in DaCoTA that have already carried out consultation activities and have touched upon eSafety issues. It is therefore appropriate to examine these outputs for views on eSafety from Workpackage 2 of DaCoTA (Developing a Pan-European In-depth Accident Investigation Network) and the consultation carried out by Workpackages 1 (Policy-making and Safety Management Processes) and 4 (Decision Support) reported in Deliverable 4.1. These activities in other Workpackages consulted National Experts and a selected Expert Panel. The online survey reported in this document gathered a much broader spectrum of views from 380 respondents from the EC Stakeholder and Road Safety Charter lists.

The Technical Annex of the project stipulated that Task 5.1 should have a deliverable report early in the project. From the nature of the task objectives the Workpackage activities to generate new eSafety methodologies or results are on-going, so the activity of actually integrating those results into a website that would be available to update the EC ERSO website is still to be carried out. In this report, proposals are made on how outputs from WP5 activities could be presented in a DaCoTA system pilot website, which will then be available to update ERSO.

It is therefore proposed that this report is delivered now but activities in this task will continue until the end of DaCoTA, to support the integration of eSafety results generated in Workpackage 5 of the DaCoTA project.

## **1.3. Layout of Document**

Reflecting the activities given above this report consists of the following chapters,

Chapters 2 and 3 give the background and results of the on-line stakeholder consultation

Chapters 4 and 5 discuss relevant eSafety results from both inside and outside DaCoTA and propose how the information can be presented in ERSO

Chapter 6 examines results relevant to eSafety from Workpackages 2, 1 and 4 of DaCoTA

Chapter 7 provides discussion and summary conclusions

This document reports on the results of a consultation process and includes comments made by participants. The views reported are not necessarily those of the DaCoTA project, those who provide funding to the DaCoTA project or the authors of this report.

## 2. DACOTA ON-LINE eSAFETY SURVEY

### 2.1. Background

#### 2.1.1. Objectives

The objective of this consultation activity was to gather broad views from stakeholders regarding the use of eSafety data and requirements for ERSO. Also general thoughts were requested on eSafety technologies and legislation.

#### 2.1.2. Method of Consultation

To meet these objectives it was decided that an online survey would be an appropriate method of consultation as it would be possible to reach a large number of stakeholders easily and gather a broad range of views efficiently. It was considered to be less resource intensive than using telephone interviews or sending surveys by post. After choosing an electronic process, a web based online survey is more accessible and user friendly, easier to complete and return, than an email with an attached survey document. Also, with a clear, simple format an online survey is not necessarily time consuming to answer and the collected data are presented by the software in a readily useable format. It is easier to make a survey anonymous with web based online software than answers being returned as attachments from email addresses.

The online survey was created using 'Bristol Online Surveys' (BOS)<sup>2</sup>, an online subscription application.

The survey link was - <https://www.survey.lboro.ac.uk/esafety-survey>. It is an advantage of the BOS software that the link text can be chosen. This link showed that the server is secure, gave a visual connection to Loughborough University and that it was an eSafety survey. One weakness of this type of consultation is that the email might be dismissed as junk mail but this type of link gives confidence to the participant rather than the obscure strings of alphanumeric text that some on-line survey software generates. Also the survey was sent by the DaCoTA EC Project Officer (see below) so was less likely to be considered as junk mail.

#### 2.1.3. Selection of Stakeholders and Survey Distribution

An objective was to consult as many people as possible involved in road safety or with a professional interest in road safety. The EC stakeholder and Road Safety Charter lists were identified as appropriate resources to achieve this, containing approximately 2,000 email addresses. The EC controls these lists so the distribution of the survey link had to be made by the DaCoTA EC Project Officer.

The DaCoTA EC Project Officer sent an emailed letter including the survey link to recipients that explained the background of the DaCoTA project and objectives, the purpose of the survey and gave a definition of eSafety. An advantage of this approach was that it gave the survey a clear context and the authority of the EC Project Officer.

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<sup>2</sup> <http://www.survey.bris.ac.uk>

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The email was sent on the 11<sup>th</sup> November 2010 with the survey available for 2 weeks (until 26<sup>th</sup> November 2010). A reminder was sent on the 23<sup>rd</sup> November 2010 by the DaCoTA EC Project Officer in the same format.

The full survey and accompanying letter are available in Appendix A. Each result is presented with the accompanying question in the results chapter (Chapter 3).

## 2.2. Survey Layout

### 2.2.1. Introduction Page

The purpose of the first page of the survey was to concisely introduce the DaCoTA project, the generic concept of eSafety and the aims of the survey. The authors were aware that this text should not be too long, quickly getting people interested enough in the subject to want to fill in the survey. Website links were included for the DaCoTA project website and ERSO. The text was also reproduced in the text of the accompanying emailed letter from the EC Project Officer. At the start of this page it was stated that the questionnaire would take 5 to 10 minutes. With such a short survey with a variety of questions it was considered that a countdown of completed pages or percentage completed was not required, although it is recognised that this is considered as good practice in longer surveys.

#### Introduction text...

##### **eSafety Data in the European Road Safety Observatory - Survey**

This questionnaire will take 5 to 10 minutes.

##### **Survey Purpose**

The European Commission's FP7 DaCoTA (Road safety Data Collection, Transfer and Analysis) project ([www.dacota-project.eu](http://www.dacota-project.eu)) is in the process of examining how to most effectively integrate road safety data concerning 'eSafety' into the European Road Safety Observatory (ERSO) website ([www.ec.europa.eu/transport/road\\_safety/specialist/index\\_en.htm](http://www.ec.europa.eu/transport/road_safety/specialist/index_en.htm)).

eSafety is a term used to describe new intelligent technologies that are rapidly being deployed into the transport system with the intention of reducing casualties and improving transport efficiency.

Examples include driver information and hazard alert systems (e.g. lane departure warning, blind spot monitoring, vehicle 2 vehicle communication) as well as autonomous systems that modify vehicle dynamics (e.g. electronic stability control, lane departure assist, autonomous emergency braking). Infrastructure technologies that interact with advanced vehicle systems will also be considered (e.g. eCall, intersection safety).

Through ERSO results from eSafety studies and good practice methodologies/tools for evaluation will be available.

We would be very grateful if you could find the time to fill out the following questionnaire which has three primary aims. To discover;

- what eSafety data you would like to be available to you on the ERSO website?
- what eSafety data do you have that you could make available on the ERSO website?
- some general thoughts on eSafety technologies and legislation.

### 2.2.2. Ethics, Data Protection and Anonymity

The Loughborough University Ethical Clearance Checklist was completed for the on-line survey. The checklist did not identify any factors that required full approval from the University Ethical Advisory Committee.

The second page stated that the information collected would only be used for the purposes of DaCoTA research.

**Data protection text...**

The information collected will only be used in the DaCoTA research project and to facilitate the integration of eSafety into the ERSO website.

Thanks to your participation we will have a better understanding of the needs of those involved in road safety regarding eSafety and the availability of relevant data and results.

Please email Alan Kirk ([a.r.kirk@lboro.ac.uk](mailto:a.r.kirk@lboro.ac.uk)) if you require assistance to complete the survey.

If you would like more information about the DaCoTA project please contact:

Dawn Chambers-Smith, Project Administrator

0044 (0)1509 226900, [d.chambers@lboro.ac.uk](mailto:d.chambers@lboro.ac.uk)

Fundamentally the survey was anonymous, as no record was taken of participants' IP addresses and no mandatory request was made for name or other identifiers. This approach was adopted to encourage the highest participation rate as possible, considering that some questions were directly asking opinions on the effectiveness of legislation and priorities of technologies.

It was decided to allow participants to enter their details if they were content to do so, at the end of the survey. This took the following form.

<b>Contact details</b>	
This is not compulsory, but if you could provide your details below it would help us monitor responses. (Optional)	
Institution/Company	<input type="text"/>
Role	<input type="text"/>
Name	<input type="text"/>
Email	<input type="text"/>
Country	Drop down list provided
Are you willing to be contacted by the DaCoTA project..	
..with details of project <b>events</b> (for example workshops)	<input type="checkbox"/>
..to discuss the <b>responses</b> in this questionnaire	<input type="checkbox"/>
If you have identified eSafety information that you feel could be available on the ERSO website but would prefer not to enter your details above please consider sending a separate email to Alan Kirk ( <a href="mailto:a.r.kirk@lboro.ac.uk">a.r.kirk@lboro.ac.uk</a> ).	

The final paragraph was added to ensure that anyone who was not comfortable with supplying their contact details – maybe because of the opinions given on legislation or new technologies – but had possible eSafety data was given the direction to make contact.

### **2.2.3. Number of Respondents**

Due to the broad scope of the survey and to get the largest number of responses possible, nearly all the questions were optional to encourage participants not to leave the survey if they found a question not relevant or too long. Although the software setting to have (*optional*) written after each question was disabled. The only mandatory question was Question 1 – Type of organisation.

The survey was opened for 2 weeks from 11<sup>th</sup> November 2010. Overall, 398 people answered question 1 and then reached the last page of the survey to trigger a submission. On closer examination it was found that some responses contained effectively no information – someone running through the data just for interest but then reaching the submission page. Deleting these responses gave 380 responses overall.

For each question in the following results chapter it is clearly stated how many participants provided an answer.

## 3. SURVEY RESULTS

The survey was laid out in 5 areas:

- Background

A brief consideration of the participant's background: type of organisation and the use of general road safety data with the organisation.

- Current Systems

Questions regarding current eSafety data use and availability of eSafety data.

- European Road Observatory Contents

Section of questions to gather opinions on what participants would find most useful on ERSO and recognise any eSafety related data that might not have been previously identified.

- Thoughts on eSafety (Legislation and Priorities)

The opportunity to learn of participants' thoughts on eSafety and the links between legislation, evaluation studies and market forces. Participants' are also asked to consider priorities in terms of casualty reduction.

- Further Contact

The survey is anonymous but participants have the opportunity to give their details to the project if they would like further information.

In this results chapter each area is addressed separately.

In total 398, people replied to the survey in that they clicked all the way through to the submission page. Of these 18 responses were found to effectively hold no data – other than Question 1, no questions were answered - and were removed from the dataset. Therefore the analysed dataset holds 380 responses.

This document reports on the results of a consultation process and includes comments made by participants. The views reported are not necessarily those of the DaCoTA project, those who provide funding to the DaCoTA project or the authors of this report.

### 3.1. Background

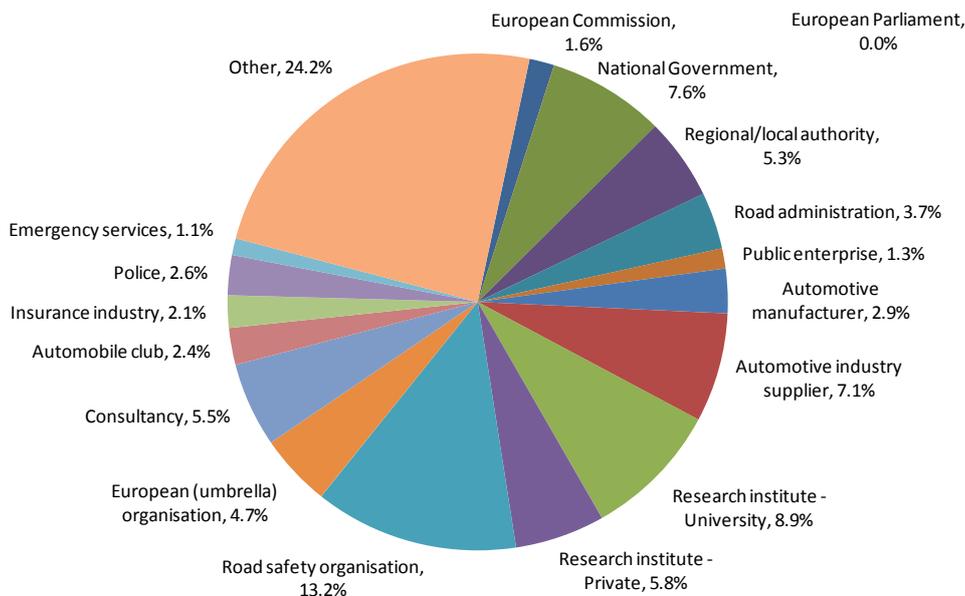
#### Question 1 - What type of organisation do you represent (please choose the best fit)?

The choices that were available are given in Table 1.

European Commission	Automotive manufacturer	Consultancy
European Parliament	Automotive industry supplier	Automobile club
National Government	Research institute – University	Insurance industry
Regional/local authority	Research institute – Private	Police
Road administration	Road safety organisation	Emergency services
Public enterprise	European (umbrella) organisation	Other

**Table 1: Type of organisation choices**

This question was mandatory and therefore answered by all 380 participants. Figure 1 shows the distribution of organisation type for the participants.



**Figure 1: What type of organisation do you represent?**

Although the choices available were considered to be quite comprehensive, 24% of participants selected ‘other’. Examples are fleet operators/management companies, non-government organisations, driving schools and associated associations, statistics offices, individual companies, health organisations and schools. In some cases the organisation stated in ‘other’ could have been included in one of the answer choices.

Of the defined categories there will be clearly some overlap between activities in the groups, for example consultancy could well cover similar activities to those carried out in research institutes. Combining what are likely to be similar types of organisations together gives 10% of participants in the automotive industry, 15% in research institutes (private or university), 18% in ‘government’ (European Commission, National Government, regional/local authority or road administration) and 18% in road safety organisations (including European [umbrella] organisations).

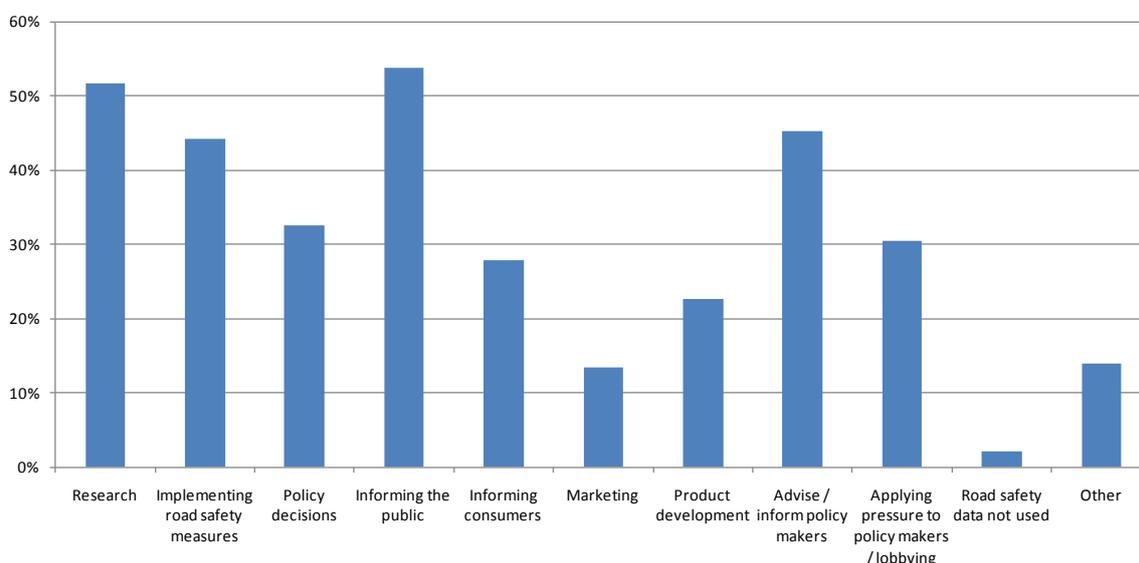
### Question 2 - What do you use road safety data for?

This question was asked to give some background regarding current road safety data use. The choices that were available are given in Table 2. It was possible to answer all that applied.

Research	Informing consumers	Applying pressure to policy makers / lobbying
Implementing road safety measures	Marketing	Road safety data not used
Policy decisions	Product development	Other (Please state):
Informing the public	Advise / inform policy makers	-

**Table 2: Choices for road safety data use**

This question was optional and answered by 378 participants. Figure 2 shows the distribution of the uses of road safety data.



**Figure 2: What do you use road safety data for?**

Figure 2 shows that most of the uses of road safety data are well represented. Over half the participants use road safety data to inform the public, closely followed by research. Road safety data is used by 44% to implement road safety measures and 45% to advise or inform policy makers.

The ‘other’ choice was made by 53 participants, although 44 of those who gave an ‘other’ answer also answered one of the 10 answer choices. It is clear that the ‘other’ text box was sometimes used to explain the coded answer more fully (for example, ‘We use it to pressure the local and national government to improve cycling infrastructure’ or ‘funding justification, and benefit cost analysis for accident reduction measure calculation’).

Some participants mentioned driver training or training for fleet operators, which were not directly addressed in the answer choices. Education was also mentioned.

### 3.2. Current Systems

This section of questions was asked to understand current eSafety data use and the availability of eSafety data.

