

Deliverable 4

Accident Reporting

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Deliverable Overview

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Glossary

2BESAFE	2-Wheeler Behaviour and Safety (research project)
ACEM	The Motorcycle Industry in Europe
AMVIR	Association of Motor Vehicles Importers Representatives (Greece) - Σύνδεσμος Εισαγωγέων Αντιπροσώπων Αυτοκινήτων
ANCMMA	<i>Associazione Nazionale Ciclo Motociclo Accessori</i> (Italy)
BASt	The Federal Highway Research Institute (Germany) - <i>Bundesanstalt für Straßenwesen</i>
BMF	British Motorcyclists Federation (United Kingdom)
BU	Biker Union (Germany)
BVDM	<i>Bundesverband der Motorradfahrer</i> (Germany)
CADaS	Common Accident Data Set
CARE	Community database on road accidents resulting in death or injury
DG MOVE	Directorate-General for Mobility and Transport
EC	European Commission
EMF	European Motorcyclists Forum
ETSC	European Transport Safety Council
EU	European Union
FEBIAC	<i>Fédération Belge de l'Automobile & du Cycle</i> (Belgium)
FEMA	Federation of European Motorcyclist's Associations
FFMC	Fédération Française des Motards en Colère (France)
FIM	International Motorcycling Federation - <i>Fédération Internationale de Motocyclisme</i>
FMI	<i>Federazione Motociclistica Italiana</i> (Italy)
GRSP	Global Road Safety Partnership
IFZ	<i>Institut für Zweiradsicherheit</i> (Germany)
iGLAD	Initiative for the global harmonisation of accident data
ITF	International Transport Forum
IVM	The German Motorcycle Industry Association (Germany) - <i>Industrie-Verband Motorrad</i>
KFV	Austrian Road Safety Board (Austria) - <i>Kuratorium für Verkehrssicherheit</i>
Lillehm.	Workshop on Motorcycling Safety, Lillehammer
LMI	<i>Lëtzebuenger Moto-Initiativ</i> (Luxembourg)
MAG Belgium	Motorcycle Action Group (Belgium)
MAG Ireland	Motorcyclists Action Group (Ireland)
MAG NL	Motorrijders Actie Groep (the Netherlands)
MAIDS	In-Depth investigation of motorcycle accidents (research project)
MCTC	MC Touring Club (Denmark)
NMCU	The Norwegian Motorcycle Union (Norway) - <i>Norsk Motorcykkel Union</i>
OECD	Organisation for Economic Co-operation and Development
PTW	Powered two-wheelers
SMC	<i>Sveriges MotorCyklistar</i> (Sweden)
SWOV	Institute for Road Safety Research (the Netherlands) - <i>Stichting Wetenschappelijk Onderzoek</i>

	<i>Verkeersveiligheid</i>
Trafficpol	Traffic Police Department (Bulgaria)
TRAFI	Finnish Transport Safety Agency (Finland) - <i>Liikenteen turvallisuusvirasto</i>
UK	United Kingdom
WATCH OVER	Vehicle-to-Vulnerable road user cooperative communication and sensing technologies to improve transport safety (research project)

Executive Summary

This deliverable reports on the work performed during the project and the main outcomes of the activities undertaken in relation to *Accident Reporting*. It focuses mainly on:

- Collecting and comparing police accident reports in Europe
- Crossing analysis with data collection and statistical needs ([Deliverable 2](#))
- Making recommendations and identifying reporting harmonisation needs.

Harmonization of data collection processes throughout Europe is a difficult subject to tackle. All safety experts, and in particular those focusing on PTW safety, will agree that this is a critical issue when addressing PTW safety. Any solution allowing more comparable data on PTW accidents to be gained at European level begins with the improvement of accident reporting across Europe. If harmonisation is too complex, we can at least *start by finding a way to make reports less different*.

With the objective of gathering as much expertise as possible, the project collected feedback and information from different sources. Part of the work consisted of identifying and summarising the main outcomes of EU co-financed projects of relevance to accident reporting. These projects, available on the ERSO website, include 2-BE-SAFE, SUPREME and WATCHOVER.

The project then worked at identifying priority areas for EU action according to the different stakeholders. This feedback collection took several forms:

- 🔍 a literature review of the main policy documents: [Annex 14](#)
- 🔍 a questionnaire (Amplifying Questions) designed to survey the different categories of stakeholders directly involved into the policy making (Member States, the European Union, the Motorcycling Community representatives, EU stakeholders). Answers to the questionnaire were collected via phone interviews, written answers or face-to-face meetings and are summarised in [Annex 4/ annex 5/ annex 6/ annex 7](#):
- 🔍 input from project workshops: [Annex 11](#) and [annex 13](#)

Views listed in this report come from:

- *Member States' National Authorities:*
 - 🔍 Bulgaria: Trafficpol
 - 🔍 Finland: TRAFI
 - 🔍 France: Conseil National de Sécurité Routière
 - 🔍 Ireland: Road Safety Authority; National Roads Authority
 - 🔍 Italy : Italian Automobil Club, statistical department
 - 🔍 Latvia: Road Traffic Safety Directorate

