



Developing Early Warning Systems for improved
microalgae **PRO**duction and Anaerobic **DIG**gest**ION**
Grant Agreement Number: 101007006

D7.1 PROJECT MANAGEMENT PLAN

PEDRO CERMENO¹, CARMEN G. COMAS¹, MACARENA SANZ²

¹Consejo Superior de Investigaciones Científicas (CSIC), Spain

²ID-Consortium (IDC), Spain



Grant Agreement Number: 101007006

Project acronym: PRODIGIO

Project title: Developing early warning systems for improved microalgae PROduction and anaerobic DIGestION

Deliverable number:	7.1
Deliverable responsible:	CSIC
Work-package:	7
Editor:	Pedro Cermeno
Dissemination Level	Public (PU)

Author(s) - in alphabetical order		
Name	Organisation	E-mail
Pedro Cermeno	CSIC	pedrocermeno@icm.csic.es
Carmen G. Comas	CSIC	cgcomas@cmima.csic.es
Macarena Sanz	IDC	msanz@idconsortium.es

Document Revision History			
Version	Date	Modifications Introduced	
		Modification Reason	Modified by
V.1	07/03/2021	NEW EDITION	Pedro Cermeno
V.2			
V.3			
V.4			



Table of Contents

1. Introduction.....	5
1.1. Purpose of Project Management Plan.....	5
1.2. Area of Application.....	5
1.3. Establishment Process.....	5
1.4. Referred Documents.....	6
2. Executive Summary.....	7
2.1. General Information.....	7
2.2. Project Objectives.....	7
2.3. Project Activities.....	7
3. Management Structure & Resources.....	8
3.1. Organizational Structure.....	8
3.2. Key Roles and Responsibilities.....	8
3.3. Decision-Making Mechanism.....	11
3.4. Project Stakeholders.....	12
3.5. Assigned Resources.....	13
3.6. Work Breakdown Structure.....	14
3.7. Deliverable scheduled.....	15
3.8. Project Management Information Systems.....	15
4. Project Management Processes.....	16
4.1. Scope Management.....	16
4.2. Change Control Management.....	16
4.3. Schedule/Time Management.....	17
4.4. Cost/Budget Management.....	18
4.5. Quality Management.....	22
4.6. Communication Management.....	22
4.7. Risk Management.....	23
4.8. Innovation Management.....	23
5. Project Monitoring & Control.....	23
5.1. Project Reporting.....	23
5.2. Project Meetings.....	26



List of Abbreviations

Abbreviation	Description
AM	Administrative Manager
CA	Consortium Agreement
DoA	Document of Action
EC	European Commission
GA	Grant Agreement
GA	General Assembly
IE&C	Innovation, Exploitation and Communication
PC	Project Coordinator
PEB	Project Executive Board
PM	Project Manager
PMIS	Project Management Information System
PMP	Project Management Plan
PMT	Project Manager Team
PO	Project Officer
QAP	Quality Assurance Plan
QM	Quality Manager
TM	Technical Manager
WBS	Work Breakdown Structure
WP	Work Package
WPL	Work Package Leader



1. INTRODUCTION

1.1. Purpose of Project Management Plan

The purpose of this document is to define how the project will be managed, executed and controlled. This document will define the basis of all project work and will refer to more detailed subsidiary plans to integrate and consolidate all management activities into a comprehensive document.

1.2. Area of Application

This document applies to all activities aimed to achieve the overall goal of the project which is to deepen our knowledge on the mechanisms underlying the failure of microalgae biomass production and biomass-to-biogas conversion systems in order to develop an efficient and scalable system failure prediction technology. Overall, the Project Management Plan (PMP) will set a common framework for the different project activities to operate efficiently. These activities include all coordination and management actions, as well as, communication and dissemination activities and other activities and strategies to contribute bringing biogas production technologies from algae-based feedstocks faster to commercialization.

The intended audience of this PMP is all internal project stakeholders including the European Commission, senior leadership and the project team. This document will be reviewed and updated periodically through a series of integrated processes that extend to the closure of the project. This process will result in a project management plan that is progressively elaborated by updates.

1.3. Establishment Process

1.3.1. Preparation

As a prerequisite to the preparation of this PMP, the Project Management Team (PMT) has undertaken a review of the Grant Agreement (GA) requirements to determine the necessary management, technical and other necessary activities that need to be planned and implemented during PRODIGIO. The necessary operations, processes and techniques have been planned and scheduled accordingly. The PMP is linked to the GA and the activities to be performed during the project, and is subjected to document control. In addition, this PMP will refer to other relevant processes and procedures, subsidiary plans and other applicable contractual requirements.

1.3.2. Approval/Submission

The PMT will be in charge of developing the PMP and keeping it up-to-date. The Coordinator is responsible for approving the PMP before its submission to the European Commission.



1.3.3. Implementation

The PMT will ensure adherence of all project activities to the processes and procedures promoted by the PMP. The PMT will execute the efficient implementation of this plan and monitor and control its overall performance.

1.3.4. Reviews, Revisions and Change Control

The PMP will be reviewed periodically by the PMT throughout PRODIGIO Project's life cycle. Revisions to the PMP will be submitted to European Commission in accordance with 1.3.2 above without any necessary delay. The PMT will ensure that any changes related to the PMP are controlled and diligently recorded.

1.4. Referred Documents

This PMP refers to the following general project documents as they have served as an input to the development of the plan.

CODE	DOCUMENT TITLE	VERSION	DATE
101007006	PRODIGIO Grant Agreement	VF	13/10/2020*
101007006	PRODIGIO Grant Agreement ANNEX 1 (PART A)	VF	13/10/2020*
101007006	PRODIGIO Grant Agreement ANNEX 1 (PART B) DoA	VF	13/10/2020*
101007006	PRODIGIO Consortium Agreement	VF	11/10/2020*

* Last edition will be applicable

This document will also refer to other subsidiary plans that contribute to define with specific detail the overall management framework of the project.

CODE	DOCUMENT TITLE	VERSION	DATE
101007006	Quality Assurance Plan (QAP)	*	*
101007006	Risk Management Plan (RMP)		
101007006	Communication Strategic Plan (CSP)		
101007006	Data Management Plan (DMP)		



2. EXECUTIVE SUMMARY

2.1. General Information

Project Name: PRODIGIO

Project EC number: 101007006

Project H2020 Topic: PRODIGIO project addresses the topic LC-SC2-RES-1-2019-2020 “Developing the next generation of renewable energy technologies”, that is part of the Horizon 2020 Framework Programme the “Secure, Clean and Efficient Energy” work programme part.

2.2. Project Objectives

The renewable energy technologies that will form the backbone of the energy system by 2030 and 2050 are still at an early stage of development, and bring them faster to commercialization is challenging. Over a period of 36 months, PRODIGIO project aims to establish a base of knowledge for the development of a system failure prediction technology (early warning signals) that increases the performance of microalgae biomass production and anaerobic digestion systems and advance towards more favourable techno-economic, environmental and social performance to achieve more sustainable microalgae biogas.

