



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 D1.1

Project work plan

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| PP | Restricted to other programme participants (including the Commission Services) | |
| RE | Restricted to a group specified by the consortium (including the Commission Services) | |
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Table of Contents

| | | |
|------|---|----|
| 1 | Introduction | 1 |
| 1.1 | Project aim..... | 1 |
| 1.2 | Project objectives | 1 |
| 1.3 | Project timeline | 2 |
| 1.4 | Project partners..... | 3 |
| 1.5 | Work package list..... | 3 |
| 1.6 | Overall project structure..... | 4 |
| 2 | Project work | 6 |
| 2.1 | WP1 Project management | 6 |
| 2.2 | WP2 Road safety management & data..... | 8 |
| 2.3 | WP3 Safe infrastructure | 12 |
| 2.4 | WP4 Safe vehicles..... | 14 |
| 2.5 | WP5 Safe road users | 16 |
| 2.6 | WP6 Post-crash care..... | 19 |
| 2.7 | WP7 Capacity bulding | 23 |
| 2.8 | WP8 Dissemination..... | 26 |
| 2.9 | Milestone list..... | 29 |
| 2.10 | Deliverable list | 30 |
| 3 | Quality assurance | 31 |
| 3.1 | Quality control of applied scientific methods | 31 |
| 3.2 | Procedure for control of deliverables to the EC | 31 |
| 4 | Risk management | 32 |

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 life-time.
- 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.

Deliverable D1.1 ‘Project work plan’

- 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 starts 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 package list

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 |

1.6 Overall project structure

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

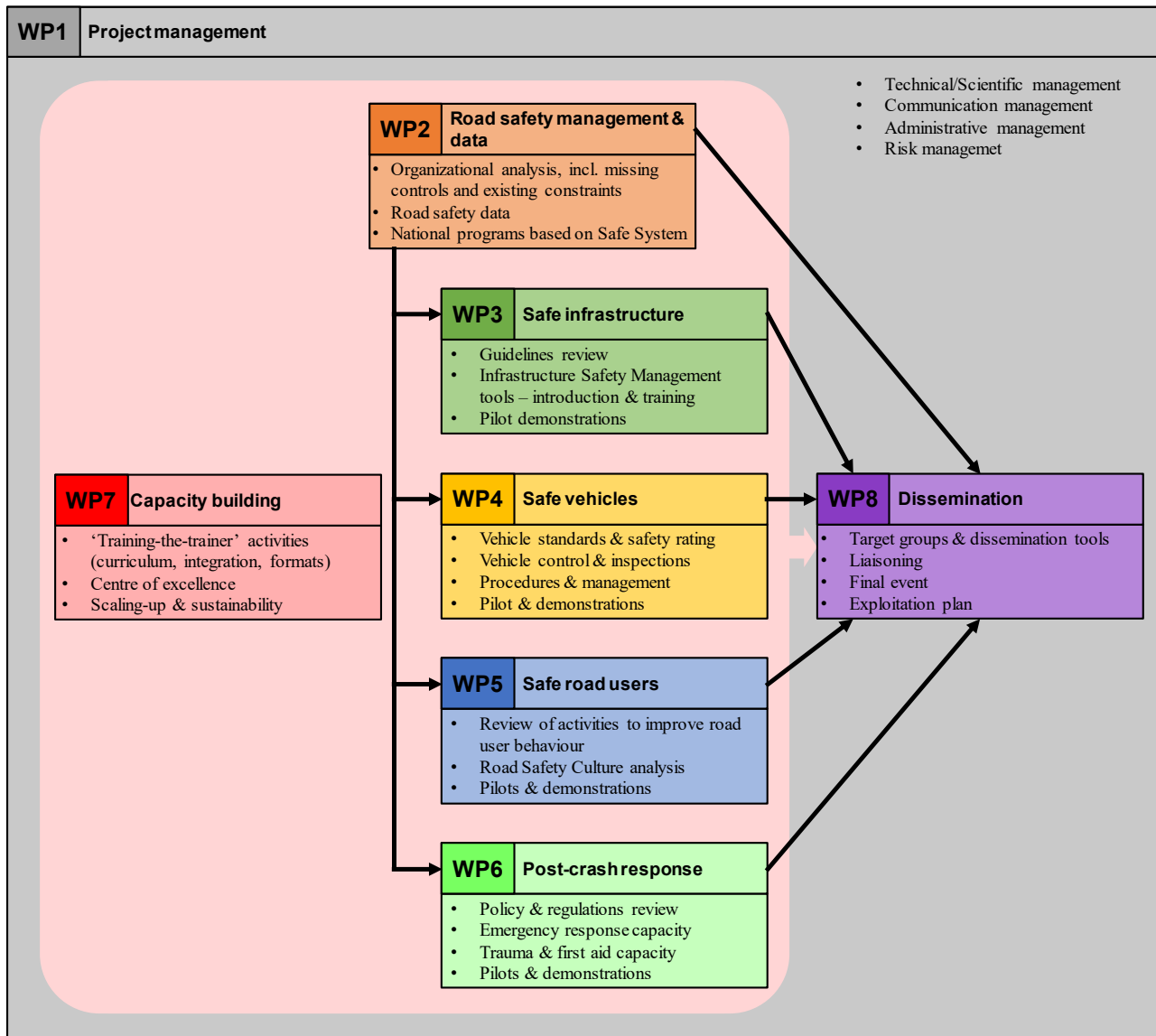


Figure 1 Overall project structure.

Deliverable D1.1 'Project work plan'



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

2 Project work

2.1 WP1 Project management

Lead participant: LU

Efforts:

| | PM cost, k€ | PM | Direct personal costs, k€ | Equipment, k€ | Travel, k€ | Other goods & services, k€ | Direct costs, k€ | OH (25%), k€ | Sub-contracting, k€ | Total, k€ |
|---------------|-------------|-------------|---------------------------|---------------|-------------|----------------------------|------------------|--------------|---------------------|--------------|
| LU | 8,5 | 17,5 | 148,9 | | 8,0 | 5,6 | 162,5 | 40,6 | | 203,2 |
| TOI | 13,4 | 1,5 | 20,1 | | 6,0 | | 26,1 | 6,5 | | 32,6 |
| VTI | 9,2 | 1,5 | 13,8 | | 4,0 | | 17,8 | 4,5 | | 22,3 |
| UEW | 2,6 | 1,0 | 2,6 | | 2,0 | | 4,6 | 1,2 | | 5,8 |
| ZRST | 3,5 | 1,5 | 5,3 | | 6,0 | | 11,3 | 2,8 | | 14,1 |
| NTU | 9,9 | 1,5 | 14,9 | | 4,0 | | 18,9 | 4,7 | | 23,6 |
| TUD | 8,2 | 1,5 | 12,3 | | 5,0 | | 17,3 | 4,3 | | 21,6 |
| Volvo | 10,3 | 0,5 | 5,1 | | 2,0 | | 7,1 | 1,8 | | 8,9 |
| Autoliv | 14,0 | 0,5 | 7,0 | | 4,0 | | 11,0 | 2,8 | | 13,8 |
| Chalmers | 14,0 | 1,5 | 21,0 | | 5,0 | | 26,0 | 6,5 | | 32,5 |
| UniDS | 3,5 | 1,0 | 3,5 | | 6,0 | | 9,5 | 2,4 | | 11,9 |
| Total: | | 29,5 | 254,4 | 0,0 | 52,0 | 5,6 | 312,0 | 78,0 | 0,0 | 390,1 |

Timeline

| | 2022 | 2023 | | | 2024 | | | 2025 | | | 2026 | | |
|-----------------------|------|----------------|----|----|------------------------|----|----|------------------------|----|----|------|-------------------------|----|
| | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 |
| WP1 Management | | ● MS1 Kick-off | | | ● MS4 Annual meeting 1 | | | ● MS9 Annual meeting 2 | | | | ● MS12 Annual meeting 3 | |

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

Description of work

Task 1.1: Technical Management / Scientific leadership (LU, all partners)

Lund University (LU) will fulfil the coordination responsibilities according to the contract with the European Commission (EC). As the Coordinator, LU is responsible for the overall project coordination, which includes research content leadership, strategic management, supervision of the overall technical progress and reporting to the EC. In cooperation with the General Assembly (all project partner representatives) and the EC, and with input from the Advisory Board, the Coordinator decides on the strategic directions of the project. The Coordinator also acts as the chairman of the project Executive Board consisting of the WP leaders. On the operative level, the project will adopt the Agile Management principles, including organisation of work around short, 4-6 weeks long periods (sprints), short-term goal setting, focus on delivering tangible results and frequent reflection on the progress being made and adjustment of the action plan whenever needed.

Task 1.2: Communication Management (LU, all partners)

The purpose of this task is to foster and ensure an appropriate level of communication within the project for scientific exchange and collaboration, as well as for matters related to project management and administration. The infrastructure for internal communication is developed and managed within

Deliverable D1.1 ‘Project work plan’

the *Task 8.3*. LU will act as the main contact for all inquiries concerning the project, as well as be responsible for communication between the consortium and the EC.

Further, the activities include:

- Quality assurance of scientific and technical results. Peer-reviews will be the main method for internal quality evaluations. The main principles of peer-reviewing will be agreed upon during the first General Assembly, and each deliverable will be reviewed by a relevant expert(s) from the consortium, selected on a case-to-case basis.
- Co-ordination of deliverable submission to the Commission and communicating requirements for modifications to the partners involved.
- Compilation of the key findings from the other work packages into a condensed final report.