- 🔍 Luxembourg: Police Grand-Ducale
- 🔍 Netherlands: department of Road Safety, Ministry of Infrastructure and Environment
- 🔍 Romania: Romanian Traffic Police Directorate
- 🔍 Slovenia: Slovenian Traffic Safety Agency
- 🔍 Spain: Directorate General for Traffic (DGT), Ministry of Interior
- 🔍 Sweden: Swedish Transport Administration
- 🔍 UK: Road User Licensing, Insurance and Safety
- *Research community*
 - 🔍 Austria: KFV (Austrian Road Safety Board)
 - 🔍 Belgium: BIVV-IBSR
 - 🔍 Czech Republic: Transport Research Centre
 - 🔍 France: IFSTTAR
 - 🔍 Germany: Federal Highway Research Institute (BAST)
 - 🔍 Greece: National Technical University of Athens
 - 🔍 Hungary: GRSP Hungary Association
 - 🔍 Netherlands: SWOV Institute for Road Safety Research
- *EU stakeholders: iGLAD, BAST, FERSI*
- *European Commission: Maria-Teresa Sanz Villegas, Casto Lopez Benitez from the DG MOVE, Dir. C Innovative and Sustainable Mobility, Unit 4 Road safety.*
- *Motorcycling Community (Industry/users)*
 - 🔍 Belgium: FEBIAC; MAG Belgium
 - 🔍 Denmark: MCTC
 - 🔍 France: FFMC
 - 🔍 Germany: BMW; IVM; IFZ; BU; BVDM
 - 🔍 Greece: AMVIR
 - 🔍 Ireland: MAG Ireland
 - 🔍 Italy: ANCM; Ducati; FMI
 - 🔍 Luxembourg: LMI
 - 🔍 Netherlands: Kawasaki; Yamaha; MAG NL
 - 🔍 Norway: NMCU

🔍 Sweden: SMC

🔍 UK: BMF

The project also conducted a review of 9 national accident report forms (from Denmark, France, Italy, Portugal, Scotland, Slovenia, Spain, Switzerland, and the UK). Further analysis included comparison with the CARE database and the CADaS protocol described in [Deliverable 2](#), leading to a list of recommendations for improving PTW safety/accident data collection.

Finally, as part of the process of examining accident reporting, the project organized 3 *forums* and discussed the deliverable outcomes with pan-EU stakeholders.

In view of the information collected during the work on *accident reporting*, the deliverable concludes by recognizing the overall challenge to find acceptable ways to harmonize this information-collecting process. Nevertheless, several things can be done to progressively harmonize accident data collection, improve the existing situation and enable better EU benchmarking.

The project Deliverable 4 on *Accident Reporting* provides the following outcomes:

- 🔍 A summary of EU research work and main conclusions for the past decade ([Annex 21](#))
- 🔍 Recommendations for the use of the CADaS protocol and harmonization needs.
- 🔍 Comparison of police accident report forms and recommendations ([Annex 20](#))
- 🔍 A summary of Recommendations for Action gathered from PTW safety policy priorities main references ([Annex 14](#)), Amplifying Questions Member States ([Annex 4](#)), Motorcycling Community ([Annex 5](#)), EU Stakeholders ([Annex 6](#)), EMF2015 discussions ([Annex 13](#))

Based on these inputs and a comprehensive review of needs, the project team identified a *List of recommendations and priority actions* for European and national levels, summarized in the report on [Needs for Policy Action](#).

The project deliverable 4 work was supervised by RIDERSCAN Reference Expert from Mutuelle des Motards: Bertrand Nelva-Pasqual.

1. Introduction

Powered two-wheelers (PTWs) are a popular form of transport providing mobility to millions of people worldwide. However, unlike for other forms of motorized transport, PTW users, as with cyclists, remain more vulnerable due to the intrinsic characteristics of the vehicle and having no occupant cell.

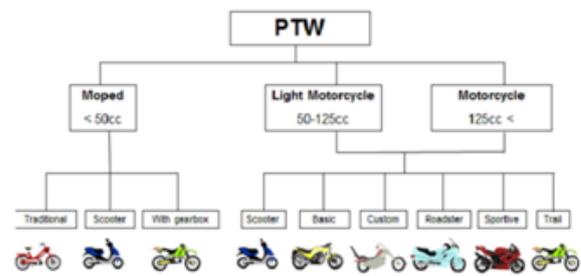
Over the last decade, numbers highlighted a decrease in PTW casualties (mopeds and motorcycles). This decrease, albeit less pronounced than for other means of transport, has taken place against a substantial expansion of the number of PTWs on the road.

In 2004, the MAIDS study¹ highlighted the fact that national police reports were not sufficiently detailed to fully understand the causes of PTW accidents. Specific PTW research studies use different data collection criteria and methodologies, thereby limiting the comparability of the different studies and the ability to develop a sound European strategy for reducing PTW accidents.

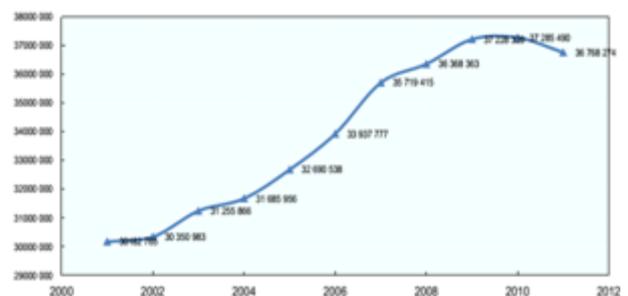
Where do we go from now?

While everyone agrees that data collection and its European harmonization is a difficult subject to tackle, all safety experts, and in particular those focusing on PTW safety, agree that this is a critical issue when addressing today's PTW safety issue (cf. [Deliverable 2](#)). More data is needed, but above all more comparable data is needed to start tackling PTW safety in a sustainable way.

The solution to gaining more comparable data on PTW accidents at a European level begins with improving accident reporting across Europe. Should full harmonization be too complex, then we should at least *start by finding ways to make them less different*.

