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GREEN SCENT

SMART CITIZEN EDUCATION FOR A GREEN FUTURE

Project start date: 01/01/2022 | Duration: 36 months

D7.3 – Quality Plan

Due date of the Deliverable: 30-06-2022
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1. Document Info

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1.4. Document History

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0.2	Luca Bevilacqua	25/05/2022	Updated section 3
0.3	Angelo Manfredi	06/06/2022	Updated section 4;
0.4	Angelo Manfredi	17/06/2022	Added risk management, sections 7, 8
0.5	Angelo Manfredi	21/06/2022	Updated section 8; Ready for review
0.6	Chiara Gunella; Alessandro Coforio; Angelo Manfredi	24/06/2022	Updated in accordance with comments received from peer reviewers
1.0	Angelo Manfredi	27/06/2022	Ready to be submitted on ECAS portal

1.5. Document data

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Acronyms

Acronym	Description
CO	**C**onfidential **D**ocument
EAB	**E**xternal **A**dvisory **B**oard
EAC	**E**xploitation **A**dvisory **C**ommittee
EC	**E**uropean **C**ommission
ECAS	**E**uropean **C**ommission **A**uthentication **S**ystem
EPM	**E**xecutive **P**roject **M**anagement
GA	**G**eneral **A**ssembly
IMB	**I**nnovation **M**anagement **B**oard
MB	**M**anagement **B**oard
PC	**P**roject **C**oordinator
PU	**P**ublic **D**ocument
QP	**Q**uality **P**lan
QMC	**Q**uality **M**anagement **P**lan
WP	**W**ork **P**ackage

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Executive Summary

The Quality Management Plan defines the quality policy and plan to be applied in the **GreenSCENT** project. Its purpose is to describe the rules and procedures to:

- produce the documental deliverables, to ensure their quality and fully meet the project objectives.
- streamline the software development efforts and monitor the quality of their results.

This deliverable will also describe the planning and reporting to be adopted throughout the project, as well as refer to all issues related to documentation, such as a repository for exchanging documents, language, template documents, deliverables review process, and scientific publications.

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2. Introduction

GreenSCENT – Smart Citizen Education for a Green Future – is a research and innovation project funded by the European Union's Horizon 2020 programme, under Grant Agreement N° 101036480.

GreenSCENT aims at developing a competence framework embracing all the Green Deal focus areas through an iterative, participated, experience and learning-by-doing based design approach.

GreenSCENT activities embrace both experts' and researchers' inputs and advise, citizen participation and stakeholder engagement initiatives; different European regions, different educational levels (from primary schools to higher education), at different engagement levels (from observation to data collection and processing, to contribute to scientific and policy agenda).

GreenSCENT legacy will consist of the Competence Framework (GreenComp), its Methodology, Use Cases, User Guides; Training kits co-designed for implementing the framework; SCENTbox, the set of digital, physical and hybrid demonstrators developed by the project; and ECCEL, a European "driving license" for Climate and Environmental competencies and skills, that will be tested during the project.

This document - the Quality Plan (QP) - describes both the actions and measures to be undertaken by the consortium to ensure the quality of the project and its full compliance with contractual requirements.

Its purpose is to provide guidance for the actions required by each partner involved in the project work and deliverables.

The QA document describes the rules and procedures to:

- produce the **GreenSCENT** documental deliverables, to ensure their quality and fully meet the project objectives
- streamline the software development efforts and monitor the quality of their results

This document also describes the channels and processes of coordination and communication between the partners to be followed for the project lifetime, as well as the organizational structure of **GreenSCENT**.

The contents of this document can be summarised as follows:

- *Chapter 3* details the organisational structure that has been designed for **GreenSCENT** project governance, their respective roles and responsibilities and the main decision-making mechanisms.
- *Chapter 4,5 and 6* report the collaboration procedures among the partners. It details the categories of meetings and phone conferences that will be organised and the project mailing list to use for formal communication. In addition, the technical infrastructures that have already been put in place are detailed. Moreover, are listed the procedure to apply for the management of documents and project deliverables
- Chapters *7 and 8* describe the risk management that **GreeSCENT** will adopt for the entire project lifespan.

3. Project governance

The **GreenSCENT** consortium is composed of members of different ages, backgrounds, cultures and interests whose purpose is to join forces and know-how to achieve common goals. Hence the project needs a suitable organisational structure to ensure effective, results-driven management.

