

SEA-SPINE High-speed Submarine Backbone for islands of the Aegean Sea

D1.1 Project Management Handbook



Project Details

Call CEF-DIG-2022-GATEWAYS-WORKS

Project start date 01/01/2024
Duration 36 months

GA No 101133518

Deliverable Details

Deliverable WP: WP1

Deliverable D1.1

Identifier:

Deliverable Title: Project Management Handbook

Editor(s): | Ioannis Patsouras (WINGS)

loannis Patsouras (WINGS), Andreas Georgakopoulos (WINGS),

Author(s): | Sokratis Barmpounakis (WINGS)

Christos Kossidas (OTE), Evangelos Tompras (OTE) Konstantinos

Reviewer(s): Gkougkoulis (OTE)

Submission Date: 31/03/2024

Dissemination Level: PU

Disclaimer

The information and views set out in this deliverable are those of the author(s) and do not necessarily reflect the official opinion of the European Union. Neither the European Union institutions and bodies nor any person acting on their behalf may be held responsible for the use which may be made of the information contained therein.

Executive Summary

This document aims to provide the EC and all project partners with a summary of all contractual rules and governance procedures that aim at ensuring efficient project management and facilitating collaboration among the partners. It also provides information related to internal and external communication rules for project participants.

Table of Contents

E	ecutive S	Summary	3
Τá	able of Co	ontents	4
Li	st of Figu	res	6
Li	st of Tab	les	7
Li	st of Acro	onyms and Abbreviations	8
1	Intro	ductionduction	9
	1.1	Structure of the document	9
2	Proje	ct overview and contractual framework	10
	2.1	Project rational and overview	10
	2.2	Project's key objectives	11
	2.3	Project's Contractual Framework	13
	2.3.1	Grant Agreement	14
	2.3.2	Consortium Agreement	15
3	Proje	ct's governance	16
	3.1	Management structure	16
	3.2	Decision-making	16
	3.3	Quality Management	16
	3.4	Project planning	17
	3.5	Risk Management	19
	3.6	Budget	19
4	Proje	ct's shared information and tools	20
	4.1	Collaborative space	20
	4.2	File Format and Naming	20
	4.3	Mailing lists	21
	4.4	Meetings	21
	4.5	Plenary Meetings	21
5	Proje	ct monitoring and reporting	22
	5.1	Project reporting – Periodic reports	22
	5.2	EC reviews	22
6	Exter	nal/Public Communication and Scientific Publications	23
	6.1	Project's website and social media channels	23
	6.1.1	Website	23
	6.1.2	Twitter	23
	6.1.3	LinkedIn	23
	6.2	Publications and acknowledgment	23

Deliverable D1.1

7	Conclusions	24
8	References	25
Anne	ex: Online repository and templates	26
	, ,	

List of Figures

Figure 1: SEA-SPINE map - seven (7) new OTE submarine fibre optic links between 11 Greek islands	12
Figure 2: Proposed timeline for deliverable creation and submission to the EC	17
Figure 3: SEA-SPINE Gantt chart	18
Figure 4: Online repository	26
Figure 5: Deliverable template	26
Figure 6: Presentation template	
Figure 7: Agenda template	27
Figure 8: Minutes template	

List of Tables

Table 1: Documents Naming	Templates	20
---------------------------	-----------	----

SEA-SPINE Page 7 / 28

List of Acronyms and Abbreviations

TERM	DESCRIPTION
CA	Consortium Agreement
CAPEX	Capital Expenditures
CEF	Connecting Europe Facility
CSP	Cloud Service Provider
DESCA	Development of a Simplified Consortium Agreement
DOA	Description of the Action
EC	European Commission
EU	European Union
GA	Grant Agreement
GenA	General Assembly
HADEA	European Health and Digital Executive Agency
IEEE	Institute of Electrical and Electronics Engineers
IPR	Intellectual Property Rights
ITU	International Telecommunications Union
KPI	Key Performance Indicator
MECMA	Mediterranean Cable Maintenance Agreement
MTDC	Multitenant data centre
MNOs	Mobile Network Operators
OPEX	Operational Expenditures
OTT	Over-the-top
PC	Project Coordinator
QAR	Quality Assurance and Risk manager
ROI	Return on Investment
TM	Technical Manager
UC	Use Case
WP	Work Package

1 Introduction

This document aims at providing the EC and all SEA-SPINE project partners with a summary of the contractual and governance framework of the project, along with the internal and external communication procedures (including tools, channels, etc.). In this context, management structure and responsibilities, meetings' management, quality management, risk management, reporting procedures are described among others.

