D7.1

Project Quality Plan

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

PHOTONICS PUBLIC PRIVATE PARTNERSHIP

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Disclaimer

Executive Summary

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

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

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

Table of Content

Chapter 1 Introduction 1

Chapter 2 Project structure 2

2.1 Project bodies 2

2.2 Steps towards project participation 4

Chapter 3 Quality management strategy 5

3.1 Quality planning 5

3.1.1 Visual identity 5

3.1.2 Project policies 6

3.1.2.1 Meeting procedures 6

3.1.2.2 Deliverables 7

3.1.2.3 Publishing scientific papers and research data 7

3.2 Quality assurance 8

3.2.1 Interim Management Reports (IMR) 8

3.2.2 Responsibilities and internal review 10

3.2.3 Conference calls and meetings 11

3.3 Quality control 11

3.3.1 Deliverable review process 11

3.3.2 Risk management 14

3.3.3 Industry Advisory Board 14

Chapter 4 Summary and Conclusion 15

Chapter 5 List of Abbreviations 16

List of Figures

Figure 1: REALHOLO project bodies 2
Figure 2: Review and Quality Assurance Process for Deliverables 11

List of Tables

Table 1: REALHOLO Mailing Lists 4
Table 2: Extract of IMR 1 9
Table 3: Extract of IMR 2 – e.g SeeReal 9
Table 4: Deliverables and Milestones Overview 10
Table 5: Internal Review Form 13

Chapter 1 Introduction

The Project Quality Plan is an integral part of the REALHOLO project management. Its purpose is to describe how quality is managed throughout the lifecycle of the project. Quality must always be planned in a project in order to prevent unnecessary rework, as well as waste of cost and time. Quality should also be considered from both, an outcome and process perspective. The processes and activities leading to deliverables need to fulfil certain quality levels in order to reach the expected high-quality outcome. To address all quality requirements and quality assurance mechanisms in the REALHOLO project, the Project Quality Plan was developed by the Project Management Team. This plan acts as a guide for the project and all partners are asked to adhere to it.

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

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

- **Quality Planning**

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

- **Quality Assurance**

Quality Assurance stands for project processes that need to be performed effectively to reach the targeted outcomes. This involves the establishment of Interim Management Reports, clear responsibilities and regular, clearly guided conf calls and face-2-face meetings. These activities within REALHOLO are summarized in section 3.2.

- **Quality Control**

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

Chapter 2 Project structure

This chapter introduces the main project characteristics in terms of participants, WPs and responsibilities, in order to allow new members to get more easily on board and find important information at a glance.

2.1 Project bodies

REALHOLO is a research project with 7 Work Packages (WPs) and 8 partners, coordinated by Dr. Klaus-Michael Koch (Technikon). Dr. Hagen Stolle (SeeReal) acts as the Technical Leader and will be responsible for the scientific and technical coordination of the project.

1) **Technikon** - TECHNIKON Forschungs- und Planungsgesellschaft mbH, Austria (AT)
2) **SeeReal -** SEEREAL Technologies gmbh, Germany (DE)
3) **Fraunhofer –** Fraunhofer Gesellschaft zur Foerderung der Angewandtenforschung e.v., Germany (DE)
4) **nSilition –** nSilition, Belgium (BE)
5) **OminiChip –** Omnichip Spolka z Ograniczona od powiedzialnoscia, Poland (PO)
6) **Valeo –** Valeo Comfort and Driving Assistance, France (FR)
7) **Sencio –** SENCIO BV, Netherlands (NL)
8) **X-FAB –** X-FAB France, France (FR)

