SAFEWAY

GIS-Based Infrastructure Management System for Optimized Response to Extreme Events of Terrestrial Transport Networks

Quality Assurance Plan (D1.1)

November 2018 (V1.0)
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PUBLIC

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SAFEWAY

GIS-BASED INFRASTRUCTURE MANAGEMENT SYSTEM FOR OPTIMIZED RESPONSE TO EXTREME EVENTS OF TERRESTRIAL TRANSPORT NETWORKS

Grant Agreement No. 769255

Quality Assurance Plan

WP 1 Overall Project Coordination

Deliverable ID	**D1.1**
Deliverable name	**Quality Assurance Plan**
Lead partner	**University of Vigo (UVIGO)**
Contributors	FERROVIAL, NGI, UMINHO

PUBLIC

SAFEWAY Project Synopsis

According to European TEN-T guidelines, due consideration must be given to the risk assessments and adaptation measures during infrastructure planning, in order to improve resilience to disasters. SAFEWAY's aim is to design, validate and implement holistic methods, strategies, tools and technical interventions to significantly increase the resilience of inland transport infrastructure. SAFEWAY leads to significantly improved resilience of transport infrastructures, developing a holistic toolset with transversal application to anticipate and mitigate the effects extreme events at all modes of disaster cycle:

1. **"Preparation":** substantial improvement of risk prediction, monitoring and decision tools contributing to anticipate, prevent and prepare critical assets for the damage impacts;
2. **"Response and Recovery":** the incorporation of SAFEWAY IT solutions into emergency plans, and real-time optimal communication with operators and end users (via crowdsourcing and social media);
3. **"Mitigation":** improving precision in the adoption of mitigation actions (by impact analysis of different scenarios) together with new construction systems and materials, contributing to the resistance & absorption of the damage impact.

SAFEWAY consortium has 15 partners that cover multidisciplinary and multi-sectorial business fields associated with resilience of transport infrastructure in Europe: national transport infrastructure managers & operators, a main global infrastructure operator, partners able to provide various data sources with large coverage in real time, comprehensive ITC solutions, and leading experts in resilience, risk databases, remote sensing-based inspection, and decision systems based on predictive modelling.

SAFEWAY will carry-out 4 real case studies distributed through 4 countries, linked to 5 corridors of the TEN-T Core Network. SAFEWAY has as main expected impacts:

1. at least 20% improvement in mobility; and
2. at least 20% lower cost of infrastructure maintenance.

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Document Approval

Ver.	Name	Position in project	Beneficiary	Date	Visa
1.0	Dr. Belén Riveiro	Project Coordinator	UVIGO	04/11/2018	BR
1.2	Dr. Belén Riveiro	Project Coordinator	UVIGO	23/04/2019	BR

Executive Summary

The Quality Assurance Plan (QAP) defines the main set of rules, for SAFEWAY consortium partners to consider during the project, to ensure that the technical outcomes of the project are produced following some high quality standards. The QAP defines the role and responsibilities of each partner, the procedures and templates to be followed when preparing, meeting agendas and minutes, PowerPoint presentations, deliverables (interim or otherwise) defined in the grant agreement, and other reports, internal deliverables or milestones that may be defined during the project. The QAP also defines the ways of verification that will be implemented during the project before final internal validation and submission of deliverables and milestones to the EC/INEA. This plan will be used by the Project Technical Committee (PRT) as guidelines to evaluate the content of the technical deliverables and to ensure the technical quality of the project outcomes.

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Glossary of Terms

AB	Advisory Board
CA	Consortium Agreement
CFS	Certificate on the Financial Statement
CT	Coordination Team
DMP	Data Management Plan
E&BP	Exploitation & Business Plan
EC	European Commission
EIM	Exploitation and Innovation Manager
EM	Ethics Mentor
FS	Financial Statement
GA	Grant Agreement
INEA	Innovation and Networks Executive Agency
IPR	Intellectual Property Rights
PC	Project Coordinator
PMB	Project Management Board
PO	Project Office
PS	Project Secretary
PTC	Project Technical Committee
QAP	Quality Assurance plan
QCG	Quality Control Group
TL	Task Leader
WP	Work Package
WPL	Work Package Leader

1. Introduction

This document defines the Quality Assurance Plan (QAP) for the Horizon 2020 project "SAFEWAY - GIS-Based Infrastructure Management System for Optimized Response to Extreme Events of Terrestrial Transport Networks". The main aim of this document is to define a common framework of requirements, procedures and regulations that are required for SAFEWAY to complete its projects outcomes following a uniform approach. In this line, the QAP is conceived as a project handbook for SAFEWAY consortium partners, in regards to project organisation, contact information, communication procedures, document publication and quality assurance issues.

The QAP covers many of the activities of the project, defining the role and responsibilities of each partner during the project. For example, defines the procedures and templates to be followed when preparing, meeting agendas and minutes, PowerPoint presentations, deliverables (interim or otherwise) defined in the grant agreement, and other reports, internal deliverables or milestones that may be defined during the project.

Furthermore, the QAP provides the guidelines for SAFEWAY to effectively meet the expected quality requirements on its technical outcomes. This document, defines the ways of verification that will be implemented during the project before final internal validation and submission of deliverables and milestones to the EC/INEA. This plan will be used by the Project Technical Committee (PTC) as guidelines to evaluate the content of the technical deliverables and to ensure the technical quality of the project outcomes.

1.1 Quality assurance

Quality assurance applies to all project activities, including Deliverables. Quality assurance is a joint responsibility of all partners during the project lifecycle. The Project Coordinator (PC) and the Project technical committee (PTC) have the authority for implementing and verifying compliance with all quality evaluation policies and procedures related to the project.

2. SAFEWAY Project Organisation

2.1 Overall organisation

The consortium and management structure will promote an optimal use of the knowledge, experience and expertise of the Partners in fulfilling the objectives of the project, while providing effective project monitoring and control. Due to the complexity of the Project management structure, the consortium has put great care in defining the most appropriated structure. All Partners assume full technical and financial responsibility for the management of the project, which involves the appointment of a Project Coordinator and the management structure shown in Figure 1.

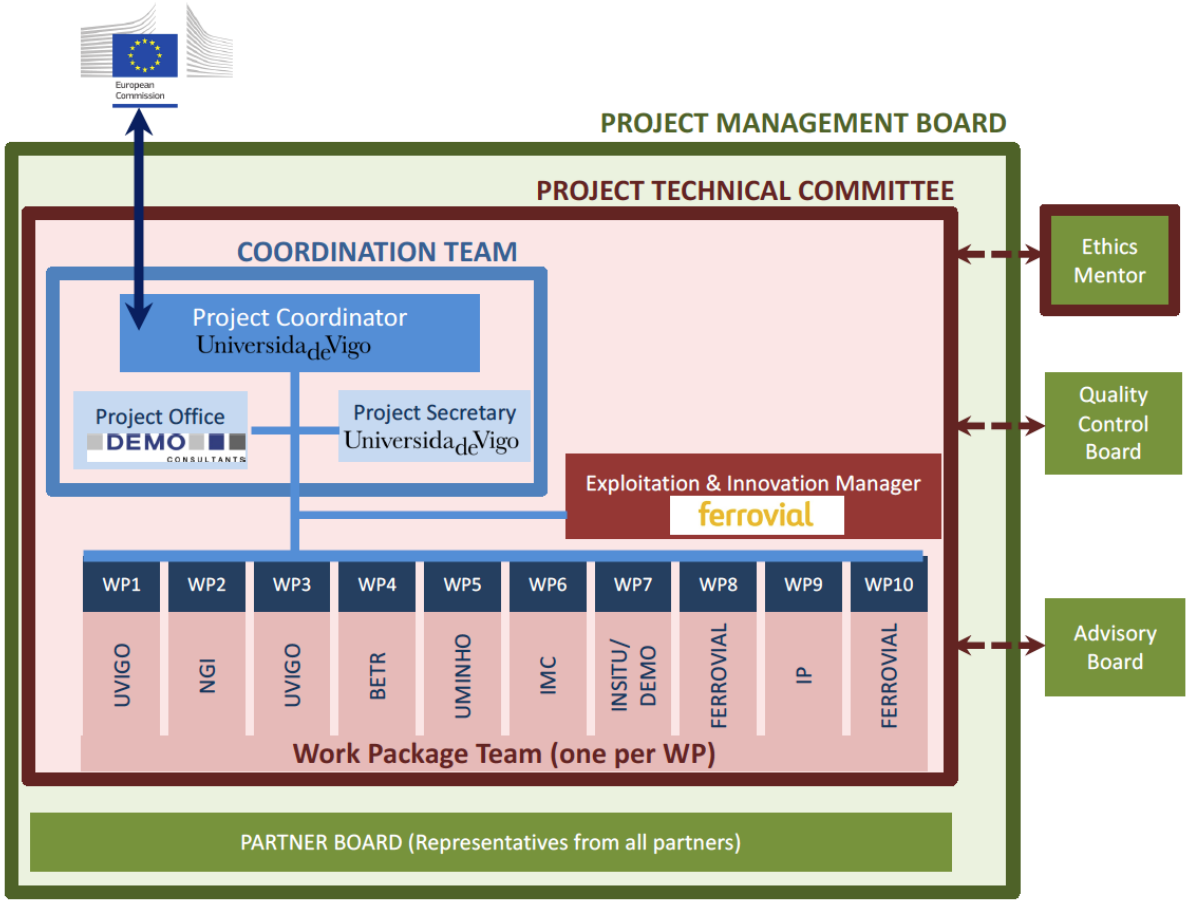


Figure 1: SAFEWAY project management structure

2.2 Roles and responsibilities of project bodies and actors

2.2.1 Coordination team

The coordination team (CT), chaired by the Project Coordinator (PC) who is supported by two offices: Project Office (PO) (technical support for the project coordinator in the project execution and implementation; and the Project Secretary (PS) (technical-administrative office created as support both to the project coordinator and to the project Partners in the project management).

