

Project Number

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Deliverable D1.1

Project Management Handbook

Work package: WP1 – Project Management Handbook

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TransSec Project Profile

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Partners

Partner	Country
Daimler AG	GERMANY
TeleConsult Austria GmbH	AUSTRIA
FUNDACION CENTRO DE TECNOLOGIAS DE INTERACCION VISUAL Y COMUNICACIONES VICOMTECH	SPAIN
WATERFORD INSTITUTE OF TECHNOLOGY	IRELAND
UNIVERSITAET STUTTGART	GERMANY

Document Control

This deliverable is the responsibility of the Work Package Leader. It is subject to internal review and formal authorisation procedures in line with ISO 9001 international quality standard procedures.

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Executive Summary

The Project Management Handbook defines the management structure and procedures needed to organize the overall project work of the TransSec consortium efficiently in accordance with the regulations of the Grant Agreement and the Consortium Agreement.

The purpose of having a good project management structure and methodology in place in the TransSec project, is to ensure the successful achievement of the project objectives, outputs and impacts.

The Grant Agreement, Annex 1 Description of the Action includes:

1. The Project Summary with the project objectives

Furthermore, the Grant Agreement, Annex 1 Description of the Action, describes the complete project work to be done with Workplan Tables:

2. List of Work Packages
3. List of Deliverables
4. Work Package Descriptions for WP 1 – 9 with tasks and deliverables
5. List of milestones
6. Critical implementation risks and mitigation actions
7. Project effort in person-month per work package and partner
8. List of project reviews

To ensure that the TransSec defined work plan will be completed in time and with high quality outputs, Work Package 1 '*Project Management*' has been defined with relevant tasks and deliverables to support, track and monitor the effective delivery of the projects outcomes and milestones.

This Project Management Handbook describes the management structure, roles, responsibilities and procedures at a more in-depth detailed level, that will be utilised and act as a guideline to successfully manage the implementation and completion of the TransSec project work.

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1 INTRODUCTION

The success of TransSec relies to a great extent on the ability of the consortium to implement an efficient management structure and adequate procedures capable of addressing the challenges normally encountered in collaborative initiatives. This section provides a description of the management framework which the consortium has set up, to link together all the project components and maintain smooth communication channels amongst the consortium partners.

The structures, roles, responsibilities and mutual obligations of the partners are based on the regulations of the Grant Agreement and further regulations specified in the Consortium Agreement between consortium partners.

Work Package 1 Project Management: WP Lead: Roland Trauter

Task 1.1 General management of the project

Lead: Roland Trauter

This task involves general project leadership and coordination at the scientific and technical levels. It will ensure cohesion against the ultimate events arising during the project and entail a tight working atmosphere with the WP leaders to refine and refocus any activity if necessary. Frequent communication will take place, including meetings scheduled every quarter and/or phone conferences. This task will also include the legal and financial management of the project as well as the administrative management of the project.

Task 1.2 Technical coordination

Lead: Axel Koppert

This task will cover the whole technical coordination and certify that the project is carried out as planned. The following subtasks will be included:

- Undertake corrective actions if needed in order to meet the plan. Identify and manage technical risks.
- Pre-check results, taking the initial requirements and objectives into consideration, and make sure that they are internally distributed.

Task 1.3 Innovation Management

Lead: Esther Novo

This task will efficiently monitor market needs and technical evolutions throughout the project's lifetime. It will also make sure that the project work plan is adjusted as needed in order to seek that the final results of the project are implemented in such a way that they best meet the needs of the market with the technologies available at the time. The Innovation Manager will report to the Steering Committee. The Innovation Manager, using the CEN/TS 16555 Standards Family as a reference, will:

- Work with partners and stakeholders to keep track of end-user needs and of the state of the art of products and services available in the market (competition).
- Work with partners to make sure that the planned work is adjusted as needed to adapt to the all the time moving target.

Task 1.4 Quality assurance and Data Management

Lead: Li Zhang

This task will guarantee that the scientific and technical results of the project have been produced based on high quality standards. Thus, this task will be responsible to overall monitor the work produced during the project's lifespan in terms of deliverable quality, timely execution of project task how research data will be handled during the research project and after the project is completed.

2 Project Management Structure

A management structure has been defined to ensure control of the project activities. Partner responsibilities, tasks and expected results have been defined before the start of the project to avoid grey areas and misunderstandings. The proposed project management structure and procedures are designed to provide leadership to enable the project to achieve its objectives, goals and to represent a framework for making structural decisions. It will provide effective co-operation between the various stakeholders and will offer opportunities for supporting innovative initiatives.

