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Road Safety Data, Collection, Transfer and Analysis

Deliverable 1.3 Stakeholder's contribution

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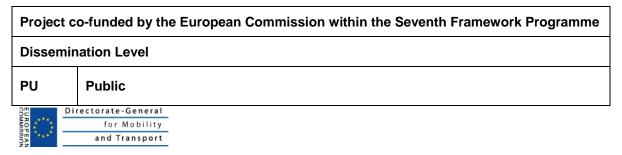
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TABLE OF CONTENTS

Ex	ecutiv	e summary	. 4
Ak	nowle	dgements	. 5
1.	Intro	duction – Goal of the Stakeholder Consultation	. 6
	1.1.	General goals of DaCoTA's Work Package 1 (Policy-making and Safety	_
	•	ment Process)	
	.2.	The consultation of an expert panel (Task 1.1)	
	.3.	Task 1.3.: Assessing views of a large set of stakeholders across Europe	
	1.4.	The team	7
2.	Meth	odology	. 8
2	2.1.	The survey tool	8
2	2.2.	The sample population	8
2	2.3.	The questionnaire	10
	2.3.1	Section 1: Country	10
	2.3.2	Section 2: Field of Work	10
	2.3.3	Section 3: Use of tools	11
	2.3.4 issue		
	2.3.5 progr	Section 5: Data and resources for the development of road safety related ammes	11
	2.3.6 meas	Section 6: Data and resources for the implementation of road safety related ures	12
	2.3.7. meas	Section 7: Data and resources for the monitoring and evaluation of road safet	-
	2.3.8	Creation and test process	13
	2.3.9	Data collection	13
3.	Resu	Ilts	14
3	3.1.	Response rate and countries of origin	14
3	3.2.	Type of organisation	15
3	3.3.	Use of existing tools	15
	3.3.1	International level	15
	3.3.2	National level	16
3	3.4.	Importance of data and knowledge to support road safety work	17
3	3.5.	Needs for knowledge and data	17
	3.5.1		
	3.5.2		
	3.5.3		
	3.5.4		

4.	Conclusions and Outlook	20
Ann	nex I Cover letter	22
Ann	nex II Electronic Questionnaire	23

EXECUTIVE SUMMARY

The aim of DaCoTA's Work Package 1 is to shed light on road safety policy-making and management processes in Europe and to explore how these can be better supported by data and knowledge. This was done by assessing demands and views of stakeholders as well as by building a good practice model for road safety management investigation. Future versions of the European Road Safety Observatory (ERSO, <u>www.erso.eu</u>) are envisaged to be built on the findings of this project.

This report describes the methodology and presents the first aggregated results of an on-line stakeholder consultation carried out in Task 1.3. The survey was successfully carried out among more than 3000 road safety stakeholders in Europe and beyond.

The assessment was conducted along four dimensions of road safety management: Fact finding, Road safety programme development, Preparing implementation, and Monitoring and evaluation.

The questionnaire was built on the results of an expert panel consultation carried out earlier in the project and was dedicated to bring in the viewpoints of stakeholders who may not be directly involved in decision-making.

Circa **3150 stakeholder contacts** were collected from the **European Commission**, the **ETSC** (European Transport Safety Council) as well as its **PIN Panel members** and the **FERSI** (Forum of European Road Safety Research Institutes).

The questionnaire was launched in February 2011 and open for one month, resulting in a satisfactory response rate of more than 16%. Response rates were specifically high for national statistics bureaus, research institutes and consultancies. Also the health sector and associations / interest groups / European (umbrella) organisations responded at above-average rates.

Stakeholders expressed significant demand for data and knowledge in road safety-related decision making. They also expressed discontent about the current poor availability of such information.

Fact finding and diagnosis	Development of safety programmes	Implementation	Monitoring and evaluation		
Information on crash causation factors	Information on the costs and benefits of a road safety measure	Common methodology for identifying high risk sites	"Seriously" injured counts, in addition to fatality counts		
Information on roadInformation on theusers' behaviour andsafety impacts ofattitudescombined measures		Good practice collec- tion on implementa- tion	Methods for evalua- tion of safety impacts		
A common definition of a fatality	Common methods for evaluations of road safety measures	Digital road maps for mapping crashes	Common methodology for the evaluation of costs and benefits of road safety measures		
Exposure data (e.g. kilometres driven, numbers of trips)	Good practice cata- logue of measures	Detailed information from road safety au- dits and road safety inspections	Statistical methods for following trends		

The following issues scored highest with regard to priority for road safety work:

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Members of the ETSC'S PIN Panel

Members of the FERSI, the Forum of European Road Safety Research Institutes

1. INTRODUCTION – GOAL OF THE STAKEHOLDER CONSULTATION

1.1. General goals of DaCoTA's Work Package 1 (Policy-making and Safety Management Process)

Little is known about which data, knowledge and methodologies are used in – or would be needed for – road safety related decision making in Europe. Likewise, there is little evidence-based knowledge on good practices in the road safety management process. The aim of the Work Package 1 in exploring this new area was therefore twofold: (1) assessing the views and demands of stakeholders across Europe, and (2) building a good practice model for road-safety management investigation.

The medium-term objective is to add data and knowledge on road safety related decision making to the future versions of the European Road Safety Observatory (ERSO, <u>www.erso.eu</u>).

Information gathering in the Work Package was organised through a comprehensive set of consultations, ranging from face-to-face interviews to an electronic question-naire proposed to more than 3000 stakeholders.

Task 1.1 of WP1 consulted an expert panel on the needs for data and technical tools in road safety policy-making. Building on the results of this first task¹, Work Package 1 assessed the views of a broader array of stakeholders across Europe.

This report describes the methodology and presents the first aggregated results of the stakeholder consultation carried out in Task 1.3.

Detailed analysis drawing together results from Task 1.1 through 1.4 shall follow in deliverable D1.5.

