



TRANSIENCE

**TRANSITIONING TOWARDS AN EFFICIENT,
CARBON-NEUTRAL CIRCULAR EUROPEAN
INDUSTRY**

Date: 19/06/2024

D1.1 – QUALITY MANAGEMENT PLAN

WP1 – Project Management (Phase 1)



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EC Summary Requirements

1. Changes with respect to the DoA

No changes with respect to the work described in the DoA.

2. Dissemination and uptake

This deliverable will serve as a reference document among consortium partners, to be aware of and kept up to date with the TRANSCIENCE project's quality management procedures, responsibilities, and requirements. It may also be used by individuals outside the consortium, including policymakers and scientists, as a documentation of the quality management plan and the rigorous procedures underpinning the legitimacy of the scientific processes carried out in the project and the results and policy recommendations.

3. Short summary of results (<250 words)

The Quality Management Plan defines the quality policy and plan to be applied in the TRANSCIENCE project. Its purpose is to establish the roles, procedures, metrics, and tools necessary to ensure that the TRANSCIENCE project is implemented smoothly, that all project deliverables are of a high quality and of scientific value, and that they are submitted to the EC services in time. Complying with the quality management procedures falls under the responsibility of the Project Coordinator, the Project Manager, the Quality Manager, the Work Package Leaders, and the Task Leaders.

Effective channels of internal communication have been established since Month 1, enabling smooth exchange of all necessary information among project partners.

A thorough quality procedure has been established: each project deliverable will be quality-reviewed by two to five internal reviewers (depending on the nature of the deliverable) and then reviewed and edited for a final time by an additional member of the management team from ICCS. This will ensure that the submitted deliverables adequately satisfy the quality criteria of clarity, completeness, accuracy, relevance, and technical compliance.

Specific performance indicators have been set for which monitoring data will be collected regularly, aimed at fully informed reporting. Finally, a risk management plan has been put into place, consisting of the identification of the technical (research-oriented) and management (project implementation-related) risks.

4. Evidence of accomplishment

This report.

Preface

The need to approach climate action, resource efficiency, and circularity performance as integrated, economy-wide, cross-cutting issues is growingly gaining attention in the policy world, stimulating the development of new industrial policies in Europe and worldwide. Currently, however, there is little progress in conceptualising the circular economy and understanding its interactions with climate action. State-of-the-art modelling capacity to capture the interplay of the two agendas and their implications for energy-intensive sectors as well as to represent the European industry's transformation in line with the region's vision for climate neutrality is not yet fully developed. TRANSIENCE will undertake a comprehensive characterisation and assessment of circularity principles and measures vis-à-vis decarbonisation, by looking at the twin transition of European industries through the lenses of global competitiveness, innovation, and holistic sustainability. It will then produce MIC3, a consistent, fully open-source model ecosystem to assess industrial circularity, decarbonisation, and sustainability. A series of interoperable modules on the socioeconomic, service and product, material, industrial, energy-system, and environmental perspectives of the transformation of European industry will be developed and integrated, building on and opening the code of leading modelling tools. MIC3 will finally be used in extensive scenario modelling to produce diverse pathways toward a material-efficient, circular, climate-neutral, sustainable European industry. Transparency, openness, and knowledge sharing will be promoted, and technical capacities will be developed in four industrial agglomerations in the EU, moving beyond stakeholder consultation, onto model co-development, continuous validation of assumptions, co-creation of scenario modelling, evaluation of the desirability and usability of the developed model and insights, and eventually co-production of science and action.

ICCS – Institute of Communication and Computer Systems	EL	
CEPS – Centre for European Policy Studies	BE	
E3M – E3-Modelling AE	EL	
Fraunhofer – Fraunhofer-Gesellschaft zur Förderung der angewandten Forschung e.V.	DE	
HOL – HOLISTIC IKE	EL	
PIK – Potsdam Institut für Klimafolgenforschung e.V.	DE	
PNTEC – Park Naukowo-Technologiczny Euro-Centrum Spolka Z Ograniczona Odpowiedzialnoscia	PL	
TECNALIA – Fundacion Tecnalia Research & Innovation	ES	
UU – Universiteit Utrecht	NL	
WI – Wuppertal Institut für Klima, Umwelt, Energie gGmbH	DE	
PSI – Paul Scherrer Institut	CH	
UCL – University College London	UK	

Executive Summary

The 'Quality Management Plan' defines the quality policy and plan to be applied in the TRANSCIENCE project. Its purpose is to establish the roles, procedures, metrics, and tools necessary to ensure that the TRANSCIENCE project is implemented smoothly and that all project deliverables are of high quality and of scientific added value and are submitted to the EC services in time. Complying with the quality management procedures falls under the responsibility of the Project Coordinator, the Work Package leaders, and the Tasks leaders.

The TRANSCIENCE Project Coordinator (PC) oversees the scientific and technical direction of the project and the quality of the project deliverables, as well as the financial aspects. The PC is supported by a Project Manager (PM), as well as a project management team from ICCS. In parallel, the Quality Manager (QM) overviews the process and monitors the project progress. Each Work Package (WP) is coordinated by a WP Leader (WPL), responsible for the implementation of the respective WP, in line with the work description. The WPL is responsible for reviewing and evaluating intermediate and final WP outputs in conjunction with other WP partners. The Task Leaders (TLs) are responsible to lead the execution of activities under the respective task and guide the rest of the partners in fulfilling their activities in a timely manner. Furthermore, the General Assembly (GA) is the ultimate decision-making body of the consortium, consisting of one representative per partner and the PC, and deciding on aspects related to content, finances, and intellectual property rights, consortium evolution, and member appointments. The Executive Board (EB) is the supervisory body for the execution of the project, which shall report—and be accountable—to the GA, consisting of the PC and the representatives of all parties, as appointed by the GA, and monitoring the effective and efficient implementation of the project. The Scientific Advisory Board (SAB) comprises external international experts recognised in the climate and policy area, whose role is to advise the consortium on matters related to the implementation and development of the project activities.

The PC is also responsible for the preparation of template documents for the various project outputs and management reports; the establishment of a document management system; and the assurance of compliance with the document naming conventions, in the aim of securing the high quality of project implementation. Effective channels of internal communication have been established since Month 1, for smooth exchange of necessary information among the partners. The means for conveying information range from physical meetings and teleconferencing facilities to an internal workspace for document management and weekly structured e-mail communication, allowing partners to have full overview of the project progress and requirements.

Quality control takes place via monthly calls and meetings between the PC (ICCS), the QM (ICCS), and the WPLs to discuss work progress through detailed reports on the progress for each task. Emphasis is laid on quality assurance of deliverables, which is planned to be achieved with the coordinated input from the project partners, each of whom undertake clear roles in the review process. A thorough quality procedure shall be followed; each project deliverable will be quality-reviewed by two to five internal reviewers (members of the consortium partners), before being finally reviewed by the PM and edited by an additional member of the management team from ICCS, ensuring that the submitted deliverables adequately satisfy the quality criteria of clarity, completeness, accuracy, relevance, and technical compliance.

Specific performance indicators have been set since the proposal phase and monitoring data will be collected regularly, aimed at fully informed reporting and at allowing for proper self-assessment of results. Finally, a risk management plan is put into place, consisting of the identification of the technical (research-

oriented) and management (project implementation-related) risks; the assessment of their degree of occurrence, and of their potential impact; and of reducing the possibility of materialisation for each one of the risks already foreseen in the design of the project by planning the necessary mitigation measures to be taken during implementation.



Contents

1	Introduction	1
1.1	Purpose and scope.....	1
1.2	Structure of the document.....	1
2	Project Management ensuring quality	2
2.1	Project Governance.....	2
2.2	Project management actors, roles, and responsibilities.....	2
2.3	Project management processes.....	5
2.3.1	Document management.....	5
2.3.2	Document management system	8
2.4	Internal Communication.....	10
2.4.1	Physical meetings.....	10
2.4.2	Remote Meetings	11
2.4.3	Weekly updates	11
2.5	Internal Reporting	12
2.6	Official Reporting.....	12
2.7	Quality Assurance of Deliverables.....	13
2.7.1	Review roles and responsibilities.....	13
2.7.2	Deliverable review process.....	14
2.8	Quality Assurance of other materials	18
3	Quality Assessment	19
3.1	Evaluation Framework	19
3.2	Performance Indicators	19
4	Risk Management Plan.....	20
4.1	Risk analysis and mitigation measures.....	20
	ANNEX I: Allocation of reviewers to deliverables (Year 1).....	24
	ANNEX II: Outcome & Impact Indicators.....	25
	ANNEX III: Communication and Dissemination activities and indicators	28
	ANNEX IV: Quality Indicators.....	30

Table of Figures

Figure 1. The TRANSIENCE internal data management platform	9
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Table of Tables

Table 1. Work Package Leaders in TRANSIENCE.....	3
Table 2. Documents to be produced in TRANSIENCE	5
Table 3. Naming convention for the TRANSIENCE deliverables	6
Table 4. Naming convention for the TRANSIENCE reviewed deliverables	6
Table 5. Naming convention for documents related to TRANSIENCE meetings and events.....	7
Table 6. Naming conventions for official reports to the EC services	8
Table 7. Naming conventions for internal documents which are regularly updated.....	8
Table 8. Naming convention for TRANSIENCE materials/publications	8
Table 9. SharePoint functionalities securing proper document management	9
Table 10. Tentative schedule of TRANSIENCE GA Meetings.....	10
Table 11. Process for the delivery of the official progress reports	13
Table 12. Deliverable review process.....	16
Table 13. Quality criteria for deliverables.....	17
Table 14. Linguistic values for risk impact and risk probability occurrence	20
Table 15. Identified risks and mitigation measures	21

1 Introduction

1.1 Purpose and scope

The purpose of the Quality Management Plan (QMP) is to establish the roles, procedures, metrics, and tools necessary to ensure that the TRANSIENCE project is implemented smoothly and that all project deliverables are of high quality and scientific value and submitted to the EC services on time.

