

TANGENT

PROJECT MANAGEMENT HANDBOOK

D9.1



This project has received funding from
the European Union's Horizon 2020
research and innovation programme
under grant agreement No 955273

Deliverable administrative information

Deliverable number	9.1
Deliverable title	Project Management Handbook
Dissemination level	Public
Submission deadline	31/10/2021
Version number	3.0
Authors	Naia Merino (Deusto) Leire Serrano (Deusto)
Internal reviewers	Céline Queron (Rennes) Isabelle Dussutour (ID4CAR) Eleni Mantouka (NTUA) Carolina Ramos (Panteia) Athina Tympakianaki (Aimsun) Raffaele Vergnani (POLIS) Mario Comerio (CEFRIEL)
Document approval	All partners

Legal Disclaimer

TANGENT is co-funded by the European Commission, Horizon 2020 research and innovation programme under grant agreement No. 955273 (Innovation Action). The information and views set out in this deliverable are those of the author(s) and do not necessarily reflect the official opinion of the European Union. The information in this document is provided “as is”, and no guarantee or warranty is given that the information is fit for any specific purpose. Neither the European Union institutions and bodies nor any person acting on their behalf may be held responsible for the use which may be made of the information contained therein. The TANGENT Consortium members shall have no liability for damages of any kind including without limitation direct, special, indirect, or consequential damages that may result from the use of these materials subject to any liability which is mandatory due to applicable law.

Copyright © TANGENT Consortium, 2021.



https://twitter.com/TANGENT_H2020



<https://www.linkedin.com/company/tangent-project/>



https://www.youtube.com/channel/UCjhz4kwEm_sTHj7fE4zXToA

For further information please visit <http://www.tangent-h2020.eu/>

Executive summary

This Project Management Handbook is written in the framework of WP9 – Project Management (Task 9.1 Project Management) of TANGENT project under Grant Agreement No. 955273.

D9.1 intends to provide useful information to all partners about the procedures of the project, its management structure, main roles, working procedures, internal communication and decision-making procedures, reporting procedures, documents and deliverables quality management process.

The terms and provisions of the EU Grant Agreement (and its annexes) and the TANGENT Consortium Agreement will prevail in the event of any inconsistency with recommendation and guidelines defined in the present Project Management Handbook.

Table of contents

DELIVERABLE ADMINISTRATIVE INFORMATION.....	1
EXECUTIVE SUMMARY	3
TABLE OF CONTENTS	4
LIST OF ABBREVIATIONS AND ACRONYMS.....	7
1 INTRODUCTION.....	8
2 PROJECT MANAGEMENT STRUCTURE	9
3 INTERNAL COORDINATION PROCEDURES.....	14
4 QUALITY AND RISK MANAGEMENT	19
5 PROJECT REPORTING	22
6 DOCUMENT MANAGEMENT	28
7 DECISION-MAKING PROCESS AND CONFLICT RESOLUTION.....	30
8 PAYMENT PROCEDURES	31
9 REVIEW OF PROJECT MANAGEMENT HANDBOOK	32
10 CONCLUSIONS	33
11 DOCUMENTS OF REFERENCE.....	34
ANNEX 1. TEMPLATE FOR DELIVERABLES	35
ANNEX 2. TEMPLATE FOR MEETING MINUTES.....	36
ANNEX 3. TEMPLATE FOR PRESENTATIONS.....	37
ANNEX 4. TEMPLATE FOR INTERNAL PROGRESS REPORT	38
ANNEX 5. EC GRANT PAYMENT DISTRIBUTION	39

ANNEX 6. LIST OF IDENTIFIED RISKS IN TANGENT PROJECT40

List of figures

Figure 1: Management structure of TANGENT	9
Figure 2: Committees' meeting schedule.....	14

List of tables

Table 1: List of abbreviations and acronyms	7
Table 2: WP Leaders.....	11
Table 3: Nomination to boards	13
Table 4: Committee's meeting schedule	15
Table 5: Notice of a meeting	15
Table 6: Standard agenda for boards meetings	16
Table 7: Structure of Google Drive repository in TANGENT	17
Table 8: Deliverables' reviewing procedure summary	20
Table 9: List of deliverables	26
Table 10: Aspects to cover in periodic and final reporting.....	27

List of abbreviations and acronyms

Acronym	Meaning
PMH	Project Management Handbook
PC	Project Coordinator
TC	Technical Coordinator
PMB	Project Management Board
PTC	Project Technical Committee
IEB	Innovation and Exploitation Board
EC	European Commission
CA	Consortium Agreement
WP	Work package
WPL	Work package leader
EU	European Union
AOB	Any Other Business
DoA	Description of the Action
GA	Grant Agreement
RTD	Research and Technical Development

Table 1: List of abbreviations and acronyms

1 Introduction

The Project Management Handbook (PMH) covers aspects related to the project's structure in terms of organization, project procedures, communication strategy within the consortium and quality assurance procedures. The PMH is a living document that will be updated along the project's lifetime. The PMH will provide useful information to all partners about the procedures that will be followed during the project execution for communication and reporting purposes.

It acts as a reference source for all Consortium members, covering many of the day-to-day activities and providing links to further information where required.

Secondly, it aims to standardize various elements of the project e.g., project reports, deliverables, file naming conventions etc., using agreed procedures and templates where relevant.

2 Project management structure

2.1 Overall management structure

The consortium and management structure will promote an optimal use of the knowledge, experience and expertise of the partners in fulfilling objectives, while providing effective project monitoring and control. All partners assume full technical and financial responsibility.

The overall management structure is presented in Figure 1 and detailed in the next paragraphs.

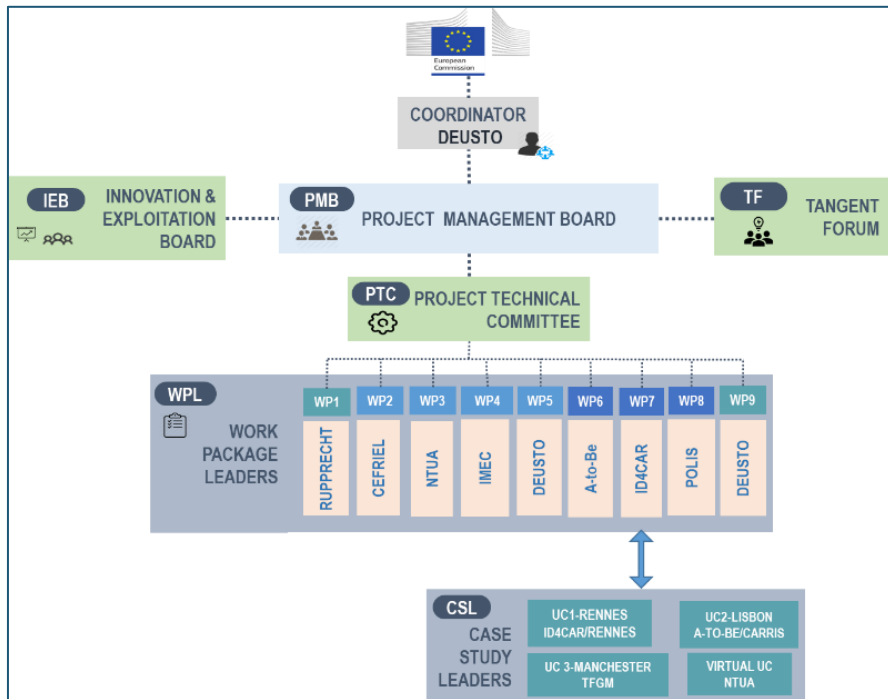


Figure 1: Management structure of TANGENT

2.2 Management figures

The management structure has been organized in the following management figures:

- The *Project Coordinator (PC)* is the legal entity acting as intermediary between the parties and the EC. The PC will perform the tasks assigned to it as per the Grant Agreement (GA) and Consortium Agreement (CA), overseeing the successful execution of the project. *Ms. Leire Serrano (DEUSTO)* will assume this role.
- The *Project Management Board (PMB)* is the ultimate decision-making body of the consortium. The PMB will include an empowered representative of each of the members of the consortium and will be chaired by the PC.
- The *Project Technical Committee (PTC)* will be chaired by the Technical Coordinator (TC) role that will be performed by *Dr. Antonio Masegosa (DEUSTO)*. It will be constituted by the Work Package Leaders (WPL), one representative per WP. PTC will oversee the execution of the project.
- The *WP leaders (WPL)* will assure the coordination and the timely execution of tasks included in each WP.

- The *Case Studies Leaders (CSL)* will be in charge of the different Case Studies addressing the validation of the solution and services in each Case Study. This role will be performed by *Ms Celine Queron (Rennes)* in Rennes, *Mr João Vieira (CARRIS)* in Lisbon, *Ms Hannah Tune (TFGM)* in Greater Manchester and *Dr Eleni Vlahogianni (NTUA)* in the virtual case study of Athens.
- The *Innovation & Exploitation Board (IEB)*, will be chaired by *Ms Isabelle Dussutour (ID4CAR)*. IEB will be responsible for addressing Intellectual Property (IP) issues and exploitation of the most promising technologies and organising collaboration to further develop products based on the project, and then test the selected technologies under real conditions, to get to the development and marketing of successful new products and services.
- The *Tangent Forum* will be an Advisory Group composed of different relevant stakeholders in the transport field supporting some project activities and helping the partners in achieving the objectives of the project. It will be chaired by *Mr Wolfgang Backhaus (RUPPRECHT)*.

2.2.1 Project Coordinator (PC)

DEUSTO will act as Project Coordinator (PC) and will assume overall responsibility for liaison between the partners and the European Commission. The PC will be the legal entity responsible for the technical, financial and administrative management of TANGENT, and will be the intermediary between the partners and the EC. *Ms. Leire Serrano (DEUSTO)* will act as the PC. The PC will be responsible for:

- the direction of the project and strategic decisions;
- centralising communications with the EC;
- the overall assessment of the technical activities, ensuring day-to-day technical work advances towards project objectives, in order to support the implementation of project tasks;
- reporting to the PMB on annual project progress;
- assistance to partners for administrative, financial and technical issues;
- preparation, with contributions from partners, and submission of official reports to the EC;
- submission of project deliverables to the EC;
- coordinating payments;
- requesting the needed amendments if necessary.

It is important to point out that the PC will also manage Ethics and Security issues with the support of members of the Applied Ethics Center of the University of Deusto. Additionally, the PC will also act as Data Manager (DM) who will be responsible for the collection of all data templates generated during the project, which will be included in the final version of Deliverable D9.2 (Data Management Plan).

2.2.2 Project Management Board (PMB)

The PMB will assume the overall management of the project. The PMB will be formed by an empowered representative of each of the members of the consortium and chaired by the PC. The PMB will be free to act on its own initiative to formulate proposals and take decisions in accordance with set procedures. All proposals on content, finances and IPR; the evolution of the consortium, and appointments will also be considered and decided upon by the PMB. The PMB will therefore be responsible for:

- any major change in the nature of the project including starting or stopping it to conduct a particular part of the project;
- making proposals for the review or amendment of the terms of the Grant Agreement;
- general assessment and approval of the periodic activity and management reports that the EC might request;
- the preparation of the budget and any proposed amendments therein;
- the preparation and adoption of the annual budgets and any proposed amendments therein;

- the approval of any exceptional expenditure not agreed upon in the budget;
- decisions and agreements on the ownership access rights of the results and exploitation plans.

2.2.3 Project Technical Committee (PTC)

The PTC will be constituted by the *Technical Coordinator* and the *WP Leaders* and will be in charge of supervising the execution of the project. To this end the PTC will be responsible for:

- providing an environment for discussion, interaction, and collaboration between WP leaders on the advancement and results of each WP and their effects and interaction with other WPs
- advising the PMB on project operational issues including ways to rearrange tasks and budgets in case of deviation.
- supporting the PC in reporting on the technical progress of the project including the preparation of deliverables and related data
- preparing the content and timing of press releases and joint publications, reviewing all documentation.

The *WP Leaders* will assure the coordination between the different teams that collaborate in the project with the aim of exchanging intermediate results. They will assure the timely execution of tasks included in each WP, stimulating the interaction between the various partners involved in the WP. They are also responsible for the consolidation of the specification reports and execution of the tasks that integrate each WP. Each organization involved will appoint a WP Leader, who is responsible for:

WP1	WP2	WP3	WP4	WP5	WP6	WP7	WP8	WP9
RUPPRECHT	CEFRIEL	NTUA	IMEC	DEUSTO	A-to-B	ID4CAR	POLIS	DEUSTO

Table 2: WP Leaders

- ensuring the coordination and timely interaction of the partners involved in the corresponding WP and especially task leaders, in order to exchange intermediate results;
- monitoring technical progress and results, as well as the preparation of the corresponding deliverables;
- on time and on budget execution of tasks included in each WP;
- organizing the necessary WP meetings;
- contribution to the preparation of official reports to the EC;
- ensuring effective information flows across WPs

2.2.4 Innovation & Exploitation Board (IEB)

This board will be constituted by representatives from all companies with an advisory presence of the RTD performers and it will be chaired by *Ms Isabelle Dussutour (ID4CAR)*. The IEB will assist in knowledge management including protection and elaboration of further preparation of RTD or innovation projects that permit the exploitation and dissemination of TANGENT project results. The IEB will also develop specific Business Exploitation Strategies, in order to support fully the industrial and commercial use of the project results. The IEB is responsible for:

- developing a plan to lay out the capacity of the project to generate new innovations and present different options for using and exploiting project results in various contexts;
- monitoring and evaluating potential new services, products or future projects that could be of interest of the consortium leveraging on TANGENT experience and tools;

- guaranteeing that the IPR identification and protection is linked implicitly to the project results as and when they are generated;
- developing and implementing a strong innovation and exploitation strategy based on the expected project impacts and ways to achieve them.

