D1.2 – Risk and Quality Procedures Manual

Security Assurance Framework for Networked Vehicular Technology

Abstract

SAFERtec proposes a flexible and efficient assurance framework for security and trustworthiness of Connected Vehicles and Vehicle-to-X (V2X) communications aiming at improving the cyber-physical security ecosystem of "connected vehicles" in Europe. The project will deliver innovative techniques, development methods and testing models for efficient assurance of security, safety and data privacy of ICT related Connected Vehicle and V2X systems, with increased connectivity of automotive ICT systems, consumer electronics technologies and telematics applications, services and integration with 3rd party components and applications. The cornerstone of SAFERtec is to make assurance of security, safety and privacy aspects for Connected Vehicles, measurable, visible and controllable by stakeholders and thus enhancing confidence and trust in Connected Vehicles.

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Document/Revision history

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V0.3	29/03/2017	ICCS	Risk matrix update, opportunity management entries added
V0.4	04/04/2017	ICCS	Legal issues added, Appendices 1, 2, 3
V0.5	21/04/2017	ICCS/ALL	List of internal reviewers approved by the consortium and added
V0.6	27/04/2017	ICCS	Section 4 updates, ethical issues added, Appendix 4
V0.7	01/05/2017	ICCS	Executive summary and conclusions, submitted for internal review
V0.8	8/05/2017	COMM,OPP	Internal review comments
V0.9	8/05/2017	UPRC	Proofreading and corrections
V1.0	8/05/2017	ICCS	Revised, final version ready

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Acronyms and abbreviations

Abbreviation	Description
DoA	Description of the Action
GA	General Assembly
PC	Project Coordinator
PO	Project Officer
QRM	Quality and Risk Manager
SME	Small and Medium-sized Enterprise
TIM	Technical and Innovation Manager
TRL	Technology Readiness Level
WP	Work Package

Table 1: List of Abbreviations

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Executive Summary

This deliverable, entitled “Risk and Quality Management Plan”, specifies the procedures to be applied by the SAFERtec partners and governing bodies in order to guarantee the high quality of project results and the easy monitoring of the project progress.

The first part of the document includes the identification of risks (*i.e.*, contractual, financial, technical, communication etc) that can become relevant in the project’s lifetime accompanied by the corresponding mitigation plans. The way that the consortium will identify, assess and exploit emerging opportunities for the benefit of the SAFERtec impact, is also discussed.

The second part of the document discusses SAFERtec’s managerial bodies formed to facilitate the efficient project coordination and decision-making. All processes for the planning, progress-monitoring and reporting the project tasks are presented in-detail.

The final part of this deliverable is dedicated to the way that the SAFERtec consortium addresses legal and ethical concerns as well as the protection of data that will be involved in the research activities.

Complementary to the specified quality processes, a number of templates (*i.e.*, a common layout) corresponding to a variety of documents foreseen to be used in the context of the SAFERtec project, have been prepared. They cover documents both for internal communication (*e.g.*, template for agenda and meeting minutes, quarterly financial report) and interface with the research community (*e.g.*, template for presentation slides) as well as the official documentation towards the EC (*e.g.*, deliverables template). The aforementioned templates are presented in the Appendices of this document.

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1. Introduction

This deliverable specifies the procedures to be applied by the SAFERtec partners and the project governing bodies, in order to guarantee the high quality of project results and the easy monitoring of the project process.

Quality planning is an integral part of the management planning. Therefore, the quality procedures have been determined for all identified project tasks and work flows, in accordance to the requirements of the ISO 9000 series of standards, so as to ultimately guarantee the high quality of project results and the proper monitoring of project process.

Complementary to the specification of discrete management entities and work processes, a number of templates which correspond to every document (such as an official deliverable) that is foreseen to be used for the SAFERtec project needs, have been prepared.

1.1 Purpose of the Document

The document seeks to detail a risk and a quality management plan that will be employed by the consortium to support the seamless progress of SAFERtec activities.

1.2 Intended readership

Besides the project reviewers, this deliverable is addressed to any interested reader (*i.e.*, PU dissemination level).

1.3 Inputs from other projects

No input from other projects was considered during the compilation of this deliverable.

1.4 Relationship with other SAFERtec deliverables

There is no direct dependency of the content included in this document with other SAFERtec deliverables. However, the managerial structures, processes and templates presented herein will strongly determine the project's achievements that will appear in the rest of the SAFERtec deliverables.

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2. Risk management plan

This section details the way that the SAFERtec consortium identifies, evaluates and mitigates any potential risk that can affect (negatively or positively) the progress of the project as well as the quality of the SAFERtec achievements.

2.1 Risks within the SAFERtec project

The SAFERtec consortium considers risks as uncertain events or conditions that, upon occurrence, can produce negative (threats) or positive impact (opportunities) on at least one project objective (*e.g.*, cost, schedule, scope and exploitation). The SAFERtec risk management process seeks to minimise the probability and/or impact for negative risks and maximise the probability and/or impact for positive risks. As expected, the need for a detailed mitigation plan involves the events that cause negative impact on the project; on the contrary, the opportunities that are welcome events for the project are treated with respect to a number of high-level guidelines trying to maximize the benefit for the project (see Section 3).

Risk management (risk identification, analysis and classification, monitoring, definition of mitigation actions and reporting) will be performed as part of the project management (WP1) and will be covered in project meetings. The identified risks and mitigation plans will be also part of the regular project reports.

