E-ECO DOWNSTREAM

Development of Heating Technologies for the Efficient Renewable Energy Consumption of $CO_2$-Neutral Downstream-Processes

# Project Management Plan

## Deliverable D7.2

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# 1. Introduction

## 1.1 Purpose and scope of the present document

This document describes the procedures and tools that will be adopted to ensure proper implementation and management of the E-ECO Downstream project, by providing a brief yet thorough overview of the management guidelines to be followed throughout the project duration to lead it towards its successful execution.

This manual is not a legally binding document. Its purpose is not to repeat the terms and conditions laid out in the Grant Agreement (and its Annexes) as well as in the Consortium Agreement, but to complement their description of the management and cooperation procedures, mainly by providing practical information for day-to-day matters. In case of any accidental incompatibilities between this document and any terms of the Grant Agreement or of the Consortium Agreement, these latter ones always prevail.

This deliverable, although officially delivered on M3, should be intended as a living document that can be modified according to the project needs. In case it is updated and extended according to the project demands during the project, the relevant issues and changes in the project and/or procedures will be reported in the Interim report.

The document will be updated upon agreement of the partners, and all the participants needs to be duly informed about the changes made with respect to the previous version.

## 1.2 Structure of the document

This document is divided into 4 main sections:

- Section 1 introduces the context of this document and its objectives.
- Section 2 introduces the main inspiring principles of the established project management plan and procedures.
- Section 3 describes the overall management structure, identifying roles and responsibilities of each partner.
- Section 4 describes the project management procedures.

# 2. . Principles of the project management

The management structure of E-ECO Downstream has been tailored to the specific project context and objectives as well as on the involved partners and aims at providing agile, effective, transparent and inclusive procedures to manage the project to ensure that a smooth cooperation is established among the partners, and that all objectives are achieved within the time, cost, and resource constraints which are defined in the Description of Action (DoA). To this aim, the overall management of E-ECO Downstream will comply with the following principles:

- Creation of an integrated project structure seamlessly incorporating technical, scientific, and administrative aspects.
- Achievement of consensus and agreement among all partners by ensuring an arrangement of decision making that is close to the responsible levels of execution.
- Full transparency of decision procedures which must be shared, understandable and easily traceable by all the project participants.

# 3. Project management structure

The quality of the project management will be ensured using a sound organizational structure, assigning well-defined responsibilities and obligations to the different partners of E-ECO Downstream. This structure is lean and flexible, adhering to the complexity of the E-ECO Downstream consortium to ensure transparency and commitment by all partners and to facilitate a smooth and successful project development.

The overall management structure is shown in **Figure 1**. On top of the responsibilities as first level structure, is the General Assembly (GA), chaired by the coordinator. It is assisted by the roles of the Executive Board (EB). Furthermore, at the WP level, a WP Leader is appointed to coordinate each WP. The functions, tasks and responsibilities of each governing body are explained in the following subsections.

