Road Safety Data, Collection, Transfer and Analysis

D1.4 An investigation of Policy Makers' priorities for data and tools and their availability

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EXECUTIVE SUMMARY

This report is part of the 'Policy' Work Package of the DaCoTA project (www.dacota-project.eu). The 'Policy' Work Package is designed to fill in a gap in knowledge on road safety policy making processes, their institutional framework and the data, methods and technical tools needed to base policy formulation and adoption on scientifically-established evidence. Building on previous work conducted by the Policy Work Package, this report aims to identify which data and tools Policy Makers regard as a priority and how available they think these are to themselves.

The identification of Policy Makers among the respondents of the Stakeholder Survey was achieved in 2 stages. The first was by selecting all respondents who stated that 'Policy Making' was one of their main road safety related activities (n=108). The second was to select respondents who stated that s/he worked for an organisation type that was considered to be strongly associated with Policy Making, but had not stated policy making as one of their main road safety related activities (n=43). These organisation types were: EU parliament, European Commission, National Government, Local/regional Government, Ministry and Road Administration. One respondent was excluded as s/he stated that s/he worked outside of Europe (USA), leaving a total of 150 respondents who can be considered to be Policy Makers. These respondents will be referred to as the Policy Maker Group.

There is an over representation of Policy Makers working in Belgium and the UK. This may be influenced by the number of European organisations that are based in Belgium and the original survey only being in English. Just over half of the Policy Makers (55%) work for organisations that are traditionally associated with policy making (EU parliament, European Commission, National Government, Local/regional Government, Ministry and Road Administration). It is likely that many of the remainder work with and advise policy making organisations. The majority of Policy Makers had worked in Road Safety for many years. 57% (71) had worked 11 years or more in Road Safety with only 18% (27) having worked less than 5 years.

Over 50% of Policy Makers stated that 13 data/tool items were of high priority:

- A common definition of a serious injury
- Information on crash causation factors
- A common definition of a fatality
- Information on road user behaviour and attitudes
- Exposure data
- Statistical methods for priority setting
- Crash databases that link police and hospital data
- Information on the costs and benefits of a road safety measure
- Information on the safety impacts of combined road safety measures
- Good practice catalogue of measures -- including implementation conditions
- Standardised procedures and methods for carrying out evaluations of road safety measures
- Focusing on seriously injured counts, in addition to fatality counts
- Methods for evaluation of safety impacts of road safety measures

However only 2 of these *A common definition of a serious injury*' and '*A common definition of a fatality*' were stated as having both high priority and high availability. The remainder of items were found as having low priority and low availability.

The results suggest that Policy Makers focus more on information related to the efficiency of road safety programmes and measures ('Information on the cost-benefit of a road-safety measure', '… safety impacts of combined road safety measures', 'good practice catalogue of measures…') or, in other words, on evidence guiding the choice of appropriate measures. Another group of tools emphasised by the Policy Makers concerned more detailed and comprehensive information on accident data and characteristics such as information on crash causation factors, on frequent crash scenarios and patterns, on road user behaviour and attitudes, as well as a need for crash databases that link police and hospital data. .Policy Makers' responses clearly demonstrated insufficient availability of the majority of tools needed at various levels of decision-making.

As the Policy Makers included in the sample considered here are from a diverse range of organisations and many different European countries, it was thought that the data/tools priorities and availability may differ between subgroups. Thus, two comparative analyses were carried out to examine:

1. Whether priorities and availability differ according to Policy making level i.e. whether the Policy Maker feels that s/he has a high level of influence on the European Commission, the National Government or the Local/regional government.
2. Whether the Road Safety performance of their country affects Policy Makers data/tools priorities and availability (in terms of Road Traffic Accident fatalities per million inhabitants[1]).

When examining the difference in priorities and availability of data and tools between the Policy Makers who feel that they are influential of the National Government and the Local/regional government, only small differences can be identified. One of the bigger differences in priorities relates to '*Good practice collection on how countries have implemented specific road safety measures*'. Those who claim to influence the National Government assign a higher priority to this (58%) than those who influence local/regional government (38%). A possible explanation for this is that National Governments are more likely to compare themselves to other countries. Local/regional governments are less likely to do this and focus instead on Road Safety measures adopted by other localities or regions within the country. With regard to availability, although a high priority for both groups, '*A common definition of a serious injury*' is more widely available for those influencing the National Government than those influencing the local/regional government, though this is a small difference.

The priorities and availability of data and tools stated by those influential of the European Commission were also examined however very small numbers [n=12] reduce the reliability of the results and make comparisons difficult. What may be noteworthy is that the Policy Makers, who regard themselves as influential of the European Commission, regard '*Results from naturalistic driving studies [1-16]*' as a high priority whereas when looking at the Policy Makers overall, very few considers it to be a high priority.

When examining priorities and availability according to whether the Policy Makers were considered to be from a high, medium or low performing country with regard to

[1] Data source: United Nations Economic Commission for Europe (UNECE) Transport Division http://w3.unece.org/pxweb/Dialog/varval.asp?ma=011_TRAccRateprofile_r&path=../database/STAT/40-TRTRANS/01-TRACCIDENTS/&lang=1

Road Safety, the medium performing countries group was broadly speaking similar to the Policy Makers as a whole. This is unsurprising given it is the largest group with the most individual countries represented. The high and low performing groups have a different pattern, although these groups have much smaller numbers of respondents, so each respondent's selection had a greater influence on the priorities and availability reported.

In general, the high priority items as selected by the high performing countries are considered to have a greater availability than those assigned high priority by the low performing countries. For some items there are relatively large differences in priorities assigned between the high and low performing groups. '*Information on road user behaviour and attitudes*' and '*Exposure data*' are considered to be a high priority by the Policy Makers from high performing countries (75% and 76% respectively), whereas fewer Policy Makers from low performing countries consider these items to be high priority (19% and 28% respectively). In contrast, '*Comparisons of safety rules and regulations*' and '*Detailed road databases providing descriptions of road layouts, signing and marking, etc.*' are 2 items that are assigned the lowest priority by the high performing countries (14% and 17% respectively) but are considered high priority by the low performing countries (70% and 55% respectively).

This finding may reflect the evolution in road safety management thinking: at an early stage of dealing with road safety problems, priority is given to more common and immediate interventions, such as those related to road safety regulations or infrastructure inventory, whereas later, at a more advanced stage, a need for deeper understanding of factors and processes leading to road accidents becomes more of a priority. This reflected, for example, in the introduction of the notion of road safety performance indicators to measures current safety conditions of the transport system (ETSC, 2001; OECD, 2008).

This report highlights data and tools which a sample of Policy Makers has suggested are a high priority. It also indicates which of these are already available and which are not. Although availability as measured here has to be treated with caution as it is only individuals' perception, this information will be useful for ERSO to identify both where there are gaps in data and tools and where there is a need for greater publicity so that Policy Makers know where to find the data/tools which they require. The development of data and tools for supporting road safety management tasks should take the differences in priorities found for various groups of policy-makers into account, i.e. such a development should not be general but certain policy-maker group oriented.

This report gives a snapshot of data drawn from a much larger dataset (Stakeholders Survey) and therefore should not be regarded as the final conclusions of the 'Policy' work of DaCoTA. The focus on just 2 elements, 'High priority' and 'Fully available' to highlight data/tools that are regarded as important in evidence based policy making is a useful interim measure but cannot be regarded as the full story. Further work is currently being undertaken to look at the results of the Stakeholder Survey in more detail and more in depth analyses will be performed.

1. INTRODUCTION

1.1. The Policy Work Package of the DaCoTA project

This report is part of the 'Policy' Work Package of the DaCoTA project (www.dacota-project.eu). The DaCoTA project aims to further develop and populate the European Road Safety Observatory (ERSO) (www.ERSO.eu).

The 'Policy' Work Package is designed to fill in a gap in knowledge on road safety policy making processes, their institutional framework and the data, methods and technical tools needed to base policy formulation and adoption on scientifically-established evidence.

The Work Package has two broad aims:

- To identify policy-makers' and other stakeholders' needs for knowledge in terms of data, data analysis and methodological tools,
- To investigate and present information on Road Safety Management and policy making processes in a range of European countries.

The focus here is on the work relating to the first of these.

1.2. Expert Panel Consultation

The first task of the Policy Work Package was to conduct a preliminarily consultation of experts in Road Safety Policy Making to gain an initial idea of the type of data and tools required by policy makers. The main purpose of this consultation was to obtain an initial in-depth insight of the needs for scientific support encountered in road safety management.

An Expert Panel was set up comprising of individuals who were knowledgeable and experienced in both generating Road Safety policy and conducting or applying research for this purpose.

In order to guide the consultation a needs matrix was created by the DaCoTA partners. The matrix identified 4 key road safety management tasks which were:

- Fact Finding
- Programme Development
- Preparing Implementation
- Monitoring and Evaluation

Four 'needs for knowledge' completed the matrix. These were:

- Data
- Tools for data treatment
- Other decision-support tools
- Training tools.

This aimed to encourage the experts to consider each of the needs for knowledge for each road safety management task. Members of the Expert Panel contributed to the consultation by either providing a written response based on the matrix and/or by taking part in an interview with one of the DaCoTA partners, guided by the matrix.

15 experts submitted a written contribution, 17 were interviewed and 3 did both. These experts represented a variety of EU countries however the newer Member States were somewhat underrepresented. The consultation clearly revealed that the experts endorsed the view of an evidence-based approach to road-safety management. A wide variety of data and tools needs were identified as important for each of the road safety management tasks. A full report of the consultation and the results can be found in Muhlrad and Dupont (2010).

1.3. Stakeholder Survey

However it was not possible to ascertain from the consultation the level of priority of these needs for data and tools, how widely available these are at the current time nor to assess the extent to which they were also considered important by other types of road safety actors. A further data gathering exercise was therefore undertaken in the form of an on-line questionnaire, referred to as the Stakeholder Survey. The aim of this was to reach as many policy makers and other stakeholders from as wide a range of European countries as possible. Questions related to data and tools needs were based on the needs identified during the Expert Panel consultation. These needs were translated into a number of items that were grouped around the key road safety management tasks as described before, although the wording of the tasks was altered slightly to be more meaningful to a wider group of stakeholders (see Table 1).

Fact Finding and diagnosis
A common definition of a fatality
A common definition of a serious injury
A common definition of a work related crash
Data on the under-reporting of road traffic crashes
Crash databases that link police and hospital data
The use of GPS and/or GIS technologies in accident data collection
Information on road user behaviour and attitudes
Exposure data
Statistical methods for priority setting
Results from in-depth crash investigations
Results from naturalistic driving studies
Results from driving simulator studies
Information on the effect of external factors on the number of road traffic crashes
Information on frequent crash scenarios and patterns
Information on crash causation factors
Examples of the successful integration of road safety policies with others (e.g. environmental or health policies)
Information on the socio-economic cost of crashes, fatalities and injuries
Development of Road Safety related programmes
Statistical models and tools for target setting

Information on the impacts of road safety measures on other sectors policies
Standardised procedures and methods for carrying out evaluations of road safety measures
Information on the safety impacts of singular road safety measures
Information on the safety impacts of combined road safety measures
Information on the costs and benefits of a road safety measure
Information on the public acceptance of a road safety measure
Comparisons of the frameworks in which road safety policies and measures are implemented
Comparisons of safety rules and regulations
Comparisons of road safety policies and measures regarding specific road user groups
Good practice catalogue of measures -- including implementation conditions
Implementation of Road Safety measures
Detailed information from road safety audits and road safety inspections
Detailed road databases providing descriptions of road layouts, signing and marking, etc.
Common methodology for identifying high risk sites ("black-spots")
Common methodology for in-depth crash analysis
Digital road maps for mapping crashes
Tools for simulating road user behaviour
Comparisons of driver training programmes across Europe
Detailed data on the costs of road safety measures across Europe
Methods to assess the training needs of individuals involved in road safety implementation processes
User-friendly interfaces to assist new users in finding road safety materials on the internet
Good practice collection on how countries have implemented specific road safety measures
Good practice and methodologies for monitoring implementation
Information on potential funding sources for road safety measures
Collections of video clips and billboards of road safety campaigns
Monitoring and Evaluation
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

Table 1: List of items of data and tools needs

For each item, respondents were asked to state the priority level for their work (high, medium, low, not relevant) and how available it is at the level of their country (already, partially, not currently, don't know).

The Stakeholder Survey was distributed to over 3000 individuals from a wide range of organisations and countries. 394 responses were received from individuals working in a European country. A full report on the Stakeholder Survey methodology and an overview of the results can be found in Machata et al (2011).

1.4. Report aims

One of the aims of ERSO is to support knowledge based policy making. Therefore part of the work of 'Policy' Work Package of DaCoTA is to identify Policy Makers' needs for data and tools. This report aims to enhance the information gained from the Expert Panel Consultation by looking at Policy Makers' priorities for data and tools and how available they think these are to themselves.