2.2 SAFERtec risk matrix (for threats)

In the following table we have identified a number of risks and highlighted a mitigation plan for each of them. In the two rightmost columns we have approximately assessed their probability of occurrence (using three levels *i.e.*, low, moderate, high) and estimated their impact (using a 1-10 scale). In the last column the respective WPs has been listed.

Risk	**Mitigation plan**	**Estimated probability** (3 levels)	**Estimated Impact** (1-10 scale)	**WP**
A partner drops out of the project due to internal financial problems or other specific reason	A two stages procedure will be followed by the SAFERtec General Assembly: a) check inside the consortium if a partner is able to take over the task(s) or then b) a new partner which has the needed competence is invited to join the	Low	8	WP1

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	consortium; in both cases the needed resources will be secured by the budget of the withdrawing partner.			
Delays in the SAFERtec working and development process	(a) Intervene promptly upon the identification of delays and assess the need for additional human resources or consultancy support (b) Promote the early and quick spotting of delays by defining and planning the SAFERtec development phases and monitoring the progress according to the management plan	Moderate	6	WP1
SAFERtec not meeting the requirements of stakeholders	(a)A workshop for respective stakeholders is planned in M6 so as to capture and assess the stakeholder requirements at the early stages of the project (b) An advisory committee of external cooperators will be set-up which will provide feedback how SAFERtec can best serve the needs of the stakeholders	Moderate	5	WP1, WP2
Difficulty in the definition of an overall system vulnerability score taking into account dependability of the various different factors and subsystems.	Further decomposition of the system and independent assessment of each component. Use of multiple techniques to extract composite metrics that accurately correspond to real-world operation conditions.	Moderate	7	WP2, WP3
Inability to directly translate radio/network KPIs to safety-security related metrics in the application layer.	To accurately quantify the effect of lower-layer parameters in the application performance, simulation tools will be used over multiple functional scenarios	Low	7	WP3
Inability to validate the threats in a real solution due to the complexity of the attacks	Identify the most critical threats to help determine which threats can be finally recreated in an accurate manner. Employ tools for generating complex (i.e, combined) attacks.	High	8	WP2, WP3
Use of the framework to quantify the level of assurance is not possible on module level at the V2I middleware, due to varying implementations schemes at each vendor.	Approach several stakeholder groups to identify “trends” if the level of difference is not acceptable. Identifying “trends” at providers will enable the project to offer different techniques (means) to apply the framework for each solution, creating different approaches which shall cover the majority of the solutions.	Moderate	7	WP3, WP4
The Assurance Framework Toolkit (AFT) is initially fed with limited information as the involved partners will be able to offer a certain set of data	AFT will be developed in a way that allows the inclusion of new data when provided by authenticated users. The project will advertise the AFT to external OEMs and stakeholders. As the framework will gain acceptance, they will be engaged to populate AFT entering their own data.	High	8	WP6
Unable to identify or reach right representatives in the standardization bodies in line with the standardization plan. (It is challenging to	Having identified the main standardization authorities, the project partners will get involved in contacting colleagues and professional networking to multiply the possible entry points and elevate the chances to get to the right persons and working	Low	8	WP7

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promote and motivate existing working groups or create new groups to work on a specific subject.)	groups.			
Convince both users and official bodies of the framework's efficiency.	Ask for the presence of representatives of official bodies and external partners in the testing sessions.	Moderate	7	WP7

Table 2: The (current version of the) SAFERtec risk matrix

The table presents the current view of the involved risks identified by the partners (*i.e.*, with respect to the progress made in the kick-off meeting and the sequence of SAFERtec teleconferences). It is important to note that the table will be regularly updated within each of the project's quarters (subject to the progress made).

3. Opportunity management

This section details the way that the SAFERtec consortium identifies, evaluates and seeks to exploit events that generate positive impact (*i.e.*, opportunities) on at least one project objective (*e.g.*, cost, schedule, scope, impact and/or exploitation).

3.1 Dealing with emerging opportunities

Opportunities are events that can benefit both the project as a whole but also the participating partners individually. To efficiently exploit any encountered opportunity and maximize its benefit a set of agreed steps will be followed. Typically, proposals are addressed to the consortium or individual partners. In other cases, a partner may be in a position to identify a potential opportunity related to an assigned task or a SAFERtec activity. The agreed procedure is as follows:

- Any proposal or identified event of potentially positive impact, are directed to the coordinator who is responsible to announce it to the entire consortium and drive all relevant discussions.
- Decisions are taken on the basis of consensus.

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- Any opportunity is to be evaluated with respect to potential benefits for the project's progress, the project's visibility and/or future impact. As described in the SAFERtec's DoA, the market/technology monitoring role of the Technical and Innovation Manager (see section 4) is central to allow the consortium to respond to (an external or internal) opportunity.
- If objections to a certain proposal (*i.e.*, opportunity) are raised by a partner presenting a clear and reasonable justification, the proposal will be rejected. Justifications may include (but are not limited to) access to sensitive information, conflict of interest, extra effort, competitiveness reasons etc
- In case a considered opportunity is expected to affect the SAFERtec work-plan the PO should be informed by the coordinator. Final decisions are then reached with respect to the suggestions of the PO.

As a final note, the consortium is committed to examine in-depth every opportunity and systematically work (even beyond contractual obligations) to take advantage of events that will benefit the SAFERtec achievements.

4. Quality management plan

The plan that is detailed in this section has been designed to support the project's progress and outcomes by adopting certain managerial structures, assigning discrete roles to key-persons as well as applying a set of carefully-designed processes to assure that the SAFERtec outcomes meet the highest quality standards.

