



D9.1

Project Quality Plan

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Abstract:	This Project Quality Plan constitutes a set of project templates and explanations on the project management process, review process, quality checks and meeting organisation, which are communicated to all partners.
Keywords:	quality assurance, project management, review process, meeting organisation



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Executive Summary

This Project Quality Plan shows how quality aspects are taken into account in a variety of processes and activities within the car2TERA project. The interrelated quality processes – planning, assurance and control – have impact on the project work from its start to its end.

- Quality Planning refers to quality policies like meetings, deliverable or publication policies, the definition of responsibilities as well as the creation of a corporate visual identity including a project logo, project-like designed templates etc. In order to communicate adequately within the project as well as to project external persons, several tools, such as project policies including meetings, deliverables and the publication process of scientific papers, are established and explained in this document.
- Quality Assurance involves the establishment of Interim Management Reports, clear responsibilities and regular, clearly guided telephone conferences. A well-defined internal review process further supports the Quality Assurance of deliverables.
- Quality Control focuses on feedback through internal processes (internal review process) as well as external advices (Advisory Board). It further monitors how feedback is implemented and assures the project outcomes through proactive risk management.

The plan is effective throughout the lifetime of the project, but is open to revision if necessary. Responsibilities for quality planning, assurance and control are shared between all partners, which allow various views on quality issues in order to reach the optimal outcome.

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Chapter 1 Introduction

The Project Quality Plan is an integral part of the car2TERA project management. Its purpose is to describe how quality will be managed throughout the lifecycle of the project. Quality must always be planned in a project in order to prevent unnecessary rework, as well as waste of cost and time. Quality should also be considered from both, an outcome and process perspective. The processes and activities that produce deliverables need to fulfil certain quality levels in order to reach the expected high-quality outcome. To address all quality requirements and quality assurance mechanisms in the car2TERA project, the 'Project Quality Plan' at hand has been developed by the project team. This plan acts as the quality bible for the project and all partners will adhere to the project quality plan.

Each project has its characteristics in terms of partners, WPs etc. and therefore requires a tailor-made quality plan, clear responsibilities and contact persons. This and how to get on board of the car2TERA project is described within Chapter 2.

The overall **Quality Management Strategy** of car2TERA is addressed in Chapter 3. It is divided in three key activities:

- **Quality Planning**

Quality Planning comprises quality policies and procedures relevant to the project for both project deliverables and project processes, defines who is responsible for what, and documents compliance with EC regulations. A corporate visual identity represents the project internally, in partners' organisations as well as externally. In order to communicate adequately within the project as well as to project external persons, several tools are established and introduced in this chapter. Clearly defined project policies in terms of policies for deliverable naming, for meetings, for scientific publications or the procedure of internal deliverable review etc. give security to the project partners, as they have clear guidance how to deal with upcoming issues.

- **Quality Assurance**

Quality Assurance creates and monitors project processes, which need to be performed effectively to reach the targeted outcome. This involves the establishment of Interim Management Reports, clear responsibilities and regular, clearly guided telephone conferences (telcos) and face-2-face meetings. These activities within car2TERA are summarized in section 3.2.

- **Quality Control**

Quality Control will be actively performed by all partners, e.g. by acting as an internal reviewer of deliverables. A clear internal review process has been defined before Deliverable Submission to provide feedback to the editor. A proactive risk management has already been mentioned within the DoA. The risk management has been established as planned in order to guarantee the project quality and avoid delays or failures. Feedback on the project progress and outcomes by the Advisory Board will support the quality controlling and guide the project into the right direction. This is described in section 3.3.

The target of the following chapters is to describe how all the mentioned pieces of the puzzle fit and stick together.

Chapter 2 Getting on Board

This chapter gives an introduction to the project characteristics in order to allow new members to get easier on board and find important information at a glance. Therefore, this chapter will introduce shortly the main elements of the car2TERA project in terms of participants, WPs and responsibilities.

2.1 Project Structure

car2TERA is a research project with 10 Work Packages (WPs) and 8 partners, coordinated by TECHNIKON. Kungliga Tekniska Hoegskolan (KTH) acts as the Scientific Leader and will be responsible for the scientific coordination of the project. Furthermore, Infineon Technologies Austria AG (IFAT) acts as the Impact Leader of car2TERA and is responsible for ensuring that the project's impact objectives are met with respect to the selected application fields and supervises the overall technical content in this regard.

- 1) **TECHNIKON** - TECHNIKON Forschungs- und Planungsgesellschaft mbH (AT)
- 2) **KTH** – Kungliga Tekniska Hoegskolan (SE)
- 3) **IFAT** – Infineon Technologies Austria AG (AT)
- 4) **CHALMERS** – Chalmers Tekniska Hoegskola AB (SE)
- 5) **ENT** – ENT Spolka Akcyjna (PL)
- 6) **ERICSSON** – Ericsson Telecomunicazioni (IT)
- 7) **ANTERAL** – Anteral SL (ES)
- 8) **Veoneer** – Veoneer Sweden AB (SE)

The interaction, responsibilities and decision-making power is clearly divided between the established project bodies as shown in Figure: 1. The governing culture of the car2TERA project is based on democracy, co-determination and clear leadership.

