

D5.3 –User Case Deployment and Evaluation Report, v1

M21/MAY 2025



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Abstract	This deliverable presents the first integrated results from the deployment, demonstration, and initial evaluation of the five SoilWise User Cases (UCs), each showcasing the use of the SoilWise Repository (SWR) across diverse stakeholder groups and real-world scenarios. Building on the plans outlined in D5.1, this report captures how SWR functionalities were tested, validated, and refined through co-design demonstration activities. It outlines the methodologies adopted, including lightweight impact evaluation frameworks and stakeholder-driven feedback loops, to assess usability, relevance, and added value of the SWR. Insights gathered have directly informed iterative improvements, highlighted key technical and organizational challenges, and laid the foundation for future replication and scale-up. D5.3 thus serves as a key milestone in ensuring the SoilWise platform evolves in response to user needs, while advancing the FAIRness, accessibility, and practical uptake of soil-related data across Europe.							



Project Number 101112838



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In this document, the acronym 'DOMG – VL O' is used to refer to the Department of the Environment and Spatial Development, Flanders, Belgium, as per the partner's request for clarification. It's noted that in the grant agreement, the partner is identified by the acronym VL O (Vlaamse Gewest).



Project Number 101112838



List of Abbreviations

А	Activity
AI	Artificial Intelligence
ΑΡΙ	Application programming interface
BIOS	BIOSENSE INSTITUTE - RESEARCH AND DEVELOPMENT INSTITUTE FOR INFORMATION
	TECHNOLOGIES IN BIOSYSTEM
C#	Cycle number
САР	Common Agricultural Policy
CIRAD	CENTRE DE COOPERATION INTERNATIONALE EN RECHERCHE AGRONOMIQUE POUR
	LEDEVELOPPEMENT
CREA	CONSIGLIO PER LA RICERCA IN AGRICOLTURA E L'ANALISI DELL'ECONOMIA AGRARIA
D#.#	Deliverable number
DEC	Dissemination, Exploitation, Communication
DG AGRI	Directorate-General for Agriculture and Rural Development (European Commission)
DKC	Data and knowledge contributors
DM	Data Management
E	Evaluators
EC	European Commission
ELO	EUROPEAN LANDOWNERS ORGANIZATION
EnU	End Users



Project Number 101112838



EU	European Union
EUSO	EU Soil Observatory
EV ILVO	EIGEN VERMOGEN VAN HET INSTITUUT VOOR LANDBOUW- EN VISSERIJONDERZOEK
FAIR	Findable, Accessible, Interoperable and Reusable
GAIA	GAIA EPICHEIREIN ANONYMI ETAIREIA PSIFIAKON YPIRESION
INRAE	INSTITUT NATIONAL DE RECHERCHE POUR L'AGRICULTURE, L'ALIMENTATION ET
	L'ENVIRONNEMENT
ISRIC	STICHTING INTERNATIONAL SOIL REFERENCE AND INFORMATION CENTRE
JRC	Joint Research Centre (European Commission)
KM	Knowledge Management
КРІ	Key Performance Indicator
Μ	Month
ML	Machine Learning
NP	NEUROPUBLIC AE PLIROFORIKIS & EPIKOINONION
P#	Phase number
PU	Public
REA	Research Executive Agency (European Commission)
R&I	Research and Innovation
SO-#	Specific objective (followed by a roman numeric)
SWR	SoilWise Repository
SWUC	SoilWise User Cases





Project Number 101112838

Т	Task
TE	Technical expert
UC	User Case
UCL	User Case leader
UI	User interface
DOMG – VL O	VLAAMSE GEWEST
WE	WETRANSFORM GMBH
WP	Work package
WPL	Work package leader
WR	STICHTING WAGENINGEN RESEARCH
ZALF	LEIBNIZ-ZENTRUM FUER AGRARLANDSCHAFTSFORSCHUNG



Table of Contents

1	INTE	RODUCTION	13
	1.1	Project Summary	13
	1.2	DELIVERABLE SCOPE AND STRUCTURE	14
	1.3	RELATIONSHIP TO OTHER PROJECT DELIVERABLES	15
2	WPS	5 - USER CASES PLANNING, DEMONSTRATION AND ASSESSMENT	16
	2.1	WP5 OBJECTIVES, ACTIVITIES & APPROACH	16
	2.2	WP5 AND INTERACTION WITH OTHER WPS	17
3	USE	R CASE MONITORING & EVALUATION APPROACH & METHODOLOGY	19
	3.1	User Case Performance Analysis	19
	3.1.	1 Monitoring and Reporting	19
	3.1.2	2 User case Demonstration Plan and Timeline	21
	3.1.3	3 User Cases Progress Report	21
	3.1.4	4 Monitoring Demonstrated SWR Components and Features	22
	3.1.	5 KPI Monitoring for User Case Performance and Progress Tracking	24
	3.1.0	6 User Cases Progress Report Template Creation	24
	3.1.2	7 Structure of the UCs Progress Report	25
	3.2	IMPACT& ADDED VALUE EVALUATION FRAMEWORK AND METHODOLOGY	31
4	USE	R CASE IMPLEMENTATION, DEMONSTRATIONS ANALYSIS AND LESSONS LEARNED	33
	4.1	UC1 LAND MANAGERS	33
	4.2	UC2 LEVERAGING A NETWORK OF SOIL R&I KNOWLEDGE AND DATA	35
	4.3	UC3 POLICY MAKING & EVALUATION TO SAFEGUARD SOIL	37
	4.4	UC4 ENHANCED CAPACITIES OF PUBLIC AUTHORITIES AND LLS ACTORS	39
	4.5	UC5 REPOSITORY FOR NEW PRODUCTS, TECHNOLOGIES AND SERVICES	40
		7	



5	NEXT ST	EPS	43
6	CONCLU	SION	44
7	REFEREN	ICES	47
8	ANNEX I	-USER CASES PROGRESS REPORTS	48
:	8.1 UC1	Land Managers	48
	8.1.1	User Case (UC) Overview	48
	8.1.2	Demonstration Overview/Description	48
	8.1.3	Demonstration Steps and Activities	49
	8.1.4	Evaluation - Impact	50
	8.1.5	Risks/Challenges & Mitigation Measures/ Solution	51
	8.1.6	Key Performance Indicators (KPIs):	52
	8.1.7	GanttChart& Milestones	53
1	8.2 UC2	LEVERAGING A NETWORK OF SOIL R&I KNOWLEDGE AND DATA	55
	8.2.1	User Case (UC) Overview	55
	8.2.2	Demonstration Overview/Description	55
	8.2.3	Demonstration Steps and Activities	57
	8.2.4	Evaluation - Impact	59
	8.2.5	Key Performance Indicators (KPIs):	62
	8.2.6	GanttChart& MileStones	63
1	8.3 UC3	POLICY MAKING & EVALUATION TO SAFEGUARD SOIL	65
	8.3.1	User Case (UC) Overview	65
	8.3.2	Demonstration Overview/Description	65
	8.3.3	Demonstration Steps and Activities	66
	8.3.4	Evaluation - Impact	67
	8.3.5	Risks/Challenges & Mitigation Measures/ Solution	67





8.3.	6	Key Performance Indicators (KPIs):
8.3.	7	GanttChart& MileStones
8.4	UC4	ENHANCED CAPACITIES OF PUBLIC AUTHORITIES AND LLS ACTORS
8.4.	1	User Case (UC) Overview
8.4.	2	Demonstration Overview/Description70
8.4.	3	Demonstration Steps and Activities
8.4.	4	Evaluation - Impact
8.4.	5	Risks/Challenges & Mitigation Measures/ Solution72
8.4.	6	Key Performance Indicators (KPIs):
8.4.	7	GanttChart& Milestones
8.5	UC5	REPOSITORY FOR NEW PRODUCTS, TECHNOLOGIES AND SERVICES
8.5.	1	User Case (UC) Overview75
8.5	2	Demonstration Overview/Description75
8.5.	3	Demonstration Steps and Activities77
8.5.	4	Evaluation – Impact
8.5.	5	Risks/Challenges & Mitigation Measures/ Solution81
8.5.	6	Key Performance Indicators (KPIs)
8.5.	7	Gantt Chart & Milestones
8.6	Ann	ex II: User Cases Progress Report Template:
8.7	Ann	ex III: Mentimeter Results
8.8	Ann	ex IV: Survey, Question

Project Number 101112838



List of Tables and Figures

Figure 1. SoilWise process approach is based on three development cycles (C#), each comprising four p (P#)	hases 13
Figure 2 SoilWise project timeline	13
Figure 3 SoilWise actors	14
Figure 4 WP5 interactions with other WPs	17
Figure UC Overview template	26
Figure Demonstration Overview template	26
Figure Demonstration steps and activities template	27
Figure Evaluation impact template	28
Figure 9 Risks and mitigation template	28
Figure 10 Gantt diagram	30

Table 1 User cases component selection	23
Table 2 User cases matrix components	24
Table 3 User cases matrix stakeholder groups	24
Table 4 KPIs template	29
Table 5 Milestones template	30
Table 6 User cases expected outcomes	31



Executive Summary

Purpose

This deliverable (D5.3) documents the initial deployment and evaluation of SoilWise pilot demonstrations, aimed at validating the SoilWise Repository (SWR) in real-world settings. It presents the progress made in developing and deploying SWR prototypes across diverse user cases, and offers a first structured reflection on their usability, relevance, and integration potential. This deliverable contributes to Work Package 5 (WP5), supporting the project's broader objective to enable FAIR, actionable soil data use in support of soil health management.

Intended audience

This report is primarily intended for stakeholders actively engaged in soil health, particularly user case partners and developers, researchers working on digital soil mapping and environmental monitoring, land managers, and regional to EU-level policy actors responsible for environmental and agricultural sustainability. It will also be relevant for other Mission Soil projects interested in cooperation with the SoilWise project and the usability of the SWR.

Description of the main activities

The main activities covered in this deliverable include the testing of two SWR prototypes across five user cases. These activities combined participatory user engagement to tailor functionalities to real-world needs. The report captures how user cases worked with developers to refine the SWR based on feedback loops.

Evaluation focused on initial user experiences with SWR functionalities such the catalogue functionalities, the chatbot or data transformations. Workshops, demonstration sessions, and survey tools were used to gather feedback from user case teams, contributing to an iterative improvement process.

Key results:

- **Result 1: Co-development of user case demonstration scenarios** A major outcome of this phase was the collaborative development of tailored demonstration scenarios for each use case. This process aligned partners on a shared methodological framework for demonstrating the SoilWise Repository. Each use case defined its own focus, narrative, and target audience for the demo events, which were co-designed with WP5.
- **Result 2: Functional Validation in Use Cases** All five user cases successfully tested core SWR functionalities, with varied levels of uptake. This provided key insights into usability gaps (e.g., need for simplified interfaces or system bugs) and confirmed general interest in FAIR soil data workflows. Use case-specific needs were also documented to inform future iterations.
- **Result 3: Preliminary Evaluation of User Experience** Demonstration events and structured feedback sessions provided a preliminary but valuable evaluation of the SWR's usability and relevance. Use case partners highlighted both the repository's potential, especially for centralizing and sharing soil data, and current limitations, such as onboarding challenges, interface complexity, and mismatches with local data formats. This feedback has been synthesized to inform the next co-design phase, serving as a direct input for refining functionalities, improving user support, and strengthening alignment with user case-specific contexts. The results lay the foundation for the continuation of the iterative development cycles planned in the next project phase.





Research and practice implications

The report reveals early signals of system-level impact potential by showing how FAIR soil data infrastructure can be applied in diverse geographical and operational contexts. Insights into user needs and local constraints will shape future research on data interoperability, quality assurance, and user-centric design.

Practically, the findings suggest that trust and ease-of-use are critical for long-term adoption. Demonstrating added value, such as time savings or policy relevance, will be key to increasing engagement. These lessons will guide the next iteration of system deployment and the refinement of SWR as a service.

Policy implications

The preliminary deployment of the SWR supports the Mission Soil objectives by operationalizing access to interoperable, reusable soil data. Results are most relevant for EU-level policymakers and regional authorities tasked with implementing the Soil Monitoring Law, SDG reporting, and sustainable land management. The SWR shows potential as a common data infrastructure supporting evidence-based soil governance, but further alignment with policy workflows is needed.

Conclusion

Deliverable D5.3 provides a critical step in the SoilWise project by documenting and evaluating the first realworld use of the SWR. It highlights what works, what needs refinement, and how use cases engage with FAIR soil data infrastructure. The results will directly inform the next round of development and demonstration, as well as broader discussions about sustainability and scale-up across Europe.

Project Number 101112838



1 Introduction

1.1 Project Summary

Soil health remains one of the most urgent environmental challenges in Europe, with an estimated 60–70% of soils considered unhealthy (Bouman, 2022). In response, the European Commission has launched the EU Mission 'A Soil Deal for Europe', alongside the EU Soil Strategy and the proposed Soil Monitoring and Resilience Directive (2023), which collectively aim for 75% of EU soils to be healthy or significantly improved by 2030 and for all soils to reach this target by 2050. Achieving this ambition demands access to harmonised, high-quality, and actionable data and knowledge to support soil-related decision-making at all levels.

The SoilWise project directly contributes to this goal by developing, testing, and validating a prototype of an open-access knowledge and data repository, referred to as the SoilWise Repository (SWR). This platform is designed to become a cornerstone of the European Soil Observatory (EUSO), ensuring the discoverability, usability, and reusability of scattered and heterogeneous soil data across Europe. Through three iterative development cycles, SoilWise applies a co-creation and co-validation approach with multiple stakeholder groups to ensure that the SWR meets diverse user needs, from land managers and researchers to policymakers, public authorities, and businesses.



Figure 1. SoilWise process approach is based on three development cycles (C#), each comprising four phases (P#).



Figure 2 SoilWise project timeline.

The project follows an iterative approach, split into four phases, which are intentionally repeated into three cycles. Fifteen project partners work across seven work packages to design, implement, and refine the SWR and its functionalities. Work Package 5 (WP5), in particular, plays a central role in demonstrating how the repository can be used in real-world contexts through five practice-oriented User Cases (UCs), each targeting different stakeholder groups. The insights gathered from these demonstration activities directly feed back into the iterative development cycles, driving continuous improvement and alignment with stakeholder needs.





In line with infrastructure thinking, the SWR is being built not as a one-time solution, but as a long-term, modular, scalable, and interoperable platform that can support soil monitoring and policy development well beyond the lifetime of the project. The repository respects data sovereignty and integrates advanced AI and ML techniques to automate data linkage, infer new knowledge, and enhance FAIRness.





1.2 Deliverable scope and structure

Deliverable D5.3 – Deployment and Evaluation Report, v1 – presents the first integrated results from the User Case demonstrations and their initial evaluation. It builds upon the guidelines and plans introduced in D5.1 and sets the D5.2, reflecting the progress achieved during Phase 4 of the first development cycle: "Demonstration and Evaluation".

The primary aim of this deliverable is to report on the actual deployment and demonstration activities conducted by the five SoilWise User Cases (UC1–UC5). These activities were designed to test the usability, relevance, and added value of the SoilWise Repository across different real-world scenarios and stakeholder contexts. As such, the deliverable:

- Summarises the user case monitoring and stakeholder engagement strategies adopted;
- Presents the outcomes of the demonstrations phase, including stakeholder feedback, identified areas for improvements, and lessons learned;
- Introduces the evaluation framework used to assess both qualitative and quantitative impacts of the demonstrations;
- Documents the KPIs and indicators established, focusing on user engagement, repository usage, and feedback-informed improvements.

D5.3 is structured as follows:

- **Chapter 1** introduces the deliverable, outlining the project summary, scope and structure of the document, and its relationship with other project deliverables.
- **Chapter 2** details the role of WP5, including its objectives, main activities, and overall approach to planning, demonstrating, and evaluating User Cases, along with its interactions with other work packages.
- **Chapter 3** Outlines the methodology used to coordinate and monitor the implementation, demonstration activities, and evaluation, covering progress monitoring, KPI tracking, and the impact evaluation framework.





- **Chapter 4** Summarises the Demonstration Overview and Progress Analysis, along with the outcomes of the first implementation and demonstration phase, including identified key improvement points, lesson learned
- **Chapter 5** outlines the next steps in preparing for the second demonstration cycle and the pathway towards future deliverables (D5.2 and D5.4).
- **Chapter 6** concludes the report with reflections on cross-case progress and implications for further development.
- **Chapter 7** and the Annexes include comprehensive progress reports for each of the five User Cases, and templates, Mentimeter results, survey responses, and other materials supporting the demonstration and evaluation activities.

The insights and data captured in D5.3 serve as a foundational input to the project's iterative improvement process, ensuring that future development cycles of the SoilWise Repository are shaped by real-world feedback and oriented toward long-term adoption and impact.

1.3 Relationship to other project deliverables

Deliverable D5.1 is intricately connected to several other deliverables within the SoilWise project, ensuring a cohesive approach to achieving project objectives:

- D1.1, D1.2 Usage Scenarios, requirements, v1, v2 (M5, M36)
- D1.3, D1.4 Repository Architecture, v1, v2 (M8, M42)
- D2.1, D2.2 Developed & Integrated DM components, v1, v2 (M13, M18)
- **D2.5, D2.6** Report on strategy for FAIRness on soil data, v1, v2 (M27, M42)
- D3.1, D3.2 Developed & Integrated KM components, v1, v2 (M13, M18)
- D3.5, D3.6 Report on strategy for effective soil KM, v1, v2 (M27, M42)
- D4.1, D4.2– Repository infrastructure, components and APIs, v1, v2, v3, v4 (M13, M18)
- D4.5 Repository Data and Knowledge Resources, v1 (M21)
- D5.1, D5.2 User cases guidelines and demonstration plans, v1, v2 (M12, M24)
- D.5.5 Deployment and Evaluation Report, v2 (M34)
- D6.2, D6.3 DEC and Capacity Building Plan and Report, v1, v2, v3 (M3, M18)

D5.3 executes the approach described in D5.1 and describes the evaluation of the SWR prototype v2 (M18) with the release of D2.2, D3.2 and D4.2 as well as the validation performed (D4.5 – M21). This ensures a comprehensive, integrated approach to demonstrating and validating the SoilWise developed functionalities across diverse user cases.