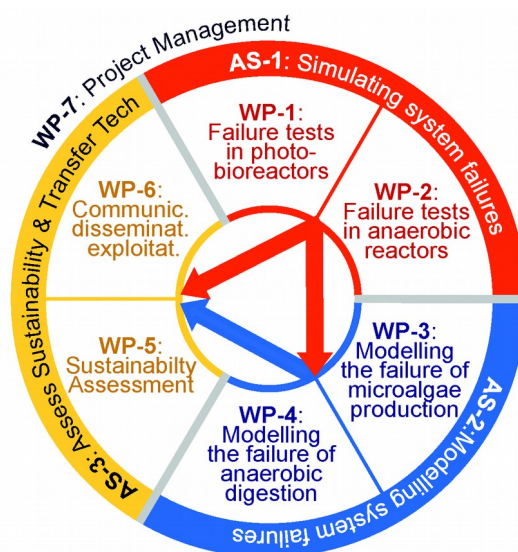
The project will advance fundamental knowledge and predictive tools in bioreactor systems whose implementation will improve the efficiency of both microalgae cultivation and biogas production, enabling the development of a fully integrated, digitized and truly sustainable microalgae biogas production industry.

2.3. Project Activities

PRODIGIO is designed around three activity streams (**AS#**) including Simulating system failures (**AS1**), Modelling system failures (**AS2**) and Assess sustainability and Technology Transfer (**AS3**).

The workflow of PRODIGIO is designed around 3 activity streams (AS#) and 7 work-packages (WP) as depicted in the diagram.

- **AS1** is devoted to simulate the failure of algal photo-bioreactors (PBRs) and anaerobic reactors (ARs). We will conduct time-course experiments in which the bioreactors will be forced to fail (i.e. move from the normal state to the failure state). These experiments will generate long time series of environmental, routine, metaOMICS and chemical fingerprint



data with the potential to i) uncover the mechanisms underlying critical state transitions and ii) identify early-warning signals.

- **AS2** will be built upon the environmental, routine, metaOMICS and chemical fingerprint data generated in AS1, and aims to examine from an analytical and modelling perspective the failure of bioreactor systems using bioinformatic tools, computational ecology methods, and state-of-the-art causal detection methods. The aims are to obtain a deep understanding of the eco-genomics in bioreactor systems (i.e. structure and temporal dynamics of causal interaction networks) and its linkage to the stability of bioreactor processes. AS1 and AS2 will be carried out sequentially as AS2 is fed from the experimental data derived from AS1.
- **AS3** is focused on evaluating the extent to which the implementation of PRODIGIO technology will improve the sustainability and profitability of microalgal PBRs and ARs for biogas production using microalgae as a substrate. AS3 will also contribute to technology transfer through communication, diffusion and intellectual property exploitation activities. AS3 will be carried out in parallel with AS1 and AS2 in order to optimize project's time and resources.

*For more detailed information refer to **PRODIGIO Grant Agreement**, Annex 1, Part B, Document of Action.*

3. MANAGEMENT STRUCTURE & RESOURCES

3.1. Organizational Structure

All operational aspects related to the PRODIGIO project will be monitored and controlled by the Project Coordinator, which reports to the European Commission and to all Partner Organizations. Additionally, a General Assembly will be created representing all partners. The Project Coordinator will define a Project Executive Board that will report directly to him. This Project Executive Board is composed of four key figures in order to ensure the success of the project: A Data Manager, a Technical Manager, an Administrative Manager, a Quality manager and in order to reflect the importance of innovation strategies to foster new cross-sectoral value chains and the exploitation and communication of project results, PRODIGIO will also place an Innovation, Exploitation and Communication Manager.

3.2. Key Roles and Responsibilities

The following roles and responsibilities have been clearly defined both in the Grant Agreement and in the Consortium Agreement to ensure the project's success:



- European Commission: This represents the Project Officer (PO) or other officials in the European Commission. All liaisons with the EU from the project shall be through the coordinating party except in specifically mandated or agreed circumstances.
- General Assembly: The General Assembly (GA) is the ultimate decision-making body of the Consortium and is responsible for taking major strategic decisions and determining the long-term strategy and direction of PRODIGIO. The GA is the forum in which all partners are represented. Its purpose is to monitor and harmonize the activities and progress of the project, and serve as a communication channel to keep all partners up-to-date on the global progress of PRODIGIO. The GA will physically meet at least once a year (ordinary) as part of the project plenary meetings. Further meetings can be called on any consortium member's demand (extraordinary). The GA formally approves or declines critical decisions of the Project Coordinator. It also agrees amendments to the Consortium Agreement (CA) after the project official start date. It also actively promotes consensus in case of conflict and, if no consensus can be found, takes decisions according to the procedures and rules defined in the CA.
- Project Executive Board: The Project Executive Board (PEB) consist of the Coordinator and the Parties appointed by the GA. It will be in charge of preparing the meetings, propose decisions and prepare the agenda of the GA. It will be responsible for seeking a consensus among the partners if needed, the proper execution and implementation of the decisions of the GA and monitoring the effective and efficient implementation of the project. In addition, the PEB will collect information at least every 6 months on the progress of PRODIGIO, examine that information to assess the compliance of the project with the Consortium Plan and, if necessary, propose modifications of the Consortium Plan to the GA.
- Project Coordinator: The Project Coordinator (PC) is a legal entity (Partner), which represents the Consortium in the negotiations with the European Commission (EC) and is the intermediary between the consortium parties and the EC during the project. All liaisons from the project with the European Commission, represented by the PO, shall be carried through the PC with the exception of specifically mandated or agreed circumstances.

The PC carries out the leadership and overall coordination of the project activities as well as the executive function. Besides fulfilling its obligations described in the Description of Work and Grant Agreement, he acts upon instructions from the General Assembly and ensures that the Consortium Agreement is adhered to. The PC is in charge of financial control activities. The Project Coordinator is represented by **Mr. Pedro Cermeno**, Tenured Researcher at the Institute of Marine Sciences – CSIC with previous experience in coordinating national and international projects.

- Quality Manager: The Quality Manager (QM) will establish the Quality Assurance framework of PRODIGIO, lead its follow-up throughout the project and be responsible



of its fulfillment. The QM will develop the Quality Assurance Plan (QAP) of the project. It will contain all procedures, plans and other documents applicable to the project as well as specify the activities to be implemented in terms of quality assurance. Besides, the QM will lead the impact analysis of PRODIGIO in terms of tracking of established KPIs, identification of deviations, establishment of corrective actions, and monitoring of their implementation within the project. The QM role will be assumed by **Mr. Pedro Cermeño** from CSIC, and **Cristina González** from IMDEA-E, both with experience as Quality Manager in I+D projects.

