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Deliverable 7.1. Project Management Manual

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Project Management Manual

D7.1: Project Management Manual

Summary

The R3VOLUTION Project Management Manual presents key relevant information about the procedures, roles, and obligations of the consortium members. The aim of this document is to ensure that all project activities described on the Description of Action (DoA) are efficiently implemented. Therefore, this document includes management procedures as well as decision-making protocols. It is worthy to mention that this document is in line with the project key administrative documents: Grant Agreement and Consortium Agreement.

This deliverable establishes the Project Management Plan (PMP) for the R3VOLUTION project. The PMP describes the main planning to ensure the production of high-quality results. It also includes the Quality Plan (QP). It defines the management structure and how the work must be scheduled, including the responsibilities of each partner by means of work packages and the associated actions.

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Lead beneficiary	**Deliverable author(s)**
CETAQUA	Eric Santos (CET)
Quality assurance / reviewers	
IWW ICONIQ	Lisa Zimmermann Juan Carlos Trejo Fernández
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Dissemination level	x PU = Public □ SEN = Sensitive, only for members of the consortium

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List of Acronyms and Abbreviations

CA	Consortium Agreement
CFS	Certification of Financial Statement
DoA	Description of Action
EAB	External Advisory Board
EC	European Commission
EU	European Union
GA	Grant Agreement
HE	Horizon Europe
IP	Intellectual Property
IPR	Intellectual Property Rights
IR	Internal Reports
PC	Project Coordinator
PSB	Project Steering Board
RP	Reporting Period
STC	Scientific & Technical Committee
WP	Work Package

Executive summary

The R3VOLUTION Project Management Manual presents relevant key information about the procedures, roles, and obligations of the consortium members. The aim of this document is to ensure that all project activities described in the Description of Action (DoA) are efficiently implemented. Therefore, this document includes management procedures as well as decision-making protocols. It is worthy to mention that this document is in line with the project key administrative documents: Grant Agreement and Consortium Agreement.

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The deliverable defines all the documents to be used during the project, both the internal Consortium documents and the rest of required documents to reach the R3VOLUTION goals. The Quality assurance chapter exposes the way the consortium will face the documents' generation process, especially the project's deliverables, in order to guarantee their approach and the required quality. In addition, it establishes the different processes and responsible persons together with an estimated timing of each phase of the process. The information process for the Quality Assurance issue is also established.

The plan includes all the processes and their responsible person/body that will ensure the management and the preventive and curative actions and decisions' taking for each of the identified risks, foreseen or happened at any phase of the project execution.

The PMP is a living document and will be updated continuously throughout the project.

The intended audience of the R3VOLUTION PMP consists of members of the R3VOLUTION consortium.

1. Introduction

This document is developed as part of the R3VOLUTION (A rEVOLUTIONary approach for maximising process water REuse and REsource REcovery through a smart, circular and integrated solution) project, which has received funding from the European Union's program HORIZON-CL4-2023-TWIN-TRANSITION-01-40, under the Grant Agreement Number 101138245.

The Project Management Plan corresponds to Deliverable 7.1 of Work Package 7 (WP7 - Project management). The specific objectives of WP7 include:

- To ensure efficient administrative and budgetary management and control
- To manage the overall operational delivery and ensure that work plan project objectives and outcomes are met
- To establish and implement an efficiency open research data management strategy
- To manage already identified risks and any other emerging risks during the project implementation

This document provides an organized and harmonized set of practical guidelines, procedures and support documents that can be used for optimizing the project implementation. It will be kept up to date as needed throughout the project lifecycle.

This document is to be used as a reference by all partners to efficiently develop their individual and collective activities and contribute to the global objectives of the project.

2. Key Documents

This is the list of key documents that will be addressed during the project execution:

- Grant Agreement (No. 101138245) – the contract between the EC (representing the EU) and the beneficiaries under which the parties receive their rights and obligations (e.g., the right of the Union's financial contribution and the obligation to carry out the research and development work). The Grant Agreement consists of the basic text and annexes, including Annex 1– Description of Action (DoA) - part A and part B. The DoA (Annex 1 part A) is also a key document to be taken into account given that it compiles a specific description of the tasks that will be carried out during the project and the expected results, deliverables and milestones to be obtained.
- Consortium Agreement: the internal agreement signed between the members of the consortium establishing their rights and obligations with respect to the implementation of the action in compliance with the Grant Agreement.

All R3VOLUTION partners have received one copy of these documents. It is important to note from the outset of the project that visibility of EU funding is mandatory while promoting the project actions. Please use always:

1. The EU emblem - High-resolution emblems can be found here:

   https://europa.eu/european-union/about-eu/symbols/flag_en

2. The following funding text: *Funded by the European Union*
3. For dissemination or communication activities, the following Disclaimer needs to be included: *Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union or [name of the granting authority]. Neither the European Union nor the granting authority can be held responsible for them.*

4. Governance structure, project roles and responsibilities

The R3VOLUTION Consortium is composed of 14 beneficiaries, 2 affiliated entities (AE) and 3 associated partners (AP). The consortium has defined a governance structure, which is depicted in Figure 1, including different governing and coordination bodies aiming at the governance, execution, control and monitoring of the project.

The composition, roles and responsibilities of all management levels are described below. Specific operational roles for the consortium bodies are described in the Consortium Agreement. Reading the Consortium Agreement carefully is thus advisable.

