ENVELOPE

Evaluation and validation of connected mobility in real open systems beyond 5GS

Project deliverable D1.2

Quality Management Plan

HORIZON JU Innovation Actions | 101139048 |
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List of contributors

Name	Organisation
Representative of each partner	All ENVELOPE partners

Quality control

	Name	Organisation	Date
Peer review 1	Nikolaos Tsampieris	ERT	22/03/2024
Peer review 2	Maria Trigka	ISI/ATH	25/03/2024

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0.8	12-03-2024	Pavlos Basaras (ICCS)	First complete draft shared for internal review
0.9	13-03-2024	Lazaros Gkatzikis (ICCS)	Updated project executive summary, added disclaimer in the deliverable executive summary, added the role of Open calls manager
1.0	29-03-2024	Pavlos Basaras (ICCS)	Included comments from peer reviewers

Legal Disclaimer

Table of contents

LIST OF TABLES

LIST OF FIGURES

Project executive summary

ENVELOPE aims to advance and open up the reference 5G advanced architecture and transform it into a vertical-oriented one. It proposes a novel open and easy-to-use 5G-advanced architecture to enable a tighter integration of the network and the service information domains by

- exposing network capabilities to verticals,
- providing vertical information to the network, and
- enabling verticals to dynamically request and modify key network aspects.

All of them performed in an open, transparent, easy-to-use and semi-automated way.

ENVELOPE will build APIs that act as an intermediate abstraction layer that translate the complicated 5GS interfaces and services into easy to consume services accessible by the vertical domain. The experimentation framework and the main innovations developed in the project are: Multi-Access Edge Computing (MEC) with service continuity support, zero-touch management, multi-connectivity and predictive QoS.

It will deliver 3 large scale Beyond 5G (B5G) trial sites in Italy, Netherlands and Greece supporting novel vertical services, with advanced exposure capabilities and new functionalities tailored to the services' needs. Although focused on the Connected and Automation Mobility (CAM) vertical, the developments resulting from the use cases (UC) will be reusable by any vertical. The ENVELOPE architecture will serve as an envelope that can cover, accommodate and support any type of vertical services. The applicability of ENVELOPE will be demonstrated and validated via the project CAM UCs and via several 3rd parties that will have the opportunity to conduct funded research and test their innovative solutions over ENVELOPE.

Social Media links:

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Deliverable executive summary

Deliverable D1.2 (Quality Management Plan, QMP) of ENVELOPE aims 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 sets the basis for 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 management 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 for a proper understanding of the present document; for instance, regarding the detailed organisational structure of the project and risk management.

The QMP **covers** the following topics:

- Introduction to quality assurance and quality control.
- Description of QA and QC roles.
- QA 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.
    - Guidelines to define quality metrics associated with technical activities carried out in the project. This part complements the outputs resulting from all technical WPs.
    - Harmonisation of ENVELOPE's communication elements, such as templates for deliverables, internal or European Commission (EC) reports. This part complements the outputs resulting from WP8 – Dissemination, exploitation and international cooperation.
- QC 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:

- Section 1 – Introduction describes the key concepts of quality management and outlines the QMP structure.
- Section 2 – QA 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.
- Section 3 – QC activities provides a set of procedures for optimal monitoring of the project quality and production of deliverables.
- Section 4 – Conclusion summarises the main points of the deliverable.

This project has used a standard methodology already developed in the PoDIUM project (Grant Agreement number: 101069547), following EU recommendations. Ad hoc modifications have been added to comply with the Grant Agreement conditions for ENVELOPE (Grant Agreement number: 101139048).

LIST OF ABBREVIATIONS AND ACRONYMS

Acronym	Meaning
B5G	Beyond 5G
CAM	Connected Automated Mobility
CM	Communication Manager
DL	Deliverable Leaders
EC	European Commission
EAB	External Advisory Board
GA	General Assembly
MEC	Multi-Access Edge Computing
ORDP	Open Research Data Pilot
PU	Public
PC	Project Coordinator
PMBoK	Project Management Body of Knowledge
QMe	Quality Metrics
QMP	Quality Management Plan
QA	Quality Assurance
QC	Quality Control
RQM	Risk & Quality Manager
TM	Technical Manager
TMT	Technical Management Team
ToC	Table of Contents
UC	Use Cases
WP	Work Package
WPLs	Work Package Leaders

1 INTRODUCTION

1.1 Introduction to project quality management

This section outlines key quality management concepts used in this the document. Our 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 2021. PMBoK is the result of work done 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 and apply to the production of all project deliverables and technical developments.