4.1 SAFERtec management structure

The SAFERtec management structure has been already described in the DoA, as part of the SAFERtec Grant Agreement. In this document we highlight the way that certain individual roles as well as committees relate to the quality of the SAFERtec outcomes.

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Figure 1 depicts the interconnections of the SAFERtec committees, the individuals with key-role, the PO and the evaluation experts as set by the EC. In what follows, the SAFERtec committees and individual roles are explained in the context of project quality.

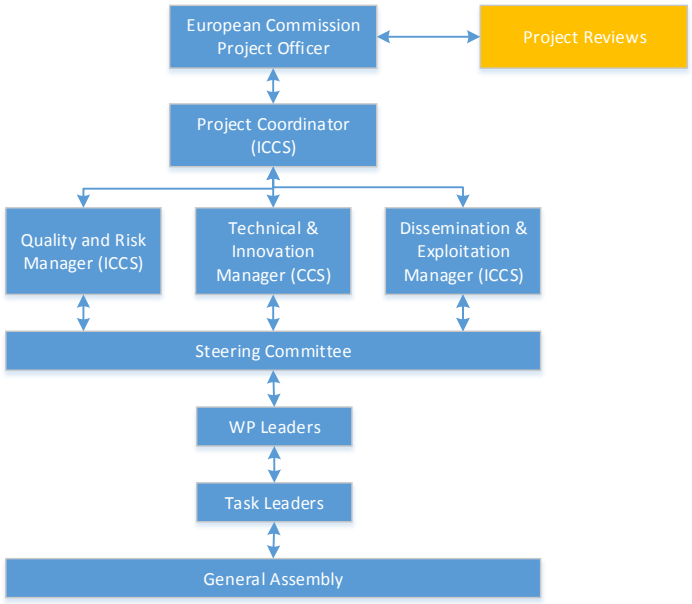

Figure 1: SAFERtec management entities

The General Assembly (GA) which is the superior governing body of SAFERtec reviews the project progress with respect to its goals. Then, given the review outcome GA decides on needed actions and therefore, contributes to an improved quality SAFERTec outcome. In case of major deviations from the plan, GA will take final decisions on policy and contractual issues as well as emerging conflicts. GA is comprised of one delegate per partner having one vote; decisions are made by consensus whenever possible, otherwise by majority voting.

The Steering Committee (SC) is responsible for the facilitation of the project management and will supervise the progress of the project guaranteeing its consistency and adequate allocation of the available resources. SC does not hold decision-making tasks but is in charge of implementing the general GA decisions. The two SC meetings per year add yet another opportunity to assist the progress and optimise the project outcomes.

The Project Coordinator (PC) and the Technical and Innovation Manager (TIM) are responsible for the overall-coordination activities under contract with the European Commission (EC) and the assurance that the project meets its technological objectives, respectively. Both roles include the monitoring task of the project and are central for its smooth progress, effective collaboration and innovative outcome.

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Further to the point of close monitoring and assurance of high-quality innovative outcome, the project has established the role of Quality and Risk Manager (QRM). QRM is responsible for the detailed *quality procedures* described in this document.

The application of quality criteria for each project deliverable that guarantee its accordance with the grant agreement is a critical QMR task. Each deliverable is to be submitted (by its creators) to the QMR, who will check the document and forward it to two appointed reviewers (see section Supporting processes) of the consortium for internal review. If there is no consensus by the reviewers on the high quality of the deliverable, a corrective action will be proposed by the QMR.

The same manager is also involved in the creation and regular update of the risk matrix and corresponding mitigation plans, presented in Section 2. All WP leaders are responsible for providing information for identified risks and contingency plans in their WPs prior to these events or whenever asked by the QMR. The latter is responsible to inform the Coordinator for risks pertaining to management/strategic and/or technical issues. In case a risk with high probability and impact on the project outcome arises, an extraordinary GA meeting can be asked by QMR.

In the following subsections, a number of structured processes (*i.e.*, sequence of steps) defined by the QMR to ease the planning, monitoring and reporting of the project's progress are briefly discussed.

4.2 Process for initiate / planning of WPs and Tasks

1. The Coordinator requests WP leaders to initiate Tasks in their WP and to coordinate Task leaders work.
2. WP leaders ask Task leaders to initiate Tasks and coordinate Task leaders work.
3. WP leaders come back with working document/detailed Task plans of the work to be performed, including allocation of responsibilities among partners involved in the WP.

4.3 Process for WPs and Tasks performance reporting

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1. Each partner responsible for performing part of a Task prepares an internal report with the results obtained as soon as the Task finishes. This internal report is uploaded on the Redmine (presented in the SAFERtec Deliverable 1.1) and a relevant e-mail is sent to WP partners.
2. WP partners send comments, if any, on this report within 5 days. The author revises the report and uploads the final one on the Redmine and sends a relevant e-mail to the WP leader with copy to all project partners.
3. If one or more Tasks result into a deliverable, the deliverable main author synthesises the Tasks internal reports into the expected deliverable.
4. The deliverable main author submits the deliverable for peer review.
5. As soon as all deliverables in a WP, which have been submitted to the European Commission through the Coordinator (after having been peer reviewed), have been accepted by the European Commission, the WP is terminated.