1.2. The consultation of an expert panel (Task 1.1)

In Task 1.1 of WP1, a preliminary assessment of policy-makers' needs for data and methodological tools was carried out by means of semi-directive face-to-face or telephone interviews as well as of written contributions. The assessment was carried out along four dimensions of road safety management:

- Fact finding and diagnosis
- Road safety programme development
- Preparing implementation
- Monitoring and evaluation

The expert panel – circa 60 persons – covered a large number of Member States as well as associated countries and Israel.

As a result, four comprehensive "needs matrices" were set up along the above four dimensions. These findings (DaCoTa deliverable 1.1/4.1) were fed into other Work

¹ http://www.dacota-project.eu/Links/DaCoTA_WP1-Deliverable1%201-4%201%20Final.pdf

Packages (e.g. WP3- Data Warehouse and WP4-Decision Support Tools) as well as to other WP1 tasks, specifically the broader investigations of road safety decision making and management processes in Tasks 1.2, 1.4 and the **stakeholder consultation in Task 1.3** (see next chapter).

1.3. Task 1.3.: Assessing views of a large set of stakeholders across Europe

Whereas the consultation of the expert panel provided a valuable first assessment among policy-making experts (or persons who were familiar with their needs), the broad picture was still not complete. In times of "*shared responsibility*" in road safety, with circa 1000 individuals contributing to the Commission's action programme consultation exercise² and nearly 2000 signatories to the European RS Charter, it was obvious that there were many (non-policy-making) road safety stakeholders – and thus potential users of the current and future ERSO – whose views should be integrated.

Hence the core aims of Task 1.3 were:

- to build on the above results of Task 1.1 and bring in the viewpoints of stakeholders who may not be directly involved in decision-making, and
- to provide the basis for validation and integration with findings from Tasks 1.1, 1.2 and 1.4 towards a common picture of what should be available on ERSO

1.4. The team

Although the original DaCoTA project setup listed only three DaCoTa partners for Task 1.3. – namely KfV, TSRC and IFSTTAR – it was agreed unanimously that all WP1 partners would contribute to this task, especially when it came to testing and improving the questionnaire prior to its launch in February 2011.

² http://ec.europa.eu/transport/road_safety/pdf/prepar_ersap_final_report.pdf

2. METHODOLOGY

2.1. The survey tool

In view of the large number of stakeholders to be approached it was decided to set up an on-line questionnaire and to make use of a standard survey tool. DaCoTA partner TSRC (Loughborough University) arranged access to the Bristol Online Surveys tool³, a service made available for use by the DaCoTA project without any additional costs. The development of the survey tool on line allowed for piloting of the questionnaire to determine the feasibility of use, content and compatibility for subsequent statistical analyses.

2.2. The sample population

In order to allow for sound comparability of results with those of Tasks 1.1, 1.2 and 1.4 it was decided to address the questionnaire to both policy-making and non-policy-making stakeholders.

Contact lists from several sources were used to notify stakeholders of the questionnaire and to invite them to participate.:

- The European Commission's stakeholder list collected e.g. during the consultation for the European Road Safety Action Programme 2011-2020
- The contact database of the ETSC European Transport Safety Council (www.etsc.eu)
- National contacts from members of the ETSC's **PIN Panel** (www.etsc.eu/PIN.php)
- National contacts from members of the FERSI, the Forum of European Road Safety Research Institutes (www.fersi.org)

Identical contacts were removed, leading to a set of circa **3150 individuals** to be addressed in EU Member States and associated countries as well as further countries in the European Region and overseas, such as the U.S.A., Canada, Australia and New Zealand.

Although for most contacts only e-mail addresses were available, for more than 90% it proved feasible to assign them to one of the following categories:

Category of Organisation receiving the questionnaire	Share in %
Association, Interest Group, European (umbrella) organisation	7,9
Automobile Club	1,9
Bicyclists' Organisation	0,3
Consultancy	4,4
Driver training	0,7
Emergency Service	0,1
European Commission	3,2
Haulier	0,9
Health	0,9

³ http://www.survey.bris.ac.uk/

Private person	3,7
Automotive manufacturer + industry supplier	10,1
Insurance	2,1
Media	2,7
Ministry	17,4
Motorcyclists' Organisation	0,3
Parliament (EU)	4,1
Parliament (National)	0,6
Police	3,6
Public Enterprise	2,0
Regional/Local Authority	3,9
Research	4,5
Road Administration	4,4
Road Safety Organisation, NGO	9,4
Statistics Bureau	0,4
Transport Provider	3,8
University	6,4
Total	100,0

Table 1: Categories of organisations and their share of all approached interviewees

Geographical coverage of the sample is shown in Table 2. A large part – nearly 20% - of questionnaires was sent to Belgium, as not only European Institutions but also most European (umbrella) organisations and associations as well as interest groups are based there. 95% of receiving countries are located in the European Region, but questionnaires were also sent to experts e.g. in the U.S, Canada, Australia and New Zealand.

Country	Share in %
Belgium / EU	14,8
United Kingdom	9,9
Germany	8,2
France	6,0
Austria	6,0
Brussels (EU)	5,1
Netherlands	5,0
Spain	4,1
Sweden	3,6
Poland	3,5
Czech Republic	3,2
Italy	2,7
United States	2,3
Ireland	2,2
Finland	2,1
Switzerland	2,0
Greece	1,9
Denmark	1,8
Cyprus	1,6

Romania	1,2
Hungary	1,2
Estonia	1,2
Portugal	1,1
Norway	0,9
Australia	0,7
Luxembourg	0,7
Latvia	0,6
Canada	0,6
Slovenia	0,5
Slovakia	0,4
Lithuania	0,4
China	0,3
Malta	0,3
Israel	0,3
Bulgaria	0,3
Total	96,8

Table 2: Geographical coverage of the sample (in % of total); excerpt

2.3. The questionnaire

Results from Task 1.1 served as a starting point for the on-line questionnaire's core assessment grid (see especially table 4 on pages 31 through 34 in deliverable D1.1/4.1). Special care was given to identifying whether respondents were already familiar with the various data and knowledge items they were presented with: for all items the priority for the individual's personal work as well as their availability at national level was inquired.