Quality management processes	What
Quality Planning **When:** • Before production process • If quality assurance activities find a quality issue requiring changes in the project and an update of the project management plan.	The QMP determines the quality requirements, how they will be measured and controlled. In ENVELOPE, it is implemented via this deliverable as a standalone document. **Outputs**: The QMP should contain at least: 1. The quality assurance procedures that must be followed during the generation of outcomes and collection of data. 2. The quality control procedures that should apply on the generated outcomes. 3. Clearly identified corresponding roles and responsibilities.
Perform quality assurance **When:** • During the production process, throughout the duration of the project.	Quality assurance is related to the prevention of errors that could affect quality. It ensures that the processes are in place to produce the project deliverables at the applicable level of quality, by asking the following questions: 1. What are the applicable quality standards? 2. How is quality measured? 3. Who measures it? 4. What is measured? 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. **Outputs**: A continuous quality management system is in place.

Perform quality control **When:** Once the production process is completed	Quality control is inspection for quality. Quality control measures the quality level of individual products and deliverables and accepts or rejects them based on the criteria developed by quality assurance. **Outputs**: Quality is monitored on project outputs. Measures are taken to reach the expected quality, which may result in a change to the QMP.

Table 1: Project quality management processes

1.2 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 Quality Assurance (QA) and Quality Control (QC) procedures, which are carried out through the following activities and for the entire duration of the project:

- Liaising with the Technical Management Team (TMT) about the quality status of project results.
- Supporting the Project Coordinator (PC) and the project managers by monitoring and mitigating quality risks.
- Defining ENVELOPE's quality procedures and providing guidelines for the production and peer review of project outputs.
- Supporting the Deliverable Leaders (DLs) 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 Communication Manager (CM) with the production of high-quality presentations and papers from the participants

The current document and the corresponding methodology are based on our work and previous experience gained from the PoDIUM[1] project. By adopting the proven framework (that is also focused on CCAM), and adapting it wherever necessary, we aim to streamline our quality management processes in ENVELOPE.

1.3 Intended audience

The dissemination level of D1.2 is public (PU) and is meant primarily for (a) all members of the ENVELOPE consortium, and (b) the European Commission (EC) services, but it will also be available to those external to the project.

This document is intended to serve as an internal guideline and reference for all ENVELOPE beneficiaries, especially the governance bodies such as the General Assembly (GA), the TMT, and the External Advisory Board (EAB).

[1] https://podium-project.eu/

2 QUALITY ASSURANCE PLAN

Quality Assurance (QA) 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 ENVELOPE, the QA plan:

- specifies the necessary tools (SharePoint, quality registers) and quality metrics,
- defines roles and responsibilities of all parties involved in the quality processes, and
- establishes QA procedures to obtain project deliverables at a high-quality level.

2.1 Quality assurance tools

2.1.1 SharePoint: the platform to share documents and store deliverables

SharePoint is a web-based project management and collaboration platform and serves as the main document management tool used in ENVELOPE. All draft and submitted deliverables are saved on SharePoint. Quality management tracking tools and procedures are also accessible there.

2.1.2 Quality registers

The outputs of the quality management processes operated in ENVELOPE include two documents:

- **Deliverable register**. This file monitors deliverables' writing and submission processes. It is based on the list of deliverables as described in the grant agreement.
- **Quality metrics register**. It includes a set of indicators to be monitored during the project and simple, effective methods for measuring project quality performance.

The editors of these files are, in order of priority: PC > Risk & Quality Manager (RQM) > other Project Managers > Work Package Leaders (WPLs). Any changes made to these documents are discussed in the following TMT meeting.