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

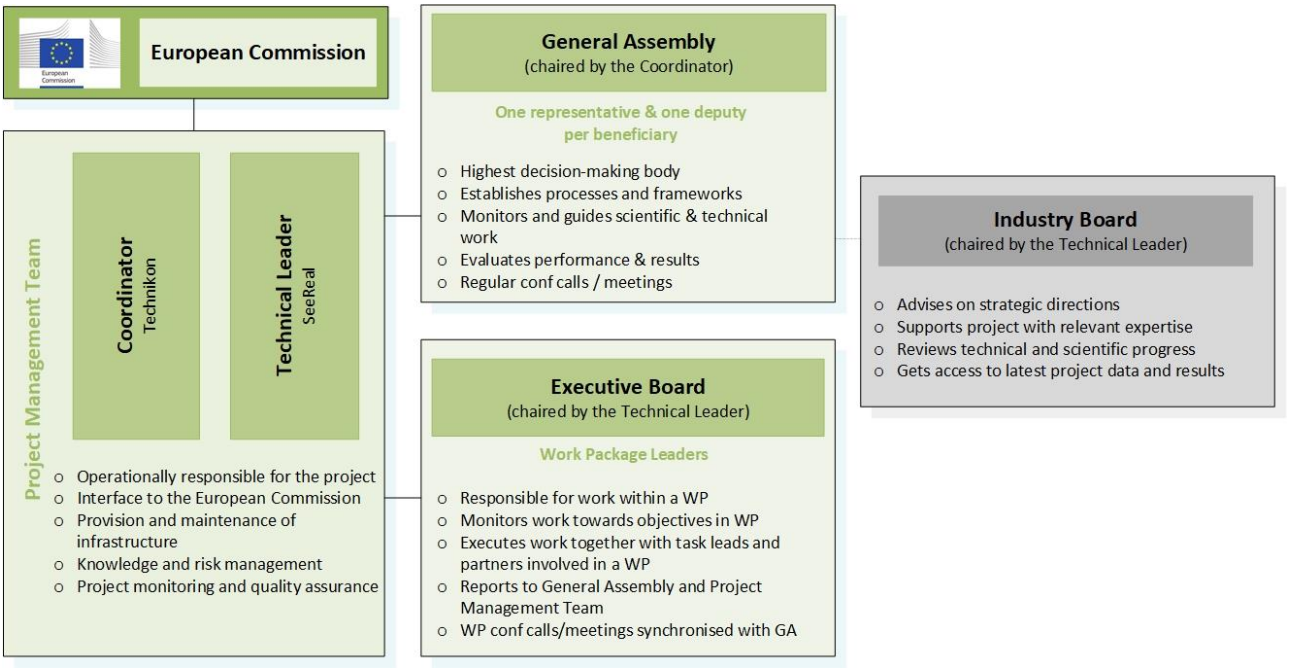

Figure 1: REALHOLO project bodies

The defined REALHOLO project bodies, the decision-making processes as well as the responsibilities are bindingly described in the Consortium Agreement as well as in the Grant Agreement.

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

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

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

- **TEC** (Klaus-Michael Koch, deputy: Marion Habernig)
- **SeeReal** (Hagen Stolle, deputy: Johannes Pleikies)
- **Fraunhofer** (Peter Dürr, deputy: Christoph Hohle)
- **NSILITION** (Thierry Delmot, deputy: Bassem Fahs, Anne-Sophie Bruyére)
- **OminiChip** (Tomasz Pomorski, deputy: Alicja Droszcz)
- **Valeo** (Stéphane Gache, deputy: Antoine De-Monts)
- **Sencio** (Oliver Maiwald, deputy: Ignas Van Dommelen)
- **X-FAB** (Laurence Dassas, deputy: Christoph Sabatier)

The **Executive Board** (EB) is the assembly of all work package leaders. It is chaired by the technical leader, Hagen Stolle from SeeReal.

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

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

- WP1: **SeeReal** (Hagen Stolle, deputy: Johannes Pleikies)
- WP2: **nSilition** (Thierry Delmot, deputy: Bassem Fahs, Anne-Sophie Bruyére)
- WP3: **Fraunhofer** (Peter Dürr, deputy: Christoph Hohle)
- WP4: **SeeReal** (Hagen Stolle, deputy : Johannes Pleikies)
- WP5: **SeeReal** (Hagen Stolle, deputy : Johannes Pleikies)
- WP6: **Valeo** (Stéphane Gache, deputy: Antoine De-Monts)
- WP7: **TEC** (Marion Habernig, deputy: Martina Truskaller)

2.2 Steps towards project participation

1) Initial registration

New participants in the project need to contact the coordinator in order to receive access to the REALHOLO working directory (Nextcloud), website and chat tool.