This core matrix was complemented by questions such as country of origin, field of work or previous experiences with national/international data or information sources.

No tracing back of an individual respondent was possible unless he/she declared his/her interest in the research topic – specifically on future inquiries on road safety management – and added an e-mail address manually.

The questions in detail:

2.3.1. Section 1: Country

• In which country are you working? Please select from the drop down box

2.3.2. Section 2: Field of Work

- What type of organisation are you working for? Please select the best fit from the drop down list
- What are your main road safety-related activities?
- To what extent do you think your organisation influences the following... (The European Commission, National Government, Regional/local authority, The public)
- · How many years have you been working in the field of road safety?

2.3.3. Section 3: Use of tools

- Do you use any of the following international databases/information sources? (ERSO (European Road Safety Observatory), IRTAD (International Road Traffic Accident Database), CARE (European Commission database of road accidents), UN-ECE (United Nations Economic Commission for Europe), EUROSTAT)
- Do you use any other international databases/information sources?
- Do you use data from national databases/information sources? (Road accident databases, Travel/mobility survey results, Other exposure databases (e.g. vehicle fleet))
- Do you use data from any other national databases/information sources?
- How important is the use of data and knowledge to support your everyday activities?
- Are you satisfied with the data and resources available to support your everyday activities?

2.3.4. Section 4: Data and resources for fact finding and diagnosis of road safety issues

Please indicate both priority and availability of the following data and resources in relation to your personal work.

- Information on crash causation factors
- Information on road users' behaviour and attitudes
- A common definition of a fatality
- Exposure data (e.g. kilometres driven, numbers of trips)
- Crash databases that link police and hospital data
- Data on the under-reporting of road traffic crashes (i.e. underestimation of the true number of accidents)
- Statistical methods for priority setting (e.g. to rank road safety measures)
- · Information on the socio-economic cost of crashes, fatalities and injuries
- A common definition of a serious injury
- Information on frequent crash scenarios and patterns
- Results from in-depth crash investigations
- The use of GPS and/or GIS technologies in accident data collection
- Examples of the successful integration of road safety policies with others (e.g. environmental or health policies)
- Information on the effect of external factors on the number of road traffic crashes (e.g. the economy or the weather)
- A common definition of a work related crash (i.e. a crash that occurs whilst commuting or during professional activities)
- Results from naturalistic driving studies (using data recorders and/or cameras in vehicles)
- Results from driving simulator studies

2.3.5. Section 5: Data and resources for the development of road safety related programmes

Please indicate both priority and availability of the following data and resources in relation to your personal work.

D1.3 Stakeholder's contribution

- Information on the costs and benefits of a road safety measure
- · Information on the safety impacts of combined road safety measures
- Standardised procedures and methods for carrying out evaluations of road safety measures
- Good practice catalogue of measures including implementation conditions
- Information on the public acceptance of a road safety measure
- Comparisons of road safety policies and measures regarding specific road user groups
- Information on the safety impacts of singular road safety measures (e.g. graduate driver licensing)
- Statistical models and tools for target setting (e.g. forecasts and time series analysis etc.)
- Comparisons of safety rules and regulations
- Information on the impacts of road safety measures on other sectors' policies (environment, health, mobility etc.) and/or vice versa
- Comparisons of the frameworks in which road safety policies and measures are implemented

2.3.6. Section 6: Data and resources for the implementation of road safety related measures

Please indicate both priority and availability of the following data and resources in relation to your personal work.

- Common methodology for identifying high risk sites ("black-spots")
- Good practice collection on how countries have implemented specific road safety measures
- Digital road maps for mapping crashes
- Detailed information from road safety audits and road safety inspections
- Common methodology for in-depth crash analysis
- Information on potential funding sources for road safety measures
- Good practice and methodologies for monitoring implementation
- Detailed road databases providing descriptions of road layouts, signing and marking, etc.
- User-friendly interfaces to assist new users in finding road safety materials on the internet
- Comparisons of driver training programmes across Europe
- Detailed data on the costs of road safety measures across Europe
- Tools for simulating road user behaviour
- Methods to assess the training needs of individuals involved in road safety implementation processes
- · Collections of video clips and billboards of road safety campaigns

2.3.7. Section 7: Data and resources for the monitoring and evaluation of road safety measures

Please indicate both priority and availability of the following data and resources in relation to your personal work.

· Methods for evaluation of safety impacts of road safety measures

- Common methodology for the evaluation of costs and benefits of road safety measures
- Statistical methods for following trends
- Focusing on "seriously" injured counts, in addition to fatality counts
- Short term forecast models (up to 2 years)
- Medium term forecast models (up to 5 years)
- Long term forecast models (up to 10 years)
- Statistical methods for isolating effects of specific policies or measures
- Crash prediction models for various road types and layouts
- Comprehensive monitoring of implemented measures across Europe

2.3.8. Creation and test process

Starting from a first draft in autumn 2010, the questionnaire's content and usability were improved recursively by all members of the WP1 team until early 2011.

As a final pre-testing step, the questionnaire was internally launched and piloted by working colleagues of WP1 partners who had no previous knowledge of the questionnaire's aim or contents. All remarks from this pilot study were taken into account in the final version of the questionnaire.

The final version was launched publicly and the link handed over for dissemination to the European Commission, DG MOVE, in late January 2011.

The full questionnaire is attached to this document as Annex II.

2.3.9. Data collection

The European Commission, DG MOVE, sent a cover letter to all respondents by email, introducing the questionnaire and providing a web link to the survey. The survey was open for the whole of February 2011. The cover letter is attached to this document as Annex I.

A reminder was sent by the European Commission in mid February. Undelivered messages were collected and excluded from the original list of recipients.

3. RESULTS

3.1. Response rate and countries of origin

From the 3150 interviewees with validated e-mail addresses, 512 responses were received (394 from the European Region, the rest from outside the Region), resulting in an overall response rate of $16.3\%^4$. Most responses were received from the United Kingdom, Belgium, Germany and Spain (see table 3 for responses from the European Region).