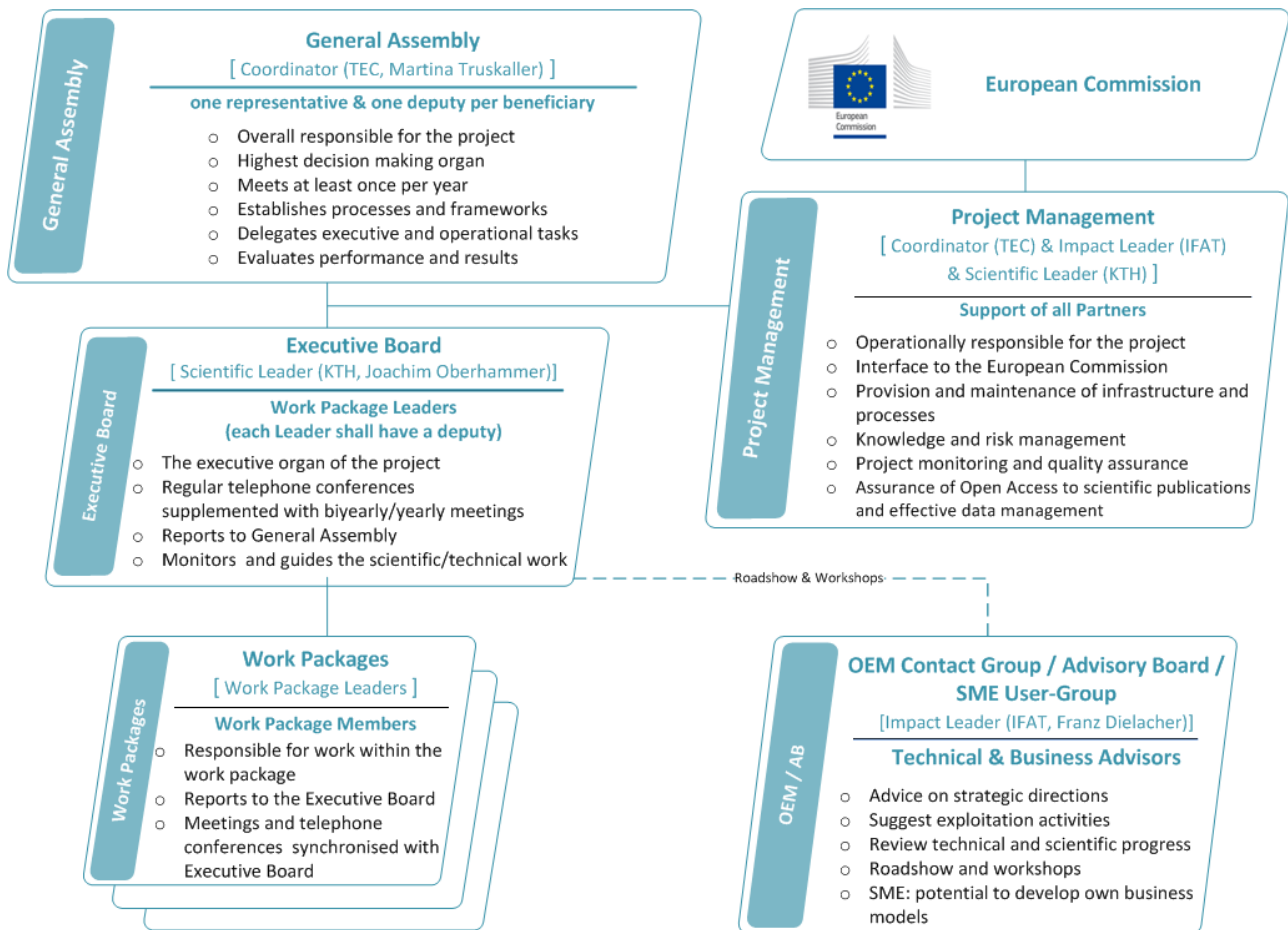


Figure: 1 car2TERA project bodies

The defined car2TERA project bodies, the decision-making process as well as the responsibilities were bindingly described in the Consortium Agreement as well as in the Grant Agreement.

The **General Assembly** (GA) is the assembly of all partners. It was established within the proposal and therefore included into the Consortium Agreement (see CA 6.3.1):

“It has the power of decision, deals with questions of strategic importance and represents the partners’ interests. It decides on major changes to the project’s research direction in cooperation with the Commission and is responsible for implementing any changes to the Grant Agreement upon request from the Commission. It also decides on major changes to the project’s research direction in cooperation with the Commission and is responsible for implementing any changes to the Grant Agreement upon request from the Commission.”

