

Deliverable 5.3: Review of Fatal Accident Pilot Study. Fatal Data Methodology Development Report.

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Executive Summary

At present, there are more than 40,000 fatally injured road users each year throughout the 25 EU Member States. A core element of the EC road safety strategy includes a reduction of fatalities by 50% by the year 2010. Part of this strategy involves the requirement for good quality in-depth accident data. Such data are seen as a fundamental pre-requisite for the formulation and monitoring of road safety policy in the EU. Data are needed to assess the performance of road and vehicle safety policies and are needed to support the development of further actions. A recent analysis conducted by the European Transport Safety Council¹ identified that no single accident database could meet all of the data needs and that there were major gaps including in-depth accident causation. Specific policy questions at EU level involve the role of road infrastructure in accident causation, the monitoring of progress towards the 2010 targets and the improvement of vehicle design and performance in accident and injury causation.

Task 5.1 of the Work Package will use an existing accident investigation infrastructure to develop a broad ranging, intermediate level, fatal accident database. The dataset will be systematically selected according to a defined sampling plan and the data will be broadly representative of the countries in which the data are collected.

The data is predominantly being derived from the police documentation of fatal accident investigations. The data recorded will describe the environmental, vehicle and driver factors to provide a description of the whole crash. The data variables have been determined and the database developed. A pilot activity has been completed and a review of this pilot study is the first step before the main data collection phase commences where the data will be gathered and recorded onto the database. The main data collection period will involve investigation of a representative sample of between 2% and 10% of the fatal crashes in each country covered(UK, France, Italy, Germany, Sweden, The Netherlands, Finland), depending on the magnitude of the fatal population, resulting in approximately 1300 fatal accident cases being collated and analysed. The information provided in the database will contribute a major advance of the knowledge of fatal accidents at EU level and tie in with the EU targets for fatal accident reduction.

This report summarises some findings from the task 5.1 pilot study and highlights the methodology that will be used in the study through case study illustrations.

¹ EU transport accident, incident and casualty databases: - current status and future needs, ETSC, Brussels 2001

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Chapter 1: Introduction and background to the task

1.1 The current situation with this type of data collection

In-depth road accident data is a major requirement at EU level. Data are needed to assess the performance of road and vehicle safety policy and are also required to support the development of further actions. An analysis conducted by the European Transport Safety Council identified that no single accident database could meet all of the needs and that there were major gaps including in-depth accident and injury causation. Specific policy questions at EU level involve the role of infrastructure in accident causation, the monitoring of progress towards the 2010 targets and the improvement of vehicle and road design and performance in accident and injury causation.

Work-package 5 (WP5) of the SafetyNet Integrated Project addresses the need for a range of in-depth accident data and will provide two road accident databanks which deal specifically with the causation of accidents. WP5 will also tie in with existing European projects where harmonies exist, including the European Truck Accident Causation (ETAC) study, and the Human Centred Design for Information Society Technologies (HUMANIST) Network of Excellence.

Task 5.1 of the Work Package will use an existing accident investigation infrastructure in a number of EU member states to develop a broad ranging, intermediate level, fatal accident database. The information provided in the database will contribute a major advance of the knowledge of fatal accidents at EU level and tie in with the EU targets for fatal accident reduction. The dataset will be systematically selected according to a defined sampling plan and the data will be representative of the countries in which the data are collected.

It was proposed that the data would be derived from records of fatal accident investigations (police or other national authorities) but will record strictly factual data only. The data recorded will describe the Vehicle factors, Occupant factors and Roadway factors to provide a description of the whole crash. The level of detail recorded will be considerably greater than is obtainable in the CAREPLUS 2 specification; 117 variables with 500+ items of data will typically be gathered. Specific areas of data will describe the overall accident circumstances, driver and vehicle characteristics, specific road infrastructure features, and descriptions of other crash participants. The main data collection period will investigate a representative sample of between 2% and 10% of the fatal crashes in each country covered, depending on the magnitude of the fatal population. It is anticipated that 1300 fatal accident cases, involving at least 1 fatality per accident, will be collated and analysed.

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While this deliverable concerns mainly 5.1 it is important to have a basic understanding of the 5.2 accident causation task as many aspects, including the basic database structure, are shared.

The focus of task 5.2 is on accident causation and will gather information relating to this through on scene investigations. These investigations are not solely fatal accident like 5.1 but will range from damage only to include slight, serious and fatal collisions.

The basic architecture of the database is shared with 5.1 although specific accident causation variables are included. For more information on 5.2 see deliverable 5.4.

1.2 Project objectives

Work Package 5 (WP5) officially commenced with the start of the SafetyNet IP on 1st May 2004. The aim for the first 24 months of the WP 5 Task 1 project was to develop the methodologies and commence protocols for an intermediate level fatal accident study, primarily directed to support road and vehicle safety policy.

The project is being developed with close attention to the following objectives:

To set up the building blocks for a continuous European process of fatal accident data collection, coding and analysis

The main purpose of Task 5.1 is to build an effective data gathering structure, involving all of the relevant partners, to ensure that specific data on fatal crashes can be gathered in a systematic and routine manner. The data should be collected in a number of EU member states using completely compatible methods although there may be variations between teams according to differences in local infrastructure. The data itself will be of an intermediate level of detail but covering a representative sample of fatal crashes in each country. There will be no new investigations but teams will bring together available information from within the existing police and other emergency services structure.

To create a broad ranging, intermediate level, fatal accident database

The data recorded will describe the environmental (including road infrastructure, junctions, road signs etc.), vehicle and driver factors to provide a description of the whole crash (for example, similar to FARS database and Stats19²). The data will not be selected according to a "lowest common denominator" approach; instead partners will be challenged to gather a variety of information types. The support of the National Experts groups might be beneficial in smoothing the links within member states. Additional interpretative information

² Whenever they are informed of, or attend a road accident in which someone is killed or injured, the UK police complete an accident report. After verification of the information, it is transferred to a Stats19 form for input to the accident database of that police force. Data is used from Stats19 at a local level by engineers who look for indications of causation to design remedial measures, and nationally by policy-makers.



will also need to be included and a basic list of causation factors is proposed. To support the concept of integrated datasets 5.1 data fields are incorporated into the 5.2 accident causation protocol.

To create an independent data set (collected by unbiased parties)

Care will need to be taken when interpreting information gathered from within the judicial process where the attribution of blame is a primary objective. For example, the discussions over the European Truck Accident Causation Study (ETAC) project indicate the importance of data quality and validation, which should be included in both parts of WP5 at an early stage. Discussions within WP4 have also demonstrated the importance of independence. Independence will be assured by the collection of strictly factual data relating to the incident and not to the judicial procedures. No variable contained within the database will record attribution of blame or related data.

To create a widely accessible data set which ends up online as aggregated (summary) cases, (similar to the Community Road Accident Database (CARE) system)

The WP 5 partners and the WP 6 team will work closely together to devise the best approach for this.

To use the information collected to inform and monitor road and vehicle policy at EU and national level

The data from the fatal accident study are required for a variety of reasons. First and foremost, the data are needed to provide the EC with data that can be used in decision making for road safety policy and regulation. Therefore, some fundamental questions need to be addressed for example:

- Which road users are killed
- What are the circumstances
- What are the countermeasures

It is anticipated that the data could be used by a multitude of stakeholders in the road transport system but specifically road infrastructure experts, highway engineers and vehicles designers. The data should be used to evaluate trends and to conduct inter-country comparisons where possible. There could be a link to national activities since most safety actions take place under subsidiary concerns.