- Technical Manager: In order to ensure a high technical performance of PRODIGIO, a TM will be appointed, which in this case will be **Mr. Pedro Cermeño** from CSIC, and **Ms. Cristina González** from IMDEA-E. The TM will act as a high-level advisor in charge of the supervision and monitoring, in joint with the rest of technological partners, of the progress of the different tasks with respect to the development of PRODIGIO.
- Administrative Manager: Overall administration of PRODIGIO is undertaken by the AM. The AM will be in charge of process and control for fair and effective internal administration. The AM is responsible to ask to the partners of the consortium the administrative issues about their organizations with regards to submissions of cost statements, deliverables or other administrative information requested by the Project Officer. The AM for the project is **Ms. Macarena Sanz** from IDC, with proven experience in administration tasks in European projects.
- Innovation, Exploitation and Communication Manager: For the success of the project, an Innovation, Exploitation and Communication Manager (IE&CM) will be appointed. The role of the IE&CM is to provide a deep understanding of both market and technical problems, with the overall goal of successfully implementing appropriate creative ideas into the project. This allows the Innovation, consortium to respond to external or internal opportunities. Other responsibilities of the IE&CM are the coordination of the exploitation activities of the project, but with a strategic Exploitation innovation vision, ensuring that the project outcomes influence the market as much as and Communication possible. The goal is to ensure that PRODIGIO results are as visible and influencing as possible. The IE&CM is also in charge of performing a market watch, by collecting existing Manager approaches, products and research projects. This function will allow PRODIGIO to keep in sync with the outside world and ensure new relevant information feed into the project. The IE&CM will also be in charge of the Intellectual Property Management. This role will be performed by **Ms. Macarena Sanz** from IDC, with a strong background in the field.
- Project Management Team: The Project Management Team (PMT) is the technical management body of the project. The PMT is comprised by the Project Coordinator (PC), Technical Manager (TM), Administrative Manager (AM), Quality Manager (QM), the Innovation, Exploitation and Communication Manager (IE&CM), the Data Manager (DM) and the work-package (WP) leaders. The main tasks of the PMT are to coordinate the



interaction between the WPs strategies, monitor progress, and advice and decide on WP revisions, exchanges of tasks and budgets, intellectual property, dissemination strategies, data management, interaction with other activities. The PMT will meet regularly but at least monthly. Where necessary and appropriate, additional meetings can be held. The PMT has the power to make short-term decisions on a daily basis.

- Communication Team: The Communication Team (CT) is comprised by the Project Coordinator, the Technical Coordinator, and a representative of WP6 leader. The main task to be carried out by this team is to support communication activities that partners should accomplish.
- Work-Package Leaders: PRODIGIO project is structured in 7 work-packages (WPs), each one having more than a participant assigned with specific tasks. Each work-package has a leader (WPL). Each WPL has the task of presenting the status and progress of their individual WP to the PMT and report feedback to the participants of their own WP. They are responsible for the management and technical coordination of their WP on a daily basis and they translate decisions of the PMT into daily (management) tasks, organize call meetings with the WP participants when necessary and report results and potential critical issues to the PMT. Additionally, the WPL remains in contact with all WP participants and ensure the flow of information from both inside and outside of the WP. They also liaise with other WP leaders towards aligning and harmonizing the work in the respective WP and the overall PRODIGIO goals.

3.3. Decision-Making Mechanism

The following table represents the different line of commands to deal with different issues and situations throughout the Project.

Item	Description
Management by Exception	The GA sets tolerances for time, cost and quality. Tolerances are permissible deviations from the plans that need not be brought to the attention of the GA and where the PC is authorized to take corrective actions as necessary to ensure fitness for purpose.
Issue Management	Issues are adverse events that affect the project. Any project team member may report an issue to the WPLs or GA. WPLs should be the first to collect issue reports and try to resolve issues within the tolerances set by the PC; otherwise they will be escalated to the PC. Issues will be also escalated if they affect more than one work package or are more significant.
Change Management	Scope changes can occur for many reasons: changes in requirements and specifications (due to internal or external reasons), deviations from plans, changes in Partners issues, risks etc. Besides from the project scope, changes may have an impact on schedule, budget, quality/performance (or combinations). WPLs are authorized to implement changes within the



Item	Description
	tolerances set by the PC; otherwise a request for change is used to escalate changes to the GA.
Conflict Resolution	Attempts will be made to resolve conflicts as close as possible to the source of conflict. WPLs and the PC will employ a problem solving approach in order to achieve consensus, ensuring a win-win outcome for conflicting parties. If conflicts cannot be resolved at that level, the GA will be asked to intervene. If this cannot be achieved then the rules of the Consortium Agreement dealing with this topic will come into play.
Decision making	The decision making process is structured in multiple tiers based on the tolerances set by the GA. Therefore WPLs can take decisions on budget and effort changes, without consultation from the GA provide they are below the agreed tolerances.

3.4. Project Stakeholders

PRODIGIO is a basic research project targeting a Technology Readiness Level 3-4 and thus most of the results derived from the project will be of interest to the scientific community. However, it is our commitment to disseminate our results and potential future application to other stakeholders which might benefit from the results of PRODIGIO in the coming years and that could potentially help speed-up the impact of the project. The first observers for PRODIGIO have shown their interest through the letters of support attached to the original project proposal. These experts are comprised in a Stakeholder Advisory Board (SAB) that will deliver PRODIGIO consortium advice and give feedback on specific issues that may arise. The SAB will continuously evaluate the progress and advise the project consortium, to ensure that the results of the project match with their expectations. Stakeholders' feedback will provide comprehensive vision of the main concerns to be examined and further explained. The SAB will advise and report to the PMT on issues regarding project strategy and optimization of applicability and exploitation of the results of the project.

The following is a list of the main stakeholders to be engaged during the project:

- Bioenergy companies: PRODIGIO will assess the interest of bioenergy companies to boost the development of more efficient and profitable bioreactor systems for microalgae production and biogas generation.
- Algae biomass production market: their feedback will be important to design and adapt the technology to their needs.
- Wastewater treatment (WWT) companies: different type of wastewater will be analyzed in order to assess the replicability of the technology across Europe.
- Organizations active in biofuels/bioenergy R&D: Externally generated scientific knowledge will be evaluated during the project through a specific innovation strategy for PRODIGIO to ensure that real innovation and scientific advance takes place.



3.5. Assigned Resources

3.5.1. Project Budget

The total costs of PRODIGIO project are estimated to be **EUR 2.452.941,25**. The budget has been calculated and distributed among partners according to their expected personnel and time contribution throughout the project, and other costs, including other direct costs, subcontracting costs and indirect costs. The following table shows the cost breakdown per resource type approved in the **PRODIGIO Grant Agreement**. Refer to this document for more detailed information, regarding the specific breakdown of the approved budget by partners.