Universidad de Vigo	DEMO CONSULTANTS	Universidad de Vigo
Project Coordinator (PC) The PC will act as intermediary between all parties and the EC, being the only contact point for all communications with the EC. Monitoring compliance by the partners with their obligations, coordinating the technical work of the WP's (section 3.2.2); managing the communication flow among the partners and of keeping the address list of contact persons. **Dr. Belén Riveiro** (UVIGO) will be the PC.	**Project Office (PO)** The PO will work to support the coordinator in the technical execution and implementation of the project. Given its experience in technical consulting and software development within the infrastructure sector and as coordinator of international projects, DEMO will chair this body. **Dr. Andre van Delft** (DEMO) will be in charge of the Project Office.	**Project Secretary (PS)** The PS will work to support the PC in all necessary administrative activities that require representation within the EC, ensuring that everything is in accordance with the programme rules and deadlines. the PS will track and archive all documentation generated throughout the project's lifecycle and supervise all necessary official transactions (e.g., deliverables, consortium agreements, financial data and legal documentation). **Dr. Pedro Arias** (UVIGO) will be the Project Secretary.

2.2.2 Project Technical Committee

The Project technical Committee (PTC), composed by the WPs leaders and chaired by UVIGO as leading entity, the PTC will be responsible for the day-to-day technical work and the proper execution and implementation of the decisions of the PMB. The PTC will be convened every 6 months, in order to collect information on the progress of the project to assess compliance and propose modifications. In case of deviations, the PTC will advise the PMB on ways to rearrange tasks and budgets. The PTC will play a crucial role in exchanging the work carried out in the different WPs in order to support the implementation of the running project.

Table 1: SAFEWAY Project Technical Committee member partners

Rolle	Partner
Project Coordinator	UVIGO
Project Office	DEMO
Project Secretary	UVIGO
WP1 – Project Coordination	UVIGO
WP2 – Risk Factors & Risk Analysis	NGI
WP3 – Multiscale Infrastructure Modelling	UVIGO
WP4 – Innovative Crowdsourcing Concepts	BETR
WP5 – Predictive Models	UMINHO
WP6 – Decision Support Systems	IMC
WP7 – SAFEWAY IT Platform Prototype	INSITU
WP8 – Action Plan for Long-term Resilience...	FERROVIAL
WP9 – Demonstrative Pilots	IP
WP10 – Exploitation, Dissemination and Communication	FERROVIAL

2.2.3 Project Management Board

The Project Management Board (PMB), composed of at least one representative of each Partner and will be chaired by the Project Coordinator. The main aim of this Board will be to advise and support the decisions of the PC on operational and management issues. It will also be responsible for all decisions of general nature within the frame of the EC Contract. Furthermore, the PMB will be an effective and efficient communication hub. These and other responsibilities and tasks are detailed in the project's Consortium Agreement.

The PMB will meet at least twice every year by videoconferencing, provided that at least all members physically meet once a year. Every member of the consortium should be represented at these meetings and may appoint a substitute to attend and vote at the meeting.

2.2.4 Work Package Teams

The Work Package Teams (one per WP), composed of representatives of the Partners participating in the WP. Each WP is leaded by the Work Package Leader (WPL) and Task Leaders (TL) may be also appointed if necessary.

The WP Leaders will ensure the coordination between the different project teams that collaborate 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. 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 Manager, who is responsible for operational decisions.

Table 2: SAFEWAY Work Package Teams member partners

WORK PACKAGE	LEADER	PARTNERS INVOLVED
WP1 – Project Coordination	UVIGO	ALL
WP2 – Risk Factors & Risk Analysis	NGI	UCAM, INSITU, UMINHO, PLANETEK, IMC, FERROVIAL, IO, BETR, TØI
WP3 – Multiscale Infrastructure Modelling	UVIGO	INSITU, PLANETEK, FERROVIAL, IP
WP4 – Innovative Crowdsourcing Concepts	BETR	UVIGO, DEMO, PLANETEK, IP,INNOVACTORY, TØI
WP5 – Predictive Models	UMINHO	NGI, UCAM,IMC, BETR
WP6 – Decision Support Systems	IMC	UCAM, DEMO, UMINHO, IP, TØI
WP7 – SAFEWAY IT Platform Prototype	INSITU	DEMO, IMC
WP8 – Action Plan for Long-term Resilience	FERROVIAL	UVIGO, UCAM, IMC, IP, NETWORK RAIL
WP9 – Demonstrative Pilots	IP	UVIGO, NGI, UCAM, INSITU, DEMO, UMINHO, PLANETEK, IMC, FERROVIAL, IP, NETWORK RAIL, BETR
WP10 – Exploitation, Dissemination and Communication	FERROVIAL	UVIGO, UCAM, INSITU, DEMO, UMINHO, PLANETEK, IMC, FERROVIAL, IP, BETR

2.2.5 Ethics Mentor

An Ethics Mentor (EM) will be appointed at the beginning of the project by the PC. The EM will support the consortium to deal with ethical issues and put in place the procedures to handle them appropriately, as well as training researchers on ethical related issues. The EM will consult all partners to determine precisely where the project may involve ethical considerations (e.g., relating to any primary research and stakeholder data collection). Based on this consultation an internal protocol

on ethical procedures will be defined for the consortium to follow. Throughout the duration of the project, the EM will organize the internal monitoring of the implementation of the ethical protocol by the consortium. A report by the Ethics Mentor will be submitted with the Data Management Plan (DMP) in M18, M30 and M42.

2.2.6 Exploitation and Innovation Manager

The PMB shall appoint an Exploitation and Innovation Manager (EIM) from representatives of the partners based on their business skills and expertise on IPR issues, as well as on dissemination and communication activities. WP10 leader **Laura TORDERA** from FERROVIAL was appointed as EIM manager during the Kick-off Meeting in September 2018. The EIM will meet at least twice a year the PMB meetings, and will report to the PMB.

The EIM will work in smoothing the pathway to innovation by identifying any possible barriers and proposing actions to the PMB in order to maximize the opportunities for the exploitation of the outcomes of SAFEWAY project across the value chain. In order to do so, the EIM will be in charge of:

i. Monitoring that IPR is carried-out according to the Exploitation Strategy and the Exploitation & Business Plan (D10.4). Moderating and proposing fair solutions to any possible conflict related to IPR;
ii. Managing innovation and exploitation opportunities, including market assessment;
iii. Coordinating and monitoring dissemination and communication activities of the project, according to the Dissemination and Communication Plan (D10.1); and
iv. Coordinating the collaboration with Standardization Bodies.

2.2.7 Quality Control Group

The Quality Control Group (QCG) is composed of representatives of the partners with experience to judge both the scientific excellence and the potential impact of the project results.

The tasks of the QCG include evaluation of the project deliverables (interim or otherwise) and other publications, following the guidelines defined in this document (Quality Assurance Plan - D1.1). In case the QCG finds that a deliverable or publication does not achieve the expected technical level, recommendations for adjustments will be given to the corresponding WPL. The QCG will be composed of representatives of the partners with experience to judge both the scientific excellence and the potential impact of the project results and will be chaired by the QCG Leader. The members of the QCG will be elected by the PMB. In case of a conflict between the QCG and the WPL decision shall be made by the PMB.

The QCG should aim to find consensus on its decisions. If this is not possible decisions are made by a two-third majority. In case of a draw the QCG leader has the decisive vote. The work of the QCG will be organized on remotely basis.