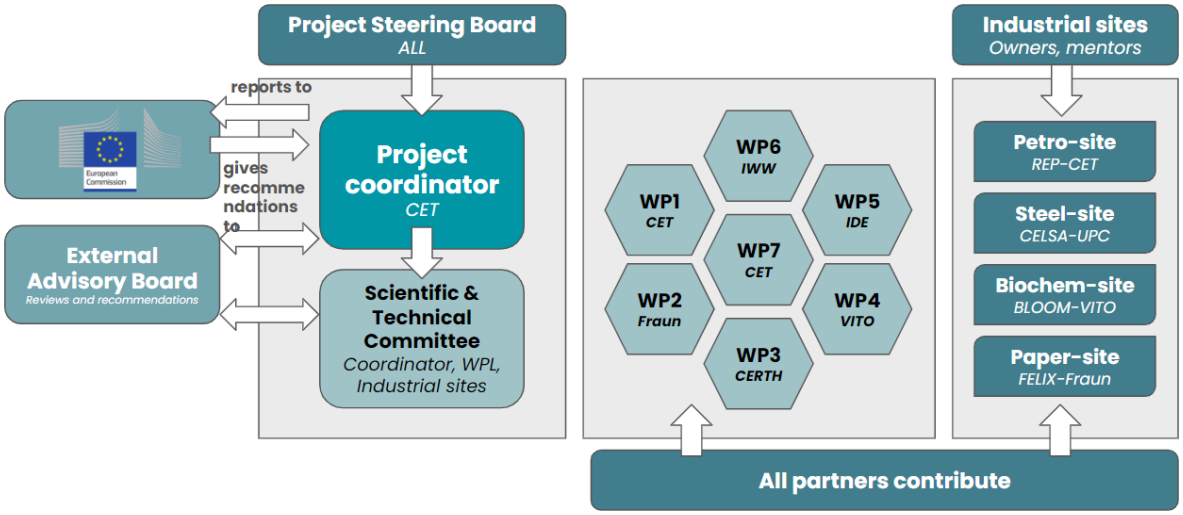


Figure 1. Governance structure of the R3VOLUTION project

3.1. Project Coordinator (PC)

The leading partner in the consortium, CETAQUA, is the Project Coordinator (PC), who acts as the intermediary between the consortium and the European Commission (EC). All administrative and financial issues will be translated to the EC in real time and, in the opposite direction, all suggestions and/or recommendations given by the European Commission will be transferred to the consortium. Thus, the PC will be in charge of the day-to-day coordination of R3VOLUTION. The coordinator shall, in addition to its responsibilities as a party, perform the tasks assigned to it as described in the Grant Agreement and the Consortium Agreement:

- The management of the overall legal, contractual, ethical, financial and administrative issues of the project in close collaboration with the different boards specialized in each of the specific topics
- The PC is the single point of contact between the consortium and the EC. The PC will be in charge of gathering the necessary and updated information from the partners in order to report the project progress in a proper manner, ensuring that the quality standards have been reached or in case of any change or relevant conflict. Each participant will nominate an administrative contact person who will be the contact point of its entity for legal, financial and reporting matters
- Monitor project progress by collecting all periodic activities and evaluating key achievements, planned activities, progress towards deliverables and main concerns
- Monitor compliance of the parties with their obligations

- The resolution of doubts that may arise through direct communication or through the the common project workspace in Google Drive
- Chair the project meetings
- Update the contact list of the parties and other contact persons
- Deal with any relevant matters not foreseen in the proposed management structure

The PC has the support and assistance of the Programmes and Operations Department of Cetaqua, specifically dedicated to project management, consortium coordination, quality-assurance, intellectual property regulation, administrative reporting, and financial monitoring.

Additionally, in order to have a complete overview of the progress of an action and the project, the PC will work in close collaboration with the different boards described in Figure 1.

3.2. Project Steering Board (PSB)

The Project Steering Board (PSB) is the decision-making body of the Project. It consists of one representative from each participant, and it is chaired by the PC. It will meet twice a year at the General Assemblies (once virtual and once presential). They may also meet virtually according to the needs of the project (upon written request of a member of the Project Management Team or 1/3 of the Members of the Project Steering Board). The General Assembly dates have been agreed to by all partners at the kick-off meeting.

The PSB is composed by the 19 organizations that participate in the project, as can be seen in Table 1, in the same order as in the Grant Agreement and with the short names that should be used.

Table 1. R3VOLUTION Consortium (Project Steering Board)

Nº	Role	Short name	Legal Name
1	COO	CET	CETAQUA, CENTRO TECNOLOGICO DEL AGUA, FUNDACION PRIVADA
2	BEN	VEO	VEOLIA ENVIRONNEMENT-VE
3	BEN	Fraunhofer	FRAUNHOFER GESELLSCHAFT ZUR FORDERUNG DER ANGEWANDTEN FORSCHUNG EV
4	BEN	FELIX	Felix Schoeller GMBH & CO. KG
4.1	AE	Felix Holding	FELIX SCHOELLER HOLDING GMBH & CO KG
5	BEN	UPC	UNIVERSITAT POLITECNICA DE CATALUNYA
6	BEN	CELSA	COMPANIA ESPANOLA DE LAMINACION SL
7	BEN	VITO	VLAAMSE INSTELLING VOOR TECHNOLOGISCH ONDERZOEK N.V.
8	BEN	REP	REPSOL S.A.
8.1	AE	REPET	REPSOL PETROLEO SA
9	BEN	VTT	TEKNOLOGIAN TUTKIMUSKESKUS VTT OY
10	BEN	CERTH	ETHNIKO KENTRO EREVNAS KAI TECHNOLOGIKIS ANAPTYXIS