The following image (Figure 1) describes this organisational structure.

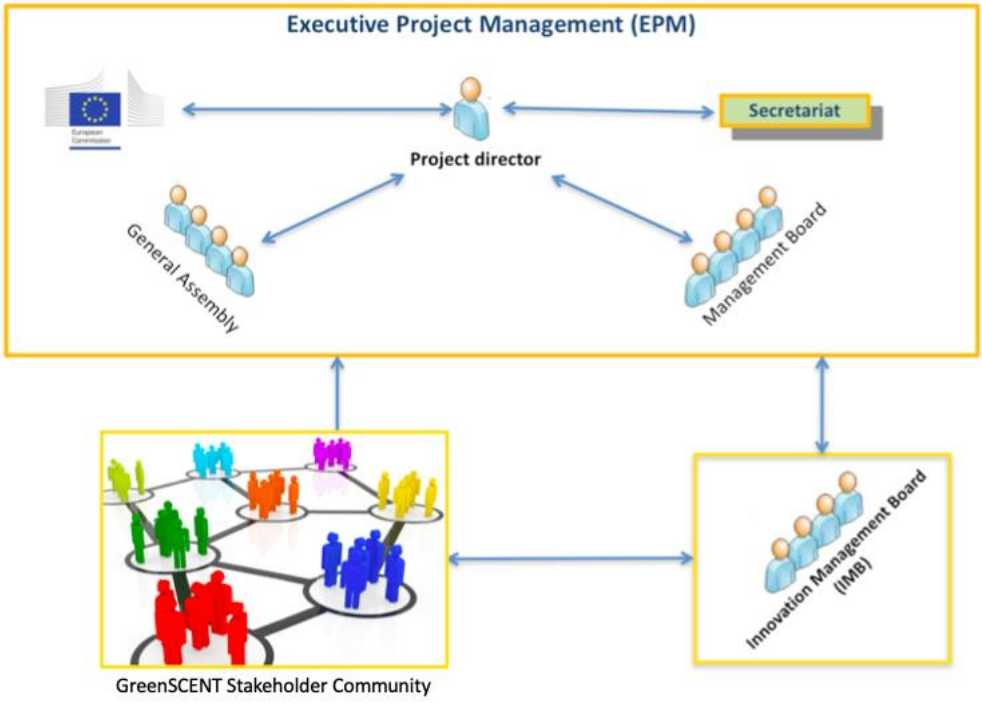

Figure 1 – GreenSCENT Organisational structure

The **E**xecutive **P**roject **M**anagement (**EPM**) is the **overall project management** process. This process involves roles and responsibilities as detailed in the following sections.

3.1. Project Director

The **P**roject **D**irector (PD) is the person in charge of the communication flows between the **E**uropean **C**ommission (EC) and the Consortium. The PD is responsible for general project management, IP aspects, administrative and financial reporting, and correct application of all EU rules, particularly concerning the handling of payments and so as maintenance of accounts.

The PD, as well as the Work Package Leaders and Task Leaders, are responsible for ensuring compliance with quality management procedures.

The PD also chairs the **M**anagement **B**oard (MB), which deals with technical management, in particular coordination issues, especially between work packages.

The Project Director will be Dr. Alessandro Caforio on behalf of UNINETTUNO.

3.2. Management Board

The Management Board (MB) will supervise the progress of research activities and guarantee efficient coordination and management. The Management Board is composed of all WP Leaders and the Project Coordinator, who chairs it. The MB will meet regularly (every 6 months) or more frequently if needed.

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This body will strive to comply with the **GreenSCENT** DoA technical section, focusing on managing WP interfaces and dependencies, and enforcing the respect of this document's Quality Management Plan (QMP).

The MB should consult the General Assembly (GA) about critical issues. The MB will support the PD to ensure smooth operation, timely financial reporting and organise audits by the Commission.

The table below (Table 1) lists all MB members:

WP	Responsability	Partner Responsabile
1	GreenComp Framework	Marinella Paciello (UNINETT)
2	Citizen Science and Co-Creation	Zarrin Fatima (VTT)
3	Digital Demonstrators Development	Vladimiro Scotto di Carlo (ENG)
4	Curriculum design, Certification and content development for societal education	Gabriele Sauberer (ECQA)
5	GreenComp Piloting	Miroslav Vujicic (UNSPMF)
6	Impact and Outreach	Pilar Orero (UAB)
7	Management and Coordination	Alessandro Caforio (UNINETT)

Table 1 –Management Board Members

3.3. Secretariat (or secretary support office)

The Secretariat provides secretarial, administrative, financial, and legal support to the PD. The secretary support office will support the partners, the PD, and the MB members. The Secretariat will be staffed by the **GreenSCENT** Project Office at UNINETTUNO. At least one person should be available at any given time.

