



Project No. 101069500—AfroSAFE

## **AfroSAFE: Safe System for radical improvement of road safety in low- and middle-income African countries**

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Deliverable 1.2

### **Data management plan**

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<b>RE</b>	Restricted to a group specified by the consortium (including the Commission Services)	
<b>CO</b>	Confidential, only for members of the consortium (including the Commission Services)	

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# 1 Introduction

## 1.1 Project aim

The primary aim of the project is to make a significant progress in propagation of the Safe System *modus operandi* within the road safety work context in African countries. This is reached by exposing the local practitioners and decision makers to the state-of-the-art knowledge and practices within road safety management based on Safe System principles, as well as supporting them by sharing necessary knowledge, tools and methods for road safety improvement—adjusted to the African conditions and in tight cooperation with the local actors.

## 1.2 Project objectives

More specifically, the project aims to:

- Translate the recommendations of the African-EU Transport Task Force into actionable activities relevant for the African countries involved in the project and achieve specific and measurable results within the project budget and lifetime.
- Identify current practices that are not in line with the Safe System, as well as existing formal and informal constraints within road safety management and suggest ways of addressing these problems.
- Introduce additional/alternative road safety data, such as safety performance indicators, that could be used for ‘management-by-objectives’ in conditions of unreliable/unavailable data on fatalities and injuries; expand the African Road Safety Observatory for accommodating these data.
- Support establishment of national in-depth accident investigation teams and standardised databases for storing and sharing the accident investigation reports.
- Analyse and revise national road safety programs in selected countries ensuring their firm foundation in Safe System approach.
- Introduce state-of-the art tools for Infrastructure Safety Management and promote their integration into the standard cycle of the infrastructure design-construction-maintenance-rehabilitation.
- Analyse the current practices of vehicle safety rating and control, both during import and later exploitation, and identify the most efficient (in terms of potential lives saved) changes to be introduced to increase the general safety level of the vehicle fleet.
- Analyse road safety culture differences between African and EU countries and how they can affect the performance of road safety measures ‘imported’ from EU.
- Study the most safety-critical road user behaviours (speeding, drunk driving, etc.) and suggest systematic measures to address them through driver education, licencing, enforcement, awareness campaigns, etc.
- Analyse and improve the current practices in post-crash care, ensure their compliance with WHO protocols and support establishing of training programs for professionals and road users in emergency post-crash care.
- Significantly contribute to building the local capacity in selected African countries on relevant, up-to-date expertise and skills within the road safety domain.
- Ensure sustainable reproduction of the knowledge and skills by establishing local centres of excellence that will continue to train road safety professionals and users after the project end.
- Develop a holistic approach for empowering vulnerable road users in traffic through inclusion of their needs regarding infrastructure design, vehicle (external) safety and addressing general attitudes towards them as well as specific unsafe road user behaviours.

- Implement pilot projects and demonstrations covering all pillars of road safety work—management, infrastructure, vehicles, road users and post-crash care.
- Expand the dissemination and demonstration activities to cover other African countries, not directly involved in the project, and thus further increase the exposure to the Safe System thinking and way of working.
- Finally, to contribute to the global target of serious injuries and fatalities reduction by 50% in 2030—primarily through building up the local African capacity in terms of knowledge, tools and methods that would allow for more focused and efficient road safety management.

While project activities cover all aspects of road safety in Africa, two areas get particular attention and are emphasised in all work packages:

1. **Vulnerable road users.** VRUs are the largest but most underprivileged road user group in Africa, disproportionately impacted by traffic accidents. Creating safe environments for VRUs has a direct positive impact on several of the Sustainable Development Goals, such as related to health and well-being (Nr.3), gender equality (Nr.5), sustainable and liveable cities (Nr.11) and climate action (Nr.13).
2. **Local expertise building.** To achieve Safe System in Africa, it is necessary to reach a critical mass of both road safety professionals and road users with the right knowledge and attitudes. It is a long-term process, and the local educators play the key role in it. The project thus adopts ‘train-the-trainer’ approach, creating the initial momentum and concentration of local expertise that will continue to spread after the project end.

### 1.3 Project timeline

The project started on 1 September 2022 and ends 31 August 2026 (duration 48 months).

Table 1 shows conversion between the project month numbers and the actual calendar dates.

