ONTO-DESIDE

DELIVERABLE

D1.1: Management and Quality Assurance Report - v.1.0

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Document approval

Version	Date	Name	Role in the project	Beneficiary
0.4	27 July 2022	M. Lindecrantz	Internal reviewer of D1.1	RS
1.0	29 July 2022	E. Blomqvist	The coordinator	LIU

Table of Contents

1. Overall summary

The Onto-DESIDE project is a Research and Innovation Action (RIA) under the Horizon Europe programme, Cluster 4 Digital, Industry and Space, from the European Health and Digital Executive Agency. The main goal of the project is to develop a technology for allowing secure decentralized data sharing about materials and products at a global scale by developing a shared vocabulary, an open circularity platform and methods to analyse and assess new circular value chain configurations validated by 3 industrial use cases. The project is divided into eight work packages:

- WP1: Project coordination
- WP2: Requirements, integration and standardisation
- WP3: Ontology modelling
- WP4: Ontology-based data sharing platform
- WP5: Multi flow circular value network design & development method
- WP6: Industry use cases
- WP7: Communication, dissemination, training and exploitation
- WP8: Ethics requirements

WP1, Project coordination, led by LiU, is the responsibility of the Project Coordinator and the Project Manager. It provides a clear organisational framework and necessary support mechanisms to ensure the proper execution of the project according to the conditions specified in the Grant Agreement and Consortium Agreement. The WP1 is divided into four tasks as outlined below:

- Overall project coordination (Task 1.1),
- Administration and finance (Task 1.2)
- Quality assurance (Task 1.3) and
- Ethical assessment and compliance (Task 1.4)

Five deliverables are being produced in WP1 during the project:

- D1.1 Management and Quality Assurance Report – v1 at M2.
- D1.2 Management and Quality Assurance Report – v2 at M18.
- D1.3 Ethics assessment report v1 at M12.
- D1.4 Ethics assessment report v2 at M24.
- D1.5 Ethics assessment report v3 at M36.

D1.1, i.e. this document, provides an explanation of the consortium's organisational and management structures and procedures, and strategies for project reporting and monitoring including ethics. The D1.1 is divided into three major parts: (i) project organisation and decision-making including internal communication, (ii) management procedures (deliverables, milestones, project reporting) and (iii) risk management. D1.1 will be used as a "living document" throughout the project, and therefore updated at the project meetings, and a revised version will be issued at M18 (D1.2).

2. Introduction

The aim of the Management and Quality Assurance Report is to provide a set of guidelines and rules that the project consortium will follow to assure and control the quality of the project procedures, implementation, work and outcomes. It also specifies roles and responsibilities for each partner as well as risk identification and risk assessment. Procedures are provided for the project management, internal communication, internal validation, collaboration, periodic and financial reporting, and risk management to meet the project objectives. While several procedures described below have also been included in the grant agreement (GA) and the consortium agreement (CA), a dedicated separate Management and Quality Assurance plan was considered as an important source and direction for the consortium as it gives more clear and detailed information about the management and procedures implemented in the project to handle risks and deliver the project as planned. Further, it covers various managerial, scientific/technical and administrative activities in one document.

The Project Manager (PM) has prepared D1.1 at the beginning of the project (M2). It will be regularly reviewed and updated by the PM, the Project Coordinator (PC) and the work package leaders (WPL) during the project meetings. An update and potential revision of the management procedures and tools including the quality assurance procedures in use is planned for the 2nd half of the project duration, i.e. at M18 (D1.2).

2.1. Quality assurance

The goal of the Quality Assurance plan is to define a set of rules for working procedures, processes and best practice guidelines to ensure quality standards of the project work and its outcomes. Its objectives are to manage collaboration between the partners, internal (e.g. meetings) and external communication (e.g. with the EC), monitor the progress of the work, set standards for approval and submission of various documents, and reporting of the project, and risk management. The project is structured around a set of deliverables, which are a central focus of quality assurance and control within the project. The following activities are included: (i) to monitor the WP activities with the WP leaders including WP8 on ethics (ii) to guide the implementation and assessment of milestones and deliverables (iii) to take necessary actions to adjust, modify and expedite the activity of work package(s), (iv) to decide whether deliverables pass internal review and can be submitted to the EC, and (v) risk management. As part of the quality assurance within the project, ethics have been included in WP1 to assist and facilitate the work and the decisions made by the ethical advisor. External Expert Advisory Board - Comments and suggestions by the EEEAB recorded in the meeting minutes will be tracked in a table for follow-up action (see Appendix I). At the end of the project, the PC will provide an evaluation report covering the most important findings and achievements of Onto-DESIDE throughout the project´s lifetime.

2.2. Risk management

Risk assessment involves identifying potential problems and eliminating or reducing the damage that they could cause for the implementation of the project. Risk management is the responsibility of the coordinating organisation, LiU. The risk assessment and management is implemented and conducted already from the start of the project and also throughout the project duration to ensure that risks are acknowledged and well controlled. There are four steps to assessing and managing risks in the project, namely, (i) identification

of risks, (ii) assessment/qualification, (iii) management and (iv) monitoring and review, see Figure 1.

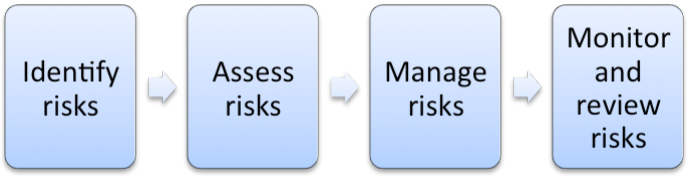

Figure 1: Risk assessment procedure

An initial risk assessment (D1.1) that includes the steps 1 - 4 presented above has been performed during the proposal stage and at the start of the project. It will be re-evaluated throughout the project (every 6 months during the general assembly and work package meetings) and whenever major deviations from the plan occur.

3. Project organisation and decision-making bodies

This section describes the management structure and rules, and how important procedures such as decision-making, internal communication and project reporting will be carried out. The project structure is defined to allow reliable overall coordination, efficient communication in the consortium and towards the EC, clear decision-making procedures, and workflow to meet deliverables quality requirements and deadlines, which is all done in accordance with the Grant Agreement and the Consortium Agreement. The project management structure and procedures described should be read in conjunction with the description of the WP1.

3.1 Organisation structure

The organisational structure has been adopted due to the size and complexity of Onto-DESIDE that includes 11 beneficiaries and is presented in Figure 1. The overall project management structure comprises of the following organisational bodies:

1. The General Assembly (GA)
2. The Project Coordinator (PC)
3. The Project Manager (PM)
4. The Work Package Leaders (WPL) including Task Leaders (TL)
5. The External Expert Advisory Board (EEAB) and
6. The Ethical Advisor (EA)

The ambition with the presented organisational structure and decision-making mechanisms is to have a communicative process, in which transparency and consistency of management on all levels of the consortium can be upheld. The current project organisational structure balances the need to keep the management structure streamlined (thereby avoiding unnecessary hierarchy and delays in reporting and decision-making). Therefore, the General Assembly will be at the centre of the management structure having both a strategic and an operational role. The role of each body is outlined in more details in following sections below.