4.4 Process for meetings organisation

The process for meetings organisation is:

1. The physical or virtual meetings of the GA and the SC, are convened and organised by the Coordinator. The physical or virtual meetings of one WP/Task are convened and organised by the WP/Task leader.
2. Fourteen calendar days before each scheduled physical or virtual meeting, the Organiser invites the participants, sending also an agenda draft (see Appendix C), including the items to be discussed and the decisions proposed to be made. The first discussion item of the agenda must be the actions status.
3. Recipients should send comments on the agenda within 5 working days.
4. The Organiser updates the agenda and submits the final version at least 5 working days before the meeting. Partner presentations should be prepared using the template in Appendix B
5. During the meeting, the Organiser is responsible for keeping minutes of the meeting. Minutes shall include decisions and actions list.
6. The Organiser uploads the draft meeting minutes (similar to Appendix C), on the Redmine and informs the participants within 15 calendar days after the end of the meeting.
7. Recipients should send comments on the minutes within 10 calendar days.
8. The Organiser uploads the final accepted meeting minutes in the Redmine and informs the whole Consortium within 2 working days.

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4.5 Process for internal quarterly reports and monitoring

All participants are requested to send a brief technical and financial report for the work performed and the resources spent per each active WP to the Coordinator and the relevant WP leader, every 3 months.

The WP leaders may (if needed) produce warning milestones for the Coordinator and the particular partner(s) involved, if for instance there is an overspending in resources which does not correspond to concrete work output. Also, when other key issues are identified, the reports will be further evaluated and may raise warnings by the WP leader. For any issues, problems or obstacles that may occur on the reporting of the WP activities, WP leaders are obliged to always inform the Coordinator.

Technical progress reports

The SAFERtec coordination team renders the regular reports as highly significant for the successful progress and completion of the project. Thus, the decision is to apply a quarterly-reporting process that will track all issues and clearly ease the project reporting/monitoring to the EC officers. The procedure to be followed for those reports within the SAFERtec project is the following:

1. The Coordinator initiates the reporting process by sending out a request for the quarter technical report and time plan to all partners.
2. Partners create one report, with the technical work they performed per each active WP and they send it to the relevant WP leaders.
3. WP leaders review the work presented per partner and compose one integrated report per WP with the feedback of each participating partner included.
4. The integrated report per WP is sent by the WP leader to Coordinator.
5. The Coordinator gathers all reports, integrates them and prepares the consolidated report. It uploads it in the Redmine and informs all partners.

Financial reports

All partners report estimations of person months spent for each reporting period. These will be estimations as the exact figures will be provided in the official periodic reports.

The procedure followed for the quarterly financial reports within the SAFERtec project is the following:

1. The Coordinator initiates the reporting process by sending out a request for the quarter financial report and time plan to all partners.

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2. Partners fill in the fields of the tables of an excel sheet (see Appendix D) for the reporting period, referring in specific to the person months that have been spent per WP, and they upload it on the Redmine, informing the relevant WP leaders and the Coordinator.
3. WP leaders review the reported resources by each partner and they send their comments if they note any discrepancy between costs and work conducted to the Coordinator.
4. The Coordinator gathers all reports, integrates them and prepares the financial report. It uploads it in the Redmine and informs all partners.
5. Partners send any comments on the integrated financial report before its finalisation by the Coordinator.

4.6 Communication protocols

This section briefly presents a set of simple rules adopted by the consortium to ease the internal communications.

Large files will not be circulated as attachments to e-mails, but will be uploaded to the Redmine repository at the adequate location. Afterwards, a notification e-mail will be sent to all partners concerned, including a short description of file contents and respective Redmine links. E-mail headings will be as follows:

- "[SAFERtec][ALL] + title of message": for e-mails to the General Assembly.
- "[SAFERtec][SC] + title of message": for e-mails to the Steering Committee only.
- "[SAFERtec][WP1] + title of message": for e-mails to the WP1 only.

The consortium partners will use a variety of tools for communicating, exchange/store files and taking decision on day-to-day management issues. The tools and means to be used for internal communication are listed below:

- Virtual meetings to be organised via GoToMeeting or other web meeting tool available to each chairman convening a meeting.
- Doodle to be used for voting and taking decisions.
- SAFERtec Redmine to be used as document repository.

The main software standards have been defined as follows:

- Operating System: Windows;
- MS Word: textual deliverable for working documents;
- pdf for final deliverables to be delivered and distributed externally
- MS Excel: textual deliverable support, cost statement, etc.;
- MS PowerPoint: transparencies, slides, posters, etc.;
- Alternative systems fully compatible with the above mentioned.

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4.7 Decision process and conflicts resolution

Decisions will be taken by the responsible members and bodies *i.e.*, the coordinator and the GS (see section 4) based on the specified work to be carried-out, as stated in the Contract, the Consortium agreement and the DoA.

In the course of the project the consortium is expected that the need to agree on technical, scientific, commercial ideas and specifications will appear. To minimize overheads the aim is to reach agreement first by informal contact, followed by official confirmation via electronic mail, letter or agreed written minutes. For important issues, the agreement may take the form of a short report that needs to be signed by those responsible for decision-making. Non-technical factors such as resource allocation and contractual terms will also need to be agreed and documented in writing. Technical issues/conflicts within given contractual commitments that do not involve a change of contract, a change of budget and/ or a change of resources/ overall focus should be discussed and solved on the WP-level.

In case there is a dispute between two or more SAFERtec partners or a decision being taken (in the context of a task/WP or management issue) is unacceptable for certain partners, the resolution of the conflict will be escalated according to the following path:

1. First, the involved partners will inform the WP leader for the conflict occurred.
2. The WP leader will organize the WP team meeting and the issue will be discussed.
3. In case of agreement the WP Leader will inform the Coordination team. Otherwise the issue will be escalated to the Coordinator.
4. The Coordinator will meet with the relevant parties in order to discuss the conflict. If no agreement occurs the issue will go to the SAFERtec GA that has the authority for the final decision. The final decision must be accepted by all parties.