11	BEN	IDENER	IDENER RESEARCH & DEVELOPMENT AGRUPACION DE INTERES ECONOMICO
12	BEN	SINTEF	SINTEF ENERGI AS
13	BEN	IWW	IWW RHEINISCH WESTFALISCHES INSTITUT FUR WASSERFORSCHUNG GEMEINNUTZIGE GMBH
14	BEN	ICO	ICONIQ INNOVATION SPAIN SL
15	AP	BLOOM	BLOOM BIORENEWABLES SA
16	AP	ZP	Z PRIME LIMITED
17	AP	ICL	IMPERIAL COLLEGE OF SCIENCE TECHNOLOGY AND MEDICINE

The PSB will gather project results from the Scientific and Technical Committee (STC) and inputs from the External Advisory Board (EAB), in order to fulfil the following tasks:

- Decisions and approval
    - To approve the implementation of the project, including deliverables and achievement of milestones
    - To validate the adoption of contingency plans, if necessary
    - To agree on modifications, including budget redistributions and task schedule variations. This includes:
        - To vote for requests of changes to the European Commission Grant Agreement, and decide on inclusions or exclusions from the consortium
        - To vote for changes to the Consortium Agreement, including withdrawals of background included
- Reporting and coordination
    - To discuss and assess the general progress and project achievements in relation to the Description of Action (DoA)
    - To promote gender equality, ensuring gender balance in decision-making and in research
    - To ensure that beneficiaries respect the recruitment and working conditions for the researchers defined in the EC Grant Agreement
- Dissemination
    - To review the dissemination level of all Deliverables
    - To provide its opinion on all publication plans with regards to the risks that such publications could imply for the protection or use of foreground
- Exploitation
    - To provide its opinion on planned granting of exclusive licences to foreground to third parties if they could be contrary to the European economy or to security or ethical principles
    - To review the plan for the use and dissemination of foreground

- To resolve disagreements on the necessary character of access rights between partners
- To review contributions to jointly-owned foreground and corresponding shares
- To follow up IP issues to make easy that partners reach agreements with third parties for use of the foreground (such as licensing or confidentiality agreements)

3.3. Scientific & Technical Committee (STC)

The Scientific & Technical Committee (STC) is the supervisory body for the execution of the project which shall report to and be accountable to the Project Steering Board (PSB). It is composed by the Work Package Leaders and RTOs mentoring industrial sites: Cetaqua, Fraunhofer, UPC, Vito, CERTH, Idener, IWW and ICL. Each beneficiary will be represented in the STC with a representative, this is a total of 8 representatives. See the beneficiaries composing the STC in Table 2.

Table 2. R3VOLUTION Scientific & Technical Committee

Participant nº	Organization name (short name)	Country
1	CETAQUA, CENTRO TECNOLOGICO DEL AGUA, FUNDACION PRIVADA (CET)	Spain
3	FRAUNHOFER GESELLSCHAFT ZUR FORDERUNG DER ANGEWANDTEN FORSCHUNG EV (Fraunhofer)	Germany
5	UNIVERSITAT POLITECNICA DE CATALUNYA (UPC)	Spain
7	VLAAMSE INSTELLING VOOR TECHNOLOGISCH ONDERZOEK N.V. (VITO)	Belgium
10	ETHNIKO KENTRO EREVNAS KAI TECHNOLOGIKIS ANAPTYXIS (CERTH)	Greece
11	IDENER RESEARCH & DEVELOPMENT AGRUPACION DE INTERES ECONOMICO (IDENER)	Spain
13	IWW RHEINISCH WESTFALISCHES INSTITUT FUR WASSERFORSCHUNG GEMEINNUTZIGE GMBH (IWW)	Germany
17	IMPERIAL COLLEGE OF SCIENCE TECHNOLOGY AND MEDICINE (ICL)	United Kingdom

The STC will closely follow-up the progress of the project in both technical and non-technical perspectives, as well as the quality and the delivery on time of the deliverables. The STC will always consider the whole vision of the project progress, ensuring the proper implementation and interrelation between Work-Packages.

The PC (CET) will chair the STC meetings, which will be held face-to-face or virtually on a six-month basis coinciding with the Project Coordination Meetings. There also will be virtual meetings with an approximate frequency of 1 per month and whenever necessary upon written request of a member of the Scientific & Technical Committee.

The Scientific & Technical Committee is responsible for the following tasks (more detail can be found in the Consortium Agreement):

- To report the progress of the Work Packages and any other necessary updates to the PSB.
- To properly execute and implement the decisions of the PSB.
- To coordinate the progress of the technical work under the WPs on a day-to-day basis.
- To communicate any plans, deliverables, documents, and information connected with the WP between its participants and, if relevant, to the PSB
- To organize the work and outputs of the WP and resolve any conflict arising according to the project protocols
- To follow up decisions made by other consortium bodies insofar as they affect the WP
- To monitor the effective and efficient implementation of the action
- To collect information at least every 6 months on the progress of the action, examine that information to assess the compliance of the project with the Action Plan and, if necessary, propose modifications of the Action Plan to the Project Steering Board
- To support the coordinator in preparing meetings with the Funding Authority and in preparing related data and deliverables

3.4. External Advisory Board (EAB)

The External Advisory Board (EAB) is a group of external experts that ensure the scientific and technical quality of the project. It will provide an additional process of quality control, advice, and validation of the vision, global impact and outreach of the project. It is appointed and steered by the PSB. The EAB will be composed during the first 6 months of the project.