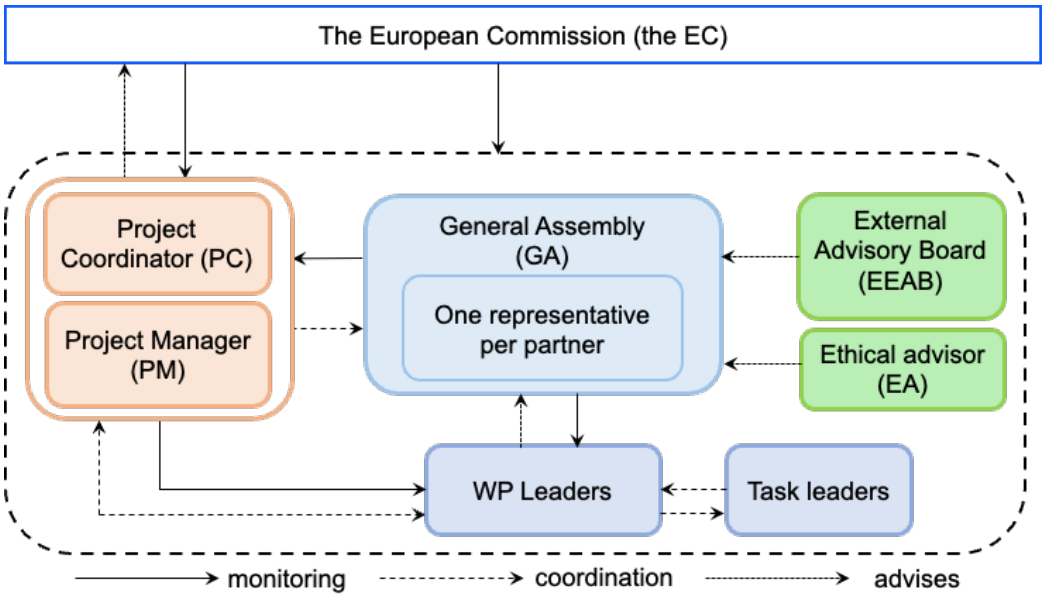

Figure 1: Project management structure to be used for task execution and decision-making

3.2 Decision and operational management and procedures

The General Assembly (GA) is the primary and top-level decision-making body of the consortium and is responsible for the overall strategic, scientific and technical planning and control. It consists of one representative of each project partner and is chaired by the project coordinator (PC). The General Assembly meets at least once every six months (one face to face and one online meeting per year). Intermediary general assembly meetings can be arranged as telephone or videoconferences upon written request. At least 14 calendar days before the meeting the PC circulates the agenda with identified decisions to be taken at the meeting. For decisions to be valid, 51% of the General Assembly members need to be present or represented. One member has one vote. Draft minutes of the meeting will be circulated to all members within 10 calendar days of the meeting. The minutes will be accepted if no member sends an objection within 20 calendar days to the PC. The GA also acts as the operational body for the execution of the project as it consists of the PC and the project manager (PM) as well as the work package leaders (WPL). The following decisions are taken by the General Assembly:

- Amendments of the work plan (Annex 1 to the Grant Agreement), to be agreed by the European Commission (EC)
- Changes to the Consortium Agreement.
- Transfer of budget and work between partners.
- Approval of reports for submission to the EC, including decisions if milestones and deliverables have been achieved.
- Proposals to exclude a partner from the consortium or to include new additional partners, to be agreed by the EC.
- Appointment and approval of the mandate of External Expert Advisory Board members, and the Ethical Advisor.
- Approval of consortium-wide dissemination, exploitation and communication activities (e.g. joint publications, website, logo, conference symposia, etc.).

- Approval of future meeting dates and locations.

LiU has the Coordinator role in the project and and has the overall responsibility for project implementation, management, administrative, financial and technical matters and for all liaisons with the EC. The Coordinator is the legal entity acting as a link between each partner and the EC. **The Project Coordinator** (PC) is Assoc Prof Eva Blomqvist. She is supported by **the Project Manager** (PM), Assoc Prof Svjetlana Stekovic, who is an experienced EU project manager and coordinator from LiU's Grants Office. She provides assistance to the PC for executing the decisions of the General Assembly and is responsible for the day-to-day management of the project. She is co-leading WP1 on project coordination and supporting dissemination and communication activities in WP7. As the main contacts of the project consortium, the PC and PM are responsible for the day-to-day coordination of the project according to the tasks described in the grant and consortium agreements. In particular, they are responsible for:

- Monitoring the partners' compliance with their obligations.
- Keeping contact and address lists of project partners and other contact persons updated and available.
- Collecting, reviewing and submitting reports (including financial statements and related certifications) and specific requested documents to the EC.
- Preparing the General Assembly meetings by proposing decisions and preparing the agenda, chairing the meetings, preparing the minutes of the meetings and monitoring the implementation of decisions taken at meetings. It also includes meetings with the External Expert Advisory Board and the Ethical Advisor.
- Transmitting documents and information connected with the project.
- Administering the financial contribution of the EC to project partners.
- Providing, upon request, the project partners with official copies or originals of documents when necessary for the project partners to present claims.
- Resolving conflicts and risks, and take corrective actions when necessary.

An **External Expert Advisory Board** (EEAB) has been appointed and steered by the General Assembly and its role is to assist and facilitate the decisions made by the General Assembly. The EEAB members are invited to participate in the General Assembly meetings, and occasionally other consortium meetings. The EEAB consists of three members. The EEAB members are:

- **Hans Kröder** – *International sustainability expert*. Founder or Learn2Improve, ISO TC 323 Circular Economy Chairman (Convenor) of Working Group 3 for 'Measuring Circularity'.
- **Dr. Gerhard Goldbeck** – *Materials science and modelling expert*. Founder of Goldbeck consulting, secretary of the European Materials Modelling Council as well as part of the OntoCommons project.
- **Prof. Oscar Corcho** – *Ontology engineering and open science expert*. Full professor in the Ontology Engineering group at UPM, Madrid. Long experience from ontology engineering for smart cities and sustainability, part of the OntoCommons project, and member of the European Open Science Cloud (EOSC) Executive Board Working Group on FAIR.

In addition, an independent **Ethical Advisor**, Assoc Prof Kai Kimppa, University of Turku, with expertise in IT and data ethics, and numerous assignments as ethical advisor of EU-funded projects. The Ethical Advisor is to oversee all project activities at an overview level, to ensure that ethical aspects are properly considered, and prepare ethics reports each project year (D1.3-D1.5), as well as for the periodic reports to be submitted to the EC.

The Work Package Leaders (WP leaders) are responsible for the execution of the technical activities to be developed in their own work packages in the project. The WP leaders will establish the detailed schedule of the WP and the work in progress. The WP Leaders are responsible for the day-to-day management of the particular WP under their responsibility, and for the coordination of the research and development activities to be performed in each WP. If necessary, the WP leaders will organise WP meetings and audio/video meetings and conferences. They are also obligated to attend the GA meetings and prepare presentations, documents, summary reports, etc. as requested by the PC. Coinciding with the GA meetings (every six months), the **WP leaders** are responsible for compiling progress reports describing the overall progress of each work package. The reporting will include information on technical progress, results obtained, and compliance with the work programme. The status of the tasks will be reported in terms of percentage of completion, estimated time to completion, person-months spent and estimated person-months to completion. Any potential risks or threats, which may delay deliverables, are to be noticed and the overall budgetary situation for each WP should be presented. All the partners contributing to a WP are to send a technical note to the responsible WP leader well in advance. The WP leader compiles the WP report and submits it to the PC at least two weeks before the scheduled GA meeting. The WP reports are reviewed by the PC and PM and will then be discussed among the GA members. Within each WP, the internal meeting schedule shall be determined by the WP leader, who will be encouraged by the GA to conduct meetings with all partners in the WP on a more frequent schedule (e.g. monthly or bi-monthly) via tele- and/or video conferences or meetings. The meetings will be used by partners to prepare technical notes, and by the WP leader to track the progress of tasks and deliverables within the WP, and to compile the WP report prior to GA meetings. Further, each WP consists of several tasks that are led by a **Task Leader** (TL) who are overseeing the execution of their own tasks and reporting directly to the WP leaders.

4. Management procedures

The general management structure of the project is presented in Figure 1 while the management team is listed in Table 1.

