Project no.:	**101095738**		
Project full title:	**6G SHort range extreme communication IN Entities**		
Project Acronym:	**6G-SHINE**		
Project start date:	**01/03/2023**	**Duration**	**30 months**

D1.1. – QUALITY AND PROJECT MANAGEMENT PLAN

Due date	31/05/2023	**Delivery date**	31/05/2023
Work package	WP1		
Responsible Author(s)	Berit Hvidberg Christensen (AAU)		
Contributor(s)	Gilberto Berardinelli (AAU)		
Version	V1.0		
Reviewer(s)	Basuki Priyanto (SONY)		
Dissemination level	Public		

VERSION AND AMENDMENT HISTORY

Version	Date (MM/DD/YYYY)	Created/Amended by	Changes
V0.1.	31/05/2023	Berit Hvidberg Christensen	First version
Xxx	Xxx	xx	Xx

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ACRONYMS AND ABBREVIATIONS

CA	*CONSORTIUM AGREEMENT*
DMP	*DATA MANAGEMENT PLAN*
EB	*EXECUTIVE BOARD*
GA	*GRANT AGREEMENT OR GENERAL ASSEMBLY*
PO	*PROJECT OFFICER (OR PA: PROJECT ADVISOR)*
WP	*WORK PACKAGE*
WPL	*WORK PACKAGE LEADER*

1 EXECUTIVE SUMMARY

The Quality and Project Management Plan defines the general approach to be followed for partner communication, documentation, deliverable's production, and quality control. It describes:

- Project organisation and management structure,
- Project reporting,
- Procedures and quality assurance measures to be followed during the project,
- Main financial management rules and principles,
- Communication procedures between partners.

2 INTRODUCTION

The purpose of the Quality and Project Management Plan is to facilitate collaboration by defining a set of rules for the organisation of the day-to-day work.

This document acts as a project handbook, including Risk Management and Quality Assurance Plan. Particularly, it sets out guidelines for the general approach for 6G-SHINE administrative management, including deliverables, deadlines, internal and external reviews.

It will contribute to the efficient and effective organisation of the project's activities and facilitate collaboration by defining a set of rules and a common framework for the efficient operation of all aspects of the project.

The Quality and Project Management Plan is intended to be a living document. It will be updated whenever necessary throughout the project duration time frame.

3 Project Organisation

3.1 Work Packages and cross-wp interactions

The project is structured in 6 work packages (WPs). See Table 1.

WP	WP title	Lead	PMs	Start	End
WP1	Project Management	AAU	28.00	1	30
WP2	Scenario, use cases and requirements	UMH	93.00	1	24
WP3	PHY and MAC enablers	CNIT	170.50	1	28
WP4	Radio resource and operation management	Apple	107.00	1	28
WP5	Experimental verification and proof of concept	IMEC	80.50	7	30
WP6	Communication, dissemination, and exploitation	FHG	49.00	1	30

Table 1. List of work packages.

The interaction and inter-dependencies between the WPs are illustrated in figure 1.

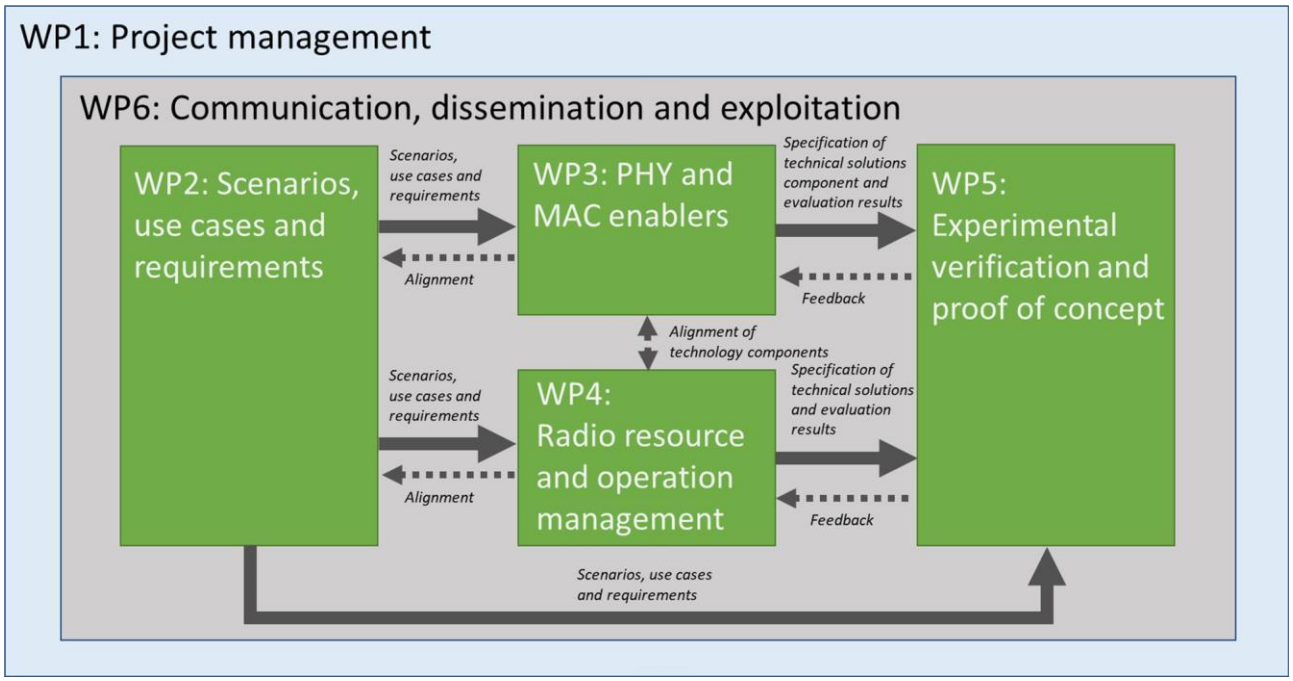

Figure 1. work package structure of 6G-SHINE.

A Gantt Chart for the deliverables of the project is shown in Figure 2.