**Table 1 Project months conversion**

Project month	Calendar date	Project month	Calendar date	Project month	Calendar date	Project month	Calendar date
M1	Sep 2022	M13	Sep 2023	M25	Sep 2024	M37	Sep 2025
M2	Oct 2022	M14	Oct 2023	M26	Oct 2024	M38	Oct 2025
M3	Nov 2022	M15	Nov 2023	M27	Nov 2024	M39	Nov 2025
M4	Dec 2022	M16	Dec 2023	M28	Dec 2024	M40	Dec 2025
M5	Jan 2023	M17	Jan 2024	M29	Jan 2025	M41	Jan 2026
M6	Feb 2023	M18	Feb 2024	M30	Feb 2025	M42	Feb 2026
M7	Mar 2023	M19	Mar 2024	M31	Mar 2025	M43	Mar 2026
M8	Apr 2023	M20	Apr 2024	M32	Apr 2025	M44	Apr 2026
M9	Maj 2023	M21	Maj 2024	M33	Maj 2025	M45	Maj 2026
M10	Jun 2023	M22	Jun 2024	M34	Jun 2025	M46	Jun 2026
M11	Jul 2023	M23	Jul 2024	M35	Jul 2025	M47	Jul 2026
M12	Aug 2023	M24	Aug 2024	M36	Aug 2025	M48	Aug 2026

## 1.4 Project partners

Table 2 presents the project partners of AfroSAFE.

**Table 2 AfroSAFE partner list**

No.	Participant organisation name	Country
1	Lund University (LU) – co-ordinator	Sweden
2	Institute of Transport Economics (TOI)	Norway
3	Swedish National Road & Transport Research Institute (VTI)	Sweden
4	University of Education, Winneba (UEW)	Ghana
5	Zambia Road Safety Trust (ZRST)	Zambia
6	NTU International (NTU)	Denmark
7	Technical University of Delft (TUD)	Netherlands
8	Volvo Technology AB (Volvo)	Sweden
9	Autoliv Development AB (Autoliv)	Sweden
10	Chalmers Industriteknik (Chalmers)	Sweden
11	University of Dar es Salaam (UniDS)	Tanzania

## 1.5 Work packages

AfroSAFE consists of eight work packages listed in Table 3.

**Table 3 Project work packages (WP)**

WP	WP title	Lead participant	Start month	End month
1	Project management	LU	M1	M48
2	Road safety management & data	TOI	M1	M30
3	Safe infrastructure	LU	M1	M45
4	Safe vehicles	Chalmers	M1	M45
5	Safe road users	VTI	M1	M45
6	Post-crash care	NTU	M1	M45
7	Capacity building	TUD	M7	M48
8	Dissemination	ZRST	M1	M48



## **WP1 - Project management**

### Objectives:

- To provide efficient and agile project management, with a clear distribution of responsibilities and roles transparent to all partners
- To ensure quality control of all the project deliverables
- To support communication and reporting to the EC
- To handle risks that may arise during the project

### Tasks (lead partner, involved partners):

- 1.1 Technical Management / Scientific leadership (LU, all partners)
- 1.2 Communication Management (LU, all partners)
- 1.3 Administrative Project Management (LU, all partners)
- 1.4 Risk Management (LU, all partners)

## **WP2 - Road safety management & data**

### Objectives:

- To identify constraints and opportunities for improved road safety management in African countries
- To perform comparative analysis of formal and informal constraints on the road safety management
- To review sources, ways of collecting and types of data relevant for traffic safety work and propose a comprehensive system for road safety data collection and management at national level
- To make a participative review and provide recommendations for revision of existing national road safety programs.

### Tasks (lead partner, involved partners):

- 2.1 Comparative analysis of control structure in road safety management (TOI, TUD, UniDS, UEW, LU)
- 2.2 Analysis of formal and informal constraints on traffic safety management (TOI, TUD, UniDS, UEW, LU)
- 2.3 State of national road safety databases & African Road Safety Observatory (ARSO) (LU, Chalmers, TOI, TUD, UniDS, UEW)
- 2.4. Development of national road safety strategies in line with Safe Systems principles (TOI/LU, TUD, UniDS, UEW).

