Quality Management Plan

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<td>Work package</td>
<td>WP1: Project Coordination</td>
</tr>
<tr>
<td>Deliverable number</td>
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<tr>
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## Authors

<table>
<thead>
<tr>
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<th>Email</th>
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<tbody>
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</tbody>
</table>

## Control sheet

### Version History

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<td>21.12.19 - 16.01.19</td>
<td>Sébastien Faye (LIST), Céline Décosse (LIST)</td>
<td>Draft versions</td>
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<tr>
<td>V1.0</td>
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<td>Sébastien Faye (LIST), Céline Décosse (LIST)</td>
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### Peer review

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<th>Reviewer</th>
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<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reviewer 1</td>
<td>Rita Bhandari (ERTICO)</td>
<td>25/01/2019</td>
</tr>
<tr>
<td>Reviewer 2</td>
<td>Kostas Trichias (WINGS)</td>
<td>25/01/2019</td>
</tr>
<tr>
<td>Reviewer 3</td>
<td>Francesco Ferrero (LIST)</td>
<td>28/01/2019</td>
</tr>
<tr>
<td>Reviewer 4</td>
<td>François Fischer (ERTICO)</td>
<td>30/01/2019</td>
</tr>
</tbody>
</table>

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# Abbreviations

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<thead>
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<th>Abbreviation</th>
<th>Definition</th>
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</thead>
<tbody>
<tr>
<td>CCAM</td>
<td>Cooperative, Connected and Automated Mobility</td>
</tr>
<tr>
<td>DL</td>
<td>Deliverable Leader</td>
</tr>
<tr>
<td>EC</td>
<td>European Commission</td>
</tr>
<tr>
<td>KPI</td>
<td>Key Performance Indicator</td>
</tr>
<tr>
<td>PC</td>
<td>Project Coordinator</td>
</tr>
<tr>
<td>PMBoK</td>
<td>Project Management Body of Knowledge</td>
</tr>
<tr>
<td>QA</td>
<td>Quality Assurance</td>
</tr>
<tr>
<td>QC</td>
<td>Quality Control process</td>
</tr>
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<td>QM</td>
<td>Quality Manager</td>
</tr>
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<td>QMP</td>
<td>Quality Management Plan</td>
</tr>
<tr>
<td>TMT</td>
<td>Technical Management Team</td>
</tr>
<tr>
<td>ToC</td>
<td>Table of Contents</td>
</tr>
<tr>
<td>WP</td>
<td>Work Package</td>
</tr>
<tr>
<td>WPL</td>
<td>Work Package Leader</td>
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EXECUTIVE SUMMARY

This document is the deliverable D1.2 – Quality Management Plan (QMP) of 5G-MOBIX, aiming at providing a single point of reference for the quality management processes implemented during the project.

The QMP defines guidelines to ensure the overall project quality. It targets the achievement of high-quality project outcomes and primarily applies to deliverable management, reporting and dissemination activities. It also describes the project organisation, roles and responsibilities related to Quality Assurance (QA) and Quality Control (QC) activities. QA comprises managerial actions aiming at high-quality output whereas QC is used to verify the quality of the output.

This deliverable complements D1.1 – Project Management Plan. D1.1 describes the overall project management and introduces elements that are essential to a proper understanding of the present document, for instance the detailed organisational structure of the project and risk management.

The QMP describes the following elements:
- Introduction to Quality Assurance and Quality Control.
- Description of Quality Assurance and Quality Control roles.
- Quality Assurance activities and procedures, including but not limited to:
  - A definition of the roles and responsibilities of each partner in the consortium with regard to quality issues.
  - Harmonisation and systemisation of 5G-MOBIX’s communication elements, such as templates for deliverables, internal or EC reports. This part complements the outputs resulting from WP7 – Dissemination and Exploitation.
- Quality Control activities and procedures, including but not limited to:
  - A methodology for peer reviewers to guarantee that the project deliverables are of high-quality and meet scientific standards and project objectives.
  - Clear deliverable evaluation criteria to monitor all phases of their development process.

The QMP is structured as follows:

Chapter 1 – Introduction briefly presents 5G-MOBIX, describes the key concepts of quality management and outlines the QMP structure.

Chapter 2 – Quality Assurance Plan presents the project’s quality management principles in a comprehensive manner to help partner beneficiaries carry out their activities with a high standard of quality.

Chapter 3 – Quality Control Activities provides a set of procedures for optimal monitoring of the project quality and production of deliverables.

Chapter 4 – Contingency Plan focuses on the potential problems that may arise in the project and how they can be solved.

Chapter 5 – Conclusion summarises the main elements of the deliverable.
1. INTRODUCTION

1.1. Introduction to 5G-MOBIX

5G-MOBIX aims at executing Cooperative, Connected and Automated Mobility (CCAM) trials along x-border and urban corridors using 5G core technological innovations to qualify the 5G infrastructure and evaluate its benefits in the CCAM context as well as defining deployment scenarios and identifying and responding to standardisation and spectrum gaps. 5G-MOBIX’s vision is to enable innovative, previously unfeasible, automated driving applications, both from a technical as well as from a business perspective.

The Project Consortium includes 47 beneficiaries and an additional nine international partners from Korea and China bringing the total partners involved to 56. This large Consortium shares responsibilities of tasks divided into eight Work Packages (WPs) across 10 EU countries as well as in Turkey, China and South Korea.

For a more details about the project, please refer to D1.1: “Executive summary” and “5G-MOBIX concept and approach”.

1.2. Introduction to Project Quality Management

This document, the Quality Management Plan (QMP), mainly relies on the Project Management Body of Knowledge (PMBoK), a set of standard terminologies and guidelines for project management. The body of knowledge evolves over time. Its most recent version was released in 2017. PMBoK results from work overseen by the Project Management Institute.

The PMBoK highlights the importance of quality planning, quality assurance and quality control as essential aspects of the project management plan. These quality management processes are defined in Table 1 – Project Quality Management Processes.
<table>
<thead>
<tr>
<th>Quality management processes</th>
<th>What</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Quality Planning</strong></td>
<td>The QMP determines the quality requirements, how they will be measured and controlled. It can be a subsection of the project management plan or, for larger projects, a standalone document. <strong>Outputs:</strong> The QMP should contain at least: 1. Quality standards that apply to the project 2. Measurement criteria and frequency 3. Inspection criteria = Quality Control Sheets</td>
</tr>
<tr>
<td><strong>When:</strong></td>
<td>- Before the production process - When quality assurance activities find a quality issue involving project changes and an update of the project management plan.</td>
</tr>
<tr>
<td><strong>Perform Quality Assurance</strong></td>
<td>Quality Assurance is prevention of errors to reach quality. Performing quality assurance ensures that the processes are in place to produce the project deliverables at the applicable level of quality. Quality Assurance asks the following questions: 1. What are the applicable quality standards? 2. How is quality measured? 3. Who measures it? 4. What is measured? (number of units? types? processes?) 5. When is it measured? 6. What are the criteria for rejection? Quality Assurance creates and analyses the systems to measure and control quality, in order to create confidence that quality deliverables will be produced. <strong>Outputs:</strong> A quality system is in place.</td>
</tr>
<tr>
<td><strong>When:</strong></td>
<td>During the production process, throughout the duration of the project.</td>
</tr>
<tr>
<td><strong>Perform Quality Control</strong></td>
<td>Quality Control is inspection for quality. <strong>Quality control</strong> measures the quality level of individual products and deliverables, and accepts or rejects them based on the criteria developed by Quality Assurance. <strong>Outputs:</strong> Quality is monitored on project outputs. Measures are taken to reach the expected quality, which may result in a change to the quality management plan.</td>
</tr>
<tr>
<td><strong>When:</strong></td>
<td>After the production process.</td>
</tr>
</tbody>
</table>
1.3. Purpose of the deliverable