2.2.5 TANGENT Forum

The tangent forum will be an Advisory Group composed of relevant different stakeholders in the transport field supporting some project activities. They will form a consultative panel of experts that will provide their expertise and know-how to the project. This will be composed of around 10 expert members, at least one per target group to be addressed: academia, modelling expert, city/region representatives, transport operators or representatives from the main transport networks at EU level. They will collaborate through presence in some physical and virtual events organised during the project's lifetime, in parallel to the PMB or PTC meetings. This board will:

- provide support along the development of the tasks: providing requirements, reviewing objectives, providing help to overcome problems, etc;
- contribute to the dissemination, exploitation and communication of the results;
- help identifying market opportunities for the TANGENT results and the definition of new business models;
- ensure an external and independent view and feedback regarding the project's progress and its results.

Some members that showed interest in the project are ALICE, LOGISTOP, ECTRI, City & Port of Antwerp, Municipality of Milan, City of Lisbon, Provincial Government of Bizkaia, Milton Keynes Council, Verband Region Stuttgart, WISE-ACT, FEHRL, INOUT, ITS CLUSTER Euskadi. The final composition and the membership of organisations to the TANGENT Forum will be defined during the first year of the project.

2.3 Board's nomination

Each consortium partner has appointed one representative for each of the boards as shown in Table 3:

No	Organisation name	PMB	PTC	IEB
1	DEUSTO	Leire Serrano	Antonio Masegosa	Leire Serrano
2	AIMSUM	Athina Tympakianaki	N/A	Athina Tympakianaki
3	NTUA	Eleni Vlahogianni	Eleni Vlahogianni	Eleni Vlahogianni
4	IMEC	Peter Hellincks	Toon Bogaerts	Siegfried Mercelis
5	CEFRIEL	Marco Comerio	Marco Comerio	Marco Comerio
6	RUPPRECHT	Wolfgang Backhaus	Morgane Juliat	Wolfgang Backhaus
7	ID4CAR	Véronique Rottier	Véronique Rottier	Isabelle DUssutour
8	RENNES	Céline Quéron	N/A	Céline Quéron

No	Organisation name	PMB	PTC	IEB
9	A-to-B	Lara Moura	Tiago Dias	Lara Moura
10	CARRIS	Joao Vieira	N/A	Joao Vieira
11	TFGM	Hannah Tune	N/A	Hannah Tune
12	PANTEIA	Arnaud Burgess	N/A	Tharsis Teoh
13	POLIS	Raffaele Vergnani	Suzanne Hoadley	Raffaele Vergnani

Table 3: Nomination to boards

3 Internal coordination procedures

Due to the collaborative nature of TANGENT project, where the research and development results obtained by different partners will be integrated, the communication among partners is key for reaching project success and also a key part of the risk identification and mitigation plan. In order to closely monitor the progress of activities and guarantee the synchronization of all the tasks, there will be regular meetings of the different management boards of the project.

Monthly meetings among the consortium partners will guarantee the synchronization of all the tasks, define control procedures to follow the evolution of work, solve potential conflicts between partners, define dissemination policies for results and plan the presentation of common communications.

Apart from meetings, there will be other means of communication: e-mail, audio conferences and on-line repository for documents exchange. Google Drive will be used as the main form of communication and exchange of documents among the beneficiaries.

3.1 Meetings

The different boards described in the previous section will be convened on regular basis, as shown in Figure 2, in order to monitor the progress of the different activities in TANGENT project.

Month	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18
PMC																		
PTC																		
IEB																		
TANGENT FORUM																		
Month	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36
PMC																		
PTC																		
IEB																		
TANGENT FORUM																		

Figure 2: Committees' meeting schedule

The meetings of Consortium Bodies shall be convened according to the schedule showed in Table 4:

	Ordinary meeting	Extraordinary meeting
PMB	A physical plenary meeting per year (including a final meeting at the end of the project) as detailed in the management structure in the DoA.	At any time upon written request and approval by 1/3 of the Members of the PMB, or upon request if deemed necessary by the Coordinator.
PTC	One physical plenary meeting every 6 months. Additionally, there will be an online regular meeting per month and per WP (audioconference).	Plenary meetings at any time upon written request and approval by the 1/3 of the Members of the PTC or each time if needed for the Project requirements.
IEB	A meeting per year in parallel with the PMB meetings.	At any time upon written request and approval by 1/3 of the Members of the IEB.
TANGENT FORUM	At least once a year (in parallel with PMB meetings).	At any time upon written request and approval by 1/3 of the Members of the FORUM.

Table 4: Committee's meeting schedule

The chairperson of a Consortium Body shall give notice in writing of a meeting to each Member of that Consortium Body as soon as possible and no later than the minimum number of days preceding the meeting as indicated in Table 5:

	Ordinary meeting	Extraordinary meeting
PMC	30 calendar days	15 calendar days
PTC	14 calendar days	7 calendar days
IEB	30 calendar days	15 calendar days

Table 5: Notice of a meeting

The chairperson of the Consortium Body shall prepare and send the agenda to the members of the Consortium Body no later than 14 calendar days before an ordinary meeting and 10 calendar days of an extraordinary meeting.

Table 6 contains the standard agenda that has been defined for each of the boards meeting.

Boards	Agenda contents
PMB	Approval of agenda and meeting minutes Review of actions from previous meeting General project review

Boards	Agenda contents
	Project reporting to the EC Administrative and financial issues Wrap-up & AOB
PTC	Approval of agenda and meeting minutes Review of actions from previous meeting General overview of the progress of the project Review of the progress of each WP Open discussions in specific technical subjects (to be defined depending on project stage) Wrap-up & AOB
IEB	Approval of agenda and meeting minutes Review of actions from previous meeting Identification of the objective of the meeting Review of dissemination and exploitation actions executed on the latest stage. Overview of dissemination and exploitation activities planned. Open discussions (to be defined depending on project stage) Wrap-up & AOB

Table 6: Standard agenda for boards meetings

Any agenda item requiring a decision by the Members of a Consortium Body must be identified as such on the agenda.

Any Member of a Consortium Body may add an item to the original agenda by written notification to all the other Members of that Consortium Body up to 10 calendar days in PMB and IEB meetings and 7 days in PTC meetings.

3.1.1 Meeting minutes and resulting actions

After physical meetings or audio conferences the chairperson shall produce written minutes of the meeting which shall be the formal record of all decisions taken and the actions that came up. The chairperson shall send the draft to all attendees within fifteen (15) calendar days of the meeting.

The minutes shall be considered as accepted if, within fifteen (15) calendar days from sending, no member has objected in writing to the chairperson with respect to the accuracy of the draft of the minutes. The accepted minutes shall be sent to the consortium members involved and the Coordinator, who shall safeguard them.