This report will therefore highlight the priorities and availability of data and tools as indicated by the Policy Makers who responded to the Stakeholders Survey.

2. POLICY MAKER GROUP

2.1. Identifying Policy Makers in the Stakeholder Survey

The identification of Policy Makers among the respondents of the Stakeholder Survey was achieved in 2 stages. The first was by selecting all respondents who stated that 'Policy Making' was one of their main road safety related activities (n=108). The second was to select respondents who stated that they worked for an organisation type that was considered to be strongly associated with Policy Making, but had not stated policy making as one of their main road safety related activities (n=43). These organisation types were: EU parliament, European Commission, National Government, Local/regional Government, Ministry and Road Administration. One respondent was excluded as they stated that s/he worked outside of Europe (USA), leaving a total of 150 respondents who can be considered to be Policy Makers. These respondents will be referred to as the Policy Maker Group.

2.2. Policy Makers' Background

The Policy Maker Group represents a wide range of European countries as shown in Table 2. Respondents were asked to state what country they worked in rather than their country of origin.

Country	Number of Respondents	% Respondents
Austria	4	2.7
Belgium	22	14.7
Bosnia and Herzegovina	1	0.7
Bulgaria	2	1.3
Croatia	1	0.7
Cyprus	4	2.7
Czech Republic	5	3.3
Denmark	5	3.3
Estonia	2	1.3
Finland	3	2
France	2	1.3
Germany	5	3.3
Greece	6	4
Hungary	1	0.7
Iceland	3	2
Irish Republic (Eire)	2	1.3
Italy (also Vatican City)	2	1.3
Latvia	1	0.7
Lithuania	1	0.7

Malta	1	0.7
Netherlands	5	3.3
Norway	2	1.3
Poland	6	4
Portugal	1	0.7
Romania	4	2.7
Serbia	1	0.7
Slovakia	2	1.3
Slovenia	3	2
Spain	6	4
Sweden	11	7.3
Switzerland	5	3.3
Ukraine	1	0.7
United Kingdom	22	14.7
Other	7	4.7
No answer	1	0.7
Total	150	100

Table 2: Country where Policy Makers' work

The majority of 'other' responses have been selected by Policy Makers who work for a European or international organisation so do not consider themselves to represent a particular country. There is an over representation of respondents working in Belgium and the UK. This may be influenced by the number of European organisations that are based in Belgium and the original survey only being in English. Also when examining how many individuals from each country were sent the questionnaire, then Belgium and the UK have the largest shares - 14.8% and 9.9% respectively (Machata et al, 2011). Sweden also has a relatively high share of respondents however the reason for this is less clear.

Table 3 shows the range of organisations for which respondents in the Policy Maker Group work. Just over half of the respondents (55%) work for organisations that are traditionally associated with policy making (EU parliament, European Commission, National Government, Local/regional Government, Ministry and Road Administration). It is likely that many of the remainder work with and advise policy making organisations. Respondents who had selected 'Other' gave a diverse description of their organisation, for example 'NGO of Pedestrians', 'transport buyer', 'International Financial Institution'.

Type of organisation	**Number of respondents**	**% of respondents**
Ministry	26	17.3
Road Administration	19	12.7
Regional/local authority	17	11.3
National Government	15	10
Consultancy	11	7.3

Road safety organisation	8	5.3
Other	8	5.3
Association	6	4
Police	6	4
Research institute (Public & Private)	5	3.4
European Commission	5	3.3
European (umbrella) organisation	5	3.3
Automotive industry supplier	4	2.7
Interest Group	4	2.7
University	3	2
Automobile club	2	1.3
Automotive manufacturer	2	1.3
Consumer association	1	0.7
European Parliament	1	0.7
Health	1	0.7
Insurance industry	1	0.7
Total	150	100

Table 3: Organisation type

The majority of policy makers had worked in Road Safety for many years. 57% (71) had worked 11 years or more in Road Safety with only 18% (27) having worked less than 5 years.

3. RESULTS

3.1. Overview of policy makers needs for data and tools

The analysis in this section is based on four major sections in the Stakeholder Survey. Each question reflects one of the key Road Safety Management tasks as defined by the data and tools needs matrix (Muhlrad and Dupont, 2010):

- Fact finding and diagnosis
- Development of Road Safety related programmes
- Implementation of Road Safety measures
- Monitoring and evaluation

The four sections comprised of lists of items describing various data and/or tools derived from the needs identified in the Expert Panel Consultation (Muhlrad and Dupont, 2010). For each item, respondents were asked to state the priority level for their work (high, medium, low, not relevant) and the availability level (already, partially, not currently, don't know). Sections 3.1.1 to 3.1.4 present the priority and availability results according to each Road Safety Management task considered.

In addition a combined examination of priority and availability issues was carried out. In order to give an overview of the Policy Makers' opinions, two summary indicators were created:

a) the percentage of respondents selecting 'high priority' for a data/tool item has been used to assess the relative priority of that item.
b) the percentage of respondents that have selected 'fully available' has been used to assess availability.

The two summary indicators were used to explore the interaction between Policy Makers' priority and availability responses as given in the Stakeholder Survey (see section 3.1.5).

With regards to availability, it should be noted that respondents' answers reflect their perception of availability not necessarily the actual availability of data/tools. The report on the Stakeholder Survey found that respondents sometimes underestimated the availability of certain data/tools (Machata et al, 2011).

Moreover, it is possible that some data or tools that are not available to a Policy Maker may not be considered a priority because s/he is not familiar with them.

Table 4 to Table show the percentage of respondents selecting each option with items sorted by the percentage of Policy Makers' selecting 'high priority'.

3.1.1. Fact finding and diagnosis

Table 4 shows the priority and availability of data for fact finding and diagnosis as stated by the Policy Maker Group. The items for fact finding and diagnosis that were assigned the highest priority by policy makers was '*a common definition of serious injury*', closely followed by '*Information on crash causation factors*', '*a common definition of a fatality'*, and '*Information on road user behaviour and attitudes*'. However not all of these are widely available to the Policy Makers. For most of the policy makers '*Information on crash causation factors*' and '*Information on road user*

behaviour and attitudes' was at best only partially available and '*a common definition of serious injury*' was only already available for half the Policy Makers.

		Priority Level for my work				Availability at the level of my country			
		High	**Medium**	**Low**	**Not Relevant**	**Already available**	**Partially available**	**Currently Not available**	**Don't Know**
1-1	**A common definition of a serious injury**	66%	22%	9%	3%	51%	33%	12%	5%
1-2	**Information on crash causation factors**	66%	23%	6%	4%	21%	59%	9%	11%
1-3	**A common definition of a fatality**	63%	20%	15%	3%	76%	18%	2%	4%
1-4	**Information on road user behaviour and attitudes**	61%	28%	9%	2%	17%	57%	18%	8%
1-5	**Exposure data**	55%	30%	9%	6%	25%	49%	17%	9%
1-6	**Statistical methods for priority setting**	55%	34%	8%	3%	22%	41%	23%	14%
1-7	**Crash databases that link police and hospital data**	53%	25%	15%	8%	13%	22%	52%	13%
1-8	**Information on frequent crash scenarios and patterns**	49%	32%	13%	6%	16%	52%	20%	13%
1-9	**Results from in-depth crash investigations**	48%	27%	17%	8%	23%	37%	30%	11%
1-10	**The use of GPS and/or GIS technologies in accident data collection**	46%	28%	18%	8%	16%	27%	41%	16%
1-11	**Information on the socio-economic cost of crashes, fatalities and injuries**	45%	41%	10%	4%	33%	42%	15%	10%
1-12	**Data on the under-reporting of road traffic crashes**	43%	40%	11%	6%	11%	40%	35%	14%
1-13	**Examples of the successful integration of road safety policies with others (e.g. environmental or health policies)**	43%	41%	12%	4%	9%	40%	35%	16%
1-14	**Information on the effect of external**	41%	41%	14%	4%	11%	53%	26%	10%

	factors on the number of road traffic crashes								
1-15	**A common definition of a work related crash**	33%	35%	22%	11%	21%	43%	22%	15%
1-16	**Results from naturalistic driving studies**	26%	36%	31%	7%	4%	28%	48%	21%
1-17	**Results from driving simulator studies**	15%	32%	39%	14%	4%	40%	36%	20%

Table 4: Policy makers' data and tools needs for fact finding and diagnosis

3.1.2. Development of Road Safety related programmes

For the development of Road Safety related programmes, '*Information on the cost-benefit of a road safety measure*' and '*Information on the safety impacts of combined road safety measures*' were assigned the highest priority by Policy Makers along with '*Good practice catalogue of measures*'. The current availability of such information to policy makers is limited especially for the safety impacts of combined measures. See Table 5 for further details.

		Priority Level for my work				Availability at the level of my country			
		High	**Medium**	**Low**	**Not Relevant**	**Already available**	**Partially available**	**Currently Not available**	**Don't Know**
2-1	**Information on the costs and benefits of a road safety measure**	61%	29%	7%	3%	16%	50%	22%	12%
2-2	**Information on the safety impacts of combined road safety measures**	58%	31%	4%	6%	9%	43%	31%	17%
2-3	**Good practice catalogue of measures -- including implementation conditions**	57%	26%	11%	6%	18%	44%	24%	15%
2-4	**Standardised procedures and methods for carrying out evaluations of road safety measures**	54%	31%	11%	4%	16%	44%	25%	15%
2-5	**Information on the public acceptance of a road safety measure**	50%	36%	10%	4%	11%	51%	28%	11%
2-6	**Information on the safety impacts of singular road safety measures**	49%	35%	10%	6%	10%	53%	23%	15%
2-7	**Comparisons of road safety policies and measures regarding specific road user groups**	49%	38%	9%	4%	10%	49%	28%	14%
2-8	**Comparisons of safety rules and regulations**	42%	41%	14%	4%	14%	46%	27%	13%
2-9	**Statistical models and tools for target setting**	38%	31%	18%	13%	21%	42%	20%	18%
2-10	**Information on the impacts of road safety measures on other sectors policies**	38%	40%	16%	6%	9%	35%	41%	15%
2-11	**Comparisons of the frameworks in which road safety policies and measures are implemented**	35%	41%	18%	6%	5%	35%	39%	21%

Table 5: Policy Makers' data and tools needs for the development of road safety related programs

3.1.3. Implementation of Road Safety measures

Table 6 shows the priority and availability of data or tools for the implementation of Road Safety Measures. 'A *common methodology for identifying high risk sites*', '*digital road maps for mapping crashes*' and '*a good practice collection on how countries have implemented specific road safety measures*' were the top 3 tools that were assigned 'high' priority. 'A *common methodology for identifying high risk sites*' and '*digital road maps for mapping crashes*' were already or partially available for around half of the Policy Makers. '*A good practice collection on how countries have implemented specific road safety measures*' was already available for only a few Policy Makers, but was partially available for 60%.

		Priority Level for my work				Availability at the level of my country			
		High	**Medium**	**Low**	**Not Relevant**	**Already available**	**Partially available**	**Currently Not available**	**Don't Know**
3-1	**Common methodology for identifying high risk sites ("black-spots")**	48%	33%	9%	10%	31%	38%	14%	17%
3-2	**Digital road maps for mapping crashes**	46%	29%	14%	12%	30%	25%	28%	18%
3-3	**Good practice collection on how countries have implemented specific road safety measures**	46%	37%	11%	7%	7%	60%	18%	16%
3-4	**Detailed information from road safety audits and road safety inspections**	43%	28%	18%	11%	17%	39%	31%	13%
3-5	**Information on potential funding sources for road safety measures**	44%	21%	19%	15%	8%	43%	28%	21%
3-6	**Common methodology for in-depth crash analysis**	41%	30%	15%	14%	16%	38%	28%	18%
3-7	**Good practice and methodologies for monitoring implementation**	41%	39%	11%	10%	7%	49%	23%	21%
3-8	**Detailed road databases providing descriptions of road layouts, signing and marking, etc.**	34%	36%	19%	12%	19%	42%	22%	18%
3-9	**User-friendly interfaces to assist new users in finding road safety materials on the internet**	33%	28%	24%	15%	9%	35%	31%	25%
3-10	**Detailed data on the costs of road safety measures across Europe**	30%	37%	24%	10%	2%	34%	40%	24%
3-11	**Comparisons of driver training programmes across Europe**	28%	33%	23%	17%	4%	31%	37%	28%

3-12	**Methods to assess the training needs of individuals involved in road safety implementation processes**	26%	30%	25%	20%	5%	25%	39%	31%
3-13	**Collections of video clips and billboards of road safety campaigns**	24%	30%	29%	17%	10%	41%	23%	25%
3-14	**Tools for simulating road user behaviour**	17%	37%	31%	15%	7%	28%	40%	25%

Table 6: Policy Makers' data and tools needs for the implementation of road safety related measures

3.1.4. Monitoring and evaluation

The priority and availability of data and tools for monitoring and evaluation is shown in Table 7. '*Focusing on seriously injured counts, in addition to fatality counts*' was top priority with '*methods for evaluation of safety impacts of road safety measures*' and a '*common methodology for the evaluation of costs and benefits of road safety measures*' following. '*Focusing on seriously injured counts, in addition to fatality counts*' is already available for 35% of the Policy Makers however a '*common methodology for the evaluation of costs and benefits of road safety measures*' is already available to only 11% of the Policy Makers.