The QMP is delivered as part of WP1 and serves as a guideline and reference to enable a successful collaborative work towards achieving the project objectives with the highest quality. The document establishes procedures for Quality Assurance and Control, which are carried out through the following activities:

- Liaising with the Technical Management Team (TMT) about the quality status of project results.
- Supporting the Project Coordinator (PC) and the project managers with risk management by monitoring and mitigating quality risks.
- Defining 5G-MOBIX’s quality procedures and providing guidelines for the production and peer review of project outputs.
- Supporting the deliverable owners in maintaining a high standard of quality in their reports.
- Monitoring the development of the internal reports and deliverables corresponding to project tasks, in liaison with the TMT.
- Supporting the dissemination manager with the production of high-quality presentations and papers from the participants.

1.4. Intended audience

The dissemination level of D1.2 is public (PU) but is meant primarily for (a) all members of the 5G-MOBIX project consortium, and (b) the European Commission (EC) services.

This document is intended to serve as an internal guideline and reference for all 5G-MOBIX beneficiaries, especially the governance bodies such as the General Assembly, the Steering Committee, the TMT, and the Advisory Board.
2. QUALITY ASSURANCE PLAN

Quality Assurance, along with Quality Control, is a primary component of a project quality system and comprises a set of processes to ensure that project deliverables meet the planned quality standards.

In 5G-MOBIX, the quality assurance plan (a) specifies tools (Projectplace, Quality Registers); (b) defines roles and responsibilities of all parties involved in the quality processes; and (c) establishes quality assurance procedures to obtain project deliverables with a high-quality standard.

2.1. Quality assurance tools

2.1.1. Projectplace: the platform to share documents and submit deliverables

Projectplace, a web-based project management and collaboration platform from Planview, is the main document management and communication tool used in 5G-MOBIX. Several groups (reflecting the organisation structure) have been created to facilitate communication among the members. The platform provides the teleconference facilities for organising the regular WP, Task and TMT virtual meetings. Any change or update must be communicated to the PC and the project managers who are the only members with rights to perform organisational changes within the platform. Projectplace integrates a versioning system.

All draft and submitted deliverables are saved on Projectplace. Quality management tracking tools and procedures are also accessible there.

2.1.2. Quality registers

The outputs of the quality management processes operated in 5G-MOBIX include two main documents:

- **Deliverable register.** This file monitors deliverable writing and submission processes. It is based on the list of deliverables and milestones described in Annex I of the Grant Agreement and reported in Sections 3.4 and 3.5 (See Annex 2).

- **Risk register.** New risks identified during the life cycle of the project are recorded here. It is described in Section 4.1 (See Annex 3).

The editors of these files are, in order of priority: PC < Quality Manager (QM) < other Project Managers < Work Package Leaders (WPLs). If changes are made to these documents, they are systematically discussed during TMT meetings.
2.2. Quality assurance roles

This section lists the governance bodies that have a direct responsibility in project quality management, as well as their roles. The complete project organisation, including the different management structures and complete contact details, are described in deliverable D1.1.

The following tables provide a summary of the roles and responsibilities involved in quality management aspects, particularly with regard to the completion of tasks and submission of deliverables.

2.2.1. Operational bodies

Operational bodies are fully detailed in D1.1. The two most important decision-making bodies in the context of quality management are:

- **The Project coordinator (PC), ERTICO,** is responsible for the successful and smooth running of the entire project and coordinates the project according to EC rules and the terms of the Grant Agreement and the Consortium Agreement.

  **Role regarding quality management.** The PC has full authority over all aspects that may affect the quality of the project, and is responsible in particular for: (a) chairing 5G-MOBIX decision-making bodies; (b) monitoring and controlling the deliverable drafting and submission processes in collaboration with Task T1.5 – *Quality Management.*

- **The Technical Management Team (TMT),** monitors the operational execution of the project. It is chaired by the PC and is composed of the Project Managers, WPLs, and Trial Site Leaders.

The quality assurance roles in 5G-MOBIX are distributed to most of the participants according to their level of involvement and responsibilities. They are summarised in Table 2 below. In addition, for the sake of convenience, the main project contacts that have a role (directly or indirectly) in quality management are listed in Table 3.

