



## D8.2 – Quality and Risk Management Plan



**COMMUNITAS**



## D8.2 – Quality and Risk Management Plan

Dissemination Level: PU - Public  
 Lead Partner: EDP L  
 Due date: May 2023  
 Actual submission date: May 2023

### Published in the framework of:

Bound to accelerate the roll-out of Energy Communities and empower consumers

### Authors:

EDP L

### Revision and history chart

Version	Date	Editors	Entity	Comment
0.1	01/05/23	Filipe Neves da Silva Humberto Queiroz Cláudia Fernandes	EDP L	First version
0.2	30/05/23	Christos Timplalexis Laura Bordo	CERTH RINA	Review
1.0	31/05/23	Filipe Neves da Silva	EDP L	Consolidated version

### Disclaimer:

The information in this document is subject to change without notice. Company or product names mentioned in this document may be trademarks or registered trademarks of their respective companies.

#### All rights reserved

The document is proprietary of the COMMUNITAS consortium members. No copying or distributing, in any form or by any means, is allowed without the prior written agreement of the owner of the property rights.

This document reflects only the authors' view. The European Community is not liable for any use that may be made of the information contained herein. Responsibility for the information and views expressed in the therein lies entirely with the author(s).



## Table of contents

1. Executive summary.....	5
2. Introduction.....	6
2.1. Objectives.....	6
2.2. Structure of the document.....	6
2.3. Relation to other tasks.....	6
3. Quality Management Plan.....	7
3.1. Quality Management Roles and Responsibilities.....	7
3.2. Documentation management.....	8
Language.....	8
Storage.....	8
Nomenclature.....	9
Templates.....	10
3.3. Deliverable submission.....	10
Reviewers and due dates.....	11
3.4. Milestone submission.....	13
4. Technical and Innovation Management.....	14
4.2. Methodology.....	14
4.3. Stakeholder Management and Engagement.....	15
4.4. Impact monitoring.....	16
4.5. Plan of activities.....	17
4.6. Other topics.....	18
Communication of technical results.....	18
Intellectual property management.....	18
5. Risk Management Process.....	19
5.1. Risk Management Strategy.....	19
1. Identification.....	19
2. Assessment.....	19
3. Mitigation.....	19
4. Monitoring.....	20
5. Communication and Documentation.....	20
5.2. Risk Register.....	20
5.3. Risk analysis and mitigation.....	21

5.4. List of Critical Risks..... 21

6. Reporting procedure.....25

6.1. Quality assurance measures..... 25

**List of figures:**

Figure 1 - Innovation Management Process..... 14

Figure 2 - Influence-interest matrix for stakeholder management .....16

Figure 3 - Risk zone matrix .....21

**List of tables:**

Table 1 - List of deliverable reviewers in COMMUNITAS..... 12

Table 2 – List of risks identified.....22

**Glossary:**

Acronym	Full name
EC	European Commission
EU	European Union
GA	General Assembly
IP	Intellectual Property
KoM	Kick-off meeting
M	Month
PC	Project Coordinator
PO	Project Officer
PSC	Project Steering Committee
QMP	Quality Management Plan
ToC	Table of Contents
WP	Work Package



# 1. Executive summary

The Quality and Risk Management Plan defines the strategy and processes that will enable to attain quality management excellence, mitigating risks, and achieve results that contribute to the project objectives. This will be accomplished by implementing the practices outlined in the guidelines and rules contained in this plan and the templates provided, that together will promote coherence and clarity in all outputs, reflecting the quality of the work prepared.

The Quality Management plan covers the roles and responsibilities of each stakeholder within the project and how they will contribute towards the overall quality of outcomes. It also provides guidelines for managing all internal documentation, describes the deliverable revision and submission process, and details the rules for preparing milestones. The Risk Management section addresses the key steps in the strategy to mitigate risks that can impact the project, while also analysing the relevance of each risk and defining a structure for the registration of any identified risks. This section also contains a list of critical risks that were identified before the project started.

Besides the quality and risk management, the deliverable covers the technical and innovation management strategy and the reporting procedures. The technical and innovation management strategy outlines a methodology that will enable the project to output innovative ideas and solutions that can steer the project towards its goals. To monitor the work set out to do during the project, the technical and innovation management strategy aims to promote accurate tracking of task progress and impact achieved. The reporting procedures section provides the set of rules to prepare the periodic reports for the European Commission, following on the excellence work promoted by the quality and risk management plan.

The Quality and Risk Management Plan will be updated twice during the project as to ensure that the outputs are of the intended quality and so that risks are constantly updated, or mitigated if they materialize. The Quality and Risk Management Plan will be included within the Project Management Roadmap updates corresponding to D8.4 and D8.5, due to M12 and M27, respectively.

## 2. Introduction

### 2.1. Objectives

The Quality and Risk Management Plan outlines the strategy and processes necessary to ensure coherence, clarity, and completeness of project outcomes, thereby contributing to high-quality results. The plan also provides a framework to identify and mitigate risks that could impact the project objectives. By adhering to the guidelines, rules, and templates provided, stakeholders can actively promote high-quality standards of work and contribute to maintain the alignment and progress of the project objectives.

### 2.2. Structure of the document

The deliverable is structured in the following sections:

- Section **Error! Reference source not found.** – Quality Management Plan – outlines the processes that will be implemented in the project to ensure that results will have the expected quality.
- Section 4 – Technical and Innovation Management – details the workshop proposed to promote the creation and development of innovative ideas, as well as how these will be tracked during the project
- Section **Error! Reference source not found.** – Risk Management Process – describes the process of risk identification and mitigation, aiming to decrease or eliminate negative impacts on the project.
- Section **Error! Reference source not found.** – Reporting procedure – briefly addresses the process for reporting the technical and financial progress of the project to the European Commission.

### 2.3. Relation to other tasks

D8.2 is a document for internal use that highlights a series of guidelines for management. The output of this deliverable will be updated two times throughout the project, reflecting changes to the guidelines or newly identified risks. The first update, D8.4, will be delivered by the end of the first year of the project, and the second update (D8.5) will be delivered by M27. Both these documents will connect information described across D8.1, D8.2 and D8.3.