1.1 Structure of the document

The document describes the project basis and main overview as set at the very beginning of the project and agreed practices, rules and procedures to run the project. After the introductory Section 1, Section 2 provides the project background and relation with the CEF-DIG-2022-GATEWAYS-WORKS call **Error! Reference source n ot found.**, the project overview and major objectives. Also, in the same section, a brief reference to the Contractual Documents, namely the Grant and the Consortium Agreements, provides rule base for project and quoted as needed in this document. Section 3 provides information about project's governance while Section 4 describes the available project's shared information and tools. Section 5 provides initial information about project monitoring and reporting while Section 6 describes guidelines for public communications and scientific publications. The last Section concludes the deliverable.

2 Project overview and contractual framework

2.1 Project rational and overview

Running in the beginning of the commercial 5G era and having already entered research and prestandardisation activities towards the 6th Generation of Mobile and Wireless Networks, besides the advancements, flexibility, intelligence and robustness in the wireless domain, **respective developments are urgently needed on the backbone infrastructure side, particularly for challenging areas, such as islands, which are geographically disconnected from the mainland and primary connectivity, storage, and computing infrastructures**.

Geographical factors and heterogeneity among the EU Member States and respective territories result in diverse challenges when coming to providing equal opportunities, digital inclusion, and high-quality broadband services. Increased commercial prices and other conditions of backbone connectivity may lead to market failure, low quality, and variety in offered services, thus hindering the full participation of citizens, societies, enterprises and regional authorities or governmental bodies in the digital European society and economy.

Demand for new submarine cables and capacity upgrades are primarily driven by capacity needs, as a result of growing data traffic volumes, and greater connectivity needs. Cloud Service Providers (CSPs) and Over-The-Top (OTT) Media Service Companies are driving this growth, as they currently comprise approximately 2/3rds of international internet traffic. As also indicated in the latest ITU – Global Connectivity Report [2], Cloud and Content Providers have emerged as some of the largest investors in backbone infrastructure, including submarine cables to route traffic from MTDCs to their own hyperscale data centres.

SEA-SPINE's overall objective is to construct seven (7) new submarine optical fiber links in the Aegean Sea (Figure 1), along with the required terrestrial and fiber optic networking works, towards substantially increasing network capacity, reducing network latency for critical applications, as well as ensuring traffic protection through link redundancy and multiple path-based impact mitigation in case of link failures. The novel submarine links involve 11 Greek islands, namely Amorgos, Astypalea, Kos, Sifnos, Folegandros, Euboea, Chios, Lesvos, Limnos, Thasos, and Skyros, while the overall length of the newly deployed submarine backbone infrastructure will extend across 563 km for the submarine segment and 231 km for the terrestrial one that will interconnect the submarine links to the respective exchange points.



Figure 1: SEA-SPINE map - seven (7) new OTE submarine fibre optic links between 11 Greek islands

Moreover, SEA-SPINE will investigate the potential of intelligent, distributed sensing capabilities, as a follow-up feature of the submarine cable infrastructure, leveraging Distributed Acoustic Sensing (DAS) techniques. Scientific and environmental monitoring capabilities, such as e.g. earthquake detection, measurements of oceanographic conditions, monitoring of marine mammal activities, etc. will provide high added research and social value to planned deployments after the project completion. Requirements, design considerations, as well as limitations will be extracted during the planning and construction activities, in order to enable future add-on deployments of DAS-related infrastructure and the execution of related studies.

2.2 Project's key objectives

The SEA-SPINE project has the following four key objectives:

Objective 1: To extend OTE's submarine network with the implementation of seven (7) new fibre optical *submarine* cables, connecting eleven (11) Greek islands of the Aegean Sea, towards high capacity, improved broadband services, link redundancy and traffic protection for geographically challenging, remote areas (islands) in Greece.

Through this objective SEA-SPINE will deliver as output:

Seven (7) State-of-the-Art fiber optical submarine links, connecting 11 Aegean islands in Greece, namely Amorgos, Astypalea, Kos, Sifnos, Folegandros, Euboea, Chios, Lesvos, Limnos, Thasos, and Skyros, while the overall length of the newly deployed submarine backbone cable infrastructure will extend across 563 km. The links will comprise "Amorgos – Astypalea", "Astypalea – Kos", "Sifnos –

Folegandros", "Euboea (Karystia) – Chios", "Chios – Lesvos", "Limnos – Thasos", and "Euboea (Kimi) – Skyros".