Country of origin of responses	Count of re- sponses	% of all responses from the European Region
United Kingdom	54	13,7
Belgium / EU	43	10,9
Germany	31	7,9
Spain	23	5,8
Poland	19	4,8
Sweden	19	4,8
Austria	17	4,3
France	17	4,3
Netherlands	15	3,8
Czech Republic	13	3,3
Italy (also Vatican City)	13	3,3
Romania	13	3,3
Greece	12	3,0
Denmark	11	2,8
Cyprus	10	2,5
Switzerland	9	2,3
Irish Republic (Eire)	8	2,0
Portugal	8	2,0
Slovenia	8	2,0
Estonia	6	1,5
Finland	6	1,5
Hungary	5	1,3
Norway	4	1,0
Iceland	3	0,8
Lithuania	3	0,8
Slovakia	3	0,8
Bulgaria	2	0,5
Croatia	2	0,5
Serbia	2	0,5
Bosnia and Herzegovina	1	0,3
Latvia	1	0,3
Luxembourg	1	0,3
Malta	1	0,3
Northern Ireland	1	0,3
Russia	1	0,3
Turkey	1	0,3
Ukraine	1	0,3
Total	394	100,0

Table 3: Responses from the European Region by country of origin and share of allresponses ("In which country are you working?")

⁴ It goes without saying that this survey does not claim statistical representativeness

3.2. Type of organisation

Response rates were specifically high for national statistics bureaus, research institutes and consultancies. Also the health sector and associations/interest Groups/European (umbrella) organisations responded at rates above the average of 16.3%. Response rates were, on the other hand, specifically low for Public Enterprises, the European Commission and the European Parliament. From more than 120 questionnaires that were sent to individuals in the European Parliament only one response was received.

Type of Organisation	Response Rate in %
Statistics bureau	46,2
Research institute (Public, Private)	34,8
Consultancy	31,1
Health	25,0
Association, Interest Group, European (um- brella organisation	19,4
University	15,8
Road safety organisation, NGOs	15,7
Police	14,4
Regional/local authority	14,8
Road Administration	14,4
Automobile club	11,7
Haulier	12,0
Insurance industry	10,1
Driver training	10,5
Media	8,8
National Government + Ministry	8,1
Automotive manufacturer + industry supplier	6,3
European Commission	4,7
Public enterprise	5,3
Parliament (EU)	0,8

 Table 4: Type of organisation ("What type of organisation are you working for?"); excerpt from responses from all countries of origin

3.3. Use of existing tools

3.3.1. International level

Existing databases and information sources at European and international level generally seem to be well known and used among respondents. The CARE database is claimed to be known and used by nearly 45% of stakeholders (European Region + overseas), ERSO reaches a value of 39%. Values for **new Member States** of the EU are generally higher than for **EU15**, with EUROSTAT scoring as top information source for these countries. With regard to type of organisation, **road safety organisations** and **research/universities** report highest use rates, with CARE and ERSO as top information sources. Representatives of **automotive and supplier industries currently have** least access to accident data at international scale: only every fourth respondent is familiar with ERSO, only every fifth with IRTAD. Comparatively low rates were also observed for **national and regional administrations**.

	In use by respondents in %							
International data- bases/information sources	General (European Re- gion + overseas)	EU15	New Member States	Associations, Interest Groups	Research, Universities	National / Regional Administrations	Industry	Road Safety Organisations
ERSO (European Road Safety Observatory)	38.7	45.3	50.0	49.1	53.2	44.8	26.3	63.6
CARE (European Commission database of road accidents)	44.9	54.7	60.7	57.9	63.6	57.5	42.1	70.5
IRTAD (International Road Traffic Accident Database)	34.8	41.4	42.9	45.6	59.7	34.5	21.1	52.3
UN-ECE (United Nations Economic Commission for Europe)	25.4	26.6	35.7	35.1	40.3	33.3	36.8	29.5
EUROSTAT	38.7	46.0	63.1	47.4	64.9	40.2	36.8	47.7

Table 5: Use of international data/information sources

Under "other sources" respondents listed a substantial amount of further information sources such as ACEA, ANFAC, ACEM, CEDR questionnaires, CIECA, SHARP, MAIDS, CLEPA, Data collected in EU projects, EES Catalogues, Vehicle databases, ETAC, ETSC, ETSC's Road Safety PIN, EFA, TRB, NHTSA, AUSTROROADS, European Road Safety Charter, Global Road Safety Partnership, EC Forum on Alcohol and Health, EuroRAP database; EuroTEST database; Roadside assistance, EVU, FARS, FGSV (Germany), VSS (Suisse), Geolibrary; QUT eprints, German In-depth Accident Study GIDAS, Health for all, IDB (EU Injury Database), ILO databases, InSAFE database, SWOV factsheets, AIDE, Response factsheet, Google scholar, Research databases available as a reviewer e.g. through Elsevier or accident analysis and prevention, International Transport Forum, IRF, TENtec, ERU, ISEMOA, ITF transport trends, Medical periodicals (e.g Injury, Journal of Trauma etc.), NASS-CDS, GES, NHST, NHTSA, CHP, Canada's TRAID data, IIHS, OECD, SafetyLit, SARTRE database, TISPOL, TREMOVE, FLEETS, TRID, data sent by FEVR, WHO European mortality data, WHO health for all database, World Bank.

3.3.2. National level

Most of respondents make use of national road accident databases (89.6%), 72% use travel and mobility surveys, and 68.5% use other national databases/information sources.

3.4. Importance of data and knowledge to support road safety work

A majority of 82.7% of respondents attach "high importance" to the availability of data and knowledge to support their own work in the field of road safety.

The current degree of satisfaction with data and resources available today leaves only 13.7% "very satisfied" whereas 71.6% are only "moderately satisfied" and 14.7% "not at all satisfied".

3.5. Needs for knowledge and data

The core part of the questionnaire explored the needs towards and availability of data and resources for the personal work of respondents along the above four dimensions of road safety management. Analysis hereunder refers to responses from all countries of origin (including outside the European Region).