		Priority Level for my work				Availability at the level of my country			
		High	**Medium**	**Low**	**Not Relevant**	**Already available**	**Partially available**	**Currently Not available**	**Don't Know**
4-1	**Focusing on seriously injured counts, in addition to fatality counts**	62%	23%	7%	8%	35%	30%	22%	12%
4-2	**Methods for evaluation of safety impacts of road safety measures**	59%	27%	7%	6%	18%	52%	17%	13%
4-3	**Common methodology for the evaluation of costs and benefits of road safety measures**	50%	33%	11%	6%	11%	47%	28%	15%
4-4	**Statistical methods for following trends**	46%	30%	16%	8%	25%	41%	19%	15%
4-5	**Statistical methods for isolating effects of specific policies or measures**	34%	36%	18%	12%	6%	26%	42%	25%
4-6	**Crash prediction models for various road types and layouts**	35%	25%	25%	15%	5%	27%	42%	26%
4-7	**Comprehensive monitoring of implemented measures across Europe**	34%	39%	19%	9%	4%	39%	35%	22%
4-8	**Medium term forecast models (up to 5 years)**	28%	39%	21%	12%	11%	24%	43%	22%
4-9	**Short term forecast models (up to 2 years)**	27%	38%	23%	12%	12%	24%	43%	22%
4-10	**Long term forecast models (up to 10 years)**	27%	34%	26%	13%	9%	24%	45%	21%

Table 7: Policy Makers' data and tools needs for monitoring and evaluation

3.1.5. Comparison between priority and availability of data and tools

It is useful to identify which data/tools are considered high priority but are not fully available for the majority of Policy Makers so that these 'gaps' can be addressed. Figure 1 plots the percentage of Policy Makers who selected High priority against the percentage who stated that a data/tool item was fully available. The percentage on which this figure is based can be found in the Appendix in Table 10.

When examining the results, the following rules were applied. If over 50% of Policy Makers selected High priority for an item and less than 50% stated Fully available then the item is considered to have *High priority and low availability*. If both High priority and Fully available were selected by over 50% of Policy Makers for an item it was considered to have *High priority and high availability*. If both High priority and Fully available were selected by under 50% of Policy Makers for an item it, was considered to have *Low priority and Low availability*. Finally, *Low priority and High availability* represents items that over 50% of Policy Makers stated were fully available but fewer than 50% stated that they were a High priority.

Figure 1 shows that only two items, '*A common definition of a serious injury [1-1]*' and '*A common definition of a fatality [1-3]*' were stated as having both high priority and high availability. No items had low priority and high availability. 11 data/tool items were stated as having high priority but low availability. These are:

- Information on crash causation factors [1-2]
- Information on road user behaviour and attitudes [1-4]
- Exposure data [1-5]
- Statistical methods for priority setting [1-6]
- Crash databases that link police and hospital data [1-7]
- Information on the costs and benefits of a road safety measure [2-1]
- Information on the safety impacts of combined road safety measures [2-2]
- Good practice catalogue of measures -- including implementation conditions [2-3]
- Standardised procedures and methods for carrying out evaluations of road safety measures [2-4]
- Focusing on seriously injured counts, in addition to fatality counts [4-1]
- Methods for evaluation of safety impacts of road safety measures [4-2]

The remainder of items were found to have low priority and low availability.

Figure 1: Policy Makers' priority versus availability for data and tools

3.1.6. Comparison with full stakeholder survey results

Table 8 compares the percentage of Policy Makers who rated a data/tool item as high priority and already available to the equivalent percentages for all respondents in the Stakeholder Survey as reported in Machata et al. (2011). Results were very similar between the 2 groups with the same items from each Road Safety Management area being assigned the highest priority. Therefore Table 8 only includes the 4 items from each Road Safety Management area in order of highest priority as rated by the Policy Maker group. As the Policy Maker Group is a subset of the Stakeholder Survey, it is unsurprising that the results are so similar. What may be of note however, is that the percentage of Stakeholders who state that the highest priority items are already available is consistently lower than the Policy Maker Group, albeit a small difference in some cases. As availability is the perception of the respondents not a true reflection of actual availability of data/tools, it may be that Policy Makers either have better access to data/tools or are more aware of their existence.

	High Priority		**Already Available**	
Item	**Policy Maker**	**Stakeholder Survey**	**Policy Maker**	**Stakeholder Survey**
Fact Finding and diagnosis				
A common definition of a serious injury	66%	63%	51%	47%
Information on crash causation factors	66%	67%	21%	18%
A common definition of a fatality	63%	60%	76%	67%
Information on road user behaviour and attitudes	61%	63%	17%	14%
Development of Road Safety related programmes				
Information on the costs and benefits of a road safety measure	61%	56%	16%	12%
Information on the safety impacts of combined road safety measures	58%	54%	9%	7%
Good practice catalogue of measures -- including implementation conditions	57%	50%	18%	14%
Standardised procedures and methods for carrying out evaluations of road safety measures	54%	52%	16%	15%
Implementation of Road Safety measures				
Common methodology for identifying high risk sites ("black-spots")	48%	46%	31%	24%
Digital road maps for mapping crashes	46%	41%	30%	20%
Good practice collection on how countries have implemented specific road safety measures	46%	43%	7%	6%
Detailed information from road safety audits and road safety inspections	43%	39%	17%	14%
Monitoring and Evaluation				

Focusing on seriously injured counts, in addition to fatality counts	62%	55%	35%	23%
Methods for evaluation of safety impacts of road safety measures	59%	54%	18%	14%
Common methodology for the evaluation of costs and benefits of road safety measures	50%	44%	11%	9%
Statistical methods for following trends	46%	39%	25%	20%

Table 8: Comparison between the priority and availability of data and tools for the Stakeholder Survey and Policy Maker subgroup

3.2. Comparisons between different groups of policy makers

As the Policy Makers included in the sample considered here are from a diverse number of organisations and many different European countries, it was thought that the data/tools priorities and availability may differ between subgroups. Thus, two comparative analyses were carried out. Section 3.2.1 will firstly examine whether priorities and availability differ according to Policy making level i.e. whether the Policy Maker feels that s/he has a high level of influence on the European Commission, the National Government or the Local/regional government. Following this, section 3.2.2 presents an exploration of whether the Road Safety performance of their country affects Policy Makers data/tools priorities and availability.

3.2.1. Priority and availability of data and tools according to Policy making level

Respondents to the Stakeholder Survey were asked to what extent they believed their organisation influences the European Commission, National Government and local/regional government. The Policy Makers who thought they were very influential were selected and the priority and availability of data and tools was examined according to whom they influenced. 12 Policy Makers stated that their organisation was very influential of the European Commission, 50 the National Government and 39 were very influential of the local/regional government. The following figures show priority versus availability for data/tools as stated by those that influence the European Commission (Figure 2), the National Government (Figure 3) and the Local/regional government (Figure 4). The percentages on which these figures are based can be found in the Appendix in Table 11, Table 12 and Table 13 respectively.

Figure 2, however, needs to be treated with some caution. As there are so few Policy Makers in this category, each individual response to the questionnaire generates a fairly high percentage. The availability percentages in particular may not accurately represent reality.

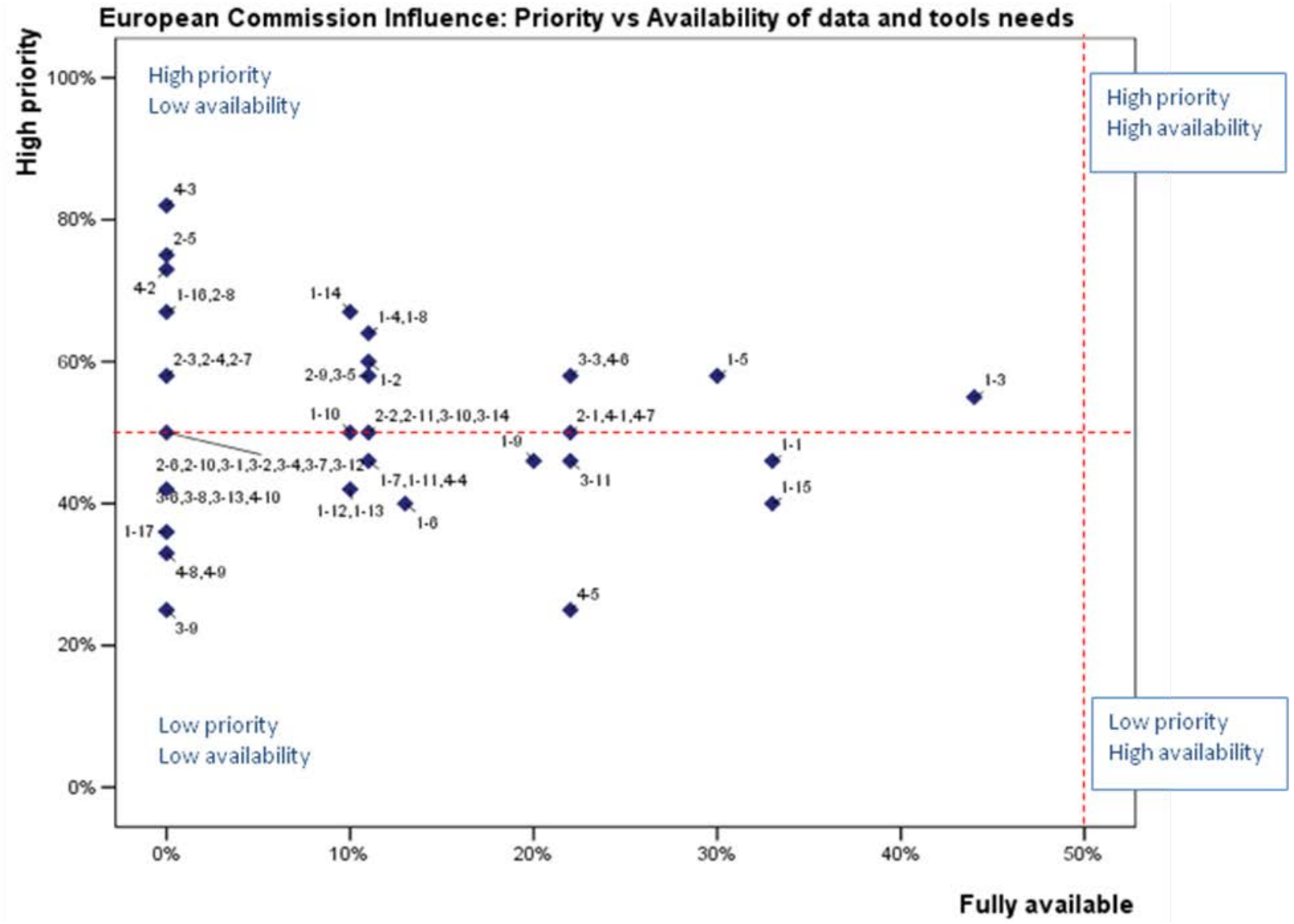

Figure 2: Influence on the European commission – Priority versus Availability of data and tools