3.4. General Assembly

All Consortium partners are represented in the GA by one senior representative from each partner (she/he/they must be delegated the authority to make decisions on behalf of their organisation with respect to the project). The IP Coordinator will keep the GA informed about progress and achievements. The GA shall resolve conflicts within the Consortium that cannot be resolved by the PD. The GA will meet online once a month and face-to-face meetings at least twice a year, or if more than 30% of GA members require an extraordinary meeting. The PD will chair the GA.

3.5. Innovation Management Board

The **I**nnovation **M**anagement **B**oard (IMB) members will be high-profile business and innovation managers from consortium partners.

The IMB is crucial to the success of **GreenSCENT** as it deals with drafting new proposals about how the adoption of the **GreenSCENT** platform fosters innovation: Hence IMB members will have to be experts in topics such as market understanding, usability, and technology. All GA members can propose IMB members.

The EPM decides on the composition of the IMB. The IMB when necessary, will be consulted about the protection of privacy and personal data, as well as other ethical issues.

3.6. Exploitation Advisory Committee

The **E**xploitation **A**dvisory **C**ommittee (EAC) chaired by the Project Director and high-profile business executives recruited from the consortium partners - three of them coming from large companies and SMEs - will deal with market access procedures and technology exploitation.

The EAC will develop concrete proposals on how to generate new business and how to organize the exploitation of the project results. Any consortium member can propose EAC members.

3.7. External Advisory Board

The **E**xternal **A**dvisory **B**oard (EAB) is chaired by external people, about 8 members, selected by the GA among experts from educational and research institutions at different educational levels and from different

scientific sectors, selected for their capacity of impacting on GreenComp definition and their will about its adoption in their respective institutions.

The EAB is expected to give recommendations to the project by helping to articulate demands in user terms and facilitate the development and validation of the GreenComp framework to support the behavioural change of citizens in favour of a green world.

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4. Quality control activities

This document - the QP - applies to all project activities, and compliance with it is mandatory.

Any changes to this document will need to be approved by the MB.

The description of the quality system will focus on the prevention of deviations during each task of the project.

The PD - supported by the MB - is responsible for quality assurance and related corrective actions/measures specifically, for:

- Overviewing the periodical reports produced in the project.
- Supervising the timely and correct execution of all project activities.
- Controlling the compliance with their respective review process of all deliverables, defined in this document, and meant to ensure the general compliance with the "Description of Work" requirement.
- Supported by WP leaders, verify technical and scientific achievements and their progress.

If non-compliance with the quality standards is found, WP and task leaders will be informed and invited to define a plan of corrective actions.

5. Project and Quality management tools

As part of the project management activities have been set up, a reliable environment, accessible to all the partners to allow them to communicate safely, share information and store documents.

The environment will rely on the following tools:

- **Project management website**: *Web tool* for project management and activities tracking.
- **Online meeting tools**: *MS Teams* for web conferencing for WP meetings, etc
- **Collaborative working area:** *Google drive* plus *Google cooperative* working features or shared contributions to working documents.
- **Software repository:** *GitHub* as a repository for distributed version control, source code management (SCM) and wiki.
- **Mailing lists**: which allow information sharing within specific members groups (ref. Table 2)

Furthermore, a suite of software instruments to foster collaboration in software-related research; in particular, to support the adoption of agile methodologies, the consortium members have decided to use the **JIRA** tool - *in its Agile version* - for collect requirements (user stories) and as issue management.

5.1. Project management website

The Project Management Website, described in D7.1, is developed using UNINETTUNO's infrastructure and UNINETTUNO's platform project management feature. It allows, on the front end, the publication of information about project work packages completion and state of development, publication of deliverables, and scientific contributions produced by the project.

The private areas, accessible by project partners and in any case protected by user authentication, allows access to full working documents and final deliverables, tracking of meetings with agendas, minutes and evidence (video recording or photos), management of contractual information.