## **WP3 - Safe infrastructure**

### Objectives:

- To review national road infrastructure design guidelines and procedures related infrastructure safety management
- To develop local guidelines for introduction of Road Infrastructure Safety Management tools
- To build local capacity for applying Road Infrastructure Safety Management tools
- To run pilot projects demonstrating application of Road Infrastructure Safety Management tools

### Tasks (lead partner, involved partners):

- 3.1 Review of national design guidelines and procedures (TUD, LU, UEW, UniDS, ZRST)
- 3.2 Introducing the tools comprising Road Infrastructure Safety Management (LU, TUD, UEW, UniDS, ZRST)
- 3.3 Training of local professionals in applying Road Infrastructure Safety Management tools (LU, TUD, UEW, UniDS, ZRST)
- 3.4 Pilot projects demonstrating their application of Road Infrastructure Safety Management tools (LU, TUD, UEW, UniDS, ZRST).

#### **WP4 - Safe vehicles**

Objectives:

- Review current procedures and methodologies concerning road vehicles in the participating countries
- Propose improvements including regulations, safety standards, taxation, vehicle register, technical controls, and inspections, etc.

Tasks (lead partner, involved partners):

- 4.1: Vehicle standards and safety rating for new and used vehicles (Chalmers, TU Delft, Autoliv, UEW, UniDS, ZRST)
- 4.2: Vehicle technical control and inspection (Chalmers, Autoliv, UEW, UniDS, ZRST)
- 4.3: Vehicle inspection pilot (Chalmers, Volvo, UEW, UniDS, ZRST)

#### **WP5 - Safe road users**

Objectives:

- Review current procedures, practices and methodologies of national road safety work concerning road users in the African participating countries and compare to EU countries, which have applied a Safe System approach to road safety.
- Map Road Safety Culture (RSC) in the African participating countries and benchmark it against selected European countries (e.g. Sweden, Norway) which have applied the Safe System approach.
- Carry out relevant pilot studies to introduce the mind-set of the Safe System approach, focusing on vulnerable road users, enforcement, transport companies and driver education.

Tasks (lead partner, involved partners):

- 5.1: Current road safety activities to encourage safe road user behaviour (VTI, TOI, LU, TUD, UEW, UniDS, ZRST)
- 5.2: Mapping of Road Safety Culture (TOI, VTI, LU, TUD, UEW, UniDS, ZRST)
- 5.3: Safe road user behaviour pilot projects (VTI, TOI, LU, TUD, UEW, UniDS, ZRST)

#### **WP6 - Post-crash care**

Objectives:

- To develop the ways to ensure effective post-crash care specific for African context in line with WHO protocols, including such aspects as raising the capacity of emergency/rescue services to respond to road traffic crashes
- To improve the capacity of health services to provide adequate medical care (trauma and first aid)
- To improve coordination between different services involved in post-crash response and medical care

Tasks (lead partner, involved partners):

- 6.1: Mapping of corridors, stakeholders and initiatives (NTU, UEW, UniDS, ZRST)
- 6.2: Needs, gaps and recommendations (NTU, UEW, UniDS, ZRST)
- 6.3: Pilot projects (NTU, UEW, UniDS, ZRST)

#### **WP7 - Capacity building**

Objectives:

- Compilation of the needs and gaps identified in WP2-WP6 in current training and capacity building activities for road safety professionals in the participating African countries and based on that develop and design suitable training activities.

- Train the local university road safety academics to develop the capacity of exposing and training road safety professionals, key actors and decision-makers in governments, the private sector, and NGOs from the participating African countries to the state-of-the-art knowledge on road safety management based on the Safe System approach. Knowledge, tools and methods for road safety improvements - adjusted to the African conditions - will be shared with the local university academics.
- Develop a centre of excellence in which the trained local university road safety academics become change agents who can maintain, update and propagate the new knowledge and way of thinking to road safety professionals and by this sustain the capacity building in their countries.
- Develop strategies and best practices for scaling up the proposed training activities and applications to other low- and middle-income countries (LMICs) and developing a business plan for sustaining these activities.