In this context, the objectives of this deliverable (D1.1) are to:

- define clear project management roles and responsibilities of all partners within the consortium;
- establish the processes for ensuring the quality and timely execution of project deliverables and milestones, and the project management activities;
- present the coordination and communication channels and processes among partners, during the project lifetime, which will secure smooth information flow;
- analyse the potential risks of the project and evaluate their impact and exposure; and
- proactively define risk mitigation measures to guarantee seamless and proper execution of the project's tasks.

Moreover, to ensure its relevance throughout the lifetime of the project, the QMP will be revisited regularly and updated when deemed necessary. All TRANSIENCE partners, European and International, are obliged to comply with the requirements set out in this document.

1.2 Structure of the document

The structure of this document is as follows:

- Section 2 provides an overview of the project governance, management structure and responsibilities, including the responsibilities for quality assurance. Moreover, this section presents the processes for internal communication, reporting and quality assurance of the deliverables and other materials/outputs, as well as the tools for effective document management.
- Section 3 presents the quality assessment framework, including the performance indicators aimed at continuous improvement throughout the project lifetime.
- Section 4 analyses the risks that may jeopardise quality and sets out the planned mitigation measures.
- Annex I: Allocation of reviewers to deliverables (Year 1)
- Annex II: Outcome & Impact indicators
- Annex III: Communication and Dissemination indicators
- Annex IV: Quality indicators

2 Project Management ensuring quality

The TRANSCIENCE governance and management structure guarantees smooth decision-making, prompt management of risks and unforeseen events, suitable interaction with relevant stakeholders, and direct participation of all partners in the operations of the project.

2.1 Project Governance

The **General Assembly (GA)** is the ultimate decision-making body of the consortium. The GA consists of one representative from each partner and the Project Coordinator (PC) from ICCS. The PC chairs all meetings of the GA, unless decided otherwise by the GA.

The decisions taken by the GA relate to, among others: (a) content, finances, and intellectual property rights; (b) evolution of the consortium; and (c) member appointments.

The **Executive Board (EB)** is the supervisory body for the execution of the Project, which shall report—and be accountable—to the GA. The Executive Board consists of the coordinator and the representatives of the parties appointed to it by the GA. The PC chairs all meetings of the EB, unless decided otherwise by a majority of two-thirds. The EB monitors the effective and efficient implementation of the project, ensuring that all required procedures are workable, implementable, and clear for all project partners. This includes contributing to the development of the project's quality management plan, outlining quality processes for all project deliverables.

The activities of the EB include, among others: (a) preparing the meetings, proposing decisions, and preparing the agenda of the GA; (b) proper execution and implementation of the decisions of the GA; (c) seeking a consensus among the parties; (d) management and monitoring of project development according to the work plan; (e) supporting the PC in preparing meetings with the Granting Authority and in preparing related data and deliverables; and (f) preparing the content and timing of press releases and joint publications by the consortium or proposed by the Granting Authority.

The operational procedures for the EB and the decisions to be made by the GA are fully described in Section 6.3 of the TRANSCIENCE Consortium Agreement.

2.2 Project management actors, roles, and responsibilities

The TRANSCIENCE **Project Coordinator (PC)**, Dr. Alexandros Nikas (ICCS), oversees the scientific and technical direction of the project and the project deliverables, manages financial planning and control, and communicates with the EC's Project Advisor (PA).

The PC is responsible for:

- monitoring all partners' compliance with their obligations under the Grant Agreement and the Consortium Agreement;
- keeping the address list of members of all TRANSCIENCE partners and other contact persons updated and available;
- collecting, reviewing to verify consistency, and submitting reports, other deliverables (including financial statements and related certification) and specific requested documents to the Granting Authority;
- preparing the meetings, proposing decisions and preparing the agenda of the GA meetings, chairing the meetings (unless otherwise decided by the GA, in which case a different chairperson is selected),

preparing the minutes of the meetings and monitoring the implementation of decisions made at meetings;

- transmitting documents and information connected with the project to any party concerned;
- administering the financial contribution of the Funding Authority and fulfilling the financial tasks described in Section 7.1 of the TRANSIENCE Consortium Agreement.

An exhaustive list of all responsibilities of the PC are presented in detail in the TRANSIENCE Consortium Agreement, to which all partners have agreed and will adhere.

Linked with the present deliverable, the PC has the responsibility of ensuring that the quality management procedures (described in the following sections) are respected by all TRANSIENCE partners.

The PC is supported by a **Project Manager (PM)**, Dr. Panagiotis Kokkinakos (ICCS), as well as a project management team from ICCS. They will focus on the day-to-day administration of the project. They will work closely with the PC, providing support with the financial and overall management and communication with all partners. The PM is also involved in setting up and overseeing the administration of project internal communication (in Task 1.1 in the Grant Agreement). Finally, the PM will have the responsibility for the scientific/research progress and will be referring to the PC in this respect.

The **Quality Manager (QM)**, Dr. Konstantinos Koasidis (ICCS), will be overseeing the process for the monitoring of the project progress. If there emerge deviations from the project plan, the QM—alongside the PC and the responsible partners—will discuss how the progress can be realigned with the plan. It is noted that the day-to-day monitoring against the quality standards, as described in the present document, will be performed by the management team from ICCS.

Each WP is coordinated by **WP Leaders (WPLs)**, responsible for the implementation of the respective WP in line with the work description. The WPLs are responsible for reviewing and evaluating intermediate and final WP outputs in conjunction with other WP partners; and for cooperating with other WPLs. WPLs are responsible for:

- coordinating the WP tasks with Task Leaders (TLs), including technical and management activities;
- ensuring that the WP fulfils the objectives listed as milestones and deliverables;
- monitoring progress against time, budget allocations and the expected outcomes;
- implementing corrective actions if needed;
- delivering required information for the preparation of all plans and reports;
- participating in monthly calls with the PC and QM to discuss work progress;
- preparing the consolidated WP reports on a quarterly basis or otherwise, as required;
- stimulating interaction and proactive sharing of information with other WPs;
- assigning internal reviews of draft deliverables, for content/editing, prior to finalisation and submission

The WPLs have the responsibility for the high quality of the respective technical deliverables and other materials related to their WPs. The WPLs are presented in Table 1.

Table 1. Work Package Leaders in TRANSIENCE

WP No	Leads	Co-leads
WP 1	Alexandros Nikas, Panagiotis Kokkinakos (ICCS)	
WP 2	Vasileios Rizos, Edoardo Righetti (CEPS)	Lukas Hermwille (WI)
WP 3	Ernst Worrell, Li Shen, Gergő Sütő (UU)	Alvaro Riviera, Teresa Domenech (UCL)
WP 4	Andrea Herbst, Marius Neuwirth (Fraunhofer)	Panagiotis Fragkos, Maro Baka (E3M)

WP 5	Alexandros Nikas, Konstantinos Koasidis (ICCS)	
WP 6	Alexandros Nikas, Panagiotis Kokkinakos (ICCS)	
WP 7	Georgios Xexakis (HOL)	
WP 8	Lukas Hermwille (WI)	
WP 9	Alexandros Nikas, Konstantinos Koasidis (ICCS)	
WP 10	Alexandros Nikas, Panagiotis Kokkinakos (ICCS)	
WP 11	Panagiotis Fragkos, Iro-Maró Baka (E3M)	Falko Ueckerdt (PIK)
WP 12	Georgios Xexakis (HOL)	Konstantinos Koasidis (ICCS)

The **Task Leaders (TLs)** are responsible to lead the execution of activities under the respective task and guide the rest of the partners in fulfilling their activities in a timely manner. More specifically, the TLs are responsible for:

- planning and monitoring activities outlined in each task;
- developing the respective data exchange templates, where needed, with the contribution of the WPL;
- communicating regularly with the WPL in order to discuss progress;
- communicating potential problems identified during the implementation of the activities;
- compiling partners' input in one integrated deliverable;
- sending the draft deliverable in time to the WPL for comments;
- integrating partners' comments in the deliverable to produce the final version;
- ensuring timely submission of related deliverables.