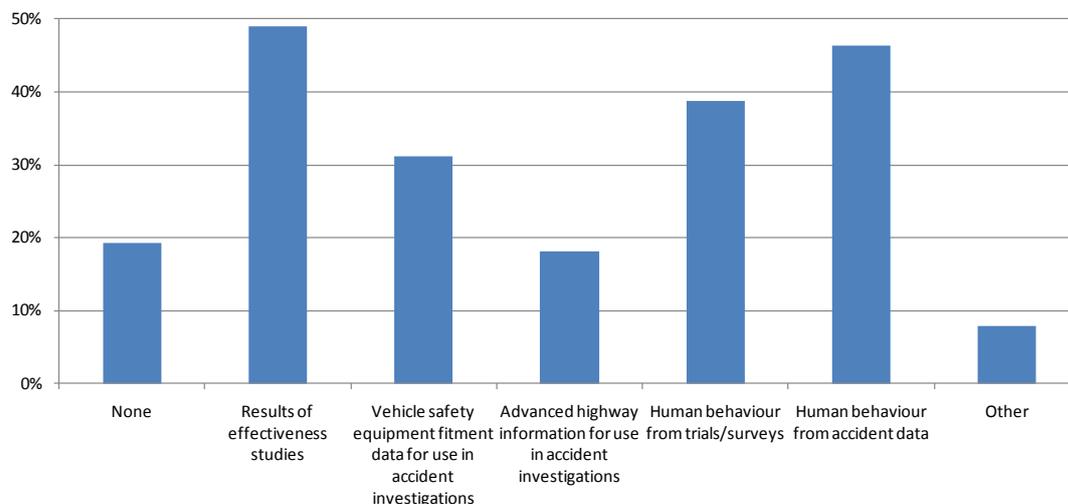
#### Question 3 - What eSafety data do you currently use?

This question was asked to give some background regarding current eSafety data use. The choices that were available are given in Table 3. It was possible to answer all that applied.

None
Results of effectiveness studies
Vehicle safety equipment fitment data for use in accident investigations
Advanced highway information for use in accident investigations
Human behaviour from trials/surveys
Human behaviour from accident data
Other

**Table 3: Choices for eSafety data currently used**

This question was optional and answered by 376 participants. Figure 3 shows the distribution of the uses of road safety data.



**Figure 3: What eSafety data do you currently use?**

Just under 50% of participants are using the results of eSafety effectiveness studies, while 46% are using human behaviour information from accident data, closely followed by human behaviour information from trials/surveys. This has been included here not necessarily as eSafety data but the kind of data that is important for a good understanding of how effective eSafety technologies might be. A surprisingly high proportion, just under a third, are using vehicle safety fitment data for use in accident investigations. Just 30 'other' text responses were given. Of those who gave an 'other' answer, 18 also answered one of the 6 coded responses (not 'other'). As with Question 2 the 'other' text box was sometimes used to explain the coded answer more fully and here that was often giving the sources of data used, for example for the results of effectiveness studies.

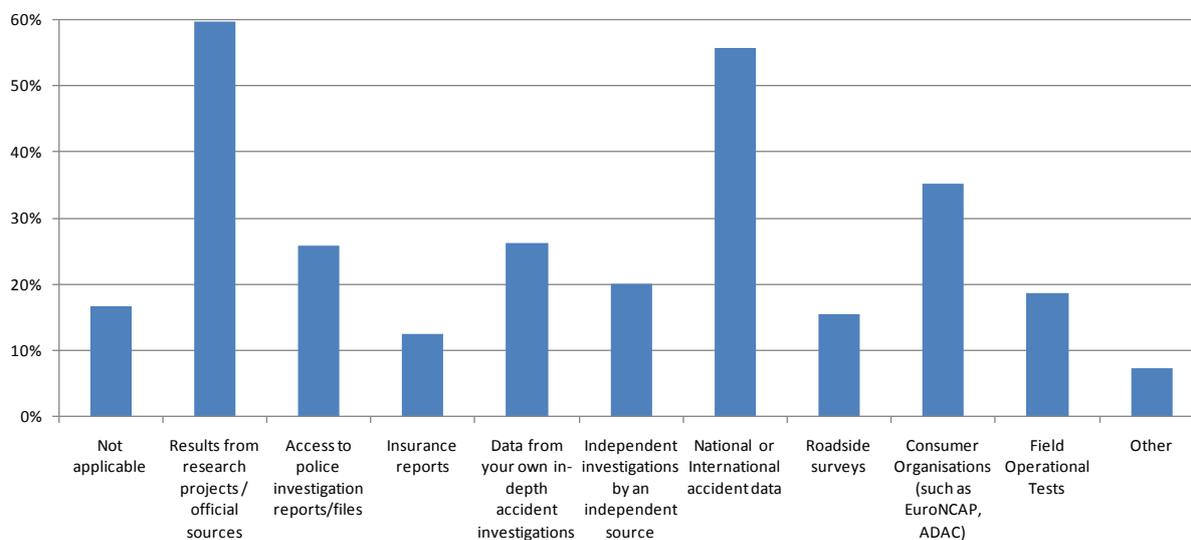
### Question 4 - Where do you currently obtain eSafety data from?

This question was asked to give some background regarding the availability of eSafety data. The choices that were available are given in Table 4. It was possible to answer all that applied.

Not applicable
Results from research projects / official sources
Access to police investigation reports/files
Insurance reports
Data from your own in-depth accident investigations
Independent investigations by an independent source
National or International accident data
Roadside surveys
Consumer Organisations (such as EuroNCAP, ADAC)
Field Operational Tests
Other

**Table 4: Choices for eSafety data currently used**

This question was optional and answered by 375 participants. Figure 4 shows the distribution of where participants currently obtain safety data.



**Figure 4: Where do you currently obtain eSafety data from?**

Just under 60% of participants obtain eSafety data from results in research projects or official sources and correspondingly 56% obtain eSafety data from national or international accident data – which will feed information into such reports. Just over a third obtain data from consumer organisations (such as EuroNCAP or ADAC).

‘Other’ text responses were given by 28 participants. Of those who gave an ‘other’ answer, 19 also answered one of the 10 coded responses (not ‘other’). Even more so than previous questions the ‘other’ text box was used to explain the coded answer more fully, often giving the sources of data used.

### 3.3. European Road Safety Observatory Contents

This section of questions was asked to gather opinions on what participants would find most useful on ERSO.

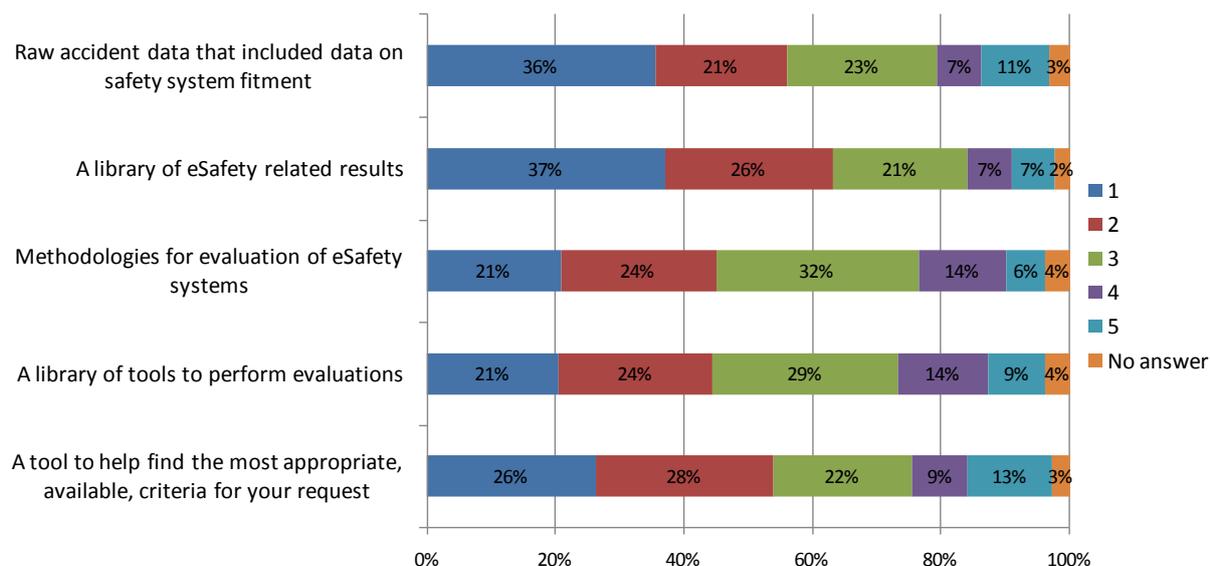
#### Question 5 - What would you find most useful if included on the European Road Safety Observatory (ERSO) website?

For this question participants were asked to rank each of the options in Table 5 individually, with 1 most useful, 3 possibly useful and 5 not useful.

Raw accident data that included data on safety system fitment	1 to 5
A library of eSafety related results	1 to 5
Methodologies for evaluation of eSafety systems	1 to 5
A library of tools to perform evaluations	1 to 5
A tool to help find the most appropriate, available, criteria for your request	1 to 5

**Table 5: Choices for eSafety data usefully included in ERSO**

This question was optional and answered by 375 participants. Figure 5 shows the distribution of where participants currently obtain safety data.



**Figure 5: What would you find most useful if included on the ERSO website?**

A library of eSafety related results was the option most often rated 1 or 2, closely followed by raw accident data including safety system fitment and a tool for helping to find the most appropriate criteria. This is an interesting result as it suggests that participants would find already produced results and then the raw data to conduct studies the most important eSafety material to have on ERSO, rather than the methodologies and tools to actually carry out the evaluations. This isn't really the full picture though, as methodologies for evaluation of eSafety systems and tools to perform evaluations get a 1 or 2 ranking with 45% of participants and a 1, 2 or 3 ranking with 77% and 74% respectively. So they are still valued.

### Question 6 - Are there any other aspects of eSafety that you would like to see included on the ERSO website?

This was free text box to allow comments on options not allowed for in Question 5. A comment was made by 23% of participants (87).

The comments have been reviewed for relevance and comprehension. Those selected have been included below under general headings. Comments range from those emphasising responses in Question 5 to quite focused suggestions. Some are more relevant to the wider ERSO, rather than particularly eSafety. As this was an open question comments are given as received (with some spelling corrections) – later in this document some comments will be summarised into similar groups.

#### General comments emphasising responses in Question 5 (examples)

'The Library for sure'	'Tools for exploring data'
'List of ongoing studies or projects'	-

#### More specific comments regarding evaluation

'The scientific credibility of each tool and a comparing tool to check parallel data from different countries in EU'	'Up-to-date data, with the same classification scheme for each Member States, taking account of the different legislation in place'
'Results of deeper investigations of accidents, identification of acc. causes (instead of raw acc. data like Nr. of injured/killed)'	'Influence of eSafety systems malfunction on accident causation and severity'
'Accident Root Cause Analysis'	'Always include non-protected road users in any developments and evaluations'
'Contribution of eSafety on reduction of fatalities and severe injuries'	'Systematic reviews of the literature of effectiveness and cost-effectiveness'
'Documents that could let the "public administrations" understand and evaluate (even in "money", the most sensitive aspect!!!) the importance of road safety'	'Heavily and minor injuries data statistics. Detailed and overall cost data on eSafety devices fitted to vehicles. (Detailed) cost information on fatalities and casualties'
'Include near-crash stats from Naturalistic driving studies and FOT results in database. investigate trends with and without eSafety systems onboard'	'Project for young drivers where the cost of their insurance was reduced substantially if they allowed a 'black box' to be fitted to their vehicle that monitored speed and use of the vehicle'
'Up to date effectiveness information (real world benefit) and context of estimate, including how achieved (retrospective/predictive/specific study) and in relation to which sample (all accidents, specific group of accidents, all fleet/drivers, or specific sample of fleet/drivers)'	'Split by country and region, split between cars, trucks, buses, motorcycles, qualitative and quantitative economic and societal benefits/savings linked to penetration rate of different eSafety systems'
'What M2M applications are improving road safety [Machine 2 Machine]'	'Evaluation methodologies for the 5 pillars of road safety'

### Understanding technologies

'Differentiation between similar systems as although they may provide the same generic functionality (i.e. auto braking) they may not all be equal with respect to effectiveness'	'Links to informational sites about the different systems, as it is hard to find your way around in the new technology'
'Collection of presentations of eSafety technologies?'	'Availability of eSafety systems, product information (no marketing)'

### Fitment and exposure

'Approaches for deployment and experiences; status of deployment of eSafety systems'	'A VIN decode to establish what optional safety equipment is fitted to each vehicle'
'Market penetration for new registered vehicles, types and the whole fleet including respective mileage'	'Up-to-date data, with the same classification scheme for each Member States, taking account of the different legislation in place'
'How many vehicles are equipped with e-safety systems and what type'	'How many vehicles are fitted with specific systems and evidence of the benefit of each system to safety'
'If eSafety item is optional (customer choice) then how much is cost to fit?'	'OEM data to implant digital car data'
'Information on the legislation in each member state'	'Take up of eSafety in legislation at a national, EU and global levels'
'Circulating parc by categories and by countries'	-

### Data availability and deployment

'Event Data Recorder to analyze accidents and to assure that eSafety systems work in a correct manner'	'Approaches for deployment and experiences; status of deployment of eSafety systems'
'Ability to reconstruct the data 2-3 seconds before the crash would be helpful'	-

### Comments focused on specific topics or themes

'Statistics for incidents and near misses (related to tunnels). Base data for the performing of risk analysis for tunnels'	"Split" results better into age and capacity of motorbikes. To get a better understanding of the shift of casualties onto 40+ years and 750cc+ bikes'
'Anything related to cyclists and eSafety'	'Safety of commercial transport and causes of concern related to safety: fatigue being the most important one'
'School transportation accidents'	-

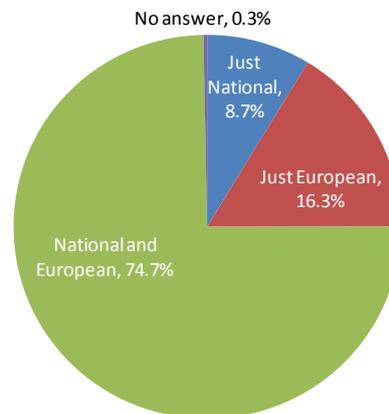
**Comments for wider ERSO**

<p>'Links on road safety related topics and data. i.e. Drugs, Alcohol, youth, fatigue, etc..'</p>	<p>'Data on status of those involved relating to Alcohol, Medicines and illegal substances'</p>
<p>'Insurance costs analysis/ data actual crash % by VM and driver profile'</p>	<p>'Information on the legislation in each member state'</p>
<p>'We wish there was an area where they were given the worthwhile initiatives in the field of road safety operations - designed by voluntary associations: ....referring for example to projects given awards'</p>	<p>'A more precise analysis of accident reasons specially for HGV and busses. Inclusion of load issues and overloading of vehicles and axles. Speed recording for the accident period and manipulations on the tachograph are also very interesting. Driving time is also very important'</p>
<p>'Current issues for debate and investigation'</p>	<p>'Campaigns to push safety'</p>
<p>'We would like to see the accidents' data as related to the traffic volume for each country of the EU'</p>	<p>'Best practices applied to reduce road transport accidents / information on Best Practices'</p>
<p>'A public database where you can find real accidents information relative to EES value; 2) A public database where you can find real accidents information relative to type of injury and dynamic of the accident'</p>	<p>'Definitions of casualty severity for each country. Casualty trends for individual countries linked to modal share'</p>
<p>'Lessons learned from road safety incidents'</p>	<p>'Our monthly magazine could forward you some of the most interesting news about the results of our research'</p>

**Question 7 - Would you prefer the data to be at a National or European level (or both)?**

This question was asked to consider the general geographical detail that participants would like available. The tick boxes available were National or European, but it was possible to tick both. This question was optional and answered by 379 participants.

The distribution of responses is shown in Figure 6.



**Figure 6: Would you prefer the data to be at a National or European level (or both)?**

The overall consideration for European data (91%) was not unexpected as the survey distribution list was those who are engaged with road safety at usually a European level. Figure 6 shows though that three quarters of participants would like to consider data at both National and European levels.

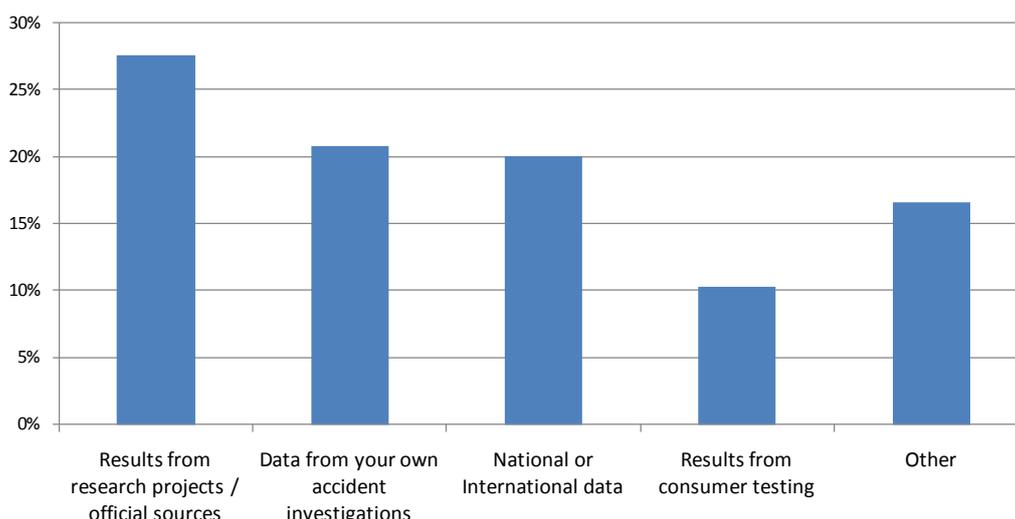
**Question 8 - Do you have any eSafety related data that would be suitable for the ERSO website?**

This question was asked to recognise any eSafety related data that might not have been identified through usual channels. The choices that were available are given in Table 6. It was possible to answer all that applied.