The system back end, managed by the project Coordination team, allows full content editing, deliverable, documents, work package status and activity reports storage, and definition of dedicated areas for exchanging information among one partner and UNINETTUNO as coordinator.

While the shared collaborative tools (see section 5.3) are designed for managing "live" documents, the project management website hosts final versions and official documents produced by the project and keeps track of the project development status.

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5.2. Online meeting tools

To manage effective communication among project partners, was agreed on to use Teams (Google Meet as backup) for web remote meetings.

In the sub-sections below are described the categories of meetings and phone conferences (remote and face-to-face) that will be organized

5.2.1. WP and Task

Regular WP and Task meetings and/or conferences will be set up every month involving all the WP/Task leaders to track progress and effort spent. Conferences about specific deliverables will be set up if/when necessary.

A preliminary poll (http://doodle.com/) will be set up to choose the most convenient time for each conference

5.2.2. Management Board

The MB will meet at least twice a year. The meetings could be either phone conferences or face-to-face meetings. Face-to-face meetings will be possibly co-located with General Assembly meetings to minimize travelling costs.

5.2.3. General Assembly

General Assembly meetings will be organized at least twice a year, and if more than 30% of the GA members require it to examine all ongoing project activities.

The meeting frequency can be changed according to project requirements, or any relevant issue or risk arises during the project lifetime.

5.2.4. Review Meetings

Two reporting periods are scheduled in **GreenScent**, an interim review covering the timeframe M1-18 and final review M19-36.

Both reporting phases will be coordinated and monitored by the PD. The PD will also carry out a preliminary check on the financial data to be submitted to the ECAS portal of each partner.

The PC (with the support of the WPs Leader and all consortium members) will organise and prepare the two official review meetings in advance, by following the guidelines listed below:

- Prepare the agenda for the meeting.
- Provide templates for review presentations.
- Attend all review presentations.
- Project coordinator will coordinate and support the partner presentations of the project's results.
- Follow up on all comments and recommendations received by reviewers and EU Project Officer.

5.3. Collaborative working area

GreenSCENT decided to use Google Drive based directory structure to store all project documents (interim reports, documental deliverables, any other document useful for sharing work) and share them among partners https://drive.google.com/drive/folders/1u1Eg3nvLzk-9xtIceLhYfx8GcuHv5zub.

Access will be protected and granted only to authorized people.

Sub-directories have been set up to mirror the WPs/Tasks project structure.

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Each WP Leader will have writing permissions on its WP sub-directory and will be able to create further sub-directories, if needed, by consulting with the PC, who will ensure uniformity in the WP subdirectory structure.

The Project Coordinator will be primarily responsible to control the proper use and for maintaining the Google drive.

5.4. Software repository

Consortium members decided to use GitHub as a software repository and version control system.

Gitlab was chosen, because, being based on Git - a distributed Version Control System - it offers several advantages over traditional technologies:

- It is fully distributed. Every user has a complete copy of the repository, allowing fast access to history, easier branching, and an overall better experience.
- It is fast: Since a branch in Git contains the entire history, it can be instantly moved and easily shared. All operations such as: performing a diff, viewing the history, committing, and merging changes, and branching actions are fast.
- It offers other advanced features like integrated Continuous Integration and Continuous Delivery (or Cycle Analytics & Time tracking) that, if adopted, demonstrate to bring value.

5.5. Mailing list

To share information among the consortium members, the mailing lists shown in the following table have been created (Table 2); Additional distribution lists will be created, whether needed

#	Mailing List	Mailing List Description
1	greenscent@uninettunouniversity.net	Created for internal communication focusing on activities as well as on important issue/news among the project partners

Table 2 – Distribution Mailing lists

6. Management of documents and project deliverables

The official language for all documents and e-mail exchanges will be English (UK)

6.1. Software and documents repositories

The following official repositories have been set up for managing the project results:

- Software (ref. section 5.4. Software repository)
- Documents where will be stored for instance documental deliverables, working-documents, internal documents, reports, bibliography, etc. (ref. to section 5.3. Collaborative working area)

The Project Director will be responsible for the maintenance both the repositories' areas (Software and Documents) and the files stored therein.

6.1.1. Document Templates

All project deliverables will adhere to the relevant template.

The following templates will have to be used for deliverables and reports and are already available in the project's Google Drive area.