Cost Type	Amount
Personnel Costs	EUR 1.428.303,00
Other Direct Costs	EUR 422.050,00
Subcontracting Costs	EUR 140.000,00
Indirect Costs	EUR 462.588,25
Total	EUR 2.452.941,25

3.5.2. Human Resources

Human Resources will take 58% of the total PRODIGIO project budget and 340,75 Person Months is the estimated effort needed to carry out all the activities planned for the project. The following table shows the Persons-Month per partner and the breakdown of these resources per project Work Package.

PARTNER	WP1	WP2	WP3	WP4	WP5	WP6	WP7	TOTAL
1/CSIC	24,00	-	24,00	-	1,00	5,00	28,00	82,00
2/AWI	9,00	9,00	-	-	-	1,00	0,50	19,50
3/ARMINES	-	-	-	-	49,00	4,50	3,75	57,25
4/IDC	-	-	-	-	-	25,00	3,00	28,00
5/IMDEA-E	-	38,00	-	3,00	1,00	3,00	1,00	46,00
6/NMBU	-	24,00	-	14,00	1,00	3,00	1,00	43,00
7/NTU	-	-	9,00	9,00	-	1,00	-	19,00
8/UAL	40,00	-	1,00	-	1,00	3,00	1,00	46,00
Total	73,00	71,00	34,00	26,00	53,00	45,50	38,25	340,75

A quick analysis of the table reveals the following details.

- Management Activities will take 11% of the total partner's effort: The effort allocated to this type of activities will ensure the correct and efficient organization and internal communication of the project.



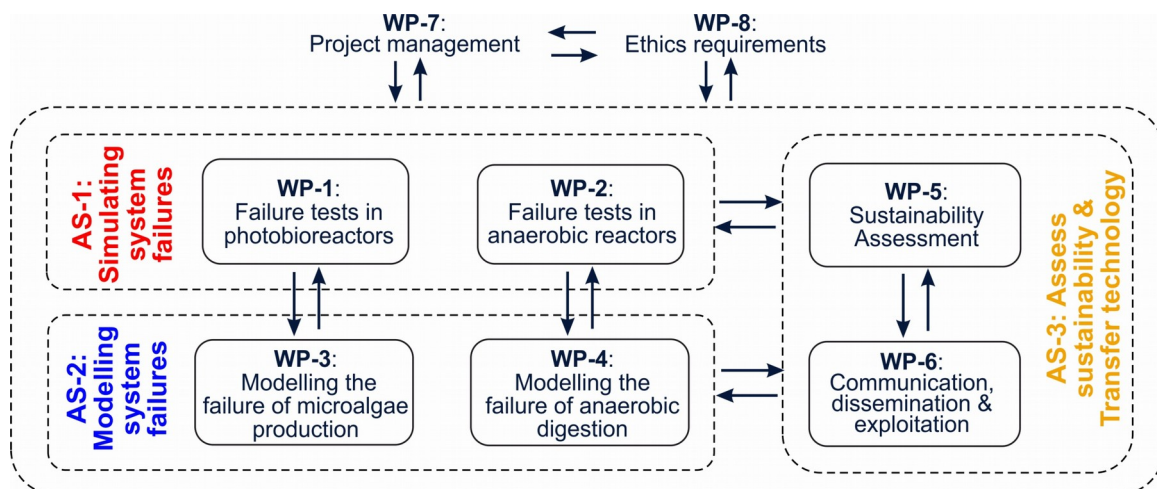
- Activities to generate scientific results, new knowledge and technology innovation will take 75% of the total partner's effort.
- Activities to foster the impact of the project and maximize the exploitation of results will require the remaining 14% of the total partner's effort.

3.5.3. Subcontractors and Third Parties

Consortium Partners may have access to external assistance and resources by subcontracting services to third parties as long as no provisions stated in the consortium agreement are breached. The consortium agreement states that “a Party that enters into a subcontract or otherwise involves third parties (including but not limited to Affiliated Entities) in the Project remains responsible for carrying out its relevant part of the Project and for such third party's compliance with the provisions of this Consortium Agreement and of the Grant Agreement. It has to ensure that the involvement of third parties does not affect the rights and obligations of the other Parties under this Consortium Agreement and the Grant Agreement.” A total budget of EUR 140.000 has been assigned to direct subcontractors (allocated to DNA and RNA sequencing), additionally Mines Paris Tech has been assigned to the project as linked third party that will provide support to work-package 5 Sustainability Assessment.

3.6. Work Breakdown Structure

All the project activities have been separated in 7 clearly defined work packages (WPs) with associated tasks, deliverables and milestones plus an additional WP-8 for ethics requirements related to all other WPs (not shown in the Pert diagram). **Refer to PRODIGIO Project Grant Agreement, ANNEX 1 (Part A), Section 3.1.3. PRODIGIO Detailed Work Description** for a detailed description of each work package. All the original project requirements have been identified in the above-mentioned document and it will serve as a basis for scope, quality, time and risk control of the project. The following Pert chart shows the links between the different activity streams and work-packages making up the backbone of the PRODIGIO project.



3.7. Deliverable scheduled

The following deliverable schedule has been approved in the project Grant Agreement and will act as the **scope and schedule baseline** during the project. Deviations from this baseline will be regularly measured and reported to ensure project success.