1.3 **Project teams**

The data collection areas for the accidents will be from the countries with the largest fatality populations in Europe (Italy, France and Germany) as well as northern (Sweden, Finland) and middle European (UK, Netherlands) countries. Independent groups with no interest in commercial aspects of the study outcomes will conduct all data gathering and accident investigation activities, listed below and detailed in Figure 1:



- Vehicle Safety Research Centre (VSRC), Loughborough University, UK (coordinators)
- Netherlands Organisation for Applied Scientific Research (TNO), Delft, Netherlands
- Institut National de Recherche sur les Transports et leur Sécurité (INRETS), Lyon, France
- Chalmers University of Technology (Chalmers), Gothenburg, Sweden
- Accident Research Unit at Medical University Hanover (ARU-MUH), Hanover, Germany
- The Finnish Motor Insurers' Centre (VALT/FMIC), Helsinki, Finland
- Department of "Idraulica, Trasporti, Strade", University of Rome (DITS), Rome, Italy



Figure 1 Map indicating WP5 partners and their locations

1.4 Scheduling of project

The main sub-tasks to be conducted within this Task are detailed in this section. The status of activities is indicated by the words: *Complete, Ongoing or Future Activity,* at the time of submission of this document (31st October 2006).

5.1.0 Co-ordination activities and general project management (Ongoing)

5.1.1 Evaluation of data gathering possibilities (Complete)

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The level of support from police, local and national administrations relating to access to current and recent fatal crashes will be evaluated. Specific issues to be addressed locally e.g. legal, personal data, administrative and ethical considerations will be identified.

5.1.2 Sampling criteria and methodology determination (Complete)

Specification of sampling region and criteria and specific data gathering methods. Develop statistical methods and sampling methodology and implement in each data collection region to ensure compatibility and linkage to national accident population (CARE).

5.1.3 Infrastructure (Complete)

Implementation of local infrastructures with links to police and other national authorities.

5.1.4 Protocol development (Complete)

Development of crash investigation protocols, data collection forms, and database system for storage, quality assurance and analysis. Specific areas of data will describe the overall accident circumstances, driver and vehicle characteristics, specific infrastructure features, and descriptions of other crash participants.

5.1.5 Team training (Complete)

Develop and present training course for data gathering groups to ensure harmonised, compatible procedures for gathering of data.

5.1.6 Pilot data gathering phase in each area (Complete)

Over a 2-month period, a trial data gathering exercise will be used to examine the viability of each local system and to validate overall methodologies and procedures. The pilot phase will also determine the final costs per case and the total case numbers to be gathered in the later part of the IP will be fixed.

5.1.7 Review of procedures (Complete)

Assess proposed data gathering practises, make amendments to procedures. Milestone before main data collection phase.

5.1.8 Full data collection (Ongoing)

Data collection activities in progress by all partners. It is anticipated that around 1300 sets of fatal accident data will be gathered over year beginning June 2006 and entered onto a database. All data available to the public will be anonymous respecting the privacy laws of Member States.

5.1.9 Data analysis and final report (Future Activity)

Upon complete data collection, data analysis and reporting will take place in accordance with the designated plan of action developed inline with EC priorities. The independent fatal accident database will primarily be directed to policy support in the areas of responsibility of the EC and there will be a dialogue to ensure that their needs are being addressed.

Transport

Chapter 2: Development of methodology

The overall aim of the task is to devise a factual database containing information on some 1300 fatal accidents in seven EU Member States. The data should be collected according to a harmonised and systematic protocol and therefore, particular attention has been paid to ensuring that the data collection methodology can be easily adopted by all partners. The needs of the data users are also an essential consideration and therefore the methodology has been developed with these issues at the forefront.

Summary of Task 5.1 completed activities

- Review of existing procedures and protocols in EU Member States and the US
- Derivation of a 'Data Variable List' by reviewing existing international protocols
- Data requirements have been sought from National Experts in EU25 Member States
- A number of systematic reviews of data variables have been undertaken to establish key elements for retention in data collection protocol
- Each team has established links with Police and local authorities to ensure data collection will run smoothly
- Database development
- Training programme completed during October 2005
- Pilot data gathering phase
- Final database completion (released June 2006)

2.1 User needs

Workshop on data requirements

A workshop was held in October 2004 entitled Establishing Requirements for a New European In-Depth Accident Causation Database. The aim of this workshop was to provide the future users of accident data the opportunity to feed into the process of identifying general and specific research and policy questions which future accident databases will be expected to address. This process was useful for both Task 1 and Task 2 of WP5. A report was produced to summarise the workshop³ which focussed on the issues raised during the workshop session on the general and specific requirements for accident causation information and the subsequent feedback session on this topic. The nature of the issues that arose could be divided into 8 categories (information domains), which included:

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³ WP5 Workshop Report "Establishing Requirements for a New European In-Depth Accident Causation Database", Oct 04. Available from http://safetynet.swov.nl/index.htm

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- 1. Pre-crash factors
- 2. Road infrastructure
- 3. Driver behaviour/human factors
- 4. Other road-users' behaviour
- 5. Vehicle technology
- 6. Passive safety considerations
- 7. Cost benefits
- 8. Other

As may be expected there was some overlap in the questioning that was suggested for each information domain, due to differences in the workshop participants' understanding and pre-conception of the definition of each. Inter-domain relationships were also of interest.

The feedback from the workshop has been constantly referred to whilst developing the data variables to ensure consistency with user needs.

Consultation of National Experts

Data requirements have been sought from National Experts in the EU25 Member States. Information and background on WP5 was presented to the National Experts in November 2004 and their feedback requested on data needs and requirements according to the nature of the project. All feedback was taken on board during the variable development process.

Research questions to ask of the data

Research questions to ask of the data have been discussed by the WP5 partners, and can be summarised into three main categories as detailed below. The list covers the primary issues and is designed to keep the project partners focused on the topics of interest and to highlight some of the areas to analyse:

General

- What kinds of cars are involved in fatal accidents (age, type)?
- What kinds of features in road infrastructure are involved in consequences of fatal accidents (trees, guide rails, poles...)?
- What kinds of features in road infrastructure are involved in fatal accidents (lane arrangements, speed limits)?
- Which type of roads are fatal accidents most commonly occurring on?
- Which gender/age is more likely to be killed in fatal accidents?
- Which hours (or day period) are the most dangerous in terms of number of fatal accidents?
- Questions on the age and model of cars that CARE can't answer.
- Were there any technical vehicle breakdowns before the crash?
- Were there visibility limitations that could prevent laser, radar or positioning (e.g. GPS) systems to work?

Design improvements/countermeasures

• Which fatal accidents can we do something about technically (vehicle or road infrastructure)?

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- Which protective measures have the highest benefit for reducing fatal accidents?
- · What type of countermeasures could save lives?
- Dependent on results of vehicles involved, systems and regulations should be developed for specific road users.
- Dependent on results of accident maneuver information, we should be able to determine which detection systems/assistance are needed.
- Which barriers were broken before the accident? It should answer which driver assisting equipment should be developed (red light detector, lane departure, etc.).

