D7.4 Quality Assurance Plan

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Abstract	This deliverable presents the Quality Assurance Plan (QAP) plan for SPATIAL. The QAP defines the main set of rules, for SPATIAL consortium partners to consider, to ensure that the technical outcomes of the project are produced following some high-quality standards. The management of a large number of deliverables and the quality of the deliverables are crucial for the successful implementation of the project.
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Version	Date	Description of change	List of contributor(s)
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V1.0	9-2-2022	Updated report based on review	van de Kamp, Ding, van der Wel (TUD)
V 0.1	2-2-2022	First draft of Quality Assurance Plan	van der Wel (TUD)

DISCLAIMER

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Nature of the deliverable:	R	
Dissemination Level		
PU	Public, fully open, e.g., web	✓
CL	Classified, information as referred to in Commission Decision 2001/844/EC	
CO	Confidential to SPATIAL project and Commission Services	

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EXECUTIVE SUMMARY

This deliverable presents the Quality Assurance Plan (QAP) plan for SPATIAL. The QAP defines the main set of rules, for SPATIAL consortium partners to consider, to ensure that the technical outcomes of the project are produced following some high-quality standards. The management of a large number of deliverables and the quality of the deliverables are crucial for the successful implementation of the project.

The QAP defines the role and responsibilities of each partner, the procedures and templates to be followed when preparing meeting agendas and minutes, PowerPoint presentations, deliverables (interim or otherwise) defined in the grant agreement, and other reports, internal deliverables, or milestones that may be defined during the project. The QAP also defines the ways of verification that will be implemented during the project before final internal validation and submission of deliverables and milestones to the European Commission (EC). This plan will be used by the Project Technical Research Director as guidelines to evaluate the content of the technical deliverables and to ensure the technical quality of the project outcomes.

To ensure the quality level of the deliverables and technical outcomes throughout the project, the following activities were carried out with respect to the QAP

- A Quality Assurance Manager (QAM) has been appointed by the project Management Committee (MC) to supervise the review process and the approval process of project deliverables;
- A template for writing deliverable reports has been developed;
- A 20-working-days Deliverable Review Process has been developed to support the deliverable approval process and document management;
- The information flow, deliverable review schedule, responsibilities of QA participants, and deliverable acceptance criteria have been determined and clarified along with the implementation of the QA procedure.

The QA procedure serves as a guideline for SPATIAL consortium members aiming at establishing effective cooperation during the project and ensuring the highest level of quality of project documentation. This QA procedure is applicable to the deliverables of all project Work Packages (WPs) and for the project coordinator to identify important tasks and dependencies for the success of the project.

Additionally, this deliverable presents a short description of managing intellectual property rights (IPR) in SPATIAL.

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ABBREVIATIONS

AUS	AUSTRALO
CA	Consortium Agreement
EC	European Commission
EU	European Union
FOKUS	Fraunhofer Institute for Open Communication Systems
GA	Grant Agreement
IEM	Innovation and Exploitation Manager
IP	Intellectual Property
IPR	Intellectual Property Rights
MC	Management Committee
QA	Quality Assurance
QAM	Quality Assurance Manager
QAP	Quality Assurance Plan
TUD	Delft University of Technology
WP	Work Package

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1 QUALITY ASSURANCE PROCEDURES

1.1 INTRODUCTION

The QA procedure is part of Task T7.3, and includes the Technical Coordination and Quality Assurance. The main task objective of the QA procedure is to assure the quality of the project deliverables.

Monitoring the technical progress of various WPs and tasks is important for project coordination. The monitoring is done on the basis of 3-monthly reports prepared by WP leaders and by the QA procedure which organises the review of deliverables. The quality of technical deliverables is monitored using a developed deliverable approval process involving QA participants and an evaluation modality. The QA participants include the WP leaders, a QAM, peer reviewers, the project coordinator, Technical Research Director, and the project manager.

Accordingly, the developed QA procedure includes the responsibilities of QA participants, information flow, review schedule linked to the deliverable deadlines, and general deliverable acceptance criteria.