Tasks (lead partner, involved partners):

- 7.1: Compilation of needs and gaps in current training activities (TOI, LU, VTI, UEW, ZRST, NTU, TUD, UniDS)
- 7.2: Design of suitable and adapted training activities (TUD, LU, TOI, VTI, UEW, ZRST, NTU, Volvo, Chalmers, UniDS)
- 7.3: Centre of excellence (UniDS, LU, VTI, UEW, ZRST, TUD, Volvo, Chalmers)
- 7.4: Scaling up the training activities to other LMICs (UEW/NTU, LU, TOI, ZRST, VTI, Volvo, UniDS, ZRST)
- 7.5: Sustainability of capacity building (NTU, LU, TUD, UniDS, UEW, ZRST)

## **WP8 - Dissemination**

Objectives:

- To disseminate information and results from the project and to inform relevant key actors about Safe System tools, methods and mindset—using adequate channels for different stakeholder groups.
- To enable mutual knowledge exchange and interaction between project partners, with related project and stakeholders to improve projects outcomes.

Tasks (lead partner, involved partners):

- 8.1: Dissemination plan / target group management (ZRST, LU)
- 8.2: Dissemination/communication tools (LU/ZRST, all partners)
- 8.3: Internal communication tools (LU, all partners)
- 8.4: Liaising with similar projects and initiatives (LU, all partners)
- 8.5: Final event and demonstration (ZRST, all partners)
- 8.6: External dissemination actions (LU, all partners)
- 8.7: Exploitation plan (TUD, NTU, ZRST, LU)

## 1.6 Overall project structure

Figure 1 displays the overall project structure and Figure 2 displays the inter-relations between the individual project tasks.