**Table 2 – Quality assurance roles in 5G-MOBIX**

<table>
<thead>
<tr>
<th>Body (Partner)</th>
<th>Role in the project</th>
<th>Responsibility regarding quality management</th>
</tr>
</thead>
</table>
| Technical Coordinator (WINGS) | - Acts at project level.  
- Is part of the TMT.  
- Crucial and active role in the overall coordination of the technical activities. | - Monitors progress of all WP compared to the overall project plan (Gantt) and milestones.  
- Quality control and overall risk management.  
- Monitoring and control of the production of deliverables in |
<table>
<thead>
<tr>
<th>Body (Partner)</th>
<th>Role in the project</th>
<th>Responsibility regarding quality management</th>
</tr>
</thead>
<tbody>
<tr>
<td>Work Package Leaders (WPLs)</td>
<td>- Act at WP level.</td>
<td>- Monitor progress of their tasks compared to the overall project plan (Gantt) and other WP needs.</td>
</tr>
<tr>
<td></td>
<td>- Are part of the TMT.</td>
<td>- Ensure timely and high qualitative production of all WP deliverables and results (e.g. deployments, tests, demos).</td>
</tr>
<tr>
<td></td>
<td>- Are responsible for the executive management of the individual WPs.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Are supported by Task Leaders.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Are responsible for the final deliverables of the WP.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Monitor progress of their tasks compared to the overall project plan (Gantt) and other WP needs.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Ensure timely and high qualitative production of all WP deliverables and results (e.g. deployments, tests, demos).</td>
<td></td>
</tr>
<tr>
<td>Task leaders</td>
<td>- Act at task level.</td>
<td>- Coordinate the preparation, quality control and submission of the deliverables related to their task.</td>
</tr>
<tr>
<td></td>
<td>- Are responsible for the executive management of the individual tasks.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Are supported by Task Participants.</td>
<td></td>
</tr>
<tr>
<td>Deliverable leaders (DLs)</td>
<td>- Are either task leaders or members of the TMT in order to ensure the proper communication of their activities.</td>
<td>- Have the full responsibility for the deliverable production process with expected quality standards and for submitting them on time.</td>
</tr>
<tr>
<td></td>
<td>- Must ensure the entire lifecycle of deliverables development.</td>
<td></td>
</tr>
<tr>
<td>Task participants</td>
<td>- Contribute to the tasks to which they are allocated.</td>
<td>- Contribute to the deliverables that are related to their tasks.</td>
</tr>
<tr>
<td></td>
<td>- Must contribute to the project deliverables resulting from tasks that involve them.</td>
<td></td>
</tr>
<tr>
<td>Corridor and Trial Site Leaders</td>
<td>- Act as site level.</td>
<td>- Ensure the harmonization of time plans, test scenarios, data management and the continual information about evaluation methods and impact assessment.</td>
</tr>
<tr>
<td></td>
<td>- Are part of the TMT.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Are the interfaces between the TMT and local-site teams.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Are responsible for the close linkage of 5G-MOBIX activities to the local corridor and trial sites.</td>
<td></td>
</tr>
<tr>
<td>Innovation Manager (VICOMTECH)</td>
<td>- Acts at project level.</td>
<td>- Ensures that the project coordination develops favourable conditions for innovation and takes necessary</td>
</tr>
<tr>
<td>Body (Partner)</td>
<td>Role in the project</td>
<td>Responsibility regarding quality management</td>
</tr>
<tr>
<td>----------------------------</td>
<td>----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td>---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
</tbody>
</table>
| **Data Manager (AKKA)**    | - Acts at project level.  
- Is part of the TMT.  
- Leads the Data Management task (T1.4) and will ensure project coordination in terms of the collection, storage and handling of evaluation data, as well as their publication as part of the Open Research Data Pilot.  
- Ensures adequate dealing with data privacy and data protection regulations, together with WP8. | - Ensures project coordination in terms of the evaluation data collection, storage and handling, as well as their publication as part of the ORDP.  
- Raises potential issues and proposes solutions for dealing adequately with data privacy and data protection regulations.                                                                                                                                 |
| **Quality Manager (LIST)** | - Acts at project level.  
- Is part of the TMT.  
- May be involved at WP level (upon request or through the TMT meetings).                                                                                                                                               | - Leads the Quality Management task (T1.5), thus ensuring high quality of deliverables and outcomes of the overall project targets.  
- Supports project coordination in achieving the milestones.  
- Acts in support to the TMT (in particular WPLs) for implementing the QMP and management of quality processes.                                                                                     |
| **Communication Manager (ERTICO)** | - Acts at project level.  
- Is part of the TMT.  
- Ensure that the project is well coordinated for achieving excellent outreach with public events, scientific publications and presentations.                                                                                   | - Ensures that the project is well coordinated for achieving excellent outreach with public events, scientific publications and presentations.                                                                                                                        |
<table>
<thead>
<tr>
<th>Role</th>
<th>Leader</th>
<th>Deputy</th>
<th>Beneficiary</th>
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<tbody>
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<td>WP1 - Project Coordination</td>
<td>François FISCHER</td>
<td>Rita BHANDARI</td>
<td>ERTICO</td>
</tr>
<tr>
<td>Technicians</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Technical Coordinator</td>
<td>Kostas TRICHIAS</td>
<td>-</td>
<td>WINGS</td>
</tr>
<tr>
<td>Communication Manager</td>
<td>Cordelia WILSON</td>
<td>Andrea HRŽIČ</td>
<td>ERTICO</td>
</tr>
<tr>
<td>Innovation Manager</td>
<td>Seán GAINES</td>
<td>Esther NOVO</td>
<td>VICOMTECH</td>
</tr>
<tr>
<td>Data Manager</td>
<td>Sadeq ZOUGARI</td>
<td>Benoit BAURENS</td>
<td>AKKA</td>
</tr>
<tr>
<td>Quality Manager</td>
<td>Sébastien FAYE</td>
<td>Céline DECOSSE</td>
<td>LIST</td>
</tr>
</tbody>
</table>

### Work package leaders

| WP2 - Specifications                      | Giancarlo PASTOR FIGUEROA  | Edward MUTAFUNGA           | AALTO                |
| WP3 - Development, - roll out             | Kostas TRICHIAS            | Panagiotis DEMESTICHAS     | WINGS                |
| WP4 - Trials                              | Anne-Charlotte NICOUDE     | Oyunchimeg SHAGDAR          | VEDECOM              |
| WP5 - Evaluation                          | Katia PAGLE                | Vasilis SOURLAS             | ICCS                 |
| WP6 - Deployment enablers                 | Georgios DIMITRAKOPOULOS   | -                          | INTRASOFT            |
| WP7 - Dissemination & Exploitation        | Julie CASTERMANS           | Cordelia WILSON            | ERTICO               |
| WP8 - Ethics                              | Rita BHANDARI              | François FISCHER            | ERTICO               |

### Corridor and trial site leaders

| Netherlands                               | Sven JANSEN                | Bas GERRITS                | TNO                  |
| Spain - Portugal                          | Francisco SANCHEZ          | Diego BERNADEZ             | CTAG                 |
| Greece - Turkey                           | Nazli GUNEY                | Emrah KINAV                | TURKCELL             |
| Finland                                   | Giancarlo PASTOR FIGUEROA  | Edward MUTAFUNGA           | AALTO                |
| Germany                                   | Manzoor-Ahmed KHAN         | Thomas SOMMER              | TUB                  |
| France                                    | Anne-Charlotte NICOUDE     | Oyunchimeg SHAGDAR          | VEDECOM              |
| China                                     | Yanjun SHI                 | Yanqiang LI                | DUT                  |
| South Korea                               | You-Jun CHOI               | Heesang CHUNG              | KATECH               |
2.2.2. Strategic and decision-making bodies

These bodies are also fully described in D1.1. They have a general role in quality assurance, as explained in Table 4 below.

Table 4 – Strategic and decision-making bodies

<table>
<thead>
<tr>
<th>Body</th>
<th>Role in project</th>
<th>Role regarding quality management</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Assembly</td>
<td>Ultimate decision-making body of the 5G-MOBIX consortium, consisting of at least one representative per beneficiary.</td>
<td>Ensure GA amendments keeps the required level of quality.</td>
</tr>
<tr>
<td>Steering Committee</td>
<td>Chaired by the PC. Composed of senior experts from the different partners organisations appointed by the General Assembly.</td>
<td>Provides advice from senior experts to ensure a high-quality development of the project and supports the coordinator in key operational and management decision making.</td>
</tr>
<tr>
<td>Advisory Board</td>
<td>Formed by external experts on specific topics who will regularly advise project contributors on their work.</td>
<td>Provides 5G-MOBIX with a high-quality technical expertise.</td>
</tr>
</tbody>
</table>

2.3. Quality assurance procedures

This section describes a series of tools and methodologies used to ensure a high standard of quality in the activities and outputs of the project.

2.3.1. Deliverables

Deliverables are official documents that are formally submitted to the EC. They are listed in Section 3.4.

2.3.1.1 General recommendations

All content generated through 5G-MOBIX must be fully consistent with the scope of the project and with the expected impact of the task with which it is associated. In particular, high quality of text and figures is critical as well as a coherent structure. Some good practices regarding form and style while drafting deliverables are:

- Use of the Project templates. Microsoft Word (or any software that is fully compatible with the templates provided in the project) should preferably be used.
• Purpose of the document and an initial Table of Contents (ToC) defined before starting work on the content of the document.
• A complete Executive summary of the entire document rather than an introduction.
• Proofreading and language check.
• Avoid copy/paste and plagiarism.
• Figures and tables should be relevant and have appropriate titles. Captions should be inserted using the automatic numbering in Microsoft Word.
• Cross-referencing of section numbers must be used to avoid generating errors following text updates.

To ensure high-quality content, deliverable owners and contributors must liaise and communicate efficiently and regularly. Lapses must be relayed to the WP leaders and the Technical Manager as well as the PC. The text should be relevant and must reflect the vision of the project.

2.3.1.2 Deliverable types and dissemination levels

All deliverables have a type and a dissemination level. Deliverable owners should consider these key characteristics before the drafting process.