Causal factors

- Which "accident type" (e.g. single vehicle-, meeting-, cross-section accident etc.) is most commonly fatal?
- Which "collision type" (e.g. frontal-, side-, rear end collision or roll over) is most commonly fatal?
- What are the most common causes of fatal accidents? (situation, environment, alcohol etc.)
- · How do weather conditions affect road accidents?

2.2 Variable development and protocols

To start this process, a review of the existing procedures and protocols in EU Member States and the US was undertaken to ensure that the project would benefit from best practice. Existing procedures and protocols that were examined in detail included the UK Cooperative Crash Injury Study (CCIS), the UK On-the-Spot Project (OTS), the German In-Depth Accident Study (GIDAS), the US Fatal Accident Reporting System (FARS), and the Swedish Factors Influencing the Causation of Accidents and Incidents project (FICA).

An initial data variable list was produced containing 1138 variables. This was reviewed by VSRC and exclusions were made for variables that were outside the project objectives, e.g. injury related criteria. After close examination of the remaining 193 potential data variables, a provisional variable compilation list ensued.

In order to determine which variables should be collected in the database, each variable was discussed in turn under the main headings of accident level, roadway level, vehicle level, and road user level. WP5 partners reviewed the provisional variable list during email circulation and at technical meetings.

Each variable on the list was reviewed by each partner against specific questions. These included:

- Is the definition of each data variable suitable?
- Would collecting this data variable contribute usefully to the aims and objectives of the project and therefore is it deemed necessary to collect the data variable?

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- Can the data variable be collected with respect to the determined definition?
- What is the expected reliability of the proposed data variable?
- What proportion of cases (per partner) could this data variable be gathered for?

The decision was made that if the proportion of cases for a data variable was less than 30% for all partners in total, then the WP5 partners would consider removing the variable concerned. Additionally, if the number of positive partner responses for collecting the data variable was less than 50%, then careful deliberation needed to be given as to whether the variable was to be retained on the prospective list or not.

Each 'potential' variable that had not already been agreed upon was discussed. This process included discussion for each variable's inclusion and definition, and partners' comments regarding possible problems with the collection of particular variables.

The list received numerous iterations after lengthy and energetic discussions, with constant revisiting of the objectives of the projects and the needs of the data users, as well as taking into account WP5 partners' comments regarding possible problems with the collection of particular variables.

After preparation of the final variable list, the preparation of the glossary and database commenced.

2.3 Database pilot phase

While the database was in construction it was necessary to devise a test program. This Database Pilot Phase was designed to thoroughly explore the database and find areas where possible improvement or refinement was necessary.

The general test procedure used provided the Partners with an opportunity to test all the processes put into place over the previous months. This method would require an amount of data collection, data input and a thorough test of the database as a whole and this would all be recorded and discussed at a technical meeting before any changes to the database were agreed.

The partners were then jointly required to collect and input 35 cases (around 5 each) and this would include one case that would be scrutinised in depth.

When reviewing the database it was important to examine it in two ways. This was completed through a detailed case review of the 5 cases with the aim to gain an understanding of the accident without the original accident report. Additionally an indepth review of one randomly selected case was completed which examined closely variables and coding issues in the database and between partners.

The results and comments generated from this process were recorded and discussed between the whole 5.1 group at a technical meeting at TNO in March 2006.



For additional information on this area and also case examples and summary on the pilot phase see chapter 3

Chapter 3: Database Pilot Review

3.1 Purpose

It was important that once the variables for the forms had been fully determined and a working prototype of the database was available to the partners that a pilot phase was conducted.

The Purpose of this phase was to be a test bed for all the practices that WP 5.1 and 5.2 data collection tasks would put into place. This would involve a small amount of data collection using the various sources outlined in the partner reports listed in Deliverable D5.1, data input into the prototype database and a technical review meeting to discuss the practicalities of the systems put in place.

The pilot phase was held over a period of 3 months at the end of the methodology development phase. A review of this pilot was necessary to fine tune the 5.1 protocol.

3.1.1Data collection

The purpose of this task was to ensure that data collection from the relevant authorities could be undertaken without undue or unforeseen problems. This pilot task involved the partners acting on the exploratory work between themselves and the authorities holding the fatal accident information to gather the reports ready for data input

3.1.2 Data Input

To test the Pilot database, it was necessary to input a number of cases into the system to test for faults or problems. This was completed by inputting the cases previously retrieved from the authorities as detailed in 3.1.1.

Each partner involved was required to collect between 5 and 8 cases in total each being randomly selected from their chosen sample regions.

The partners were expected to extract all the relevant details from the cases and input them into the database in their entirety. For each case the partners were expected to list all of the problems with the data collection protocol and the WP5 database so that these could be addressed at the work package 5 review meeting. The intention was to then update the protocols in time for the full data collection period.

3.1.3Technical Meeting

To discuss the findings from this pilot phase it was important to hold a technical meeting in order to facilitate a rapid transfer of information for ideas and improvements; this meeting was held from the 6 - 10 March 2006 at TNO in Delft

3.2 Pilot Phase

The pilot phase of task 5.1 was an essential test of functionality of the prototype database. As this was to be a test bed for the full data collection task it was decided to use actual fatal accident cases.



Each Partner was required to collect a minimum of 5 cases from the relevant authorities resulting in a minimum of 35 cases for the pilot. This number was felt sufficient to enable the 5.1 group to further develop and streamline the database. This amount of cases would also allow the group to 'iron out' any problems with the database at an early stage.

Cases for the pilot study were selected on a case by case basis to include a broad range of road users and accident types. This was important as it allowed the database capabilities to be fully exploited.

The case collection for full scale data input will be based on a representative sample. This method will ensure the validity of analysis and results from across Europe.

A reviewing matrix was drawn up to illustrate the review process between the partners, this is shown in Table 1

Partner A This partner sends their completed 5.1 database to Partner B	Partner B This partner receives and reviews the completed 5.1 database from Partner A
VALT	VSRC
VSRC	MUH
MUH	INRETS
INRETS	DITS
DITS	TNO
TNO	Chalmers
Chalmers	VALT

Table 1 pilot phase case review matrix

Once the partners had received a completed database from their reviewing partner containing at least five cases it was necessary to look at each case in detail to gain an understanding of the fatal accident involved. The level of detail contained in these cases enabled each reviewing partner to "tell the story" of the accident. This review would be conducted without the original accident report and would therefore demonstrate that the database could record data in a systematic and logical method while containing all the relevant accident-related data.

The process detailed above would demonstrate to reviewing partners that the level of detail, quality and accuracy of the inputted data was sufficient and consistent across not only the respective centres but also the group as a whole.

The initial database checks, outlined above, provided an 'intermediate' level review of the cases and database as a whole providing an evaluation of the general functionality. However it was decided that a thorough review of one randomly selected case from the database should be completed. The main objective of this in-depth review was a 'data variable' and 'coding' evaluation.

The reviewing matrix (Tables 1) remained the same for this pilot phase (e.g. VSRC reviewing a VALT case) although additional information was provided from the partner where the accident report originated.

Transport

A translation of the fatal accident report was provided in English for the reviewing partner. This document was typically the original police report containing all the relevant accident information, scene plans, photographs and additional police data. In cases where this document was not available it was necessary for the partner distributing the information to provide a summary of the accident to a level where a thorough report could be drawn.

Once the in-depth review of the randomly selected case was under way it was important to maintain a dialogue between the partner from where the case originated and the reviewer from where the case was being examined. This process would allow the coding information to be discussed.

