



SELECTIVE ELECTROCHEMICAL REDUCTION OF CO₂ TO HIGH VALUE CHEMICALS

Grant agreement no.: 851441
Start date: 01.01.2020 – Duration: 36 months
Project Coordinator: Dr. Brian Seger - DTU

DELIVERABLE REPORT

1.1. – PROJECT MANAGEMENT PLAN		
Due Date	Jan 31, 2020	
Author (s)	Brian Seger	
Workpackage	WP1	
Workpackage Leader	Brian Seger	
Lead Beneficiary	DTU	
Date released by WP leader	28-01-2020	
Date released by Coordinator	28-01-2020	
DISSEMINATION LEVEL		
PU	Public	X
PP	Restricted to other programme participants (including the Commission Services)	
RE	Restricted to a group specified by the consortium (including the Commission Services)	
CO	Confidential, only for members of the consortium (including the Commission Services)	
NATURE OF THE DELIVERABLE		
R	Report	X
P	Prototype	
D	Demonstrator	
O	Other	

SUMMARY	
Keywords	<i>Project Management Plan, Information</i>
Abstract	<i>This deliverable defines the operating procedures of the SELECTCO2 project. It contains a wide variety of information relating to meeting dates and structures, internal communications, financial management and procedures for deliverables, milestones, and project reviews. This is a living document and will be reviewed at least annually to see if any necessary modifications are needed.</i>
Public abstract for confidential deliverables	

REVISIONS			
Version	Date	Changed by	Comments
0.1	22-01-20	Brian Seger	

PROJECT MANAGEMENT PLAN

CONTENTS

1	Introduction	4
2	Scope.....	4
3	Project Management	5
3.1	Management Structure.....	5
3.2	Organizational Meetings and Procedures.....	7
3.3	Internal Communications.....	10
3.4	Conflict Resolution	12
4	Implementation and Quality Management.....	12
4.1	Deliverables & Milestones	12
4.2	Risk Management	14
4.3	Project Reporting	15
4.4	Dissemination and knowledge management protocol.....	17
5	Financial Management	18
5.1	Financial Statements.....	18
5.2	Payment Handling.....	20
6	Conclusions and future work	21
7	References	22

1 INTRODUCTION

The purpose of the SELECTCO2 Project Management Plan deliverable is to allow for a document describing an effective management and coordination plan that will be implemented throughout the project. The main objective of this document is to allow for a single point of reference in regards to quality management, financial management and reporting protocols. This document is intended to be used as a manual for all Consortium members in regards to issues relating to protocols relating to day-to-day activities. Thus, this document will allow for a standardized and organized operating procedure and methods for providing documents, which will allow for efficient implementation of the project.

2 SCOPE

This document is submitted to the European Commission for the purpose of compliance with the Grant Agreement. However, since this is a living document this plan will be regularly updated (as denoted in the Grant Agreement document) to ensure it maintains effectiveness as the project is implemented. Any time this document is updated, all partners will receive a copy of the appended document.

While the purpose of this document is to set an overall project management plan, the information in here does overlap with other documents (noted in References). Whenever there are areas of ambiguity or contradictions of statements, the prioritization of documents is as followed:

1. European Commission Documents
2. Grant Agreement
3. Consortium Agreement
4. Project Management Plan
5. Dissemination and Knowledge Management Protocol (Deliverable 9.3)
6. Technical Consistency Plan (Deliverable 1.4)

3 PROJECT MANAGEMENT

3.1 Management Structure

Supporting Documents: GA-1B

Summary- The Coordinator will lead the project and interact with the European Commission. The Coordinator will receive administrative help from the Management Team in supporting and directing the project via the Steering Committee. The Scientific Advisory Board will be an outside source to give advice to the Steering Committee. The Industrial Advisory Board will both provide general guidance to the project as well as specific details to WP8 to allow for a comprehensive analysis of this technology. The General Assembly, consisting of all the work packages will meet annually and will work with the Coordinator to achieve the goals set out in the project.

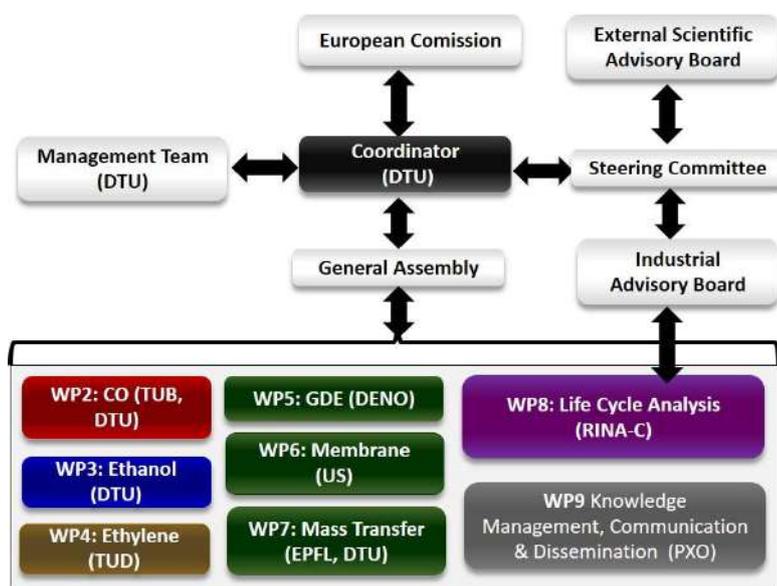


Figure 1: Management structure

3.1.1 Coordinator

The Coordinator is the main responsible person for the project and holds the communication with the European Commission. The Coordinator will be assisted on the day to day business by the Management Team in the effort to cover the following responsibilities:

- Project scientific management, identification of challenges to meet timely progress.
- Organizing, convening and chairing of General Assembly and Steering Committee meetings. This will be done in collaboration with the host institute for the meetings.
- Reporting of minutes of these meetings to partners.
- Monitoring progress and quality check of deliverables, jointly with the Steering Committee.
- Project coordination, monitoring and reporting, with assistance of the WP leaders.
- Management of financial and administrative reporting and ensuring sound financial and contractual management.
- Continuous monitoring and assessment of emerging issues and handling of critical risks and conflicts, with assistance of the Steering Committee.
- Communicating with the European Commission and representing the project externally.

3.1.2 Management Team

The Management Team (DTU) consists of the Coordinator Brian Seger, consortium members Karen Chan and Ib Chorkendorff and Administrative Staff (Wiebke Lutzen, Lone Coe Jensen and Birgit Bohn) all located at DTU Physics. Karen Chan’s role will be vice-coordinator whereas Ib Chorkendorff’s role will be to use his vast experience managing consortiums (VSustain, CASE, CINF, etc.) to advise the Coordinator. The team will work to facilitate an efficient and timely implementation of the project through the established management procedures. They will timely address and handle all day to day business and emerging issues including convening and organisation of meetings, communication with partners and Work Package Leaders to sustain and monitor an effective implementation of the project activities,

tasks, milestones and deliverables. They will also ensure a timely reporting of scientific and financial contractual requirements to the Commission and work to undertake an effective communication between partners and the Commission. The Management Team will also be responsible for overseeing the implementation of the financial plan and monitor expenditures and resources (person month) of each partner. The Management

Table 1: Steering Committee

Member	Partner	Role in SELECTCO2
Brian Seger	DTU	Coordinator/ WP3 Lead
Peter Strasser	TUB	WP2 Lead
Tom Burdyny	TUD	WP4 Lead
Emanuele Instuli	DENO	WP5 Lead
John Varcoe	US	WP6 Lead
Sophia Haussener	EPFL	WP7 Lead
Stefano Barberis	RINA-C	WP8 Lead

Team will also assist partners on financial issues and ensure that financial reports are submitted on time and in accordance with the provision of the Grant Agreement. The Management Team has successfully worked together on coordinating collaborative projects (e.g. VSustain and ECOEthylene) where each team members’ background jointly forms a strong management experience. They will specifically be responsible on the following tasks:

- Project management and monitoring of progress of Milestones and Deliverables.
- Planning and organisation of project meetings.
- Drafting periodic reports.
- Managing of financial, contractual and administrative reporting.

3.1.3 Steering Committee

The Steering committee (SC) will be composed of the Coordinator and WP leaders in all the technical WP’s. It will meet every 6 months, at the annual project meeting and through conference calls in order to reduce the project’s carbon footprint, time and travel costs. Intermediate status meetings will be held through shorter conference calls every two months. The Steering Committee will make common decisions on issues necessary for the project to meet its goals. Each represented party in the Steering Committee holds one vote, and Steering Committee decisions will be reached by consensus as far as possible or by simple majority, with the Coordinator will have the casting vote. The Steering Committee is also responsible for drafting any major changes (e.g. variation in financial distribution), which then will be voted on at the General Assembly. The Steering Committee is specifically responsible for the following:

- Strategic research planning and monitoring the progress, making sure that the project is on track and deadlines for milestones, deliverables and reports are met and achieved.
- Assessing the bi-annual status reports available for evaluation by the Coordinator.
- Monitoring WP progress, Milestones and delivery including preparation of status reports of the project.

- Defining and updating the Work Plan and allocation of resources if necessary.

3.1.4 Work Package Leaders

Work package leaders are responsible for the programme of work within their work package.

The work package leader role includes:

- Ensuring that the tasks and deliverables within their work package are delivered on time, to the required quality criteria and according to the budget provided.
- Identifying and reporting risks and deviations within their work package to the Project Coordinator.

Table 2: Work Package Leaders

Work Package	Partner	Person
1	DTU	Brian Seger
2	TUB	Peter Strasser
3	DTU	Brian Seger
4	TUD	Tom Burdyny
5	DENO	Emanuele Instuli
6	US	John Varcoe
7	EPFL	Sophia Haussener
8	RINA-C	Stefano Barberis
9	PXO	Nathalie Cros

3.2 Organizational Meetings and Procedures

Supporting Documents: CA, GA-1B

3.2.1 Frequency of Meetings-General

The constituted meeting frequencies for the General Assembly and Executive board are detailed below:

Table 3: Frequency of meetings

	Ordinary meeting	Extraordinary meeting
General Assembly	At least once a year	At any time upon written request of the Steering Committee or 1/3 of the Members of the General Assembly
Steering Committee	Every 6 months	At any time upon written request of any Member of the Steering Committee
Intermediate Meeting Status	Every 2 months	At any time upon written request of any partner

The Coordinator will chair the General Assembly meetings and will receive advice and guidance from the Scientific Advisory Board. The first GA was at the Kick-off meeting, which occurred on January 27-28, 2020 and focused on initiating a good working relationship among project partners. These annual project meetings will be scheduled for 2021, 2022 and a concluding meeting in 2023.