Results from research projects / official sources
Data from your own accident investigations (of course this would be subject to a discussion regarding confidentiality and the level of disaggregation of the data)
National or International data
Results from consumer testing
Other

**Table 6: Choices for eSafety data suitable for ERSO**

This question was optional and answered by 226 participants (59.5%). Figure 7 shows the distribution of the responses (as a proportion of all 380 participants).



**Figure 7: Do you have any eSafety related data that would be suitable for the ERSO website? N=380**

Results from research projects / official sources was listed by 28%. Just over 20% responded as having data from their own accident investigations, which may include research projects that have used accident data. There is also likely to be an overlap between results from research projects / official sources and national or international data.

Regarding 'other', 11% (41) gave a relevant response to this option (rather than 'no data' or 'sorry have no original data'). It is not appropriate here to list these as they contain some quite specific references and further contact would be needed with participants to explore possibilities first. This is also the case with the responses to the last part of Question 8, which was a free text box entitled 'Please give details (however brief)'. A relevant response was given by 67 people to this section.

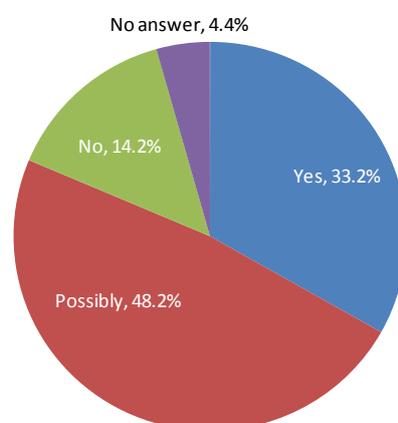
### Question 9 - Would you be willing to make this eSafety information available on the European Road Safety Observatory?

This question was asked to investigate the possible availability of any potential information sources mentioned in Question 8. The layout of the question is given in Table 7.

Would you be willing to make this eSafety information available on the European Road Safety Observatory?
Yes
Possibly
No

**Table 7: Data Availability**

This question was optional and answered by 216 of the 226 people who gave a positive response to question 8. Figure 8 shows the answers given.



**Figure 8: Would you be willing to make this eSafety information available on the European Road Safety Observatory N=226**

One third can be seen to have answered 'yes' to making the information they have identified in question 8 available. Half responded 'possibly'. There is clearly a willingness to possibly share information but an understandable reluctance to commit with just the information presented in the introduction to the survey.

Those answering 'yes' or 'possibly' were invited to comment in a free text box on the 'conditions that the information could be made available'. Of the 75 who said 'yes', 26 provided a further comment. To summarise these comments they fall generally into three areas:

- data is already publically available
- sources must be correctly acknowledged
- there would need to be discussions regarding confidentiality and level of data disaggregation

Of the 109 who said 'possibly', 50 provided a further comment. As expected these comments were more detailed than those for 'yes'. To summarise these comments they fall generally into the following areas:

- confirmation/agreement of partners, sponsors/funding body or company management
- in-depth-information would have to be anonymised
- source must be acknowledged

## D5.1 Integration of WP5 Activities in ERSO – Consultation and Model

- would only be available in accordance with national legislation (for example, ‘Each city would need to agree individually’) or within terms of data protection agreements
- the level of disaggregated data would need to be discussed
- project not yet completed
- translation from national language would need to be funded

One comment also stated that the final aim was not clear enough with the indication that this would need to be clearer for data to be made available. This is understandable as the information presented in the introduction to the survey needed to be concise.

### 3.4. Thoughts on eSafety

Questions 10 to 13 were in a section entitled ‘Legislation’ and Questions 14 to 16 in a section entitled ‘Priorities’.

#### 3.4.1. Legislation

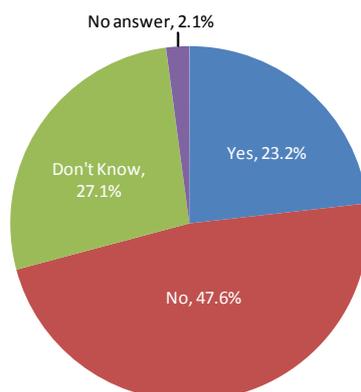
##### Question 10 - Do you feel that legislation is keeping up with eSafety technologies?

This question was asked to take the chance to get some general background on participants’ thoughts on eSafety, as a relatively new area. The layout of the question is given in Table 8.

Do you feel that legislation is keeping up with eSafety technologies?
Yes
No
Don't know

**Table 8: Legislation**

This question was optional and answered by 372 participants (98%). Figure 9 shows the distribution of the responses (as a proportion of all 380 participants).



**Figure 9: Do you feel that legislation is keeping up with eSafety technologies? N=380**

It was realised that this was quite a specific question and would be difficult for some to answer, hence the option of ‘don’t know’ and just over one quarter ticking this option. Taking the 269 who responded ‘yes’ or ‘no’, a third responded ‘yes’ and two thirds (67%) ‘no’. Of these 269 participants, 42 identified themselves as being in a research institute with 79% responding ‘no’. 34 identified themselves as being in the automotive industry with 62% responding ‘no’. 42 identified themselves as being in government/local authority or road administration with 57% responding ‘no’. 38 identified themselves as being in a road safety organisation with 71% responding ‘no’.

Of the 88 who said ‘yes’, 14 provided a further comment. The most frequent comment was something similar to ‘Think more could be done / slow pace’. Some more specific comments are:

- ‘eSafety technologies represent a competitive area and should not be subject of regulation, at least not in the starting face of new applications’
- ‘In some cases legislation is even too prescriptive and we think that it could create a deeper gap between Motorways and ordinary road system’

## D5.1 Integration of WP5 Activities in ERSO – Consultation and Model

- ‘But combined effect of eSafety technologies may not be sufficiently addressed in the legislation’
- ‘for the majority of road users, the benefit, having an Emergency Brake Assist (AEBS) on passenger cars, we are missing. And we think, that EU is doing too little effort to go ahead with analyzing the most benefiting feature AEBS at all’.

Of the 181 who said ‘no’, 47 provided a further comment. They are summarised below into general categories (**bold titles**). Similar comments have been combined into a summary statement and other specific comments from participants are given in ‘quotes’.

### Evaluation

Evaluations should include impact of driver behaviour and human aspects, e.g. risk compensation	Not taking full advantage of the eSafety technologies capabilities. Rules are not followed by drivers
Difficult for eSafety technologies to prove themselves when not fitted to enough vehicles. The evidence is therefore often not at the required level to convince policy makers of action	‘Any new eSafety measure and technology, should have an impact study on driver behaviour and vehicle dynamics. Follow up studies to evaluate real life results should be carried out’
‘Evaluation procedures are missing for eSafety functions’	-

### Road user types

‘safety for motorcyclists, requirement of ABS or anti-skid systems’	Need to take cyclists into account during infrastructure planning
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### Specific technologies

‘eCall decision still pending’.	‘SatNavs are a threat to road safety yet have no legislation’
Need to promote better understanding of commercial transport driving times legislation and shared/common enforcement practices, with use of digital tachographs	‘Particularly in relation to enforcement technologies’
‘There are more possibilities by technology, for example using the data on board computers for accident investigation’	‘The legislation does not impose a free for cellular telephone on every new car, however technology is available long time ago’

**General**

<p>‘European frequency regulation procedure is a significant hurdle and disadvantage for the European industry in international competition’</p>	<p>‘Harmonization requires legislation. No legislation will be made responsible for having non harmonized solutions and deployment delays’</p>
<p>‘Legislation is not the key - technology is a much better and more accurate indicator’</p>	<p>‘Manufacturers’ development is focusing on technical feasibility and marketing instead of real safety impact. They require funding from the Commission to do what should be their primary task, to investigate usability and safety impact BEFORE market introduction.’</p>

**Legislative framework**

<p>Technology will always move faster than legislation.</p>	<p>‘Legislation has always been slower or non-existent, example ABS’</p>
<p>‘Legislation is always behind the innovation. ESC, for example, has been around for at least a decade, and legislation is only coming in 2012/14’.</p>	<p>‘We are going towards autonomous interventions in vehicles and there are no legislative frameworks for this. eCall should not become a rolemodel on how legislation is supporting eSafety’</p>
<p>‘Liability!’</p>	<p>‘Have "solutions looking for problems".’</p>
<p>‘Vienna convention of 1965 needs update’</p>	<p>‘V2V and V2I technologies have a strong potential, their deployment is only possible if a strong political will exists’</p>

**Market**

<p>‘We need more encouragement for car buyers to invest into eSafety (e.g. insurance fee reduction). We need more legislations to make eSafety a standard equipment (e.g. autonomous braking mandatory for trucks for 2013)’</p>	<p>-</p>
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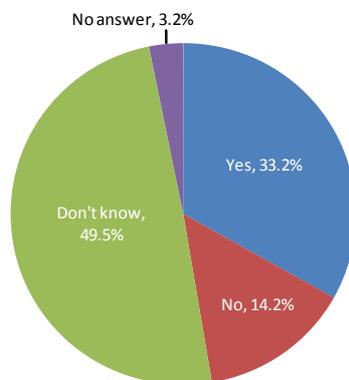
**Question 11 - Do you feel that any eSafety measures that have been legislated for have lacked evaluation studies?**

This question was asked to take Question 10 further, exploring participants' thoughts on how clear the links between legislation and evaluation studies are. The layout of the question is given in Table 9.

Do you feel that any eSafety measures that have been legislated for have lacked evaluation studies?
Yes
No
Don't know

**Table 9: Legislation and evaluation studies**

This question was optional and answered by 368 participants (97%). Figure 10 shows the distribution of the responses (as a proportion of all 380 participants).



**Figure 10: Do you feel that any eSafety measures that have been legislated for have lacked evaluation studies?**

By taking Question 10 further, it was realised that this was a very specific question and would be difficult for some to answer, hence the option of 'don't know' and just under a half entering this choice. Taking the 180 who responded 'yes' or 'no', 70% responded 'yes' and 30% 'no'.

On reflection, it is appreciated that it is a slightly leading question, using the negative sense of agreeing if studies have been lacking. A better question would have been 'Do you feel that all eSafety measures that have been legislated for have been supported by appropriate evaluation studies?'

Of the 126 who said 'yes', 24 provided a further comment. The comments have been selected for relevance and comprehension and are given below under general categories (**bold titles**).

**General**

'The differences between EU countries are in some cases significant'	'Yes there is an absence of credible independent evaluation. Purposed evaluation studies are routinely developed by technology promoters and automotive interests.'
'Automotive and telematics industry develop much faster than legislation'	'It seems difficult to have evaluation studies'
'European rules have changed, but as far as I know there has been no project for an evaluation in any EU country'	'Some systems become mandatory via legislation, even though no vehicle is equipped today and in consequence there cannot be any credible cost/benefit result'
'Reliable evaluation studies are missing'	'Quantitative data on their effect is needed.'
'Particularly when transferring systems from one application/vehicle type to another'	'Measures are mostly only evaluated on a national level'
Comment that in Belgium the fine for drug driving is higher than for alcohol driving, 'There is absolutely no logic when regarding the statistics'...'The legislators haven't for sure take into considerations the years of research conducted by NGOs on this theme (and European projects results).'	'Theoretical studies of INRETS, DLR or the TRACE project are available, but we need to have proof now based on equipped cars in real life (e.g. insurances need to establish registration of safety system equipment in their database or field operational tests have to be performed)'
'Legislation includes some eSafety without evaluation procedures'	-

**Specific technologies**

'Alcolock'	'Digital tachographs'
'e.g. ESC - how to measure accident avoidance (near misses)'	'There were no scientifically sound studies, neither on ABS nor on ESP'
'Fatigue as one of the main causes of accidents in commercial transport needs more attention'	'The justification for Brake Assist as part of the Pedestrian Protection Directive springs to mind'
'Safety belts'	'eCall'
'Mirror technology'	Comment regarding ABS on motorcycles that it is: 'quite dangerous to implement it, without proper testing procedures, and ditto customer education'

## D5.1 Integration of WP5 Activities in ERSO – Consultation and Model

Of the 54 who said 'no', 7 provided a further comment. The comments have been selected for relevance and comprehension and are given below.

'Without business case useful measures may be hard to deploy to the public'	'Maybe evaluation studies should be more comprehensive'
'Legislation has required quite robust evidence to justify action (quite rightly). Although in some cases the true benefits cannot be evaluated until after widespread fitment'	'Up to now only ESC has been widely legislated and some for certain categories of vehicles. The impact assessments have been based on studies, although they might have benefit from more in-depth analysis'
'It is difficult to collate data to easily explain the benefits of the systems in public campaigns. eSafety technologies are taking too long to get onto the market. Many people aren't aware of their benefits. If we had more standardised data, illustrating how systems have made a difference, it would be much easier to increase demand for them and improve vehicle safety in national fleets'.	-

These comments are not particularly positive, so it may be that participants have not understood the question fully.

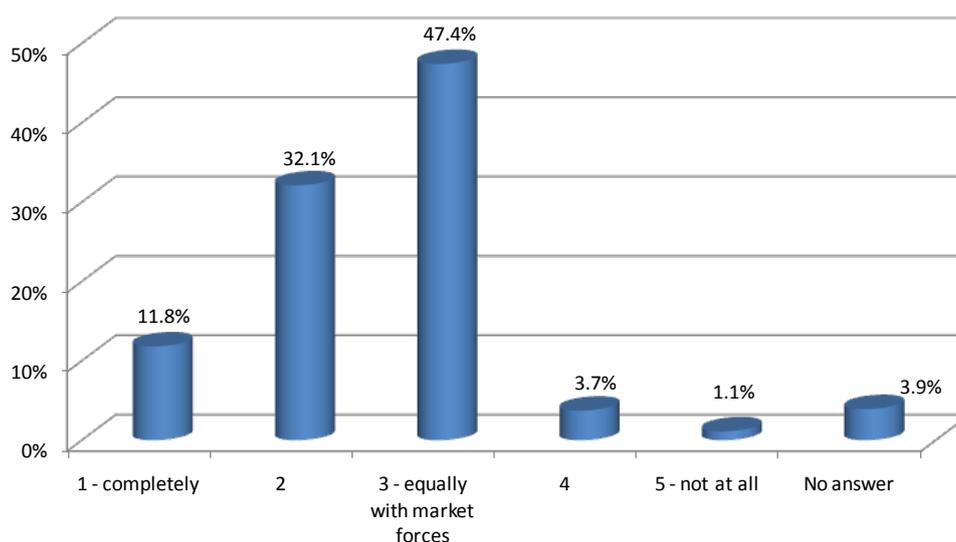
**Question 12 - How much should we rely on experimental or other safety evidence to develop eSafety policy?**

This question was asked to explore the balance between completely relying on evidence based policy making and not taking an evidence base into account at all. The layout of the question is given in Table 10.

How much should we rely on experimental or other safety evidence to develop eSafety policy?
1 - completely
2
3 - equally with market forces
4
5 - not at all

**Table 10: Layout of question**

This question was optional and answered by 365 participants (96%). Figure 11 shows the distribution of the responses (as a proportion of all 380 participants).



**Figure 11: How much should we rely on experimental or other safety evidence to develop eSafety policy?**

Nearly half of participants chose option 3, indicating an evidence base should be relied upon equally with market forces. The majority of the rest chose options 1 or 2 (44% of all), indicating a preference for experimental or other safety evidence, over market forces, with 12% indicating that an evidence base should be relied upon completely.

Further comments were provided by 23 people. The comments have been selected for relevance and comprehension and are given below under the answer given for Question 12 (**bold titles**).