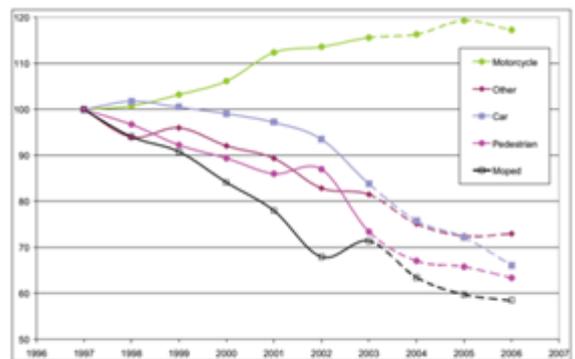


PTWs variety (Source: OECD/ITF report on motorcycle safety, 2015 – to be published)



* European Union + Norway + Switzerland
Source: ACEM

PTWs circulating park (Source: OECD/ITF report on motorcycle safety, 2015 – to be published)

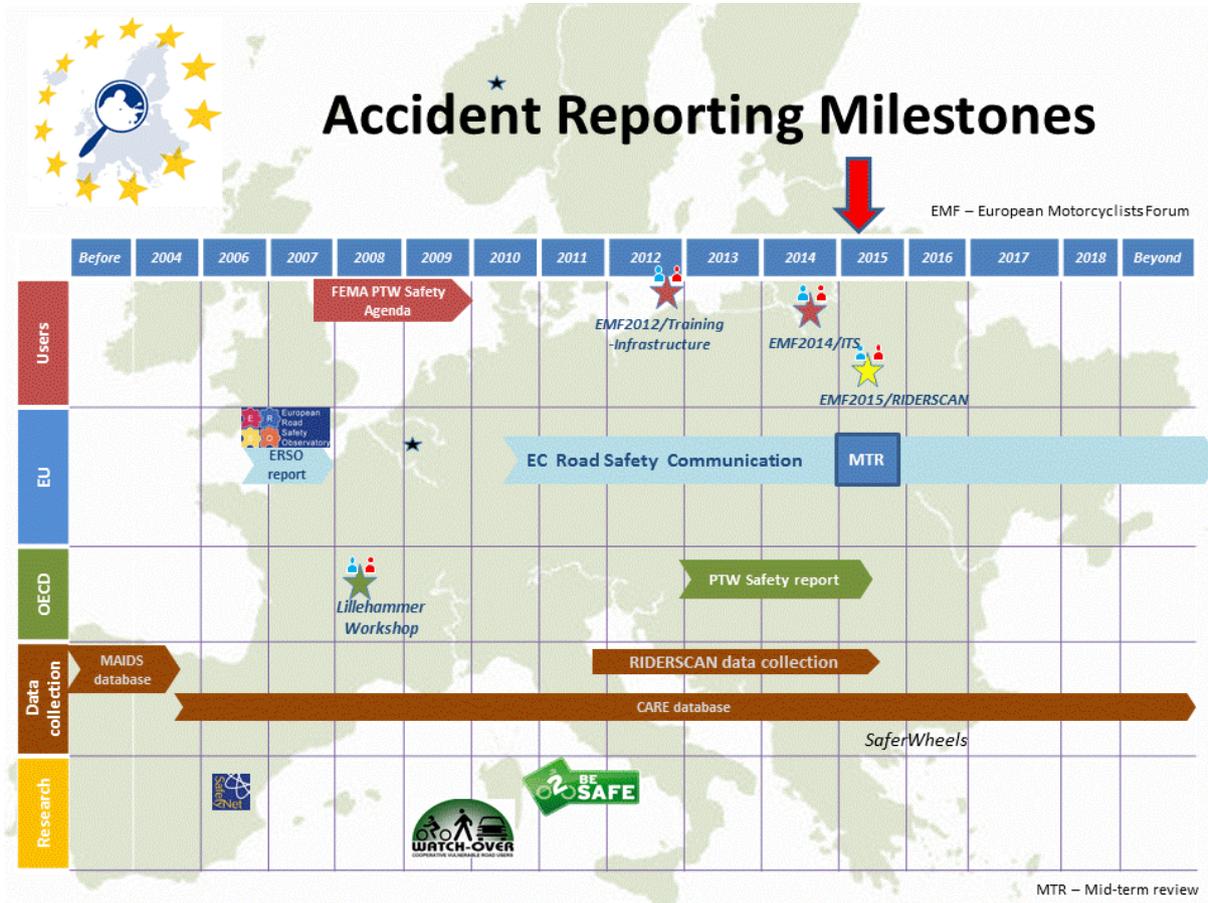


PTWs casualties in Europe (Source: OECD/ITF report on motorcycle safety, 2015 – to be published)

¹ <http://www.maids-study.eu/>

With this objective in mind, the RIDERSCAN project focused on:

- Collecting and comparing police accident reports in Europe
- Making recommendations and identifying harmonisation needs with regard to reporting



2. Project activities and work overview

2.1. EU Research main conclusions ([Annex 21](#))

This section compiles a selection of relevant extracts from EU-financed research projects in relation with *accident reporting*. These projects are available on the [ERSO website](#) (latest consulted on 15/03/2015).

The comprehensive list of selected extracts is available in [Annex 21](#).

- **Data collection:**

- There is a lack of comprehensive data and research evidence about PTWs from a road safety perspective and as a sustainable form of transport. This ranges from limitations in crash data reporting and collection, to the uncertainty about the effectiveness of a range of safety related activities. (2-BE-SAFE)

🔍 ERF – IRF suggests that a new statistical tool should be developed, which is specifically aimed at gathering information on PTW accidents to ascertain the different factors which play a role in real-life conditions. (2-BE-SAFE)

- **Macro & micro studies:**

🔍 Accident Research incorporates the study of macro and micro accident databases studies with respect to the casualty population. Macro studies record and investigate road accidents at a national and international level, whereas micro studies utilize in-depth and forensic investigation techniques to examine a much smaller number of crashes, but to a much greater level of detail. To successfully tackle the future motorcycle casualty problem it will be necessary to combine the macro and micro data to formulate strategies. There is reasonable recording across Europe at a macro level with police gathering data on injury collisions, but there is very little in-depth or micro data collected. (2-BE-SAFE)

🔍 When the magnitude of data collection ‘problems’ are considered, there are arguably two parts to discuss: firstly, there is always scope to improve the quality of the data that is currently collected, primarily by the police (macro); and there is a scientific need for more information that describes what actually occurs before, during and after collisions in a very detailed way – more in-depth data collection (micro). (2-BE-SAFE)

