Enhancing Trust, Integrity, and Efficiency in Research through Next-Level Reproducibility

Deliverable D1.1 – Project handbook (including management, research integrity & quality assurance plans)

27/04/2023

Lead Beneficiary: KNOW

Authors: Eva Kormann, Thomas Klebel, Tony Ross-Hellauer
Reviewers: TIER2 Consortium

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1.0	Final version	27 April 2023	Thomas Klebel KNOW

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Executive Summary

The project handbook outlines the internal procedures of the TIER2 project in terms of project execution, administrative management, management structures, communication and collaboration, and research integrity and quality assurance. It contains all relevant information for the Consortium partners to refer to during the project to complete and fulfil all project management, reporting, and communication tasks. Additionally, it describes relevant tools to be used for reporting and management of the project as well as measures to ensure the high quality of the project's results.

The project handbook describes the following aspects of the project:

- Consortium and work package structure
- Management and decision-making structures
    - Internal communication
    - File storage
- Research Integrity
- External communication
- Deliverable management and quality assurance process
    - Quality and internal review deadlines for deliverables
    - Document structure
    - File naming
    - Collaborative writing
- External reporting to the European Commission
- Internal reporting to the coordinator
- Key dates
- Key performance indicators

List of Abbreviations

D – Deliverable
DMP – Data Management Plan
EC – European Commission
EU – European Union
GA – Grant Agreement
MS – Milestone
M – Month (of the project)
PI – Principal Investigator
PSC – Project Steering Committee
R – Report
WP – Work Package

1. Introduction

The purpose of the project management handbook is twofold. First, it is a reference document for Consortium partners containing the main information of the day-to-day project management and providing links to further information where required. In addition, the document outlines the standard procedures the TIER2 Consortium will implement when delivering project reports and deliverables, including file naming conventions and the use of agreed procedures and templates where relevant. This handbook is a living document and will be updated periodically during the project. For the avoidance of doubt, the Grant Agreement and Consortium Agreement take precedence over this document.

1.1. Consortium

The TIER2 Consortium brings together an international group of partners collectively representing the interdisciplinary expertise in reproducibility issues in targeted research fields, processes of research culture change, capacity-building and knowledge infrastructure. The partners have been carefully selected for their expertise and experience to propose a holistic, pragmatic methodology.

The Consortium includes partner institutions from seven European countries (Austria, Bulgaria, Denmark, Germany, Greece, Netherlands, UK). Table 1 gives an overview of the institutions that are participating in TIER2, including the principal investigator.

Table 1: *Members of the Consortium.*

Short name	Institution	Role	PI	Country
KNOW	Know-Center GmbH, Open and Reproducible Research Group	Coordinator	Tony Ross-Hellauer	AT
ARC	Athena – Athena Research & Innovation Center In Information Communication & Knowledge Technologies	Partner	Thanasis Vergoulis	GR
VUmc	Stichting VUmc	Partner	Joeri Tijdink	NL
AU	Aarhus Universitet	Partner	Jesper Schneider	DK
PENSOFT	Pensoft Publishing	Partner	Lyubomir Penev	BG
GESIS	GESIS-Leibniz-Institut Für Sozialwissenschaften EV	Partner	Hajira Jabeen	DE
OpenAIRE	OpenAIRE AMKE	Partner	Natalia Manola	GR
Charite	Charité - Universitätsmedizin Berlin	Partner	Alexandra Bannach-Brown	DE
FLEMING	Biomedical Sciences Research Center Alexander Fleming	Partner	Martin Reczko	GR
UOXF	The Chancellor Masters & Scholars of The University of Oxford	Associated Partner	Susanna-Assunta Sansone	UK

1.2. Work Packages

The work plan consists of five work packages (WPs) as illustrated in Figure 1. The work packages are nested such that the next builds on, and delivers output back to, each preceding work package.