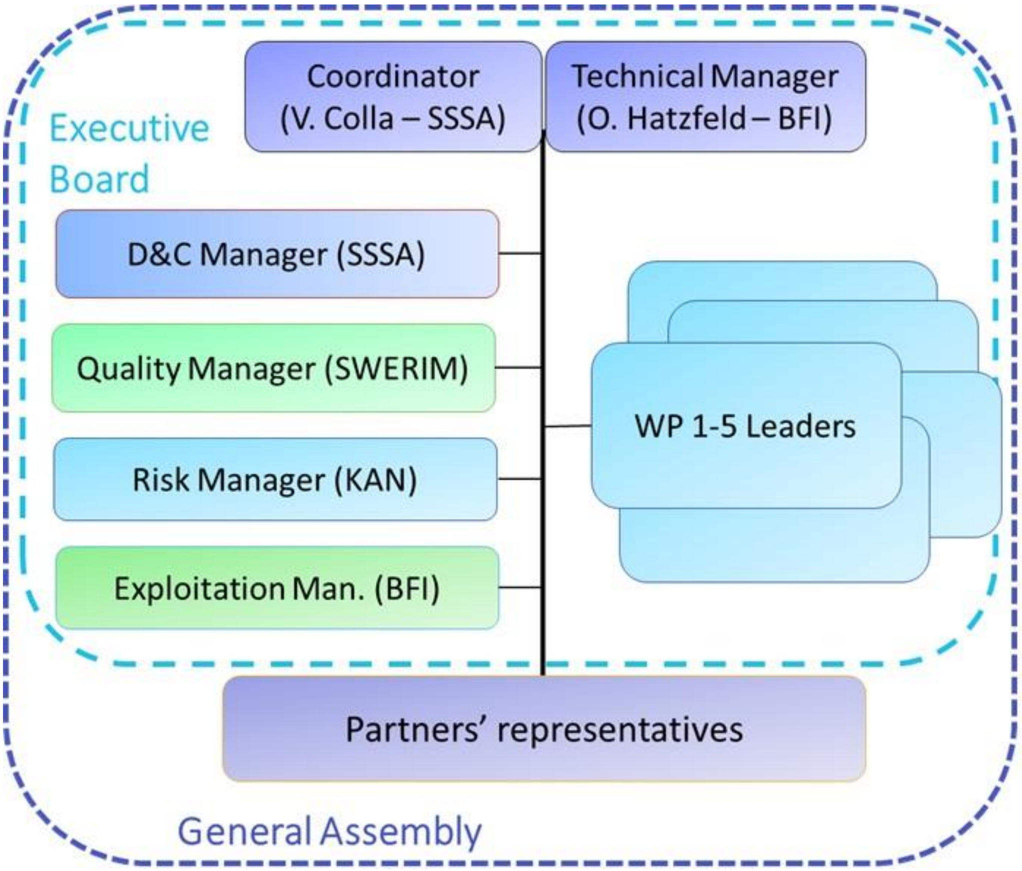


FIGURE 1. E-ECO DOWNSTREAM MANAGEMENT STRUCTURE.

## 3.1 General Assembly

The GA is the highest governing body of the E-ECO Downstream project and its main task is the project governance. It consists of one representative of each partner and is chaired by the Project Coordinator. It has the overall responsibility of all technical, administrative, financial, legal, and ethical issues of the project. Additionally, it will monitor and assess the actual progress of the project and make amendments, if necessary. The GA assumes the overall management responsibility on behalf of the partners; takes decisions on proposals for changes to Annexes 1 and 2 of the Grant Agreement, workplan, resource allocation, evolution of the consortium, Consortium Agreement, identifies breaches, defaulting partners and remedies and approves appointments to the other consortium bodies.

## 3.2 Work Package Leaders

The Work Package Leader (WPL) is responsible for the coordination, management and assessment of the work carried out in a work package and ensures that performance, budget, and timelines are met. In cooperation with the CO and TM, WPLs are responsible for the integration of their results to connected tasks and WPs.

**Table 1** lists all the WPLs of the project.

TABLE 1. LIST OF WORK PACKAGE LEADERS.

| WP No | Title | Leading partner | WPL |
|---|---|---|---|
| **1** | Adaptable burner for the fuels of transition and future fuels | BFI | MSc. Eng. Sebastian Bialek |
| **2** | Heat recovery for transition and future fuels | FER | Dr. Piero Frittella |
| **3** | Hot charging | ADI | MSc. Eng. Antonio Curci |
| **4** | Hybrid heating in a pilot walking beam furnace | SWERIM | MSc. Eng. Andreas Johnsson |
| **5** | Technical, economic, and ecological assessment of new/adapted technical solutions to enhance existing steel making plants for the transition to de-carbonisation | BFI | Dr. Frank Mintus |
| **6** | Dissemination, exploitation and communication | SSSA | Dr. Ismael Matino |
| **7** | Project Management | SSSA | Prof. Valentina Colla |