Meeting minute's template has been prepared (see Annex 1. Template for deliverables) and is at disposal of project members in the corresponding folder in the repository.

3.2 Information and communication tools

3.2.1 Google Drive

A repository has been set up in the file hosting service “Google Drive” for document exchange among the consortium partners. The repository is exclusively restricted to consortium partners. Table 7 contains the folder structure established:

Name of folder	Objective	Access rights
0_meetings	Supporting documents related to consortium meetings will be kept including minutes and presentations	Reading/writing: All project partners
0_C&D_material_templates	Project templates will be uploaded in this folder: for deliverables, presentations etc.	Reading: All project partners. Writing: Deusto, POLIS
1_WP1_cooperation_policies	Documents related to the WP of reference will be kept.	Reading/writing: All project partners
1_WP2_data_gathering	Documents related to the WP of reference will be kept.	Reading/writing: All project partners
1_WP3_travel_behaviour	Documents related to the WP of reference will be kept.	Reading/writing: All project partners
1_WP4_transport_prediction_simulation	Documents related to the WP of reference will be kept.	Reading/writing: All project partners
1_WP5_transport_network_optimization	Documents related to the WP of reference will be kept.	Reading/writing: All project partners
1_WP6_integration	Documents related to the WP of reference will be kept.	Reading/writing: All project partners
1_WP7_use_cases	Documents related to the WP of reference will be kept.	Reading/writing: All project partners
1_WP8_dissemination	Documents related to the WP of reference will be kept.	Reading/writing: All project partners
1_WP9_mgt	Several subfolders: 0_official_documentation There will be supporting documents related to H2020 legal framework, such as the Grant Agreement, Consortium Agreement among others 1_payments: The coordinator will upload the payments evolution	Reading: All project partners. Writing: Deusto.

Table 7: Structure of Google Drive repository in TANGENT

3.2.2 E-mailing list

In order to make communication easier among partners, different email distribution lists have been set up in a domain owned by the University of Deusto. The addresses of the mailing lists follows:

- Distribution list for general discussions (tangent-all-group@deusto.es)
- Distribution list for technical issues (tangent-technical-group@deusto.es)
- Distribution list for Case Studies issues (tangent-casestudies-group@deusto.es)

Distribution lists are not moderated and therefore any person included in the list can send emails to the whole list. It is recommended to use them properly and avoid massive emails unless that is considered necessary.

These distribution lists are managed by the coordinator, so the inclusion or removal of any contact have to be requested to Deusto.

3.2.3 Audioconferences

A teleconference system will be used for follow-up audio meetings, mainly through the Google Meet video-communication service.

4 Quality and risk management

4.1 Quality check of deliverables

It is crucial that deliverables are of the highest quality. For this purpose, deliverables will undergo several steps of review and multiple quality checks, described below:

Definition of the general structure of the deliverable:

The first quality check for the deliverable will apply to the general structure of the deliverable. The partner responsible for the deliverable will provide the other contributing partners, the WP Leader and PC with a general structure of the deliverable. Feedback is given by all the contributing partners to this structure to ensure that a) all the relevant contents will be included and b) the contents are well structured ensuring readability of the document. The structure of the reports will be reviewed on the periodic audio conferences planned in the project, at overall project level (monthly progress audio conferences) or at WP level.

Initial Quality Check by Author of the contents:

The next step in quality control lies with the author of the deliverable contents who will make sure that the contents provided were checked for spelling, grammar and readability. Only when this initial Quality check is done, will the deliverable be opened for the internal review.

Internal Review of the deliverables:

At least two weeks before the submission date, the deliverable will be opened up for the internal review. It will be sent to the partner identified as Internal Reviewer (Table 9: List of deliverables) and to the WP leader. The review-process will last 1 week, and the appointed partner and the WP leader will perform the quality check of the deliverable (preferably a member of the organization not involved as an author of the document). Both will check the contents, structures, consistency and whether the deliverable is in line with the Grant Agreement up to the extent it is possible for the reviewer. Table 9: List of deliverables, which can be subject to change throughout the project, provides a first indication of Internal Reviewers for the different deliverables.

After the internal review is done, if requests for changes are provided, a rebuttal phase will be opened for the authors of the deliverable to solve the comments provided by the Internal Reviewers. After this phase is ended, at least one week in advance before the deadline, the deliverable is sent to:

- the PC and TC who will monitor that the content of the deliverable is aligned with the description of the actions as set in the GA and submit the deliverable.
- all the project partners in case they have any comments or suggestions in the deliverable.

Additionally, some specific partners will need to approve the deliverable, confirming that they are aware and agree on the contents, due to its implication with other related deliverables. Table 9 indicates the partners that have to approve the different deliverables (column "Approval from partners").

Submission to ECAS by PC

After all relevant partners approve the deliverable, the PC will upload the deliverable to ECAS. Please note that the PC will need at least a full working day to process and submit the file.

The reviewing procedure defined for assuring the quality of the deliverables of the project is summarized in the following table:

Phase	Who	Summary of the action
Definition of the general structure of the deliverable	Partner responsible of the deliverable	The partner responsible for the deliverable will provide the other contributing partners with a general structure of the deliverable at least 4 weeks before the submission deadline. The structure of the reports will be reviewed on the periodic audio conferences planned in the project, at overall project level (monthly progress audio conferences) or at WP level
Initial Quality Check by Author of the contents	Partner responsible of the deliverable & Authors	The partner responsible for the deliverable will elaborate the report with the inputs of the partners involved and check spelling, grammar and readability.
Internal review	Partner responsible of the deliverable & Internal reviewers	The deliverable will be distributed to the partners appointed as internal reviewers and WP leader, at least 2 weeks in advance before the deadline of submission. They will check the contents, structures, consistency and whether the deliverable is in line with the Grant Agreement
	Partner responsible of the deliverable & All partners	After implementing the suggestions from the WPL and the internal reviewers the leading partner will distribute the report to all project partners, at least 1 week in advance before the deadline of submission for comments or suggestions. Additionally, some specific partners appointed in Table 9 will need to approve the deliverable
Submission to ECAS	Partner responsible of the deliverable	After updating the report following the comments received from partners, the leading partner will send the deliverable to the coordinator, at least 2 days before the deadline of submission.
	Project coordinator	The Project coordinator submits the deliverable to the EC complying with the established deadline.

Table 8: Deliverables' reviewing procedure summary

4.2 Risk Management

In order to assure that TANGENT-project is resilient against potential risks which could endanger the timeline and ultimately the results of the project the following steps for Risk Management strategy are applied:

- Risk Identification
- Risk Assessment
- Risk and Problem Resolution

The first two parts of the process concern possible risks that might occur during the project. In that case the Risk Management is set up to prepare for the worst case. The last part is a mixture of preparation and actual troubleshooting, where solutions for potential risks or unforeseen problems are treated.