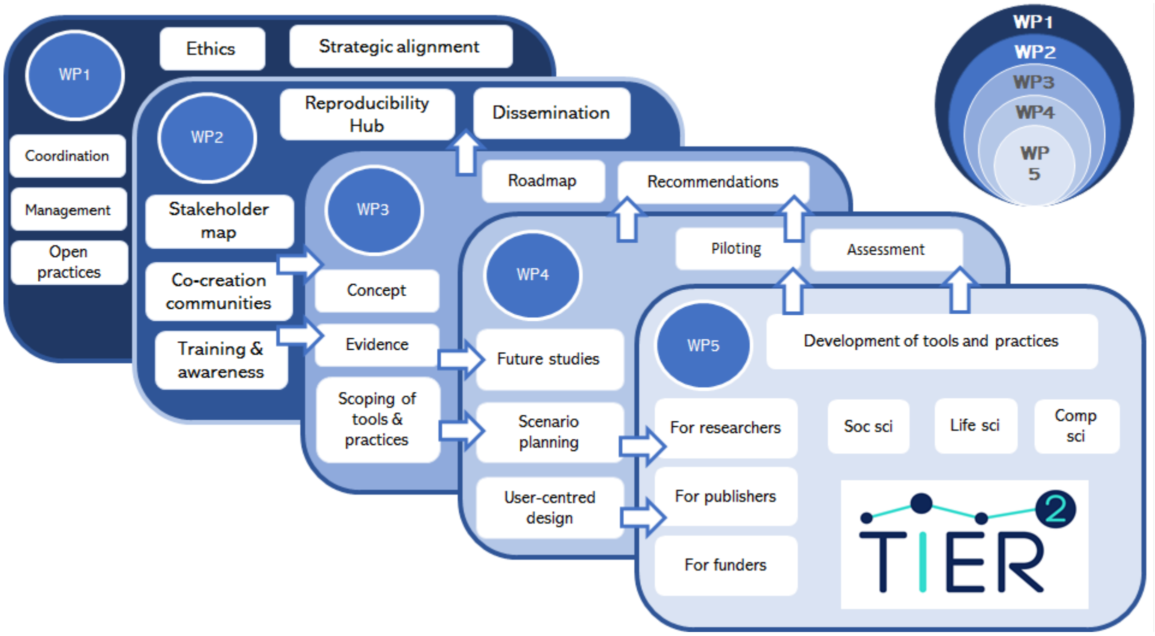

Figure 1: *TIER2 work package structure.*

The TIER2 overall methodology also follows six stages according to our stated objectives (see Figure 2). Each stage incorporates checks and balances between all activities to ensure alignment.

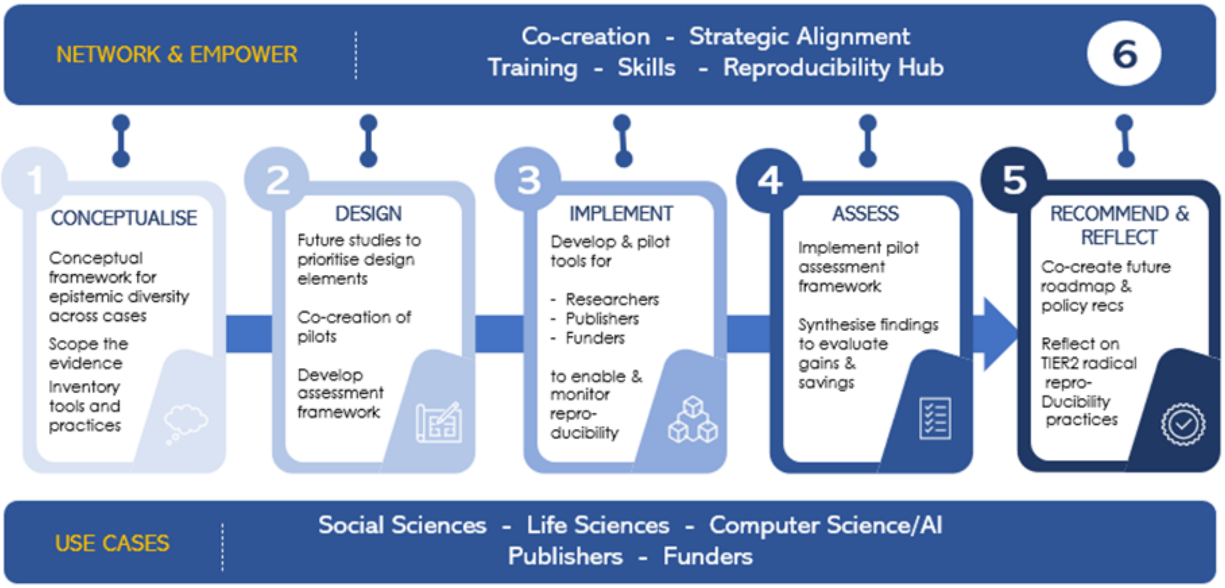

Figure 2: *TIER2 methodological steps.*

WP1 Coordination and Management coordinates all financial and day-to-day activities of TIER2. It ensures that partners work together effectively and monitors the projects' progress, resources and activities. WP1 is also responsible for meeting contractual requirements and ensuring the project adheres to the highest ethical, legal, integrity and quality assurance standards.

WP2 Communities, Communication and Dissemination ensures effective communication (within the project) and dissemination of outcomes (beyond the project). It builds communities and networks for co-creation and communication with all key stakeholders in reproducibility and aims to increase awareness/skills for reproducibility tools and practices across disciplines.

WP3 Concept, Evidence, Synthesis and Recommendations creates a conceptual framework for assessing impact pathways to increase reproducibility across epistemic contexts, which will then be used to map evidence regarding reproducibility across contexts. This forms the knowledge base for later design, development and piloting activities. Finally, this WP will synthesize findings and help inform final recommendations.

WP4 Community-Driven Design and Piloting of Reproducibility Tools and Practices uses future studies, interviews, focus groups and co-creation methods to engage communities to steer and assist the development/adaptation of reproducibility tools and practices. It will prepare and run pilot scenarios for developed tools and practices and evaluate them across contexts.

WP5 Development of Tools and Practices for Communities develops, extends and/or adapts practical reproducibility-related tools for funders, publishers, and researchers, to be used in the WP4 pilot activities. An agile, continuous, co-creative development approach (in constant dialogue with WP4) will be used to ensure that the needs and requirements of pilot users the stakeholder communities are met.

2. Project Management

2.1. Project Management Structure

With the specific objectives of TIER2, a strong expertise and organisational structure is required in order to ensure the quality and achievability of the results. As the project will be based upon existing state-of-the-art technologies in conjunction with a diversity of expertise and methodologies, strong collaboration between the partners is an explicit requirement in order to build a project-wide knowledge base. Adequate structures have been put in place to ensure and enforce the collaborative, integrative and business aspects of the project. The project management structure presents the different roles of the beneficiaries and partners according to the work plan and needed levels of decision and advice. The following specific roles are implemented in this structure:

Project Coordinator (Tony Ross-Hellauer): The Project Coordinator will be responsible for the overall project and its objectives, quality, schedule and budget. Together with the Project Manager, he is the contact point for the European Commission and chairs the Project Steering Committee. Supported by the coordination team at Know-Center, the coordinator’s main responsibilities are to: (1) assure efficient project management; (2) manage the project’s decision-making process; (3) chair the Project Steering Committee (PSC) and lead the set of activities to be carried out by this committee; (4) coordinate technical/support activities amongst work-packages; (5) assure the quality and timely delivery of TIER2 deliverables; (6) serve as the only interlocutor of the Consortium with the European Commission; and (7) act as the Financial Officer within the Consortium, including managing the preparation of financial statements for the Commission.