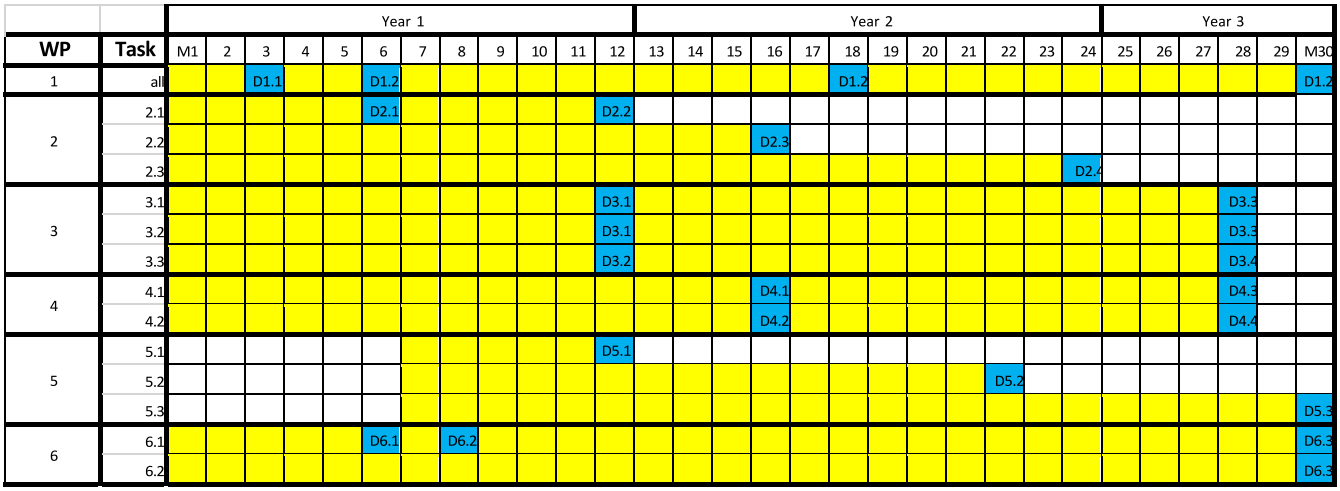

Figure 2. Gantt Chart.

3.2 Management Structure and meetings

The daily management and overall coordination of 6G-SHINE is led by the project coordinator and the administrative project manager and further supported by the Executive Board and the General Assembly.

The 6G-SHINE project involves a consortium of 12 partners spread across nine countries with representatives from research institutions and industry. It is important to note that one of the partners is an Associated partner (i.e., not signatory to the Grant Agreement and not receiving EU Funding). The practical implications of this will be described more in detail throughout the document.

WP1, the project management WP, is the anchor point for the project. Its aim is to ensure a successful delivery of the project and it has the following objectives:

- Set up and ensure a strong governance structure promoting Gender equality.
- Ensure high level of scientific quality by coordinating collaboration between the different management bodies, individual partners, and individual work packages to ensure vertical and horizontal integration within the project.
- Guarantee adequate risk management procedures and ensure that all occurring risks are mitigated.
- Coordinate the activities in the project, assure deadlines are met, implement mitigation measures in case of delays or deviations from the original plans and ensure all necessary communication and flow of inputs among work packages and partners is effective and efficient and to ensure an effective administrative management (reporting, budgets, and payments)
- Administer ethics and data management.

To match the complexity of the project, a strong organisational structure with several governing bodies (General Assembly and Executive Board) has been established, see figure 2. The rules for

decision-making, composition, voting rights and procedures, organisation, rules for amendments etc. are detailed in the Consortium Agreement which is based on the DESCA model.

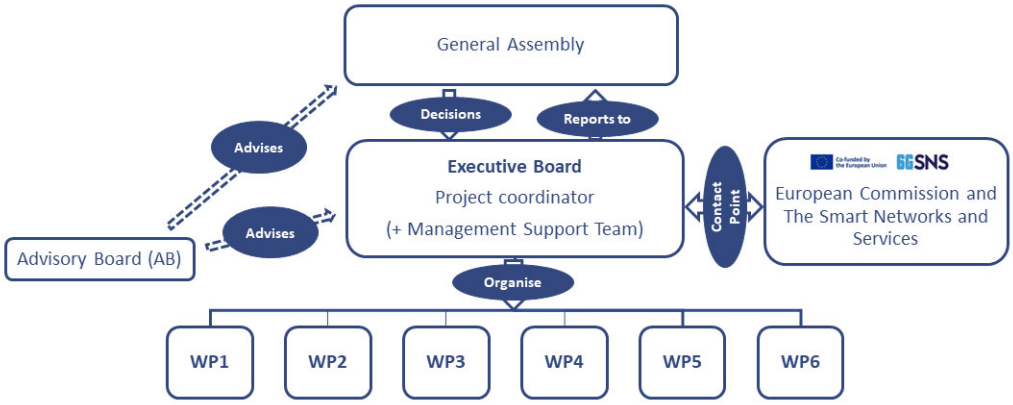

Figure 3. 6G-SHINE management structure.

3.2.1. Management team (coordinator and administrative project manager)

The 6G-SHINE project is coordinated by Gilberto Berardinelli (AAU). The Project Coordinator also has the overall scientific and technical responsibility of 6G-SHINE. The coordinator, together with Berit Hvidberg Christensen (the administrative project manager) (AAU), has the following tasks and responsibilities:

- Interface between the EC and the project consortium.
- Coordination of the work according to the project time schedule.
- Acquisition and monitoring the financial and administrative data from the partners and the processing and preparation for the submission to the EC.
- Assembling and preparation of progress reports based on the input of the partners.
- Deciding on proposed modifications on the work packages after discussion with the WPLs, the partners involved, the GA and in consultation with the EC.

3.2.2. General Assembly (GA)

The General Assembly is the ultimate decision-making body of the consortium. It performs the strategic management of the project and consists of one representative per partner organisation (hereinafter referred to as “Member”). There can be more than one representative attending the GA-meetings, and the member may appoint a substitute or a proxy to attend and vote at any meeting. The main tasks include the overall supervision of the project’s progress, milestone achievement, conflict resolution and risk management.