4.2.1 Risk identification

In Section 1.3.5 of the Grant Agreement the potential risks and corresponding mitigation measures, which have been identified during the project development phase, have been listed. This list was added to this document (see Annex 6. List of identified risks in TANGENT project and is subject to updates during the course of the project.

For the identification of new risks, the following options are considered:

- Regular analysis of the project progress (deliverables and milestones)
- Regular Communication among the PTC (the WP-Leaders and TC)

For a clear classification of new risks, the description of the risks will follow the structure of the table of the Grant Agreement indicating:

- Description of risk (including likelihood and impact)
- WP Number
- Proposed risk-mitigation measures

4.2.2 Risk assessment and problem resolution

Once new risks have been identified, they will be assessed by the TC and the PC according to their probability (from very unlikely to very certain) and their effect on the project (from hardly any effect to high impact) and updated in the risk log excel sheet in Google Drive.

The status of the risks will be reviewed in the different meetings set up in the project, at WP level and project level:

- (1) Firstly, the risk follow-up and resolution will be done at WP level, discussing low pressing issues, like minor delays of tasks or slight deviations in methodology or contents. During these audio meetings the consortium members of the corresponding WP will discuss solutions to the problems at hand. Any unresolved issues will be taken to Project Level for further discussion.
- (2) During the PMB meetings the general progress of the project is discussed and general issues which arose during the past month will be presented and solutions discussed with all members of the consortium. Any issues that arise that need a fundamental change to the project, its timeline and its contents will be discussed at this level.

5 Project reporting

5.1 Submission of deliverables

The deliverables will be elaborated by the responsible partners, as stated in the list of deliverables in Table 9. However, in many of the deliverables other partners will have to contribute. In this case the responsible partner for the deliverable will have to request the necessary information from the partners. All the deliverables must be in English. The project coordinator is responsible for submitting the deliverables to the EC through the Funding and Tenders Portal.

WP No	Del.No.	Title	Lead Benef.	Nature	Diss. Level	Del. Month	Internal reviewers	Approval from partners
WP1	D1.1	Multi-actor co-creation strategies for each Case study.	RUPPRECHT	R	PU	6	Aimsun, POLIS	CARRIS, A-to-Be, TFGM, Rennes, NTUA
WP1	D1.2	NTM needs assessment and system requirements.	RUPPRECHT	R	PU	9	A-to-be, Deusto, NTUA, CEFRIEL, IMEC, Aimsun	All partners
WP1	D1.3	Multi-actor cooperation models for NTM. First release	RUPPRECHT	R	PU	12	Aimsun, A-to-Be, POLIS, CEFRIEL, Deusto, IMEC, NTUA	PANTEIA
WP1	D1.4	Policy, regulatory and planning framework for TNM. First release	RUPPRECHT	R	PU	12	POLIS, PANTEIA	
WP1	D1.5	Report on TANGENT Forum activities.	RUPPRECHT	R	PU	36	POLIS, ID4Car	
WP1	D1.6	Multi-actor cooperation models for NTM. Second release	RUPPRECHT	R	PU	36	Aimsun, A-to-Be	A-to-Be
WP1	D1.7	Policy, regulatory and planning framework for TNM. Second release	RUPPRECHT	R	PU	36	POLIS, PANTEIA	
WP2	D2.1	Data requirements and available data sources	CEFRIEL	R	PU	12	A-to-Be, Deusto, Aimsun, IMEC, NTUA	ID4CAR, Rennes, A-to-Be, TFGM, CARRIS
WP2	D2.2	Data-sharing governance model.	CEFRIEL	R	PU	14	Aimsun, A-to-B	Deusto, Aimsun, IMEC, NTUA
WP2	D2.3	TANGENT API for data harmonisation and fusion. First release	CEFRIEL	D	CO	20	NTUA, A-to-B	Deusto, Aimsun, IMEC, NTUA

WP No	Del.No.	Title	Lead Benef.	Nature	Diss. Level	Del. Month	Internal reviewers	Approval from partners
WP2	D2.4	TANGENT API for data harmonisation and fusion. Second release	CEFRIEL	D	CO	28	NTUA, A-to-B	Deusto, Aimsun, IMEC, NTUA, A-to-Be
WP3	D3.1	Travel behaviour: State-of-the-art, current and future mobility patterns	NTUA	R	PU	9	Deusto, Aimsun	--
WP3	D3.2	Travel choice modelling (set of models, code). First release	NTUA	D	PU	20	IMEC, Aimsun	--
WP3	D3.3	In-depth analysis of travel behaviour	NTUA	R	PU	28	Aimsun	--
WP3	D3.4	Travel choice modelling (set of models, code). Second release	NTUA	D	PU	28	IMEC, Aimsun	A-to-Be
WP4	D4.1	Report on the relevant state-of-the-art approaches for traffic predictions and simulations.	IMEC	R	PU	9	Deusto, NTUA	Deusto
WP4	D4.2	Overview of the developed traffic supply forecasting approaches with benchmarks	IMEC	R	CO	28	NTUA	Deusto
WP4	D4.3	Overview of the developed travel demand predictions with benchmarks	AIMSUN	R	CO	28	NTUA	Deusto
WP4	D4.4	Report on the detection and impact analysis of traffic events	IMEC	R	PU	26	Deusto	Deusto
WP4	D4.5	Framework for real-time traffic monitoring and forecasting. First release	AIMSUN	D	CO	20	A-to-Be, Deusto	Deusto
WP4	D4.6	Framework for real-time traffic monitoring and forecasting. Second release	AIMSUN	D	CO	28	A-to-Be, Deusto	A-to-Be, Deusto
WP5	D5.1	Analysis of current approaches in optimization of transport network management	DEUSTO	R	PU	9	NTUA, Aimsun	
WP5	D5.2	Optimization models for transport network management.	DEUSTO	R	CO	18	IMEC, NTUA	
WP5	D5.3	Optimization techniques for transport network management	DEUSTO	R	CO	24	NTUA, Aimsun	
WP5	D5.4	Calibration of arbitration models	DEUSTO	R	CO	26	Rupprecht, Deusto	Rupprecht
WP5	D5.5	Transport network optimization module. First release	DEUSTO	D	CO	20	A-to-Be, Aimsun	