Project Manager (Thomas Klebel): The Project Manager will be responsible for the day-to-day coordination of the project. He will ensure that the management procedures as defined below are carried out throughout the project's lifetime and that supporting tools and templates will be made available. Management tasks include: consolidation of the project planning, progress reports, milestone monitoring, financial management, etc. by gathering and aggregating inputs from the project partners. It also includes coordination of the communication between partners aligned to the procedures and communication with the European Commission.

Project Steering Committee (PSC): The PSC will be composed of one senior representative from each partner. It deals with all decisions related to the Consortium agreement and to the respective partners, oversees contractual issues with the European Commission, and is the highest body for solving disputes. The PSC will be mainly responsible for: (1) the definition of the overall project strategy; (2) fulfilling the Commission requirements pertaining to preparation of progress and financial reports; (3) deciding on long-term exploitation plans; (4) conflict resolution within the Consortium, under chairing of the Project Coordinator; (5) technical coordination and decision-making (assessment of the technical work, interchange of technical information amongst partners, submission of deliverables, etc.); and (6) risk management. The PSC will meet once a month. Partners should ensure that they are represented (either with the senior representative or a deputy) in each meeting to ensure efficient communication within the project.

Work package Leaders: WP leaders are responsible for implementing the main activities of the project. WP leaders ensure and facilitate timely communication between the task leaders and oversee risk management for all tasks within the work package. Hence, their responsibilities include: (1) technical management of their WPs, including timely submission of deliverables and milestones, liaison with task leaders; each WP leader will also be responsible for the quality assurance of documents and deliverables produced; (2) technical reporting to the PSC; and (3) communication exchange amongst the partners involved in their WP(s).

Task Leaders: A task leader has been designated for each of the tasks in the WPs, performing technical management of the corresponding activities: planning, monitoring and reporting to the WP leader. Each individual partner will be ultimately responsible for the delivery of technical and administrative outputs assigned to it.

Advisory Board: The Advisory Board is composed of high-level external stakeholders with a demonstrated record/interest in Reproducibility, including independent experts as well as representatives of key organisations. Members will be invited based on the suggestions of the beneficiaries. The board will advise the project in strategic matters and will provide advice for the high-level dissemination and outreach strategy of the project. The Advisory Board will also be essential for the verification and finalisation of the project's core results and recommendations. Table 2 lists all confirmed advisory board members. If the need arises throughout project implementation, the advisory board might be extended at a later point in time.

Table 2: *Confirmed Advisory Board Members.*

Name	Institution	Country
Olavo Amaral	Institute of Medical Biochemistry, Federal University of Rio de Janeiro	Brazil
Oleksandr Berezko	Department of Social Communications and Information Activities, Lviv Polytechnic National University	Ukraine
Maura Hiney	Health Research Board Ireland	Ireland
Jakub Rajčáni	Comenius University Bratislava	Slovakia
Catriona MacCallum	Hindawi	UK
Lex Bouter	Amsterdam University Medical Centers, Vrije Universiteit	Netherlands
Timothy Errington	Center for Open Science, Charlottesville, Virginia	USA
Sabina Leonelli	University of Exeter	UK

2.2. Internal Communication

2.2.1. Emails

Day-to-day communication will be based on emails. All emails should include "TIER2" in the subject header. Know-Center has created mailing lists for the Consortium as a whole, for legal and financial staff of all partner institutions, for the PSC, for the advisory board, and for each WP. In addition to group emails, individual reminders will be sent if needed. An overview of available mailing lists and the complete lists can be accessed in the TIER2 Microsoft Teams in the mailing lists file. If a person needs to be added/removed from the list (or needs to be added to Microsoft Teams), then each partner should:

- Edit the respective list(s) in the mailing lists file.
- Inform the project manager of the changes made so that the mailing lists can be edited.

2.2.2. Meetings

In order to keep all WP members and project partners up-to-date and coordinate tasks, monthly meetings will be held for each WP, as well as the PSC. WP leaders will organize and chair the meeting with their WP members. The project coordinator and project manager are responsible for organising the monthly meeting of the PSC.

During less intensive periods or when many partners are absent (e.g., summer), meetings might be held less frequently (e.g., every two months), depending on the project requirements and progress. During busy periods, they may be held more frequently (e.g., every two weeks or upon request).

2.2.3. Internal News Briefing via Email

To foster transparency among the Consortium about all outreach and communication activities, the leader of WP2 (PENSOFT) will coordinate the production and dissemination of an internal project newsletter every 4 months detailing major steps in project progress, including a summary of events, outreach, and public discussions.