WP#	Del. #	Title	Leader	Nature	Due Date
WP1	D1.1	Routine measurements in PhotoBioReactors (PBRs)	UAL	data sets	30 Jun 2022
WP1	D1.2	Metabarcoding from PBR samples	CSIC	data sets	31 Dec 2022
WP1	D1.3	Metagenomics, Metatranscriptomics, Metaproteomics from PBRs	CSIC	data sets	31 Dec 2022
WP1	D1.4	Chemical fingerprint from PBR samples	AWI	data sets	31 Dec 2022
WP2	D2.1	Routine measurements in anaerobic reactors (ARs)	IMDEA-E	data sets	30 Apr 2023
WP2	D2.2	Metabarcoding from AR samples	NMBU	data sets	30 Jun 2023
WP2	D2.3	Metagenomics, Metatranscriptomics, Metaproteomics from AR's	NMBU	data sets	30 Jun 2023
WP2	D2.4	Chemical fingerprint from AR samples	AWI	data sets	30 Jun 2023
WP2	D2.5	Process inhibition levels	IMDEA-E	Report	30 Jun 2023
WP2	D2.6	Process inhibition mitigation	IMDEA-E	Report	30 Jun 2023
WP3	D3.1	Data integration - PBRs metadata	CSIC	data sets	31 Aug 2023
WP3	D3.2	Data integration – gene patterns, diversity, and productivity in PBRs	CSIC	Report	31 Aug 2023
WP3	D3.3	DARWIN model simulations	CSIC	Report	31 Aug 2023
WP3	D3.4	Report of Early Warning Signals (EWS) in PBRs	NTU	Report	31 Oct 2023
WP3	D3.5	Report of PBR interactomes	NTU	Report	31 Oct 2023
WP3	D3.6	Evaluation of EWS from PBRs	CSIC	Report	31 Dec 2023
WP4	D4.1	Data integration - ARs metadata	NMBU	data sets	31 Aug 2023
WP4	D4.2	Data integration – gene patterns, diversity, and productivity in ARs	NMBU	Report	31 Aug 2023
WP4	D4.3	Anaerobic Digestion Model N°1 (ADM1) simulations	IMDEA-E	Report	31 Oct 2023
WP4	D4.4	Report of Early Warning Signals (EWS) in ARs	NTU	Report	31 Oct 2023
WP4	D4.5	Report of AR interactomes	NTU	Report	31 Oct 2023
WP4	D4.6	Evaluation of EWS from ARs	NMBU	Report	31 Dec 2023
WP5	D5.1	Definition of PRODIGIO biogas production chain	ARMINES	Report	31 Dec 2021
WP5	D5.2	Env. Life Cycle (LC) assessment of PRODIGIO biogas production chain	ARMINES	Report	30 Jun 2023
WP5	D5.3	Social impacts of the PRODIGIO biogas production chain	ARMINES	Report	30 Sep 2023
WP5	D5.4	LC costs of PRODIGIO	ARMINES	Report	30 Sep 2023
WP5	D5.5	LC Sustainability Assessment of PRODIGIO biogas production chain	ARMINES	Report	30 Nov 2023
WP6	D6.1	Communication and Dissemination Plan	IDC	Report	31 Mar 2021
WP6	D6.2	Preliminary Plan for the Exploitation of Results	IDC	Report	31 Dec 2021
WP6	D6.3	Dissemination Report 1	CSIC	Report	31 Dec 2022
WP6	D6.4	Plan for the Exploitation of Results	IDC	Report	31 Dec 2022
WP6	D6.5	Dissemination Report 2	CSIC	Report	31 Oct 2023
WP6	D6.6	Plan for the Exploitation of PRODIGIO results beyond project	IDC	Report	31 Oct 2023
WP7	D7.1	Project Management Plan	CSIC	Report	28 Feb 2021
WP7	D7.2	Quality Assurance Plan	CSIC	Report	28 Feb 2021
WP7	D7.3	Data Management Plan	IDC	ORDP	30 Jun 2021
WP7	D7.4	Report of the first meeting with SAB	CSIC	Report	28 Feb 2022
WP7	D7.5	Data Management Plan-v2	IDC	ORDP	30 Jun 2022
WP7	D7.6	Report of the second meeting with SAB	CSIC	Report	31 Aug 2023
WP8	D8.1	H - Requirement No. 1	CSIC	Ethics	30 Jun 2021
WP8	D8.2	POPD - Requirement No. 2	CSIC	Ethics	30 Jun 2021
WP8	D8.3	NEC - Requirement No. 3	CSIC	Ethics	31 Dec 2021
WP8	D8.4	EPQ - Requirement No. 4	CSIC	Ethics	31 Dec 2021

3.8. Project Management Information Systems

To ensure the correct management of project documentation and improve collaboration between internal and external stakeholders, the following PMIS will be used.

- Project Management Platform



THIS PROJECT HAS RECEIVED FUNDING FROM THE EUROPEAN UNION'S HORIZON 2020 RESEARCH AND INNOVATION PROGRAMME UNDER GRANT AGREEMENT #101007006

- PRODIGIO Project Website

Specific functionalities of each platform are described in **D7.2 Quality Assurance Plan**

4. PROJECT MANAGEMENT PROCESSES

4.1. Scope Management

For each WP there will be an associated Work Package Leader (WPL). It is the role of the WPL to review the requirements stated in the **Grant Agreement**, collect additional requirements that could come-up throughout the development of the project and decompose its work package into detailed activities to ensure the scope stated in the Grant Agreement is met and that the required project deliverables are provided on time. The activities will then be used to develop a detailed schedule with the goal of meeting the deliverable timeline set in the Project Grant Agreement. The Project Management Team (PMT) will use this activities and deliverable schedule as the scope baseline. This document will therefore become the main source to control and validate project scope as well as to control any additional deviation from the original plan.

The Project Coordinator, together with the Project Management Team will work together to measure scope performance against the scope baseline or deliverable schedule and validate that the completed scope of work is acceptable to the customer.

4.2. Change Control Management

Over the course of the project, changes to the original scope and baselines will be inevitable. In order to manage change efficiently and avoid scope creep during the project, changes must be recorded on a regular basis and there must be a change control procedure in place.

On a day to day basis, work package leaders are authorized to implement changes in their activities within the tolerances set by the Project Coordinator and using the Project Grant Agreement and Consortium Agreement as a framework. When there is a change that implies a significant variation or an amendment in an approved document, a change request must be issued to the Project Coordinator in order to start the change management procedure.

The change management process starts by the submittal and record of a change request. Once the change request is issued, the project coordinator together with the Project Management Team will evaluate the impact of the change and identify different options. Once this is done the change request will be approved or rejected internally. Finally, the Project Coordinator will communicate the change to the European Commission if this is required and will assign the new resources required or implement the actions stated in the approved change.



4.3. Schedule/Time Management

Using a similar structure to the scope management procedure, the deliverable schedule together with the milestone schedule approved in the grant agreement (**Refer to PRODIGIO Grant Agreement Annex I (Part A), Section 1.3.2 WT2 list of deliverables and 1.3.4 WT4 list of milestones**) will establish a schedule baseline for the project. This high level baseline will be further developed using a rolling wave planning method by each work package leader as the project evolves. This will lead to a high level schedule baseline for the whole project and a detailed activity schedule for upcoming activities with more reliable and clearly defined data.