Table 3: SAFEWAY Quality Control Group members

Partner Organization	Main contact
NGI	Unni Eidsvig
UVigo	Belén Riveiro
BeTR	Ben Rutten
UMinho	Jose Matos
IMC	Rade Hajdin
Insitu	María Varela
DEMO	Andre van Delft
FERROVIAL	Sara Cuerva
IP	Francisco Ganhão

2.2.8 Advisory board

An Advisory Board (AB)will be set up during the first 6 months of the project and it will be steered by the PC. Several European and US stakeholders have already been contacted during the proposal preparation and given their consent to be included in the AB, so it is assured:

- An adequate contribution of relevant stakeholders to specific WPs, as MIT to multiscale materials in WP8, and the EFRTC, DGPCE and CNPC to WP2.
- A broad impact on transport agencies, industrial sector, policy makers, etc., through stakeholders as Innovatie Centrale and the American Society of Civil Engineers, and also the EFRTC, DGPCE and CNPC.

The function of the AB is to assure permanent connection of the SAFEWAY project with the stakeholders, and to give advice or to be available for consultation during all phases of the project lifecycle. The AB will meet at least twice during the project usually in parallel to PMB meetings and when necessary following a request by the PMB meetings and when necessary following a request by the PMB meetings and when necessary following a request by the PMB.

The travel and subsistence costs for the members of the AB will be reimbursed. They will explicitly not be paid for time that they will spend for their advisor activity.

2.3 Consortium communication tools

Consortium Agreement Art. 11.3: Notices and other Communication

Any notice to be given under this Consortium Agreement shall be in writing to the addresses and recipients as listed in the most current address list kept by the Coordinator.

Formal notices:

If it is required in this Consortium Agreement (Sections 4.2 and 11.4) that a formal notice, consent or approval shall be given, such notice shall be **signed by an authorised representative of a Party and shall either be served personally or sent by mail with recorded delivery or telefax** with receipt acknowledgement to the Party's registered address.

Other communication:

Other communication between the Parties may also be effected by other means such as e-mail with acknowledgement of receipt, which fulfils the conditions of written form.

Any change of persons or contact details shall be notified immediately by the respective Party to the Coordinator. The address list shall be accessible to all concerned.

Communication for technical implementation of the action:

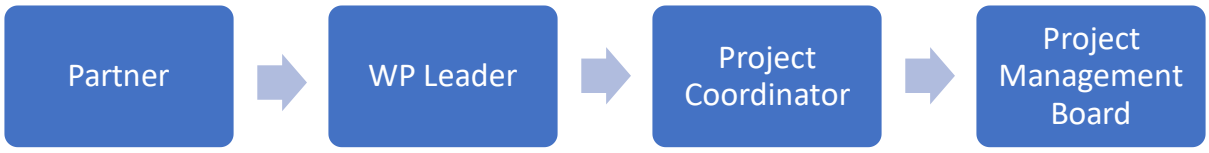


Figure 1: SAFEWAY internal communication chain for the technical implementation of the action

Other communication between the Parties may also be effected by other means such as e-mail with acknowledgement of receipt, which fulfils the conditions of written form.

2.4 Decision making and conflict resolution

The PMB is the decision-making body of the SAFEWAY Consortium. Primarily, decisions should be made by consensus. If discussions do not lead to an agreement and consensus, the case is decided upon voting. In the PMB, members will have one (1) vote each. A 2/3 majority of the votes will be sufficient. However, a decision-making process is needed for a wide range of issues ranging from day-to-day activities to issues that affect the overall outcome of the project.

If the quorum is not reached, the chairperson of the Consortium Body shall convene another ordinary meeting within 15 calendar days. If in this meeting the quorum is not reached once more, the chairperson shall convene an extraordinary meeting which shall be entitled to decide even if less than the quorum of Members

is present or represented (Article 6.2.2.8 GA). Decisions shall be taken by a majority of 60% (rounded up) of the votes cast.

2.4.1 Decision making mechanism

The PMB is the decision-making body of the SAFEWAY Consortium. Primarily, decisions should be made by consensus. If discussions do not lead to an agreement and consensus, the case is decided upon voting. In the PMB, members will have one (1) vote each. A 2/3 majority of the votes will be sufficient. However, a decision-making process is needed for a wide range of issues ranging from day-to-day activities to issues that affect the overall outcome of the proposal.

In the unlikely case of irreconcilable differences that cannot be resolved by the PMB, the issue will be addressed following the procedure defined in the CA under Settlement of Conflicts provisions.

Figure 2: SAFEWAY Decision making mechanism

2.4.2 Conflict resolution

Problems have to be reported as early as possible to the PC, for this to immediately define and apply mitigation actions (if necessary). in case of any conflict, the PMB will act as the highest conflict resolution level within the project. PMB will be responsible to analyse the conflict and provide proposals for a solution in an amicable way. Any Consortium member may, however, contact the PC or the other respective boards directly if they identify an actual or potential conflict. The PC will immediately attempt to resolve this by discussion or by calling an ad-hoc meeting.

In the unlikely case of irreconcilable differences that cannot be resolved by the PMB, the issue will be addressed following the procedure defined in the CA under Settlement of Conflicts provisions.

3. Contractual Framework

The contractual framework of the SAFEWAY project consists mainly of two reference documents:

- The Grant Agreement (GA)
- The Consortium Agreement (CA)

3.1 Grant Agreement

The GA regulates the relationship between the European Commission (EC) and the Project Consortium. The GA is signed between the European Commission and the Project Coordinator. All other project partners have signed Accession Forms to the contract in order to be integrated within the project consortium. The GA contains the specific details of the project, such as: project start date, project duration, budget, project results, etc.

The GA consists of the following documents:

- Terms and Conditions
- Annex I – Description of the Action
- Annex II – Estimated budget for the action
  - IIa Additional information on the estimated budget
- Annex III – Accession Forms
- Annex IV – Model for the financial statements
- Annex V – Model for the certificate on the financial statements
- Annex VI – Model for the certificate on the methodology

3.2 Consortium Agreement

The CA regulates the cooperation within the project consortium partners, covering the following main topics:

- Legal name, address and authorised people to sign the contract of all partners
- Preamble
- Subject of the contract (title of project)
- Organisational provisions (project boards and their responsibilities, management, voting procedures, …)
- Financial provisions (financing plan, modification procedures, auditing of costs, payments, …)

4. Quality Management

4.1 Meetings

Regular project meetings are the base for a good consortium cooperation and a sound working progress. After the initial kick-off meeting, project (PMB) meetings will be held at least twice a year by videoconferencing, provided that at least all partners physically meet once a year. In addition, PTC meetings will be held every three months by videoconferencing, provided that at least all PTC members meet all in person in parallel to PMB meetings. Furthermore, WP meetings will be held, at least every three months. Finally, Separate technical meetings will be held on demand.

Meetings will serve as a platform for information exchange between the project participants and problem solving. Information is being given, taken or exchanged with a view to reach collective decisions. This exchange will be formalized by an agenda, which will be extended to the minutes of the meetings (see Appendices 5 and 6). In addition, an Action List will be jointly elaborated by the participants at meetings to be added to the minutes and will serve as a guiding timeframe tool.

Agendas and minutes of the meetings will be elaborated by the chair of the meeting and the administrative framework will be prepared by the respective partner who is hosting the meeting.

Table 4: SAFEWAY meetings

Meeting type	Ordinary meeting		Extraordinary meeting
	In person	By VC	
Project Management Board (PMB)	At least one a year	At least twice a year	At any time upon written request of the PTC or 1/3rd of the members of the PMB.
Project Technical Committee (PTC)	At twice a year (in parallel to PMB meetings)	At least quarterly (alternate quarters to the ones where meet in person)	At any time upon written request of any member of the PTC.
Work Package Team	At least one every quarter		At any time upon written request of any member of the WP team.

Meetings of each Consortium Body may also be held by teleconference or other telecommunication means (Consortium Agreement, 6.2.2.7).

- Project Management Board: at least once a year physically (GA)
- Project Technical Committee: at least once a year physically (GA)

4.2 Delivery process for project outcomes

The quality of the work will be ensured through regular and systematic monitoring processes which will be organized among the project participants. The project milestones and deliverables identified shall be the primary basis for monitoring and approval of the progress of the project. The PC will be responsible of monitor the effective and efficient implementation of the Project whilst the WPL have similar responsibilities at WP level. The Task Leader will be reporting to the WPL and the WPL to the PC and the PTC.

During the project implementation, the Consortium will have various reporting activities describing technical progress, results obtained (e.g. deliverables) and compliance with the work-plan, as well as costs incurred, at least on a six-month basis. The PC will collect all the information and provide it to the PMB. Through this monitoring system, the PC and the PMB will keep a general view on the technical progress as well as financial flows within the project. The PMB will assess the compliance of the Project with the Project Plan and, if necessary, propose modifications. Complementarily, the PTC is responsible for the internal validation of the deliverables prior the submission to the EC/Agency, and for reviewing the scientific and technical papers before their publication, to assure the technical quality of the project outcomes.