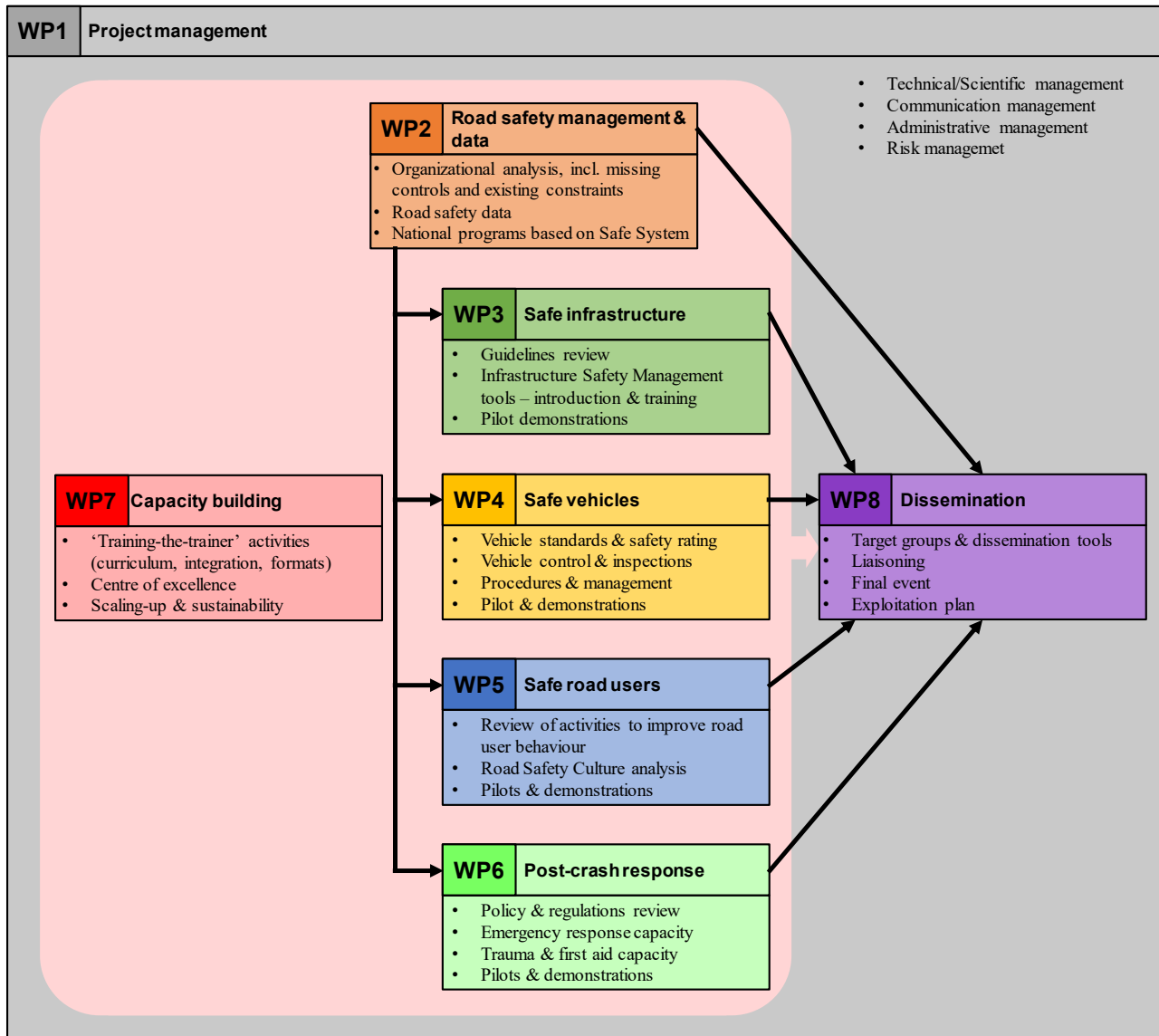


Figure 1 Overall project structure.

Deliverable D1.2 'Data management plan'



Figure 2 Inter-relation between project individual tasks (WP1 and WP8 are excluded).

## 2 Data Management and Protection

The Data Management and Protection Plan regulates the procedures for data collection, storage, sharing, analysis, and publication. All project partners are obliged to follow the procedures described here. Before start of each study in which sensitive data is collected, each partner involved in the study must contact the national ethical board for approval. This document will be revised and if necessary updated once a year. Any changed routines are to be applied even for the data already collected.

### 2.1 Data collected in the project

The following types of data will be collected in AfroSAFE:

- Data from interviews with professionals on the present situation of Road Safety Management
- Data from national accident records
- Data about the present situation of Road Infrastructure Safety Management
- Data about national vehicle registers
- Data from surveys and focus groups with road users
- Data from interviews professionals involved in Emergency Medical Services

### 2.2 Interviews with professionals in Road Safety Management

#### 2.2.1 Data description

We conduct qualitative interviews anonymously in six countries: Norway, the Netherlands, Sweden, Ghana, Tanzania and Zambia, to map the national approaches to road safety management. The interviewees will be people working with traffic safety management at authorities and relevant organisations at various levels and in the respective country. The purpose of the interviews is to ask road safety professionals about road safety management in their country, e.g. cooperating organisations involved in traffic safety management, strategies used by authorities and organisations, plans for traffic safety management, common goals among cooperating organisations, etc.

#### 2.2.2 Data collection procedure

The data will be collected through personal (face-to-face or online via Teams) interviews. The interviewees will be recruited by sending e-mails to various people whose names we get through searches on websites or from people with good knowledge of traffic safety actors in the respective country. Participation entails answering questions regarding road safety management in the country, e.g. cooperating organisations involved in the national model for traffic safety management, strategies used by authorities and organisations, plans for traffic safety management, common goals among cooperating organisations, etc. The interviews will be recorded using a digital voice recorder then transcribed. Participation in the interviews is voluntary. The answers in the study are treated confidentially by the partners in the respective countries. It will not be possible to identify the individual interviewee.

#### 2.2.3 Data processing and storage

We will only use personal data for the purpose(s) specified above and will process personal data in accordance with data protection legislation (GDPR). All personal data will be treated confidentially and in accordance with the privacy regulations. The results will only contain data aggregated to group level, so that individuals cannot be identified. The data will be stored and analysed on secure servers which have several layers of protection for users, e.g. two factorial login (“Secure zone”). Storage and use of data will follow GDPR rules.

Data processing will be done only by the researchers involved in the project. All data files will be named using the following elements in the file name:

- Date or date range of experiment: YYYYMMDD
- Descriptive file name
- Initials of the person who last modified the file
- Version number of file.

All datasets collected by the researchers will be stored during the project in a dedicated secure project storage at the respective organization and managed by the same organization.

## 2.2.4 Data sharing and access

The raw data extracted from the interviews (recordings and transcripts) only can be shared with other persons in the same organisation only if they are also qualified to access the same database. Other personnel in the same organisation or other project partners can access only anonymised data (no personal identifying data). Only anonymised and aggregated data can be shared publicly (for example, through reports or publications in journals).

## 2.2.5 Strategy for long-term preservation

During the research project, all data will be stored on local servers maintained and automatically backed up by the respective organization ICT department. Only team members have access to the designated server. After the end of the project, all datasets will be published in the research data repository managed by the respective university/organisation library. The data will then be openly accessible to all. The project is scheduled to end on 31st of December 2026. The anonymized data from the study will then be stored further for research purposes, without any form of commercial exploitation.