2.1.3 Quality Metrics (QMe)

ENVELOPE brings together many different areas of expertise. In this context, it is important to establish a clear list of assessment criteria so that the performance of each WP and each project activity can be evaluated. This is the purpose of defining certain quality metrics (QMe).

According to PMBoK, "A quality metric specifically describes a project or product attribute and how the control quality process will measure it." Quality metrics are used both in the QA process (when writing deliverables or working on the project) and the QC process (when checking deliverables against quality metrics).

All QMe are fully described in the quality metrics register, which is an excel file managed by the RQM throughout the duration of the project. For the sake of clarity, it is accessible to all project members on SharePoint. This file is intended to evolve throughout the project and will naturally consider and aggregate some performance indicators used by project managers and WPLs (e.g., dissemination). Ultimately, this file should help the RQM to get a regular overview of the quality level of a variety of project attributes.

The currently identified QMe can be found in the Annex (Section 5).

2.1.4 Milestones

Complementary to the metrics mentioned above, milestones have been defined to ensure that the project progresses according to the schedule. These milestones are listed in the deliverable register file and are regularly checked by the PC and the TMT to ensure their successful completion. As with the other registers, updates and additions of milestones can be made by the WPLs, if necessary. Up to the time of writing of this deliverable, the milestones are as specified in the grant agreement.

2.2 Quality of assurance roles

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

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)**, ICCS, 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. The PC has full authority over all aspects that may affect the quality of the project and, in particular, is responsible for: (a) chairing ENVELOPE decision-making bodies; (b) monitoring and controlling the deliverable drafting and submission processes.
- The **Technical Management Team (TMT)** monitors the operational execution of the project. It is chaired by the PC and is composed of the five managers and the WPLs (see D1.1). The Technical Manager (TM) (a.k.a. Technical and Innovation Manager) is also a key person responsible to monitor and align all technical activities across the project, irrespective of WP/task and Use Case.

The quality assurance roles in ENVELOPE are distributed to most of the participants according to their level of involvement and responsibilities. Especially, the Risk & Quality Manager (RQM) has the most important role in quality management. All roles are summarised below, in Table 2.

Body	Role in the project	Role regarding quality management
Work package leaders	• Act at WP level. • Are responsible for the executive management of the individual WPs. • Are supported by the task leaders. • Are responsible for tracking the delivery of the final deliverables of the WP.	Are part of the TMT.
Task leaders	• Act at task level. • Are responsible for the executive management of the individual tasks. • Are supported by the task participants.	Coordinate the preparation, quality control and submission of the deliverables related to their task.

Deliverable leaders	• Are either task leaders or members of the TMT in order to ensure the proper communication of their activities. • Must ensure the entire life cycle of the deliverables' development.	Have the full responsibility for the deliverable production process according to the expected quality standards and for submitting them on time.
Task participants	• Contribute to the tasks to which they are allocated. • Must contribute to the project deliverables related to the tasks they are involved in.	N/A
Use case leaders	• Responsible for the successful execution of each use case they are assigned with. • Are involved in the technical validation and demonstration of the use cases.	Report to the WPLs of WP2, WP3, WP4, WP6 and to the TMT.
Technical & Innovation Manager (CMS) (i.e., Technical Manager)	• Crucial and active role in the overall coordination of the technical activities. • Acts at project level. • Leads the task related to Innovation Management (T1.2) to ensure that the project coordination develops favourable conditions for innovation and takes necessary actions to make certain that the innovations are effectively exploited after the end of ENVELOPE.	• Is part of the TMT. • Quality control and overall risk management. • Monitoring and control of the production of deliverables.
Data manager & protection officer (ISI)	• Acts at project level. • Leads the Data Management related task (T1.3) and will ensure project coordination in terms of the collection, storage and handling of project data, as well as their publication as part of the Open Research Data Pilot (ORDP). • Ensures adequate dealing with data privacy and data protection regulations.	Is part of the TMT.
Risk & quality Manager (ICCS)	• Acts at project level. • May be involved at WP level (upon request or through the TMT meetings).	• Leads the quality assurance and risk management (T1.4), 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. • Is part of the TMT.