- Optimisation of the interconnection and link redundancy between the Greek mainland and numerous
 islands of the Aegean Sea, towards increased capacity, low latency, traffic protection and smooth
 network operation for different use cases and applications for societal, personal, business and
 government growth. Route diversity, redundancy, and more direct control over critical infrastructure
 is driving the need for more submarine cables. Specifically, having bandwidth available on multiple
 submarine cable systems is important, to provide a high level of network availability, reliability, and
 resilience.
- Comprehensive documentation consolidating already completed offshore and shore-end surveys, focusing on the extraction of network design planning requirements, as well as relevant technical reports that will describe in detail the technical specifications of the submarine optical fiber links to be installed. Deploying submarine cables involves several steps including route planning, marine survey, operational permitting, design, manufacturing, marine lay, and installation & commissioning. It must be highlighted that the main part of the offshore and shore-end studies, have been already completed. To this end, -and considering that no costs are requested in the context of the project for already completed activities-, SEA-SPINE will focus on the consolidation, extraction of main outcomes and refinement -where needed- of the respective studies and documentation prior to the actual works and document them in detail as part of the project's deliverables (WP2 deliverables).
- Studies and technical specifications that will be optionally enable future add-on deployments for environmental/security monitoring applications, regarding the required DAS-based sensing equipment, interrogators' placement, optic fiber repurposing, etc. Sensing intelligence leveraging DAS techniques towards environmental and scientific monitoring, namely monitoring of integrity threats to submarine cables and associated infrastructure, earthquake detection, measurements of oceanographic conditions, monitoring of marine mammal activities, etc., will be enabled for future works, for constructing sustainable and socially valuable submarine cables.

Objective 2: To perform detailed planning, design, and development of the associated terrestrial networks including cable landing stations, etc.- that will bring the submarine links into operational status, via interconnecting and terminating the submarine links to the local exchange points.

Through this objective SEA-SPINE will deliver as output:

- Physical surveys, GIS- and AutoCAD-based design, and data collection for optimal planning of the terrestrial network, CLS components, required data centres, etc. It should be highlighted that contrary to the in-shore and shore-end related studies, the terrestrial network related physical surveys have not been carried out and are included in the Studies of the project (WP2).
- Civil construction works, such as construction of trenches, ducts, manholes, etc., required for the terrestrial networks of the end-to-end infrastructure.
- Fiber optic networking activities, comprising cable installation, fibre distribution, joint constructions, cable termination, etc.
- Comprehensive documentation comprising relevant studies, technical reports describing the data collection activities' results, series of construction activities, technical implementation activities with relevant specifications, as well as the respective budget tables regarding the installation costs.

Objective 3: Implement, deploy, and configure -according to each specific link and respective backbone network segment requirements (submarine, inshore, shore-end and terrestrial)- the required fibre inspection, test, and monitoring tools, as well as complementary network support systems and necessary utilities.

Through this objective SEA-SPINE will deliver as output:

- Diverse set of tools, for fibre inspection, such as Remote Fibre Testing Equipment (RFTE), Optical Time
 Domain Reflectometry (OTDR), Fibre Characterisation (chromatic dispersion, polarization mode
 dispersion, attenuation profile), Optical Spectrum analysis, network service testing and performance
 monitoring, secure operation, link failure/degradation detection/prediction, proactive/reactive
 network management, etc.
- Easy-to-use, repeatable test plan processes, namely Test Process Automation (TPA) and Key Performance Indicator (KPI) analysis framework. The fibre test process should readily compare plan to actual as-built network inventory and performance characteristics.
- Analysis of the key network-, service-, safety-, and security-level requirements of the envisioned, future use cases of the developed backbone network segments
- Extended amount of measurement data (both on physical/lower layer as well as service-level) to
 provide statistical confidence and heterogeneity. Detailed analysis of the performance of the
 implemented backbone network links, across the 7 submarine routes in the Aegean, -and respective
 terrestrial network segments- under various configurations and for various realistic network load
 conditions and use cases.

Objective 4: Deliver a thorough Business, Techno-economic, and Security assessment analysis for submarine optic fibre backbone networks for various scales, Societal, Business, and Governmental needs and use cases and assess the Economic Impact of the foreseen investments.

Through this objective SEA-SPINE will deliver as output:

- Detailed mechanisms that will be used to provide services after the project completion, namely guarantee the provision of services to access seekers, as well as comprehensive description of operational relationship(s) between the different participants in the value chain for providing services.
- Detailed report of the processes/procedures (procurement, regulatory permissions, licensing, etc.) from a diverse number of state authorities (e.g., General Navy Staff, Ministry of Mercantile Marine, Archaeologies, Municipalities, Prefectures, Regions, Ministries, etc.). and prerequisites (marine studies, terrestrial network studies, etc.) to set-up, configure and operate similar infrastructure, exploiting the foreseen deployments.
- Techno-economic (cost per equipment category, CAPEX/OPEX, etc.) analysis of the deployment and operation of the submarine links, including suitable business models and Return-On-Investment (ROI) analysis based on indicative use cases. For the analysis, OTE will also consider maintenance service-related costs from MECMA, namely the Mediterranean Cable Maintenance Agreement. E.g., the economic useful life of a submarine link is terminated when the costs to operate the system, begin outweighing the link's revenue potential from leasing its capacity. Newer undersea links displace older systems because they can operate at a similar level of fixed costs, but, given their higher capacity, their cost per bit delivered is much lower.
- In-depth analysis of the necessary security requirements and guarantees needed to support and operate the foreseen deployment and operation, including the relevant audit results (deliverable D4.3).