## 2.2.6 Ethical concerns

Participation in the project is voluntary. If interviewees chose to participate, they can withdraw consent at any time without giving a reason. All information about them will then be made anonymous. There will be no negative consequences for them if they chose not to participate or later decide to withdraw.

As long as the interviewees can be identified in the collected data, they have the right to:

- access the personal data that is being processed about them
- request that their personal data is deleted
- request that incorrect personal data about them is corrected/rectified
- receive a copy of their personal data (data portability), and
- send a complaint to our Data Protection Officer or the Norwegian Data Protection Authority regarding the processing of their personal data.

The main concern is that the interviewee can still be identified from the responses to the interviews. In such a case, the involved researchers will sign a declaration of non-disclosure of the data.

## 2.3 Data from national accident records

Data on accident records is collected in WP2.

### 2.3.1 Data description

All partner countries have national databases for traffic accidents registered by police (and sometimes by hospitals). The records are already pre-processed and the most sensitive information like names

of persons involved or vehicle registration numbers is removed. The remaining information normally contains:

- Date and time of the accident
- Location of the accident
- Types of road users involved – vehicle driver, vehicle occupant, cyclist, pedestrian, etc.
- Types of vehicles involved – car, heavy truck, etc.
- Description of the accident event
- Injuries obtained in the accident.

### 2.3.2 Data collection procedure

There are certain procedures that a researcher has to follow in order to get access to the accident databases. In Sweden, it is necessary to take a special education course and sign a declaration of non-disclosure of the data unless it has been aggregated. Similar rules exist in other countries. In Norway, the data can be transferred to the Institute of Transport Economics after the establishment of a data management plan. The data must be stored and analysed on secure servers which have several layers of protection for users, e.g. two factorial login ("Secure zone"). All the project partners already have personnel qualified to access the accident databases. The documentation supporting this fact will be provided on request to EC prior to the extraction of the data from the databases.

### 2.3.3 Data processing and storage

The extracts from the accident databases will be used for comparative in-depth analysis in each study country (Ghana, Tanzania, the Netherlands, Norway,) of six cases: two each representing serious head-on collisions, motorcycle or cycle collision and Vulnerable Road User (VRU) - heavy vehicle collisions. The data will be stored and analysed on secure servers which have several layers of protection for users, e.g. two factorial login ("Secure zone"). Storage and use of data will follow GDPR rules and data management plans will be made together with data owners, e.g. national public roads administrations. It may be possible to analyse aggregated data (i.e. without person sensitive information) on regular computer hard drives.

### 2.3.4 Data sharing and access

The raw data extracted from the databases (individual accident reports), electronic or printouts, can be shared with other persons in the same organisation only if they are also qualified to access the same accident database. Other personnel in the same organisation or other project partners can access the data with greatly limited level of details (no individual accident protocol is exposed, but location, date and simplified description of the accident can be read. Only aggregated data can be shared publicly (for example, through reports or publications in journals).

### 2.3.5 Strategy for long-term preservation

Original data will be deleted after the project lifetime.

### 2.3.6 Ethical concerns

The main concern here is that even though the most obvious personal data is removed from the records it is still theoretically possible to figure out which person was involved in a particular accident (for example, through comparing with publications in media or other data sources). The involved researchers will sign a declaration of non-disclosure of the data.



## 2.4 Data about the present situation of Road Infrastructure Safety Management

Data on the present situation of Road Infrastructure Safety Management is collected in WP3.

### 2.4.1 Data description

The collected data comprises national regulatory and guideline documents concerning frameworks and procedures of Road Infrastructure Safety Management in Ghana, Tanzania, and Zambia.

### 2.4.2 Data collection procedure

The documents of interest are downloaded from the relevant national authorities’ home pages and if not available officers of the relevant authorities are contacted and asked for providing them.

### 2.4.3 Data processing and storage

The documents are scrutinized and relevant information for the AfroSAFE project is compiled into a description of the present frameworks and procedures of Road Infrastructure Safety Management in Ghana, Tanzania, and Zambia.

### 2.4.4 Data sharing and access

All data is public and shared with project partners, as well as with national road authorities of Ghana, Tanzania, and Zambia.