At the end of each reporting period, the PC will also prepare the Periodic and Final reports, supported by the information provided by the WPL. Additionally, the PC will prepare a consolidated overview of the budgetary situation of the project, on the basis of the financial statements of the partners. The financial statements will be submitted along with the periodic reports and the final report.

In some specific months, partners will provide to the Coordinator the necessary information to monitor the progress of its activity: names, hours spent, tariffs, short description of the work done, other expenditures.

At the consulting level, the Advisory Board / Committee will provide independent and practical expertise and guide the SAFEWAY Consortium.

4.2.1 Quality assurance of project outcomes

4.2.1.1 For all scientific deliverables and project milestones

The Quality Assurance Plan foresees a two-step process, for project outcomes where scientific outcomes of the project are presented – i.e., deliverables and milestones from all WPs but WP1, WP10 and WP11:

- **WP leaders** will act as a '**First-step Filter**', being in charge of approving the deliverables, milestones and other technical or exploitation issues within their WP.
- The **Project Coordinator** will act as a '**Second-step Filter**', validating and approving definitively the deliverables, milestones and other technical or exploitation issues previously approved by WP leaders. Before the PC definitely approve and submit project deliverables, these will be subjected to a quality assessment by the **Quality Control Group** (see section 4.5).

Table 5: Quality assurance timeframe for all scientific deliverables and milestones

Days before submission	Action
D60	An official reminder will be sent by the project coordinator to Lead Author(s) and WP Leader responsible of the Deliverable or milestone.
D45	Completed draft (by lead author(s) and WP Leader) to be sent for internal review to the Project Coordinator (PC) and the Project Technical Committee (PTC).
D45 - D15	Internal peer-review by 2 reviewers from the Quality Control Group (see Appendix 1). This review will include consultations, feedback and discussions with the lead author(s). PC and QCG will be involved in the discussion.
D15	The feedback from the peer-review process will be collected by the PC and sent to Lead Author(s) and WP Leader (and the PTC in copy).
D15 – D7	Final corrections to the draft for submission by Lead Author(s) and WP Leader.
D7 – D0	Final technical, administrative and format check by the Project Coordinator.
D0	Final submission by the Project Coordinator.

Besides the formal timeframe defined in Table 5, which must be followed by all and Lead Author(s) and WP Leaders who are responsible for a deliverable, it is also suggested to follow the following two additional recommended steps (Table 6).

Table 6: Suggested additional timeframe steps for all scientific deliverables and milestones

Days before submission	Action
D210	WP Leader together with the Task Leader appoints the Lead Author(s) for the deliverable/milestone.
D180	Lead Author(s) draft an extended table of content of the deliverable/milestone to be discussed with their respective WP Leader.
D90	Lead Author(s) schedule a progress review meeting with the WP Leader, PC and QCB reviewers responsible for the deliverable (see Appendix 1).

4.2.1.2 For all technical deliverables and official project reports

The QAP foresees tree step process, for project outcomes where administrative and technical aspects of the implementation of the work are presented (public or

confidential deliverables) and official project reports to the European Commission – i.e., deliverables and reports from WP1, WP10 and WP11.

- **WP leaders** will act as a '**First-step Filter**', being in charge of approving the Technical activity reports and other technical or exploitation issues within their WP.
- The **Project Technical Committee** will act as a '**Second-step Filter**', validating and approving the technical reports previously approved by WP leaders.
- The **Project Coordinator** will act as a '**Third-step Filter**', validating and approving definitively the technical reports and other exploitation issues.

Table 7: Quality assurance timeframe for technical deliverables and official project reports

Days before submission	Action
D45	An official reminder will be sent by the project coordinator to Lead Author(s) and WP Leader responsible of the technical reports and other exploitation issues.
D30 - D15	Completed draft (by lead author(s) and WP Leader) to be sent for internal review to the Project Coordinator (PC) and the Project Technical Committee (PTC).
D15	The feedback from the PC and PTC will be collected by the PC and sent to Lead Author(s) and WP Leader.
D15 – D7	Final corrections to the draft for submission by Lead Author(s) and WP Leader.
D7 – D0	Final technical, administrative and format check by the Project Coordinator.
D0	Final submission by the Project Coordinator.

4.3 Project documentation

4.3.1 Document templates

A set of standard document templates has been produced for partners to use. Templates have been designed following the SAFEWAY Identity defined in the context of WP10 exploitation, communication and dissemination.

Standard templates have been produced for:

- Interim Deliverables
- Deliverables
- Periodic Monitoring Reports
- Meeting Agendas
- Meeting Minutes
- PowerPoint Presentations

These templates can be found in Appendices 2 to 7. The most updated version of these templates will be always kept in a root folder of the project official repository (see Deliverable D10.12 SAFEWAY Website).

4.3.2 Document confidentiality

During implementation of the action and for four years after the period set out in Article 3, the parties must keep confidential any data, documents or other material (in any form) that is identified as confidential at the time it is disclosed ('confidential information').

If a beneficiary requests, the Agency may agree to keep such information confidential for an additional period beyond the initial four years.

If information has been identified as confidential only orally, it will be considered to be confidential only if this is confirmed in writing within 15 days of the oral disclosure.

Unless otherwise agreed between the parties, they may use confidential information only to implement the Agreement.

The beneficiaries may disclose confidential information to their personnel or third parties involved in the action only if they:

a) Need to know to implement the Agreement and
b) Are bound by an obligation of confidentiality.

This does not change the security obligations in Article 37 of the GA, which still apply.

The Agency may disclose confidential information to its staff, other EU institutions and bodies. It may disclose confidential information to third parties, if:

a) This is necessary to implement the Agreement or safeguard the EU's financial interests and
b) The recipients of the information are bound by an obligation of confidentiality. Under the conditions set out in Article 4 of the Rules for Participation Regulation No 1290/201325, the Commission must moreover make available information on the results to other EU institutions, bodies, offices or agencies as well as Member States or associated countries.

The confidentiality obligations no longer apply if:

- the disclosing party agrees to release the other party;
- the information was already known by the recipient or is given to him without obligation of confidentiality by a third party that was not bound by any obligation of confidentiality;
- the recipient proves that the information was developed without the use of confidential information;
- the information becomes generally and publicly available, without breaching any confidentiality obligation, or
- the disclosure of the information is required by EU or national law. The beneficiaries may disclose confidential information to their personnel or third parties involved in the action only if they:

Proprietary Rights Statement

For greater consistency, IPR protection and IPR strategy activities will be managed by Laura TORDERA from FERROVIAL (leader of WP10) as Innovation and Exploitation Manager with the support of the H2020 IPRHelpdesk (www.ipr-helpdesk.org). The overall IPR strategy of the project is to ensure that partners are free to benefit from their complementarities and to fully exploit their market position. Hence, the project has a policy of patenting where possible. An IPR Plan will be included in the Exploitation & Business Plans (E&BP) (D10.4) which will be elaborated by the M24 and finally revised by the M42.

4.3.3 Document naming conventions

Conventions related to document naming:

Interim Deliverables

Document Status	File name
Final	SAFEWAY<underscore>InD<Interim Deliverable number><underscore><underscore>V<version number> Examples: SAFEWAY_InD1.1.1_V0.1

Deliverables

Document Status	File name
Final	SAFEWAY<underscore>D<Deliverable number><underscore>V<version number> Examples: SAFEWAY_D1.1_V0.1

Meeting minutes

Document Status	File name
Final	Minutes<underscore>SAFEWAY <underscore><PMB o PTC or WP or Task number><underscore>meeting <underscore><YYYY-MM-DD> Examples: Minutes_SAFEWAY_PTC1_meeting_xxxx-xx-xx

Naming convention for cost follow-up

Document Status	File name
Final	SAFEWAY<underscore>costs<underscore>follow-up <underscore><beneficiary short name><underscore>M <reporting period start month>-M<reporting period final month>.xls SAFEWAY_cost_follow-up_UVIGO_M0-M18.xls SAFEWAY_cost_follow-up_UVIGO_M19-M30.xls SAFEWAY_cost_follow-up_UVIGO_M31-M42.xls

Document information conventions

SAFEWAY project documents must include a table summarising the main metadata of the document. Two different types of tables are defined:

Reports (Deliverables/Interim Deliverables/Periodic Reports)

Table 8: Document information table for reports

Document Name	<document title>
Version No.	<Vx.x>
Due date Annex I	<planed submission date from Annex I dd/mm/yyyy>
Report date	<submission date dd/mm/yyyy>
Number of pages	<number of pages>
Lead Author	<Lead author>(<lead author's institution>)
Other Authors	<insert other authors>
Dissemination level	<select Public/Confidential>

Minutes

Table 9: Document information table for minutes

Meeting place	<insert meeting place>
Meeting date	<dd/mm/yyyy>
Version	Vx.x
Author	<Author>(<author's institution>)
Type of meeting	<PMB o PTC or WP or Task number>

4.3.4 Revision and approval procedure

The following table (already included in the predefined templates) should be used to provide a track record of the revision procedure, including: version number, the author implementing the version, the reviewer for the version, the date of the revision and a brief description of the changes.

