



D1.5 Project Management Plan – Month 18

Date : 23.01.2026

Deliverable No : D1.5

Responsible Partner : CIRCE

Dissemination Level : PU

Short Description	
The WILSON Project Management Plan (D1.5) outlines governance, coordination, and progress of all 18 work packages at Month 18. It details team roles, timelines, deliverables, risks, and milestones to ensure effective development and large-scale demonstration of digital twin technologies for sustainable building and district management.	

Project Information	
Project Acronym:	WILSON
Project Title:	Distributed data modelling and Federated Digital Twinning for lifecycle data-driven sustainable operation and management of buildings and districts
Project Coordinator:	CIRCE
Duration:	48 months

Document Information & Version Management			
Document Title:		D1.5 Project Management Plan – Month 18	
Related WP/Task:		WP1 / T1.1	
Document Type:		Report	
Main Author(s):		CIRCE (Aleida Lostale)	
Contributor(s):		Project Consortium	
Reviewed by:		Project Consortium	
Approved by:		CIRCE (Aleida Lostale)	
Version	Date	Modified by	Comments
V0.0	13.06.2025	CIRCE (Aleida Lostale)	Table of Contents
V1.0	25.07.2025	Project Consortium	Contributions received
V1.1	11.11.2025	CIRCE (Aleida Lostale)	Final version
V2.0	23.01.2026	CIRCE (Aleida Lostale)	Updated according to PO's comments

Disclaimer
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. Neither the European Union nor the granting authority can be held responsible for them.

TABLE OF CONTENTS

1. EXECUTIVE SUMMARY	7
2. INTRODUCTION	8
3. TEAM COMPOSITION AND ROLES PER ENTITY	9
4. WORK PACKAGES INTERACTION	11
5. WORK BREAKDOWN STRUCTURE	13
5.1. WPI-2-3 Management and coordination	13
5.1.1. WPI-2-3 Objectives	13
5.1.2. WPI-2-3 Gantt Chart	13
5.1.3. WPI-2-3 Deliverables	13
5.1.4. WPI-2-3 Milestones	14
5.2. WP4 Baseline assessment and performance indicators of buildings and portfolios	14
5.2.1. WP4 Objectives	14
5.2.2. WP4 Gantt Chart	14
5.2.3. WP4 Deliverables	15
5.2.4. WP4 Milestones	16
5.3. WP5-6 Semantic and federated digital twins at local and district levels	16
5.3.1. WP5-6 Objectives	16
5.3.2. WP5-6 Gantt Chart	16
5.3.3. WP5-6 Deliverables	16
5.3.4. WP5-6 Milestones	17
5.4. WP7-8 Data interoperability for data mesh-enabled digital twins	18
5.4.1. WP7-8 Objectives	18
5.4.2. WP7-8 Gantt Chart	18
5.4.3. WP7-8 Deliverables	18
5.4.4. WP7-8 Milestones	19
5.5. WP9-10 Digital twin enabled lifecycle data solutions for energy uses	19
5.5.1. WP9-10 Objectives	19
5.5.2. WP9-10 Gantt Chart	20
5.5.3. WP9-10 Deliverables	20
5.5.4. WP9-10 Milestones	20
5.6. WPI1-12 Digital twin enabled lifecycle data solutions for non - energy uses	21
5.6.1. WPI1-12 Objectives	21
5.6.2. WPI1-12 Gantt Chart	21

5.6.3.	WP11-12 Deliverables	22
5.6.4.	WP11-12 Milestones	22
5.7.	WP13 Integration of technologies and preparation for large-scale pilots	23
5.7.1.	WP13 Objectives	23
5.7.2.	WP13 Gantt Chart	23
5.7.3.	WP13 Deliverables	23
5.7.1.	WP13 Milestones	24
5.8.	WP14 Large-scale demonstration campaign.....	25
5.8.1.	WP14 Objectives	25
5.8.2.	WP14 Gantt Chart.....	25
5.8.3.	WP14 Deliverables.....	25
5.8.4.	WP14 Milestones.....	26
5.9.	WP15 Impacts and guarantees of replication	27
5.9.1.	WP15 Objectives	27
5.9.2.	WP15 Gantt Chart.....	27
5.9.3.	WP15 Tasks	27
5.9.4.	WP15 Milestones.....	28
5.10.	WP16-17-18 Dissemination, communication and exploitation	28
5.10.1.	WP16-17-18 Objectives.....	28
5.10.2.	WP16-17-18 Gantt Chart	28
5.10.1.	WP16-17-18 Tasks.....	29
5.10.2.	WP16-17-18 Milestones.....	29
6.	RISK ASSESSMENT	31
7.	CONCLUSIONS	37

LIST OF FIGURES

Figure 1 WILSON Pert Chart	12
Figure 2 WP1-2-3 Gantt Chart.....	13
Figure 3 WP4 Gantt Chart	14
Figure 4 WP5-6 Gantt Chart	16
Figure 5 WP7-8 Gantt Chart.....	18
Figure 6 WP9-10 Gantt Chart.....	20
Figure 7 WP11-12 Gantt Chart	22
Figure 8 WP13 Gantt Chart.....	23
Figure 9 WP14 Gantt Chart.....	25
Figure 10 WP15 Gantt Chart.....	27
Figure 11 WP16-17-18 Gantt Chart.....	28

LIST OF TABLES

Table 1 Team composition and roles per entity	9
Table 2 WP1-2-3 Deliverables	13
Table 3 WP1-2-3 Milestones	14
Table 4 WP4 Deliverables.....	15
Table 5 WP4 Milestones.....	16
Table 6 WP5-6 Deliverables.....	16
Table 7 WP5-6 Milestones	17
Table 8 WP7-8 Deliverables	18
Table 9 WP7-8 Milestones	19
Table 10 WP9-10 Deliverables.....	20
Table 11 WP9-10 Milestones	20
Table 12 WP11-12 Deliverables	22
Table 13 WP11-12 Milestones	23
Table 14 WP13 Deliverables.....	24
Table 15 WP13 Milestones.....	24
Table 16 WP14 Deliverables	25
Table 17 WP14 Milestones.....	26
Table 18 WP15 Deliverables	27
Table 19 WP15 Milestones.....	28
Table 20 WP16-17-18 Deliverables.....	29
Table 21 WP16-17-18 Milestones	29
Table 22 WILSON Critical Risks at M18	31

LIST OF ACRONYMS

AEC	Architecture, Engineering, and Construction
API	Application Programming Interface
BIM	Building Information Modelling
BMS	Building Management System
DBL	Digital Building Logbook
DT	Digital Twin
EoL	End of Life
ETL	Extract, Transform, Load
IDS	International Data Space
IDS	Information Delivery Specification
INN	Innovation
IoT	Internet of Things
KG	Knowledge Graph
LBD	Linked Building Data
LCA	Life Cycle Assessment
LCC	Life Cycle Cost
P2P	Peer-to-Peer
PDHs	Personalised Data Hubs
PKI	Public Key Infrastructure
PMP	Project Management Plan
QMP	Quality Management Plan
SDGs	Sustainable Development Goals
SLA	Service level agreement
SOA	Service-Oriented Architecture
UC	Use Case
UHI	Urban Heat Island
W3C	World Wide Web Consortium
WBS	Work Breakdown Structure
WP	Work Package

1. EXECUTIVE SUMMARY

Deliverable D1.5 presents the second version of the WILSON Project Management Plan (PMP), detailing the organisational, technical, and administrative structure guiding the project at Month 18. It ensures the alignment of consortium activities with the project's goals of developing a federated digital twin framework to enable sustainable lifecycle management of buildings and districts.

The document outlines the composition and roles of the project partners, the structure and interaction of 18 Work Packages (WPs), and the timelines, milestones, and deliverables associated with each. Key technical developments include data space architecture, semantic and federated digital twins, Personalised Data Hubs (PDHs), blockchain-based peer-to-peer frameworks, and integrated solutions for both energy and non-energy use cases.

Work is progressing toward integration and validation in the Living Lab, with subsequent demonstration across large-scale pilots in Italy, Spain, the UK, and Switzerland. A strong focus is placed on interoperability, data governance, risks – vulnerability – resilience to climate change, environmental impact, and lifecycle cost assessments. The plan also defines strategies for dissemination, exploitation, risk mitigation, and policy engagement to ensure long-term impact and replication of WILSON solutions.

Through coordinated efforts and clear management protocols, this PMP provides a comprehensive framework to drive innovation, monitor progress, and support the deployment of advanced digital technologies in the built environment.