Communication manager (ERT)	• Acts as project level. • Leads the Dissemination, exploitation and international cooperation WP (WP8) to ensure that the project is well coordinated for achieving excellent outreach with public events, scientific publications and presentations.	Is part of the TMT.
Open calls manager (EBOS)	• Leads the "Open calls management and support to 3rd parties" WP to ensure the seamless interaction of the 3rd parties with the project.	Responsible to ensure the high quality of the open call documentation and reviews, and the proper execution of subcontracting

Table 2: Quality assurance roles in ENVELOPE

2.2.2 Strategic and decision-making bodies

These bodies are fully described in D1.1. They have a general role in QA, as explained in Table 3 below.

Body	Role in the project	Role regarding quality management
General Assembly (GA)	Ultimate decision-making body of the ENVELOPE consortium, consisting of at least one representative per beneficiary.	Validate actions if the grant agreement is affected.
Steering Committee	Responsible for the proper execution and implementation of the decisions of the Grant Agreement.	Propose internal quality processes, common templates and communication tools.
External Advisory Board (EAB)	Formed by external experts on specific topics who will regularly advise project contributors on their work.	With its high-quality technical expertise, ensures quality in terms of relevance to the latest technical advancements

Table 3: Strategic and decision-making bodies in ENVELOPE

2.3 Quality assurance procedures

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

2.3.1 Deliverables

The project deliverables are official documents that are formally submitted to the EC. They are listed in deliverable D1.1 and in the grant agreement.

2.3.1.1 General principles

All content generated by ENVELOPE 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. Some good practices regarding form and style while drafting deliverables are:

- Use of the Project templates. Microsoft Word should be preferably 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 is provided.
- Proofreading and language check is applied before submission.
- 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, DLs and contributors must liaise and communicate efficiently and regularly. Lapses must be relayed to the WPLs as well as the PC. The text should be relevant and must reflect the vision of the project.

2.3.1.2 Deliverable structure

Microsoft Word Templates

All Microsoft Word templates are available on the SharePoint platform. 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, Section 5) that serves as a change tracking system. These templates are structured as follows:

- Cover page
- Control sheet
- List of contributors
- Table of contents
- List of tables (if not empty)
- List of figures (if not empty)
- Project executive summary
- Deliverable executive summary
- List of abbreviations (if not empty)
- Introduction
  - Project introduction (required if public deliverable)
  - Purpose of the deliverable
  - 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: “ENVELOPE - DN.N - Name [- vX.X].docx”. Version indication at the title is optional.

2.3.1.3 Deliverable life cycle

WPLs are responsible for the **monitoring** of the activities related to a deliverable, including quality aspects and that deadlines are respected. 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 4 below. These elements also describe the processes related to the handling of deliverable files and their owners. Peer reviewing activities are part of quality control and hence 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 RQM, if needed.

When	Owner	Actions	Supporting tools
At any time	WPL	Responsible for the respect of deadlines and the monitoring of the deliverable progress throughout its life cycle.	SharePoint/Deliverable register, e-mails
4 months before deadline	DL	Provides description of “Purpose of the deliverable” and “Intended audience”	SharePoint/Draft version folder
3 months before deadline		- Complete ToC – up to Level 3 with high level description. - With all task contributors: • Agree on ToC. • Share drafting responsibilities between contributors.	
Writing process		- Monitors progress continuously, corrects bugs and ensures consistency across contributions. - Regularly interacts with WPLs. - Iteratively updates: purpose – audience – conclusion – executive summary.	
2 months before deadline	PC/RQM	- Verify the availability of two peer reviewers not contributing to the deliverable with the support of the RQM. A third reviewer may be appointed by the RQM if needed (this may include the RQM him/herself). - Informs peer reviewers about the review date.	e-mail to identified reviewers
1 month before deadline	DL	- Merges input from all contributors. - Performs final editing of the first draft and consolidates the deliverable. The DL may optionally decide to conduct a WP internal review. - Notifies the WPLs by e-mail when consolidation is done.	SharePoint /Draft version folder, e-mails
3 weeks before deadline		Launches peer review.	
10 days before deadline	Reviewers	Send comments to DL.	