Table 10: Document revision table

Ver.	Date	Description	Authors	Checked by
0.0	<date>	Creation of the document	<Author>	<Reviewer(s)>
0.1	<date>	Updated table x	<Author>	<Reviewer(s)>
…	…	…	…	…
1.0	<date>	Final version	<Author>	<Reviewer(s)>
1.1	<date>	<Changes done>	<Author>	<Reviewer(s)>
…	…	…	…	…

The following table (already included in the predefined templates) should be used to provide a track record of the approval procedure, including: version number, name, role in the project and institution of the person approving the document (typically the PC), date when the version was approved and initials of the person acting as Visa.

Table 11: Document approval table

Ver.	Name	Position in project	Beneficiary	Date	Visa
1.0	<name>	<role>	<partner>	<date>	
1.1	<name>	<role>	<partner>	<date>	
…	…	…	…	…	…

4.3.5 Project Deliverables

Project deliverables (reports, databases, applications, websites, etc.) are evidences of the performance being carried out by SAFEWAY partners, and allows the PC and the European Commission to monitor the project performance.

The Interim Deliverable and Deliverable templates (from appendices 2 and 3 respectively) must be used for all types of deliverables (interim or otherwise).

The list of official project deliverables can be found in table WT2 of the annex 1 of the GA. However, other interim deliverables and/or technical reports may be proposed by the PTC during the action of the project.

4.3.6 Roles

Because the SAFEWAY project is a highly collaborative project, deliverables will always be generated by a team with clearly assigned responsibilities. The team for each deliverable needs to be managed by the lead beneficiary for the deliverable and is comprised of one or multiple authors from the contributing beneficiaries as discussed in the GA. The following table outlines the roles and responsibilities of each one of the parts involved in the production of project deliverables.

Table 12: Roles and responsibilities in the production of project deliverables

Role	Responsibilities
Task Leader	• Assign together with the WP Leader the Lead Author(s) (person) in charge of the deliverable. Involve all require contributors for the deliverable and set up clear responsibilities, delivery plans, and deadlines. • Check the technical quality of the deliverable and that it follows the formatting of the template strictly. • Ensure deadlines are match.
Lead Author(s)	• Be responsible for the technical content of the deliverable and its clear communication in written form.

WP Leader	• Check the technical quality and that the deliverable strictly follows the formatting template.
	• Monitor the:
	  ○ consistency and the fit of all deliverables within the work package;
	  ○ overall planning and timely submission of all deliverables; and
	  ○ consistency of the deliverables with the other work packages.

Reviewers	• Review the deliverable and provide detailed feedback and constructive comments for improvement.
Project Technical Committee	• Oversee the accomplishment of the overall project goals as manifested in each of the submitted deliverables. • Approve final deliverables.
Project Coordinator	• Monitor the overall submission process. • Approve final deliverables. • Conduct a final style check of the formatting. • Submit the approved deliverables to the EC.

4.3.7 Acknowledgements

To acknowledge the support by the European Commission the following paragraph has to appear in all project publications, next to the EU emblem[1]:

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No. 769255.

In any other publication, the following acknowledgement must be included:

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No. 769255.

or

This [insert type of result] is part of a project that has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No. 769255.

When possible, the EU emblem must be used, in a similar size to the other adjacent logos.

Additionally, according to GA Art. 29.5, a disclaimer excluding EC responsibility must be indicated in any dissemination of results:

LEGAL NOTICE
The sole responsibility for the content of this publication lies with the authors. It does not necessarily reflect the opinion of the European Union. Neither the Innovation and Networks Executive Agency (INEA) nor the European Commission are responsible for any use that may be made of the information contained therein.

4.3.8 External publications, including scientific publications

The Project Coordinator and all partners have to be informed on project related publications well in advance (see also the GA and the CA for details). External publications should be joint publications between project partners, whenever possible. References to published articles will be compiled within the dissemination and Communication Plan (Deliverable D10.1), included in the continuous reporting to the European Commission and advertised on the SAFEWAY website. Whenever

[1] *The EU Emblem can be downloaded from: https://ec.europa.eu/info/sites/info/files/use-emblem_en.pdf*

possible, and always complying with the publisher's copyright rules, PDF versions of publications should also be made available.

External publications must acknowledge the SAFEWAY Project and the EU funding contribution, by including the following statement in the acknowledgements:

This [paper/publication/conference proceeding] was carried out in the framework of the GIS-Based Infrastructure Management System for Optimized Response to Extreme Events of Terrestrial Transport Networks (SAFEWAY) project, which has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No. 769255. Neither the Innovation and Networks Executive Agency (INEA) nor the European Commission is in any way responsible for any use that may be made of the information it contains.

4.4 Project monitoring and reporting

4.4.1 Monitoring and progress report

The quality of the work will be ensured through regular and systematic monitoring processes which will be organized among the project participants. The project milestones and deliverables identified shall be the primary basis for monitoring and approval of the progress of the project. The PC will be responsible of monitor the effective and efficient implementation of the Project whilst the WPL have similar responsibilities at WP level. The Task Leader will be reporting to the WPL and the WPL to the PC and the PTC.

During the project implementation, the Consortium will have various reporting activities describing technical progress, results obtained (e.g. deliverables) and compliance with the work-plan, as well as costs incurred, at least on a six-month basis. The PC will collect all the information and provide it to the PMB. Through this monitoring system, the PC and the PMB will keep a general view on the technical progress as well financial flows within the project. The PMB will assess the compliance of the Project with the Project Plan and, if necessary, propose modifications. Complementarily, the PTC are the responsible for the internal validation of the deliverables prior the submission to the EC/Agency, and for reviewing the scientific and technical papers before their publication, to assure the technical quality of the project outcomes.

At the end of each reporting period, the PC will also prepare the Periodic and Final reports, supported by the information provided by the WPL. Additionally, the PC will prepare a consolidated overview of the budgetary situation of the project, on the basis of the financial statements of the partners. The financial statements will be submitted along with the interim report and the final report. Thus, it is part of the coordinator's R&D Contracts Office to support the partners with the elaboration of the financial statements.

4.4.2 Periodic reports

4.4.2.1 Periodic Reports (PRs)

The coordinator must submit to the Agency (see Article 52) the technical and financial reports set out in this Article. These reports include requests for payment and must be drawn up using the forms and templates provided in the electronic exchange system (see Article 52).

The action is divided into the following 'reporting periods':

- RP1: from month 1 to month 18
- RP2: from month 19 to month 30
- RP3: from month 31 to month 42

The coordinator must submit a periodic report within 60 days following the end of each reporting period.

The periodic report must include the following:

- **Part A,** including the structured tables from the grant management system (generated automatically from the system)
  - Cover page
  - Summary for publication
  - Web-based tables covering issues related to the project implementation
- **Part B,** including a free text report containing:
  - An explanation of the work carried out by all beneficiaries and linked third parties during the reporting period;
  - An overview of the progress towards the objectives of the project, including milestones and deliverables identified in Annex 1, including the differences between the work expected under annex 1 and the work actually performed (if any).

Periodic Reports must include explanations justifying the differences between the work expected to be carried out, in accordance with Annex I, and the work that was actually carried out.

The report must detail the exploitation and dissemination of results and — if required in Annex I — include an updated 'plan for the exploitation and dissemination of the results'.

The report must indicate the communication activities;

- a summary for publication by the Agency;
- The answers to the 'questionnaire', covering issues related to the action implementation and the economic and societal impact, notably in the context of the Horizon 2020 key performance indicators and the Horizon 2020 monitoring requirements.

4.4.2.2 Final report

In addition to the periodic reports, for the last reporting period the coordinator must submit the final report within 60 days following the end of the last reporting period. The final report must include a final technical and a final financial part:

Final technical report

The final technical report must include the following:

- overview of the results and their exploitation and dissemination;
- conclusions on the project;
- socio-economic impact of the project;
- an up-to-date link to the project website; and
- project logos, diagrams, photographs and videos illustrating its work (if available).

4.4.3 Preparation of project review

Project review meetings will take place once official reports (final and periodic reports) have been delivered to the European Commission (Table 13). Timelines should be respected and although, there is a 60 days' period for the submission of the official reports, delays should be avoided to reduce further delays in the review process.

Table 13: SAFEWAY planed project reviews

Review number	Month	Planned venue of review
RV1	20	Brussels
RV2	32	Brussels
RV3	44	TBD

4.5 Peer-review process

The internal peer-review process of project deliverables will be carried out by the **Quality Control Group.** At the beginning of the project, the QGC will assign two reviewers for each deliverable (see appendix 1 of this QAP). The reviewers will be provided with the technical deliverables at least one month before the official deadline of the submission to the Agency, and their review must be submitted to the PC at least two weeks before the official deadline (see table 5).