This deliverable is also connected to D6.4 – Final project IP strategy and exploitation plan of the most promising KERs. Although in D8.2 does not expand on the Intellectual Property strategy, this is an essential part of the innovation management. The topic will be approached in detail in D6.4.

### 3. Quality Management Plan

The COMMUNITAS Quality Management Plan (QMP) outlines the processes and resources that will be implemented to ensure that the consortium meets the required quality standards, mainly focusing on the quality of the deliverables produced as outputs of the project results.

The QMP will ensure that the deliverables are produced according to the required quality standards from the European Commission, aiming for achieving a 100% approval rate. To ensure this, the quality management activities will target the content of each deliverable before and after it is prepared, considering both technical and linguistic aspects.

#### 3.1. Quality Management Roles and Responsibilities

The definition of specific roles and responsibilities of the consortium partners with respect to quality management will enable collaboration between partners towards a common goal of achieving the desired level of quality and minimize risks of requests from the evaluators to improve the work.

This section is based on the information described in deliverable 8.1 – Project Management Roadmap, more specifically it takes into consideration Section 4.1 – Governance Structure. In this section of deliverable 8.1, the different project representatives are identified and their roles in the project are described. The roles defined include the Project Coordinator (PC), the General Assembly (GA), the Project Steering Committee (PSC), the WP leaders, the task leaders, the Ethics Manager, and External Advisory Board. It is also defined the role of the Project Officer (PO) in the project.

For quality management issues, each project representative has a specific role and different levels of contribution for the quality of the outputs:

- The Project Officer (PO) will review all outputs of the project and will liaise with the PC to give feedback on the overall quality of the outputs. If the quality is not up to standard the PO will report to the PC so that the consortium partners can work on improvements and corrections. This process is a last case scenario since it is expected that the quality management process will ensure that any deliverables submitted to the European Commission will be of the highest standard, answering all the points detailed in the Grant Agreement, and as such it is not expected that the deliverables will require changes after being submitted.
- The Project Coordinator (PC) is responsible for the final review and submission of deliverables in the participant portal. The PC will be in contact with the WP Leader to ensure an efficient and effective process is being implemented during the deliverable preparation so that, by the time the PC receives it for the final review, the deliverable has been reviewed by other consortium members and that it requires minimal changes at that point to ensure a high-quality output. The work of the PC in this process is fundamental to ensure that all project representatives respect their allocated times for preparation and review.
- The WP Leader will be the representative that manages the outputs of each WP. The WP Leader must ensure that the outputs have the necessary quality and are delivered on time. To ensure this, the WP Leader will request a table of contents (ToC) to Task Leaders to overview and adjust the content planned for each deliverable. The WP Leader can also bridge between the deliverable reviewers and the Task Leader to facilitate the review process.



- The Task Leader is the responsible for preparing the outputs and deliverables associated to its tasks. The Task Leader is the first responsible for the quality of the outputs and the remaining quality management structure will revert to the Task Leader in case improvements must be made. The Task Leader can be supported by other consortium partners to prepare their deliverables and outputs. The relationship and plan within tasks do not have an assigned format and Task Leaders should decide on the best plan or method to manage their tasks, that will guarantee the delivery of quality outputs.
- The Deliverable Reviewers were formally defined in Table 7 of Deliverable 8.1 – Project Management Roadmap and are the responsible for reviewing each project deliverable. For most cases, each deliverable is assigned to two reviewers, which are consortium partners that participate on that same task and are selected for their expertise in the area of that specific deliverable. Despite this, in some cases, the role of the Deliverable Reviewer in that task may be restrict to the review process.

### 3.2. Documentation management

Effective documentation management is key to organise the project outputs in a structure that is easily understandable to all persons currently working in project, so that anyone can immediately create, find, identify, or analyse a project output. It is equally important that this structure enables new persons working in the project to autonomously catch up with the outputs that are already delivered. Considering this, COMMUNITAS quality management plan recommends a standard format for the language, storage, nomenclature, and bibliographical references for all documents. Several templates for different types of documents are or will be also shared with all consortium partners to facilitate the application of these guidelines.

#### Language

As stated in the Grant Agreement, all project documents must be submitted in English. In special cases a document may be accepted in another language if accompanied by a summary in English. In the case of COMMUNITAS, this can apply for example for minutes of meetings with local stakeholders that are held in the local language, or dissemination material to be presented in a specific country. The project will follow all appropriate grammar rules and formal language of British English.

#### Storage

A common repository has been prepared for all project documentation. The repository is a Microsoft Sharepoint folder, which can be accessed only by the consortium members.

[COMMUNITAS Shared Folder](#)

Specific subfolders are available for each WP and for other purposes. All project documentation should be placed in the corresponding folder and according to the nomenclature convention defined.



## Nomenclature

The nomenclature for the project documents aims to provide a consistent method for quickly identifying each file and its content. Each document will have a unique identifier related to the specific task and WP where it is originated.

The prefix for all documents created should be the project name “COMMUNITAS”.

All **deliverables** should follow by the identification of the specific deliverable in the following format:

COMMUNITAS\_Dx.y\_name\_v##

Where “Dx.y” corresponds to the deliverable number, “name” corresponds to the deliverable name, and “v##” corresponds to the version of the document. The version should start with “v01” and will increase as modifications or reviews are implemented. For the final version, that was submitted in the participant portal, the version number may be removed.

An example for this would be:

COMMUNITAS\_D8.1\_Project Management Roadmap\_v04

For project **presentations** the nomenclature should follow the structure below:

COMMUNITAS\_type\_date\_v##

The “type” refers to the type of meeting or conference where the presentation was held. A list of possible types includes: kick-off meeting (KoM), General Assembly (GA), Project Steering Committee (PSC), WP# meeting, T#.# meeting, Conference, Workshop, etc. In case of Conferences, workshops, or other types of events, the name of the referred event should also be written. The “date” is date of the presentation in the format dd.mm.yy. “v##” is optional and refers to the version number of the presentation. For WP meetings and Task meetings “WP#” refers to the WP number and “T#.#” refers to the task number.