2.3 Project's Contractual Framework

The project's contractual framework is composed of the following two contractual documents:

- Grant Agreement (GA)
- Consortium Agreement (CA)

2.3.1 Grant Agreement

The Grant Agreement (GA) is the contract between the European Commission (EC) and the project's partners for the implementation of the project. It is signed first by the European Commission and the Coordinator (WINGS) then all the other partners are required to sign the Accession Form so as to become full beneficiary.

It is the legal document which establishes the frame of the project.

A digital copy of the signed GA can be found in the Commission's document repository. All partners may access to the signed GA through the EC Funding & Tenders Portal (My projects > Manage project > Document Library). The main sections and Articles of the Grant Agreement are the following:

- Preamble
- Terms And Conditions
- Datasheet
- Chapter 1 General
 - o Article 1 Subject Of The Agreement
 - o Article 2 Definitions
- Chapter 2 Action
 - o Article 3 Action
 - o Article 4 Duration And Starting Date
- Chapter 3 Grant
 - o Article 5 Grant
 - o Article 6 Eligible And Ineligible Costs And Contributions
- Chapter 4 Grant Implementation
 - o Section 1 Consortium: Beneficiaries, Affiliated Entities And Other Participants
 - Article 7 Beneficiaries
 - Article 8 Affiliated Entities
 - Article 9 Other Participants Involved In The Action
 - Article 10 Participants With Special Status
 - Section 2 Rules For Carrying Out The Action
 - Article 11 Proper Implementation Of The Action
 - Article 12 Conflict Of Interests
 - Article 13 Confidentiality And Security
 - Article 14 Ethics And Values
 - Article 15 Data Protection
 - Article 16 Intellectual Property Rights (IPR) Background And Results Access Rights And Rights Of Use
 - Article 17 Communication, Dissemination And Visibility
 - Article 18 Specific Rules For Carrying Out The Action
 - Section 3 Grant Administration
 - Article 19 General Information Obligations
 - Article 20 Record-Keeping
 - Article 21 Reporting
 - Article 22 Payments And Recoveries Calculation Of Amounts Due
 - Article 23 Guarantees
 - Article 24 Certificates
 - Article 25 Checks, Reviews, Audits And Investigations Extension Of Findings
 - Article 26 Impact Evaluations
- Chapter 5 Consequences Of Non-Compliance
 - Section 1 Rejections And Grant Reduction
 - Article 27 Rejection Of Costs And Contributions
 - Article 28 Grant Reduction

- Section 2 Suspension And Termination
 - Article 29 Payment Deadline Suspension
 - Article 30 Payment Suspension
 - Article 31 Grant Agreement Suspension
 - Article 32 Grant Agreement Or Beneficiary Termination
- Section 3 Other Consequences: Damages And Administrative Sanctions
 - Article 33 Damages
 - Article 34 Administrative Sanctions And Other Measures
- o Section 4 Force Majeure
 - Article 35 Force Majeure
- Chapter 6 Final Provisions
 - o Article 36 Communication Between The Parties
 - o Article 37 Interpretation Of The Agreement
 - o Article 38 Calculation Of Periods And Deadlines
 - Article 39 Amendments
 - o Article 40 Accession And Addition Of New Beneficiaries
 - o Article 41 Transfer Of The Agreement
 - o Article 42 Assignments Of Claims For Payment Against The Granting Authority
 - Article 43 Applicable Law And Settlement Of Disputes
 - o Article 44 Entry Into Force

2.3.2 Consortium Agreement

The Consortium Agreement (CA) is the agreement that partners have concluded among them to establish the internal rules of the consortium (such as governance, rights and obligations of parties, intellectual property rights and distribution of the EC contribution). It is the legal document signed by all partners; it is not signed by the EC, nevertheless EC itself requires to have such document in place. This agreement cannot contradict or negate the rules established by the GA or the Rules for Participation in European projects.