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5. Supporting processes

5.1 SAFERtec internal review process

Each official project deliverable is reviewed regarding content and layout by two experts, which will not be involved in the preparation of this deliverable. The reviewers per deliverable are shown in the Table of the following subsection. The reviewers must evaluate the deliverable with respect to the following issues and conclude whether it is acceptable or not.

General comments:

- Deliverable contents thoroughness;
- Correspondence to project objectives as in the DoA;
- Correspondence to programme objectives.

Specific comments:

- Relevance;
- Response to user needs;
- Methodological soundness;
- Quality of achievements;
- Quality of presentation of achievements;
- Deliverable layout (format, language, spelling, etc.).

The final rating of the Deliverable draft will be marked as:

- Fully accepted
- Accepted with reservation
- Rejected unless modified properly
- Rejected

The relevant comments can be included within the same document or in a separate deliverable review report (with respect to the reviewers' convenience).

In order to ensure the highest possible quality, the process to be followed along the preparation, compilation and internal review of a SAFERtec deliverable is described in the following steps:

1. One month before the official delivery date of a Deliverable, QMR confirms the actual delivery date with the deliverable responsible partner / Task Leader (deliverable author) and informs via email the assigned reviewers about the date.
4. The deliverable responsible partner / Task Leader (deliverable author) prepares the final draft of the deliverable (using the template - see Appendix A), uploads it on the Redmine and informs the QRM. This should be not later than 10 working days before the deadline set in the DoA.
5. The QRM forwards immediately the deliverable to the appointed reviewers.

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6. The reviewers within five (5) working days do study and revise the deliverable and prepare their comments (as described earlier) which they send to the QRM.
7. The QRM upon receiving the internal reviews makes a synthesis of them and within 2 working days informs (in parallel) the Coordinator, WP leader and the Deliverable authors on the required actions/improvements.
8. The Deliverable author revises the deliverable within 3 working days as required and send the final, revised one to the Coordinator and the QRM. The author explains the main actions taken and revisions made in the internal review report.
9. The Coordinator registers the final deliverable, properly names as version 1.0 (*i.e.*, final one) and uploads it to the Redmine under the folder named "*deliverable_name*_Final_Version". Then, the Coordinator sends an e-mail to all partners, announcing the upload of the final deliverable.
10. The Coordinator submits the final deliverable to the European Commission.

5.2 List of deliverables and corresponding internal reviewers

The table contains all information about the SAFERtec deliverables including the assignment of internal reviewers (in the rightmost column).

Deliverable Number	Deliverable Name	WP	Lead Participant	Type	Diss. Level	Delivery Date	Internal Reviewers
D1.1	Internal Website and Collaborative Tool	1	ICCS	R	PU	2	UPRC, TOM
D1.2	Risk and Quality Procedures Manual	1	ICCS	R	PU	3	COMM, OPP
D7.1	SAFERtec Dissemination and Exploitation Plan	7	ICCS	R	PU	5	CRF, SWA
D2.1	Connected Vehicle Use Cases and High Level Requirements	2	ICCS	R	PU	6	AUT, CCS
D7.2	SAFERtec Website	7	ICCS	DEC	PU	6	TOM, CRF
D7.3	Roadmap Automotive Assurance Frameworks - Beyond V2I	1	ICCS	R	PU	7	AUT, COMM
D4.1	Specifications of Connected Vehicle System	4	CRF	R	PU	9	TOM, CCS
D2.2	Attack Modelling	2	CCS	R	PU	10	UPRC, OPP
D2.3	Vulnerability Analysis	2	CCS	R	PU	10	UPRC, OPP
D3.1	Analysis of Existing Assurance Methodologies and Tools	3	OPP	R	PU	12	UPRC, SWA
D7.4	SAFERtec Standardization Plan	7	OPP	R	PU	12	CCS, AUT
D2.4	Security Controls and Protection Profiles	2	AUT	R	PU	14	COMM, OPP
D4.2	Modules and Applications of Connected Vehicle	4	SWA	R	CO	20	CRF, TOM
D4.3	Integration of Connected Vehicle System	4	CRF	R	CO	22	AUT, ICCS
D3.2	Quantification of Trustworthiness Attributes and Definition of Assurance Levels of Connected Vehicle	3	UPRC	R	PU	23	OPP, CCS
D5.1	Comparative Analysis of Assurance Frameworks	5	OPP	R	PU	27	UPRC, CCS
D6.1	Reference Architecture of the Assurance Framework Toolkit	6	TOM	R	PU	28	ICCS, SWA
D5.2	Simulation Based Evaluation of SAFERtec Assurance Framework	5	OPP	R	PU	30	SWA, TOM
D5.3	Extended Modules of the Connected Vehicle System	5	COMM	R	PU	34	AUT, CRF
D6.2	Implementation of Assurance Framework Toolkit	6	ICCS	R	PU	34	SWA, COMM
D3.3	Results of SAFERtec Assurance Framework Testing	3	CCS	R	CO	36	UPRC, OPP
D5.4	Composite Evaluation of SAFERtec Assurance Framework	5	CCS	R	PU	36	AUT, CRF

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D6.3	Assurance Framework Toolkit Prototype	6	ICCS	DEM	PU	36	TOM, SWA
D7.5	Contribution, Extensions and/or Recommendation to Standard	9	OPP	R	PU	36	COMM, CCS

Table 3: Assignment of SAFERtec deliverables to internal reviewers

6. Legal and ethical concerns

SAFERtec relates to a number of ICT technologies of a relatively high TRL and aims at developing solutions that will be close to the security-automotive market. On top of that, certain dissemination events involve humans (as participants). Thus, legal and ethical concerns become relevant and must be addressed.