3 working days before deadline	DL	- Considers reviewers' comments. - Creates a final version of the deliverable and uploads it to the folder named Final version. - Sends the final version to the WPLs, the RQM and the PC.	SharePoint/Final version folder, e-mails
Final check period	PC, RQM, WPLs	- Final check of the deliverable file before submission. - Last-minute changes are managed by the WPLs, with the assistance of the RQM.	
Deadline	PC	Submits the deliverable to the EC.	EC portal (unless printed copies are requested)

Table 4: Deliverable life cycle & process owners

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 SharePoint 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.

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 10 days. If there are any comments, the chairperson introduces them in the document and shares a reviewed version of the minutes. Attendees have again 10 days to provide feedback. If there are no comments, the minutes are considered accepted and they are shared with the PC by the chairperson, and through SharePoint. As an alternative a meeting may be recorded after the consensus of all participants. In this case the record file is uploaded at SharePoint within 2 days after the meeting. Meeting categories are defined in D1.1.

A meeting minutes' template is available in SharePoint and its use is mandatory for all partners. All meeting minutes' documents should be named using the following structure: "yyyy mm dd - ENVELOPE - 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. Regarding presentations, the Microsoft PowerPoint templates available in SharePoint can be used. Depending on the nature of the dissemination activity, the timeframes and the exact dissemination procedure for internal communication and permission to disclose project information will be specified in D8.2 (Initial communication and dissemination strategy and plan) and updated in D8.4 (Updated communication and dissemination strategy and plan).

Dissemination reporting tool: WP8 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: External communication of the project results follow the guidelines established by the EC as stated in article 17 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 PC. 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, all partners are required to provide a financial statement to the PC. 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 ICCS electronically no later than 30 days after the end of the reporting period. After gathering all partners' inputs, ICCS 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 PC 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 to monitor the development of the report and data collection.

3 QUALITY CONTROL ACTIVITIES

This section describes the quality control (QC) procedures established to verify the quality of each project deliverable.

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 to a percentage of advancement as described below, in Table 5.

Advancement	Name	Description
10%	First draft of the deliverable's ToC completed	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.
40%	Half of the sections are completed	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.
80%	Deliverable content completed	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.
90%	Peer review completed	This state corresponds to the completion of the peer review of the deliverable, by two project members that didn't participate extensively in the creation of the document. For technical deliverables, the peer-reviewers provide a detailed review of the shared doc with Track changes or otherwise simply fill Table 7 and send it to the DL for consolidation and revision for the final version.
100%	Deliverable submitted to the EC	This state is reached with 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.

Table 5: Deliverable life cycle progress (with completion percentage)

3.2 Peer review process

All deliverables will be peer-reviewed by two experts within the consortium. To this matter, the RQM has developed a deliverable register to have a view on all deliverables, their status, and the allocated reviewers. 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 detailed steps of the peer review process are presented below, in Table 6.

When	What	Owner	Supporting tools
2 months before the submission deadline	The PC verifies the availability of the two allocated peer reviewers, and if they are not available, updates the allocation, with the assistance of the RQM, if needed.	PC	PC updates the deliverable register file accordingly
2 months before the submission deadline	The PC notifies the peer reviewers about their assignment with an indicative date to start the review.	PC	E-mail
Any time	Peer reviewers can consult the deliverable register file to see their assignments as well as an overview of the deliverable properties.	Peer reviewers	SharePoint
3 weeks before the submission deadline	The DL uploads the deliverable to be reviewed on SharePoint and formally assigns it to reviewers. Reviewers can edit and comment the document.	DL	SharePoint, deliverable register file
Maximum 10 days before the submission deadline	Each peer reviewer returns a review form to the DL via Sharepoint. 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 RQM if needed.	Peer reviewers	SharePoint, If needed: “Track Changes” comments on Microsoft Word
3 working days before the submission deadline	The DL, assisted by the contributors who will focus on their own sections, finalises the deliverable based on the comments received.	DL	SharePoint

Table 6: Peer review process.