The CA is based on the Development of a Simplified Consortium Agreement (DESCA) Model Consortium Agreement and adapted to suit the project characteristics in line with partner's feedback. The document has been signed by the partners.

3 Project's governance

3.1 Management structure

- Project Coordinator (PC): The main role of the PC is the overall administrative management of the project, being the single point of contact with the European Commission (EC). The PC coordinates all communication channels across all partners to ensure progress and quality in the work, may propose and implement corrective actions if the progress deviates from the project plan, and provides the EC with technical, managerial and financial information. The PC chairs the GA and closely interacts with the Technical Manager, and also acts as the main point of contact for the project to external parties and other project, enhancing the project synergies. WINGS has undertaken this role.
- Technical Manager (TM): The TM is in charge of the overall technical feasibility of the deployed solution and the respective management and progress of the project's technical tasks towards the common technical goals. Moreover, the TM consolidates the technical reports and reviews the technical deliverables, ensuring they adhere to the necessary requirements. OTE has undertaken this role.
- The General Assembly (GenA): The GenA is the highest decision-making body of the project, chaired
 by the PC and composed of at least one representative per partner (each having one vote), allowing
 for the participation of each partner in the collective decisions of the project. The GenA is responsible
 for the strategic orientation of the project, overall direction of all activities, reorientation whenever
 necessary, budget revision and more.
- Work Package (WP) Leaders: Each WP leader coordinates the work to be carried out within the scope of the respective WPs, monitoring the performance and progress of the WPs with regard to the project plan (objectives, Gantt chart, milestones, deliverables), including potential corrective actions, and ensuring the horizontal information flow to other WP leaders and reporting to the PMB and the PC at regular intervals. Each Task Leader reports to the associated WPL, coordinates technical work for the tasks and activities according to the project and WP objectives, and assists in the preparation of the corresponding reports. The project is divided into 6 WPs and has clearly defined goals and carefully scheduled milestones and deliverables. The exact roles and tasks of each partner and reporting to the EC are defined throughout this document.
- Quality Assurance and Risk manager (QAR): The role of the QAR manager is to guide and monitor the
 quality plan and assess the project's risks, whilst ensuring high-quality deliverables and fully tested
 and reliable systems. The QAR responsibilities include the definition of project quality evaluation
 criteria, risk assessment and risk update, continuous monitoring, triggering of quality assurance
 project reviews, and more. WINGS has undertaken this role.

3.2 Decision-making

The principles of the decision process are described in more detail in the CA (Section 6.3). As general principle, each body decision shall be taken by a majority of 2/3 of the votes cast.

3.3 Quality Management

A high quality is pursued and secured through the project by the application of the rules defined in this deliverable. All project deliverables are internally reviewed following a peer review methodology. The project templates and guidelines to be followed by all documents produced within the project are defined as well. At the same time, a deliverable preparation plan, in accordance with all delivery dates and milestones, is produced.

The following timeline has been proposed for the preparation of deliverables.

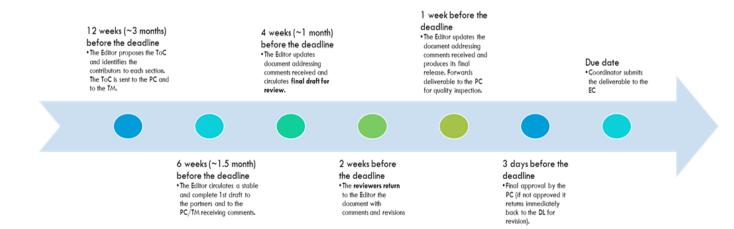


Figure 2: Proposed timeline for deliverable creation and submission to the EC

3.4 Project planning

The timing of all the WPs, their tasks, deliverables, and the project milestones are illustrated in the Gantt chart which is included in the Grant Agreement.

22-EL-DIG-SEA-SPINE		2024												2025								
	22-EL-DIG-3EA-3FINE	Jan	Feb	Mar	Арг	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Арг	May	Jun	Jul	Aug	
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
WP1	Project management and coordinatio	n																				
T1.1	Project management and coordination			MS1																		
T1.2	Technical management																					
T1.3	Quality control and risk management																					
WP2	Submarine and terrestrial network de	sign,	archit	ecture	e spec	cificat	ion ar	nd pla	nning													
T2.1	Procurement, Licensing, and Acquisition activities																					
T2.2	Submarine, inshore and shore-end surveys' consolidation												MS4									
T2.3	Terrestrial network survey studies												MS4									
T2.4	Functional and non-functional requirements & Security analysis																					
T2.5	E2E architecture and specifications																					
WP3	Implementation, constructions, activation																					
T3.1	Cable factory production, measurements and acceptance tests														MS6							
T3.2	Cable ship loading, transport and installation																					
T3.3	Shore-end protection, burial works, beach joints construction																					