- Deliverable (https://drive.google.com/drive/folders/1u1Eg3nvLzk-9xtIceLhYfx8GcuHv5zub)
- Meeting Report (https://drive.google.com/drive/folders/1Dkshcz_S16udvYeNiyYxhuz_p6zCO_5m)
- Peer Review (template definition is in progress)

All documental deliverables will need to have duly filled the following mandatory fields:

- document history table.
- table of contents.
- list of abbreviations used.
- lists of figures and tables.

All final versions of project document deliverables classified as "**PU**" – public document - will be freely downloadable, also by using direct links on the project website or social media pages.

Restricted access will be mandatory for document deliverables classified as "**CO**" – confidential document -.

6.1.2. Document Deliverables Naming Convention

The official deliverable will be named using the naming format:

GreenSCENT_Dw.d_[DELVERABLE_NAME]_ACR_Vx.y.ext

where:

- **w**: is the work package number
- **d**: is the deliverable number
- **DELVERABLE_NAME**: deliverable name as reported into the official deliverables list
- **ACR**: is the partner Acronym that initiated and has the responsibility for the document
- **x**: is the version major number
- **y**: is the version minor number
- **ext**: is the extension (*.doc, .pdf, .ppt, .xls*).

The deliverable owner will have the authority to change the version number when all partners have added their contributions.

In case a partner aims to send comments on the document, track changes can be used, adding the partner's acronym at the end.

GreenSCENT _Dw.d_[DELVERABLE_NAME]_ACR_Vx.y_ACR2.ext

When the document (after an appropriate number of iterations) is finalized, it will assume the following name:

GreenSCENT_Dw.d_[DELVERABLE_NAME]_ Vx.y _FF.pdf

Where FF represents the "Final Frozen" version, which cannot be modified, unless requested by the PO or the external reviewers appointed by the EC.

6.1.3. Other Document Naming Convention

The **GreenSCENT** documents (public and private), except for the official deliverables, will have the following format:

GreenSCENT _WPw_ShortTitle_YYYYMMDD_ACR_Vx.y.ext

where:

- **w**: is the work package number
- **ShortTitle**: is an explanatory short title of the document
- **YYYY**: is the year
- **MM**: is the month
- **DD**: is the day
- **ACR**: is the partner Acronym that initiated and has the responsibility for the
- **x**: is the version major number
- **y**: is the version minor number
- **ext**: is the extension (*.doc, .pdf, .ppt, .xls, .exe, .zip*)

6.2. Documental and Software development process and quality control

6.2.1. Documental deliverable development process

The image shows (Figure 2) all the phases of document drafting process, each of which is depicted as a rounded rectangle and a name:

The following states will be reached

- Table of Content
- 1st draft,
- 2nd draft,
- Ready for peer review,
- Ready for final quality check (pre-final)
- Officially Released (final).

For specific needs, it is possible formally require, to the PC well in advance, an exception to this process.

The PC, evaluated the process changes, can grant, or reject the request. Stringent time constraints may for example motivate the skipping of one draft stage.

Peer-reviewers will be assigned at the beginning every 6 months period for all deliverables due in the forthcoming 6 months.

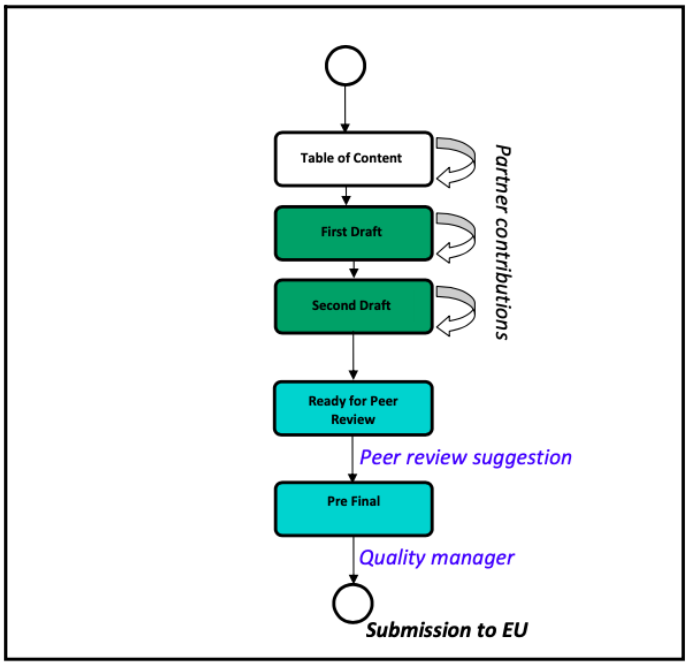

Figure 2 – Documental development process

6.2.2. Quality control for documental deliverables (Peer Reviews)

A quality control procedure will be applied to all project documental deliverables except for internal reports and other working intermediate documents.