Frequent interaction will be sought between the PSB and the EAB in order to gain insights on the evolutions in the state of the art and to obtain validation of the methodologies adopted. Progress reports will be sent to the EAB to obtain feedback about project results during the implementation. At the same time, the EAB will make recommendations to the PSB to support achieving impacts.

The EAB will get together once a year (at least most of its members) with the PSB for discussion of findings, challenges and opportunities during the project coordination meetings. The EAB will also be asked to review key project deliverables, and assess difficulties and priorities identified by the PSB.

In addition, the EAB will be the link to international initiatives by benchmarking, promoting and supporting the route to market of R3VOLUTION technologies.

3.5. Other bodies: Work Package Leaders, Task Leader, Industrial Sites

Work Package Leaders (Cetaqua, Fraunhofer, CERTH, Vito, Idener, IWW) are in charge of leading and coordinating their respective Work-Package. They answer directly to the Project Coordinator and must manage the beneficiaries involved in each WP. They must make sure that the deliverables are of sufficient quality before they are shared for review with the PC and that they are submitted in due time. Furthermore, they must ensure scientific and technical coordination within each WP as well as with other WPs if the project requires it (e.g. link to WPs 1, 2 and 4).

The management responsibility for each Task in a work package is attributed to the appointed partner, who nominates an individual as Task Leader.

The Task Leader is responsible for coordinating and reporting the work done by all participants in the task. The Task Leader presents the action progress when required by the WP Leader or the STC.

5. Internal Communication

Virtual and face-to-face meetings will take place to monitor the progress of the project and to develop corrective measures where needed. In Table 3 is a summary of the main expected meetings. It is worth noting that all the ordinary face to face meetings, will take place during the project coordination meetings.

The project coordination meetings of the PSB will be hosted twice a year. Besides having some plenary sessions to report the advancements of the WPs and case studies, it will also have parallel technical meetings, the STC and PSB meetings, and once a year, the EAB meetings.

Table 3. R3VOLUTION official project meetings

Type of meeting	Ordinary meeting	Extraordinary meeting
Project Steering Board	Twice a year: once presential, once virtual	Virtual or face to face meetings may take place at any time, upon written request of a Member of the STC or 1/3 of the members of the PSB
Scientific & Technical Committee	At least quarterly, virtual	At any time upon request of any member of the STC
External Advisory Committee	Once a year, online or virtual	
Work-Package	Up to the WP leader judgement	At any time upon request of any participant in the WP.

Virtual meetings will be held regularly with the aim to:

- Discuss the work progress within specific Work-Packages / groups of work
- Define responsibilities and actions to take
- Agree on any potential amendments to the work plan
- Share ideas and clarify questions / doubts

The official tool to perform virtual meetings hosted by the PC is Google Meet. In case of unavailability of partners the meeting organizer will decide the best alternative. The general rules for the project meetings are the following:

- The partners will receive an invitation to the meeting (if necessary, a Doodle will be launched in advance to find the most convenient date for everyone)
- The invitation will include the agenda for the call and preparatory work for each participant in case that is needed
- After the meeting, the attendees will receive a preliminary version of the minutes for their validation

- The final minutes of the meeting will be shared via email and in the shared folder of the project
- The follow up actions/next steps defined in each conference call will be listed in the meeting minutes to allow for a clear understanding of responsibilities and to better track the progress of the project

Finally, a common strategy for internal communication is established, preventing the proliferation of mails and broadcasting to the whole consortium. In this sense, mail recipients shall be included to whom the mail is relevant, reducing global mails. Likewise, for ease of identifying R3VOLUTION relevant emails, it is recommended that all mail subjects begin with "R3V" and have the following structure, allowing recipients to quickly identify mails which are relevant to them:

Example for email codification: **R3V - [ADMIN or WPx]_[TX.X or Dx.x]: TOPIC**

Where:

- [ADMIN or ALL]: Refers to administrative, management or general inquiries
- [WPx]: Refers to a specific Work-Package
- [TX.X]: Refers to a specific task within the WP
- [DX.X]: Refers to a specific deliverable within the WP

4.1. Internal communication and management

Google drive has been selected as the environment for the internal communication and management of the project. It is a user-friendly platform where partners have access to the most up-to-date documents, templates, project materials and information. The objective of this platform is to set up an effective virtual communication among R3VOLUTION partners.

4.2. Contacts

The R3VOLUTION contacts list is available in Google Drive and is continuously updated according to the corresponding changes in the participants and contact data occurring throughout the project.

It includes details on the roles of each participant and their contribution to each work package, together with all the contact information: name, role, email and phone. Due to the public dissemination level of the present D7.1, the contact list will not be displayed in this document.

6. Rules for implementing Horizon Europe projects

The implementation of the R3VOLUTION project will follow the rules and guidelines for Horizon Europe projects. The Grant Agreement (GA) is the document which sets out the rights and obligations and the terms and conditions applicable to the grant awarded to the R3VOLUTION partners for implementing the R3VOLUTION project. The following is a series of important points / rules to be considered.

5.1. Reporting

The reporting process allows the EC to follow the project closely and to ensure that it is implemented as stated in the GA and in conformity with the financial rules. The GA gives an overall picture of the progress of the project, in relation to the original and revised plans. It also provides a review of incurred costs.