6.1 Intellectual Property Rights

The SAFERtec consortium includes partners from the private sector, in particular 4 industrial partners (*i.e.*, CCS, CRF, TOM, SWARCO) and 3 SMEs (AUT, COMM, OPP). All these partners together with the academic institutions (i.e., UPRC, ICCS) obviously have Intellectual Property Rights on their technologies, data and/or designed algorithms. It is clear that the SAFERtec consortium will protect these achievements and will have the confirmation of concerned partners before every publication that will include or refer to them.

6.2 Ethical aspects

The coordination team is responsible to overview all aspects of the SAFERtec project so that everything in the project is legal and ethical. Taking into consideration all relevant EU and National legislation it will monitor the data processing/handling during all phases of the SAFERtec project, ensuring that the provisions in this Deliverable are fully respected by all partners and in all project activities.

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6.3 Personal data protection

The SAFERtec project does not directly involve the use of personal and/or sensitive data in its technical activities such as design, testing and/or validation sessions. In that sense no action or measures are required.

On the contrary there are SAFERtec workshops planned for month 6 and 36, where the stakeholders' requirements and feedback will be collected and the project outcome will be announced, respectively. The collection of relevant data, especially regarding the workshop participants' nationality, age, gender, educational level and socioeconomic status will be guided and justified, in order to meet the goals of the project. Particular care will be taken to ensure the protection of *personal data*, not only in the data acquisition phase, but also in the data storage, protection and destruction. The EU General Data Protection Regulation [1] will be taken into account in (personal) data processing by making licit use of the collected data and guaranteeing participants' privacy. In general, actions will be taken:

- to ensure that all individuals participating in the project questionnaires are well informed of the project scope, possible tenure of personal data and that they provide signed informed consent forms prior to their participation which will be on a purely voluntary basis,
- to follow the EU and national legislation on the procedures that will be implemented for data collection, storage, protection, retention and destruction,
- to follow the EU and national legislations on the procedures that will be implemented for personal data communication. More specially, data transfer will be allowed only among SAFERtec partners and those communications containing personal data will be encrypted.

More particularly, in WP7 there are two planned events (*i.e.*, workshops) with experts and stakeholders. Potentially, the latter will be asked via questionnaires compiled by the SAFERtec consortium, to reply to key SAFERtec questions and relevant challenges as well as provide feedback to the SAFERtec achievements. In these activities, it may be necessary to collect basic personal data (*e.g.*, name, age category, profession, background, contact details). In publicly available analyses or reports describing survey results, the names or affiliations of individual respondents will not be included unless they have explicitly consented, and even then, the responses or comments made will not be attributed to individuals or organisations *i.e.*, *responses will be anonymised*. Such data will be protected in accordance with the EU's Data Protection Directive 95/46/EC2 "on the protection of individuals with regard to the processing of personal data and on the free movement of such data". No sensitive data (*e.g.*, sexual lifestyle, habits or orientation, ethnicity, political opinion, religious, political or philosophical conviction) will be collected, either directly or indirectly, or in any way retained. All personal data, or data directly related to SAFERtec interviewees will be collected only after giving users full details on the purpose of the questionnaire and SAFERtec related objectives, stressing that this will done on a voluntary basis (having obtained from them the signed informed consent form, if needed).

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Finally, it is to be noted, that no personal data of individuals/customers will be made available from (industrial) SAFERtec partners to the consortium.

7. Conclusions

This deliverable specifies the structures and procedures to be employed by the SAFERtec project in order to guarantee both the high quality of the project results and also the efficient monitoring of the research progress.

The risk management plan prescribes a continuing process that will assist the project to effectively identify and address any issue (along the three years) that could jeopardize the quality of SAFERtec achievements. In parallel, any opportunity to strengthen the impact of the achieved results on the industrial or academic security assurance research field will be exploited.

The proposed quality management plan is flexible and well-defined, thus assisting towards concrete project outputs and allowing for the robust project monitoring. The presented plan is applicable to all the activities related to the project and the compliance with the established procedures has been agreed in the consortium as mandatory for all partners.

Finally, a number of templates that has been created will offer a broad toolkit to serve the purposes of the SAFERtec research, comprehensive reporting and visibility.

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References

[1] The EU General Data Protection Regulation, http://www.eugdpr.org/ , page accessed 4/4/2017.

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Appendices

A. Template for SAFERtec deliverable

Both the deliverable at-hand and the already submitted D1.1 have used the SAFERtec template. This template has been carefully designed to include all necessary information and at the same time having it intuitively organized. All upcoming SAFERtec deliverables will be compiled using the same template.