Each member has equal voting rights with one vote, irrespective of their contribution in the project. The decisions are made by a two-third majority. The rules, as laid down in the Consortium Agreement form the basis of the decision-making and quorum. The Management Team shall give notice in writing to members as soon as possible and no later than 45 calendar days preceding an ordinary meeting and 15 calendar days preceding an extraordinary meeting.

The Project Coordinator chairs the General Assembly meetings that will be held at least twice a year, in conjunction with a consortium meeting. The meetings discuss strategic questions on both technical and non-technical issues related to project management. Apart from the scheduled meetings, any urgent need for decision-making may be initiated by conducting online meetings and exchanging emails.

Partner	Name of the General Assembly members
AAU	Gilberto Berardinelli
NOKIA	Johannes Harrebek
UMH	Baldomero Coll Perales
SONY	Basuki Priyanto
FHG	Frank Burkhardt
IMEC	Spilios Giannoulis
CNIT	Davide Dardari
APPLE	Christian Hofmann
COGN	Fotis Foukalas
BOSCH	Henrik Klessig
Keysight	Usman Virk
IDE	Ognen Ognenoski

Table 2. General Assembly members.

3.2.3 Executive Board (EB)

The Executive Board is the supervisory body for the execution of the project, which shall report to and be accountable to the General Assembly. It supports the Management Team in supervising the execution of the project. It consists of at least one representative per partner, the WPs leaders (see Table 3), the project coordinator and the administrative project manager.

To assist with project management, the consortium has decided to hold Executive Board meetings on a virtual basis every 3 months. The meetings will be scheduled well in advance and be informed at the latest 14 calendar days before. These meetings will be attended by the WP leaders and other partners will be strongly encouraged to participate. WPLs will provide brief updates on key aspects of progress in each WP, deliverable, task/subtask following the WP-status template as well as highlight any issues and problems that need addressing. During the meeting, members can decide if issues being discussed should be escalated for discussion at the next GA meeting.

3.2.4 Work Package Leaders (WPLs)

Each WP has a leader (WPL) who oversees the execution of the scientific, technological and exploitation activities within the scheduled time in their respective WPs. All WP leaders have been selected based on their substantial experience in their field and/or with coordination. The individual tasks within the WP may be managed by other project partners in the form of Task Leaders (TL). The WPLs ensure their tasks integrate with activities in the wider project. They represent the WP at the General Assembly meetings and EB meetings and coordinate closely with the Management Team.

WP	WP title	Partner	Name
WP1	Project Management	AAU	Gilberto Berardinelli
WP2	Scenario, use cases and requirements	UMH	Baldomero Coll Perales*
WP3	PHY and MAC enablers	CNIT	Davide Dardari
WP4	Radio resource and operation management	APPLE	Christian Hofmann
WP5	Experimental verification and proof of concept	IMEC	Spilios Giannoulis
WP6	Communication, dissemination, and exploitation	FHG	Frank Burkhardt

**In WP2 Javier Gozalvez is appointed as Co-Work Package Leader.*

Table 3. Work Packages leaders.

3.2.5 Advisory Board (AB)

The Advisory Board (AB) consisting of 4 external experts and relevant industrial stakeholders.

Advisory Board	Name of the Advisory Board members
NXP	Dr. Javier Velasquez Gomez as a representative semiconductor industry
OFCOM	Dr. Simon Burley, as a regulator of communication services
ABB	Dr. Zhibo Pang, as a representative of robotics and automation technology areas
Orange	Dr. Marie-Helene Hamon, as a representative of mobile operators

Table 4. Advisory Board members.

Using available material and presentations of the project progress, the AB members will assist in the following tasks:

- Monitor and provide feedback on proposed technical innovations and their feasibilities.
- Provide direction and additional requirements if necessary.
- Participate in the evaluation of the final project results.
- Participate in the discussions assessing technological impact and feasibility for standardization.

For this purpose, the AB members will be asked for input and invited ad hoc. to attend the AB telco meetings (no face-to-face meetings are foreseen). The project coordinator will take care of arranging these telcos and invite the interested participants (typically WP leaders). The exchange will focus on several aspects, such as vertical-specific requirements (early in the project) and feedback on project activities like concept design and PoCs for enabling vertical use cases (throughout the project). This participation does not involve any financial compensation or any contractual obligation but will be limited to providing support, advice and guidance to the project management and project members of the consortium on a voluntary basis.

4 Project Reporting

Regular progress reporting is the key to monitor the projects progress with respect to cost and time. It also helps to highlight any achievements or difficulties that have been encountered. This will allow the consortium to act proactively and introduce corrective measures as soon as inconsistencies and deviations occur. Figure 4 provides an overview of the reporting timeline.

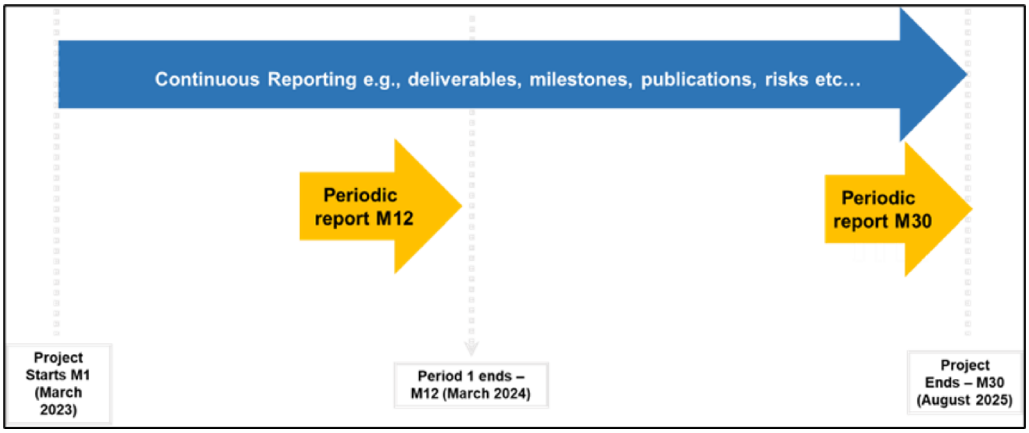

Figure 4. Reporting timeline.