Task 1.3: Administrative Project Management (LU, all partners)

In order to allow the Project Coordinator to focus on strategy, leadership and scientific coordination, her/his administrative project management burden will be shared by the Administrative Team. In principle, each partner is responsible for doing the necessary administrative reporting to the EC. In practice, however, the Administrative Team will need to provide the necessary explanations on how the reporting is to be done, remind about the upcoming deadlines, provide templates and instructions, etc. Other administrative tasks include:

- Collection of deliverables, identifying delays in deliverables and milestones, warning about needs for contingency actions, etc.
- Handling day-to-day business, processing external and internal requests, etc.
- Overseeing all tasks related to management regarding their administrative components, supporting the Coordinator and WP-leaders in fulfilling their obligations
- Preparation and support of auditing, such as preparation of cost statements and documents for the auditor
- Supporting in other administrative issues, such as grant contract amendments, procedures related to selection of sub-contractors, IPR-handling (with external support sought when necessary), etc.

Task 1.4: Risk Management (LU, all partners)

Unexpected risks may arise during the project lifetime. The main task for Risk Management is monitoring of the project progress and risk contingency planning when serious deviations from the original plan arise. More specifically, this task will ensure that:

- Each WP reports unexpected issues encountered to the Coordinator and a joint decision on their mitigation is promptly taken. The Agile approach to project management will support this type of discussions on a regular basis and ensure positive working climate for constructive problem resolution.
- Major problems are reported by the Coordinator to the General Assembly (and an extraordinary meeting may be called for) and the EC’s Project Officer and the best way forward is identified.

Deliverables

- D1.1 Work plan (M3: Nov 2022; LU)
- D1.2 Data management plan (M6: Feb 2023; LU)
- D1.3 Project progress report 1 (M18: Feb 2024; LU)
- D1.4 Project progress report 2 (M36: Aug 2025; LU)
- D1.5 Final report (M48: Aug 2026; LU)

Milestones

- MS1 Kick-off meeting (M1: Sep 2022)

Deliverable D1.1 ‘Project work plan’

- MS4 Annual meeting 1 (M13: Sep 2022)
- MS9 Annual meeting 2 (M25: Sep 2024)
- MS12 Annual meeting 3 (M37: Sep 2025)

2.2 WP2 Road safety management & data

Lead participant: TOI

Efforts

| | PM cost, k€ | PM | Direct personal costs, k€ | Equipment, k€ | Travel, k€ | Other goods & services, k€ | Direct costs, k€ | OH (25%), k€ | Sub-contracting, k€ | Total, k€ |
|---------------|-------------|-------------|---------------------------|---------------|-------------|----------------------------|------------------|--------------|---------------------|--------------|
| LU | 8,5 | 8,8 | 74,8 | | 6,0 | 1,0 | 81,8 | 20,4 | | 102,2 |
| TOI | 13,4 | 12,8 | 171,3 | | 5,5 | 2,0 | 178,8 | 44,7 | | 223,5 |
| VTI | 9,2 | | | | | | | | | |
| UEW | 2,6 | 7,4 | 19,1 | | 2,0 | 1,0 | 22,1 | 5,5 | | 27,6 |
| ZRST | 3,5 | | | | 1,0 | | 1,0 | 0,3 | | 1,3 |
| NTU | 9,9 | | | | | | | | | |
| TUD | 8,2 | 7,4 | 60,3 | | 2,0 | 2,0 | 64,3 | 16,1 | | 80,3 |
| Volvo | 10,3 | | | | | | | | | |
| Autoliv | 14,0 | 1,0 | 14,0 | | | | 14,0 | 3,5 | | 17,5 |
| Chalmers | 14,0 | 1,5 | 21,0 | | | | 21,0 | 5,3 | | 26,3 |
| UniDS | 3,5 | 7,4 | 25,7 | | 4,0 | 1,0 | 30,7 | 7,7 | | 38,4 |
| Total: | | 46,1 | 386,2 | 0,0 | 20,5 | 7,0 | 413,7 | 103,4 | 0,0 | 517,1 |

Timeline

| | 2022 | 2023 | | | | 2024 | | | | 2025 | | | | 2026 | | |
|--|------|------|----|----|----|------|----|----|----|------|----|----|----|------|----|----|
| | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 |
| WP2 Road Safety Management | | | | | | | | | | | | | | | | |
| Task 2.1 Control structure analysis | | | | | | | | | | | | | | | | |
| Task 2.2 Formal & informal constraints | | | | | | | | | | | | | | | | |
| Task 2.3 Road safety data | | | | | | | | | | | | | | | | |
| Task 2.4 National road safety programmes | | | | | | | | | | | | | | | | |

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

Description of work

Task 2.1: Comparative analysis of control structure in road safety management (TOI, TUD, UniDS, UEW, LU)

This task performs case comparison of African countries (Tanzania, Ghana, Zambia) with EU countries with record of excellence in traffic safety and practicing Safe Systems principles (Norway, Sweden, Netherlands) aiming to:

- Develop lists of generic system hazards and safety constraints needed for successful road safety management at national level.
- Describe for each case country, the existing road safety management structure: organisation of actors involved, power responsibility distribution, information flows.

- Comparative analysis of (i) actor control actions that could threaten identified safety constraints, (ii) main reasons for these 'unsafe' actions.

Each country's reference group with members representing major stakeholders in traffic safety management (road authorities, counties/municipality authorities, traffic police, traffic schools, major road constructors) will be supplemented for WP2 with 3 or 4 subject matter experts such as researchers, consultants, practitioners vehicle manufacturers/importers, or road user interest groups. This expanded reference group will be used to source documents, data and contacts for interviews, to be used in a comparative STAMP (STPA) analysis of national road safety management, as follows. We will start by developing a set of generic system hazards that could lead to serious injury in traffic; and a set of system constraints to be enforced to prevent each hazard occurring. This will include injury to cyclist, pedestrians and other vulnerable road users (VRUs). Through document analyses and focus group interviews with national subject matter experts n=15) in each country, we will collect data needed to generate initial maps of the control structure of national systems for managing traffic safety. In line with Safe Systems principles, we will analyse the role of road safety in the development and operation of roads, vehicles, cycles etc., and in the training and behaviour of road users. Control structure maps will be generated at a knowledge transfer workshop, in which TØI will guide other partners in analysis using STAMP and STPA (knowledge transfer). Applying learning from the workshops, researchers in respective countries will then develop maps showing formal control structure of traffic safety management in each country -- how responsibility is distributed among system actors, how databases are shared, procedures or activities monitored, learning transferred (including training of policy-makers in governments, the private sector, and non-governmental organizations, those who design driving training instructions etc.), and critical traffic safety KPIs measured. At a second researcher workshop we will compare the maps and make initial analyses of how system safety constraints can be threatened by insufficient or missing control actions or information flows. Maps and analyses will be validated and developed at a practitioner workshop in each country, with key stakeholder representatives. Finally, in a final analysis, researchers will examine the degree and character of alignment with Safe Systems principles, and constraints and opportunities for applying Safe Systems, that are inherent in the structure of national road safety management in each country. We will maintain a focus collisions involving VRUs in addition to those involving motor vehicles. The maps and materials we generate will also provide input for other activities in WP2 as well as training activities in WP7.

Task 2.2: Analysis of formal and informal constraints on traffic safety management (TOI, TUD, UniDS, UEW, LU)

Comparative in-depth analysis in each study country (Tanzania, Ghana, Norway, Netherlands), of six cases: two each representing serious head-on collisions, motorcycle or cycle collision and VRU-heavy vehicle collisions. Beginning from control structure we will: (i) "flesh out" formal system factors influencing crash outcomes; (ii) understand informal factors influencing crash outcomes. To do this we will:

- Identify cases and access information and persons representing key actors influencing each collision case.
- Review data from in-depth reports, reporting forms or databases describing (i) collisions of this type; and (ii) documents and data associated with selected cases.
- Interview actors (4-5 in each case) influencing collision outcomes on actual practice of road safety management surrounding each case (where possible have been involved in relevant collision, with exception of road user) e.g. road administrator, road users, police.

Cases would be of actual collisions with serious outcomes, of three types that occur across the African and European study countries, selected for their high risk relative to other accident types, and to align learning with the rest of the project. For example, choosing to focus on head-on collisions on a high-speed road stretch, we would conduct qualitative risk analyses to identify appropriate safety constraints that, if enforced, would reduce head-on collisions. In line with a Safe Systems approach,

Deliverable D1.1 ‘Project work plan’

safety constraints could be identified for the road (e.g. ensuring central reservations on high-speed stretches); the vehicle (e.g. ensuring good tyres, new cars have lane-keeping/ADAS); and the road user (e.g. enforcing limited driving hours for commercial drivers). According to STAMP, safety constraints are enforced by ‘safe’ control actions, purposeful actions by one actor to influence the behaviour of another actor or process. By examining the formal control structure maps from *Task 2.1*, we will identify ways to improve data and information flows for better formal control of safety constraints. Recognising differences between work as proscribed and work as done, we will also interview stakeholders influencing head-on collisions on high speed stretches (e.g. car industry, road administrators, truck drivers and their managers), with a view to understanding how control actions can be made ‘unsafe’ by, for example, limited resources, underreporting, goal conflicts and trade-offs, mindset/safety culture, training, feedback on process controlled, understanding of status of processes and how they are controlled, and so on. Similar analyses would be carried out for motorcycle collisions and VRU-heavy vehicle collisions.

The result of *Task 2.2* will be an in-depth understanding of how formal and informal factors influence a Safe Systems approach in selected African countries. From this, together with findings from *Task 2.1* we will make recommendations on the most important factors to be addressed to better enable Safe Systems approach.