Steering Committee Meetings

The Steering Committee will meet every 6 months, at the annual project meeting and through conference calls in order to reduce the project’s carbon footprint, time and travel costs. These meetings will be chaired by the Coordinator. At least 14 days before each intermediate status meeting each WP leader must submit a report to the Project Coordinator stating how their project is proceeding and general and specifically how they are proceeding on each deliverable and milestone that is due within the next 3 months. See Section 4.3.1 for details regarding the report.

The Coordinator will then collect and organize these reports along with previous Intermediate Status Meeting Reports and will present a bi-annual status reports to the steering committee 7 days before the meeting. In addition this report will also be sent to either the Scientific Advisory Board (in M13, M25 and M36) or Industrial Advisory Board (in M7, M19 and M31) since the steering committee will be meeting with them at this time.

Intermediate Status Meetings

Intermediate status meetings will be held through shorter conference calls every 2 months or whenever necessary. At least 2 days before each intermediate status meeting each WP leader must submit a report/powerpoint to the Project Coordinator stating how their project is proceeding and general and specifically how they are proceeding on each deliverable and milestone that is due within the next 3 months. See Section 4.3.1 for details regarding the report.

Timing of Meeting

The chairperson shall give notice in writing of a meeting to each Member of that Consortium Body as soon as possible and no later than the minimum number of days preceding the meeting as indicated below.

Table 4: Timeframe in which meetings are set

	Ordinary meeting	Extraordinary meeting
General Assembly	45 calendar days	15 calendar days
Steering Committee	14 calendar days	7 calendar days
Intermediate Status Meeting	3 rd Monday of every odd month (M3, M5, ...) at 12 PM unless it is a month of a steering committee meeting or General Assembly	7 calendar days

3.2.2 Specific Meetings and Dates

Below is a table showing the major pre-planned meetings as part of the SELECTCO2 project. Meetings without each dates are denoted as ‘to be determined’ (TBD).

Table 1: Meetings

Meeting	Date	Location	Participants	Deliverable	Lead
General Assembly	27/01/2020	Kongens Lyngby	Gen. Assembly	Minute Meetings	DTU
Steering Committee w/ Industrial Advisory Board	TBD (June 2020)	Teleconference	Steering Committee	Minute Meetings	DTU
General Assembly	TBD (Jan. 2021)	Surrey	Gen. Assembly	Minute Meetings	US
Steering Committee w/ Industrial Advisory Board	(TBD) June 2021	Teleconference	Steering Committee	Minute Meetings	DTU
NanoGe Symposium	Oct 24-29 2021	Eindhoven	Scientists	D9.4	EPFL
General Assembly/ Stakeholder Engagement meeting	(TBD) Jan 2022	Delft	Gen. Assembly, Stakeholders	Minute Meetings, D9.5	TUD
Steering Committee w/ Industrial Advisory Board	(TBD) June 2023	Teleconference	Steering Committee	Minute Meetings	DTU
Final Meeting	(TBD) Dec 2023	Berlin	Gen. Assembly	Minute Meetings	TUB

3.2.3 Meeting Agenda

The Coordinator shall prepare and send each Member of that Consortium Body a written (original) agenda no later than the minimum number of days preceding the meeting as indicated below.

Table 2: Timeframe to set meeting

	Ordinary meeting	Extraordinary meeting
General Assembly	21 calendar days	10 calendar days
Steering Committee	7 calendar days	7 calendar days
Intermediate Status Meeting	7 calendar days	7 calendar days

In general, the meeting agenda will include the following points:

- Presentation and review of progress of tasks and deliverables in each Work Package.
- Analysis and discussion of Work Packages data and results obtained.
- Planning of exchange of data and expertise between partners.
- Assessment of progress with respect to milestones and deliverables for following period.
- Adjustment of the work plan if necessary.
- Planning of upcoming events and meetings.

Adding agenda items: Any agenda item requiring a decision by the Members of a Consortium Body must be identified as such on the agenda. Any Member of a Consortium Body may add an item to the original agenda by written notification to all of the other Members of that Consortium Body up to the minimum number of days preceding the meeting as indicated below.

Table 3: Timeframe on adding agenda items

	Ordinary meeting	Extraordinary meeting
General Assembly	14 calendar days	7 calendar days
Steering Committee	2 calendar days	2 calendar days
Intermediate Status Meeting	2 calendar days	2 calendar days

3.2.4 Decision Making

The General Assembly (GA) is the major decision making body in SELECTCO2. At the GA, each partner will have one vote and simple majority will make decisions. In case of a draw, the Coordinator holds the casting vote. All rights and obligations of partners in the GA will be described in the Consortium Agreement. The general principle in these meeting will be to try to achieve decisions by informal means and consensus, using formal procedures such as voting only when essential. Precise details of the remit of the various management bodies, and of voting procedures etc. will be carefully defined in the Consortium Agreement.

3.3 Internal Communications

3.3.1 Extranet Workspace

SELECTCO2 has a web-based workspace to share information that is operated and maintained by PXO. This workspace can be found at:

<https://pretexo.com/selectco2/egroupware/>

The workspace provides shared document space for all official project documentation. Thus this includes:

- Calling of meetings and their agendas
- Intermediate Status Reports and Biannual status reports.
- Minutes of the meeting
- Experimental data
- Dissemination of the results via:
 - Powerpoint presentations
 - Videos
 - Publications of scientific articles
 - Any other form of digital dissemination
- Directories for the contact details of personnel working on the project

Further details regarding how to use this as well as how the SELECTCO2 website will be built and operated is given in D9.2 and D9.3.