2. INTRODUCTION

Deliverable D1.5 represents the second version of the WILSON Project Management Plan (PMP), building upon the foundations laid in D1.4 (submitted in Month 2). While the initial PMP focused on aligning consortium members around the project's structure, objectives, and roles during the early setup and implementation phases, this updated version incorporates critical reflections, updated planning, and consolidated coordination mechanisms following the first 18 months of execution.

The PMP continues to serve as a central guiding document to ensure a coherent and structured approach to managing the WILSON project. It outlines the updated roles and responsibilities of the consortium's 16 partner entities, the temporal and functional interdependencies among 18 Work Packages (WPs), and the tools in place to monitor progress, manage risks, and ensure the delivery of high-quality outcomes.

Compared to D1.4, which provided the initial Work Breakdown Structure (WBS), Gantt charts, and foundational risk management strategy, D1.5 reflects the progress achieved, deviations addressed (e.g. slight delays in WP4), and realignment measures implemented. Notably, it includes updates on deliverables and milestones that have been achieved, revised risk mitigation actions based on practical experiences, and the integration of feedback loops from the consortium's collaborative processes.

D1.5 also reinforces the coordination structure and updates administrative, financial, technical, and legal management practices in alignment with the project's current needs. It reflects lessons learned during the initial implementation and fine-tunes the PMP to ensure the continued success of WILSON in achieving its technical ambitions, including the development of semantic and federated digital twins, deployment of data mesh-enabled infrastructures, and demonstration activities across four large-scale European pilot sites. This plan will continue to evolve, with subsequent updates scheduled for Month 36 and Month 48, to ensure that the project remains on track and effectively guided throughout its lifecycle.

3. TEAM COMPOSITION AND ROLES PER ENTITY

The present section introduces the different entities that participate in WILSON project, their members and which is the role they are going to perform during the lifetime of the project. The name of the employees has been obtained from the contact list of the project.

Table 1 Team composition and roles per entity

Entity and participants	Role in the project
1/ CIRCE	Project coordinator. Developer of P2P services framework (INN3) and analytics & energy management toolset (INN4); WP9-10 and WP13 leader (integration of WILSON technologies and living lab); support in all energy solutions, given their extensive experience in this field; leader of T4.1, T7.2/T8.2, T7.4/T8.4.
2/ CSTB	Developer of HIBOU (biodiversity, INN6) and CONTINIUM (semantic renovation for material passports, INN7). Leader of T9.4 and WP11-12.
3/ TUE	Developer of PDHs (INN2), leader of WP7-8, ontologies definition (T5.2/T6.2), interface for Asset Management Systems, BMS and Digital Logbook (T9.1/T10.1).
4/ RINA-C	Developer of Risk and resilience tool (INN8); leader of WP14, KPIs definition (T4.5), LCA/LCC of BMS (T11.4/T12.4), deployment & monitoring plan (T13.1), holistic impact assessment and CBA (T15.1), and Italian pilot.
5/ QUE	Developer of BIM-enabled SRIs calculator (INN9), WP4 leader. Overall technical and development support.
6/ PARQ	Supporting on BIM and DTs development as well as Spanish pilot.
7/ WATTX	Technology manufacturer. Data provision mainly for Swiss pilot.
8/ ADD	Public owner of the Italian large-scale pilot and data provision for WILSON UCs demonstration.
9/ HMRIB	Leader of the Spanish demo site. Owner of the Spanish large-scale pilot and data provision for WILSON UCs demonstration.
10/ IDSA	Reference entity in data sovereignty, global standards for IDS and connectors. Extensive contacts network and synergies with existing projects and initiatives. Leader of T15.4 (standards and policy).

Entity and participants	Role in the project
11/ GND	Developer of the Investment Planning Tool (KER10), overall management activities and technical tasks support. Leader of WP15.
11.1/ GND.A	Overall financial (advisory), sustainability and business support.
12/ INTRACT	Leader of WP16-17-18. Responsible for communication, exploitation & dissemination strategy and actions.
13/ HSLU	Leader of Data Space architecture definition and infrastructure setup (T5.1) and technical support in related tasks; large-scale demonstration set-up (T13.4) and Swiss pilot.
14/ SAK	Owner of the Swiss pilot and data provision for WILSON UCs demonstration.
15/ UNEW	Developer of federated DT (INN1) at local and district level and CIMBA tool (INN5). Leader of WP5-6; analysis of business cases and main pilots' requirements (T4.2).
16/ BAM	Leader of the UK demo site. Estates Director of the UK demo-site and data provision for WILSON UCs demonstration.

4. WORK PACKAGES INTERACTION

Work Packages interaction has not changed from initial version of Project Management Plan (i.e. D1.4). All project activities are supported during the project execution by a coherent and smooth management and coordination articulated under **WP1, WP2 and WP3**. These WPs provide the necessary tools, methods and governing structure for effective and comprehensive administrative, financial, technical and legal management to ensure the successful project execution. The core project work started in **WP4**, in which an exhaustive analysis of boundary conditions needed for the correct development of the solutions in the pilots (Italy, Spain, UK and Switzerland) was carried out, setting the technical and technological requirements for the subsequent development of WILSON solutions. In parallel, an identification and analysis of the business cases were performed in this WP to identify end users needs and requirements, as well as the definition of the KPIs and data handling main requirements.

Once all reference conditions and information are established, design and development of the technologies to be implemented at the demonstrators is being performed in parallel during WP5 to WP12. **WP5-WP6** focus on the definition of data space architecture and its components, the ontologies, as well as on the development of the digital twins at local and district level. **WP7-8** focus on the design and development of the Personalised Data Hubs and corresponding data interaction mechanisms (blockchain access control, IDS connectors, APIs). On the other hand, **WP9-WP10** are dedicated to the innovations regarding energy uses, while **WP11-12** focus on non-energy uses.

WP13 will deal with the planning of the demonstration, the integration of technologies and solutions developed in previous WPs, and their implementation and validation at TRL6 in the Spanish living lab. Finally, this WP will prepare the large-scale pilots for the real demonstration of the solutions in the following WP. Once these tasks are finished, **WP14** will push the WILSON solutions to TRL7-8 through the demonstration across the four large-scale pilots, which will conclude with a task dedicated to the compilation of results, cost-benefit analysis and KPIs evaluation across the four large scale demo sites.

In parallel to the demonstration of WILSON solutions, business modelling, investment tools and plans will be developed in **WP15** to study their impact and replication potential, resulting in the development of new finance models, market opportunities and policy recommendations that will foster the further uptake of WILSON solutions.

Finally, a coherent dissemination, communication and exploitation strategy is defined and implemented from the very beginning of the project in **WP16, WP17 and WP18**. These WPs assure the correct transfer of WILSON results to the target stakeholders and establish synergies with other on-going projects and initiatives, including the exploitation and IPR management of the project developments.

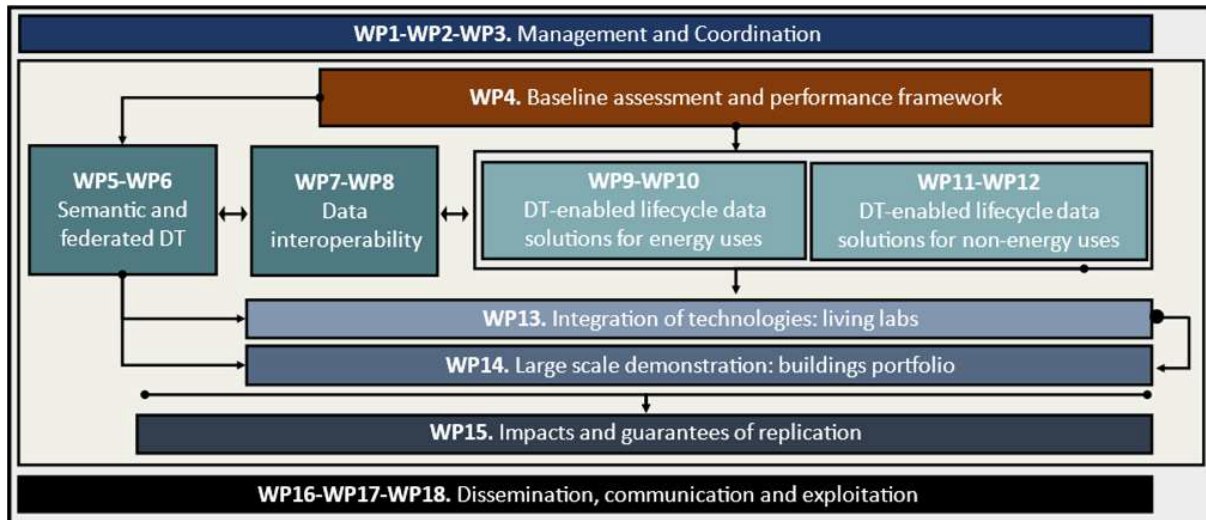


Figure 1 WILSON Pert Chart

5. WORK BREAKDOWN STRUCTURE

This section of the report details the activities foreseen in the 18 Work Packages of WILSON project. For each WP, the topics listed below are summarized:

- Objectives and expectations
- Work plan and schedule
- Checkpoints for controlling work progresses

5.1. WPI-2-3 Management and coordination

5.1.1. WP1-2-3 Objectives

To develop effective administrative, financial, technical and legal management to warrant successful execution of WILSON. They will ensure achievement of all objectives in terms of time, quality and costs, setting appropriate management tools, and performing smooth and effective management and coordination of consortium guaranteeing joint understanding among partners.