2 WP5 - User Cases planning, demonstration and assessment

2.1 WP5 Objectives, Activities & Approach

The overall objectives and structure of WP5 – *User Cases Planning, Demonstration and Assessment* – are fully described in Deliverable D5.1 User cases guidelines and demonstration plans, v1. This work package aims to support the implementation and evaluation of the SoilWise User Cases, showcasing how they can capitalise on the (re)use of the SoilWise Repository (SWR). WP5 builds on earlier phases of the project and closely interacts with WP1 (requirements and co-design), WP4 (solutions and validation), and WP6 (stakeholder engagement).

In the context of **D5.3**, which marks the first version of the *Deployment and Evaluation Report*, the focus lies specifically on objectives that relate to the **implementation** and **initial evaluation** of the User Cases during Phase 4 of the project:

• SO II - To coordinate and support the SoilWise User Cases in their demonstration activities (T5.2).

This objective ensures that the User Cases move from planning to implementation in a coordinated and technically supported manner. T5.2 oversees the actual deployment of demonstrations by each User Case, ensuring alignment with the planning from T5.1, the readiness of the solutions validated in WP4/T4.3, and the needs of stakeholders identified through WP6. During this phase, support has been provided to UC partners to resolve technical issues, monitor progress, and maintain alignment with the development and stakeholder engagement processes.

• SO III – To monitor and evaluate how user cases target groups can capitalize (T5.3).

This deliverable initiates the evaluation process of how target groups can capitalize on the SoilWise Repository through practical use cases. Rather than establishing a rigid KPI framework early on, the evaluation adopts a lightweight and story-driven approach to capture real-world interactions and benefits. Feedback gathered from the first demonstration cycle will inform the iterative refinement of evaluation criteria, ensuring they reflect both practical relevance and stakeholder value. These initial insights are critical not only to assess early impact, but also to inform the second co-design cycle of the repository, starting in the next iteration of the project. By identifying real-world constraints, usability issues, and success stories, WP5 contributes concrete input to WP1 for refining user needs, updating acceptance criteria, and prioritising new requirements tailored to evolving expectations.

 SO IV – To <u>share the resulting knowledge and creation of guidelines</u> for replicating results across Europe (T5.4).

Although the main output of T5.4 is expected later in the project, early feedback gathered in this deliverable lays the groundwork for future replication. By capturing user experiences and emerging best practices during the initial demonstrations, WP5 begins building a foundation for cross-case learning and broader dissemination. These insights will support the development of guidelines for scaling and adapting SWR usage across different contexts and stakeholders, including EUSO actors and other Mission Soil projects

To conclude, WP5 plays a central role in bringing the SoilWise Repository (SWR) into real-world use by planning, supporting, and evaluating the implementation of the project's five User Cases. Through its four main tasks, WP5 helps translate the technical work from earlier phases into practical demonstrations that are tested with real users across different sectors. It works closely with WP1 to provide feedback that will inform the next co-





Project Number 101112838

design cycle, ensuring the SWR continues to meet user needs. WP5 also interacts with WP4 to align demonstrations with technical readiness, and with WP6 to ensure engagement with the right stakeholders. This first version of the Deployment and Evaluation Report reflects the early outcomes of that collaboration, highlighting how demonstration activities are progressing and what users are experiencing in practice. The findings from this phase will guide both the refinement of the repository and the preparation of future guidance for wider use and replication across Europe.

2.2 WP5 and interaction with other WPs



Figure 4 WP5 interactions with other WPs

The interaction of WP5 with the other work packages (WPs) is illustrated as a dynamic and iterative process centered around the user cases (UCs). WP5 begins with **Task 5.1 (UC Planning)**, which lays the foundation for the implementation and demonstration activities in **Task 5.2**. In the early phase of Task 5.2, **WP4** and **WP6** play a crucial role, specifically through **Task 4.3 (Testing and Validation)** and **Task 6.2 (Stakeholder Engagement)**, working with stakeholders from the five user cases to define and refine the demonstration scenarios.







During the demo events, the added value of the SoilWise repository (SWR) is presented not only to engaged stakeholders but also to a broader audience, targeting specific user groups. These events showcase the most relevant functionalities identified during the planning and testing phases. Feedback collected during the demonstrations serves two key purposes: (1) it supports **Task 5.3 (UC Evaluation)** by assessing the perceived usefulness and impact of the SWR for end users, and (2) it informs future development by generating new requirements and user needs. These insights are channeled back into **WP1 (Co-Design)** to shape the next iteration of development. The newly formulated user stories are then further developed, validated with new stakeholders, and cycled back into WP5 for continued testing and demonstration.

WP5 acts as a critical integrator, bridging technical development and stakeholder needs. Through structured planning, demonstration, evaluation, and feedback loops, it ensures that user cases evolve in close coordination with the other WPs, particularly WP1, WP4, and WP6. This cyclical process reinforces continuous improvement, relevance, and stakeholder alignment throughout the project lifecycle.



3 User Case Monitoring & Evaluation Approach & Methodology

3.1 User Case Performance Analysis

Performance assessment of the User Cases is an ongoing process that supports the project's co-design and development cycles. It relies on continuous monitoring through regular meetings, reports, questionnaires, and project communications. The collected information feeds into the evaluation of each UC's progress and overall impact. The evaluation outcomes will be documented in core deliverables (D5.3, D5.4, D5.5), submitted at strategic stages of the project. These reports will not only capture the outcomes but also offer concrete recommendations to improve the SoilWise Repository (SWR) and guide its future development. This continuous feedback loop is essential for ensuring the SWR remains relevant, effective, and aligned with project goals.

3.1.1 Monitoring and Reporting

FTo ensure smooth implementation, timely identification of issues, and appropriate mitigation or corrective actions, a monitoring process has been established. This process includes regular and ad-hoc WP5 and UC meetings, progress reporting, and ongoing communication through email exchanges and presentations during meetings, all serving as tools to track the progress of the User Cases.

Meeting Structure and Objectives in WP5

Within WP5, a combination of **regular and ad-hoc meetings** is used to address the evolving needs of User Cases (UCs). These meetings are essential for monitoring progress, resolving issues, and ensuring smooth demonstration implementation. The primary objectives include:

- Monitoring and documenting UC implementation progress based on the Demonstration Plan, Gantt chart, and milestones.
- Identifying and responding to delays, challenges, and risks through proactive collaboration with the other UC, WP5 partners.
- Providing technical support to facilitate implementation and demonstration processes.

Regular WP5 Meetings

To ensure an effective and multi-actor approach, WP5 has established two main levels of recurring meetings:

WP5 Monthly Coordination Meetings

These monthly meetings involve WP, Task, and UC leaders, and optionally R&I partners. Managed by the Task 5.2 Leader and WP5 Leader (EV-ILVO), they may shift to a bi-monthly frequency depending on project needs. Their purpose is to:

- Track progress and address implementation concerns.
- Address UC-specific challenges and explore synergies across UCs.
- Share experiences, challenges, solutions, and lessons learned.
- Foster collaboration among UCs and across actors.
- Support the update of methodologies and development of replication guidelines.
- Monitor progress and evaluate KPIs.





UC-Specific Collaborative Meetings

Held monthly (or bi-monthly, as needed), these meetings gather UC leaders, their partners, and representatives from WP1, WP4, WP5, and WP6. Coordinated by the Task 5.2 and WP5 leaders, they aim to:

- Strengthen collaboration between UCs and WPs.
- Address UC-specific challenges
- Deliver tailored technical and organizational support for each UC.

Ad-hoc Complementary Meetings

In addition to regular meetings, the following targeted sessions are organized when needed:

Meetings Between UC Leaders and Their Partners

Scheduled according to UC-specific needs, these meetings are used to:

- Coordinate partner efforts within each UC.
- Report on status, planning, challenges, and risks.
- Maintain alignment and foster collaboration.
- Ensure continuous monitoring of KPIs.

UC–Developer Meetings (Speed Dating Format)

These sessions support technical development and validation, particularly for the SoilWise Repository (SWR). They serve to:

- Address technical issues.
- Support ongoing development and validation efforts.
- Strengthen collaboration with technical partners.

Meetings with External Stakeholders

Organized by User Case leads and partners and with support from WP6 where possible, these meetings engage stakeholders to validate the SWR and co-develop demonstration scenarios. They are designed to:

- Explore potential value of the SWR.
- Involve external input in the validation and scenario development process.
- Collect actionable feedback.

WP5 actors also participate in regular **Executive Board (ExBo) meetings**. Through this involvement, they maintain strong communication between UCs, WP leaders, and the project coordinator, ensuring alignment across all project components.

Meeting Documents

For meetings between the Task 5.2 Leader and the UC partners, a draft agenda is prepared by the Task Leader and shared with participants at least seven calendar days before the meeting. The agenda is provided as a dynamic online document, allowing for real-time updates and collaborative input to ensure it reflects the shared priorities and concerns of all participants.





Following each meeting, meeting notes and action points are compiled and distributed by the Task 5.2 Leader. All related documentation, including agendas, minutes, action points, and presentations, is stored in the project's WP5 SharePoint Teams folder under the /meetings directory.

3.1.2 User case Demonstration Plan and Timeline

Each User Case (UC) must align its demonstration activities with its core objectives and ensure that a clear and structured Demonstration Plan is in place. This plan is essential for enabling systematic data collection and supporting effective monitoring and evaluation throughout the implementation process.

To this end, each UC leader is responsible for developing a tailored Demonstration Plan. The planning process began with the definition of a clear objective: to create a detailed, well-structured, and fit-for-purpose plan based on the four key steps outlined in the demonstration methodology:

- **Demo Design:** Planning for each iteration, including definition of roles, scheduling, required technical assets, and stakeholder engagement.
- **Demo Preparation:** Organizing data collection, coordinating with stakeholders, and addressing logistical and operational needs.
- **Demo Execution:** Conducting live demonstrations of the SoilWise Repository (SWR) in real-world use cases.
- Evaluation (Task 5.3): Integrating early-stage planning for performance monitoring, KPI tracking, and reporting of use case results.

The activities under each step were defined and assigned to relevant partners, in alignment with their roles and responsibilities as outlined in Deliverable D5.1 (Demonstration Plan and Guidelines). A corresponding timeline (Gantt chart) was then developed, marking key activities and related milestones (see section 3.1.7, figure 10).

To ensure the Demonstration Plan is responsive to needs, it was co-developed in close collaboration with UC partners. Their specific needs, perspectives, and objectives were carefully integrated, allowing a degree of flexibility to accommodate differing contexts.

The finalized UC Demonstration Plan serves as a roadmap for implementation and is embedded within the reporting template. It will be used as a reference to monitor the progress of each UC against defined activities and timelines.

3.1.3 User Cases Progress Report

The User Case Progress Report templates were co-developed in close collaboration with the User Case partners to ensure relevance and usability. These templates are designed to capture the status of activities outlined in each UC Demonstration Plan, while also documenting any risks and corresponding mitigation measures across the various demonstration steps and activities.

Each UC Leader is responsible for completing these standardised, pre-filled templates using information gathered through meetings, questionnaires, documentation, and email exchanges. The reports provide a structured way to monitor progress, assess challenges, and share updates across the consortium.

The completed reports, along with the outcomes of the related evaluations, will feed into a series of formal deliverables (D5.3, D5.4, and D5.5), submitted at key project milestones. These deliverables will not only summarise the progress and results of each User Case but will also provide actionable insights to improve the SoilWise Repository (SWR).





This ongoing reporting and evaluation process is essential for supporting the continuous improvement of the SWR. It ensures that the repository evolves based on real user feedback, aligns with stakeholder needs, and ultimately enhances its long-term relevance, usability, and sustainability.

3.1.4 Monitoring Demonstrated SWR Components and Features

To support effective monitoring and coordination across User Cases, a tracking matrix (see table 2) was developed as a tool to follow the demonstration of SoilWise Repository (SWR) components and functionalities. This matrix enables us to clearly see which functionalities are being demonstrated, identify any missing elements, and determine which User Case is showcasing which features. It also highlights common or overlapping components and target groups, using color codes to make these overlaps easily identifiable. These overlaps are reflected in a summary table for both target groups and functionalities (see table x), simplifying monitoring and facilitating potential collaborations, such as co-organizing demonstration events. By providing this clear overview, the matrix ensures that all planned functionalities are addressed, all relevant target groups are engaged, and no demonstrations are missed. To maintain its usefulness, User Case leaders are regularly asked to update the table, indicating the components they intend to showcase and the audiences they aim to engage. This tool also helps the Work Package Lead monitor implementation, alignment, and cooperation across the project.



		User Cases (UC)/Demonstration			on Scenerio (DS)						
Technical Components	Functionality	1101						1101		1105	
	, anotionality	001	USZ	0	C2	00	.3	U	C4	U	C5
		(Earm *	(Land *	(Rese -	(Rese -	(Govern	(Goverr.	blic 🖵	(Public 🗸	(Farme	(Farmer
	Metadata harvester				x	х		X			X
	Knowledge harvester				x						X
Harvest data and knowledge	Metadata harmonization				х	х		X			X
	Duplication identification				x						х
	Metadata RDF Turtle serialization				х	х					X
	RDT to Triple store				х	х					X
	Manual metadata upload				X	x					X
	Metadata transformation				X	x					X
	CRS transformation				X	x					v
Harmonize and transform	Format transformation				^	x					^
data and knowledge					X						
	Codelist mapping				X	x					
	Units of measurements conversion				X	x					X
	Download interoperable metadata				X	х					X
	Query Catalogue	х	х	X				Х		Х	Х
	CSW API			X						X	X
	OGC API Catalogue			X						x	X
	Data download (AS IS)	х	х	X				X		X	X
Catalogue	Display metadata augmentation results			X				X		X	X
	Display metadata validation results			X						X	X
	Display link to knowledge	X	X	X				X		X	X
	liviap preview	x	×	X				X		X	X
	Metadata profile validation			^				^		^	^
Metadata validation											
	Link liveliness assessment	х	X								X
	Automatic metadata generation					х					
	Translation module					x					X
	Keywords matcher					x					X
	Spatial Locator										
Metadata Augmentation	Metadata cleaning										
	Spatial scope analyser										
						x					
	Similarity finder										
	Automatic metadata interlinking										
Knowladza Cranh	Knowledge Graph enrichment and linking					x					
Knowledge Graph	Knowledge Graph querying (SPARQL										
	endpoint)					x					
System Usage & Monitoring	Custom Loolth & Status Manitaring										
	System Health & Status Monitoring										
	Storage of user-enhanced content - GI										X
	Storage of raw harvested metadata -										~
	PostgreSQL Storage of augmented metadata					x					X
Repository Storage											v
	Storage of augmented linked metadata										^
	knowledge granh - Triple Store										v
	Storage of vector embeddings										^ v
	User and Organisational Management										^
	Identity Drovider					x					
	DAPS (Participant and Component					x					
Authorisation	identification)										
	CA (Authentication base infrastructure)										
	IDS compliant Connectors										
	Creating metadata records directly within										
Metadata authoring	SoilWise Catalogue					x					
	AI / LLM based KG generation from	~									
	unstructured content	X									
Natural Language Querying	Chatbot - Natural Language Interface	X				x					
	LLM operationalisation	х									
Map Server						x					

Table 1 User cases component selection



				~~	1162					
	001		002		003		0C4		005	
Technical Components		DS2	DS1	DS2	DS1	DS2	DS1 (DS2 (DS1	DS2
~	(Farm 👻	(Lai 👻	(Res 👻	(Rese 👻	(Govern 👻	(Gove 👻	Living 👻	Living 🖵	(Farm 👻	(Farme 🚽
Harvest data and knowledge				х	x		х			х
Harmonize and transform data and knowledge				х	x					х
Catalogue	x	х	x				x		x	х
Metadata validation	x	х								х
Metadata Augmentation	x	х			x					х
Knowledge Graph					x					
System Usage & Monitoring										
Repository Storage					х					х
Authorisation					x					
Metadata authoring					x					
Natural Language Querying	x	х			х					
Map Server					x					

Table 3 User cases matrix stakeholder groups

	UC1		UC2		UC3		U	C4	UC5	
Torget Crouns	DS1	DS2	DS1	DS2	DS1	DS2	DS1 (DS2 (DS1	DS2
Target Groups	(Farmer	(Land	(Resea	(Researc	(Govern	(Gover	Living	Living	(Farmers,	(Farmer
· · · · · · · · · · · · · · · · · · ·	s, Lan 🔻	Mana 🔻	rche 🔻	hers) 🔽	menta 🔻	nme 🔻	Labs, 💌	Labs, 💌	Land 🔽	s, Lanc 🔻
Farmers	х								х	x
Land Managers	х	х								
Land Owners	х	х							х	x
Researchers			x	х						
Governmental bodies					x	х				
Public Authorities										
Technology and Services Providers		х							Х	x
Living Labs							х	X		
Lighthouses										
Policy Makers										
Business Actors	Х	Х							х	х

3.1.5 KPI Monitoring for User Case Performance and Progress Tracking

To assess the performance of each User Case (UC), selected Key Performance Indicators (KPIs) will be monitored in Section 7 of the progress report template.

UC Leaders are expected to take the lead in regularly updating the KPI table by reporting current values for each selected indicator. This will enable the calculation of achievement percentages, offering a clear view of progress against set targets.