🔍 Road conflict investigations are not universally carried out across Europe and there are different criteria under which a police officer or another official would instigate such an enquiry. In the UK, only life threatening or fatal crashes would trigger an in-depth forensic investigation involving detailed photographs of the scene, mapping of the crash partners and environment (scene plan), collection of witness statements and a detailed reconstruction of events. For motorcycle collisions there are further complications when it comes to the reconstruction, as specialist techniques are required to account for the motorcycle and riders characteristics. (2-BE-SAFE)

N.	PARAMETER	DESCRIPTION
1	Accident configuration	The first aspect considered is the accident configuration. It gives an immediate overview of the situation where the accident happened. From this variable it is possible to gather the percentages of accidents that occurred with similar geometric characteristics.
2	Collision opponent	It tells about the main actors involved in an accident.
3	Collision speed	Collision speed is the recognised velocity registered before the impact. It can be represented with an absolute speed (one moving opponent and a static one) or a relative velocity (both the opponents moving). Even if the WATCH-OVER target speed is 50 km/h, this aspect is important to discover the velocities at which the accident occurs more often.
4	Time of day	It gives the percentages of when an accident between a vehicle and a VRU happens. It is possible to gather when the fatalities or injuries occur more often, and the most proper scenario lighting.

N.	PARAMETER	DESCRIPTION
5	Road conditions	Road condition is referred to the road surface status at the time of the incident. It is partially related to the weather conditions, as for example the rain makes the road more slippery. The percentages of most commonly occurring road conditions should be used for scenarios' prioritisation.
6	Accident location	It highlights where the accident happened. It is an important input to distinguish events occurred in an urban area or on a rural/sub-urban road.
7	First contact point	Whenever an accident occurs the first contact point tells about the visibility of the collision opponent at the time of the event. From this information it is possible to understand if the VRU should have been visible by the camera sensor and how much the communication technology can help to increase the recognition of the VRU.
8	Age group of user	It indicates the percentages of accidents occurred to different road users, dividing them in different age groups. This variable gives an idea about the typology of people involved in the event, and so it is possible to derive the range of speeds of the pedestrians mostly related to road accidents.

Table 1: Parameters considered in accident statistical survey

(WATCH OVER)

2.2. Comparison of police accident report forms ([Annex 20](#))

The Mutuelle des Motards (project partner) made a comparative analysis of 9 police accident reports (Denmark, France, Italy, Portugal, Scotland, Slovenia, Spain, Switzerland and the United Kingdom), out of which the following findings and recommendations have been gathered.

- They identified 74 different headings within the various accident reports studied.

For example, Spain uses 34 headings, while France has 56.

- ***Recommendation 1: Harmonise the format of accident report forms at a European level***

- A further finding was that the content of the headings found in the accident reports studied differed from country to country, making it more difficult or even impossible to perform any comparison.

Example: description of the road: state of the road surface, curve or straight road, upward/downward slope, etc.

➤ ***Recommendation 2: Harmonise the content of the individual headings at European level***

🔍 In identifying the vehicle(s) involved, the vast majority of accident reports only list their make and/or model. Within their national accident report forms, a number of countries list the type of vehicle when a PTW is involved. However, as this heading is not mandatory, any data is collected in a non-harmonised manner. It would be a good idea to be able to at least find details of the engine size and/or the type of vehicle (sports, basic, off-road, custom, etc.).

➤ ***Recommendation 3: Put forward a proposal for the harmonised classification of the vehicles involved***

🔍 The place where the accident happened is not listed in a uniform and precise manner from one country to the next.

For instance, when an accident happens in a built-up area, it would be no problem to list the name of the street and the nearest street number. By contrast, this is much more difficult when the accident occurs in the open countryside.

➤ ***Recommendation 4: Have the police list the GPS coordinates of the place of accident***

🔍 There are different ways of listing the damage to the vehicles in the accident reports. This is a further factor making it difficult to compare countries.

➤ ***Recommendation 5: For each vehicle involved, list the following:***

- Point of impact (front left, front right, etc.)
- The angle of impact (0°, 45°, 90°, 135° ... 360°)
- Impact severity (light, medium, hard)

➤ ***Recommendation 6: Make it mandatory to take a photo of the damage to each vehicle involved.***

🔍 With a view to gaining a better understanding of the accidentology of PTW riders, it is seen as a good idea to be able to access such data as how often the vehicle is used or what the purpose of the last trip was, as is possible in France and Belgium.

➤ ***Recommendation 7: Put forward a proposal for European harmonisation of data on vehicle use frequency;***

➤ ***Recommendation 8: Put forward a proposal at European level for gathering data on the purpose of the last trip.***

To conclude, Mutuelle des Motards' comparative work brought up differences in the variables found in the data collected, their values, their definitions, as well as structural differences in the accident report forms and in the formats of the relevant data in existing national databases can make it very difficult to compare data. As a consequence, the lack of harmonised accident

data between and within EU Member States represents an obstacle to exploiting such data and limits EU-level comparisons.

Though police reports constitute a great potential, they are of poor data quality and/or only partially filled out. In many cases, the police's primary concern at the scene of an accident is to secure the area to prevent any further accident happening!

Each state must be made aware of the fact that the quality of the data collected is dependent on the extent to which the police are involved in accomplishing this task.

Given the specific features of each Member State, there is little point in having a harmonised police accident report form at European level. Were we to have such, i.e. taking the specific features of each country into account, we would end up with a long and tedious data collection process.

The proposal is therefore to have certain headings made mandatory, with these being harmonised for all EU Member States.

This would allow us to gain a much better picture of the accidentology of PTW riders (bikers and trikers) as well as improving our knowledge of the traumatology of riders and their passengers.

2.3. CARE database and the CADaS protocol ([Annex 20](#))

Improving PTW safety not only requires to have comparable data at European level by having common headings in police accident reports, it also involves having identical value ranges in all countries. Due to differences in the collected data variables and values, their definitions, the differences of the accident data collection forms structures and the relevant data formats among the existing national databases, both accident data quality and availability are affected. Consequently, lack of accident data uniformity among and within EU countries hinders the exploitation of CARE potential and limits data analyses and comparisons at EU level.