5.1.2. WP1-2-3 Gantt Chart

WP1 starts at month 1 and finishes at M18, WP2 starts at month 19 and finishes at M36 and WP3 starts at month 37 and finishes at the end of the project (month 48). All of them are led by CIRCE.

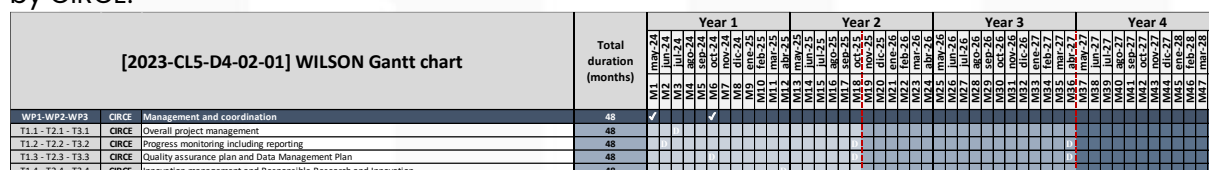


Figure 2 WPI-2-3 Gantt Chart

5.1.3. WP1-2-3 Deliverables

These WPs are comprised of the following deliverables. In **green**, deliverables already submitted.

Table 2 WP1-2-3 Deliverables

D1.1 Project Handbook	CIRCE	R, SEN	M3
Internal document setting the basis for governance structure, communication channels and methods, reporting to task and WP leaders, Project Coordinator and the EC, conflict solving methods and the Quality Management Plan (QMP).			
D1.4-1.5-2.2-3.1 Project Management Plan	CIRCE	R, PU	M2, M18, M36, M48
Detailed Project Management Plan with a Gantt chart and a Work Breakdown Structure (WBS). They will include a schedule per task, responsible partner related subtasks, related deliverables, and dependencies on other tasks.			
D1.6-2.3-3.2 Project Progress Report	CIRCE	R, SEN	M18, M36, M48
These deliverables will contain the overall status of the project. It will count with two updated versions.			
D1.2-1.3-2.1 Data Management Plan	CIRCE	R, SEN	M6, M18, M36

These deliverables will set the basis for the Dissemination and exploitation but also the procedures for the sharing of data of the project. There will be two versions to be revised during the course of the project. Updated regularly.

D1.7-3.3 RRI Report CIRCE R, PU **M12, M48**

Report on the progress of the implementation of the RRI actions in the project with two updated versions.

5.1.4. WP1-2-3 Milestones

Table 3 presents the milestones related to WP1-2-3 that will indicate the successful execution of the project. In **green**, milestones already achieved.

Table 3 WP1-2-3 Milestones

No.	Description	Leader	Due date	Means of verification	Status
1	Project kick-off	CIRCE	M1	Kick-off meeting minutes delivered.	Achieved
2	WILSON initial documentation ready and project ready to start dissemination	INTRACT	M4	Project Handbook and DEC Plan approved by the PC and the GA. Website and first visual materials available.	Achieved
10	End of WILSON project	CIRCE	M48	All deliverables checked and approved WP leaders and the PC.	Not started

5.2. WP4 Baseline assessment and performance indicators of buildings and portfolios

5.2.1. WP4 Objectives

To define the baseline and key aspects for correct development and later deployment of WILSON solution. This includes characterisation of pilots, data requirements, analysis of business cases identifying key target stakeholders, data handling, and KPIs for project monitoring and assessment.

5.2.2. WP4 Gantt Chart

WP4 starts at month 1 and was planned to finish at M10. However, it finished in M11 since the process of gathering and aligning all the inputs took longer than initially anticipated. Given its significance (WP4 defines the baseline scenario, which serves as a foundation for the subsequent work packages), ensuring a comprehensive and accurate assessment was a priority and end date was 3-weeks delayed. WP4 is led by QUE.

[2023-CL5-D4-02-01] WILSON Gantt chart			Total duration (months)	Year 1												Year 2												Year 3												Year 4											
				M1	M2	M3	M4	M5	M6	M7	M8	M9	M10	M11	M12	M13	M14	M15	M16	M17	M18	M19	M20	M21	M22	M23	M24	M25	M26	M27	M28	M29	M30	M31	M32	M33	M34	M35	M36	M37	M38	M39	M40	M41	M42	M43	M44	M45	M46	M47	M48
WP4	QUE	Baseline assessment and performance indicators of buildings and portfolios	10																																																
T4.1	CIRCE	Ex ante surveys of pilot infrastructure, equipment need analysis and installation planning	10																																																
T4.2	UNEW	Analysis of use & business cases and definition of main system functionalities	10																																																
T4.3	QUE	Life-cycle oriented building performance indicators	10																																																
T4.4	QUE	Data handling, cybersecurity mechanisms and compliance for federated and data mesh-based DTs	10																																																
T4.5	RINA-C	Definition of KPIs for WILSON monitoring and evaluation plan development	10																																																

Figure 3 WP4 Gantt Chart

5.2.3. WP4 Deliverables

WP4 is comprised of the following deliverables. As previously explained, all 5 deliverables were submitted with a three-week delay, in order to refine missing or unclear information and improve the quality of the documents. This delay had no major impact to other WPs or deliverables.

Table 4 WP4 Deliverables

D4.1 Detailed models of buildings at demonstration pilots	CIRCE	R, SEN	M10
The document will provide detailed information of the pilots, including the present architecture and equipment, but also the requirements by solutions developers for the next steps of the project.			
D4.2 WILSON use and business cases definition	UNEW	R, PU	M10
Capture the business use cases for WILSON developments from a diverse stakeholder group using a combination of a comprehensive literature review, questionnaire and focus groups in order to gather user requirements, and define key factors (challenges, preferences, expectations) affecting the development of Wilson technical solutions and its uptakes. Successful completion of T4.2 will inform the subsequent WPs for data interoperability, energy and non-energy services.			
D4.3 BIM-to-SRI methodology and tool	QUE	OTHER, SEN	M10
This deliverable describes the functionalities of the BIM-to-SRI methodology and tool, presenting an automated workflow for precise calculation of the SRI score based on BIM data collected through the WILSON data mesh approach. Emphasising compliance with the IDS (Information Delivery Specification) and MVD (Model View Definition) standards, it also reports on the data models developed to semantically represent the I/O requirement of the tool.			
D4.4 Data handling, management and protection	QUE	R, SEN	M10
Detailed documentation of the data made available and used in the project, together with characteristics and the requirements for their effective, performant, and secure management and sharing according to FAIR principles. Assessment and guidelines of practices for protection of personal data and cybersecurity measures will be included.			
D4.5 WILSON KPIs life-cycle oriented indicators panel	RINA-C	R, PU	M10
Panel of KPIs to evaluate the innovation and effectiveness of WILSON solutions. The KPIs will be used for overall assessment of pilots, mainly aiming at benchmarking their performance, in meeting the SDGs. Sources of information for KPIs definition are obtained from the analysis of the impacts from the data management, operation, sustainability and resilience perspectives, among others, aiming to be as aligned as possible with Built4People. These KPIs will be also identified to benchmark WILSON technologies and services with competitor technologies and current demo-sites situations. The KPIs panel will represent a draft of the monitoring and assessment plan to be put in place early in WILSON pilots to guarantee that the necessary sensors and building assets are working properly. The foreseen sensors typically include energy (distributed energy generation, electrical power production, demand and storage meters, etc.), and non-energy (environmental performance, circularity, building systems) monitoring systems.			

5.2.4. WP4 Milestones

Table 5 presents the milestones related to WP4 that will indicate the successful execution of the project. In green, milestones already achieved.