It will include measures for continuous consultation with external stakeholders to discuss and confirm vision, directions and agree priorities. Provisions will also be made for the management of knowledge, protection of intellectual property rights and other innovation-related activities arising in the project.



Figure 1: Project Management Structure

During negotiation phase the Consortium Agreement has been signed by TransSec partners. It includes:

- Provisions for an agreement on governance/management and management of IPR.
- Basis for the distribution of grant and admission of new partners.
- Background and foreground knowledge information and access rights policies.

3 Project Coordination

The TransSec project coordinator (DAI) will have the responsibility for the overall coordination of the project. DAI will be in charge of all the administrative, contractual and financial management of the project constituting the direct interface between the project and the EU Commission. Activities which will be carried out by DAI for the entire duration of the project include the following:

- Interface between the consortium and the European Commission.
- Coordinate all technical activities and detect deviations.
- Convene the Grant Agreement and Chair the Steering Committee (SC).
- Identify and implement suitable management tools to support the projects processes, communication, task assignment, etc.).
- Organisation of the meetings of the various management bodies, preparation and diffusion of the minutes.
- Prepare and follow-up all project meetings (notification, agenda, chairing and reporting).
- Monitor project progress, task implementation, workload consumption and track costs related to the budget.
- Technical follow-up, monitoring of project progress and risk assessment (follow up of project indicators such as GANTT chart, milestones and deliverables tables, risk register, as well as quality control through the Steering Committee).
- Implement suitable Quality check and approval process for all the documents and deliverables generated in the TransSec project.
- Keep partners informed about project progress.
Manage reporting to the commission and serve as the administrative liaison to the commission and as project secretary and archive.

For the **Project Management Team (WP 1 Team)** five roles have been defined:

The Project Manager (PM), who is the ultimate reference, and has the overall responsibility for the organisation, planning and control monitoring of the quality of the technical achievements of the TransSec project. This is the person who acts as the direct interface with the European Commission and with any interested third-party stakeholders. The Project Manager of TransSec is Roland Trauter (Daimler).

The **Administrative Manager (AM)** will assist, support and advise on issues related to legal, financial and contractual aspects of the project. The AM in TransSec is Kornelija Beljo (Daimler).

The Technical Manager (TM) and leader of Task 1.2 will assist the Project Manager in organisation, planning, and control of the project, as well as monitoring technical achievements. The TM is in charge of coordinating all interactions between WPs and is responsible for the supervision of the overall progress of the project as day to day contact for the technical aspects of the project. The Technical Manager is Axel Koppert (TCA).

The **Innovation Manager (IM)** and leader of Task 1.3 will coordinate the work of all TransSec partners to ensure that the project results can be optimally exploited and commercialised. The IM in TransSec is Esther Novo (Vicom). The IM will report to the Steering Committee and she will also provide guidance to the Consortium with regard to best practices on innovation management, such as planning for innovation success, identifying and fostering innovation enablers/driving factors, developing the innovation management process for the project, evaluating and improving the performance of the innovation management system, and understanding and using innovation management techniques.

The **Quality and Data Manager (QM)** and leader of Task 1.4 will coordinate quality assurance and data management of the development work packages (WP 2 – 8). A focus will be on the software development process including methods, standards, tools, documentation, test, analysis and reviews. The Quality and Data Manager is Li Zhang (USTUTT).

4 Steering Committee

The TransSec Steering Committee (SC) will be comprised of a representative of each partner taking part in the project and chaired by the Project Coordinator. The aim of this committee will be to advise and support the Project Coordinator's decisions on operational and management issues. Where appropriate, the SC will try to resolve conflicts as they arise, otherwise it will refer the matter to the Coordinator with the necessary recommendations. The board will be responsible for all decisions of general nature within the frame of the EC contract and the Consortium Agreement, including:

- Any expenditure (except those already agreed upon in the budget).
- Any major change in the nature of the project.
- The preparation of the budget and any proposed amendments.
- Any transaction between the consortium and a third party.
- Ownership and access rights of the results.
- Decisions regarding publications and press releases.

The decisions within the SC will be taken preferably by consensus. In the case of disagreements, the decision will be put to a unanimous vote of all representatives, where the outcome will be decided by the qualified majority.

The members of the Steering Committee are:

Partner	Representative
Daimler	Roland Trauter
TCA	Jürgen Seybold
VICOM	Oihana Otaegui
WIT	Ruisong Han
USTUTT	Volker Schwieger

Table 1: Steering Committee Members

The Consortium Agreement has been negotiated and agreed among the participants in the project in order to define their obligations and rights under the project. It will cover all management issues and the intellectual property aspects of the project, and also protection of prior knowledge and access rights. The Steering Committee will be in charge of the resolution of the conflicts that may arise during the execution of the project.