**1 - completely**

<p>'Any eSafety application of functionality which is not evaluated, must not be introduced on the market. Who is allowed to sell medicine on the market without sound studies before, in particular not the kind of medicine everybody is allowed to buy in the drug store without a doctor's prescription?'</p>	<p>'My opinion is that we should rely on evidence based approaches for the implementation of eSafety technologies, i.e. analyse thorough fully the causes of accidents (real-life and in-depth data) and then shape the appropriate policies and technologies'</p>
<p>'Extremely important so as to have realistic expectations'</p>	<p>'Studies should be independently undertaken using best practise (e.g. experimental design techniques) in accordance with quality standards'</p>

**2**

<p>'We should pay close attention to market forces in order to identify those aspects of e-safety that market forces will or could be harnessed to advance. This will help us to see where government intervention to complement or where necessary counter market forces is required'</p>	<p>'eSafety should be evidence-led not market forces led. However, in some cases it may be impossible to obtain evidence at the required "burden of proof"'</p>
<p>'Experimental or other safety evidence are a must, but market leads anything'</p>	<p>'Knowledge on Human behaviour is a base efficiency of safety measures'</p>
<p>'Evidence is very important, but sometimes you need to 'stick your neck out' and go for it...'</p>	<p>'Market is not driven by safety performance'</p>
<p>'There should be some proved evidence, either experimental or perhaps commercial, but I suppose that consumers or market could promote specific eSafety products or measures for some other reasons too than only for road safety, so called experience of consumers and information coming from market is not objective enough, I am afraid'</p>	<p>'New safety technologies compete with each other for the best positive impact. Sometimes the same goal can be achieved with different technologies (e.g. traffic sign recognition by GPS location, video, infrared, RFID. It is not clear at the beginning which technology will outnumber the others or will they run in parallel, etc.'</p>

**3 - equally with market forces**

<p>'Depending on the Technology'</p>	<p>'Experiments without significant deployment are just theories'</p>
<p>'I wish we could deny market forces but we cannot. Ideally it would be only safety evidence. But that would run out of sync with reality'</p>	<p>'It should complement the experiments with the views of those who (like us) working in the field and knows the psyche and the behaviour of young people!'</p>
<p>'Sometimes market driven forces rely on better safety evidence than up front evaluation studies and experimental testing'</p>	<p>'The market approach is needed for the deployment; experimental evidence can filter the application and help prioritize among them'</p>
<p>'This is why NCAP are evolving the rating system'</p>	

4

<p>'It is the hen and egg problem, to wait until a proof is been seen for an eSafety system in the accidentology data base, as take rates are too low to get this statistical proof. If we want to improve road safety by mandating eSafety systems in the vehicle fleet, we must rely on benchmarking the use case performance (e.g. reduction in crash speed by AEBS systems) as the automotive industry is doing while developing the systems. This shows the accident reduction potential very clearly. But only with a wide spread on the vehicle fleet, we can show the statistical proof.</p>	<p>'Real needs of consumers, do not always coincide with research findings'</p>
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**5 - not at all (no comments)**

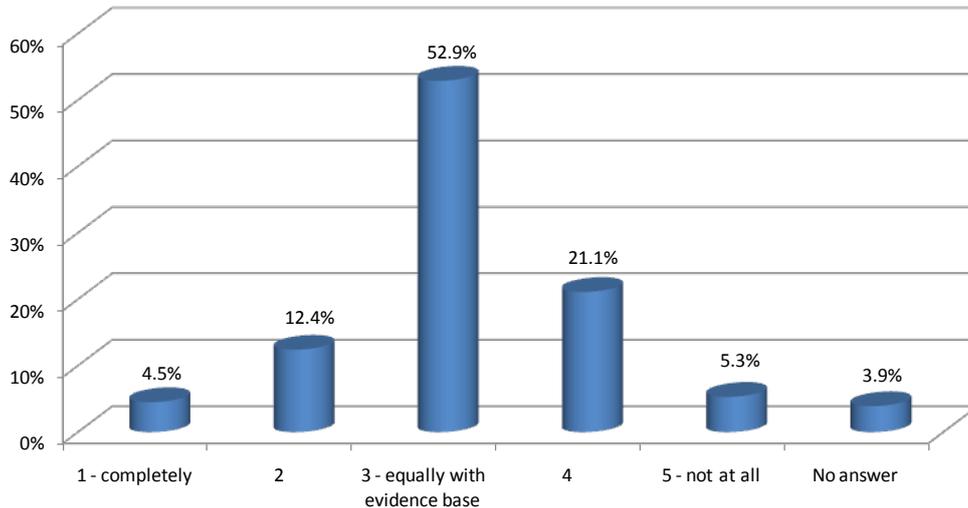
**Question 13 - How much do you think the market should lead eSafety policy?**

This question was asked to be complementary to Question 12, exploring the balance between market forces completely leading and not taking market forces into account at all. The layout of the question is given in Table 11.

How much do you think the market should lead eSafety policy?
1 - completely
2
3 - equally with evidence base
4
5 - not at all

**Table 11: Layout of question**

This question was optional and answered by 365 participants (96%). Figure 11 shows the distribution of the responses (as a proportion of all 380 participants).



**Figure 12: How much do you think the market should lead eSafety policy?**

Just over one third of participants (138) chose option 3 for both Question 12 and 13. Overall 69.8% chose options 1 to 3 for Question 13 (very pro-market forces to equally with evidence base) and 91.3% chose options 1 to 3 for Question 12 (very pro-evidence to equally with market forces).

Generally most participants see a mixed approach as being most appropriate but it appears that people are more uncomfortable to not take the evidence base into account than to not take market forces into account. In Question 12, 4.8% answered 4 and 5 (i.e. evidence base not so important) and in Question 13, 26.4% answered 4 and 5 (i.e. market forces not so important). Overall, it was not unexpected to see that generally a mix is considered best, but it is interesting to see the extremes for both, and to gather comments.

Further comments were provided by 27 people. The comments have been selected for relevance and comprehension and are given below under the answer given for Question 13 (**bold titles**). With the two questions being similar certain comments in fact were of the ‘same as above’ nature.

**1 - completely**

'At the end of the day they are those deciding'	'We have been doing that for a while'
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**2**

'If the market can improve safety quicker than policy this should be encouraged'	'It is the hen and egg problem, to wait until a proof is been seen for an eSafety system in the accidentology data base, as take rates are too low to get this statistical proof. If we want to improve road safety by mandating eSafety system'
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**3 - equally with evidence base**

'Depending on the Technology'	'The market has been extremely influential in improving safety'
'Market has its engineering and testing grounds, but should be closely watched by knowledgeable experts'	'The government should facilitate the development of new devices and security systems'
'The main issue is that people do not buy live-saving safety features. They rather buy comfort features including some safety... The policy making would clearly help to force the market to develop'	'It should be based on evidence such as injury reductions, and recognised by awards such as NCAP advanced'
'We should be very selective on technologies, making mandatory promising eSafety devices'	-

**4**

'It is not the market to lead eSafety policy as we need to look at eSafety services and not at eSafety systems. If the market is taking over there is a high fear that technological approaches are driven without concentrating on the eSafety'	'Market development may have other agendas (other than those which have most casualty reduction value), like maturity of technology, expertise in area. differentiation from other OEMs, or cost effectiveness for the OEM/Tier 1'
'Evidence base is the most important'	'Experimental or other safety evidence are a must, but market leads anything'
'Some relevant measures will never be rolled out if only market driven'	'The concern would be if manufacturers are making sales based on false claims of improved safety and benefiting from the car buying publics lack of knowledge/evidence'
'Clearly have an important contribution for its implementation'	'Does not make sense to study IVIS or ADAS without any market perspective'

**5 – not at all**

'Are you selling devices and telecommunications services or are you interested in reducing fatalities, serious injuries and collisions'	'Safety policy has to influence the market, not the opposite. Consumers need independent objective information in the field of safety to demand the right functionalities in the market. Policy driven by the market equals to lack of policy'
'Must be controlled by the EU government'	-

### 3.4.2. Priorities

**Question 14 - Assuming the ability to monitor all possible road safety issues, using a variety of methods, please rate the following topics according to your feeling of their priority in terms of casualty reduction**

This was a question that was replicated from the questionnaire sent in Workpackage 2 of DaCoTA – regarding in-depth data collection. That questionnaire was sent to each national road administration. It was included to give an understanding of the research topics / themes that the participants ranked as being of low, medium or high priority to road safety policy.

Topic...	Priority...
Accident Causation	High / Medium / Low / Not sure
Alcohol	High / Medium / Low / Not sure
Daytime Running Lights	High / Medium / Low / Not sure
Distraction/Inattention	High / Medium / Low / Not sure
Fatigue	High / Medium / Low / Not sure
Gap Acceptance	High / Medium / Low / Not sure
Near Misses	High / Medium / Low / Not sure
Safety technologies (infrastructure or vehicle)	High / Medium / Low / Not sure
Seatbelt Use	High / Medium / Low / Not sure
Speed	High / Medium / Low / Not sure

**Table 12: Layout of question**

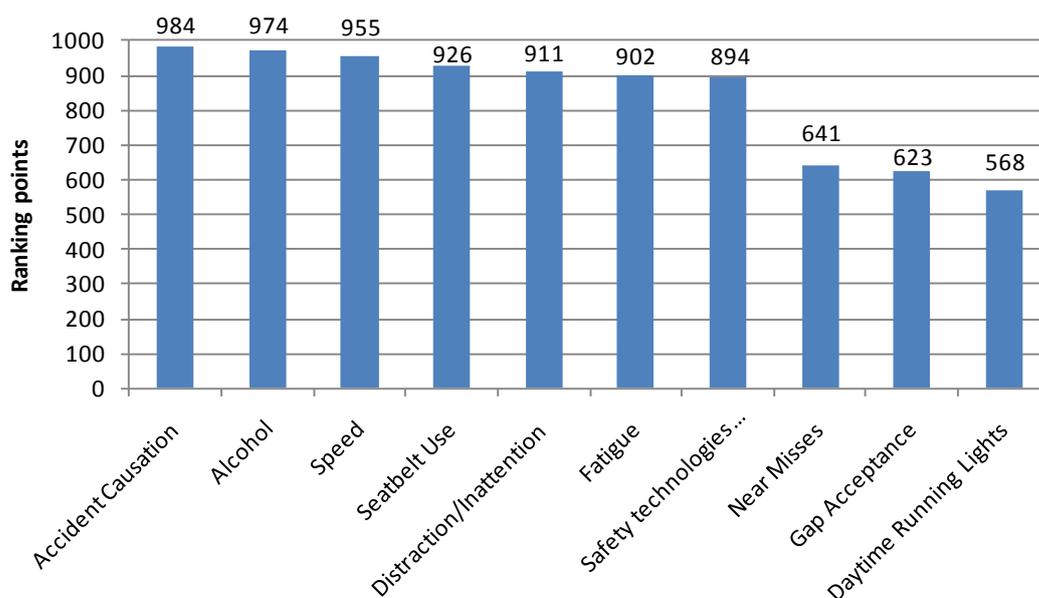
Following the methodology used in Workpackage 2 the responses are given the following numerical values to create the ranking shown in Figure 13:

- 0 = No response / not sure
- 1 = Low priority
- 2 = Medium priority
- 3 = High priority

In the Workpackage 5 eSafety survey the participants were asked to assume the ability to monitor all possible road safety issues and consider priority in term of casualty reduction.

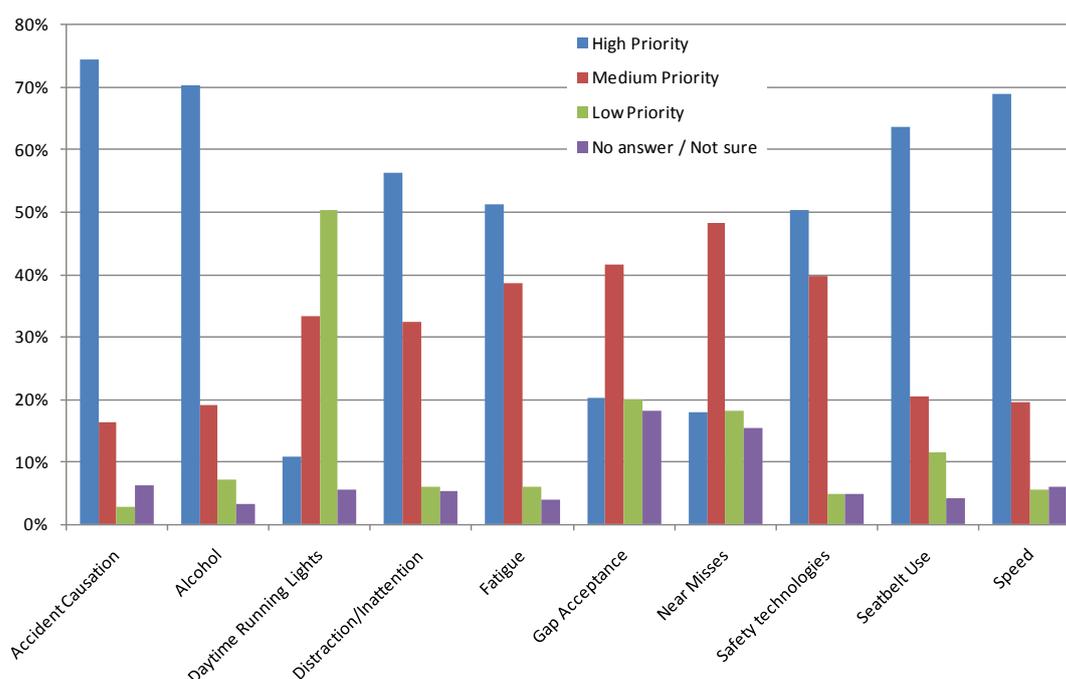
In this survey there was also the possibility to put 'not sure' and it is recognised that the subtlety of this response is not reflected in the reporting described above. Not sure is coded as 0 for this ranking system. It is considered that if a respondent's initial reaction was not to be sure then it is unlikely that it would be considered to be a high priority and for each question there is equally the possibly of being not sure (although it is unlikely that, for example alcohol, will have many unsure results). It is appreciated that these is an assumption that should be borne in mind when analysing the results.

## D5.1 Integration of WP5 Activities in ERSO – Consultation and Model



**Figure 13: Results by ranking points**

The results as answered are shown in Figure 14.



**Figure 14: Results by percentage (%) of responses**

Figure 14 shows that for some topics (gap acceptance and near misses) participants were less sure and this will have affected the ranking in Figure 13.

Clearly shown in Figure 13 and indicated in more detail in Figure 14, eSafety technologies are in a middle group with distraction/inattention and fatigue. eSafety technologies can potentially make a contribution (possibly very large) to the issues of speeding and alcohol, which are ranked highly as priorities.

Using the same ranking system as in Figure 13, Table 13 takes selected groups of participants by organisation type with the priorities listed with the most highly ranked at the top.

## D5.1 Integration of WP5 Activities in ERSO – Consultation and Model

Research institute n=56	Automotive industry n=38	Government/local authority or road administration n=69	Road safety organisation n=50
Speed	Distraction/Inattention	Alcohol	Alcohol
Accident Causation	Accident Causation	Speed	Accident Causation
<b>Safety technologies</b>	<b>Safety technologies</b>	Accident Causation	Speed
Alcohol	Fatigue	Fatigue	Distraction/Inattention
Seatbelt Use	Alcohol	Seatbelt Use	Seatbelt Use
Distraction/Inattention	Seatbelt Use	Distraction/Inattention	Fatigue
Fatigue	Speed	<b>Safety technologies</b>	<b>Safety technologies</b>
Near Misses	Near Misses	Near Misses	Gap Acceptance
Gap Acceptance	Gap Acceptance	Gap Acceptance	Near Misses
Daytime Running Lights	Daytime Running Lights	Daytime Running Lights	Daytime Running Lights

**Table 13: Priorities for selected organisation types**

Table 13 shows that safety technologies are ranked as a higher priority for casualty reduction for the research and automotive industry groups than the government/local authority or road administration and road safety organisations group. It may be that, in very general terms, the second group considers the issue and policy area to be addressed more and the first group considers the solutions to issues more. Of course both groups have an overall balanced approach but this data shows a difference emerging in the middle of the table.