4.1 Periodic reporting to the EC

Periodic reports are a contractual obligation as defined in article 21 of the Grant Agreement. The consortium shall submit a periodic report to the European Commission for each reporting period within 60 days after the end of each respective period.

Reporting Period	Project months covered	Due Date (end of Month plus 60 days)
RP1	M1-M12	28 February 2024 + 60 days = 30 April 2024
RP2	M19-M30	31 August 2025 + 60 days = 31 October 2025

Table 5. Overview of the periodic reports.

The periodic reports include a technical and a financial part:

- The technical part includes an overview of the action implementation.
- The financial part includes:
    - financial statements for all beneficiaries/affiliated entities (apart from Interdigital Europe (IDE), which as an associated partner is not required to submit a financial statement).
    - for the final report, all beneficiaries with a requested EU contribution for costs higher than € 430,000 will have to submit a certificate on the financial statements (CFS).

The project manager will prepare the templates for the reporting, which will then be circulated to the partners for their input. There are 2 templates, one which will be sent to the partner's administrative representatives (financial) and a second template which will contain the technical status, which will be sent to the partners. It the responsibility of each partner to deliver input to reports both on financial

and technical. Continuous reporting, e.g., deliverables, milestones, publications, risks, must be up to date at the time of submitting the periodic report.

4.2 Internal progress reports

In addition to the official periodic reports (M12 and M30), internal progress reports will be produced to allow the management team to monitor progress more closely. These reports are for internal use only. The due dates of the internal reporting periods are shown below:

Reporting Period	Project months covered	Due Date (end of month)
RP1.1	M1 - M6	M7 (September 2023)
RP1. Official periodic reporting	M1 - M12	M12
RP2.1	M13 - M18	M19 (September 2024)
RP2.2	M19 - M24	M25 (February 2025)
RP2. Official periodic reporting	M25-M30	M30

Table 6. Overview of the internal progress reports.

The internal reports will consist of a financial overview of the costs, PM effort and a written progress description from each partner. A template will be created and distributed together with a timeline for providing input. The project manager will, every six months, send the two templates for the internal report to the partner's administrative representatives (financial) and a written progress description (technical) to the WPL/Executive Board Member from each partner.

If any irregularities or deviations are reported or identified in the reports, these will be addressed at an EB meeting or GA meeting, depending on the nature and impact they may have on the project.

4.3 Deliverables

6G-SHINE has 22 deliverables, which shall be submitted on the last day of the month indicated in the GA. Each deliverable will have a main author and will go through a review process to ensure the highest quality outcome is achieved (see section 3 below for more information). By default, deliverables are in British English. Table 7 presents the split of deliverables across the project.

Reporting Period	Project months covered	No of deliverables	Lead
RP1 M1-M12	M3	1	AAU
	M6	3	AAU, SONY, CNIT
	M8	1	IDE
	M12	5	AAU, SONY, COGN, CNIT
RP2 M13-M30	M16	3	AAU, CNIT, Apple
	M22	1	FHG
	M25	1	BOSCH
	M28	4	UMH, CNIT, IDE
	M30	3	AAU, IMEC, FHG
		22	

Table 7. Split of deliverables across the project's reporting periods.

5 Procedures

5.1 Quality assurance measures

Quality in 6G-SHINE will be ensured by having common templates for each deliverable, establishing rules for the creation of the deliverables, and running a rigorous internal review process, which includes the active circulation, inclusion and involvement of all project participants. Quality assurance will primarily be carried out by the coordinator, supported by the administrative project manager. Together they will monitor the activities described in more detail below. Project partners are also responsible for observing and complying with the rules and procedures laid down here.

5.2 Deliverable review process

To ensure 6G-SHINE's deliverables are of the highest quality, a process for document review has been established for the technical deliverables. The first stage of quality control is performed by the lead editor of the deliverable. They will coordinate the preparation of the deliverable and appoint the main contributors as needed. When the first full draft has been prepared, it will be subject to an internal review process which is described in detail below.

5.2.1 Definition of roles

The following roles have been identified for the preparation of the project deliverables:

1. Lead partner – responsible for the overall organisation of the deliverable.
2. Lead editor – responsible for the coordination and compilation of the deliverable and timeline.
3. Contributor(s) – contribute to technical parts of the deliverable and could be a person from any partner in the project. Is responsible for submitting input to the lead editor on time.
4. Reviewers – will perform an independent review of the deliverable and suggest changes to be made to improve quality and outcome.

5.2.2 Definition of responsibilities

The WPL will appoint the lead editor of the deliverable, who will prepare a table of contents (ToC). The WPL and/or lead editor then appoint the contributors (could be any or all partners active in the task/WP) for each section of the ToC. The GA appoints two reviewers (ideally someone who is not directly contributing to the deliverable.

5.2.3 Process and timeline for submission of deliverables

Each deliverable is referenced by the deliverable number, relative to the work package, the due date of the deliverable relative to the project start, and the lead (bold face) and contributing partners. Figure 5 below shows the suggested timeline of the various steps in the process of creating deliverables in the project.

Figure 5. Timeline for creating deliverables.

5.3 Document management

A few practical rules will be followed to facilitate the management of the information produced within the project, and to ensure consistent document presentation and management. For every report, deliverable, presentation, minutes etc., the templates provided by the coordinator and/or WP6 Leader should be used.

The following document nomenclature should be used and include the following information, but kept as short as possible:

- Title (possibly with WP in front)
- Document version (e.g. v0.1)
- Date (ddmmyyyy)
- Organisation
- Author

Example: GA_minutes _v0.1_19072023_AAU_bhc

One exception is the naming of deliverables, here only elements of the nomenclature will be used: Deliverable Number

- Title
- Document version
- Date (ddmmyyyy)

Example: D1.2_DMP_v1.0_31082023

Further details on archiving and compliance with GDPR rules, will be set out in the Data Management Plan, due in M6.

5.4 Legal, financial and administrative management

All partners are welcome to contact the administrative project manager for guidance whenever needed.

5.4.1 For beneficiaries

Each beneficiary is responsible for following the rules set up in the GA and CA. Beneficiaries are encouraged to consult the Annotated Model Grant Agreement [1] whenever they are in doubt concerning the GA.