3.3 Peer review evaluation table

To review a deliverable, each reviewer provides detailed comments with track changes enabled to the DL or, if no major comments exist, completes a “review form” stored on SharePoint. This review form contains:

- The “peer review evaluation table” as shown in Table 7, which may be updated with specific evaluation criteria, depending on the deliverable technical requirements.

- A free evaluation field.

Criteria	Definitely	Satisfactory	Somewhat	Not at all	Not applicable
Deliverable matches the description of the task it relates to					
Objectives are clear and in line with the planned task activities					
Issues at project level are properly treated (e.g., conflict with other WPs)					
Authors responds to readers' needs (defined through deliverable objectives)					
Technical approaches used are appropriate					
Content is well organised					
Issues raised are relevant					
Achievements are clearly stated					
Contents contribute to the state of the art					
Conclusions (if any) are valid					
Deliverable is complete (no major parts missing)					
Deliverable is formally correct (aligned with the quality management plan)					
Any additional criterion to be added by WPL					

Table 7: Peer review form

4 CONCLUSIONS

The quality management plan of ENVELOPE covers all the procedures, control measures and operating practices intended to ensure that all project activities are carried out with a high standard of quality. It complements the project management plan (see 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 ENVELOPE.

5 ANNEX

In this annex, we provide a view on basic QMP tools/files described throughout this Deliverable.

5.1 Templates

Three template categories are available on the SharePoint:

- Meeting minutes/Various documents (Microsoft Word)
- Presentations (Microsoft PowerPoint) (Figure 1)
- Deliverables (Microsoft Word)

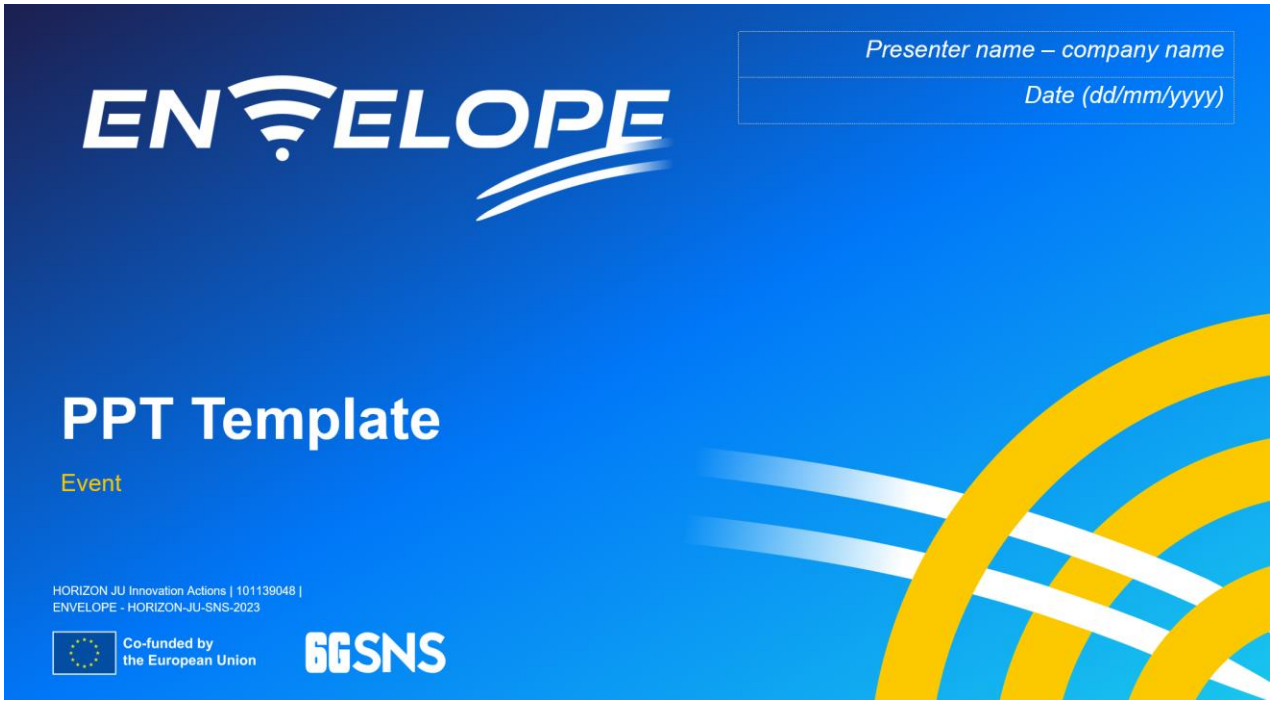

Figure 1: ENVELOPE presentations template.