3.5.1. Fact finding and diagnosis of road safety issues

Highest demand (the highest share of responses which rank an issue as "High Priority") is attached to the areas of **crash causation factors** and **road users' behaviour and attitudes** (which are areas where information is poorly available) as well as a **common definition of a road fatality**. Least attention was given to a common **definition of a work related crash**, and studies in the areas of **driving simulation** as well as **naturalistic driving**.

Issue	High Priority (% of respondents)	Already available (% of respondents)
Information on crash causation factors	67,1	18,4
Information on road users' behaviour and attitudes	62,8	14,1
A common definition of a fatality	60,4	67,4
Exposure data (e.g. kilometres driven, numbers of trips)	52,7	17,5
Crash databases that link police and hospital data	52,0	11,6
Data on the under-reporting of road traffic crashes (i.e. underesti- mation of the true number of accidents)	49,0	10,0
Statistical methods for priority setting (e.g. to rank road safety measures)	48,5	15,8
Information on the socio-economic cost of crashes , fatalities and injuries	47,2	23,9
A common definition of a serious injury	47,1	63,0
Information on frequent crash scenarios and patterns	46,2	12,0
Results from in-depth crash investigations	44,0	15,7
The use of GPS and/or GIS technologies in accident data collection	41,8	11,0
Examples of the successful integration of road safety policies with others (e.g. environmental or health policies)	39,3	7,8
Information on the effect of external factors on the number of road traffic crashes (e.g. the economy or the weather)	38,6	9,1
A common definition of a work related crash (i.e. a crash that occurs whilst commuting or during professional activities)	31,2	23,7
Results from naturalistic driving studies (using data recorders and/or cameras in vehicles)	30,5	4,3
Results from driving simulator studies	18,4	7,4

Table 6: Priority ranking in the field of fact finding and diagnosis of road safety issues

3.5.2. Development of road safety related programmes

Respondents report a high demand for **cost/benefit information** as well as impacts of **combined road safety measures**. At the same time, very low availability values are reported. Little demand is stated towards knowledge concerning **impacts of road safety measures on other sectors' policies** and **comparisons of implementation frameworks** of road safety policies and measures.

Generally speaking, availability values in this road safety management-oriented section are lower than for the previous section on fact finding. Little knowledge seems to exist about information already available on ERSO – see e.g. the low availability score for "Comparisons of safety rules and regulations".

Issue	High Priority (% of respondents)	Already available (% of respondents)
Information on the costs and benefits of a road safety measure	56,3	12,1
Information on the safety impacts of combined road safety meas- ures	53,6	6,6
Standardised procedures and methods for carrying out evaluations of road safety measures	52,2	14,6
Good practice catalogue of measures - including implementation conditions	50,4	14,3
Information on the public acceptance of a road safety measure	44,6	8,8
Comparisons of road safety policies and measures regarding spe- cific road user groups	44,0	8,1
Information on the safety impacts of singular road safety measures (e.g. graduate driver licensing)	43,7	10,3
Statistical models and tools for target setting (e.g. forecasts and time series analysis etc.)	37,2	17,5
Comparisons of safety rules and regulations	37,2	13,2
Information on the impacts of road safety measures on other sectors' policies (environment, health, mobility etc.) and/or vice versa	35,3	6,7
Comparisons of the frameworks in which road safety policies and measures are implemented	27,8	4,0

Table 7: Priority ranking in the field of development of road safety related programmes

3.5.3. Implementation of road safety related measures

A common definition for **identifying high risk sites** ranks highest in priorities – and (only) every 4th stakeholder thinks that such a definition is already available at national level. A **good practice collection** on road safety measures ranks nearly as high, but at 5.8% availability is close to non-existent. The areas of **training of road safety professionals** as well as – to some surprise – **collections of road safety videos & billboards** receive lesser attention by stakeholders. At only 2.3% availability score, the national access to detailed data on the **costs of road safety measures across Europe** ranks lowest of all sections of this part of the questionnaire ("Needs for knowledge and data").

Issue	High Priority (% of respondents)	Already available (% of respondents)
Common methodology for identifying high risk sites ("black-spots")	46,3	23,8
Good practice collection on how countries have implemented specific road safety measures	42,6	5,8
Digital road maps for mapping crashes	41,0	20,2
Detailed information from road safety audits and road safety in- spections	39,3	14,2
Common methodology for in-depth crash analysis	39,3	13,7
Information on potential funding sources for road safety measures	37,7	7,4
Good practice and methodologies for monitoring implementation	35,6	5,6
Detailed road databases providing descriptions of road layouts, signing and marking, etc.	34,3	14,3
User-friendly interfaces to assist new users in finding road safety materials on the internet	30,1	7,9
Comparisons of driver training programmes across Europe	29,4	5,7
Detailed data on the costs of road safety measures across Europe	29,2	2,3
Tools for simulating road user behaviour	25,7	8,2
Methods to assess the training needs of individuals involved in road safety implementation processes	25,6	4,5
Collections of video clips and billboards of road safety campaigns	24,6	9,7

Table 8: Priority ranking in the field of implementation of road safety related measures

3.5.4. Monitoring and evaluation of road safety measures

Focusing on "seriously" injured counts, in addition to fatality counts, ranks highest in this section. Much weight is also given to evaluation of safety impacts as well as of costs and benefits. However, only every tenth stakeholder has access to costbenefit studies at national level. Crash prediction models on the other hand – and possibly due to their relative novelty – as well as monitoring of implemented measures receive least attention in this section.

Issue	High Priority (% of respondents)	Already available (% of respondents)
Focusing on "seriously" injured counts, in addition to fatality counts	54,7	22,7
Methods for evaluation of safety impacts of road safety measures	53,7	14,1
Common methodology for the evaluation of costs and benefits of road safety measures	44,0	9,3
Statistical methods for following trends	38,8	19,8
Comprehensive monitoring of implemented measures across Europe	32,1	3,1
Statistical methods for isolating effects of specific policies or measures	31,3	6,8
Crash prediction models for various road types and layouts	31,2	4,3
Short term forecast models (up to 2 years)	26,4	9,8
Long term forecast models (up to 10 years)	26,4	9,5
Medium term forecast models (up to 5 years)	26,3	9,1

Table 9: Priority ranking in the field of monitoring and evaluation of road safety meas-ures

4. CONCLUSIONS AND OUTLOOK

An extensive survey was successfully carried out among more than 3000 road safety stakeholders in Europe and beyond.