The following representatives and deputies have been defined to present their organization within the **car2TERA General Assembly**:

- **TECHNIKON** (Martina TRUSKALLER, deputy: Klaus-Michael KOCH)
- **KTH** (Joachim OBERHAMMER, deputy: Umer SHAH)
- **IFAT** (Franz DIELACHER, deputy: Yannis PAPANANOS)
- **CHALMERS** (Herbert ZIRATH, deputy: Zhongxia HE)
- **ENT** (Wlodzimierz STRUPINSKI, deputy: Iwona PASTERNAK)
- **ERICSSON** (Jonas HANSRYD, deputy: Yinggang LI)
- **ANTERAL** (Itziar MAESTROJUAN, deputy: Victor TORRES)

- **Veoneer** (Tobias ADERUM, deputy: Olof ERIKSSON)

The **Executive Board** (EB) is the assembly of all work package leaders. It is chaired by the scientific leader, Joachim Oberhammer from KTH.

According to the Consortium Agreement (see CA 6.3.2) *“the **Executive Board** is responsible for guiding and monitoring the scientific work. The Work Package leaders are the members of the EB and responsible for the coordination of the work carried out as well as for the achievement of the objectives within the WP. The WP leaders report to the Executive Board and are also in charge of the assigned deliverables and of providing the required reporting to ensure efficient overall project monitoring and coordination.”*

The following representatives and deputies have been defined for the **car2TERA Executive Board**:

- WP1: **IFAT** (Franz DIELACHER, deputy: Yannis PAPANANOS)
- WP2: **CHALMERS** (Herbert ZIRATH, deputy: Zhongxia HE)
- WP3: **ENT** (Wlodek STRUPINSKI, deputy: Iwona PASTERNAK)
- WP4: **KTH** (Joachim OBERHAMMER, deputy: Umer SHAH)
- WP5: **VEONEER** (Olof ERIKSSON, deputy: Tobias ADERUM)
- WP6: **ERICSSON** (Yinggang LI, deputy: Francesco TESTA)
- WP7: **Veoneer** (Olof ERIKSSON, deputy: Tobias ADERUM)
- WP8: **TECHNIKON** (Klaus-Michael KOCH, deputy: Martina TRUSKALLER)
- WP9: **TECHNIKON** (Martina TRUSKALLER, deputy: Klaus-Michael KOCH)
- WP10: **TECHNIKON** (Martina TRUSKALLER, deputy: Klaus-Michael KOCH)

2.2 Steps towards Participation

1) Initial registration

New participants in the project need to contact the coordinator (coordination@car2tera.eu) in order to receive access to the car2TERA Subversion server (SVN), website and Mattermost.

2) Contact details and mailing list

All contact details will be added to the car2TERA contact list and the new participant will be subscribed to relevant mailing lists, as these are central tools for all project internal communication.

Mailing List Name	Members
ALL-Mailing List	All personnel actively involved in the project
GA Mailing List	General Assembly members and deputies
EB Mailing List	For all technical correspondence & EB member discussions
Financial Mailing List	Personnel responsible for financial questions and tasks
Publication Mailing List	Partners will be informed about Publication & Notices at least 45 days before publication according to Article 29.1 GA
SVN-Log Mailing List	Email notification on SVN commits

Table 1: car2TERA Mailing Lists

Further details are described in D8.1 – *“Internal and external IT communication infrastructure and project website”*.

3) Project handbook

New participants will receive this document (which will be available in the restricted area of the project website), as short introduction to get familiar with:

- the *car2TERA infrastructure* (SVN, public website, calendar, Mattermost, GoToMeeting)
- the *project structure* (partners, hierarchy of bodies, most important documents at a glance) – see section 2.1
- the *project procedures* (meetings, deliverables, publications)

The project handbook is designed in a way to be easily consulted and it provides quick answers in the project area. It is available as a PDF file on the SVN and the restricted area of the project website and should be a living document. This implies that it will be updated regularly to record and list the lessons learned in order to improve the quality of the project. The partners will be involved in the revision process and informed about handbook modifications. In general, TECHNIKON will be the main responsible partner for updating the project handbook. Modifications and updates will be performed whenever necessary, e.g. if there are changes to the mailing lists or if the project structure or the General Assembly / Executive Board composition changes. In any case, partners are always invited to propose updates if required.

4) Introduction to partners and start

Once being familiar with the project policies and the IT tools, newcomers will find the most relevant documents like the Description of Action (DoA), Grant Agreement (GA) and Consortium Agreement (CA) on our working directory - the SVN.

Chapter 3 Quality Management Strategy

Quality is the degree to which the project results fulfil the project's requirements. In order to fulfil and exceed the project requirements, a Quality Management Strategy has been defined within the car2TERA project through three key processes, namely Quality Planning, Quality Assurance and Quality Control. These three processes are connected and interact in order to guarantee efficient and high-quality work.

3.1 Quality Planning

Quality Planning determines quality policies and procedures relevant to the project for both project deliverables and project processes, defines who is responsible for what, and documents compliance with defined guidelines.

3.1.1 Visual Identity

The creation of a corporate visual identity plays a significant role in the way the car2TERA project presents itself to both internal and external stakeholders. A corporate visual identity expresses the values and ambitions of our project and its characteristics. Our corporate visual identity provides the project with visibility and "recognisability". It is of vital importance that people know that the organization exists and remember its name and core business at the right time. In the following, we briefly list the actions that were taken in order to create a visual identity of the project. A detailed presentation of the materials and activities can be found in D7.1 "Internal and external IT communication infrastructure and project website".