Task 2.3: African Road Safety Observatory (ARSO) & state of national road safety databases (LU, Chalmers, TOI, TUD, UniDS, UEW)

This task includes:

- Review and compare accident database quality (extent to which variables give safety-relevant description of infrastructure, vehicles involved, road user and injury type/extent, location, time of occurrence, etc.) and review possible under-reporting issues
- Review in-depth data collection – structuring, reporting, variations in practice across regions and nations
- Review national KPIs (safety performance indicators) beyond fatalities & injuries (e.g. exposure, speeding, safety belt use, etc.) and make recommendations for ARSO expansion

While the system for collection of the most critical data (such as registration of traffic fatalities and casualties) may already be in place all African countries, many other relevant data types are not collected at all or collected in a non-systematic way which makes it difficult to access and use for comparative analysis and monitoring of development. In this task we will **conduct interviews with subject experts and survey reports and databases** to review in depth for each study country: strategies and theoretical bases for data collection; data sources; data collection methods; data management; and types of data available for traffic safety work. The task will focus on data ‘beyond’ traffic fatalities, such as availability of different exposure data, surveys of seatbelt use, and other indicators capture aspects of behaviour-, infrastructure- and vehicle influencing road safety. We will also consider underreporting (applying learning from Norwegian studies), use of hospital data (applying learning from STRADA, Sweden), data on people with special needs in each country (people with impaired mobility, impaired vision, elderly, children, etc), and the use of statistical value of life in socio-economic assessment of transport projects. Findings will be used as the basis for identifying improvement areas. Recommendations for how these indicators should regularly be collected, followed up and shared on national and continental level (e.g. their inclusion in ARSO) will be developed.

We also aim to conduct a **pilot project on in-depth accident investigation**. Beginning from existing international recommendations and practices (e.g. developed by IGLAD), guidelines will be developed for how national in-depth investigation teams and databases could be established and run, comparing these to existing practices described in the interviews above. In parallel, a representative or team from Tanzania or other African country will then be invited to Norway or Sweden to learn

Deliverable D1.1 ‘Project work plan’

about how teams there (e.g. national road administration investigation teams and Accident Investigation Boards) carry out in-depth analyses of serious traffic accidents. The new guidelines and practice knowledge will then be applied in the African country, in order to investigate and generate data on a traffic serious accident, and the pilot evaluated against existing practice.

Based on the findings, a comprehensive system for collection and management of safety related data on the national level will be proposed.

Task 2.4. Development of national road safety strategies in line with Safe Systems principles (TOI/LU, TUD, UniDS, UEW)

This task includes:

- Participative development of existing national road safety management strategies in African countries
- Development of guidelines for implementation of new strategies

In this task, recommendations for the revision of the existing national road safety programs will be further developed in each African country. We will use an approach based on Cognitive Work Analysis to structure a guided **subject expert/practitioner workshop**, in which participants will identify concrete ways to develop national safety management practices towards goal-driven Safe System management. Participants will define goals for national road safety management, select KPIs to monitor progress towards goals, derive key system functions and select from available system components (technology, people, infrastructure) those that are best suited to provide those functions. Materials and content for workshops will be developed using findings from *Task 2.1*, *2.2* and *2.3*. A **researcher workshop** will be conducted prior to the practitioner workshop, to allow researchers to collaborate on design and development of workshop and materials. Findings from each workshop will be assimilated in a report on describing what can be done to progress African road safety management strategies towards Safe Systems approaches.

Deliverables

- D2.1 State of road safety management in selected African countries—review and recommendations (M24: Aug 2024; TOI)
- D2.2 Road safety data and national road safety strategies—review and recommendations: report (M30: Feb 2025; LU/TOI).

Milestones

- MS5 Road safety data pilots specified (M18: Feb 2024)

2.3 WP3 Safe infrastructure

Lead participant: LU

Efforts

| | PM cost, k€ | PM | Direct personal costs, k€ | Equipment, k€ | Travel, k€ | Other goods & services, k€ | Direct costs, k€ | OH (25%), k€ | Sub-contracting, k€ | Total, k€ |
|---------------|-------------|-------------|---------------------------|---------------|-------------|----------------------------|------------------|--------------|---------------------|--------------|
| LU | 8,5 | 20,0 | 169,8 | | 30,0 | 1,0 | 200,8 | 50,2 | | 251,0 |
| TOI | 13,4 | | | | | | | | | |
| VTI | 9,2 | | | | | | | | | |
| UEW | 2,6 | 15,5 | 40,3 | | 3,0 | | 43,3 | 10,8 | | 54,1 |
| ZRST | 3,5 | 15,5 | 54,3 | | 3,0 | | 57,3 | 14,3 | | 71,6 |
| NTU | 9,9 | | | | | | | | | |
| TUD | 8,2 | 10,3 | 84,5 | 1,0 | 14,0 | | 99,5 | 24,9 | | 124,3 |
| Volvo | 10,3 | | | | | | | | | |
| Autoliv | 14,0 | | | | | | | | | |
| Chalmers | 14,0 | | | | | | | | | |
| UniDS | 3,5 | 13,5 | 47,3 | | 3,0 | | 50,3 | 12,6 | | 62,8 |
| Total: | | 74,8 | 396,1 | 1,0 | 53,0 | 1,0 | 451,1 | 112,8 | 0,0 | 563,8 |

Timeline

| | 2022 | 2023 | | | | 2024 | | | | 2025 | | | | 2026 | | |
|---|------|------|----|----|----|------|----|----|----|------|----|----|----|------|----|----|
| | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 |
| WP3 Safe infrastructure | | | | | | | | | | | | | | | | |
| Task 3.1 Review of guidelines | | | | | | | | | | | | | | | | |
| Task 3.2 Tools for Infrastructure Safety Management | | | | | | | | | | | | | | | | |
| Task 3.3 Training in applying tools | | | | | | | | | | | | | | | | |
| Task 3.4 Infrastructure pilots | | | | | | | | | | | | | | | | |

● MS10 Infrastructure pilots specified

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

Description of work

Task 3.1: Review of national design guidelines and procedures (TUD, LU, UEW, UniDS, ZRST)

The national design guidelines and procedures with special attention to vulnerable road users’ (pedestrians, cyclist, and motorcyclists) safety will be carried out. The expected output is identified safety deficiencies and potentials for improvements.

Task 3.2: Introducing the tools comprising Road Infrastructure Safety Management (LU, TUD, UEW, UniDS, ZRST)

Based on the needs identified by WP2 and *Task 3.1*, assessing the present situation in the country, local guidelines for the introduction of the tools comprising Road Infrastructure Safety Management will be developed. These tools include:

- Network Safety Management (identification of road sections with a high accident concentration taking into account at least the number of fatal accidents that have occurred in previous years per unit of road length in relation to the volume of traffic and, in case of intersections, the number of such accidents per site),

Deliverable D1.1 ‘Project work plan’

- Road Safety Impact Assessment (evaluation of the safety effects of road improvements or building new roads to be carried out at the initial planning stage before the infrastructure project is approved to indicate the road safety considerations which contribute to the choice of the proposed solution),
- Road Safety Audit (a formal safety performance examination of planned roads by an independent audit team. It qualitatively estimates and reports on potential road safety issues and identifies opportunities for improvements in safety for all road users),
- Road Safety Inspection (a systematic review of existing roads with the intention to identify any potential hazards, faults or deficiencies that may lead to serious accidents) and
- Road Assessment Programme (assessing the safety level of a road. It involves the collection of data on road characteristics with the aim to determine the level of protection the road environment provides for the road user when a crash occurs).

Task 3.3: Training of local professionals in applying Road Infrastructure Safety Management tools (LU, TUD, UEW, UniDS, ZRST)

Aligned with *WP7 ‘Capacity building’, Task 7.2*—where the theoretical part of Road Infrastructure Safety Management tools will be taught—local professionals will be trained in carrying out Network Safety Management, Road Safety Impact Assessment, Road Safety Audit, Road Safety Inspection and Road Assessment Programme. Special attention will be given to the safety of vulnerable road users (pedestrians, cyclist, and motorcyclists). Besides training in the above tools, training in the Traffic Conflicts Technique (an observation method where traffic conflicts (near-misses) are observed on-site allowing to identify underlying risk factors for accidents, will be carried out.

Task 3.4: Pilot projects demonstrating their application of Road Infrastructure Safety Management tools (LU, TUD, UEW, UniDS, ZRST)

To demonstrate the application of the various Road Infrastructure Safety Management tools, pilot projects at local road agencies/municipalities will be carried out in the participating countries considering local conditions. The pilot project will focus on the safety of vulnerable road users (pedestrians, cyclist, and motorcyclists).