Ultimately this process would lead to a formal technical meeting where the 'in-depth' case reviews would be presented to the 5.1 group as a whole.

The major areas of interest while conducting the in-depth review centred mainly around coding issues. With the variables already decided this process would allow the coding options within these variable fields to be more closely scrutinised. For example, when it is necessary to code the variable field "crash avoidance manoeuvre" the following options are give in a drop down box (option box), see Table 2.

P_CrashAvoidanceManoeuvre				
CrashAvoidanceManoeuvreID	CrashAvoidanceManoeuvre			
1	No avoidance manoeuvre reported			
2	Braking (skid marks evident)			
3	Braking (no skid marks evident)			
4	Steering (evidence or stated)			
5	Steering and braking (evidence or stated)			
6	Other avoidance manouvre			
7	Not reported/inconclusive (by police)			
777	Not applicable			
888	Other			
999	Unknown			

Table 2 example variable field and options

Whilst it is quite evident that there could be almost infinite crash avoidance manoeuvres a finite list had to be developed for the database. Information on all data fields and data variables used in the WP5 database will be available as a WP5 deliverable at a later date.

The in-depth case review helped to highlight coding irregularities between the partners and the 5.1 group as a whole. This process aided the development of the data collection process in two ways, initially by fine tuning the option boxes to help reflect accident scenarios more accurately and secondly as a training exercise.

3.3 Pilot Review

Further to the physical process of entering fatal cases onto the pilot database it was important to review the information gathered from the technical discussions. This information would provide the 5.1 group with a direct way of feeding back useful data into the database development process.

This process; (although officially one task) can be best described as developing into two distinct parts labelled, for ease of explanation, Process A and Process B (fig 2)

Process A

Initially the fatal cases were entered into the prototype database as detailed above. This allowed the partners to determine and interpret the irregularities within the database. These problems were then discussed between the partners and recorded.

Process B

For the in-depth fatal case it was essential to cross reference the cases to highlight coding issues. Fig 5 illustrates the direction of feedback between partners allowing coding information to be discussed and conclusions drawn.

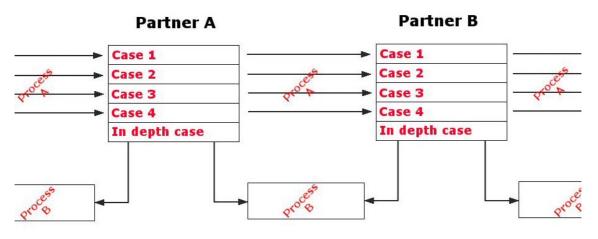


Fig 2: Case review flow chart

The amalgamation of these two areas of the pilot were recorded and discussed at the WP5 technical meeting 6-10 march 2006 in Delft, The Netherlands.

Initially the in-depth cases were formally presented allowing the whole 5.1 group to understand the specifics of the case. The format of the presentation was such that the fatal case was outlined to the group therefore giving everyone present the case history.

Basic coding discrepancies and problems due to variable or options boxes were also presented and open to discussion. This method allowed the group to brainstorm as an entirety, resolving database problems more quickly.

3.4 Review Case Example

The illustration (fig 3) demonstrates how the database forms link together to build up the picture of the accident as a whole. The subsequent database screen shots illustrate the different levels of accident information gathered and some of the problems and changes that were highlighted and updated at the technical meeting.



Fig 3 Database level details

The Partners were required to input the fatal case into the prototype database initially to identify potential problems with the software or the case. These details were then fed back to the respective partner (process B)

An overview of the database at a form level is shown below with descriptions of some of the related coding problems

Accident date	Plea M Car		involved in the accident per of relevant participan	ts
	Car.			
			0 Van	100
Time of day		/ Minibus	O Truck	0
		cultural vehicle	0 Motorcycle / Moped	
				0
	~		Unknown wehicle	0-0
	Corr	ments:		
Animal involvement?	~			
	Animal involvement?	0 Com	O Comments:	Bicycle Tram / Tram Shoe Vehicle (Pedestrian) O

Figure 4 Accident Level Form

No serious coding problems were highlighted when reviewing the accident level page. The two most important issues related to straightforward database coding, the first involved removing coding options throughout the database to encourage positive coding and the second involved disabling fields depending on the data entered. This would also allow the two versions of the database (5.1 and 5.2) to work more harmoniously together.

General Details		Comments:	Events Number of events ?	1	Most harmful event ?
Vehicle type Vehicle make Model and variant Car body style Drives of vehicle Vahicle colour Vahicle olour Vahicle olour Vahicle width (mm) Vaka vehicle towing ? Engine power (in kW) Year of manufacture - Karb weight (kg) Number of asles	<= 9999		Event 1 Collision type ? Vahicle interactad with Object struck Event 3 Collision type ? Vahicle interacted with Object struck Object struck Collision type ? Vahicle interacted with Collision type ? Vahicle interacted with Collision type ? Vahicle interacted with Collision type ?	R Unknown v	Calinion type 7 Vehicle interacted with Object struck Calinium type 7 Vehicle interacted with Object struck Collision type 7 Vehicle interacted with Collision type 7 Vehicle interacted with OR

Figure 5 Vehicle Level Form



A number of changes and clarifications were necessary when reviewing the Vehicle level form. The most significant being a complete review of the 'Events' variable. This was discussed and adapted through a group meeting,

The other variables and coding issues raised included a clarification on "Hazardous Cargo" and "Rollover" specifically for motorcycles and the deletion of "Causal" variables due to the reduced information available for the 5.1 groups

General Details			The Conditions		Comments:
Trafficway flow		*	Road conditions	×	Commence.
	hicle's side of the road		Light conditions	*	
	1	2		~ ~	
Speed limit (kph)	Type of speed limit	~	Strong winds	*	
/erticatal	Magnetal		Fog		
alignment	alignment	×		. 1091	
Construction/maintena	ince zone	×	Potential Causal Fa	ictors	Comments:
Traffic signal contro	l/device		Surface contaminants	~	
No Control	Regulatory signals	School zone signs	Inadequate signing ?	~	
Warning signs	Highway traffic signal	Other			
Unknown					
Fraffic signal control fu	nctioning	~	Traffic calming	~	
Roadway surface type			Was the traffic	~	
		~	calming device a contributing cause		
Pedestrian facility					

Figure 6 Roadway Level Form

Within the Roadway form it was necessary to review the variables "signing" and "Trafficway flow". The former has been modified so that signs at and around the accident scene can be more accurately and reliably recorded. This will prove especially important when entering data for the 5.2 project where more signing information can be gathered.

The changes to the "Trafficway flow" variable have aligned the coding options more accurately with road classifications throughout Europe. This in turn has led to a simplification of subsequent variables.



Road User Details	Case Number Vehicle N	lumber 1 _{of}	
Person number of		Road user classification	
General Details Age Age	SaletyNet medical eurome Body region med heavily injured Carmends Epection	rts:	(ef)
Ensih evoldance manoeume Commista	Number of days until doubt-	Other items wom Back to the Ac Back to the Ve Back to the Ro	hicle Details

Figure 7Road User Level Form

Only one major change for the Road user level form was discussed with the 5.1 group. This centered around the "Ejection" variable and was in essence a change to the glossary definition.



3.5 Pilot phase conclusions and recommendations

With all the relevant data and feedback associated with pilot phase collated it was important to resolve some of the issues described above before full data collection could begin.