Deliverable D1.1

T3.4	Provisional acceptance of the submarine links																				
T3.5	Terrestrial network works																				
WP4	VP4 Testing and performance assessment																				
T4.1	Submarine network readiness testing																				
T4.2	E2E network testing and performance assessment																				
T4.3	Security Audit & Evaluation																				
WP5	Outreach, dissemination and techno-e	cono	mic a	nalys	sis																
T5.1	Dissemination and Communication																				
T5.2	CEF synergies and outreach to other programmes																				
T5.3	Standardization and Refulation, Business model and techno-economic analysis																				
			20	25							20	26							2	027	
	22-EL-DIG-SEA-SPINE	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr
		21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36				
WP1	Project management and coordination																				
T1.1	Project management and coordination																				
T1.2	Technical management				MS2												MS3				
T1.3	Quality control and risk management				MS2												MS3				
WP2	Submarine and terrestrial network des	ign, a	rchit	ectur	e spec	ificati	ion an	ıd pla	nning												
T2.1	Procurement, Licensing, and Acquisition activities				MS5																
T2.2	Submarine, inshore and shore-end surveys' consolidation																				
T2.3	Terrestrial network survey studies																				
T2.4	Functional and non-functional requirements & Security analysis				MS5																
T2.5	E2E architecture and specifications				MS5																
WP3	Implementation, constructions, activat	tion																			
T3.1	Cable factory production, measurements and acceptance tests																MS8				
T3.2	Cable ship loading, transport and installation				MS7												MS8				
T3.3	Shore-end protection, burial works, beach joints construction				MS7												MS8				
T3.4	Provisional acceptance of the submarine links																MS8				
T3.5	Terrestrial network works																MS8				
WP4	Testing and performance assessment																				
T4.1	Submarine network readiness testing															MS9					
T4.2	E2E network testing and performance assessment															MS9					
T4.3	Security Audit & Evaluation																MS10				
WP5	Outreach, dissemination and techno-e	conor	nic a	nalys	is																
T5.1	Dissemination and Communication																MS11				
T5.2	CEF synergies and outreach to other programmes																				
T5.3	Standardization and Refulation, Business model and techno-economic analysis																MS11				

Figure 3: SEA-SPINE Gantt chart

3.5 Risk Management

The risk management is a key practice in all projects, and even more in a European-funded long-term project like this one. In order to secure its spread application and right steering, risks are collected at WP level, monitored and followed-up as well, and constantly reported through relevant committees.

The initial list of the major risks (risk register) with contingency plan is included in the GA and will be updated as necessary during the project lifetime.

3.6 Budget

The budget per partner and per WP and per types of costs is described in the Grant Agreement.

These budgets define the maximum contribution per partner for the full duration of the project, cannot be surpassed, and each partner will have to provide enough information on its technical activities in the reports to justify these expenses. This implies that partners not able to justify their manpower or expenses will not be able to claim their corresponding budget.

Budget transfers between beneficiaries or budget categories are possible according to the provisions of the Grant Agreement.

The payment schedule, which contains the transfer of pre-financing and interim payments to partners is defined in the Consortium Agreement. Payments are made by the EC to the coordinator (WINGS) who then transfers the relevant amounts to the beneficiaries according to their internal arrangements.

4 Project's shared information and tools

4.1 Collaborative space

The collaborative space is an internet-based secure collaborative workspace where all project partners can share and exchange information (Figure 4). This platform is intended to foster collaboration between all partners at all levels: Consortium, WPs, Legal and Financial, etc. Its functions include scientific, administrative, and financial information exchange and archiving.

The team collaboration tool is Microsoft Teams/Sharepoint and is created and maintained by the project coordinator (WINGS). Access must be requested from WINGS. There is a tree structure:

- Administrative: containing the documents of reference of the project (GA, CA), the project's mailing list participants, the reporting information.
- Deliverable Final Version: containing copy of all deliverables as submitted to the EC by WINGS.
- Work Packages With a further tree structure for WP1 to WP5 in which WPn is a folder that each WP can organize as desired to share WP related documents.

Rather than circulate documents and deliverables by email, it is encouraged that partners upload corresponding files on the document repository and inform the partners of their availability (indicating the folder or including a direct link to the document) for editing them, review them, or download if necessary.

4.2 File Format and Naming

All the working and exchanged (between the partners) documents should be in a format that can be easily edited and/or amended. For that reason, it is preferable to use file types supported by Microsoft Office.

In order to have a unique way to identify the official project's documents, a naming template has been defined as presented in the Table below along with an example for each document type (see also Figure 5, Figure 6, Figure 7, Figure 8 in Annex).