The analysis of these updates, together with the broader progress reports, will allow for ongoing UC performance monitoring and evaluation of UCs. This process not only supports the project's impact assessment but also helps identify delays, challenges, or risks throughout the implementation and demonstration phases

3.1.6 User Cases Progress Report Template Creation

The User Case (UC) progress report template was developed to systematically monitor and evaluate the status of UC implementation, ongoing activities, and key achievements. It also provides a clear and consistent structure with clear instructions to support and streamline the harmonized reporting process





The development of the template was carried out through a structured **four-step process**

- 1. **Initial Drafting:** The first draft of the template was designed to provide a comprehensive and wellstructured format aligned with the Demonstration Plan and the overarching objectives of the work package.
- 2. **Partner Consultation:** The draft version was shared with UC partners to incorporate their specific needs, expectations, and perspectives. Feedback received during this phase was used to refine and improve the template.
- 3. **Project-Level Review:** The updated version was presented to the project coordinator and WP leaders during the Executive Board (ExBo) meeting to gather further comments and recommendations for enhancement.
- 4. **Finalization:** The final version of the progress report template was completed by integrating all feedback received. It is fully aligned with the UC Demonstration Plan and associated guidelines, ensuring clarity, usability, and consistency across the project.

3.1.7 Structure of the UCs Progress Report

The User Case progress report template is designed to collect detailed information on the implementation and demonstration of UCs. It provides a structured and user-friendly format that can be applied across all User Cases. The template captures key elements such as data and knowledge resources for the population of the repository, existing solutions will be used, needs for improvement to allow the integration with the SWR (T4.3), suggested potential actors and their role, start and end of the demonstration.

The content of the progress report template is organized into seven chapters, each focusing on a specific aspect of the demonstration and monitoring process.

1. User Case (UC) Overview

This section provides a general introduction to the User Case. It includes key information such as the UC number and title, the leading organization and contact person, and the list of partners involved. It also identifies the main target groups who will benefit from the demonstration. Finally, it outlines the specific challenge or problem that the UC aims to address, setting the context for the demonstration activities.

2. Demonstration Overview/Description

Here, the details of the planned demonstration are described. It covers the event's title, date, time, and location (online or physical). The objective of the event is defined, explaining what is expected to be achieved. This section also outlines the demonstration scenario, relevant data sources, technologies used, and the stakeholder groups involved. Additional details such as materials needed, dissemination channels, and potential synergies with other projects are also captured.



1 User Case (UC) Overview

User Case No & Name:

(Provide the UC number and name)

User Case Leader & Contact Information:

(Include the name and contact details of the user case leader)

UC Partners:

(List the other partners involved in the user case)

Target Groups:

(Specify the intended audience or beneficiaries of the user case)

Challenge (Need/Problem): (Describe the specific challenge, need, or problem the user case addresses)

Figure 5 UC Overview template

2 Demonstration Overview/Description

Event Title: (Provide the title of the event)

Date and Time: (Specify the date and time of the event)

Location: (Indicate whether the event is online or physical, and provide the location details)

Event Objective: (Briefly explain what you aim to achieve with this demonstration)

Demonstration Scenario/Showcase: (Provide a brief description of the demonstration scenario, highlighting its specific added value.)

Data/Knowledge Sources:

(Specify the data and knowledge sources to be used for the demonstration)

Existing Solutions to Be Integrated and Needs/ Improvement for Integration: (Detail the existing solutions that will be integrated into the demonstration and outline the needs and improvements required for their integration with the SWR)

Main Technologies/Functionalities to Be Presented:

(List the main technologies or functionalities to be showcased)

Stakeholder Groups and Participation:

(Identify the primary participants or stakeholder groups who are directly involved in or invited to the event, including whether their participation is for testing/validation, or showcasing purposes.)

Materials used/ Needed & Dissemination Channels:

(Indicate the materials required for the event and the dissemination channels, such as flyer, posters, newsletters, social media, etc.)

Potential Collaboration with Other Projects:

(Mention any opportunities for collaboration with other projects)

Figure 6 Demonstration Overview template





3. Demonstration Steps and Activities

This section breaks down the demonstration process into four main phases: Design, Preparation, Execution, and Evaluation. For each phase, the start and end months are recorded. A short summary of key activities and overall progress is provided along with the partners involved and their responsibilities. This structured timeline ensures that each step is clearly documented and traceable.

3 Demonstration Steps and Activities

3.1 Demo Design Start Month: MXX End Month: MXX

Activities & Progress

(Please provide a brief summary of the main activities carried out under each step, along with the overall progress.)

Partners Involved:

(List the partners involved in the activity and their responsibilities)

3.2. Demo Preparation Start Month: MXX End Month: MXX

Activities & Progress

(Please provide a brief summary of the main activities carried out under each step, along with the overall progress.)

Partners Involved:

(List the partners involved in the activity and their responsibilities)

3.3. Demo Execution Start Month: MXX End Month: MXX

Activities & Progress

(Please provide a brief summary of the main activities carried out under each step, along with the overall progress.)

Partners Involved:

(List the partners involved in the activity and their responsibilities)

3.4. Evaluation Start Month: MXX End Month: MXX

Activities & Progress

(Please provide a brief summary of the main activities carried out under each step, along with the overall progress.)

Partners Involved:

(List the partners involved in the activity and their responsibilities)

Figure 7 Demonstration steps and activities template

4. Evaluation – Impact

The focus here is on assessing the value and outcomes of the demonstration. It defines the evaluation objectives, including aspects like usability, performance, and user satisfaction. It also describes the evaluation methods (e.g., surveys, interviews, KPIs), key topics to gather feedback on, and the improvements identified based on participant input. This helps guide future improvements and assess the SoilWise Repository's impact.





4 Evaluation - Impact

Evaluation Objectives:

(Describe the purpose of the evaluation, including which aspects of the SWR will be assessed—such as performance, usability, user satisfaction, usefulness, and added value.)

Evaluation Approach:

(Outline the methods and tools to evaluate impact and performance, such as survey, interview, KPIs)

Feedback from Participants:

(List the topics to include in the feedback questionnaire, such as the usefulness of technologies, ease of understanding, or suggestions for improvement)

Identified areas for improvement based on feedback received.: ((Highlight any areas that could be enhanced or optimized based on received feedback.))

Figure 8 Evaluation impact template

5. Risks/Challenges & Mitigation Measures

This part identifies any risks or challenges that may affect the demonstration, specifying which activities are at risk. It also proposes mitigation strategies or solutions to address them. Documenting risks in this way helps anticipate problems and plan practical responses to ensure smoother execution.

5.Risks/Challenges & Mitigation Measures/ Solution

Description of Risk/Challenges: (Describe the specific risks or challenges associated with the demonstration)

Stage/Activity Concerned: (Identify the steps/ activities affected by the risk or challenge)

Proposed Mitigation Measures/Solution: (Outline the solutions of measures proposed to mitigate the identified risks)

Figure 9 Risks and mitigation template

6. Key Performance Indicators (KPIs)

This section lists measurable indicators used to track the success and impact of the UC demonstration. Each KPI includes a number, description, current value, target value, and a comment section. It covers aspects such as the number of events, stakeholder participation, user engagement, and system improvements. KPIs help quantify progress and support transparent reporting.



Table 4 KPIs template

6.Key Performance Indicators (KPIs):

(Please indicate the KPIs relevant to your user case for evaluation)

Key Performance Indicators							
KPI No	KPI description	Current	Target value	Comments			
		value					
1	Number of						
	demonstration						
	events organised						
2	Number of						
	stakeholders						
	invited to each						
	event, and total						
	number for the						
	whole events.						



7. Gantt Chart & Milestones

The final section outlines the timeline of the activities and key milestones across different demonstration iterations.

Gantt Chart was created (Table) as a way to display activities against time. Each activity is represented by a bar; the position and length of the bar shows the start date, duration and end date of the activities. This allows you to see at a glance:

- What are the different activity groups and activities.
- When each activity starts and ends.
- How long each activity is scheduled to last.
- What are the dependencies and milestones.
- The start and end date of the UC Implementation phase.





		2024			2025						
Activities	Partners involved	SEP	ОСТ	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN
Demo design		MS1									
A1-Design and Detail the Demonstration Scenarios											
A2-Establish the Demo Plan and Timeline											
A3-Align and Collaborate with Technology Providers											
A4-Identify needed data and components											
A5-Identify Stakeholders											
Demo Preparation				MS2							
A6-Communication and collaboration between the Partner	s and Tech providers										
A7-Prepare Demo Materials and Resources											
A8-Prepare and Integrate Required Technical Components											
A9-Conduct Internal Testing and Validation											
A10-Engage Stakeholders and Confirm Participation											
A11-Finalize Logistics and Demo Setup											
Demo Execution							MS3		MS4		
A12-Execute the Demonstration as Planned											
A13-Monitor and Troubleshoot During the Demo											
A14-Engage and Interact with Participants											
A15-Capture Data and Feedback for Analysis											
Demo Evaluation										MS5	
A16-Reporting on the progress											
A17-Identify and Define Key Evaluation Aspects											
A18-Select and Prepare Evaluation Tools and Methodology											
A19-Provide Feedback and Baseline information , if needed											
A20-Provide Feedback and Recommendations for Improvement											

Figure 10 Gantt diagram

We indicated the UC milestones apart from project milestones for the purpose of motivation and to ensure that we were on the right track. Milestones are the specific points within a BC implementation and will be used to measure the UC implementation progress. In BC Gantt chart they represent critical events such as:

- Key deliverables (MS1, MS5, MS10, MS15)
- Delivery of prototype (MS1, MS6, MS11)
- Completion of critical activities (MS2, MS3, MS8, MS13)
- Meetings, or events (MS4, MS9, MS14)

Table 5 Milestones template

۱ <u>ــــــــــــــــــــــــــــــــــــ</u>					
	MS	MS Name	Mean of verifications	Achievement	Achievement
	NO MC1	delivery of initial	Submission of D4.1	(yes/no)	Date
	MSI	prototype	Submission of D4.1	yes	
	MS2	Complete and	This milestone includes completing the detailed demo design, including the	yes	
		approve the demo	demo scenarios, the associated activities, and the comprehensive schedule for		
		plan, detailing the	each iteration. This should reflect the improvements made to the user case		
		demo scenarios,	descriptions and provide clarity on the assets and services needed for the demo.		
		activities	The plans must be flexible and easily understandable by all involved		
			stakeholders, ensuring that everyone knows their responsibilities and timelines.		
5	MS3	MS3 Completion of Finalize the preparation for the demo, including confirming stakeholder		yes	
atio		Stakeholder	participation, securing necessary materials (hardware/software). All		
Iter		Engagement and	stakeholders should be engaged and committed, and all resources should be in		
rst		Demo Materials	place to ensure smooth execution. This milestone also includes finalizing any		
Ξ			synergies or shared activities with other user cases or work packages (e.g., T4.3).		
	MS4	Successful Execution	Complete the first demonstration session with active participation from		
		of the Demo and	stakeholders. The SoilWise repository (SWR) should be tested in real-world		
		Collection of Data	scenarios, and operational data (including any challenges or issues		
			encountered) should be collected. The focus will be on testing the SWR's		
			functionality and ensuring that the demonstration provides tangible insights into		
			its real-world applicability.		
	MS5	First Deployment and	Delivery of D5.2 Deployment and Evaluation Report		
		Evaluation Report			
S	MS6	Delivery of improve	Delivery of tech Deliverables V2		
0, 0		repository			

For the achieved milestones in the examined reporting period (Table 5 Milestones template), UCL should provide a mean of verification, a clear statement of achievement (yes/no) and an achievement date. Complete version of the template can be found in ANNEX 1





3.2 Impact& Added value Evaluation Framework and Methodology

Impact Assessment

The impact assessment is aimed at verifying if the demonstration activities performed under WP5, by the 5 user cases, are fostering the reaching of the respective expected outcomes as foreseen in the Grant Agreement, or possibly updated, given the interaction with the respective stakeholders. The demonstration events are the core activities performed by WP5, but as described in the respective demonstration scenarios, other activities accompany the demonstration events themselves, to better involve the stakeholders, demonstrate the SWR and get their feedback on improvements needed, in order to make the SWR more useful, in terms of added value to their daily work.

The expected outcomes foreseen in the Grant Agreement for each User case are reported in the table Table 6 User cases expected outcomes

User case	Expected Outcomes
UC01: Soil health	User case for reuse of R&I and monitoring data from SoilWise/EUSO and
performance indicators for	connected sources to improve local land management, and for merging
Land Managers	open and closed data from EU, national and private local data sources while
	ensuring data sovereignty. Also showcasing EU coverage potential and how
	businesses (e.g. soil sampling, farm management systems, consultancy) can
	build viable business models supported by SoilWise.
UC02: Leveraging a network	A pool of potential additional users of SWR. Showcase and ensure
of Soil R&I Knowledge and	persistency of R&I project results. Best practices for interlinkage and
Data	cooperation. Quantified and described added value of R&I project results
	and interlinkage of repositories for at least 3 projects.
UC03: Policy Making &	20% Increased discoverability and accessibility of data for reporting and
Evaluation to safeguard soil	other purposes. Showcase added value of improved and more efficient
	reporting pipelines and frequency or quality of the results.
UC04: Enhanced capacities of	Exemplify the use of FAIR data implementation and Open Science practices
Public Authorities and LLs	for Public Authorities. • Community of users with an increased sense of
actors	ownership of the repository • Improved balance between costs and benefits
	for data providers and users • Improved content quality of the repository,
	improved search experience; high-quality content first • Evaluation of
	effectiveness and user-friendliness of different options to improve FAIRness
	of data provided to SoilWise and SWR itself • Solutions (tools), approaches
	and practices that make publishing knowledge, data and projects in a FAIR
	way easier and encourage organisations to make the step to complete FAIR
	publication
UC05: Repository for new	Priority list of aspects that create added value for data providers • Priority
products, technologies and	list of aspects that create added value for data users • Evaluation of the
services	extent in which the SWR provides added value to users.

Table 6 User cases expected outcomes

The demonstration of SWR has been performed both with in person and online demonstration events. A mailing list of possible stakeholders to be involved in the 5 User Cases was first produced in collaboration between WP1 and the User Cases leaders. Meetings were held between SWR developer team and WP5, including UC leaders, and WP6, with the aim to determine the structure of the demonstration events. Contemporarily the stakeholders were invited of the different categories were first informed about the Soilwise activities, in order to preannounce of the up-coming demonstrations events. Meetings were held to define specific evaluation





Project Number 101112838

criteria to determine the impact of the demonstration events, in the view to reach the general objectives of SoilWise project. During these meetings it was agreed that there was the need for specific evaluation criteria and KPI for WP5, that is, to determine the impact of the WP5 activities, and particularly of the demonstration events. The reasoning was that the impact of the WP5 demonstration events should be evaluated in terms of their contribution to the reaching of the overarching objectives of SoilWise project, and respective KPIs: were the demonstration events able to enlarge the SoilWise stakeholders network, promote the SWR and give the necessary feedbacks to the SWR developer in order to improve the SWR following the stakeholders needs expressed and collected as a feedback during the demonstration events?

The evaluation method developed was based both on a storytelling approach and on specific KPIs. Mentimeter sessions were organized and held during the demonstration events.

In the storytelling a qualitative evaluation will be performed, to describe the qualitative evaluation of the demonstration events, such as describing how far the SWR is giving an added value to the stakeholders' daily work. In the storytelling, the User Case leaders will evaluate if the activities undertaken have succeeded in reaching the Expected Outcomes, if an added value has been recognized to the SWR, or otherwise which kind of improvement is requested to the SWR developer, in terms of both improvement of the existing functionalities or adding of new ones.

Metrics and indicators to evaluate the demonstration events

KPIs have been formulated after the first cycle and after gathering feedback from the initial demonstrations.:

- 1 Number of demonstration events organised
- 2 Number of stakeholders invited to each event, and total number for the whole events.
- 3 Number of stakeholders registered to each event, and total number for the whole events.
- 4 Number of stakeholders effectively participating to each event, and total number for the whole events.

5 Number of stakeholders effectively engaged in Soilwise activities after participating to the demonstration events.

6 Number of stakeholders using the SWR after/before participating to the demonstration events.

7 User stories produced as a result of demonstration events.

8 SWR functionalities modified/improved following stakeholders' suggestions given during and as a follow-up of demonstration events.

9 SWR functionalities added following stakeholders' suggestions given during and as a follow-up of demonstration events





4 User Case Implementation, Demonstrations Analysis and Lessons Learned

This section provides a high-level summary and analysis of the SoilWise demonstration activities across all five User Cases (UC01–UC05). It outlines the objectives, approaches, and outcomes of the demonstrations, as well as cross-cutting lessons and challenges. The aim is to provide an overarching understanding of how each User Case has contributed to testing, validating, and improving the SoilWise Repository (SWR) in different stakeholder settings. Detailed progress and implementation reports for each User Case can be found in ANNEX 7.

4.1 UC1 Land Managers

User Case (UC) Overview

This user case focuses on land managers, farmers, landowners, and agronomists. It aims to address how these groups can improve soil health through tailored management techniques and crop choices. The core challenge is aligning advice and actions with local soil conditions. The lead is WR (Rob Lokers) with support from ELO and ILVO. Their role is to test the SoilWise Repository (SWR) in practice and evaluate its usefulness for this group.

Demonstration Overview, Progress Analysis

User Case 1 (UC1), focusing on land managers, successfully conducted two online demonstration events in April 2025 to introduce key functionalities of the SoilWise Repository (SWR) to stakeholders, specifically farmers, landowners, land managers, and the agronomists working on their behalf. The sessions, held on 14 and 17 April via Zoom, aimed to familiarise participants with both the SoilWise Catalogue and the Soil Companion chatbot. The demonstration began with an overview of the SoilWise project, including its background, data sources, and key partners. This was followed by a live walkthrough of the Catalogue, showcasing how to search for datasets, scientific articles, and soil-related resources. The chatbot was then presented through a practical scenario, using a fictional soil lab analysis to illustrate its capacity to interpret test results and provide parcel-specific advice, for example, on improving soil organic matter.