2.2.4. General Assemblies

General assemblies are meetings of the PSC and will be scheduled as required (either face-to-face or virtually) and held in advance of major decisions to be made. The following decisions shall be taken at a general assembly, subject to veto of any Consortium member(s) whose intellectual property rights could be directly and adversely affected by such a decision:

- Content, finances and intellectual property rights
  - Proposals for changes to Annexes 1 and 2 of the Grant Agreement to be agreed by the Funding Authority
  - Modifications to Attachment 1 (Background Included)
  - Additions to Attachment 3 (List of Third Parties for simplified transfer according to section 8.2.2)
  - Additions to Attachment 4 (Identified Affiliated Entities)
- Evolution of the Consortium
  - Entry of a new Party to the Consortium and approval of the settlement on the conditions of the accession of such a new Party
  - Withdrawal of a Party from the Consortium and the approval of the settlement on the conditions of the withdrawal
  - Identification of a breach by a Party of its obligations under this Consortium Agreement or the Grant Agreement
  - Declaration of a Party to be a Defaulting Party
  - Remedies to be performed by a Defaulting Party
  - Termination of a Defaulting Party's participation in the Consortium and measures relating thereto
  - Proposal to the Funding Authority for a change of the Coordinator
  - Proposal to the Funding Authority for suspension of all or part of the Project
  - Proposal to the Funding Authority for termination of the Project and the Consortium Agreement

2.3. File Storage

The Consortium has decided to use Microsoft Teams as a platform for storing, sharing and collaborating on documents. All partners have been added to the project platform. It will be used for sharing working documents, for collaboratively writing deliverables (see section 5.4 for further details), and for holding project management information. Sensitive data (including survey data, interview transcripts, etc.) will be kept on internal servers of the project partners. The procedures will be described in detail in deliverable D1.2 (Data Management Plan, to be submitted Month 6).

3. External Communication

All external communication activities (events and publications) will be collected via dedicated forms, which all members of the Consortium are asked to fill in continuously. All created output will be available under the Creative Commons Attribution 4.0 International (CC BY 4.0) licence.

3.1. Funding Acknowledgement

All TIER2 communication materials as well as publications and other outputs must acknowledge EU support by displaying the European flag (emblem) and funding statement. Additionally, the following disclaimer must be included:

“Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union or the Research Executive Agency. Neither the European Union nor the Research Executive Agency can be held responsible for them."

3.2. Logo

The logo of TIER2 project is presented in Figure 4. It should be included on all the presentation and communication materials. The logo in its various sizes and file-formats can be found in the Microsoft Teams WP2 – Logos folder. The colours and font used in the logo are described in the visual identity guide.

Figure 4: *The TIER2 logo*

3.3. Websites and Social Media Platforms

The website of the project is available at https://tier2-project.eu/, and presents the project, the team and will include a section on the advisory board. Additionally, it provides access to all project results and materials. It will further be used to announce events and publish blog posts about the progress of the project.

The handle for the Twitter account for the project is: @TIER2Project
TIER2’s LinkedIn can be found here.
Additionally, a YouTube channel was set up to upload videos informing about the project.

3.4. Templates for Deliverables and Presentations

The leader of WP2 (PENSOFT) has created templates for deliverables and presentations featuring the colours from the TIER2 logo, which also include the required acknowledgment for funding. All presentations in which TIER2 results are disseminated must be branded as such (hence, not with, for example, partner institution templates). Other templates may only be used for presentations in which most of the content is not related to TIER2. Even in these cases, slides with TIER2 results need to at least feature the logo, and the final slide must acknowledge funding for TIER2 as described above.

Deliverables should not deviate from the structure and style of the template. The templates are available in the Microsoft Teams WP2 – Templates folder. See section 5.1 for further details on document structure and style.

4. Deliverable Management and Quality Assurance Process

The Microsoft Teams for TIER2 contains the folder Deliverables. One subfolder should be created for each deliverable (named Dx.y_max3words_deliverable_name). All deliverables in TIER2 are flagged as PUBLIC and will therefore automatically be published in CORDIS following submission. This should be kept in mind when preparing deliverables for submission.

4.1. Deliverable Document Structure and Style

Deliverables must use the Deliverable template. Its style (including fonts, colours, headers/footers, numbering of headings) and structure must be maintained. The following general structure should be followed and is as such provided in the deliverable template of the project:

- Cover page (project title, title of deliverable, date, lead beneficiary, authors, reviewers)
- Document Information and Revision History (information table, revision history table)
- Table of Contents
- Executive Summary
- List of Abbreviations
- Core part
- Acknowledgements
- References
- Annexes (optional)

4.2. Internal Review Process and Deadlines for Deliverables

The lead author (representing the responsible partner) is responsible to submit the deliverable by ensuring the latest version is stored within the respective folder in Microsoft Teams and informing the Consortium via email within the deadline (as described below). All deliverables will be reviewed internally in the Consortium. Administrative deliverables will be reviewed by all partners. Content/research deliverables will be reviewed by two project partners not or only marginally involved in the creation of the deliverable (see Table 4). Reviewers must ensure that all content is consistent with the provided summary, the objectives of the deliverable, are scientifically correct and of high-quality. In addition, the reviewers should also perform proof-reading and grammar checks. The reviewer must provide comments or modifications using the track changes features.

The lead author and their partner institution are then responsible for ensuring that all reviewer comments are addressed in a timely fashion to ensure submission to the EC by the official delivery date. All deliverables will be uploaded to the EC Participant Portal by the coordinating partner (Know-Center). Hence, lead authors should ensure that the final deliverable is stored within the dedicated Microsoft Teams folder and inform the coordinating partner at least two days in advance of the final submission date.