A set of examples for the nomenclature of presentations is below:

COMMUNITAS\_PSC\_06.05.23

COMMUNITAS\_T8.1 meeting\_12.04.23

COMMUNITAS\_Sustainable Places Conference\_14.06.23

**Agendas and Minutes of meeting** follow a similar nomenclature to presentations as shown:

COMMUNITAS\_type\_Agenda/MoM\_date\_v##

Where “type”, “date”, and “v##” corresponds to the same as in the presentations nomenclature and “Agenda/MoM” serves as an identifier if the file corresponds to either a meeting agenda – Agenda, or a Minutes of meeting – MoM.

For **technical and financial reports** the following structure is suggested:

COMMUNITAS\_type\_M#\_partner

Where the “type” corresponds to either “technical report”, “financial report”, or “interim report”. “M#” corresponds to the month associated to the delivery of the report and, “partner” corresponds



to the consortium partner abbreviation that prepared the version of the report. The consolidated report will mention “consolidated” instead of a partner name.

An example is presented below:

COMMUNITAS\_Technical Report\_M12\_EDP

Other types of files not mentioned in this document should follow a nomenclature as close as possible to one of the nomenclatures stated. Although the use of the nomenclature is not mandatory, it is highly recommended to all consortium partners to facilitate the documentation search.

## Templates

A set of templates can be found in the shared folder of the project, within the subfolder “3. Templates and Graphics”. A template is already available in this folder for deliverables, presentations, and other general documents. Templates for specific types of documents will be added in as necessary.

In case a template is not available for a specific document, the following rules should be considered as basis for all text documents:

- Documents should contain a title page, a presentation page, a table of contents, and an executive summary.
- Text must be formatted in colour black, Calibri font, size 11, multiple line spacing of 1.08, spacing of 8 pt. after.
- All images and tables should contain a caption.
- All documents should refer the funding received from the European Commission and contain the EU flag.

### 3.3. Deliverable submission

The project deliverables represent the evidence of the work carried out during the project and results achieved. Since the deliverables will reflect on the quality of the project it is essential that deliverables go through a thorough quality assessment process. The structure below showcases the quality assessment process that should be considered and the deadlines for each stage of the process:

1<sup>st</sup> stage – Preparation of the table of contents – 3 months before deliverable deadline

2<sup>nd</sup> stage – Send the deliverable to the reviewers – 1 month before deliverable deadline

3<sup>rd</sup> stage – Send the deliverable to the coordinator – 5 days before deliverable deadline

The 1<sup>st</sup> stage is the preparation of a table of contents that should be shared with the assigned reviewers and WP Leader, to ensure that the content is aligned with the description in the Grant Agreement and so that there is no content overlap between deliverables in the WP. This should be shared at least 3 months before deliverable deadline so that there is enough time to make changes and prepare the full deliverable afterwards.

Between the 1<sup>st</sup> and the 2<sup>nd</sup> stage it is expected that the task leader prepares the deliverable with the support of contributing partners. In Description of Action of the Grant Agreement it is possible to

verify the contributing for each task. The task leader is responsible for assigning roles to each of the contributing partners in accordance with the effort that is partner has available for that specific task. In the cases where task leaders expect major contributions from contributing partners, these contributions must be discussed before the preparation of the table of contents and agreed between the parties. In the case of minor contributions, the task leader should still make clear as soon as possible what those contributions are expected to be and the deadline to prepare such contributions. This strategy aims to provide enough time for all involved parties to provide quality contributions that ensure a high-quality output. The task leader is also responsible for merging all these contributions together and put out the full project deliverable.

The 2<sup>nd</sup> stage is to provide the full deliverable to the reviewers. This must be done at least 1 month before the deadline of the submission so that there is enough time to review the deliverable and make the identified modifications. The reviewers can be identified in Table 1. The main goal of the reviewers is to assess the coherence and relevance of each section of the deliverable, to evaluate the clarity of its written content, and to assess the completeness of the deliverable.

The coherence and relevance can be assessed based on the reviewers' experience on the topic, hence why the selected reviewers are experts in the topic of the deliverable they are reviewing. The expert opinion of the reviewers should allow them to assess if the different sections of the deliverable are interconnected and make sense in the scope of work carried out for that task. The clarity of a deliverable should be evaluated by making sure that the writing and the methodology used are understandable for any type of reader. The deliverable should be technical enough so that experts can understand how the work was prepared, and simple enough so that non-experts can understand what results were achieved. Any section that according to the reviewers are not fully clear should be rewritten to improve the overall quality. The reviewers should also assess the completeness of the deliverable by checking its content against the table of contents and against the description in the Grant Agreement, ensuring that the work meets what was agreed upon.

Between the 2<sup>nd</sup> and 3<sup>rd</sup> stage, the task leader should incorporate all the changes proposed by the reviewers into a new version of the deliverable. Finally, the last stage of the process is to share the deliverable with the project coordinator, that will assess the same topics as the previous reviewers and the formatting as well. In the case where the project coordinator agrees that the quality of the deliverable is good, the coordinator prepares a final version and submits the document in the participant portal. In the case where the coordinator detects small changes, the coordinator will apply minor modifications to the document, inform the authors, and submit it to the portal. In the case where the coordinator considers that certain areas of the document do not meet the quality standards imposed, then the deliverable will be sent back to the task leader with suggestions on how to improve that section. The proposed changes can be discussed and agreed upon with the authors.

## Reviewers and due dates

The reviewers for each deliverable were assigned in D8.1 – Project Management Roadmap and can also be found in this deliverable in Table 1, together with the due dates for each stage of the quality assessment process.