Table 5 WP4 Milestones

No.	Description	Leader	Due date	Means of verification	Status
3	Definition of requirements and context for the pilots and KPIs gathering and selection of most applicable	QUE	M10	WP4 DLVs checked and accepted. The consortium has a clear understanding of the large-scale pilots and the needed baseline to develop the project solutions	Achieved
10	End of WILSON project	CIRCE	M48	All deliverables checked and approved WP leaders and the PC.	Not started

5.3. WP5-6 Semantic and federated digital twins at local and district levels

5.3.1. WP5-6 Objectives

To develop a framework enabling the adoption of the existing frameworks and ontologies pertaining WILSON data spaces and the specification and implementation approaches for federated and semantic digital twins at building and district levels. These activities will start in WP5 and continue and finalise in WP6 that will end up with the final versions of the ontologies and DTs at local and district levels for their later integration in WP7, WP8, WP13 and demonstration in WP14.

5.3.2. WP5-6 Gantt Chart

WP5 starts at month 6 and finishes at M18 and WP6 starts at month 19 and finishes at M30. Both of them are led by UNEW.

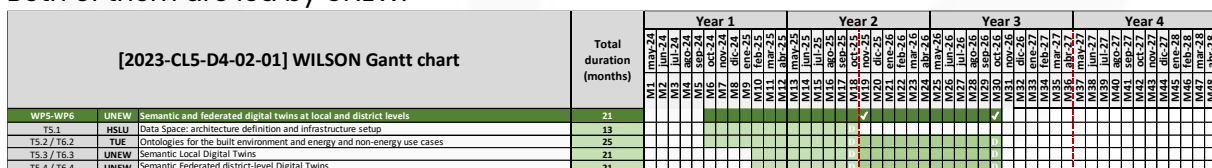


Figure 4 WP5-6 Gantt Chart

5.3.3. WP5-6 Deliverables

WP5-6 are comprised of the following deliverables. In green, deliverables already submitted.

Table 6 WP5-6 Deliverables

D5.1 Data Space architecture and infrastructure	HSLU	R, SEN	M18
Based on the reference architecture model of International Data Space Association (IDSA) this deliverable describes the concrete architecture that will be used for the WILSON Data Space. It defines the needed components of the Data Space system layer, such as app			

store and apps, connectors, identity provider vocabulary hub (list not exhaustive). Further, the deliverable defines the concepts of the data space's integration in the WILSON data infrastructure. The concepts will show the interactions between the components in the Data Space as well as the connection to PDHs, company's cloud and data infrastructure.

D5.2–6.1 WILSON ontologies evaluation TUE R, PU **M18** M30

Reports that present the existing ontologies, identified through a targeted literature review and a detailed WILSON consortium survey, in support of the WILSON data architecture (T5.1, T7.1). These ontologies are to be adopted in the implementation of local and/or district DT in WILSON. The report includes full documentation, and direct links to properly published ontologies.

D5.3–6.2 Local and Federated district-level Digital Twins UNEW R, PU **M18** M30

Reports including the work to create the Local Digital Twins (at per building/dwelling level) and the Federated Digital Twins (at district level) that can be tested in the WILSON living labs and large-scale pilots. The creation of Local DT will use building information and enable testing of building response to different scenarios (e.g., weather conditions, occupancy levels). The creation of Federated DT will connect local DTs with district level infrastructures and other urban parameters based on data mesh principles.

5.3.4. WP5–6 Milestones

Table 7 presents the milestones related to WP5–6 that will indicate the successful execution of the project. In **green**, milestones already achieved.

Table 7 WP5–6 Milestones

No.	Description	Leader	Due date	Means of verification	Status
4	Data spaces fully defined. Solutions developments' alpha version available Exploitation activities ready to start	TUE	M19	WP5, WP7, WP9 and WP11 checked and accepted. Architectures, models and algorithms initially developed and have been validated in a closed environment. Start of T17.2.	Achieved
6	WILSON decentralised data mesh, software modules and suite of tools ready	UNEW	M31	WP6, WP8, WP10 and WP12 DLVs checked and accepted. Project tools and models are completed with full functionalities and ready to test. First tests of the solutions conducted in the Spanish living lab.	In progress
10	End of WILSON project	CIRCE	M48	All deliverables checked and approved WP leaders and the PC.	Not started

5.4. WP7-8 Data interoperability for data mesh-enabled digital twins

5.4.1. WP7-8 Objectives

Devise a service-oriented architecture (SOA) that serves as a Building Operating System relying on (live) data connectors and transformers enabling access to heterogeneous data streams via Personalised Data Hubs (PDHs) of built assets. A built asset is hereby understood as the building component (wall, sensor, device, beam, roof) of a building / dwelling. This work will start in WP7 and continue and finalise in WP8 that will end up with the final versions of the solutions and modules, being able to fully integrate and demonstrate their operation and interoperability in WP13-WP14.

5.4.2. WP7-8 Gantt Chart

WP7 starts at month 10 and finishes at M18 and WP8 starts at month 19 and finishes at M30. Both of them are led by TUE.

[2023-CL5-D4-02-01] WILSON Gantt chart			Total duration (months)	Year 1												Year 2												Year 3												Year 4													
WP7-WP8	TUE	Data interoperability for data mesh enabled digital twins	21	M1	M2	M3	M4	M5	M6	M7	M8	M9	M10	M11	M12	M13	M14	M15	M16	M17	M18	M19	M20	M21	M22	M23	M24	M25	M26	M27	M28	M29	M30	M31	M32	M33	M34	M35	M36	M37	M38	M39	M40	M41	M42	M43	M44	M45	M46	M47	M48		
T7.1 / T8.1	TUE	Personalised Data Hubs	21																																																		
T7.2 / T8.2	CIRCE	Decentralized data and services interexchange framework and access control	21																																																		
T7.3 / T8.3	TUE	Connectors to legacy and third party systems	21																																																		
T7.4 / T8.4	CIRCE	Data ingestion and system integration methods	21																																																		

Figure 5 WP7-8 Gantt Chart

5.4.3. WP7-8 Deliverables

WP7-8 are comprised of the deliverables listed in Table 8. In **green**, deliverables already submitted.

Table 8 WP7-8 Deliverables

D7.1 –8.1 Personalised Data Hubs	TUE	OTHER, PU	M18, M30
1 st version of a prototype software solution delivered for the Personalised Data Hubs (PDHs). This deliverable includes the prototype software, as well as documentation for use. The PDH software is an out-of-the-box solution that can host data for individual buildings and/or users, including multi-modal data management techniques. This allows to store semantic, timeseries, geometric and other data on a per-object (object = built asset) and per-building basis.			
D7.2 –8.2 Blockchain-based decentralised P2P framework	CIRCE	OTHER, PU	M18, M30
1 st version of detailed documentation about the framework based on blockchain principles that will make up the decentralized network, including the security and data integrity layers that enhance the architecture.			
D7.3 –8.3 Connectors to legacy and third party systems	TUE	R, PU	M18, M30
1 st and final version of connectors and transformers delivered for legacy systems, e.g. BIM modelling software, BMS systems, etc. The developed connectors constitute the IDS connectors known in the Data Spaces initiative and they allow transferring data from these legacy systems into the WILSON PDHs. The deliverable will consist of a report that documents the use of these connectors, metadata and microservices that are expected to enable data integration.			

D7.4–8.4 API software for data ingestion and system integration	CIRCE	OTHER, PU	M18, M30
1 st and final version of explanation of the data and system integration methods developed along the project to interconnect the heterogeneous systems of the pilots.			

5.4.4. WP7–8 Milestones

Table 9 presents the milestones related to WP7–8 that will indicate the successful execution of the project. In **green**, milestones already achieved.

Table 9 WP7–8 Milestones

No.	Description	Leader	Due date	Means of verification	Status
4	Data spaces fully defined. Solutions developments' alpha version available Exploitation activities ready to start	TUE	M19	WP5, WP7, WP9 and WP11 checked and accepted. Architectures, models and algorithms initially developed and have been validated in a closed environment. Start of T17.2.	Achieved
6	WILSON decentralised data mesh, software modules and suite of tools ready	UNEW	M31	WP6, WP8, WP10 and WP12 DLVs checked and accepted. Project tools and models are completed with full functionalities and ready to test. First tests of the solutions conducted in the Spanish living lab.	In progress
10	End of WILSON project	CIRCE	M48	All deliverables checked and approved WP leaders and the PC.	Not started

5.5. WP9–10 Digital twin enabled lifecycle data solutions for energy uses

5.5.1. WP9–10 Objectives

To develop a set of data-driven solutions to maximise interoperability of assets, data sharing and optimise their operation focusing on energy aspects. This also includes the development of a secure blockchain-based framework that will allow the deployment of WILSON's data governance solutions and innovative business models. This work will start in WP9 and continue and finalise in WP10 that will end up with the final versions of the solutions and modules for energy uses, being able to fully integrate and demonstrate their operation and interoperability in WP13.