Table 3 presents the timeline for the deliverable review process in terms of weeks and days before the due date. The due date always corresponds to the last date of the month number indicated in the Description of Action, starting with January 2023 as M1 (i.e., M24 indicates the due date 31.12.2024). Additionally, Table 4 lists the specific reviewers assigned for all deliverables that require review.

Table 3: *Timeline for deliverable review process.*

Deadlines for deliverable review process	
4 weeks before	● Deliverable uploaded for review in respective Microsoft Teams folder. ● Send an email to the designated reviewers informing them that the document is ready for review. ● Announce this on the corresponding WP mailing list so that all WP members have the opportunity to read and comment on the deliverable.
2 weeks before	● Reviews available in Microsoft Teams
1 week before	● End of cycle of corrections and further revisions (if necessary). ● Whole Consortium can now comment and give approval.
2 days before	● Final version in dedicated deliverable subfolder in Microsoft Teams. ● WP leader does final quality check.
Due date	• Deliverable submitted to the Commission by project coordinator.

Table 4: *Assigned reviewers and deadlines for all deliverables.*

ID	Deliverable name	Lead	Type	Due date	Actual delivery date	Internal delivery date	R1	R2
D1.1	Project handbook (including management, research integrity & quality assurance)	KNOW	R	M04	30.04.23	31.03.23	Whole consortium	
D1.2	Data Management Plan	ARC	DMP	M06	30.06.23	31.05.23	KNOW	GESIS
D1.3	Data Management Plan (Update)	ARC	DMP	M18	30.06.24	31.05.24	KNOW	GESIS
D1.4	Autoethnographic reflections on implementing radical reproducibility in the TIER2 project	AU	R	M36	31.12.25	30.11.25	KNOW	ARC
D2.1	Stakeholder Communication & Engagement Plan	PENSOFT	R	M06	30.06.23	31.05.23	Open AIRE	KNOW
D2.2	Stakeholder Communication &	PENSOFT	R	M24	31.12.24	30.11.24	Charite	OpenAIRE

	Engagement Plan (First Update)							
D2.3	Reproducibility Hub	VUmc	Other	M36	31.12.25	30.11.25	UOXF	Charite
D2.4	Stakeholder Communication and Engagement Plan (Second Update)	PENSOFT	R	M36	31.12.25	30.11.25	Open AIRE	VUmc
D2.5	Policy Briefing 1	KNOW	R	M12	31.12.23	30.11.23	ARC	VUmc
D2.6	Policy Briefing 2	KNOW	R	M36	31.12.25	30.11.25	ARC	VUmc
D3.1	Reproducibility Impact Pathways: State-of-play on methods, tools, practices to increase reproducibility across diverse epistemic contexts	KNOW	R	M12	31.12.23	30.11.25	ARC	VUmc
D3.2	Validated key impact pathways for reproducibility, including recommendations	KNOW	R	M36	31.12.25	30.11.25	ARC	UOXF
D4.1	Future reproducibility across epistemic contexts: Report on future studies/ backcasting outcomes	VUmc	R	M09	30.09.23	31.08.23	UOXF	ARC
D4.2	Pilot implementation and assessment plans	GESIS	R	M18	30.06.24	31.05.24	KNOW	Pensoft
D4.3	Pilot implementation reflection report including assessment of efficacy & recommendations for future developments	VUmc	R	M30	30.06.25	31.05.25	AU	KNOW
D5.1	Reproducibility toolset (tools & practices) for researchers	ARC	Other	M34	31.10.25	30.09.25	KNOW	FLEMING
D5.2	Reproducibility toolset (tools & practices) for publishers	KNOW	Other	M34	31.10.25	30.09.25	AU	Pensoft
D5.3	Reproducibility toolset (tools & practices) for funders	ARC	Other	M34	31.10.25	30.09.25	AU	GESIS

4.3. File Naming and Version Control

During drafting, review, editing and final submission, each deliverable must be individually identifiable using a unique document name to ensure version control. The deliverable identifier must be used in the deliverable file name. We suggest that the first version number is 0.1 and is updated each time a new person edits the deliverable, but it may be changed more often if one person makes several considerable changes. Authors and reviewers must be identified in the document revision history table on the second page of each deliverable. As file names, please use the following:

- For the draft phase: Dx.x_max3words_deliverable_name_DRAFT.docx
- For the review phase: Dx.x_max3words_deliverable_name_REVIEW.docx
- For the final version, we will use: TIER2_Dx.x_max3words_deliverable_name.docx

For drafting, one file can be used continuously. In case separate files are used, they should be delineated with version numbers at the end of the file names.

4.4. Collaborative Writing

4.4.1. Document drafting software

The default environment for drafting is Microsoft Teams. In cases where authors want or need to accommodate many references, it is recommended and preferred to use Google Docs for drafting, since it is compatible with Zotero (see next section). When Google Docs is used for drafting, a deliverable document should still be created within Teams containing a link to the Google Doc.

4.4.2. Zotero

- A group library for TIER2 has been created in Zotero, to facilitate collaborative working on manuscripts, and share references and paper PDFs with partners. Within this library, all partners are invited to create folders for each WP, task or publication as needed. All group members can add references to these folders and access references added by other partners. Instructions for using group libraries can be found here.
- Install Zotero: https://www.zotero.org/download/
- Install the connector plugin for using Zotero from Google Doc and adding references from your browser: https://www.zotero.org/download/connectors. This allows adding references from your browser to the currently active Zotero library.
- How to use Zotero in Google Docs:
    - Zotero - Add/edit citation to insert a new reference. When you do this the first time, you'll have to choose the style and set the language to English in the window that opens. TIER2 will follow the citation style of the American Psychological Association 7th edition. In addition, make sure to set the language to English. (Otherwise, your default browser language will be used in citations, i.e. "u.a." instead of "et al." in German.) Changing these settings is possible via Zotero - Document preferences.
    - Zotero - Add/edit bibliography to insert a list of references at the end of the document.