Table 1 - List of deliverable reviewers in COMMUNITAS

#	Leader	Provide by:	ToC	Send to Reviewers by:	Reviewer 1	Reviewer 2	Send to PC by:
D1.1	EDP L	01/05/2023		01/07/2023	Enercoop	CERTH	26/07/2023
D1.2	TNO	01/06/2023		01/09/2023	E@W	ETRA	26/09/2023
D1.3	UNINOVA	01/06/2023		01/09/2023	CERTH	ETRA	26/09/2023
D1.4	EDP L	01/10/2023		01/12/2023	WVT	UNIZAG	26/12/2023
D2.1	E@W	01/10/2023		01/12/2023	CERTH	ETRA	26/12/2023
D2.2	E@W	01/02/2024		01/04/2024	EDP	-	25/04/2024
D2.3	RINA	01/02/2024 <sup>I</sup>		01/07/2024	UNL	EDP	26/07/2024
D2.4	EDP L	01/07/2025		01/12/2025	E@W	EMAC	26/12/2025
D2.5	E@W	01/07/2025		01/12/2025	CERTH	UNL	26/12/2025
D3.1	RINA	"		01/12/2025	SEL	UNINOVA	15/12/2025
D3.2	EDP L	"		01/12/2025	SEL	RINA	15/12/2025
D3.3	CERTH	"		01/12/2025	UNINOVA	ETRA	15/12/2025
D3.4	EDP L	"		01/12/2025	RINA	ASM	15/12/2025
D3.5	CERTH	"		01/12/2025	EDP	ETRA	15/12/2025
D3.6	ETRA	"		01/12/2025	EDP	-	15/12/2025
D4.1	TNO	01/11/2023		01/01/2024	E@W	EMAC	26/01/2024
D4.2	TNO	01/03/2026 <sup>III</sup>		01/05/2026	RINA	CERTH	15/06/2026
D4.3	UNINOVA	01/03/2026 <sup>III</sup>		01/05/2026	TNO	EDP	15/06/2026
D4.4	ASM	01/03/2026 <sup>III</sup>		01/05/2026	UNL	TNO	15/06/2026
D5.1	ETRA	01/05/2024		01/07/2024	RINA	EDP	26/07/2024
D5.2	ETRA	"		01/06/2026	ASM	Enercoop	25/06/2026
D5.3	EGC	"		01/06/2026	ETRA	ASM	25/06/2026
D5.4	CERTH	"		01/06/2026	RINA	E@W	25/06/2026
D6.1	EDP L	01/10/2025		01/12/2025	FBK	ASM	26/12/2025
D6.2	UNINOVA	01/03/2026 <sup>III</sup>		01/05/2026	EDP	RINA	15/06/2026
D6.3	RINA	01/02/2026 <sup>III</sup>		01/04/2026	WVT	SEL	01/06/2026
D6.4	RINA	01/04/2026		01/06/2026	FBK	ASM	25/06/2026
D7.1	ASM	-		-	EDP	EMAC	-
D7.2	ASM	01/04/2023		01/06/2023	EDP	CERTH	25/06/2023
D7.3	ASM	01/10/2024		01/12/2024	RINA	WVT	26/12/2024
D7.4	ASM	01/04/2026		01/06/2026	CERTH	EDP	25/06/2026
D7.5	TNO	01/02/2026 <sup>III</sup>		01/04/2026	UNINOVA	E@W	01/06/2026
D8.1	EDP L	-		20/03/2023	E@W	ETRA	26/03/2023
D8.2	EDP L	01/03/2023		01/05/2023	RINA	CERTH	26/05/2023
D8.3	EDP L	01/04/2023		01/06/2023	TNO	-	25/06/2023
D8.4	EDP L	01/10/2023		01/12/2023	CERTH	E@W	26/12/2023
D8.5	EDP L	01/04/2026		01/06/2026	RINA	TNO	25/06/2026

<sup>I</sup> Since D2.3 relates to the release of the first version of the Core Platform, a mock-up of the platform is expected earlier on so that partners can comment before development

<sup>II</sup> While the final deliverable only has to be submitted by the end of the project, there are two intermediate milestones that presume that some content is already described earlier on in the project

<sup>III</sup> Due to the considerable number of deliverables for the last month of the project, some dates were slightly anticipated to ensure there is enough time for review and confirm the quality of the work.



Overall, the due dates for each stage follow the rationale proposed, with some exceptions. In the case of deliverable that reflect the development of tools for the COMMUNITAS Core Platform, those are not required to deliver a table of contents but should provide a mock-up that enables to visually understand how the tool will work. The WP Leaders and Project Coordinator will assess a feasible date to have the mock-ups ready in the scope of these tasks, in agreement with the Task Leader. Another example is some of the deliverables for the last month of the project that need to anticipate all stages of the quality assessment process as with the large number of deliverables it would not be viable to review all documents in the original proposed period.

### 3.4. Milestone submission

To ensure that milestones are prepared on time and with the same high-quality standards as deliverables, a set of rules should be taken into consideration by Task Leaders that are responsible for milestones.

1<sup>st</sup> – To ensure that the work for the milestone follows the terms described in the Grant Agreement, 1 month before the milestone deadline the Task Leader should organize a meeting with all task participants to showcase the results that will correspond to the milestone and gather input from the remaining partners.

2<sup>nd</sup> – All documentation, code, data, or other types of files used to justify the achievement of the milestone should be in the shared folder, at least 5 days before the deadline, in a subfolder specifically created for that milestone, within the associated task folder.

3<sup>rd</sup> – 5 days before the submission deadline, the milestone responsible must send at least one paragraph of text, via email, to the PC with a justification on how this milestone was achieved.

The PC will be responsible for confirming the achievement of the milestone in the EC Participant Portal.