3.3.2 Contact List

A contact list has been created and distributed to all partners. The contact list is available as an excel worksheet and will be located on the project workspace. The contact list includes names, phone numbers, email, and Skype names. If any new member is added to the project, it is the responsibility of whichever partner is financially supporting them, or the work package leader of that partner to add them to the list. (This is viable since each partner has one, and only work package leader). For the case of international partners, it is the responsibility of the partner under which they are linked to (e.g. DTU is responsible for SLAC).

The contact list also breaks down the work packages for which each contact should receive communication. It is up to the WP leader to ensure the correct people are included on the email list. This is intended to prevent the proliferation of emails, broadcasting to the whole consortium and where necessary, compartmentalize work to prevent conflict of interest issues. Where possible consortium members should only email the contacts to whom the email is relevant and global emails should be minimized.

3.3.3 Email

In order to facilitate the classification of project e-mails, email subject titles should be formatted in an orderly manner. The subject titles should first denote SELECTCO2 with a hyphen followed by one of the following:

- A WP number
- A WP deliverable
- Legal
- Finance
- Admin
- All

If an email is in relation to a milestone, the subject should first denote the WP attributed to the milestone followed by the milestone. The final piece of information in the email subject title should be a short message describing the issue. Thus an example for an email in relation to production of standardized reactors would be:

SELECTCO2-WP1-MS1- Titanium or graphite flow field

Another example for a general meeting

SELECTCO2-All- Kick-off meeting start time

Whenever relevant, be specific about the action needed and the deadline in which it is needed by. Large file attachments should be avoided when possible to not exceed the email quota of project participants. Instead, it is recommended to upload the information to the project workspace and provide a link in the email.

3.3.4 Teleconferencing

Teleconferencing is recommended as a means of efficient, cost-effective and relatively environmentally benign process of communicating. The most effective teleconferences are those that are well structured, the group have already met so can recognise the speaker and have clear aims and objectives.

Teleconferences are especially useful for:

- Talking a group through a document or presentation
- Discussing technical or management issues
- Assigning tasks to participants
- Making decisions requiring urgent actions

To ensure that teleconferences are as efficient as possible, it is recommended that:

- The meeting is limited to a small group of participants.
- The meeting has a clear aim and objective and where possible limit the meeting to individuals presenting or reporting back to the group, confirming that they will take future actions or agreeing on predefined points.
- All teleconferences used for bi-annual meetings or meetings with the scientific advisory board or industrial advisory board will be minuted and a report relating to the outcomes on the meeting will be produced and uploaded to the shared workspace.

Skype will be used as the default means of teleconferencing unless otherwise noted in the agenda.

3.4 Conflict Resolution

Supporting Documents: GA-1B

Identification of any conflicts, which arise in the project is the responsibility of all project participants. In general consensus will be sought at all levels in the decision making structure. Any signs of disagreement between project participants will be immediately communicated to the Coordinator and WP leader, who will then initiate the conflict resolution procedure:

- WP leader should seek to resolve any conflict in their own Work Packages and inform the Coordinator of development and status. The Coordinator can assist and mediate if necessary.
- If the matter cannot be resolved within the Work Package the Steering Committee shall be informed and make suggestion for solutions. An extra Steering Committee meeting can be convened if necessary.
- If not solved in the Steering Committee, the issue will be addressed at the General Assembly, where the majority vote will decide the case. An extra General Assembly meeting can be convened if necessary.

If the Consortium is unable to solve the conflict at the Steering Committee or the General Assembly, the Coordinator will ensure legal mediation according to the description in the Consortium Agreement. The Consortium Agreement will be formulated to include procedures for the conflict.

4 IMPLEMENTATION AND QUALITY MANAGEMENT

4.1 Deliverables & Milestones

Supporting Documents: GA-A1

4.1.1 Deliverables

The project deliverables will mainly be in the form of reports, which are presented to the European Commission as evidence of the work carried out. Although the main product of the task may be something physical equipment, software, a database, document or publicity material, an event or a website, a report will be produced which demonstrates the work carried out and which can be uploaded to the EC Participant Portal.

The list of deliverables, the level of dissemination (e.g. public, confidential), and the due date of all deliverable are listed in GA-A1. Each deliverable will be subjected to a review process which is described briefly below.

Each deliverable should follow a set structure as set out in the templates of:

- A cover page denoting the Due Date, Authors, Work Package, Work Package Leader, Lead Beneficiary, Date Released by the WP Leader, Date Released by Coordinator, whether deliverable is Report, Prototype, etc., and whether deliverable is public or confidential
- Abstract (and public abstract if confidential document)
- Table denoting revisions
- Table of Contents (if sufficiently large and is deemed necessary)
- Introduction – an outline of the aims and objectives of the deliverable and where it fits in the context of the SELECTCO2 project. The introduction should also explain the interdependences related to this deliverable, whether this work is drawing on earlier tasks and deliverables and what other tasks will use this deliverable as input or for structuring their work.
- Scope- The scope should allow for one to understand what this deliverable encompasses and what it does not encompass
- Main body of the report – this section will explain the task that was carried out and the results generated and illustrate the technical and scientific progress made within the task.
- Conclusions – this sections should be a summary of the major outputs of the deliverable and the implications of the results on other parts of the project or the impact on that the results will have for the end-users, the broader scientific community, and/or the general public dependent upon the deliverable. The conclusions should also highlight the deficiencies in the work carried out and where future improvements or further work should be directed.
- References
- Appendixes – Appendix of data or further information not suitable for the main body of the report either due to its detailed nature or separated for confidentiality purposes.