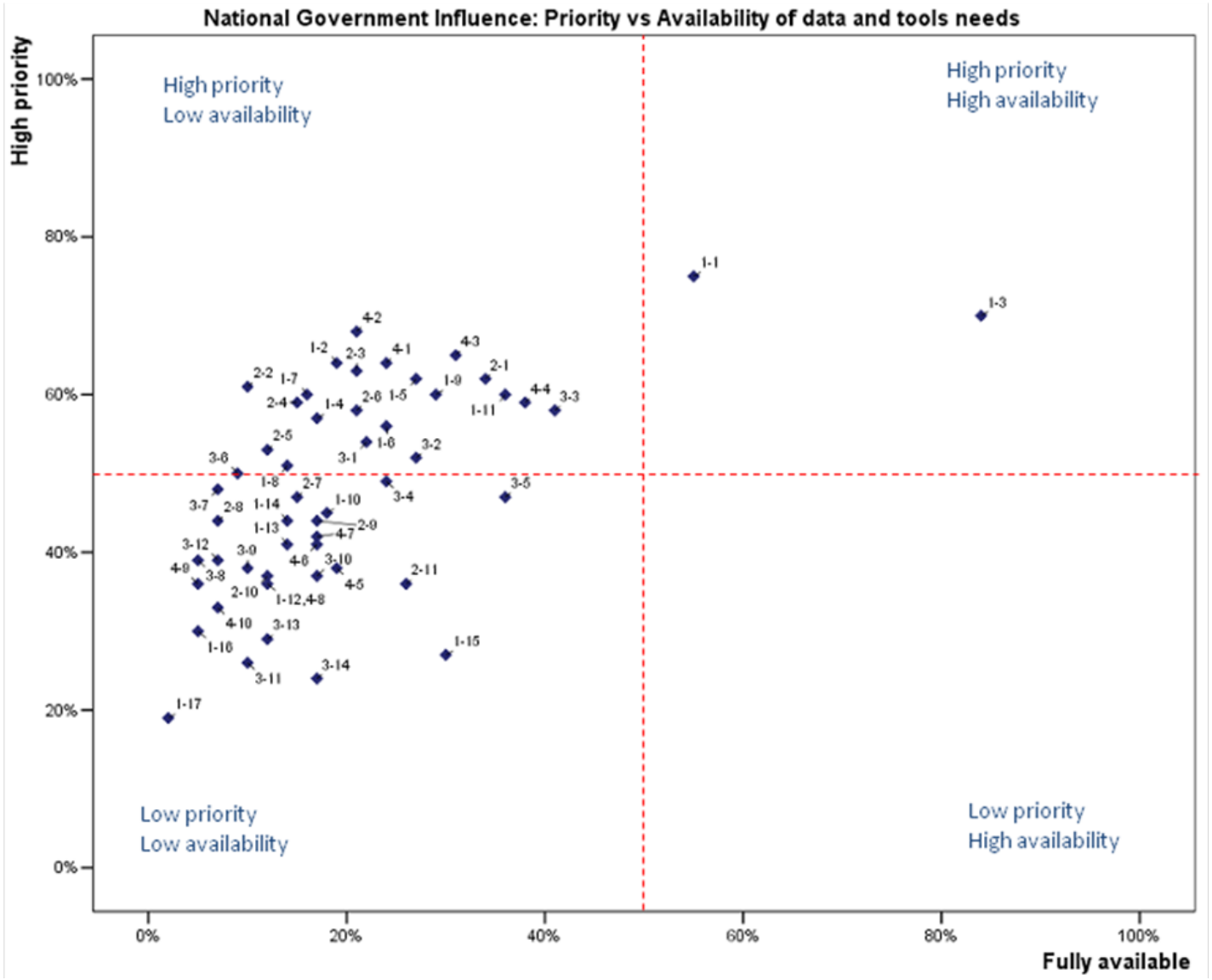

Figure 3: Influence on the National Government – Priority versus Availability of data and tools

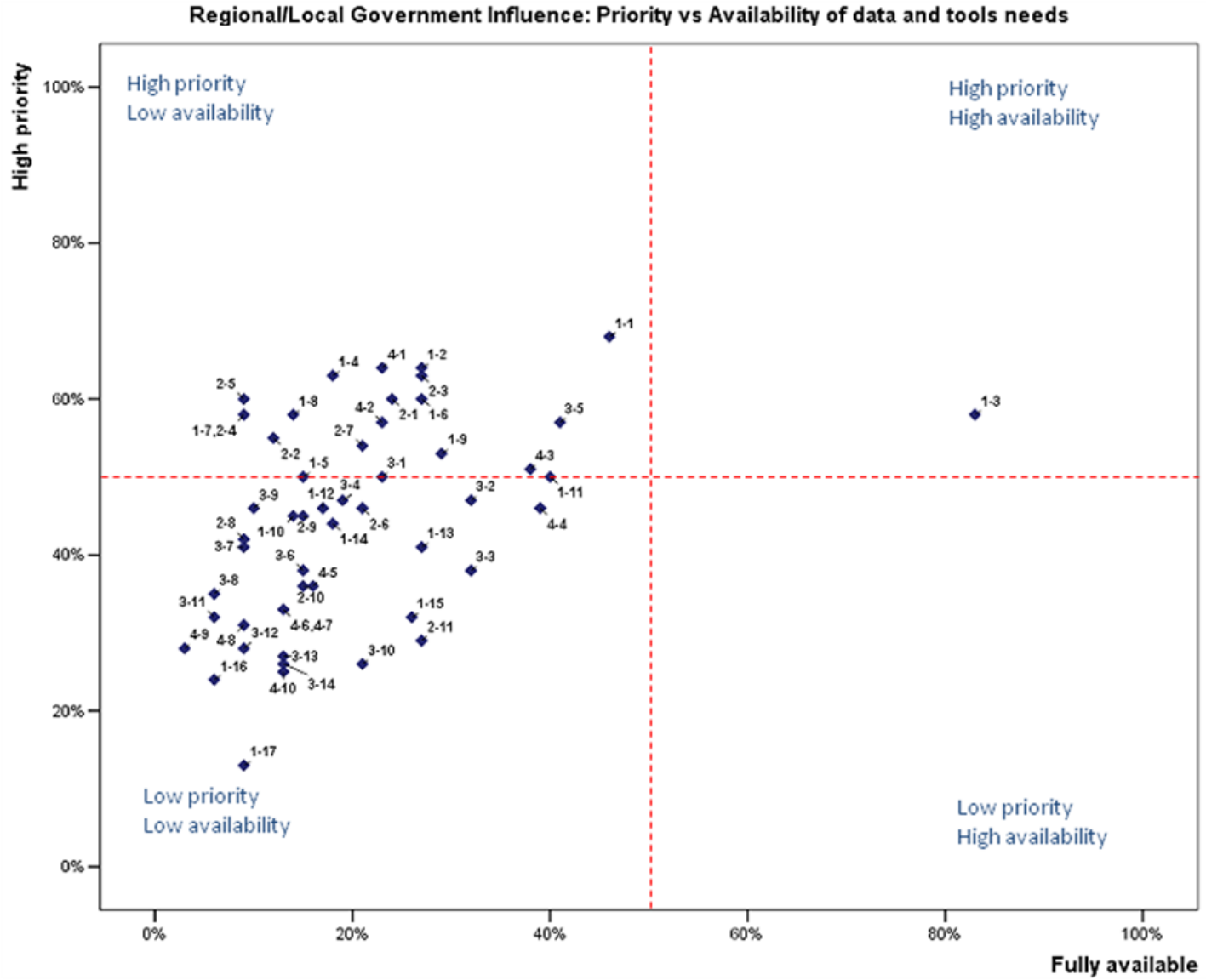

Figure 4: Influence on the local/regional government – Priority versus Availability of data and tools

The availability percentages are remarkably lower according to the EU policy makers (Figure 2) compared to other levels – no items appeared in the "high availability" half of the plot if we apply a 50% threshold. As previously stated this is likely to be affected by the low number of EU policy makers. The high-priority items for the EU policy-makers are as follows:

- Information on crash causation factors [1-2]
- A common definition of a fatality [1-3]
- Information on road user behaviour and attitudes [1-4]
- Exposure data [1-5]
- Information on frequent crash scenarios and patterns [1-8]
- Information on the effect of external factors on the number of road traffic crashes [1-14]
- Results from naturalistic driving studies [1-16]
- Good practice catalogue of measures -- including implementation conditions [2-3]
- Standardised procedures and methods for carrying out evaluations of road safety measures [2-4]
- Information on the public acceptance of a road safety measure [2-5]
- Comparisons of road safety policies and measures regarding specific road user groups [2-7]
- Comparisons of safety rules and regulations [2-8]
- Statistical models and tools for target setting [2-9]
- Good practice collection on how countries have implemented specific road safety measures [3-3]
- Information on potential funding sources for road safety measures [3-5]
- Methods for evaluation of safety impacts of road safety measures [4-2]
- Common methodology for the evaluation of costs and benefits of road safety measures [4-3]
- Crash prediction models for various road types and layouts [4-6]

What may be noteworthy is that the Policy Makers who regard themselves as influential of the European Commission, regard '*Results from naturalistic driving studies [1-16]*' as a high priority whereas when looking at all the Policy Makers, very few consider it to be a high priority (Figure 1). Those who feel they influence National Government and Local/regional government also assign '*Results from naturalistic driving studies [1-16]*' a much lower priority.

The patterns of priority versus availability for Policy Makers who influence the National Government (Figure 3) and those who influence the local/regional government (Figure 4) are broadly similar. The following items are considered in general to be a high priority but not fully available for both National and local/regional government Policy Makers:

- Information on crash causation factors [1-2]
- Information on road user behaviour and attitudes [1-4]
- Statistical methods for priority setting [1-6]
- Crash databases that link police and hospital data1-7
- Information on frequent crash scenarios and patterns1-8
- Results from in-depth crash investigations [1-9]
- Information on the costs and benefits of a road safety measure [2-1]
- Information on the safety impacts of combined road safety measures [2-2]

- Good practice catalogue of measures -- including implementation conditions [2-3]
- Standardised procedures and methods for carrying out evaluations of road safety measures [2-4]
- Information on the public acceptance of a road safety measure [2-5]
- Common methodology for identifying high risk sites ("black-spots") [3-1]
- Focusing on seriously injured counts, in addition to fatality counts [4-1]
- Methods for evaluation of safety impacts of road safety measures [4-2]
- Common methodology for the evaluation of costs and benefits of road safety measures [4-3]

'*A common definition of a fatality [1-3]*' has high availability as well as high priority for both the National and local/regional government groups. However, although a high priority for both groups, '*A common definition of a serious injury [1-1]*' is more widely available for those influencing the National Government than those influencing the local/regional government, though this is a small difference.

One of the bigger differences is that there is a 20% difference in the priority given to '*Good practice collection on how countries have implemented specific road safety measures [3-3]*' between the number of Policy Makers who influence National Government (58%) and those who influence local/regional government (38%). '*Exposure data [1-5]*' is slightly less of a priority and less widely available for those influencing the local/regional government than those influencing the National Government. '*Statistical methods for following trends [4-4]*' is more of a priority for those influencing the National Government however the availability of this is similar for those influencing the local/regional government.

3.2.2. Priority and availability of data and tools according to the Road Safety performance of the country

The second comparative analysis examines the data and tools priority and availability for Policy Makers according to their country's Road Safety performance. Road Safety performance was taken to be the road traffic accident fatality rate per million inhabitants as published by UNECE[2]. Table 9 shows the road traffic accident fatality rate per country. Countries were divided into high, medium and low performance. The SUNflower[3] countries were taken to be high performing countries, countries with 100 or more fatalities per million inhabitants were assigned to the low performance group and all other countries were thought as being medium performance countries.

Country	Fatality Rate* 2009	Country	Fatality Rate* 2009
Sweden	38	Hungary	82
United Kingdom	38	Portugal	83
Netherlands	39	Slovenia	84
Norway	44	Czech Republic	86

[2] United Nations Economic Commission for Europe (UNECE) Transport Division http://w3.unece.org/pxweb/Dialog/varval.asp?ma=011_TRAccRateprofile_r&path=../database/STAT/40-TRTRANS/01-TRACCIDENTS/&lang=1

[3] SUNflower is an EC project examining the developments in road safety of the 3 best performing countries **S**weden, **U**nited Kingdom and **N**etherlands with a view of identifying ways in which other countries could improve their safety record. See http://sunflower.swov.nl/

Switzerland	45	Belgium	87
Germany	51	Cyprus	89
Finland	52	Serbia	100
Iceland	53	Lithuania	111
Irish Republic (Eire)	54	Latvia	113
Denmark	55	Ukraine	117
Spain	59	Bulgaria	119
France	68	Poland	120
Italy (also Vatican City)	70	Croatia	124
Slovakia	71	Greece	129
Estonia	73	Romania	130
Austria	76		

*Fatality rate = number of road traffic accident fatalities per million inhabitants

Table 9: Fatality Rate per country

Policy Makers' who work for a European organisation or did not state which country they worked in were excluded from this analysis (n=18). This left 29 Policy Makers in the high performing group, 70 in the medium performing group and 23 in the low performing group. The following figures show priority versus availability of data and tools for each of the performance groups. Figure 5 is the high performing group, Figure 6 the medium and Figure 7 the low performing group. The percentages used in these figures can be found in the appendix in Table 14, Table 15 and Table 16 respectively.