The R3VOLUTION project lasts 48 months and has 3 reporting periods (RP):

- **RP1**: from month M1 (01/01/2024) to month 18 (30/06/2025, M19&M20 to upload it to the participant portal)
- **RP2**: from month 19 (01/07/2025) to month 36 (31/12/2026, M37&M38 to upload it to the participant portal)
- **RP3**: from month 37 (01/01/2027) to month 48 (31/12/2027, M49&M50 to upload it to the participant portal)

A report needs to be compiled and submitted to the EC at the end of each reporting period (within 60 days following the end of the reporting period). It includes:

- **A periodic technical report** (explanation of the work carried out; overview of the progress; publishable summary; answers to questionnaire)
- **A periodic financial report** (individual financial statement; explanation of the use of resources; periodic summary financial statement)

This is the specific procedure for the periodic report (all steps in 60 days):

1. All beneficiaries receive a notification and log on to the Participant Portal (day 0)
2. All beneficiaries share all costs they have to claim with Cetaqua and Cetaqua checks and reviews them (day 0 – 30)
3. All beneficiaries complete their own Financial Statement. Beneficiaries send their contribution to the technical part of the Periodic Report to Cetaqua and Cetaqua uploads it in the portal. Beneficiaries e-sign and submit their Financial Statements to the Coordinator (day 31 – 35)
4. The Coordinator approves the elements of the Periodic Report & submits to the EU Services (day 35-60)
5. The EU Services review the submitted Periodic Report and accept or reject it
6. Interim Payment (90 days from reception of periodic reports, if there are no deviations occurred)

Partners should read the guidelines on the Participant Portal to understand what exactly is expected from them (login to ECAS needed):

https://webgate.ec.europa.eu/fpfis/wikis/display/ECResearchGMS/Periodic+Reporting

The final report at the end of the project must be submitted within 60 days following the end of the last reporting period (in addition to the periodic report for the last reporting period). It must include:

- A final technical report (overview of the results and their exploitation and dissemination; the conclusions of the action; the socio-economic impact)

- A final financial report (final summary financial statement – created automatically by the electronic exchange system; a certificate on the financial statements – in some cases)

At the end of the project and for the final financial report, beneficiaries which request a total financial contribution of 430,000.00€ or more must provide a certificate on the financial statement (CFS). The certificate must be issued by an external auditor, using the template in Annex 5 of the Grant Agreement.

Partners should keep the signed original in their files and submit the CFSs as a scanned copy (PDF) together with the financial statement for the final reporting period of each partner concerned. Costs based on lump sums, flat-rates (e.g. indirect costs) or unit costs are not included in the 430,000.00€ limit.

In addition to the periodic reporting to the EC, the project coordinator will monitor the progress of the project through regular internal progress reports. These internal progress reports (IR) will be submitted to the project coordinator during the project and will be used to follow the progress and the budget use of the project, as well as to detect any deviations from the work plan. The internal progress reports focus on the progress of the activities and on the financial reporting (expenses). The reports will be requested in the following months (mid-term ahead of the formal periodic report to the EC):

- **1st. Internal Report** (IR1): M1-M6 (M7, July 2024 to send it to the coordinator)

- **2nd. Internal Report** (IR2): M7-M12 (M13, January 2025 to send it to the coordinator)

- **3rd. Internal Report** (IR3): M13-M18 (M19, July 2025 to send it to the coordinator) or M1-M18 (RP1)

- **4th. Internal Report** (IR4): M19-M24 (M25, January 2026 to send it to the coordinator)

- **5th. Internal Report** (IR5): M25-M30 (M31, July 2026 to send it to the coordinator)

- **6th. Internal Report** (IR6): M31-M36 (M37, January 2027 to send it to the coordinator) or M19-M36 (RP2)

- **7th. Internal Report** (IR7): M37-M42 (M43, July 2027 to send it to the coordinator)

- **8th. Internal Report** (IR8): M43-M48 (M49, January 2028 to send it to the coordinator) or M37-M48 (RP3)

5.2. Financial aspects

The ‘maximum grant amount’ is 10,985,636.50 € (ten million nine hundred and eighty-five thousand six hundred thirty-six Euro and fifty cents).

The funding rate for all the beneficiaries and their affiliated partners is 100% (see Article 6 of GA, ‘reimbursement of eligible costs grant’, see Annex 2 of GA).

The estimated eligible costs of the action are 10,985,636.50€ (eleven million seven hundred and fifty-three thousand eighty Euro).

Eligible costs (see Article 6) must be declared under the following forms ('forms of costs'):

a) for direct personnel costs:

- as actually incurred costs (‘actual costs’) or
- on the basis of an amount per unit calculated by the beneficiary in accordance with its usual cost accounting practices (‘unit costs’).
- Personnel costs for SME owners or beneficiaries that are natural persons not receiving a salary (see Article 6.2, Points A.4 and A.5) must be declared on the basis of the amount per unit set out in Annex 2a (unit costs);

b) for direct costs for subcontracting: as actually incurred costs (actual costs);

c) for direct costs of providing financial support to third parties: not applicable;

d) for other direct costs:

- for costs of internally invoiced goods and services: on the basis of an amount per unit calculated by the beneficiary in accordance with its usual cost accounting practices (‘unit costs’);
- for all other costs: as actually incurred costs (actual costs), also known as Purchase costs;

e) for indirect costs: on the basis of a flat-rate applied as set out in Article 6.2, Point E (‘flat-rate costs’);

f) specific cost category(ies): not applicable.

The ‘final grant amount’ depends on the actual extent to which the action is implemented in accordance with the Agreement’s terms and conditions.