2) Contact details and mailing list

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

So far the following REALHOLO mailing lists are activated and in use:

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

Table 1: REALHOLO Mailing Lists

3) Project handbook

New participants will receive this document, as short introduction to get familiar with:

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

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

4) Introduction to partners and start

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

Chapter 3 Quality management strategy

Quality is the degree to which the project results fulfil the project requirements. For this purpose, a Quality Management Strategy has been defined within the REALHOLO project through three key processes, namely Quality Planning, Quality Assurance and Quality Control. These three processes are interconnected and interact in order to guarantee efficient and high-quality work.

3.1 Quality planning

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

3.1.1 Visual identity

The creation of a corporate visual identity plays a significant role in the way the REALHOLO project presents itself to both internal and external stakeholders. A corporate visual identity expresses the values and ambitions of the project and its characteristics and makes the project visible and recognisable. It is of vital importance that people know that the project exists, remembering its name as well as the names of its collaborators. In the following, we briefly list the actions that were taken in order to create a visual identity of the project. A more detailed presentation of the materials and activities can be found in D6.1 “Internal and external IT communication infrastructure and project website”.

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

Project website: For greater visibility of the project, a website was launched in the first month. The REALHOLO project website is available at the following link: https://realholo.eu/

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

Podcast and videos: The REALHOLO consortium will publish podcasts on a regular basis. TECHNIKON’s media department will record these podcasts at the project meetings or remotely and share them on https://euvation.eu/ and via a podcast-hosting platform (OmnyStudio) under the channel "EUVATION" (https://euvation.eu/) on Spotify, iTunes and Google Podcasts.

The links to the podcasts will also be published on the different social media channels. In addition, project videos will be produced and published. Every year video material with durations of up to 2 minutes and animated 2D/3D content will be produced by TECHNIKON and published on Vimeo. These videos will then also be shared on the website and on the REALHOLO Social Media accounts.

Templates: Presenting the REALHOLO project with a clear visual identity is a goal of all project partners. Therefore, templates that bear the hallmark of the REALHOLO design were created and made available to all project partners. All templates include the REALHOLO logo, the REALHOLO colours, a disclaimer and acknowledgement to the EC and Photonics21.

Social Media: In order to reach our main target groups, Twitter and LinkedIn are used to raise awareness of project related news, results and publications and to foster cooperation activities.

3.1.2 Project policies

Internal project guidelines, or so-called project policies, are established by the coordinator to guarantee efficient internal and external processes concerning meetings, deliverables and publications.

3.1.2.1 Meeting procedures

Since the outbreak of the Covid-19 pandemic in 2020, physical meetings have been reduced to a minimum in all REALHOLO partner organizations (see Section 3.2.3). Therefore, the project kicked off with a virtual meeting and will continue to hold virtual meetings until the situation improves in all participating countries. However, in the future, REALHOLO partners will try to meet face-to-face and for this purpose, the following rules are set out:

The consortium agrees that the hosting partner of a meeting pays for conference facilities, catering, and the like while each partner pays for accommodation and provisions. Usually the host invites for lunch and coffee breaks during the meeting. If possible, the hosting partner invites the partners to one common dinner.

Meeting locations have to change regularly in order to achieve a fair distribution of costs. To keep costs down, we prefer to meet at company facilities that can often be used for free, instead of meeting at hotels or other event locations. If that is not possible at all, the host can also arrange/ask for offers for conference rooms in a hotel. Then the partners pay separately for their conference fees (room fee including coffee and lunch breaks).