5.4.2 For associated partners

IDE is the only associated partner to the project. It is not a signatory to the Grant Agreement, and it does not receive EC payments. It is however still subject to obligations as a signatory to the Consortium Agreement, see CA section 2: "Associated partners must implement the action tasks attributed to them in Annex 1 in accordance with Article 11 in the GA. They may not charge costs or contributions to the action and the costs for their tasks are not eligible."

The question was raised whether associated partners must respect Article 20 (Record keeping obligations) in the GA. The reply of our National Contact Point (NCP) received from the EC legal and financial helpdesk is stated as follows:

"*Records and supporting documents referred to in Article 20 of the Horizon Europe Model Grant Agreement (HE MGA) are required not only to justify the amounts of the costs declared to the granting authority but also to prove that the action is or has been implemented properly and in compliance with the obligations under the Grant Agreement. As such, associated partners are, as the beneficiaries, bound by the obligations of Article 20. Nevertheless, associated partners which cannot declare eligible costs are therefore exempted from financial obligations of the grants, including to prove the costs incurred. Yet, they will have indeed to keep adequate records related to the proper action implementation.*

Please note that in the Annotated Grant Agreement (AGA – v0.2 draft, 30 November 2021), the current annotations under Article 20 are only reflecting preliminary views for Horizon Europe. These annotations are still subject to internal corporate review within Commission services. In that context, further consideration may be given to the particular situation of associated partners regarding records-keeping. As a result, annotations under Article 20 may evolve in a next version of the AGA."

5.5 Procedures for risk management

The purpose of risk management is to minimise the possibility of external/internal events negatively affecting the project in terms of time, implementation, quality, cost, and to maximise exploitation opportunities. With its high ambitions, 6G-SHINE carries a high level of risk, and efficient risk management is important. Several risks have been identified in the GA and are presented in Table 8 below.

Risk No.	Description of risk	Work Package No(s)	Proposed Mitigation Measures
1	A targeted objective cannot be achieved	WP2, WP3, WP4, WP5	We will closely track the developments to get an early indication if the risk is becoming reality. Additionally, we will track via a continuously updated risk table the

	Likelihood: Medium Severity: Medium		individual risks for each objective and prepare according to mitigation measures. The mitigation measures will be decided on in the WP and PMT calls.
2	Inability of one or more partners to meet milestones. Likelihood: Medium Severity: Low-Medium	WP1 WP2 WP3 WP4 WP5 WP6	Potential issues and delays hindering the capability of meeting the milestones will be promptly identified during PMT and WP calls, and tailored solutions will be applied. Such solutions can include –whenever possible- postponing the milestone of a few months, applying measures for lowering the ambition of the milestone and make it possible in the expected time.
3	Partner leaves the project. Likelihood: Low Severity: Medium	WP1 WP2 WP3 WP4 WP5 WP6	Given the interest and the commitment of each partner in the project, we consider this a low risk. Each task in the project has more than one allocated partner. This will ensure that the project will have the necessary redundancy for achieving the project objectives in case one of the partners decides to leave. Additionally, we would try to reallocate the budget which is freed by the leaving partner to allow other partners to fill the gap. Potentially a new partner could be proposed by the consortium if the competences of the leaving partner cannot be substituted by the current consortium members
4	Task deviations (e.g., delayed) Likelihood: Low-Medium Severity: Medium	WP2, WP3, WP4	This is a medium risk with respect to minor deviations and a low risk with respect to major ones. The timing and dependency of the different tasks have been carefully chosen to minimize the impact of minor deviations. Regular interactions within the tasks and WPs (e.g., telcos) will ensure the tasks to meet their targets both related to schedule and content. Possible deviations from the work plan have to be reported as early as possible to avoid cascading this through the project. The project manager has to monitor regularly the status of the project with the help of the regular PMT calls and regular reports. If a deviation occurs, the consequences to the project have to be assessed and countermeasures have to be initiated. Thanks to the regular PMT calls and reports, deviations from the work plan will be identified timely.
5	Conflicting interests affect decision making with delays as a result Likelihood: Low Severity: Low	WP1 WP2 WP3 WP4 WP5 WP6	Conflicts of interests in the decision-making process can to a large extent be avoided by following a transparent decision-making process. Further, the close collaboration in the preparation phase of the project should ensure a high level of mutual understanding among the partners. Should a conflict of interest occur, it can be resolved by an open discussion with the partners and the project manager, and if that is insufficient, we rely on all decisions in the project are consensus driven. Disagreements on strategic issues, where partner interests are involved, must be handled by the GA, according to the rules in the Consortium Agreement. In fact, the legal framework of the settlement of disputes which cannot be resolved in the project will be described in the Consortium Agreement. If a consensus is not reached, then a vote is conducted at the GA level.
6	Equipment for measurements is malfunctioning, leading to poor measurement quality Likelihood: Low Severity: High	WP2	Given the experience in measurement campaigns and usage of measurement equipment by the partners involved in Task 2.2, this is a low risk. We will make sure that all the equipment is properly calibrated and run preliminary tests before performing measurements in the scenarios of interest. Also, we will monitor the quality of the measurements already during the execution phase and take prompt actions in case they are deemed not to be of sufficient quality. The case of equipment fully malfunctioning is very remote and easy to be identified at the early preliminary tests. In this case, alternative solutions among the equipment available at the partners' facilities will be promptly considered, and eventual new measurement plans be drafted.
7	Unpredicted challenges in the implementation of selected technology components Likelihood: High Severity: Low	WP5	The selection of technology solutions for PoCs is made with considerations of the feasibility region of the test-beds available from the partners. Should an unpredicted challenge occur, it will be considered if a simpler PoC can be implemented of the technology component, otherwise, a reselection of the technology solutions will be done. There will be frequent discussions between WP5 and the other WP leaders to promptly identify potential issues affecting the implementation.