Table 1: Management team and their contact details

Role	Name	Contact
Project Coordinator, WP3, WP7 and WP8 leader	Eva Blomqvist (LiU)	E-mail: eva.blomqvist@liu.se Tel: +46 13 28 27 72
Deputy Project Coordinator, and WP7 and WP4 deputy leader	Olaf Hartig (LiU)	E-mail: olaf.hartig@liu.se Tel: +46 13 28 56 39

Project Manager, WP1 leader, and WP8 deputy leader	Svjetlana Stekovic (LiU)	E-mail: svjetlana.stekovic@liu.se Tel: +46 13 28 69 55 Tel: +46 701 91 66 76
Deputy Project Manager, WP1 deputy leader	Kirstin Kahl (LiU)	E-mail: kirstin.kahl@liu.se Tel: +46 13 28 28 97
WP2 leader	Mikael Lindecrantz (RS)	E-mail: Mikael.Lindecrantz@ragnsells.com Tel: +46 10 723 76 72
WP2 deputy leader	Lars Nybom (RS)	E-mail: lars.nybom@ragnsells.com Tel: +46 709 272 526
WP3 deputy leader	Patrick Lambrix (LiU)	E-mail: patrick.lambrix@liu.se Tel: +46 13 28 26 05
WP4 leader	Ben de Meester (IMEC)	E-mail: ben.demeester@imec.be Tel: +32 9 3314956
WP5 leader	Fenna Blomsma (UHAM)	E-mail: fenna.blomsma@uni-hamburg.de Tel: +49 15906719939
WP5 deputy leader	Sebastian Späth (UHAM)	E-mail: Sebastian.Spaeth@uni-hamburg.de Tel: +49 176 95 600 138
WP6 leader	Teresa Oberhauser (CIRC)	E-mail: teresa@circularise.com Tel: +31 6 18901772
WP6 deputy leader	TBD (CIRC)	E-mail: TBD Tel: TBD
EEAB members	Hans Kröder	E-mail: h.kroder@learn2improve.nl Tel: +31.6 22 459 541
	Gerhard Goldbeck	E-mail: gerhard@goldbeck-consulting.com Tel: +44 1223 853201
	Oscar Corcho	E-mail: ocorcho@fi.upm.es Tel: +34 910672911
Ethics Advisor	Kai Kimppa	E-mail: kakimppa@utu.fi Tel: +358 29 450 2336

The Management and Quality Assurance plan is to be reviewed by the PC and PM during the GA meetings. These reviews are to focus on the results from previous project reviews, results from internal audits, status of deliverables and milestones, any problems and risks occurred during previous period and corrective actions to be taken during next period. Minutes are to be taken from these discussions including a summary of the points raised and solved. The minutes are to be archived by the PM.

Further details on the management structure can be found in the DoA – Annex I of the Grant Agreement – and in particular in the Consortium Agreement signed by each partner in the project.

4.1 Internal communication

In order to enhance the project flow, an internal communication strategy has been established. The internal communication tools include project meetings, project reports, e-

mail (including project mailing lists), phone, a project file repository, website and video conferences such as using Zoom, Teams and similar. A website has also been set up (https://ontodeside.eu) as the web is an efficient means of communication both externally and internally. The website and other external communication tools will be described in more detail in deliverable D7.1 – Dissemination and communication plan under WP7.

4.2 External communication

The objective of external communication is to perform communication related activities to support overall coordination and reporting to the EC representatives, including the submission of all project documentation and deliverables. Reporting of risks and requests for amendments are also included in this task. The PC and PM are the official interface with the EC and therefore all formal exchanges of information and reporting with the EC is handled through them.

4.3 Meetings

Project meetings are important for the success of the project, as they are necessary to maintain close collaborative and working relationships, to promote communication and information exchange between the partners, to make agreements and to take major decisions. The schedule of the various meetings is presented in Table 2 as outlined in the CA. Each partner shall be represented at the General Assembly meetings but may appoint a substitute or a proxy to attend and vote at the meeting, and shall also participate in a cooperative manner.

Table 2: Meetings planned in the project

	Ordinary meeting	**Extraordinary meeting**
General Assembly meetings	At least twice a year and once with the EEAB	At any time upon written request of 1/3 of the Members of the GA
External Expert Advisory Board meetings	At least two times a year, may coincide with GA meetings.	At any time upon written request of any Member of the GA.
Consortium meetings	At least once a year, preferably every 6 months (may coincide with GA meetings)	At any time based on a GA decision
WP meetings	Bi-monthly, monthly or as needed	At any time upon request from any partner, task leader and WP leader.
Intermediary meetings	As needed	At any time upon request from any partner.

The **General Assembly** will meet at least twice every year. At least 14 calendar days before the meeting the PC circulates the agenda with identified decisions to be taken at the meeting. For decisions to be valid, 51% of the General Assembly members need to be present or represented. Draft minutes of the meeting will be circulated to all members within 10 calendar days of the meeting. The PC is also responsible for sending out the agenda at least 7 calendar days before the EEAB meeting. Minutes of the meeting will be circulated to all EEAB members within 10 calendar days of the meeting.

Each partner shall have one vote. Decision will be taken by a majority quorum of two-thirds (2/3) of the votes (see the CA, 6.3.4 for more information). If a quorum is not reached, the chairperson of the PC shall convene another ordinary meeting within 15 calendar days. If in this meeting the quorum is not reached once more, the chairperson shall convene an extraordinary meeting, which shall be entitled to decide even if less than the quorum of Members is present or represented. A Member which can show that its own work, time for performance, costs, liabilities, intellectual property rights or other legitimate interests would be severely affected by a decision of the GA may exercise a veto with respect to the corresponding decision or relevant part of the decision. In case of exercise of a veto, the Members of the GA shall make every effort to resolve the matter, which occasioned the veto to the general satisfaction of all its Members.

Consortium meetings are preferably held as in-person meetings, but may be transferred to online meetings if needed, where the purpose is to share and discuss the status of the overall project and its WPs with the whole consortium, and all researchers working in the project. Consortium meetings may coincide in time and location with GA meetings, but does not involve making decision, but rather focuses on internal communication, e.g. to discuss methods and plans, and inform about results. All consortium members will be invited to the meetings, and in addition the EEAB, EA, and PO will be invited, but participation is not mandatory.

A list of project meetings will be available and maintained on the shared project file repository, and meetings will be scheduled through sending out calendar invitations to all intended participants. Some general rules and recommendations in relation with the preparation of meetings and follow-up are given below. Each meeting, both face-to-face and online, should be well prepared. The objectives, agenda and required preparation/contribution from the attendees should be defined at least two weeks in advance of the meeting. If specific documents or reports will be discussed in the meeting, the draft material should be made available sufficiently in advance to ensure that the participants have time to read and comment it. Meeting dates and locations for physical meetings are chosen at least several months in advance (and up to a year in advance for meetings where all GA and EEAB members are to attend) to ensure all concerned participants can attend. If possible, meetings with different purposes (often in conjunction with a conference and other meeting) will be combined to facilitate maximal attendance and to minimise travel time and expenses. Detailed description of travel information to the meeting venue is provided (not just the address – but details of train, metro, taxi, schematic map of the meeting location, telephone number of meeting organiser and local contact) and a recommendation on hotels. Online and hybrid meetings will be facilitated to reduce environmental impact as well as costs. Date and times of online meetings shall be chosen as early as possible, preferably several weeks or months in advance, to facilitate maximal attendance. Onto-DESIDE meetings that have been scheduled and/or held at this point in time are:

- 20th of June 2022, kick-off meeting (part I) with the GA and EEAB members, all other participants in the project, and the Ethical Advisor, online by using Zoom.
- 22nd of June 2022, kick-off meeting (part II) with the project officer, online by using Zoom.
- 12th of July 2022, WP6 task leader meeting (online).
- 2nd of August 2022, WP6 task leader follow-up meeting (online).
- July 2022, GA decision without a meeting (through e-mail) to appoint EEAB and EA.
- August-September 2022, WP6 deliverable (D6.1) coordination meetings (online).

- 5-6th of September, face-to-face consortium meeting, including GA and EEAB meetings, and with EA participation, physical meeting in Sweden.
- September-October 2022, WP2 requirements analysis meetings, and deliverable coordination (D2.1) (online).
- February 2023, Second consortium meeting and GA meeting.

Each meeting must have an agenda. The agenda is distributed in advance (typically one to three months for larger meetings, and 14 days for WP and intermediary meetings) an added to the calendar invite of the meeting, to inform the participants about the topics to be discussed and to give them the possibility to suggest changes or additions to the agenda, which must then be re-circulated. Any suggestions for changes should be sent at least 7 days before the meeting. The agenda lists the subjects, which will be discussed. It is an instrument to assist the PC and PM in planning the meeting.