Deliverables

- D3.1 Review of national design guidelines and procedures: report (M12: Aug 2023; LU)
- D3.2 Proposal for national guidelines for the introduction of the tools comprising Road Infrastructure Safety Management: report (M24: Aug 2024; LU)
- D3.3 Capacity building for applying Road Infrastructure Safety Management tools: report (M36: Aug 2025; LU)
- D3.4 Pilot projects demonstrating the application of Road Infrastructure Safety Management tools: report (M45: May 2026; LU)

Milestones

- MS10 Infrastructure pilots specified (M30: Feb 2025)

2.4 WP4 Safe vehicles

Leading partner: Chalmers

Efforts

| | PM cost, k€ | PM | Direct personal costs, k€ | Equipment, k€ | Travel, k€ | Other goods & services, k€ | Direct costs, k€ | OH (25%), k€ | Sub-contracting, k€ | Total, k€ |
|---------------|-------------|-------------|---------------------------|---------------|-------------|----------------------------|------------------|--------------|---------------------|--------------|
| LU | 8,5 | 3,1 | 26,1 | | 3,0 | 4,0 | 33,1 | 8,3 | | 41,3 |
| TOI | 13,4 | | | | | | | | | |
| VTI | 9,2 | | | | | | | | | |
| UEW | 2,6 | 5,0 | 13,0 | | 3,0 | 2,0 | 18,0 | 4,5 | | 22,5 |
| ZRST | 3,5 | 5,0 | 17,5 | | 1,0 | | 18,5 | 4,6 | | 23,1 |
| NTU | 9,9 | | | | | | | | | |
| TUD | 8,2 | 2,0 | 16,4 | | | | 16,4 | 4,1 | | 20,5 |
| Volvo | 10,3 | 6,3 | 64,8 | | 2,0 | | 66,8 | 16,7 | | 83,5 |
| Autoliv | 14,0 | 3,7 | 51,8 | | | | 51,8 | 13,0 | | 64,8 |
| Chalmers | 14,0 | 9,5 | 133,0 | | 6,0 | 4,0 | 143,0 | 35,8 | | 178,8 |
| UniDS | 3,5 | 3,5 | 12,3 | | 3,0 | 2,0 | 17,3 | 4,3 | | 21,6 |
| Total: | | 38,1 | 334,8 | 0,0 | 18,0 | 12,0 | 364,8 | 91,2 | 0,0 | 456,0 |

Timeline

| | 2022 | 2023 | | | | 2024 | | | | 2025 | | | | 2026 | | |
|---------------------------------------|------|------|----|----|----|------|----|----|----|------|----|----|----|------|----|----|
| | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 |
| WP4 Safe vehicles | | | | | | | | | | | | | | | | |
| Task 4.1 Vehicle standards | | | | | | | | | | | | | | | | |
| Task 4.2 Vehicle control & inspection | | | | | | | | | | | | | | | | |
| Task 4.3 Vehicle inspection pilot | | | | | | | | | | | | | | | | |

MS13 Vehicle inspection demo

● MS6 Vehicle inspection pilot specified

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.

Description of work

The work will include review and updates of current procedures and methodologies of national road safety work concerning road vehicles. With an inventory of potential or proposed standards, this WP will investigate further how vehicle technical control and inspection can be utilized in the regions. It will also investigate gaps for training activities on vehicle inspectors, thus providing input for the WP7.

Task 4.1: Vehicle standards and safety rating for new and used vehicles (*Chalmers, TU Delft, Autoliv, UEW, UniDS, ZRST*)

This task will review the existing regulations and procedures concerning vehicle import, registration, and inspection in the four countries in Africa. The work will not be confined to personal cars but will include trucks and motorized two-wheelers as well. The task will be based on investigation of existing vehicle standards and safety ratings for new and used vehicles (including in-use standards, where applicable.) After consideration of the local African circumstances, the task will recommend potential vehicle standards and safety ratings for new and used vehicles. The task will conclude with the development of a proposal for enhancing national guidelines regarding vehicle import, registration and inspection.

Task 4.2: Vehicle technical control and inspection (*Chalmers, Autoliv, UEW, UniDS, ZRST*)

The second task in this work package will investigate existing systems for regular technical control and inspections and suggest a reliable set up for the African countries. Since the general technical

Deliverable D1.1 ‘Project work plan’

conditions of the fleet is low, too strict regulations will make large share of it illegal with various negative consequences (public resistance, corruption, continued used of uninspected vehicles, etc.). Therefore, a reasonable set of test procedures suitable for the countries will be developed aiming at the most safety-critical systems (brakes, seat belts, etc.). Again, the scope includes different vehicle types—motorbikes, cars and trucks. It needs to account for the constraints of potential inspection settings, such as time with the vehicle, skill set of the inspectors, equipment available at inspection stations, etc.

As a secondary output the task will advise on a simple subset of methods for assessing the suitability of vehicle safety components, as fitted. For instance, the type approval status of a seat belt is shown on its label and with familiarity with such labels it is possible to discern if the belt should be used only in conjunction with other elements of a restraint system (e.g. an airbag) or by itself. This type of insight from the type approval process is deliberate to aid vehicle inspections at various stages of a vehicle’s life, but may not be widely understood without prior experience with the topic.

Task 4.3: Vehicle inspection pilot (*Chalmers, Volvo, UEW, UniDS, ZRST*)

Together with local authorities, this task has the objective to set up a first demonstration of a vehicle inspection centre in one region and to test proposed methods of vehicle inspections. The skills of the vehicle inspectors will be a constraint of the technical controls being proposed, so an element of this task will be to suggest vocational training required of vehicle mechanics.

Deliverables

- D4.1 Inventory of existing standards for vehicle safety, including suggestions for updates: report (M15: Nov 2023; Chalmers)
- D4.2 Inventory of existing vehicle safety technical control and inspection procedures, including suggestions for updates: report (M30: Feb 2025; Chalmers)
- D4.3 First demo centre of a vehicle inspection centre in one region: demo (M45: May 2026; Chalmers)

Milestones

- MS6 Vehicle inspection pilot specified (M24: Aug 2024)
- MS13 Vehicle inspection demo centre launched (M45: May 2026)

2.5 WP5 Safe road users

Leading partner: VTI

Efforts

| | PM cost, k€ | PM | Direct personal costs, k€ | Equipment, k€ | Travel, k€ | Other goods & services, k€ | Direct costs, k€ | OH (25%), k€ | Sub-contracting, k€ | Total, k€ |
|---------------|-------------|-------------|---------------------------|---------------|------------|----------------------------|------------------|--------------|---------------------|--------------|
| LU | 8,5 | 4,0 | 33,6 | | 2,0 | | 35,6 | 8,9 | | 44,5 |
| TOI | 13,4 | 10,0 | 133,8 | | 2,0 | 2,0 | 137,8 | 34,5 | | 172,3 |
| VTI | 9,2 | 12,0 | 110,4 | 5,0 | 2,0 | 4,0 | 121,4 | 30,4 | | 151,8 |
| UEW | 2,6 | 6,0 | 15,6 | | | | 15,6 | 3,9 | | 19,5 |
| ZRST | 3,5 | 6,0 | 21,0 | | | | 21,0 | 5,3 | | 26,3 |
| NTU | 9,9 | | | | | | | | | |
| TUD | 8,2 | 2,5 | 20,5 | | | | 20,5 | 5,1 | | 25,6 |
| Volvo | 10,3 | | | | | | | | | |
| Autoliv | 14,0 | | | | | | | | | |
| Chalmers | 14,0 | 1,0 | 14,0 | | | | 14,0 | 3,5 | | 17,5 |
| UniDS | 3,5 | 6,0 | 21,0 | | | | 21,0 | 5,3 | | 26,3 |
| Total: | | 47,5 | 369,9 | 5,0 | 6,0 | 6,0 | 386,9 | 96,7 | 0,0 | 483,6 |

Timeline

| | 2022 | 2023 | | | | 2024 | | | | 2025 | | | | 2026 | | |
|--|------|------|----|----|----|------|----|----|----|------|----|----|----|------|----|----|
| | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 |
| WP5 Safe road users | | | | | | | | | | | | | | | | |
| Task 5.1 Mapping of current activities | | | | | | | | | | | | | | | | |
| Task 5.2 Road safety culture | | | | | | | | | | | | | | | | |
| Task 5.3 Road user pilots | | | | | | | | | | | | | | | | |

● MS7 Road user pilots specified

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.

Description of work

Task 5.1: Current road safety activities to encourage safe road user behaviour (VTI, TOI, LU, TUD, UEW, UniDS, ZRST)

This task aims at reviewing how the current national road safety procedures, methodologies and various strategies 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). Mapping these relationships will enable us to understand the current situation (i.e., identify gaps) as a departure point for proposed improvements and identify relevant pilot studies as well as a baseline for fine-tuning of training activities in WP7. The methodology is through interviews with key actors as well as the revision of official national relevant documents, in both the selected African and European countries. The task will also be aligned with activities in WP2 and WP7.

The task includes the mapping of:

- Road safety policies and practices addressing the safety of vulnerable road users (pedestrians and cyclists) and their interaction with motorized vehicles (speeding, drink/drug driving, seat

Deliverable D1.1 ‘Project work plan’

- belt, child restraint usage, route choice, crossing, jaywalk, use of lights, reflecting materials, etc.).
- Safety policies and practices concerning motorcycles (use of helmets, lights, number and protection of passengers, motorcycle taxis etc.).
- Driver training programs (curriculum), driving tests (approval requirements), and licencing procedures focusing on professional- and novice drivers.
- Police enforcement – practices and resources (distribution of enforcement over the road network, linkage to campaigns/other safety work, public support, irregularities, types of sanctions, personnel, equipment (speed laser, breath analyser, etc.).
- Publicity, information, and educational campaigns (principles and practices (e.g., align with CAST).
- The protection of vulnerable road users (policies, infrastructure, etc).
- NGOs with focus on Road Safety and civil society (strategies, activities, skills and empowerment).
-

Task 5.2: Mapping of Road Safety Culture (TOI, VTI, LU, TUD, UEW, UniDS, ZRST)

The task aims at a conducting comprehensive study of Road Safety culture (RSC) (i.e., shared patterns and shared norms) in the African and European countries including a thorough understanding of human factors. The target groups will be car drivers and vulnerable road users. A survey to car drivers, measuring key road safety behaviours and based on previous studies (e.g., using Driver Behaviour Questionnaire), will be developed. To adapt the survey to the national context qualitative interviews will be conducted in each country. In addition to questions within the DBQ the survey will also include questions measuring some aspects of RSC, including road users’ own behaviour, (shared) patterns of behaviour, shared norms and descriptive norms i.e., expectations of other road users’ behaviour. Survey results will be analysed for each country and compared across countries and continents. We hypothesize that the RSC is relatively similar in Norway and Sweden and different from the African countries. The association between descriptive norms, behaviour, and accidents is well documented, signifying the utility of the applied RSC perspective.