WP No	Del.No.	Title	Lead Benef.	Nature	Diss. Level	Del. Month	Internal reviewers	Approval from partners
WP5	D5.6	Transport network optimization module. Second release	DEUSTO	D	CO	28	A-to-Be, Aimsun	A-to-Be
WP6	D6.1	Technical architecture and resource specification. First release	A-to-Be	R	CO	12	Deusto, Aimsun	Deusto, NTUA, CEFRIEL, IMEC, Aimsun.
WP6	D6.2	TANGENT tool development and integration. First release	A-to-Be	D	CO	28	Deusto, Aimsun	
WP6	D6.3	Smart infrastructure index report. First release	A-to-Be	R	PU	24	Rupprecht, ID4CAR	
WP6	D6.4	Technical architecture and resource specification. Second release	A-to-Be	R	CO	22	Deusto, Aimsun	Deusto, NTUA, CEFRIEL, IMEC, Aimsun.
WP6	D6.5	TANGENT tool development and integration. Second release	A-to-Be	D	CO	33	Deusto, Aimsun	CARRIS, A-to-Be, TFGM, Rennes
WP6	D6.6	Smart infrastructure index report. Second release	A-to-Be	R	PU	36	Rupprecht, ID4CAR	
WP7	D7.1	Definition of the Case Studies, testing methodology and stakeholders' & users' engagement campaign.	ID4CAR	R	CO	18	POLIS, Deusto	ALL
WP7	D7.2	System deployment and testing specifications	ID4CAR	R	CO	18	A-to-Be, Aimsun	IMEC, NTUA, Deusto, CEFRIEL
WP7	D7.3	Assessment of the testing results in the Case Study of Rennes	ID4CAR	R	PU	36	NTUA	
WP7	D7.4	Assessment of the testing results in the Case Study of Lisbon	CARRIS	R	PU	36	ID4CAR	
WP7	D7.5	Assessment of the testing results in the Case Study of Greater Manchester	TFGM	R	PU	36	CARRIS	
WP7	D7.6	Assessment of the testing results in the Case Study of Athens	NTUA	R	PU	36	TFGM	
WP7	D7.7	Impact assessment report.	PANTEIA	R	PU	36	ID4CAR, Rupprecht	
WP8	D8.1	Dissemination and communication plan.	POLIS	R	PU	3	Deusto	
WP8	D8.2	Website and social networks profiles.	POLIS	O	PU	4	Deusto	

WP No	Del.No.	Title	Lead Benef.	Nature	Diss. Level	Del. Month	Internal reviewers	Approval from partners
WP8	D8.3	Report on dissemination activities (including cooperation with other projects). First release	DEUSTO	R	PU	18	POLIS	
WP8	D8.4	Final booklet.	POLIS	O	PU	36	Deusto	
WP8	D8.5	Policy recommendations	RUPPRECHT	R	PU	36	POLIS, ID4CAR, PANTEIA, RENNIS, CARRIS, TFGM	
WP8	D8.6	Exploitation and business model plan.	ID4CAR	R	CO	36	PANTEIA, Rupperecht	
WP8	D8.7	Report on dissemination activities (including cooperation with other projects). Second release	DEUSTO	R	PU	36	POLIS	
WP9	D9.1	Project management handbook. First release	DEUSTO	R	PU	2	ALL	ALL
WP9	D9.2	Data Management Plan. First release	DEUSTO	ORDP	PU	6	ALL	
WP9	D9.3	IPR management and Data Protection. First release.	DEUSTO	R	PU	12	ALL	
WP9	D9.4	Ethics monitoring. First release	DEUSTO	R	PU	12	ALL	
WP9	D9.5	Project management handbook. Second release	DEUSTO	R	PU	18	ALL	ALL
WP9	D9.6	Project management handbook. Third release	DEUSTO	R	PU	36	ALL	ALL
WP9	D9.7	Data Management Plan. Second release	DEUSTO	R	PU	18	ALL	
WP9	D9.8	Data Management Plan. Third release	DEUSTO	R	PU	36	ALL	
WP9	D9.9	IPR management and Data Protection. Second release	DEUSTO	R	PU	36	ALL	
WP9	D9.10	Ethics monitoring. Second release	DEUSTO	R	PU	36	ALL	
WP10	D10.1	H - Requirement No. 1	DEUSTO	E	CO	6	ALL	
WP10	D10.2	POPD - Requirement No. 2	DEUSTO	E	CO	6	ALL	

WP No	Del.No.	Title	Lead Benef.	Nature	Diss. Level	Del. Month	Internal reviewers	Approval from partners
WP10	D10.3	EPQ - Requirement No. 3	DEUSTO	E	CO	6	ALL	

Table 9: List of deliverables

CO: Confidential, only for members of the consortium (including the Commission Services)

PU: Public

R: Report

D: Demonstrator

E: Ethics

O: Other

ORDP: Open Research Data Pilot

5.2 Periodic/Final reporting to the European Commission

There are two periods established in TANGENT project:

- Month 1 to month 18
- Month 19 to month 36

For each period, a periodic report has to be submitted to the EC, within the next 60 days after the period finishes. Moreover, a final report has to be delivered within the next 60 days after the end of the project.

The reports will be based on the templates provided by the EC.

Type of report	Aspects to cover
Periodic report sections	<p>Covering <u>technical aspects</u>:</p> <ul style="list-style-type: none"> • Explanation of the work carried out by the beneficiaries; • An overview of the progress towards the objectives of the action, including milestones and deliverables identified in Annex 1 of the Grant Agreement. • A summary for publication by the Agency; • The answers to the 'questionnaire', related to the economic and societal impact. <p>Covering <u>financial aspects</u>:</p> <ul style="list-style-type: none"> • An 'individual financial statement' from each beneficiary and from each linked third party, for the reporting period concerned. • An explanation of the use of resources and the information on subcontracting and in-kind contributions provided by third parties from each beneficiary and from each linked third party, for the reporting period concerned; • A 'periodic summary financial statement', created automatically by the electronic exchange system, consolidating the individual financial statements for the reporting period concerned and the request for interim payment.
Final report sections	<p>A 'final technical report' with a summary for publication.</p> <p>A 'final financial report' containing:</p> <ul style="list-style-type: none"> • a 'final summary financial statement'

Type of report	Aspects to cover
	<ul style="list-style-type: none"> If applicable, a 'certificate on the financial statements' for each beneficiary and for each linked third party.

Table 10: Aspects to cover in periodic and final reporting

The project coordinator will coordinate the preparation of these reports in collaboration with all the consortium partners. All the reporting must be in English and financial claim in euros. After the periodic reports and final reports delivery, the EC has 90 days for approving the reports.

5.3 Internal Progress Report

An Internal Progress Report has been established on a six-month basis for a good monitoring of the project progress. A template has been created for technical and financial monitoring. This covers technical progress, results, deliverables and compliance with the WP description, as well as the monitoring, updating of the possible identified risks, deviations from agreed time scales and corrective actions. Also, a section for explaining the use of the resources during the six months has been allocated.

The evaluation will be done by reviewing the established work plan in the Annex 1 of the Grant Agreement. It is mandatory to complete the Internal Progress Report by all the partners.

A template of the referred document is available in Annex 4. Template for Internal Progress Report of this document and it is shared in the corresponding folder in the repository.

6 Document management

There are different types of documents in TANGENT:

- **Deliverables:** formal documents whose delivery, content and responsible partner has been committed in the DoA included in the Grant Agreement.
- **Meeting minutes:** reports on main discussions, agreements, update on ongoing actions status and new actions agreed during a meeting or conference.
- **Agenda for meetings:** list of issues to be dealt with during a meeting or a conference.
- **Presentations:** slides produced by partners for internal or external dissemination purposes.
- **Other documents:** formal letters and other formal documentation created by the partners.