Those decisions may be classified as follows: on-going management of project, review or amendment of the work-plan defined in this document, together with the allocation of the funding provided by the Commission under the EC contract between the parties and review or amendment of the terms of the EC contract; the cost and time schedules under the EC contract, the termination date of the EC contract. Certain decisions will require approval by the Commission.

If partners do not fulfil their obligations within the project, they will be cautioned by the consortium.

All means will be taken to resolve any conflicts that might occur during the project by unanimous decision of the Steering Committee. However, if a unanimous decision cannot be reached within an appropriate time frame, a decision process with a qualified majority vote will be applied by the Steering Committee. Details of the necessary majority and the competencies to make decisions are specified in the Consortium Agreement.

5 Work Packages and Work Package Leaders

The project work is structured to be implemented within the 9 defined Work Packages (WP). The necessary coordination between partially in parallel running work packages is completed as part of project management tasks and therefore assigned to WP1 Project Management.

The work packages are split into a number of mostly sequential tasks which provide one or several deliverables with defined deadlines. The overall number of deliverables is above 50 and define a dense sequence of results to be delivered. Among the deliverables are some outstanding which are used to define 8 milestones which measure and document the progress of project work and the achievement of the project objectives.

The Work Package descriptions are completed by the effort in person-months (PMs) that partners plan to spend for each Work Package. Therefore, the work within the Work Packages is limited by the assigned effort per partner and the available time until the deliverables deadline.

We refer to GA, Annex 1, Part A, page 40, WT6 Summary of effort in person-month.

The **Work Package Leader (WPL)** is responsible for the coordination of the technical work within a WP. In conjunction with the Project Coordinator and the relevant partners for each work package, the work package leader is responsible for the follow up of the work in compliance with the objectives and general scope of work as agreed by the partners. He or she will chair corresponding meetings and is responsible for assigning the defined resources required for the work package tasks and drawing up suitably detailed programmes for executing the work and for producing the deliverables. These will be agreed with the participating partners and the Project Coordinator.

The main responsibility of the Work Package Leader has been fixed in the Consortium Agreement, Article 4.3:

The WORK PACKAGE LEADERS are responsible for the quality and punctual delivery of defined results (DELIVERABLES with deadlines).

The Work-Package Leaders are:

WP Number	WP Name	WP Leader
1	Project Management	Roland Trauter
2	Precise Vehicle Positioning	Axel Koppert
3	Road and Environment Map	Li Zhang
4	Environment Object Detection	Javier Yebes
5	Vehicle Movement Monitoring	Javier Yebes
6	V-2-X Communication	Ruisong Han
7	Autonomous Emergency Manoeuvring	Roland Trauter
8	Integration and Pilot Testing	Roland Trauter
9	Dissemination and Exploitation	Frances Cleary

Table 2: Work Package Leaders

The Work Package Team consists of the Work Package Leader and the Team Members assigned by each partner to conduct work within each Work Package. The actual Work Package Team is documented in a separate table not included here. It will be updated regularly during the projects lifetime to ensure the correct work package team contact details are included.

6 Innovation Management

Innovation management is a process, which requires an understanding of both market and technical problems, with a goal of successfully implementing appropriate creative ideas. TransSec sees corresponding business models and process innovations as an integral part of creating, adapting, and maintaining a product or service to market maturity. These new business models and process innovations are very often triggered through technological innovations, which act as enablers, but also generate requirements for the development of technology.

Without a business model, it is impossible to launch a product or service on the market successfully. WP8, led by WIT-TSSG, includes the activity on new exploring business models. It is this work package where the main TransSec industrial partners bring their experience to bare. The Innovation Manager will coordinate the work of all TransSec partners to ensure that the project results can be optimally exploited and commercialised. The Innovation Manager will report to the Steering Committee and will also provide guidance to the Consortium with regard to best practices on innovation management, such as:

- Planning for innovation success, understanding and using innovation management techniques and processes during the lifetime of the project.
- Identifying and fostering innovation enablers/driving factors.
- Evaluating and improving the performance of the innovation management system.
- Identify the “go to market” needs of high potential innovations.
- Systematically capture structured data on project innovations, related to innovation readiness, innovation management, and market potential (both the concept of TRL – Technology Readiness Level, and MARL – Market Adoption Readiness Level, will be used during the project).
- Identification and exploitation of positive spill-overs.