Accident	Traffic unit
Accident ID	Accident ID
Accident date	Traffic unit ID
Accident time	Traffic unit type
Nuts	Vehicle special function
Lau	Trailer
Weather conditions	Engine power
Light condition	Active safety equipment
Accidents with pedestrians	Vehicle drive
Accidents with parked vehicles	Make
Single vehicle accidents	Model
At least 2 vehicles: no turning	Registration year
At least 2 vehicles: turning or crossing	Traffic unit maneuver
	First point of impact
	First object hit in
	First object hit off
	Insurance
	Hit and run
	Registration country
Road	Person
Accident ID	Accident ID
Latitude	Traffic unit ID
Longitude	Person ID
E-road	Year of birth
E-road kilometer	Gender
Func. Class 1 st road	Nationality
Func. Class 2 nd road	Injury type
Speed limit 1 st road	Road user type
Speed limit 2 nd road	Alcotest
Motorway	Alcotest sample type
Urban area	Alcotest result
Junction	Alcohol level
Related to junction / intersection	Drug test
Junction control	Driving license issue date
Surface conditions	Driving license validity
Obstacles	Safety equipment
Carriageway type	Position in/on vehicle
Number of lanes	Distraacted by device
Emergency lane	Psycophys. Phys. Imp.
Markings	Trip / journey purpose
Tunnel	
Bridge	
Work zone related	
Road curve	
Road segment grade	



Variables recommended by the CADaS protocol

The CADaS variables are divided into four basic categories: accident-related variables, road related variables, traffic unit (vehicle and/or pedestrian) -related variables, and person-related variables.

The RIDERSCAN project identified potential variables to be harmonised to make comparison possible across Europe.

Accident data

- **Age:** the CADaS protocol recommends collecting the year of birth. But in the national statistical reports publicly available, the age of victims is organised by age brackets, which vary greatly from one country to another:

➤ **Recommendation: set harmonized age brackets for the EU.**

	Details about the variable
Austria	0-14; 15-19; 20-24; 25-29; 30-34; 35-39; 40-44; 45-49; 50-54; 55-59; 60-64; 65-69; 70-74; 75+
Belgium	-18; 18-24; 25-34; 35-44; 45-54; 55-64; 65+
Bulgaria	-6; 6-9; 10-14; 15-17; 18-20; 21-24; 25-64; 65+; total
Finland	0-4; 5-9; 10-14; 15-19; 20-24; 25-29; 30-34; 35-39; 40-44; 45-49; 50-54; 55-59; 60-64; 65-69; 70-74; 74+
France	0-5; 6-9; 10-14; 15-17; 18-20; 21-24; 25-34; 35-44; 45-54; 55-64; 65-74; 75+; total
Ireland	0-5; 6-9; 10-14; 15-17; 18-30; 21-24; 25-34; 35-44; 45-54; 55-64; 65+; unknown; total
Italy	1-13; 14-29; 30-45; 46-64; 65+; Unknown; Total
Latvia	-6; 6-9; 10-14; 15-17; 18-20; 21-24; 25-34; 35-44; 45-54; 55-64; 64+; Total
Luxembourg	7-14; 15-17; 18-24; 25-34; 35-44; 45-54; 55-64; 65+; unknown; total
Netherlands	0-14; 15-17; 18-24; 25-44; 45-64; 65+; unknown; total
Norway	0-5; 6-11; 12-14; 15-17; 18-19; 20-24; 25-29; 30-34; 35-39; 40-44; 45-49; 50-54; 55-59; 60-64; 65-69; 70-74; 74-79; 80+
Sweden	15-18; 18-19; 20-24; 24-34; 35-44; 45-54; 55-64; 65-74; 75+
Switzerland	10-19; 20-29; 30-39; 40-49; 50-59; 60-69; 70+
UK	0-6; 7-14; 15-17; 18-24; 25-44; 45-64; 65-74; 75+; Total
	-16; 17; 18; 19; 20-24; 25-29; 30-39; 40-49; 50-59; 60+; age not reported; total

- **Type of motorcycle:** the CADaS protocol does not go into the details of the vehicle except for the brand or model of the vehicle. Within national statistical reports on accidents involving a motorcycle, some countries specify the motorcycle type, though in a non-harmonised way.

➤ **Recommendation: harmonise the classification of the type of motorcycle.**

	Details about the variable
Norway	Light motorcycle; R-bike; Street fighter; Off-road; Touring; Custom
Sweden	Standard; Touring; Supersport; Sporttouring; Custom; Off-road; Scooter

- **Responsibility:** the CADaS protocol does not recommend specifying who was responsible for an accident. But it would be really useful to be able to compare the share of responsibility in an accident between the different countries in Europe.
 - **Recommendation: to collect and specify the share of responsibility of road users in an accident.**

	Details about the variable
France	Full; Responsible; % of responsibility
Luxembourg	Cars; PTW
Norway	Motorcyclist; Other party; Shared; Wildlife, etc.

Other mobility data

The CADaS protocol refers solely to accident data. However non-accident data such as mobility data can be really useful when it comes to comparing motorcycle use in Europe.

- **Vehicle fleet:** at present, it is possible to compare the number of powered two-wheelers on the roads in the different countries of Europe. However, different ways are used to measure the numbers.
 - **Recommendation: establish a harmonised way of measuring vehicle numbers.**

	Details about the variable
Austria	Vehicle numbers; new registrations
France	Registration of new motorcycles; Number of PTWs on 31 December; Number of motorcycle licences
Italy	Vehicle numbers

- **Frequency of PTW use:** knowing the use frequency of PTWs would allow us to understand the different types of motorcyclists that exist. Moreover, the ability to compare such data at EU level would be very advantageous for understanding fundamental differences in PTW use in the different countries of Europe.
 - **Recommendation: establish common use frequency categories for Europe and define other mobility variables**

	Details about the variable
Belgium	5 days a week; 1 to a few days a week; 1 to a few days a month; 1 to a few days a year; Never
France	Every day or almost every day; 4-5 days a week; 1-3 days a week; Only on

weekends; Almost never; Total		
	Other variables	Details
Belgium	Use of transport mode	% of use for each transport mode
France	PTW use	Commuting; professional use; leisure/hobby/sport; long-distance travelling; shopping; other

→ See [Annex 20](#) for the detailed headings to be harmonised.