6.1 Document templates

A set of templates has been created for all the documents mentioned above. It is available for download on the repository to all project partners to facilitate and standardise project communications. For all official project documents and presentations, it is mandatory to use the templates.

The template's definition includes indications about format and contents to include which have to be followed. In addition, all project documents shall be written in English.

The provisional template for deliverables is available in Annex 1. Template for deliverables, of this document. The final version of this template will be provided by POLIS as part of D8.1 Dissemination and communication plan due to M3.

6.2 Document identification policy

For deliverables, internal documents and meeting minutes a control of the versions has been set up due to the need of going through a review process. It is essential that every document circulated to other partners include a proper version naming and numbering in order to facilitate easy identification and avoid situations where partners are working with old or obsolete versions of documents.

The following specifications have been defined for each of the cases:

6.2.1 Deliverables

Naming: Filenames shall be the deliverable code followed by the deliverable name as included in the deliverables list in Annex 1 of the DoA. Example:

- "D9.1 Project Management Handbook"

Version number: deliverable's version will be two numbers separated by a dot. The first version submitted to the EC will be 1.0. The number after the dot will be increased every time the document is updated after a review (i.e. next version released to the EC after implementing the requested modifications will be 2.0)

6.3 Record control

The project coordinator will be responsible for keeping the final version of documents. The documents will be available in the Google Drive folder. Each WP folder will contain a subfolder called 'deliverables' where submitted deliverables will be located.

7 Decision-making process and conflict resolution

The consortium members will try to solve amicably any problem that might emerge during TANGENT project execution. If this is not possible, it will be dealt with by the highest decision-making organ in the project, the PMB. The decision-making process will be done according to the procedures established in the Consortium Agreement and summarized as follows:

7.1 Voting rules and quorum

- Each Consortium Body shall not deliberate and decide validly unless two-thirds (2/3) of its Members are present or represented (quorum).
- If the quorum is not reached, the chairperson of the Consortium Body shall convene another ordinary meeting within 15 calendar days. If the quorum is not yet reached in this second ordinary meeting, the chairperson shall convene an extraordinary meeting which will be entitled to decide even in the case that less than the quorum of Members is present or represented.
- Each Member of a Consortium Body present or represented in the meeting shall have one vote.
- Defaulting Parties may not vote. Abstentions and blank votes will not be taken into account as valid.
- Decisions shall be taken by 2/3 of the votes cast.
- As a normal procedure, decisions will be taken by consensus whenever possible. If consensus is not reached, decisions will be taken by a qualified majority of two-thirds. The voting will be open (non-secret), with one vote per partner.

7.2 Escalation process for technical issue resolution

As a general principle, decisions are made at all levels and in all areas of the project's activities. For important decisions arising within the project, i.e., decisions that affect more than one partner, a consensus should be achieved.

The first step where to handle such consensus management is at the WP level. If it cannot be found at this level, the work package leader must escalate the conflict to the PC for resolution. If the PC cannot find a solution satisfactory to all partners, the issue will be escalated to the level of the PMB for a final decision.

8 Payment procedures

There are three types of payments in TANGENT project according to the Grant Agreement and Consortium Agreement:

- **Pre-financing payment:** The EC will make the pre-financing payment to the coordinator within 30 days either from the entry into force of the Agreement or from 10 days before the starting date of the action, whichever is the latest. The pre-financing will be released in two instalments among partners, the first one will be 70 % of the pre-financing amount and it will be transferred without undue delay. The second instalment will be released when the second “Internal Progress Report”(by Month 12) has been completed by the Party concerned
- **Interim payments:** after the approval of the periodic reports (including the cost claim and EC grant request) by the EC within the 90 days after receiving the reports (after months M18 and M36).
- **Payment of the balance:** Upon submission of the official cost claiming to the EC and approval of the reports by the EC within the next 90 days of receiving the reports. It will be based on the amounts of costs approved by the EC (after month M36).

The EC will transfer the payments to the coordinator and the coordinator will distribute the corresponding amounts among the partners. In the case of “third parties”, the linked partner will be in charge of doing the payment. Current payment/budget situation is included in Annex 5. EC grant payment distribution. This document is also available in the project repository and will be updated during the project lifetime.

9 Review of Project Management Handbook

The PMH has been distributed among all the consortium partners and all of them are aware of the information contained. The PMH will be a “live” document, it will be updated every time a management procedure is modified according to the project’s needs. Two updated versions of this document will be submitted as deliverables to the EC:

- “D9.5 Project management handbook. Second release” due in month 18
- “D9.6 Project management handbook. Third release” due in month 36

All the changes on the PMH have to be approved by the PMB.

10 Conclusions

This deliverable contains the necessary guidelines for project management and quality assurance.

It contains presentation standards for internal documents and for deliverables and reports to the EC, measures to ensure timely reporting, payment procedures plan and calendar, conflict prevention and resolution and internal communication procedures aiming at achieving the best results on TANGENT's project execution.

11 Documents of reference

EC (2021). Grant Agreement of TANGENT project (955273)

TANGENT Consortium (2021). Consortium Agreement of TANGENT project

EC. Project reporting templates for H2020 projects, specifically “Research and Innovation actions”.

Annex 3. Template for presentations

What is TANGENT

- TANGENT aims at developing new complementary tools for optimising traffic operations in a coordinated and dynamic way. To help participating cities achieve a 10% reduction travel time, 8-10% reduction in CO₂ emissions, 5% reduction of accidents, 10-15% increase in use of public transport.
- The partners represent seven European countries: Belgium, Germany, Greece, Italy, Netherlands, Portugal, Spain, United Kingdom
- The cities involved are Lisbon, Great Manchester, Rennes, Athens

USER GUIDE

HEADER 1 (Arial – 44 pt – Dark blue)

HEADER 2 (Arial – Min 20 pt / Max 36 pt – Light blue)

- Body (Arial – Max 28 pt - Dark grey)
- List item 1
 - List item 2
 - List item 3 (Arial – Min 14 pt – Dark grey)

Colour palette

ROB	HEX
387083	264953
42157143	2a00ff
23111181	a7851
23198108	e048a
24416207	54281
224208131	e0f83
969696	696969
155753153	999999

IMAGE STYLING

Example of an image with a transparent colored block on top. Set the colored block to 50% transparency.

TABLE

Header 1	Header 1	Header 1	Header 1
Item 1	Item 1	Item 1	Item 1
Item 2	Item 2	Item 2	Item 2
Item 3	Item 3	Item 3	Item 3
Item 4	Item 4	Item 4	Item 4
Item 5	Item 5	Item 5	Item 5

ICONS

PIE CHART

Feature	Percentage
Feature One Here	20%
Feature Two Here	15%
Feature Three Here	15%
Feature Four Here	20%
Feature Five Here	30%

EVOLUTION GRAPH

This line graph displays four series (Series 1, Series 2, Series 3, Series 4) over a period of time. The Y-axis represents 'This Series Here'.