The **consortium partners/contributors** to tasks are responsible for:

- responding to requests by the TLs, WPLs, and the PC in a timely manner, in line with the agreed deadlines;
- reporting any difficulties encountered during the implementation of their activities to the TL—when these difficulties affect the timely submission of their contribution or the quality or impact of their work, then mitigation actions should be suggested and decided with the WPL and the PC;
- communicating new risks identified for mitigation measures to be taken to the corresponding TLs, and WPLs as well as the PC; and
- developing deliverables and ensuring that these are of high quality and can be published/submitted to the EC services.

Project partners will comply with all ethical standards deriving from national, European, and international laws.

Moreover, the respective research methods will agree to the code of ethical research of the EU, as well as any additional codes referring to their own institution or professional bodies, obtaining ethical approval of the responsible organisations. In addition, the compliance with ethical codes will be ensured by the consortium via ethical review processes.

The envisaged research activities will not require the collection of individual information and the names of participants will not be revealed in the research: all stakeholder input envisaged to drive or co-produce the scientific activities and outputs and respective personal data will be anonymised and therefore does not fall under the data privacy rules. Information from the stakeholder database will be strictly confidential, remain undisclosed in all stages of the research, and only be used for contacting stakeholders.

2.3 Project management processes

2.3.1 Document management

2.3.1.1 Documentation Requirements

Document management refers to the preparation of template documents for the various project outputs and management reports; the establishment of a document management system; and the assurance of compliance with the document naming conventions. The above-mentioned tasks are under the responsibility of the PC.

During TRANSCIENCE, forty-five (45) deliverables and several types of documents will be produced, as shown in Table 2.

Table 2. Documents to be produced in TRANSCIENCE

Documents	Responsible	Type	Template
45 Deliverables submitted to the EC	As per Annex I (Part A) of the Grant Agreement	External-output	Deliverable Document Template (i.e., the template used for the present Deliverable)
Internal Project Presentation	Project Coordinator	External-promotion	Project Presentation Template
Meeting/Event Agenda	Partner hosting the Meeting/Event	Internal-monitoring	Meeting/Event Agenda Template
Meeting Minutes	Partner hosting the Meeting	External-management	Meeting Minutes Template
Internal Effort and Cost Reporting	All partners	Internal-monitoring	Internal Effort and Cost Reporting Template
Periodic Report PART B	Project Coordinator	External-management	As per Grant Agreement and Commission guidelines
Commentaries/Working documents/Model Documentations/Policy briefs	All Partners	External-scientific and policy level	Commentaries Template/Working document Template/ Documentation Template/ Policy brief Template
Articles in scientific journals (papers), presentations and/or (extended) abstracts or short papers in scientific conferences	All Partners	External-scientific	According to journal guidelines
Datasets & guidelines for validating as well as reproducing papers	Project Coordinator	External-scientific	Zenodo-specific documentation template

Although they will also be available in PDF format, these documents should (and will) comply with the following standards:

- Word Processor: Microsoft Word 2013 or higher,
- Spreadsheet: Microsoft Excel 2013 or higher,
- Presentations: Microsoft PowerPoint 2013 or higher.

In case partners cannot comply with above standards due to limited capacity, ICCS will ensure that the documents are converted as per standards.

2.3.1.2 Naming conventions and versioning

Document configuration management will be ensured by tracking the history of changes within the following project documents:

- Deliverables
- Project/WP Meetings agendas and minutes
- Project events agendas
- Official reports to the EC
- Documents, such as mailing lists and internal effort reporting, which are regularly updated
- Documents used for internal project management and monitoring purposes
- Materials/Publications produced by the project, such as commentaries, policy briefs, working documents, presentations, newsletters

Document history is tracked in each deliverable through a dedicated functionality offered by SharePoint. Tables 3 and 4 show the naming conventions for the draft deliverable ready for internal review, and the revised deliverable after the internal review.

The naming conventions of the final deliverables to be submitted should follow the guidelines established under D3.1 'Machine-actionable, open data management plan', rendering the reports machine actionable.

Table 3. Naming convention for the TRANSIENCE deliverables

Name	TRANSIENCE DX.Y [Deliverable title]-vA.BB
Where	X: Work Package number
	Y: Deliverable number
	A: Major version of the deliverable
	BB: Minor version of the deliverable for updates during the preparation phase
Examples	TRANSIENCE D1.1 Quality Management Plan-v0.01
	TRANSIENCE_D1.1_Quality_Management_Plan: this format should be used for the submitted document to the EC. For record purposes a "-v1.00" disclaimer can be used to indicate the version initially submitted to the EC
Notes	If the Deliverable title is longer than 50 characters (with spaces) then the title should be shortened accordingly by the Deliverable leader.

Table 4. Naming convention for the TRANSIENCE reviewed deliverables

Name	TRANSIENCE DX.Y [Deliverable title]-vA.BB_IN
Where	X: Work Package number
	Y: Deliverable number
	A: Major version of the deliverable

	BB: Minor version of the deliverable for updates during the preparation phase
	IN: Initials of the reviewer's name
Examples	TRANSIENCE D1.1 Quality Management Plan-v0.01_AN
	TRANSIENCE D1.1 Quality Management Plan-v0.01_PK

For example, the people involved in this deliverable D1.1 'Quality Management Plan' are: PK, author responsible; AN, CT, contributing partners; KK, Reviewer 1; MB, Reviewer 2; LH, Reviewer 3; KK, Quality Manager; and AN, editor (for the roles in the internal review process, see the 2.7.1 section 'Review roles and responsibilities' further below).

The various names and versions of the deliverable may be:

- TRANSIENCE D1.1 Quality Management Plan-v0.01 (this version is typically the one to include only the Table of Contents, to be further edited by the contributing partners)
- TRANSIENCE D1.1 Quality Management Plan-v0.08 (first draft of the deliverable submitted to the PM for internal review)
- TRANSIENCE D1.1 Quality Management Plan_PK (first draft document reviewed by PK and communicated, via the PM, to the Deliverable leader, featuring comments and tracked changes)
- TRANSIENCE D1.1 Quality Management Plan-v0.12 (revised deliverable by the Deliverable Leader, having integrated the comments of all reviewers on version 0.08, submitted for further review)
- TRANSIENCE D1.1 Quality Management Plan-v0.12_KK (second draft document reviewed by KK and communicated, via the PM, to the Deliverable leader, featuring comments and tracked changes)
- TRANSIENCE D1.1 Quality Management Plan-v0.14 (revised deliverable by the Deliverable Leader, after integrating comments of all reviewers on version 0.12)
- TRANSIENCE D1.1 Quality Management Plan-v0.14_AN (document modified by contributor AN, based on comments addressed from their side)
- TRANSIENCE D1.1 Quality Management Plan-v0.17 (final version submitted by the Deliverable Leader to the PM for final review)
- TRANSIENCE_D1.1_Quality_Management_Plan (final machine actionable version, checked by AN and submitted to the EC)
- TRANSIENCE D1.1 Quality Management Plan-v1.00 (final version kept for version recording)

Table 5 shows the naming conventions for the various documents related to meetings and events.

Table 5. Naming convention for documents related to TRANSIENCE meetings and events

Name	TRANSIENCE DX.Y [Deliverable title]-vA.BB
Where	A: Major version of the meeting/event related document
	BB: Minor version of the meeting/event related document for updates during the preparation phase
Examples	TRANSIENCE KOM Logistics-v0.10
	TRANSIENCE KOM List of participants-v0.10
	TRANSIENCE KOM Minutes-v0.10
	TRANSIENCE Consortium meeting 15th May 2024 Minutes-v1.00
	TRANSIENCE EB meeting 19th June 2024 Minutes-v1.00
	TRANSIENCE WP4 meeting 14th June 2024 Minutes-v1.00

Table 6 shows the naming conventions for the official reports to the EC services.

Table 6. Naming conventions for official reports to the EC services

Name	TRANSCIENCE DX.Y [Deliverable title]-vA.BB
Where	A: Major version of the report
	BB: Minor version of the report for updates during the preparation phase
Examples	TRANSCIENCE 1st Periodic Technical Report-v0.10
	TRANSCIENCE 1st Periodic Financial Report-v0.10
	TRANSCIENCE Final Technical Report-v0.10

Table 7 shows the naming conventions for internal documents, such as mailing lists and internal effort reporting, which are regularly updated.

Table 7. Naming conventions for internal documents which are regularly updated

Name	TRANSCIENCE [Document description]_ddmmyy or TRANSCIENCE [Document description] [Partner name]_ddmmyy
Where	dd: date; mm: month; yy: year
Examples	TRANSCIENCE Mailing List_200224
	TRANSCIENCE Effort and Cost Reporting ICCS_050224

Finally, Table 8 presents the naming conventions for materials/publications of the project.