Stakeholder engagement was achieved through prior one-on-one validation sessions, participation in the main demonstrations and a call-to-action session at the General Assembly in Warsaw on 26th November 2024. These interactions were essential for collecting user feedback on the functionalities and practical relevance of the tools. Dissemination relied on LinkedIn and direct email outreach coordinated by ELO. While the chatbot demonstrated its potential to deliver quick and informative responses by leveraging existing knowledge, the demonstration also highlighted a key limitation: more localized agronomic data are needed to improve the tool's capacity for tailored, site-specific advice. The event confirmed the utility of the SWR but also underscored the importance of continued data integration and refinement. UC1 also explored future collaboration opportunities with relevant initiatives such as SoilGuard, Climate Farm Demo, and SoilNavigator.

The UC1 demonstration for land managers progressed through a well-structured sequence of design, preparation, execution, and evaluation. In the design phase, ELO collaborated closely with the User Case lead (WR) and SWR developers to align the demonstration with the needs and expectations of the target users. This phase required mutual familiarization with each other's terminology and system functionalities, laying the groundwork for a coherent demonstration structure. During the preparation phase, three validation sessions were conducted with stakeholders from Belgium, France, and the Czech Republic. Feedback from these sessions led to targeted improvements in the repository's data and in the chatbot's language model, with WR focusing on technical adjustments and ELO facilitating stakeholder coordination. The execution phase in April 2025 involved an online demonstration in which WR presented the SoilWise Catalogue and Chatbot through a practical scenario: a farmer uploading a soil analysis report and receiving parcel-specific advice on improving soil





organic matter. ELO coordinated event logistics and communication in collaboration with WP6. In the evaluation phase, ELO collected and summarized feedback on participation levels, engagement, and feature-related suggestions. These insights revealed key areas for improvement, particularly regarding localized advice and data relevance. WR and the broader development team are now working to integrate this feedback by enhancing data inputs and strengthening the overall functionality of the SWR for the land manager audience.

Progress Analysis on Key Performance Indicators and Milestones

UC1 (Land Managers) has demonstrated steady progress during its first demonstration cycle, supported by clear milestone achievements and initial KPI tracking. Two full demonstration events have been successfully organised (KPI 1 – Number of demonstration events organised, Current value: 2), accompanied by three validation sessions involving stakeholder groups from Belgium, France, and the Czech Republic. This diversity aimed to identify region-specific needs and improve the relevance of the SoilWise Repository (SWR).

The outreach efforts resulted in a total of 36 stakeholder registrations across both events (KPI 3 – Number of stakeholders registered, Current value: 36), with 24 effective participants taking part in the live demonstrations (KPI 4 – Number of stakeholders effectively participating, Current value: 24/36). Stakeholders were preidentified through earlier engagement activities, and early contact appeared to contribute positively to actual attendance.

All key milestones for UC1 have been reached according to schedule, supporting the successful implementation of the first demonstration cycle. The initial prototype was delivered through the submission of Deliverable D4.1 (MS1), followed by the approval of the detailed demo plan in March 2025 (MS2), which outlined the demonstration scenarios, activities, and timeline. By April 2025, the team had completed preparations for the demonstration, including stakeholder engagement and finalization of materials (MS3). The first demonstration event was successfully executed on 14 April 2025 (MS4), with active participation and feedback collection. The final milestone in this sequence, the submission of the Deployment and Evaluation Report (D5.2), is currently on track and scheduled for delivery in May 2025 (MS5).

Evaluation/ impact

The evaluation of UC1 focused on assessing the SoilWise Repository's (SWR) Catalogue and Chatbot in terms of performance, usability, user satisfaction, usefulness, and overall added value. Given that the primary stakeholders are farmers and agronomists, individuals directly engaged with soil in practice, the repository's ability to provide functional and relevant data was identified as the most critical success factor. If the data and knowledge offered by the SWR are not sufficiently specific or actionable, the tool risks falling short of its intended value for this user group.

The evaluation approach combined performance monitoring with direct stakeholder engagement during the demonstration events. Participants' opinions, questions, and suggestions were collected through interactive sessions, surveys, and interviews to better understand their expectations and data needs. Key questions raised included how the presented data will be updated in the future, whether more localized information (e.g., location-specific soil data) could be accessed, and if users could upload their own field data. Stakeholders also inquired about linking chatbot responses to their original data sources, the chatbot's ability to generate images or soil maps, and its current availability for online testing.

Importantly, participants saw potential for cross-project collaboration and suggested connecting with other EU-funded initiatives such as SoilGuard, Climate Farm Demo, and SoilNavigator.

Identified areas for improvement based on feedback received





During the validation process every participant asked if the Chatbot would be able to analyse and give advice based on soil analysis data for a specific parcel. Therefore, WR created a fictional lab analysis and was able to showcase the capabilities of the Chatbot to give advice based on the local conditions. The results were however still too general, and more local data needs to be fed into the repository to be able to have specific enough answers.

As soil conditions change quickly, from village to village and even from field to field, the SWR needs to have an abundance of data to support the needs of our target group.

Risk/Challenges:

Given the relatively limited demonstration of the SWR's possibilities, the ongoing challenge is to maintain the interest of landowners, farmers, and land managers. This requires further development of the SWR to ensure it remains sufficiently engaging and relevant for this target audience.

Besides securing longer term engagement, the following risks are relevant:

- Data and knowledge provided by SWR is not sufficient to provide expected results. E.g. lack of localised data and lack of data specific to agronomy, farm management might limit the capacities of the chatbot to provide localised, farm and parcel specific data.
- Sensitivity of farm data might hold land managers from supplying these to SoilWise (chatbot)
- Stakeholder expectations sometimes presume the integration of complex analytics and models, which is not foreseen in SoilWise

Lessons Learned

- 1. **Early engagement with diverse stakeholders** (from different countries and roles) helped shape relevant and user-driven demonstration content.
- 2. **Terminology and technical alignment** between developers and user-facing partners is essential to design effective demonstrations.
- 3. **Interactive and scenario-based demonstrations** (e.g., using fictional soil analysis) helped stakeholders better understand and test the chatbot's capabilities.
- 4. Local data specificity remains a critical need; the general nature of current responses limits the perceived usefulness of the tool.
- 5. **Continuous feedback loops**, including validation sessions before and evaluations after the demonstration, were effective in identifying areas for improvement.
- 6. **Demonstrator design and follow-up must evolve** across iterations to maintain user interest and address remaining functionality gaps.

4.2 UC2 Leveraging a network of Soil R&I Knowledge and Data

User Case (UC) Overview

UC02 targets scientific researchers and aims to enhance the FAIRness (Findability, Accessibility, Interoperability, and Reusability) of soil data and knowledge. Led by Céline Blitz Frayret, with multiple partners from CIRAD, INRAE, and related institutions, the goal is to test how the SoilWise Repository (SWR) supports research workflows and data discovery.

Demonstration Overview, Progress Analysis



Project Number 101112838



User Case 2 (UC2), focusing on soil research and data reuse, delivered two successful demonstration events designed to showcase the value of the SoilWise Repository (SWR) for the scientific community. The first demonstration took place physically on 14 November 2024 during the Mission Soil Data & Knowledge Cluster event in Brussels and used a scientific narrative focused on agroforestry. The second demonstration, held online on 29 April 2025, highlighted use cases related to phosphorus fertilisation experiments. In both cases, researchers simulated real-world needs for accessing specific soil datasets to support modelling and experimentation. SWR was demonstrated as a tool capable of significantly improving search efficiency and delivering more targeted results compared to conventional platforms.

The demonstrations included hands-on scenarios using the SWR Catalogue and, in Demo 1, Hale Studio for data transformation. Both events were structured around scientific narratives that made abstract metadata principles more accessible. The engagement approach combined physical and online formats and included live testing, Menti-based evaluations, and stakeholder interaction. Dissemination efforts included coordination through the European Commission (Demo 1), as well as targeted outreach via BioSense, Cirad, INRAE, and Mission Soil networks (Demo 2). Key stakeholder groups included research staff from multiple Mission Soil projects and European institutions, with some 15 participants from Demo 1 involved in further hands-on sessions during February and March 2025.

The demonstrations were designed and prepared through a multi-partner effort. Preparations for Demo 1 were completed between September and November 2024, and for Demo 2 in April 2025. Partners including ISRIC, EV ILVO, Cirad, BioSense, and Masaryk University contributed to scenario development, stakeholder interviews, bug fixing, and the development of Menti and flipchart tools for evaluation. The demonstrations were executed successfully, with strong participation and detailed feedback captured.

Progress Analysis on Key Performance Indicators and Milestones

UC2 has shown consistent progress in tracking and meeting its demonstration KPIs. Two demonstration events were successfully organised (KPI 1 – Number of demonstration events organised, Current value: 2, Target: 2). Participation was high, particularly in Demo 2, where over 200 stakeholders were invited and 110 registered (KPI 2 & KPI 3). Demo 1 participation was coordinated by the EC, and exact registration data is held by them. Effective participation reached 40 in Demo 1 and 60 in Demo 2 (KPI 4 – Number of stakeholders effectively participating).

Following the demonstrations, UC2 recorded engagement of 20 stakeholders from Demo 1 and 5 from Demo 2 in further SWR-related activities (KPI 5 – Number of stakeholders effectively engaged). Though usage of SWR before/after the events has not yet been monitored (KPI 6), Demo 1 led to the generation of 10 user stories (KPI 7), while feedback from Demo 2 is still being processed and will inform additional stories. Based on feedback, functionalities such as faceted filters and metadata handling were improved following Demo 1 (KPI 8), and potential changes from Demo 2 are under consideration. No new functionalities were added yet, though prioritisation is ongoing (KPI 9).

Milestone achievements for UC2 are fully on track. The initial prototype was delivered through D4.1 (MS1). The demonstration plan, including scenarios and schedules, was finalised in April 2025 (MS2). Stakeholder engagement and demo materials were completed in time for the second demonstration on 29 April (MS3), and the live execution of the event fulfilled the data collection milestone (MS4). The submission of the Deployment and Evaluation Report (MS5) is forthcoming as scheduled.

Evaluation / Impact

The evaluation process for UC2 aimed to assess the usefulness and usability of the SWR for soil researchers. It combined face-to-face interviews (Demo 1) and structured Menti feedback (Demo 2) to identify needs related to data accessibility, transformation, and catalogue usability. In Demo 1, participants were engaged through hands-on sessions in early 2025, allowing for deeper discussion on technical needs and user expectations. In




Demo 2, participants were asked a comprehensive set of questions regarding filter preferences, catalogue interface usability, transformation tools (e.g., Hale Studio), and metadata structure. These insights will directly guide prioritisation and improvements for upcoming versions of the SWR.

Identified Areas for Improvement Based on Feedback Received

For Demo 1, interviews with Mission Soil stakeholders revealed needs for better discoverability, easier data transformation, and clearer metadata organisation. In Demo 2, the large volume of feedback, captured through Menti, is being analysed, with preliminary suggestions pointing to the need for improved catalogue filters, user interface enhancements, and better documentation of data sources.

These findings underscore the importance of refining search accuracy, expanding metadata interoperability, and improving user interface features in future iterations of the SWR. The evaluation focused on the ease of use, performance, and added value of the SWR. Stakeholders assessed the relevance of filtering functions, metadata visibility, and integration potential. Key insights related to improving filtering functionalities and enhancing metadata presentation. Feedback was captured via Mentimeter and refined with support from various partners.

Risks / Challenges

A key challenge for UC2 has been managing the high volume of stakeholder input, particularly in aligning suggestions with available development capacity. To mitigate this, the engagement strategy was refined to prioritise the most relevant stakeholder groups, as outlined in the Grant Agreement.

Lessons Learned

- 1. Narrative-based demonstrations helped researchers understand practical applications of SWR.
- 2. Live feedback tools (e.g., Menti) enabled efficient and targeted collection of user input during demos.
- 3. **Stakeholder engagement should be balanced** with available resources to ensure follow-up actions are realistic.
- 4. **Scientific-specific search needs** (e.g., spatial filters, data transformation formats) must be considered in future SWR updates.
- 5. **Hands-on sessions are valuable** for deep feedback and testing but require structured planning and facilitation.

4.3 UC3 Policy Making & Evaluation to safeguard soil

User Case (UC) Overview

UC03 addresses the challenge of fragmented soil data management across EU Member States. Despite efforts like INSPIRE and EJPSOIL to standardize and share public soil data, many datasets remain difficult to access or reuse. This Use Case, led by CREA (Maria Fantappiè) with support from DOMG VL O, ISRIC, JRC, and EEA, focuses on policy and evaluation tools to improve data interoperability through the SoilWise Repository (SWR).

Demonstration Overview, Progress Analysis

User Case 3 (UC3), focusing on supporting policy-making and evaluation to safeguard soil, organized its first demonstration event as part of the 3rd Meeting of the EIONET Thematic Group Soil (TG Soil), held on 12–13 December 2024 in Copenhagen (hybrid format). The demonstration aimed to present how the SoilWise Repository (SWR), in conjunction with EJPSOIL, could enhance soil data exchange and reporting processes, particularly in the context of the EU Soil Monitoring Law and future policy needs.





The core added value presented during the demonstration was the potential for a 20% increase in data discoverability and accessibility, specifically for institutional reporting and decision-making. The showcase emphasized more efficient reporting pipelines, as well as improvements in reporting frequency and result quality. The SWR's contribution focused on harmonisation and transformation functionalities, aligning with EIONET reporting templates through tools like the Geopackage-SOIL.

While the demonstration was embedded in a high-level institutional meeting, supporting partners such as VLO, ISRIC, and CREA contributed to the preparation phase. Francesca Assennato and Claudia Cagnarini from ISPRA (Italy), representing the Italian node in the EIONET network, confirmed participation and engagement in UC3 demonstration planning.

Materials used included a presentation delivered online during the meeting, and dissemination took place via EIONET and institutional channels. The demonstration builds on continuity with the EJPSOIL project and reinforces cooperation with EIONET institutions. The execution and evaluation phases have not yet taken place formally; however, preparatory UC and WP5 coordination meetings have helped define the content and engagement strategy.

Progress Analysis on Key Performance Indicators and Milestones

UC3 has made initial progress in terms of planning, institutional alignment, and stakeholder engagement, particularly within the EIONET network. One demonstration event was organised (KPI 1 – Number of demonstration events organised, Current value: 1, Target: 5), with 27 stakeholders invited and participating (KPI 2 and 4 – Number of stakeholders invited and effectively participating, Current value: 27, Target: 100). While no registration list was captured (KPI 3), attendance was confirmed through EEA coordination.

Post-event engagement is still developing, with no stakeholders yet actively using the SWR after the event (KPI 5 and 6 – Current value: 0, Target: 50). One user story was produced following the demonstration (KPI 7 – User stories produced, Current value: 1, Target: 3), specifically focused on aligning the Geopackage-SOIL with EIONET reporting formats. UC3 has contributed to improvements in one functionality related to data harmonisation (KPI 8 – SWR functionalities modified, Current value: 1, Target: 3), while no new functionalities have yet been added (KPI 9 – Current value: 0, Target: 3).

All milestones for UC3 have not yet been fully achieved. The initial prototype was delivered via D4.1 (MS1). Progress has been made toward demo plan development and stakeholder coordination (MS2 and MS3), although formal completion is still pending. The demo execution and evaluation stages (MS4 and MS5) are expected to follow in the next project phase, pending more comprehensive rollout and feedback collection.

Evaluation, Impact

Evaluation is planned but not yet implemented. It is expected to assess the usefulness and usability of SWR in policy reporting contexts, particularly focusing on performance, data accessibility, and integration with institutional workflows. Methods may include surveys and interviews with policy-related stakeholders.

While full demonstration and evaluation were still pending, early planning sessions revealed that institutions working in national soil monitoring seek streamlined data pipelines for reporting obligations.

Improvements were suggested in relation to standardized formats, harmonized metadata, and the potential inclusion of the Soil Geopackage in the SoilWise Repository. The expected value lies in simplifying workflows across Member State authorities.

Risks/Challenges & Mitigation Measures/Solution





A primary risk is the complexity of coordinating soil data from multiple institutions with differing standards and access policies. To mitigate this, collaboration with existing networks like EIONET and alignment with prior projects (e.g., EJPSOIL) will be emphasized. Limiting engagement to manageable groups is also a strategy under consideration.

Lessons Learned

- 1. **Policy-focused demonstrations require alignment** with legislative timelines and institutional mandates, that is, the SWR need to harvest from national repositories, and the governance rules of data must be respected
- 2. **Engagement through established networks** (e.g., EIONET) is essential for institutional trust and participation, and alignment is needed between the EIONET reporting template and the INSPIRE compliant Geopackage-SOIL template presented during the demonstration events.
- 3. **The completion and testing of the implementation of soil ontology** is needed to make soil data interoperable. This will be performed in collaboration with FAO-GLOSIS, GLOSOLAN and AGROVOC.
- 4. Preparation phases benefit from involving country representatives early to confirm relevance and commitment.
- 5. **Evaluation must be embedded in early design** to ensure follow-through and measurable impact.

4.4 UC4 Enhanced capacities of Public Authorities and LLs actors

User Case (UC) Overview UC04 focuses on enhancing the capacity of Public Authorities and Living Labs (LLs) to adopt FAIR data principles. The challenge lies in overcoming usability and technical barriers, including complicated tools, low incentives, inconsistent metadata, and classification issues. Led by DOMG VL O (Max Vercruyssen and Dries Luts), and supported by ZALF and EV ILVO, this use case aims to simplify data reuse and sharing within the SoilWise Repository.