Each documental deliverable will be peer-reviewed by at least one member of the consortium partner who did not participate in its writing.

Peer reviewers will evaluate the deliverable with respect to the following criteria.

- Content and its relevance.
- Quality of achievements.
- Presentation quality.
- Fluency, spelling, etc.
- Technical terminology.

The Peer Reviewers will also rate the Deliverable draft as:

A) *Fully accepted*,
B) *Accepted with suggested changes*,
C) *Below appropriate quality level unless modified properly*.

The peer reviewers will send the author the updated deliverable with detailed comments, suggestions and proposed changes added by activating the "track changes" option.

The author will consider all observations and produce the final version to be submitted on ECAS portal.

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6.2.3. Software deliverable development process

For the software deliverables, the development process will follow agile principles and related quality control procedures.

Research efforts will be broken down into segments of manageable complexity by:

- Involve the stakeholders (IT, Graph design, Green Deal expert, etc.) to form a shared consensus about possible scenarios of usage and related user requirements early in the project
- Define the requirements as a list of small unit-works written in simple terms from the perspective of end-user (i.e.: express them as synthetic user stories).
- Involve the stakeholders to prioritize among user stories.
- Involving technical partners in roughly estimating the effort (from each involved partner) that is necessary to develop the highest priority stories.
- Choose which user stories will be realized in the following time-boxed period (i.e: Sprint).
- Refine the requirements, design, code and test the chosen user requirements (user stories). The activities above will be iterated several times.

This iterative process inherently provides a stricter quality control since the most important requisites will be studied first and checked early, ensuring that a proper match between what the end-user expected and what is designed and realized happens as soon as possible.

This agile process minimizes technical risks stemming from misunderstandings, mistakes, and technical obsolescence.

6.2.4. Quality control for software deliverables

The **GreenSCENT** agile process will be flexible (allowing easier management of several software-related risks) but quality procedures will be strictly followed nonetheless:

- The overall process will be tracked and controlled by using appropriate progress boards (the software instrument to implement this is JIRA).
- All software-related results will be put under a rigorous versioning system (the software instrument to implement this is Gitlab).
- Unit testing and integration testing will be required to consider each requirement completed. Modern software engineering approaches to foster quality (test-driven development, continuous integration & continuous delivery) will be evaluated and used where appropriate.

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7. Risk management plan

The Risk Management Plan consists of the identification of the technical and management risks and their assessment draft as:

- Risk description.
- WPS involved.
- Risk Impact.
- Likelihood.
- Proposed mitigation actions.

The **GreenSCENT** consortium has already identified at the project design (Table 3) several risks which have been added to the risk register as shown in the table below. The risks were further reviewed by the consortium partners to assign each of them the probability of the risk event occurring "Likelihood" as well as the measure of the negative consequences if the risk event materializes "Impact".

A slot of time will always be reserved for any technical or consortium meeting to assess: a) the identified risks; b) the effectiveness of the mitigation measures of materialized risks b) update the register if new risks have been identified.

Description of risk	WP(s)	Risk Impact	Risk Likelihood	Proposed risk-mitigation measures
Delay in releasing the first version of the Competence Framework	1	Moderate	Medium	Since this will be a milestone for the project, an initial inventory of existing practices, initiatives, and frameworks to be used as a starting point has been already carried out in the proposal preparation phase. External Advisors are already aware of the project and its activities; citizen engagement and open innovation initiatives will be based on existing practices already managed by GreenSCENT partners.
Low level of citizen engagement and participation	2	Significant	Low	Citizen engagement activities will start at the beginning of the project. Close monitoring of citizen engagement activities will be carried out. The methodology will be based on tested citizen engagement approaches.
Insufficient user numbers for either the app or the platform to actually distil knowledge	3	Moderate	Low	Communication activities, involving, and related to the pilots, in particular, will be managed to try to reach a number of users sufficient to distil knowledge. In progress AI-based natural language process algorithms could be used to elaborate synthetic content - if necessary - to make up for tuning/testing needs even if sufficient human intervention happens later than expected.
The number of skills and competencies every citizen in the EU should have to understand and contribute to the EU Green Deal is too high	4	Minor	Low	Advisory Board Meeting to develop a strategy to reach a consensus with all stakeholders. Apply a ranking system, a scale from 10 (high importance for the understanding of the Green Deal) to 1 (very low importance).
Requirement, that all training materials shall be enjoyable, user-centred and digitally accessible, and in compliance	4	Moderate	Low	Training and communication activities, to explain what Digital Accessibility is, in in the form of online tutorials and face-to-face coaching and workshops. Practical