2.4. Key priorities for Accident Reporting

Collecting the views and information of the various stakeholders involved into the areas of work covered by the project was part of the key activities to have a better understanding of priority actions. This collection of feedback and information took several forms:

- a literature review from the main related policy documents: [Annex 14](#)
- a questionnaire (Amplifying Questions) designed to survey the different categories of stakeholders directly involved into the policy making (Member States, the European Union, the Motorcycling Community representatives, EU stakeholders). Answers to the questionnaire were collected either from phone interviews, written answers, or face-to-face meetings and are summed up in the [Annex 4/ annex 5/ annex 6/ annex 7](#);
- inputs from project workshops: [Annex 11](#) and [annex 13](#)

Following this structured approach, the project team worked at identifying priority areas for EU action according to the different stakeholders.

• Key Stakeholders Safety Priorities – Accident reporting

With the objective of gaining a preliminary overview of the key safety aspects to be considered in the PTW safety debate, and of the project safety areas in particular, the project team undertook a detailed comparison of the PTW safety policies of key influencing PTW/road safety stakeholders.

The table below summarizes the identified key safety aspects for each key influencing stakeholder.

It should be noted that the documents were not written at the same time, meaning that some of them are more up-to-date than others. For a complete overview of PTW safety policies and reference details, please refer to [Annex 14](#).

D4 – Accident reporting	ETSC	Lillehm.	FEMA	EC	ACEM	ITF
- A pan-EU Road Accident Report Form			Yes			
- Traffic Accident Report including			Yes			

- **The Motorcycling Community ([Annex 5](#), [Annex 14](#)):**

- 🔍 ***PTW accident reporting form***

Among the representatives of the motorcycling community interviewed, views on a specific PTW accident report varied.

BMW (Germany), Ducati (Italy), IVM & IfZ (Germany), MCTC (Denmark) do not see any advantage in having an accident reporting form specifically for PTWs. Though FFMC (France) and NMCU (Norway) consider such a form to be interesting, they agree that in practice it cannot be done. It would be too complex for the police officer who already has a lot of work to do, would require the reporting officer to be specifically trained and it could lead to having specific report for each type of vehicle.

On the other hand, FEBIAC (Belgium), ANCMA (Italy), Yamaha (Netherlands), Kawasaki (Netherlands), BVDM (Germany) MAG Belgium, SMC (Sweden) consider that an accident reporting form specifically for PTW accidents would have the advantage of enabling factors specific to a PTW accident to be collected.

More specifically, in the view of ANCMA, such a report should include:

- Description of the road: condition of the surface, curve or straight road, uphill or downhill
- Weather conditions, night or daylight
- Rough estimate of speed
- The driver's state of health, presence of alcohol or drugs
- Vehicle condition (wheels, brakes, etc.)

In the view of Yamaha, this report should include questions on:

- Rider profile in depth: experience, attitude, mileage/year, gear worn, etc.
- Environment in depth: road condition, weather, obstacles, etc.
- In the case of a collision with another vehicle: profile of the opponent and in depth consideration why i.e. he did not see the PTW or why a misinterpretation was made.

In the view of SMC, these questions should be included:

- Rider: Licence, owner of vehicle, drugs/alcohol, rider failure.
- Infrastructure: friction, possible spillages, gravel, barriers, poles, potholes, etc.
- Opponent: licence, owner of vehicle, drugs/alcohol, driver failure.
- Motorcycle: technical faults? ABS? Tyres? Insurance/registered/allowed to ride on the road?

Recommendations

Besides having a specific PTW accident report form, another option would be to **improve the existing report**.

According to FEBIAC, IVM & IfZ, AMVIR, a good solution would be to improve the police accident report by **adding a dedicated section for PTWs** (in the case of an electronic form for example).

BMW Germany, IVM & IfZ recommend having the questions regarding the **different MAIDS variables** included in the police accident report.

In the view of FFMC, police accident reports should be improved by **making a clear distinction between the causes and consequences of the accident**. And they should take third parties into account even if not “involved” in the accident (a PTW accident can be caused by a dangerous manoeuvre of a motorist without the PTW actually making contact with the car).

MAG NL would like to see an overall police accident report for all motorised vehicles but with dedicated questions on **infrastructure problems** and **responsibility** in order to better understand PTW accidents.

In the view of NMCU an important thing would be to identify the **dynamics of the accident** in order to quickly establish a plausible cause.

In the UK, there is a need to somehow capture driver/rider activity immediately prior to a collision. This is because many believe that in-car devices are distracting drivers but this can seldom be proven.

MAG Ireland recommends at least consulting an **experienced Garda (Police) motorcyclist** for every PTW accident.

- **Member States ([Annex 4](#), [Annex 14](#)):**

PTW police accident report

Turning to our Member State experts’ interviews, it appears that there is no European country with a PTW-specific police accident report. In almost every case, there is only one such report per country, which is used for all road categories and for all vehicles. The exception is Italy where there is no harmonised the police accident report and where the local police can use a specific form for themselves. But even they send data to the national statistics agency on a common form. There were attempts to harmonise reporting between the 20 different regions but it was impossible to find a common position.

According to the French expert, it would be interesting to have more information to measure the speed of impact for example (not the case at present), information on the safety equipment worn by the motorcyclist, on the deformation of the vehicle after the crash, etc.

Though Italy does not have a specific police accident report for PTW accidents, according to Italian experts it could be useful. Though they sometimes make specific reports or studies, they lack specific information on PTWs.