This amount is calculated by the agency — when the payment of the balance is made (see Article 21.4) — in the following steps:

Step 1 - Application of the reimbursement rates to the eligible costs

Step 2 - Limit to the maximum grant amount

Step 3 - Reduction due to the no-profit rule

Step 4 - Reduction due to substantial errors, irregularities or fraud or serious breach of Obligations

More detailed information about the grant amount, form of grant, reimbursement rates, forms of cost, eligible and illegible costs can be seen in Chapter 3 of the Grant Agreement.

5.3. Review Meeting and Audits

The R3VOLUTION Review Meetings (with the EC) will be organised between the last month of the reporting period and the following two months. The final dates will be decided between the consortium and the EC.

The review meetings will be within the following time-frames:

- **Review meeting RP1: M18-M20**
- **Review meeting RP2: M36-M38**
- **Review meeting RP3: M48-M50**

Regarding audits:

During the implementation of the project or afterwards, the EC checks, reviews, investigates, and audits the proper implementation of the project and its compliance with the Grant Agreement.

The EC may order an audit to the grant during the project or at any time up to 2 years after the final payment. Any claimed ineligible costs will be recovered or deducted from the next payment.

In the context of checks, reviews, audits or investigations, partners must make available records and other supporting documentation that proves the proper implementation of the action and that the costs they declare as eligible (for a period of five years after the payment of the balance).

The audit statement costs are considered contracting, and not subcontracting.

6. Documents and resources

European Commission resources / documents

- Annotated Model Grant Agreement

https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/common/guidance/aga_en.pdf

- Participant Portal Horizon Europe Online manual

http://ec.europa.eu/research/participants/portal/desktop/en/funding/reference_docs.html#h2020-grantsmanual-lev

- Page on the research participant portal where partners can find useful documents dedicated to Horizon Europe projects:

http://ec.europa.eu/research/participants/portal/desktop/en/funding/reference_docs.html

Communication, Dissemination, Data Management

- Communication in the Horizon Europe manual

http://ec.europa.eu/research/participants/docs/h2020fundingguide/grants/grantmanagement/communication_en.htm

- All the issues concerning Exploitation, Dissemination and Business Plan for results will be developed in WP6 led by IWW.

- Dissemination (GA article 29) is a separate obligation (e.g. through scientific articles and conferences). More information in D6.2 Communication and Dissemination Strategy and Synergies Plan)

http://ec.europa.eu/research/participants/docs/h2020fundingguide/grants/grantmanagement/dissemination-of-results_en.htm

- Communication EU research and innovation: guidance for project participants

http://ec.europa.eu/research/participants/data/ref/h2020/other/gm/h2020guidecomm_en.pdf

- The Data Management Plan will be developed in WP7, more specifically in T7.5 by CERTH

- Guidelines on Open Access to Scientific Publications and Research Data

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

IPR (Intellectual Property Rights)

- To learn more about the Horizon Europe rules regarding intellectual property right, please read article 16 of the Grant Agreement.

- IPR Helpdesk

https://www.iprhelpdesk.eu/

- Your Guide to IPR in Horizon Europe

https://www.iprhelpdesk.eu/sites/default/files/documents/EU_IPR_Guide-to-IP-H2020.pdf

- Intellectual Property Rights (IPR) is another important issue that will be tackled in task 6.3, within the Deliverable 6.6 Innovation Management Plan.

Finance Helpdesk

- Checks, Audits, Investigations

http://www.finance-helpdesk.org

7. Quality assurance, control and risk management

7.1. Quality assurance

The Deliverables identified in the DoA shall be delivered to the EC within the deadlines and in accordance with the conditions specified in the Grant Agreement (to be used as an indicator that the project is progressing on time).

The Deliverables are developed by the Deliverable lead beneficiary with support from the respective task contributors and submitted to the EC by the Project Coordinator through the electronic exchange system.

The R3VOLUTION PSB, STC and the EAB all play an important role in the quality assurance of the project.

Table 4 summarizes the deliverables that will be developed throughout the project, the entity with main responsibility to develop it, the document type (R: Report, DEM: Demonstrator, OTH: Other), the dissemination level (SEN: Sensitive, PU: Public) and the due date for submission.

Table 4. List of deliverables in R3VOLUTION

Nº	Deliverable	WP nº	Lead	Type	Dissem level	Due date
D1.1	Characterization of sites streams	1	CET	R	SEN	M6
D1.2	Thermal energy analysis of demo sites	1	SINTEF	R	SEN	M15
D1.3	Design of the treatment trains for all streams	1	CET	R	SEN	M36
D2.1	Numerical and lab investigation of heat recovery systems	2	SINTEF	R	PU	M28
D2.2	Development of advanced ceramic membranes	2	Fraunhofer	R	SEN	M24
D2.3	Development of nanocellulose membranes	2	VTT	R	SEN	M24
D2.4	Development surface modified ceramic membranes	2	VITO	R	SEN	M24
D2.5	Integrational evaluation of selected process combinations	2	Fraunhofer	R	SEN	M30
D3.1	Data Management Platform	3	ZP	DEM	SEN	M8
D3.2	Process model and optimisation	3	IDE	OTH	SEN	M20
D3.3	ML models	3	CET	OTH	SEN	M22
D3.4	DPA tool	3	CERTH	DEM	SEN	M22
D4.1	Demo (physical) plants and protocols	4	VITO	DEM	SEN	M30
D4.2.	Results of the operation of the demonstration in petrochemical industry	4	CET	R	SEN	M42
D4.3	Results of the operation of the demonstration in bio-based chemical industry	4	VITO	R	SEN	M42
D4.4	Results of the operation of the demonstration in pulp & paper industry	4	Fraunhofer	R	SEN	M42
D4.5	Results of the operation of the demonstration in steel industry	4	UPC	R	SEN	M42