To address RSC in general 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 (3) their perception of enforcement practices. *Task 5.2* will thus enable us to develop concrete recommendations about which critical factors to address in each country to improve RSC.

Task 5.3: Safe road user behaviour pilot projects (VTI, TOI, LU, TUD, UEW, UniDS, ZRST)

Based on the gaps identified in *Tasks 5.1* and the road safety culture influencing factors in 5.2, relevant pilot studies will be carried out to apply a safe system approach to three key sociocultural units: (i) communities, (ii) transport companies and (iii) driver education. The proposed pilots (interventions) will be designed as before-after studies at the system level, aiming to change the mindset and practices of the local practitioners towards a safe system approach. The results will be used to prescribe recommendations to transfer and scale-up the pilots to other countries and regions. The proposed pilot studies will be carried out depending on the country-specific situations and availability of resources. Non-exclusive examples of pilot studies (other topics may emerge based on the findings from the previous tasks) are:

- **Community empowerment of vulnerable road users.** Based on the RSC results from *Tasks 5.1* and *5.2* regarding the safety of vulnerable road users and the factors influencing RSC, this pilot aims to change the behaviour of drivers in a community (e.g., a school area with many pedestrians), empower vulnerable road users and increase their subjective perception of the safety. 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

Deliverable D1.1 ‘Project work plan’

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. ‘The Heart Zone’ model is a cultural approach, which try to encourage local inhabitants to take control over their own area. To ensure effectiveness, the pilot will also include police enforcement in the same area to increase driver’s subjective risk of detection. The aim is to change and guide the police strategy towards a safe systems approach (i.e., increasing its police visibility and not focusing on traffic tickets), and to influence the drivers to respect the rules and zones (e.g., lower speed limits) established in the Heart Zone area. The impact on the perceived subjective risk of vulnerable road users in the specific area will be evaluated before and after the pilot. Another key impact measure that will be examined before and after in the study areas is the speed of car drivers, which will be measured before and after using radars.

- **Safe transport company.** Based on the outcome of 5.1 and 5.2 we hypothesize that the driving style and speed of professional drivers in areas with many pedestrians can be a source of perceived risk of vulnerable road users, including accidents. The focus of this pilot will therefore be to influence the driving style of professional drivers, 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 pilot will focus on implementing a simplified version of the ISO:39001 standard, which is referred to as the Safety Ladder for safety management in transport companies. The key focus in the Safety Ladder is influencing company safety culture through management commitment and regulation of the driving style of drivers, focusing especially on the factors influencing this (e.g., stress, time pressure, life situation of drivers). The intervention will be influenced by Norwegian pilots following the same approach. The impact of the intervention will be evaluated by before and after surveys with drivers in the company.
- **Training of driver education teachers.** In this pilot the aim is to provide teachers with tools enabling them to increase their focus on the so called “higher order skills” in driving as defined by the GDE matrix (Goals for Driver Education) (e.g., risk awareness, hazard perception and cognitive skills). Furthermore, since an important focus of WP5 is to increase the safety for VRUs, this pilot will encourage teachers to develop drivers’ risk awareness and cognitive skills related to interaction with VRUs. These skills are an important in the driver training in safe system countries. The training will be evaluated through a small-scale survey directed to driver education teachers.

Deliverables

- D5.1 Current procedures and methodologies of national road safety work concerning road users in selected African countries (M9: May 2023; VTI)
- D5.2 Road Safety culture in selected African countries (M18: Feb 2024; VTI)
- D5.3 Human factors and accident causation in selected African countries (M20: Apr 2024; VTI)
- D5.4 Pilot studies in road safety measures directed to road users in selected African countries (M40: May 2026; VTI)

Milestones

- MS7 Road user pilots specified (M24: Aug 2024)

2.6 WP6 Post-crash care

Lead participant: NTU

Efforts

| | PM cost, k€ | PM | Direct personal costs, k€ | Equipment, k€ | Travel, k€ | Other goods & services, k€ | Direct costs, k€ | OH (25%), k€ | Sub-contracting, k€ | Total, k€ |
|---------------|-------------|-------------|---------------------------|---------------|-------------|----------------------------|------------------|--------------|---------------------|--------------|
| LU | 8,5 | 2,5 | 21,3 | | | | 21,3 | 5,3 | | 26,6 |
| TOI | 13,4 | | | | | | | | | |
| VTI | 9,2 | | | | | | | | | |
| UEW | 2,6 | 10,5 | 27,3 | | 6,0 | 4,5 | 37,8 | 9,5 | | 47,3 |
| ZRST | 3,5 | 10,0 | 35,0 | | 6,0 | 4,5 | 45,5 | 11,4 | | 56,9 |
| NTU | 9,9 | 21,3 | 210,9 | | 20,0 | 2,5 | 233,4 | 58,3 | | 291,7 |
| TUD | 8,2 | | | | | | | | | |
| Volvo | 10,3 | | | | | | | | | |
| Autoliv | 14,0 | | | | | | | | | |
| Chalmers | 14,0 | | | | | | | | | |
| UniDS | 3,5 | 10,0 | 35,0 | | 6,0 | 4,5 | 45,5 | 11,4 | | 56,9 |
| Total: | | 54,3 | 329,4 | 0,0 | 38,0 | 16,0 | 383,4 | 95,9 | 0,0 | 479,3 |

Timeline

| | 2022 | 2023 | | | | 2024 | | | | 2025 | | | | 2026 | | |
|--|------|------|----|----|----|------|----|----|----|------|----|----|----|------|----|----|
| | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 |
| WP6 Post-crash care | | | | | | | | | | | | | | | | |
| Task 6.1 Current situation mapping | | | | | | | | | | | | | | | | |
| Task 6.2 Innovative solutions to deliver post-crash care | | | | | | | | | | | | | | | | |
| Task 6.3 Post-crash care pilots | | | | | | | | | | | | | | | | |

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

Description of work

The WP activities will be carried out in Ghana, Tanzania, and Zambia.

Task 6.1: Mapping of corridors, stakeholders and initiatives (NTU, UEW, UniDS, ZRST)

This task involves identifying national, regional and global partnerships and initiatives on post-crash response and key stakeholders working on post-crash response. A list of stakeholders will be drawn up through network of local contacts and reviewing documents on post-crash response, including websites, media sources, government reports, scholarly reports, legal briefings, company profiles, etc. In addition, relevant stakeholders working on post-crash response at the national, regional, or global levels will be identified through interviews (e.g. Key Informant Interviews and Focus Group Discussions). The task will also include review of national, region and international actions and initiatives on post-crash response. Such actions and partnerships include United Nations Road Safety Collaboration (UNRSC), The Global Alliance for Road Safety NGOs, local Red Cross Societies etc.

Additionally, the task will seek to confirm the final selection of the corridors where the following tasks will be carried out. The indicative list of the corridors include:

- Kasoa-Mankessim highway (31.1 km in length), a segment of the Accra-Cape Coast road network, Ghana

Deliverable D1.1 ‘Project work plan’

- Dar es Salaam region, Tanzania
- Lusaka-Kabwe (143 km single carriage way road), Zambia

The data for the rapid assessment 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 focus groups with local Red Cross Societies, national authorities, etc.

Key Informant Interviews will be carried out with staff involved with pre-hospital care, hospital care, emergency dispatch services and police in each of the corridors applying the appropriate sampling techniques depending of the final size of the corridors. Facilities will be selected based on their proportional representation in the burden of road traffic injuries along the 3 corridors.

Task 6.2: Needs, gaps and recommendations (NTU, UEW, UniDS, ZRST)

Activities planned under this task are as follows:

In-depth corridor analysis

Analysis will be conducted to examine stakeholders’ alignment, interest, and influence with a view to form partnerships, capitalise on prevailing capacities and know-how, and avoid duplication of efforts. The analysis will shed light on the power and influence of individual stakeholders, potential sources of financing for the activities piloted under this project, potential partnerships for sustaining efforts further, etc.

Following stakeholder analysis, an initial analysis relating to the status and provisions for post-crash care will be informed principally by rapid corridor assessments and Key Informant Interviews (KIIs).

The data collected will be cleaned, validated and triangulated; a combination of qualitative and quantitative analysis methods will be applied.

In developing and improving a post-crash system, it is important to view the system as a ‘chain of interventions’ with emergency care for injury at the core of the system. Improvement must address each link in this ‘chain’ to ensure its overall effectiveness, including joint training exercise to increase interoperability. The analysis will therefore be carried out by phases of care: at the scene, facility, and follow-up. For each phase, needs and gaps will be identified as difference between the current state and selected benchmarks. This will form the basis for elaboration for recommendations and action plans.

Recommendations for improvements

Building on results on the analysis presented above and international best practices, recommendations will be proposed to improve the delivery of post-crash response services. As one size does not fit all, alternative recommendations will be proposed that are aligned with the varying situations in target countries. Recommendations will indicate aspects to improve operation manuals and guidelines, developing checklists of essential procedures, elaboration of training programs for first responders and selected hospital staff, and other related aspects for enhancement of institutional and personal capacities.

When assessing recommendations, the following factors will be considered carefully:

- the expected outcomes of recommended solution; and
- the effect of the recommended solution on the effectiveness and efficiency of the post-crash response.