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

Meeting Room(s):

- On the first day we need one big room for approx. 20-25 people (if every partner shows up with 2-3 persons; a participant list will be created to provide further details).
- For the second day parallel sessions might be suitable. To plan such sessions, one or two rooms (for approx. 10-12 persons each) are required. (It will be decided in advanced how many breakout sessions are necessary for the dedicated meeting.)
- Are there any costs for the conference room/day/person? (e.g. coffee break or lunch)?
- Are there any other expenses?

Infrastructure/Equipment:

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

The host of a REALHOLO internal meeting has to prepare a 1-2 pager with logistic information about one month before the meeting. This 1-2 pager is checked by the Project Management Team and discussed within the technical progress conf calls to make sure that the meeting allocation fits the planned meeting and the number of participants. The number of participants can be evaluated by a participant list on Nextcloud, which needs to be filled by all partners at least one and a half months before the meeting. The coordinator together with the meeting host, has to prepare the agenda about one month before the meeting as well.

All these specific requirements are already taken into account when choosing the host of the next meeting. If a partner volunteers to host a meeting, but is not able to fulfil the meeting process described in section 3.1.2.1, another partner will be chosen for hosting it.

3.1.2.2 Deliverables

Deliverables must be stored in the "Deliverables" folder of the corresponding Work Package on Nextcloud. The following file naming is used for all deliverables:

- *REALHOLO-[D.xx.x]-[Level of Dissemination]-[Due-Month]*.

Nature of Deliverables

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

  Deliverables marked with nature "DEM" will be accompanied by a small written report outlining its structure and purpose in order to justify the achievement of the deliverable.
- "DEC" (Websites, patent filings, videos, etc.)

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

  Deliverables marked with nature "OTHER" will be accompanied by a small written report outlining its structure and purpose in order to justify the achievement of the deliverable.
- "ORDP" (Open Research Data Pilot)

As deliverables are the most important outcome of the project, excellent quality needs to be ensured. Therefore, an internal review process was defined, which is described in detail in section 3.3.1.

3.1.2.3 Publishing scientific papers and research data

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

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

Furthermore, the publication, or the link to it will be made accessible on the project website. Partners shall inform the coordinator as soon as a link or document in pdf format is available. The Commission and any interested party will be informed about the scientific publication via our website and social media channels.

In order to comply with GA Article 29.2 about the provision of open access to scientific publications, REALHOLO publications will be uploaded on the OpenAIRE data repository Zenodo.

All publications or any other dissemination relating to foreground with financial support from the European Commission shall include the following acknowledgment (GA 29.4):

"The REALHOLO project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No. 101014977. This project is an initiative of the Photonics Public Private Partnership."

Authorship "Rules of Thumb"

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

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

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

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

According to GA Article 29.3 the parties must “deposit in a research data repository and take measures to make it possible for third parties to access, mine, exploit, reproduce and disseminate – free of charge for any user” research “data, including associated metadata, needed to validate the results presented in scientific publications”. To make sure such data produced in the REALHOLO project is made openly accessible, the Coordinator will send a data specification sheet to the partner owning the data, which needs to be filled for each identified dataset. This must also be done for data not directly attributable to a scientific publication. Depending on the sensitivity of the information - either public or confidential – the data will either be published or a justification to the confidentiality reason will be requested.

3.2 Quality assurance

Quality assurance focuses on the creation and monitoring of processes based on set requirements. Quality assurance supports the monitoring of project processes, which need to be performed effectively to reach the targeted outcomes. This involves the establishment of Interim Management Reports, clear responsibilities and regular, clearly guided conference calls and face-to-face meetings.

3.2.1 Interim Management Reports (IMR)

The basic idea of internal “Interim Management Reports” is to implement a tool, which requires each partner to provide information regarding their past, ongoing and planned work, as well as information on the spent resources in a specific period of time. The IMR is a cumulative report created on a quarterly basis, to which all partners contribute. It is an efficient tool to provide the Project Management Team a good understanding of the status and progress of the work and to detect any possible delays or deviations well in advance. Furthermore, the IMR serves as the basis for the periodic reports to the EC.