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B. Template for SAFERtec presentation

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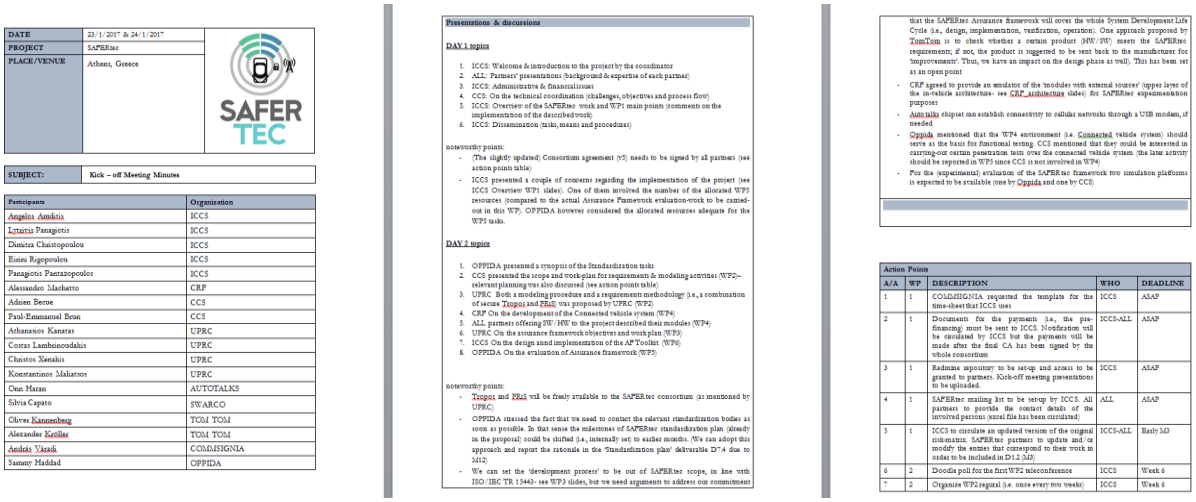
C. Template for SAFERtec meeting agenda



DATE	23/1/2017 & 24/1/2017
PROJECT	SAFERtec
PLACE/VENUE	Athens, Greece

SUBJECT:	Kick – off Meeting Minutes

Participants	Organisation
Angelos Amditis	ICCS
Lytaitis Panagiotis	ICCS
Dimitra Chaistopoulou	ICCS
Eirini Rigopoulou	ICCS
Panagiotis Pantazopoulos	ICCS
Alessandro Mascherto	CRF
Adrien Berne	CCS
Paul-Emmanuel Brun	CCS
Athanasios Kanatas	UPRC
Costas Lambrinoudakis	UPRC
Christos Xenakis	UPRC
Konstantinos Maliatsos	UPRC
Ons Haran	AUTOTALKS
Silvia Capato	SWARCO
Oliver Kannenberg	TOM TOM
Alexander Kotliar	TOM TOM
András Várady	COMMSIGNIA
Sammy Haddad	OPPIDA

Presentations & discussions

DAY 1 topics

1. ICCS: Welcome & introduction to the project by the coordinator
2. ALL: Partners' presentations (background & expertise of each partner)
3. ICCS: Administrative & financial issues
4. CCS: On the technical coordination (challenges, objectives and process flow)
5. ICCS: Overview of the SAFERtec work and WP1 main points (comments on the implementation of the described work)
6. ICCS: Dissemination (tasks, means and procedures)

noteworthy points:

- (The slightly updated) Consortium agreement (v5) needs to be signed by all partners (see action points table)
- ICCS presented a couple of concerns regarding the implementation of the project (see ICCS Overview WP1 slides). One of them involved the number of the allocated WP1 resources (compared to the actual Assurance Framework evaluation-work to be carried-out in this WP). OPPIDA however considered the allocated resources adequate for the WP5 tasks.

DAY 2 topics

1. OPPIDA presented a synopsis of the Standardization tasks
2. CCS presented the scope and work-plan for requirement & modeling activities (WP2)– relevant planning was also discussed (see action points table)
3. UPRC Both a modeling procedure and a requirements methodology (i.e., a combination of secure Tropos and FReS) was proposed by UPRC (WP2)
4. CRF On the development of the Connected vehicle system (WP4)
5. ALL partners offering SW/HW to the project described their modules (WP4)
6. UPRC On the assurance framework objectives and work plan (WP3)
7. ICCS On the design annd implementation of the AP Toolkit (WP6)
8. OPPIDA On the evaluation of Assurance framework (WP5)

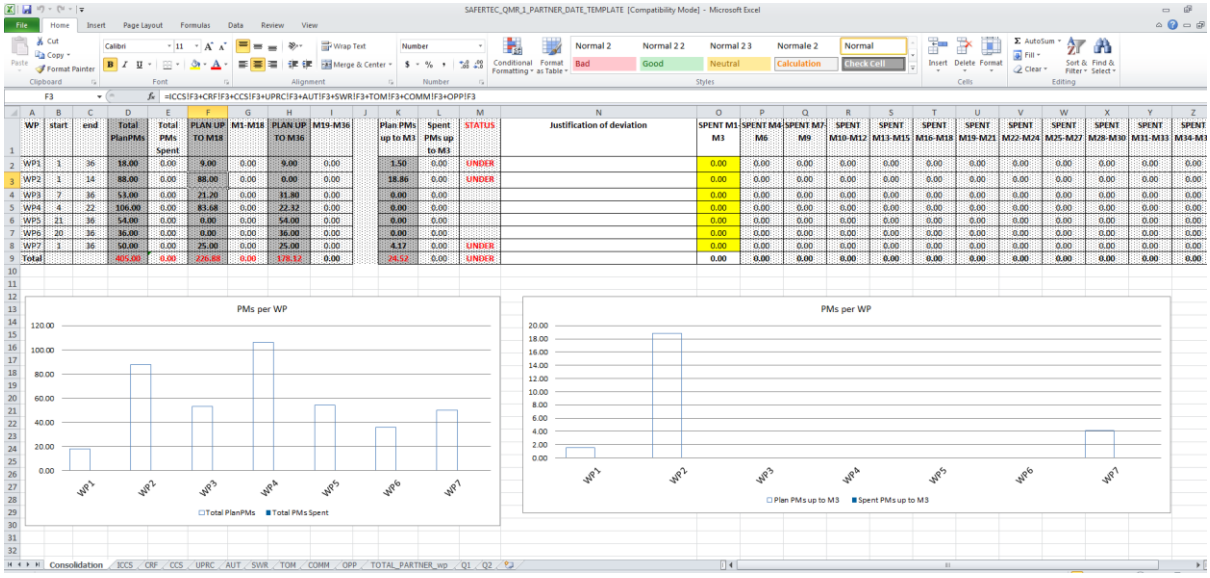
noteworthy points:

- Tropos and FReS will be freely available to the SAFERtec consortium (as mentioned by UPRC)
- OPPIDA stressed the fact that we need to contact the relevant standardization bodies as soon as possible. In that sense the milestones of SAFERtec standardization plan (already in the proposal) could be shifted (i.e., internally set) to earlier months. (We can adopt this approach and report the rationale in the 'Standardization plan' deliverable D7.4 due to M12)
- We can set the 'development process' to be out of SAFERtec scope, in line with ISO/IEC TR 15443- see WP3 slides, but we need arguments to address our commitment that the SAFERtec Assurance framework will cover the whole System Development Life Cycle (i.e., design, implementation, verification, operation). One approach proposed by TomTom is to check whether a certain product (HW/SW) meets the SAFERtec requirements; if not, the product is suggested to be sent back to the manufacturer for 'improvement'. Thus, we have an impact on the design phase as well). This has been set as an open point
- CRF agreed to provide an emulator of the 'modules with external sources' (upper layer of the in-vehicle architecture- see CRF_architecture slides) for SAFERtec experimentation purposes
- Autotalks chipset can establish connectivity to cellular networks through a USB modem, if needed
- Oppida mentioned that the WP4 environment (i.e. Connected vehicle system) should serve as the basis for functional testing. CCS mentioned that they could be interested in carrying-out certain penetration tests over the connected vehicle system (the later activity should be reported in WP3 since CCS is not involved in WP4)
- For the (experimental) evaluation of the SAFERtec framework two simulation platforms is expected to be available (one by Oppida and one by CCS)

Action Points

A/A	WP	DESCRIPTION	WHO	DEADLINE
1	1	COMMSIGNIA requested the template for the time-sheet that ICCS uses	ICCS	ASAP
2	1	Documents for the payments (i.e., the pre-financing) must be sent to ICCS. Notification will be circulated by ICCS but the payments will be made after the final CA has been signed by the whole consortium	ICCS-ALL	ASAP
3	1	Redmine repository to be setup and access to be granted to partners. Kick-off meeting presentations to be uploaded.	ICCS	ASAP
4	1	SAFERtec mailing list to be setup by ICCS. All partners to provide the contact details of the involved persons (excel file has been circulated)	ALL	ASAP
5	1	ICCS to circulate an updated version of the original risk-matrix. SAFERtec partners to update and/or modify the entries that correspond to their work in order to be included in D1.2 (M3)	ICCS-ALL	Early M3
6	2	Doodle poll for the first WP2 teleconference	ICCS	Week 6
7	2	Organize WP2 regural (i.e. once every two weeks)	ICCS	Week 6

D. Template for SAFERtec (quarterly) financial reporting



SAFERTEC_QMR_1_PARTNER_DATE_TEMPLATE [Compatibility Mode] - Microsoft Excel

=ICCS!F3+CRF!F3+CCS!F3+UPRC!F3+AUT!F3+SWR!F3+TOM!F3+COMM!F3+OPP!F3

WP	start	end	Total PlanPMs	Total PMs Spent	PLAN UP TO M18	M1-M18	PLAN UP TO M36	M19-M36	Plan PMs up to M3	Spent PMs up to M3	STATUS	Justification of deviation	SPENT M1-M3	SPENT M4-M6	SPENT M7-M9	SPENT M10-M12	SPENT M13-M15	SPENT M16-M18	SPENT M19-M21	SPENT M22-M24	SPENT M25-M27	SPENT M28-M30	SPENT M31-M33	SPENT M34-M
WP1	1	36	18.00	0.00	9.00	0.00	9.00	0.00	1.50	0.00	UNDER		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
WP2	1	14	88.00	0.00	88.00	0.00	0.00	0.00	18.86	0.00	UNDER		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
WP3	7	36	53.00	0.00	21.20	0.00	31.80	0.00	0.00	0.00			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
WP4	4	22	106.00	0.00	83.68	0.00	22.32	0.00	0.00	0.00			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
WP5	21	36	54.00	0.00	0.00	0.00	54.00	0.00	0.00	0.00			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
WP6	20	36	36.00	0.00	0.00	0.00	36.00	0.00	0.00	0.00			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
WP7	1	36	50.00	0.00	25.00	0.00	25.00	0.00	4.17	0.00	UNDER		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total			405.00	0.00	226.88	0.00	178.12	0.00	24.52	0.00	UNDER		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Consolidation | ICCS | CRF | CCS | UPRC | AUT | SWR | TOM | COMM | OPP | TOTAL_PARTNER_wp | Q1 | Q2

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