Action plan and feasibility assessment

Within this Activity, the recommendations will be further elaborated, grouped, and presented as specific, realistic and time-bound action plans (with cost estimates) that will be presented to key stakeholders in selected countries for feedback. In addition, the African Union Commission (AUC) and Regional Economic Communities (RECs) will be consulted on ways for replicability and testing

Deliverable D1.1 ‘Project work plan’

of solutions. Cooperating with other projects will be sought if there are projects underway currently testing new solutions /equipment for post-crash care, joint tests could be carried out to enhance synergy and avoid duplication of efforts. Special attention will be paid to the existing and envisaged local resources and challenges. Based on the feedback received, the recommendations and action plans will be subject to fine-tuning using an iterative process in order to meet the expectations.

The final action plans will involve a phased approach, commencing with lower-level interventions and investments; and assessment of the applicability of recommended actions at geographies beyond study corridors.

Task 6.3: Pilot projects (NTU, UEW, UniDS, ZRST)

The purpose of activities within this *Task 6.3* is to test the applicability and performance of recommended actions, and devise recommendations to further enhance newly proposed actions in order to improve the prevailing system. The scope of the pilots will relate to improvement of capacities and coordination to respond to road traffic crashes, including processes/procedures, skills/knowledge and awareness.

This task will involve 3 small-scale pilots of the selected actions from the action plan (based on the situation on the ground). The scope of pilot monitoring and dissemination will include:

- Pilot preparation: identification of contact persons in the organisations participating in pilots; documentation of the existing and recommended operating procedures and practices; presentations of new tools/procedures/measures to the users and preparation of hand-outs/support materials;
- Pilot implementation: Q&A sessions and implementation support; site visits to observe practical operations and examine how recommended actions are applied and what impacts they have brought;
- Pilot assessment: collecting participant’s feedback by surveys, interviews and/or focus groups; analysis of the monitoring data collected during pilot implementation (impact, outcome, output level);
- Pilot dissemination: developing strategies and guidelines for awareness creation and dissemination of success stories.

The outcome of these activities will be used to devise ways to address any gaps identified during the piloting phase.

The examples of scope/actions of pilots include:

- Guidelines for emergency services in order to improve the interoperability and co-ordination amongst the emergency services
- Positioning of the rescue vehicles for prompt response
- Communications and pre-alert systems between mobile units and hospitals
- Enhancement of data analysis and reporting systems and practices
- Joint training exercise for emergency services (police, fire, and ambulance) to improve capacity, interoperability, and operational effectiveness.

The task also involves the establishment/piloting a training regime and scope of training materials for bystanders, which includes: guidelines and guidance on population awareness program; knowledge of emergency telephone number; do’s and do not do’s at the crash scene. The awareness campaign in itself will not be part of this activity, however approach to its organisation, structuring, scoping and elaboration of materials will be piloted with the bodies in charge of such campaigns.

Deliverables

- D6.1 Post-crash response mapping and data collection: report (M18: Feb 2024; NTU)
- D6.2 Post-crash response data analysis and recommendations: report (M24: Feb 2024; NTU)
- D6.3 Action plans for Tanzania, Ghana and Zambia: report (M24: Feb 2024; NTU)

Deliverable D1.1 'Project work plan'

- D6.4 Post-crash response pilots: report (M45: May 2026; NTU)

Milestones

- MS8 Post-crash care pilots specified (M24: Aug 2024)

2.7 WP7 Capacity building

Lead participant: TUD

Efforts

| | PM cost, k€ | PM | Direct personal costs, k€ | Equipment, k€ | Travel, k€ | Other goods & services, k€ | Direct costs, k€ | OH (25%), k€ | Sub-contracting, k€ | Total, k€ |
|---------------|-------------|-------------|---------------------------|---------------|-------------|----------------------------|------------------|--------------|---------------------|--------------|
| LU | 8,5 | 8,9 | 75,5 | | 10,0 | 2,0 | 87,5 | 21,9 | | 109,3 |
| TOI | 13,4 | 6,0 | 80,3 | | 6,0 | | 86,3 | 21,6 | | 107,9 |
| VTI | 9,2 | 6,5 | 59,8 | | 6,0 | | 65,8 | 16,5 | | 82,3 |
| UEW | 2,6 | 5,5 | 14,3 | | 4,0 | 2,0 | 20,3 | 5,1 | | 25,4 |
| ZRST | 3,5 | 4,5 | 15,8 | | 4,0 | 2,0 | 21,8 | 5,4 | | 27,2 |
| NTU | 9,9 | 4,5 | 44,6 | | 6,0 | | 50,6 | 12,6 | | 63,2 |
| TUD | 8,2 | 9,5 | 77,9 | | 6,0 | | 83,9 | 21,0 | | 104,9 |
| Volvo | 10,3 | 2,5 | 25,7 | | 6,0 | | 31,7 | 7,9 | | 39,7 |
| Autoliv | 14,0 | | | | | | | | | |
| Chalmers | 14,0 | 2,0 | 28,0 | | 6,0 | | 34,0 | 8,5 | | 42,5 |
| UniDS | 3,5 | 6,5 | 22,8 | | 4,0 | 12,0 | 38,8 | 9,7 | | 48,4 |
| Total: | | 56,4 | 444,5 | 0,0 | 58,0 | 18,0 | 520,5 | 130,1 | 0,0 | 650,6 |

Timeline

| | 2022 | 2023 | | | | 2024 | | | | 2025 | | | | 2026 | | |
|--|------|------|----|----|----|------|----|----|----|------|----|----|----|------|----|----|
| | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 |
| WP7 Capacity building | | | | | | | | | | | | | | | | |
| Task 7.1 Mapping of current education | | | | | | | | | | | | | | | | |
| Task 7.2 Design of training activities | | | | | | | | | | | | | | | | |
| Task 7.3 Centre of excellence | | | | | | | | | | | | | | | | |
| Task 7.4 Scaling-up to other countries | | | | | | | | | | | | | | | | |
| Task 7.5 Sustainability of capacity building | | | | | | | | | | | | | | | | |

Objectives

WP7’s main aim and focus is on the transfer of road safety knowledge and training of road safety professionals and capacity building using the ‘train-the-trainer’ approach. Hence, the main objectives of WP7 are:

- 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.

Description of work

Task 7.1: Compilation of needs and gaps in current training activities (*TOI, LU, VTI, UEW, ZRST, NTU, TUD, UniDS*)

Deliverable D1.1 ‘Project work plan’

Task 7.1 will act as an umbrella task and compile all the findings from WP2-WP6 regarding the unique road safety problems and conditions, existing regulations and procedures, road safety culture, and existing training and capacity building activities for road safety professionals of each of the selected African countries. The results and findings will be reviewed and additional data collection (interviews and collection of relevant documents) will take place in case further information is needed. A predefined checklist will be established and used to structure and synthesise the information. This compilation will provide a holistic view of current training and capacity building activities, their level of depth and existing gaps. Following this, *Task 7.1* will investigate efficient and effective ways to adjust the training activities towards the Safe System Approach and investigate what types of training are needed in *Task 7.2* for each of the African countries. Therefore, the output of this task will serve as an input to *Task 7.2*.

Task 7.2: Design of suitable and adapted training activities (TUD, LU, TOI, VTI, UEW, ZRST, NTU, Volvo, Chalmers, UniDS)

In this task suitable and adapted training and capacity building activities targeted to fill the training gaps identified in *Task 7.1* will be developed. These training activities will take the form of lectures, interactive workshops and sessions, case studies and practical assignments, study tours, field trips, success stories and lessons learned (from both European and African countries). The central core of these training activities is the Safe System approach with particular attention to vulnerable road users. The training will start with a generic part that is relevant to all road safety professionals and include topics such as system thinking and system mindset (i.e. safe system approach), road safety culture, road safety evaluation and assessment. This will be followed by dedicated thematic training groups depending on the specific background of different university road safety academics (e.g. engineering, policy, psychology): road infrastructure safety (e.g. Network Safety Management, Road Safety Impact Assessment, Road Safety Audit and Inspection), education and enforcement (e.g. design of effective educational and enforcement campaigns, driver training and driving licencing), policymaking (e.g. development of evidence-based long-term road safety strategies, action plans and management including mobilizing stakeholders and lead agencies), vehicle safety (e.g. harmonized vehicle standards and reliable system for vehicle inspection, safety technological developments), in-depth accident investigations, post-crash care, etc.

The type of training activities and the extent to which each theme will be covered will be adapted to the specific needs of each of the selected countries and the gaps identified.

Task 7.3: Centre of excellence (UniDS, LU, VTI, UEW, ZRST, TUD, Volvo, Chalmers)

This task aims to develop a web-based centre of excellence where the developed curriculum and training activities will be available for further dissemination and provide possibilities for distance online learning. This task also includes the development of the technical infrastructure needed, and a business plan to maintain the centre of excellence beyond the project lifetime by the local African partners. This centre of excellence will provide an online platform on which local road safety academics and local road safety professionals can communicate, interact and exchange knowledge and experiences regarding road safety management. This task will as well investigate the best ways and the resources needed for hosting the web-based centre of excellence during its phase of development and sustaining it after the project lifetime. Possibilities of integration of the centre of excellence with ARSO will be investigated, too.

Task 7.4: Scaling up the training activities to other LMICs (UEW/NTU, LU, TOI, ZRST, VTI, Volvo, UniDS, ZRST)

This task will focus on developing strategies and best practices for scaling up the proposed training activities and applications to other LMICs. The contacts and connections that the African partners have with universities and knowledge transfer centres in other LMICs will be utilized for this purpose. A researchers’ workshop will be planned involving representatives of these universities and knowledge transfer centres to discuss the target groups for training in these countries, identification

Deliverable D1.1 ‘Project work plan’

of potential barriers and how the training would be best conducted. Based on that, effective strategies for scaling up the training activities will be developed and the safety knowledge and training activities will be further distributed.