1.2 QA PARTICIPANTS

The QA for deliverables is monitored and improved using a developed approval process involving WP leaders, peer reviewers, the QAM, the project coordinator, and the project manager. The main tasks and responsibilities of the QA participants are as follows:

- **WP leader**: prepares and submits deliverable to QAM for quality review. The WP leader appoints the peer reviewers from the project consortium members to be involved into the review process of the deliverable. The WP leader informs the appointment of the peer reviewers to the QAM.
- **Peer reviewer**: referred to as reviewer, responsible for reviewing the deliverable of a WP by providing review comments in “track changes” mode in the draft deliverable. The reviewers are appointed by the WP leader of the deliverable from project consortium members. A reviewer is not directly involved in carrying out the tasks of the WP, but has the expertise, with respect to technical content, consolidation of results, etc., to review the deliverable and provide comments and suggestions for improving the deliverable.
- **Project coordinator**: the coordinator of the project monitors the technical progress of the WPs based on their deliverables and indicates (in possible consultation with Management Committee (MC)) corrective actions when needed. The project coordinator provides his approval on the quality review to the QAM.
- **QAM**: responsible for organizing and facilitating the deliverable review process. The QAM is appointed by the project MC and reports the approval of deliverables to the MC. The deliverable approval of the QAM relies on the review comments of the peer reviewers (appointed by the WP leaders) and the coordinator.
- **Project manager**: performs the final check of the deliverables after the approval of the QAM, reports to the project MC who submits the deliverables to the EC.

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1.3 DELIVERABLE REVIEW PROCESS

Project deliverables are prepared by WP leaders. Further review process is done by peer reviewers and the project coordinator, followed by the final approval of the QAM. QAM reports final version to the project manager and the MC. To fulfil the QA procedure for SPATIAL, Huber Flores from University of Tartu (UT) was appointed by the project MC as the QAM.

To support the QA procedure, a standard template for deliverable reports has been developed containing sections for modification control, release approval, and history of changes. The implementation of the QA procedure involves diverse participants and multiple steps. Figure 1 illustrates the deliverable review process, containing the information flow and activities of the QA participants.