Project-wide meetings are generally structured as follows. An introduction is first given, including new project/consortium information of a general nature and update on external communication with the EC/Project Officer. Following this, the meeting is structured in terms of WPs. An update of WP1 on coordination and management activities is given by the PC and PM. Then each WP leader gives a presentation to update the WP progress towards deliverables, foreseeable risks, and scientific or other issues that have arisen. This is followed by a discussion on the WP level, with all attending parties (including EEAB members) taking part. Dissemination and exploitation activities are then communicated (WP7) by the PC and PM, including a discussion of opportunities for further dissemination through common publishing or presentation opportunities. Finally, other matters of interest and voting matters are addressed, as well as future meeting locations and dates. An example of GA and EEAB meeting agendas are included in Appendix II. Meeting minutes are taken by one attendee, reviewed by the PC and PM, then sent to the meeting attendees for approval, and finally archived. Consortium and WP meetings may additionally contain more working sessions with discussions and a workshop-like structure.

4.4 Data and document management

Data management is addressed in D7.4 in WP7, and was already partly described also in the Consortium Agreement and annexes of the Grant Agreement. Research data generated within the project includes material and product data (both related to actual products and materials as well as synthetic data for verification and evaluation purposes), ontology models (and their related artefacts, such as lists of terms, competency questions etc), software code, evaluation results from technical evaluations, various images, progress reports, manuscripts, posters, abstract, and published studies with supplementary material. The research data generated in the project will be archived and made available within the consortium in a secure file-sharing repository provided by the PC, or in a project-specific git repository. To the extent possible (c.f. CA and GA), the project will by default apply open science practices, including publishing research data openly according to the FAIR principles. However, the partners shall not publish results or background of the partners without prior approval (8.4.3 in the CA). Public deliverables will be made available for download from the project website.

Experimental data will be subject to a decision by the consortium on how and when to deposit, archive, and make publicly available such data, if deemed not to conflict with the

legitimate interests of researchers or industrial partners. Wherever feasible, raw experimental data supporting a peer-reviewed publication will be made available at the time of manuscript publication, as published supplementary information or in open-access repositories commonly used by the particular scientific journal of interest. Finally, to support continued access to project-generated materials and research data after conclusion of the project, the dissemination plan in D7.4 will also include measures to transfer data to long-term institutional servers (for example, to be hosted by the Coordinator's University), to ensure continued open access to project outputs after the grant period. Standards for implementing good research data management will be actively sought during the preparation phase of the dissemination plan (i.e. during the first six months of the project), and may include published standards, EU standards, and models used in other EU projects.

4.5 Deliverables and milestones

The PC and PM are responsible for ensuring that all Onto-DESIDE deliverables and milestones are controlled, reviewed, revised, and submitted to the EC. This includes the overall formal deliverable technical and quality standards. They are to be delivered and assessed at the due date indicated in Description of the Action (DoA), Annex 1 of the grant agreement. Responsible partners are also listed in the DoA. The deliverables and milestones are to be produced according to the recommendations from quality assurance (see 4.5.1) and approval process and storage described below (see 4.5.2).

4.5.1 Quality assurance

All deliverables shall be delivered according to Table 3 and associated guidelines. The authors are to comply with general recommendations given for scientific and technical reporting and publishing such as use of references, citations, and publisher- or authority-specific guidelines.

Table 3*:* Quality standard for deliverables

Deliverable	Quality standards
Report	To contain a detailed description of the deliverable, including background and context of the deliverable. Copies of relevant documents (approvals, etc.) should be attached as Annexes. The Onto-DESIDE template for deliverables will be available on the project's document server, along with examples of completed deliverables.
Other	In Onto-DESIDE, other means software and protocol releases, such as the open circularity platform, and FAIR integrated ontology networks. These deliverables are to contain a short description of the deliverable, as well as appropriate (detailed) online documentation of the software or ontology code itself.
Data	Research data such as data sets, microdata, experimental results etc. will also include a short description of data files as well as information about how the data can be freely accessed according to the EU's Open Access policy (in cases where the deliverable is public).
Milestones	Milestones are part of the deliverable reporting and shall contain information about its purpose, status, possible issues, delays,

	reasons for delays, and any updates. Milestone reporting is done within the participant portal.
Website, promotional material, training material, patent filing, etc.	To contain a short description following the template for deliverables. Screenshots or the full document should be attached as an Annex, where possible, even when the full material is accessible online.

4.5.1 Approval process and storage

Each deliverable is associated with a work package. The partner responsible for the deliverable, i.e. usually the task leader in case the deliverable reports results from only one task, or the WP leader if several tasks are involved, nominates the lead author jointly with the PC and WP leader. The lead author will then create the document and coordinate preparation of the required documentation in consultation with the partners involved. The responsible partners will also agree on the person who will perform the quality check, the Reviewer. If possible, the reviewer shall be a person not directly involved in the task producing the results reported in the deliverable, but involved in other tasks of the project. In Appendix III, a list of default partners responsible for providing a reviewer for each deliverable are given. Delivery approval process steps and deadlines are presented in Table 4.

Table 4: Delivery approval process

Step	When	What	Who	How
1	Day 1, 45 days before deadline	Information about deliverable and its due date sent to involved partners	PM	E-mail (cc to PC)
2	Day 7, 38 days before deadline	Lead Author and Reviewer nomination sent to PC and PM	Deliverable owner	E-mail, update the deliverable status
3	Day 31, 14 days before deadline	Complete draft of deliverable content submitted to WP leader and the Reviewer	Lead Author	E-mail, update the deliverable status
4	Day 35, 10 days before deadline	Feedback on draft submitted by Reviewer and WP leader to Author	Reviewer	E-mail, phone, update the deliverable status
5	Day 38, 7 days before deadline	Final draft submitted to WP leader, Reviewer, and PC	Lead Author	E-mail, update the deliverable status
6	Day 40, 5 days before deadline	Latest day to provide remaining feedback on Author's changes by Reviewer and WP leader	Reviewer, WP leader	E-mail, update the deliverable status

7	Day 41, 4 days before deadline	Final version submitted to the PC and PM	Deliverable owner	E-mail, update the deliverable status
8	Day 43, 2 days before deadline	Approval from the PC	PC	Sign/date then scan and sent by e-mail to the PM
9	Day 45, due date	Submit the deliverable to the EC	PC and PM	Participant portal, update the deliverable status

During this process, it is mandatory to use the collaborative site for the project where folders have been set up for this purpose. If the above dates correspond to a holiday, the deadlines will be brought forward or postponed to the nearest working day.

4.6 Internal reporting

Internal reporting comprises the following:

- Semi-annual written WP updates (or more frequently if needed) from WP leaders to the PC and PM (via e-mail exchange, to be compiled into a report by the PC and PM).
- Semi-annual dissemination and exploitation reports from partners to the PC and PM (via e-mail exchange, to be compiled into a report by the PC and PM).
- Annual reports from partners on the spending in terms of personal costs and other direct costs to the PM as per article 7.1.4 on Excess Payment in the consortium agreement.
- Input from the partners for periodic reporting for the WP1 to the EC.

To ensure the project's internal quality assurance for monitoring of deliverables and work progress, a review template has been created, Appendix IV. A list of all deliverables is given in Appendix V, which will be updated regularly by the PC and PM as the project progresses.

4.6 Project reporting

Onto-DESIDE is divided into two reporting periods (RP No), as specified in the Data Sheet and articles 21 and 22 in the grant agreement and will deliver two periodic reports:

- 1st periodic reporting on the progress of work and use of resources (RP1) for the period M1-M18, and
- 2nd periodic reporting on the progress of work and use of resources (RP2) for the period M19-M36. The final report is also included in this period.

Two project reviews with the EC are also scheduled during the project reporting periods, namely, latest 60 days after end of the reporting period.