Table 5 – Deliverable types as defined by H2020

<table>
<thead>
<tr>
<th>Type of deliverable</th>
<th>R</th>
<th>DEM</th>
<th>DEC</th>
<th>OTHER</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description</td>
<td>Document, report (excluding the periodic and final reports)</td>
<td>Demonstrator, pilot, prototype, plan designs</td>
<td>Websites, patents filing, press &amp; media actions, videos, etc.</td>
<td>Software, technical diagram, etc.</td>
</tr>
</tbody>
</table>

Table 6 – Deliverable dissemination levels as defined by H2020

<table>
<thead>
<tr>
<th>Level</th>
<th>PU</th>
<th>PP</th>
<th>RE</th>
<th>CO</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description</td>
<td>Public</td>
<td>Restricted to project partners</td>
<td>Restricted to a group specified by the consortium</td>
<td>Confidential, only for members of the consortium</td>
</tr>
</tbody>
</table>
2.3.1.3 Deliverable structure

Microsoft Word Templates

All Microsoft Word templates are available on the Projectplace platform (Annex 4). Their use is mandatory for all deliverables. Deliverables must not override the structure defined in the templates. These templates include a document control sheet (Annex 1) that serves as a change tracking system.

These templates are structured as follows:

- Cover page
- Control sheet
- Table of contents
- List of figures (if not empty)
- List of tables (if not empty)
- List of abbreviations (if not empty)
- Executive summary
- Introduction
  - Project introduction (required if public deliverable)
  - Purpose of the deliverable (i.e. reference to select the content)
  - Intended audience
- Content
  - A ToC and a high-level description need to be defined before writing
- Conclusion
- Annexes (if not empty)

Naming convention

All deliverables should be named using the following structure: “5G-MOBIX - DN.N - Name - vX.X.docx”.

2.3.1.4 Deliverable life cycle

WPLs are responsible for the entire monitoring of the activities related to a deliverable, including quality aspects and the respect of deadlines. DLs are responsible for the execution of the activities related to a deliverable. WPLs report the progress to the TMT following the guidelines and timeframe set out in this document. The complete deliverable life cycle is described in Table 7 below and it is illustrated through a diagram next page (Figure 1: Deliverable life cycle). These elements also describe the processes related to the handling of deliverable files and their owners. Peer reviewing activities are defined in the next chapter.

If there is a conflict, problem or need for assistance in any of the steps described below, then the DL can interact with the WPL, which in turn can involve the QM.
Table 7 – Deliverable life cycle & process owners

<table>
<thead>
<tr>
<th>Deadline</th>
<th>Owner</th>
<th>Actions</th>
<th>Supporting tools</th>
</tr>
</thead>
<tbody>
<tr>
<td>At any time</td>
<td>WPL</td>
<td>→ Responsible for the respect of deadlines and the monitoring of the deliverable progress throughout its life cycle.</td>
<td>Projectplace: Deliverable register, e-mails¹</td>
</tr>
<tr>
<td>6 months before deadline²</td>
<td></td>
<td>→ Provides deliverable purpose and the audience before any other section.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>→ Completes ToC – up to Level 3 with high level description.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>→ With all task contributors:</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>1. Agree on ToC</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>2. Share drafting responsibilities between contributors</td>
<td></td>
</tr>
<tr>
<td></td>
<td>DL</td>
<td>→ Monitors progress continuously, corrects bugs and ensures consistency across contributions.</td>
<td>Projectplace: Draft version folder</td>
</tr>
<tr>
<td></td>
<td></td>
<td>→ Regularly interacts with WPL.</td>
<td></td>
</tr>
<tr>
<td>5 months before deadline</td>
<td></td>
<td>→ Finds two peer reviewers not contributing to the deliverable with the support of the QM, who may be assisted by the technical manager if no one is found. A third reviewer may be appointed by the QM if needed (this may include the QM him/herself).</td>
<td>Projectplace: Deliverable register, e-mails</td>
</tr>
<tr>
<td></td>
<td></td>
<td>→ Informs peer reviewers about the review date.</td>
<td></td>
</tr>
<tr>
<td>3 months before deadline</td>
<td>WPL</td>
<td>→ Merges input from all contributors and performs final editing of the first draft.</td>
<td>Projectplace: Draft version folder, e-mails</td>
</tr>
<tr>
<td></td>
<td></td>
<td>→ Consolidates the deliverable. The DL may optionally decide to conduct a WP internal review.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>→ Notifies the WPL by e-mail when consolidation is done.</td>
<td></td>
</tr>
<tr>
<td>2 months before deadline</td>
<td>DL</td>
<td>→ Launches peer review.</td>
<td></td>
</tr>
<tr>
<td>1 month before</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

¹ "e-mails" can also refer to comments left on files directly via Projectplace (which generates e-mails).
² Date of delivery indicated in the Description of Action.
<table>
<thead>
<tr>
<th>Deadline</th>
<th>Owner</th>
<th>Actions</th>
<th>Supporting tools</th>
</tr>
</thead>
<tbody>
<tr>
<td>deadline</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>20 days before deadline</td>
<td>Reviewers</td>
<td>➔ Send comments to DL.</td>
<td></td>
</tr>
<tr>
<td>5 working days before deadline</td>
<td>DL</td>
<td>➔ Takes into account reviewers’ comments.</td>
<td>Projectplace: Final version folder, e-</td>
</tr>
<tr>
<td></td>
<td></td>
<td>➔ Creates a final version of the deliverable and uploads it to the folder</td>
<td>mails</td>
</tr>
<tr>
<td></td>
<td></td>
<td>➔ Sends the final version to the WPL, the QM and the PC.</td>
<td></td>
</tr>
<tr>
<td>2 working days before deadline</td>
<td>PC &lt; QM &lt; WPL</td>
<td>➔ Final check of the deliverable file before submission.</td>
<td>EC portal (unless printed copies are</td>
</tr>
<tr>
<td></td>
<td></td>
<td>➔ Last-minute changes are managed by the WPL, with the assistance of the</td>
<td>requested)</td>
</tr>
<tr>
<td>Deadline</td>
<td>PC</td>
<td>➔ Submits the deliverable to the EC.</td>
<td></td>
</tr>
</tbody>
</table>
Figure 1: Deliverable life cycle
2.3.2. Internal reporting

Partners are responsible for keeping their organisation contact details up to date:
- By updating the administrative data on the EC Participant Portal.
- By informing the PC about contact details or internal organisational changes.

The PC is responsible for updating Projectplace and the project contact database.

In order to ensure an effective and efficient internal coordination, internal communication involves the organisation of meetings, whether physical or virtual. Categories of meetings are summarised in deliverable D1.1 (Sec. 2.4.2.4.).

Each meeting is led by a Chairperson, who is usually the initiator of the meeting, or appointed by the initiator, for example a WPL. The Chairperson is responsible for producing the meeting minutes using the corresponding template. The Chairperson distributes the meeting minutes to attendees for review within 15 days. If there are any comments, the chairperson introduces them in the document and share a reviewed version of the minutes. Attendees have again 15 days to provide a feedback. If there are no comments, the minutes are considered accepted and they are shared with the PC by the Chairperson, and through Projectplace. Meeting categories are defined in D1.1.

The meeting minutes’ template is available in Projectplace (Annex 4) and its use is mandatory for all partners:

- 5G-MOBIX meeting minutes template.
  - All meeting minutes’ documents should be named using the following structure: "yyyy mm dd - 5G-MOBIX - meeting name - vX.X.docx".