Demonstration Overview, Progress Analysis

User Case 4 (UC4), focusing on enhancing the capacities of public authorities and Living Lab (LL) actors, is currently in the final preparation phase for its first demonstration event, scheduled for 25 June 2025. The online session, titled "Soil Health Monitoring: How do you generate, use and share meaningful data?", will present the search and query functionalities of the SoilWise Repository (SWR), and promote FAIR data practices among LL participants. The demonstration scenario is designed to show how Living Labs can improve the impact of their soil health monitoring activities by adopting consistent soil measurement methods, exploring open data via the SWR, and applying FAIR principles to maximize data reuse and policy relevance.

The primary target group includes scientists and managers active in Living Labs, particularly those with soil or data-related roles. Through collaboration with the SOILL project, the demonstration will use an online training format to showcase how to navigate the SWR Catalogue (including data download, map preview, and feedback options), and highlight datasets from sources such as BonaRes and EJP SOIL. Dissemination is being conducted via SOILL mailing lists and LinkedIn, while preparation has included one-on-one consultations with LL actors and a targeted work session with LTE scientists at ILVO. A follow-up, in-person demonstration and workshop is planned for October 2025 to enable more in-depth stakeholder feedback.

The design phase was shaped by joint contributions from DOMG VLO, ZALF, ISRIC, and other partners. ZALF led the development of the final narrative, while DOMG VLO facilitated stakeholder alignment. Preparatory work (January–June 2025) included internal testing and validation, leading to the confirmation of SOILL as a demonstration partner and platform host. The execution phase is schedule for June, and evaluation will follow immediately thereafter, using real-time feedback tools such as Menti during the demo and Hotjar for follow-up input.





Progress Analysis on Key Performance Indicators and Milestones

UC4 (Public Authorities and Living Labs) is moving steadily toward its first demonstration, scheduled for 25 June 2025. One event has been formally planned (KPI 1 – *Number of demonstration events organised*, **Current: 1**), with invitations sent to around 100 Living Lab stakeholders via the SOILL network (KPI 2). Registration is ongoing (KPI 3), and participation figures (KPI 4) will be confirmed post-demo. Several KPIs, such as stakeholder engagement post-demo (KPI 5), SWR usage (KPI 6), user stories (KPI 7), and functionality changes (KPIs 8–9), will be evaluated based on feedback collected during and after the event.

Milestone progress is mostly on track. The initial prototype was delivered with D4.1 (MS1), while the demo plan (MS2) and preparation of materials and engagement activities (MS3) are being finalized for completion by mid-June. The main demo will take place on 25 June (MS4). The Deployment and Evaluation Report (MS5) has already been submitted by the end of May 2025

Evaluation /Impact

The evaluation aims to assess the usability and functionality of the SWR catalogue. It also seeks to understand how well SWR supports FAIR data practices within Living Labs. Live input will be collected during the demo using Menti and extended afterward via website-based feedback tools.

Stakeholders involved in the preparation phase pointed to several needed enhancements, including userfriendly guidance on FAIR data publishing and improved usability of the Catalogue's filters and map tools. The demonstration's success is tied to its practical training value, but additional feedback is expected from the planned in-person follow-up in October. A stronger framework for integrating Living Lab outputs into the SWR ecosystem is also needed to boost long-term adoption.

Risks/Challenges & Mitigation Measures/Solution

A major challenge in the demonstration is collecting meaningful and actionable feedback. Striking the right balance between small, focused sessions that generate specific insights and larger online events that reach broader audiences, but often result in more general or limited feedback, is particularly difficult. In large online settings, participants may be less engaged or reluctant to provide detailed input, reducing the depth and usefulness of the feedback collected. To address this, we plan to combine broad engagement through the online demo with targeted follow-up sessions in in-person, more focused groups

Lessons Learned

- 1. Collaborating with networks like SOILL improves access to target groups
- 2. Early engagement with scientists helps shape relevant and feasible narratives.
- 3. **Collecting meaningful feedback** requires balancing broad online reach with smaller, focused sessions that yield deeper insights.
- 4. Interactive tools (like Hotjar) are critical for timely, structured feedback collection.

4.5 UC5 Repository for new products, technologies and services

User Case (UC) Overview

UC05 focuses on providing a central repository for new products, technologies, and services related to soil data. It targets the business community and farming professionals and addresses the fragmentation and inconsistency of data across platforms. The user case emphasizes harmonized datasets, standardized metadata, and better data discoverability to support decision-making in agriculture, policy, and environmental sectors.



Project Number 101112838



Demonstration Overview, Progress Analysis

User Case 5 (UC5), focusing on the business community and farming professionals, successfully conducted its first online demonstration event on 28 April 2025. The aim was to showcase the SoilWise Repository's (SWR) capabilities in facilitating metadata harmonization and improving data visibility for private stakeholders. The event was structured around two real-world narratives: one targeting data scientists in forestry, and another addressing private organizations managing diverse territorial datasets. These scenarios demonstrated how users can discover, assess, and harmonize metadata using tools such as HALE Studio, and how the SWR supports the interoperability and reuse of existing data.

The demonstration was held via Zoom and featured walkthroughs of multiple SWR components and functions, including the catalogue search and preview tools, metadata harvesting, and transformation features such as data restructuring and unit conversion. These functionalities were presented by GAIA, ILVO, WE, and BIOS teams, using live examples and pre-defined user paths.

Stakeholder engagement was achieved through targeted outreach and one-on-one stakeholder mapping activities conducted by UC5 partners. The demo was promoted using a flyer, which was disseminated during the Agrothessaly Expo 2025, held from March 6th to 9th in Larissa, Greece, where GAIA and NP were present with a dedicated booth, and visual materials co-designed by GAIA and BIOS, and disseminated through SoilWise and partner social media channels. Although participation was more selective than broad, attendees represented a wide spectrum of the agri-tech ecosystem, such as private companies, advisors, research institutions, and ministry representatives, among others. The narrative-driven format helped demonstrate practical relevance, while the live feedback session using Mentimeter provided immediate insight into stakeholder experiences and needs.

The UC5 demonstration for business and farming communities followed a structured process of design, preparation, execution, and evaluation. In the design phase (Sept-Oct 2024), GAIA and WE developed and refined the use case narrative, with input from all partners to define demo content, responsibilities, and timelines. BIOS contributed to early stakeholder identification, through the accommodation of a dedicated stakeholder event. To raise the number of potential stakeholders, additional identification of relevant stakeholders was carried out by UC5 leader, with input from NP, through targeted stakeholder mapping, drawing from relevant networks. Through the technical validation process, led by the UC5 leader, several key bugs in the SWR were identified, reported accordingly, and thus successfully resolved. During the preparation phase (Nov 2024–Apr 2025), resources were finalized, and an additional API integration scenario was developed by ILVO. This scenario was based on a second use case narrative, co-developed by GAIA in collaboration with external stakeholders interested in integrating the SoilWise Repository (SWR). HALE Studio content was prepared by WE, and Mentimeter evaluation was set up collaboratively by GAIA, ILVO, BIOS, and WE. Stakeholders were further engaged through targeted outreach, and promotional materials were developed jointly by GAIA and BIOS. The execution phase culminated in a successful online demo on 28 April 2025, featuring presentations by GAIA, WE, ILVO, and moderation by BIOS. The event highlighted SWR functionalities including catalogue search, data harmonization, and API usage. Evaluation took place during the session using Mentimeter, with feedback developed by GAIA and refined with CREA, ILVO, WE, and BIOS. Insights gathered will inform future improvements, particularly in metadata discoverability, integration of workflows, and stakeholder-specific needs.

Progress Analysis on Key Performance Indicators and Milestones

UC5 (New Products, Technologies, and Services) has successfully completed its first demonstration cycle, with strong initial engagement. One demonstration event has been organised (KPI 1 – Number of demonstration events organised, Current: 1, Target: 1) and 14 stakeholders were invited (KPI 2). The event saw high interest, with 47 registrations (KPI 3 – Registered stakeholders, Target: 10) and 17 actual participants (KPI 4 – Effective participants, Target: 10), exceeding initial expectations.





Several impact-related KPIs are still being monitored or awaiting follow-up. These include stakeholder engagement post-demo (KPI 5), usage of the SWR (KPI 6), and user story development (KPI 7). Some suggestions for improvement, particularly related to filtering options, were collected (KPI 8), but no new functionalities have been added so far (KPI 9).

All milestones for the first iteration were completed on time. The initial prototype was delivered via D4.1 (MS1), and the demonstration plan was finalized by April 2025 (MS2). Stakeholder engagement and demo materials were prepared and confirmed by 28 April 2025 (MS3), followed by the successful execution of the demo and data collection on the same day (MS4). The corresponding Deployment and Evaluation Report (D5.2) was submitted by the end of May 2025 (MS5).

Evaluation, Impact / Identified areas for improvement

The evaluation focused on the ease of use, performance, and added value of the SWR. Stakeholders assessed the relevance of filtering functions, metadata visibility, and integration potential. Key insights related to improving filtering functionalities and enhancing metadata presentation. Feedback was captured via Mentimeter and refined with support from various partners.

Participants welcomed the demonstration of HALE Studio and metadata transformation features but called for more intuitive filtering options and a clearer structure in metadata fields. They also highlighted the need to improve dataset discoverability, especially for business use. Suggestions included streamlining API access, clarifying licensing and ownership metadata, and creating stronger visual overviews of dataset content.

These detailed improvements across User Cases reflect both the technical and user-experience-related adjustments needed to enhance the SWR platform. They will inform the second iteration of development and guide the roadmap for broader system integration.

Risks/Challenges & Mitigation Measures/Solution The main challenge was low attendance despite higher registrations. This was attributed to the complexity of the target group. Mitigation includes earlier, targeted outreach, consistent engagement, and pre-demo events to build commitment. Future iterations will prioritize deeper relationship building and clearer communication of the SWR's value.

Lessons Learned

- 1. Tailored narratives help translate technical tools into business value.
- 2. Engaging stakeholders early and consistently is crucial, late outreach results in low attendance.
- 3. Using tools like Mentimeter supports real-time evaluation and improves the learning loop.
- 4. Visual and interactive demos (e.g., HALE Studio) make abstract processes like metadata transformation more relatable.
- 5. Low-cost promotional materials (flyers, social media) can enhance visibility but must be paired with personal follow-ups.
- 6. A second iteration is essential to validate improvements and broaden outreach.





5 Next steps

The upcoming activities within Work Package 5 (WP5) are structured across four key tasks, aligned with the overall demonstration methodology and timeline of the SoilWise project. Each task builds on the previous one to ensure a coherent and comprehensive User Case (UC) demonstration process.

T5.1 – User Case Planning (M7–M22)

The focus is on aligning with ongoing developments and the evolving needs of the project and User Cases, together with delivered progress and evaluation report making necessary updates and refinements to both the monitoring and evaluation methods and tools. This work will result in an updated version of the User Case Guidelines and Demonstration Plan (D5.2 v2).**D5.2** – **User Case Guidelines & Demonstration Plan v2**.

T5.2 – User Case Implementation and Demonstration (M13–M46)

In this task, ongoing support will be provided to the User Cases (UCs) to ensure smooth and effective implementation. Key activities include monitoring UC progress, addressing any implementation challenges, and supporting the execution of demonstrations. The validation process will remain a priority, alongside continued stakeholder engagement and feedback collection, which are central to both this task and the broader Implementation Phase. Based on the results and insights gathered from the first iteration, necessary actions and adjustments will be taken to improve subsequent phases. The outcomes of this task will contribute directly to Deliverable D5.3 – Deployment and Evaluation Report, v 2.

T5.3 – User Case Impact Analysis (M18–M46)

In the next phase, the analysis of added value and impact will be further strengthened. As SoilWise continues to evolve based on stakeholder feedback, the focus remains on improving core functionalities to better respond to user needs. This will support wider uptake and create stronger opportunities for demonstrating tangible value and impact in the next iteration. Further Building on the first iteration the method and tools used will be enriched and refined base on stakeholder needs. Close monitoring and coordination with WP1 will ensure that findings inform the co-design process and support the continuous evolution of EUSO The evaluation will focus on the relevance, impact, and effectiveness of the User cases. It is also covered in D5.3 – Deployment and Evaluation Report, v1.

Building on the first iteration, this phase will enrich and refine methods and tools based on

T5.4 – Best Practices and Replication Guidelines (M31–M48)

The final task will synthesise insights from all UCs to produce best practices and replication guidelines. Special attention will be given to analysing how UCs interact with and benefit from the SoilWise Repository (SWR), particularly with regard to the end-user experience.

These steps ensure a structured, iterative, and participatory approach to the demonstration process, strengthening the project's impact and its potential for replication





6 Conclusion

Deliverable D5.3 – First User Case Demonstration and Evaluation Report is based on information gathered through regular progress meetings, email correspondence within WP5, and submitted progress reports that outline the current status and advancement of the activities implemented.

The collected data indicates that significant progress has been achieved since the start of the implementation phase . Nevertheless, some User Cases have faced challenges and delays in reaching specific milestones. The underlying causes of these delays have been identified, and revised plans with adjusted timelines have been put in place to address them. As a result of these corrective actions, the affected User Cases were able to submit their progress reports on time and deliver their outputs within the planned timeframe.

Moreover, strong communication and collaboration, both within and across User Cases and project Work Packages, have been instrumental in supporting successful implementation. This collaborative approach has enabled the early identification of challenges, constraints, and potential obstacles, allowing for timely interventions to maintain smooth project execution.

In Summary, the implementation of the SoilWise demonstration activities across all user cases has shown solid progress, with each UC successfully advancing according to its context and objectives. all user cases completed their first demonstration cycles, engaging a wide range of stakeholders, from land managers and agronomists to data providers, public authorities, and business actors. These demonstrations showcased key functionalities of the SoilWise Repository, including the Catalogue, Chatbot, faceted filters, spatial search tools, soil health map visualisation, metadata presentation, and data transformation using Hale Studio. UC3 is currently focusing on strategic planning and policy engagement, laying important groundwork for future demonstrations. UC4 is preparing a major demonstration scheduled for 25 June, followed by a second in October, combining broader online engagement with targeted follow-up sessions.

All user cases placed strong focus on validation, actively involving their target groups to gather meaningful external input. This engagement provided valuable feedback on both strengths and limitations of the SWR, directly informing its ongoing improvement. By grounding the demonstrations in real user experiences, the process helped ensure that the tools evolve in line with actual needs. Demonstration activities will also continue in parallel wherever relevant, adjusting to each UC's evolving context. This combination of cross-partner collaboration, targeted validation, and practical testing has laid a solid foundation for enhancing the SWR's usability, relevance, and impact.

The WP5 UC KPIs show solid initial progress following the first demonstration cycle.. A total of 6 demonstration events have been completed out of a target of 9 (KPI 1). Altogether, over 270 stakeholders were invited (KPI 2), with registered participants exceeding 240 (KPI 3) and over 120 effectively participating in the events (KPI 4). Post-demo engagement is still being tracked, but at least 61 stakeholders have expressed continued interest (KPI 5). Use of the SWR after the demos (KPI 6) has not yet been widely monitored. In terms of content, 13 user stories have been developed so far (KPI 7), and multiple UCs have reported suggestions for functional improvements (KPI 8), though no new functionalities have yet been added (KPI 9). Overall, the figures reflect strong initial outreach and participation, with the remaining KPIs expected to advance following upcoming demonstrations by UC3 and UC4.

Challenges Faced

The demonstration phase across user cases surfaced several cross-cutting challenges. One of the central issues was the difficulty in engaging stakeholders consistently and meaningfully. While initial registration numbers were often high, actual attendance during demonstrations was lower than expected, particularly in UC5. This disconnect underscored the need for sustained relationship-building and early outreach. In larger online events,



Project Number 101112838



participants tended to provide less detailed feedback, while smaller, focused sessions were more productive but harder to scale.

A recurring challenge was the lack of a shared understanding of key terminology and roles across work packages (notably WP1, WP5, and T4.3). Misalignments in the interpretation of terms such as "user case," "narrative," "verification", "validation" "evalution" created confusion in the planning and implementation of demonstrations. This also impacted the ability of teams to effectively coordinate and support one another. Clarifying these concepts and defining adjacent roles more clearly is essential for ensuring coherence and collaboration moving forward.

Another important challenge was communicating the practical benefits of the SWR to both stakeholders and institutional actors such as JRC.

Maintaining stakeholder interest, particularly among landowners, farmers, and land managers, remains a key challenge, as these groups rely on tools that provide direct, locally relevant, and actionable insights. The current limitations of the SWR, especially the lack of region-specific data and agronomic content, reduce the tool's capacity to deliver tailored, parcel-level advice through features like the chatbot, which in turn affects long-term user engagement. In addition, concerns about data sensitivity, especially around farm-specific inputs, may prevent users from fully engaging with the platform.

In summary, the key challenges included stakeholder engagement and retention, terminology alignment, coordination between work packages, limitations in localized data, and difficulty in delivering compelling, context-specific narratives. Addressing these areas will be critical to improving the adoption and effectiveness of the SoilWise Repository in future phases.

Overall Lessons Learned

The demonstration phase across all user cases yielded a wide range of practical lessons that will shape future development and engagement strategies for the SoilWise Repository (SWR). A key finding was the importance of early and continuous stakeholder engagement. In nearly every user case, timely outreach was essential, late communication often led to lower participation and weaker feedback loops. Engaging diverse stakeholders early, including scientists, policymakers, and practitioners, helped shape demonstration content that was both relevant and feasible.

Clear communication and shared understanding were also fundamental. Misaligned expectations between developers and user-facing partners highlighted the need for clarity in terminology and functionality. Co-developed narratives and scenario-based demonstrations proved particularly effective in making complex technical tools, such as metadata transformation or FAIR principles, more tangible. Fictional but realistic examples, such as interpreting soil analysis through the chatbot, made tool applications easier to understand and test for stakeholders.