A template for deliverables will be uploaded to the extranet to allow for uniform deliverables among all partners. Deliverables will be tracked by the Management Team, identifying deliverables due in the near future, the deadlines for each deliverable, follow-up actions and the names of the persons producing and reviewing. The Management Team will report this progress to the Steering Committee at either the Steering Committee meetings or intermediate status meetings.

4.1.2 Milestones

Milestones are project checkpoints for SELECTCO2 representing the end of a project phase, helping the evaluation and monitoring of project progress. All project milestones are listed in GA-A1.

WP Leaders are responsible for ensuring the on-time delivery of the milestones. In case of potential delays, the Coordinator will work with the responsible WP leader to develop a contingency plan. Acute delays will be brought to the attention of the Management Team.

Once a milestone has been reached, the responsible beneficiary should inform the Coordinator and the Management Team. The beneficiary should produce a brief report paying attention to note the date the milestone was achieved. Each milestone will be assessed against a quality criteria by the Management Team and progress or completion status will be logged by the Management Team in the EC portal and reported to the Steering Committee as an indicator of progress.

4.2 Risk Management

Supporting Documents- GA-A1

4.2.1 Risk Analysis

In the GA-A1, foreseeable risks related to SELECTCO2 were analyzed and documented. In this initial analysis, for each risk the consortium denoted:

- The associated WP and task
- The level of risk
- The appropriate contingency plan

If any additional risks are discovered the WP leaders should report this to the Coordinator to allow for appropriate actions to take place. If deemed necessary, this can then be brought up to the Steering Committee to help find contingency plans to mitigate the risk.

The responsibility of managing risks within a WP lies with the WP Leader whereas the responsibility for project risks lies with the Coordinator.

4.2.2 Risk Response

Risk response is the process of deciding what should be done with a risk, if anything at all. Risk response answers two key questions:

- who owns the risk (responsibility) and
- what can / should be done (scope and actions).

Strategies and plans are developed to minimize the effects of a risk to a point where the risk can be controlled and managed. The range of response actions for the project is as follows:

- **Transfer:** risk is external to the project. Resources and knowledge outside of the project are better able to manage the risk. Transfer implies the ultimate accountability, responsibility and authority to expend resources, it requires acceptance of the risk by the receiving party. Transferring liability for risk is most effective in dealing with financial risk exposure.
- **Accept:** do nothing but handle the risk as an issue if it occurs. However, no further resources are expended in managing the risk. These are usually risks of lower significance.
- **Avoid:** determine actions that if executed enough in advance will prevent the risk from occurring Mitigate: eliminate or reduce the risk by reducing the impact, reducing the probability, or shifting the timeframe when action must be taken.
- **Watch:** monitor the risks for early warning of critical changes in impact, probability, timeframe or other aspects.
- **Contingency:** determine actions that are executed once the risk has occurred to address the situation. For risks denoted in GA-A1, there is already an actionable plan for this response.

For all identified risks, the various handling techniques should be evaluated in terms of feasibility, expected effectiveness, cost and schedule implications and the effect on the system's technical quality and performance.

4.3 Project Reporting

Supporting Documents- AMGA & GA, PRT

The European Commission monitors progress and controls this project through:

- Periodic reporting
- Evaluation of project deliverables
- Project reviews

These forms of assessment present the evidence that the project is progressing, should continue and that the Consortium has completed its duty as set out in the Grant Agreement and is eligible for the EC payment.

In addition to the reporting to the EU Commission, the Management Team will also present internal progress reports to the Steering Committee, Scientific Advisory Board and Industrial Advisory Board in the form of the bi-annual reports.

4.3.1 Internal Reporting

Internal reporting will consist of 3 types of reports: Intermediate Status Reports, Steering Committee Reports and Bi-Annual Status Reports. The templates for all reports can be found in the project workspace.

Intermediate Status Reports/Presentations will be written by the WP leaders and uploaded to the project workspace every 2 months for the Project Coordinator to review in accordance with the Intermediate Status Meetings. The deadline for uploading these is 2 days before the Intermediate Status Meetings and these reports will consist of:

- A statement about the overall progress on the WP
- Status and progress on all deliverables and milestones due within the next 3 months

These reports will be written in the form of powerpoint slides using the templates provided by PXO on the project workspace. Writing the status reports in terms of powerpoint slides will minimize administrative time, and allow for facile discussion of the results at the intermediate status meetings.

Steering Committee Reports will be written by the WP leaders and uploaded to the project workspace every 6 months for the Project Coordinator to review in accordance with the Steering Committee Meetings. (On these months, this report will be in place of the Intermediate Status Report). The deadline for uploading these is 14 days before the Intermediate Status Meetings and these reports will consist of:

- A more detailed statement about the overall progress on the WP
- Denotion of successful deliverables or milestones in the last 6 months.
- Denotion of why any deliverables or milestones were delayed or not successful in the last 6 months.
- Status and progress on all deliverables and milestones due within the next 3 months
- Any additional issues that need to be discussed/resolved at the Steering Committee meetings.