 **Police accident reporting and infrastructure issues:**

Infrastructural issues are not taken into account in every police accident report. Demands vary from one country to another, as does the scope of details collected.

In Austria, Finland, Greece, Luxembourg and Slovenia, the police accident report does not take into account infrastructural problems. In Austria, if there is a request regarding the infrastructure (for example on road friction), the information is collected at a later date by another ministry.

In the Czech Republic, Hungary, Ireland, Romania and Spain, reporting on infrastructural problems is part of the police accident report. For example, the infrastructure section in the Spanish report is quite detailed (information on road type, road designation and kilometre, type of junction, state of the road surface, road lighting, visibility, speed limit, number of carriageways, number of lanes, lane width, shoulder width, number and type of safety barriers, road markings, road margins, etc.). In Ireland and Romania, information related to infrastructure issues is shared with the competent authority in order to fix them.

Turning to Belgium, Bulgaria, France, Germany, Latvia, the Netherlands and the United Kingdom, infrastructural issues are taken into account as general accident causes. But this will greatly depend on the police officer’s evaluation of the situation, meaning that the quality of the police accident report can vary. In France, there is a list of different road characteristics but without any detailed explanations. For example, there are check-boxes for “crash-barrier” or “tree” but only to be checked in the case of a collision with another vehicle. If the rider crashed the tree because he fell off his motorcycle, it won’t be reported.

 **Filling in the report:**

The way the police accident report is filled in differs from one country to another:

<i>Austria</i>	<p>An electronic police accident report is currently being tested. It displays a number of specific questions when the police officer checks the box “PTW”.</p> <p>In the case of an injury accident, further data is collect.</p> <p>Included in the police report are some basic facts on the environment: type of road, road condition, weather, road design (curve, straight line). The cause of the accident can be assessed at a later date. The new electronic form contains one question on the cause of the accident. The answer is an educated guess by the responsible police officer.</p>
<i>Belgium</i>	<p>Accidents on motorways are recorded by the federal police and all other ones by the local police.</p> <p>There are a number of questions concerning cycle paths for cyclists and moped riders. But there is no specific section on other PTWs.</p>



<i>Bulgaria</i>	<p>The investigator has to fill in another report, a registration card (used for statistics only), and in this there are questions on the infrastructure (bridge, etc.).</p> <p>When the accident call comes to the police, they first have to secure the scene. The traffic unit (an auxiliary unit within the police) arrive at the scene of the accident once it has been secured to fill in the accident report and the registration card used for statistics. They may subsequently summon a more specialized investigation unit to collect information for the court case. This is only done in the case of injuries or fatalities.</p>
<i>Finland</i>	<p>The forms are computerized and the police have a connection to Trafi's vehicle database. Accident location coordinates come from the police car's GPS.</p>
<i>France</i>	<p>Even if there is no special section on PTWs, there are a number of PTW-specific questions: type of vehicle, brand and whether a helmet was worn.</p> <p>The police accident report can be initially filled in on the spot just after the accident, though information is missing and the police have to come back on the spot some days later to complete the report. One of the major problems of accident reporting is that the person who intervened at the moment of the accident and the person who completes the report are not the same (different ministries, different services, etc.).</p>
<i>Germany</i>	<p>The accident is registered by the police on site when the police are summoned to the accident. Accident details are registered in the computer system later on at the police station. But it is also possible for an accident to be registered with the police some time after it occurred.</p>
<i>Greece</i>	<p>There are a couple of questions specific to PTWs (wearing a helmet, seat position).</p>
<i>Ireland</i>	<p>The police accident report is in electronic form.</p> <p>There are different investigations in the case of collision. If the collision is minor, the police just fill in the standard collision report at the scene of the accident to try to reconstitute the crash. If there is a fatality, a forensic expertise is compiled. Alongside the police report and the forensic expertise (with information about the vehicle, driver, i.e. a very detailed report), the National Road Authority (within 7 days) will also compile a report, this time more on the road structure itself.</p>
<i>Netherlands</i>	<p>For some crashes the police are present and have to complete an electronic form collecting all information. This is then passed on to the government. In certain cases, insurance companies will also conduct further investigations. And in the case of any lawsuit, there may be more investigations done, but, as the data is not collected by the police, the government does not receive it.</p> <p>There is however a second data source: when a person is injured and goes to hospital, the hospital collects data on his injuries and the vehicle involved. However, no data on the weather, infrastructure, location, etc. is collected. The two sets of data are merged by the government.</p>
<i>Romania</i>	<p>The same procedure is applied for all accidents. First, at the scene of an accident, the police officer writes down a report with all data which might otherwise be lost (road and weather conditions, etc.). After that, a technical examination of the PTW will</p>

follow (all data and details are written in the report). Finally the, personal data of the accident victims, passengers and witnesses are included in the report, as well as initial conclusions on the cause of the accident. A few days may be needed to get all the data.

2.5. Other stakeholders' feedback ([Annex 6](#), [Annex 11](#), [Annex 13](#), [Annex 14](#)):

• **Stakeholders workshops comments**

As part of the data collection and validation processes, the project organized 3 forums, and discussed the deliverable outcomes with pan-EU stakeholders. The memorandums of the workshops can be read in [Annexes 11](#), [12](#) and [13](#). Below is a compilation of interesting comments made by participants and/or speakers in relation to *accident reporting*.

– **Police accident reports:**

- According to FIM, police accident report forms provide us with an enormous potential, but great difficulties. Education of the police force is essential to convey the importance of gathering accident data. The quality of completed reports is often poor. A UN Working Party is looking at this issue.
- IFSTTAR, have been collecting in-depth accident data for several years and worked in cooperation with police services, and the police frequently said that statistics was not their job, which is to protect people. They completed forms as a secondary task, and frequently entered “unknown” or made confusing statements. Progresses have been done since that time, notably with the instauration of steps of control and correction, but every government still has to be persuaded to convey to their police the importance of this task. Notably when dealing with PTW crashes, as far as their specificity asks for specific competences.
- In the UK, a lot of the validation of the information that comes from the police is done by local government. Unfortunately, local authorities have budgetary constraints so less validation is being done. Also, a normal police officer attending a collision has a number of tasks, and filling in reports is low down on their priorities. The whole process is slow and the police have multiple forms to complete. Maybe common data could be incorporated from the cycling community, which has more impetus?