All deliverables will include in the beginning of the document “Document control sheet” according to the provided template, and as shown below:

Dissemination level	Choose an item.
Type of deliverable	Choose an item.
Work package	Choose an item.
Title of the Deliverable	Choose an item.
Status – version, date	Choose an item - Vx.y, DD/MM/YYYY
Deliverable leader	Text

Contractual date of delivery	Click or tap to enter a date.
Submission date	Click or tap to enter a date.
Keywords	Text

List of contributors

Name	Organisation
John Doe	XXX

Quality control

	Name	Organisation	Date
Peer review 1			DD/MM/YYYY
Peer review 2			DD/MM/YYYY

Version History

Version	Date	Author	Summary of changes
	DD/MM/YYYY		
	DD/MM/YYYY		

5.2 Deliverable register

The current state of the deliverable register is as shown below:

Del No.	Deliverable name	WP	Lead	Type	Diss. lvl	Delivery date			Reviewer 1	Reviewer 2
D1.1	Project management plan	WP1	ICCS	R	PU	M03			TEO	TNO
D1.2	Quality management plan	WP1	ICCS	R	PU	M03			ERT	ISI/ATH
D1.3	Innovation management plan	WP1	CMS	R	PU	M06			NCSRD	ICCS
D1.4	Data management plan	WP1	ISI/ATH	DMP	PU	M06			NXW	COTO
D1.5	Updated data management plan	WP1	ISI/ATH	DMP	PU	M24			COTO	LINKS
D1.6	Innovation management report	WP1	CMS	R	PU	M36			ICCS	ERT
D2.1	ENVELOPE use cases description and specifications	WP2	ISI/ATH	R	PU	M09			LINKS	FOGUS
D2.2	ENVELOPE platform architecture requirements and specification	WP2	NCSRD	R	PU	M12			IQU	ICCS
D2.3	ENVELOPE availability and cooperation enablers definition	WP2	VICOM	R	PU	M12			CMS	NCSRD
D3.1	ENVELOPE experimentation as a service development description	WP3	LINKS	R	PU	M18			NXW	EBOS
D3.2	ENVELOPE open and dynamically reconfigurable B5GS description	WP3	NCSRD	R	PU	M21			TNO	LINKS
D3.3	ENVELOPE innovation developments report	WP3	UDE	R	PU	M24			EBOS	IQU
D4.1	Deployment of ENVELOPE architecture to the sites and development of data collection tools and internet service repository	WP4	ICCS	R	PU	M27			KPN	NCSRD
D4.2	ENVELOPE trial sites integration and preevaluation testing report	WP4	TNO	R	SEN	M30			SISW	OTE
D5.1	Open calls documentation package	WP5	EBOS	R	PU	M18			ICCS	TEO
D5.2	Initial report on the Open calls proposal evaluation and contracting	WP5	EBOS	R	PU	M24			ERT	INC
D5.3	Final report on the Open calls proposal evaluation and contracting	WP5	EBOS	R	PU	M34			ISI/ATH	LINKS
D6.1	ENVELOPE evaluation methodology	WP6	VICOM	R	PU	M27			CMS	ICCS
D6.2	Technical evaluation and demonstration of the ENVELOPE UCs	WP6	ISI/ATH	DEM	PU	M34			ISFM	TNO
D6.3	Technical evaluation and demonstration of the ENVELOPE open call projects	WP6	IQU	DEM	PU	M34			EBOS	VICOM
D6.4	Impact assessment and user acceptance report	WP6	EBOS	R	PU	M36			SISW	IQU
D7.1	Market and actor-role analysis	WP7	INC	R	PU	M18			FOGUS	UDE
D7.2	Business models for sustainable 5G adv./6G CAM service provisioning	WP7	INC	R	SEN	M30			LNVO	OTE
D7.3	Techno-economic analysis and sustainability of ENVELOPE business models	WP7	INC	R	SEN	M36			LINKS	CMS
D7.4	Standardization activities, EU policies and regulations recommendations	WP7	LNVO	R	PU	M36			HPE	TIM
D8.1	Brand identity and guidelines	WP8	ERT	DEC	PU	M03			ICCS	NCSRD
D8.2	Initial comm. and dissemination strategy and plan	WP8	ERT	R	PU	M04			ICCS	UDE
D8.3	Communication tools	WP8	ERT	DEC	PU	M04			ISFM	FOGUS
D8.4	Updated comm. and dissemination strategy and plan	WP8	ERT	R	PU	M18			ISI/ATH	INC
D8.5	Exploitation plan	WP8	EBOS	R	SEN	M18			EBOS	VICOM
D8.6	Report on the dissemination activities	WP8	ICCS	R	PU	M36			ICCS	ERT
D8.7	Report on liaison activities and international cooperation	WP8	ERT	R	PU	M36			VICOM	LNVO
D8.8	Exploitation report	WP8	EBOS	R	SEN	M36			INC	ISI/ATH