## 3.3 Executive Board

The EB is responsible for the facilitation of the project management and will supervise the project progress guaranteeing its continuity and consistency by (re)allocating the needed resources adequately. The EB encompasses the following main roles:

- **Project Coordinator (CO)** chairs the EB meetings and is responsible for the overall management, communication, and coordination of the whole project. She acts as intermediary and representative of the Consortium towards the PO and the Funding Agency, monitors partners' compliance with their contractual obligations, monitors the implementation of the whole project, controls the project resources and budget, handles the financial aspects of the project, controls the schedule of activities and the allocation of the effort, ensures the effectiveness of the project internal communication, undertakes quality control of contractual deliverables, ensures that all deliverables are available on time, liaises with and report to the EC on all matters concerning the project.

The CO also undertakes the scientific coordination of the project, being responsible for smooth adoption and implementation of all the aspects dealing with scientific advancements foreseen within the project and related to the technological WPs/Tasks. The CO closely cooperates with the Technical Manager to ensure smooth development of technical activities. The role of CO has been assigned to Prof. Valentina Colla from SSSA.

- **Technical Manager (TM)** is responsible for all technical aspects of the project. Together with the WPLs, He defines the specifications, design principles, and is responsible for the consistency of all project results through the implementation phase. The role of TM has been assigned to Dr. Oliver Hatzfeld from BFI.
- **Dissemination and Communication Manager (D&CM)** guides the definition and execution of the dissemination and communication plan and activities, in close cooperation with the Communication Leader (CL). The role of D&CM has been assigned to Dr. Ismael Matino from SSSA.
- **Quality Manager (QM)**: is responsible for the implementation of the quality procedures determined in the Quality Control. The QM role has been assigned to Dr. Joel Falk from SWERIM.
- **Risk Manager (RM)** is responsible for the verification of the project results. The RM role has been assigned to Dr. Jesse White from Kanthal (KAN).
- **Exploitation Manager (EM)** overviews the definition and execution of the exploitation activities, by leading all the initiatives that aim at exploring opportunities for the adoption of the proposed solutions in the EU steel sector. The EM role has been assigned to Dr. Zeinab Kargar from BFI.

Moreover, the leaders of WPs 1, 2, 3, 4 and 5 are also part of the EB.

# 4. Project management procedures

The project management will use validated procedures, tools and techniques that have been successfully developed over many years of experience by both SSSA and the involved research organisations (BFI and SWERIM) throughout various successfully completed national and international projects. The objective is to ensure that the project will meet all its objectives on time, lead to high quality results, and will exploit the foreseen resources according to the principles of efficiency and efficacy.

## 4.1 Decision Making Mechanisms

Mandatory decision rules and agreements are necessary for the success of the project. As regards the decision-making process, it concerns mainly of two main categories:

- decisions regarding issues of technical and/or scientific nature;
- decisions regarding issues of administrative nature including financial and IPR issues.

The above-described project management structure, such as described in Section 3, also forms the foundation for the decision-making and conflict resolution procedures.

A general guideline to reach agreement as close as possible to the level of execution is followed, and only if agreement is not reached on a given level, the decision will be escalated to the next appropriate level.

- **Decision Scope at Task Level**: All partners being involved in a task are eligible to contribute to a decision regarding that certain task. In case a capable decision cannot be taken at this level, the issue must be forwarded to the WPL.
- **Decision Scope at WP Level**: All partners being involved in a WP activity are eligible to contribute to a decision with regards to this WP in cooperation with and under guidance of the EB. In case a capable decision cannot be taken at this level, the issue must be forwarded to the GA.
- **Decision Scope of GA**: The supreme decision committee is the GA. Each partner must send a qualified representative to the GA.