Stakeholders expressed **high demand for data and knowledge** in road safetyrelated decision making. They also expressed **discontent about the current poor availability** of such information.

4.1. Current role of ERSO

Knowledge and use of the European Road Safety Observatory (ERSO, <u>www.erso.eu</u>) is not equally distributed between countries and across categories of road safety stakeholders. Values for **new Member States** of the EU are generally higher than for **EU15**; half of stakeholders in the new Member States and about 45% in the EU15 countries make use of ERSO. With regard to type of organisation, **road safety organisations and research/universities** report highest use rates. Lowest rates were reported for representatives of **automotive and supplier industries** as well as for **national and regional administrations**. Care should therefore be taken to make ERSO the standard tool for a majority of road safety stakeholders across the EU countries and all road safety related professions.

4.2. Priority rankings

The following issues scored highest with regard to priority for road safety work:

Fact finding and diagnosis

Information on **crash causation** factors (high priority for 67,1% of respondents), information on **road users' behaviour and attitudes** (62,8%), a common **definition of a fatality** (60,4%), **exposure data** (52,7%), crash databases that **link police and hospital data** (52%), data on the **under-reporting** of road traffic crashes (49,0%).

Development of safety programmes

Information on the **costs and benefits** of a road safety measure (56,3%), information on the **safety impacts of combined measures** (53,6%), common methods for **evaluations** of road safety measures (52,2%), **good practice catalogue** of measures (50,4%), information on the **public acceptance** of a road safety measure (44,6%).

Implementation

Common methodology for identifying high risk sites (46,3%), good practice collection on implementation (42,6%), digital road maps for mapping crashes (41,0%), detailed information from road safety audits and road safety inspections (39,3%), common methodology for in-depth crash analysis (38,3%).

Monitoring and evaluation

"Seriously" injured counts, in addition to fatality counts (54,7%), methods for evaluation of safety impacts of road safety measures (53,7%), common methodology for the evaluation of costs and benefits of road safety measures (44,0%), statistical methods for following trends (38,8%), comprehensive monitoring of implemented measures across Europe (32,1%).

4.3. Misjudgement about availability

Most of the above issues are currently poorly available. It must be noted, however, that comparatively **low availability scores** were reported **even for items which are already available** - such as definitions of a fatalities or severe injuries at national scale. **Improving knowledge about the steadily growing portfolio of available data** should therefore be one of the prime concerns of future public relations work in relation with ERSO.

4.4. Low scores but high stake

Other issues, such as in-depth investigations, naturalistic driving and simulator studies reached **low priority scores** but will be **at the heart of European research** for the coming years. Hence, one of the future functions of ERSO will be to **present stakeholders with results from recent EU research**.

4.5. Implications for ERSO

The results of the stakeholder survey presented in this report will serve as a basis for arriving at a common picture of demands of stakeholders (policy-making as well as non-policy-making) towards data and knowledge in the road safety domain. Future versions of the European Road Safety Observatory (ERSO, www.erso.eu) are envisaged to be built on the above findings.

A joint analysis of results of all tasks of WP1 – including Task 1.3 at hand – is to be found in DaCoTA Deliverable D1.5.

ANNEX I COVER LETTER

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 <u>**Da**</u>ta <u>**Co**</u>llection, <u>**T**</u>ransfer & <u>**A**</u>nalysis www.dacota-project.eu) within the 7th EU Framework Programme for Research and Technological Development.

One of the objectives of DaCoTA is to gather information towards further improvement of the **European Road Safety Observatory** (ERSO) in order to better support knowledge-based policy-making in road safety.

Therefore, DaCoTA is now examining which data and tools are required by road safety stakeholders in Europe - and should therefore be made available on the ERSO website www.erso.eu.

The European Commission would be very grateful if you could find the time (max. 15 minutes) to fill out the following online questionnaire

https://www.survey.lboro.ac.uk/road_safety_data/

The survey will be open until 28 February 2011

This questionnaire has one central aim:

• What road safety data and tools do you deem necessary for your personal work in the road safety domain?

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 is strictly anonymous and will only be used in the DaCoTA research project and for the further improvement of the ERSO website.

Thanks to your participation we will have a better understanding of the needs of stakeholders towards knowledge-based policy-making in road safety.

Yours sincerely,

María Teresa SANZ VILLEGAS Dacota Project Officer Road Safety Directorate General Mobility and Transport

European Commission

ANNEX II ELECTRONIC QUESTIONNAIRE

BOS Home | About BOS | Contact Us



Page 1 of 6

Welcome

The DaCoTa project aims at further developing the **European Road Safety Observatory (ERSO)**, specifically to improve **commonly available data and tools** in the road safety domain. **ERSO** aims at providing objective data and **information for all stakeholders** that are involved in road safety, be it directly or indirectly. It is therefore important to assess thoroughly the needs felt by these actors in terms of knowledge, data, or information tools as a first step in fulfilling those needs.

This questionnaire is subdivided in two main parts. The first one concerns your activity in the field of road safety, the organisation you work for and the type of information you use as support for your daily work. The second part concerns the type of data and information that should be made available for European road-safety actors. With this survey the DaCoTa team wants to learn how to **better support your daily work in the road safety domain**: What, according to you, are the European road safety data, information and tools that should be accessible on the website of the European Commission.

This survey will not take you more than 15 minutes.

Note that once you have clicked on the CONTINUE button at the bottom of each page you can not return to review or amend that page.

For more information about ERSO please see the ERSO website www.erso.eu

Continue >

<u>Top</u>

European Survey on Road Safety Related Data and Information

Page 2 of 6

Data Protection

All data collected in this survey will be held anonymously and securely.

You will not be required to input any personal data unless you choose to provide your contact details at the end of this survey.