Logo: For the improvement of its visibility, the car2TERA project has adopted a project logo. The logo is used on all internal templates as well as on external dissemination tools.

Project website: For greater visibility of the project, a website was launched in month 3. The car2TERA project website is available at the following link: www.car2TERA.eu

Leaflet: An informative and graphically appealing A5 leaflet, highlighting the car2TERA vision, main goals, key technological aspects as well as background information will be created. It can be used for distribution at conferences or certain other events in order to provide further visibility to the car2TERA project. An electronic version of the leaflet will be available on the car2TERA website.

Templates: Presenting the car2TERA project with a clear design is a claim by the whole consortium. Therefore, templates which bear the hallmark of the car2TERA design were created. All templates include the car2TERA logo, colours and the disclaimers.

Social Media: In order to reach a broad target group, Twitter and LinkedIn are used to raise awareness of project specific news/results/publications and to foster cooperation activities.

3.1.2 Project Policies

Internal project guidelines, our so-called project policies, were established to organize internal and external processes in terms of meetings, deliverables and publications, to ensure quality.

3.1.2.1 Meetings

The consortium decided in general, that the hosting partner of a meeting pays for conference facilities, catering and the like, while each partner pays for accommodation and provisions. Usually the host invites for lunch and coffee breaks during the meeting. If possible, the hosting partner invites the partners to one common dinner. The meeting locations have to change regularly in order to achieve a fair distribution of costs. To keep costs down, the consortium prefers to meet at company facilities that can often be used for free.

If that is not possible, the host can also arrange/ask for offers for conference rooms in a hotel. Then the partners pay separately their conference fees (room fee including coffee and lunch breaks).

The following bullet points should be a kind of **checklist for the host of upcoming meetings/workshops**.

Meeting Room(s):

- On the first day we would need one big room for approx. 20-25 people (if every partner shows up with 2-3 persons; a participant list will be created and provides further details).
- For the second day parallel sessions might be suitable. To plan such sessions, one-two rooms (for approx. 15 persons each) would be required. (It will be discussed in advanced if and if yes how many break-out sessions will be necessary for the dedicated meeting.)
- Are there any costs for the conference room/day/person? (coffee break, lunch)?
- Are there any other expenses?

Infrastructure/Equipment:

- Free WLAN at conference
- Internet connection
- Projector in each room
- Flip charts and pens
- Power plugs for all participants
- Optional: Microphone/Speaker for large rooms

3.1.2.2 Deliverables

Deliverables must be put into the "Deliverables Folder" of the corresponding Work Package on SVN. Please use the following file naming:

- *car2TERA-[Dx.x]-[Level of Dissemination]-[Due-Month]*

Nature of Deliverables

- "R" (Document, report)
- "DEM" (Demonstrator, pilot, prototype)

Deliverables marked with nature "DEM" will be accompanied by a small written report outlining its structure and purpose in order to justify the achievement of the deliverable.

- "DEC" (Websites, patent filings, videos, etc.)

Deliverables marked with nature "DEC" will be accompanied by a small written report outlining its structure and purpose in order to justify the achievement of the deliverable.

- "OTHER" (Other)

Deliverables marked with nature “OTHER” will be accompanied by a small written report outlining its structure and purpose in order to justify the achievement of the deliverable.

- “ORDP” (Open Research Data Pilot)

As deliverables are the most important outcome of the project, excellent quality needs to be ensured. Therefore, an internal review process has been defined, which is described in detail in section 3.3.2.

3.1.2.3 Policy for publishing scientific papers

Prior notice of any planned publication shall be given to the other parties concerned **at least 45 days** before the publication in accordance with the GA Article 29.1. Any objection to the planned publication shall be made in accordance with the GA in writing to the coordinator and to any party concerned within 30 days after receipt of the notice. If no objection is made within the time limit stated, the publication is permitted. (CA 8.4.1)

The beneficiaries may agree in writing on different time limits to those set above, which may include a deadline for determining the appropriate steps to be taken.

Furthermore, the paper/article, or the link to it will be published on our **official car2TERA project website**. Please inform the coordinator (TECHNIKON) as soon as a link or document in pdf format is available. The Commission will then be informed about the scientific publication via our website and also via Twitter.

In addition, in order to comply with GA Article 29.2, to provide open access to scientific publications, these papers will be uploaded partners’ repositories, such as Zenodo.

All publications or any other dissemination relating to foreground was generated with the assistance of financial support from the Union and shall include the following statement (GA 29.4):

“The project car2TERA has received funding from the European Union’s Horizon 2020 research and innovation programme under grant agreement No 824962.”

Authorship "Rules of Thumb"

A person should be author and the person may veto a publication if

- the person has contributed significant portions of the text, and/or
- the person has contributed at least one significant idea, and/or
- the paper describes an implementation that has been significantly contributed by the person.

All other contributors/influencers should be mentioned broadly in the acknowledgements.