Decisions will normally be taken by the responsible team members, and organization bodies based on the description of work to be performed. During the project the consortium will have to agree on and develop technical, scientific, and commercial ideas and specifications. Usually, agreement will be reached first by informal contact, followed by official confirmation via electronic mail, letter or agreed written minutes. For important issues, the agreement may take the form of a short report that needs to be signed by those responsible for decision-making. Non-technical factors such as resource allocation and contractual terms will also need to be agreed on and documented in writing. Technical issues/conflicts within given contractual commitments that do not involve a change of contract, a change of budget and/or a change of resources/overall focus will be discussed/solved on the WP level first.

### 4.1.1 Voting Rules and Quorum

Each Consortium Body shall not deliberate and decide validly unless two-thirds (2/3) of its Members are present or represented (quorum).

If the quorum is not reached, the chairperson of the Consortium Body shall convene another ordinary meeting within 15 calendar days. If in this meeting the quorum is not reached once more, the chairperson shall convene an extraordinary meeting, which shall be entitled to decide even if less than the quorum of Members is present or represented. All members belonging to a Consortium Body have a single vote. Defaulting parties may not vote.

When decisions must be taken and there is no possibility (or is not cost/time effective) to celebrate a meeting, the chairperson of the Consortium body taking the decision will send a Doodle poll to the corresponding partners with a deadline for issuing the votes. Once the decision is taken, minutes of it will be sent to partners along with the result.

### 4.1.2 Conflicts Resolution

In case of conflicts arising within the consortium about the implementation of the project or other matters related to the project itself, the following procedure is applied:

1. The implementation team will inform the related WPL about the occurred conflict.
2. The WPL organizes a WP meeting involving the Task Leaders of the same WP, and the issue is discussed.
3. In case of agreement, the team will inform the TM and the CO.
4. If no decision is taken, the WPL informs the CO, who contacts the responsible persons and tries to resolve the conflict.
5. In case of agreement the CO informs the GA.
6. If no agreement is reached, the issue is discussed in the GA that has the authority for the final decision. The final decision must be accepted by all parties.

For all conflicts, standard voting procedures will be followed based on the consensus principle with a necessary majority of two-thirds (2/3) of the votes cast.

### 4.1.3 Problems concerning the Performance of a Partner

Each WPL monitors the performance of all the partners involved in the concerned WP and, if a partner is not suitably performing its technical tasks, the issue must be reported and discussed to the CO and the TM, which must preliminarily try to solve the problem through a direct contact with the defaulting partner targeting. If necessary, CO and TM report the problem to the GA by providing specific technical information about the defaulting partner. The GA will meet to discuss possible solutions and decide on suitable actions. Possible decisions involve:

- To suspend the next payment from the Commission, be it part of a previous advance that had been partially paid, or the next phase advance payment.
- To move part of the outstanding work from the concerned partner to another partner in the same WP, with a subsequent transfer of budget.
- To request the partner to leave the consortium.

When necessary, the CA is the main reference for conflict resolution.

### 4.1.4 Management of changes in the work plan

Any modifications that may be required in the workplan must be promptly reported to the CO. Requests for modification could come from a particular WP: in this case the relevant WPL should report the situation to the TM and the CO.

Other instances of change could occur based on general project assessments, carried out as part of the normal management. If the workplan needs to be changed, the CO needs to discuss this with the Project Officer. If a Review is imminent, it may be more practical to present the revised situation to the Reviewers, who can then recommend the change as an outcome of the Review.

It is worth to remember that an amendment can take more than one month to be approved by the EC.

When necessary, please refer to the GA and CA for further details.

## 4.2 Communication among partners

Efficient communication and collaboration procedures are essential for the success of the project. Since all project partners are distributed across European member states, suitable measures are planned to enable smooth cooperation, co-working and co-editing of documents across the project.