Bi-Annual Status Reports will be written by the Project Coordinator based off of the Intermediate Status Reports, Steering Committee Reports, and discussions with consortium members. This report will contain:

- An overall assessment of the project as a whole
- A detailed description of the progress and discoveries that has been made over the last 6 months
- Denotion of achieved deliverables and milestones accomplished and a reasoning why any deliverables or milestones have been delayed or not achieved.
- Future outlook and analysis if any risks that may be present.

The reports from each of these will be collected and after the concomitant Intermediate Status Meeting or Steering Committee meeting will be included with the meeting minutes.

4.3.2 Reporting to the EC

It is the responsibility of each WP Leader to produce a technical and financial document using the template set forth in the Periodic Report Templates relating to their WP and submit this document to the Management Team. It will be the responsibility of the Management Team to organize documents submitted by the Work Package Leaders. This will then be uploaded to the project workspace for a final review. Following the review by all partners, the report will then be submitted to the EC. There will be two reporting periods in this project. Below is a list of information and documents that will be included as part of this report.

The Period 1 mid-project review will include the following documents:

- A publishable summary of the SELECTCO2 project
- Deliverables which were due within the Period 1 reporting period according to the GA-1A
- Period 1 Periodic Activity Report on the results and achievements of the project over this reporting period, including the progress made on tasks, deliverables and attainment of milestones, and if any deviations have occurred from the Description of Action in Annex 1 of the Grant Agreement, an explanation justifying the differences. The Periodic Activity Report will also include a plan for the exploitation and dissemination of the results.
- Issues related to the action implementation and the economic and societal impact.
- Financial statements of each partner (Described in further detail in Financial Management Section)
- Explanation of the use of resources

The Period 2 end of project review will include the same documents as Period 1, but applied to the whole project and, in addition, it will include:

- A publishable summary report of all of the results, conclusions and the impact of the project, the benefits to end-users and society
- A final technical report
- An update to the exploitation plan for the implementation and dissemination of the products of the project
- Certificate of the Financial Statement (CFS) provided by auditor for each partner if their total requested funding exceeds €325k.

4.3.3 EC Project Reporting Periods

The SELECTCO2 project has two reporting periods

- Period 1 – from M1 (January 2020)-M18 (June 2021)
- Period 2 – from M19 (July 2021)-M36 (December 2023)

To ensure a timely delivery of the reports, the Management Team will prepare the templates and notify the partners of their duties and where they should contribute to the report at least 2 calendar months before the end of the reporting period. The Management Team will then ask that each partner completes their reporting by:

Deadlines:

- Period 1 – July 31, 2021
- Period 2 – January 31, 2024

Having these deadlines will allow the Management Team to ensure that the report is presented at a sufficient quality level. This will allow the Management Team 30 days to meet the EC Deadline (Period 1–31/8/2021 & Period 2–28/2/2024) It is expected that all partners will contribute to the report, reporting on their participation with work package leaders also reporting on the progress made within their work package.

4.4 Dissemination and knowledge management protocol

Supporting Documents- AMGA, GA-A2, G-FAIR, GOASPR

The SELECTCO2 Data Management Plan (DMP) gives an overview of the data and information collected throughout the project and shows the interaction and interrelation of the data collecting activities within and between the work packages. The DMP will also link these activities to the SELECTCO2 partners and discuss their responsibilities with respect to all aspects of data handling.

Furthermore, the SELECTCO2 DMP will lay out the procedure for data collection, consent procedure, storage, protection, retention and destruction of data, and confirmation that they comply with national and EU legislation. The DMP will ensure that the exchange of data of universities and companies is in full compliance with the participating universities' and companies' internal data protection strategies. This DMP aims at providing an effective framework to ensure comprehensive collecting and handling of the data used in the project. Thereby and wherever trade secrets of the participating companies and industries are not violated, SELECTCO2 strives to comply with the open access policy of Horizon 2020.

With the DMP as part of the Project Management Plan, this is thus a living document, which may be modified to the specific needs of SELECTCO2 throughout the project's runtime.

This plan will establish the measures for promoting the findings during SELECTCO2's lifecycle and will set the procedures for the sharing of data of the project. Addressing FAIR principle for research data (Findable, Accessible, Interoperable and Re-usable) SELECTCO2 DMP will consider:

- Data set reference and name
- Data set description
- Standards and metadata
- Data sharing and handling during and after the end of the project
- Archiving and preservation (including after the end of the project)

Being in line with the EU's guidelines regarding the DMP, this document should address for each data set collected, processed and/or generated in the project the following characteristics: dataset description, reference and name, standards and metadata, data sharing, archiving and preservation. At this point in time, an estimation of the size of the data cannot be given. To this end, the consortium will develop a number of strategies that will be followed in order to address the above elements.

The specific details of the Dissemination Protocol and Data Management Plan are given in Deliverable 9.3

5 FINANCIAL MANAGEMENT

The financial management section includes the procedures for financial reporting, payment handling and accounting.

5.1 Financial Statements

Supporting Documents- AMGA, GA

The financial statement of costs (Form C) should be completed by each partner and submitted via the Participant Portal at the end of each Reporting Period (M18 and M36 of the project). The method for getting these statements approved both internally and externally is defined in *Section 5.1.2: Preparation of financial statements*. The financial statements should be according to the partners' normal accounting rules. However, each partner should check that:

- The SELECTCO2 project costs are correctly identified within their accounts
- Only eligible costs are claimed for and can be separated from non-eligible costs
- All records (timesheets, invoices, receipts etc) are properly stored and are retrievable in the case of an audit

Actual costs must be:

- Actually incurred by the beneficiary
- Incurred during the action
- Indicated in the estimated budget set out in GA-A2
- Incurred in connection with the action as described in the GA-A1 and GA-A2 and necessary for its implementation
- Identifiable and verifiable – recorded in the beneficiary's accounts in accordance with the accounting standards applicable in the country where the beneficiary is established and with the beneficiary's usual cost practices
- Reasonable, justified and must comply with the principle of sound financial management
- Must comply with the applicable national law, labor and social security.