When performing a peer-review, internal reviewers should follow the review report template form Appendix 8, and use this QAP as a guideline.

5. Financial Management

5.1 Payments by the Commission

Payments are made to the Project Coordinator (PC) on behalf of the consortium. The PC is responsible for receiving and ensuring the distribution of funds to the consortium partners.

Whenever changes regarding the bank account information occur on the partner's side the PC has to be informed immediately.

5.2 Cost monitoring

Periodic financial report containing:

I. Individual financial statement' (see Annex 4) from each beneficiary and from each linked third party, for the reporting period concerned.
The individual financial statement must detail the eligible costs (actual costs, unit costs and flat-rate costs; see Article 6) for each budget category (see Annex 2).
The beneficiaries and linked third parties must declare all eligible costs, even if — for actual costs, unit costs and flat-rate costs — they exceed the amounts indicated in the estimated budget (see Annex 2). Amounts which are not declared in the individual financial statement will not be taken into account by the Agency.
If an individual financial statement is not submitted for a reporting period, it may be included in the periodic financial report for the next reporting period.
The individual financial statements of the last reporting period must also detail the receipts of the action (see Article 5.3.3).
   - Each beneficiary and each linked third party must certify that:
   - the information provided is full, reliable and true;
   - the costs declared are eligible (see Article 6);
   - the costs can be substantiated by adequate records and supporting documentation (see Article 18) that will be produced upon request (see Article 17) or in the context of checks, reviews, audits and investigations (see Article 22), and
   - for the last reporting period: that all the receipts have been declared (see Article 5.3.3);

II. an explanation of the use of resources and the information on subcontracting (see Article 13) and in-kind contributions provided by third parties (see Articles 11 and 12) from each beneficiary and from each linked third party, for the reporting period concerned;

III. not applicable;

IV. a 'periodic summary financial statement', created automatically by the electronic exchange system, consolidating the individual financial statements for the reporting period concerned and including — except for the last reporting period — the request for interim payment.

Final financial report containing:

I. a 'final summary financial statement', created automatically by the electronic exchange system, consolidating the individual financial statements for all reporting periods and including the request for payment of the balance; and

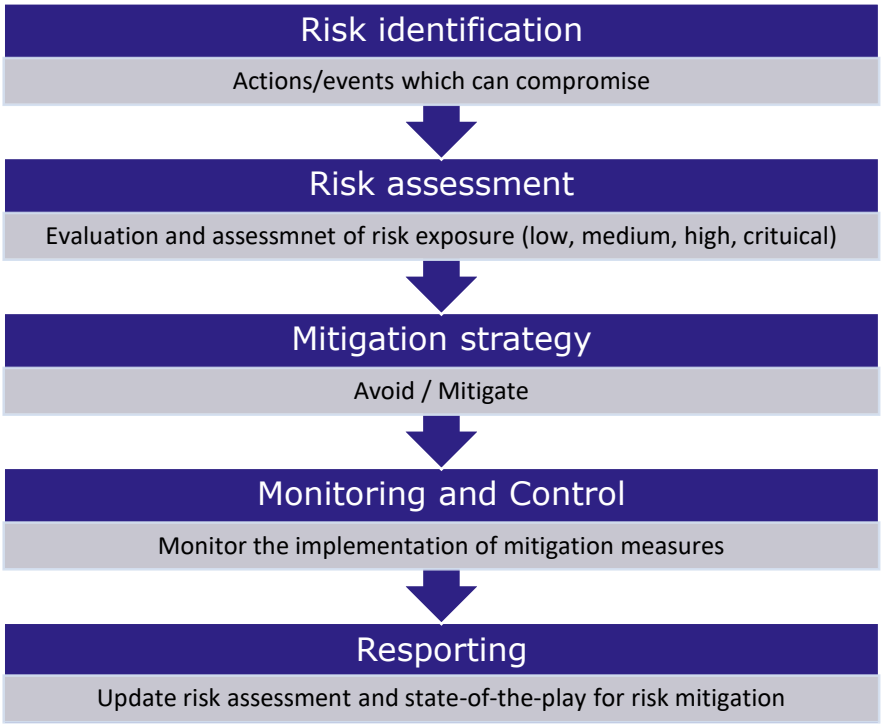
II. Certificate on the financial statements' (drawn up in accordance with Annex 5) for each beneficiary and for each linked third party, if it requests a total contribution of EUR 325. 000 or more, as reimbursement of actual costs and unit costs calculated on the basis of its usual cost accounting practices (see Article 5.2 and Article 6.2).

5.3 Time sheets

All consortium partners must keep monthly records of time sheets for each project employee (contractually mandatory, according to the GA). These timesheets are necessary to demonstrate claimed working ours, in case the EC may have the project efforts checked by independent auditors.

6. Risk Management

The below risk management process is applicable to the research activities, project deliverables and milestones of the SAFEWAY project. This process describes how can potentially harmful events or situations that may represent a risk for the technical implementation of the project will be dealt with, both at project and WP level.



6.1 Risk identification

During the GA preparation, a number of possible risks where identified and their respective mitigation measures proposed. These can be found in the list of Foreseen Risk of the project (Table WT5 of the Annex I of the GA). The situations described in the list of foreseen risk and other that may introduce new unforeseen risks will be continuously monitored by Task T1.2 Monitoring project progress and risk management.

Task 1.2 will rely on the Project Technical Committee (PTC) that will follow the procedures described in this QAP to ensure the achievement of the project objectives within time deadlines and financial allocations of GA. In order to do so, the PTC is entitled to adapt the project plan.

Project monitoring will use deliverables and milestones to measure project progress. A monitoring system has been defined in this QAP to guarantee any deviation is detected in time to define the adequate corrective action.

SAFEWAY has identified the following types of potential risks:

- Technical risks: technological issues to overcome in order to meet the work package objectives.
- Time risks: any schedule change or delay in producing the expected deliverables.
- Resource risks, like lack of resources allocation to the project a partner which induce hazards on the ability to reach the intermediate objectives.
- Competence risks: identifying the required personnel to perform the tasks, the possible competence conflicts within each organization and proposing solutions to meet deadlines.
- Budget risks: cost overruns due to project changes and making sure that the impacted organizations agree on the new budget figures to meet the effectiveness constraints.

6.2 Risk assessment

For each identified risk, the PC, in collaboration with the PTC, will estimate the provability for the risk to occur and the expected impact that this will have on the project (Low/Medium/High/Critical). The risk exposure matrix from below represents a valuable tool to estimate the risk level and define the appropriate mitigation measures.

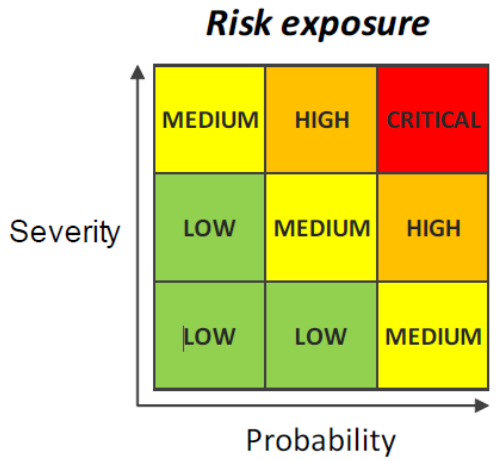


Figure 3: Risk exposure matrix

6.3 Mitigation strategy

The risk mitigation strategy defines a number of actions or mitigation measures to tackle the potentially harmful situations/events that cause identified the risk to the project. This is a contingency plan that assign roles and responsibilities, and proposes a clear response and timeframe for risk owners.

When first identified a risk and its exposure has been assessed, risk owners, in collaboration with the PC, will try to identify if the situations/events that may cause the risk can be avoided without introducing new risks to the project. In the event that these situations/events cannot be avoided, then mitigation measures will be proposed.

6.3.1 Risk ownership

As a collaborative project, SAFEWAY requires that when a risk is identified its related responsibilities are clearly and well defined. Although, T1.2 Monitoring project progress and risk management is a responsibility of the PC and the Coordination Team (CT), all partners are expected to participate in the project activities in a sensible manner, delivering high quality outcomes, and identifying and risks when these are identified. In this respect, it is a crucial part of the risk management process to clearly identify the risk ownership, so that the appropriate responsibilities can be identified and risk mitigation strategies put in place.

Coordination Team

The CT is responsible for monitoring the project process and the risk management, assuming the tasks of manage and monitor the risks that may be identified during the action of the project and support the PC on its obligations and responsibilities towards the European Commission.