This activity was coordinated by the VSRC and involved all the partners input to decide on the correct change to the data collection process. This process was split into two areas, those problems requiring only glossary or definition updates and those relating specifically to the database. These two activities were completed by the VSRC and DITS respectively.

From the thorough notes and minutes, taken throughout the Delft technical meeting discussions, changes to the variables and database could easily be pinpointed and changed in accordance with a group consensus. Variables where continued discussion was required was also conducted throughout the entire group through e-mail and telephone. This allowed each partner to discuss the problem from their data collection or input viewpoint.

The update process described above allowed the changes to the glossary to be completed rapidly therefore permitting the database changes, which are reliant on the glossary as 'foundations', to be completed with only minimal delay.

While considering the database it is important to stress the important role played by the team at DITS. This side of the project is extremely important and valuable to the project and the final result is a credit to the amount of hard work the Italian team have put into this project.



Chapter 4: Case Examples

This section will, by means of simplified examples, demonstrate the types and amount of data that can be gathered from fatal accident reports. This in turn gives an indication of the wide ranging levels of information generated from a fatal accident report.

With reference to the chapters above, relating to database development and data input, it will hopefully give an indication as to how complex the development process has been with regard to the choices of variables and option fields.

Included in appendix 1 are screen shots of the database with the example information inserted. This will give an idea of how the case information relates to each level to build up the picture of the accident.

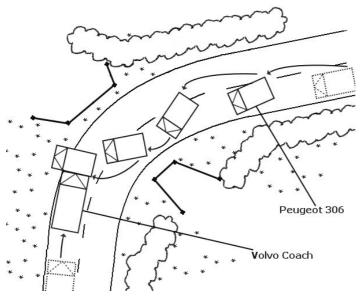
4.1 Case one

Peugeot 306 Vs Volvo Coach

Accident Level [Appendix 2, P31]

The accident occurred on Friday the 13th August 2004 at 1825hrs, the road layout was a gentle but gradually tightening bend from both directions. There were no junctions in the vicinity. The accident involved a car and coach; no other vehicles were involved.

Accident scenario:

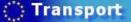


The Peugeot 306 loses control in a left hand bend and begins to rotate Anticlockwise, the driver then overcorrects the slide therefore presenting the Peugeot's nearside to the front of the oncoming coach.

Vehicle Level [Appendix 1 P32/33]

Vehicle 1

- Peugeot 306 Meridian hatchback
- Manufactured 2000
- 2.0HDI Diesel, Manual
- Front wheel drive
- 66Kw power output





• Equipped with ABS

Vehicle 2

- Volvo Coach
- Manufactured 1990
- Rear wheel drive
- Equipped with TELMA electro magnetic retardation device
- One Male driver and 19 passengers

Roadway level [Appendix 2 P34/35]



- Accident occurred on an unclassified rural road with one direction of flow each way; the carriageways were not physically divided
- The speed limit for this road was 60mph(97kmh)with the coach restricted to 50mph(80kmh)
- Road conditions were wet but drying rapidly
- · Weather conditions were fine and dry; it was daylight
- The Peugeot's approach was downhill into a gently tightening left hand bend
- The coach was also slightly downhill into a right hand bend
- There was only one sign present indicating a bend warning for the Peugeot
- The lane is known locally as a 'cut through' between two major roads



Approach of Peugeot



Approach of Volvo Coach





Scene Photos



Road user Level [Appendix 2 P36/37]

The driver of the Peugeot 306 was a 29 year old female. She was a resident of the country but it is unclear whether she was familiar with the road.

The driver was wearing a seat belt and the steering wheel hub airbag was deployed along with the struck-side seat back airbag.

The body area most heavily injured was the head; she died in hospital on the 20th August 2004, 8 days after the accident.

The driver of the Volvo coach was a 40 year old male who was also a resident of the country; again it is unclear whether he was familiar with the road. The driver of the coach, as indicated by the onboard tachograph, braked initially when he saw the Peugeot out of control; he then applied the TELMA system in an attempt to avoid the collision.

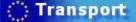
The coach was not fitted with any airbags although the driver was wearing his seatbelt. Neither the driver, nor any of the 19 passengers, sustained any injuries apart from shock.

Additional information

Through the police vehicle examination it became clear that the Peugeot 306 had new rear pads and disks fitted earlier in the day; this could possibly be determined as a vehicle defect.

From witness statements and most importantly the statement from the first witness at the scene, it became clear that an unlit cigarette and lighter was found on the Peugeot drivers lap. This could have been a distraction or causative issue.

After the accident the signing and road surface was also renewed and this could have been a factor in the accident considering the minimal signing and the drying road surface.

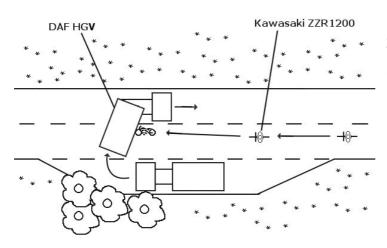


4.2 Case two

Kawasaki ZZR1200 Vs DAF Articulated truck

Accident Level [Appendix 1 P38]

The accident occurred on Friday 5th September 2003 at approximately 0630hrs, the road layout was straight for 1800m with the accident occurring around the halfway point of this stretch. At the accident scene there was a shallow layby to the nearside (viewed from the motorcyclist). There were no road junctions directly related to the accident. The collision involved a motorcycle and a Truck and no other vehicles were involved



Accident scenario: The Kawasaki motorcycle collides with the offside of the DAF articulated trailer as the DAF attempts a U turn out of a roadside layby

Vehicle Level [Appendix 1 P39/40]

Vehicle 1

- Kawasaki ZZR1200 Motorcycle
- Manufactured 2003
- 1164cc producing 158bhp(116KW)
- 236kg
- No ABS fitted
- Travelling due South

Vehicle 2

- DAF 95XF tractor unit
- 3 axle articulated chassis trailer
- 38 tonnes
- Initially facing South although attempting a U turn to face North





Transport

Roadway Level [Appendix 1 P41/42]

The accident occurred on a 60mph(97kmh) 'A-class' road with two way undivided traffic flow; this road was level and straight for 1800m. At the time of the accident witness statements suggest thick fog with visibility less than 50m. However the road surface was dry with the surface in good condition and free from contaminants

By referencing the accident time (0630) with the time of sunrise (0618) it can be established that light conditions would have been partially dark

The DAF lorry would have been limited to 40mph (64kmh) on this particular road.

There was only one sign evident from the accident scene photos. This is of unknown type although likely to be a junction warning. It is not thought to be relevant to the accident.

The motorcycle's pre-impact speed derived through police reconstruction was in the region of 43mph (69kmh)





Scene Photos

Road user Level [Appendix 1 P43/44]

The male rider of the Kawasaki motorcycle was a resident of the country although it is unclear whether he was familiar with the road.

The rider attempted to avoid the accident when he saw the articulated trailer blocking his path by emergency braking. However the lack of Anti-lock braking system (ABS) fitted caused the motorcycle to skid.

The rider died at scene from injuries sustained from hitting the trailer support leg and adjacent road wheel.

The male driver of the DAF truck was also a resident of the country and was delivering goods to a company a short distance away. However, the U turn manoeuvre suggests that he wasn't entirely familiar with the road layout. The driver sustained no injuries from the collision.