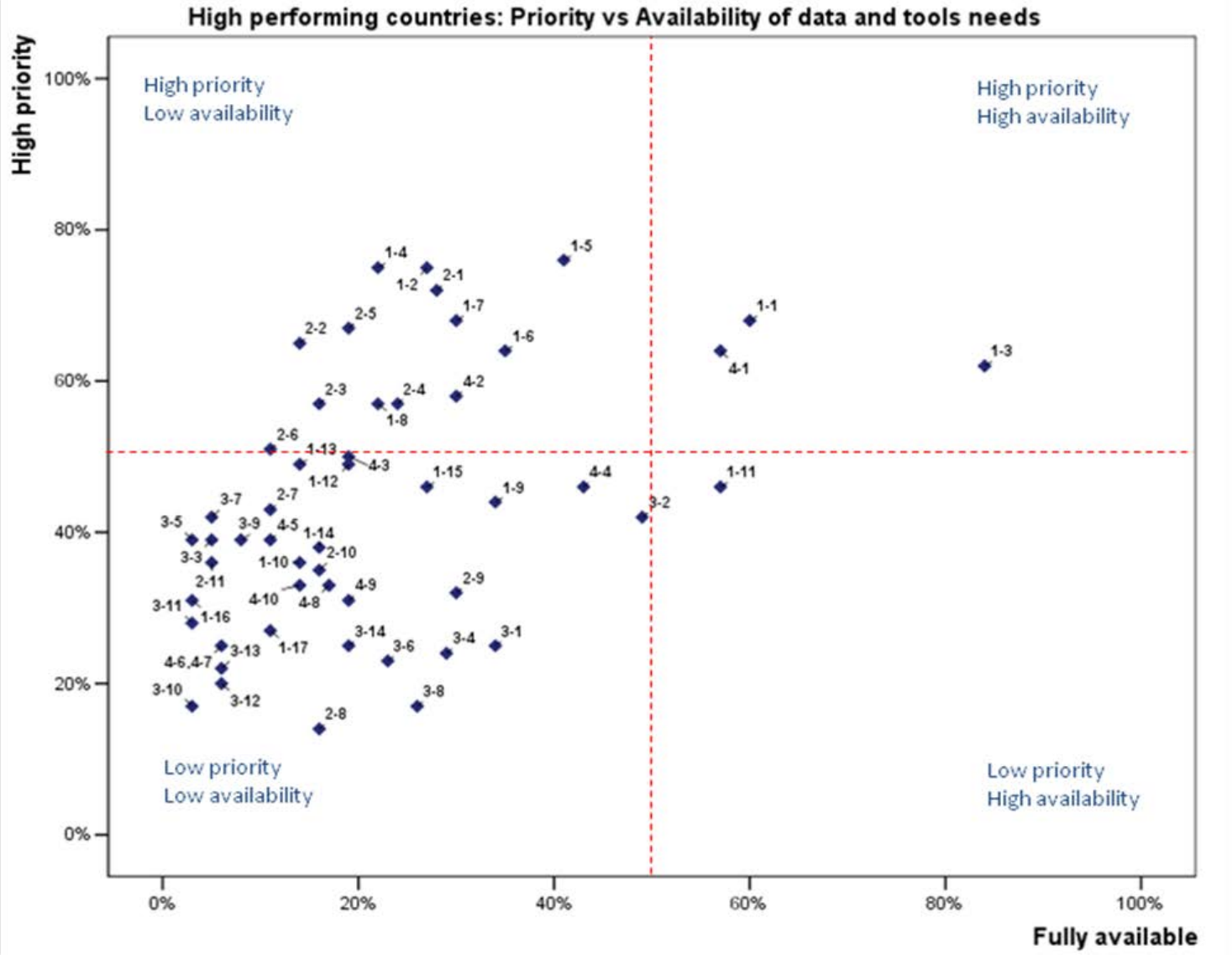

Figure 5: Priority versus Availability of data and tools for high performing counties

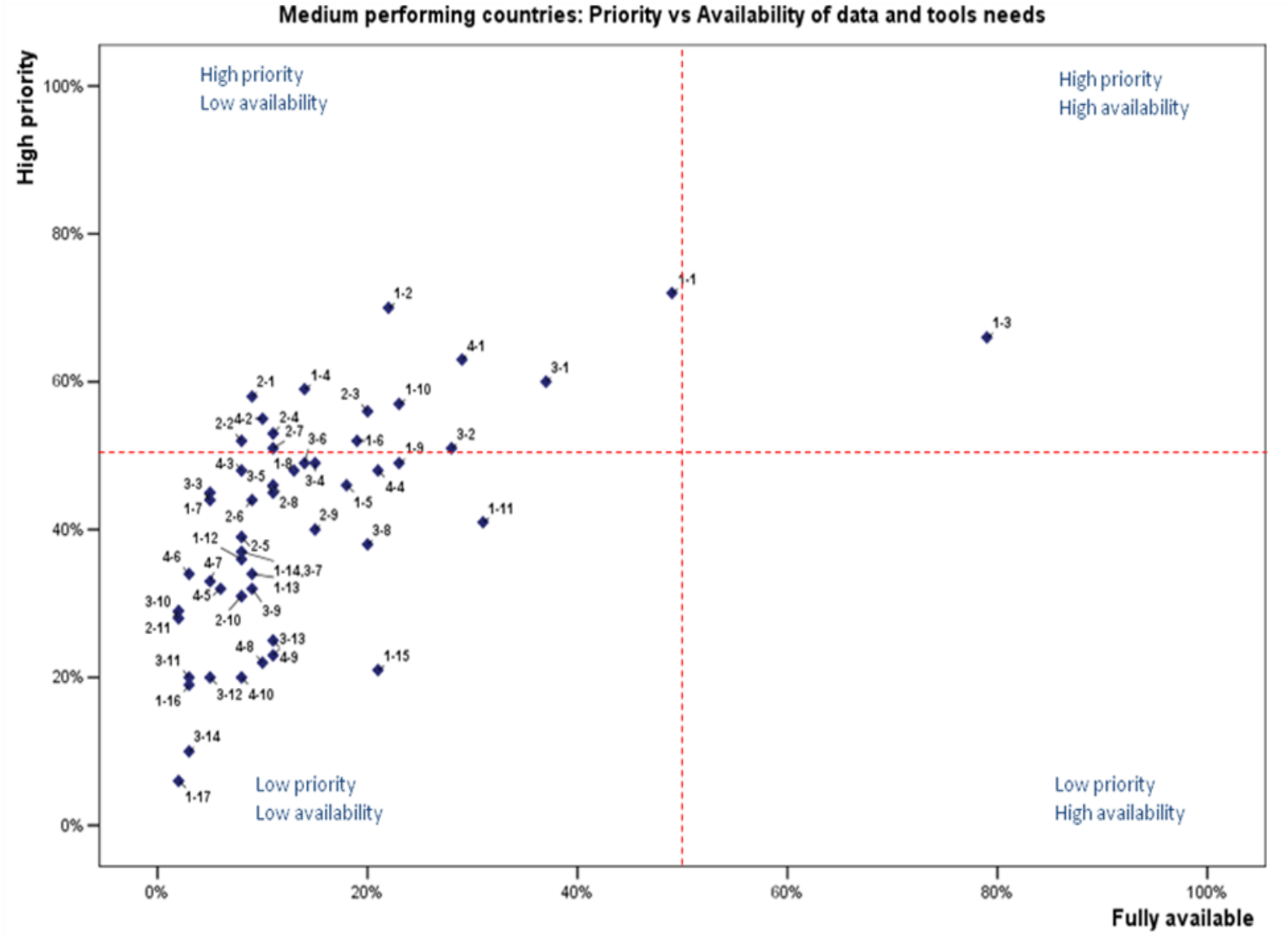

Figure 6: Priority versus Availability of data and tools for medium performing counties

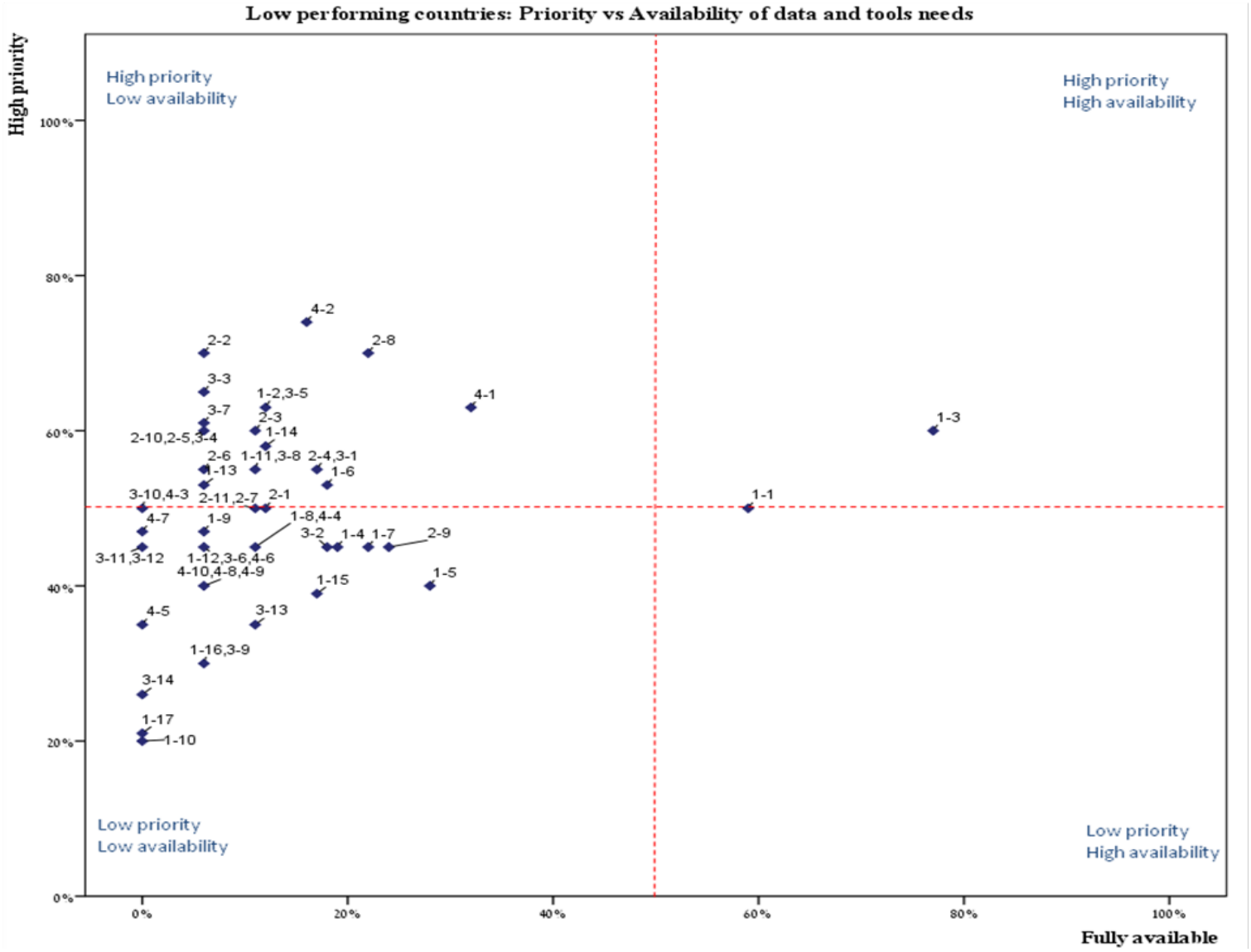

Figure 7: Priority versus Availability of data and tools for low performing countries

Figure 5 shows that the data and tools priorities for high performing countries are as follows:

- A common definition of a serious injury [1-1]
- Information on crash causation factors [1-2]
- A common definition of a fatality [1-3]
- Information on road user behaviour and attitudes [1-4]
- Exposure data [1-5]
- Statistical methods for priority setting [1-6]
- Crash databases that link police and hospital data [1-7]
- Information on the costs and benefits of a road safety measure [2-1]
- Information on the safety impacts of combined road safety measures [2-2]
- Good practice catalogue of measures -- including implementation conditions [2-3]
- Standardised procedures and methods for carrying out evaluations of road safety measures [2-4]
- Information on the public acceptance of a road safety measure [2-5]
- Information on the safety impacts of singular road safety measures [2-6]
- Comparisons of safety rules and regulations [2-8]
- Focusing on seriously injured counts, in addition to fatality counts [4-1]
- Methods for evaluation of safety impacts of road safety measures [4-2]

'*A common definition of a serious injury [1-1]*, '*A common definition of a fatality [1-3]*' and '*Focusing on seriously injured counts, in addition to fatality counts [4-1]*' were the only items with high availability in addition to high priority.