7 Quality Assurance and Data Management

A Quality Assurance methodology will be adopted for all the project activities in order to ensure several important aspects. There will be a standard format used for each type of document. This will be done by creating templates for every type of document; the deliverables will be consolidated at a given date or milestone. Work package leaders will be specifically dedicated to monitoring and reminding due dates to the deliverable responsible or editor; there will be a “quality plan” with the requirements and templates the deliverable must follow and there will be an internal quality revision plan for deliverables. This will be done by assigning one or two members of the consortium, not directly involved with the deliverable, who will revise the document according to the quality plan.

Deliverable Preparation Rules

The deliverable preparation planning starts as soon as the related tasks start. The main steps for the deliverable preparation are as follows:

- Partner responsible of the deliverable generates the first table of content and sends it to the corresponding reviewers and contributors.
- The deliverable responsible partner sends the draft version to the reviewers, 14 days before the deadline set in the DoA.
- Reviewers and involved contributors verify the quality of the deliverable, make any possible suggestion for its improvement following the Quality Review Form (see Annex III), and send it to the deliverable responsible partner, one week before the deadline.
- Deliverable responsible partners integrate the improvements in the document and send it to the Coordinator before the deadline.
- The Coordinator uploads the deliverable to the European Commission’s Portal within the deadline set in the DoA.

Milestones

Milestones are the performance indicators to measure the progress of project work and the achievement of the project objectives. The outcome of the Work Packages are the defined deliverables. From each of the WP 2 – 8 outstanding deliverables have been selected as milestones of the project. We thereby have defined eight milestones distributed over the project duration. The responsibility for the milestones is distributed among the partners whereas each partners is at least responsible for one milestone. We refer to the table of the milestones included in GA Annex 1, Part A, page 38.

Project Progress Reporting

In order to document project results in the most efficient way, the following steps will be followed. Each partner will be required to formally report to the WP Leader on progress and achievement of specific deliverables in compliance with the work programme every six months (Partner Technical Progress Reports). These shall include, but not be limited to, the following:

- WP objectives for the period.
- Work progress towards objectives over the time period covered (including meetings and teleconferences).
- Milestones/deliverables achieved in the period.
- Explanation of the gaps and their impact on other tasks.
- Reasons for failing to achieve critical objectives and/or not being on schedule, and impact on other tasks

as well as on available resources and planning.

- Corrective actions planned or taken.

The Work Package Leaders will be responsible for compiling such reports in the WP Progress Report also every six months. The Project Coordinator will receive this document from each WP Leader and will assemble and submit the Project Progress Reporting as Periodic Report M6, M12, M18, M24, M30 and Project Final Report.

We refer to GA, Annex 1, Part, page 6 – 11, where the reports are included in the list of deliverables.

Regarding cost reporting and other financial aspects, every partner will provide the project coordinator with the economic reports with the signed Form C, within 10 days of the end of the reporting period. The Coordinator will require all the necessary financial information from the partners.

Project Reviews

The final element of progress monitoring and reporting are the project reviews. The Kick-Off Meeting has already been conducted by the GSA Project Officer in Prague on 20th 2018 together with assigned Project Reviewers. The following reviews will be combined with demos, also defined as deliverables. The demos will in addition to reports show the project results in action. Thereby proving the practicability and benefits of project results.

GA, Annex 1, Part 1, page 41, includes the list of tentative project reviews:

Review number ¹⁹	Tentative timing	Planned venue of review	Comments, if any
RV1	1	Praque	Kick-Off Meeting
RV2	12	San Sebastian	Steering Committee Meeting
RV3	18	Waterford	Mid-Term Review
RV4	24	Graz	Steering Committee Meeting
RV5	36	Stuttgart	Final Review

Table 3: List of Project Reviews

8 Project Internal Procedures

Project Communication and Meetings

In order to ensure a rapid and efficient launch of the project tasks, dedicated management tools and procedures, fitting all specific management requirements, will be proposed from the start. These tools will be placed under the responsibility of the Steering Committee and Work Package Leaders.

Short-term communication on actual issues by e-mail or telephone.

For regular communication the following meeting types and intervals will be used:

- Project Management / WP Coordination – Bi-Weekly / on demand teleconference one hour
- Work Package Meeting – Intervals and duration to be defined WP-internally with WP Team
- Project Meeting – Quarterly half day at partner location + 1,5 day technical meetings
- Steering Committee Meeting - Yearly half day at partner location + 1,5 day technical meeting

The Consortium has agreed on the face-to-face Meeting Calendar, and will update the following table during the project. All these meetings and conference calls will be used to track technical, financial and managerial progress against plan, identify and assess issues and risks, refresh forthcoming deadlines and milestones. The agreed team meetings setting along with fluent email, telephone and WebEx communications has proven satisfactory and it is intended to be maintained until the end of the project. Ad-hoc meetings will also be scheduled as needed to tackle specific topics.