Task 7.5: Sustainability of capacity building (NTU, LU, TUD, UniDS, UEW, ZRST)

For long term impact on road safety, it is important to sustain and update the developed training activities in the future. An exploitation plan will be developed in consultation with the African partners and stakeholders detailing how to ensure the sustainability of developed training and capacity building activities, their maintenance and update, and their accessibility on the web-based centre of excellence beyond the project lifetime. A business plan will be prepared to detail the resources needed to ensure the sustainability of the capacity building and knowledge transfer. Several organizations in the EU support collaborations and person/knowledge transfer between European and African countries such as NOREC (Norway) and TU Delft | Global Initiative (Netherlands), and Vision Zero Academy | Swedish National Transport Administration (Sweden). These experiences and results will be capitalised upon. Similarly, the connections with DG INTPA, DG MOVE, EIB and other EU agencies work of the same dimension – development of transport and road safety in particular in Africa.

In order to ensure buy-in and roll-out of knowledge collected during the project on the continent level, the contacts will be established with the African Union Commission, namely the Department of Infrastructure and Energy in charge of Transport & Mobility. The possibility of hand-over of web-based centre of excellence to the AUC acting as knowledge hub will be explored, building upon the capacity and knowledge built by AUC within the scope of past and ongoing programmes and EU funded initiatives. Alternatively, handing over to the specific organisation or network/association of thereof will be considered, exploring also the possibility of cooperation with the African Road Safety Observatory (ARSO).

Within this task, the marketing strategy and plan towards spreading the information about the centre of excellence beyond project lifetime will be developed (building upon *Tasks 7.3* and *7.4*). It will be tightly integrated with the *Task 8.7* developing the general exploitation plan for the project outcomes.

Deliverables

This work package will result in the following deliverables:

- D7.1 Current training activities for road safety professionals in the participating African countries: report (M16: Dec 2023; TOI)
- D7.2: Web-based (online) centre of excellence including online portal with educational and training material and activities (M36: Aug 2025; UniDS)

Milestones

- MS11 Web-based centre of excellence is launched (M36: Aug 2025)

2.8 WP8 Dissemination

Lead participant: ZRST

Efforts

| | PM cost, k€ | PM | Direct personal costs, k€ | Equipment, k€ | Travel, k€ | Other goods & services, k€ | Direct costs, k€ | OH (25%), k€ | Sub-contracting, k€ | Total, k€ |
|---------------|-------------|-------------|---------------------------|---------------|--------------|----------------------------|------------------|--------------|---------------------|--------------|
| LU | 8,5 | 5,5 | 46,6 | | 27,0 | 14,0 | 87,6 | 21,9 | | 109,5 |
| TOI | 13,4 | 1,4 | 18,1 | | 10,0 | 4,0 | 32,1 | 8,0 | | 40,1 |
| VTI | 9,2 | 1,4 | 12,4 | | 5,0 | 2,0 | 19,4 | 4,9 | | 24,3 |
| UEW | 2,6 | 1,3 | 3,3 | | 7,0 | 3,5 | 13,8 | 3,4 | | 17,2 |
| ZRST | 3,5 | 10,5 | 36,8 | | 11,0 | 35,5 | 83,3 | 20,8 | | 104,1 |
| NTU | 9,9 | 1,9 | 18,3 | | 7,0 | 1,0 | 26,3 | 6,6 | | 32,9 |
| TUD | 8,2 | 1,9 | 15,2 | | 9,0 | 4,0 | 28,2 | 7,0 | | 35,2 |
| Volvo | 10,3 | 0,8 | 7,7 | | 3,0 | 1,0 | 11,7 | 2,9 | | 14,6 |
| Autoliv | 14,0 | 0,8 | 10,5 | | 7,0 | 1,0 | 18,5 | 4,6 | | 23,1 |
| Chalmers | 14,0 | 1,4 | 18,9 | | 9,0 | 4,0 | 31,9 | 8,0 | | 39,9 |
| UniDS | 3,5 | 1,3 | 4,4 | | 7,0 | 3,5 | 14,9 | 3,7 | | 18,6 |
| Total: | | 27,7 | 192,1 | 0,0 | 102,0 | 73,5 | 367,6 | 91,9 | 0,0 | 459,5 |

Timeline

| | 2022 | 2023 | | | | 2024 | | | | 2025 | | | | 2026 | | |
|---------------------------------|------|------|----|----|----|------|----|----|----|------|----|----|----|------|----|----|
| | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 |
| WP8 Dissemination | | | | | | | | | | | | | | | | |
| Task 8.1 Dissemination plan | | | | | | | | | | | | | | | | |
| Task 8.2 Dissemination tools | | | | | | | | | | | | | | | | |
| Task 8.3 Internal communication | | | | | | | | | | | | | | | | |
| Task 8.4 Liaising | | | | | | | | | | | | | | | | |
| Task 8.5 Final event | | | | | | | | | | | | | | | | |
| Task 8.6 External dissemination | | | | | | | | | | | | | | | | |
| Task 8.7 Exploitation plan | | | | | | | | | | | | | | | | |

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

Description of work

Task 8.1: Dissemination plan / target group management (ZRST, LU)

At the beginning of the project a dissemination plan will be set up, describing the dissemination activities and target groups in detail, and providing timelines and responsibilities. The main target groups to be addressed are governmental authorities involved in road safety in Africa (incl. from countries not directly involved in the project), academic institutions involved in professional education and research within road safety domain, NGOs, international organizations (e.g. WHO, OECD, SSATP), aid agencies supporting road safety programmes for Africa (e.g. GRSP, FIA Foundation) and general public. It is necessary to follow different communication strategies depending on the target group and country; therefore, a dissemination matrix will be developed combining the target groups with adequate dissemination channels and messages. Relevant stakeholders will be identified using the knowledge and professional networks of the consortium partners. The list will be extended whenever necessary during the lifetime of the project.

Task 8.2: Dissemination/communication tools (LU/ZRST, all partners)

Deliverable D1.1 'Project work plan'

A project **website** will be implemented shortly after the start of the project. The website will be managed by LU/ZRTS and will act as the main point of reference for up-to-date information on the project activities and results. Documents such as public deliverables, green open access publications or newsletters will be uploaded there. Information on project upcoming events will be included, as will contacts and links to related projects and networks, publications or project-related events.

A **project leaflet**, which will contain general information on the project, will be designed close to the start of the project. It will be published in printed form (complemented by the project information on the website) and made available to all partners as promotional material to be used at external dissemination activities or to give away to any of the dissemination target groups where appropriate.

The progress of the project will be disseminated via **periodic newsletters**. This will keep the public awareness of the project during the project's lifetime. In contrast to the general project leaflet, the newsletters will be electronically distributed via email (using Mailchimp service), and also be made available on the project's website.

The project will also have **social media channels** which will publish small updates but with higher frequency compared to the newsletters (ideally, on a weekly basis). Experience from earlier projects shows that the social media followers only partly overlap with the newsletter subscribers, thus the increasing the total audience covered. Project channels will be created on several (3-4) social media platforms; the exact list will be decided based on the local knowledge on which platforms are currently mostly used in different African regions.

A series of **targeted articles** in media will be published in local/professional press, in connection to the project major milestones and deliverables, incl. the project final event.

Project visual profile will be developed in the beginning of the project, including a logotype, colour scheme, templates for PowerPoints presentations, reports, newsletters, etc.

Task 8.3: Internal communication tools (LU, all partners)

To support proper communication within the project team, a **collaborative platform** (MS Teams or similar) will be set up for file sharing, messaging, assignment and follow-up of the tasks, etc. A **recurring internal activity report** will be shared within the consortium, containing short information about reached milestones, deliverables, dissemination activities and publications, etc.

It is expected that a major bulk of internal communication will be done through **video calls**. Availability of proper equipment (e.g. speakerphones, webcams), stable Internet connection and familiarity with the software used is a must. Special efforts will be made in the beginning of the project to ensure that these pre-requisites are in place for all partners and communication can be done efficiently.

Task 8.4: Liaising with similar projects and initiatives (LU, all partners)

The consortium will actively seek and attempt to co-operate with other projects, initiatives and activities within the topic of the project. In particular, contact with the other project(s) within the same Horizon Europe call will be established from the beginning and possibilities for synergy through joined efforts on data collection, dissemination activities, including the joint final event (see *Task 8.5*), will be discussed on a regular basis.

Task 8.5: Final event and demonstration (ZRST, all partners)

The project outcomes will be presented at the final event, held in the last month of the project's lifetime. The final event will target the relevant African and European stakeholders and research community. Special attention will be given to inviting political decision makers, incl. those from countries not directly involved in the project. Results will be shown via live presentations and a poster exhibition; however, a significant amount of time will be reserved for mingling and personal face-to-face communication, highly important for creating trust to the project team and building long-lasting personal relations that could benefit the further implementation of project recommendations. The

Deliverable D1.1 'Project work plan'

final event will also contain a large number of demonstrations and show-cases based on the various pilots that have been implemented during the project.

Task 8.6: External dissemination actions (*LU, all partners*)

Apart from the project's own dissemination actions, external activities such as **conferences, workshops or seminars/webinars** will be used to distribute information on the project. Results as well as information on the ongoing work of the project will be presented to give the conference participants insights into the project. Those actions will also be used to expand the network with possible stakeholders and get feedback which will enhance the project further.

In this task, relevant conferences, workshops and seminars will be identified and the information distributed among the partners. The participation of partners in external activities will be coordinated and they will be assisted in the preparation of contributions for relevant actions. Each of the project partners (especially from Africa) will actively contribute to identifying national opportunities to disseminate information and demonstrate the project tools and results.

Another important dissemination channel will be the publication of results in **scientific journals**. Partners will actively seek to publish articles in relevant journals to raise awareness of the project and spread results. Publishing will comply with the Open Access requirements in Horizon Europe.