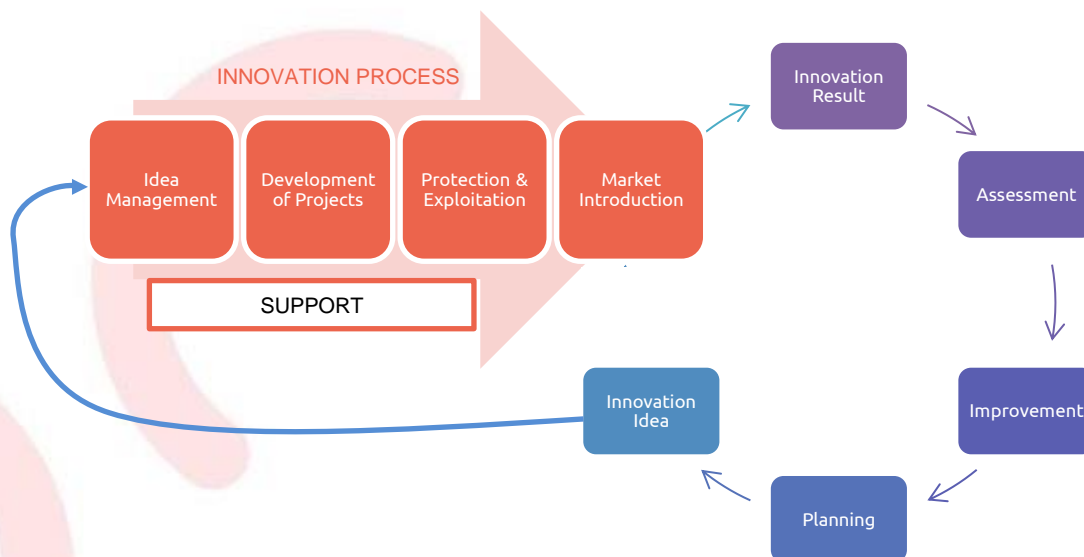
## 4. Technical and Innovation Management

### 4.2. Methodology

Innovation management is based on the processing of new ideas, from the first steps of ideation to developing them into tangible innovations. This includes a generation step to uncover hidden concepts, a capturing step to record ideas readily for sharing with stakeholders, an evaluating step to discuss and criticize the innovative ideas, and lastly, there is the prioritizing step, where time, resources, and priority are assigned to develop the chosen ideas further. The innovation process itself translates the accumulated knowledge into marketable products, solutions, or systems.

Therefore, it is imperative that the COMMUNITAS project incorporates a methodology for the creation, development, and concretization of innovative ideas. This ensures that every development and result that comes from the project are made available on time, with an effective coordination. The project outcomes are also expected to facilitate the design of appropriate business models that are specifically designed for the needs of the changing market, overall ensuring customer/end user satisfaction.

The proposed structure and workflow for the implementation of relevant steps during the innovation management process for the stakeholders are presented in more detail in Figure 1, in accordance with the EU Standard for Innovation Management CEN/TS 16555-1. This process reinforces the need for assessment, improvement, and planning of the innovative results, as a measure to guarantee quality in the outcome and development of the final innovation solution.



**Figure 1 - Innovation Management Process**

The methodology procedures and results, although being transversal to every COMMUNITAS' activity, will be revised throughout WP8 and updated on the M12 (December 2023) and M27 (March 2025).

Lastly, the COMMUNITAS methodology will be based on an innovation management process that streamlines the innovation process by introducing organized and well-defined steps for the creation

of robust and successful solutions that effectively correspond to the projects' needs. This process is capable of maximizing the innovation process with a fool proof system, in which there is a combination of steps that ensure quality and continuous improvement of the final solutions, products or services.

Therefore, the methodology aims to guarantee that the project outcomes are consistent with recent technological, scientific and market developments, assuring a high-quality work.

### 4.3. Stakeholder Management and Engagement

In order to guarantee a successful engagement and maintain the support throughout the COMMUNITAS project of both internal and external stakeholder, it is crucial to adopt a stakeholder management and engagement plan as a framework plan during the project's life. It aims to encourage and facilitate the entry of new stakeholders to the scope of the project and allow effective communication through the use of an enhanced communication plan incorporating engagement techniques that are specially target taking into account the cultural diversity of the stakeholders.

Since the COMMUNITAS project aims to build the foundations for the creation of new ECs, as well as develop and improve already existing ones, it is imperative to manage and maintain successful partnerships with a wide group of stakeholders, from citizens to companies and local municipalities. There are also several proposals for stakeholder engagement with workshop implementations that appeal to communication exercises that promote open discussions. Moreover, various activities within the scope of COMMUNITAS are related to the installation of smart devices that meter relevant data within citizens' households. It has been defined a target value of 10 households/pilot for data collection, which includes interaction within the personal/intimate space of the residents, reflecting in a crucial necessity of prioritization of an effective management in order not to cause disruptions and discontentment to the stakeholders.

It is important to define crucial steps within the framework. The first approach is based on the identification and analysis of the stakeholders with their corresponding classification (internal or external - ranging from client, supplier, partner, or legal authority) and characterization (identity, contact, relevant information, influence, responsibilities, potential impact within the project, motivations, interests, and expectations). A second phase consists of the definition of a stakeholder management plan based on the definition of strategies and actions to optimize the stakeholder activity in accordance with their previous characterization. This approach is better defined within the scope of a power-interest analysis, present in the matrix which is represented in Figure 2, that considers possible actions to integrate within the plan. It also aims to anticipate the stakeholders' behaviour to identify potential risks and respond accordingly with appropriate mitigation measures.

These two phases are closely accompanied by a transversal continuous phase that involves multiple activities associated with communication and management of stakeholder expectations. Ensuring regular communication within the appropriate channels and setting clear project expectations allow to quickly address any arising issues or concerns within the appropriate timeframe. It is as important to communicate changes and progress in the project with the stakeholder as involving them in the decision-making processes. Seeking stakeholders input and feedback helps to build trust and increase their commitment to the project. The continuous phase has the main objective to monitoring stakeholder engagement to ensure overall satisfaction and revise, in appropriate times, the project plans based on the provided feedbacks to integrate their needs and meet expectations.





**Figure 2 - Influence-interest matrix for stakeholder management**

Therefore, the execution of this plan envisions a continuous stream of communication with the stakeholders, keeping them informed alongside the project progression. In summary, the stakeholder management and engagement plan will implement suitable mechanisms to identify, anticipate, communicate, minimise risks and mitigate possible project deviations.

#### 4.4. Impact monitoring

Monitoring project impacts is an essential aspect of project management that significantly contributes to its success and effectiveness. Systematically tracking and assessing impacts enables early detection of issues and timely corrective actions, maximizing the project impact.

During the proposal phase, 67 different impact indicators were defined, along with specific targets to achieve throughout the project. These indicators reflect the results and effectiveness of the results driven from COMMUNITAS actions and solutions. Additional indicators were also defined for the dissemination and communication activities of the project, which will be further discussed in D7.2 – Dissemination and communication strategy, due to be released by M6 (June 2023).