		Trimester	1	2	3	4	5	6	7	8	9	10	11	12	
AS1 - Simulating System Failures	WP1. Failure tests in PhotoBioReactors (WPL: UAL)														
	Task 1.1 (UAL) Perturbation experiments I														
	Task 1.2 (UAL) Perturbation experiments II														
	Task 1.3 (UAL) Bioinformatic analyses from PBRs														
	Task 1.4 (AWI) Chemical fingerprint														
	WP2. Failure tests in Anaerobic Reactors (WPL: IMDEA-E)														
	Task 2.1 (IMDEA) Perturbation experiments I														
	Task 2.2 (IMDEA) Perturbation experiments II														
	Task 2.3 (IMDEA) Perturbation experiments III														
	Task 2.4 (IMDEA) Bioinformatic analyses from AR-s														
Task 2.5 (AWI) Chemical fingerprint															
AS2 - Modelling System Failures	WP3. Modelling the failure of PhotoBioReactors (WPL: CSIC)														
	Task 3.1 (CSIC) Comm. structure, Bioreactor funct,														
	Task 3.2 (CSIC) Modelling bioreactor systems														
	Task 3.3 (NTU) Empirical Dynamic Modelling (PBRs)														
	WP4. Modelling the failure of Anaerobic Reactors (WPL: NMBU)														
	Task 4.1 (NMBU) Comm. structure, Bioreactor funct.														
	Task 4.2 (NMBU) Modelling bioreactor systems														
Task 4.3 (NTU) Empirical Dynamic Modelling (AR's)															
AS3 - Tech Assess. Transfer Knowledge	WP5. Sustainability Assessment (WPL: ARMINES)														
	Task 5.1 (ARMINES) Env. Life Cycle (LC) Assessment														
	Task 5.2 (ARMINES) Social LC Assessment														
	Task 5.3 (ARMINES) LC Cost Assessment														
	Task 5.4 (ARMINES) Int. LC Sustainability Assessment														
	WP6. Communication, Dissemination, Exploitation (WPL: IDC)														
	Task 6.1 (IDC) Comm. and Dissem. Activities														
	Task 6.2 (IDC) Exploitation and IPR Management														
	Task 6.3 (IDC) Collaboration with EU projects														
	WP7. Project Management (WPL: CSIC)														
Task 7.1 (CSIC) Team & Project Coordination															
Task 7.2 (IDC) Research Data Management															
Task 7.3 (CSIC) Project Progress Technical Reports															
Task 7.4 (CSIC) Financial & Administrative coordination															



The project management team will monitor progress against both schedule baselines on a weekly basis, and update the project executive board on variances against the schedule baselines on a regular basis. The Technical manager will be responsible for ensuring the project schedule is updated with the latest information. For variances on executive milestones greater than 10%, the technical manager may choose to escalate the issue to the project coordinator in order to initiate actions to mitigate risks. The following **milestone schedule** has been approved in the project Grant Agreement.

Number	Name	Lead	Due Date
M1	PBR experimental setups in operation	UAL	31 Jan 2021
M2	Perturbation experiments in microalgal PBRs completed	UAL	30 Jun 2022
M3	Bioinformatic tools/pipelines function properly	CSIC	31 Oct 2021
M4	First identification of chemical fractions (dissolved and volatile) in PBRs	AWI	31 Dec 2021
M5	Bioinformatic analyses completed and ready to use in WP3	CSIC	31 Dec 2022
M6	AR experimental setups in operation	IMDEA-E	28 Feb 2021
M7	Identification of key indicators for the failure of systems	IMDEA-E	31 Oct 2021
M8	Perturbation experiments in microalgal ARs completed	IMDEA-E	31 Mar 2023
M9	Bioinformatic analyses completed and data ready to use in WP4	NMBU	30 Jun 2023
M10	PBR bioinformatic data analyses and interpretation completed	CSIC	31 Aug 2023
M11	DARWIN model simulations completed	CSIC	31 Aug 2023
M12	PBR interactomes	NTU	31 Oct 2023
M13	Early Warning Signals in PBRs	CSIC	31 Dec 2023
M14	AR bioinformatic data analyses and interpretation completed	NMBU	31 Aug 2023
M15	ADM1 model simulations completed	IMDEA-E	31 Oct 2023
M16	AR interactomes	NTU	31 Dec 2023
M17	Early Warning Signals in ARs	NTU	31 Dec 2023
M18	Quantification of input/output flows for microalgae and biogas production	ARMINES	31 Aug 2022
M19	Life cycle (LC) assessment of PRODIGIO biogas completed	ARMINES	30 Jun 2023
M20	Identification of affected stakeholders per stage of the life cycle	ARMINES	30 Jun 2022
M21	LC Sustainability Assessment of PRODIGIO completed	ARMINES	30 Nov 2023
M22	kick-off meeting	CSIC	31 Jan 2021
M23	Project logo, website and social media channels published	IDC	31 Mar 2021
M24	PRODIGIO exploitation plan in place	IDC	31 Oct 2023
M25	Final Conference	CSIC	31 Dec 2023

4.4. Cost/Budget Management

It is important to manage and control project costs in order to provide reports to the European Commission with ease and to identify promptly any deviations from the original budget to take corrective or preventive actions.

4.4.1. EC Payment Milestones

EU Payments Schedule	M1	M24
Payment Amount	EUR 1.839.705.94	TBD
Accumulated	EUR 1.839.705.94	TBD
% of Total Project Budget	75%	TBD
Total Project Budget	EUR 2.452.941,25	



Funding of costs will be paid to each partner after receipt from the Funding Authority (EC) without undue delay and in conformity with the provisions of the Grant Agreement. The Coordinator is entitled to withhold any payments due to a Party identified by a responsible Consortium Body to be in breach of its obligations under the Consortium Agreement or the Grant Agreement.

4.4.2. Types of cost

The EC contributes only to the financing of eligible costs. 100% of the eligible costs of the beneficiaries. To be considered eligible costs, it must fulfill the general condition (actual costs, unit costs and flat-rate costs) and specific conditions stated in Article 6 of the *Grant Agreement*.

Some recommendations and obligations for the specific conditions are:

- Costs are classified in two categories: **direct costs** and **indirect costs**.
- Costs can only be charged in one category: no cost can be taken into account twice, both as direct and indirect cost, or in two different cost categories of direct costs.

4.4.2.1. Direct costs

The Grant Agreement considers three types of direct costs:

i) Personnel costs:

The cost of personnel assigned to the project is eligible if the personnel complete the mentioned requisites:

- Work for the beneficiary under an employment contract and assigned to the action (costs for employees).
- Limited to salaries, social security contributions, taxes and other costs included in the remuneration, if they arise from national law or the employment contract.

Non-profit legal entities may declare as personnel costs additional remuneration for personal assigned to the action if:

- It is part of the beneficiary's usual remuneration practices and is paid in a consistent manner whenever the same kind of work or expertise is required.
- The criteria used to calculate the supplementary payments are objective and generally applied by the beneficiary, regardless of the source of funding used.

For the additional remuneration amount for the personal assigned consider the condition stated in Article 6: A. Direct personnel costs. Besides, the costs for natural persons working under a direct contract with the beneficiary complete the following requisites:

- Work under the beneficiary's instructions on the beneficiary's premises.
- The result of the work carried out belongs to the beneficiary;
- The costs are not significantly different from those for personnel performing similar tasks under an employment contract with the beneficiary.



Only the costs of the actual hours worked by the persons directly carrying out work under the project may be charged. Working time to be charged must be recorded throughout the duration of the project by the use of Timesheets. A template to record working hours will be provided to the partners (not for compulsory use if partners already have their own institutional templates), that will include the following basic information:

- full name of beneficiary as indicated in the grant agreement;
- full name of the employee directly contributing to the project;
- title of the project as indicated in the grant agreement;
- project account number should be indicated;
- time period concerned (for instance on daily, weekly, monthly basis) according to the beneficiary's normal practice;
- amount of hours claimed on the project. All hours claimed must be able to be verified in a reliable manner;
- full name and a signature of a supervisor (person in charge of the project).