Table 8. Naming convention for TRANSCIENCE materials/publications

Name	TRANSCIENCE [Material/Publication]-vA.BB or TRANSCIENCE [Material/Publication] [Short title]-vA.BB
Where	A: Major version of the material/publication
	BB: Minor version of the material/publication for updates during the preparation phase
Examples	TRANSCIENCE Policy Brief Issue 1: Stakeholder Inclusion in Modelling-v0.10
	TRANSCIENCE Newsletter No1-v0.10

2.3.2 Document management system

SharePoint is a web-based collaborative platform that integrates natively with Microsoft Office. SharePoint allows for storage, retrieval, searching, archiving, tracking, management, and reporting on electronic documents and records. SharePoint's integration with Microsoft Windows and Microsoft Office allows for collaborative real-time editing and encrypted/information rights managed synchronisation. SharePoint team 'TRANSCIENCE' site includes a 'Documents' library, which will host all documents related to the WP deliverables, the scientific content, and the administrative documents that should be shared among the consortium partners.

The documents are classified as illustrated in Figure 2.

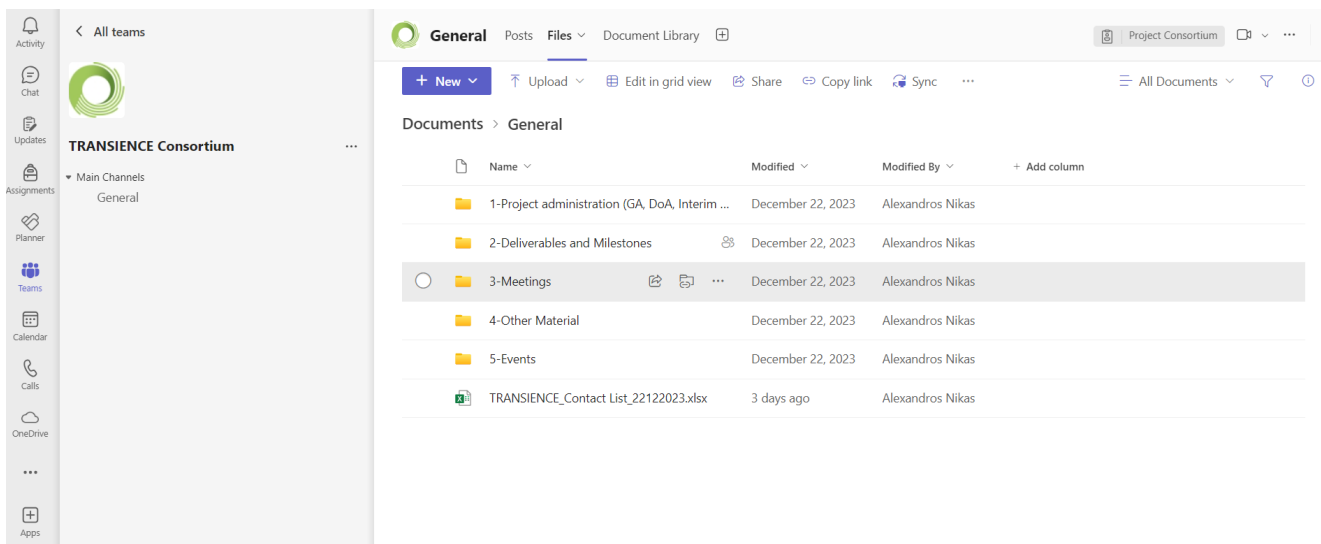


Figure 1. The TRANSCIENCE internal data management platform

The structure is simple, yet comprehensive, allowing the user to identify/locate easily all documents related to the project. SharePoint offers various functionalities that secure proper document management, as reflected in Table 9.

Table 9. SharePoint functionalities securing proper document management

Functionality	Description
Secure sharing of a document	To share a document uploaded onto the library, SharePoint creates a link that the user (creator of the document) can copy and send it to select recipient(s). For someone to access the document, they need to be a registered TRANSCIENCE SharePoint user.
Replacing an existing document / Version history	SharePoint offers the user the capacity to upload new versions of an existing document. Versioning creates a historical record of all changes, with the date/time and indication of the user that made the change, on a per-file/list item basis. The end user can view, delete, and restore a version if they have the correct permissions in the library or list. Version History opens in a modal dialog box, with options to View, Restore, or Delete the entry. If any SharePoint Metadata columns were changed, that column and its new value will be displayed.
Locking a document	SharePoint offers the user the capacity to lock (check out) a document while they are editing it. Checking out a document stops other users from modifying it in any way, until the editing process is over.
Adding News	SharePoint allows users to create posts like announcements, people news, status updates, and more that can include graphics and rich formatting.
Creating a List	SharePoint offer user the capacity to create and share lists to track issues, tasks, and more. Start from a template, Excel file, or from scratch.

Overall, SharePoint provides a central point, where TRANSCIENCE partners can access project documents and collaborate on their development. Advantages of the system include:

- Documents in a single place. TRANSCIENCE partners know that all project documents can be found on SharePoint.
- Document tracking. SharePoint allows the development of a document to be tracked: document versions are numbered, collaboration is structured, and old versions of documents are stored rather

than overwritten.

- Ownership recorded. When a document is uploaded onto SharePoint, information regarding the date, time and author is all recorded.
- Risk reduction. Using SharePoint reduces reliance on WP and task leaders to manage document collaboration via other routes, such as email, Dropbox, etc. SharePoint also allows document changes to be 'rolled back', reducing the risk of work being lost due to files being accidentally overwritten or deleted.
- Document availability. SharePoint is a web-based system that is accessible via computers, smartphones and tablets. One can access documents wherever they are.

The management team from ICCS will be responsible for securing that SharePoint, and no other tool, is used for document management. In particular, the PC will ensure that:

- all documents related to the work carried out in TRANSCIENCE are uploaded onto SharePoint;
- all partners use SharePoint to collaborate on documents produced with TRANSCIENCE partners, rather than other tools, such as e-mail, Dropbox, or Google Drive;
- all consortium partners have access to all relevant documents; and
- document collaboration is not delayed by consortium partners, in particular WPLs, being on missions, on holidays or working on other assignments outside TRANSCIENCE.

2.4 Internal Communication

Effective channels, processes, and tasks for internal communication have already been established since Month 1, in order to facilitate effective coordination, knowledge sharing, smooth cooperation and direct communication of the implementation and dissemination of information for partners.

2.4.1 Physical meetings

The kick-off meeting (M1) took place in Athens and the 2nd GA meeting (M10) will be held in Brussels, both as hybrid events. Regular project meetings will be held on a six-month basis to ensure that all procedures are understood and implemented as planned. For sustainability reasons, these will be back-to-back with other physical events organised by the project or held online. The management team from ICCS is responsible for the organisation of the agenda of the meetings. In case of an emergency or in need of a conflict resolution, ad-hoc meetings may be organised upon decision of the GA. A tentative schedule of project meetings is available in Table 10.

Table 10. Tentative schedule of TRANSCIENCE GA Meetings

Meeting identifier	Time	Place
Kick-off Meeting	February 2024 (M2)	Athens
2 nd GA Meeting	October 2024 (M10)	Brussels
3 rd GA Meeting	June 2025 (M18)	Online (TBC)
4 th GA Meeting	November 2025 (M23)	Rhine-Ruhr (TBC)
5 th GA Meeting	June 2026 (M30)	Online (TBC)
6 th GA Meeting	December 2026 (M36)	Athens (TBC)
7 th GA Meeting	June 2027 (M42)	Online (TBC)
8 th GA Meeting	October 2027 (M46)	Basque Country (TBC)
Final Event	December 2027 (48)	Brussels

Proposed dates for each meeting will be discussed in online meetings and decided over doodle polls

organised by the management team from ICCS, at an early stage—i.e., at least four (4) months before a physical meeting.

2.4.2 Remote Meetings

Remote meetings (through Microsoft Teams) will be employed for the effective communication among project partners during the project lifecycle. Monthly **EB meetings** will ensure that the project is on track towards achieving its objectives and vision as well as provide WP updates (with reviews and appropriate revisions of the work) to enable following a realistic time schedule and introducing corrective actions in a timely fashion. The management team from ICCS is responsible for the organisation of the agenda and for the coordination of these meetings. The meetings' details (day, time, Microsoft Teams link, agenda) will be communicated by the management team from ICCS at least 1 week before the date of each meeting, to allow time to the participants for scheduling and preparing all necessary information for each meeting. Remote and hybrid meetings will be recorded, after consent from all participants is granted. The minutes of each project meeting (physical, hybrid, and remote) will be drafted right after each meeting. The minutes will be compiled into one document forming part of deliverable D1.2, 'Report on Project and SAB Meetings', due in Month 18 and with updates in Months 36 (D6.1) and 48 (D10.1).

In addition, remote WP meetings will be held on an ad-hoc basis, initiated by the respective WPL, in coordination with the PC, who will be present in these meetings. WP meetings will also serve for conflict resolution.