Table 1: Documents Naming Templates

Document Type	Naming Template	Example						
Deliverables	ProjectName DeliverableNo Date Version Partner	SEA_SPINE_D1.1_V0.1_WI NGS						
Presentations	ProjectName MeetingID PresentationTitle Partner MeetingDate	SEA_SPINE_WP1_Progress _Overview_WINGS_20230 213						
Agendas	ProjectName MeetingID MeetingLocation(or Online) Agenda MeetingDate Version Meetings identifiers: GA=General Assembly Meeting TM=Technical Meeting RM=Review Meeting Telco=Online meeting (Teams, etc.)	SEA_SPINE_Kick-Off meeting_Athens_Agenda_ 20240213						
Minutes following the organization of an online or physical meeting	ProjectName MeetingID MeetingLocation (or Online) MeetingTitle Minutes MeetingDate Version	SEA_SPINE_Kick-Off meeting_Athens_Minutes _20230213						

4.3 Mailing lists

The project has established dedicated mailing lists for project communications and deal with specific aspects. These are:

- General
- Financial
- WP1
- WP2
- WP3
- WP4
- WP5

Only subscribers to each of the lists are able to receive and send messages to the lists. Any message coming from non-subscribers will be bounced.

Lists are created and maintained by WINGS.

4.4 Meetings

During the project, several meetings are planned and scheduled. The type and nature of these meetings is different and consequently also the need for attendance and presence at these meetings differs.

The meetings at WP level are managed by WP leader who agrees with WP partners the frequency. Extraordinary meetings of any sort (i.e., technical, coordination) may be organized to suit the needs of the project.

Meetings can be online, physical, hybrid (i.e. physical with online participation as well).

4.5 Plenary Meetings

The project plenary meetings are planned and scheduled in advance, mostly coinciding with crucial points within the project flow. These meetings cover the whole consortium and the whole project and are called in advance in order to provide time to exchange information as well as inter- and intra-work package related technical issues.

All partners are required to attend plenary meetings. Per partner one or more people can attend, depending on the involvement in the tasks and activities discussed at the meeting.

The organisation of project plenary meetings is under the responsibility of the meeting host (can be different each time) and the Project Coordinator. The meeting host will organize the room bookings, catering, practical details of the area and on how to approach the venue. The Coordinator will define the agenda by collecting also specific needs by the WP leaders.

5 Project monitoring and reporting

There is an internal reporting mechanism that secures the information collection from all partners and WP leaders and the subsequent aggregation and submission to the EC. This process covers both the technical and financial detail reporting. Furthermore, the establishment of the governance of the various committees (from WP level to GenA) ensures constant alignment and prompt handling of deadlines and key issues. Templates and guidelines will be provided to support in reporting.

The project's work plan is detailed at the Description of the Action (DoA), which is the Technical Annex to the Grant Agreement (Annex 1).

All WPs, tasks, deliverables, and resources to be spent during the project are defined in the DoA and Grant Agreement. The progress of the project is monitored and assessed by the timely and budget wise achievement of milestones, deliverables, and reports. The key references to monitor are:

- Deliverables
- Efforts spent per WP per partner per quarter.
- Personnel costs, travel, other costs per partner vs. total budget
- Equipment costs
- Other aspects (e.g. deviation from plan etc.)

5.1 Project reporting – Periodic reports

Official periodic and financial reports will have to be prepared. These reports contain all relevant information about the technical work progress, administrative and financial aspects. These reports also include the updated project vision based on the evolution of the project environment and the results generated.

However, every six months, each partner will provide the effort and cost expenditure by filling in a specific file which will be provided by the Coordinator and will also briefly describe the work done.

Each partner can see the progress of its effort and cost in comparison with planned baseline.

Content from these reports will be combined and harmonized to create parts of the annual progress deliverables (one for each year of the project).

5.2 EC reviews

EC reviews are organised to present the project results to the European Commission and their independent experts. This enables the Commission to monitor the project and to ensure that contractual obligations are fulfilled.

The project will have at least two review meetings which will be scheduled jointly with the European Commission.

6 External/Public Communication and Scientific Publications

6.1 Project's website and social media channels

6.1.1 Website

The project's website is an important dissemination tool. It is the home base, where most of our online activities take place, or at least where the records of activities are presented in a clear, organized manner. The official address for the website is https://SEA-SPINE.eu/.

At the initial publication stage, the site has a main page, and three subsections; About (including Objectives and Consortium), Dissemination and Communication, Contact.

The site has been built and is being managed by WINGS ICT Solutions.