The complete time recording system should enable reconciliation of total hours in cases when personnel work on several projects during the same period. It is important to remember that an effective time-recording system (a system which certifies the reality of the hours worked) is a prerequisite for the eligibility of the costs. A contract, as a document signed before the work is actually performed, would not be sufficient. Also, there must be some system allowing the beneficiary to indicate the tasks to which the hours have been attributed. The above elements are basic requirements, and there are no obstacles to run the timesheets in a more detailed way. A simple estimation of hours worked is not enough.

The annual number of productive hours can be calculated in two ways:

- By using a fixed number of productive hours for all employees (1720 hours) or
- By calculating an actual individual annual number of productive hours for each employee.

Productive hours per year should exclude annual leave, public holidays, training and sick leave. Productive hours have to be clearly justified and should match the underlying time records. If hours actually spent in productive hours exceed the standard productive hours, the first shall be used for the calculation of personnel costs, unless overtime is paid.

*For more details on particular cases, such as “teleworking” and overtime please see the **Grant Agreement**.*

ii) Other Direct Costs

Travel and related subsistence costs

As a general rule, actual travel and related subsistence costs including related duties, taxes and charges like VAT paid by the beneficiary relating to the project are considered as eligible direct costs, as long as they comply with the beneficiary's usual practices and are adequately recorded.



Purchase cost of durable equipment

The eligible costs regarding the purchase of equipment, infrastructure or other assets are: The depreciation costs if they were purchased and written off in accordance with the terms mentioned in Article 10.1.1 of the Grant Agreement. The costs of renting or leasing and the costs of contributed in-kind against payment if they do not exceed its depreciation cost and do not include any financing fee.

Consumables and supplies

The costs of consumables and supplies may constitute eligible costs provided that they are purchased specifically for the action and contributed in kind against payment in accordance with Article 10.1.1 and Article 11.1 respectively.

Large scale infrastructure operation

All the capitalized and operating costs of large research infrastructure are eligible if its value represents at least 75% of the total fixed assets and the methodology of declaration of the beneficiary has been positively assessed by the Commission. Only the portion which corresponds to the duration of the action and the rate of actual use for the purposes of the action is declared as direct eligible costs and they comply with the conditions detailed in the annotations to the H2020 grant agreements.

4.4.2.2. Indirect costs

Indirect costs, also called, overheads, are all those eligible costs that cannot be identified as being directly attributed to the project, but which can be identified and justified by its accounting system as being incurred in direct relationship with the eligible direct costs attributed to the project. Indirect costs are all the structural and support costs of an administrative, technical and logistical nature which are crosscutting for the operation of the beneficiary's entity and cannot therefore be fully attributed to the project. Indirect costs for PRODIGIO are identified on the basis of a flat rate of 25% of the personnel costs.

4.4.3. Cost Reporting Procedure

All costs must be **reported** to the administrative manager **at the end of each semester**.

- **Personnel costs** will be reported using the **time-sheets** provided to the partners or any other institutional template that includes the information required.
- Other Direct Costs will be reported with a small explanation and the entirety of the cost when these exceed by at least a 15% the total reported personal costs.

Beneficiaries need to justify all costs in order to be reimbursed. For this purposes, they need to maintain the accounts for the project and keep the relevant documentation for at least 5 years after the date of the final payment and have to make this available notably in case of a financial audit.



ID-Consortium will request and check the total costs of the project **every 9 months** and will report the following conclusions to the administrative manager.

- Budget Status Report
- Actual vs. planned expenditure
- Identification of problems and proposal of countermeasures

The formal approval of the costs of each partner will be done at the end of each reporting period using the financial statement of each beneficiary

4.5. Quality Management

As part of the project deliverables the development of a detailed Quality Assurance Plan (QAP, D7.2) is required to ensure project success. Please refer to this QAP document for detailed quality management information.

4.6. Communication Management

As part of the project deliverables, a Communication Management Plan (CMP) and a Data Management Plan (DMP) will be prepared throughout the course of the project. Please refer to these subsidiary plans for detailed information.

E-mail will be used as the main communication channel between the partners of the project. When phone calls or videoconferences take place to discuss relevant project subject matter, it will be highly recommended and encouraged to prepare a meeting minutes document and update an action log.

The PMT will generate an **action log template** and a **meeting minute template** for their use during the project. In addition, the PMT will prepare a **communication matrix** which will be regularly updated as new project stakeholders are identified. This matrix will include information of the required project subject matter that should reach each member in the project.

To make email communication more effective, the following contact lists will be generated and updated regularly.

- General Assembly
- Project Executive Board
- Project Management Team
- Quality Manager
- Work Packages Leaders
- Work Package Participants (1 list per Work Package)
- Task Participants (1 list per task)
- Financial and administrative contact list



4.7. Risk Management

A risk management plan and a risk log that will be regularly updated will be elaborated as part of the project deliverables. Please refer to these documents for detailed information.

4.8. Innovation Management

A project that runs for 36 months and is focused on boosting the efficiency of solar energy conversion into biogas by increasing the performance of i) microalgae production systems and ii) anaerobic digestion systems, thanks to the development of early-warning signals for improved systems monitoring and control will fail in achieving its expected impact and goals if it does not react to new scientific findings and technological advances. The project needs to identify those advances and opportunities as well as to ensure that they are embedded into the project for keeping it up to date. As such, new scientific and technological innovation needs to be recognized by the consortium to react as quickly as possible. For ensuring this, PRODIGIO foresees the following concept:

- PRODIGIO management structure enables to take a strategic approach to innovation. Installs an Innovation, Exploitation and Communication Manager (IE&C). IE&C Manager will be a disruptive element to the project whose main purpose is to ensure that the project adapts to scientific and technological advances.
- PRODIGIO will establish a framework for strategic innovation with participation of the IE&C Manager in the Stakeholder Advisory Board (SAB), building an external alignment with other partner organizations by formally making them part of the creation process. The SAB engages relevant participants from within and outside the project.

5. PROJECT MONITORING & CONTROL

5.1. Project Reporting

PRODIGIO project's coordinator has the obligation (Grant Agreement No 101007006; article: 19) to submit the deliverables as identified in Annex 1 of the GA to the European Commission. Besides, the coordinator must report the technical and financial activities of the project to the European Commission's Agency.

The following diagram (next page) shows the timing for every reporting requirement (i.e. deliverables, milestones, internal reports and external reports) throughout the duration of the project.