Generally, technical issues or conflicts within the contractual commitments that do not involve any contract, budget, resource allocation or overall project focus changes will be discussed at WP level first. If the decisions reached at WP level are unacceptable by any single consortium partner, the conflict will be resolved according to a conflict resolution procedure that can be summarised in the next steps:

1. The consortium members involved in the implementation of the WP inform the WPL for the emerging conflict.
2. The WPL decides whether the issue needs to be discussed in a bilateral teleconference or a dedicated WP meeting. The WPL then informs the PC for the planned actions.
3. The result of the bilateral teleconference or the meeting is communicated to the PC.
4. If no consensus has been reached thus far, the PC contacts the responsible persons and tries to resolve the conflict.
5. If the disagreement remains, the issue is escalated to the EB. The decision that will be made at that level will be considered as the final resolution of the issue.

Minutes of WP meetings will be drafted by the WPL following the template, to be shared with the consortium.

2.4.3 Weekly updates

The PC will be sending weekly updates (e.g., every Friday) in the form of an e-mail to inform TRANSCIENCE partners about the latest updates regarding the implementation of the project. The update will include inter alia reminders about upcoming deliverables and project meetings, information about international events and involvement of the consortium, useful documentation and produced material and deliverables, requests for action by partners, etc. Thus, all partners can always have an updated overview of the project implementation and progress, effectively communicated.

2.5 Internal Reporting

For internal project management and monitoring purposes, partners will be submitting every 18 months their actual use of human resources to the PC, for the purposes of preparing the interim (midterm and final) reports—unless otherwise necessitated by the Commission. This includes sub-contracting, travel, and other direct costs spent in the framework of the project for each of the reporting periods (Month 1 to 18, Month 19 to 36, and Month 37 to M48, see below).

As far as internal reporting of human effort and other costs is concerned, a dedicated template has been created and will be used by all beneficiaries.

Finally, as per Article 20.1 of the Grant Agreement, the consortium partners will be keeping time records for the number of hours declared. These records will be in writing and approved by the persons working on the action and their supervisors, at least monthly.

Each partner will be responsible for keeping their time records, but there will be no obligation to submit them to the PC.

2.6 Official Reporting

According to Article 21.2 of the Grant Agreement, the project is divided into the following ‘reporting periods’ (RPs):

- RP1: from Month 1 to Month 18 (i.e., January 2023 – June 2025)
- RP2: from Month 19 to Month 36 (i.e., July 2025 – December 2026)
- RP3: from Month 37 to Month 48 (i.e., January 2027 – December 2027)

Article 21.2 of the Grant Agreement describe in detail the content of the periodic report covering RP1 and the final report covering RP2.

The periodic technical report shall consist of two parts:

- Part A, generated by the electronic exchange system in the Participant Portal, which requires that the PC, on behalf of the consortium, answer to a questionnaire covering issues related to project implementation and the economic and social impact, notably in the context of the Horizon Europe key performance indicators and the Horizon Europe monitoring requirements; and
- Part B, the narrative part that includes explanations of the work carried out by the partners during the reporting period.

The information will be regularly inserted into the template, in order to allow timely submission of the report, ensuring that all necessary information is provided to the EC. Part A will be also fed into on a regular basis.

The process to ensure high quality in the delivery of the official reports consists of the following steps (Table 11):

Table 11. Process for the delivery of the official progress reports

When	Who	What	Recipient
1 month before the end of the reporting period	PC	Provides the consortium partners with detailed guidelines on the requirements of the periodic report template	All consortium partners
1 week before the end of the reporting period	PC	Provides a template for the technical part of the periodic report, including on progress and use of resources	All consortium partners
3 weeks after the end of the reporting period	All consortium partners	Provide progress and use of resources for the technical part of the periodic report	QM, PM, EM
4 weeks after the end of the reporting period	QM	Provides feedback on the draft periodic report	PC
4 weeks after the end of the reporting period	All beneficiaries	Provide their financial statements with details on use of resources, as necessary (submitted via the Participants Portal)	EC
5 weeks after the end of the reporting period	PC, PM	Synthesise and share the draft technical part of the periodic report, with PM's, PC's and QM's feedback for partners to address	All consortium partners
6 weeks after the end of the reporting period	All consortium partners	Provide their final inputs/modifications, if any, in respect to comments, if any	PC, PM
7 weeks after the end of the reporting period	PC	Puts together final report and submits to the EC	EC

The above time schedule provides the PC with three extra weeks to address, if necessary, any remaining issues before eventually submitting the report to the EC, as per Article 21 of the Grant Agreement.

For associated partners (PSI, UCL), this otherwise-template process will be done with respect to their internal processes and obligations towards their funding bodies.

2.7 Quality Assurance of Deliverables

In this section, the necessary activities to assess, analyse, and improve the quality of project outputs are described.

2.7.1 Review roles and responsibilities

The following actors will be engaged in the process for the review of deliverables.

Quality Manager (QM): The QM, whose role can be framed like that of an editor of a peer-reviewed scientific journal, will be supervising the quality assurance process, in close contact with the ICCS management team. For certain cases of critical deliverables (e.g., research works), the QM will review their quality and provide feedback during the 2nd round of the review process. The QM will have the authority to closely follow the progress in any deliverable on an ad hoc basis—including having the final say on a review comment, in the instance deliverable leader and reviewer disagree on the way forward.

Internal reviewers: They are responsible to thoroughly read the draft deliverable, assess its quality against pre-defined criteria (see Table 14) and provide clear comments for improvement. The internal reviewers will be involved in the first review round, following the original submission of the draft version of a deliverable. In case, during the second review round performed by the PM and the PC (see below), the quality of the deliverable is still not deemed to be in line with the standards set nor adequate for submission to the EC services, the two internal reviewers may be invited for one or more revision iterations, until the deliverable is ready for final submission to the EC services.

Deliverable leaders: They prepare the backbone (table of contents) of the deliverable, allocate tasks to, and coordinate the work of, the contributors and are responsible to consolidate the inputs of all contributors into the draft deliverable to be submitted for review and publication. They must address the comments made by the internal reviewers to improve the quality of the deliverable.

Deliverable contributors: They are responsible to draft parts of the deliverable, as per the allocation of tasks performed by the Deliverable Leader, and to deliver their inputs in a timely way to the Deliverable Leader.

Project Coordinator (PC): The PC will be involved in the entire review process, either as one of the reviewers or in continuous communication with the PM (see below) and the team of reviewers.

Project Manager (PM): The PM will be involved in the entire review process, meaning that the PM must review both the draft version submitted for review by the respective Deliverable Leader and the revised version submitted after addressing the comments raised by the internal reviewers. The PM will be reviewing all deliverables.

Member of the management team from ICCS: One member of the management team from ICCS will oversee the final editing of the deliverable before the official submission to the Participant Portal. This is a final technical check that the deliverable complies with the template and that the deliverable is ready to be uploaded, ensuring that the text is free of spelling/grammar/syntactic/semantic errors, as well as of comments, and highlighted text. Other aspects (page numbering and table of contents, figures, tables, etc.) will be also checked.

2.7.2 Deliverable review process

Each project deliverable will be quality-reviewed by 2-5 internal reviewers from the consortium (depending on the nature of the deliverable), by the PM, and an additional member of the management team from ICCS.

2.7.2.1 Assignment of reviewers

The PM invites, through the weekly update, all consortium partners to declare their interest in reviewing the upcoming deliverables for the next year (twelve months). Partners declare interest and the PM then allocates reviewers based on the respective partner's technical expertise and overall availability. The number of deliverables to be reviewed by each consortium partners depends on the background/expertise as well as is subject to the budget and effort share in the project (for allocation of reviewers for Year 1 deliverables, see Annex I).

2.7.2.2 Review steps

For each deliverable of the upcoming year, once the reviewers are assigned, the following steps take place to secure timely submission of the deliverable (Table 12).



Table 12. Deliverable review process

(By) When	Initiator	What	Recipient
5 weeks before the official submission deadline	PM	verifies interest and informs of the review period/deadlines	The assigned internal reviewers
4 weeks before the official submission deadline	Deliverable leader	submits the first draft deliverable to SharePoint and informs by e-mail the PM	PM
4 weeks before the official submission deadline	PM	informs of the submitted draft deliverable	The assigned internal reviewers
3 weeks before the official submission deadline	Assigned internal reviewers, PM	submit the reviewed deliverable with their comments (activating track changes in the Word document) to SharePoint and inform the PM by e-mail	PM
3 weeks before the official submission deadline	PM	informs the deliverable Leader and invites them to address the comments of the reviewers	The deliverable leader
10 days before the official submission deadline	Deliverable Leader	submits the revised (second draft) deliverable to SharePoint and informs the PM by e-mail	PM
5 days before the official submission deadline	PM	reviews the revised deliverable; and submit it to SharePoint for final editing	PM
2 days before the official submission deadline	Assigned member of the management team from ICCS	copyedits the deliverable and informs the PM	PM
2 days before the official submission deadline	PM	Submits the deliverable to the Participant's Portal	SyGMA
2 days before the official submission deadline	PM	Informs about the submission of the deliverable	All consortium partners

The quality of the deliverables will be assessed against specific quality criteria to ensure uniformity and consistency in the review process of all deliverables and to ensure the reviewers' clear understanding of and compliance with the process. The criteria, along with the aspects to be investigated, are outlined in Table 13.