Continue >

<u>Top</u>

	Directorate-Genera
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afety Related Data and	22
7Da	CoTA
	Page 3 of 6
our activity in the field of road safety	
Country	
1. In which country are you working?	
Please select from the drop down box (Optional)	
Select an answer	
If you selected Other, please specify:	
P	
Field of Work	
2. What type of organisation are you working for?	
Please select the best fit from the drop down list (Optional)	
Select an answer	
, _	
If you selected Other, please specify:	
3. What are your main road safety related activities? (Optional)	
(select all that apply)	
Data collection and analysis	
Training	
 Training Monitoring and evaluation 	
 Training Monitoring and evaluation Planning and design 	
 Training Monitoring and evaluation Planning and design Infrastructure safety 	
 Training Monitoring and evaluation Planning and design Infrastructure safety Vehicle safety 	
 Training Monitoring and evaluation Planning and design Infrastructure safety Vehicle safety Enforcement 	
 Training Monitoring and evaluation Planning and design Infrastructure safety Vehicle safety Enforcement Research (commissioning) 	
 Training Monitoring and evaluation Planning and design Infrastructure safety Vehicle safety Enforcement Research (commissioning) Research (conducting myself) 	
 Training Monitoring and evaluation Planning and design Infrastructure safety Vehicle safety Enforcement Research (commissioning) 	

Other (please specify):

4. To what extent do you think your organisation influences the following

	Please	Please indicate the level of influence of your organisation						
	Very influential			No influence				
a. The European Commision	C	C	O	C				
b. National Government	C	O	O	C				
c. Regional/local authority	C	O	O	C				
d. The public	C	O	O	O				

5. How many years have you been working in the field of road safety? (Optional)

- C <5 years
- © 5-10 years
- C 11-20 years
- [☉] >20 years

Use of tools

6. Do you use any of the following international databases/information sources?							
_	Yes	No	Don't Know				
a. ERSO (European Road Safety Observatory)	igodot	O	O				
b. IRTAD (International Road Traffic Accident Database)	\odot	O	O				
c. CARE (European Commission database of road accidents)	C	O	O				
d. UN-ECE (United Nations Economic Commission for Europe)	C	O	O				
e. EUROSTAT	\mathbf{O}	Ō	O				

7. Do you use any other international databases/information sources? (Optional)

^C Yes ^C No ^C Don't Know

If 'yes', please specify which international sources you have used

8. Do you use data from national databases/information sources?

	Yes	No	Don't know			
a. Road accident databases	O	O	O			
b. Travel/mobility survey results	O	O	Ō			

c. Other exposure databases (e.g. vehicle fleet)	O	0	0
9. Do you use data from any other nation	nal databases	s/information	sources? (Ontional)
[©] Yes [©] No [©] Don't Know			
If 'yes', please specify which other n	ational data so	ources you ha	ve used
10. How important is the use of data and	knowledge to	support your	everyday activities? (Optional)
○ High importance ○ Low importance	Not impo	ortant	
11. Are you satisfied with the data and read (<i>Optional</i>)	sources availa	able to suppor	t your everyday activities?
C Very satisfied C Moderately satisfied	d 🔿 Not at a	all satisfied	

Continue >

<u>Top</u>

BOS Home | About BOS | Contact Us



Page 4 of 6

EU wide Data, Methodologies and Resources

This section of the survey will ask you to rank a series of statements according to whether you either use or would like to use particular types of data and other resources in your day to day activities.

Data and resources for fact finding and diagnosis of road safety issues

12. Please indicate both **priority** and **availability** of the following data and resources **in relation to your personal work.**

Please answer all questions and fill out for both Priority and Availability!

	PRIO	RITY leve	el for my	/ work	AVAILABILITY at the level of country			
	High priority	Medium priority	-	Not relevant for my work		Partially available	Currently not available	Don't know
a. A common definition of a fatality	O	O	O	O	C	C	O	O
b. A common definition of a serious injury	O	O	O	O	O	O	O	C
c. A common definition of a work related crash (i.e. a crash that occurs whilst commuting or during professional activities)	C	C	C	C	C	C	C	O
d. Data on the under- reporting of road traffic crashes (i.e. underestimation of the true number of accidents)	C	C	C	C	C	C	C	O
e. Crash databases that link police and hospital data	O	O	O	O	O	O	O	C
f. The use of GPS and/or GIS technologies in accident data collection	O	C	O	C	C	C	C	O
g. Information on road users' behaviour and attitudes	O	O	O	O	O	O	O	O
h. Exposure data (e.g. kilometres driven, numbers of trips)	O	C	C	O	C	C	C	C
i. Statistical methods for priority setting (e.g. to rank road safety measures)	O	C	C	C	C	C	C	O
j. Results from in-depth crash investigations	O	O	O	O	O	O	O	O

k. Results from naturalistic driving studies (using data recorders and/or cameras in vehicles)	O	C	C	C	C	C	Ō	C
I. Results from driving simulator studies	O	O	C	C	C	C	C	O
m. Information on the effect of external factors on the number of road traffic crashes (e.g. the economy or the weather)	C	Õ	Õ	Õ	O	C	C	C
n. Information on frequent crash scenarios and patterns	O	O	O	O	C	C	Ō	C
o. Information on crash causation factors	O	O	O	O	O	O	O	O
p. Examples of the successful integration of road safety policies with others (e.g. environmental or health policies)	O	O	O	Õ	O	C	O	C
q. Information on the socio - economic cost of crashes, fatalities and injuries	O	Ō	O	C	C	C	C	O
r. Other (please specify below)	O	O	O	O	O	O	O	O

13. Please state any other data or resources that you use for fact finding and diagnosis (Optional)

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Data and resources for the development of road safety related programmes

14. Please indicate both priority and availability of the following data and resources in relation to your personal work.

Please answer all questions and fill out for both Priority and Availability!