Additional Information

According to police calculations the safe speed for the motorcyclist in the conditions indicated by witnesses was 38mph (61kmh). This probably would have enabled a safe emergency stop, the motorcycle was travelling at 43mph (69kmh) at the time of this incident.

Had the motorcycle been fitted with ABS then the skid would not have occurred and the machine would have stayed upright, at the pre impact speed of 43mph (69kmh) then the motorcycle would have struck the trailer at the lower speed of 25mph (40kmh). It is not clear whether this impact would have been survivable. When considering the view from the approaching motorcyclist, the truck with headlights on, would have appeared to be in the opposite carriageway. Only at the point where the motorcyclists stopping distance was too great for his speed would the lower voltage trailer warning lights have be visible.



Chapter 5: Summary

In summary the pilot phase has shown to be effective on many levels. Initially the task could be seen to test and develop a prototype database from a user level improving its functionality and ease of use while still allowing fatal cases to be accurately recorded.

Furthermore, the pilot phase and subsequent review process has been an essential requirement in terms of defining the database variables with more certainty and greater clarity. This will improve the accuracy and quality of the data recorded by providing a wide ranging set of variables, which not only can be recorded, but recorded more often, more accurately and with more confidence.

Further to the database development the whole pilot phase has provided the 5.1 group with an invaluable period of training, either working directly with the database on fatal cases or working indirectly thorough discussion and development meetings. Finally, the pilot phase has been an essential trial of the project methodology and in particular a means of ensuring that the data collection teams can operate the data collection process in their defined sample regions without unnecessary and unforeseen problems.



Appendix 1

Case 1

Accident Details Fields Saved into the DB for all previewed Forms Percentage of available fields filled in all Forms	
First event in accident Cross median/centreline Related factors in the accident None Hit and Run? No Animal involvement? No	Car / MPV 1 Van Bus / Minibus 1 Truck Agricultural vehicle Motorcycle / Moped Bicycle Train / Tram Shoe Vehicle (Pedestrian) Other Unknown vehicle Comments:
How was the majority of this accident level What level of comparison o	nfidence you have in each source/method and the reasons
Move to vehicle details	Photos New accident details

Case 1 Accident Level [p24]



Vehicle Details Case I	Number 7002 V	/ehicle Number 1	of 2		Safe D
					Ret
Number of Occupants/Riders i	in the Vehicle	Events		Number of events ?	2 🗸
General Details	Comments:	Most harmful event ?	Event 2 💌	Area of most damage	Left 🗸
Vehicle type Car / MPV		_ Event type	Non-collision 🗸	Event type	
Vehicle make Peugeot	~				~
Model and variant 306 Meridian H	Contraction of the Contraction o	Event detail	Cross median/centrel 🛩	4 Event detail	~
Car body style Hatchback	~	Interacted with	~	Interacted with	~
Driven wheels Front Drive of vehicle Right hand driv	V	Collision type	~	Collision type	~
Drive of vehicle Right hand driv Vehicle colour Blue	ve 💌	Event type	Collision with vehicle 🐱	Event type	0
Vehicle length (mm) <= 99999	4060 🗸	9 Event detail	Vehicle travelling on s 🗸	5 Event detail	~
Vehicle width (mm) <= 9999	1680 🗸	Interacted with	Vehicle 2	Interacted with	~
Was vehicle towing ? No	~	Collision type	Side to front (angle n 🗸	Collision type	~
Engine power (in kW)	66 🗸				
Year of manufacture - 4 digit	2000 🗸	Event type	×	Event type	~
Kerb weight (kg)	1140 🗸	Event detail	~	Event detail	~
Number of axles	~	Interacted with	~	Interacted with	~
Vehicle specific speed limit t Ap	plicable 🗸	Collision type	~	Collision type	~
	Comments:	1			
Potential Causal Factors	Comments.	eSafety Iss			
Are vehicle defects possibly No causal in the accident?	~	ABS Yes	BAS No	ACS No	ESP No 💌
Has the vehicle passed a mandatory	Yes	LDW No	*	CSS No 🔽	TCS No 🔽
technical inspection/MOT? Driver manoeuvre prior to accident	Lost control of vehicle	Comments:			
Transient factors	Distraction(s) inside vehicle				
Vehicle heading at accident	West	×			
	No				
Hazardous cargo?	NU				
Was hazardous cargo discharged?	Lister aver	~			
Pre-impact speed	Unknown				
Other comments about vehicle:	and lighter found on the lap of the	deceased, probable caus	se of pre-impact distraction.		
Move to roadway de	taile	Photo	Re Rac	k to the Accident	Detaile
wove to roadway de		Photo	Dac Dac	k to the Accident	

Case 1 Vehicle Level – Vehicle 1 [p24]



Vehicle Details Case N	lumber <mark>7002</mark> V	'ehicle	Number 2	of 2		Safe ▼Net	5
Number of Occupants/Riders in	the Vehicle 20	Even	ts		Number of events ?	1	*
General Details		Most h	armful event ?	Event 1	Area of most damage	Front	~
Vehicle type Bus / Minibus	Comments:				-		
Vehicle make Volvo	~		Event type	Collision with vehicle			V
Model and variant Unknown	~	1	Event detail	Vehicle travelling on s	Event detail		Y
Car body style	~	- 8 - - }	Interacted with	Vehicle 1	Interacted with		~
Driven wheels Rear	~		Collision type	Front to side (angle n 🗣	Collision type		~
Drive of vehicle Right hand drive	e 💌		2 100				
Vehicle colour White	×	0	Event type	×			Y
	known 🛩	2	Event detail	~	Event detail		~
Vehicle width (mm) <= 9999 Uni	known 🚩		Interacted with	~	Interacted with		~
Was vehicle towing ? No	~		Collision type		Collision type		×
Engine power (in kW) Uni	known 🛩		Event turn		Event type		
Year of manufacture - 4 digit	1990 🖌	9	Event type				~
Kerb weight (kg)	known 🗸	5	Event detail	8			×
Number of axles	~		Interacted with				~
Vehicle specific speed limit	80 🗸		Collision type		Collision type		~
Potential Causal Factors Are vehicle defects possibly No causal in the accident? Has the vehicle passed a mandatory technical inspection/MOT? Driver manoeuvre prior to accident Transient factors Vehicle heading at accident Hazardous cargo? Was hazardous cargo discharged? Pre-impact speed	Comments: Yes Driving round a right hand bend No distraction North east No 40	S S	eSafety Iss ABS No LDW No Comments: Telma Electro	Ues BAS No magnetic retardation dev	CSS No CSS No CSS	ESP No TCS No	>
Move to roadway det	ails		Photo	s Ba	ck to the Accident	Details	

Case 1 Vehicle Level – Vehicle 2 [p25]



Roadway Details Case Number 7002 Veh	icle Number 1 of 2 Car / MPV Peugeot 306 Meridian Hdi 90 Blue
General Details Carriageway type Number of lanes on vehicle's side of the road Number of lanes on vehicle's side of the road Motorway Speed limit (kph) 97 Type of speed limit Junction No junc Local area Rural Verticatal alignment Bend to left Construction/maintenance zone None Roadway surface type Asphalt Pedestrian facility None present Cycle facilities	Comments: Road conditions Wet Comments: Road surface drying rapidly Light conditions Daylight Paplight Traffic flow Normal traffic flow Paplight Weather conditions Dry Potential Causal Factors Surface contaminants None Potential Causal Factors Inadequate signing ? No Potential Cause Inadequate signing ? No Potential Cause In the action? Potential Cause Potential Cause In the action? Potential Cause Potential Cause In the action? Potential Cause Potential Cause
Signs Number of signs present 1 sign Problem with s Sign 1 Danger warning signs No visibility pro Sign 2 Sign 3 Sign 4 Sign 5 Any other comments on the roadway:	
Move to road user details Pho	tos Back to the Accident Details