8	New Corona virus variant or similar could have impact the project execution as they can limit access to workplaces and physical dissemination. Likelihood: Low Severity: Low-Medium	WP1 WP2 WP3 WP4 WP5 WP6	The consortium has already in-house procedures to effectively carry on its activities during lockdowns. Most of the research activities in the project do not require physical presence in the workplace, but they can be carried out by participants at home, while interacting with other team members via digital communication platforms. An exception is represented by lab activities (WP5), where physical presence is needed. Each partner will implement measures for ensuring access to lab facilities while ensuring physical distancing and avoidance of crowds. Should physical participation to conferences/events not be possible, partners will rely on remote participation.

Table 8. Description of potential risk.

This list will be closely monitored throughout the project and be reviewed during each project meeting. More risks will be added if identified. Figure 6 shows the continuous approach setup by the consortium to manage the risks in this project. It aims at early identification of risks, an efficient analysis and assessment, a clear definition of mitigation and a continuous monitoring.

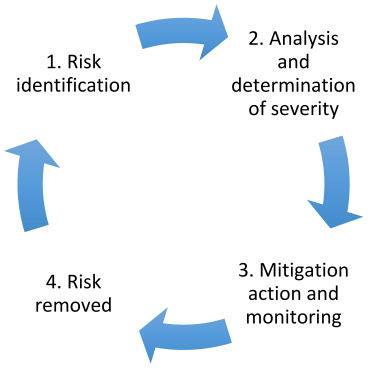

Figure 6. Risk handling strategy from identification to mitigation and risk removal.

Any minor deviations from the plan will be reported to the coordination team who will consider the problems and, where appropriate, make recommendations for implementing the contingency plan(s) associated with the work package(s) or partner(s) in question. Minor deviations can include, e.g., adjusting of Person Months in a WP, new start date for a task, extra survey to improve results (within the budget). In the event of more serious problems, e.g., bankruptcy of a partner, the coordination team will convene the general assembly (GA) to determine the best route forward. The EC Project Officer will be kept informed whenever relevant and, if significant changes are required, the EC project officer will be consulted to discuss the future of the project or if an amendment would suffice.

5.6 Management of intellectual property (IPR)[1]

The high emphasis that 6G-SHINE places on visibility to ensure the necessary impacts from the project, means that the IPR of the partners needs to be assured. The Consortium Agreement therefore includes rules to address this and should be consulted actively by the project partners. It includes among others:

[1] We are waiting for the signing of CA/Desca, but we expect the IPR to be as described in section 5.6. However, we must ensure that it corresponds to the IPR issues that are finally agreed in CA.

- How joint ownerships will be managed and how ownership provisions can be transferred.
- Which access rights are provided and which background is included.
- How to publish findings of the project, including protection in relation to dissemination and exploitation of results.
- How to handle software generated in the project whether the software is developed jointly or not.
- How to treat any limitations in relation to findings.
- Any additional rules on access rights.
- How third-party involvement will be managed.

5.7 Notification prior to dissemination of results[2]

In accordance with the GA and the CA, a procedure, i.e., a review period for all dissemination of results developed as part of the 6G-SHINE project is established. This will allow all partners who contributed information, data or otherwise to check and confirm that their IPR is respected prior to publication.
Any partner planning to disseminate results must inform the Consortium in advance. The GA and CA foresee different notice periods depending on what is communicated/disseminated.
"Dissemination" refers to any publishing of results which includes publications, presentations etc. Note that publications are considered as a special form of dissemination.

According to the GA, a beneficiary that intends to disseminate its results must give an advance notice at least 15 calendar days to the other beneficiaries (unless agreed otherwise), together with sufficient information on the results it will disseminate. The Consortium has agreed on a longer 30 calendar days' notice for publications (see CA art. 8.4.2.1.). Notification is not needed for general communication about the project (without dissemination of results) (e.g., for marketing purpose).

Categories	Ruled by	Example	Notification to Consortium beforehand
General communication about project (without disclosure of results)	Art. 17 GA	Twitter post about a project meeting	Not requested
Publication of project results	Art. 8.4.2.1 CA	Scientific publication	Prior notice of any planned publication shall be given to the other Parties at least 30 calendar days before the publication.

Table 9. Communication/dissemination categories and information to be provided.

All material produced by the consortium is owned in common and can be used by partners according to the rules stipulated in the GA and CA.

FHG as the dissemination and exploitation manager of the project coordinates and manages the dissemination activities. This includes:

- Selection of the conferences and journals, and coordination of the papers to be submitted.
- Coordination of journal special issues centered on the project's findings.

[2] We are waiting for the signing of CA/Desca, but we expect the 'Notification prior to dissemination of results' to be as described in section 5.7. However, we must ensure that it corresponds to the IPR issues that are finally agreed in CA.

- Coordination of project whitepapers.
- Coordination of workshops, project booths events and demonstration activities.
- Managing the statistics of the IPRs generated within the project.

5.8 Open access for scientific publications[3]

The beneficiaries must ensure open access to peer-reviewed scientific publications relating to their results. In particular, they must ensure that:

- at the latest at the time of publication, a machine-readable electronic copy of the published version or the final peer-reviewed manuscript accepted for publication, is deposited in a trusted repository for scientific publications.
- immediate open access is provided to the deposited publication via the repository, under the latest available version of the Creative Commons Attribution International Public Licence (CC BY) or a license with equivalent rights; for monographs and other long-text formats, the license may exclude commercial uses and derivative works (e.g., CC BY-NC, CC BY-ND) and
- information is given via the repository about any research output, or any other tools and instruments needed to validate the conclusions of the scientific publication. Gold open access is also part of the early access.

Beneficiaries (or authors) must retain sufficient intellectual property rights to comply with the open access requirements.

5.9 Acknowledgement of funding

All communication or dissemination activity related to the action MUST include the European flag and the SNS funding statement as well as a disclaimer excluding the EC and SNS JU responsibility.

Possible combination (example):

Co-funded by the European Union 6GSNS

Horizon Europe Grant Agreement No. 101095738. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union or SNS JU. Neither the European Union nor the granting authority can be held responsible for them.

As per annex 5 GA, the beneficiaries must ensure open access to peer-reviewed scientific publications relating to their results. Metadata of deposited publications must include, among other, a mention of Horizon Europe funding, grant project name (6G Short range extreme communication IN Entities) acronym (6G-SHINE) and grant number (101095738).