The structure and the target of each section in the IMR are as follows:

Chapter 1 “Explanation of the work carried out by the beneficiaries and overview of the progress (including deviations)” asks for partner information regarding the work performed within the respective quarter. This helps the Project Management Team to monitor partner activities and the progress made within the last quarter. It further asks the WP leader explicitly for the main achievements and exploitable results per WP, in order to have a clear view on the results and how they will impact the ongoing work. For the Coordinator it was also of high importance to add a section, which gives the partners the opportunity to describe deviations concerning the work plan described in the DoA. In this subsection of each WP partners describe problems they had/have to cope with and that may be related to problems with larger impact.

Chapter 2 of the IMR reports on the status of the deliverables and milestones which were due until the issue of the report, as well as on those due in the upcoming quarter.

Chapter 3 is dedicated to dissemination, communication, exploitation and standardisation activities carried out in the respective quarter, while Chapter 4 summarizes the publications (and associated research data) that were submitted until the issue of the IMR or are planned to be submitted in the next quarter. Every six months, a separate chapter about risk assessment will be added to the IMR. The process of risk management is described in section 3.3.2.

Finally, the IMR contains a chapter about the use of resources of each partner per WP and task. Chapter 6 gives an overview of the total planned person months in comparison to the actual spent person months. A subsection of Chapter 5 allows partners to shortly describe and justify deviations regarding their planned use of resources and person months.

The coordinator prepares a cumulative report with the inputs from all partners every quarter, which is checked by the Technical Leader. If shortcomings or inconsistencies are identified, they will be discussed in the next technical progress conf call and fixed latest within the next IMR.

WP1 – Use cases and target specifications [M01-M09]
Overview on Tasks in WP1: **T1.1: Finalizing target specification of MMA [M01-M06]** **T1.2: Finalizing target specification of CMOS backplane and driving electronics [M01-M06]** **T1.3: 3Finalizing target specification on back-end fabrication of MMA component: packaging and design of precision made optical window [M01-M06]** **T1.4: Finalizing target specification on the demonstration of a real holographic MR HUD [M01-M09]**
Explain the work carried out in WP1 during the reporting period for your beneficiary! <fill in>
Explain the reasons for deviations from the DoA, the consequences and the proposed corrective actions. *Include explanations for tasks not fully implemented, critical objectives not fully achieved and/or not being on schedule. Explain also the impact on other WP/tasks on the available resources and the planning.*
Deviation from DoA: <yes/no>
If yes, please provide the following information:
Reason: <fill in if applicable> Consequences: <fill in if applicable> Corrective actions: <fill in if applicable>
For the WP1 leader: Achievements and Results
Summarize the main achievements and results for WP1. <fill in>

Table 2: Extract of IMR 1

WP	Total Planned (according to DoA)	Actual Expenditure								
		M01-M03	M04-M06	M07-M09	M10-M12	M13-M15	M16-M18	Total (M01-M18)	Total in %	Remaining resources
WP1	9,00	<fill in>	<fill in>	<fill in>	<fill in>	<fill in>	<fill in>	000	0%	9.00
WP2	7,00	<fill in>	<fill in>	<fill in>	<fill in>	<fill in>	<fill in>	000	0%	7.00
WP3	6,00	<fill in>	<fill in>	<fill in>	<fill in>	<fill in>	<fill in>	000	0%	6.00
WP4	30,00	<fill in>	<fill in>	<fill in>	<fill in>	<fill in>	<fill in>	000	0%	30.00
WP5	16,00	<fill in>	<fill in>	<fill in>	<fill in>	<fill in>	<fill in>	000	0%	16.00
WP6	6,00	<fill in>	<fill in>	<fill in>	<fill in>	<fill in>	<fill in>	000	0%	6.00
WP7	6,00	<fill in>	<fill in>	<fill in>	<fill in>	<fill in>	<fill in>	000	0%	6.00
Total	80.00	0	0	0	0	0	0	000	0%	80.00