with the European standard EN 301 549 for digital accessibility, are overwhelming for GreenSCENT experts and teachers and professors.				guidance, using respective free materials available.
Assessment and evaluation methodology turns out to be too complex for the stakeholders.	4	Minor	Low	Communication activities, to explain the methodology and add more user-friendly and user-centred elements, if necessary.
Certification by a third party is not understood and/or not accepted by stakeholders	4	Moderate	Low	Communication and internal training activities for project partners, to make the concept, benefits, and mechanisms of Third-Party Certification, provided by ECQA, clear and understood. Sharing of good practice examples and success stories, to make the benefits of certification for stakeholders and communities more tangible and understandable.
Incomplete identification of all the involved stakeholders in the different pilots and consequent failure to engage them.	5	Moderate	Medium	The involvement of leading institutions in each pilot, with extensive knowledge and connections in their respective contexts, is expected to enable a comprehensive identification and successful engagement of all relevant stakeholders.
Communication issues deriving from the diversity of actors between the consortium and the involved communities: technical and non-technical actors, with different levels of education.	5, 6	Significant	Low	In its addressing of the pilot cases, the consortium will strive to promote an inclusive environment, with regular dissemination activities/establishing clear communication pathways on the progress and applications of the research work.
Lack of motivation for participation in making up part of the GreenSCENT Community	5, 6	Moderate	Low	Specific actions will be put in place in order to aggregate a critical mass of potential users of the GreenSCENT solution. The main target will be designers in the environmental field but also in other creativity domains. In addition, the consortium members have access to relevant target communities with a significant number of contacts in the education and accessibility sectors which will be tapped into to maximise further awareness.
Low level of interest in workshop and pilots participation	5	Significant	Low	Coordinator and WP leaders clearly explain the scope of GreenSCENT and invite a wide range of participants. Workshops' schedule is arranged taking into account the participants' needs and availability. GreenSCENT will also motivate participants by offering meetings with experts and incentives.
Difficult synchronization of certain types of activities – e.g., workshop organization, SCENTbox development,	1, 2, 3, 4, 5, 6	Moderate	Medium	Intensified communication between the coordinator, WP leader and Task leaders.

implementation and validation, demonstrators				
Exploitation and communication yielding insufficient results	6	Moderate	Low	Both the communication and exploitation strategy of GreenSCENT will be designed in an iterative way: an initial strategy outlined at the start of the project will be updated at least twice, as co-creation methodology are implemented, technologies are integrated, pilots are run, first exploitation activities are organised, a market analysis is performed and business models are tested with the GreenSCENT community. Mitigating strategies could include adapting the use cases to observed stakeholder sectors' needs, rethinking the business model, and choosing alternative means of communication and exploitation (events) targeted at different market segments.
Divergent objectives between technical and pilot teams.	7	Moderate	Low	GreenSCENT's management structure was specifically designed to minimise this risk and to ensure close partner collaboration. This will minimise the probability of misunderstanding and divergences and open vast opportunities to correct the divergences at their early stage.
The consortium cannot be easily co-ordinate.	7	Significant	Low	GreenSCENT partners have already collaborated on other international projects. The Management Board is defined to be as representative as possible, maintaining the correct efficiency and operability

Table 3 – Risk Register

8. Risk management process

The image below describes the overall risk management process that **GreenSCENT** will follow.