As prior notice needs to be given 45 days before the publication, all partners have sufficient time to review the planned publication. This additional review process further contributes to high quality publications.

3.2 Quality Assurance

The focus of quality assurance is on the creation and monitoring of processes. Quality assurance creates and monitors project processes, which need to be performed effectively to reach the targeted outcome. This involves the establishment of Interim Management Reports, clear responsibilities and regular, clearly guided telephone conferences and face-to-face meetings.

3.2.1 Interim Management Reports (IMR)

The basic idea of internal “Interim Management Reports” is to implement a tool, which forces each partner to provide information regarding their ongoing and planned work as well as information on the resources spent. The IMR is planned as a short report on a quarterly basis. It is an efficient tool to provide the coordinator a good understanding of the status and progress of the work and to detect any possible delays or deviations well in advance. Furthermore, the cumulative report serves as a helpful basis for the creation of the periodic reports. The following sections explain the structure and the section targets of the IMR. While Chapter 1 of the IMR gives a short introduction to the partners, Chapter 2 “Explanation of the work carried out by the beneficiaries and overview of the progress including deviations” asks for partner information regarding the work performed within the respective quarter. This helps the coordinator to monitor partner activities and the progress made within the last quarter. It further asks the WP leader explicitly for the achievements and results per WP, in order to have a clear view on the results and how they will impact the ongoing work. It was also of high importance to add a section which gives the partners the opportunity to describe deviations and corrections. This section gives ideas of problems partners have to cope with and that may be related to other deeper problems. In addition, the WP leads should provide input, if any other research data generated in the dedicated WP, which is not directly attributable to a scientific publication, has been identified. If this is the case, the coordinator will send the partner a data specification sheet, which needs to be filled for each listed dataset. Depending on the sensitivity of the information, either public or confidential, data sets will be made openly accessible or a justification to the confidentiality reason will be requested.

WP1 – Requirement analysis, specifications and roadmap development [M01-M15]
<p>Overview on Tasks in WP1:</p> <p>T1.1: Requirement analysis and system specifications for primary and secondary applications [M01-M06]</p> <p>T1.2: Analysis of technology capability, technology projection, roadmap analysis, and economical challenges of a car THz microsystem [M01-M15]</p>
<p><i>Explain the work carried out in WP1 during the reporting period for your beneficiary!</i></p> <p><fill in></p>
<p><i>Explain the <u>reasons for deviations</u> from the DoA, the <u>consequences</u> and the <u>proposed corrective actions</u>.</i></p> <p><i>Include explanations for tasks not fully implemented, critical objectives not fully achieved and/or not being on schedule. Explain also the impact on other WP/tasks on the available resources and the planning.</i></p>
<p>Deviation from DoA: <yes/no></p>
<p><i>If yes, please provide the following information:</i></p>
<p>Reason: <fill in if applicable></p> <p>Consequences: <fill in if applicable></p> <p>Corrective actions: <fill in if applicable></p>
For the WP1 leader: Achievements and Results
<p>Summarize the main achievements and results for WP1.</p> <p><fill in></p>

Figure 1: Extract of IMR I, Chapter 2

The IMR gives the coordinator and all partners the position to share information about ongoing work of the overall project, to be up to date and always able to provide a profound answer.

The third chapter of the IMR focuses on the use of efforts. A dedicated table where partners fill in rough estimates of their efforts each quarter provides a good comparison of “plan” vs. “is” person months. To control the risk of rejection of costs during the financial reporting, with the IMR the coordinator is able to advise partners on the eligibility of costs and activities.

WP	Total Planned (according to DoA)	Actual Expenditure								
		M01-M03	M04-M06	M07-M09	M10-M12	M13-M15	M16-M18	Total (M01-M18)	Total in %	Remaining resources
WP1	1,00	<fill in>	<fill in>	<fill in>	<fill in>	<fill in>	<fill in>	0,00	0%	1,00
WP2	2,00	<fill in>	<fill in>	<fill in>	<fill in>	<fill in>	<fill in>	0,00	0%	2,00
WP3	3,00	<fill in>	<fill in>	<fill in>	<fill in>	<fill in>	<fill in>	0,00	0%	3,00
WP4	4,00	<fill in>	<fill in>	<fill in>	<fill in>	<fill in>	<fill in>	0,00	0%	4,00
WP5	5,00	<fill in>	<fill in>	<fill in>	<fill in>	<fill in>	<fill in>	0,00	0%	5,00
WP6	6,00	<fill in>	<fill in>	<fill in>	<fill in>	<fill in>	<fill in>	0,00	0%	6,00
WP7	7,00	<fill in>	<fill in>	<fill in>	<fill in>	<fill in>	<fill in>	0,00	0%	7,00
WP8	8,00	<fill in>	<fill in>	<fill in>	<fill in>	<fill in>	<fill in>	0,00	0%	8,00
WP9	9,00	<fill in>	<fill in>	<fill in>	<fill in>	<fill in>	<fill in>	0,00	0%	9,00
Total	45,00	0	0	0	0	0	0	0,00	0%	45,00

Figure 2: Extract of IMR II, Chapter 3

This IMR concept will support the quality assurance within the car2TERA project in order to cope with potential risks, leap chances, and monitor the projects process towards objectives.