### 4.2.1 Management documents sharing and co-editing

The sharing of the main management documents will be developed mainly through a OneDrive shared folder, which is managed by the CO and can be fully accessed by all the participants, who have the possibility to create/delete folders, modify documents, upload and download files, etc. The typology of documents to be shared through the OneDrive folder include:

- meeting agendas, minutes and presentations;
- draft and final versions of deliverables;
- draft and final versions of interim reports;
- schemes, flowsheets, and any kind of documents that are useful for the development of the activities of the different WPs.

The OneDrive folder contains one folder per WP, and the WPLs are responsible to monitor the consistency of the contents referring to their WPs.

Co-editing via online editing modalities is strongly encouraged, to limit as much as possible the circulation of multiple emails containing different versions of the documents, avoid work duplication and make the evolution of the documents transparent and immediately visible to all the co-authors.

The partners' representative in the GA are responsible to provide the CO with an updated list of all the persons of its own company/institution which must have access to the project shared folder. Each amendment of such list, e.g., due to rearrangements of teams or people leaving the company/institution, must be timely communicated to the CO.

### 4.2.2 Project Meetings

In order to ensure clear and efficient project progress, regular physical as well as remote meetings will be held. Beyond the meetings related to the different consortium bodies (GA, EB, WPs) meeting focused on single tasks can be organised based on the specific needs and demands related to the tasks.

The dates of the meetings will be agreed among the partners. The calendar for GA and EB meetings is discussed at each GA with a time horizon of 18 months (or until the end of the project, after Year 2). The indicative calendar of GA and EB meetings for the first 2,5 years of the project, listed in chronological order is provided in **Appendix A**. Such list will be completed and continuously revised along the project duration based on the needs and development of the project itself.

The calendar for WP and Task meetings is proposed by the WPLs with a time horizon of 12 months or until the end of the WP/task. WP meetings generally involve only the Task Leaders.

Meetings can be classified as *ordinary* or *extraordinary*. A meeting is *ordinary* if it is foreseen in the GA and follows the normal pace established at the beginning of the project. On the other hand, a meeting is considered *extraordinary* when it has not been foreseen in the GA, but it is considered necessary for the correct execution of the project for different reasons: management of critical risks (technical, financial, managerial, etc.), to take important decisions, etc.

WPLs are responsible for the organisation of the remote WPs, Task leaders are responsible for organising tasks meetings. CO and TM are responsible for the organisation of remote GA and EB meetings.

For physical meetings, the hosting institution is responsible for the logistic aspects, but CO, TM and the concerned WPL (in case of task meetings) must be informed and can decide to attend and/or to involve other partners (upon agreement of the other involved partners), if they think it is relevant.

**Table 2** summarises the planned timetable of the various project meetings.

Any Party, which is a member of a Consortium Body:

- should be represented at any meeting of such Consortium Body
- may appoint a substitute or a proxy to attend and vote at any meeting
- shall participate in a cooperative manner in the meetings

Everyone else in the project is free to participate.

An updated version of the established calendar of project meetings is maintained in the project OneDrive shared folder under the responsibility of CO and TM, lists all project-related meetings and other important events. This calendar will be editable for all the partners, so that WPLs can also update it based on the evolving schedule of WP and tasks meetings.

The agenda, minutes and presentations from meetings will also be available to all project participants through the project OneDrive shared folder.

**TABLE 2. OVERVIEW OF THE MEETINGS CALENDAR.**

| Consortium Body | Ordinary meetings | Extraordinary meeting | Objectives |
|---|---|---|---|
| GA | *Physical*: At least yearly<br><br>*Remote*: semestral, extending the EB conference call | At any time upon written request of 1/3 of GA members (physical or remote) | • Enable and facilitate the communication and information exchange among partners<br>• Support decision making process<br>• Enable effective collaboration between partners<br>• Analyse risks<br>• Analyse, support and promote dissemination and communication opportunities |
| EB | *Physical*: At least yearly<br><br>*Remote*: semestral conference calls | At any time upon written request of any member of EB (physical or remote) | • Make joint technical decisions<br>• Promote discussions and exchange on technical results |
| WP level | *Remote*: quarterly conference calls | According to the WP plan and needs | • Discuss in detail the activities of the WP<br>• Define concrete implementation actions |
| Task level | According to the task plan and needs | | • Discuss in detail the activities of the task<br>• Define concrete implementation actions |