**Question 15 - Please rate the following technologies according to your feeling of their priority in terms of road accident casualty reduction**

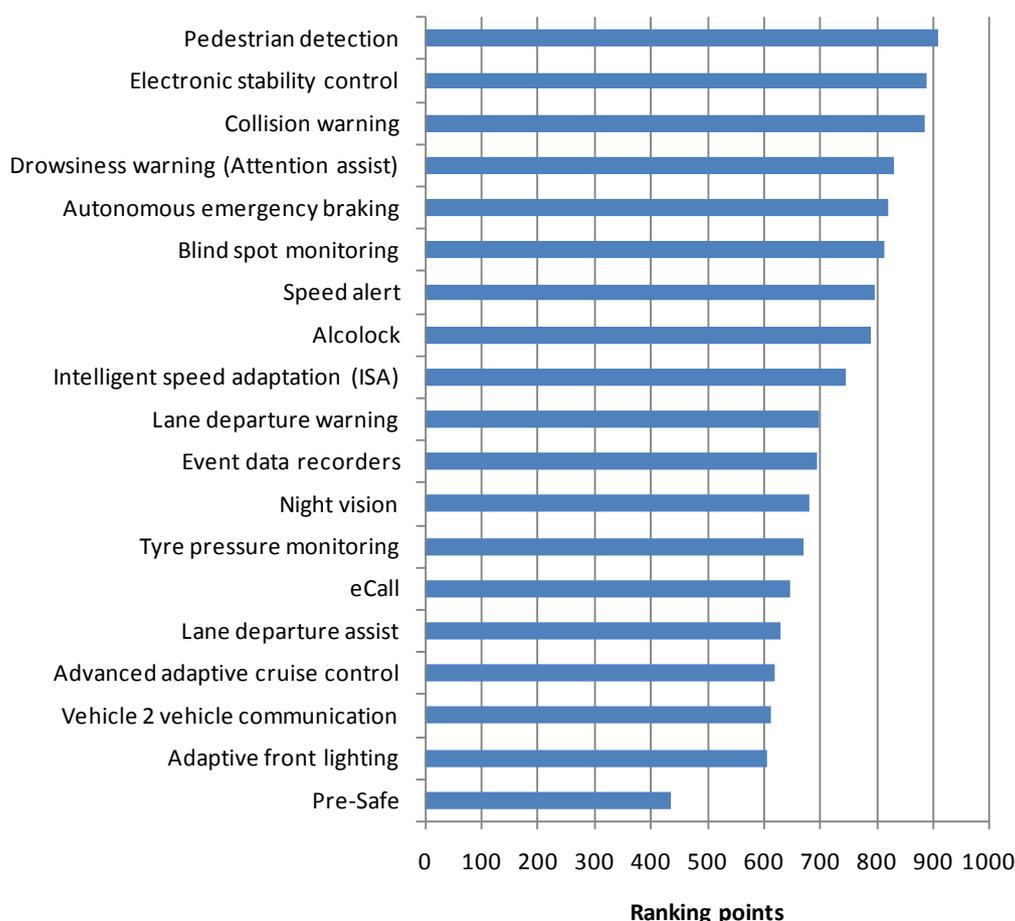
**Vehicle / Driver**

The technologies grouped under the vehicle / driver category were:

Alcolock	Intelligent speed adaptation (ISA)
Adaptive front lighting	Lane departure assist
Advanced adaptive cruise control	Lane departure warning
Autonomous emergency braking	Night vision
Blind spot monitoring	Pedestrian detection
Collision warning	Pre-Safe
Drowsiness warning (Attention assist)	Speed alert
eCall	Tyre pressure monitoring
Electronic stability control	Vehicle 2 vehicle communication
Event data recorders	-

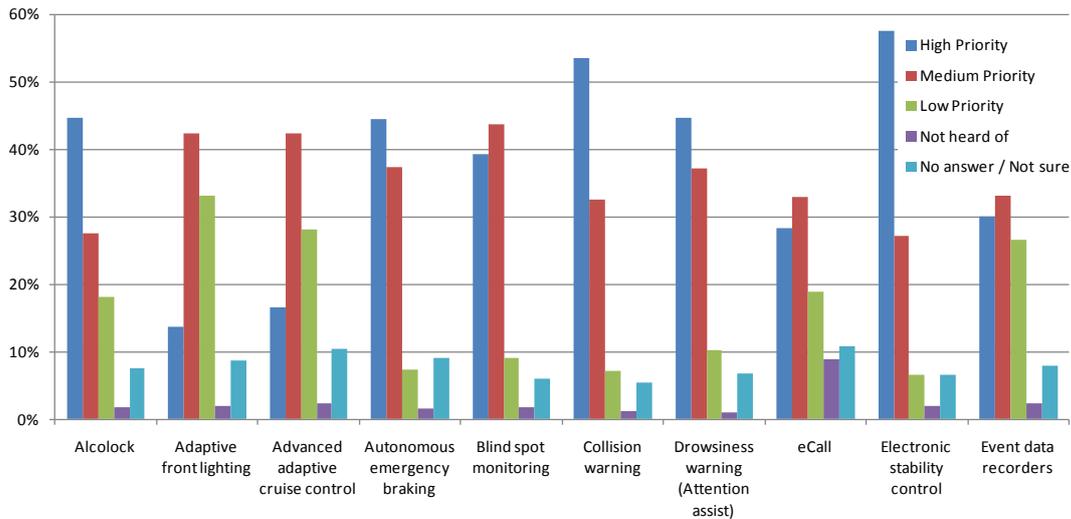
**Table 14: Vehicle / Driver technologies**

Figure 15 uses the same ranking system as described for Question 14 to indicate how participants answered.

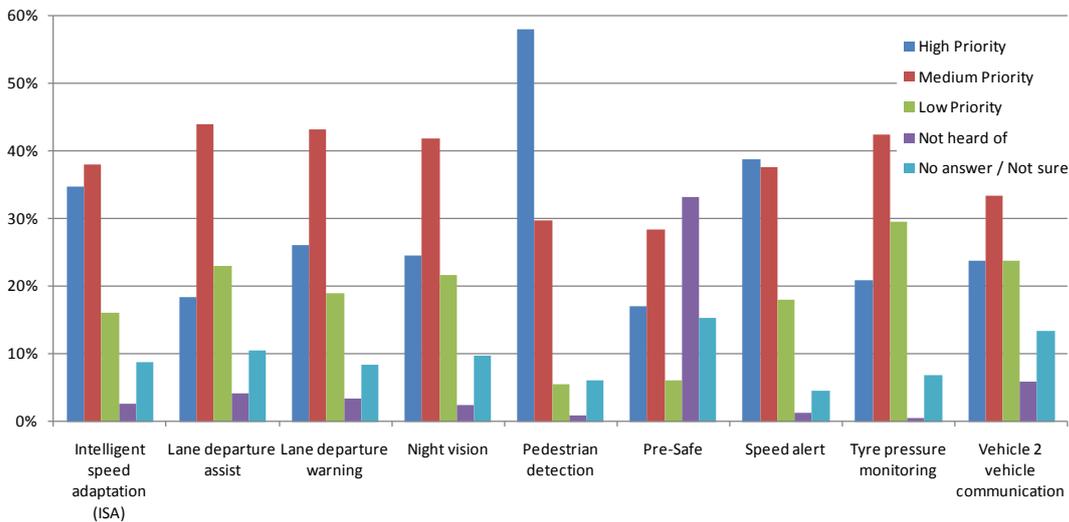


**Figure 15: Vehicle/Driver technologies by ranking points**

Figure 16 and Figure 17 give the results as answered, split across two charts for clarity.



**Figure 16: Vehicle / Driver technologies by percentage (%) of responses**



**Figure 17: Vehicle / Driver technologies by percentage (%) of responses**

Pedestrian protection appears as the most often selected highest priority technology in both ways of presenting the results, closely followed by ESC and collision warning. Although Alcohol and Speed are high priorities as topics in Question 14 the eSafety technologies that directly address them, alcolock, speed alert and ISA are in a middle group. That said ESC could also be recognised as a technology that indirectly addresses speed by providing assistance in some loss of control scenarios.

It is surprising that eCall has a high percentage of ‘not heard of’ responses, after ESC it is considered by the authors to be one of the technologies that is quite often found to be discussed, it is easy for people understand and is already available on some vehicles (for example, Volvo on Call, BMW Assist Advanced eCall).

With ‘not heard of’ as an option, it is clear that technologies that are not so well known are at some disadvantage here. This is the case for pre safe, which was ‘not heard of’ for a third of participants and a further 15% did not answer or put not sure for this technology.

**Question 16 - Please rate the following technologies according to your feeling of their priority in terms of road accident casualty reduction**

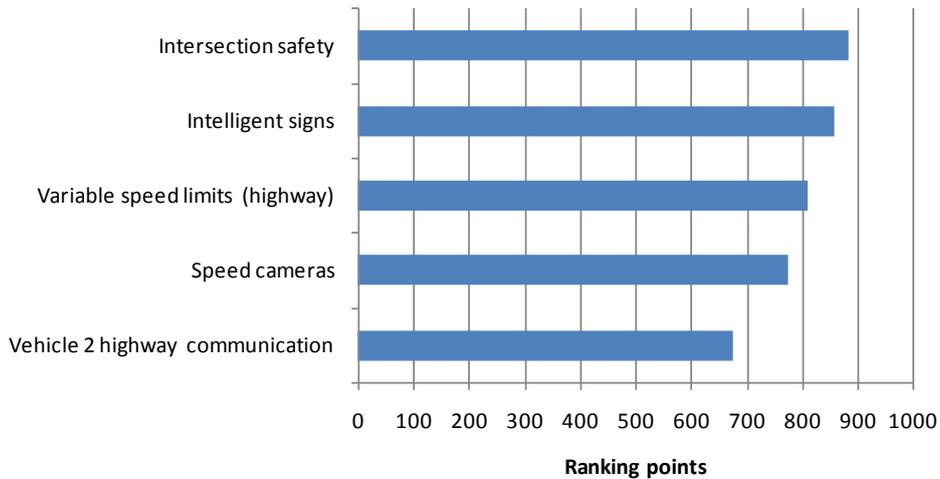
**Road / Infrastructure**

The technologies grouped under the Road / Infrastructure category were:

Intelligent signs	Variable speed limits (highway)
Intersection safety	Vehicle 2 highway communication
Speed cameras	-

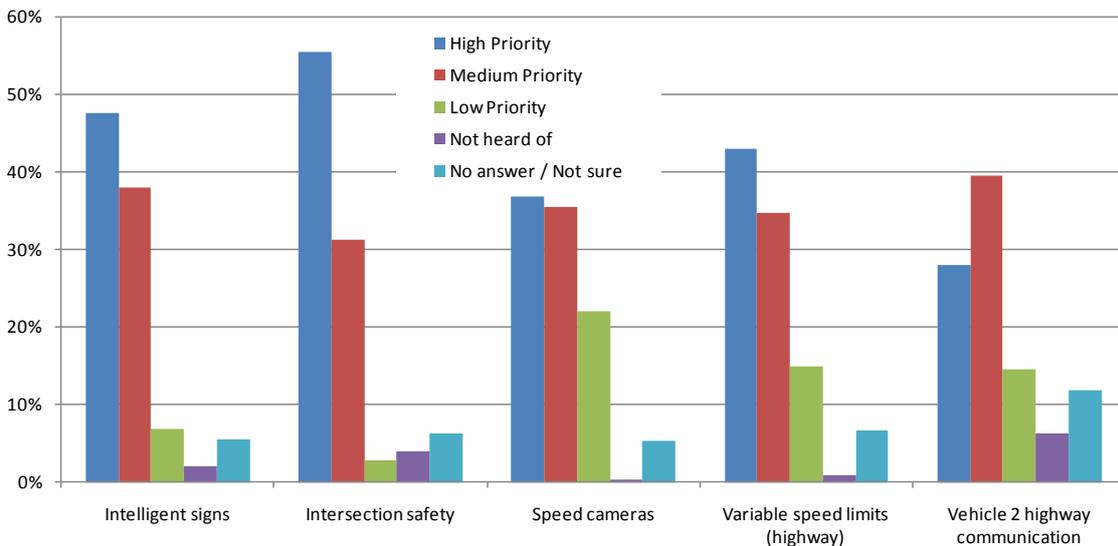
**Table 15: Vehicle / Driver technologies**

Figure 18 uses the same ranking system as described for Question 14 to indicate how participants answered.



**Figure 18: Road / Infrastructure technologies by ranking points**

The results as answered are given in Figure 19.



**Figure 19: Road / Infrastructure technologies by percentage (%) of responses**

Intersection safety is recognised as the highest priority for the most participants in the survey, although vehicle 2 highway communication is seen as a medium priority technology when it is a technology that would be part of intersection safety.

## D5.1 Integration of WP5 Activities in ERSO – Consultation and Model

Although speed was one of the highest priority research topics in Question 14 it would seem here that variable speed limits and intelligent signs are seen as slightly higher in priority than speed cameras.

### 3.5. Further Contact

#### Question 17 – Personal details

Participants were asked in Question 17 to provide information regarding their Institution / Company, role, name, email and country. But, as explained in Section 2.2.2 this was not compulsory.

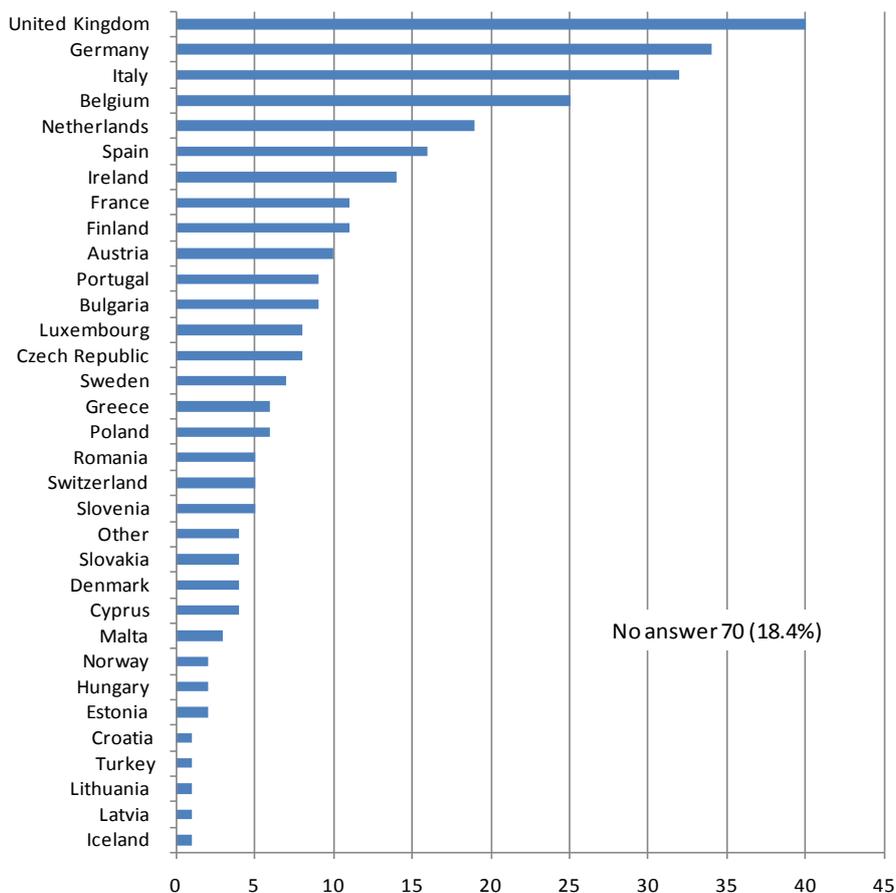
Table 16 shows the percentage of the 380 participants who provided details in each category.

Request...	% response provided
Institution/Company	72.4%
Role	70.3%
Name	70.8%
Email	73.9%
Country	81.6%

**Table 16: Further contact responses**

Generally 7 out of 10 participants gave some level of personal detail and 8 out of 10 their country.

Figure 20 shows the distribution of participants by country.



**Figure 20: Participants by country N=380**

The United Kingdom, Germany and Italy represent the three countries with the highest numbers of participants, together forming a third of the known countries. This will be a reflection of both the membership of the email distribution lists used and, for the UK, the attractiveness of answering the English only survey.

The other category for country was selected by 4 participants and included a worldwide organisation and the European Union.

### **Question 18 – Are you willing to be contacted by the DaCoTA project**

The last section of the survey addressed willingness to be contacted by the DaCoTA project with the question having two parts;

- a)...with details of project events (for example workshops)
- b)...to discuss the responses in this questionnaire

Table 17 shows the percentage of the 380 participants who responded positively along with those who also provided an email address.

	% positive response	+ email provided
Details project events	67.9%	63.7%
Discuss responses	54.7%	53.4%

**Table 17: Are you willing to be contacted by the DaCoTA project**

Of the 184 participants who indicated in Question 9 that they had eSafety information available or possibly available, 120 (65%) responded positively to discussing responses and provided an email address.

## 4. WORK PACKAGE 5 ACTIVITIES

### 4.1. DaCoTA Workpackage 5 Methodologies, Tools and Results

DaCoTA Workpackage 5 is studying various elements of safety and eSafety that could possibly be integrated into ERSO.

The work to generate new results is on-going, so the activity of actually integrating those results into a website that would be available to update the EC ERSO website<sup>3</sup> is still to be carried out. It is therefore proposed that this report is delivered now but activities in this task will continue until the end of DaCoTA, to support the integration of WP5 results generated in DaCoTA.

**Task 5.2** - Drivers' needs and the validation of technologies – is updating a catalogue of safety systems and examining if these systems address the real road users' needs in terms of accident prevention, accident avoidance and injury prevention or injury mitigation. As part of this activity accident causation models will be reviewed and an appropriate model for examining eSafety systems in terms of road users' needs put forward.

For ERSO possible results to be integrated will be;

- Accident causation model and its relevance to eSafety
- Results of driver's needs analysis
- Safety systems catalogue

**Task 5.3** – Evaluation – is building a general model for evaluating the safety benefits and other benefits of technologies. The model will be applied to some of the technologies identified in task 5.2. The relevant methods and tools that are necessary to perform the evaluation will be determined and it will be investigated how empirical results using data from selected countries can be expanded to EU27 level.

For ERSO possible results to be integrated will be;

- Model methodology (Word document or active example)
- Methodological tools to perform evaluations
- Methods to expand results to EU27 level

**TASK 5.4** – Real world and procedures – looks at whether current eSafety test procedures are relevant to road accident problems and if there any new test procedures appropriate to assessing the safety performance of new technologies.

For ERSO possible results to be integrated will be;

- Recommendations for eSafety test procedure benchmarks

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<sup>3</sup> [http://ec.europa.eu/transport/road\\_safety/index\\_en.htm](http://ec.europa.eu/transport/road_safety/index_en.htm)

## 4.2. Integration into ERSO

Since May 2011 a draft pilot of the DaCoTA pilot website has been available which will be populated with information, data and methods that will be available to update the EC ERSO website. The first version is populated with existing webtexts (articles written by experts in the field - being updated in DaCoTA) from SafetyNet and the 2010 Annual Statistical Report and 2010 Basic Factsheets.

The deliverables of the outputs above will be complex and it will not be appropriate to put all the information on ERSO. Therefore summaries will be created with links to the DaCoTA project website deliverables page. The DaCoTA pilot website clearly shows a key section called 'Methods' and most of the summaries will be placed in that section. The sub sections are currently, Safety issues, Countries and Data. These are the titles of the other key sections of the website with the implication that each describes the methodologies used to populate the key sections with results. Whilst methodological output from WP5 could be appropriate under Safety issues, as it is a set of methodologies and procedures directed at safety technology evaluations the summaries will be, when available, included in a new sub-section called 'Safety Technology Evaluations' (under the Methods section).