Table 13. Quality criteria for deliverables

Quality criteria	Description
Clarity	The language of the text is clear (proper sentence structure is used); The text is in English (UK); The text is unambiguous; The terminology, including acronyms, is explained; There are no spelling errors; Any potentially sensitive information is appropriately worded
Completeness	All aspects of the deliverable, as described in Annex I (Part A) of the GA, are comprehensively addressed
Accuracy	All factual information used in the deliverable is supported by the respective references
Added value	Each aspect of the deliverable is analysed in adequate detail; The deliverable has scientific and/or policy value, as envisaged by the project; The language of the text is useful to the targeted audience (e.g. scientists, policymakers, etc.)
Relevance	The content is relevant to the scope of the deliverable; The deliverable is relevant to the targeted readers/audience
Compliance	The text is written in line with the deliverable template
Originality	The text does not violate academic integrity and avoids plagiarism. It includes appropriate attributions and citations when paraphrasing and summarising the work of others. Generative artificial intelligence (AI) and AI-assisted technologies should only be used to improve readability and language, with human oversight. Deliverable authors should disclose the use of such technologies and acknowledge full responsibility. In case reviewers identify violations of the aforementioned guidelines, deliverables will be extensively screened using established tools (e.g., Turnitin, tools for detecting AI-generated text etc.). In case pieces of the deliverable have been submitted for publication, or are published, in any outlet (e.g., journal article) strictly within the context of the project and of the task to which the deliverable corresponds, this will be explicitly mentioned in disclaimers throughout the deliverable.
Conciseness	The text is clear and does not include vague words or language. It avoids repetition, tautology, and unnecessary words.

Clear instructions will be given to all reviewers by the PC and the QM so that they assess the deliverables against all the above-mentioned criteria when they perform the review.

2.8 Quality Assurance of other materials

The other scientific and policy-related outputs of the project—i.e., the project commentaries, policy briefs, and working documents—will also be reviewed before they are published, mainly for compliance with the respective templates. As there are no deadlines and no formal submission for these materials, the process only includes one step, delivery of the draft document by the dissemination leader, based on the inputs of the authors, and a technical check by the management team from ICCS (as a bare minimum).

Templates are also developed for other, communication-related, project material (e.g., newsletters and press releases). For this type of resource, the management team from ICCS will be reviewing the content of every produced resource for completeness and scientific relevance, its compliance with the obligations set out in the Description of the Action, and its format for compliance with the respective template.

3 Quality Assessment

3.1 Evaluation Framework

The consortium has defined two levels of self-evaluation of the TRANSCIENCE project.

The first one is related to the assessment against the performance indicators set under the expected policy, societal, and research/scientific impacts reflected in Annex I (Part B) of the Grant Agreement. The second one is associated with the internal processes and the quality of operations of the project. The performance indicators are meant to measure the performance of the consortium against the principles and processes presented in the current QMP.

The team responsible for the quality assessment tasks, such as the data collection, data analysis and synthesis and reporting, is the project management team from ICCS, supervised by the PC and coordinated by the PM. ICCS will be collecting data regularly, closely working with all partners, and will be updating the values of the indicators on a six-month basis, which will allow the consortium to take corrective measures if needed, in a timely manner.

3.2 Performance Indicators

The tables in Annex II and Annex III summarise a) the indicators per outcome and impact and b) the communication and dissemination indicators respectively. For each indicator, the target values are extracted from Annex I (Part A) of the Grant Agreement and the column for the current value will be updated on a six-month basis (the current value at the beginning of the project is zero).

Annex IV refers to the indicators for the assessment of the quality of operations and processes of implementation.

4 Risk Management Plan

The Risk Management Plan consists of the identification of the technical (research-oriented) and management (project implementation-related) risks; the assessment of their degree of occurrence, and of their potential impact; and of reducing the possibility of materialisation for each one of the risks already foreseen in the design of the project by planning the necessary mitigation measures to be taken during implementation.

4.1 Risk analysis and mitigation measures

The risk probability and impact are reflected in the following linguistic values (Table 14).

Table 14. Linguistic values for risk impact and risk probability occurrence

Level of likelihood	Level of severity
Low	Low
Medium	Medium
High	High

Table 15 presents the risks that have been identified already since the proposal phase and the proposed mitigation measures.

Table 15. Identified risks and mitigation measures

Risk ID	Description of risk	WPs involved	Risk likelihood	Risk severity	Proposed risk mitigation measures
1	Partner(s) unable to Contribute	WP8, WP1, WP10, WP4, WP2, WP9, WP11, WP6, WP3, WP5, WP7, WP12	Low	High	Rigorous management. Failure of partners will lead to immediate capacity assessment, task reassignment. Partners with adequate skills to take over.
2	Partners' contribution to outputs not delivered on time	WP8, WP1, WP10, WP4, WP2, WP9, WP11, WP6, WP3, WP5, WP7, WP12	Medium	Low	Quality management, early directions for timely outputs. Monthly calls on WPs (reviews/ appropriate revisions) for corrective actions. 22 of 45 deliverables in Phase 1 to reveal risks; 17 milestones to track progress.
3	Low scientific and/or technical quality of deliverables	WP8, WP1, WP10, WP4, WP2, WP9, WP11, WP6, WP3, WP5, WP7, WP12	Low	High	Rigorous quality management. First deliverable drafts one month prior to deadline, for thorough internal review, detailed feedback by Coordinator, 2-5 reviewers. Partners have an excellent track record for scientific quality.
4	Low engagement of target stakeholders	WP8, WP2, WP12	Medium	High	Partners to mobilise existing networks and experience in co-creation and maintenance of CDE nodes. SAB to be asked to support if needed. Case study leaders are well linked to regional industrial clusters, whose support is already offered; CEPS well linked in Brussels policy and industry world.

5	Lack of coordination with other actors, wrong expectations	WP8, WP1, WP10, WP4, WP2, WP9, WP11, WP6, WP3, WP5, WP7, WP12	Low	Medium	Acknowledging the requirement of inclusiveness in the climate dialogue, project is oriented to co-creation (WPs 2, 8, 12). Partners' expertise in and access to transdisciplinary toolboxes to be used if needed. First workshops in Phase 1 (in Brussels & clusters) are dedicated to fostering expectations.
6	Limited policy and/or industrial impact and delays to major policy or scientific processes	WP9, WP5, WP12	Low	Medium	Project planning fits well in the policy debate. It is also envisioned to run within the IPCC AR7 cycle and to end in time for the Global Stocktake. Should associated processes be affected, impact is still envisaged beyond project duration. Disruptions to be seen as research opportunity to develop modules and the final model with capacity to assess emerging challenges.
7	Limited participation of external experts	WP2, WP9, WP11, WP7, WP12	Medium	Low	Robust, rigorous CDE plan established (Task 5.2) & dynamically updated in each phase (Tasks 9.1, 12.1), promoting the project and results with all possible means. To maximise participation, we will use existing know-how in consortium in establishing an effective communication platform, and in transferring interactions to the hybrid/virtual domain, if necessary.
8	Difficulty in organising and attending stakeholder exchanges	WP8, WP2, WP12	Medium	Medium	Organisation responsibility for physical stakeholder interactions spread to 5 partners. #staygrounded: some interactions to take place online for sustainability reasons and/or acknowledging potential barriers to travel.
9	Limited transparency of the modelling processes	WP8, WP4, WP2, WP11, WP3, WP7, WP12	Low	High	We emphasise openness for transparency (across all model developments in WP4, WP7). Open protocols for data, modelling, scenario building, and model development early (WP3) and regularly updated (Task 7.1, 11.1). Stakeholders to drive model co-development (WP2) use (WP8, WP11) & validation (WP8, WP12). All modules and the model to be released in open access with training sessions, for the modelling community and in the four case study regional clusters, and all datasets in an open repository.