Work Package Leaders

WP Leaders are accountable of the implementation of the work within their own WP, consequently WPLs have the risk ownership for the deliverables and milestones within the WP they are leading. WPLs assure the identification and management of the risks and they should inform the Coordination Team. If new risks are identified, these should be reported to the CT/PC so that the Risk Management process can be activated.

Project Technical Committee

The PTC is accountable for the technical supervision of the implementation of the project. This body will ensure the smooth execution of the project plan, will oversee the day-to-day work and will inform the Coordinator on any issues that should be escalated to the Project Management Board level. Concerning risk management and risk ownership, the PTC should advice the CT/PC and report to the PMB if problems cannot be easily resolved.

6.4 Monitoring and control

SAFEWAY project partners are responsible to communicate to the PC the status and effectiveness of each risk and its associated mitigation measures, in order for the PC to update the state-of-the-play of the risk management and assess the relevance and effectiveness of the risk management plan and mitigation measures. The risk monitoring and control will consider the following actions:

i. The Risk owner will confirm the correct implementation of mitigation measures and the effectiveness of the response.
ii. The Risk owner will keep a continuous monitoring on the situation and inform the PC.
iii. The PC will keep a continuous evaluation on the risk exposure and modify the mitigation measures if required.

6.5 Reporting

The PC is responsible to keep updated the state-of-the-play for risk mitigation within the Risk Log (see Appendix 9), which will be reviewed during PTC meetings. The Risk Log will include the list of risks identified within the course of the project, together with the proposed mitigation measures, the risk level and the Risk status – Note: a risk will be considered closed when the potentially harmful situation/event has ceased and it can no longer be considered a threat to the project.

The Risk Log will be included as an appendix of Periodic Reports and Periodic Monitoring Reports.

Acknowledgements

This deliverable was carried out in the framework of the GIS-Based Infrastructure Management System for Optimized Response to Extreme Events of Terrestrial Transport Networks (SAFEWAY) project, which has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 769255.

SAFEWAY

GIS-BASED INFRASTRUCTURE MANAGEMENT SYSTEM FOR OPTIMIZED RESPONSE TO EXTREME EVENTS OF TERRESTRIAL TRANSPORT NETWORKS

Grant Agreement No. 769255

Quality Assurance Plan - Appendices

WP 1 Overall Project Coordination

Deliverable ID	**D1.1**
Deliverable name	**Quality Assurance Plan**
Lead partner	UVIGO
Contributors	FERROVIAL, NGI, UMINHO

PUBLIC

Appendices Contents

Appendix 1. Reviewers to judge quality of technical deliverables

Deliv. No.	Deliverable Title	WP No.	Lead beneficiary	Type	Dissemination level	Due Date (month)	Reviewer
D1.1	Quality Assurance Plan	WP1	1 - UVIGO	Report	Public	2	PTC
D1.2	Periodic Monitoring Report Period 1	WP1	1 - UVIGO	Report	Confidential, only for members of the consortium (including the Commission Services)	6	PTC
D1.3	Data Management Plan (DPM) V1	WP1	1 - UVIGO	Report	Public	6	PTC
D1.4	Periodic Monitoring Report Period 2	WP1	1 - UVIGO	Report	Confidential, only for members of the consortium (including the Commission Services)	12	PTC
D1.5	Data Management Plan (DPM) V2	WP1	1 - UVIGO	Report	Public	18	PTC

Deliv. No.	Deliverable Title	WP No.	Lead beneficiary	Type	Dissemination level	Due Date (month)	Reviewer
D1.6	Periodic Monitoring Report Period 3	WP1	1 - UVIGO	Report	Confidential, only for members of the consortium (including the Commission Services)	24	PTC
D1.7	Data Management Plan (DPM) V3	WP1	1 - UVIGO	Report	Public	30	PTC
D1.8	Periodic Monitoring Report Period 4	WP1	1 - UVIGO	Report	Confidential, only for members of the consortium (including the Commission Services)	36	PTC
D1.9	Data Management Plan (DPM) V4	WP1	1 - UVIGO	Report	Public	42	PTC
D2.1	GIS map and identification of hot spots of sudden extreme natural hazard events, including database with Impact and Return Periods.	WP2	2 - NGI	Report	Public	12	INSITU UVIGO
D2.2	Impact evaluation of man-made hazards on diverse infrastructure types	WP2	6 - UMINHO	Report	Public	12	UVIGO IP
D2.3	Vulnerability and resilience factors	WP2	2 - NGI	Report	Public	18	FERROVIAL IP

Deliv. No.	Deliverable Title	WP No.	Lead beneficiary	Type	Dissemination level	Due Date (month)	Reviewer
D3.1	Data acquisition report	WP3	7-PLANETEK	Report	Public	12	INSITU NGI
D3.2	Schema of the SAFEWAY Infrastructure Information Model feeding the Infrastructure Management System	WP3	1 - UVIGO	Other	Public	24	DEMO UMINHO
D4.1	Data acquisition and integration report	WP4	12 - BeTR	Report	Public	24	UVIGO IMC
D4.2	Report on lessons from sociotechnical systems analysis and practical recommendations for IMS information content	WP4	14 - TOI	Report	Public	30	IMC UMINHO
D5.1	Report with description of dynamic risk-based predictive models developed	WP5	6 - UMINHO	Report	Public	30	FERROVIAL NGI
D6.1	Report on the value system and definition of Key Performance Indicators.	WP6	8 - IMC GmbH	Report	Confidential, only for members of the consortium (including the Commission Services)	30	FERROVIAL IP

Deliv. No.	Deliverable Title	WP No.	Lead beneficiary	Type	Dissemination level	Due Date (month)	Reviewer
D6.2	Report on the decision support system	WP6	8 - IMC GmbH	Report	Public	36	DEMO BETR
D7.1	Interfaces & Exchange standards	WP7	4 - INSITU	Other	Confidential, only for members of the consortium (including the Commission Services)	36	BETR IMC
D7.2	IT Architecture & Cloud computing configuration	WP7	5 - DEMO	Other	Confidential, only for members of the consortium (including the Commission Services)	36	BETR UVIGO
D7.3	Operational spatial database	WP7	4 - INSITU	Other	Public	36	UMINHO UVIGO
D7.4	Messaging & dashboard applications	WP7	5 - DEMO	Other	Public	42	IMC BETR
D8.1	Emergency Management Plan	WP8	10 - IP	Report	Public	18	DEMO UMINHO
D8.2	Adaptation needs of linear infrastructures and proposed construction systems	WP8	9-FERROVIAL	Report	Public	36	UMINHO IP
D8.3	Report on Legal and Normative framework	WP8	10 - IP	Report	Public	42	NGI INSITU

Deliv. No.	Deliverable Title	WP No.	Lead beneficiary	Type	Dissemination level	Due Date (month)	Reviewer
D9.1	Individual (4x) test & demo sites validated including updated values of KPI	WP9	10 - IP	Report	Public	42	INSITU NGI
D9.2	Techno-economical evaluation of SAFEWAY concepts for terrestrial transport network	WP9	10 - IP	Report	Public	42	DEMO FERROVIAL
D10.1	Dissemination and Communication Plan V1	WP10	1 - UVIGO	Report	Public	6	PTC
D10.2	Report on (future) standardization activities of the IMS V1	WP10	9-FERROVIAL	Report	Public	18	PTC
D10.3	Training plan V1	WP10	9-FERROVIAL	Report	Public	18	PTC
D10.4	Exploitation & Business Plans (E&BP) V1	WP10	9-FERROVIAL	Report	Confidential, only for members of the consortium (including the Commission Services)	24	PTC
D10.5	Dissemination and Communication Plan V2	WP10	1-UVIGO	Report	Public	30	PTC
D10.6	Report on (future) standardization activities of the IMS V2	WP10	9-FERROVIAL	Report	Public	30	PTC
D10.7	Training plan V2	WP10	9-FERROVIAL	Report	Public	30	PTC

Deliv. No.	Deliverable Title	WP No.	Lead beneficiary	Type	Dissemination level	Due Date (month)	Reviewer
D10.8	Dissemination and Communication Plan V3	WP10	1-UVIGO	Report	Public	42	PTC
D10.9	Exploitation & Business Plans (E&BP) V2	WP10	9-FERROVIAL	Report	Confidential, only for members of the consortium (including the Commission Services)	42	PTC
D10.10	Report on (future) standardization activities of the IMS V3	WP10	9-FERROVIAL	Report	Public	42	PTC
D10.11	Training plan V3	WP10	9-FERROVIAL	Report	Public	42	PTC
D10.12	SAFEWAY Website	WP10	5 - DEMO	Websites, patents filling, etc.	Public	4	PTC
D11.1	H - Requirement No. 1	WP11	1 - UVIGO	Ethics	Confidential, only for members of the consortium (including the Commission Services)	3	PTC

Deliv. No.	Deliverable Title	WP No.	Lead beneficiary	Type	Dissemination level	Due Date (month)	Reviewer
D11.2	POPD - Requirement No. 2	WP11	1 - UVIGO	Ethics	Confidential, only for members of the consortium (including the Commission Services)	3	PTC
D11.3	GEN - Requirement No. 3	WP11	1 - UVIGO	Ethics	Confidential, only for members of the consortium (including the Commission Services)	1	PTC

Appendix 2. Template for Interim Deliverables

GIS-Based Infrastructure Management System for Optimized Response to Extreme Events of Terrestrial Transport Networks

[Title of Interim Deliverable] (InDx.x.x)

[Month Year (Vx.x)]

[Updated version Month Year (Vx.x)]

[PUBLIC/CONFIDENTIAL]

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No. 769255.