	PRIORITY level for my work				AVAILABILITY at the level of my country			
	High priority	Medium priority		Not relevant for my work		Partially available	Currently not available	Don't know
a. Statistical models and tools for target setting (e.g. forecasts and time series analysis etc.)	O	O	O	O	O	O	O	C
b. Information on the impacts of road safety measures on other sectors' policies (environment, health, mobility etc.) and/or vice versa	O	O	O	O	O	O	C	C
c. Standardised procedures and methods for carrying out evaluations of road safety measures	O	Õ	C	O	O	O	O	O

d. Information on the safety impacts of singular road safety measures (e.g. graduate driver licensing)	O	C	C	C	C	C	O	O
e. Information on the safety impacts of combined road safety measures	O	O	O	Õ	C	Õ	O	O
f. Information on the costs and benefits of a road safety measure	O	C	O	O	C	C	O	O
g. Information on the public acceptance of a road safety measure	O	C	O	C	C	C	O	O
h. Comparisons of the frameworks in which road safety policies and measures are implemented	C	O	O	O	O	O	O	C
i. Comparisons of safety rules and regulations	O	O	O	O	O	O	C	O
j. Comparisons of road safety policies and measures regarding specific road user groups	C	O	O	O	O	O	O	C
k. Good practice catalogue of measures including implementation conditions	O	C	O	C	C	C	O	O
I. Other (please specify below)	O	C	O	C	C	C	C	O

15. Please state any other data or resources that should be available for the development of road safety programmes (Optional)

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Data and resources for the implementation of road safety related measures

16. Please indicate both priority and availability of the following data and resources in relation to your personal work. Please answer all questions and fill out for both Priority and Availability!

	PRIO	RITY leve	el for my	/ work	AVAILABILITY at the level of my country				
	High priority	Medium priority		Not relevant for my work		Partially available	Currently not available	v Don't know	
a. Detailed information from road safety audits and road safety inspections	O	C	O	O	C	C	C	O	
b. Detailed road databases providing descriptions of road layouts, signing and marking, etc.	O	O	O	O	O	Õ	O	C	
c. Common methodology for identifying high risk sites ("black-spots")	O	Ō	O	O	Ō	C	Õ	O	

d. Common methodology for in-depth crash analysis	\odot	O	O	O	O	\odot	O	O
e. Digital road maps for mapping crashes	O	O	O	O	O	C	O	C
f. Tools for simulating road user behaviour	O	O	O	O	O	C	O	O
g. Comparisons of driver training programmes across Europe	O	C	O	O	O	O	Ō	C
h. Detailed data on the costs of road safety measures across Europe	O	Õ	C	C	O	O	O	C
i. Methods to assess the training needs of individuals involved in road safety implementation processes	Ō	O	O	O	O	C	O	O
j. User-friendly interfaces to assist new users in finding road safety materials on the internet	C	O	O	O	O	O	O	O
k. Good practice collection on how countries have implemented specific road safety measures	C	O	O	O	O	O	O	O
I. Good practice and methodologies for monitoring implementation	O	C	C	C	O	O	O	C
m. Information on potential funding sources for road safety measures	O	C	C	Õ	O	O	O	O
n. Collections of video clips and billboards of road safety campaigns	C	C	C	O	C	O	O	O
o. Other (please specify below)	\odot	C	O	O	C	C	C	O

17. Please state any other data or resources that should be available for the implementation of road safety measures *(Optional)*

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Data and resources for the monitoring and evaluation of road safety measures

18. Please indicate both **priority** and **availability** of the following data and resources **in relation to your personal work**.

Please answer all questions and fill out for both Priority and Availability!

	PRIO	RITY leve	el for my	/ work	AVAILABILITY at the level of my country			
	High priority	Medium priority	-	Not relevant for my work		available	Currently not available	Don't know
a. Methods for evaluation of safety impacts of road safety measures	O	C	C	O	C	C	C	C

b. Common methodology for the evaluation of costs and benefits of road safety measures	C	C	C	C	C	O	C	O
c. Statistical methods for following trends	C	O	C	O	C	C	C	C
d. Focusing on "seriously" injured counts, in addition to fatality counts	O	C	C	O	C	C	C	O
e. Short term forecast models (up to 2 years)	C	C	C	O	C	C	O	O
f. Medium term forecast models (up to 5 years)	C	O	C	O	O	C	C	C
g. Long term forecast models (up to 10 years)	O	O	O	O	O	O	O	O
h. Statistical methods for isolating effects of specific policies or measures	O	C	C	O	C	C	C	O
i. Crash prediction models for various road types and layouts	O	C	C	O	C	O	C	O
j. Comprehensive monitoring of implemented measures across Europe	O	C	C	C	C	C	C	C
k. Other (please specify below)	O	C	O	O	C	C	C	O

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Continue >

<u>Top</u>

BOS Home | About BOS | Contact Us



Page 5 of 6

Future Research

As well as exploring the data needs of road safety stakeholders, the DaCoTA project is studying **Road Safety Management Systems**. If you feel that you have a role in road safety policy making and management in your country we would like to contact you again to find out more about your countries specific practices.

Your details (optional)

20. Would you be willing to be contacted again with regards to **Road Safety Management Systems** in your country? *(Optional)*

⊙ Yes O No

If you answered 'yes' to the above question, please provide the following details

a. Name (Optional)

b. Job title (Optional)

c. Affiliation (Optional)

d. Email Address (Optional)

Continue >

<u>Top</u>

BOS Home | About BOS | Contact Us



Page 6 of 6

Thank You!

Thank you for completing this survey, your answers have been saved.

You can now navigate away from this page or close your web browser.

If you would like more information about the DaCoTA project please visit the website: http://www.dacota-project.eu/

The European Road Safety Observatory can be found within the European Commission website: <u>www.erso.eu</u>

For questions relating to this survey or the use of BOS at Loughborough University, **please contact:** Klaus Machata (<u>klaus.machata@kfv.at</u>)

View and print your responses

Please note that you will only be able to follow this link within 15 minutes of completing the survey. After this time you will not be able to access your responses.

View and print your responses

Alternatively you can view your responses with a list of all the possible responses for a question:

View and print your responses (including all possible responses)

Top