Table 3: Extract of IMR 2 – e.g SeeReal

3.2.2 Responsibilities and internal review

Transparency of roles and responsibilities has a big impact on the project success. Uncertainty can dramatically affect individual, organisational as well as the consortium's overall performance. Therefore, as already mentioned in Chapter 2, responsible persons for each organisation and per WP were defined. In a further step, responsibilities for deliverables are defined. The table below lists all deliverables and milestones due within the first 12 months of the project. While the leader of each deliverable has already been set in the DoA, the editor responsible for requesting and guiding partner inputs towards a punctual and high-quality submission, were chosen at the project start. In line with the internal review process (described in section 3.3.1) two internal reviewers for each deliverable are defined and clear deadlines for the first draft, the review feedback, as well as for the final version were established.

ACR	Nature	Type	Deliverables and Milestones	WHO	Editor name	WP	Del. Month	Review Start	Deadline	upcoming DEADLINES	Name of Reviewer 1
D6.1	PU	Websites, patents filing, etc.	Internal and external IT communication infrastructure and project website	TEC		WP6	M03	10/03/2021	31/03/2021	Deadline next month	
D6.9	PU	R	Professional communication kits – Version 1	TEC		WP6	M03	10/03/2021	31/03/2021	Deadline next month	
D7.1	PU	R	Project quality plan	TEC		WP7	M03	10/03/2021	31/03/2021	Deadline next month	
D1.1	CO	R	Component specification plan	SeeReal		WP1	M06	09/06/2021	30/06/2021		
D1.2	CO	R	System specification plan	SeeReal		WP1	M06	09/06/2021	30/06/2021		
D6.2	CO	ORDP	Data Management Plan	TEC		WP6	M06	09/06/2021	30/06/2021		
D7.2	CO	R	Interim progress report	TEC		WP7	M06	09/06/2021	30/06/2021		
MS1			Requirements and specifications for demonstrators and technology assessment completed	SeeReal		WP1	M06	09/06/2021	30/06/2021		
D1.3	PU	Websites, patents filing, etc.	Dissemination report on component and system specifications	SeeReal		WP1	M09	09/09/2021	30/09/2021		
D2.1	CO	R	Report on CMOS backplane subcircuit design and use of CMOS test chips for failure test methods	nSilition		WP2	M12	10/12/2021	31/12/2021		
D3.1	CO	R	Report on MEMS process and actuator design concepts	Fraunhofer		WP3	M12	10/12/2021	31/12/2021		
D6.10	PU	R	Professional communication kits – Version 2	TEC		WP6	M12	10/12/2021	31/12/2021		
D6.3	CO	R	Intermediate business plan and exploitation report	Valeo		WP6	M12	10/12/2021	31/12/2021		
D6.4	PU	R	Intermediate dissemination report	TEC		WP6	M12	10/12/2021	31/12/2021		
D7.3	CO	R	Risk assessment plan	TEC		WP7	M12	10/12/2021	31/12/2021		
D7.4	CO	R	Ethics report	TEC		WP7	M12	10/12/2021	31/12/2021		
MS2			Completion of conceptual design of MEMS, CMOS and the package	Fraunhofer		WP2, WP3	M12	10/12/2021	31/12/2021		

Table 4: Deliverables and Milestones Overview

3.2.3 Conference calls and meetings

Communication is one of the most essential foundations of a successful project collaboration. Therefore, the REALHOLO consortium established regular conf calls and video-calls (e.g. monthly technical progress conf calls, requesting WP status reports and several WP-internal/cross-WP meetings and conf calls). The Coordinator provides their conf call system. Virtual meetings are planned in parallel to physical meetings, which are needed because of the complexity of this project. As mentioned previously, physical meetings are currently reduced to a minimum because of the Covid-19 pandemic.

To ensure the project success it is necessary to implement an efficient meeting structure. At the beginning of the REALHOLO project, the Kick-off meeting took place virtually on 19th and 20th of January 2021. The different expectations and schedules were discussed in order to make a definitive plan about the further work plan and required actions.