SAFEWAY

GIS-BASED INFRASTRUCTURE MANAGEMENT SYSTEM FOR OPTIMIZED RESPONSE TO EXTREME EVENTS OF TERRESTRIAL TRANSPORT NETWORKS

Grant Agreement No. 769255

[Title Interim Deliverable]

WP X WP Title

Deliverable ID	**D X.X**
Deliverable name	
Interim Del. ID	**InD X.X.X**
Interim Del. name	
Lead partner	
Contributors	

[PUBLIC/CONFIDENTIAL]

SAFEWAY Project Synopsis

According to European TEN-T guidelines, due consideration must be given to the risk assessments and adaptation measures during infrastructure planning, in order to improve resilience to disasters. SAFEWAY's aim is to design, validate and implement holistic methods, strategies, tools and technical interventions to significantly increase the resilience of inland transport infrastructure. SAFEWAY leads to significantly improved resilience of transport infrastructures, developing a holistic toolset with transversal application to anticipate and mitigate the effects extreme events at all modes of disaster cycle:

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SAFEWAY will carry-out 4 real case studies distributed through 4 countries, linked to 5 corridors of the TEN-T Core Network. SAFEWAY has as main expected impacts:

1. at least 20% improvement in mobility; and
2. at least 20% lower cost of infrastructure maintenance.

Document Information

Document Name	
Version No.	Vx.x
Report date	dd/mm/yyyy
Number of pages	
Lead Author	Author Name (Institution)
Other Authors	
Delivery (be associated with)	D X.X
Dissemination level	[Public/Confidential]

Document History

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Document Approval

Ver.	Name	Position in project	Beneficiary	Date	Visa
1.0	Dr. Belén Riveiro	Project Coordinator	UVIGO		

Executive Summary

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Table of Contents

Glossary of Terms

LID	Lore Ipsum Dolor
LID	Lore Ipsum Dolor
LID	Lore Ipsum Dolor

1. Introduction

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SAFEWAY

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Grant Agreement No. 769255

Title of Deliverable - Appendices

WP X Title of WP

Deliverable ID	**Dx.x**
Deliverable name	
Lead partner	
Contributors	

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Appendices Contents

Appendix 1. Lore ipsum dolor

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Appendix 3. Template for Deliverables

GIS-Based Infrastructure Management System for Optimized Response to Extreme Events of Terrestrial Transport Networks

[Title of Deliverable]
(Dx.x)

[Month Year (Vx.x)]

[Updated version Month Year (Vx.x)]

[PUBLIC/CONFIDENTIAL]

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Contributors	

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Report date	dd/mm/yyyy
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Other Authors	
Dissemination level	[Public/Confidential]

Document History

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Document Approval

Ver.	Name	Position in project	Beneficiary	Date	Visa
1.0	Dr. Belén Riveiro	Project Coordinator	UVIGO		

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SAFEWAY

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Grant Agreement No. 769255

Title of Deliverable - Appendices

WP X Title of WP

Deliverable ID	**Dx.x**
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Lead partner	
Contributors	

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Appendix 4. Template for Periodic Monitoring Reports

SAFEWAY

GIS-BASED INFRASTRUCTURE MANAGEMENT SYSTEM FOR OPTIMIZED RESPONSE TO EXTREME EVENTS OF TERRESTRIAL TRANSPORT NETWORKS

Grant Agreement No. 769255

Periodic Report

(XX/XX/XXXX- XX/XX/XXXX)

Part B

Deliverable ID	**DX.X**
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Contributors	
Author	
Period covered	From xx/xx/xxxx to xx/xx/xxxx
Period Covered	1st / 2nd / 3rd / 4th

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Other Authors	
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Example of question format

Example of question format

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Figure 1: Lore ipsum dolor

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Acknowledgements

This periodic report was carried out in the framework of the GIS-Based Infrastructure Management System for Optimized Response to Extreme Events of Terrestrial Transport Networks (SAFEWAY) project, which has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 769255.

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Appendix 5. Template for Meeting Agendas

SAFEWAY

GIS-Based Infrastructure Management System for Optimized Response to Extreme Events of Terrestrial Transport Networks

Grant Agreement No. 769255

Type of meeting	
Meeting place	
VC link	

Date

Agenda Item	Remark	Time
Welcome	Reception, introduction and agenda	xx:xx - xx:xx
1.	Agenda item 1 title	xx:xx - xx:xx
2.	Agenda item 2 title	xx:xx - xx:xx
A 2.1	Action 1 under agenda item 2	
3.	Agenda item 3 title	xx:xx - xx:xx
4. AOB	Any Other Business (AOB)	xx:xx - xx:xx
Wrap-up	End of meeting	xx:xx

Appendix 6. Template Meeting Minutes

Project	**SAFEWAY (Grant Agreement No 769255)**	
Type of meeting		
Date & Place	**Recording available:**	
Estimated duration		
Partners present		
	Attending remotely	
Apologies		
Documents	•	

Discussion, decisions, assignments

		Action
1	**Welcome and Introduction**	
1.1 1.2	• •	
2	**Agenda item 1**	
2.1 2.2	• •	
4	**Any Other Business (AOB)**	
4.1 4.2	• •	
5	**Date of next meeting**	
5.1	•	

Document information

Meeting place	
Meeting date	
Version	Vx.x
Author	
Type of meeting	

Document history

Version	Date	Modification	Authors
0.1			
1.0			

Document approval

Ver.	Name	Position in project	Beneficiary	Date	Visa
1.0	Dr. Belén Riveiro	Project Coordinator	UVIGO		BR

Appendix 7. Template for PowerPoint Presentations

SAFEWAY

Kick-off Meeting: Session xxxxx

TITLE MEETING

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Item

Section title

Item

Section title

Section title


SAFEWAY

SAFEWAY

Kick-off Meeting: Session xxxxx

TITLE MEETING

Appendix 8. Review Report Template

Peer-review Report

Project	**SAFEWAY (Grant Agreement No 769255)**
Document Title	
Document No.	
Reviewer name	
Review date	
Submission date	

Reviewer's comments

Peer-review Checklist

Yes	No	General aspects
☐	☐	Is information is organised in a logical manner?
☐	☐	Does the Executive summary provide an accurate overview of the report?
☐	☐	Is the Executive summary be disclosed free of confidential information?
☐	☐	Is the Executive summary concise and has a clear language?
☐	☐	Does the deliverable conforms the specifications from Annex I of the GA?
Yes	**No**	**Body of report**
☐	☐	Does the introduction sets the background and context of the report?
☐	☐	Does the report follows a clear and concise structure?
☐	☐	Are findings adequately and accurately described?
☐	☐	Are related documents well identified?
☐	☐	Are results clearly related to original propositions, hypotheses, research questions, and data analysis?
☐	☐	Do tables provide sufficient and accurate data to allow the reader to reach independent conclusions?
☐	☐	Are figures and appendixes used effectively?
Yes	**No**	**Conclusions**
☐	☐	Are the most important components and contributions of the study highlighted?
☐	☐	Are the Conclusions supported by the results of the study?
☐	☐	Would a reader looking only at the Introduction and Conclusions understand the contribution and significance of the report?
Yes	**No**	**Presentation and**
☐	☐	Is the document well referenced and references are well used?
☐	☐	Does the document length adequately?
☐	☐	Has been the standard template adequately followed?
☐	☐	Has been the guidelines form the QAP (D1.1) followed?
☐	☐	Is the English, style and fluency of the text good?

Document information

Reviewer name	
Review date	
Submission date	
Document Ver. No.	Vx.x
Document Title	
Document No.	
Document WP	

Document history

Version	Date	Modification	Authors
0.1			
1.0			

Appendix 9. Risk Log Template

Risk No.	Description	Date identified	Risk owner(s)	Provability	Severity	Impact	Mitigation measures	Comments	Status
<…>	<…>	<dd/mm/ yyyy>	<partner(s)/ person(s)>	*<low/ medium/ high>*	*<low/ medium/ high>*	*<low/ medium/ high/ critical>*	<…>	<…>	*<active/ closed>*