Case 1 Roadway Level – Vehicle 1 [p25]



Roadway D	Details Case Numb	per 700	02 Veh	iicle Number <mark>2</mark> of	2 <mark>Bus / Minibu</mark> Unknown W		Safe
							KINE
General Details				The Conditions			Comments:
Carriageway type Tw	vo way traffic divided by painte	d line	*	Road conditions	Wet	*	Road surface drying
Number of lanes on ve	hicle's side of the road		1	Light conditions	Daylight	~	rapidly
Motorway		No	~	Traffic flow	Normal traffic flow	~	
Speed limit (kph)	97 Type of speed limit	Permanent	~	Weather conditions	Dry	~	
Junction No	junc 🖌 Local area	Rural	*	Strong winds	No	*	
		5		Fog	No fog reported	~	
Verticatal	Horizontal	Deniel an viela		Determine Coursel	Fastan		Comments:
alignment Flat	alignment	Bend to right	~	Potential Causal Surface contaminants		~	
				Inadequate signing ?	No	~	
Construction/maintena	ance zone	None	~	Traffic calming	No	~]
Roadway surface type	Asphalt		*	Was the traffic	110	~	
Pedestrian facility	None present		*	calming device a			
Cycle facilities			\sim	contributing cause in the accident?			
Signs Number of si	gns present 🛛 No signs 👻	Prot	olem with	sign	I	Not W	orking
Sign 1	~			~	[~
Sign 2	×			~ [[~
Sign 3	×	(~	[~
					L		
Sign 4	~			*			~
Sign 5				~			×
Move to re	oad user details		Pho	otos	Back	to th	ne Accident Details
					Back	to t	he Vehicle Details

Case 1 Roadway Level – Vehicle 2 [p25]



Impairment None Software for the country? Software for the traffic system? Software for the traffic system software for	uences ry severity Fatal medical outcome Fatal n most heavily injured Head : None Comments:	Road user classification Driver for Motorcyclists M/cycle helmet worn Helmet type Other protective items worn Partial leathers (protective jacket) Partial leathers (trousers) Motorcycle boots Reflective/High visibility items worn
Is the person a resident of Yes Yes Fitter country? Is the person familiar with the traffic system? Comments: Crash avoidance manoeuvre Steering (evidence or stated)		Motorcycle boots
Crash avoidance manoeuvre Steering (evidence or stated)	tt/extrication None v ospitalYes v days in hospital 8 v ene/en route No v days until death 8 v	Comments:
Seat position 1.1	Il Causal Factors of alcohol involvement No 🛩 orted other drug involvement No 🛩 s:	
Seat direction Front facing Seatbelt Used Comments: Airbag availability Present Airbag deployment Yes Comments about location of airbags: Hub, facia and seat bags, Hub and FSP seat bag deployed	aint fitted	

Case 1 Road User Level – Vehicle 1 [p26]

💮 Transport

erson number 1 of 20 eneral Details ge 40 w ender Male w maximum None w imments:	Bus / Minibus Consequences Police injury severity SafetyNet medical outcome Body region most heavily injured Comments: Ejection	Not Injured	For Motorcyclists Comments: M/cycle helmet worn Image: Comment in the structure items worn Other protective items worn Partial leathers (protective jacket)
eneral Details ge 40 v ender Male v imments: the person a resident of Yes v	Police injury severity SafetyNet medical outcome Body region most heavily injured Comments:	-	
e country?	Ejection None		Partial leathers (trousers)
the person familiar with traffic system?	Entrapment/extrication None Taken to hospitalNo Number of days in hospital Died at scene/en route Number of days until death	Comments:	Motorcycle gloves Motorcycle boots Reflective/High visibility items worn Comments:
rash avoidance manoeuvre raking (no skid marks evident) v omments: eat position 1.1 v eat direction Front facing v eatbelt Unknown v	Potential Causal Factors Suspicion of alcohol involvement Police reported other drug involvemen Comments:	nt No V	If or Bicyclists Comments: Bicycle helmet wom ✓ Helmet type Other items worn High visibility/Reflective clothing Thick clothing (jacket and trousers) Comments:
irbag availability Not present v rbag deployment v omments about location of airbags:	for Children Child restraint fitted Child restraint used CRS Type Comments:		for Pedestrians Pedestrian-Vehicle-Interaction Pedestian company Pedestrian disabilities Deaf Blind/partially sighted Requires use of support to wall Not applicable Other Unknown Reflective/high visibility items worn Comments:
ny other omments n this bad user:			



Case 2

Accident Det Fields Saved into the D for all previewed Forms Percentage of available fields filled in all Forms	diis B Yes 100 %	/Net Accident Data Select ● Fatal Accident Cas ● Accident Causation	e	kage 5 cident Case Check 🗖	Safe Net
Case Number	Accident date Accident day Frie Time of day on (GDV number) Overturn/rollover None No	tre Name VSRC Unknown 05/09/2003 iay 06:30 721 involvement? No v se with the underside of the DAF 95X	Car / MPV Bus / Minibus Agricultural vehicle Bicycle Shoe Vehicle (Pedestrian)	Total number of vehicles involved in the accident er of relevant participan Van Truck Motorcycle / Moped Train / Tram Other Unknown vehicle	
How was the major data collected? Information Source [Method of Investigation [rity of this accident leve	What level of confid why:	ence you have in each so	urce/method and the rea	asons
Move to veh	icle details		Photos	New accident d	letails

Case 2 Accident Level [p27]



Vehicle Details Case N	Number 7019 N	/ehicle Number	1 of2		SafetyNet
Number of Occupants/Riders i	n the Vehicle	Events		Number of events ?	2 🗸
General Details	Comments:	Most harmful event ?	Event 2	Area of most damage	Front 🗸
Vehicle type Motorcycle / N	Noped 🔽	_ Event type	Non-collision 🗸	Event type	~
Vehicle make Kawasaki	~	Event detail	Overturn/rollover	Event detail	~
Model and variant ZZR1200	*	Interacted with		Interacted with	~
Car body style Driven wheels Rear	×	Collision type		Collision type	
Drive of vehicle Not Applicable	0000	Comsion type	Y	Comsion type	<u>×</u>
Vehicle colour Blue	×	Event type	Collision with vehicle 💌	Event type	~
Vehicle length (mm) <= 99999	2160 🗸	D Event detail	Vehicle travelling on s 🗸	🛛 🗲 Event detail 📄	~
Vehicle width (mm) <= 9999	754 🗸	Interacted with	Vehicle 2	Interacted with	~
Was vehicle towing ? No	~	Collision type	Front to underside 🗸	Collision type	~
Engine power (in kW)	116 🗸				
Year of manufacture - 4 digit	2003 🗸	Event type	×	Event type	~
Kerb weight (kg)	236 🗸	Event detail	Y	Event detail	×
Number of axles	~	Interacted with	~	Interacted with	~
Vehicle specific speed limit t App	plicable 🗸	Collision type	~	Collision type	~
Potential Causal Factors Are vehicle defects possibly causal in the accident? No Has the vehicle passed a mandatory technical inspection/MOT? Driver manoeuvre prior to accident Transient factors Vehicle heading at accident Hazardous cargo? Was hazardous cargo discharged? Pre-impact speed Pre-impact speed	Comments: No Driving along a straight road No distraction North No 69			CSS No V	ESP No V TCS No V
Other comments about vehicle:	ung for MOT test.				
Move to roadway de	tails	Phot	os Bac	k to the Accident	Details