6.1.2 Twitter

Project's official twitter account is https://twitter.com/EuSeaSpine

6.1.3 LinkedIn

LinkedIn official account is https://www.linkedin.com/company/eu-sea-spine/

6.2 Publications and acknowledgment

Before engaging in a communication or dissemination activity expected to have a major media impact, the beneficiaries must inform the Granting Authority.

- If partners post on Twitter, they shall tag the Granting Authority and the CEF programme by using
 @EU_HaDEA and the dedicated hashtag #CEFDigital. (Note: HaDEA can also be found on LinkedIn
 (https://www.linkedin.com/company/european-health-and-digital-executive-agency-hadea/mycompany/)
- Every communication activity foreseen for SEA-SPINE should be communicated to HaDEA in a timely manner to ease coordination and possible exchanges/participation.

Besides these guidelines, prior notice of any planned publication shall be given internally to the Consortium before publication. Any objection to the planned publication shall be made in accordance with the Grant Agreement in writing to the Coordinator and to the Party or Parties proposing the dissemination. If no objection is made, publication is permitted. Detailed aspects are mentioned in the Grant Agreement ARTICLE 17 — COMMUNICATION, DISSEMINATION AND VISIBILITY.

To ensure high quality of scientific publications it is suggested to follow IEEE instructions such as the "IEEE Authorship Series How to Write for Technical Periodicals & Conferences". Collaborative papers with authors and work from more than one partner are encouraged. All papers or publications related to the project must include the following Acknowledgement:

This work was supported by the European Union's Connecting Europe Facility (CEF) programme under Grant agreement No 101133518. The contents of this publication are the sole responsibility of the authors and do not in any way reflect the views of the EU.

7 Conclusions

This deliverable has provided useful information for the overall project governance. It aimed to provide the EC and all project partners with a summary of all contractual rules and management procedures. It has provided information related to management tools and common guidelines for project participants. Also, guidelines about project-wide quality monitoring are also described including the management of the planned deliverables.

8 References

- [1]. https://ec.europa.eu/info/funding-tenders/opportunities/portal/screen/opportunities/topic-details/cef-dig-2022-gateways-works
- [2]. https://www.itu.int/itu-d/reports/statistics/global-connectivity-report-2022/

Annex: Online repository and templates

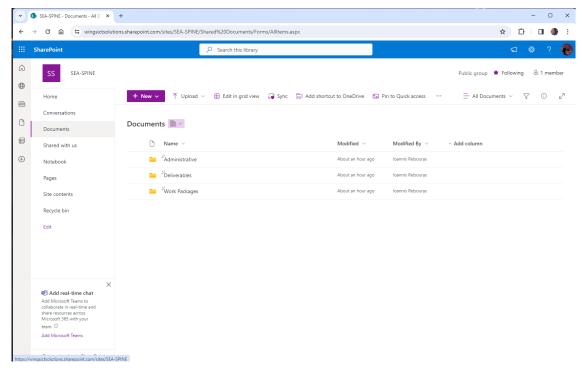


Figure 4: Online repository

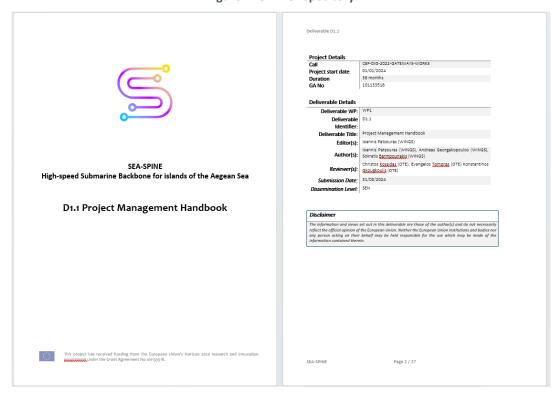


Figure 5: Deliverable template



Figure 6: Presentation template



Figure 7: Agenda template

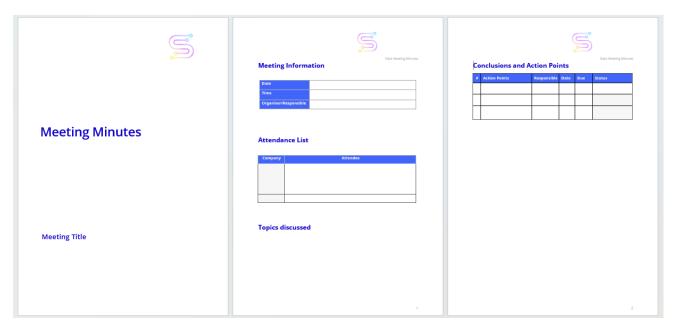


Figure 8: Minutes template