5.3 Quality metrics register

The list of the items in the quality metrics register follow:

QMe ID	Related WPs	Type	Quality Metric	Performance Measure	Acceptance criteria
QMe1	All	Governance	Deliverable is submitted to the PC at least 5 working days before the deadline for submitting the deliverable to the EC	QMe1 = (deadline-5) – PC submission date	QMe1 >= 0
QMe2	All	Governance	Respect of the deadline for submitting the deliverable to the EC	QMe2 = deadline – EC submission date	QMe2 >= 0
QMe3	WP2-WP4, WP6	Technical dissemination	Number of scientific publications	QMe3 = number of papers in scientific journals and international conferences	1st year: QMe3 > 5 2nd year: QMe3 > 10 3rd year: QMe3 > 20
QMe4	All	Dissemination	Number of non-scientific publications	QMe4 = number of non- scientific publications	1st year: QMe4 > 1 2nd year: QMe4 > 2 3rd year: QMe4 > 2
QMe5	All	Dissemination	Number of project-related presentations	QMe5 = number of presentations	1st year: QMe5 > 5 2nd year: QMe5 > 10 3rd year: QMe5 > 15
QMe6	All	Dissemination	Popularity of public events	QMe6 = total number of participants / number of events	1st year: - 2nd year: QMe6 > 75 3rd year: QMe6 > 150

QMe7	All	Dissemination	Number of trade shows	QMe7 = number of ENVELOPE-related exhibition stands	QMe7 > 1 (annually)
QMe8	WP8	Dissemination	Website popularity	QMe8 = number of users per month	1st year: QMe8 > 100 2nd year: QMe8 > 150 3rd year: QMe8 > 200
QMe9	WP8	Dissemination	Social networks impact	QMe9 = number of messages with the #ENVELOPE hashtag	1st year: QMe9 >= 100 2nd year: QMe9 >= 200 3rd year: QMe9 >= 300
QMe10	WP8	Dissemination	Engagement to the project via professional social network	QMe10 = number of followers of ENVELOPE group in LinkedIn	1st year: QMe10 >= 100 2nd year: QMe10 >= 200 3rd year: QMe10 >= 300
QMe11	WP8	Dissemination	Leaflets dissemination activity	QMe11 = number of technical leaflets published and distributed (project brochure, etc.)	1st year: QMe11 >= 100 2nd year: QMe11 >= 100 3rd year: QMe11 >= 100
QMe12	WP8	Dissemination	Videos dissemination activity	QMe12 = number of project videos produced	1st year: QMe12 > 1 2nd year: QMe12 > 2 3rd year: QMe12 > 3

QMe13	WP8	Dissemination	Webinars	QMe13 = number of webinars per year	1st year: QMe13 >= 1 2nd year: QMe13 >= 2 3rd year: QMe13 >= 4
QMe14	WP8	Dissemination	Participation in webinars	QMe14 = number of participants in each webinar	QMe14 >= 50