Validation, evaluation, and feedback mechanisms were most effective when built into the demonstration design from the beginning. Tools like Mentimeter and Hotjar supported real-time, structured feedback collection, helping to close learning loops. Clear distinctions between verification, validation, and benefit assessment were necessary to track progress and refine tools in a systematic way. A structured, multi-phase approach, combining broad online events with more targeted in-person follow-ups, proved more effective in balancing reach and depth.

Cross-team collaboration and alignment with networks added major value. Coordination between developers, communication , user case partners helped tailor demonstrations to different audiences and use cases. Leveraging established networks such as SOILL and EIONET improved outreach and built trust, particularly in



Project Number 101112838



policy-focused and public sector contexts. These collaborations enabled demonstrations to align with ongoing policy initiatives and existing data infrastructures, as seen in UC3 and UC4.

In terms of audience engagement strategies, visual and interactive content increased visibility, but interest alone did not guarantee participation. Low-cost promotional materials (e.g., flyers, social media) helped raise awareness, but personal outreach and direct partner involvement were more effective in securing commitment.

Finally, the demonstrations confirmed that local data specificity remains a critical need. Generic outputs from tools like the chatbot often limited perceived value, underlining the importance of better regional data integration and tailored advice. Meeting these expectations will be key to increasing the SWR's adoption and long-term relevance.

In summary, the lessons learned across all user cases emphasize that successful demonstration and adoption of the SWR depends on user-centred design, early and structured engagement, practical and relatable demonstrations, clear communication across teams, and continuous improvement based on real-world validation. These principles will be essential as the project moves toward broader adoption and the next iteration of the SoilWise platform.



7 References

1. Bouman, J., & Veerman, C. P. (2022). Developing Management Practices in: "Living Labs" That Result in Healthy Soils for the Future, Contributing to Sustainable Development. *Land*, *11*(12), 2178.



Project Number 101112838



8 Annex I-User Cases Progress Reports

8.1 UC1 Land Managers

8.1.1 User Case (UC) Overview

User Case No & Name:

UC01 – Land Managers

User Case Leader & Contact Information:

WR - Rob Lokers (use case lead) and Rob Knapen (developer)

UC Partners: (List the other partners involved in the user case)

ELO –Lodovica von Freyberg and Marc Rosiers

EV ILVO – Radu Giurigu

Target Groups: Landowners, land managers, farmers and agronomists

Challenge (Need/Problem): (Describe the specific challenge, need, or problem the user case addresses)

How to improve soil health, which management techniques to apply, and what crops to plant based on specific regions and soil types.

8.1.2 Demonstration Overview/Description

Event Title: SoilWise Demonstration for Farmers and Land Managers

Date and Time: 14.04.2025 17:00 - 18:00

17.04.2025 15:30 - 16:00

Location: Online via Zoom

Event Objective:

The goal was to introduce the SoilWise Repository, including both the Catalogue and the Soil Companion, a soil health chatbot, to the audience. This included demonstrating how it can be used, what type of information it provides, and encouraging direct interaction. Audience members were also invited to share which features they would find most useful, providing valuable input for future development.

Demonstration Scenario/Showcase:

First, the SoilWise project was introduced in broad terms, including its origins, the methods of data collection, the type of data used and the project's key partners. Then the SoilWise Catalogue was demonstrated with WR showcasing how to effectively use the repository. Afterwards, the Chatbot was introduced through a practical scenario in which a farmer asked various questions - such as "how to improve soil organic matter" - and



Project Number 101112838



uploaded a soil analysis report allowing the chatbot to provide tailored advice on parcel specific soil management practices to improve soil health.

Data/Knowledge Sources: The SoilWise Repository (Catalogue) and the Soil Companion (Chatbot) were the main functions shown during the demonstrations. To better demonstrate how the Chatbot works, WR created a fictional soil analysis which was used to mimic local data and showcase how the Chatbot could interpret these results.

Existing Solutions to Be Integrated and Needs/ Improvement for Integration: We demonstrated how the Catalogue can be used to find datasets, scientific papers and other knowledge on specific soil-related topics, and how the chatbot leverages this scientific knowledge to deliver quick yet detailed answers to the audience questions. However, additional data is still needed to enhance the chatbot's ability to provide comprehensive responses that fully meet user needs.

Main Technologies/Functionalities to Be Presented:

SoilWise Catalogue and Chatbot.

Stakeholder Groups and Participation:

Farmers, landowners, land managers, and agronomists participated initially for validation purposes, through one-on-one sessions held prior to the demonstration events, and later took part in the demonstrations themselves as part of the showcasing effort.

Materials used/ Needed & Dissemination Channels:

Social media, specifically LinkedIn, and email distribution to personal contacts provided by ELO were used for outreach.

Potential Collaboration with Other Projects:

SoilGuard, Climate Farm Demo and SoilNavigator.

8.1.3 Demonstration Steps and Activities

Demo Design Start Month: October 2024 End Month: January 2025

Activities & Progress

The ELO team collaborated closely with the Use Case lead and developers to shape the demonstration according to identified needs and potential user expectations. To achieve this, the ELO team dedicated significant time to understanding the functionalities of the SWR and its limitations. This required the ELO team to familiarize themselves with the terminology used by SWR developers, and vice versa, which ultimately led to the foundational structure of the demo.

Partners Involved: WR was in charge of developing the repository and chatbot scenario and adding data that would be useful for our target audience. ELO made sure to contact potential validators to test the repository with before developing a demonstration.

Demo Preparation Start Month: January 2025 End Month: April 2025



Project Number 101112838



Activities & Progress

Three validation tests were conducted with stakeholders from different countries: a Czech agronomist working for a fertilisation company, a Belgian landowner and consultant for land managers, and a French agronomist employed by AGPB. These tests took place between the end of January and the end of February. Based on the feedback and evaluations provided by the testers, WR had time until April to implement adjustments to the repository.

Partners Involved: ELO was responsible for finding validators and setting up the validation meetings.

WR was responsible for translating the recommendations from the validators into augmented data, which facilitated search functionality in the catalogue, as well as for training the large language models used by the chatbot.

Demo Execution Start Month: April 2025 End Month: April 2025

Activities & Progress

First, the SoilWise project was introduced in broad terms, including its origins, the methods of data collection, the type of data used and the project's key partners. Then the SoilWise Catalogue was demonstrated with WR showcasing how to effectively use the repository. Afterwards, the Chatbot was introduced through a practical scenario in which a farmer asked various questions - such as "how to improve soil organic matter" - and uploaded a soil analysis report allowing the chatbot to provide tailored advice on parcel specific soil management practices to improve soil health.

Partners Involved:

ELO was responsible for organizing the demonstration, attracting participants, and disseminating information about the event via social media in cooperation with WP6. WR conducted the demonstrations, starting with an introduction to the SoilWise project as a whole, and then focusing specifically on the Catalogue and the Chatbot.

Evaluation Start Month: April 2025 End Month: June 2025

Activities & Progress

An evaluation of the objectives achieved by the two demonstrations was conducted within a week after the events. This evaluation included the number of participants, the level of stakeholder engagement, as well as suggestions and questions related to the SoilWise Repository (SWR). Further discussions are needed to determine how the audience's suggestions can be incorporated to improve the SWR's functionalities.

Partners Involved:

ELO summarized the outcomes of the demonstrations, emphasizing the most pressing areas for improvement within the specific use case. In response, WR, with other partners in the SoilWise development team will address these needs by collecting additional data and increasing the amount of data and knowledge integrated into the repository.

8.1.4 Evaluation - Impact



Evaluation Objectives: The evaluation will review the Catalogue and Chatbot, focusing on performance, usability, user satisfaction, usefulness, and added value. Considering that UC01 interacts with people physically working with soil (farmers and agronomists), it is important that the repository can provide functional data.

The most important factor for this user case is the usefulness of the data and knowledge provided by the SWR. If this is not specific enough the repository will not provide sufficient added value.

Evaluation Approach: The evaluation will oversee the performance of the SWR and the opinions and questions the public provided during the demonstrations. Surveys and interviews will also be carried out in order to collect further knowledge and understand exactly what type of data the representatives of UC1 would need.

Feedback from Participants: Questions and suggestions from the participants of the demonstrations were:

·How will the data that we currently present be updated in the years to come?

·Will we be able to have more local data (e.g. finding soil data in a specific location)?

·Can we upload and use specific field data?

·Can we make a connection (via a direct link) to the source used for the answers of the chatbot?

·Can the chatbot provide and create images and soil maps?

·Is the chatbot already available to test online? Participants also pointed out the potential collaboration opportunity with different EU funded projects such as: SoilGuard, Climate Farm Demo and SoilNavigator.

Identified areas for improvement based on feedback received.: During the validation process every participant asked if the Chatbot would be able to analyse and give advice based on soil analysis data for a specific parcel. Therefore, WR created a fictional lab analysis and was able to showcase the capabilities of the Chatbot to give advice based on the local conditions. The results were however still too general, and more local data needs to be fed into the repository to be able to have specific enough answers.

As soil conditions change quickly, from village to village and even from field to field, the SWR needs to have an abundance of data to support the needs of our target group.

8.1.5 Risks/Challenges & Mitigation Measures/ Solution

Description of Risk/Challenges:

Given the relatively limited demonstration of the SWR's possibilities, the ongoing challenge is to maintain the interest of landowners, farmers, and land managers. This requires further development of the SWR to ensure it remains sufficiently engaging and relevant for this target audience.

As a consequence the following risks are significant

- Data and knowledge provided by SWR is not sufficient to provide expected results. E.g. lack of localised data and lack of data specific to agronomy, farm management might limit the capacities of the chatbot to provide localised, farm and parcel specific data.
- Sensitivity of farm data might hold land managers from supplying these to SoilWise (chatbot)
- Expectations sometimes presume the application of complex analytics and models, which is not foreseen in SoilWise.



Project Number 101112838



Stage/Activity Concerned:

Demonstrations following the 2nd and the 3rd iteration.

Proposed Mitigation Measures/Solution:

Meeting the expectations of the target audience. In collaboration with WP1, the second iteration is being designed and we are confident that we can maintain interest.

8.1.6 Key Performance Indicators (KPIs):

Key Performance	e Indicators			
KPI No	KPI description	Current value	Target value	Comments
1	Number of	2	2	
	demonstration			
	events organised			
2	Number of	4 validation	4	We tried to have stakeholders
	stakeholders invited	events with 3		from different regions to see if
	to each event, and	different		there would be a difference in
	total number for the	stakeholder		needs. Validation was performed
2	whole events.	groups.	20	with Belgians, French and Czechs.
3	Number of	1/	20 registrations	
	stakenoiders	inscriptions to	registrations	
	event and total	first event	perevent	
	number for the	mst event.		
	whole events.	23		
		registrations		
		inscriptions to		
		second demo.		
		36 in total (not		
		counting		
		people		
		registering		
		twice).		
4	Number of	12/17 in first	10	
	stakeholders	event. 16/23	participants	
	effectively	in second	per event	
	participating to each	event.		
	event, and total			
	whole events	24/36 total		
	whole events.	participants		
		(not counting		
		narticinating		
		twice).		
5	Number of	36		At the end of the Demo we asked
-	stakeholders			participants if they would accept
	effectively engaged			participating in future sessions.
	in Soilwise activities			No objection was noted.





	after participating to the demonstration events.		
6	Number of stakeholders using the SWR after/before participating to the demonstration events.	-	As it is not publicly available, no one can use it.
7	User stories produced as a result of demonstration events.	2	See 2 nd iteration
8	SWR functionalities modified/improved following stakeholders' suggestions given during and as a follow-up of demonstration events.	Chatbot	
9	SWR functionalities added following stakeholders' suggestions given during and as a follow-up of demonstration events.	1	Upload individual data sets

8.1.7 GanttChart& Milestones

Demo design						
Create UC Narrative	ELO					
Create Detailed Demo Plans	ELO, WR					
Identify Stakeholders	ELO					
Creating awareness amongs the stakeholders	ELO					
Plan for Technology	WR					
Build a Timeline	ELO,WR					
Demo Preparation						
Collect and prepare resources	ELO, WR					
Engage stakeholders	ELO					
Develop demo material	ELO, WR					
Finalise location and logistics	ELO, WR					
Refine the timeline	ELO, WR					
Ensure Tech support	ELO, WR					
Demo execution						
Execution of the demo event	ELO, WR					
Engagement and interaction with stakeholders	ELO, WR					
Demo Evaluation						
Reporting on the progress	ELO, WR					





Project Number 101112838

	MS	MS Name	Mean of verifications	Achiev	Achiov
	No			ement	ement
				(yes/11 0)	Date
	MS 1	delivery of initial prototype	Submission of D4.1	yes	
	MS 2	Complete and approve the demo plan, detailing the demo scenarios, activities	This milestone includes completing the detailed demo design, including the demo scenarios, the associated activities, and the comprehensive schedule for each iteration. This should reflect the improvements made to the user case descriptions and provide clarity on the assets and services needed for the demo. The plans must be flexible and easily understandable by all involved stakeholders,	yes	March 2025
			ensuring that everyone knows their responsibilities and timelines.		
	MS 3	Completion of Stakeholder Engagement and Demo Materials	Finalize the preparation for the demo, including confirming stakeholder participation, securing necessary materials (hardware/software). All stakeholders should be engaged and committed, and all resources should be in place to ensure smooth execution. This milestone also includes finalizing any synergies or shared activities with other user cases or work packages (e.g., T4.3).	yes	April 2025
First Iteration	MS 4	Successful Execution of the Demo and Collection of Data	Complete the first demonstration session with active participation from stakeholders. The SoilWise repository (SWR) should be tested in real-world scenarios, and operational data (including any challenges or issues encountered) should be collected. The focus will be on testing the SWR's functionality and ensuring	yes	14.04. 2025



		that the demonstration provides tangible insights into its real-world applicability.	
MS	First Deployment and Evaluation Report	Delivery of D5.2 Deployment	May
5		and Evaluation Report	2025

8.2 UC2 Leveraging a network of Soil R&I Knowledge and Data 8.2.1 User Case (UC) Overview

User Case No & Name: UC2 - Leveraging a network of Soil R&I Knowledge and Data(Provide the UC number and name)

User Case Leader & Contact Information: Céline Blitz Frayret – celine.blitz@cirad.fr(Include the name and contact details of the user case leader)

UC Partners: Fenny Van Egmond – Paul Van Genuchten – Christine Le Bas – Antonio Bispo – Julien Demenois – Emilie Vrot(List the other partners involved in the user case)

Target Groups: scientific research team(Specify the intended audience or beneficiaries of the user case)

Challenge (Need/Problem): improving FAIRness of data and knowledge(Describe the specific challenge, need, or problem the user case addresses)

8.2.2 Demonstration Overview/Description

Event Title:

Demo 1 : demonstration at the Data & knowledge cluster for Mission Soil projects

Demo 2 : demonstration at UC research demo webinar

Date and Time:

Demo 1 : 14th November 2024 - afternoon

Demo 2 : 29 April 2025 15h00 - 16h30

Location:

Demo 1 : Brussels (physical)

Demo 2 : Online Event Objective:

Demo 1 : demonstrating SoilWise repository usage based on a scientific narrative about agroforestry

Demo 2: demonstrating SoilWise repository usage based on a scientific narrative about fertilization experiment

Demonstration Scenario/Showcase:





Demo 1 : As a researcher in ecophysiology at INRAE, I am studying the efficiency of the water and the light use in a context of agroforestry systems. This study needs data obtained in agroforestry experiments. Indeed, I need to simulate those efficiencies with the model MAESPA requiring as input parameters, the soil water content expressed in % in the layers on the soil of the studied plot.

Demo 2 : As a researcher in ecophysiology, I would like to understand the effect of phosphorus on plant growth mechanisms. I then need data about fertilization experiments.

In these 2 data search scenarios, SoilWise added value is to improve the efficiency of queries: it allows 1) to increase the search speed and 2) to provide more focused results than those we could have from mainstream search engines.

Data/Knowledge Sources:

Demo 1 :

https://maps.bonares.de/mapapps/resources/apps/bonares/index.html?lang=en&mid=0944b0bf-<u>c440-48d4-8ac4-553c3781cbf6</u>

Demo 2 :

https://maps.bonares.de/mapapps/resources/apps/bonares/index.html?lang=en&mid=27d da226-

Existing Solutions to Be Integrated and Needs/ Improvement for Integration: None, we used SWR as is for the 2 demonstration events (some bugs were fixed by the development team).

Main Technologies/Functionalities to Be Presented:

Demo 1 : Catalogue and Hale Studio for data transformation

Demo 2 : Catalogue

Stakeholder Groups and Participation:

Demo 1 : Participants involved : research teams of Mission Soil projects.

Participation for :

- Writing new user stories about envisioned functionalities

- 15 stakeholders engaged to participate in one of the 5 hands-on sessions organized in February 2025 to test and validate the SWR and write new user stories according to their needs.

Demo 2 : Participants involved : research staff from different research teams in Europe

Participation for :





- Writing new user stories about envisioned functionalities
- 5 stakeholders engaged to participate in future testing sessions

Needed Materials & Dissemination Channels:

Demo 1 : Dissemination has been realized by the EC. Material needed for the demonstration.

Demo 2: Dissemination has been realized by BioSense, Cirad, INRAE and inside Mission Soil projects. Material used was Linkedin post, news from Mission Soil projects on SWR website, email at INRAE and Cirad networks, etc. Material needed for the demonstration were laptops (with Powerpoint, Excel, Menti license).

Potential Collaboration with Other Projects:

Demo 1: Sus-Soil - Mona Lisa - Loess - Edaphos - Bin2Bean - Echo - Seacure - Curiousoil - Gov4All - etc.

Demo 2 : Stakeholders engaged did not mention any projects.