The chairperson of a Consortium Body must notify via email of a meeting to each member of the concerned Consortium body (and to CO and TM in copy, for WP and task meetings) as soon as possible and no later than the minimum number of days preceding the meeting, such as indicated in **Table 3**. Depending on weather the meeting is physical or remote as well as ordinary or extraordinary, the number of preceding days varies.

**TABLE 3. TIMEFRAME FOR MEETINGS NOTIFICATION.**

| Meeting mode | Consortium Body | Ordinary meetings | Extraordinary meeting |
|---|---|---|---|
| **Physical** | GA | 60 calendar days | 30 calendar days |
| | EB | 42 calendar days | 21 calendar days |
| | WP/task | 21 calendar days | 10 calendar days |
| **Remote** | GA | 30 calendar days | 15 calendar days |
| | EB | 21 calendar days | 10 calendar days |
| | WP/task | 15 calendar days | 7 calendar days |

The chairperson of a Consortium body shall produce written minutes of each meeting to record and formalise all decisions that are taken in that meeting.

The chairperson shall send the draft minutes to all Consortium members (even those not participating) within 21 calendar days of the concerned meeting date and shall be considered as accepted if, within the following 21 days, from their receipt, no member has produced any written objection. Minutes are also shared through the project OneDrive folder.

### 4.2.3 E-Mail Communication

Electronic mail is one of the major means used to exchange information, while the main exchange of documents in electronic form over the Internet will be accomplished using the shared OneDrive folder.

A list of persons involved in each WP is available including email address and kept updated on the OneDrive shared folder.

To make more effective the e-mail communications it is strongly advised to provide meaningful and intuitive subjects enabling the readers to immediately get what the mail is about (e.g., E-ECO Downstream – WPx – Document contribution required).

In addition, some specific keywords can be also used in the subject. For instance:

- [URGENT]: an answer is necessary in a week
- [EXTREMELY URGENT]: an answer is necessary max in two days
- [IMPORTANT TO READ]: an e-mail that despite longer than usual deserves to be completely read and, if requested, to receive feedback.

It is not recommended to send e-mails with attached big documents to the mailing lists. It is more effective to upload them on the shared OneDrive folder and allow each participant to access them when required. If e-mail has to be used, then to keep down file transfer times and avoid limitations imposed by certain Internet providers, it is strongly recommended to use URLs of the documents intended to be transferred.

## 4.3 Project Reporting

The project reporting, along with deliverables, is the procedure used by the EC to assess and follow up the funded projects. Therefore, it is of utmost importance, as its conditions in a very direct way the good image and good assessment of the project by the EC.

It is important to remark that project reporting is a responsibility of the whole Consortium and every partner has to be involved in it.

The deadline for submitting official reports is **60 days** after the end of the period (**M18**, **M30** and **M42**, respectively). The official reports are composed of one joint Periodic Technical Report and many Periodic Financial Reports, i.e. one per each partner.

### 4.3.1 Periodic Technical Reports

For each official reporting period the technical progress of the project must be communicated to the EC by preparing the Periodic Technical Reports to claim for the interim payment. The CO, with the support of the TM, will be in charge of preparing them based on the information provided by the partners.

To this aim, the CO will prepare and share through the OneDrive folder a skeleton of the report, which will be organised on a WP and Task basis, according to the guidelines of the EU. The CO will attribute to the different partners the task of drafting the first version of different sections based on the responsibility of the different activities. Generally, WPLs will be asked to draft the description of the activities of the WP their coordinate. Obviously, they can share the burden of the draft preparation with task leaders, but they are still responsible to ensure the completeness of the provided information. CO and TM will revise and overview this first draft and will provide other versions of the document by possibly asking for integrations and amendments as well as by asking all the partners to carefully revise the document. It is, therefore, very important that the different versions of the document are revised online, so that all the partners can monitor the evolution of the document through time and work duplication is avoided.