As described in Section 5.3 and 5.4, further work of this Task will be to link the relevant parts of the updated webtext to these WP5 methodology summaries.

Safety system effectiveness or drivers' needs results generated in WP5 will be integrated into the relevant webtext for the technology as a summary - in discussion with the author of the relevant webtext. A link will then be made to the full Deliverable report on the DaCoTA project website.

## 5. SAFETY ON ERSO

### 5.1. Information / Data Sources outside DaCoTA

#### 5.1.1. Library

Results from eSafety system evaluations from outside DaCoTA can be considered to be primarily from;

- Research projects (particularly EC)
- Research organisations/institutes
- Consumer / insurance organisations
- Manufacturers

The authors are aware that a library of eSafety results covering the 4 points above would be particularly relevant to ERSO and this is identified by participants in the on-line survey (Question 5). What is not so clear is what ERSO can offer in terms of links to other results that does not duplicate already established activities in this area, in particular [www.esafetysupport.org](http://www.esafetysupport.org).

On this website eSafety activities are addressed with an 'eSafetyActivities' database ([www.esafetysupport.org/en/esafety\\_activities](http://www.esafetysupport.org/en/esafety_activities)) and results in the 'eSafetyEffects' database ([www.esafety-effects-database.org](http://www.esafety-effects-database.org)), with further links provided to eSafety organisations - [www.esafetysupport.org/en/links/index.html](http://www.esafetysupport.org/en/links/index.html).

This information is currently hosted under the 'eSafetySupport' branding but it is indicated on the website that in the future it will be integrated into the [www.icarsupport.eu](http://www.icarsupport.eu) website.

The updated eSafety webtext will reference many of these results and it is proposed that the reference section of this webtext is used as an 'eSafety library', primarily containing reference links for the webtext but then also descriptions of the focused websites above, along with links. The references included in the webtext will be cross checked against those received in the follow up to the consultation (section 5.1.2 below) and any new references will be included in the library with a line of description about the source and any acknowledgements required.

It will be proposed that this library will be clearly identified as a sub section of the eSafety updated webtext on the ERSO website.

#### 5.1.2. Data Sources – Consultation Follow Up

There were 120 participants who indicated in Question 9 that they had eSafety information available that would be suitable for the ERSO website (52) or possibly available (68), responded positively to further contact for discussing responses and provided an email address. After examining comments given in the responses (some indicated 'other' but then commented that no data was available) and whether suitable links had already been given in comments, 90 individuals have been contacted via a follow up email. They have been asked for information on the data sources, especially web links and any acknowledgements required.

When these replies have been collated they will be compared to outputs and data sources referenced in the updated webtexts and the websites identified in Section 5.1.1 above. Also, any that are relevant to the updated webtexts but have not been included will be included as references – in discussion with the webtext author to ensure the quality of the reference.

## 5.2. Existing Webtexts on EC ERSO Website

'Webtexts' for ERSO regarding eSafety were written in the EC SafetyNet project and are hosted primarily in the Road Safety Knowledge Base area, but under different sub sections. These webtexts will be updated during the DaCoTA project.

### Road Safety Knowledge Base → eSafety

The largest set of webtexts regarding eSafety are hosted on the current EC ERSO website<sup>4</sup> in the area of Road Safety Knowledge Base (sub-section called 'eSafety').

Information is provided under the following articles,

- Vehicle technologies and road casualty reduction
- eSafety - a definition
- eSafety measures - known safety effects
  - Intelligent Speed Adaptation (ISA)
  - Seat belt reminders
  - Electronic stability control
  - Alcolocks
  - Black boxes/ in-vehicle data recorders
  - Crash data or event data recorders
  - Journey data recorders
  - Anti-lock braking systems in cars (ABS)
- eSafety measures – unknown safety effects
  - Brake Assist
  - Anti-lock braking for motorcycles
  - Collision avoidance systems
  - eCall
  - Electronic driving licences
- EC initiatives on eSafety
- eSafety - evaluating measures
- eSafety - consumer information
- eSafety - knowledge gaps
- References

### Road Safety Knowledge Base → Vehicle → Safety Design Needs

Also both passive and active safety technologies are addressed by vehicle type under a section called Safety Design Needs<sup>5</sup>.

Articles regarding eSafety are provided for the following vehicle types,

- Buses and coaches
- Cars
- Heavy goods vehicles
- Motorcycles

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<sup>4</sup> EC ERSO website → For the Specialist → Road Safety Knowledge Base → eSafety:  
[http://ec.europa.eu/transport/road\\_safety/specialist/knowledge/esave/index.htm](http://ec.europa.eu/transport/road_safety/specialist/knowledge/esave/index.htm)

<sup>5</sup> EC ERSO website → For the Specialist → Road Safety Knowledge Base → Vehicle → Safety design needs:  
[http://ec.europa.eu/transport/road\\_safety/specialist/knowledge/vehicle/safety\\_design\\_needs/index.htm](http://ec.europa.eu/transport/road_safety/specialist/knowledge/vehicle/safety_design_needs/index.htm)

## 5.3. Harmonisation of Safety Systems Information across ERSO

Safety and eSafety technologies are developed to address specific road safety problems. It is therefore important to provide links in the places in ERSO where road safety problems are presented to the information regarding the technologies that can address, or potentially address, those problems. Therefore across the broad range of ERSO it will be appropriate to review the updated webtexts for consistency in the links to technology information.

There is also currently some duplication of information across the website. Using an example from the Road Safety Knowledge Base area of the current EC ERSO website, Intelligent Speed Adaptation (ISA) is included under the eSafety section<sup>6</sup> but there is also a section on ISA in the speeding section<sup>7</sup>. Both are well written pieces but each have differing references.

When the new updated webtexts are available, WP5 will review these crossovers and harmonise them – which will give a more consistent experience to the user. At the moment there could be a feeling for users of ‘where do I stop if I’ve already found differing information in two different places?’ In fact for ISA there is then the possibility to find ISA in the vehicle → safety design needs → cars section<sup>8</sup>. This is a reduced version of the information in the eSafety section, with the text rearranged in a different order. More systematic approaches can be taken as appropriate to the topic,

- 1) Replicate a full version in each relevant section
- 2) Have full text in only one section and point other sections towards it
- 3) Have a short introduction with one or two headline figures in each section and then point to the full version

Approaches 2 and 3 are likely to be most manageable. It is appreciated that the emphasis behind mentioning a technology in different sections might be different, for example maybe HMI aspects of ISA might be more prominent in the behaviour area than in the vehicle technologies area. In reality though the holistic approach to safety technologies is nearly always important and the advantages of having consistent text and references are considered to be important. In this situation the behaviour area could have 2 or 3 headline figures such as ‘X% of drivers in a survey preferred voluntary ISA’ and then a link to the full text on ISA. The speeding area could have

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<sup>6</sup> EC ERSO website → For the Specialist → Road Safety Knowledge Base → eSafety → eSafety measures - known safety effects → Intelligent Speed Adaptation (ISA):  
[http://ec.europa.eu/transport/road\\_safety/specialist/knowledge/esave/esafety\\_measures\\_known\\_safety\\_effects/intelligent\\_speed\\_adaptation\\_isa.htm](http://ec.europa.eu/transport/road_safety/specialist/knowledge/esave/esafety_measures_known_safety_effects/intelligent_speed_adaptation_isa.htm)

<sup>7</sup> EC ERSO website → For the Specialist → Road Safety Knowledge Base → Speed → New technologies, new opportunities → Intelligent Speed Adaptation (ISA):  
[http://ec.europa.eu/transport/road\\_safety/specialist/knowledge/speed/new\\_technologies\\_new\\_opportunities/intelligent\\_speed\\_adaptation\\_isa.htm](http://ec.europa.eu/transport/road_safety/specialist/knowledge/speed/new_technologies_new_opportunities/intelligent_speed_adaptation_isa.htm)

<sup>8</sup> EC ERSO website → For the Specialist → Road Safety Knowledge Base → Vehicle → Safety design needs → Cars:  
[http://ec.europa.eu/transport/road\\_safety/specialist/knowledge/vehicle/safety\\_design\\_needs/cars.htm](http://ec.europa.eu/transport/road_safety/specialist/knowledge/vehicle/safety_design_needs/cars.htm)

'Speed was reduced by X% on urban roads' and then a link to the full text on ISA. Then the full text would be in the eSafety section.

Regarding identifying useful combinations with other types of data. In the webtexts regarding safety technologies links will be identified to sources of data within ERSO that aid the understanding of the technology or provide evaluation methodologies. For example, webtext on technologies that provide driver support at junctions would include a link to the Annual Statistical Report which has data on fatality numbers at junctions and a link to the summary of the evaluation methodology (see Section 5.4 below) that would be appropriate for such technologies.

## **5.4. Linking of Webtexts to WP5 Activities**

The webtext and outputs of WP5 will be linked together so that appropriate issues highlighted in the webtext are then linked to the outputs of WP5. ERSO users will be directed to the Deliverables page of the DaCoTA website but also WP5 summary results that will be included in ERSO in the 'Methods' section (also see Section 4.1).

For example, in an article on 'Evaluating measures' in the eSafety webtext....

*Such approaches have been developed in the DaCoTA project. The full results can be found in project Deliverables D5.X and D5.X (link to DaCoTA website) and a summary is given in (link to methods section of ERSO website).*

## **5.5. Status of Activities**

Since May 2011 a draft pilot of the DaCoTA pilot website has been available which will be populated with information and data that will be available for consideration to update the EC ERSO website. The first version is populated with existing webtexts from SafetyNet and the 2010 Annual Statistical Report and 2010 Basic Factsheets.

As of August 2011 the updated webtexts and new results from WP5 are not available to complete the work described in the sections 5.3 and 5.4 above. This is as project plans not due to any particular delays. As described in Section 1.2, it is therefore proposed that this Deliverable is delivered now but activities in line with the integration of WP5 into ERSO are continued.

## 6. ESAFETY RELEVANT RESULTS FROM OTHER DACOTA ACTIVITIES

### 6.1. Workpackage 2 Consultation

As part of the work concerning in-depth accident data, Workpackage 2 of DaCoTA (Developing a Pan-European In-depth Accident Investigation Network) sent a short questionnaire to the national administrations of the 27 EU member states, through the National Expert's framework.

The questionnaire was designed to be concise and there was no scope for particular eSafety questions, but it was requested that two questions in the questionnaire were supplemented with eSafety elements. The full methodology and results are available in DaCoTA Deliverable 2.1<sup>9</sup>.

#### 6.1.1. Country's Policy Priorities

The question show below (Table 18) was asked in order to achieve an understanding of current research interests, with 21 states responding to this question. Participants were asked to rank a list of research topics by their priority to road safety policy, assuming that they would be able to monitor all possible road safety issues, using a variety of methods. The line 'Safety technologies (infrastructure or vehicle)' was added for the benefit of Workpackage 5. This question was also repeated in the wider Workpackage 5 consultation to compare results – Question 14 (Section 3.4.2).

##### Country's Policy Priorities

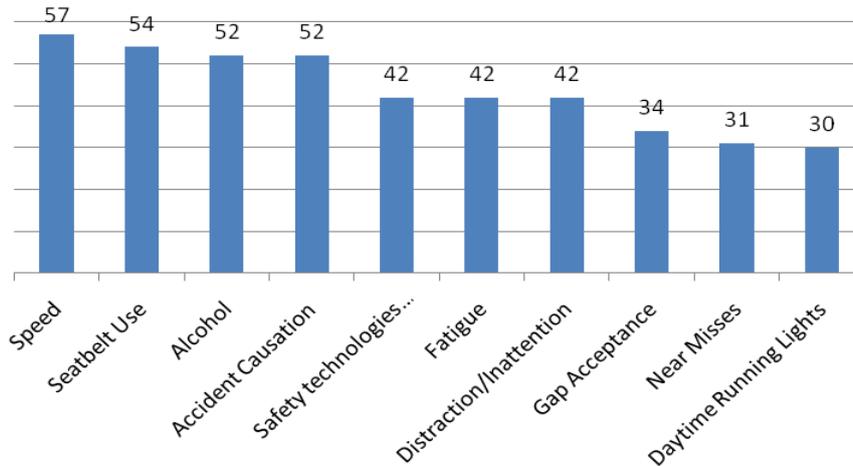
Assuming that you would be able to monitor all possible road safety issues, using a variety of methods, please rate the following topics according to their priority in your country's current road safety policy:

	Low Priority	Medium Priority	High Priority
Accident Causation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Alcohol	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Daytime Running Lights	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Distraction/Inattention	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Fatigue	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Gap Acceptance	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Near Misses	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Safety technologies (infrastructure or vehicle)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Seatbelt Use	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Speed	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other, Please state:	<input type="text"/>		

**Table 18: Question layout from WP2 questionnaire**

<sup>9</sup> Hagstroem, L., Fagerlind, H., Danton, R., Reed, S., Hill, J., Martensen, H., Margaritis, D., Jahi, H, Morris, A. & Thomas P. (2010). Report on purpose of in-depth data and the shape of the new EU-infrastructure, Deliverable 2.1 of the EC FP7 project DaCoTA contract no: 233659

Ranking the responses (methodology reproduced for WP5 in Section 3.4.2) gave the results seen in Figure 21.



**Figure 21: Ranking of safety issue priorities (reproduced from WP2 D2.1)**

eSafety technologies can be seen to be in the middle group of priorities, although it is interesting to note that eSafety technologies can potentially make a contribution (possibly very large) to the issues of speeding and alcohol, which are ranked highly. Further examination of the results finds that 8 countries responded with eSafety technologies as a high priority, 11 countries as medium and 1 country as low.

It is not clear if daytime running lights were ranked low because they are already legislated for – therefore no longer a policy priority – or they are not valued in policy.

Other research priorities and topics listed by the national administrations for current and future data needs included;

- Vulnerable Road Users (pedestrians and cyclists)
- Mobile phone use (x2)
- Blind spot accidents (x2)
- Motorcyclists (including helmet use)
- Traffic education (x2)
- **ITS implementation**
- Medical issues (including illicit drugs and medicines)
- Ageing populations and accident scenarios
- Young drivers
- Road and traffic characteristics (including road maintenance)
- Law obedience (including issues with licences)

Whilst ITS (Intelligent Technology Systems) is directly correlated with eSafety many other topics in this list have potential eSafety solutions. For example, blind spot accidents can be addressed with blind spot warning systems.

### 6.1.2. In-Depth Data Collection

The WP2 questionnaire also asked those countries undertaking in-depth investigation activity to select the evaluations and measurements they use, from the following list;

- Crash reconstructions
- Crash severity calculations
- **Consideration of safety technologies (infrastructure and vehicle)**
- Determination of accident causation
- Determination of human behavioural factors
- Determination of injury severity
- Determination of injury cases

Of the 8 countries that identified in-depth investigation activity, 6 answered the question and 5 included 'consideration of safety technologies'.

## 6.2. WP1 / WP4 Consultation

### 6.2.1. Background

Deliverable 1.1/4.1 of the DaCoTA project<sup>10</sup> reports on consultation activities undertaken in Workpackages 1 (Policy-making and Safety Management Processes) and 4 (Decision Support) of the DaCoTA project.

This consultation used an Expert Panel to assess knowledge, data and analysis needs within road safety management and the current needs for evidence-based road safety decision making in the European countries. The Panel covered 20 EU Member States and 3 other European countries and included members of the CARE National Experts group of the European Commission, people within the national road safety administration or scientific community of each country suggested by the National Experts and additional people suggested by the DaCoTA partners.

Two methods were used, interviews and written contributions. The authors state that '*Particular emphasis was given to the open nature of the questions, both within the interviews and the written contributions, allowing the experts to describe their own experiences, views and messages and to put emphasis on the issues they consider themselves important, without being "directed" by a detailed questionnaire to specific judgments*'.

This is obviously a brief summary of the methodology and a fuller explanation is available in the Deliverable 1.1/4.1.

### 6.2.2. Results Relevant to eSafety

The Deliverable has been examined to find results that are relevant to eSafety.

Overall, many issues are found that are globally as relevant to eSafety as other safety areas. For example, '*the need for road safety databases of different types (accident data, health data, exposure data etc.) to be linked and to be made more accessible*'.

Although in many places generic 'road safety measures' are discussed it is not apparent that eSafety is at the forefront of the experts' minds. As described above, it is made clear though that the questions were intentionally of an open nature, so it is maybe not surprising that eSafety was not prominent in its own right.

Clearly it is not appropriate to reproduce the document here but it is relevant to focus on responses that are particularly relevant to eSafety or refer to concepts that are relevant to eSafety. Extracts from Deliverable 1.1/4.1 are given below in italics and the titles in bold have been added for this Workpackage 5 document.