The periodic reports include both a technical and a financial report. The **technical periodic report** is itself divided into 2 parts, Part A and Part B, containing:

- Part A (online): structured tables with the project information on project summary, deliverables, milestones, publications, dissemination activities, standards, etc. which is to be continuously updated as the project goes.

- Part B (narrative, submitted as pdf): similar to the proposal form and requires reporting of the work progress, differences with justification (e.g. delays, work not implemented, budget overruns, new subcontracts, etc.), etc.

The **financial report** consists of individual financial statement from each partner and consolidated financial statements, both retrieved from the participant portal. In addition, explanation of the use of recourses and a certificate on the financial statements (CFS, article 24 in the grant agreement) for payments above a threshold are also required.

The technical report Part A and the financial report is generated automatically on the basis of the data in the participant portal while Part B needs to be prepared using the template downloaded from the system and then uploaded as pdf. The Coordinator will have to submit them as a single report.

The elaboration of the technical report is led by the PC and PM with the active contribution of the WP leaders and all partners in general. This report is official and must be well written showing the main description of the project progress to the EC.

Financial statements are under the responsibility of each partner (and linked 3rd party). Periodic financial reports must be completed by each partner (and each 3rd party) for each reporting period. A draft Individual Financial Statements (IFS) must be submitted to the PM in good time (**at least 2 weeks before the deadline**). The PM will collect IFSs and submit them to the EC together with the technical and financial reports for every RP. Before the submission of the IFSs to the EC, the PM can reject the IFS and ask for a correction of any error if needed. In case of relevant inconsistency with the project progress the PM will discuss the issue with the partner concerned and if relevant bring it to the attention of the PC and EC Project Officer. If a beneficiary does not submit its financial statement on time, its costs will be considered zero for that reporting period.

The technical and financial reporting must be submitted within 60 days following the end of each reporting period. However, information such as financial reports and project results, may not be available until several weeks following the end of the reporting period. Therefore, the reporting process is expected to start 30 days following the end of each reporting period, leaving 30 days remaining to be able to meet the deadline. For this, we have defined intermediate deadlines to assure good quality and review of the reports, Table 5.

Table 5: Technical and financial reporting process and timeline

Step	When	What	Who	How
1	Day 1, 30 days before deadline (30 days after end of a reporting period)	1st draft technical report (TR) submitted, status of financial reporting (FR)	Each partner	E-mail to PC and PM
2	Day 5, 25 days before deadline	Feedback to partners	PC and PM	E-mail, phone
3	Day 10, 20 days before deadline	2nd draft TR submitted, FRs submitted to Participant Portal (PP)	Each partner	E-mail and participant portal
4	Day 15, 15 days before deadline	Feedback to partners	PC and PM	E-mail and participant portal

5	Day 20, 10 days before deadline	Final drafts submitted	Each partner	E-mail and participant portal
6	Day 25, 5 days before deadline	Final version sent to the partners	PC and PM	E-mail and participant portal
7	Day 28, 2 days before deadline	Ok from partners received	Each partner	E-mail and participant portal
8	Day 30, due date (60 days after end of a reporting period)	TRs and FRs submitted to the EC	PC or PM	Participant portal

In addition to the periodic report for the last reporting period, the Coordinator must submit the final report within 60 days following the end of the last reporting period. The final report must include a final technical report with a publishable summary and final financial reports containing both a final summary financial statement and a certificate on the financial statements, CFS, if a total contribution of €430 000 or more is requested as reimbursement of actual costs. The CFS is to be performed by an approved independent external auditor.

Each partner is responsible for its linked third parties and submits requested periodic reports to the PC and PM for its linked third parties and keeps the originals of the IFSs and CFS.

5. Risk management

Risk management is concerned with a potential event or condition that, if it occurs, has an effect on at least one project objective. Risk management focuses on identifying and assessing the risks to the project, monitoring and mitigating those risks to minimise their potential impact on the project, in the manner described below.

5.1 Identification of risks

As defined in the DoA of the grant agreement, the consortium has identified 10 management, scientific and technological risks that may compromise the implementation of the project and achievements of its objectives, prior to starting the project (Table 6). Mitigation actions have been also proposed. These risks will be re-evaluated every six months at a minimum, and revised where necessary throughout the project lifetime and whenever major deviations from the plan occur.

Table 6: Description of the project risks

Risk no	**Description**	**WP no**	**Proposed mitigation measures**
R1	Risk that requirements and expectations are not covered.	WP2	The project research and development process has 3 iterations, where new requirements can be added throughout the project so as to cover both new and changing requirements.
R2	Risk of evaluation results that are not satisfactory.	WP6	Related to the risk above, if evaluation results are not satisfactory a change of requirements is necessary, which is supported by the iterative approach. If this happens at the final evaluation,

			a time extension of the project would be needed, without extra budget.
R3	Risk of data not being realistic or not enough data for realistic evaluations.	WP6	Several industry partners are involved in the consortium with the specific target of supporting data collection, preparation and ensuring that these and the evaluation setup will be realistic.
R4	Risk of not being able to find common concepts for the core ontologies at the right level of granularity.	WP3	Current top-level ontologies show the existence of shared concepts, however, in the project we need to find a trade-off between reusability and the capability to accurately describe domain concepts, so if shared concepts are too abstract more manual effort will be needed when using the ontologies in a new industry domain. This can partly be compensated by appropriate training material and guidance/documentation.
R5	Risk of not being able to find a good trade-off between confidentiality and data sharing needs for automation in the data sharing platform.	WP4	Such trade-offs have been found and technically supported for other use cases, e.g. personal data privacy, but if it proves more difficult in this domain, we will have to instead reduce the level of automation provided by the platform and include manual steps to check data before sharing.
R6	Unexpected difficulties in integration and/or technical development.	WP3, WP4, WP2	Technical integration will be performed in all three iterations, so problems will be discovered early. We will also establish a shared development and testing process at the beginning of the project, in WP2.
R7	The risk of insufficient access to end user partners and staff, for requirements, data and evaluations.	WP6	We have included all industry organisations involved as full partners of the project, to ensure that their effort can be paid, including travel etc., by the project budget.
R8	The risk that the industry use cases are too specific and solutions do not generalise across industry domains.	WP6, WP2	By including three very different industry domains this risk is reduced. We have also selected several industry partners (e.g. RS, CIRC, POS) that are not only working in one industry domain, in order to get a cross-industry perspective. The future extension of the ontologies to cover more domains will also be part of the maintenance plan developed by WP3.
R9	Normal business risks: bankruptcy, mergers, key personnel becoming unavailable.	WP1	There is a certain level of redundancy in the consortium, where each use case is for instance involving more than one partner, and each partner has more than one person involved. However, such events can be disruptive and have to be managed promptly by the project coordinator.

R10	Poor communication or coordination.	WP1	The coordinator will hire experienced project management and financial support from the university Grants Office. In addition, the project is planned to have regular meetings and conference calls to ensure internal coordination.

5.2 Qualification of risks

To be able to actively manage the risks, qualification and classification of the risk's probability and impact will be performed. Risk will be classified in terms of Low, Medium or High, as presented in Table 7. Numbers 1 and 6 represent a very high and a very low priority, respectively.

Table 7: Classification of risks

		Impact		
		High	**Medium**	**Low**
Probability	**High**	1	1	2
	Medium	2	3	4
	Low	4	5	6

Impact is assessed based on whether the objective is in a critical path to achievement of WP and overall project goals, whether core project tasks are affected, effect on time schedule, costs/budget and expected results. Probability assessment is based on complexity, number of interdependent tasks, number of partners involved, and an empirical subjective assessment. Both Impact and Probability of risk are classified as follows:

- **Low:** no or no almost effect of the project, can cause small delays and cost increase/change, the objectives are not jeopardised, low risk is acceptable and is to be monitored during the project
- **Medium:** Moderate cost and schedule changes but important objectives and results would be met without jeopardising the project, mitigation actions needed, and
- **High:** Objectives would not be achieved and there is a possibility for work package goals and larger aims of the project to fail, mitigation actions urgently needed and to be closely monitored by the grant agreement.