Task 8.7: Exploitation plan (*TUD, NTU, ZRST, LU*)

To ensure that the project findings and initiated pilots come to good use even after the project, a plan for exploitation of the project results will be developed. It will identify the usable outcomes of the project and strategies to support their wider implementation and use on the African continent. This task will be done in tight co-operation with the *Tasks 7.4* and *7.5* on sustainability and scaling-up of the training activities initiated by the project. The first draft of the exploitation plan will be prepared on M6 and the final version delivered at the end of the project. The early draft is necessary to make it possible (when feasible) to integrate some of the outlined strategies into the project activities.

Deliverables

- D8.1 Communication and dissemination plan (M3: Nov 2022; ZRST)
- D8.2 Project webpage & leaflet (M3: Nov 2022; ZRST)
- D8.3 Draft exploitation plan (M6: Feb 2023; TUD)
- D8.4 Final exploitation plan (M48: Aug 2026; TUD)

Milestones

- MS2 Website & communication tools are up & running (M3: Nov 2022)
- MS3 Visual profile is ready for use (M3: Nov 2022)
- MS14 Final event (M48: Aug 2026)

2.9 Milestone list

| Milestone | Related WP | Name | Lead partner | Deadline | Verification |
|------------------|-------------------|--|---------------------|-----------------|--|
| MS1 | WP1 | Kick-off meeting | LU | M1: Sep 2022 | Meeting took place |
| MS2 | WP8 | Website & communication tools are up & running | ZRST | M3: Nov 2022 | Website publicly accessible; social media accounts created; newsletter software (Mailchimp) is set up; each channel has posted the first ‘hello, world’ message. |
| MS3 | WP8 | Visual profile is ready for use | ZRST | M3: Nov 2022 | Logotype, document templates, etc. are available to all partners for use. |
| MS4 | WP1 | Annual meeting 1 | LU | M13: Sep 2022 | Meeting took place |
| MS5 | WP2 | Road safety data pilots specified | TOI | M18: Feb 2024 | Decision on the scope of the pilot activities is taken |
| MS6 | WP4 | Vehicle inspection pilot specified | Chalmers | M24: Aug 2024 | Decision on the scope of the pilot activities is taken |
| MS7 | WP5 | Road user pilots specified | VTI | M24: Aug 2024 | Decision on the scope of the pilot activities is taken |
| MS8 | WP6 | Post-crash care pilots specified | NTU | M24: Aug 2024 | Decision on the scope of the pilot activities is taken |
| MS9 | WP1 | Annual meeting 2 | LU | M25: Sep 2024 | Meeting took place |
| MS10 | WP3 | Infrastructure pilots specified | LU | M30: Feb 2025 | Decision on the scope of the pilot activities is taken |
| MS11 | WP7 | Web-based centre of excellence is launched | TUD | M36: Aug 2025 | An external user can access the Centre of excellence’s webpage and use it contents/functionality |
| MS12 | WP1 | Annual meeting 3 | LU | M37: Sep 2025 | Meeting took place |
| MS13 | WP4 | Vehicle inspection demo centre launched | Chalmers | M45: May 2026 | Demonstration event took place |
| MS14 | WP8 | Final event | ZRST | M48: Aug 2026 | Final event took place |

2.10 Deliverable list

| Deliverable | Related WP | Title | Lead partner | Deadline |
|--------------------|-------------------|--|---------------------|-----------------|
| D1.1 | WP1 | Work plan | LU | M3: Nov 2022 |
| D8.1 | WP8 | Communication and dissemination plan | ZRST | M3: Nov 2022 |
| D8.2 | WP8 | Project webpage & leaflet | ZRST | M3: Nov 2022 |
| D1.2 | WP1 | Data management plan | LU | M6: Feb 2023 |
| D8.3 | WP8 | Draft exploitation plan | TUD | M6: Feb 2023 |
| D5.1 | WP5 | Current procedures and methodologies of national road safety work concerning road users in selected African countries | VTI | M09: May 2023 |
| D3.1 | WP3 | Review of national design guidelines and procedures | LU | M12: Aug 2023 |
| D4.1 | WP4 | Report and inventory of existing standards for vehicle safety, including suggestions for updates | Chalmers | M15: Nov 2023 |
| D7.1 | WP7 | Current training activities for road safety professionals in the participating African countries | TOI | M16: Dec 2023 |
| D1.3 | WP1 | Project progress report 1 | LU | M18: Feb 2024 |
| D5.2 | WP5 | Road Safety culture in selected African countries | VTI | M18: Feb 2024 |
| D6.1 | WP6 | Post-crash response mapping and data collection | NTU | M18: Feb 2024 |
| D5.3 | WP5 | Human factors and accident causation in selected African countries | VTI | M20: Apr 2024 |
| D2.1 | WP2 | State of road safety management in selected African countries—review and recommendations | TOI | M24: Aug 2024 |
| D3.2 | WP3 | Proposal for national guidelines for the introduction of the tools comprising Road Infrastructure Safety Management | LU | M24: Aug 2024 |
| D6.2 | WP6 | Post-crash response data analysis and recommendations | NTU | M24: Aug 2024 |
| D6.3 | WP6 | Action plans for Tanzania, Ghana and Zambia | NTU | M24: Aug 2024 |
| D2.2 | WP2 | Road safety data and national road safety strategies—review and recommendations | LU/TOI | M30: Feb 2025 |
| D4.2 | WP4 | Report and inventory of existing vehicle safety technical control and inspection procedures, including suggestions for updates | Chalmers | M30: Feb 2025 |
| D1.4 | WP1 | Project progress report 2 | LU | M36: Aug 2025 |
| D3.3 | WP3 | Capacity building for applying Road Infrastructure Safety Management tools | LU | M36: Aug 2025 |
| D7.2 | WP7 | Centre of excellence, including online portal with educational and training material and activities | UniDS | M36: Aug 2025 |
| D3.4 | WP3 | Pilot projects demonstrating the application of Road Infrastructure Safety Management tools | LU | M45: May 2026 |
| D4.3 | WP4 | First demo centre of a vehicle inspection centre in one region | Chalmers | M45: May 2026 |
| D5.4 | WP5 | Pilot studies in road safety measures directed to road users in selected African countries | VTI | M45: May 2026 |
| D6.4 | WP6 | Post-crash response pilots | NTU | M45: May 2026 |
| D1.5 | WP1 | Final report | LU | M48: Aug 2026 |
| D8.4 | WP8 | Final exploitation plan | TUD | M48: Aug 2026 |

3 Quality assurance

3.1 Quality control of applied scientific methods

The project consortium joins experienced experts in the area of traffic safety management and the Safe System approach. The following actions will ensure the high quality of the scientific output of the project:

- Project experts will have regular work meetings (physical or through video calls) to plan and implement the research activities and discuss the results.
- The experts from the project's Advisory Board, will be approached when additional input or specific expertise deemed necessary.
- AfroSAFE team will have regular communication with the sister projects Trans-Safe.
- The project will produce publications in peer-reviewed journals which will guarantee independent quality control by external reviewers.

3.2 Procedure for control of deliverables to the EC

For quality assurance of the deliverables the following procedure will be applied:

1. An early draft of the deliverable is submitted to the Executive Board at the latest 3 weeks before the stipulated deadline of the submission to the EC.
2. The Executive Board appoints two reviewers who did not participate in the production of the deliverable. If necessary, external experts can be involved, for example the members of the Advisory Board.
3. The peer review will focus on the scientific content of the deliverable, checking that the deliverable fulfils the requirements from scientific and technical perspectives, and that conclusions and recommendations are validly drawn from the results of the analysis.
4. The peer reviewers provide their comments latest one week before the stipulated deadline of the report.
5. The responsible task manager will take the comments from the peer reviewers into consideration and will develop a final version of the deliverable.
6. The final deliverable will be submitted to the EC by the project management team.

4 Risk management

The main task for Risk Management is monitoring of the project progress and risk contingency planning when serious deviations from the original plan arise. The following risks were identified in the project:

| Description of risk (likelihood/severity) | WPs involved | Proposed risk-mitigation measures |
|--|--------------|--|
| Restrictions to travelling due to Corona/visa requirements (<i>medium/medium</i>) | WP1-8 | The main bulk of communication/education will be done through video meetings; early in the project, all partners will purchase high quality equipment and Internet services to ensure connection. The educational and study visit activities that are planned physically can also be converted to online format. |
| Lack of support from the local authorities for the pilot projects (<i>low/high</i>) | WP2-6 | Initial contacts have been taken with the various stakeholders to ensure their interest. In case some of the planned pilots cannot be realised in a particular African country, attempts will be done to do it in another partner country. |
| Disagreement between partners (<i>low/medium</i>) | WP1-8 | The project management structure based on Agile principles allows for such disagreements to be identified early and also suggests the procedure for resolving the conflicts (through Executive Board and General Assembly if necessary). |
| A key person leaves consortium (<i>low/low</i>) | WP1-8 | Even though each partner brings in some unique expertise, there is also an overlap in the competences between the partners. In case a key person leaves the project, a replacement within the same and partners organisations will be found. |
| Delay in meeting deadlines (<i>medium/medium</i>) | WP1-8 | The Agile management principles used in the project allows to detect and address all deviations from the original plan at a very early stage. |

Unexpected risks are handled in the following manner:

- Each WP leader reports unexpected issues to the Coordinator and a joint decision on their mitigation is promptly taken. The Agile approach to project management will support this type of discussions on a regular basis.
- Major problems are reported by the Coordinator to the Executive Board (and an extraordinary meeting may be called for) and the EC’s Project Officer and the best way forward is identified.