### 2.4.5 Strategy for long-term preservation

The compiled description of the present frameworks and procedures of Road Infrastructure Safety Management in Ghana, Tanzania, and Zambia will be part of a project deliverable and will be preserved accordingly.

### 2.4.6 Ethical concerns

There are no ethical concerns since all data is originally public.

## 2.5 Data about national vehicle registers

Information on national vehicle registers is collected in WP4.

### 2.5.1 Data description

The partner countries have national databases for vehicle registration, such as general vehicle content information, as well as individual vehicle information. In the project, no individual information is needed (such as vehicle owner, etc.) and all sensitive information like names of persons involved, or vehicle registration numbers is removed.

### 2.5.2 Data collection procedure

Data from the involved countries’ (Ghana, Tanzania, Zambia) databases is normally collected by the involved researchers of these countries and transferred to the project database. As all personal data will be removed, no special precaution needs to be taken, when stored in the project database.

### 2.5.3 Data processing and storage

All collected and transferred data will be stored in the Teams structure. The collected data will be used to understand the state of the art of vehicle standards and inspection in the individual countries.

### 2.5.4 Data sharing and access

The stored data will be shared with involved partners in the project, to better understand the state of the art of vehicle standards and inspection in the individual countries. Aggregated data can be shared publicly (e.g. through project reports or publications in journals).

### 2.5.5 Strategy for long-term preservation

It is not required by the consortium to delete the collected data after the project lifetime. However, if the data still exists after project end, the rules for data storage, access and sharing described in this plan apply.

### 2.5.6 Ethical concerns

Ethical concerns do not apply in this activity.

## 2.6 Data from surveys and focus groups with road users

Surveys and focus groups with road users will be carried out in WP5.

### 2.6.1 Data description

#### *Surveys*

The first survey will target car drivers and vulnerable road users (VRU). The survey to car drivers will include questions about key road safety behaviours (e.g. drink driving, seatbelt usage and speeding). To adapt the survey to the national context qualitative interviews will be conducted in each country which is described below. In addition to questions about their behaviour the survey will also include questions measuring some aspects of the Road Safety Culture (RSC), including road users’ own behaviour, (shared) patterns of behaviour, shared norms and descriptive norms, i.e. expectations of other road users’ behaviour.

Three different pilots will be implemented and evaluated using a survey before and after the implementation. The first pilot focus on the empowerment of vulnerable road users. The approach will be based on previous research on community RSC development, addressing the impact of local leadership and involvement of local inhabitants. The pilot will be based on the Norwegian ‘Heart Zone’ campaign, which involves local stakeholder involvement, risk analyses, local road safety plans and the establishment of local measures aiming to influence driver behaviour. This can involve definition of “car free zones”, new signage and lowering of speed limits in an area. To ensure effectiveness, the pilot will also include police enforcement in the same area to increase driver’s subjective risk of detection. The survey used to evaluate this pilot will assess the effect of the campaign. That is, whether it increases the safety of VRU but also if it has a positive effect on their perceived risk and their perception of car drivers’ speed.

The second pilot focuses on professional drivers aiming at influencing their driving style, especially in areas with large numbers of vulnerable road users, e.g. by lowering their speed, keeping safe distance, yielding, etc. This will be done through a campaign targeting a transport company employing professional drivers. The impact of the intervention will be evaluated using a survey before and after with drivers in the company focusing on their driving style.

The third pilot focuses on driving instructors with the aim to provide them with tools enabling them to teach the so called “higher order skills” (e.g. risk awareness, hazard perception and cognitive

skills). This pilot will also be evaluated using a survey before and after the training. The questions will include aspects of their teaching to determine if they focus more on the higher order skills after the intervention.

### *Interviews*

Interviews with key actors within the area of road safety will be conducted. The aim is to interview driver trainers, the police, and people active within different NGOs focusing on road safety and vulnerable road users. The questions included in the interview guide will cover road safety procedures, methodologies and various strategies that affect the safety of road users in the participating countries in Africa and compare them to selected EU countries, which have applied the Safe System Approach (i.e. Norway, Sweden).

### *Focus groups*

To address Road Safety Culture one focus group in each country will be conducted. The groups will discuss the following: (1) interaction among road users; (2) vulnerable road user's perceived safety and accessibility; and (3) their perception of enforcement practices.