	31 Jan 2021 28 Feb 2021 31 Mar 2021 30 Jun 2021 30 Sep 2021 31 Oct 2021 31 Dec 2021 28 Feb 2022 30 Jun 2022 31 Aug 2022 31 Dec 2022 31 Mar 2023 30 Apr 2023 30 Jun 2023 31 Aug 2023 30 Sep 2023 31 Oct 2023 30 Nov 2023 31 Dec 2023 28 Feb 2024																																			
MONTH	1	2	3	6	9	10	12	14	18	20	24	27	28	30	32	33	34	35	36	36-38																
DELIVERABLES		D7.1	D6.1	D7.3			D5.1	D7.4	D1.1		D1.2		D2.1	D2.2	D3.1	D5.3	D3.4	D5.5	D3.6																	
		D7.2		D8.1			D6.2		D7.5		D1.3			D2.3	D3.2	D5.4	D3.5		D4.6																	
				D8.2			D8.3				D1.4			D2.4	D3.3	D4.3																				
							D8.4				D6.3			D2.5	D4.1		D4.4																			
											D6.4			D2.6	D4.2		D4.5																			
MILESTONES	M1	M6	M23			M3	M4		M2	M18	M5	M8		M9	M10		M12	M21	M13																	
	M22					M7			M20					M19	M11		M15		M16																	
														M14	M24				M17	M25																
INTERNAL Rep.					R1								R2						R3																	
EU Rep.									EU-1										EU-2																	
FINAL Rep.																				EU-F																

CSIC - ARMINES - AWI - IDC - IMDEA - NMBU - NTU - UAL - ALL

[<Go to Table of deliverables>](#)

[<Go to Gantt chart>](#)

[<Go to Table of Milestones>](#)

5.1.1. Internal Progress Reports

The internal progress report aims at keeping the partners and the Project Officer informed about the tasks carried out, the progress of deliverables and the incurred costs per partner and WP. Should there be any problem arising in the project, it would be also addressed in the progress report.

An internal progress report should be sent to the project coordinator on **Month 9** and **Month 27** including the periodic external reports to the European Commission (see next section 4.9.2.) of **Month 18** and **Month 36** which will be cumulative. The format of these reports would be similar to the structure of the periodic report that would be sent to the Commission.

The internal progress report will be based on the following sections:

- **Executive Summary** (to be completed by the Technical Manager)
- **Work progress and achievements during the period** (Each Work Package Leader will complete it for his/her WP)
 - Description of the work and role of the partners
 - Deviations to Annex I of Grant Agreement
 - Use of the resources.
- **Project Management during the period** (to be completed by the financial and administrative manager):
 - Consortium management tasks and achievements.
 - Problems and solutions



- Changes in the consortium, if any
- Description of the project meetings
- Project planning vs status.
- Impact of possible deviations in milestones and deliverables.
- Changes in the legal status of the beneficiaries

The template for the Internal Progress Report will be provided.

5.1.2. External Reports to the European Commission

During the life of the project, there will be two interim reports to the Commission (**months 18 & 36**) and one final report (**month 36-38**). The periodic report includes both the technical report and the financial report.

The technical report and the financial report can be uploaded in the Participant Portal provided by the Commission by the Partners.

- **Financial Report:** Financial statements and financial certificates. Within the 60 days of the accomplishment of the reporting periods (**Month 18 & 36**), the coordinator must submit a periodic financial report containing:
 - ✓ Individual financial statements must be filled out by each beneficiary (individually), and then signed and formally submitted to the coordinator (directly in the Funding & Tenders Portal).
 - ✓ An individual financial statement from each beneficiary containing details about the eligible costs (actual costs, unit costs and flat-rate costs) and the receipts of the action for the reporting period concerned.
 - ✓ An explanation of the use of resources and the information on subcontracting and in-kind contributions provided by third parties from each beneficiary.
 - ✓ a periodic summary financial statement generated online by the respective beneficiaries, consolidating the individual financial statements for the reporting period concerned and including the request for interim payment with the exception of the last reporting period.
 - ✓ Financial statements are generated online by the respective beneficiaries. They must be signed and formally submitted to the coordinator (directly through the Funding & Tenders Portal). A summary financial report consolidating the Community contribution claimed by all the beneficiaries will be also provided in an aggregate form, based on the information provided in the financial form of each beneficiary.
 - ✓ A 'certificate on the financial statements' (drawn up in accordance with Annex 5) for each beneficiary and for each linked third party, if it requests a total contribution of EUR 325.000 or more, as reimbursement of actual costs and unit costs calculated on the basis of its usual cost accounting practices (see Article 5.2 and Article 6.2).



- ✓ When financial certificates are required they must be signed by an authorized person of the auditing entity and must be submitted (by the coordinator) at the end of the process as scanned copy (PDF) together with the financial statement for the last reporting period of the beneficiary concerned.
- **Technical Report:** Within the 60 days of the accomplishment of the reporting periods (Month 18 & 36), the coordinator must submit a periodic technical report containing:
 - ✓ An **explanation of the work carried out** by the beneficiaries.
 - ✓ An **overview of the progress** towards the objectives of the action, including milestones and deliverables identified with **justification** in the differentiation between **work expected** to be **carried out and that actually carried out** and an updated plan for the **exploitation and dissemination** of the results.
 - ✓ The answers to the 'questionnaire', covering issues related to the action implementation and the economic and societal impact, notably in the context of the Horizon 2020 key performance indicators and the monitoring requirements.

The technical report must be uploaded to the Commission's Participant Portal. The preferred format is PDF.

- **Final Report:** The coordinator must submit to EC the final report within 60 days following the end of the last reporting period (month 36-38). This report must include the following:
 - ✓ Final Technical Report - A final technical report with a summary for publication containing an overview of the results and their exploitation and dissemination, conclusions on the action and the socio-economic impact of the actions.
 - ✓ Final Financial Report - A final financial report containing a final summary financial statement created on the Commission's Participant Portal consolidating the individual financial statements for all reporting periods and including the request for payment of the balance and a certificate on the financial statements.

5.2. Project Meetings

Detailed information regarding meeting representation and applicable rules are states in the Consortium Agreement. Please refer to this document for further information

5.2.1. Convening meetings

	Ordinary meeting	Extraordinary meeting
General Assembly	At least once a year	At any time upon written request of the Project Executive Board or 1/3 of the Members of the General Assembly
Executive Board	At least quarterly	At any time upon written request of any



		Member of the Project Executive Board
--	--	---------------------------------------

5.2.2. Notice of a meeting

The chairperson of a Consortium Body 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.

	Ordinary meeting	Extraordinary meeting
General Assembly	45 calendar days	15 calendar days
Executive Board	14 calendar days	7 calendar days

5.2.3. Sending the agenda

The chairperson of a Consortium Body 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.

General Assembly	21 calendar days, 10 calendar days for an extraordinary meeting
Executive Board	7 calendar days

Any agenda item requiring a decision by the Members of a Consortium Body must be identified as such on the agenda.

5.2.4. Adding agenda items

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.

General Assembly	14 calendar days, 7 calendar days for an extraordinary meeting
Executive Board	2 calendar days