5.5.2. WP9-10 Gantt Chart

WP9 starts at month 10 and finishes at M18 and WP10 starts at month 19 and finishes at M30. Both of them are led by CIRCE.

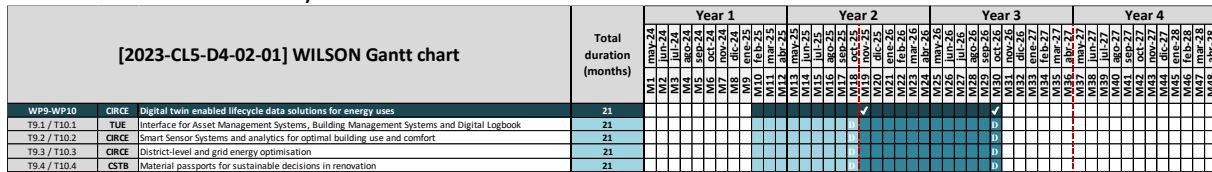


Figure 6 WP9-10 Gantt Chart

5.5.3. WP9-10 Deliverables

WP9-10 are comprised of the following deliverables. In **green**, deliverables already submitted.

Table 10 WP9-10 Deliverables

D9.1 -10.1 BMS upgrade and Digital Logbook	TUE	OTHER, SEN	M18 , M30
1 st version of an enhanced BMS solution that integrates all the Asset Management Systems for the monitoring of WILSON buildings. This enhanced BMS has a common (programming) interface to the rest of the architecture, based on the semantics developed in WP5-6, and connecting to the individual PDHs of WP7-8. The solution includes a Building Data Storage system, for the correct storage of data at the Digital Logbook of the buildings.			
D9.2 -10.2 Building energy use optimisation services	CIRCE	OTHER, PU	M18 , M30
1 st and final version of a detailed description of the building management systems enhancements, including new assets at sensor level, and advanced solutions at management level.			
D9.3 -10.3 District-level and grid optimisation services	CIRCE	OTHER, PU	M18 , M30
1 st and final version of the deliverable that describes the decision-making and support services at district and grid levels developed in T9.3 and T10.3, respectively. They will include both the multi-vector energy network manager service and the aggregated demand portfolio manager service.			
D9.4 -10.4 Material passports for sustainable renovations	CSTB	R, SEN	M18 , M30
1 st and final version of the report presenting guidelines and specifications for developing material passports for circular rehabilitation/renovation of buildings.			

5.5.4. WP9-10 Milestones

Table 11 presents the milestones related to WP9-10 that will indicate the successful execution of the project. In **green**, milestones already achieved.

Table 11 WP9-10 Milestones

No.	Description	Leader	Due date	Means of verification	Status
4	Data spaces fully defined. Solutions	TUE	M19	WP5, WP7, WP9 and WP11 checked and accepted.	Achieved

No.	Description	Leader	Due date	Means of verification	Status
	developments' alpha version available Exploitation activities ready to start			Architectures, models and algorithms initially developed and have been validated in a closed environment. Start of T17.2.	
6	WILSON decentralised data mesh, software modules and suite of tools ready	UNEW	M31	WP6, WP8, WP10 and WP12 DLVs checked and accepted. Project tools and models are completed with full functionalities and ready to test. First tests of the solutions conducted in the Spanish living lab.	In progress
10	End of WILSON project	CIRCE	M48	All deliverables checked and approved WP leaders and the PC.	Not started

5.6. WP11-12 Digital twin enabled lifecycle data solutions for non - energy uses

5.6.1. WP11-12 Objectives

WP11 and WP12 objectives are to go beyond the energy issues by considering the life cycle assessment for all the contributors to the building impacts in the different phases of a building life cycle: construction, including extraction of raw materials, use stage, renovation, EoL and deconstruction, as well as services brought by WILSON solutions, with focus on the BMS and NBS. As the maintenance and renovation are very important to improve the existing buildings (versus demolition and new buildings construction), the work carried out in the WP11-12 will focus on the assessment of the maintenance actions impact on prolonging the lifetime of building assets and the renovation actions impacts on the environmental and resilience KPI. The work will be carried out in close relation with the WP4 Baseline assessment and performance indicators of buildings and portfolios and WP9-10 Digital twin enabled lifecycle data solutions for energy uses, in which some of the WP11-12 contributors are also involved. The goal is to have a consistent assessment from the baseline and the KPIs establishment to their application on real projects, through the calculation methods and tools developed in the framework of the WILSON project. All these activities work will start in WP11 and continue and finalise in WP12 that will end up with the final versions of the solutions and modules for nonenergy uses, being able to fully integrate and demonstrate their operation and interoperability in WP13.

5.6.2. WP11-12 Gantt Chart

WP11 starts at month 10 and finishes at M18 and WP12 starts at month 19 and finishes at M30. Both of them are led by CSTB.

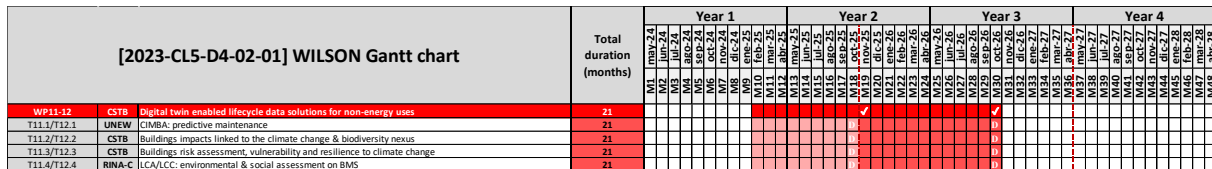


Figure 7 WP11-12 Gantt Chart

5.6.3. WP11-12 Deliverables

WP11-12 are comprised of the following deliverables. In **green**, deliverables already submitted.

Table 12 WP11-12 Deliverables

D11.1 -12.1 CIMBA: predictive maintenance tool	UNEW	OTHER, SEN	M18 , M30
1 st and final version of CIMBA development, a predictive maintenance tool, that utilises transfer learning techniques to train asset degradation models using homogenous asset data from building portfolios. The CIMBA tool in T11.1 and T12.1 will be verified by assessing its capabilities to predict remaining useful life, create adaptive maintenance schedules, and adjust degradation patterns based on selected variables (e.g. climatic hazard projections) hence, helping to mitigate failure risks and downtime.			
D11.2 -12.2 Methodology for climate & biodiversity impacts	CSTB	R, PU	M18 , M30
1 st and final version of reports on the biodiversity and climate KPI calculation method. The reports will give detailed information about the method used for the calculation of the KPI specific to the climate change and the biodiversity impacts. For the biodiversity, both in-situ (local) and ex-situ (global) impacts will be assessed. The nexus between the climate change and biodiversity impacts will be considered through the end point Life Cycle Assessment (LCA) approach.			
D11.3 -12.3 Risk and vulnerability & LCA/LCC integration	CSTB	R, PU	M18 , M30
D11.3 and D12.3 will describe the work carried out in Tasks 11.3 and 11.4 (and 12.3 and 12.4), specifically related to risk and vulnerability assessment (Task 11.3/12.3) and LCA and LCC (Task 11.4/12.4). Specifically, for what concern the Task 11.3 (12.3) it will describe both 1) the methodology used to tackle the urban heat Island (UHI) phenomena and 2) how the risk and resilience assessment support the decision-making process in the management and performance assessment of buildings, integrating the outcomes from resilience-based analysis for current and future scenarios in terms of climatic impacts to buildings. On the other hand, the D11.3 will provide guidelines on how to Integrate LCA and LCC into BMS based on the work carried out in the Task T11.4.			

5.6.4. WP11-12 Milestones

Table 13 presents the milestones related to WP11-12 that will indicate the successful execution of the project. In **green**, milestones already achieved.

Table 13 WP11–12 Milestones

No.	Description	Leader	Due date	Means of verification	Status
4	Data spaces fully defined. Solutions developments' alpha version available Exploitation activities ready to start	TUE	M19	WP5, WP7, WP9 and WP11 checked and accepted. Architectures, models and algorithms initially developed and have been validated in a closed environment. Start of T17.2.	Achieved
6	WILSON decentralised data mesh, software modules and suite of tools ready	UNEW	M31	WP6, WP8, WP10 and WP12 DLVs checked and accepted. Project tools and models are completed with full functionalities and ready to test. First tests of the solutions conducted in the Spanish living lab.	In progress
10	End of WILSON project	CIRCE	M48	All deliverables checked and approved WP leaders and the PC.	Not started

5.7. WP13 Integration of technologies and preparation for large-scale pilots

5.7.1. WP13 Objectives

To elaborate a plan for the successful deployment of solutions to prove their feasibility; to integrate and test the solutions in the Spanish living lab and prepare the tools and architecture of WILSON for large-scale implementation.