10	Vulnerability of modelling to different types of uncertainty	WP8, WP4, WP11, WP7	Low	Medium	Robustness of modelling outcomes is a core aim of TRANSIENCE. Apart from consistency of the modular framework securing robustness against structural uncertainty, scenario design to consider parametric uncertainty, and a task to be devoted to assessing stochastic uncertainty (Task 11.4).
11	Limited legitimacy of models, methods, and tools	WP4, WP2, WP11, WP7	Low	High	Technical/policy briefs on capacity of new models produced, effectively disseminated. Module development (WP4), integration (WP7) and use (WP11) driven by stakeholders (WP2) and based on their needs. Open software development practices to be strictly followed (Task 7.3).
12	Limited contribution to major EU policy, industry, or scientific assessments (e.g., IPCC reports)	WP8, WP1, WP10, WP4, WP2, WP9, WP11, WP6, WP3, WP5, WP7, WP12	Low	Medium	Participation in networks supporting assessments (e.g., IAMC). Several members were IPCC AR6 authors; underlying model backbones used in EU policy design (GEM-E3, PRIMES, FORECAST) and/or IPCC AR6 (REMIND). SAB to feature experts with remarkable IPCC track record.
13	Data not being forthcoming from various sources	WP4, WP3, WP7	Medium	Medium	Existing open datasets to be used. We target EU & associated countries, for which open data is available (e.g., Eurostat). Sectoral data to be made available via module links. If needed, open alternatives to be prioritised.

ANNEX I: Allocation of reviewers to deliverables (Year 1)

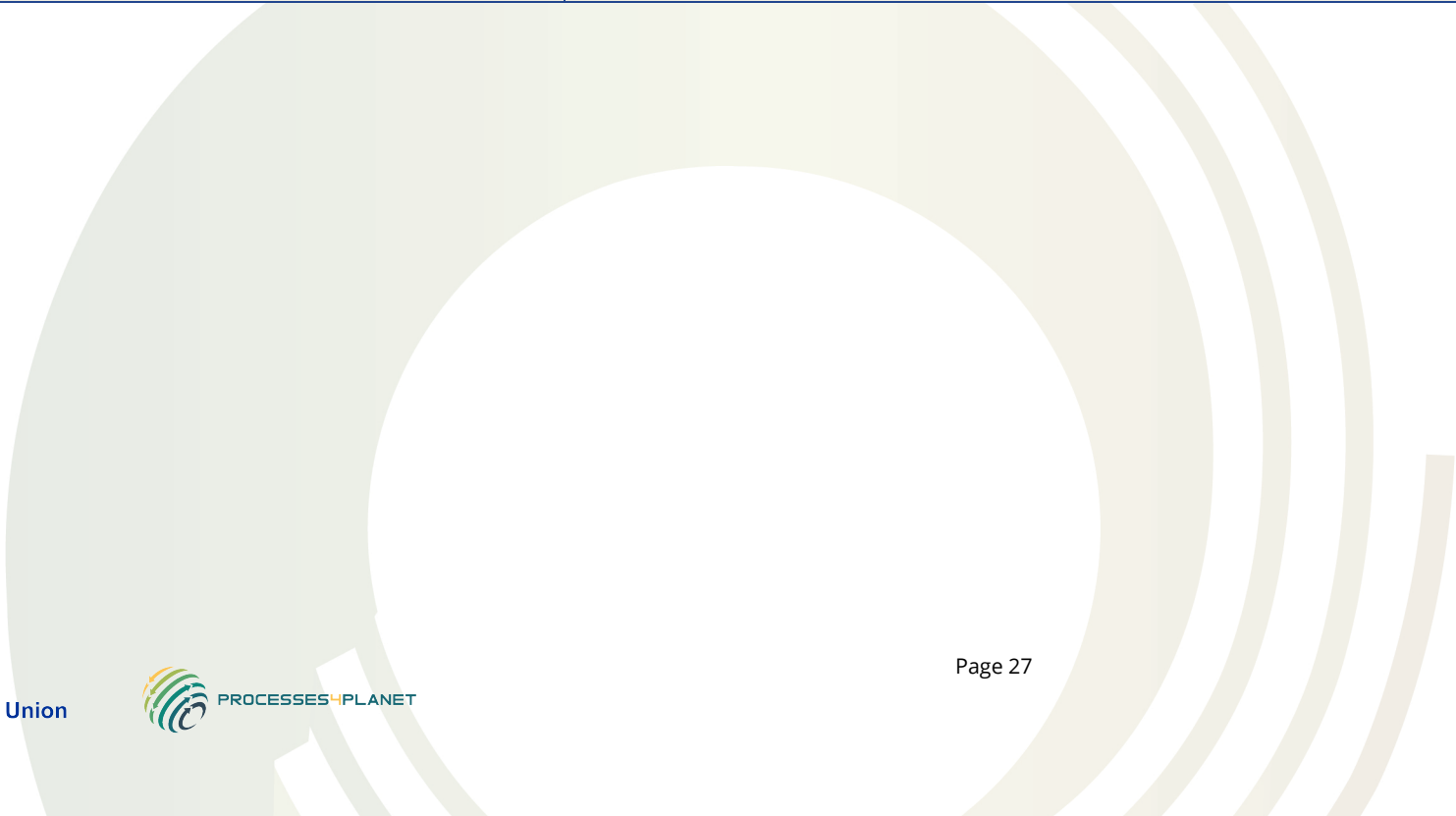
Work Package	Deliverable Number	Deliverable Name	Due Date	Deliverable Leader	Reviewer 1	Reviewer 2	Reviewer 3	Reviewer 4	Reviewer 5	Reviewer 6
2	1	Multi-layered stakeholder engagement strategy	2-Apr-2024	CEPS	ICCS	PNTEC	TECNALIA	WI	-	-
3	1	Machine-actionable, open data management plan	2-Apr-2024	ICCS	E3M	Fraunhofer	PIK	UU	UCL	-
5	1	Visual identity & website	2-Apr-2024	ICCS	CEPS	HOL	-	-	-	-
1	1	Quality management plan	7-Jun-2024	ICCS	ICCS	E3M	WI	-	-	-
5	2	The TRANSCIENCE project CDE plan	7-Jun-2024	CEPS	ICCS	HOL	-	-	-	-
2	2	Assessing needs for model applications	4-Oct-2024	WI	ICCS	E3M	HOL	TECNALIA	-	-
3	2	Open model development strategy	4-Oct-2024	UU	ICCS	E3M	Fraunhofer	HOL	WI	-
3	3	Conceptualisation of CE and policy mapping	4-Oct-2024	UCL	CEPS	WI	PSI	-	-	-
3	4	Framework for industry transition modelling	29-Nov-2024	UU	ICCS	E3M	Fraunhofer	HOL	WI	UCL

ANNEX II: Outcome & Impact Indicators

Expected Outcomes (EO)/ Expected Impacts (EI)		Performance Indicator/ Targets
EO1	Development of a model, enhancement of existing modelling tools towards understanding the pathways for industry, and Energy Intensive Industries (EII) in particular, to contribute to EU's climate neutrality.	(i) MIC3 models, along with each satellite model fully open in GitHub (repositories 'starred'/'watched' at least 50 times) (ii) 10 open-access papers on model design and methodology (each viewed by 100 unique users in Zenodo) (iii) 2 papers published on 2 special I2AM PARIS workspaces results accessed by at least 500 unique users (iv) 5 reports on results from conceptualising CE, understanding links with decarbonisation, and assessing interactions with competitiveness, innovation, global sustainability (200 views in Zenodo each)
EO2	Modelling of scenarios of possible pathways of how industry, and EII in particular, can become climate neutral according to: (1) their energy demand and use and energy efficiency, (2) their emissions including process emissions; (3) use of raw materials, chemicals and water; (4) their production of consumer goods/equipment/construction products; (5) possibility of replacing fossil carbon in materials by more sustainable streams.	(i) results of all scenarios will be documented in at least 5 workspaces in I2AM PARIS and analysed in 2 reports, 3 policy briefs, 3 industry guides and 1 high-level synthesis for industry (each publication to ensure 200 views in Zenodo) (ii) publish 5 papers based on scenarios (each targeting an EII sector or process industry) (iii) case study results visualised in 5 workspaces in I2AM PARIS, published in 5 papers, and presented in 5 events (policy and scientific)
EO3	Facilitate future EU and national industry, climate, and energy policy assessments. Climate neutrality of industry will be a strong priority for the EU and national policies by 2030 and towards 2050 as industry is considered as hard-to-abate sector. Any policy initiatives on the EU or national level will require a robust, forward-looking analytical basis interlinked with macro-economic and energy system trends and such can be provided by modelling.	(i) 5 papers based on scenarios (each targeting an EII sector or process industry) (ii) all results presented in at least 10 events (adding slides on SlideShare) to reach researchers, policymakers, and industry actors (iii) 2 papers published on databases results uploaded in 2 special I2AM PARIS workspaces accessed by at least 500 unique users (iv) 5 reports on results from conceptualising CE, understanding links with decarbonisation, and assessing interactions with competitiveness, innovation, global sustainability (200 views in Zenodo each) (v) 80% of participants in surveys and workshops on validation of modelling results satisfied (vi) 10 new papers and reports to reference insights on stakeholder needs (vi) 2 reports documenting synergies and at least 10 papers, briefs, or guides jointly produced with relevant projects and members of modelling communities (e.g., IAMC)
EO4	Set the climate neutrality transition pathways for	(i) co-creation activities will be documented in 5 reports, each viewed by at least 200 unique