CITIES

LISBON, GREAT MANCHESTER, RENNES, ATHENS

Project overview

- A 4.8 million EUR innovation project funded by the European Commission, Horizon2020
- It aims at developing new complementary tools for optimising traffic operations in a coordinated and dynamic way
- To help participating cities achieve a 10% reduction travel time, 8-10% reduction in CO₂ emissions, 5% reduction of accidents, 10-15% increase in use of public transport

CITIES

LISBON GREAT MANCHESTER RENNES ATHENS

CONTACTS

Project Coordinator
Lena Serrano - University of DELU20
lena.serrano@delu20.eu

Communication Manager
Rafaela Vergara - PCL22
R.Vergara@profnetwerk.eu

Annex 5. EC grant payment distribution

Partner name	Pre-financing payment (first instalment) (€)
UNIVERSIDAD DE LA IGLESIA DE DEUSTO ENTIDAD RELIGIOSA	431.825,62 €
AIMSUN SLU	227.718,75 €
NATIONAL TECHNICAL UNIVERSITY OF ATHENS	293.212,50 €
INTERUNIVERSITAIR MICRO-ELECTRONICA CENTRUM vzw	220.095,09 €
CEFRIEL SOCIETA CONSORTILE A RESPONSABILITA LIMITATA	215.578,12 €
RUPPRECHT CONSULT-FORSCHUNG & BERATUNG GMBH	192.281,25 €
POLE DE COMPETITIVITE IDFORCAR	255.281,25 €
RENNES METROPOLE	36.421,87 €
ATOBE - MOBILITY TECHNOLOGY SA	293.261,72 €
COMPANHIA CARRIS DE FERRO DE LISBOA, E.M., S.A.	77.437,50 €
TRANSPORT FOR GREATER MANCHESTER	84.460,03 €
PANTEIA BV	94.565,62 €
POLIS - PROMOTION OF OPERATIONAL LINKS WITH INTEGRATED SERVICES, ASSOCIATION INTERNATIONALE	123.768,75 €
Total	2.545.908,09 €

Annex 6. List of identified risks in TANGENT project

Risk no.	Description of Risk	WP no.	Proposed risk mitigation measure
1	Stakeholders' engagement is not properly achieved. Low progress for interviewing and the provision of data	WP1	Different stakeholders are involved in the proposal as partners and will be supported by the experts in the Stakeholders Forum. Strong dissemination actions will be done from the beginning of the project.
2	Insufficient data, and/or access restrictions.	WP2 WP7	The different uses cases partners involved in the proposal are aware of the data requirements and committed to share their data in frames of the project. In fact, a first data analysis and mapping has been done at proposal stage
3	Insufficient questionnaire data for behaviour modelling	WP3	All partners involved in the Case Studies are committed to distribute the questionnaire in all pilot locations thus, increase exposure and facilitate the data collection process.
4	Low data quality (noise, incompleteness, ...)	WP3 WP4 WP5	Definition of default values and application of techniques to deal with noise and incompleteness.
5	Historical data of the case studies is not sufficient or not available in time to start the development of the models.	WP4	Start initial development on datasets from other environments (publicly available datasets and data collected for other projects) and finetune the models later to the specific case studies.
6	User requirements not met by the TANGENT tools	WP1 WP6	Through the engagement and consultation of external stakeholders during the developments, supported by agile concepts. Several iteration reviews will be made for measuring progress and accessing that all the specified functionalities are met.
7	Interoperability of modules. Different components of the platform are not compatible to each other, failing integration, putting pilots at risk.	WP6 WP2 WP3 WP4 WP5	Using a well-structured requirement analysis, the TANGENT solution tackles the issues related to physical interoperability and product data interoperability, by providing a precise definition of adapter interfaces related to standards within the TANGENT architecture.
8	Excessive computational time required by the global optimization methods to provide good enough solutions	WP5	Simplification the constraints considered in the optimization models according to their priority of fulfilment in each environment.
9	The transport network optimization sub-system cannot be completed in the expected time frame	WP5	Prioritize the functional and non-functional requirements of the sub-system to reduce its complexity while keeping its main functionalities.
10	Solutions doesn't reach the expected results	WP6 WP7	During monitoring phase any negative deviation of the objectives will be analysed by the PTC, supported by the case studies leaders and the partners involved.
11	Collected data does not allow a coherent impact analysis.	WP2 WP7	Specifications of the monitoring and follow up procedures must be carefully designed at the start of the use cases. Intermediate sampling will allow to confirm if data are sufficient.
12	A partner leaves the	ALL	The rest of the consortium will try to assume the partner

Risk no.	Description of Risk	WP no.	Proposed risk mitigation measure
	project.		objectives, responsibilities and resources. In case the responsibilities reallocation is not possible, the consortium will look for other partner with the same profile.
13	Partners' activities not aligned and not meeting project aims or outputs from one WP do not meet the requirements of the next WP.	ALL	Regular WP and technical meetings will be held to ensure that activities are streamlined and that lessons learnt are shared. WP achievements will be presented by each WP leader at the PTC with the chance for feedback.
14	Results of each WP are not good enough.	ALL	A quality management plan is foreseen to detect lack of quality and implement corrective measures.
15	Delays on deliverables and results not meeting project objectives.	ALL	The PC and management structures have established mechanisms to react against possible delays. Regular meetings will be scheduled to ensure that activities are streamlined with the project work plan.
16	Partners do not agree on the IPR of the results of the project.	WP8	An exploitation plan will be developed within the first steps of the project, identifying the expected results of the project, as well as who will be the owner. In addition, a CA will be signed by all partners before the project starts, establishing the basic rules for IPR.
17	Risks related to the health of the people participating in the project.	ALL	If any of the partners occurs to be affected during the project, the rest of the consortium will try to assume the partner objectives, responsibilities and resources with a redistribution of the work until the partner is available again. To prevent this, meetings will be held online until is safe enough to travel and always complying with the measures established by the competent authorities.
18	Financial risk derived from the shutdown of the economic activity of partners that ensure the progress of the project.	ALL	If any of the partners occurs to be at financial risk on the project, the rest of the consortium will try to assume the partner objectives, responsibilities and resources with a redistribution of the work and the corresponding budget so the final outcome will not be jeopardise. In case the re-allocation is not possible the consortium will look for other partners with similar profile that could accomplish the tasks.
19	Risks in day-to-day operations (face-to-face meetings, etc.).	ALL	To prevent this, meetings will be held online until is safe enough to travel and always complying with the measures established by the competent authorities in the matter.
20	Deviations of project's results due to changes in the sector trends. The results of the project may be realigned.	ALL	The PC and management structures have established mechanisms to react against possible delays. Regular meetings will be scheduled to ensure that activities are streamlined with the project work plan. Within the consortium there is expertise enough to address changes in the exploitation plan of the project and realigned it to maximize its impact.