5.7.2. WP13 Gantt Chart

WP13 starts at month 25 and finishes at M45 and is led by CIRCE.

[2023-CL5-D4-02-01] WILSON Gantt chart			Total duration (months)	Year 1												Year 2												Year 3												Year 4																		
				M1	M2	M3	M4	M5	M6	M7	M8	M9	M10	M11	M12	M13	M14	M15	M16	M17	M18	M19	M20	M21	M22	M23	M24	M25	M26	M27	M28	M29	M30	M31	M32	M33	M34	M35	M36	M37	M38	M39	M40	M41	M42	M43	M44	M45	M46	M47	M48	M49	M50					
WP13	CIRCE	Integration of technologies and preparation for large-scale pilots	17																																																							
T13.1	RNA-C	Deployment and monitoring plan	6																																																							
T13.2	CIRCE	Integration of technologies	6																																																							
T13.3	CIRCE	Living lab: TRIS testing	12																																																							
T13.4	HSLU	Large-scale demonstration set-up and final preparation	12																																																							

Figure 8 WP13 Gantt Chart

5.7.3. WP13 Deliverables

WP13 is comprised of the following deliverables.

Table 14 WP13 Deliverables

D13.1 Deployment and monitoring plan	RINA-C	R, PU	M30
This deliverable reports on the activities carried out in Task 13.1. In particular, it provides a detailed monitoring plan to gather the data needed to assess pilot KPIs as provided by pilot owners. The monitoring plan will include as well as solutions and backup plans for optimisation and troubleshooting as well.			
D13.3 Integration of WILSON technologies in living lab	CIRCE	R, SEN	M41
Report showcasing the tests performed on the different technologies in the Spanish living lab, and the results obtained from the integration of these technologies.			
D13.3 Integration of WILSON technologies in living lab	CIRCE	R, SEN	M41
Report showcasing the tests performed on the different technologies in the Spanish living lab, and the results obtained from the integration of these technologies.			
D13.2 Pilots commissioning and TRL8 preparation	HSLU	R, PU	M36
Each WILSON pilot will require a technological set up and integration, carried out in premises of the technical partners of the project, to enable the large-scale demonstration. The deliverable thus will be a detailed summary of work performed in the 4 pilots regarding the installation of any assets or works required for the demonstration campaign.			

5.7.1. WP13 Milestones

Table 5 presents the milestones related to WP13 that will indicate the successful execution of the project.

Table 15 WP13 Milestones

No.	Description	Leader	Due date	Means of verification	Status
6	WILSON decentralised data mesh, software modules and suite of tools ready	UNEW	M31	WP6, WP8, WP10 and WP12 DLVs checked and accepted. Project tools and models are completed with full functionalities and ready to test. First tests of the solutions conducted in the Spanish living lab.	In progress
7	Integration of technologies completed. Installation and commissioning finalised and start of large-scale demonstration	CIRCE	M36	Integration completed (T13.2 finalised) and first 6 months of WILSON living lab test completed. Pilots' equipment installation ready (D13.2 checked and approved). Start of large-scale demonstration campaign (WP14).	Not started

No.	Description	Leader	Due date	Means of verification	Status
8	Tools refined after living lab completion. Reach of half of large-scale demonstration.	HSLU	M41	KPIs checked and modifications of tools carried out with feedback gathered. WP13 DLV checked and approved.	Not started
10	End of WILSON project	CIRCE	M48	All deliverables checked and approved WP leaders and the PC.	Not started

5.8. WP14 Large-scale demonstration campaign

5.8.1. WP14 Objectives

To deploy and demonstrate WILSON solutions in 4 large-scale pilots for collecting real data from field.

5.8.2. WP14 Gantt Chart

WP14 starts at month 35 and finishes at M46 and is led by RINA-C.

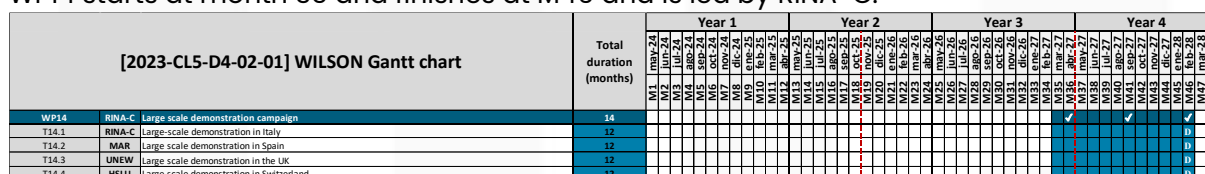


Figure 9 WP14 Gantt Chart

5.8.3. WP14 Deliverables

WP14 is comprised of the following deliverables.

Table 16 WP14 Deliverables

D14.1 Italian pilot full demonstration log	RINA-C	R, PU	M46
D14.1 will include activities performed in the Italian pilot, with particular emphasis on how methodologies and tools (specifically UC5 and UC6) have been demonstrated, what have been the achievements in terms of performance, usability, applicability and replicability, etc. taking into account the KPIs defined for the tools in Section 1 as well as their review during the project development process.			
D14.2 Spanish pilot full demonstration log	HMRIB	R, PU	M46
The pilot aims to implement mature technical solutions for energy management, relating it to user activity and indoor air quality, aspiring to create a digital twin of the hospital. The deliverable consists of a report of 1) the work performed during validation, 2) a description of the pilot's objectives fulfilled as well as 3) a demonstration of the use case innovation.			
D14.3 UK pilot full demonstration log	BAM	R, PU	M46
Document the outcomes of the WILSON products tested in the Newcastle Helix site, including implementation of UC1 - Decentralized multi-source data management, UC4 -			

Predictive maintenance and other UCs linked to UK pilot. KPIs defined in T4.5 will be measured to assess the impact of the research outcomes.

D14.4 Swiss pilot full demonstration log	HSLU	R, PU	M46
--	------	-------	-----

The pilot aims to implement a data space based on the framework of the International Data Space Association and give proof of its commercial feasibility. The deliverable includes a report of 1) the work performed during validation, 2) a description of the pilot's objectives fulfilled as well as 3) a demonstration of the use case innovation.

5.8.4. WP14 Milestones

Table 5 presents the milestones related to WP14 that will indicate the successful execution of the project.

Table 17 WP14 Milestones

No.	Description	Leader	Due date	Means of verification	Status
7	Integration of technologies completed. Installation and commissioning finalised and start of large-scale demonstration	CIRCE	M36	Integration completed (T13.2 finalised) and first 6 months of WILSON living lab test completed. Pilots' equipment installation ready (D13.2 checked and approved). Start of large-scale demonstration campaign (WP14).	Not started
8	Tools refined after living lab completion. Reach of half of large-scale demonstration.	HSLU	M41	KPIs checked and modifications of tools carried out with feedback gathered. WP13 DLV checked and approved.	Not started
9	Release of the refined WILSON solutions and completion of demonstration	RINA-C	M46	Large-scale demonstration campaign of WILSON completed (WP14 DLV checked and approved). KPIs are checked and evolution can be compiled, preparing final outcomes and conclusions (T15.1).	Not started
10	End of WILSON project	CIRCE	M48	All deliverables checked and approved WP leaders and the PC.	Not started

5.9. WP15 Impacts and guarantees of replication

5.9.1. WP15 Objectives

To analyse impacts achieved and ensure replication of WILSON innovations, assessing that all evaluations needed for the outreach of solutions are analysed and considered to propose business models and recommendations to legislators.

5.9.2. WP15 Gantt Chart

WP15 starts at month 33 and finishes at M48 and is led by GND.

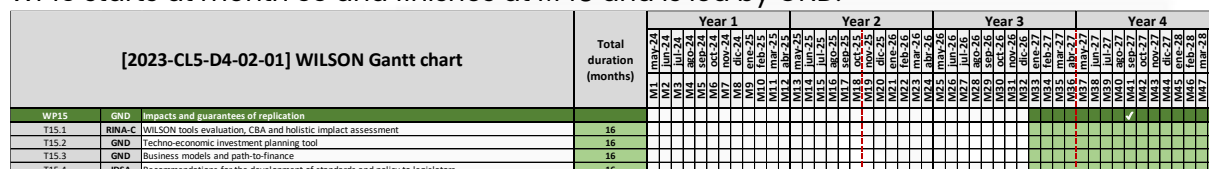


Figure 10 WP15 Gantt Chart

5.9.3. WP15 Tasks

WP15 is comprised of the following deliverables.