D5.1	Methodology and preliminary analysis for TCA, LCA, LCSA and circularity assessments of each site	5	ICL	R	PU	M30
D5.2	R3VOLUTION solution replicability for additional streams	5	IDE	R	SEN	M48
D5.3	Final TCA, LCA, LCSA and circularity assessments of each site	5	ICL	R	PU	M46
D6.1	Communication and Dissemination (C&D) Strategy and Synergies plan v1	6	IWW	R	PU	M6
D6.2	Corporate identity and general communication material	6	IWW	R	PU	M6
D6.3	Communication and Dissemination (C&D) Strategy and Synergies plan v2	6	IWW	R	PU	M12
D6.4	Communication and Dissemination (C&D) Strategy and Synergies plan v3	6	IWW	R	PU	M24
D6.5	Communication and Dissemination (C&D) Strategy and Synergies plan v4	6	IWW	R	PU	M36
D6.6	Innovation Management Plan	6	CET	R	SEN	M46
D6.7	Plan for Exploitation	6	VEO	R	CO	M46
D6.8	Final Dissemination, Communication and Synergies Plan	6	IWW	R	PU	M48
D7.1	Project Management Manual	7	CET	R	PU	M6
D7.2	Risk Management Plan v1	7	CET	R	CO	M6
D7.3	Risk Management Plan v2	7	CET	R	CO	M24
D7.4	Risk Management Plan v3	7	CET	R	CO	M48
D7.5	Data Management Plan v1	7	CERTH	R	PU	M6
D7.6	Data Management Plan v2	7	CERTH	R	PU	M18
D7.7	Data Management Plan v3	7	CERTH	R	PU	M36
D7.8	Data Management Plan v4	7	CERTH	R	PU	M48

7.2. Quality control

Control methods will be used to monitor deviations from plan and attempts to return to plan. Feedback from internal and external advisors will be used to monitor progress towards the project objectives. Risk management will be used as a proactive approach towards managing deviations from the Grant Agreement plan.

Revision and review process for:

- Official EC report submissions - deliverables & periodic reports
- Public material

Before submitting to the European Commission, each deliverable will undergo a Peer Review to ensure they meet acceptable technical and quality standards. This review process will be documented in the change history of the document. If it is refused, the deliverable will be modified taking into

account the remarks and then a new review will be carried out. Reviews will focus on correcting errors such as:

- technical ambiguities or inconsistencies,
- non-conformance to the philosophy and concepts developed in the description of work (Grant Agreement, Annex 1),
- non-conformance to the requirements laid down by the EC.

Reviewers: WP leader (if they are not the main writer), coordinator or project manager (or Support Team) and/or another partner nominated by the coordinator.

Furthermore, partners will be required to periodically report technical issues, tasks progress and financial matters to the project coordinator every 6 months.

7.3. Risk management

A risk is the potential of a situation or event to impact the achievement of specific objectives in a negative way.

Risk management is the process of identifying, assessing, planning, and implementing responses to ensure that uncertainty and negative impact of risks is reduced to an acceptable level. It is a measure put in place to deal with the dynamic nature of project and is effectively the process of anticipating what might not go to plan and putting actions in place to ensure the project is not negatively impacted.

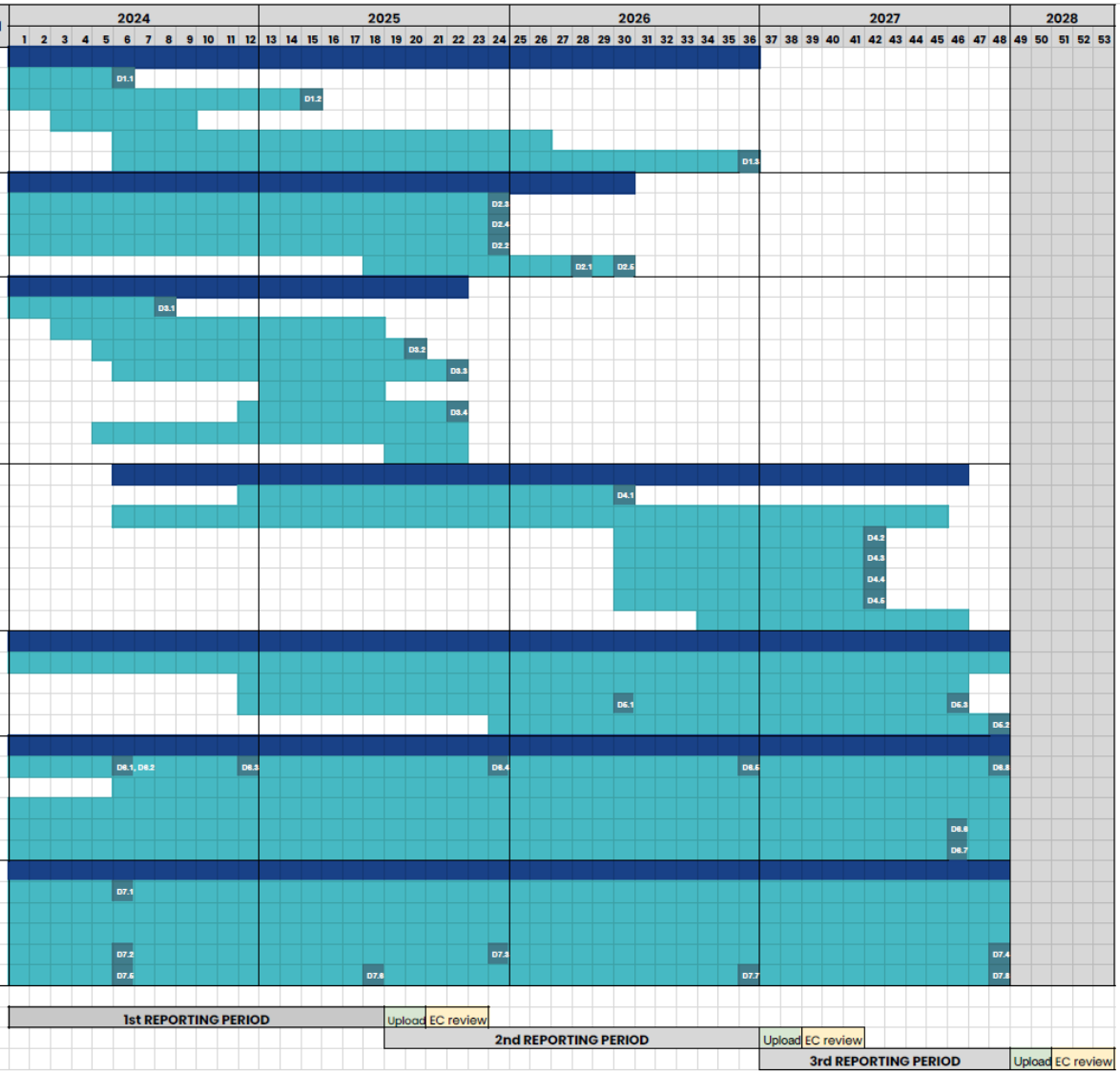
During R3VOLUTION, risks will be monitored as a continuous activity throughout the project duration. Approach is based on early identifications and rapid reaction to events that could affect the project outcomes. Risks will be identified and reviewed at progress and technical meetings and status reported in Work Package Interim Management reports and EC periodic reports.