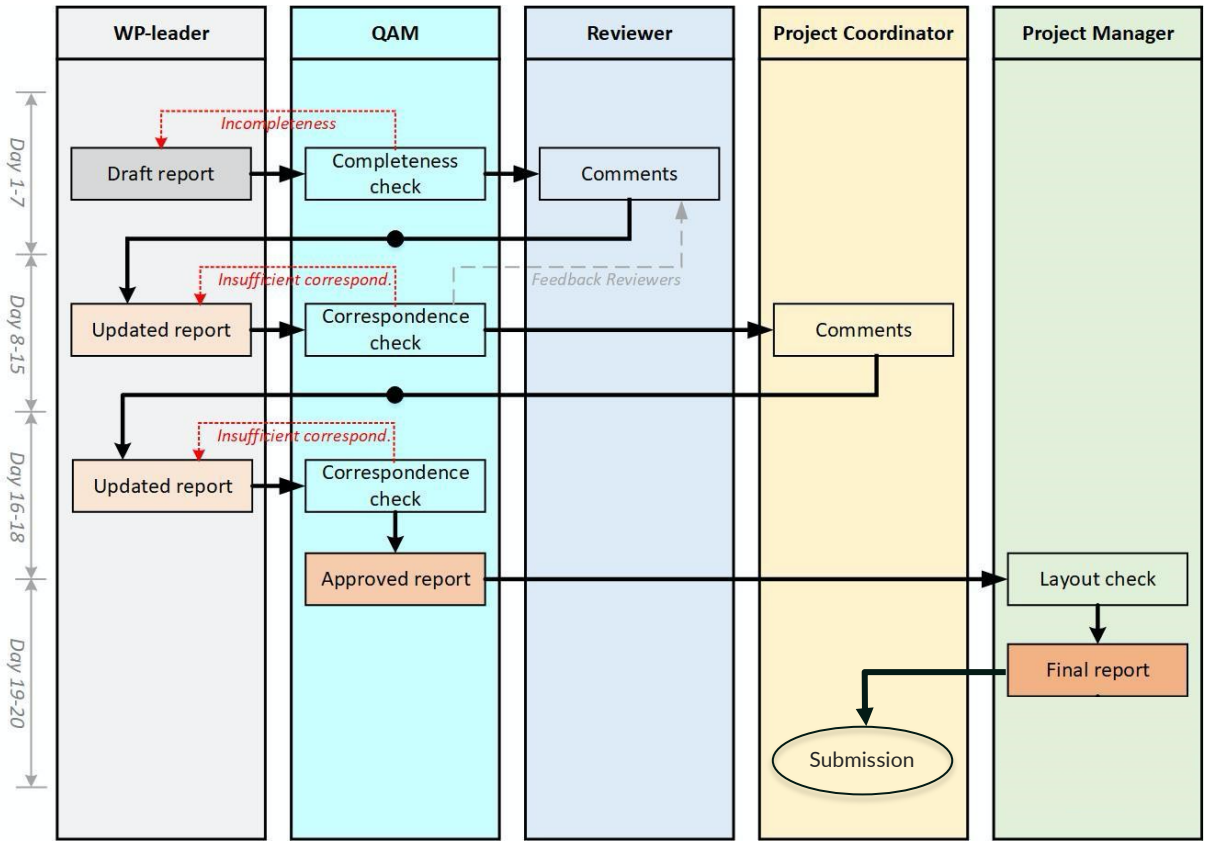

FIGURE 1: SPATIAL DELIVERABLE REVIEW PROCESS

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1.4 20-WORKING-DAYS REVIEW SCHEDULE

Linked to the deadlines of project deliverables, a 20-working-days review schedule for the deliverable review process has been determined to ensure the highest level of quality assurance, as shown in Table 1.

TABLE 1: REVIEW SCHEDULE

Day Nr.	Activity
00	**WP leader** delivers draft report to QAM before the first day of deliverable month
01	**QAM** checks completeness of draft report
02	
03	**Peer Reviewer** comments on draft report
04	
05	
06	
07	
08	**WP leader** improves report according to reviewer's comments and delivers updated report to QAM
09	
10	
11	**QAM** checks correspondence of updated report
12	
13	**Project coordinator** comments on updated report
14	
15	
16	**WP leader** improves report according to comments of project coordinator and delivers updated pre-final report to QAM
17	
18	**QAM** checks correspondence of pre-final report and approves the final report
19	**Project Manager** performs layout check, reports to MC, and sends it to the **Project Coordinator**. The Project Coordinator arranges the submission to the EC
20	

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1.5 EVALUATION MODALITY AND CRITERIA

During the deliverable review process, the comments of the peer reviewers and the project coordinator to the author(s) of the deliverable, and accordingly the updated deliverable by the author(s), are provided via reliable and traceable electronic correspondence. The MC of SPATIAL has determined to apply the electronic correspondence in the "track changes" mode in the draft deliverables and by emails. Besides evaluating the technical content and consolidation results of the deliverables, a checklist of general deliverable acceptance criteria (Table 2) is applied for peer reviewers to support the QA procedure. A peer reviewer will need to check each of the general issues in the checklist and provide comments when necessary. The checklist will be handed in to the QAM together with the commented draft deliverable.