Case 2 Vehicle Level – Vehicle 1 [p27]



Vehicle Details ca	se Number	7019	/ehicle	Number 2	of 2			Safe Net	
Number of Occupants/Ride	ers in the Ve	hicle 1	Event	ts		N	umber of events ?	1	~
General Details		Comments:	Most h	armful event ?	Event 1	✓ A	rea of most damage	Underside	~
Vehicle type Truck	~	Towing 3 axle	-						
Vehicle make DAF	*	container trailer shortened to		Event type	Collision with vehicle		Event type		٧.
Model and variant 95XF	~	minimum length		Event detail	Vehicle travelling on :	e 🕶 🖌	🔼 Event detail 📃		~
Car body style	×		-	Interacted with	Vehicle 1	~	Interacted with	1	~
Driven wheels Rear	~			Collision type	Underside to front	*	Collision type		×
Drive of vehicle Right han	d drive 💌		-						
Vehicle colour Red	~			Event type		~	Event type		~
Vehicle length (mm) <= 99999	Unknown 🐱		Z	Event detail		× .	D Event detail		~
Vehicle width (mm) <= 9999	Unknown 🗙			Interacted with		~	Interacted with		Y
Was vehicle towing ? Yes, Plea	ise commer 🛩			Collision type		~	Collision type		4
Engine power (in kW)	316 🗸		-	Event type			_ Event type		V
Year of manufacture - 4 digit	1997 🗸		0	Event detail			C Event detail		4
Kerb weight (kg)	Unknown 🗙					×			v
Number of axles	2 🗸			Interacted with			Interacted with		
Vehicle specific speed limit	64 🗸			Collision type		~	Collision type		×
Potential Causal Factors Are vehicle defects possibly No causal in the accident? No Has the vehicle passed a mandate technical inspection/MOT? Driver manoeuvre prior to accident Transient factors Vehicle heading at accident Hazardous cargo? Was hazardous cargo discharged? Pre-impact speed	Pulling of No distra South	ut of lay-by onto main n action	× oai× × ×	eSafety Iss ABS No LDW No Comments:	ues Bas No	V	ACS No 💙 CSS No 💙		*
Move to roadway	details			Photo	s B	ack	to the Accident D	Details	

Case 2 Vehicle Level – Vehicle 2 [p27]



Roadway Details Case No	umber <mark>7019</mark> Vei	hicle Number 1 of	1 2 Motorcycle / Mope Kawasaki ZZR120	
General Details Carriageway type Two way traffic divided by p Number of lanes on vehicle's side of the road Motorway	nt Straight road ✓	The Conditions Road conditions Light conditions Traffic flow Weather conditions Strong winds Fog Potential Causal Surface contaminants Inadequate signing ? Traffic calming Was the traffic	1 <u></u>	Comments:
Sign 1	Problem with	~	Not W	
Sign 3 Sign 4 Sign 5		> > > > >		• • • • • •
Any other comments on the roadway Move to road user details		otos		ne Accident Details

Case 2 Roadway Level – Vehicle 1 [p28]



Roadway Details Case Number	7019 Veh	icle Number 2 of	2 Truck DAF 95XF	Red S
				ar C ZNet
				AT LOC
General Details		The Conditions		Comments:
Carriageway type Two way traffic divided by painted line	*	Road conditions	Dry	 Visibility less than 50
Number of lanes on vehicle's side of the road	1	Light conditions	Partial light	meters
Motorway No	~	Traffic flow	Light traffic flow	
Speed limit (kph) 97 Type of speed limit Permanent	*	Weather conditions	Dry	
Junction No junc V Local area Rural	~	Strong winds	No	•
		Fog	Dense fog	
Verticatal alignment Flat 🖌 Horizontal alignment Straight road	~	Potential Causal	Factors	Comments:
		Surface contaminants		
		Inadequate signing ?	No	×
Construction/maintenance zone None	~	Traffic calming	No	×
Roadway surface type Asphalt	~	Was the traffic		
Pedestrian facility None present	~	calming device a contributing cause		
Cycle facilities	~	in the accident?		
Signs				
Number of signs present No signs 👻	Problem with s	sign	Not V	Vorking
Sign 1		Ŷ		~
Sign 2		¥		~
Sign 3		×		~
Sign 4		Ŷ		×
Sign 5		~		~
Move to road user details	Pho	tos	Back to t	the Accident Details

Case 2 Roadway Level – Vehicle 2 [p28]



Road User Details	ase Number 7019	Vehicle Number 1	of 2 Motorcycle / Moped Kawasaki ZZR1200 Blue
Person number 1 of 1 General Details Age Unknown Gender Male Comments:	Motorcycle / Moped Consequences Police injury severity SafetyNet medical outcome Body region most heavily injured Comments: Ejection	Fatal Fatal Multiple regions Comments:	Helmet type Full Face 💌
Is the person a resident of the country? Yes Is the person familiar with the traffic system? Unknow Comments:	Entrapment/extrication None Taken to hospital No Number of days in hospital		. for Bicyclists
Crash avoidance manoeuvre Braking (skid marks evident) Comments: Seat position Seat direction Seat belt Comments:	Suspicion of alcohol involvement Police reported other drug involvemen Comments:		icycle helmet worn
Airbag availability Airbag deployment Comments about location of airbags:	for Children Child restraint fitted Child restraint used CRS Type Comments:	Pe Pe P	for Pedestrians adestrian-Vehicle-Interaction adestian company edestrian disabilities Blind/partially sighted Requires use of support to walk Not applicable Other Unknown effective/high visibility items worn mments:
Any other comments on this road user:	<u></u>	Photos	Back to the Accident Details

Case 2 Road User Level - Vehicle 1 [p28]

🔆 Transport

Road User Details	Case Number 7019	Vehicle Number 2	of 2 Truck DAF 95XF Red
Person number 1 of 1	Truck	R	oad user classification Driver
General Details Age Unknown v Gender Male v Impairment None v comments: v Is the person a resident of the country? Yes v Is the person familiar with the traffic system? Unknow v	Consequences Police injury severity SafetyNet medical outcome Body region most heavily injured Comments: Ejection	Not Injured Not Injured Comments:	
Comments: U-turn and proximity to depot address suggests unfamiliarity	Died at scene/en route Number of days until death	* *	
Crash avoidance manoeuvre No avoidance manoeuvre reported Comments: Seat position Seat direction Seat direction Seatbelt Comments:	Potential Causal Factors Suspicion of alcohol involvement Police reported other drug involvement Comments:	No V No V Hit Th	for Bicyclists Comments: icycle helmet worn Image: Comments of the state of the
Airbag availability Not present Airbag deployment Comments about location of airbags:	for Children Child restraint fitted Child restraint used CRS Type Comments:	Pe Pe Pe Re	for Pedestrians
		Photos	Back to the Accident Details

Case 2 Road user Level – Vehicle 2 [p28]