– **Injury data:**

- In the UK we have never been able to match up hospital data with accident data. For example, it's difficult to compare the severity of an injury as

classified by the police to that classified by the medical team.

- In Sweden from 1st January 2015, all hospitals are reporting injuries from traffic accidents. It's been a law for the police forces for 10-15 years but they are not medically trained. Now we can get the correct information from the hospital. I also have a comment about police report forms, which suggest that 10% of motorcycling accidents are caused by loss of friction, but from the hospital forms completed by motorcyclists themselves, that figure is 30%. So it would be helpful for police forms to have a box for loss of friction, which does not exist at the moment.

– **Database and in-depth studies**

- In Germany, the police do a good job and they have a very good database. On the other hand, if every country in Europe had the same database we would have to think about whether it makes sense to put together, because the situation in different countries is very different as to the use of the PTW, engine power, age of rider etc. The German database applies to all vehicles, not just motorcycles. But it took us years to enable the police to do this accident research and they are willing to do this and build up an in-depth accident study. We need the manufacturers to finance this. There is a lot of work to do before you get to this point.
- There are accident databases and statistics, and then comes the interpretation of that data. In Northern Ireland we have forensics investigators who go to the scene of accidents and their report is normally attached to a coroner's report, which asks questions about the accident. This has to be taken into consideration when talking about in-depth accident reports; the human factor.

• **Pan-EU stakeholders feedback**

The RIDERSCAN project also collected the views of pan-European stakeholders whose work relates to the safety area covered and discussed key project findings.

• **iGLAD**

- IGLAD is a consortium where data from different countries/projects is recorded according to a harmonised data scheme and shared in between members.
- There has not yet been any analysis on priority actions and statistical needs. But a harmonised PTW-accident report is seen as a good way to go.

• **European Commission**

- The police fill in a report, which is more or less the same throughout the EU. These reports provide a lot of information about accident conditions, but not about accident causation. It would be interesting to have distinct information collected depending on the road type (motorway, trunk road, secondary road or urban area);



to have more information on accident conditions; together with social and societal data (traffic, km driven, usage data and weather condition). Certain other data cannot be exchanged at EU level because of data protection regulations.

- CARE: Member States are free to decide whether to use the CADAS structure or not. Generally speaking, national police accident reports have adopted more or less the same structure. And the European Commission organises the information gathered in a homogeneous way to allow comparison.
- One solution regarding fatal accidents would be to have much more in-depth information collected to be able to establish accident causation. But it is expensive and would be difficult to make mandatory.
- A good point would be to cross information about injuries (following the AIS structure) with hospital data.

2.6. Improving accident reporting: key challenges

In view of the information collected during the work on *accident reporting*, it appears quite clear that, while everyone agrees that accident details are key to gaining a better understanding of accident causation factors and designing adequate countermeasures, the overall challenge remains to find acceptable ways to harmonize the information-collecting process, not the least because the primary task of those in charge of filling in accident reports, i.e. police officers, is to first manage the accident consequences and protect human lives.

Nevertheless, several things can be done to progressively harmonize accident data collection, enable European comparisons, and define sound road safety strategies for the different transport modes. These include

- 🔍 **fostering the use of the CADaS protocol at national level** to have comparable data throughout Europe,
- 🔍 proposing **harmonized age brackets**.

For PTW-specific accident reporting, there is a need to

- 🔍 complete the CADaS protocol with specific **data related to accidents involving PTWs**, such as environmental aspects or vehicle details;
- 🔍 propose and include a **common classification of the types of PTW**;
- 🔍 identify the (obvious) **share of responsibility** per road user involved in an accident.

In order to evaluate the correct exposure rate to identified accident-related risk factors, it is also necessary to

- 🔍 propose a harmonised way of measuring the **number of PTWs on the road**;
- 🔍 identify and propose common categories for the **type/frequency/motivation of vehicle use**;

More specifically on *accident report forms*, it is advisable to:

- 🔍 harmonise **formats** and **headings**;
- 🔍 propose a harmonised **classification of vehicles involved in an accident**
- 🔍 include **GPS coordinates** for the accident location
- 🔍 include the following information for each vehicle involved in the accident:
 - Point of impact (front left, front right, etc.)
 - The angle of impact (0°, 45°, 90°, 135°...360°)
 - Impact severity (light, medium, hard)
- 🔍 include **pictures** of the **scene** and the **damage to each vehicle** involved.

3. Deliverable conclusions

As highlighted by the 2BESAFE project, research and data acquisition are not an end in itself; they are a necessary prerequisite for developing and implementing effective and efficient road safety countermeasures.

Acquisition of additional and better data on PTW accidents, mobility and other issues should therefore receive top priority at European level.

As underlined by the OECD/ITF working group on motorcycle safety², there is a critical need to *improve the knowledge on PTW mobility and crash mechanisms*. WG members further underline the need to *develop and apply relevant methods, tools and indicators to measure PTWs in traffic flows and analyse their mobility and behaviour (exposure data)*.

Improving accident reporting methods and content will undoubtedly improve this knowledge and contribute to a better understanding of PTW crash mechanisms, leading to effective crash prevention measures.

As one of the main strategic objectives of the European Commission, road safety plans are to *encourage research* into increased PTW safety, while the mid-term review of the *EC Communication on Road Safety 2011-2020* is an opportunity to address the steps necessary for enhancing PTW crash causation knowledge.

² IMPROVED SAFETY FOR MOTORCYCLES, SCOOTERS AND MOPEDS © OECD 2015 (to be published)