8.2.3 Demonstration Steps and Activities

Demo Design

Demo 1 : September 2024 - November 2024

Demo 2 : March 2025 - April 2025

Activities & Progress Demo 1 :

Identification of asset or service to be available and ready for the demos : the demo has been done on site, on Powerpoint slides because the internet access was not guaranty in the room in Brussels. Services needed to perform the demonstration were Hale Studio installed on a laptop, Powerpoint and Excel.

Identification of activities related to WP6 and colleagues concerned : the Mission Soil Data and Knowledge cluster has been organized by EC so communication activities have not been performed in the SoilWise cluster. The activities related to WP6 in charge of the SoilWise partners is the stakeholders engagement that we ensured by a Menti proposition for engagement. This lead to the engagement of about 15 Mission Soils stakeholders.

Organization of the evaluation : right after the demonstration an interactive flipchart session allowed to get the user needs of Mission Soil stakeholders and in February and March 2025 the 15 stakeholders (and about 20 with their colleagues) were involved in 5 hands-on sessions to test and validate the SoilWise repository.

Partners Involved: ISRIC, EV ILVO and MU to prepare the Menti and flipchart questions.

Demo 2 :



Project Number 101112838



Identification of asset or service to be available and ready for the demos : the demo has been done online, in live. Services needed to perform the demonstration were internet, Menti, Powerpoint and Excel.

Identification of activities related to WP6 and colleagues concerned : Dissemination has been realized by BioSense, Cirad, INRAE and inside Mission Soil projects. Material used was Linkedin post, news from Mission Soil projects on SWR website, email at INRAE and Cirad networks, etc. Material needed for the demonstration were laptops (with Powerpoint, Excel, Menti license).

Organization of the evaluation : at the same time of the demonstration, with Menti questions specific to the showcased functionalities.**Partners Involved**: ISRIC - EV ILVO - BioSense – external Mission Soil stakeholders of LifeWatch: setting up of the program and date of the event, check availability of colleagues involved for presentations, testing and setting up the Zoom session.

Demo Preparation

Demo 1 : September 2024 - November 2024

Demo 2 : April 2025 – April 2025

Activities & Progress

Demo 1 :

Collect of the necessary information, stakeholders engagement to join the demo execution, preparation of the needed material, etc. : the engagement of stakeholders joining the demo has been done by EC. The needed material has been prepared by Cirad, by interviewing external stakeholders of Cirad and INRAE about their scientific research activities in order to find the narrative story. A second step implied to find a dataset on SoilWise allowing to a connexion to the scientific story and the ability of showcasing a all SoilWise functionality. Partners Involved: ISRIC, WE and ZALF for bug fixing and improvements on SoilWise repository, Hale Studio and Bonares, during the demo preparation. External stakeholders of Cirad and INRAE to prepare the scientific story.

Demo 2 :

Collect of the necessary information, stakeholders engagement to join the demo execution, preparation of the needed material, etc. : the engagement of stakeholders joining the demo has been done by sending emails to the scientific community networks asking to fill an engagement form. The needed material has been prepared by Cirad, by interviewing external stakeholders of Cirad about their scientific research activities in order to find the narrative story. A second step implied to find a dataset on SoilWise allowing to a connexion to the scientific story and the ability of showcasing all SoilWise functionality. **Partners Involved :** ISRIC - EV ILVO - BioSense - external Mission Soil stakeholders of LifeWatch : preparation of : presentation of SoilWise project, demonstration testimony, stakeholders interactions with the project, how to let feedback, Q&A session, Menti questions (All)

Demo Execution

Demo 1: 14th November 2024

Demo 2: 29th April 2025





Activities & Progress Demo 1 : The demonstration execution was successfully presented with a focus on the catalogue and the data transformation with Hale Studio.

Partners Involved: Cirad presented the demonstration.

Demo 2: The demonstration execution was successfully presented with a focus on the catalogue and at the same time, Menti questions were asked to the participants.

Partners Involved: External stakeholder (Xavier Rottlan) from LifeWatch presented the first demonstration as a testimony, and Cirad presented the second demonstration supported by evaluation Menti questions.

Evaluation

Demo 1 : February 2025 - March 2025

Demo 2 : 29th April 2025

Activities & Progress

Demo 1: 5 Hands-on sessions were organized for the Mission Soil stakeholder. Purpose of this evaluation :- To improve the data and knowledge capture

- To explore the potential needs of data transformation

- To know the needs of data providers and data / knowledge users

- To make a ranking of the previous user stories registered in UC2 in order to facilitate the prioritization. Partners Involved: Masaryk University – ISRIC – EV ILVO – Vlaanderen - We Transform : for each hands on session, interviews of stakeholders are made by a facilitator and a developer from these partners of the co

Demo 2 : The purpose on the evaluation was :

To assess in live with the demo (Menti) the functionalities of catalogue, facet filters, spatial filter, Sort By button, etc.

To improve the data and knowledge capture

To explore the potential needs of data transformation

To know the needs of data providers and data users

To make a ranking of the previous user stories registered in UC2 in order to facilitate the prioritization.

Partners Involved: Masaryk University – EV ILVO – ISRIC – Vlaanderen for contributing to the Menti questions preparation.

8.2.4 **Evaluation - Impact**

Evaluation

Objectives: Demo 1 and 2 : - To improve the usefulness of SoilWise for soil researchers community by creating added values,



Project Number 101112838



- To improve usability of SoilWise repository

Evaluation Approach:

Demo 1: Direct interviews, with questions sent by email one week in advance. Although the forms was sent in advance, no filled forms was sent back by the stakeholders, so feedbacks was gathered during face to face interviews.

Demo 2 : Menti questions at the same time than showcasing SoilWise repository functionalities

Feedback from Participants: *Demo 1* : Feedbacks from stakeholders are provided during hands-on sessions, based on the provided questions :

1 - As a Soil Mission data user :

- While browsing through the contents, do you get the impression that Soilwise (https://soilwise-he.containers.wur.nl/) includes the main topics and publications in our domain?

- If you identified a published material (thank you to provide the reference) is the material (easily) discoverable through SoilWise ?

- If you did not find any relevant material with SoilWise, tell us more about your request, it will help us to improve the data capture

- Do you have special issues with data format transformation ? for example, do you need to convert from an INSPIRE format to another kind of format ?

2 - As a Soil Mission data producer :

- If you published a data or knowledge on a repository (thank you to provide the reference), does SoilWise reference it ?

- What would you need to facilitate the upload of your dataset ?

Demo 2 : To get their feedbacks, participants are requested to answer to the following questions :

Among the categories characterizing a record of the catalogue, which one would you remove : ... / which one would you like to add

Is the 'Sort By Date' / 'Sort By Title' useful : / Which other ranking criteria would you add

Would you be interested in displaying the map scale or resolution for the map preview?

How would you like to search for spatial data coverage :

Any other feedback about spatial filter :

What are the most important types of resources you would need to see

Among these categories of filters, which ones are useful for you : ... / which ones would you like to add

60

Project Number 101112838



Do you use glossaries or vocabularies ? if yes which one(s)

Which other information(s) would you like to see on the catalogue page :

How would you improve the resource detail page ?

How useful is the catalogue 'as is'?

How likely is it that you would use the Soilwise catalogue 'as is' in the coming period ?

Ranking of the usefulness of the following features (not implemented yet) : ...

From a EUSO perspective which repositories should be harvested ?

Do you need automatic data transformation tool (Hale Studio) to transform local format to INSPIRE or other format ?

According to your needs, what would be the most useful functionalities ?

Ready to participate to SoilWise improvements ? Let us your name and email :

To ensure SoilWise is useful for you, what added value would you expect ?

What is your specific needs as data/knowledge users or providers ? As a [role], I want to [action], so that [reason]

Identified areas for improvement based on feedback received :

Demo 1: the issues obtained from the Mission Soil stakeholders interviews are listed in section

8.3.1. Demo 2 : Given the high number of questions, responses to feedbacks are stored at the following URL:

https://filesender.renater.fr/?s=download&token=afe19184-c9a1-4db0-8f11-d40c96a0e845

Areas of improvement correspond to the current functionalities of the catalogue such as the filters, the interface of the catalogue results list, etc.

8.2.5 Risks/Challenges & Mitigation Measures/ Solution

Description of Risk/Challenges:

Demo 1 and Demo 2: Having too much stakeholders engaged for testing / providing their user needs that the SoilWise team could not implement.

Stage/Activity Concerned:

Demo 1 and Demo 2 : Stakeholders engagement.

Proposed Mitigation Measures/Solution:





Demo 1 and Demo 2 : Limiting the stakeholder's engagement to the prioritized groups indicated in the Grant Agreement.

8.2.6 Key Performance Indicators (KPIs):

Key Performance I	ndicators			
KPI No	KPI description	Current value	Target value	Comments
1	Number of demonstration events organised	2	2	
2	Number of stakeholders invited to each event, and total number for the whole events.	Demo 1 : data hold by EC Demo 2 : >200	Demo 1 : data hold by EC Demo 2 : not fixed	
3	Number of stakeholders registered to each event, and total number for the whole events.	Demo 1 : Data hold by EC Demo 2 : 110	Demo 1: Data hold by EC Demo 2 : not	
4	Number of stakeholders effectively participating to each event, and total number for the whole events.	Demo 1 : 40 Demo 2 : 60	Demo 1 : Data hold by EC Demo 2 : not fixed	
5	Number of stakeholders effectively engaged in Soilwise activities after participating to the demonstration events.	Demo 1 : 20 Demo 2 : 5	Demo 1 : No target expected Demo 2 : not fixed	
6	Number of stakeholders using the SWR after/before participating to the demonstration events.	Demo 1 : Not monitored Demo 2 : Not monitored		
7	User stories produced as a result of demonstration events.	Demo 1: 10 Demo 2 : Not yet produced		

62



Project Number 101112838

		 A presentation of the Menti feedback will be done the 5 june at the UC/ devteam crossover meeting 		
8	SWR functionalities modified/improved following stakeholders' suggestions given during and as a follow-up of demonstration events.	Demo 1 : Feedback process, faceted filters, source repositories metadata.		
		Demo 2 : Not yet, probably filters		
9	SWR functionalities added following stakeholders' suggestions given during and as a follow-up of demonstration events.	Demo 1- and Demo 2 : None yet, it has to be prioritized.		

8.2.7 GanttChart& MileStones



			2	024				2	025		
Activities	Partners involved	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN
Demo design	Cirad-ISRIC-EV ILV	D-MU-Bio	Sense								
Write narratives											
Create demo plan											
Plan for technology											
Set Timelines											
Develop KPIs											
Demo Preparation	Cirad-ISRIC-WE-ZA	LF-BioSer	ise								
Prepare ressources											
Engage new stakeholders	5										
Develop demo material											
Finalize logistics											
Refine timelines											
Ensure tech support						1					
Demo Execution	Cirad										
A1											
A2											
Demo Evaluation	Cirad-MU-ISRIC-EV	ILVO-Vlar	deren-WE								
A1											
A2											

	MS No	MS Name	Mean of verifications	Achievem ent	Achievem ent Date
	MS 1	delivery of initial prototype	Submission of D4.1	yes	
Fi	MS 2	Complete and approve the demo plan, detailing the demo scenarios, activities	This milestone includes completing the detailed demo design, including the demo scenarios, the associated activities, and the comprehensive schedule for each iteration. This should reflect the improvements made to the user case descriptions and provide clarity on the assets and services needed for the demo. The plans must be flexible and easily understandable by all involved stakeholders, ensuring that everyone knows their responsibilities and timelines.	yes	April 2025
rs t lt er at io n	MS 3	Completion of Stakeholder Engagement and Demo Materials	Finalize the preparation for the demo, including confirming stakeholder participation, securing necessary materials (hardware/software). All stakeholders should be engaged and committed, and all resources should be in place to ensure smooth execution. This milestone also includes finalizing any synergies or shared activities with other user cases or work packages (e.g., T4.3).	yes	29 April 2025
	MS 4	Successful Execution of the Demo and Collection of Data	Complete the first demonstration session with active participation from stakeholders. The SoilWise repository (SWR) should be tested in real-world scenarios, and operational data (including any challenges or issues encountered) should be collected. The focus will be on testing the SWR's functionality and ensuring that the demonstration provides tangible insights into its real-world applicability.	yes	29 April 2025
	MS 5	First Deployment	Delivery of D5.2 Deployment and Evaluation Report		

64



and		
Evaluation		
Report		

8.3 UC3 Policy Making & Evaluation to safeguard soil

8.3.1 User Case (UC) Overview

User Case No & Name:3 - Policy Making & Evaluation to safeguard soil

User Case Leader & Contact Information: Maria Fantappiè, maria.fantappie@crea.gov.it

UC Partners: DOMG VL O, ISRIC

As external JRC and EEA

Target Groups: Public Institutions in the Member States involved in the monitoring and mapping soil.

EIONET network.

EJPSOIL national soil data hubs

ESP – INSII - GSP

Challenge (Need/Problem):

Soil data in EU Member States is held by different institutions. Although several efforts to implement the EU legislation for public data sharing in standard format, with INSPIRE directive as the pivotal one, and the efforts undertaken through several projects to facilitate this implementation, the last and relevant one being EJPSOIL, there is still lot of work to be done under Soilwise to make soil data held by EU-MS public institutions (national and sub-national), really FAIR, that is findable accessible interoperable and reusable. The Soilwise Repository has inherited the EJPSOIL catalogue and is improving it with new functionalities. The Soil Geopackage produced by EJPSOIL is also under testing through Soilwise project.

(Describe the specific challenge, need, or problem the user case addresses)

8.3.2 Demonstration Overview/Description

Event Title: 3rd Meeting of the EIONET Thematic Group Soil (TG Soil)

Date and Time: 12-13 December 2024

Location:

Copenhagen (Kongens Nytorv 6), hybrid

Event Objective:Soil data exchange & reporting (EU soil monitoring law and beyond). Solutions provided by Soilwise and EJPSOIL.





Demonstration Scenario/Showcase:(Provide a brief description of the demonstration scenario, highlighting its specific added value.)

The added value as reported in the Grant Agreement should be: 20% increased discoverability and accessibility of data for reporting and other purposes.

Showcase added value of improved and more efficient reporting pipelines and frequency or quality of the results.

Data/Knowledge Sources:

Existing Solutions to Be Integrated and Needs/ Improvement for Integration:

Main Technologies/Functionalities to Be Presented:

Stakeholder Groups and Participation:

EEA and EIONET network institutions.

Materials used/ Needed & Dissemination Channels:ppt presentation online

Potential Collaboration with Other Projects: In continuation with EJPSOIL.

8.3.3 Demonstration Steps and Activities

Demo Design Start Month: MXX End Month: MXX

Activities & Progress

Several meetings were held between the UC3 partners, and with the WP5 coordination, to define the contents to be included in the demonstration events.

Partners Involved: DOMG VL O, ISRIC, CREA

Demo Preparation Start Month: MXX End Month: MXX

Activities & Progress

Francesca Assennato and Claudia Cagnarini of ISPRA (Italy), as representative for Italy inside the EIONET network were asked for their availability to participate to UC3 demonstration events, and they accepted.

Partners Involved: VL O, ISRIC, CREA and ISPRA as external institution.

Demo Execution Start Month: MXX End Month: MXX

Activities & Progress

NONE

Partners Involved: (List the partners involved in the activity and their responsibilities)



Project Number 101112838



Objectives:

Approach:

Evaluation Start Month: MXX End Month: MXX

Activities & Progress

NONE

Partners Involved: (List the partners involved in the activity and their responsibilities)

8.3.4 Evaluation - Impact

Evaluation

(Describe the purpose of the evaluation, including which aspects of the SWR will be assessed, such as performance, usability, user satisfaction, usefulness, and added value.)

Evaluation

(Outline the methods and tools to evaluate impact and performance, such as survey, interview, KPIs)

FeedbackfromParticipants:(List the topics to include in the feedback questionnaire, such as the usefulness of technologies, ease of understanding, or suggestions for improvement)

Identifiedareasforimprovementbasedonfeedbackreceived.:((Highlight any areas that could be enhanced or optimized based on received feedback.))