2.3.3. Dissemination activities

Task Leaders and WPLs have to inform the Communication Manager and the WPLs about intended dissemination activities. A reference to the project (name, grant agreement number) must be made in all communication materials. For a scientific publication, this might be, for instance:

"The authors acknowledge support from 5G-MOBIX, which has received funding from the European Union’s Horizon 2020 research and innovation programme under grant agreement No 825496."

Regarding presentations, Microsoft PowerPoint templates (Annex 4) made by the communication team must be used.

Depending on the nature of the dissemination activity, the QMP establishes the following timeframes for internal communication:
<table>
<thead>
<tr>
<th>Type</th>
<th>Notification</th>
<th>Person to notify</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scientific or technical publications</td>
<td>60 calendar days in advance</td>
<td>Task and work package leaders</td>
<td></td>
</tr>
<tr>
<td>Events involving the presentation of a demonstration or development work related to a corridor/trial site.</td>
<td>at least 30 calendar days in advance</td>
<td>Corridor and trial site leaders</td>
<td>These communication activities imply a coordination between corridor and trial site leaders, and the TMT.</td>
</tr>
<tr>
<td>Press releases, articles, interviews and presentations</td>
<td>at least 7 calendar days in advance</td>
<td>Dissemination manager</td>
<td></td>
</tr>
</tbody>
</table>

**Dissemination reporting tool.** WP7 leader is responsible for developing the dissemination reporting tool that is shared with all partners. Partners record all results of their dissemination efforts in this tool.

**Dissemination guidelines.** All the external communication of the project results follows the guidelines established by the EC as stated in article 29 of the Grant Agreement. This article sets mandatory rules regarding the use of the European emblem, the information on the EU funding, the disclaimer excluding Commission responsibility and presents the consequences of non-compliance.

### 2.3.4. Financial reporting

The financial management is carried out by the Project Coordinator. Each member of the Consortium must provide every six months a periodic financial report to declare the actual project costs (including the personnel and other costs) incurred during the execution of the project for each WP, explaining the nature of the mentioned costs. WPLs and the PC review the reports and verify that the work has been properly carried out.

At the end of each reporting period (M18, M36), all partners are required to provide a financial statement to the coordinator. The template will be available on time, financial data are entered manually, and overall figures are generated automatically by predetermined formulas. All partners submit their financial statements to ERTICO electronically no later than 30 days after the end of the reporting period. After gathering all partners’ inputs, ERTICO will fill in the portal session previously opened by the EC. The financial data entered into the portal must be verified accurately by each partner, validated and signed electronically only by the authorised representative (PFSIGN). Afterwards, the Project Coordinator will submit them to the EC on behalf of the consortium partners.

The due date of the financial reports is 60 days after the end of each reporting period. The established meetings scheme will ensure the follow up of these reports as a priority task and dedicated meetings (or conference calls) will be set 2 months prior to the end of each reporting period (M16 & M34) to monitor the development of the report and data collection.
3. QUALITY CONTROL ACTIVITIES

3.1. Deliverable life cycle progress

Each step of the processes described in the previous chapter have to be completed according to an established timeframe and corresponds with a percentage of advancement as described in Table 9 below. These percentages can be used as a standard reference to concretely qualify the state of a deliverable.

Table 9 – Deliverable life cycle progress (percentage)

<table>
<thead>
<tr>
<th>Advancement</th>
<th>Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>10%</td>
<td>First draft of the deliverable’s ToC</td>
<td>Corresponds to the preparation of the first table of contents. It includes the overall deliverable scope, the scope of each section and indicates the partner in charge of preparing each section.</td>
</tr>
<tr>
<td>40%</td>
<td>Half of the sections are completed</td>
<td>Corresponds to the completion of 50% or more of the sections drafted in the ToC. This state of advancement has to be reported by the DL to the Task and WPLs, and the WPL reports this to the TMT.</td>
</tr>
<tr>
<td>80%</td>
<td>Deliverable content completed</td>
<td>Corresponds to the completion of all the content of the deliverable. This also includes the WP internal review steps, which are the responsibility of the DL. The deliverable is available for peer-review. This state of advancement has to be reported by the leader of the deliverable to the Task and WPLs, and the WPL reports this to the TMT.</td>
</tr>
<tr>
<td>90%</td>
<td>Peer review completed</td>
<td>This state corresponds to the completion of the peer review of the deliverable, by two project members that didn’t participate in the creation of the document. This step has to be completed 20 days before the submission deadline. The peer-reviewers need to fill Table 11 – Peer review evaluation table and send it to the DL for consolidation and revision for the final version.</td>
</tr>
<tr>
<td>100%</td>
<td>Deliverable submitted to the EC</td>
<td>This state corresponds to the submission of the deliverable to the EC by the PC. The PC will perform a final check and submit the deliverable to the EC according to the established deadline.</td>
</tr>
</tbody>
</table>

3.2. Peer review process

All deliverables will be peer-reviewed by two experts within the consortium. To this matter, the QM has developed a deliverable register to have a view on all deliverables, their status, and the reviewers that are...
allocated. Before this process is carried out, a WP internal review, managed by the DL, is carried out in order to obtain a consolidated version. The peer review process is presented in Table 10 below.

<table>
<thead>
<tr>
<th>When</th>
<th>What</th>
<th>Owner</th>
<th>Supporting tools</th>
</tr>
</thead>
<tbody>
<tr>
<td>3 months before the submission deadline</td>
<td>The WPL selects two peer reviewers, with the assistance of the QM if needed</td>
<td>WPL</td>
<td>WPL updates the deliverable register file accordingly</td>
</tr>
<tr>
<td>3 months before the submission deadline</td>
<td>The WPL notifies the peer reviewers about their assignment with an indicative date to start the review</td>
<td>DL</td>
<td>E-mail</td>
</tr>
<tr>
<td>Any time</td>
<td>Peer reviewers can consult the deliverable register file to see their assignments as well as an overview of the deliverable properties.</td>
<td>Peer reviewers</td>
<td>Projectplace</td>
</tr>
<tr>
<td>1 month before the submission deadline</td>
<td>The DL uploads the deliverable to be reviewed on Projectplace and formally assigns it to reviewers. Reviewers can edit and comment the document.</td>
<td>DL</td>
<td>Projectplace, with the “add reviewers” option, deliverable register file</td>
</tr>
<tr>
<td>Maximum 20 days before the submission deadline</td>
<td>Each peer reviewer returns a review form to the DL via Projectplace. The deliverable itself must be directly commented with the “Track Changes” option in Microsoft Word and sent back to the DL. Peer reviewers may contact the DL or consult the QM if needed.</td>
<td>Peer reviewers</td>
<td>Projectplace If needed: “Track Changes” comments on Microsoft Word</td>
</tr>
<tr>
<td>5 working days before the submission deadline</td>
<td>The DL, assisted by the contributors who will focus on their own sections, finalises the deliverable based on the comments received.</td>
<td>DL</td>
<td>Projectplace</td>
</tr>
</tbody>
</table>

3.3. Peer review evaluation table

To review a deliverable, each reviewer completes a "review form", stored on Projectplace (Annex 5). This review form contains:
- The “peer review evaluation table” as shown in Table 11, which may be updated with specific evaluation criteria, depending on the deliverable technical requirements.
- A free evaluation field.
Table 11 – Peer review evaluation table

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Definitely</th>
<th>Satisfactorily</th>
<th>Somewhat</th>
<th>Not at all</th>
<th>Not applicable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Deliverable matches the description of the task it relates to</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Objectives are clear and in line with the planned task activities</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Issues at project level are properly treated (e.g. conflict with other WPs)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Authors respond to readers’ needs (defined through deliverable objectives)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Technical approaches used are appropriate</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Content is well organised</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Issues raised are relevant</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Achievements are clearly stated</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Contents contribute to the state of the art</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Conclusions (if any) are valid</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Deliverable is complete (no major parts missing)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Deliverable is formally correct (aligned with the quality management plan)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Peer reviewers and WPLs are free to add specific evaluation criteria to a deliverable according to its technical content*

3.4. List of deliverables

The complete list of deliverables, with additional information, is available in the deliverable register Excel file on Projectplace. Table 12 – List of deliverables shows an extract as of January 2019.