3.2.2 Responsibilities & Internal Review

Transparency of roles and responsibilities has a big impact on the project success. Uncertainty can dramatically affect individual, organisational as well as the consortium performance. Therefore, as already mentioned in Chapter 2, responsible persons for each organisation and per WP were defined. In a further step responsibilities for Deliverables were defined. The table shown below lists all Deliverables and Milestones due within the first 9 months of the project. While Deliverable leading organisations were already defined within the DoA, the concrete editor responsible for requesting and guiding partner inputs towards a punctual and high-quality submission, were named at the project start. In line with the concluded internal review process (described in section 3.3.2) at least one specific internal reviewer for each Deliverable was defined and clear deadlines for first draft version, the review feedback as well as for the submission were established.

Nr.	Nature	Type	Car2TERA - Deliverables and Milestones	WHO	Person	Del. Month	Review Start	Deadline	upcoming DEADLINES	Name of Reviewer 1
D2.1	D	R	First PDK on B12 SiGe process	IFAT	Yannis Papananos	M01	10.01.2019	31.01.2019	Submitted	Herbert Zirath
MS1	M		Successful project start	TECHNIKON	Martina Truskaller	M01	10.01.2019	31.01.2019		
D8.1	D	R	Internal and external IT communication infrastructure and project website	TECHNIKON	Martina Truskaller	M03	10.03.2019	31.03.2019	Deadline this month	Franz Dielacher
D9.1	D	R	Project quality plan	TECHNIKON	Martina Truskaller	M03	10.03.2019	31.03.2019	Deadline this month	Joachim Oberhammer
D1.1	D	R	Requirements and system specifications for the primary and secondary applications	Veoneer	Olof Eriksson	M06	09.06.2019	30.06.2019		
D1.2	D	R	Assessment of Technology Capability	CHALMERS	Herbert Zirath	M08	10.08.2019	31.08.2019		
MS2	M		Requirements and Specifications for demonstrators, and technology assessment completed	IFAT	Yannis Papananos	M08	10.08.2019	31.08.2019		
D3.1	D	D	Graphene material delivered to CHALMERS	ENT	Wlodek Strupinski	M12	10.12.2019	31.12.2019		
D3.2	D	R	THz MEMS beam-steering and micromachined antenna concepts	KTH	Joachim Oberhammer	M12	10.12.2019	31.12.2019		
D4.1	D	R	General micromachined interposer & packaging concept	KTH	Joachim Oberhammer	M12	10.12.2019	31.12.2019		
D8.2	D	R	Updated plan and initial report on dissemination, communication and training activities	TECHNIKON	Martina Truskaller	M12	10.12.2019	31.12.2019		
D9.2	D	R	Risk Assessment Plan	TECHNIKON	Martina Truskaller	M12	10.12.2019	31.12.2019		

Table 2: Deliverables and Milestones Overview

3.2.3 Telephone conferences & Meetings

Communication is for sure one of the most essential foundations of successful project collaborations. Therefore, the car2TERA consortium established regular telcos and video-telcos (e.g. monthly technical progress telcos, requesting WP status reports and several WP-internal/cross-WP meetings and telcos). Currently, TECHNIKON provide their telco system for regular technical progress telcos as well as for WP related telcos. The virtual meetings are planned in parallel to the face-to-face meetings. The face-to-face meetings are needed because of the complexity and large number of interfaces to be developed within this project.

To ensure the project success it is necessary to implement an efficient meeting structure. At the beginning of the car2TERA project, the Kick-off meeting took place together with the first General Assembly meeting on 28th and 29th of January 2019 in Villach (TECHNIKON). The different expectations and schedules were discussed in order to make a definitive plan about the further work plan and required actions.

We plan at least 2 f2f Executive Board meetings per year, which will be combined with the General Assembly meetings at the end of each project period (Q4) (planned venue: at a partner's premises). Regular Advisory Board f2f meetings, whereas the advisors will assure the market relevance and provide feedback to the project developments. In addition, there will be some WP-internal / cross-WP face-to-face meetings on request but due to experience there will be more telephone conferences instead of physical meetings.

At the end of each project period there will be a Review Preparation meeting one day before the official Review meeting takes place (planned venue: EC premises in Brussels, or if applicable partner's premises). In addition, there will be two intermediate review meetings. At the end of the car2TERA project there will be a Project finalisation meeting. Further it is planned to participate in several workshops and conferences.

3.3 Quality Control

The focus of quality control is on feedback and deviation management in the project. Quality control ensures that feedback, from internal as well as from external advisors, is taken into account and therefore positively influences the work towards project objectives. Risk Management is an integral element of quality control as the proactive notice of deviations from the DoA allows the consortium to control the consequences or even transform those consequences to opportunities.