TABLE 2: REVIEW CRITERIA

Criterion	Evaluation	
	Accepted	Declined
Descriptions must be technically correct and should be suitable for peer reviewers who are not experts in the specific technical domain.	x	x
If *declined, add comments:*		
Consistency should be maintained in writing styles and text formats.	x	x
If *declined, add comments:*		
Presence of project data and consortium information complies with the General Data Protection Regulation (GDPR).	x	x
If *declined, add comments:*		
Avoid unnecessary **use of acronyms**, always fully spell them at least at their first occurrence.	x	x
If *declined, add comments:*		
Figures and tables should be readable when printed in A4 size.	x	x
If *declined, add comments:*		
All text, figures and tables should be in the **language** of the Grant Agreement, the UK English.	x	x
If *declined, add comments:*		
Avoid **typos and misspelling**, check the overall level of English language by selecting UK English.	x	x

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If *declined, add comments:*

1.6 CONCLUSION

The developed QA procedure will ensure the conduct of high-quality project deliverables. The applied measures provide a solid basis for managing the project technical deliverables. The QA procedure aims at being a reference for all project consortium members for the entire duration of the project. Throughout the project, QAM will report to MC regarding the progress of the QA and any issues or concerns that may arise.

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2 INTELLECTUAL PROPERTY RIGHTS PROCEDURES

2.1 INTRODUCTION

All partners are encouraged to share their knowledge in order to improve the quality of the SPATIAL project and results. Most of this sharing will normally be unproblematic, but sometimes the knowledge may represent a significant value for the owning partner. In these cases, one needs to consider, amongst others, (i) IPR protection, (ii) IPR ownership, and (iii) access to IPR.

Partners are advised to keep the Grant Agreement (GA) and the Consortium Agreement (CA) at hand, especially regarding the IPR terms. These inter alia contain obligations towards each other and the European Commission regarding the partners' results and background. The IPR terms are defined in the GA and CA.

2.2 IPR MANAGER

The overall IPR strategy of the project is to ensure that partners are free to benefit from their complementarities and to fully exploit their market position.

For greater consistency, IPR protection and IPR strategy activities will be managed by Miguel Garçia from AUS (leader of WP6) as Innovation and Exploitation Manager (IEM) with the support of the H2020 IPR Helpdesk[1]. He is appointed by the SC. WP6 is responsible for the IPR plan (see Dissemination and Communication Plans (T6.2), and the Innovation Management, Exploitation and Sustainability (T6.3)). The SPATIAL Impact Master Plan (D6.1), which is due in M06, covers the exploitation strategies designed for SPATIAL.

The IEM will handle IPR management including keeping records of results generated, providing information on protection and ownership of IPR, and addressing queries regarding interpretations of the rules and regulations stated in the GA and CA. The IEM is in charge of:

- Carrying out the IPR according to the Impact Master Plan (D6.1).
- Moderating and proposing fair solutions to any possible conflict related to IPR.
- Managing innovation and exploitation opportunities, including impact assessments.
- Coordinating and monitoring dissemination and communication activities of the project, according to the Dissemination and Communication Plan (D6.2).
- Coordinating the collaboration with Standardization Bodies.
- Acting as the first point of contact with regard to queries about IPR and ownership and offering guidance regarding interpretations of the rules and regulations stated in the GA and CA.
- Reporting to MC regarding the progress of the IPR topics and any issues or concerns that may arise.

[1] The IPR Helpdesk can be found at: https://intellectual-property-helpdesk.ec.europa.eu/regional-helpdesks/european-ip-helpdesk

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- Maintaining a register of potential innovations generated. The IEM should be notified of all intentions to protect/patent results and will update the consortium on all developments as appropriate.

For the avoidance of doubt, the IEM only acts in the advisory and coordination capacity. Any specific knowledge needed by a partner regarding, amongst others, the GA, CA, and IPR related must be ascertained by the partner itself. Any conflicts that cannot be resolved by the consortium within the scope of the CA may have to be taken to external institutions for resolution.

2.3 PROTECTING IPR

The choice of the most suitable form of IP protection, as well as the duration and geographical coverage depends on the results at stake: examples are inventions, software, or databases. Also, the business plans for their exploitation and legitimate interests of partners should be considered. Table 3 summarizes what type of subject could be considered for what type of protection.