The Coordinator plans to organize at least two technical meetings per year (either f2f or virtual), combined with General Assembly meetings at the end of each project period or at least once per year (planned venue: online or at a partner's premises). Meetings with the REALHOLO Industry Advisory Board will assure that the consortium takes the right decisions regarding market relevance, impact on policy-making and other factors. In addition, there will be some WP-internal / cross-WP meetings on request. Due to the current situation (Covid-19) the majority of meetings is held virtually.

At the end of each project period there will be a review preparation meeting shortly before the official review meeting takes place (planned venue: online or EC premises in Brussels or - if necessary – at a partner's premises). In addition, there will be one intermediate review meeting in M07.

3.3 Quality control

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

3.3.1 Deliverable review process

To ensure the quality of deliverables, an internal review process was defined. The main goal of this process is to gather internal feedback from partners, who did not directly participate as editor or contributor to the deliverable before its submission to the European Commission. The review process is shown and explained below.

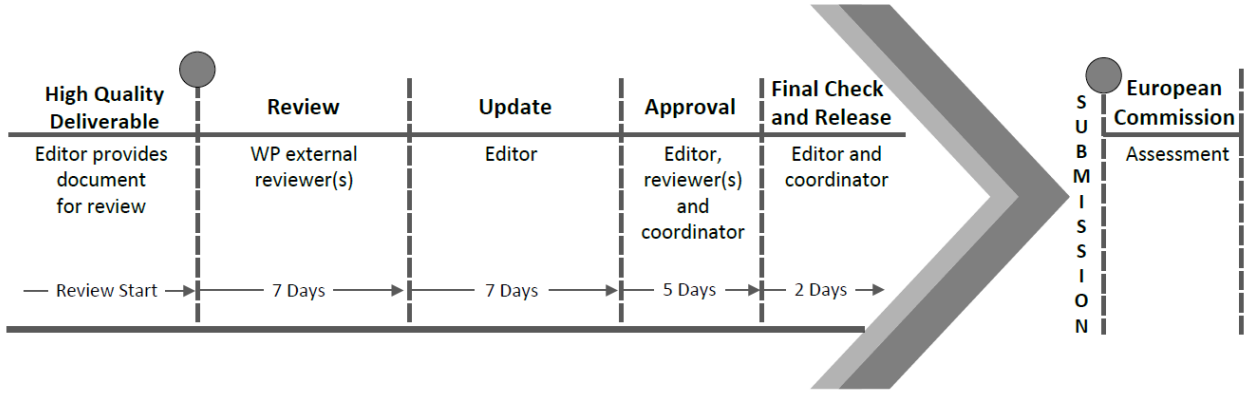

Figure 2: Review and Quality Assurance Process for Deliverables

The editor sends the high-quality deliverable to the reviewers who were not directly involved in the deliverable work. High quality means, that all required input is included within the deliverable, all track changes accepted and a first formatting check performed. The reviewers read the deliverable and compare the content against its objective, as defined in the work plan.

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

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

The editor is responsible to check the feedback of the reviewers and to update the deliverable accordingly. The final version of the deliverable is then sent to the reviewers and the Project Management Team for final approval. If a deliverable does not fulfil the quality requirements of REALHOLO, this process will be repeated until it is at least in line with the DoA. The caused delay has to be explained and justified by the editor, who - together with the Management Team - checks, if the delay affects other deliverables or the project progress in general.

As soon as the reviewers give their okay, the Project Management Team performs a final check and formatting updates, before the coordinator officially submits the deliverable via the participant portal.

If a deliverable is not ready for submission by the official submission deadline, the coordinator will inform the project officer about the delay and mention if this delay has any impact on other deliverables or the project progress in general.