Ineligible costs include:

- Costs related to return on capital;
- Debt and debt service charges;
- Provisions for future losses or debts;
- Interest owed;
- Doubtful debts;
- Currency exchange losses;
- Bank costs charged by the beneficiary's bank for transfers from the EU Commission;
- Excessive or reckless expenditure;
- Deductible VAT;
- Costs incurred during suspension of the actions;
- Costs declared under another EU or Euratom grant

5.1.1 Personnel Costs

Eligible Personnel Costs are:

- Related to personnel working for the beneficiary under an employment contract (or equivalent appointing act) and assigned to the action
- Limited to salaries (including during parental leave), social security contribution, taxes and other costs included in the remuneration, if they arise from national law or the employment contract.

As defined in the GA, there are two methods of calculating personnel costs:

- Actual personnel costs:
- on the basis of an amount per unit calculated by the beneficiary in accordance with its usual cost accounting practices

Methods include:

- Actual Personnel Costs = hours worked on the project x hourly rate
- Hours worked on the project = hours on timesheet
- Hourly Rate = actual annual personnel costs / annual productive hours
- Annual Productive Hours = 3 possible methods
- Actual Annual Personnel Costs – based on last closed financial year

Timesheets are not required for personnel if 100% of their time is spent working on this project for the full reporting period. However, for any organization to which this applies they will need to submit a declaration to confirm that they have completed 100% of their time on the SELECTCO2 project. Timesheets should be approved by a senior level manager/administrator. If the partner's organization's existing timesheet system can meet these requirements then this can be used for recording the time for the SELECTCO2 project.

Templates for timesheets and full-time declaration may be found on the Project Workspace or the EC Participant Portal: http://ec.europa.eu/research/participants/data/ref/h2020/other/legal/templ/tmpl_decl_excl-work_en.odt

5.1.2 Preparation of financial statements

The Management Team is responsible for collecting, checking and compiling the project's Financial Statements. The Management Team will also inform the Project Coordinator of any delays or difficulties encountered in the production and compilation of the financial statements including any delay in receiving information from a partner or a major discrepancy and where necessary propose a contingency plan.

Financial statements will aim to be submitted to the European Commission with other reporting documents by DTU within 60 calendars after the end of the each reporting period.

- Two months before the end of the Reporting Period the Management Team will issue clarification notes for each partner in what is required from them and when.
- 30 calendar days after the end of the Reporting Period the partners should have completed their Financial Statements on the Participant Portal.
- The Project Management Team will compile all financial statements and Certificate of Financial Statements and check them for compliance.
- In the case of a partner not submitting their Financial Statements in time, the Project Coordinator can decide whether or not to include that partner's financial statement in the submission to the EU Commission. Excluding a partner's financial statement will result in them having to wait until the next reporting period for further funds, but would allow the payments to all other partners to be delivered on-schedule and avoid the delay of payment to majority of the consortium.
- The Management Team will compile the Financial Statements and the Certificates and send them to the Coordinator at least 5 days prior to the deadline.

5.1.3 Certificate of Financial Statement

If a partner's total requested funding exceeds €325,000 they will need to provide a Certificate of the Financial Statement (CFS) provided by an independent auditor or equivalent competent person. The CFS should be submitted no later than 60 days after the end of the final reporting period. A model for the financial statements, a model of the Certificate of the Financial Statement and a model for the certificate on the methodology are provided within the Grant Agreement Annexes 4, 5 and 6 respectively.

5.2 Payment Handling

Supporting Documents- AMGA, GA, GADS

As is standard, the EC will pay all the money on behalf of the project to the coordinator, which in this case is DTU. The coordinator is then responsible for distributing the money to the other partners on the project. The maximum total EC financial contribution for SELECTCO2 is fixed at 3,772,265.00 €.

5.2.1 Prefinancing

This is made at the start of the project, usually within 30 days of the EC signing the Grant Agreement. The pre-finance payment made to the Coordinator (i.e. DTU) will be 75% of the Maximum EC Financial Contribution (as SELECTCO2 has two reporting periods: month 1-18 and 19-36) plus the 5% contribution the guarantee fund. This translates into pre-financing of 3,206,425.25€. Of this 3,017,812,00€ is transferred to the consortium and 188,613.25€ kept by the Commission for the Guarantee Fund.

5.2.2 Interim payments

These are made after each period financial reports are submitted and accepted by EC. Payment is subject to the approval of the periodic report. Its approval does not imply recognition of the compliance, authenticity, completeness or correctness of its content. The amount due as interim payment is calculated by the Agency in the following steps:

- Step 1 – Application of the reimbursement rates
- Step 2 – Limit to 90% of the maximum grant amount

5.2.3 Final payment

This is made at the end of the project once EC has accepted all deliverables and reports and will include any final payment due to the project. This will include the Guarantee Fund payment.