#### **General Comments on Knowledge and Evaluation**

*....the monitoring and evaluation task is considered to be most essential, not only for assessing the effectiveness of road safety measures, but also for identifying needs for further improvement. Several methodological needs were also mentioned, including the need for standardized assessment tools (statistical models, analysis*

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<sup>10</sup> Muhlrad, N, Dupont, E (Eds.) (2010) Consultation of a panel of experts on the needs for data and technical tools in road safety policy-making, Deliverable 1.1/4.1 of the EC FP7 project DaCoTA

*techniques etc.), that will allow for the identification of the reasons and mechanisms leading to the observed safety effect of the measures.*

*A number of experts feel it necessary to underline that road safety policy-making should be based on knowledge, a point which may not be as obvious to some of the decision-makers in their respective countries (Italy, Portugal, for example). In the interviews, some experts focused the discussion on the need for promotion of evidence-based decision-making. In general, to promote the use of the available information and knowledge in the RS policy-making processes an increase of awareness of the RS decision-makers is required, which is done through a systematic dissemination of findings, communication and training. A possible incentive for moving to evidence-based policy making could be through adopting formal procedures which would oblige a consideration of the expected safety efficiency of a certain measure or intervention as a necessary condition for its approval (for budget expenses, introducing new regulation, etc). This implies of course that it is possible to actually assess the effects of a measure or intervention under consideration and that if the expected effects cannot be assessed the measure should be abandoned.*

*Experts do insist on the extent and complexity of the knowledge needed and on the efforts to be made to provide easier access to it. Better understanding of crash mechanisms and causation processes is found essential. The knowledge available to be able to integrate road safety and other policies is an emerging issue.*

### **Vehicle Fleet Data**

*Beyond crash and injury data, experts stress that road safety policy-making must rely on a much broader range of data and that crash and injury databases should be linked to databases on vehicles (characteristics of the vehicle fleet, of newly registered vehicles, pass/failure results of the periodical vehicle tests), on roads (design characteristics, surfacing, signing and marking, safety devices, lighting, state of maintenance), on drivers (driver licensing, traffic violations), on traffic (traffic flows, traffic mix). Further integration of different sources of data (e.g. from the insurance companies) would be useful as well. In most countries, such linkages are still missing and some of the data required, for example on roads and on drivers, has not been fully developed. Standardized methodologies for data collection on vehicles, roads, drivers, traffic should be worked out as well as software for linking the relevant databases.*

### **Cost Data**

*....assessment of the cost of crashes is considered a useful tool to mobilize policy-makers and funding sources. However, there is a lack of useful information on the subject. There is a need both for comparative fact-sheets on costs of crashes in EU countries and for designing a common methodology to assess costs, including the data necessary and the means for collecting it.*

### **Vehicles and Technologies**

*In the area of safety measures addressing vehicles, the need for better information on the vehicles involved in crashes have been stressed: statistics should include age of vehicles, make, model, safety equipment, results of the last technical tests, etc. Exposure data needs to be improved.*

*In-depth analysis of crashes is found as an essential tool. A common methodology and training material should be made available.*

*Experts mostly feel powerless in the field of vehicle safety: they find that even proven cost-effective measures such as ISA (Intelligent Speed Adaptation), alcolocks, seat belt ignition interlocks, etc. are not introduced: “A major problem of road safety policy making today is that many promising measures for improving safety refer to vehicle technology, but that no country can unilaterally decide to make new vehicle safety technology mandatory. Since adopting new vehicle safety standards is based on international consensus, the process is slow and ineffective.” Even more frustrating is the fact that some Intelligent Technology Systems (ITS) measures supposed to have a high effect on crash reduction are introduced while no evaluation studies have actually demonstrated that these systems were actually beneficial for safety; some experts even suspect that they could deteriorate safety by distracting drivers’ attention from other tasks.*

*It seems that an overview of ITS on board vehicle systems, could be useful to clarify the situation.*

### **Behavioural measures**

*The need for more in-depth knowledge of behavioural patterns is underlined: “basic knowledge and understanding (at a microscopic level) of user behaviour under normal and critical circumstances needs further advancement”. This should help refine micro-simulation tools which are used in particular for infrastructure design, but could also help understand behavioural compensation processes. Thus, in-depth analysis of behaviour is not useful only to design measures directly addressing behaviour, but also to design other measures addressing the environment of road users and whose success relies on proper adaptation to normal behaviour or on adequate behavioural adaptation.*

## 7. DISCUSSION / CONCLUSIONS

This chapter starts with a discussion of the responses from each section of the survey, followed by the proposals that have been put forward on how the integration of WP5 activities and safety technology information into an update for ERSO could take place and relevant eSafety comments from other DaCoTA Workpackage activities. Some experiences of carrying out the survey, which will be useful for similar activities in the future, are also included. Each section has bulleted summary conclusions at the end.

### 7.1. Survey - Background

It was expected that using the EC stakeholder and Road Safety Charter lists would give a broad spectrum of professionals involved in road safety – rather than just those involved in academic research or industry – and this was the case. The survey would possibly have benefited from a higher proportion of participants from industry but it is considered that, overall, 380 participants was a high enough number to feel that the results would give a good balance of views and opinions.

It was unfortunate to have such a high number of ‘other’ responses, but maybe that was to be expected with such wide reaching distribution lists. If required it is of course possible to disaggregate results by participant’s organisation type. It is recognised that there will be some overlap between activities in the given groups anyway and any more exact analysis of the data would most probably require asking each individual what their work actually entails, which was outside the scope of this survey.

When asked ‘What do you use road safety data for’, over half the participants use road safety data to inform the public. It is interesting to have the views of such participants as eSafety is an area which very much mixes marketing and public perception with the science of real world benefit. An area identified by some participants, but not covered in the answers available was driver training or training for fleet operators. With companies having responsibility for the welfare of their employees but new technologies often involving extra cost, this is an area in which sound evaluation of eSafety technologies may have a strong impact. It is likely that companies ‘legislating’ that their vehicles must be fitted with certain technologies can move much faster than governmental or international legislation.

- It is considered that, overall, 380 participants was a high enough number to feel that the results would give a good balance of views and opinions.

### 7.2. Survey - Current Systems

It is clear that many of the participants have experience of eSafety data, with nearly half using the results of eSafety effectiveness studies. Human behaviour is an important element of how effective eSafety measures can be, be it in terms of risk compensation, human to machine interface or how well the technology actually addresses real road users’ needs (examined in Task 5.2). This is reflected in the high proportion of participants who report using human behaviour information from accident data, followed by human behaviour information from trials/surveys.

Just under a third are using vehicle safety fitment data for use in accident investigations. This is slightly surprising as it was not realised that such a high level of accident investigation was taking place, especially across such a broad spectrum

of respondents. Equipment fitment is an important element of these accident investigations.

- Many of the participants have experience of eSafety data.
- The importance of human behaviour in the study of eSafety is reflected in the high proportion of participants who report using human behaviour information from accident data, followed by information from trials/surveys.

### 7.3. Survey - Contents of ERSO

For Question 5 – regarding the usefulness of topics if included in ERSO – none of the options given are not valued by the respondents. The lowest ranking option of a library of tools to perform evaluations still has 74% of participants responding with a 1 (most useful) to 3 (possibly useful). It is surprising that raw accident data with safety system fitment is ranked slightly higher than the methodologies and tools to actually do something with it, but the difference is not large and maybe reflects an understanding that good real world in-depth data is maybe the first step in the process, so is fundamentally important.

Many of the comments in response to Question 6 emphasise points that would be covered by the options of Question 5, for example that evaluations should take into account casualty reduction, cost benefit and accident causation. Also, many comments recognise the importance of exposure and fitment data with detailed comments showing an understanding of how important this data is for accurate evaluation studies.

Over and above the areas that would be included anyway for the options in Question 5, certain comments make further points that could be considered in the work of Workpackage 5. ‘Always include non-protected road users in any developments and evaluations’ emphasises the holistic view that should be taken in road safety research and policy. Harmonisation between countries, in terms of up-to-date data, legislation and take up of technologies is mentioned in more than one comment. ‘Taking into account influence of malfunction in evaluation’ is a challenging issue to incorporate into methodologies and tools but it would be an interesting addition to the analysis of drivers’ needs – how will drivers react to malfunction.

Although many comments for eSafety are also relevant to generic issues in monitoring and road safety measure evaluation, some comments have been specifically categorised as being for the wider ESRO and will be shared with the relevant tasks within further DaCoTA Workpackages. For example comments regarding ‘Campaigns to push safety’ or ‘Data on status of those involved relating to Alcohol, Medicines and illegal substances’.

Whilst 91% of participants would want to consider eSafety data at European level, 83% would also like to consider it at a National level. This should be borne in mind when developing evaluation tools, a wholly European view may introduce limitations or estimations when used at a national level, where they may be more data.

Of the 226 participants that responded to Question 8 – regarding having any eSafety related data that would be suitable for ERSO – it is not clear how much of that data is already available. Results from research projects / official sources was listed by 106 participants and they may be in the public domain already. In Question 9 – regarding willingness to make this eSafety information available on ERSO – of the 75 who said yes, a third provided extra comment and some mentioned that data was already publically available. Of the comments provided by those who said possibly, all had been expected, except translation from national language, which would need funding.

- All of the areas suggested for ERSO are valued to some extent (most useful to possibly useful) by the majority of participants.
- Most of the comments given support activities that would already be covered, but some add a focused point that would be an interesting addition to activities in Workpackage 5.
- Many participants consider a national level of eSafety data examination to be of value.

## 7.4. Survey - Thoughts on eSafety

It is appreciated by the authors that these questions were maybe slightly unfair to some participants as they do require a certain level of knowledge of eSafety technologies and legislation. But one of the key points of DaCoTA is to address as many road safety professionals as possible. It was felt that whilst contacting so many interested individuals it would be a good opportunity, and a natural continuation of the eSafety and ERSO theme, to get a feeling of current thoughts on eSafety and people's understanding. ERSO supports policy makers and provides information on the most relevant technologies. It was therefore thought interesting to gather participants' thoughts on legislation and priorities.

### Legislation

Of the participants who gave a yes or no answer to Question 10 - Do you feel that legislation is keeping up with eSafety technologies – two thirds responded no and a third yes. The comments made by those who answered yes were not all particularly positive, with some indicating more could be done and the pace is slow. For those who said no the comments cover a wide range of issues from lack of evaluation procedures and focus on lack of legislation of certain technologies to stating that 'legislation is not the key – technology is a much better and more accurate indicator'. Comments are made here that are also seen in later questions regarding the difficulty of evaluation and legislation when technology moves much faster.

On reflection, Question 11 - Do you feel that any eSafety measures that have been legislated for have lacked evaluation studies? – was a leading question and was difficult to answer with 50% responding 'don't know'. Of the comments given the themes of a lack of evaluation but also technology moving much faster than the chance to build an evidence base continue from the previous question.

With DaCoTA being a research project, with possibly a biased view regarding a scientific evidence base, Questions 12 and 13 were included to try and explore the extreme views from each end of the spectrum, evidence base versus market forces. It is no surprise that the overall, majority view, is one of balance and pragmatism. Within the statistics there is a shift towards ensuring at least some evidence base rather than completely letting the market lead. Although it is recognised the proportion of participants indicating themselves as being 'industry' is only 10%.

A view that is often reported in the comments is that establishing an evidence base and then legislating takes time, whilst technology is moving at a much faster pace. It is recognised that this is a difficult problem to solve but comments are made that in moving forward we need sound methodologies that use best practice and the best data available.

### Priorities

Considering the range of research topics in Question 14, eSafety ranks in a middle group, even though eSafety technologies could potentially make a contribution to the issues of speeding and alcohol, which are ranked highly as priorities. This could be

an indication that some people may still have traditional views on the prevention of these high priorities and haven't considered the full impact that new technologies could make, or that the eSafety solutions being offered are not considered capable.

For Questions 15 and 16, whilst it is recognised that explanations of each technology could have been provided it would have moved the survey away from being relatively short and quick. Also it would have created a divide between those who considered the explanation of the technology and those who would not have felt that they had the time to consider each one individually. On reflection, it is likely that some of the technologies might have benefited from a short explanation and these can be spotted with higher proportions of 'not heard of' responses (for example 'pre safe'). It was estimated that the survey was taking around 10 minutes and no comments were received regarding the length.

The ranking list of vehicle/driver technologies is slightly surprising, with pedestrian protection at the top. Although Alcohol and Speed are high priorities as research topics the eSafety technologies that very directly address them, alcolock, speed alert and ISA are in a middle group – possibly not valued by all participants. Although, ESC could also be recognised as a technology that indirectly addresses speed by providing assistance in some loss of control scenarios.

The results here will be compared to the technology evaluations proposed in the Workpackage to ensure that, where viable methodologies and data exist, the technologies considered as priorities in the survey are included. For road/infrastructure technologies, intersection safety was ranked highest. This will be an interesting and challenging area for effectiveness evaluation as it involves multiple participant accidents, including vulnerable road users, in often complex scenarios.

- Of the participants who gave a yes or no answer two thirds feel that legislation is not keeping up with eSafety technologies.
- In considering evidence base versus market forces in developing eSafety policy, the majority view is one of balance and pragmatism.
- An often repeated view is that establishing an evidence base and then legislating takes time, whilst technology is moving at a much faster pace.
- Participants have given priority rankings to new technologies and, where viable methodologies and data exist, they will be considered in further activities.

## 7.5. Survey – Further Contact

There is a good spread of countries representing participants, although clearly The United Kingdom, Germany and Italy are most prominent. An email asking for information on the data sources, especially web links and any acknowledgements required, has been sent to 90 individuals to identify any eSafety information that is potentially new and interesting to ERSO.

- Collated replies will be compared to outputs and data sources referenced in the updated webtexts. Any that are relevant to the updated webtexts but have not been included will be included as references – in discussion with the webtext author to ensure the quality of the reference.

## 7.6. Experiences from Carrying out the Survey

It is acknowledged that other surveys are to be carried out in DaCoTA and that greater software availability has made the concept of on-line surveys more viable for research. It is also now accepted by the 'public' that on-line surveys are part of the

normal internet experience. Therefore it is useful to give an overview of the experiences from this survey. It is clear that carrying out such surveys on-line is an improvement over electronic forms in Word, Excel or Access. These improvements come in easier design and implementation of questions, simplified dissemination of the survey link and no data entry is required. The points below are not necessarily statements of good practice for surveys, which can be found in the literature, but instead some observations that have come from the work carried out here.

The web links for the DaCoTA and ERSO sites would have been better either moved to, or reproduced at, the end of the survey, rather than just on the introduction page. This would have been a more effective way of ending the survey.

After the survey was launched it was requested by five people to have electronic copies of the full survey in order to share responses with colleagues before submitting the response on-line. With the survey having been developed using the on-line software there was not a functioning version in Word or Excel ready for this purpose, so a document had to be created. This was not a particular problem but it should be kept in mind for future surveys that this requirement may be requested.

The type of organisation list was not comprehensive enough for the distribution lists used and 25% of the participants entered text into the 'other' box.

Only one person asked for a copy of their responses, for them to keep on record, obviously a small percentage (0.3%) but something to be kept in mind with a survey with a large number of participants, as it could become a time consuming activity.

When the results were compiled a procedure was applied to the data to find responses with effectively no information – someone running through the data just for interest but then reaching the submission page. These responses were deleted from the dataset, reducing it from 398 to 380 responses. It is recommended that this is carried out for any future large scale surveys.

If another survey was to be undertaken in the future the authors would certainly use this methodology again.

## **7.7. Integration of Safety Systems and WP5 Activities into ERSO**

It is proposed that Task 5.1 activities carry on, after this Deliverable, to support the representation of safety system material in ERSO as methodologies and evaluation results arrive from WP5 activities and updated webtexts are available. The results from the consultation will be able to guide, where data and methodologies exist, how the results are presented and which technologies the participants feel are priorities.

The authors are aware of other large websites reporting eSafety results and giving links to eSafety activities. A strength of ERSO over and above these other websites, for eSafety, will be the methodologies and tools developed in WP5 and the updated webtexts. But these websites are very strong as libraries of safety technology information and this is a priority for users of ERSO identified in the consultation. Therefore it is proposed that for ERSO the 'eSafety library' does not duplicate these websites but firstly makes available the references of the updated webtext as links, followed by descriptions and links to these other dedicated websites (including whether they are still actively being updated). The last section of the library will include additional new references identified in the consultation follow up.

Proposals are made in this report of how Task 5.1 might go forward, not just putting the results in the DaCoTA pilot website but developing more widespread

harmonisation and linking to relevant safety technologies across the updated webtexts, avoiding duplication of similar (but not exactly the same) text on the same technologies.

Looking at the implementation of safety technology information in the current EC ERSO website it is clear that articles (webtexts) regarding individual technologies are spread over ERSO and often duplicated. The example given in the body of this report is ISA (Intelligent Speed Adaption).

Primarily this is due to the holistic nature of safety technologies and eSafety. Technologies address road safety problems so will be mentioned as countermeasures in articles where the size of the problem is presented (for example, casualties due to speed will mention ISA). Safety system effectiveness is often intrinsically linked to human behaviour (for ISA the behaviour of speeding and Human Machine Interface considerations of how the driver will interact with the ISA system). Then in the current ERSO there is an area for vehicle design in addition to an area for eSafety. In addition to these areas 'for the specialist' are less specialist 'topic' areas (with a topic of speeding under behaviour).

Whilst recognising that safety technologies need this coverage for an understanding of their role in road safety, it is proposed that their representation in ERSO is more harmonised. Still using ISA as an example technology. Rather than each section in the paragraph above having different descriptive text of what ISA is, with differing references, the text should be standardised with headlines for that particular area of ERSO. For example, in the human behaviour area the headline could be X% of drivers in a certain trial preferred voluntary ISA. In a road safety problems / casualty reduction area of ERSO the headline could be X% of fatal accidents may be mitigated by ISA. Links would then be made to a full description of ISA in one place on the website – which would be easier to manage and update.