The assessment of the risks, their ranking and status will be monitored using the template in Appendix VI.

5.3 Management of risks

Risk assessment and management will be an on-going task in the project. Although the risks in Table 5 were identified during the project proposal stage, new risks may arise during the lifetime of the project, and this needs to be addressed within the existing risk management framework. Therefore, part of effective risk management is to identify and deal with risks as they occur, which includes adding them to the form in Appendix VI. Therefore, on-going risk management involves both monitoring and reviewing of the existing risks but also identifying of new risks and their management. The WP leaders have accepted the role of Risk Managers for their own work package and will fill the template provided by the PM and

presented in the Appendix VI. They will also report on WP risks at each GA meeting and/or whenever a new risk is raised.

5.4 Monitoring of risks

The PC and PM will monitor risk together with the GA. The template from Appendix VI will be updated after each GA meeting and shared on the common file-sharing platform. The risk table will also be added to the period project reporting. In addition, each time the project actual progress varies significantly from the project schedule, the risks will be re-assessed and re-evaluated. New risks will be ranked and assessed as shown in Table 8.

Table 8: Risk monitoring schedule

Step	When	What	Who	How
1	Quarterly, including once before each GA meeting	Review risks and update risk table (Appendix IV)	WP leaders	E-mail, phone
2	Quarterly	Update the D1.1 Appendix VI, and send to all partners	PC and PM	D1.1, E-mail
3	Semi-annually	Update of the risk table and review of new risks	GA members	GA meetings

6. Conclusion

This deliverable provides a set of guidelines to assure and control the quality of the project work, its deliverables and procedures. It also includes risk identification and assessment, their proactive management, planning and monitoring. Procedures are provided for management, periodic and financial reporting, etc. to meet the project aim and objectives.

Appendix I: Recommendations from the EEAB for follow-up

EEAB Recommendation Table					
No	**Meeting**	**Recommendation (EEAB Member)**	**Partner**	**Followed up?**	**Status**
1	Kick-off meeting (online)	Agree on definitions of terms used in the project, such as “value” (Hans Kröder)	LIU		To be discussed at the kick-off meeting in September.
2					
3					
4					
5					

Appendix II – Template for GA and EEAB meetings

General Assembly agenda example:

1. Welcome and introduction of participants
2. General information from PC and PM, including external information from PO
3. WP1 update by PM
4. WP2-6 update(s) – for all relevant active WPs, by WP leaders
    a. WP progress including upcoming and recently completed deliverables
    b. Risks
    c. Other issues
5. WP7 update and discussion, by task leaders
    a. Communication progress and opportunities
    b. Dissemination progress and opportunities
    c. Exploitation opportunities and plans
    d. Training opportunities
6. Other decision points
7. Future meeting date(s) & location(s)

EEAB meeting agenda example:

1. Welcome and introduction of participants
2. Objectives of the meeting
3. Presentation of project overview and status of activities
4. Comments on the overall vision and direction of the project from the EEAB
5. Proposals from the EEAB on specific WPs/tasks and activities
6. Other suggestions from the EEAB

Appendix III – Deliverable review responsibilities

WP No	No	Deliverable Title	Lead Beneficiary	Review responsible partner	Due Date
WP1	D1.1	Management and Quality Assurance Report - v.1	LIU	RS	31 Jul 2022
WP1	D1.2	Management and Quality Assurance Report - v.2	LIU	UHAM	30 Nov 2023
WP1	D1.3	Ethics assessment report v1	LIU	UHAM	31 May 2023
WP1	D1.4	Ethics assessment report v2	LIU	CIRC	31 May 2024
WP1	D1.5	Ethics assessment report v3	LIU	REIA	31 May 2025
WP2	D2.1	Project requirements specification and research methodology - v.1	RS	LIU	30 Nov 2022
WP2	D2.2	Project requirements specification and research methodology - v.2	RS	LIU	31 Jan 2024
WP2	D2.3	Project requirements specification and research methodology - v.3	RS	LIU	31 Oct 2024
WP2	D2.4	Software and protocol releases - v.1	RS	CIRC	31 May 2023
WP2	D2.5	Software and protocol releases - v.2	RS	CIRC	31 May 2024
WP2	D2.6	Software and protocol releases - v.3	RS	CIRC	28 Feb 2025
WP2	D2.7	Standardisation plan - v.1	POS	REIA	30 Nov 2023
WP2	D2.8	Standardisation plan - v.2	POS	CIRC	30 Nov 2024
WP3	D3.1	Ontology network architecture, methodology and alignment plan - v.1	LIU	UHAM	28 Feb 2023
WP3	D3.2	Ontology network architecture, methodology and alignment plan - v.2	LIU	UHAM	31 May 2024
WP3	D3.3	FAIR integrated ontology network - v.1	LIU	IMEC	31 Mar 2023
WP3	D3.4	FAIR integrated ontology network - v.2	LIU	IMEC	31 Mar 2024
WP3	D3.5	FAIR integrated ontology network - v.3	LIU	IMEC	31 Dec 2024
WP3	D3.6	FAIR integrated ontology network - v.4	LIU	IMEC	28 Feb 2025
WP3	D3.7	Ontology maintenance plan	LIU	FAS	28 Feb 2025
WP4	D4.1	Digital twin concept design, including ontology-based data sharing platform architecture and methodology - v.1	IMEC	RS	28 Feb 2023
WP4	D4.2	Digital twin concept design, including ontology-based data sharing platform architecture and methodology - v.2	IMEC	RS	31 May 2024
WP4	D4.3	Digital twin concept design, including ontology-based data sharing platform architecture and methodology - v.3	IMEC	RS	28 Feb 2025
WP4	D4.4	Open circularity platform - v.1	IMEC	CON	31 Mar 2023
WP4	D4.5	Open circularity platform - v.2	IMEC	CON	31 Mar 2024
WP4	D4.6	Open circularity platform - v.3	IMEC	CON	31 Dec 2024
WP4	D4.7	Open circularity platform - v.4	IMEC	CON	28 Feb 2025
WP5	D5.1	State of knowledge review	UHAM	RS	28 Feb 2023
WP5	D5.2	Multi flow circular value network design & development method - v.1	UHAM	RS	31 May 2024
WP5	D5.3	Multi flow circular value network design & development method - v.2	UHAM	RS	31 May 2025
WP6	D6.1	Use case needs analysis and circular value flow mapping - v.1	CIRC	LIU	31 Aug 2022
WP6	D6.2	Use case needs analysis and circular value flow mapping - v.2	CIRC	LIU	30 Nov 2023
WP6	D6.3	Use case needs analysis and circular value flow mapping - v.3	CIRC	LIU	31 Aug 2024
WP6	D6.4	Resulting research data sets - v.1	CIRC	IMEC	31 May 2023

WP6	D6.5	Resulting research data sets - v.2	CIRC	IMEC	31 May 2024
WP6	D6.6	Resulting research data sets - v.3	CIRC	IMEC	28 Feb 2025
WP6	D6.7	Report on evaluation results - v.1	CIRC	LIU	30 Nov 2023
WP6	D6.8	Report on evaluation results- v.2	CIRC	LIU	31 Aug 2024
WP6	D6.9	Report on evaluation results - v.3	CIRC	LIU	31 May 2025
WP7	D7.1	Dissemination and communication plan - v.1	LIU	UHAM	30 Nov 2022
WP7	D7.2	Dissemination and communication plan - v.2	LIU	UHAM	30 Nov 2023
WP7	D7.3	Dissemination and communication plan - v.3	LIU	UHAM	31 May 2025
WP7	D7.4	Exploitation and Data Management Plan - v.1	LIU	POS	30 Nov 2022
WP7	D7.5	Exploitation and Data Management Plan - v.2	LIU	POS	30 Nov 2023
WP7	D7.6	Exploitation and Data Management Plan - v.3	LIU	POS	31 May 2025
WP7	D7.7	Training material	UHAM	FAS	31 May 2025
WP8	D8.1	OEI - Requirement No. 1	LIU	UHAM	31 Aug 2022

Appendix IV – Internal review report template

Internal Review Report			
Report		Title	
Work package		WP title	
Task no		Task title	
Author(s)			
Date of review			
Document file name			
General comments			

Quality assurance:

Who	**Name**
Reviewer 1	
Reviewer 2	

#	**Document review aspect**	**Comment/Request for updates**
1	Are deliverable title, number, type and dissemination level in accordance with the DoA?	
2	Is the deliverable following the template (project branding, front page, document history, table of contents, list of figures & tables, fonts used, headings, spacing, captions, page numbers, etc.)?	
3	Are the objectives of the deliverable and its reported results/activities clearly stated? Is the deliverable consistent with its objectives and in line with its definition in the DoA? If this is not the case, is there a justification for the deviation?	
4	Does the document contain an “Executive summary”/”Abstract” section, and an “Introduction” correctly positioning the deliverable in the project and defining its objectives? Is the summary sufficiently informative, when read as a standalone text?	
5	If relevant, does the deliverable explain its relationship with other project deliverables (including other versions of this deliverable – past and future)?	