Table 12 – List of deliverables

<table>
<thead>
<tr>
<th>Reference</th>
<th>WP</th>
<th>Task(s)</th>
<th>Name</th>
<th>DL</th>
<th>Type</th>
<th>Dissemination</th>
<th>Deadline</th>
</tr>
</thead>
<tbody>
<tr>
<td>D1.1</td>
<td>WP1</td>
<td>1.1</td>
<td>Project management plan</td>
<td>ERTICO</td>
<td>R</td>
<td>PU</td>
<td>31/12/2018</td>
</tr>
<tr>
<td>Reference</td>
<td>WP</td>
<td>Task(s)</td>
<td>Name</td>
<td>DL</td>
<td>Type</td>
<td>Dissemination</td>
<td>Deadline</td>
</tr>
<tr>
<td>-----------</td>
<td>----</td>
<td>---------</td>
<td>------</td>
<td>----</td>
<td>------</td>
<td>---------------</td>
<td>----------</td>
</tr>
<tr>
<td>D1.2</td>
<td>WP1</td>
<td>1.5</td>
<td>Quality management plan</td>
<td>LIST</td>
<td>R</td>
<td>PU</td>
<td>31/01/2019</td>
</tr>
<tr>
<td>D1.3</td>
<td>WP1</td>
<td>1.3</td>
<td>Innovation management plan</td>
<td>VICOM</td>
<td>R</td>
<td>PU</td>
<td>30/04/2019</td>
</tr>
<tr>
<td>D1.4</td>
<td>WP1</td>
<td>1.4</td>
<td>Data management plan</td>
<td>AKKA</td>
<td>ORDP</td>
<td>PU</td>
<td>30/04/2019</td>
</tr>
<tr>
<td>D1.5</td>
<td>WP1</td>
<td>1.3</td>
<td>Innovation management report</td>
<td>VICOM</td>
<td>R</td>
<td>PU</td>
<td>31/10/2021</td>
</tr>
<tr>
<td>D2.1</td>
<td>WP2</td>
<td>2.1</td>
<td>5G-enabled CCAM use cases specifications</td>
<td>VICOM</td>
<td>R</td>
<td>PU</td>
<td>30/04/2019</td>
</tr>
<tr>
<td>D2.2</td>
<td>WP2</td>
<td>2.2</td>
<td>5G architecture and technologies for CCAM specifications</td>
<td>WINGS</td>
<td>R</td>
<td>PU</td>
<td>31/07/2019</td>
</tr>
<tr>
<td>D2.3</td>
<td>WP2</td>
<td>2.3</td>
<td>Specification of the infrastructure for 5G augmented CCAM</td>
<td>TNO</td>
<td>R</td>
<td>PU</td>
<td>31/07/2019</td>
</tr>
<tr>
<td>D2.4</td>
<td>WP2</td>
<td>2.4</td>
<td>5G augmented vehicle specifications</td>
<td>DAIMLER</td>
<td>R</td>
<td>PU</td>
<td>31/07/2019</td>
</tr>
<tr>
<td>D2.5</td>
<td>WP2</td>
<td>2.5</td>
<td>Initial evaluation KPIs and metrics</td>
<td>ICCS</td>
<td>R</td>
<td>PU</td>
<td>31/07/2019</td>
</tr>
<tr>
<td>D2.6</td>
<td>WP2</td>
<td>2.1, 2.2, 2.3, 2.4, 2.5</td>
<td>Final set of 5G/CCAM systems and vehicle specifications</td>
<td>AALTO</td>
<td>R</td>
<td>PU</td>
<td>30/04/2021</td>
</tr>
<tr>
<td>D3.1</td>
<td>WP3</td>
<td>3.1</td>
<td>Corridor and trial sites roll-out plan</td>
<td>GT-ARC</td>
<td>R</td>
<td>PU</td>
<td>31/10/2019</td>
</tr>
<tr>
<td>D3.2</td>
<td>WP3</td>
<td>3.2</td>
<td>Report vehicle development and adaptation for 5G enabled CCAM use cases</td>
<td>CTAG</td>
<td>R</td>
<td>PU</td>
<td>30/04/2020</td>
</tr>
<tr>
<td>D3.3</td>
<td>WP3</td>
<td>3.3</td>
<td>Report on the 5G technologies integration and roll-out</td>
<td>TU/e</td>
<td>R</td>
<td>PU</td>
<td>30/04/2020</td>
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<tr>
<td>D3.4</td>
<td>WP3</td>
<td>3.4</td>
<td>Report on corridor infrastructure development and integration</td>
<td>TUB</td>
<td>R</td>
<td>PU</td>
<td>30/04/2020</td>
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<td>D3.5</td>
<td>WP3</td>
<td>3.5</td>
<td>Report on the evaluation data management methodology and tools</td>
<td>AKKA</td>
<td>R</td>
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<td>30/04/2020</td>
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<tr>
<td>D3.6</td>
<td>WP3</td>
<td>3.6</td>
<td>Report on trial readiness verifications</td>
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<td>D3.7</td>
<td>WP3</td>
<td>3.1, 3.2, 3.3, 3.4</td>
<td>Final report about development, integration and roll out</td>
<td>GT-ARC</td>
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<td>WP4</td>
<td>4.1</td>
<td>Report on the corridor and trial site plans</td>
<td>VED</td>
<td>R</td>
<td>PU</td>
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<td><strong>D4.2</strong></td>
<td>WP4</td>
<td>4.1</td>
<td>Report on the methodology and pilot site protocol</td>
<td>VED</td>
<td>R</td>
<td>PU</td>
<td>30/04/2020</td>
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<tr>
<td><strong>D4.3</strong></td>
<td>WP4</td>
<td>4.1</td>
<td>Report on the corridor and trial site test activities</td>
<td>VED</td>
<td>R</td>
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<td>30/04/2021</td>
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<td>WP5</td>
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<td>Evaluation methodology and plan</td>
<td>ICCS</td>
<td>R</td>
<td>PU</td>
<td>31/10/2019</td>
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<td><strong>D5.2</strong></td>
<td>WP5</td>
<td>5.2</td>
<td>Report on technical evaluation</td>
<td>CTAG</td>
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<td>31/08/2021</td>
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<td><strong>D5.3</strong></td>
<td>WP5</td>
<td>5.3</td>
<td>Report on impact assessment and cost-benefit analysis</td>
<td>VTT</td>
<td>R</td>
<td>PU</td>
<td>31/08/2021</td>
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<td><strong>D5.4</strong></td>
<td>WP5</td>
<td>5.4</td>
<td>Report on user acceptance</td>
<td>CCG</td>
<td>R</td>
<td>PU</td>
<td>31/08/2021</td>
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<td><strong>D6.1</strong></td>
<td>WP6</td>
<td>6.1</td>
<td>Strategy and methodology to ascertain the deployment enablers</td>
<td>INTRA</td>
<td>R</td>
<td>PU</td>
<td>30/04/2020</td>
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<td>WP6</td>
<td>6.1</td>
<td>Reports on the deployment options for 5G technologies for CCAM</td>
<td>DGT</td>
<td>R</td>
<td>PU</td>
<td>31/08/2021</td>
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<tr>
<td><strong>D6.3</strong></td>
<td>WP6</td>
<td>6.2</td>
<td>Report on the 5G enabled business models for automated mobility</td>
<td>DAIMLER AG</td>
<td>R</td>
<td>PU</td>
<td>31/08/2021</td>
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<tr>
<td><strong>D6.4</strong></td>
<td>WP6</td>
<td>6.3</td>
<td>Report on the standardisation and spectrum allocation needs</td>
<td>TURKCELL</td>
<td>R</td>
<td>PU</td>
<td>31/08/2021</td>
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<tr>
<td><strong>D6.5</strong></td>
<td>WP6</td>
<td>6.4</td>
<td>Reports about the EU policies and regulations recommendations</td>
<td>ASELSAN</td>
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<td><strong>D7.1</strong></td>
<td>WP7</td>
<td>7.1</td>
<td>Communication strategy and plan</td>
<td>ERTICO</td>
<td>R</td>
<td>PU</td>
<td>31/01/2019</td>
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<tr>
<td><strong>D7.2</strong></td>
<td>WP7</td>
<td>7.1</td>
<td>Project communication identity and website</td>
<td>ERTICO</td>
<td>DEC</td>
<td>PU</td>
<td>28/02/2019</td>
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<td>WP7</td>
<td>7.2</td>
<td>Dissemination plan</td>
<td>ICCS</td>
<td>R</td>
<td>PU</td>
<td>31/03/2019</td>
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<tr>
<td><strong>D7.4</strong></td>
<td>WP7</td>
<td>7.3</td>
<td>Initial exploitation strategy and plan</td>
<td>VICOM</td>
<td>R</td>
<td>PU</td>
<td>31/10/2019</td>
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<tr>
<td><strong>D7.5</strong></td>
<td>WP7</td>
<td>7.3</td>
<td>Report on the exploitation results</td>
<td>VICOM</td>
<td>R</td>
<td>PU</td>
<td>31/08/2021</td>
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<tr>
<td><strong>D7.6</strong></td>
<td>WP7</td>
<td>7.4</td>
<td>Report on the international cooperation results</td>
<td>UL</td>
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<td>PU</td>
<td>31/08/2021</td>
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<tr>
<td><strong>D7.7</strong></td>
<td>WP7</td>
<td>7.2</td>
<td>Report on the dissemination activities</td>
<td>ICCS</td>
<td>R</td>
<td>PU</td>
<td>31/10/2021</td>
</tr>
</tbody>
</table>
Milestones have been defined to ensure that the project progresses and is on schedule. These milestones are monitored using the deliverable register file (second tab) and are regularly checked by the project managers and the PC to ensure their successful completion. The milestones, as of January 2019, are listed in Table 13 below. As with the other registers, updates and additions of milestones can be made by the WPLs at the beginning of their WP.