Dates	Meeting type	Organiser	Location

Table 4: List template for Face-to-Face Meetings

Conflict Resolution

The Consortium Agreement was negotiated and agreed among the participants in the TransSec project in order to define their obligations and rights under the project. It covers all management issues and the intellectual property aspects of the project, and also protection of prior knowledge and access rights.

The Steering Committee is in charge of the resolution of the conflicts that may arise during the execution of the project. Those decisions may be classified as follows: on-going management of project, review or amendment of the work-plan defined in this document, together with the allocation of the funding provided by the Commission under the EC contract between the parties and review or amendment of the terms of the EC contract; the cost and time schedules under the EC contract, the termination date of the EC contract.

Certain decisions will require approval by the EC. If partners do not fulfil their obligations within the project, they will be cautioned by the consortium. All means will be taken to resolve any conflicts that might occur during the project by unanimous decision of the Consortium. However, if a unanimous decision cannot be reached within an appropriate time frame, a decision process with a qualified majority vote will be applied via WPL. Details of the necessary majority and the competencies to make decisions are specified in the CA.

Regarding amendments to the DoA, significant project changes and deviations must be dealt with in writing. The participant or Work Package Leader proposing the change should forward a written explanation to the Project Coordinator, indicating the reasons behind the proposed amendment and the consequences in terms of budget, work programme, etc. As a general rule, all participants should act as fast as possible when a need for a project change is observed. The amendment request will be forwarded on behalf of the Consortium by the Project Coordinator to the EU Commission. Minor changes such as insignificant deviations from time schedule will be dealt with in the periodic reporting.

Project Repository

To support the joint work and integration activities of the partners a project repository will be provided by TCA. It will be installed as an SFTP server continuously accessible via internet connection by all partners and their project team members.

It is used to store all common data and to exchange larger data assets. Common data are especially the deliverables, any other kinds of reports, informational documents, software tools and the software modules to be developed including their source code, documentation and executables.

The SFTP server has been installed with an initial directory structure and is now successfully being utilized.

9 Risk Management

Risk is defined as any event potentially precluding the achievement of the objectives of a certain activity or task. Risk management is a balance of judgement so that the risks are minimised without over-emphasising the potential problems. Controlling the risks will help to manage the project to properly achieve the objectives on time and in budget.

WP leaders will identify the risks relevant to their activities or tasks and shall be requested to properly and promptly document them to the Steering Committee (SC). Risk management requires identification, control and recording of risks, highlighting the consequences and taking the adequate management actions.

To ensure a successful development process, a risk management process has been adopted. The process will involve a risk register which will be regularly reviewed by the SC and which will be forwarded to the European Commission as part of the regular reporting process (via the SyGMa online portal).

As a first step towards following the appropriate risk policy, the table in Part A of the DoA summarises the critical risks identified during the proposal and grant agreement preparation, related to project implementation, which will be updated during the project. Possible risk mitigation measures are also included. Moreover, the state of the play regarding reference reporting period, mitigation measures applied, risk materialised and actions will be continuously updated for the foreseen risks, and also unforeseen risks will be reported in necessary.

We refer to GA, Annex 1, Part 1, page 39, *WT5 Critical Implementation risks and mitigation actions*.

10 Conclusions

This document presents the internal guidelines that will be followed for the appropriate management of the TransSec project.

Project Management Plan is the handbook on project management for TransSec, including the project structure, the management structure and procedures, an introduction to the quality assurance plan, as well as the list of critical risk and mitigation strategies.

The overall management plan of the project described in this deliverable is aligned with the information already provided in the Description of Action for TransSec Project.

11 ABBREVIATIONS AND ACRONYMS

Abbreviation	Description
AM	Administration Manager
CA	Consortium Agreement
DoA	Description of Annex
EC	European Commission
GA	Grant Agreement
GSA	Global Navigation Satellite System Agency
IM	Innovation Manager
MARL	Market Adoption Readiness Level
PM	Project Manager
PMs	Person Months
QM	Quality & Data Manager
SC	Steering Committee
TM	Technical Manager
TRL	Technology Readiness Level
WP	Work Package
WPL	Work Package Lead
WT	Working Table

12 REFERENCES

Grant Agreement number: 776355 — TransSec — H2020-GALILEO-GSA-2017/H2020-GALILEO-GSA-2017-1

Consortium Agreement TransSec - CA final version (V4) dated 20.11.2017