Table 18 WP15 Deliverables

D15.1 Evaluation of key results, impact assessment and CBA	RINA-C	R, PU	M48
<p>D15.1 will contain the analysis and evaluation of WILSON based on the Impact Assessment methodology defined in T4.5. It will focus on aspects such as: i) professionals' overall interest and acceptance regarding the proposed services, ii) technical/functional performance and the comparison of results, iii) evaluation of costs-benefits and feasibility of proposed services, iv) problems met and solved, v) recommendations for improvement and suggested extensions. The KPIs (T4.5 and T13.1) will be measured at the beginning and end of the demonstration campaign by pilot coordinators to assess impacts achieved. Based on the KPI results, the deliverable will gather the lessons learnt and provide the economic and social impacts of the most promising results based on the calculation of Cost/Benefit Ratios (CBR).</p>			
D15.2 Investment planning tool and new business models	GND	OTHER, PU	M48
<p>The specification of the Investment Tool providing stakeholders with in-depth insights to support their decision-making processes on operation, renovation and installation of green, sustainable assets. The Investment tool will be based on the expertise of GND focused on the environmental-financial data collections from sustainable energy and energy efficiency related projects and its visualization to investors. The investment tool will be integrated into GND infrastructure (www.gnd.one) as a GND asset increasing outreach of the WILSON project. The investment tool will support investors' decision-making process and integrate technical factors (such as energy efficiency improvements, reduced operational costs, etc.) with economical ones (such as increased property value, associated upfront expenses), providing stakeholders with comprehensive insights aiding their decision-making processes regarding operation and planned investments. The investment tool will support the development of new business models. The tool will cater</p>			

to a vast audience of sustainable energy investors, boosting the project's reach even post-completion.

D15.3 Standardisation and policy recommendations	IDSA	R, PU	M48
--	------	-------	-----

Comprehensive report on the main regulations and standards related to WILSON solutions and Data Spaces. Furthermore, the deliverable will report the conclusions of the workshops organized to consolidate industry recommendations to EU and national legislators, as well as the recommendations identified within the project for relevant standardization communities or for the creation of new standards.

5.9.4. WP15 Milestones

Table 5 presents the milestones related to WP15 that will indicate the successful execution of the project.

Table 19 WP15 Milestones

No.	Description	Leader	Due date	Means of verification	Status
5	WILSON solutions start integration planning and preparation for large-scale demonstration. Initial exploitation routes designed.	INTRACT	M25	Pilot partners start concrete conversations with developers for implementation (WP13 starts). Initial agreements reached on exploitation routes for developed innovation (D17.4 checked and approved).	Not started
10	End of WILSON project	CIRCE	M48	All deliverables checked and approved WP leaders and the PC.	Not started

5.10. WP16-17-18 Dissemination, communication and exploitation

5.10.1. WP16-17-18 Objectives

To define and implement dissemination, communication, and exploitation activities to be carried out throughout (and after) the project to ensure WILSON results will effectively benefit built environment data management and reach the market. Contribute, upon invitation by the CINEA, to common information and dissemination activities to increase the visibility and synergies between Horizon Europe supported actions.

5.10.2. WP16-17-18 Gantt Chart

WP16 starts at month 1 and finishes at M18, WP17 starts at month 19 and finishes at M36 and WP18 starts at month 37 and finishes at the end of the project (month 48). All of them are led by INTRACT.

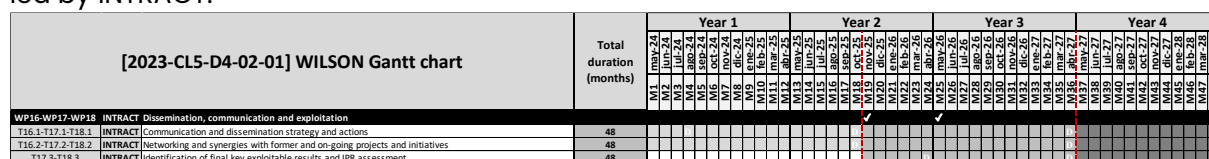


Figure 11 WP16-17-18 Gantt Chart

5.10.1. WP16-17-18 Tasks

WP16-17-18 are comprised of the following deliverables. In **green**, deliverables already submitted.

Table 20 WP16-17-18 Deliverables

D16.1-16.2 -17.1-18.1 Dissemination, Communication and Exploitation Plan & Execution Report	INTRACT	R, PU	M4, M18 , M36, M48
The report serves as a dynamic and comprehensive framework to ensure the successful outreach, awareness, and utilization of the WILSON project's outcomes. This deliverable encompasses a series of key components that collectively contribute to the strategic communication and dissemination efforts throughout the project lifecycle: (1) Identification of WILSON stakeholders/profiling; (2) Dissemination methods, channels, associated activities and tools to reach expected impacts; (3) Dissemination procedures; (4) DEC activities' schedule and complementarities among partners. Report on the progress of the DEC activities during the project (M4, M18, M36) and final report (M48). These deliverables guide and evaluate the project's communication and dissemination efforts, fostering a dynamic and adaptive approach to maximize the long-term impact of the WILSON project.			
D16.3 -17.2-18.2 Project synergies report	INTRACT	R, PU	M18 , M36, M48
1 st , 2 nd and final version of the report that serves as a comprehensive compilation of outcomes derived from the collaborative efforts and synergies established by the WILSON project with various European Union-funded projects, the Built4People partnership, and relevant platforms. These documents encapsulate the multifaceted engagements aimed at fostering a cohesive and interconnected ecosystem within the scientific and industrial community. The reports reveal WILSON's commitment to collaboration, knowledge sharing, and the establishment of a robust network that extends beyond project boundaries, contributing to the collective advancement of research and innovation in the European landscape.			
D17.3-17.4-18.3 Knowledge management and IPR protection plan	INTRACT	R, SEN	M24, M36, M48
1 st , 2 nd and final version of the plan that encapsulates the strategic framework and actionable insights formulated by WILSON to efficiently manage knowledge generated within the project and safeguard the Intellectual Property Rights (IPR) associated with the final key exploitable results (KERs). This comprehensive plan, developed under the leadership of INTRACT and involving all project participants, encompasses various stages and methodologies to ensure a systematic and proactive approach. The plan serves as an essential tool for WILSON, ensuring the effective utilization of project outcomes while fostering a collaborative and legally secure environment among consortium members.			

5.10.2. WP16-17-18 Milestones

Table 3 presents the milestones related to WP16-17-18 that will indicate the successful execution of the project. In **green**, milestones already achieved.

Table 21 WP16-17-18 Milestones

No.	Description	Leader	Due date	Means of verification	Status
2	WILSON initial documentation ready and project ready to start dissemination	INTRACT	M4	Project Handbook and DEC Plan approved by the PC and the GA. Website and first visual materials available.	Achieved
4	Data spaces fully defined. Solutions developments' alpha version available Exploitation activities ready to start	TUE	M19	WP5, WP7, WP9 and WP11 checked and accepted. Architectures, models and algorithms initially developed and have been validated in a closed environment. Start of T17.2.	Achieved
5	WILSON solutions start integration planning and preparation for large-scale demonstration. Initial exploitation routes designed.	INTRACT	M25	Pilot partners start concrete conversations with developers for implementation (WP13 starts). Initial agreements reached on exploitation routes for developed innovation (D17.4 checked and approved).	Not started
10	End of WILSON project	CIRCE	M48	All deliverables checked and approved WP leaders and the PC.	Not started

6. RISK ASSESSMENT

In the following table, the risk assessment up to M18 for each potential risk is presenting, including mitigation measures planned or applied. This section will be updated during the project execution with any foreseen risk that may be materialized or new one identified.

Table 22 WILSON Critical Risks at M18

No.	Description	WP No.	Materialized? (Yes / No)	Mitigation Measures (Applied / Planned)
1	Closing the activity of one company or partner leaving the consortium	WP1-3	Yes	(Applied) The consortium is highly qualified and, within their large contact network, is finding, the best partner for assuming the role lost.
2	Poor communication flow between partners	WP1-3	No	(Planned) An open and dialectic approach will be applied in all the consortium meetings and correspondence and communication will be promoted and ensured by the project coordinator.
3	Lack of financial resources	WP1-3	No	(Planned) Solvency of project partners has been assessed, ensuring their financial resources during the project execution. Most partners have already participated in national or EU projects, having wide experience and history, which reduces this risk.
4	Error in the estimation of the tasks' duration	WP1-3	Yes	(Applied) Due to the monthly steering of the project and the milestones and deliverables placed for control, delays in WP4 were duly detected and addressed by PC and partners involved were encouraged and requested to place extra.
5	Delay of one partner providing reports or activities	WP1-3	No	(Planned) Estimation of tasks' duration has been made in agreement of all partners, so that, as a first approach, the DLVs and development should be given in time. In case of task delay which would suppose delay of others, adjustment on tasks' duration will be made to accomplish the time targets established and asking for additional effort to the partner responsible for the delay.