<table>
<thead>
<tr>
<th>Milestone</th>
<th>Milestone name</th>
<th>Related WPs</th>
<th>Due date</th>
<th>Means of verification</th>
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<tbody>
<tr>
<td>MS1</td>
<td>Project kick-off</td>
<td>WP1</td>
<td>M01</td>
<td>Minutes of the kick-off meeting</td>
</tr>
<tr>
<td>MS2</td>
<td>Specifications completed</td>
<td>WP2</td>
<td>M09</td>
<td>D2.1 to D2.5 available</td>
</tr>
<tr>
<td>MS3</td>
<td>Roll-out plan, evaluation methodology and plan, dissemination and exploitation plan ready</td>
<td>WP3, WP5, WP7</td>
<td>M12</td>
<td>D3.1, D5.1 and D7.1 to D7.4 available</td>
</tr>
<tr>
<td>MS4</td>
<td>Roll-out completed, pilot site protocol, deployment enablers plan ready</td>
<td>WP3, WP4, WP6</td>
<td>M18</td>
<td>D3.2 to D3.5, D4.2 and D6.1 available</td>
</tr>
<tr>
<td>MS5</td>
<td>Revised specifications and roll-out reports, end of trials</td>
<td>WP2, WP3, WP4</td>
<td>M36</td>
<td>D2.6, D3.7 and D4.3 available</td>
</tr>
<tr>
<td>MS6</td>
<td>Evaluation, deployment enablers and dissemination &amp; exploitation actions completed and final event</td>
<td>All WPs</td>
<td>M36</td>
<td>Final event report, D5.2 to D5.4, D6.2 to D6.5, D7.5 to D7.7 available</td>
</tr>
</tbody>
</table>
4. **CONTINGENCY PLAN**

4.1. **Risk management**

As already described in D1.1 (Section 2.4.2.3), risk management is led by the PC, the relevant task leaders and the TMT. The QM monitors risk management processes throughout the project duration to ensure low exposure to risk and the highest possible quality of 5G-MOBIX outcomes.

Risks are assessed according to their **probability** and level of negative impact (**severity**). Each of these criteria is evaluated with a score ranging from 1 (low) to 3 (high). Risks with a high probability and a severe impact are handled with particular caution during the project. The following measures are foreseen to mitigate these risks:

- Medium to high probability and high severity: regular monitoring – contingency plans and countermeasures applied by TMT at a very early stage when the risk is identified.
- Low probability or low severity, or for the ones that cannot be foreseen at this stage: TMT will ensure early identification by way of the regular TMT meetings and the internal project reports provided every six months.

In order to regularly monitor the status of the existing risks, and possibly add new ones, a risk register has been established by the QM (available on Projectplace, see Annex 3). The QM ensures that this file is updated throughout the life cycle of the project. New risks are presented and discussed during TMT meetings, and existing risks are systematically discussed. Particular attention will be given to risks that are assessed as having a medium to high probability and a high severity. This procedure ensures a continuous monitoring of the project risks and enables taking preventive and corrective actions to participate to the successful development of 5G-MOBIX.

Table 14 below lists the risks that are in the risk register as of January 2019. This list is based on D1.1 and will evolve throughout the project.