For medium performing countries (Figure 6), the items with high priority were:

- A common definition of a serious injury [1-1]
- Information on crash causation factors [1-2]
- A common definition of a fatality [1-3]
- Information on road user behaviour and attitudes [1-4]
- Statistical methods for priority setting [1-6]
- The use of GPS and/or GIS technologies in accident data collection [1-10]
- Information on the costs and benefits of a road safety measure [2-1]
- Information on the safety impacts of combined road safety measures [2-2]
- Good practice catalogue of measures -- including implementation conditions [2-3]
- Standardised procedures and methods for carrying out evaluations of road safety measures [2-4]
- Information on the public acceptance of a road safety measure [2-5]
- Comparisons of road safety policies and measures regarding specific road user groups [2-7]
- Common methodology for identifying high risk sites ("black-spots") [3-1]
- Digital road maps for mapping crashes [3-2]
- Focusing on seriously injured counts, in addition to fatality counts [4-1]
- Methods for evaluation of safety impacts of road safety measures [4-2]

For this group only *A common definition of a fatality [1-3]*' has both high priority and high availability.

Figure 7 shows that for the low performing countries, the high priority data/tools items are:

- Information on crash causation factors [1-2]
- A common definition of a fatality [1-3]
- Statistical methods for priority setting [1-6]
- Information on the socio-economic cost of crashes, fatalities and injuries [1-11]
- Examples of the successful integration of road safety policies with others (e.g. environmental or health policies) [1-13]
- Information on the effect of external factors on the number of road traffic crashes [1-14]
- Information on the safety impacts of combined road safety measures [2-2]
- Good practice catalogue of measures -- including implementation conditions [2-3]
- Standardised procedures and methods for carrying out evaluations of road safety measures [2-4]
- Information on the public acceptance of a road safety measure [2-5]
- Information on the safety impacts of singular road safety measures [2-6]
- Comparisons of safety rules and regulations [2-8]
- Information on the impacts of road safety measures on other sectors policies [2-10]
- Common methodology for identifying high risk sites ("black-spots") [3-1]
- Good practice collection on how countries have implemented specific road safety measures [3-3]
- Detailed information from road safety audits and road safety inspections [3-4]
- Information on potential funding sources for road safety measures [3-5]
- Good practice and methodologies for monitoring implementation [3-7]
- Detailed road databases providing descriptions of road layouts, signing and marking, etc. [3-8]
- Focusing on seriously injured counts, in addition to fatality counts [4-1]
- Methods for evaluation of safety impacts of road safety measures [4-2]

'A common definition of a fatality [1-3]' is the items with both high priority and high availability.

Figure 6, the medium performing countries group is broadly speaking similar to the Policy Makers as a whole (Figure 1). The high and low performing groups have a different pattern although these groups have much smaller numbers of respondents so each respondent's selection will have a greater influence on the priorities and availability reported. As the high and low performing groups have a similar number of respondents, it is possible to compare the results of Figure 5 and Figure 7 respectively.

In general, the high priority items as selected by the high performing countries are considered to have a greater availability than those assigned high priority by the low performing countries. '*Information on road user behaviour and attitudes [1-4]*' and '*Exposure data*' are considered to be a high priority by the Policy Makers from high performing countries (75% and 76% respectively), whereas fewer Policy Makers from low performing countries consider these items to be high priority (19% and 28% respectively). In contrast, '*Comparisons of safety rules and regulations [2-8]*' and '*Detailed road databases providing descriptions of road layouts, signing and marking, etc. [3-8]*' are 2 items that are assigned the lowest priority by the high

performing countries (14% and 17% respectively) but are considered high priority by the low performing countries (70% and 55% respectively).

Other items that are considered high priority by low performing countries but less of a priority by high performing countries are '*Common methodology for identifying high risk sites ("black-spots") [3-1]*' (55% vs. 25%), '*Detailed information from road safety audits and road safety inspections [3-4]*' (60% vs. 24%) and '*Detailed road databases providing descriptions of road layouts, signing and marking, etc. [3-8]*' (55% vs. 17%). Interestingly these all fall under the DaCoTA Road Safety Management task of 'Implementation of Road Safety measures' which suggests low performing countries have a greater focus on this area than high performing countries

4. SUMMARY AND CONCLUSIONS

4.1. Summary and Discussion

150 Policy Makers were identified from the respondents to the Stakeholder Survey. Over 50% of these respondents stated that 13 data/tool items were of high priority although only 2 of these *A common definition of a serious injury [1-1]*' and '*A common definition of a fatality [1-3]*' were stated as having both high priority and high availability. 3 items were considered to be high priority by over 60% of respondents but fewer than 25% of respondents stated that these data/tools items were already available:

- Information on crash causation factors [1-2]
- Information on road user behaviour and attitudes [1-4]
- Information on the costs and benefits of a road safety measure [2-1]

The priorities and availability ratings were similar in the Policy Maker Group to the Stakeholder Survey as a whole which is perhaps unsurprising given that the Policy Maker Group is a significant subset of the Stakeholder Survey respondents [n=394] (Machata et al, 2011). For the items of highest priority in the 4 Road Safety Management areas, the percentage of Stakeholders who state these data/tools are already available is consistently lower than the Policy Maker Group, albeit a small difference in some cases. As availability is the perception of the respondents not a true reflection of actual availability of data/tools, it may be that either Policy Makers have better access to data/tools or are more aware of their existence.

When examining the difference in priorities and availability of data and tools between the Policy Makers who feel that they are influential of the National Government and the Local/regional government, only small differences can be identified. One of the bigger differences in priorities relates to '*Good practice collection on how countries have implemented specific road safety measures [3-3]*'. Those who claim to influence the National Government assign a higher priority to this (58%) than those who influence local/regional government (38%). A possible explanation for this is that National Governments are more likely to compare themselves to other countries. Local/regional governments are less likely to do this and focus instead on Road Safety measures adopted by other localities or regions within the country. With regard to availability, although a high priority for both groups, '*A common definition of a serious injury [1-1]*' is perceived to be more widely available for those influencing the National Government than those influencing the local/regional government, though this is a small difference.

The priorities and availability of data and tools stated by those influential of the European Commission were also examined, however very small numbers [n=12] reduce the reliability of the results and make comparisons difficult. What may be noteworthy is that the Policy Makers, who regard themselves as influential of the European Commission, view '*Results from naturalistic driving studies [1-16]*' as a high priority, whereas when looking at the Policy Makers overall, very few consider it to be a high priority.

Differences between priorities and availability were also examined for countries that are high, medium or low performing with regards to Road Safety (in terms of fatalities per million inhabitants). The medium performing countries group was broadly speaking similar to the Policy Makers as a whole which again is unsurprising given it is the largest group with the most individual countries represented. The high and low

performing groups have a different pattern although these groups have much smaller numbers of respondents so each respondent's selection had a greater influence on the priorities and availability reported.

For three data/tool items, the difference in priority between high and low performing countries was particularly high, with low performing countries assigning high priority and high performing countries assigning less priority:

- Common methodology for identifying high risk sites ("black-spots") [3-1] (55% vs. 25%)
- Detailed information from road safety audits and road safety inspections [3-4] (60% vs. 24%)
- Detailed road databases providing descriptions of road layouts, signing and marking, etc. [3-8] (55% vs. 17%).

As all three of these data/tools relate to the DaCoTA Road Safety Management task of 'Implementation of Road Safety measures' it suggests that low performing countries have a greater focus on this area than high performing countries

In general, the high priority items as selected by the high performing countries are considered to have a greater availability than those assigned high priority by the low performing countries. For some items there are relatively large differences in priorities assigned between the high and low performing groups. '*Information on road user behaviour and attitudes [1-4]*' and '*Exposure data*' are considered to be a high priority by the Policy Makers from high performing countries (75% and 76% respectively), whereas fewer Policy Makers from low performing countries consider these items to be high priority (19% and 28% respectively). In contrast, '*Comparisons of safety rules and regulations [2-8]*' and '*Detailed road databases providing descriptions of road layouts, signing and marking, etc. [3-8]*' are 2 items that are assigned the lowest priority by the high performing countries (14% and 17% respectively) but are considered high priority by the low performing countries (70% and 55% respectively).

This finding may reflect the evolution in road safety management thinking: at an early stage of dealing with road safety problems, priority is given to more common and immediate interventions such as those related to road safety regulations or infrastructure inventory, whereas later, at more advanced stage, a need for deeper understanding of factors and processes leading to road accidents becomes more of a priority. This was reflected, for example, in the introduction of the notion of road safety performance indicators to measure current safety conditions of the transport system (ETSC, 2001; OECD, 2008).

4.2. Conclusions: How the findings of this report relate to the DaCoTA 'Policy' work

This report highlights data and tools which a sample of Policy Makers suggest are a high priority. It also indicates which of these are already available and which are not. Although availability as measured here has to be treated with caution as it is only individuals' perception, this information will be useful for ERSO to identify both where there are gaps in data and tools and where there is a need for greater publicity so that Policy Makers know where to find the data/tools which they require.

The exploratory Expert Panel consultation that served as a basis for developing the Stakeholder Survey involved "scientific road safety actors" for the most part. Therefore the strong support for a road-safety management guided by scientific

evidence (evidence based policy making) that emerged from that consultation consequently did not come much as a surprise. It is difficult to determine whether the picture that emerges from this second step of assigning priorities and assessing availability is in agreement with the initial exploratory view, mainly because the results from the exploratory consultation have not been quantified. The results of the analyses presented here suggest, however, that Policy Makers focus more on information related to the efficiency of road safety programmes and measures ('Information on the cost-benefit of a road-safety measure', '… safety impacts of combined road safety measures', 'good practice catalogue of measures…') or, in other words, on evidence guiding the choice of appropriate measures. The findings here therefore are suggestive of support for evidence based policy making, although they are not conclusive.

Another group of tools emphasised by the Policy Makers concerned more detailed and comprehensive information on accident data and characteristics such as information on crash causation factors, on frequent crash scenarios and patterns, on road user behaviour and attitudes, as well as a need for crash databases that link police and hospital data.

In addition, the Policy Makers responses clearly demonstrated insufficient availability of the majority of tools needed at various levels of decision-making, where high availability was stated mostly for two items: a common definition of a fatality and a common definition of a serious injury.

Finally, the development of data and tools for supporting road safety management tasks should take the differences in priorities found for various groups of policy-makers into account, i.e. such a development should not be general but certain policy-maker group oriented.

This report gives a snapshot of data drawn from a much larger dataset (Stakeholders Survey) and therefore should not be regarded as the final conclusions of the 'Policy' work of DaCoTA. The focus on just 2 elements, 'High priority' and 'Fully available' to highlight data/tools that are regarded as important in evidence based policy making is a useful interim measure but cannot be regarded as the full story. Further work is currently being undertaken to look at the results of the Stakeholder Survey in more detail and more in depth analyses will be performed.

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*DaCoTA deliverables can be downloaded from:
http://www.dacota-project.eu/deliverables.html

APPENDIX

The following tables show the percentages of respondents selecting high priority and already available and correspond to the figures in the main document.

All Policy Makers

Fact finding and diagnosis		**High Priority**	**Already Available**
1-1	A common definition of a serious injury	66%	51%
1-2	Information on crash causation factors	66%	21%
1-3	A common definition of a fatality	63%	76%
1-4	Information on road user behaviour and attitudes	61%	17%
1-5	Exposure data	55%	25%
1-6	Statistical methods for priority setting	55%	22%
1-7	Crash databases that link police and hospital data	53%	13%
1-8	Information on frequent crash scenarios and patterns	49%	16%
1-9	Results from in-depth crash investigations	48%	23%
1-10	The use of GPS and/or GIS technologies in accident data collection	46%	16%
1-11	Information on the socio-economic cost of crashes, fatalities and injuries	45%	33%
1-12	Data on the under-reporting of road traffic crashes	43%	11%
1-13	Examples of the successful integration of road safety policies with others (e.g. environmental or health policies)	43%	9%
1-14	Information on the effect of external factors on the number of road traffic crashes	41%	11%
1-15	A common definition of a work related crash	33%	21%
1-16	Results from naturalistic driving studies	26%	4%
1-17	Results from driving simulator studies	15%	4%
Development of Road Safety related programmes		**High Priority**	**Already Available**
2-1	Information on the costs and benefits of a road safety measure	61%	16%
2-2	Information on the safety impacts of combined road safety measures	58%	9%
2-3	Good practice catalogue of measures -- including implementation conditions	57%	18%
2-4	Standardised procedures and methods for carrying out evaluations of road safety measures	54%	16%
2-5	Information on the public acceptance of a road safety measure	50%	11%
2-6	Information on the safety impacts of singular road safety measures	49%	10%
2-7	Comparisons of road safety policies and measures regarding specific road user groups	49%	10%
2-8	Comparisons of safety rules and regulations	42%	14%
2-9	Statistical models and tools for target setting	38%	21%