[3] We are waiting for the signing of CA/Desca, but we expect the 'Open access for scientific publications' to be as described in section 5.8. However, we must ensure that it corresponds to the guidelines that are finally agreed in CA.

6 Financial Management

6.1 EC payments

AAU, as project coordinator, received €3.500,384.25 for pre-financing which is the equivalent of 75% of the maximum EC grant. The prefinancing has (not yet) been transferred to all partners according to their share of the budget. Prefinancing (in contrast to interim payments) remains the property of the EC until the final payment. The purpose of the prefinancing is to make it possible for the beneficiaries to have a positive cash flow during (most of) the project.

5% of the maximum EC grant has been withheld by the EC for the Mutual Insurance Mechanism. Subsequent payments will be made as interim payments corresponding to the amount accepted for the first reporting period and as final payment. The 5% transferred to the Guarantee Fund will be returned to the beneficiaries together with the final payment. A maximum of 90% of the partner's total EC contribution can be paid before the final payment.

6.2 Eligibility rules

To be considered eligible, actual costs must comply with article 6 GA. They must be, e.g.:

- Actually, incurred by the beneficiary.
- Incurred during the action duration.
- Declared under one of the budget categories set out in budget.
- Incurred in connection with the action and necessary for its implementation.
- Identifiable and verifiable, in particular recorded in the beneficiary's accounts in accordance with accounting standards.
- Comply with the applicable national law.
- Reasonable, justified and must comply with the principle of sound financial management.
- Actual costs are not considered eligible if they do not comply article 6 GA. The following costs are by default ineligible:
    - Return on capital and dividends, debt and debt service charges, provisions for future losses, interest owed, currency exchange losses, bank costs in relation to bank transfer of EC payment.
    - Deductible or refundable VAT.
    - Excessive or reckless expenditure.
    - Costs or contributions declared under other EU grants.
    - Costs incurred during suspension of the implementation of the Action.

IDC, an associated partner, must implement the action tasks attributed to them in Annex 1 of the GA in accordance with Article 11. They may not charge costs or contributions to the action and the costs for their tasks are not eligible. Instead, they should follow their internal guidelines for managing their budget.

An overview of the different cost categories used in 6G-SHINE can be found in figure 7 below.

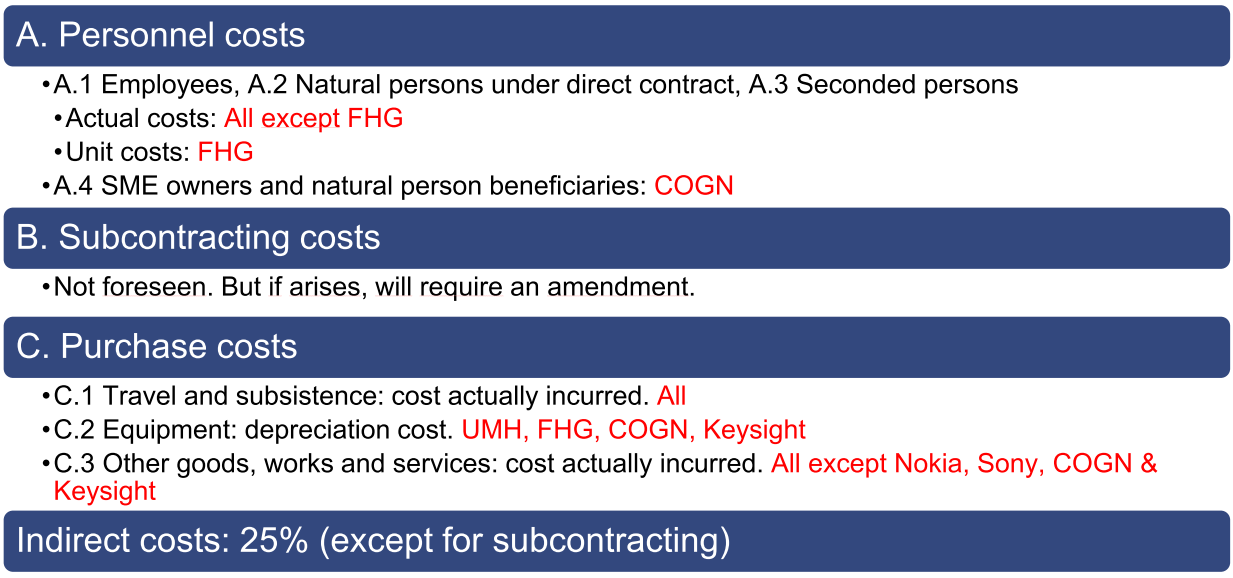

Figure 7. Overview of cost categories in 6G-SHINE.

6.2.1 Indirect costs

Indirect costs, also known as overheads, include costs connected with infrastructures and the general operation of the organisation such as, e.g., hiring personnel, depreciation of buildings and plants, water/gas/electricity, maintenance, insurance and costs connected with horizontal services such as administrative and financial management, human resources, training, legal advice, documentation etc. For indirect costs a flat rate (25% of direct cost) is applied by the EC.

6.2.1 Personnel costs

Unit costs are possible in some cases but will not be used in the 6G-SHINE project.

For actual costs, personnel must be directly hired by the partner (or under a direct contract) according to its national legislation, work under the supervision of the partner and be remunerated in accordance with the normal practices of the partner. Only the costs of the actual hours worked by the persons directly carrying out work under the project may be charged. Working time should be recorded using monthly timesheets or a declaration. Whatever system you use, the document must be signed monthly by the person and their supervisor. A template for this is available in Teams under the folder Templates.

6.2.3 Purchase costs

Purchase costs must:

- fulfil the general conditions for costs to be eligible.
- be based either on the best value for money (considering the quality of the service, good or work proposed, i.e., the best price-quality ratio) or on the lowest price.
- Not be subject to conflict of interest.
- Purchases between beneficiaries are in general not accepted.

6.2.3.1. Travel and subsistence costs

Travel and subsistence costs must comply with the partner's usual practices and must be adequately recorded.