- For more instructions on using Zotero with Google Docs, Word, or LibreOffice to cite references and create bibliographies in manuscripts: https://www.zotero.org/support/word_processor_integration

5. Research Integrity

5.1. Principles

TIER2 commits to follow the ALLEA European Code of Conduct for research integrity, following its fundamental principles of research integrity:

- "**Reliability** in ensuring the quality of research, reflected in the design, the methodology, the analysis and the use of resources.
- **Honesty** in developing, undertaking, reviewing, reporting and communicating research in a transparent, fair, full and unbiased way.
- **Respect** for colleagues, research participants, society, ecosystems, cultural heritage and the environment.
- **Accountability** for the research from idea to publication, for its management and organisation, for training, supervision and mentoring, and for its wider impact."

5.2. Good Research Practices

To ensure that the principles mentioned above can be pursued optimally, TIER2 emphasizes the following research practices (based on the ALLEA European Code of Conduct for research integrity) throughout the project:

- **Research environment**: research institutions/organisations foster a culture of research integrity and provide clear guidance and appropriate infrastructure, interactions/language are inclusive and respectful, criticism is given and accepted as constructive.
- **Training, supervision and mentoring**: researchers are trained properly in research design/methodology/analysis and ethics and research integrity, senior researchers/ research leaders/ supervisors provide specific guidance and training for team members.
- **Research procedures**: researchers carefully design, conduct and document their research considering the state-of-the-art in developing research ideas, researchers use research funds responsibly, researchers publish findings openly/honestly/transparently and respect confidentiality.
- **Safeguards**: researchers comply with regulations relevant to their discipline, handle research subjects in accordance with legal and ethical provisions, regard the well-being of everyone connected to their research, take account of relevant demographic differences and consider potential risks of their research.
- **Data Practices and Management**: data sharing is the default approach, unless, for instance, there are privacy concerns. Data sharing practices will be specified in detail in the Data Management Plan.
- **Collaborative working**: all partners take responsibility for research integrity, agree on goals and the process of communication for their research, agree on procedures to ensure research integrity and are informed/consulted about submissions for publication of results.

The project aims for the most inclusive standards possible (e.g., striving for gender parity and diversity).

- **Publication and dissemination**: all authors are responsible for the published content, authorship is based on contribution (and preferably made explicit via the CRediT taxonomy), conflicts of interest are disclosed, work is promptly retracted or corrected, if necessary. Negative results are considered for publication and dissemination the same as positive results, work presented at conferences is also being made available. The project aims to share work with non-specialist audiences as much as possible.
- **Reviewing, evaluating and editing**: all publications within TIER2 are reviewed beforehand by members of the consortium (see section 4.2).

Responsibility for adhering to these principles lies primarily with the WP leads. In addition, the Project Coordinator and Project Manager will monitor adherence based on the reporting provided in the monthly calls of WPs and the PSC.

5.3. Publication development and authorship

The partners in the TIER2 project strive to work collaboratively on publications building on data and knowledge generated within the project. The 6-monthly work plans include a dedicated publication strategy, which serves as a starting point for discussing planned publications and potential contributions across the consortium. For the duration of the project, the PSC must be notified as soon as possible when partners intend to work on new publications building on project results. This is intended to allow all partners to express their interest in contributing to these publications, and to prevent partners from using jointly produced knowledge without notifying other partners.

To avoid authorship disputes, partners should strive to declare contributorship roles according to the CRediT taxonomy as early as possible, preferably before work on the publication begins.

5.4. Research Misconduct and other Unacceptable Practices

Fabrication of results, falsification (manipulation of research processes and data) and plagiarism are viewed as major violations of good research practices. There are a multitude of other unacceptable practices in research jeopardizing the pursuit of the principles of reliability, honesty, respect and accountability. Examples for further unacceptable practices are self-plagiarism, selective citing, withholding of results, hampering the work of other researchers, to name a few. TIER2 members put effort into preventing and discouraging such practices.

Within TIER2 any behaviour that excludes, intimidates or discomforts colleagues, participants or users in face-to-face as well as online settings is also not accepted. Such behaviours include:

- Excluding, disrespectful and threatening language or comments based on gender, appearance, sexual orientation, race, religion, or disability (including jokes and swearing).
- Causing someone to fear for their safety (through stalking, following, or intimidation).
- Non-consensual or unwelcome physical contact or sexual attention.
- Repeated disruption of activities and communication.
- Continuing to initiate interaction and to publish private communication without explicit consent.

5.5. Consequences in Case of Violation

All partners are asked to report to the coordinator and project manager when witnessing violations of the aforementioned principles and practices. Anyone asked to stop unacceptable behaviour is expected to comply immediately. All reported unacceptable behaviour will be followed up in a confidential way. Violations of good research practice or allegations of misconduct will be handled according to the principles of integrity and fairness. The primary means of resolving conflicts will be to seek dialogue between conflicting parties, with the goal to agree on apologies to be made and necessary behavioural changes in the future. More severe sanctions will depend on the specifics of the incident, and might include exclusion from further meetings and events, re-assignment of roles and responsibilities, as well as other appropriate measures.