The 67 impact indicators can be found in a spreadsheet where partners are expected to regularly update the values and provide justifications to how that value was achieved. The fulfilment of the indicators is not linear across the project's duration, some are expected to be 100% reached by the first months of the project, while many are expected to only be verifiable towards the end of the project, when the demonstration activities will have enough time to provide concrete results.

The Impact Tracking Table spreadsheet can be found in the WP8 subfolder on the shared folder, or through the link below:

[Impact Tracking Table.xlsx](#)

The Impact Tracking Table is divided in the following columns:



- Description – description of the impact as in the Grant Agreement.
- Responsible for tracking – designates the partner who is responsible for updating the value of each impact indicator.
- Latest update – refers to when this impact indicator was lastly updated. It enables to overview which impacts are required to be updated.
- Value – this cell can be used to input the value that matches the current status for that impact. An example could be the number of workshops organised for the impact that tracks the workshops.
- Justification – the justification is where partners should describe how the value indicated was achieved. Previous justifications should never be deleted, new justifications can be added below in the same cell, with a reference to the date where it was added.
- Target – specifies the target that was proposed for that impact indicator in the Grant Agreement
- Achievement (%) – an automatic cell that does the quotient between the “value” cell and the “target” cell, to verify the percentage of achievement for that indicator
- Notes – a cell to add any relevant notes
- Baseline at M1 – some impacts defined require a baseline to be defined in order to verify what results were achieved. An example of this are all indicators that were defined as a percentage of decrease or increase. The baseline will provide the base quantitative value, and, in the future, it will be possible to assess any increase or decrease in that value as a percentage.
- Justification for the baseline – as there are different methods to assess baselines, it is important to justify how the baseline was calculated, so that, in the future, the new values for that indicator can be calculated using the same method, guaranteeing a correct calculation without deviations due to different theoretical approaches.

At each update of the Project Management Roadmap, an update will be made on the status of the impacts. By the end of the project, the consortium expects to reach at least 100% completion on all impacts and an evaluation summary will be prepared based on the impacts’ completeness level, discussing if the results met the expectations, if they exceeded expectations, or if they were below expectations, and justify why this was the final result.

#### 4.5. Plan of activities

Planning and delivering tasks on time is crucial in project management as it plays a vital role in achieving timely task completion by proactively developing a well-structured project plan. This enables Task Leaders to effectively manage resources, minimizing delays, and ensuring a smooth workflow.

With this in mind, in COMMUNITAS, all Task Leaders will work with the WP Leaders to provide a Gantt of activities within each task. The result expected using this methodology is that it will facilitate the Task Leader to distribute work and organise its own role in the task, and it will also allow the WP



Leader and all other consortium partners to follow the status of the task more effectively and to know when to expect certain developments within tasks.

A spreadsheet was created and shared with the consortium partners for this purpose. Each Task Leader is expected to fill the Gantt for their tasks as soon as the respective task starts. The spreadsheet includes a sheet for each WP and, within that, a space already dedicated to fill in the activities to be developed within the task. It is recommended that Task Leaders divide the task in 5 to 10 different activities to allow to follow the progress. For the definitions of the months allocated to each activity, the Task Leader can propose it based on their own feeling of duration of each activity, however, all partners must assume that this is an estimation, and in reality, the duration of an activity may last more or less time than initially expected.

The spreadsheet may be found in the shared folder, within the WP8 subfolder, or in the following link:

[Plan of activities](#)

## 4.6. Other topics

### Communication of technical results

The communication of technical results assumes a vital role in COMMUNITAS for the process of knowledge sharing, raising awareness for the project, and engaging stakeholders. Raising awareness for the topic of energy communities and share knowledge are some of the main objectives of the project, essential to promote the adoption of energy communities across Europe. Through the communication of the technical results of the project, the consortium aims to reach a large audience and increase the knowledge on the topic, raising interest that leads to the creation of more communities and creating a market that can potentiate the tools developed during the project. Furthermore, the communication of results allows to engage stakeholders that are key to develop energy communities, connecting these stakeholders with citizens that are interested in the topic. The results of COMMUNITAS may also trigger further research and development activities.

In order to have an effective communication of technical results, several methods will be used to showcase COMMUNITAS. These methods include the publication of project deliverables, scientific articles in science journals, relevant information in social media, and others. A full description of communication and dissemination activities will be released in D7.2 – Dissemination and communication strategy, due to be released by M6 (June 2023).

### Intellectual property management

The intellectual property (IP) management ensures the proper exploitation of project results and protects the partners that contributed to the developments achieved by safeguarding their ideas, methods, knowledge, or solutions. The IP management may stimulate innovative ideas as partners are aware that such ideas will be protected, and also encourages collaboration and knowledge sharing.

Several methods of IP rights may be identified and implemented for the project solutions. D6.4 – Final project IP strategy and exploitation plan of the most promising KERs, will analyse such possibilities and detail the exploitation routes for each solution.

## 5. Risk Management Process

### 5.1. Risk Management Strategy

The management framework for dealing with the risks involved on the project has an important role in the project management structure. The COMMUNITAS' Risk Management Strategy has, as its main objective, the identification of the risks that can impact the project activities during all its phases and propose mitigation plans to decrease or eliminate the potential negative impacts of such identified risks. The key steps to be considered in the scope of COMMUNITAS Risk Management Strategy are the identification, assessment, mitigation, monitoring, and communication and documentation of risks.

#### 1. Identification

The first stage of the risk management process regards the risk identification, so that the consortium is aware of potential risks. In this stage, the risks and uncertainties that can affect the project objectives are listed, considering internal aspects related with the consortium, and external, namely market conditions, regulatory changes, environmental threats etc. For the identification of risks any validated tool can be used, such as brainstorming, SWOT analysis, lessons learned from past similar initiatives and the expertise of the consortium members.

#### 2. Assessment

After the proper identification, risks are assessed and evaluated. To do that the identified risks must be clearly described, providing a comprehensive description of the dynamics of the risk, including sources and causes. The risks are categorized based on their nature, such as technological, financial, communicational, operational, management, cost, legal, resources, and miscellaneous. When categorizing the risks based on their nature, additional information should be identified, namely any additional costs that may be incurred due to the risk, the changes in scheduling, the new delivery dates, and any safety, reputation, and compliance aspects that should be taken into consideration.