2-10	Information on the impacts of road safety measures on other sectors policies	38%	9%
2-11	Comparisons of the frameworks in which road safety policies and measures are implemented	35%	5%
Implementation of Road Safety measures		**High Priority**	**Already Available**
3-1	Common methodology for identifying high risk sites ("black-spots")	48%	31%
3-2	Digital road maps for mapping crashes	46%	30%
3-3	Good practice collection on how countries have implemented specific road safety measures	46%	7%
3-4	Detailed information from road safety audits and road safety inspections	43%	17%
3-5	Information on potential funding sources for road safety measures	44%	8%
3-6	Common methodology for in-depth crash analysis	41%	16%
3-7	Good practice and methodologies for monitoring implementation	41%	7%
3-8	Detailed road databases providing descriptions of road layouts, signing and marking, etc.	34%	19%
3-9	User-friendly interfaces to assist new users in finding road safety materials on the internet	33%	9%
3-10	Detailed data on the costs of road safety measures across Europe	30%	2%
3-11	Comparisons of driver training programmes across Europe	28%	4%
3-12	Methods to assess the training needs of individuals involved in road safety implementation processes	26%	5%
3-13	Collections of video clips and billboards of road safety campaigns	24%	10%
3-14	Tools for simulating road user behaviour	17%	7%
Monitoring and Evaluation		**High Priority**	**Already Available**
4-1	Focusing on seriously injured counts, in addition to fatality counts	62%	35%
4-2	Methods for evaluation of safety impacts of road safety measures	59%	18%
4-3	Common methodology for the evaluation of costs and benefits of road safety measures	50%	11%
4-4	Statistical methods for following trends	46%	25%
4-5	Statistical methods for isolating effects of specific policies or measures	34%	6%
4-6	Crash prediction models for various road types and layouts	35%	5%
4-7	Comprehensive monitoring of implemented measures across Europe	34%	4%
4-8	Medium term forecast models (up to 5 years)	28%	11%
4-9	Short term forecast models (up to 2 years)	27%	12%
4-10	Long term forecast models (up to 10 years)	27%	9%

Table 10: Policy Makers – Priority and availability percentages (Figure 1)

Policy Makers who influence the European Commission

Fact finding and diagnosis		**High Priority**	**Already Available**
1-1	A common definition of a serious injury	46%	33%
1-2	Information on crash causation factors	60%	11%
1-3	A common definition of a fatality	55%	44%
1-4	Information on road user behaviour and attitudes	64%	11%
1-5	Exposure data	58%	30%
1-6	Statistical methods for priority setting	40%	13%
1-7	Crash databases that link police and hospital data	46%	11%
1-8	Information on frequent crash scenarios and patterns	64%	11%
1-9	Results from in-depth crash investigations	46%	20%
1-10	The use of GPS and/or GIS technologies in accident data collection	50%	10%
1-11	Information on the socio-economic cost of crashes, fatalities and injuries	46%	11%
1-12	Data on the under-reporting of road traffic crashes	42%	10%
1-13	Examples of the successful integration of road safety policies with others (e.g. environmental or health policies)	42%	10%
1-14	Information on the effect of external factors on the number of road traffic crashes	67%	10%
1-15	A common definition of a work related crash	40%	33%
1-16	Results from naturalistic driving studies	67%	0%
1-17	Results from driving simulator studies	36%	0%
Development of Road Safety related programmes		**High Priority**	**Already Available**
2-1	Information on the costs and benefits of a road safety measure	50%	22%
2-2	Information on the safety impacts of combined road safety measures	50%	11%
2-3	Good practice catalogue of measures -- including implementation conditions	58%	0%
2-4	Standardised procedures and methods for carrying out evaluations of road safety measures	58%	0%
2-5	Information on the public acceptance of a road safety measure	75%	0%
2-6	Information on the safety impacts of singular road safety measures	50%	0%
2-7	Comparisons of road safety policies and measures regarding specific road user groups	58%	0%
2-8	Comparisons of safety rules and regulations	67%	0%
2-9	Statistical models and tools for target setting	58%	11%
2-10	Information on the impacts of road safety measures on other sectors policies	50%	0%
2-11	Comparisons of the frameworks in which road safety policies and	50%	11%

	measures are implemented		
Implementation of Road Safety measures		**High Priority**	**Already Available**
3-1	Common methodology for identifying high risk sites ("black-spots")	50%	0%
3-2	Digital road maps for mapping crashes	50%	0%
3-3	Good practice collection on how countries have implemented specific road safety measures	58%	22%
3-4	Detailed information from road safety audits and road safety inspections	50%	0%
3-5	Information on potential funding sources for road safety measures	58%	11%
3-6	Common methodology for in-depth crash analysis	42%	0%
3-7	Good practice and methodologies for monitoring implementation	50%	0%
3-8	Detailed road databases providing descriptions of road layouts, signing and marking, etc.	42%	0%
3-9	User-friendly interfaces to assist new users in finding road safety materials on the internet	25%	0%
3-10	Detailed data on the costs of road safety measures across Europe	50%	11%
3-11	Comparisons of driver training programmes across Europe	46%	22%
3-12	Methods to assess the training needs of individuals involved in road safety implementation processes	50%	0%
3-13	Collections of video clips and billboards of road safety campaigns	42%	0%
3-14	Tools for simulating road user behaviour	50%	11%
Monitoring and Evaluation		**High Priority**	**Already Available**
4-1	Focusing on seriously injured counts, in addition to fatality counts	50%	22%
4-2	Methods for evaluation of safety impacts of road safety measures	73%	0%
4-3	Common methodology for the evaluation of costs and benefits of road safety measures	82%	0%
4-4	Statistical methods for following trends	46%	11%
4-5	Statistical methods for isolating effects of specific policies or measures	25%	22%
4-6	Crash prediction models for various road types and layouts	58%	22%
4-7	Comprehensive monitoring of implemented measures across Europe	50%	22%
4-8	Medium term forecast models (up to 5 years)	33%	0%
4-9	Short term forecast models (up to 2 years)	33%	0%
4-10	Long term forecast models (up to 10 years)	42%	0%

Table 11: Influential of the European Commission – Priority and availability percentages (Figure 2)

Policy Makers who influence National Government

Fact finding and diagnosis		**High Priority**	**Already Available**
1-1	A common definition of a serious injury	75%	55%
1-2	Information on crash causation factors	64%	19%
1-3	A common definition of a fatality	70%	84%
1-4	Information on road user behaviour and attitudes	57%	17%
1-5	Exposure data	62%	27%
1-6	Statistical methods for priority setting	56%	24%
1-7	Crash databases that link police and hospital data	60%	16%
1-8	Information on frequent crash scenarios and patterns	51%	14%
1-9	Results from in-depth crash investigations	60%	29%
1-10	The use of GPS and/or GIS technologies in accident data collection	45%	18%
1-11	Information on the socio-economic cost of crashes, fatalities and injuries	60%	36%
1-12	Data on the under-reporting of road traffic crashes	36%	12%
1-13	Examples of the successful integration of road safety policies with others (e.g. environmental or health policies)	41%	14%
1-14	Information on the effect of external factors on the number of road traffic crashes	44%	14%
1-15	A common definition of a work related crash	27%	30%
1-16	Results from naturalistic driving studies	30%	5%
1-17	Results from driving simulator studies	19%	2%
Development of Road Safety related programmes		**High Priority**	**Already Available**
2-1	Information on the costs and benefits of a road safety measure	62%	34%
2-2	Information on the safety impacts of combined road safety measures	61%	10%
2-3	Good practice catalogue of measures -- including implementation conditions	63%	21%
2-4	Standardised procedures and methods for carrying out evaluations of road safety measures	59%	15%
2-5	Information on the public acceptance of a road safety measure	53%	12%
2-6	Information on the safety impacts of singular road safety measures	58%	21%
2-7	Comparisons of road safety policies and measures regarding specific road user groups	47%	15%
2-8	Comparisons of safety rules and regulations	44%	7%
2-9	Statistical models and tools for target setting	44%	17%
2-10	Information on the impacts of road safety measures on other sectors policies	37%	12%
2-11	Comparisons of the frameworks in which road safety policies and	36%	26%

	measures are implemented		
Implementation of Road Safety measures		**High Priority**	**Already Available**
3-1	Common methodology for identifying high risk sites ("black-spots")	54%	22%
3-2	Digital road maps for mapping crashes	52%	27%
3-3	Good practice collection on how countries have implemented specific road safety measures	58%	41%
3-4	Detailed information from road safety audits and road safety inspections	49%	24%
3-5	Information on potential funding sources for road safety measures	47%	36%
3-6	Common methodology for in-depth crash analysis	50%	9%
3-7	Good practice and methodologies for monitoring implementation	48%	7%
3-8	Detailed road databases providing descriptions of road layouts, signing and marking, etc.	39%	5%
3-9	User-friendly interfaces to assist new users in finding road safety materials on the internet	38%	10%
3-10	Detailed data on the costs of road safety measures across Europe	37%	17%
3-11	Comparisons of driver training programmes across Europe	26%	10%
3-12	Methods to assess the training needs of individuals involved in road safety implementation processes	39%	7%
3-13	Collections of video clips and billboards of road safety campaigns	29%	12%
3-14	Tools for simulating road user behaviour	24%	17%
Monitoring and Evaluation		**High Priority**	**Already Available**
4-1	Focusing on seriously injured counts, in addition to fatality counts	64%	24%
4-2	Methods for evaluation of safety impacts of road safety measures	68%	21%
4-3	Common methodology for the evaluation of costs and benefits of road safety measures	65%	31%
4-4	Statistical methods for following trends	59%	38%
4-5	Statistical methods for isolating effects of specific policies or measures	38%	19%
4-6	Crash prediction models for various road types and layouts	41%	17%
4-7	Comprehensive monitoring of implemented measures across Europe	42%	17%
4-8	Medium term forecast models (up to 5 years)	36%	12%
4-9	Short term forecast models (up to 2 years)	36%	5%
4-10	Long term forecast models (up to 10 years)	33%	7%

Table 12: Influential of National Government – Priority and availability percentages (Figure 3)

Policy Makers who influence Local/regional government

Fact finding and diagnosis		**High Priority**	**Already Available**
1-1	A common definition of a serious injury	68%	46%
1-2	Information on crash causation factors	64%	27%
1-3	A common definition of a fatality	58%	83%
1-4	Information on road user behaviour and attitudes	63%	18%
1-5	Exposure data	50%	15%
1-6	Statistical methods for priority setting	60%	27%
1-7	Crash databases that link police and hospital data	58%	9%
1-8	Information on frequent crash scenarios and patterns	58%	14%
1-9	Results from in-depth crash investigations	53%	29%
1-10	The use of GPS and/or GIS technologies in accident data collection	45%	14%
1-11	Information on the socio-economic cost of crashes, fatalities and injuries	50%	40%
1-12	Data on the under-reporting of road traffic crashes	46%	17%
1-13	Examples of the successful integration of road safety policies with others (e.g. environmental or health policies)	41%	27%
1-14	Information on the effect of external factors on the number of road traffic crashes	44%	18%
1-15	A common definition of a work related crash	32%	26%
1-16	Results from naturalistic driving studies	24%	6%
1-17	Results from driving simulator studies	13%	9%
Development of Road Safety related programmes		**High Priority**	**Already Available**
2-1	Information on the costs and benefits of a road safety measure	60%	24%
2-2	Information on the safety impacts of combined road safety measures	55%	12%
2-3	Good practice catalogue of measures -- including implementation conditions	63%	27%
2-4	Standardised procedures and methods for carrying out evaluations of road safety measures	58%	9%
2-5	Information on the public acceptance of a road safety measure	60%	9%
2-6	Information on the safety impacts of singular road safety measures	46%	21%
2-7	Comparisons of road safety policies and measures regarding specific road user groups	54%	21%
2-8	Comparisons of safety rules and regulations	42%	9%
2-9	Statistical models and tools for target setting	45%	15%
2-10	Information on the impacts of road safety measures on other sectors policies	36%	15%
2-11	Comparisons of the frameworks in which road safety policies and	29%	27%

	measures are implemented		
Implementation of Road Safety measures		**High Priority**	**Already Available**
3-1	Common methodology for identifying high risk sites ("black-spots")	50%	23%
3-2	Digital road maps for mapping crashes	47%	32%
3-3	Good practice collection on how countries have implemented specific road safety measures	38%	32%
3-4	Detailed information from road safety audits and road safety inspections	47%	19%
3-5	Information on potential funding sources for road safety measures	57%	41%
3-6	Common methodology for in-depth crash analysis	38%	15%
3-7	Good practice and methodologies for monitoring implementation	41%	9%
3-8	Detailed road databases providing descriptions of road layouts, signing and marking, etc.	35%	6%
3-9	User-friendly interfaces to assist new users in finding road safety materials on the internet	46%	10%
3-10	Detailed data on the costs of road safety measures across Europe	26%	21%
3-11	Comparisons of driver training programmes across Europe	32%	6%
3-12	Methods to assess the training needs of individuals involved in road safety implementation processes	28%	9%
3-13	Collections of video clips and billboards of road safety campaigns	27%	13%
3-14	Tools for simulating road user behaviour	26%	13%
Monitoring and Evaluation		**High Priority**	**Already Available**
4-1	Focusing on seriously injured counts, in addition to fatality counts	64%	23%
4-2	Methods for evaluation of safety impacts of road safety measures	57%	23%
4-3	Common methodology for the evaluation of costs and benefits of road safety measures	51%	38%
4-4	Statistical methods for following trends	46%	39%
4-5	Statistical methods for isolating effects of specific policies or measures	36%	16%
4-6	Crash prediction models for various road types and layouts	33%	13%
4-7	Comprehensive monitoring of implemented measures across Europe	33%	13%
4-8	Medium term forecast models (up to 5 years)	31%	9%
4-9	Short term forecast models (up to 2 years)	28%	3%
4-10	Long term forecast models (up to 10 years)	25%	13%