6	Is the organization and layout of the deliverable satisfactory (e.g. section structure with introduction and objectives, methods, results, conclusions, bibliography, etc.)?	
7	Is the scientific / technical approach sound, adequate and state of the art?	
8	Are interpretations of results and conclusions sound, justified by the data and consistent with the objectives of the deliverable?	
9	Is the quantity, quality and level of detail of data/information presented inside the report adequate to make the work verifiable and/or results reproducible by others? Is data published in addition to the deliverable/report document? If yes, is that data accessible and appropriately documented?	
10	Does the content justify the length?	
11	Are the figures and tables all necessary and correctly referenced? Are the figures and tables complete (e.g. content, numbers and captions), clearly presented and of good quality? Are there figures/tables missing?	
12	Are the references cited relevant and up to date? Are all the cited references in the bibliography and are all references in the bibliography used in the text?	
13	Is the deliverable written in appropriate language, with good syntax and grammar, and adequate language for the target group(s)? Are symbols and abbreviations explained?	
14	Do hyperlinks and references work?	
15	Additional comments and suggestions to the author(s) (if any)	

Appendix V – Deliverable list and monitoring

Deliverables												
Work Package No	Deliverable Related No	Deliverable No	Deliverable Name	Description	Lead Beneficiary	Type	Dissemination Level	Due Date	New Due Date (if delay)	Delivery Date	Approval Date	Status
WP1	D1.1	D1	Management and Quality Assurance Report - v.1	The first version will outline the planned management procedures and tools to be used for project management and reporting, as well as quality assurance and benchmarking of all delivered artefacts. The second version will in addition include a half-time evaluation of the management procedures and tools, as well as quality assurance procedures, in use, and any adjustments for the second half of the project.	LIU	R	PU	31 Jul 2022				Pending
WP6	D6.1	D28	Use case needs analysis and circular value flow mapping - v.1	Report describing the industrial needs from the perspective of the three use cases, and a detailed mapping of the targeted value flows in each use case. Updates in M18 and M27 to reflect new and changed needs identified after first and second prototype evaluation.	CIRC	R	PU	31 Aug 2022				Pending
WP8	D8.1	D44	OEI - Requirement No. 1	This research would benefit from an independent ethics advisor. The necessary background would have to include privacy and data protection issues on one side and the knowledge of the EU Ethics Appraisal process on the other side. It is recommended that the advisor submits yearly reports to the PO (so that the PO has sufficient information on the ethics compliance aspects of the project before reporting period 1 and project review as well as before the final review on M36).	LIU	ETHICS	SEN	31 Aug 2022				Pending
WP2	D2.1	D3	Project requirements specification and research methodology - v.1	Initial set of requirements for prototype 1 summarised at M6, extended and updated versions for prototype 2 and 3 delivered at M20 and 29 respectively. Report will also include a section on research methodology.	RS	R	PU	30 Nov 2022				Pending
WP7	D7.1	D37	Dissemination and communication plan - v.1	Report detailing the communication and dissemination activities planned, revised in M18, and including a summary of the carried out activities in M36.	LIU	R	PU	30 Nov 2022				Pending
WP7	D7.4	D40	Exploitation and Data Management Plan - v.1	Detailed data management plan, including the plans for open source and open access publishing, as well as exploitation plans and opportunities identified. To be updated at M18 and M36.	LIU	R	PU	30 Nov 2022				Pending
WP3	D3.1	D11	Ontology network architecture, methodology and alignment plan - v.1	Report describing the tailored ontology development methodology, the ODP catalogue and the overall ontology network architecture, as well as alignment strategies and plans.	LIU	R	PU	28 Feb 2023				Pending
WP4	D4.1	D18	Digital twin concept design, including ontology-based data sharing platform architecture and methodology - v.1	Description of the digital twin concept, including the technical design and architecture of the ontology-based data sharing platform, encompassing data transformation, retrieval and querying. In v2 also encompassing verifiable statements and credentials, i.e. targeting legal, ethical, security and privacy aspects.	IMEC	R	PU	28 Feb 2023				Pending
WP5	D5.1	D25	State of knowledge review	Overview of the current knowledge in the field, scoped by the requirements from WP2.	UHAM	R	PU	28 Feb 2023				Pending
WP3	D3.3	D13	FAIR integrated ontology network - v.1	Releases of the ontology network itself, including online documentation, with change management requests until deliverable date.	LIU	OTHER	PU	31 Mar 2023				Pending
WP4	D4.4	D21	Open circularity platform - v.1	Software releases, including documentation, to be integrated by WP2, with final change request management until the deliverable date.	IMEC	OTHER	PU	31 Mar 2023				Pending
WP1	D1.3	D45	Ethics assessment report v1	First version of the ethics assessment report, but the external ethics advisor.	LIU	R	SEN	31 May 2023				Pending
WP2	D2.4	D6	Software and protocol releases - v.1	Documented software, including data documentation and sharing protocols, released in the three project iterations.	RS	OTHER	PU	31 May 2023				Pending
WP6	D6.4	D31	Resulting research data sets - v.1	Research datasets to be partly used for technical development, e.g. technical testing in WPs 2-4, as well as to be used for the use case-based evaluations in T6.1-3.	CIRC	DATA	SEN	31 May 2023				Pending
WP1	D1.2	D2	Management and Quality Assurance Report - v.2	The first version will outline the planned management procedures and tools to be used for project management and reporting, as well as quality assurance and benchmarking of all delivered artefacts. The second version will in addition include a half-time evaluation of the management procedures and tools, as well as quality assurance procedures, in use, and any adjustments for the second half of the project.	LIU	R	PU	30 Nov 2023				Pending
WP2	D2.7	D9	Standardisation plan - v.1	First version will target an overview of existing standards the project will align to and use, while the second version will add a standardisation plan for the ontologies and protocols developed by the project.	POS	R	PU	30 Nov 2023				Pending
WP6	D6.2	D29	Use case needs analysis and circular value flow mapping - v.2	Report describing the industrial needs from the perspective of the three use cases, and a detailed mapping of the targeted value flows in each use case. Updates in M18 and M27 to reflect new and changed needs identified after first and second prototype evaluation.	CIRC	R	PU	30 Nov 2023				Pending
WP6	D6.7	D34	Report on evaluation results - v.1	Report on the evaluation results from each use case, regarding prototypes 1-3 in each version of the deliverable respectively.	CIRC	R	PU	30 Nov 2023				Pending
WP7	D7.2	D38	Dissemination and communication plan - v.2	Report detailing the communication and dissemination activities planned, revised in M18, and including a summary of the carried out activities in M36.	LIU	R	PU	30 Nov 2023				Pending
WP7	D7.5	D41	Exploitation and Data Management Plan - v.2	Detailed data management plan, including the plans for open source and open access publishing, as well as exploitation plans and opportunities identified. To be updated at M18 and M36.	LIU	R	PU	30 Nov 2023				Pending