Another key point in the assessment process is to classify the likelihood and severity of the risks identified. This process can take into account historical data, expert views, and any available quantitative or qualitative information. To establish a good benchmark between risks, the likelihood and severity of each risk will be evaluated in a qualitative scale that will be classified on a scale of 1 to 3. The likelihood and severity information are then cross-referenced to determine the prioritization of deployment of mitigation strategies. A register or log must be created to summarize the identified risks, their likelihood, potential consequences, and severity.

#### 3. Mitigation

After the assessment of the risks, the mitigation plans are developed. Different approaches can be implemented as the strategy for risk mitigation: transferring, avoidance, reduction, or acceptance. Risk transferring is the process of outsourcing them to external parties, such as insurance companies. This transfer must be cost-effective, feasible and aligned with the project requirements. Avoidance of the risk means their elimination by changing the relevant aspect of the project, such as timeline, suppliers, plans, or scopes. The risk reduction comprises in the implementation of measures to reduce their likelihood or consequence, such as safety protocols, back-up systems, training programs or



processes. The risks with low severity or the ones that are beyond the consortium control can be accepted via partners' agreement. However, contingency plans must be developed to manage their potential impacts.

The action plan for the mitigation of the risks should clearly describe the chosen risk mitigation strategies, with the assigned responsibilities and the agreed timeline for their implementation.

Contingency plans may be developed in the case of high-impact risks that have a significant likelihood of occurring. These plans outline alternative approaches or actions to be taken if the risks materialize. These plans should also include information on the trigger points and response plans for activating contingencies in order to minimize the impact on the project.

#### 4. Monitoring

The effectiveness of the mitigation action plans must be continuously monitored. Regular assessment activities must be scheduled with the goal of updating the activities, possibly adjusting the mitigation strategies, and starting the identification process for newly identified risks.

#### 5. Communication and Documentation

The risk mitigation strategies and their effectiveness must be communicated to all project stakeholders, ensuring that they are aware of their roles and responsibilities relating to each risk. The documentation of the risk mitigation measures aims to maintain a central repository for risk-related information that is updated as needed. The information that should be reported in this repository includes the rationale behind each mitigation strategy, the actions taken, and the expected outcomes.

The central repository of risks will be built as showcased in the next section.

### 5.2. Risk Register

The Risk Register is a repository for recording and managing risks that will be used throughout the project. The Risk Register consists of a spreadsheet where the identified risks are described and it is used for tracking its possible impact, as well as to propose mitigation actions. The repository of risks can be found in the WP8 subfolder or in the following link:

[Risk Register](#)

COMMUNITAS Risk Register includes the following elements:

- Risk owner – identifies the partner responsible for tracking the risk and implement mitigation actions if the risk materializes
- Risk ID – corresponds to a number identifying the risk
- Risk description – describes the risk, namely how it can materialize
- Related WP(s) – identified the WPs associated with each risk
- Likelihood – identifies the likelihood of materialization of each risk, in a scale of low, medium, or high



- Impact – identifies the impact that the risk can cause, in a scale of low, medium, or high
- Did the risk materialized? – states if the risk has or has not materialized as of yet
- Mitigation measure(s) – identifies possible mitigation measures that prevent the risk from happening or that can be applied in the case the risk materializes
- Responsible for mitigation measures – identified the partner responsible for the application of the mitigation measures
- Additional comments – a space for writing additional information about the risk that could be relevant but does not fit in other elements.

### 5.3. Risk analysis and mitigation

Many risks can be identified during the project, which may not mean that many risks will materialize or will have a major impact. To allow the consortium to focus on the risks that are more likely to occur and will have a more significant impact, a risk zone matrix is proposed as follows:

	2	3	4	High	Impact
	1	2	3	Medium	
	0	1	2	Low	
	Low	Medium	High		Likelihood

**Figure 3 - Risk zone matrix**

As seen in Figure 3, the higher the impact and likelihood, the higher the number associated to the risk. For high zone risks such as risks classified with 3 or 4, the mitigation measures will also risk avoidance strategies that will be implemented regardless of if the risk materializes or not. These risk avoidance strategies may include changes to the original work proposal, such as anticipating tasks or modify a methodology. Any changes that affect the original description described in the Grant Agreement is subject to acceptance from the PO. Risks in the medium zone (classified with 1 or 2) and the high zone will all contain predefined mitigation measures assuming a scenario where the risk materializes, even if it never happens. For risks in the low zone, classified with 0, it is not mandatory to have proposed mitigation actions, unless the risk materializes.

### 5.4. List of Critical Risks

The Grant Agreement of COMMUNITAS provides a list of the critical risks identified during the proposal that can impact the project. The risks are categorized according to the Work Packages in which they can materialize. Possible mitigation measure for the stated risks were also described. Table 2 shows this list of critical risks.