REVIEW FORM

for the Internal Reviewer

REALHOLO deliverable:

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

Date of Internal Review:	Internal Reviewer:		
	Answer	**Comments**	**Type***
1. Is the deliverable in accordance with			
i. the Description of Action?	☐ Yes ☐ No		☐ M ☐ m ☐ a
ii. the international State-of-the-Art?	☐ Yes ☐ No		☐ M ☐ m ☐ a
2. Is the quality of the deliverable such			
i. that it can be sent to the EC?	☐ Yes ☐ No		☐ M ☐ m ☐ a
ii. that it needs further editing?	☐ Yes ☐ No		☐ M ☐ m ☐ a
iii. that the content needs to be improved?	☐ Yes ☐ No		☐ M ☐ m ☐ a
3. Does the Deliverable include			
i. a clear structure (e.g. appropriate, understandable presentation of the work performed)	☐ Yes ☐ No		☐ M ☐ m ☐ a
ii. a sufficient and meaningful executive summary	☐ Yes ☐ No		☐ M ☐ m ☐ a
iii. an appropriate introduction	☐ Yes ☐ No		☐ M ☐ m ☐ a
iv. a meaningful summary & conclusion	☐ Yes ☐ No		☐ M ☐ m ☐ a

Table 5: Internal Review Form

3.3.2 Risk management

To guarantee the achievement of the objectives of the REALHOLO project, it is essential to identify and understand those risks that could have a negative impact on the project.

A continuous risk management process is based on the early identification of, and the fast reaction to, events that can negatively affect the outcome of the project. For this purpose, the regular meetings of the project bodies serve as the main forum for risk identification. The identified risks are analysed and rated, based on their impact and probability of occurrence by answering the following question: “How big is the risk and what is its impact on REALHOLO?” Knowing how a risk impacts the project is important, as several risks of the same type can be an indication of a problem of larger impact.

The risks defined in the DoA are divided into low/medium/high risk levels.

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

The risks will be monitored on a regular basis and an updated risk table will be provided within the Periodic Reports. Further, a detailed classification and evaluation will be provided within D7.2 “Risk Assessment Plan” in M12. The Risk Assessment Plan will show how potential risks are assessed and mitigated in order to avoid any negative influence on the project objectives.

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

3.3.3 Industry Advisory Board

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

Through the integration of an Industry Advisory Board, interim feedback of enormous importance regarding the overall orientation of the project outcome is expected. This supports the path towards objectives and controls the quality of the project work as well as the quality of expected outcomes.

The Technical Leader is the chair of the IB and is in charge of preparing the implementation of the IB’s suggestions.

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

Chapter 4 Summary and Conclusion

This Project Quality Plan demonstrates how quality aspects are taken into account in a variety of processes and activities within the REALHOLO project. The interrelated quality processes – planning, assurance and control – impact the project work from its start to its end. The project aims at obtaining a high degree of quality, where outcomes are achieved in terms of the effectiveness and efficiency of working practices, as well as products and standards of project deliverables and outputs.

This plan establishes the procedures and standards to be implemented in the project, and allocates responsibility to ensure that these procedures and standards are correctly pursued. The Project Management Team (Coordinator and Technical Leader) make sure that the above described processes are put into practice. In case of deviations from the original work plan, it is in charge of implementing necessary mitigation measures.

The Project Quality Plan is effective throughout the lifetime of the project, but is open for revision if necessary. As described in section 2.1, responsibilities for quality planning, assurance and control are shared between all partners.

Chapter 5 List of Abbreviations

Abbreviation	*Explanation*
CA	***C**onsortium **A**greement*
DoA	***D**escription **o**f **A**ction (Annex 1 of the Grant Agreement)*
EB	***E**xecutive **B**oard*
EC	***E**uropean **C**ommission*
GA	***G**rant **A**greement*
H2020	***H**orizon **2020***
IB	***I**ndustry Advisory **B**oard*
ICT	***I**nformation and **C**ommunication **T**echnologies*
IMR	***I**nterim **M**anagement **R**eport*
NDA	***N**on **D**isclosure **A**greement*
PM	***P**erson **M**onth*
PR	***P**eriodic **R**eport*
WP	***W**ork **P**ackage*