### 4.3.2 Periodic Financial Reports

The financial reporting process has been designed to follow up budget execution and detect possible deviations.

Each partner (and linked third parties) has been granted resources for each work package as specified in the GA. They will report, in the cost reporting template, the corresponding person/months allocated during the reporting period to each WP. This information will be used by the PO to monitor the progress and the associated human resources declared by the partners. The steps to be followed are explained below:

- At the end of each reporting period, the CO will send an email to the partners with instructions and templates to be filled in.
- During the next 30 days after the end of each reporting period, each partner will send to the CO its financial cost report using the provided template.
- During the next 15 days the CO will check the financial report and ask partners for possible justifications and/or corrections.
- Following the eventual requests, the partners correct the financial report, if needed, and upload the final version of the financial report on the EU portal.

It is possible, that the CO and/or the PO requests partners for further information to clarify or explain certain costs.

## 4.4 Financial Management

Funding and payment principles are regulated by the GA and CA. Payment modalities are specified by the EC including evaluation and approval processes, as well as by the consortium as a whole concerning distribution of budget among the partners.

To avoid any misunderstanding of these regulations, the texts are not copied to this deliverable. Nevertheless, the following subsections clarify two major aspects that can be particularly relevant for a smooth financial management of the project, namely financial deviations and redistribution of budget.

### 4.4.1 Financial Deviations

The process to manage financial deviations is explained below:

- The partner who incurs any financial deviation must communicate it as soon as possible to the CO.
- If the CO considers that these deviations are minor, a detailed explanation is provided in the dedicated section of the interim report. Otherwise, namely if they are considered major deviations, the CO will communicate the issue to the PO.
- The PO decides its acceptance or rejection. In case of acceptance, the PO decides if an amendment is required.

### 4.4.2 Re-Distribution of Budget

In case of major deviations in the progress of the project or in the use of resources by partners, the EB may include a discussion about the re-distribution of resources. In case the GA decides to modify the budget, the CO needs to negotiate this with the EC.

# 5. Conclusions

This deliverable presents the E-ECO Downstream Project Management Plan, an internal instrument to provide a consistent framework to manage the interaction among partners and the proper handling of assemblies and the reporting tasks.

The Consortium recognizes that appropriate procedures are fundamental for a smooth management of project activities. Therefore, the present document illustrates in clear terms the rationale behind the management procedures, in agreement with what stated in the Grant Agreement and Consortium Agreement.

The project management plan can be revised during the project duration if needed, amendments should be approved by the General Assembly, and the updates will be presented in the interim reports.

# Appendix I: Indicative list of GA and EB meetings

| Foreseen Date | Physical location/online tool |
|---|---|
| 28-30.10.2025 | Udine (Italy) in conjunction with the ESTEP Annual Event |
| March 2026 | Online |
| September 2026 | Lulea (Sweden) hosted by SWERIM, possibly in conjunction with the First Review Meeting |
| March 2027 | Online |

## List of Figures



## List of Tables

# List of acronyms and abbreviations

| Acronym | Full Name |
|---|---|
| BFI | VDEH-Betriebsforschungsinstitut |
| CO | Coordinator |
| D&CM | Dissemination and Communication Manager |
| EB | Executive Board |
| EM | Exploitation Manager |
| FER | Feralpi |
| GA | General Assembly |
| KAN | Kanthal |
| QM | Quality Manager |
| RM | Risk Manager |
| SSSA | Scuola Superiore Sant’Anna |
| TM | Technical Manager |
| WP | Work Package |
| WPL | Work Package Leader |