No.	Description	WP No.	Materialized? (Yes / No)	Mitigation Measures (Applied / Planned)
6	Problems between partners (IPR, internal disagreement, etc.)	WP1-3	No	(Planned) Handbook (D1.1) will include all procedures already accepted in the CA. Democratic and dialectic approach will be applied in all consortium meetings and correspondence. IPR issues will be discussed and established in a common CA, signed by all partners.
7	Quality, scope and delay of partners work	WP1-3	No	(Planned) Compulsory Work plan is established with operative plan to be prepared by WP leaders to avoid low quality, loss of direction or overloaded actions. If detected, PC will contact WP leader to revise. DLVs will always go through review process, including CIRCE.
8	Regulatory constraints for implementing a solution in a pilot site	WP14	No	(Planned) Specific project solutions may be deployed in pilot or not depending on local legal and regulatory framework and therefore, recommendations based on experience and consultations will be provided and adapted to each local area.
9	Unavailability of data that would lead in inefficient optimization of models	WP4	Yes	<p>(Planned) WILSON includes experts with deep knowledge in their domains to ensure avoidance of assumptions or simplifications during modelling. Pilot partners are willing to install additional equipment for data gathering purposes to ensure that no lack of data appears during the course of the project.</p> <p>(Applied) WILSON mitigates the risk of reduced data availability in one demonstration site following the withdrawal of a former data provider and the resulting loss of access to heat-pump datasets by proactively securing alternative data streams. Beyond relying on domain experts to prevent modelling assumptions or oversimplifications, the project coordination team and the partners involved in the affected demo have already initiated a contingency plan to ensure continuity of datasets for tool validation: the preferred option is to obtain equivalent datasets from heat pumps provided by a major</p>

No.	Description	WP No.	Materialized? (Yes / No)	Mitigation Measures (Applied / Planned)
				manufacturer; in parallel, two feasible fallback routes are being pursued, namely (i) accessing data from other heat pumps already under the control of the demo owner and currently accessible, and/or (ii) sourcing suitable heat pumps elsewhere in the market with accessible data to validate WILSON tools. Where required, the demonstration stakeholders remain ready to deploy additional monitoring equipment to close any remaining gaps and avoid interruptions in data provision over the project lifetime.
10	Final construction of the Future Homes in UK pilot or the renovation project in the Italian pilot does not correspond with the planned timeline.	WP14	No	(Planned) Construction of Future Homes is planned for 2025, while renovation project in Italy will occur within the project to implement the renovation tools. Enough time is planned from its scheduled finalisation until start of WP15. If delays happen, scope of demonstration will adapt to available capacity at the time, adapting the WP timeline if needed.
11	Limited access to pilot sites and delay in gathering information and running demos	WP4, WP14	No	(Planned) Implementation of proactive measures with pilot partners to accelerate information collection and procurement processes to create a buffer of time that can be utilized in case of restrictions. Technical team always alert to speed up deployment. Alternative locations and actions (e.g., special permits) will be taken to ensure realisation of demo activities.
12	Failure to provide a concrete reference architecture specification	WP5-6, WP7-8	No	(Planned) WILSON includes experienced experts in EU projects and systems development, who have already worked on and developed solutions for the data market. Also, WILSON will allow for a two-phase process for architecture specification for early problems detection.
13	Challenges implementing solutions at pilots or unexpected	WP4, WP13, WP14	No	(Planned) Initial effort will be placed during the first phase of the WP4 with a specific task (T4.1) to develop a comprehensive pilot analysis and deployment plan (refined in WP13), mitigating risks

No.	Description	WP No.	Materialized? (Yes / No)	Mitigation Measures (Applied / Planned)
	problems during operation			of later difficulties during implementation. Duration of pilot operation and monitoring tasks have been calculated considering possible complications and thus a contingent timeframe has been set.
14	Outputs not compliant with standards/reference architectures	WP14, WP15	No	(Planned) Early tasks dedicated to data compliance (T4.4) and data spaces (T5.1) Partners, specially IDSA, are leaders in standards and IDS, minimizing this risk. Regular alignment will be ensured in tests. WP leader to monitor initiatives and emerging standards.
15	Interoperability problems between heterogeneous components / systems	WP4, WP9-10, WP11-12, WP13, WP14	No	(Planned) To avoid problems on later stages, T4.4 will early analyse data compliance and requirements. This allows communication and alignment between partners to ensure data availability and interoperability. Partners will agree any decision that may impact interoperability
16	Deviations from the planned technical expectations	From WP4 to WP14	No	(Planned) To align expectations, WP4 conducts an in-depth analysis of use cases and system functionalities with input from all partners, particularly developers and end users. Regular SC meetings and Exploitation sessions will discuss progress achieved in detail, achievements and expectations of the solutions developed to ensure alignment of required functionalities
17	Ineffective exploitation strategy and/or business models	WP16-18	No	(Planned) WILSON counts with industrial and research partners with experience in developing, implementing and managing similar solutions, as well as business experts like RINA-C and INTRACT, and other entities with a large portfolio of clients and covering the entire value creation chain, which ensures enough expertise to modify and adapt exploitation if required.

No.	Description	WP No.	Materialized? (Yes / No)	Mitigation Measures (Applied / Planned)
18	Out of the radar competition could hinder exploitation of results	WP16-18	No	(Planned) Market intelligence activities will ensure continuous monitoring of competition. Close interaction with relevant on-going R&I projects will reveal features that need to be included in the WILSON offering and alert the consortium for the acceleration of development and exploitation activities / WP leaders will ensure the quality of the relevant activities.
19	Poor dissemination to the stakeholders	WP16-18	No	(Planned) Wide dissemination will be planned and updated to avoid this risk. All partners will use different channels to draw visitors to website: social media, newsletter, digital outlets, etc. In addition, it will be promoted at all events attended by consortium partners.

Last but not least, it is worth to mention the importance of **Gender Balance** for WILSON project. Although it is not considered a critical risk for project implementation, since it does not jeopardize the project's ability to implement the work plan, deliver results, or meet milestones, given the negative trend shown up to M18 (i.e. October 2025), from 52.4% men / 47.6% women at M6, to 61.5% / 38.5% at M18, partners commit to closely monitoring this index in the coming periods. To proactively support its improvement, a dedicated WILSON Gender Plan will be developed and implemented to promote gender equality and foster a more balanced participation across the consortium.



7. CONCLUSIONS

By Month 18, WILSON has transitioned from set-up to steady execution, with the Project Management Plan (PMP) (D1.5) capturing a consortium that is functioning coherently across partners and Work Packages. The governance framework and quality controls established in D1.4 (1st version of Project Management Plan submitted in Month 2) have proved effective in practice: responsibilities are traceable, escalation paths are clear, and decisions are taken in time to protect the critical path. Where deviation occurred (most notably the three-week delay in WP4) the issue was detected early, corrective actions were applied, and downstream activities remained unaffected.

Technically, the project has delivered first versions of the essential building blocks: the data space architecture aligned with International Data Spaces (IDS) principles, the initial ontologies, local and federated digital twins, Personalised Data Hubs (PDHs), IDS-based connectors, and blockchain/API layers. These components are consistent with the target architecture and already demonstrate the interoperability required for the forthcoming integration phase. The risk register has been updated to reflect both materialised and potential risks, alongside applied or planned mitigations, while strengthened review loops and internal communication further reduce exposure to schedule and interface risks.

The project is now poised for integration and validation in the Spanish living lab (WP13) and for subsequent large-scale demonstrations in Italy, Spain, the UK, and Switzerland (WP14), progressing from TRL6 to TRL7–8. The monitoring plan and KPI framework will provide robust evidence for impact assessment and exploitation. Data protection, cybersecurity, FAIR data management, RRI, and clear IPR/knowledge-management procedures remain embedded throughout, supporting secure exchange and replicability.

In sum, WILSON remains on course to deliver a federated digital twin framework for sustainable lifecycle management at building and district levels. The checkpoints of PMP set for M36 and M48, coupled with risk-aware execution and quality assurance, provide a sound basis for integration, demonstration, and EU-level impact.



wilson-project.eu



wilson-project



wilson-project



wilson_project_



Funded by
the European Union

This project has received funding from the European Union's Horizon Europe research and innovation programme under grant agreement No 101147267