A risk register will be continually updated and monitored. When a risk is identified contingency and mitigation actions will be agreed including date or frequency of review. Separate meetings to address specific risks will be arranged if necessary. The risk owner will be identified in the risk register. All partners will be responsible for identification and updating risks and communicating them to the project coordinator.

8. Gantt Chart

The Gantt Chart of the R3VOLUTION project is presented below:

WP/T	Key Activity	WP/T Leader	Start	End
WP1	**Site characterisation, definition of baseline and system design**	**CET**	**1**	**36**
T1.1	Characterization of the industrial wastewater streams	CET	1	6
T1.2	Characterization of the energy needs and waste-heat recovery assessment	SINTEF	1	15
T1.3	Membrane selection and system design specification	Fraunhofer	3	9
T1.4	Design of the pilot plants to demnstrate R3V treatment trains in the physical indust	CET	6	26
T1.5	Definition of the R3V treatment trains to be assessed in the different virtual industri	CET	6	36
WP2	**Advanced approaches for membrane technology applications**	**Franhofer**	**1**	**30**
T2.1	Development of high-performance nanocellulose membranes and assembled mo	VTT	1	24
T2.2	Development/application of specialized surface functionalization tecniques for cer	VITO	1	24
T2.3	Deveopment of advanced ceramic membranes, adaptation of module design and	Franhofer	1	24
T2.4	Laboratory/semi-pilot scale trials for evaluation of selected process combinations	Franhofer	18	30
WP3	**Digital tool development**	**CERTH**	**1**	**22**
T3.1	Data management platform	ZP	1	8
T3.2	Process modelling and calibration	IDENER	3	18
T3.3	Process assessment and optimization for each case study	IDENER	5	20
T3.4	ML models for process control and monitoring	CET	6	22
T3.5	Deveopment of explainable AIs	CERTH	13	18
T3.6	Digital twin recommendation system	CERTH	12	22
T3.7	System risk management	ZP	5	22
T3.8	User interface development	IDENER	19	22
WP4	**System integration and demonstration**	**VITO**	**6**	**46**
T4.1	System integration and commissioning	VITO	12	30
T4.2	Digitalisation process	ICL	6	45
T4.3	Demonstration petrochemical idustry	CET	30	42
T4.4	Demonstration bio-based chemical industry	VITO	30	42
T4.5	Demonstration pulp & paper industry	IKTS	30	42
T4.6	Demonstration steel industry	UPC	30	42
T4.7	Water, materials and energy recovery assessment	CET	34	46
WP5	**Sustainability, circularity and social impact assessment**	**IDENER**	**1**	**48**
T5.1	Future industrial needs and market assessment	VEO	1	48
T5.2	Techno-economic assessment	ICL	12	46
T5.3	Environmentak, circularity and social impact assessment	ICL	12	46
T5.4	Replicability and synergies with other sectors	IDENER	24	48
WP6	**Exploitation and communication**	**IWW**	**1**	**48**
T6.1	Dissemination and communication activities	IWW	1	48
T6.2	Synergy with relevant project and initiatives	IWW	6	48
T6.3	Intellectual property protection	CET	1	48
T6.4	Innovation management	CET	1	48
T6.5	Exploitation roadmap	VEO	1	48
WP7	**Project Management**	**CET**	**1**	**48**
T7.1	Project management, coordinadion and legal compliance	CET	1	48
T7.2	Administration, financial management, and reporting	CET	1	48
T7.3	Monitoring of project activities and work progress	CET	1	48
T7.4	Quality and risk management	CET	1	48
T7.5	Data management	CET	1	48



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