3.3.1 Advisory Board

The consortium will be supported and advised by an external Advisory Board (AB), consisting of selected organisations not directly involved in the project as partners. Their valuable feedback to the technical process of the project brings many benefits for the car2TERA project. The AB members will provide an external unprejudiced view advising on strategic directions of the project in terms of detailed technical goals and impact, comment on economic feasibility and achieved or missed targets. To achieve high quality results within the car2TERA project, a strong cooperation with the AB members will actively be pursued and facilitated by frequent interaction in the form of face-to-face meetings, conference calls and feedback rounds. Experts in the field stated their interest to guide, support and provide feedback to the car2TERA consortium with advice and expertise throughout the project duration.

Through the integration of an Advisory Board, interim feedback of enormous importance regarding the overall orientation of the project outcome is expected. This supports the path towards objectives and controls the quality of the project work as well as the quality of expected outcomes. The Impact Lead is the chair of the AB and is in charge of preparing the implementation of the AB's suggestions.

If confidential information will be provided to the AB members, the Coordinator will ensure that a Non-Disclosure Agreement (NDA) is executed between the consortium and each AB member.

3.3.2 Internal Review Process

To ensure quality of Deliverables, an internal review process has been defined. The main goal of this process is to establish internal feedback by partners who did not directly participate as editor to the Deliverable before submitting the Deliverable to the European Commission. The review process is shown and explained below.

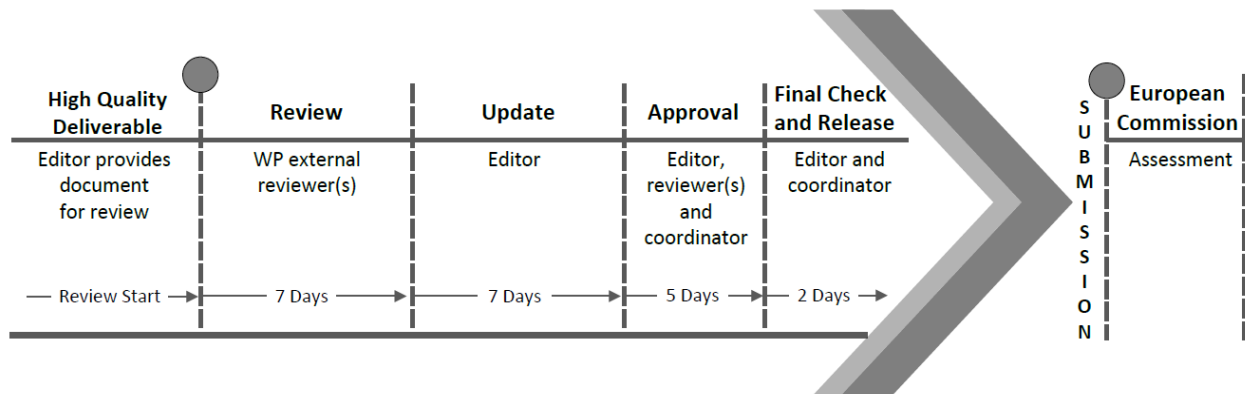


Figure 3: Review and Quality Assurance Process for Deliverables

Step1 “Review”: partners send the High Quality Deliverable to TECHNIKON (Project Management) and to an internal reviewer, who was not directly involved in the deliverable work (*Review = 7 days*). High quality means, that all required input is included within the deliverable, all track changes accepted and a first formatting check performed. The reviewer reads the High Quality Deliverable and compares the content against its objective as defined in the work plan. The review result is a draft with mark-up as follows:

LaTeX: For latex, typos and small changes are directly performed on the text. Comments are entered into the text using the `comments.sty` latex package.

Word: For MS Word, the author protects the draft against changes (always save with “track changes” activated). Typos and small changes are directly entered on the text while using “track changes”. Comments are entered into the text as MS Word comments.

The internal reviewer has to fill in an **Internal Review Template**. The internal review form guides the reviewer through specific questions, in order to make sure that the content complies with the quality claims of the EC (e.g. accordance with the DoA, required information, structure, etc.) as well as the project partners. It monitors the structure as well as the compliance with the description in the DoA. This gives feedback to editor of this Deliverable in a clearly structured form and helps the editor to address all comments. Below a screenshot of the internal review form in car2TERA is presented:



Review Form
for the Internal Reviewer
Car2TERA deliverable:

* Type of comments: M = Major comment, m = minor comment, a = advice

Date of Internal Review: 	Internal Reviewer: 		
	Answer	Comments	Type*
1. Is the deliverable in accordance with			
i. the Description of Action? https://car2tera.technikon.com/02-Legal-Documents/02-DoA/Car2TERA-824962-DoA.pdf	<input type="checkbox"/> Yes <input type="checkbox"/> No		<input type="checkbox"/> M <input type="checkbox"/> m <input type="checkbox"/> a
ii. the international State-of-the-Art?	<input type="checkbox"/> Yes <input type="checkbox"/> No		<input type="checkbox"/> M <input type="checkbox"/> m <input type="checkbox"/> a
2. Is the quality of the deliverable such			
i. that it can be sent to the EC?	<input type="checkbox"/> Yes <input type="checkbox"/> No		<input type="checkbox"/> M <input type="checkbox"/> m <input type="checkbox"/> a
ii. that it needs further editing?	<input type="checkbox"/> Yes <input type="checkbox"/> No		<input type="checkbox"/> M <input type="checkbox"/> m <input type="checkbox"/> a
iii. that the content needs to be improved?	<input type="checkbox"/> Yes <input type="checkbox"/> No		<input type="checkbox"/> M <input type="checkbox"/> m <input type="checkbox"/> a
3. Does the Deliverable include			
i. a clear structure (e.g. appropriate, understandable presentation of the work performed)	<input type="checkbox"/> Yes <input type="checkbox"/> No		<input type="checkbox"/> M <input type="checkbox"/> m <input type="checkbox"/> a
ii. a sufficient and meaningful executive summary	<input type="checkbox"/> Yes <input type="checkbox"/> No		<input type="checkbox"/> M <input type="checkbox"/> m <input type="checkbox"/> a
iii. an appropriate introduction	<input type="checkbox"/> Yes <input type="checkbox"/> No		<input type="checkbox"/> M <input type="checkbox"/> m <input type="checkbox"/> a
iv. a meaningful summary & conclusion	<input type="checkbox"/> Yes <input type="checkbox"/> No		<input type="checkbox"/> M <input type="checkbox"/> m <input type="checkbox"/> a

Figure 4: Internal Review Form

Step2 “Update”: After the review, the editor has to make the necessary changes and updates. For the update it is important that in general, comments are not removed. Instead there must be first a discussion between the involved authors to update the Deliverable according to the received comments. Secondly, the author either adds text to comments how they were addressed or adds additional comments on its own. (*Update = 7 days*).

Step3 “Approval / 2nd review”: During the second review (Approval) the editor contacts again the reviewer(s) and the Coordinator to check if their comments have been addressed; if required, updates review form and states if the deliverable is ready for submission. (*Approval = 5 days*)

Step4 “Final Check and Release”: The editor performs a final check and informs the Coordinator that the deliverable is final. The Coordinator performs a final check (formatting updates, consistency check, check of front page, etc.) and creates the final pdf. (*Release = 2 days*) TECHNIKON will then submit the final document to the EC.




3.3.3 Risk Management

To guarantee the achievement of the objectives of the car2TERA project, it is essential to identify and understand the significant project risks.

The continuous risk management process is based on the early identification of, and the fast reaction to, events that can negatively affect the outcome of the project. The frequent meetings of the project bodies therefore serve as the main forum for risk identification. The identified risks are then analysed and graded, based on impact and probability of occurrence.

Technical risks were analysed and graded, based on their probability of occurrence in order to answer the governing question: “How big is the risk and what its impact is?” Knowing how a risk impacts the project is important as several risks of the same type can be an indication of a larger problem.

The risks defined in the DoA, will be graded into low/medium/high risk levels.

	low	Low probability of occurrence and low impact
	medium	Low/high probability of occurrence and High/low impact
	high	High probability of occurrence and high impact

The risks will be monitored on a regular basis and an updated risk table will be provided within the Periodic Reports. Further, a detailed classification and evaluation will be provided within D9.2 “*Risk Assessment Plan*” in M12. The Risk Assessment Plan will show how potential risks are assessed and mitigated in order to avoid any negative influence on the car2TERA project objectives.

In addition to the above-mentioned tools and procedures, the project partners’ and the coordinator’s profound experience with H2020 projects implicates a high level of competence, expert knowledge, skills and qualifications, which further increases the quality of the project work. Furthermore, besides these hard skills, also soft skills, such as motivation, team spirit, and interpersonal interaction contribute to high quality project performance.

Chapter 4 Summary and Conclusion

This Project Quality Plan demonstrates that quality aspects are taken into account in a variety of processes and activities within the car2TERA project. The interrelated quality processes – planning, assurance and control – impact the project work from its start to its end. The project aims at obtaining a high degree of quality, where outcomes are achieved in terms of the effectiveness and efficiency of working practices, as well as products and standards of project deliverables and outputs. This plan seeks to establish the procedures and standards to be employed in the project, and to allocate responsibility for ensuring that these procedures and standards are followed. The project management team (Coordinator, Scientific Lead and Impact Lead) monitors that the above-described processes are fulfilled. In case of any deviations to the planned work the management team is in charge of taking necessary mitigation measures. The plan is effective throughout the lifetime of the project, but is open to revision if necessary. As described in section 2.1, responsibilities for quality planning, assurance and control are shared between all partners, which allow various views on quality issues in order to reach the optimal outcome.

Chapter 5 List of Abbreviations

Abbreviation	Explanation
CA	Consortium Agreement
DoA	Description of Action (Annex 1 of the Grant Agreement)
EB	Executive Board
EC	European Commission
GA	Grant Agreement
H2020	Horizon 2020
ICT	Information and Communication Technologies
IMR	Interim Management Report
NDA	Non Disclosure Agreement
PM	Person Month
PR	Periodic Report
SVN	Subversion server
Telco(s)	Telephone Conference(s)
WP	Work Package