6. Reporting to the European Commission

Over the course of the project two periodic reports (the latter of which is the final report) must be submitted to the European Commission. They cover the following project periods:

- Period 1: M1-M12 = January 2023 – December 2023
- Period 2: M13-M36 = January 2024 – December 2025

The periodic reports will be submitted by the coordinator within 60 days of the end of each reporting period, that is in M14 and M38 respectively.

General reporting principles will be as follows:

- The Project Coordinator will request WP leaders to report on their WP using a generic reporting template provided by the Project Coordinator;
- WP leaders will prepare inputs for the periodic report by collecting inputs from their WP task leaders;
- The Project Coordinator will combine all this information into a coherent periodic report.
- All partners will then review this report.
- The Project Coordinator will then revise appropriately and submit to the EC by the required date.

Please note that all partners must keep time records of the hours worked on the action, in accordance with Article 20.1(e) of the Grant Agreement.

6.1. Periodic Technical Reporting

The periodic technical reports cover the work conducted by the project partners between M1 and M12, and M13 and M36. The periodic reports will follow the official template and will contain the following parts:

Part A: Is created by the participant portal's IT system based on information entered by participants.

- Summary for publication
    - Summary of the context and overall objectives of the project

    - Work performed from the beginning of the project to the end of the period covered by the report including main results achieved so far
    - Progress beyond the state of the art and expected potential impact
- Overview of researchers involved in the project
- Deliverables
- Milestones
- Critical Risks
- Project Pathway to Impact
- Results Ownership List
- Publications
- Datasets
- Intellectual property rights
- Standards
- Other results
- Dissemination and communication activities
- Impact
- Research Infrastructure

Part B: Part B will be compiled in a Word document within the Teams environment, based on inputs provided by the WP leads and then submitted as one comprehensive report by the coordinator.

- Explanation of the work carried out by the beneficiaries and overview of the progress
    - Objectives of the project
    - Explanation of the work carried out in each WP
    - Impact
- Follow-up of recommendations and comments from previous review(s) (if applicable)
- Open Science
- Deviations from Description of Action (Annex 1 & 2) (if applicable)

6.2. Periodic Financial Reporting

Financial statements cover each partner's cost claim for the previous reporting period. They will be submitted to the European Commission electronically via the participant portal. An individual financial statement (Annex 4 of the GA) from each beneficiary will provide an explanation of the use of resources and the information on subcontracting and in-kind contributions provided by third parties from each beneficiary for the reporting period concerned. Before submission, the financial statement must be signed by the financial signatory at each partner institution (FSIGN). The request for interim payment will be also submitted together with the financial statement. If a partner does not submit their financial reporting on time, no interim payment to the respective partner will be made during this period.

The individual financial statement must detail the eligible costs (outlined under Article 6 of the GA) for each budget category (see Annex 2). Eligible costs include:

- direct personnel costs;
- direct costs of subcontracting;
- direct costs of providing financial support to third parties;
- other direct costs (travel costs, equipment, other goods and services);
- indirect costs (flat rate 25%)

All records and supporting documents of costs must be kept as proofs (see article 20 of the GA). Further information related to financial management can be found in:

- Annotated Model Grant Agreement
- Online Manual

6.3. Continuous Reporting

Continuous Reporting is available from the beginning of the project and can be edited by all beneficiaries in SyGMa (System for Grant Management). A snapshot of the data entered within the tabs for continuous reporting will also be included in the periodic reports when submitted.

More information on continuous reporting can be found here.

6.3.1. Reporting on Impact

Different SyGMa tabs (Impact, Impact continuation, Beneficiaries feedback) include questionnaires to monitor an evaluate the Horizon Europe programme performance. There, progress of the impact is recorded.

- Impact questionnaire: collects information about technology readiness, Sustainable Development Goals (SDGs) and citizen engagement
- Impact continuation questionnaire: records information about scientific, societal, environmental and economic impacts of project implementation
- Beneficiaries feedback questionnaire: asks about key factors fostering and impeding the impact of the progress of the project

6.3.2. Reporting on Communication, Dissemination and Exploitation

Reporting on communication, dissemination and exploitation follows rather a qualitative than a quantitative approach. Two separate tabs exist in SyGMa on communication and dissemination activities. The main communication and dissemination activities should be added to these tabs, especially when costs were charged to the project. Activities should be described including their purpose, the target audience and their status. Entries can be removed if they have not been included in a periodic report and edited if they have not been included in an intermediate report. The final periodic report must include at least one communication and one dissemination activity with the status “delivered” and no activities with the stats “ongoing” or “postponed”. To facilitate reporting, PENSOFT has created forms that consortium members are asked to fill in (see section 7 below).

6.3.3. Reporting on Project Results

Continuous reporting on project results is also required, focusing on content. The according tabs in SyGMa are called "Results" and "Other Results". Name and type of results is to be recorded, if they are Key Exploitable Results, audience or target groups and steps undertaken towards exploitation and market maturity.

6.3.4. Project Summary

The project summary is automatically published in CORDIS with the proposal abstract already filled in. It should be continuously updated when the project produces results. The text should be in a simple language and understandable to externals. Short descriptions intended for wider audience should be included in the "work performed" and "results beyond the state of the art". Another question is included on the "policy relevance" of the project to the policy objectives of the call.

6.3.5. Researchers

The questionnaire on researchers involved in the project can be updated anytime in SyGMa when changes occur within the list of participating researchers. Additions should only be made for researchers as defined in the Frascati Manual and for researchers receiving their salary from other sources who are still contributing to the project's activities. If a researcher does not participate or is removed (especially if their participation was considered very important at the time of the proposal), a justification must be given.