<table>
<thead>
<tr>
<th>Description of risk</th>
<th>WPs</th>
<th>Probability</th>
<th>Severity</th>
<th>Mitigation measures</th>
</tr>
</thead>
<tbody>
<tr>
<td>The objectives in terms of enhancement of CCAM functions are not reached</td>
<td>WP2, WP3</td>
<td>Medium (2)</td>
<td>Medium (2)</td>
<td>WP2 defines how to handle performances enhancement provided by 5G.</td>
</tr>
<tr>
<td>Dissemination and exploitation has limited impact</td>
<td>WP6, WP7</td>
<td>Low (1)</td>
<td>High (3)</td>
<td>The consortium has a wide range of the required organisations to reach the target stakeholders – Events at local sites</td>
</tr>
<tr>
<td>Description of risk</td>
<td>WPs</td>
<td>Probability</td>
<td>Severity</td>
<td>Mitigation measures</td>
</tr>
<tr>
<td>-----------------------------------------------------------------------------------</td>
<td>---------</td>
<td>-------------</td>
<td>----------</td>
<td>----------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Discrepancies in the technical visions: Project delays, adjustment of contributions</td>
<td>WP2</td>
<td>Low (1)</td>
<td>Medium (2)</td>
<td>Planned to reach local stakeholders, relevant organisations committed to join the advisory board.</td>
</tr>
<tr>
<td>Technical work diverges from project initial goals: Core technical items not adequately addressed to meet the project objectives</td>
<td>WP3, WP4</td>
<td>Low (1)</td>
<td>Medium (2)</td>
<td>Frequent communication within WP solves issues that are raised.</td>
</tr>
<tr>
<td>Conflicts of interest between partners on commercial model</td>
<td>WP6</td>
<td>Medium (2)</td>
<td>Low (1)</td>
<td>WP2 issues global specifications and thanks to the phase incremental work plan this risk is minimised.</td>
</tr>
<tr>
<td>Evaluation trials are not successful; data cannot be used for evaluation</td>
<td>WP4, WP5</td>
<td>Low (1)</td>
<td>Low (1)</td>
<td>Multi-phase evaluation methodology: T2.5, T3.5, T4.1 and T5.1 iterative process, and verification (T3.6) as well as roll-out (WP3) is implemented to ensure that data collection meets the expectations.</td>
</tr>
</tbody>
</table>

### 4.2. Non-compliance

Partners shall follow the procedures and guidelines set out in the 5G-MOBIX Quality Plan and meet the obligations defined in the Grant Agreement and Consortium Agreement. In case of a partner’s non-compliance with the Quality Plan, Grant Agreement or Consortium Agreement, WPLs discuss the non-compliance with the partner and together agree upon corrective measures. If the partner fails to comply, the WPL may take the issue to the PC, who will issue a formal warning to the partner. If the partner still does not comply with the agreed corrective measures, the PC takes the issue to the Steering Committee, and ultimately to the General Assembly. Consequences may involve a re-allocation of the partner’s tasks and budgets or the dismissal of the partner from the consortium.
4.3. Grant Agreement amendment

The conditions and procedures for a grant agreement amendment are set in article 55 of the Grant Agreement, and more details are given in D1.1.

Amendments to the contract may be proposed by any partner or group of partners, who then submit a written proposal to the PC. Such a proposal includes:

- Current status of the contract that should be changed,
- Proposed changes,
- Justifications for the amendment,
- Impact of the changes on the project plan.
5. CONCLUSION

This document, the quality management plan (D1.2), covers all procedures, control measures and operating practices intended to ensure that all activities in 5G-MOBIX are carried out with a high standard of quality. It complements the project management plan (D1.1) and must be carefully examined and followed to ensure the proper implementation of the project and the high quality of its deliverables. This work is also crucial to the other project tasks and serves as a reference point for process monitoring, in both technical and managerial terms.

Together with the Grant Agreement and the Consortium Agreement, this document is to be regarded as a reference for the overall project quality management of 5G-MOBIX.
## ANNEX 1 – DOCUMENT CONTROL SHEET

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<td>Author(s)</td>
</tr>
<tr>
<td>Deliverable number</td>
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<td>Actual delivery date</td>
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### Version History

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<th>Author</th>
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### Peer review

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<td>Reviewer 2</td>
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## ANNEX 2 – DELIVERABLE REGISTER


### Deliverable Info

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<th>Deadline</th>
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<td>R</td>
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<td>R</td>
<td>PU</td>
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<td>WP7</td>
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<td>D2.1</td>
<td>WP2</td>
<td>5G-enabled CCAM use cases specifications</td>
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<td>D2.2</td>
<td>WP2</td>
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### Deliverable team

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<th>Contributors</th>
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<tr>
<td>ERTICO</td>
<td>R. Bhandari (ERTICO)</td>
</tr>
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<td>LIST</td>
<td>S. Fay (LIST)</td>
</tr>
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<td>ERTICO</td>
<td>R. Bhandari (ERTICO)</td>
</tr>
<tr>
<td>TNO</td>
<td>R. Bhandari (ERTICO)</td>
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<td>DAIMLER</td>
<td>R. Bhandari (ERTICO)</td>
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<td>R. Bhandari (ERTICO)</td>
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<td>C. Décose (LIST)</td>
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### Current status

- Submitted
- Peer review

Comments for the quality check:

- Quality check completed on 31/12/2018.
## ANNEX 3 – RISK REGISTER


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<th>No.</th>
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<th>Eval.</th>
<th>Probability</th>
<th>Impact</th>
<th>Mitigation Measure</th>
<th>Monitoring</th>
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<td>The objectives in terms of shareholder interest are not reached</td>
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<td>Medium</td>
<td>Low</td>
<td>Review of the plan</td>
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<td>2</td>
<td>WP3, WP4</td>
<td>Dissemination and exploitation has limited impact</td>
<td>High</td>
<td>Low</td>
<td>Medium</td>
<td>Risk Management</td>
<td></td>
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<tr>
<td>3</td>
<td>WP2</td>
<td>Non-regularity in the technical sessions; project delays, adjustment of deadlines</td>
<td>Medium</td>
<td>Low</td>
<td>Medium</td>
<td>Update the plan</td>
<td></td>
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<td>4</td>
<td>WP3, WP4</td>
<td>Technical work clashes from project integration; Core technical terms not accurately addressed to meet the project objectives</td>
<td>Medium</td>
<td>Low</td>
<td>Medium</td>
<td>Update the plan</td>
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<td>5</td>
<td>WP4</td>
<td>Exceedance of internal business partners on commercial model</td>
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<td>Medium</td>
<td>Low</td>
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<td>6</td>
<td>WP6, WP7</td>
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<td>Low</td>
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<td>Low</td>
<td>Risk Management</td>
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</table>

WP2 defines how to handle performance assurance provided by 5G.
ANNEX 4 – TEMPLATES

Location on Projectplace: [Documents/Dissemination/Templates/]

Three template categories are available:

- Meeting minutes (Microsoft Word)
- Deliverables (Microsoft Word)
- Presentations (Microsoft PowerPoint)
# ANNEX 5 – REVIEW FORM


## 1 Peer review evaluation table

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<thead>
<tr>
<th>Criteria</th>
<th>Definitely</th>
<th>Satisfactorily</th>
<th>Somewhat</th>
<th>Not at all</th>
<th>Not applicable</th>
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<tbody>
<tr>
<td>Deliverable matches the description of the tasks it relates to</td>
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<tr>
<td>Objectives are clear and in line with the planned task activities</td>
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<tr>
<td>Issues at project level are properly treated (e.g. conflict with other WPs)</td>
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<tr>
<td>Authors respond to readers’ needs (defined through deliverable objectives)</td>
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<tr>
<td>Technical approaches used are appropriate</td>
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<tr>
<td>Content is well organised</td>
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<td>Issues raised are relevant</td>
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<td>Achievements are clearly stated</td>
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<td>Contents contribute to the state of the art</td>
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<td>Conclusions (if any) are valid</td>
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<tr>
<td>Deliverable is complete (no major parts missing)</td>
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<tr>
<td>Deliverable is formally correct (aligned with the quality management plan)</td>
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</tbody>
</table>

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2. [https://www.pmi.org/](https://www.pmi.org/)