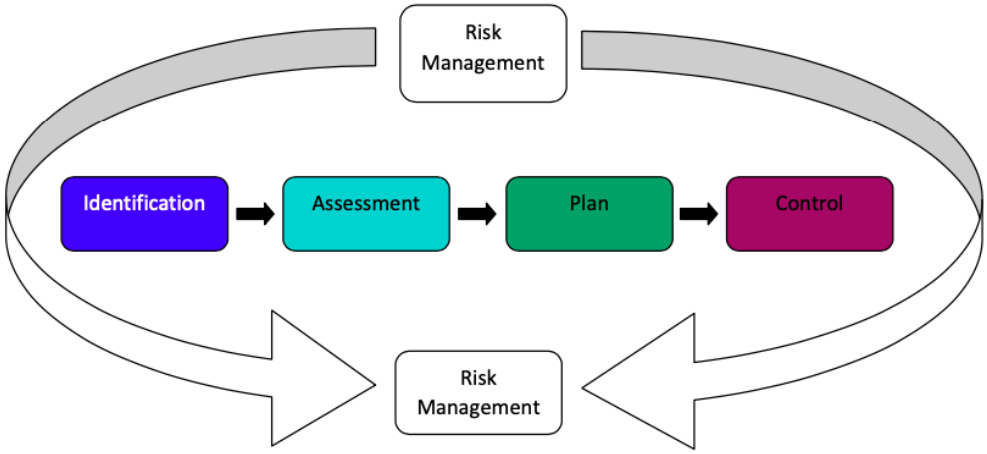

Figure 3 – Risk Management process

8.1. Identification (First step)

To identify relevant risks the responsible person will need to think about three main risks categories:

- **Technical Risks**: i.e. risks for the evolution of **GreenSCENT** prototypes (or other research results) not being able to reach the necessary performance levels to meet requirements.
- **Financial Risks**: i.e. risks related to the ability to reach satisfactory results within the cost budget determined in the DoA. Two areas bearing on financial risks are:
  - *Inaccurate initial cost estimates*.
  - *Cost overruns* due to a failure to mitigate technical risks.
- **Schedule Risks**: i.e. risks related to the inability to reach satisfactory results meeting the deadlines approved in the DoA. Two factors bearing on schedule risk are:
  - *Unrealistic initial schedule estimates*
  - *Time overruns* due to a failure to mitigate technical risks.

WP leaders will be responsible for identifying risks that could arise and potentially impact their WPs, while the PC, supported by WP leaders, will identify risks that impact beyond individual WPs.

8.2. Assessment (Second step)

All categories of risks will be assessed (and then managed) by evaluating:

- **L** (*Likelihood*): to evaluate the Probability of the risk event to happen
- **I** (*Impact*): to a measure the negative consequences if the risk event materializes.

The probability that the risk event happens "**L**" is expressed as "*low*, *medium*, or *high*" while as "*minor*, *moderate*, or *high"* the evaluation of the negative consequences if a specific risk materializes "**I**".

This assessment will result in a conceptual matrix, the cells of which provide general guidelines on the actions needed to manage the risk (which will need to be specialized to manage each specific risk).

Impact	Risk Management Actions		
Significant	Considerable management required	Must manage and monitor risks	Extensive management essential
Moderate	Risks may be worth accepting with monitoring	Management effort worthwhile	Management effort required
Minor	Accept risks	Accept but monitor risks	Manage and monitor risks
	Low	Medium	High
	Likelihood		

Table 4 – Risk Management Actions

8.3. Plan (Third step)

After a specific risk is identified and assessed, the responsible person will have to define an appropriate set of actions to handle it.

The responsible person will be:

- The WP Leaders for risks that could potentially impact their WPs.
- The PC for any other risk (i.e.: risks whose consequence spans the boundaries of a single WP).

Using the general matrix guidelines as a reference he/she/they will propose an answer to the question "*What can we do to reduce the impact of the risk?*".

For each selected handling option, the responsible person (WP Leaders or PC) will specify the actions that, when implemented, will handle the risk. More specifically he/she will specify:

- what needs to be done
- the effort needed
- the involved resources
- the cost estimates
- the action schedule:
    - needed elapsed time (start date, end date)
    - risk reduction activities and their time phasing
    - relationship to significant WP/project activities/milestones

8.4. Control (Fourth step)

The responsible person will also oversee executing the approved risk management actions and their effectiveness.

Day by day he/she/they will evaluate the progress of risk management actions by comparing the expected results of the planned actions with the results achieved, taking corrective actions if necessary.

Furthermore, a slot of time will be always reserved at each consortium plenary meeting to review the risks identified and to evaluate the progress of handling actions.

A slot of time will always be reserved for any technical or consortium meeting to review the identified risks, add new ones if detected and evaluate the progress of mitigation actions for materialised risks.