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TABLE 3: TYPES OF INTELLECTUAL SUBJECT AND POSSIBLE WAYS FOR PROTECTION

Subject Matter	Patent	Utility Model	Industrial Design	Copyright	Trade Mark	Confidential information / Trade Secret
Invention	X	X				X
Software	X*			X		X
Scientific article				X		
Design of a product			X	X	X	
Name of a product, service / project					X	
Know-How						X
Website			X	X	X	

**Software patentability is still a debated issue, possibly as long as the claim related to a computer program defines or uses technical means (a hardware element).*

Although it is not mandatory to inform other partners about IPR protection activities, it is considered good practice to consult with them before deciding whether to protect results or not – particularly if when dealing with potentially joint IPR.

2.4 IPR MANAGEMENT

These procedures are created to enable identification, documentation, tracking, and protection of IPR derived from the SPATIAL project.

Initially, each Partner is requested to communicate potentially innovative results that may lead to protectable IPR and follow it up throughout the Task. A potential innovation in a Task should be documented in an IP-i form (Innovation Potential inventory form; one form per potential innovation), see Appendix A for the IP-i form template. This template is also available in the project EMDESK. Please note that the IP-i form is intended as an inventory only and is a living document. There is no obligation to actually declare a potential innovation even if one has been listed in the IP-i form, as not all potential innovations identified at start-up will be eligible for formal IPR protection in the end.

Where possible, Partners can already partly fill in the IP-i form on expected potential innovations. This can be done as of Task kick-off and the Task Leader should involve all partners within the Task in gathering information for each Partner's form. A Task meeting or similar event presents a good occasion to complete draft or final versions of the IP-i form. Once a new (draft or final) version is completed, the IP-i form should be sent to the IEM. It is suggested that Partners update IP-i forms regularly and draft a new IP-i form as soon as possible after the generation of a new potential innovation.

The completed IP-i forms are kept on file (separately) by the IPR Manager, with possibilities for updates by the partners as the Tasks proceed. Upon completion of a Task, the partners should complete a final IP-i form, listing actual Intellectual Property Rights derived from the Task. The

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Task Leader ensures that each partner within their task drafts and finalises the IP-i form(s) timely. The final IP-i form is kept on file by the IPR Manager for documentation purposes.

Please note that the IPR Manager is available for assistance in completing the IP-i form and all IP-related activities in the Task.

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APPENDIX A: INNOVATION POTENTIAL INVENTORY FORM TEMPLATE

TABLE 4: IP-I FORM TEMPLATE

Potential innovative result	Description of the result and summary of the scope
Type of result	Such as: prototype, software, test, methodology, algorithm, other?
WP associated	
State of the art	Current state of the art, interrelation with background of other partners
Competitive advantage	What distinguishes this result from the competition?
Owner	Full legal entity name of owning Partner. Is the result generated by multiple partners? In that case, which partners and who claims what? How is the ownership divided? Is there already a JOA in place? If not, make sure to do so and be referred to the JOA related information in this document.
Other partners involved	Did other partners help the owner(s) to generate the result? If so, name the involved partner(s). Are their results or background used?
Exploitable product(s) or measure(s)	How can this result be exploited?
Sector(s) of application	In which sectors can this result be exploited? In which sectors do you want to exploit the results?
Geographical coverage	Where are those sectors of application located? In which of them are you interested in?
Timetable, commercial or any other use	When do you expect to put the result to (commercial) use?
Economic size sector	What is the value of the application sector(s)? What is your estimated market share?
Target market	Who are the potential customers?
Competitors	Who are the competitors? In what sector(s) are they? What is their market share?
Expected impact	Estimated figures for the short, medium, and long term exploitation of the result
Confidential	YES / NO
IPR Exploitable	
Measures	Do you want to protect the result with IPR? What type(s) of IPR are you interested in? Which IPR protection do you prefer?
Foreseen embargo date	DD/MM/YYYY
In case of an IPR registration: Application reference(s)	

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In case of an IPR registration:	
Subject or title of application	
In case of an IPR registration: Applicant (s) (as on the application)	
Further research	Can you directly exploit the result or is further research necessary?
Future actions	What further steps have you planned in the short, medium and long term?
Dissemination & exploitation	Is your strategy focused on dissemination, exploitation, or both?

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