	process industries in an open and transparent manner via design, modelling, and assessment of pathways for these industries. Modelling exercises can set the framework conditions and project market uptake of transformative solutions and products.	users in Zenodo (ii) outcomes of surveys and workshops on validation of modelling results documented in 2 workspaces in I2AM PARIS, published in at least 2 papers, and presented in a conference/event. (iii) 80% of participants satisfied and 10 new papers and reports reference insights on stakeholder needs
EO5	Enhance the knowledge about climate neutrality pathways for industry and academia as the resulting modelling capacity (model code) and input data should be fully transparent and published under an open-source licensing.	(i) MIC3 models, along with each satellite model fully open in GitHub (repositories 'starred'/'watched' at least 50 times) (ii) input data and models uploaded on a server, allowing users to interact with them via APIs with at least 50 external model users (iii) case studies and co-creation activities with the 4 industrial clusters documented in 2 reports, 2 policy briefs, & 2 industrial guides (at least 200 visitors in Zenodo) (iv) databases uploaded in 2 special I2AM PARIS workspaces, featuring interactive search and visualisation (v) participate in at least 5 events, strengthening the policy-research-industry interface for industrial transition
EI1	Making Europe the first digitally led circular, climate-neutral and sustainable economy through the transformation of its mobility, energy, construction, and production systems.	(i) references in 15 papers and at least 10 external modelling teams adapting models (ii) scenario results to inform at least 5 policy documents (e.g., EC climate strategies or national climate action plans; Green Deal Industrial Plan), 5 industrial strategies (e.g., WBCSD reports), and 5 NGO publications (e.g., from C40 cities, Climate Alliance, Climate Action Network) (iii) case studies to be used by policymakers and industrialists as examples of successful decarbonisation and circularity and inform research with at least 15 citations each (iv) open science toolbox to guide model development to be viewed by at least 250 unique users, described in a methodological paper and presented in 3 openmod meetings aiming for at least 10 modelling teams to use and reference
EI2	Promoting an open strategic autonomy by leading development of key digital, enabling, emerging technologies, sectors, value chains to accelerate and steer the twin transition through human-centred technologies and innovations	(i) scenario results to inform at least 5 policy documents (e.g., EC climate strategies or national climate action plans; Green Deal Industrial Plan), 5 industrial strategies (e.g., WBCSD reports), and 5 NGO publications (e.g., from C40 cities, Climate Alliance, Climate Action Network) (ii) case studies to be used by policymakers and industrialists as examples of successful decarbonisation and circularity and inform research with at least 15 citations each (iii) at least 10 references in papers and policy reports (iv) results from conceptualising CE, understanding links with decarbonisation, and assessing interactions with competitiveness, innovation, global sustainability will be published in 5 papers each cited in at least 15 future papers (v) 80% of participants in surveys and workshops on validation of modelling results satisfied (vi) 10 new papers and reports to reference insights on stakeholder needs

E13	Creating a more resilient, inclusive, democratic European society, prepared/responsive to threats and disasters, addressing inequalities, providing high-quality healthcare, empowering all citizens to act in the twin transition.	(i) attract at least 1,000 unique users to try the simplified MIC3 (ii) at least 5 policy documents (e.g., EC climate strategies or national climate action plans; Green Deal Industrial Plan), 5 industrial strategies (e.g., WBCSD reports), and 5 NGO publications (e.g., from C40 cities, Climate Alliance, Climate Action Network)
E14	Restoring Europe’s ecosystems and biodiversity and managing sustainably natural resources to ensure food security and a clean and healthy environment.	(i) results from conceptualising CE, understanding links with decarbonisation, and assessing interactions with competitiveness, innovation, global sustainability will be published in 5 papers each cited in at least 15 future papers (ii) papers/ scenarios to be referenced at least 30 times in the upcoming IPCC, IPBES, IRP, and UNEP’s Emissions Gap reports
E15	Global leadership in clean, climate-neutral and resilient industrial value chains, circular economy and climate-neutral and human-centric digital systems and infrastructures	(i) papers/ scenarios to be referenced at least 30 times in the upcoming IPCC, IPBES, IRP, and UNEP’s Emissions Gap reports (ii) results from conceptualising CE, understanding links with decarbonisation, and assessing interactions with competitiveness, innovation, global sustainability will be published in 5 papers each cited in at least 15 future papers (ii) at least 10 modelling teams to use and reference toolbox on model development



ANNEX III: Communication and Dissemination activities and indicators

Task	Dissemination and exploitation objectives	Main dissemination channel/activity	Months
T2.1, T2.2	Define guidelines for engagement activities and establish a stakeholder database	Stakeholders contacted for permitting their inclusion in the database and registering for future activities	1-5
T2.3, T8.1	Co-define research, policy, industry questions for model development & scenario modelling	Workshops, webinars, bilateral interviews	4-10, 19-36
T8.3, T11.5	Ensure the validation and desirability of satellite modules and the MIC3 framework	Workshops, and surveys across all stakeholder groups based on the co-defined questions	29-34, 37-48
WP5, WP9, WP12	Maximise project outreach in science, policy, society, & notably industry, at all geographic levels (including in regional industry clusters)	Participate in relevant high-impact events, establish ties with the Processes4Planet Partnership, publish policy briefs, industry guides, and scientific papers	1-48
T11.2	Translate stakeholder needs into scenarios	Workshops and webinars with all stakeholder groups	37-38
T11.6	Provide practical examples of exploiting the MIC3 framework or its modules individually	Partner with industrial clusters in Europe and provide model capacity to underpin their sustainability plans	37-48
T12.4	Ensure the exploitation potential of the developed models with industry stakeholders	Develop a simplified, operational version of MIC3 and promote it to policymakers, industries, and society	37-48

Activity	Objective	Expected Audience	Monitoring tool
TRANSIENCE visual identity (Task 5.1)	Creating distinctiveness and appeal of the project to all stakeholder groups	All stakeholder groups: policy industry, research, civil society	Summary of all monitoring means
Enhanced I2AM PARIS platform (Tasks 3.3, 7.3, 8.3, and 12.3)	Facilitating harmonisation/modelling; fostering co-creation; validating the usability/desirability of MIC3/results	All stakeholder groups 2000 unique users/year 30% of return visitors	Google Analytics
Policy briefs, industry guides (Tasks 9.3, 12.3)	Briefs and guides (and synthesis documents) to inform EU policy and European industry on project results	Policymakers, industry 5 policy briefs (& 2 reports); 5 industry guides (& 1 synthesis)	Number (#) of briefs and guides

Project website (Task 5.1)	Aiming to present and disseminate the project's results as well as to be a referenced source with useful material and links related to industry transition	All stakeholder groups 2000 unique visitors/year 30% of return visitors <50% bounce rate	Google Analytics account set up when website launched.
Networking with relevant EU projects (Tasks 5.3, 9.2, 12.2)	Creating awareness of project, sharing results in IAM, industrial transition, sustainability research communities	Academia Project reference in 10 projects, joint papers, meetings, etc.	Digital monitoring, # of joint papers & acknowledgements
Social media channels (Tasks 5.2, 9.1, 12.1)	Creating awareness of project topic, objectives, results among scientists, policy, industry, citizens, and others	All stakeholder groups 1,000 #industry4netzero and/or #transience uses, 500 followers	Twitter, Facebook, LinkedIn analytics, Twitonomy, etc.
Bi-monthly newsletters (Tasks 5.2, 9.3, 12.3)	Creating awareness and involving stakeholders in progress; reports and commentaries of policy interest	All stakeholder groups 4000 recipients/downloads 30% opening rate	Email monitoring system; Website download analytics
Infographics & videos (Tasks 5.2, 9.3, 12.3)	Creating awareness and familiarity with project among non-experts	Industry, society, policymakers >1,500 views/downloads	YouTube/Instagram stats; # downloads
Blog posts, media articles, commentaries (Tasks 5.2, 9.3, 12.3)	Articles on climate, circular economy, industry transformation in leading news/media websites and blogs	Civil society At least 10 articles and press releases in the project's lifetime	Media monitoring Copies of articles shared on website
Final EU event (Task 12.3)	Sharing final project results	All stakeholder groups Audience of 70-100	# of attendees; minutes; photos
Scientific outreach (Tasks 9.3, 12.3)	Academic dissemination of project results (fully open access)	Academia > 30 papers; > 20 conferences	Digital monitoring, OpenAIRE entries

ANNEX IV: Quality Indicators

Performance Indicator	Targets
% of comments of reviewers addressed by the Deliverable Leaders/authors	>90%
Average Delay (in days) in the submission of draft deliverables for internal review	<7
Average Delay (in days) in the submission of the final deliverables to the Participants Portal	0
Average number of inconsistencies according to the deliverable template (format, layout, spelling, etc.) in the versions ready for the final editing before submission	<3
% of internal effort reports delivered on time	>80%
Delay (in days) in the submission of the periodic report	0
Delay (in days) in the submission of the final report	0