Regarding WP5 results and methodologies it is proposed that summaries are given in the methods section of ERSO. Full deliverable reports would be on the DaCoTA project website, or could also be on ERSO if appropriate. It is felt that having accessible summaries on ERSO is important. Just directing ERSO users from webtexts straight to full deliverable reports is likely not to be effective. It will be important to recognise relevant points in the updated webtexts which should link to the WP5 outputs.

- Continue Task 5.1 activities as methodologies and results arrive from other WP5 tasks and updated webtexts are available. Review updated webtexts and references across proposed updates to ERSO to ensure the harmonisation of information presented regarding safety technologies.

## **7.8. eSafety Relevant Results from Other DaCoTA Activities**

Results from other DaCoTA Workpackages support findings in the WP5 survey. In the Workpackage 2 results, eSafety technologies can be seen to be in the middle group of priorities, as in Question 14 here, and of the 6 countries who collect in-depth data and answered the question, 5 consider safety technologies.

In the Workpackage 1/4 results, in many places generic 'road safety measures' are discussed which are relevant to eSafety but it is not apparent that eSafety is at the forefront of the experts' minds – although the open nature of the questions is likely to have reinforced this. Comments that reinforce results from the Workpackage 5 survey and are also relevant to eSafety evaluations cover the areas of;

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- the need for standardized assessment tools to observe safety effects
- road safety policy-making should be based on knowledge
- databases on vehicles (characteristics of the vehicle fleet, of newly registered vehicles, pass/failure results of the periodical vehicle tests) are required
- crash cost data is required
- vehicle data, make, model, safety equipment, results of the last technical tests, etc. Exposure data needs to be improved
- In-depth analysis of crashes is found as an essential tool. A common methodology and training material should be made available
- In-depth knowledge of behavioural patterns

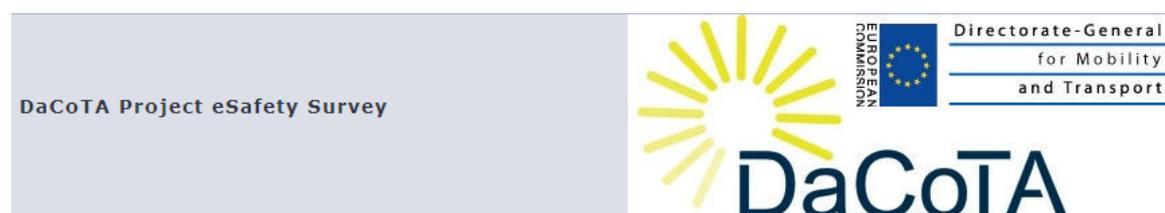
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eSafety Support website	<a href="http://www.esafetysupport.org">www.esafetysupport.org</a> <a href="http://www.icarsupport.eu">www.icarsupport.eu</a>
eSafetyActivities database	<a href="http://www.esafetysupport.org/en/esafety_activities">www.esafetysupport.org/en/esafety_activities</a>
eSafetyEffects database	<a href="http://www.esafety-effects-database.org">www.esafety-effects-database.org</a>
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## APPENDIX A1 – FULL SURVEY



### eSafety Data in the European Road Safety Observatory - Survey

This questionnaire will take 5 to 10 minutes.

#### Survey Purpose

The European Commission's FP7 DaCoTA (Road safety Data Collection, Transfer and Analysis) project ([www.dacota-project.eu](http://www.dacota-project.eu)) is in the process of examining how to most effectively integrate road safety data concerning 'eSafety' into the European Road Safety Observatory (ERSO) website ([www.ec.europa.eu/transport/road\\_safety/specialist/index\\_en.htm](http://www.ec.europa.eu/transport/road_safety/specialist/index_en.htm)).

eSafety is a term used to describe new intelligent technologies that are rapidly being deployed into the transport system with the intention of reducing casualties and improving transport efficiency.

Examples include driver information and hazard alert systems (e.g. lane departure warning, blind spot monitoring, vehicle 2 vehicle communication) as well as autonomous systems that modify vehicle dynamics (e.g. electronic stability control, lane departure assist, autonomous emergency braking). Infrastructure technologies that interact with advanced vehicle systems will also be considered (e.g. eCall, intersection safety).

Through ERSO results from eSafety studies and good practice methodologies/tools for evaluation will be available.

We would be very grateful if you could find the time to fill out the following questionnaire which has three primary aims. To discover;

- what eSafety data you would like to be available to you on the ERSO website?
- what eSafety data do you have that you could make available on the ERSO website?
- some general thoughts on eSafety technologies and legislation.

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#### Data Protection

The information collected will only be used in the DaCoTA research project and to facilitate the integration of eSafety into the ERSO website.

Thanks to your participation we will have a better understanding of the needs of those involved in road safety regarding eSafety and the availability of relevant data and results.

Please email Alan Kirk ([a.r.kirk@lboro.ac.uk](mailto:a.r.kirk@lboro.ac.uk)) if you require assistance to complete the survey.  
If you would like more information about the DaCoTA project please contact:  
Dawn Chambers-Smith, Project Administrator  
0044 (0)1509 226900, [d.chambers@lboro.ac.uk](mailto:d.chambers@lboro.ac.uk)

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## D5.1 Integration of WP5 Activities in ERSO – Consultation and Model

### eSafety Questionnaire

Please note - once you click on CONTINUE you will **not** be able to return to a previous page.

Background
<p>1. What type of organisation do you represent (please choose the best fit)?</p> <p>Select an answer <input type="text"/></p> <p>If you selected Other, please specify:</p> <input type="text"/>
<p>2. What do you use road safety data for? (select all that apply)</p> <p><input type="checkbox"/> Research</p> <p><input type="checkbox"/> Implementing road safety measures</p> <p><input type="checkbox"/> Policy decisions</p> <p><input type="checkbox"/> Informing the public</p> <p><input type="checkbox"/> Informing consumers</p> <p><input type="checkbox"/> Marketing</p> <p><input type="checkbox"/> Product development</p> <p><input type="checkbox"/> Advise / inform policy makers</p> <p><input type="checkbox"/> Applying pressure to policy makers / lobbying</p> <p><input type="checkbox"/> Road safety data not used</p> <p><input type="checkbox"/> Other (please specify):</p> <input type="text"/>
Current Systems
<p>3. What eSafety data do you currently use? (select all that apply)</p> <p><input type="checkbox"/> None</p> <p><input type="checkbox"/> Results of effectiveness studies</p> <p><input type="checkbox"/> Vehicle safety equipment fitment data for use in accident investigations</p> <p><input type="checkbox"/> Advanced highway information for use in accident investigations</p> <p><input type="checkbox"/> Human behaviour from trials/surveys</p> <p><input type="checkbox"/> Human behaviour from accident data</p> <p><input type="checkbox"/> Other (please specify):</p> <input type="text"/>
<p>4. Where do you currently obtain eSafety data from? (select all that apply)</p> <p><input type="checkbox"/> Not applicable</p> <p><input type="checkbox"/> Results from research projects / official sources</p> <p><input type="checkbox"/> Access to police investigation reports/files</p> <p><input type="checkbox"/> Insurance reports</p> <p><input type="checkbox"/> Data from your own in-depth accident investigations</p> <p><input type="checkbox"/> Independent investigations by an independent source</p> <p><input type="checkbox"/> National or International accident data</p> <p><input type="checkbox"/> Roadside surveys</p> <p><input type="checkbox"/> Consumer Organisations (such as EuroNCAP, ADAC)</p> <p><input type="checkbox"/> Field Operational Tests</p> <p><input type="checkbox"/> Other (please specify):</p> <input type="text"/>

Continue >

## D5.1 Integration of WP5 Activities in ERSO – Consultation and Model

European Road Safety Observatory contents	
5. What would you find most useful if included on the ERSO website? Please rank each option individually using 1 to 5, with 1 the most useful, 3 possibly useful and 5 not useful.	
a. Raw accident data that included data on safety system fitment	Select an answer ▼
b. A library of eSafety related results	Select an answer ▼
c. Methodologies for evaluation of eSafety systems	Select an answer ▼
d. A library of tools to perform evaluations	Select an answer ▼
e. A tool to help find the most appropriate, available, criteria for your request	Select an answer ▼
6. Are there any other aspects of eSafety that you would like to see included on the ERSO website?	
<input type="text"/>	
7. Would you prefer the data to be at a National or European level (or both)? (select all that apply)	
<input type="checkbox"/> National <input type="checkbox"/> European	
8. Do you have any eSafety related data that would be suitable for the ERSO website? (select all that apply)	
<input type="checkbox"/> Results from research projects / official sources <input type="checkbox"/> Data from your own accident investigations (of course this would be subject to a discussion regarding confidentiality and the level of disaggregation of the data) <input type="checkbox"/> National or International data <input type="checkbox"/> Results from consumer testing <input type="checkbox"/> Other (please specify):	
<input type="text"/>	
Please give some details (however brief):	
<input type="text"/>	
9. Would you be willing to make this eSafety information available on the European Road Safety Observatory?	
<input type="radio"/> Yes <input type="radio"/> Possibly <input type="radio"/> No	
If 'yes' or 'possibly' what would be the conditions that you could make the information available?	
<input type="text"/>	

## D5.1 Integration of WP5 Activities in ERSO – Consultation and Model

### Thoughts on eSafety

Legislation	
10. Do you feel that legislation is keeping up with eSafety technologies?	
<input type="radio"/> Yes <input type="radio"/> No <input type="radio"/> Don't know	
Any comments:	
<input type="text"/>	
11. Do you feel that any eSafety measures that have been legislated for have lacked evaluation studies?	
<input type="radio"/> Yes <input type="radio"/> No <input type="radio"/> Don't know	
Any comments:	
<input type="text"/>	

Policy making for eSafety technologies can use both evidence based or market led approaches, or clearly a mixture of both.	
12. How much should we rely on experimental or other safety evidence to develop eSafety policy?	
<input type="radio"/> 1 - completely <input type="radio"/> 2 <input type="radio"/> 3 - equally with market forces <input type="radio"/> 4 <input type="radio"/> 5 - not at all	
Any comment...	
<input type="text"/>	
13. How much do you think the market should lead eSafety policy?	
<input type="radio"/> 1 - completely <input type="radio"/> 2 <input type="radio"/> 3 - equally with evidence base <input type="radio"/> 4 <input type="radio"/> 5 - not at all	
Any comment...	
<input type="text"/>	

Priorities	
14. Assuming the ability to monitor all possible road safety issues, using a variety of methods, please rate the following topics according to your feeling of their priority in terms of casualty reduction:	
a. Accident Causation	Select an answer ▼
b. Alcohol	Select an answer ▼
c. Daytime Running Lights	Select an answer ▼
d. Distraction/Inattention	Select an answer ▼
e. Fatigue	Select an answer ▼
f. Gap Acceptance	Select an answer ▼
g. Near Misses	Select an answer ▼
h. eSafety Technologies (infrastructure or vehicle)	Select an answer ▼
i. Seatbelt Useage	Select an answer ▼
j. Speed	Select an answer ▼

## D5.1 Integration of WP5 Activities in ERSO – Consultation and Model

Please rate the following technologies according to your feeling of their priority in terms of road accident casualty reduction:

15. Vehicle / Driver	
a. Alcolock systems	Select an answer ▼
b. Adaptive front lighting system	Select an answer ▼
c. Advanced adaptive cruise control	Select an answer ▼
d. Autonomous emergency braking	Select an answer ▼
e. Blind spot monitoring	Select an answer ▼
f. Collision warning	Select an answer ▼
g. Drowsiness warning (Attention assist)	Select an answer ▼
h. eCall	Select an answer ▼
i. Electronic stability control	Select an answer ▼
j. Event data recorders	Select an answer ▼
k. Intelligent speed adaptation (ISA)	Select an answer ▼
l. Lane departure assist	Select an answer ▼
m. Lane departure warning	Select an answer ▼
n. Night vision	Select an answer ▼
o. Pedestrian detection	Select an answer ▼
p. Pre-Safe	Select an answer ▼
q. Speed alert	Select an answer ▼
r. Tyre pressure monitoring	Select an answer ▼
s. Vehicle 2 vehicle communication	Select an answer ▼
16. Road / Infrastructure	
a. Intelligent signs	Select an answer ▼
b. Intersection safety	Select an answer ▼
c. Speed cameras	Select an answer ▼
d. Variable speed limits (highway)	Select an answer ▼
e. Vehicle 2 highway communication	Select an answer ▼

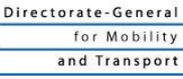
Continue >

## D5.1 Integration of WP5 Activities in ERSO – Consultation and Model

### Further contact (Optional)

Please still select CONTINUE at the bottom of the page to submit your answers.

Contact details	
This is not compulsory, but if you could provide your details below it would help us monitor responses. (Optional)	
17. Institution/Company...	
<input type="text"/>	
a. Role...	
<input type="text"/>	
b. Name...	
<input type="text"/>	
c. Email...	
<input type="text"/>	
d. Country...	
<input type="text" value="Select an answer"/>	
If you selected Other, please specify:	
<input type="text"/>	
18. Are you willing to be contacted by the DaCoTA project..	
<input type="text"/>	
a. ...with details of project <b>events</b> (for example workshops)	<input type="text" value="Select an answer"/>
b. ...to discuss the <b>responses</b> in this questionnaire	<input type="text" value="Select an answer"/>
If you have identified eSafety information that you feel could be available on the ERSO website but would prefer not to enter your details above please consider sending a separate email to Alan Kirk ( <a href="mailto:a.r.kirk@lboro.ac.uk">a.r.kirk@lboro.ac.uk</a> ).	

<b>DaCoTA Project eSafety Survey</b>	   <b>DaCoTA</b>
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### Survey completed

Thank you, your responses have been saved and submitted.

If you would like more information about the DaCoTA project please contact:  
Dawn Chambers-Smith, Project Administrator  
0044 (0) 1509 226900, [d.chambers@lboro.ac.uk](mailto:d.chambers@lboro.ac.uk)

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## APPENDIX A2 – ACCOMPANYING LETTER



EUROPEAN COMMISSION  
DIRECTORATE-GENERAL FOR MOBILITY AND TRANSPORT  
DIRECTORATE D - Inland Transport  
D.3 - Road safety

Brussels, 11 November 2011  
MOVE-D3/JPR.D(2010)

### TO WHOM IT MAY CONCERN

Dear Madam / Sir,

The European Commission, Directorate-General for Mobility and Transport, has signed a grant agreement with a consortium of road safety scientific Institutes for the implementation of the project called "DaCoTA" (Road Safety Data Collection, Transfer & Analysis [www.dacota-project.eu](http://www.dacota-project.eu)) within the 7<sup>th</sup> EU Framework Programme for Research and Technological Development.

DaCoTA will last 30 months as of 1<sup>st</sup> January 2010. It will advance the state of the art in six key areas of road safety data:

1. **Policy-making and Safety Management Processes:** development and implementation of a protocol to collect information on road safety management systems and good practice in knowledge-based policy-making;
2. **Developing a Pan-European In-depth Accident Investigation Network:** gathering in-depth safety related accident data concerning crashes across the EU;
3. **Data Warehouse:** development of a comprehensive and integrated system with aggregate data and information necessary for decision making support;
4. **Decision Support:** bridging the gap between research and policy by bringing together policy makers' needs and tangible tools;
5. **Safety and eSafety\*:** development of methodologies and approaches that will enable future evaluation of the safety impact of emerging intelligent technologies;
6. **Driver Behaviour Monitoring through Naturalistic Driving:** development and validation of a methodology common to European countries to record and analyse the behavioural and exposure data.

\* *eSafety* is a term used to describe new intelligent technologies that are rapidly being deployed into the transport system with the intention of reducing casualties and improving transport efficiency.

*Examples include driver information and hazard alert systems (e.g. lane departure warning, blind spot monitoring, vehicle-to-vehicle communication) as well as autonomous systems that modify vehicle dynamics (e.g. electronic stability control, lane departure assist, autonomous emergency braking). Infrastructure technologies that interact with advanced vehicle systems will also be considered (e.g. eCall, intersection safety).*

DaCoTA is examining how to most effectively integrate road safety data concerning eSafety into the European Road Safety Observatory (ERSO) website [www.erso.eu](http://www.erso.eu).

Through ERSO results from eSafety studies and good practice methodologies/tools for evaluation will be available.

The European Commission would be very grateful if you could find the time (max. 10 minutes) to fill out the following online questionnaire

<https://www.survey.lboro.ac.uk/esafety-survey>

The survey will be open for 2 weeks, until 26 November 2010

This questionnaire has three primary aims:

- what eSafety data would you like to be available to you on the ERSO website?
- what eSafety data do you have that you could make available on the ERSO website?
- some general thoughts on eSafety technologies and legislation.

If there is somebody else in your organisation that you feel would be interested in completing this survey, please feel free to pass on the link

The information collected will only be used in the DaCoTA research project and to facilitate the integration of eSafety into the ERSO website.

Thanks to your participation we will have a better understanding of the needs of those involved in road safety regarding eSafety and the availability of relevant data and results.

Yours sincerely,

(signed) Jean-Paul Repussard