In case of audit or CFS, the following documents are typically required to provide the following:

- Short justification for the travel.
- If it is a conference, paper or poster presented.
- Agenda and Minutes of any project meeting.
- Invoice and itinerary for plane tickets.
- Receipts of accommodation and meals (travel expense settlement form from the beneficiary)

Note that all travel and expenses must be of relevance to the project.

6.2.3.2. Other goods and services

This budget category includes costs such as:

- costs for consumables and supplies (e.g., raw materials, office supplies).
- communication and dissemination costs (e.g., translation and printing costs or graphic. Designer fees for printed products such as leaflets or other promotional items in relation to communication activities; conference fees; costs for speakers and interpreters).
- costs related to intellectual property rights (IPR) (e.g., costs related to protecting the results such as consulting fees or fees paid to patent offices).

The CFS price (exclusive of VAT in case VAT is reimbursable by local tax authorities) is a direct eligible cost under other goods and services.

6.2.3.2. Equipment

Only equipment used for the purposes of carrying out project activities can be charged as direct costs. Only the portion of the equipment used in the project may be charged. The amount of use (percentage used and time) must be auditable.

Depreciation is charged in each relevant periodic report and must be calculated according to the partner's own internal depreciation rules. A proportionate share of equipment purchased before the starting date of the project may be included but only for the share used in 65-SHINE.

6.2.3.3. Subcontracts

A subcontractor is a legal entity which is not a partner of the consortium and is not a signatory to it. Tasks to be subcontracted must be identified in Annex I – Description of Action. So far, a need for subcontracting has not been identified in 6G-SHINE.

Subcontractors should be selected on a best value for money principle (considering the quality of the service, good or work proposed, i.e., the best price-quality ratio) or the lowest price. There should not be subject to conflict of interest. Subcontracting between beneficiaries in the same EC Grant Agreement is not accepted. Note that the rules for subcontracts are strict and it is advisable to check on a case-by-case basis with the project manager.

7 Communication

External communication will be handled in WP6 with contributions from all partners and will be described in D6.1. Communication Plan (M6) and D6.2 Project communication chain (M8). Internal communication within the consortium is described below.

7.1 Means of communication

The primary means of communication between the project partners will be done via e-mail. 6G-SHINE mailing lists have been established in accordance with the structure identified by the consortium (see below).

The consortium decided to use MS Teams as the project's collaborative platform since it meets most of our user requirements and the GDPR regulation. It will be used for an internal document archive, as well as to enhance the official communication within the consortium. The platform will allow free access to technical and financial project follow-up as well as project archives (project database). Any additional data storage and management requirements of the project will be identified by the data management plan.

Any request to the EC will be handled by the coordinator or administrative project manager. All partners are instructed not to contact the EC project officer directly but to address any issues to the coordinator or administrative project manager who will then contact the EC on behalf of the partner.

On a scientific level, WPLs are the link between individual partners and the coordinator. On an administrative level, each partner shall directly consult the administrative project manager.

7.2 Mailing lists

All partners have nominated persons for the internal mailing lists identified below. These can be supplemented by more lists, if necessary. By creating the lists, we ensure that all partners receive the same information and that no one is left out of the communication. Partners can request changes to the lists at any time. The lists are updated and maintained by the administrative project manager ensuring that only persons involved in the project will get access to the communication. Hence, if a partner needs to sign up a colleague for any of the mailing lists, an email must be sent to Berit Hvidberg Christensen (christensen@adm.aau.dk) requesting to be included. The following lists have been created:

- All scientific/technical participants: 6G-SHINE_all@lists.aau.dk
- WP Leaders: 6G-SHINE_WPLs@lists.aau.dk
- General Assembly members: 6G-SHINE-ga@lists.aau.dk
- Administrative and financial contacts: 6G-SHINE_adm@lists.aau.dk

Specific mailing lists for Work Packages 2 – 6:

- All members of WP2: 6gshine-wp2@lists.aau.dk
- All members of WP3: 6gshine-wp3@lists.aau.dk
- All members of WP4: 6gshine-wp4@lists.aau.dk
- All members of WP5: 6gshine-wp5@lists.aau.dk
- All members of WP6: 6gshine-wp6@lists.aau.dk

7.3 Meetings

An overview of the meetings planned in 6G-SHINE can be found in Table 10.

Meeting type	Occurrence	Length	Aim	Participants
Consortium & General Assembly	Every six months	1 or 2 days	Overall supervision of the project's progress, milestone achievement, conflict resolution and risk management. GA = decision making body	All partners to be present or represented.
Executive Board	Every three months	2 hours	Check progress and identify/solve any cross-WPs issue	WP Leaders to be present or represented. Other consortium members are encouraged to join
WP level	When needed	1-2 hours	Collaborate and check progress at WP level	Participants in this specific WP
Advisory Board	Once a year	1-2 hours	Network with sister projects and stakeholder engagement. Dissemination of project results.	AAU, NXP, OFCOM, ABB, Orange

Table 10. Meetings planned in 6G-SHINE.

In addition to the regular meetings, the communication in the consortium will be carried out mainly through e-mail and MS Teams. As a rule, all meetings shall be recorded in writing (notes/minutes) and be uploaded to its respective folder on Teams. A template for minutes can be found under the folder "Templates". The main objective is to provide an overview of the progress. The minutes include the following key points: participants, agenda, decisions, key points of discussion, list of action points = WHO does WHAT until WHEN. For physical meetings, all participants will have to sign an attendance list to make sure that they are able to document their presence. The default solution for virtual meetings is MS Teams but other solutions such as Zoom can be used whenever necessary.

Review meetings with the EC Project Officer and appointed external evaluators will take place after the end of each reporting period. Meeting venues are by default in Brussels unless there is a specific request to hold it elsewhere. Meetings could also be held online, depending on the PO request. The coordinator, the administrative project manager and the WPLs (of active WPs in the reporting period covered) are as a minimum expected to participate in these meetings. Other project members may be invited if necessary. The organisation of the reviews will be coordinated by the coordinator, the administrative project manager, and the PO.

8 References

[1] Annotated Model Grant Agreement, pre-draft version0.2, last accessed 17/10/2022 https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/common/guidance/aga_en.pdf