WP2	D2.2	D4	Project requirements specification and research methodology - v.2	Initial set of requirements for prototype 1 summarised at M6, extended and updated versions for prototype 2 and 3 delivered at M20 and 29 respectively. Report will also include a section on research methodology.	RS	R	PU	31 Jan 2024				Pending
WP3	D3.4	D14	FAIR integrated ontology network - v.2	Releases of the ontology network itself, including online documentation, with change management requests until deliverable date.	LIU	OTHER	PU	31 Mar 2024				Pending
WP4	D4.5	D22	Open circularity platform - v.2	Software releases, including documentation, to be integrated by WP2, with final change request management until the deliverable date.	IMEC	OTHER	PU	31 Mar 2024				Pending
WP1	D1.4	D46	Ethics assessment report v2	Second version of ethics assessment report by external ethics advisor.	LIU	R	SEN	31 May 2024				Pending
WP2	D2.5	D7	Software and protocol releases - v.2	Documented software, including data documentation and sharing protocols, released in the three project iterations.	RS	OTHER	PU	31 May 2024				Pending
WP3	D3.2	D12	Ontology network architecture, methodology and alignment plan - v.2	Report describing the tailored ontology development methodology, the ODP catalogue and the overall ontology network architecture, as well as alignment strategies and plans.	LIU	R	PU	31 May 2024				Pending
WP4	D4.2	D19	Digital twin concept design, including ontology-based data sharing platform architecture and methodology - v.2	Description of the digital twin concept, including the technical design and architecture of the ontology-based data sharing platform, encompassing data transformation, retrieval and querying. In v2 also encompassing verifiable statements and credentials, i.e. targeting legal, ethical, security and privacy aspects.	IMEC	R	PU	31 May 2024				Pending
WP5	D5.2	D26	Multi flow circular value network design & development method - v.1	Description of the developed methods, in v2 including a 'how-to' guide or manual aimed at a business audience.	UHAM	R	PU	31 May 2024				Pending
WP6	D6.5	D32	Resulting research data sets - v.2	Research datasets to be partly used for technical development, e.g. technical testing in WPs 2-4, as well as to be used for the use case-based evaluations in T6.1-3.	CIRC	DATA	SEN	31 May 2024				Pending
WP6	D6.3	D30	Use case needs analysis and circular value flow mapping - v.3	Report describing the industrial needs from the perspective of the three use cases, and a detailed mapping of the targeted value flows in each use case. Updates in M18 and M27 to reflect new and changed needs identified after first and second prototype evaluation.	CIRC	R	PU	31 Aug 2024				Pending
WP6	D6.8	D35	Report on evaluation results- v.2	Report on the evaluation results from each use case, regarding prototypes 1-3 in each version of the deliverable respectively.	CIRC	R	PU	31 Aug 2024				Pending
WP2	D2.3	D5	Project requirements specification and research methodology - v.3	Initial set of requirements for prototype 1 summarised at M6, extended and updated versions for prototype 2 and 3 delivered at M20 and 29 respectively. Report will also include a section on research methodology.	RS	R	PU	31 Oct 2024				Pending
WP2	D2.8	D10	Standardisation plan - v.2	First version will target an overview of existing standards the project will align to and use, while the second version will add a standardisation plan for the ontologies and protocols developed by the project.	POS	R	PU	30 Nov 2024				Pending
WP3	D3.5	D15	FAIR integrated ontology network - v.3	Releases of the ontology network itself, including online documentation, with change management requests until deliverable date.	LIU	OTHER	PU	31 Dec 2024				Pending
WP4	D4.6	D23	Open circularity platform - v.3	Software releases, including documentation, to be integrated by WP2, with final change request management until the deliverable date.	IMEC	OTHER	PU	31 Dec 2024				Pending
WP2	D2.6	D8	Software and protocol releases - v.3	Documented software, including data documentation and sharing protocols, released in the three project iterations.	RS	OTHER	PU	28 Feb 2025				Pending
WP3	D3.6	D16	FAIR integrated ontology network - v.4	Releases of the ontology network itself, including online documentation, with change management requests until deliverable date.	LIU	OTHER	PU	28 Feb 2025				Pending
WP3	D3.7	D17	Ontology maintenance plan	Report describing the ontology maintenance plan and evolution strategies, beyond the project.	LIU	R	PU	28 Feb 2025				Pending
WP4	D4.3	D20	Digital twin concept design, including ontology-based data sharing platform architecture and methodology - v.3	Description of the digital twin concept, including the technical design and architecture of the ontology-based data sharing platform, encompassing data transformation, retrieval and querying. In v2 also encompassing verifiable statements and credentials, i.e. targeting legal, ethical, security and privacy aspects.	IMEC	R	PU	28 Feb 2025				Pending
WP4	D4.7	D24	Open circularity platform - v.4	Software releases, including documentation, to be integrated by WP2, with final change request management until the deliverable date.	IMEC	OTHER	PU	28 Feb 2025				Pending
WP6	D6.6	D33	Resulting research data sets - v.3	Research datasets to be partly used for technical development, e.g. technical testing in WPs 2-4, as well as to be used for the use case-based evaluations in T6.1-3.	CIRC	DATA	SEN	28 Feb 2025				Pending
WP1	D1.5	D47	Ethics assessment report v3	Third and final ethics assessment report by the external ethics advisor.	LIU	R	SEN	31 May 2025				Pending
WP5	D5.3	D27	Multi flow circular value network design & development method - v.2	Description of the developed methods, in v2 including a 'how-to' guide or manual aimed at a business audience.	UHAM	R	PU	31 May 2025				Pending
WP6	D6.9	D36	Report on evaluation results - v.3	Report on the evaluation results from each use case, regarding prototypes 1-3 in each version of the deliverable respectively.	CIRC	R	PU	31 May 2025				Pending
WP7	D7.3	D39	Dissemination and communication plan - v.3	Report detailing the communication and dissemination activities planned, revised in M18, and including a summary of the carried out activities in M36.	LIU	R	PU	31 May 2025				Pending
WP7	D7.6	D42	Exploitation and Data Management Plan - v.3	Detailed data management plan, including the plans for open source and open access publishing, as well as exploitation plans and opportunities identified. To be updated at M18 and M36.	LIU	R	PU	31 May 2025				Pending
WP7	D7.7	D43	Training material	Training material online.	UHAM	DEC	PU	31 May 2025				Pending

Appendix VI – Risk list and monitoring form

Risk factor (Table 6)	Impact qualification (Table 7)	Probability qualification (Table 7)	Priority (Table 7)	Owner	Status and explanation
R1	High	Low	4	RS (WP2 leader)	(Will be monitored once first set of requirements are agreed in WP2)
R2	Medium	Medium	3	PC	(Related to both technical development in all WPs and the evaluations in WP6, will be monitored by PC throughout the project as soon as technical development starts, in close collaboration with WP6 and WP2 leaders.)
R3	High	Low	4	CIRC (WP6 leader)	(Will be monitored as soon as data collection start in WP6)
R4	Medium	Low	5	LIU (WP3 leader)	(Will be monitored as soon as WP3 starts)
R5	High	Low	4	IMEC (WP4 leader)	(Will be monitored as soon as WP4 starts)
R6	Medium	Low	5	RS (WP2 leader)	(Will be monitored as soon as technical development starts in WP3 and 4, and subsequent integration in WP2)
R7	High	Low	4	PC	Continuously monitored by PC, to ensure the appropriate involvement of all partners in meetings and tasks. Current focus is on involvement in use case descriptions of D6.1, as well as all partners participating in consortium meeting.
R8	Medium	Medium	3	RS (WP2 leader)	Currently mitigated through ensuring close collaboration between WP2 and WP6 during the initial use case description development for D6.1
R9	Medium	Medium	3	PM	Monitoring the status of the involved partner organisations, ensuring that all key personnel has appointed deputies, collecting contact information to all parties etc.

R10	Medium	Low	5	PM & PC	Setting up and describing internal communication and coordination procedures as described in this document (D1.1) as well as technical support and templates (towards Milestone 1)
New risks added					
R11					
R12					
R13					