7. Internal Reporting to Project Coordinator

In addition to obligatory reporting to the EC (see section 6), each WPs will be asked to provide a work plan every 6 months, and each partner will be asked to provide a financial report every 6 months to the coordinator. All members of the Consortium shall further continuously report any outreach activities at events (conferences, seminars, etc.) as well as publications and datasets related to the project via dedicated reporting forms, to facilitate periodic reporting about dissemination and communication activities.

7.1. 6-Month WP Plans

All partners will be asked to contribute to WP plans which will be put together at the beginning of each 6-month period. Each WP leader is responsible for collecting contributions from all task leaders and uploading the 6-month plan into the corresponding folder of the Teams Environment within 2 weeks after the beginning of each new period (M6, M12, M18, M24, M30). All WP plans describe the work plan for the following 6-month separately for each task in the WP, including upcoming deliverables, task aims, timeline for each specific step, areas of priority, integration with other WPs as well as communication and publication strategy. The communication strategy describes when and how awareness among the Consortium and external stakeholders will be raised. The publication strategy lists the publications planned for each task, including contributing authors and a preliminary abstract. Reports will further contain a section reporting on achieved results in the previous period, including milestones and deliverables, as well as deviations from the previous plan.

7.2. Financial Reporting every 6 Months

Every 6 months, the controlling team at the coordinating institution will further send out an excel-sheet for reporting on financial resources. All partners are asked to report their use of resources in the respective tab of this document.

8. Overview of Key Dates

Table 5 provides an overview of key dates to keep in mind throughout the project. It includes events, project phases, internal financial reporting, and milestones (M1.1 etc). It does not include deliverables deadlines for reviewing and submission, since these are listed in Table 4. Dates are provided as project months (column Mo) and as actual dates.

Table 5: *Overview of key dates (except deliverables deadlines).*

Deadline/event	Mo	Date	Partner
MS2.4 Website and Logo	2	28.02.2023	PENSOFT
MS4.1 Pre-registration of protocol for future studies	4	30.04.2023	VUmc
MS3.1 Conceptual framework for reproducibility across contexts	8	31.08.2023	KNOW
End of reporting period 1	12	31.12.2023	
MS2.1 Reproducibility Hub (Beta version)	15	31.03.2024	VUmc
MS4.2 Pre-registration of methods for pilot implementation/assessment	18	30.06.2024	ARC
MS5.1 TIER2 researcher reproducibility toolset first release	22	31.10.2024	ARC
MS5.2 TIER2 researcher reproducibility toolset first release	22	31.10.2024	KNOW
MS5.3 TIER2 researcher reproducibility toolset first release	22	31.10.2024	ARC
MS4.3 Update briefing reports on pilot implementation progress	26	28.02.2025	KNOW
MS3.2 Interim synthesis of findings on reproducibility gains and savings	28	30.04.2025	KNOW
MS2.2 Final self-reflection report on co-creation processes	34	31.10.2025	CHARITE
MS2.3 Final conference	36	31.12.2025	PENSOFT
End of reporting period 2	36	31.12.2025	

9. Key Performance Indicators for Impact

The major key performance indicators for impact for TIER2 are listed in Table 6. The pilot activities will be revised in accordance with the evolving co-creation strategy. Corresponding performance indicators might therefore be subject to change. The project coordinator will monitor reasonable progress towards the key performance indicators throughout the project.

Table 6: *Key Performance Indicators for Impact*.

	Success measure	KPI
Pilot Activities		
Reproducibility checklist	Survey Participants	24
	TLR for tool	8
Reproducibility management plans	HE projects participating in the tests	15
	Funders for pilot test	3
	TLR for tool	5
Reproducible workflows	Use cases for SCHeMa expansion	3
	TRL for new research domains	6
	Participants across epistemic contexts	25
Workflows to review research datasets & code (for publishers)	Reviewer-editor pairs participating in user-testing/surveys	30
	Cross-stakeholder focus groups	3
	Scoping report for 'stamps' or validity marks	1
Threaded (linked) publications (for publishers, plus researchers in social, life, computer sciences)	Focus group	1
	Threaded publications platforms tested	2
	Survey Participants	24
New models of publishing & review – focusing on open & transparent & mandatory data deposition & availability (for publishers, plus researchers in social sciences & humanities)	Participants in user testing	20
	Registered reports published in the context of testing	10
Reproducibility promotion plan (for funders)	Funders to create RPPs	2
	RPP to be tested by each funder	1
Reproducibility monitoring dashboard (for funders)	Funder representatives performing user testing	8
Dissemination		
Branding	Templates for TIER2 documents, reports, representations, posters & infographics (by M06)	6
Reproducibility Hub via Embassy of Good Science	Monthly website visits (by M36)	>1000
Website	Monthly website visits (by M36)	>1000
Social media	Twitter followers (by M36)	>1000
	Tweets (by M36)	>500
	LinkedIn followers (by M36)	>500
	LinkedIn posts (by M36)	>60

Podcasts, video tutorials, infographics	Project videos (by M36)	2
Co-creation workshops & events	Researchers, funders & publishers engaged via TIER2 events	>1000
External conferences/workshops	Conference/workshop participations (by M36)	>30
Public outreach events	Events where TIER2 is represented (by M36)	>10
Press releases	Press releases (by M36)	>6
Policy briefs	Policy briefs (by M36)	>5
Scientific publications	Publications (by M36)	>15