Table 13: Influential of the Regional/local government – Priority and availability percentages (Figure 4)

Policy Makers from high Road Safety performing countries

Fact finding and diagnosis		**High Priority**	**Already Available**
1-1	A common definition of a serious injury	68%	60%
1-2	Information on crash causation factors	75%	27%
1-3	A common definition of a fatality	62%	84%
1-4	Information on road user behaviour and attitudes	75%	22%
1-5	Exposure data	76%	41%
1-6	Statistical methods for priority setting	64%	35%
1-7	Crash databases that link police and hospital data	68%	30%
1-8	Information on frequent crash scenarios and patterns	57%	22%
1-9	Results from in-depth crash investigations	44%	34%
1-10	The use of GPS and/or GIS technologies in accident data collection	36%	14%
1-11	Information on the socio-economic cost of crashes, fatalities and injuries	46%	57%
1-12	Data on the under-reporting of road traffic crashes	49%	19%
1-13	Examples of the successful integration of road safety policies with others (e.g. environmental or health policies)	49%	14%
1-14	Information on the effect of external factors on the number of road traffic crashes	38%	16%
1-15	A common definition of a work related crash	46%	27%
1-16	Results from naturalistic driving studies	31%	3%
1-17	Results from driving simulator studies	27%	11%
Development of Road Safety related programmes		**High Priority**	**Already Available**
2-1	Information on the costs and benefits of a road safety measure	72%	28%
2-2	Information on the safety impacts of combined road safety measures	65%	14%
2-3	Good practice catalogue of measures -- including implementation conditions	57%	16%
2-4	Standardised procedures and methods for carrying out evaluations of road safety measures	57%	24%
2-5	Information on the public acceptance of a road safety measure	67%	19%
2-6	Information on the safety impacts of singular road safety measures	51%	11%
2-7	Comparisons of road safety policies and measures regarding specific road user groups	43%	11%
2-8	Comparisons of safety rules and regulations	14%	16%
2-9	Statistical models and tools for target setting	32%	30%
2-10	Information on the impacts of road safety measures on other sectors policies	35%	16%
2-11	Comparisons of the frameworks in which road safety policies and	36%	5%

	measures are implemented		
Implementation of Road Safety measures		**High Priority**	**Already Available**
3-1	Common methodology for identifying high risk sites ("black-spots")	25%	34%
3-2	Digital road maps for mapping crashes	42%	49%
3-3	Good practice collection on how countries have implemented specific road safety measures	39%	5%
3-4	Detailed information from road safety audits and road safety inspections	24%	29%
3-5	Information on potential funding sources for road safety measures	39%	3%
3-6	Common methodology for in-depth crash analysis	23%	23%
3-7	Good practice and methodologies for monitoring implementation	42%	5%
3-8	Detailed road databases providing descriptions of road layouts, signing and marking, etc.	17%	26%
3-9	User-friendly interfaces to assist new users in finding road safety materials on the internet	39%	8%
3-10	Detailed data on the costs of road safety measures across Europe	17%	3%
3-11	Comparisons of driver training programmes across Europe	28%	3%
3-12	Methods to assess the training needs of individuals involved in road safety implementation processes	20%	6%
3-13	Collections of video clips and billboards of road safety campaigns	22%	6%
3-14	Tools for simulating road user behaviour	25%	19%
Monitoring and Evaluation		**High Priority**	**Already Available**
4-1	Focusing on seriously injured counts, in addition to fatality counts	64%	57%
4-2	Methods for evaluation of safety impacts of road safety measures	58%	30%
4-3	Common methodology for the evaluation of costs and benefits of road safety measures	50%	19%
4-4	Statistical methods for following trends	46%	43%
4-5	Statistical methods for isolating effects of specific policies or measures	39%	11%
4-6	Crash prediction models for various road types and layouts	25%	6%
4-7	Comprehensive monitoring of implemented measures across Europe	25%	6%
4-8	Medium term forecast models (up to 5 years)	33%	17%
4-9	Short term forecast models (up to 2 years)	31%	19%
4-10	Long term forecast models (up to 10 years)	33%	14%

Table 14: High performing countries – Priority and availability percentages (Figure 5)

Policy Makers from medium Road Safety performing countries

Fact finding and diagnosis		**High Priority**	**Already Available**
1-1	A common definition of a serious injury	72%	49%
1-2	Information on crash causation factors	70%	22%
1-3	A common definition of a fatality	66%	79%
1-4	Information on road user behaviour and attitudes	59%	14%
1-5	Exposure data	46%	18%
1-6	Statistical methods for priority setting	52%	19%
1-7	Crash databases that link police and hospital data	45%	5%
1-8	Information on frequent crash scenarios and patterns	48%	13%
1-9	Results from in-depth crash investigations	49%	23%
1-10	The use of GPS and/or GIS technologies in accident data collection	57%	23%
1-11	Information on the socio-economic cost of crashes, fatalities and injuries	41%	31%
1-12	Data on the under-reporting of road traffic crashes	36%	8%
1-13	Examples of the successful integration of road safety policies with others (e.g. environmental or health policies)	34%	9%
1-14	Information on the effect of external factors on the number of road traffic crashes	37%	8%
1-15	A common definition of a work related crash	21%	21%
1-16	Results from naturalistic driving studies	19%	3%
1-17	Results from driving simulator studies	6%	2%
Development of Road Safety related programmes		**High Priority**	**Already Available**
2-1	Information on the costs and benefits of a road safety measure	58%	9%
2-2	Information on the safety impacts of combined road safety measures	52%	8%
2-3	Good practice catalogue of measures -- including implementation conditions	56%	20%
2-4	Standardised procedures and methods for carrying out evaluations of road safety measures	53%	11%
2-5	Information on the public acceptance of a road safety measure	39%	8%
2-6	Information on the safety impacts of singular road safety measures	44%	9%
2-7	Comparisons of road safety policies and measures regarding specific road user groups	51%	11%
2-8	Comparisons of safety rules and regulations	46%	11%
2-9	Statistical models and tools for target setting	40%	15%
2-10	Information on the impacts of road safety measures on other sectors policies	31%	8%
2-11	Comparisons of the frameworks in which road safety policies and	29%	2%

	measures are implemented		
Implementation of Road Safety measures		**High Priority**	**Already Available**
3-1	Common methodology for identifying high risk sites ("black-spots")	60%	37%
3-2	Digital road maps for mapping crashes	51%	28%
3-3	Good practice collection on how countries have implemented specific road safety measures	44%	5%
3-4	Detailed information from road safety audits and road safety inspections	49%	15%
3-5	Information on potential funding sources for road safety measures	45%	11%
3-6	Common methodology for in-depth crash analysis	49%	14%
3-7	Good practice and methodologies for monitoring implementation	37%	8%
3-8	Detailed road databases providing descriptions of road layouts, signing and marking, etc.	38%	20%
3-9	User-friendly interfaces to assist new users in finding road safety materials on the internet	32%	9%
3-10	Detailed data on the costs of road safety measures across Europe	28%	2%
3-11	Comparisons of driver training programmes across Europe	20%	3%
3-12	Methods to assess the training needs of individuals involved in road safety implementation processes	20%	5%
3-13	Collections of video clips and billboards of road safety campaigns	23%	11%
3-14	Tools for simulating road user behaviour	10%	3%
Monitoring and Evaluation		**High Priority**	**Already Available**
4-1	Focusing on seriously injured counts, in addition to fatality counts	63%	29%
4-2	Methods for evaluation of safety impacts of road safety measures	55%	10%
4-3	Common methodology for the evaluation of costs and benefits of road safety measures	48%	8%
4-4	Statistical methods for following trends	48%	21%
4-5	Statistical methods for isolating effects of specific policies or measures	32%	6%
4-6	Crash prediction models for various road types and layouts	34%	3%
4-7	Comprehensive monitoring of implemented measures across Europe	33%	5%
4-8	Medium term forecast models (up to 5 years)	22%	10%
4-9	Short term forecast models (up to 2 years)	25%	11%
4-10	Long term forecast models (up to 10 years)	20%	8%

Table 15: Medium performing countries – Priority and availability percentages (Figure 6)

Policy Makers from low Road Safety performing countries

Fact finding and diagnosis		**High Priority**	**Already Available**
1-1	A common definition of a serious injury	50%	59%
1-2	Information on crash causation factors	63%	12%
1-3	A common definition of a fatality	60%	77%
1-4	Information on road user behaviour and attitudes	45%	19%
1-5	Exposure data	40%	28%
1-6	Statistical methods for priority setting	53%	18%
1-7	Crash databases that link police and hospital data	45%	22%
1-8	Information on frequent crash scenarios and patterns	45%	11%
1-9	Results from in-depth crash investigations	47%	6%
1-10	The use of GPS and/or GIS technologies in accident data collection	20%	0%
1-11	Information on the socio-economic cost of crashes, fatalities and injuries	55%	11%
1-12	Data on the under-reporting of road traffic crashes	45%	6%
1-13	Examples of the successful integration of road safety policies with others (e.g. environmental or health policies)	53%	6%
1-14	Information on the effect of external factors on the number of road traffic crashes	58%	12%
1-15	A common definition of a work related crash	39%	17%
1-16	Results from naturalistic driving studies	30%	6%
1-17	Results from driving simulator studies	21%	0%
Development of Road Safety related programmes		**High Priority**	**Already Available**
2-1	Information on the costs and benefits of a road safety measure	50%	12%
2-2	Information on the safety impacts of combined road safety measures	70%	6%
2-3	Good practice catalogue of measures -- including implementation conditions	60%	11%
2-4	Standardised procedures and methods for carrying out evaluations of road safety measures	55%	17%
2-5	Information on the public acceptance of a road safety measure	60%	6%
2-6	Information on the safety impacts of singular road safety measures	55%	6%
2-7	Comparisons of road safety policies and measures regarding specific road user groups	50%	11%
2-8	Comparisons of safety rules and regulations	70%	22%
2-9	Statistical models and tools for target setting	45%	24%
2-10	Information on the impacts of road safety measures on other sectors policies	60%	6%
2-11	Comparisons of the frameworks in which road safety policies and	50%	11%

	measures are implemented		
Implementation of Road Safety measures		**High Priority**	**Already Available**
3-1	Common methodology for identifying high risk sites ("black-spots")	55%	17%
3-2	Digital road maps for mapping crashes	45%	18%
3-3	Good practice collection on how countries have implemented specific road safety measures	65%	6%
3-4	Detailed information from road safety audits and road safety inspections	60%	6%
3-5	Information on potential funding sources for road safety measures	63%	12%
3-6	Common methodology for in-depth crash analysis	45%	6%
3-7	Good practice and methodologies for monitoring implementation	61%	6%
3-8	Detailed road databases providing descriptions of road layouts, signing and marking, etc.	55%	11%
3-9	User-friendly interfaces to assist new users in finding road safety materials on the internet	30%	6%
3-10	Detailed data on the costs of road safety measures across Europe	50%	0%
3-11	Comparisons of driver training programmes across Europe	45%	0%
3-12	Methods to assess the training needs of individuals involved in road safety implementation processes	45%	0%
3-13	Collections of video clips and billboards of road safety campaigns	35%	11%
3-14	Tools for simulating road user behaviour	26%	0%
Monitoring and Evaluation		**High Priority**	**Already Available**
4-1	Focusing on seriously injured counts, in addition to fatality counts	63%	32%
4-2	Methods for evaluation of safety impacts of road safety measures	74%	16%
4-3	Common methodology for the evaluation of costs and benefits of road safety measures	50%	0%
4-4	Statistical methods for following trends	45%	11%
4-5	Statistical methods for isolating effects of specific policies or measures	35%	0%
4-6	Crash prediction models for various road types and layouts	45%	6%
4-7	Comprehensive monitoring of implemented measures across Europe	47%	0%
4-8	Medium term forecast models (up to 5 years)	40%	6%
4-9	Short term forecast models (up to 2 years)	40%	6%
4-10	Long term forecast models (up to 10 years)	40%	6%

Table 16: Low performing countries – Priority and availability percentages (Figure 7)