Table 2 – List of risks identified

Risk number	Description	Work Package(s)	Proposed Mitigation Measures
1	Partner(s) not delivering on time or providing low-quality contributions	WP5, WP1, WP2, WP3, WP8, WP4, WP7, WP6	Quality control process to be presented by M5 (D8.2); Monthly WP calls to track progress– risks and mitigation actions to be identified; two reviewers per deliverable assigned by M1 (final draft to be shared 1 month before submission); Main technical partners known for their large R&D/technical expertise and extensive FP7/H2020 track record; Management Roadmap (D8.1) with collaboration mechanisms; EDP L to set a MS Teams for the consortium by M1; Use and frequent update of WP-level mailing lists.
2	Partner leaves the consortium	WP5, WP1, WP2, WP3, WP8, WP4, WP7, WP6	Coordinator will: (i) replace the partner by one of similar characteristics; (ii) distribute tasks/budget among the partners of the project. (EDP L has already conducted such a process within POCITYF).
3	Breach of end users' privacy and confidentiality	WP5, WP1, WP2, WP3, WP8, WP4, WP7, WP6	Full compliance with the GDPR and security standards; Attention will be given when storing and processing personal data or any data that can indirectly reveal a user's behaviour – in this case, specific organizational (explicit users' authorization), encryption (hybrid authenticated encryption) and automated pseudonymization techniques will be used; Establishment of data related procedures in the Data and Ethics Management Plan (D8.3, M6).
4	Disruptive situations (e.g. COVID-19) preventing presential meetings and a smooth implementation stage	WP5, WP1, WP2, WP3, WP8, WP4, WP7, WP6	Regular update of the risks and respective mitigation plans (D8.2); Enhancement of digital communication channels; Implementation of lessons learnt on risk mitigation derived from COVID-19 impact on ongoing projects (e.g. EDP L has managed several risk management exercises throughout 2020 and 2021 in POCITYF).
5	Lack of engagement from COMMUNITAS' external stakeholders and citizens	WP5, WP1, WP2, WP4	Strong synergies with the communication and dissemination experts (WP7) will be established since the start of the project, in order to get a clear and appealing targeted message on the benefits of participating (message to be updated when necessary); Partners with solid experience in social engagement (e.g. TNO) leading participatory labs; Capitalize on existing and large partners' networks and COMMUNITAS' supporting entities.
6	Availability of the ECs and members to participate as partners	WP5, WP1, WP4	Partners managing ECs are part of the consortium and are committed to participate and facilitate access to their members; COMMUNITAS is supported by the cooperatives managing ECs or received support letters from representatives of groups of citizens; Keep EC members in the loop by communicating regularly and clearly about



			COMMUNITAS' progress; Three developmental sprints will be pursued, giving citizens several opportunities to interact with the project; All pilot partners with considerable effort in the Participatory Labs, reflecting project's focus on engagement.
7	Tools not complying with their end-users' needs	WP1, WP2, WP3	Developers involved in Social and Policy Labs (WP4) and replication academy (T6.2); by having a group of stakeholders to regularly contact with, partners will ensure that the information provided is updated (e.g. regulation, financial schemes); three developmental sprints to promote end-users' phased participation; show users and the consortium has adopted their suggestions in subsequent tools' releases.
8	Interoperability issues between different platforms/tools and the CCP or slowdown in the development of tools	WP2, WP3	Requirements and interoperability topics to be characterized within use cases (T1.3); Technical specification and project architecture by M12; regular meetings and constant communication between CCP developer and WP3 developers; Previous experience of CCP developer in conducting such process and development; Deployment of DevOps methodology to streamline integration and developmental work; Open architecture will be used for minimizing the risk of interoperability.
9	Difficulty to further increase the TRL of the products	WP2, WP3, WP6	CCP and tools based upon the integration of technology that exists or which conceptualization has already been developed; Partners are experts in TRL improvement within innovation projects.
10	Insufficient or corrupted raw data collected from pilot to be used for the monitoring and impact assessment process	WP5	Use of several data sources and conduct a pre evaluation procedure of the data will be used in order to identify possible corruption and repeat part of the measurements if required; Definition of an implementation plan for all pilots in which these matters will be verified before starting implementation stage; Collection of baseline data before monitoring to support impact assessment and check pilots' suitability with aimed data provision.
11	Regulatory frameworks not favourable for the demonstration and replication of the project activities	WP5	Analysis of the existing regulatory conditions will be part of the project and a document with recommendations will be delivered; Consortium will assist pilots in the creation of regulatory sandboxes to test innovative solutions; Presence of one regulator as a supporting entity (consortium to engage with more throughout participatory labs).
12	Disputes over ownership of IPR amongst consortium partners	WP6	Standard IPR and access rights clauses will be included in the Consortium Agreement; Exploitation plans (T6.5) will further identify generated results (foreground); Exploitation Manager (RINA) and coordinator to mediate possible discussions on this issue, based on previous coordination roles.



13	Out of the radar/ emerging competition could hinder innovation and threaten commercialization	WP6	Market intelligence activities will ensure continuous monitoring and analysis of the market and competition landscape; Core technical partners (EDP, E@W, CERTH) and tech developers to regularly follow this topic (partners already motivated to do so, as to adopt own KERs into commercial strategies afterwards); If a considerable market shift is detected, partners will align to analyse it and change development strategy/concept, if approved by the Project Officer.
----	---	-----	---





## 6. Reporting procedure

### 6.1. Quality assurance measures

COMMUNITAS has three distinct reporting periods that require the submission of a periodic report:

- 1<sup>st</sup> reporting period – M1 to M12 (January 2023 to December 2023)
- 2<sup>nd</sup> reporting period – M13 to M27 (January 2024 to March 2025)
- 3<sup>rd</sup> reporting period – M28 to M42 (April 2025 to June 2026)

At the end of each period, the consortium partners should organise to prepare and submit a periodic report, including a technical report and an individual financial statement.

To ensure the quality of the reporting process, some rules are established:

- Both the technical report and financial statement must be based on the templates that are provided by the PC
- Each partner has 30 days after the end of the reporting period to provide their inputs and financial statement for the associated periodic report
- The PC will review all inputs received and will submit the full report in the EC Participant Portal within 60 days after the end of the reporting period
- The WP Leaders are responsible for managing the inputs associated with their respective WPs. If necessary, they should bridge with Task Leaders and other participants.
- All partners should provide appropriate justifications in case of delays in tasks and if they are under-reporting or over-reporting costs

The periodic report will follow the standard template with the Technical Report (Part A and Part B) and the Financial Report. The Part A of the Technical Report is directly obtained from the Continuous Reporting module from the Participant Portal. The Part B of the Technical Report will follow the structure of the template that be made available in the shared folder under WP8 > Reporting. The report will include the following sections:

- Explanation of the work carried out and overview of process
- Follow-up of recommendations and comments from previous reviews (if applicable)
- Open science
- Deviations from the Description of Action
- Deviations in the use of resources

For the Financial Report, a template will be made available in the same folder as the Technical Report. The PC will be responsible for copying the information from the template into the Participant Portal. The template will request the same fields as requested in the EC Participant Portal, namely the effort spent in each WP and associated costs, as well as the justification for other direct costs for the current reporting period.