5.2.4 Guarantee fund

The Guarantee Fund is a percentage of the budget, in the case of SELECTCO2 the EC withholds 5% of each partner's budget at the start of the project in the Guarantee Fund. If the project runs smoothly and there are no issues this 5% is paid out by the EC with the final payment.

The EC uses the money in this fund to reimburse the project in the situation where one of the partners is made bankrupt and takes with its money in access of the costs reported.

5.2.5 Distribution of funds to partners

The Project Coordinator will distribute the EC financial contribution to each partner without unjustified delay according to the rules set out in the Consortium Agreement and Grant Agreement. For the first pre-finance payment this will be distributed to the partners with each receiving 75% of their Maximum EC Financial Contribution.

Subsequent payments will be based on the validation of the deliverables and the cost statements submitted to EC and potentially dependent upon any budget changes proposed by the Steering Committee and approved by the General Assembly and the SELECTCO2 Project Officer.

6 CONCLUSIONS AND FUTURE WORK

The project management plan presented in the document provides a guide to be used by the Management Team and the consortium partners to ensure an understanding of the roles and responsibilities of each member of the consortium in delivering the SELECTCO2 project through efficient and well-managed processes. This document should be used by partners to complement the aforementioned GA, CA, AMGA. Further guidelines may also be found on the EC Participant Portal within the H2020 Online Manual

http://ec.europa.eu/research/participants/docs/h2020-funding-guide/index_en.htm

This document will be updated at least annually and more often if necessary to ensure an effective and efficient management of the project.

If any item in this document is ambiguous, or further assistance or advice is required then please contact the Management Team:

Brian Seger- Coordinator

Dept of Physics, Technical University of Denmark, Fysikvej, Bld. 307, 2880 Kgs. Lyngby, DK

Karen Chan- Vice-Coordinator

Dept of Physics, Technical University of Denmark, Room 004, Fysikvej Bld. 311, 2880 Kgs. Lyngby, DK

Ib Chorkendorff- Advisor

Dept of Physics, Technical University of Denmark, Room 179, Fysikvej Bld. 312, 2880 Kgs. Lyngby, DK

Birgit Bohn- Administrative Assistant

Dept of Physics, Technical University of Denmark, Room 181, Fysikvej Bld. 312, 2880 Kgs. Lyngby, DK

Lone Jensen Coe - Administrative Assistant

Dept of Physics, Technical University of Denmark, Room 002, Fysikvej Bld. 311, 2880 Kgs. Lyngby, DK

Wiebke Lutzen- Economic Project Controller

Technical University of Denmark, Lundtoftevej 150, Bygning 266, 2880 Kgs. Lyngby, DK

7 REFERENCES

This document is based on the terms and conditions established in the Grant Agreement and its Annexes, as well as in the Consortium Agreement specifications and requirements. Alongside to these key documents, this plan has been produced following the European Commission guidelines and templates. In addition, this document will be complemented by future project deliverables and plans such as *D1.4 Technical Consistency Plan* and *D9.3 Dissemination and knowledge management protocol*

The references in this deliverable relating to each key document is described in Table 1 below.

Table 8: SELECTCO2 Key Related Documents

Document	Acronym	Access ¹	Availability	Reference within PMP
Annotated Model Grant Agreement	AMGA	Public	<ul style="list-style-type: none"> • EC Website² • SELECTCO2 workspace³ 	3c, 4a
Grant Agreement: Core Text	GA	Confidential	<ul style="list-style-type: none"> • Participant portal⁴ • SELECTCO2 workspace 	3c, 4a, 4b
Grant Agreement: Annex 1 – Part A	GA-1A	Confidential	<ul style="list-style-type: none"> • Participant portal • SELECTCO2 workspace 	3a, 3b
Grant Agreement: Annex 1 – Part B	GA1-B	Confidential	<ul style="list-style-type: none"> • Participant portal • SELECTCO2 workspace 	2a, 2b, 2c, 3d
Grant Agreement Data Sheet	GADS	Confidential	<ul style="list-style-type: none"> • Participant portal 	4b
Consortium Agreement	CA	Consortium	<ul style="list-style-type: none"> • SELECTCO2 workspace 	2b
Periodic Report Template ⁵	PRT	Public	<ul style="list-style-type: none"> • EC Website 	3c
Guidelines on FAIR data management in Horizon 2020 ⁶	G-FAIR	Public	<ul style="list-style-type: none"> • EC Website 	3d
Guidelines on Open Access to Scientific Publications and Research ⁷	GOASPR	Public	<ul style="list-style-type: none"> • EC Website 	3d

¹ Confidential: limited to Consortium, European Commission, appointed external evaluators and other EU bodies; Consortium: originally conceived as consortium but can be made available to European Commission, appointed external evaluators and other EU bodies if necessary; Public: public and fully open availability.

² http://ec.europa.eu/research/participants/data/ref/h2020/grants_manual/amga/h2020-amga_en.pdf

³ This is located at <https://pretexo.com/selectco2/egroupware/>

⁴ <http://ec.europa.eu/research/participants/portal/desktop/en/home.html>

⁵ http://ec.europa.eu/research/participants/data/ref/h2020/gm/reporting/h2020-tmpl-periodic-rep_en.pdf

⁶ http://ec.europa.eu/research/participants/data/ref/h2020/grants_manual/hi/oa_pilot/h2020-hi-oa-datamgt_en.pdf

⁷ http://ec.europa.eu/research/participants/data/ref/h2020/grants_manual/hi/oa_pilot/h2020-hi-oa-pilot-guide_en.pdf