### **Data processing and storage**

The survey will be a pen and paper survey and will not include anything which will identify the respondents. The paper surveys with answers will be sent to the task leaders and analysed.

The interviews will be recorded and then transcribed. The information will not include anything which can identify the respondents. The transcriptions of the recordings will be sent to the task leaders and then analysed.

The data will be stored on an external device (hard disk or USB-drive) or on a server belonging to the partner organisation. If data is stored on an external device, the device must be locked away when not in use to prevent theft. If data is stored on a server, reasonable security must be provided to prevent hacking. Access to data on the server or the external device must require a password.

A working copy of the data can be stored on hard drives on the computers of the researchers analysing the data (unless national rules require stricter protection, in that case the national rules are to be followed). If a working copy is stored on a computer, the computer must be protected with a password, and reasonable measures against theft and hacking must be taken.

No copies on public cloud services are allowed.

## 2.6.2 Data sharing and access

The data from the survey, the recordings and the transcriptions will be shared with partners involved in the relevant work package. As no personal information will be transferred across borders, the questionnaires will be anonymized by the partner organisation in each country before it will be available to the other partners. Each partner organisation must consider discretion when handling the non-anonymized data in order to make the anonymization and to make any data enquiries that need access to personal information. Only aggregated data will be used in publications (presentations, reports, papers, etc.).

## 2.6.3 Strategy for long-term preservation

It is not required by the consortium to delete the original data after the project lifetime. However, if data are stored by the institutions the guidelines regarding data storage, sharing and access shall be followed.

## 2.6.4 Ethical concerns

When dealing with personal information, maintaining anonymity is always a concern. As only aggregated data will be made public, the anonymity of respondents is ensured when presenting results of the questionnaires. The researchers analysing the data will be aware of the respondents' identities during the research process. The respondents will be made aware of this before they answer the questionnaire, and as the participation is voluntary, they may refrain from answering if they do not wish researchers to know their personal information. The involved researchers will sign a declaration of non-disclosure of the data. The study does not include any sensitive questions, however, all the participants will be sent a consent form before they take part in the study which they have to sign and return to the task leader.

## 2.7 Data from interviews professionals involved in Emergency Medical Services

Data on the present situation of Emergency Medical Services is collected in WP6.

### 2.7.1 Data description

Collected data will include information relating to legislative frameworks, the role of the bystanders, access to Emergency Medical Services (EMS), pre-hospital care, hospital care, and rehabilitation and discharge collected via desk-based research, field visits and interviews with staff involved with pre-hospital care, hospital care, emergency dispatch services and police, fire brigades, communities, and other relevant stakeholders in Ghana, Tanzania, and Zambia.

The interviews with hospitals will seek to gather general hospital information (such as its catchment area, formal categorization, staffing numbers, training levels, and data collection systems) as well as specific questions relating to emergency care (such as the appropriateness of the training, sufficiency of other capacities, opinions regarding availability of critical equipment and services, etc.).

### 2.7.2 Data collection procedure

To map the current situation on three chosen corridors (one per country), desk reviews will be undertaken as well as surveys and interviews will be conducted with professionals. An agenda of the interview questions can be provided in advance to those professionals participating in the interviews. The length of the interview will be agreed upon prior to the meeting. The interviews will be conducted by local partners, audio-taped and later transcribed for the purpose of data analysis.

### 2.7.3 Data processing and storage

The information gathered during the study will remain confidential in secure premises during this project. Only the involved researchers will have access to the study data and information. The survey questionnaires or interview transcripts will be coded anonymously. The names and any other identifying details will never be revealed in any publication of the results of this study.

### 2.7.4 Data sharing and access

The results of the research will be published in the form of a deliverable report, a research paper published in a professional journal and presented at professional meetings. It may also be published in book form. The knowledge obtained from this study will be of great value in guiding professionals to be more effective in providing post-crash care to road traffic victims.

### 2.7.5 Strategy for long-term preservation

The compiled description of the present frameworks and procedures of Emergency Medical Services in Ghana, Tanzania, and Zambia will be part of a project deliverable and will be preserved accordingly.

### 2.7.6 Ethical concerns

The study does not include any sensitive questions; however, all the participants will be sent a consent form before they take part in the study which they have to sign and return to the task leader.