8.3.5 Risks/Challenges & Mitigation Measures/ Solution

Description of Risk/Challenges:

(Describe the specific risks or challenges associated with the demonstration)

Stage/Activity Concerned:

(Identify the steps/ activities affected by the risk or challenge)

Proposed Mitigation Measures/Solution:

(Outline the solutions of measures proposed to mitigate the identified risks)

8.3.6 Key Performance Indicators (KPIs):

(Please indicate the KPIs relevant to your user case for evaluation)

Key Performance Indicators							
KPI No	KPI description	Current value	Target value	Comments			

67



1	Number of demonstration events organised	1	5	
2	Number of stakeholders invited to each event, and total number for the whole events.	27	100	The stakeholders were invited by EEA during the EIONET meeting
3	Number of stakeholders registered to each event, and total number for the whole events.	n/a	100	
4	Number of stakeholders effectively participating to each event, and total number for the whole events.	27	100	
5	Number of stakeholders effectively engaged in Soilwise activities after participating to the demonstration events.	0	50	
6	Number of stakeholders using the SWR after/before participating to the demonstration events.	0	50	
7	User stories produced as a result of demonstration events.	1	3	User story for the alignment of the Geopackage-SOIL with the EIONET reporting template.
8	SWR functionalities modified/improved following stakeholders' suggestions given during and as a follow-up of demonstration events.	1	3	Harmonise and transform data and knowledge is the functionality on which the UC3 is giving a contribution.
9	SWR functionalities added following stakeholders' suggestions given during and as a follow-up of	0	3	



		demonstration events.			
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8.3.7 GanttChart& MileStones

	MS	MS Name	Mean of verifications	Achievement	Achievement
	No			(yes/no)	Date
	MS1	delivery of initial prototype	Submission of D4.1	yes	
	MS2	Complete and approve the demo plan, detailing the demo scenarios, activities	This milestone includes completing the detailed demo design, including the demo scenarios, the associated activities, and the comprehensive schedule for each iteration. This should reflect the improvements made to the user case descriptions and provide clarity on the assets and services needed for the demo. The plans must be flexible and easily understandable by all involved stakeholders, ensuring that everyone knows their responsibilities and timelines.	no	
	MS3	Completion of Stakeholder Engagement and Demo Materials	Finalize the preparation for the demo, including confirming stakeholder participation, securing necessary materials (hardware/software). All stakeholders should be engaged and committed, and all resources should be in place to ensure smooth execution. This milestone also includes finalizing any synergies or shared activities with other user cases or work packages (e.g., T4.3).	no	
u	MS4	Successful Execution of the Demo and Collection of Data	Complete the first demonstration session with active participation from stakeholders. The SoilWise repository (SWR) should be tested in real-world scenarios, and operational data (including any challenges or issues encountered) should be collected. The focus will be on testing the SWR's functionality and ensuring that the demonstration provides tangible insights into its real-world applicability.	no	
First Iteratio	MS5	First Deployment and Evaluation Report	Delivery of D5.2 Deployment and Evaluation Report	no	

8.4 UC4 Enhanced capacities of Public Authorities and LLs actors8.4.1 User Case (UC) Overview

User Case No & Name:UC 4 - Enhanced capacities of Public Authorities and LLs actors**User Case Leader & Contact Information:** DOMG VL O- Max Vercruyssen - <u>max.vercruyssen@vlaanderen.be</u>DOMG VL O- Dries Luts - dries.luts@vlaanderen.be**UC Partners:**ZALF - Cenk DönmezZALF- Valeh KhalediEV ILVO - Radu Giurgiu

Target Groups:Public Authorities and LLs actors **Challenge (Need/Problem):** Adopting FAIR principles is hindered by technical and usability barriers, such as complex tools, a lack of incentives, and unclear trade-offs between





data quality and quantity. Additionally, finding and reusing existing datasets is difficult due to unintuitive search interfaces, poor metadata alignment, and inconsistent data classification and formatting across repositories.

8.4.2 Demonstration Overview/Description

Event Title:

Soil Health Monitoring:

How do you generate, use and share meaningful data?Date and Time:planned on the 25th of June 13:00-14:30

Location:Online

Event Objective:

Present the search capabilities of the soilwise repository for open data.

Knowledge transfer around FAIR data publishing

Demonstration Scenario/Showcase:

The demonstration scenario showcases how Living Labs can improve the impact of their soil health monitoring by adopting best practices in data collection, reuse, and FAIR data publishing. Through a practical online training, participants learn how to take consistent and comparable soil measurements, explore publicly available datasets like those in the SoilWise Repository, and apply FAIR principles to ensure their data supports broader scientific and policy goals. The added value lies in empowering Living Labs to generate high-quality, reusable data and leverage existing soil knowledge, enhancing research efficiency, collaboration, and long-term relevance.

Data/Knowledge Sources:

Various sources of data and knowledge will be accessed through the SoilWise Repository, with a particular focus on those originating from the BonaRes platform and EJP publications. For this, the current list of possible resources is;

- <u>https://maps.bonares.de/mapapps/resources/apps/bonares/index.html?lang=en&mid=108d410a-aa51-4176-8384-3b6dd67812e6</u>
- <u>https://maps.bonares.de/mapapps/resources/apps/bonares/index.html?lang=en&mid=379b2ed1-741d-484f-97a6-cdf5dcf4fa5b</u>
- <u>https://maps.bonares.de/mapapps/resources/apps/bonares/index.html?lang=en&mid=03b52930-0210-4bfc-a4ac-75f7544ce7a5</u>
- <u>http://doi.org/10.5281/zenodo.8130195</u>
- https://doi.org/10.5281/zenodo.8127975
- https://doi.org/10.5194/essd-16-4735-2024
- <u>http://okir-tdr.helion.hu/?talajallapot=2</u>
- https://geo.sv.rostock.de/download/opendata/stadtbodenkarte_2005/stadtbodenkarte_2005_bodenklassen.json

Existing Solutions to Be Integrated and Needs/ Improvement for Integration:

For this first demonstration, integration of existing solutions was not necessary. Looking ahead, the need for integration will depend on the type and quality of feedback we receive during the demo.



Project Number 101112838



Main Technologies/Functionalities to Be Presented:

Catalogue; Query Catalogue, Data download, Map preview, Feedback option, Facets.

Stakeholder Groups and Participation:

SOILL community of living labs. Target participants are scientist and managers that participate in these living labs with a background in soilhealth or data. The primary goal is to engage participants and showcase current developments, with the added benefit of validating our vision for future advancements.

Materials used/ Needed & Dissemination Channels:

As the demonstration event will be held online, no physical materials are required. Dissemination is planned through the SOILL mailing list network and our LinkedIn social media channels.

Potential Collaboration with Other Projects:

This is a collaboration with the SOILL project

8.4.3 Demonstration Steps and Activities

Demo Design Start Month: September 2024 End Month: June 2025

Activities & Progress & Partners Involved:

During this phase, we collaborated closely with all use case partners through several joint meetings to shape the demo design. DOMG VL O conducted multiple one-on-one meetings with local authority representatives and Living Lab participants to deepen the understanding of stakeholder needs. Both ZALF and DOMG VL O proposed narrative concepts, with ZALF ultimately refining their proposal into the final narrative selected for this use case demonstration. ISRIC provided valuable technical input on the SoilWise Repository throughout the discussion meetings.

Demo Preparation Start Month: January 2025 End Month: June 2025

Activities & Progress & Partners Involved: Key preparatory activities included organizing a focused work session led by DOMG VL O with a select group of LTE scientists within the ILVO organization to gather input and perform a first demonstration. Significant effort was also dedicated to identifying a suitable platform and partner to support broader outreach. This was successfully achieved through collaboration with SOILL, which offered an established network and strong connections within the Living Labs community.

An agreement was reached with SOILL to host an online training and demonstration in June 2025, followed by participation in their in-person event in October 2025. This upcoming physical event will provide an excellent opportunity to conduct a second demonstration and interactive work session, enabling us to gather deeper and more valuable feedback on the project from a broader group of stakeholders.

Demo Execution Start Month: June 2025 End Month: June 2025

Activities & Progress & Partners Involved: Demo execution is planned during the SOILL training on the 25th of June



Project Number 101112838



Evaluation Start Month: June 2025 End Month: MXX

Activities & Progress & Partners Involved: To be done after demo execution but it is planned to have live feedback during the demonstration.

8.4.4 Evaluation - Impact

Evaluation Objectives: The purpose of the evaluation is to assess several key aspects of the SoilWise Repository (SWR) in the context of the demonstration. This includes evaluating the functionality and usability of the data catalogue through live feedback using tools like Menti, and reviewing the current state of harvested repositories. The evaluation will also explore the relevance and accuracy of problem identification conducted by the consortium, gauge the level of data maturity in terms of FAIR principles within the Living Labs, and identify promising technologies that could support future developments.

Evaluation Approach: During the demonstration, live questions will be conducted using Menti to gather immediate feedback. In addition, we will promote the Hotjar feedback option on the website to encourage participants to share their thoughts on usability and functionality at their convenience, extending the opportunity for input beyond the live session.

Feedback from Participants: Demo exection is planned

Identified areas for improvement based on feedback received.: Demo execution is planned

8.4.5 Risks/Challenges & Mitigation Measures/ Solution

Description of Risk/Challenges:

A major challenge in the demonstration is collecting meaningful and actionable feedback. Striking the right balance between small, focused sessions that generate specific insights and larger online events that reach broader audiences, but often result in more general or limited feedback, is particularly difficult. In large online settings, participants may be less engaged or reluctant to provide detailed input, reducing the depth and usefulness of the feedback collected.

Stage/Activity Concerned:

Planning

Proposed Mitigation Measures/Solution:

To address this, we plan to combine broad engagement through the online demo with targeted follow-up sessions in in-person, more focused groups.

8.4.6 Key Performance Indicators (KPIs):

(Please indicate the KPIs relevant to your user case for evaluation)




Project Number 101112838

Key Performance I	ndicators			
KPI No	KPI description	Current value	Target value	Comments
1	Number of	1	1	
	demonstration events			
	organised			
2	Number of	100LL's	Not set	
	stakeholders invited			
	to each event, and			
	total number for the			
	whole events.			
3	Number of	In progress	Not set	The event has not yet happened.
	stakeholders			
	registered to each			
	event, and total			
	number for the whole			
	events.			
4	Number of	In progress	Not set	The event has not yet happened.
	stakeholders			
	effectively			
	participating to each			
	event, and total			
	number for the whole			
	events.			
5	Number of	In progress	Not set	The event has not yet happened.
	stakeholders			
	effectively engaged in			
	Sollwise activities			
	after participating to			
	the demonstration			
6	events.	Not	Not cot	The event has not yet hannoned
0	stakeholders using	monitored	NOT SET	The event has not yet happened.
	the SM/P after/before	monitored		
	narticipating to the			
	demonstration			
	events			
7	User stories produced	In progress	Not set	The event has not vet happened.
	as a result of			, compensation of the second production of the second second second second second second second second second s
	demonstration			
	events.			
8	SWR functionalities	In progress	Not set	The event has not yet happened.
	modified/improved			
	following			
	stakeholders'			
	suggestions given			
	during and as a			
	follow-up of			
	demonstration			
	events.			
9	SWR functionalities	In progress	Not set	The event has not yet happened.
	added following			
	stakeholders'			



suggestions given during and as a follow-up of demonstration events.		
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8.4.7 GanttChart& Milestones

				2024			2025						
Activities	Tasks	Partners involved	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL
Demo design		DOMG VLO / ZALF / ILVO											
Create UC Narrative													
Create Detailed Demo Plans													
Identify Stakeholders													
Plan for Technology													
Build a Timeline													
Develop KPIs for Evaluation													
Demo Preparation		DOMG VLO / ZALF / ILVO											
Collect and prepare resources	3												
Engage stakeholders													
Develop demo material													
Finalize location and logistics	3												
Refine the timeline													
Ensure tech support													
Demo Execution		DOMG VLO / ZALF / MU / WUR											
SOILL Training													
Demo Evaluation													
A1													
A2													

	MS	MS Name	Mean of verifications	Achievement	Achievement
	No			(yes/no)	Date
	MS1	delivery of	Submission of D4.1		
		initial		yes	
		prototype			
	MS2	Complete and	This milestone includes completing the detailed demo	no	06/06/2025
		approve the	design, including the demo scenarios, the associated		
		demo plan,	activities, and the comprehensive schedule for each		
		detailing the	iteration. This should reflect the improvements made		
		demo	to the user case descriptions and provide clarity on the		
		scenarios,	assets and services needed for the demo. The plans		
		activities	must be flexible and easily understandable by all		
			involved stakeholders, ensuring that everyone knows		
			their responsibilities and timelines.		
	MS3	Completion of	Finalize the preparation for the demo, including	no	18/06/2025
		Stakeholder	confirming stakeholder participation, securing		
		Engagement	necessary materials (hardware/software). All		
		and Demo	stakeholders should be engaged and committed, and		
		Materials	all resources should be in place to ensure smooth		
			execution. This milestone also includes finalizing any		
			synergies or shared activities with other user cases or		
			work packages (e.g., T4.3).		
	MS4	Successful	Complete the first demonstration session with active	no	25/06/2025
۲		Execution of	participation from stakeholders. The SoilWise		
atio		the Demo and	repository (SWR) should be tested in real-world		
era		Collection of	scenarios, and operational data (including any		
st It		Data	challenges or issues encountered) should be collected.		
Firs			The focus will be on testing the SWR's functionality and		





		ensuring that the demonstration provides tangible insights into its real-world applicability.		
MS5	First Deployment and Evaluation	Delivery of D5.2 Deployment and Evaluation Report	yes	End of May
	Report			

8.5 UC5 Repository for new products, technologies and services8.5.1 User Case (UC) Overview

User Case No & Name:

UC05: Repository for new products, technologies and services

User Case Leader & Contact Information:

Katerina Sachsamanoglou, GAIA (<u>k_sachsamanoglou@c-gaia.gr</u>)

UC Partners:

Somakanthan Somalingam, WE (<u>so@wetransform.to</u>)

Ramona Resch, WE (rr@wetransform.to)

Biljana Tadic, BIOS (<u>biljana.tadic@biosense.rs</u>)

Vassilis Gkoles, NP (v gkoles@neuropublic.gr)

Odysseas Sekkas, NP (o sekkas@neuropublic.gr)Marc Rosiers, ELO (marc.rosiers@elo.org)

Caroline Mahr, ELO (caroline.mahr@elo.org)

Target Groups:

Business Community (Smart Farming Services/Technology Providers, Farm Management Information System operators, Agri-food Businesses and Organisations), Farming Professionals (farm advisors)

Challenge (Need/Problem):

The user case addresses the recurring challenge of fragmented, inconsistent, and difficult-to-access soil-related data across various platforms. It highlights the importance of centralised access to harmonized datasets, supported by clear, standardized metadata that enables users to quickly assess relevant information. By improving data discoverability and interoperability, the user case supports efficient, in terms of time and effort, integration into real-world workflows and helps different sectors, including agriculture, forestry, and policy, make informed decisions using reliable data

8.5.2 Demonstration Overview/Description





Event Title:

SoilWise Demo Event for Business Community & Farming Professionals Get ready to explore how SoilWise brings practical, data-driven solutions to the agri-business and farming community.

Join us for an online showcase of the SoilWise Repository's capabilities to facilitate data reuse and harmonization, discover ways to leverage the platform, and unlock new business opportunities.

Date and Time: Monday, 28th of April 2025, 12:00-13:30 CET.

Location:

Online, hosted via a Zoom link (<u>https://zoom.us/j/95568232438?pwd=2skdp3fyRLs02AaZ8a8qyaIC4oQaHb.1</u>)

Meeting ID: 955 6823 2438

Passcode: 653100

Event Objective:

The objective of the demo event was to showcase a narrative based on a real-world forestry scenario, demonstrating how to discover and download relevant datasets, and how they can be harmonized and transformed using HALE Studio. The event also highlighted how the SoilWise Repository can be leveraged by businesses to enhance metadata visibility, making key information from diverse data sources more accessible and actionable.

Demonstration Scenario/Showcase:

Demonstration Scenario 1: As a data scientist I want to search for data concerning forestry to integrate diverse datasets into business intelligence workflows. I want to understand its metadata, such as data source details, to determine whether it requires data harmonization or unit conversion. Finally, I want to confirm that the dataset complies with the required licensing terms, is validated, and to ensure that business contact details are up-to-date to address any queries or issues with the data provider.

Demonstration Scenario 2: As a company/private organization that has already developed databases encompassing territorial data, such as soil, climate, land cover data, and other relevant datasets, aiming to enhance the discoverability, accessibility, and interoperability of soil-related data, we seek to optimize how metadata from diverse sources is surfaced and shared. The importance of efficient metadata management and seamless data integration needs to be highlighted. While multiple data sources have successfully been harnessed, metadata fragmentation across platforms poses a challenge. By leveraging SoilWise metadata, metadata visibility can be enhanced, ensuring that key information from various data repositories becomes more accessible and actionable. This enables to efficiently identify, retrieve, and integrate relevant datasets, fostering improved interoperability and collaboration.

Data/Knowledge Sources:

https://maps.bonares.de/mapapps/resources/apps/bonares/index.html?lang=en&mid=0944b0bf-c440-48d4-8ac4-553c3781cbf6

Existing Solutions to Be Integrated and Needs/ Improvement for Integration:





No solutions were needed, as all technical issues and bugs were resolved during the validation phase of the demonstration scenarios, which also served as a form of user testing.

Main Technologies/Functionalities to Be Presented:

Component: Catalogue, Function/API: Query Catalogue;

Component: Catalogue, Function/API: Map Preview;

Component: Harvester, Function/API: Harvest metadata resources;

Component: Harvester, Function/API: Harvest knowledge resources;

Component: Catalogue, Function/API: Data download (AS IS)

Component: Transformation and Harmonization, Function/API: Manual metadata upload

Component: Transformation and Harmonization, Function/API: Metadata transformation

Component: Transformation and Harmonization, Function/API: Data restructuring

Component: Transformation and Harmonization, Function/API: Units of measurements conversion

Component: Transformation and Harmonization, Function/API: Download interoperable metadata

Stakeholder Groups and Participation:

The stakeholders invited to the event were selected for showcasing purposes. They represented a diverse range of sectors, including private non-profit organizations and foundations related to farming and land use, environmental engineering, infrastructure and consulting, as well as representatives from the Ministry of Agriculture, research institutions, independent farm advisors, and private technology-based companies.

Materials used/ Needed & Dissemination Channels:

For the purpose of the demo event, a tailor-made flyer and poster were developed collaboratively by GAIA and BIOSENSE. GAIA created the initial mock-up, and BIOSENSE finalized the design. BIOSENSE also created the invitation graphics, in consultation with and with the approval of the UC5 leader. The dissemination of the UC5 demo event took place through SoilWise's official social media channels, as well as through the social media accounts of various project partners.

Potential Collaboration with Other Projects:

No opportunities for collaboration with other projects arose.

8.5.3 Demonstration Steps and Activities

Demo Design Start Month: September 2024 End Month: October 2024

Activities & Progress





The demo design phase focused on the initial planning, configuration, and structuring of the key activities that would form the foundation of the upcoming demonstration event.

Create UC Narrative: The initial conceptualization of the Use Case (UC) narrative was introduced during the early UC5 meetings. The final narrative was shaped, drafted, and refined through contributions from both GAIA and WE partners.

Create Detailed Demo Plans: The demo plan was first developed through joint discussions during the preliminary UC5 meetings, with the participation of all UC5 partners. The final breakdown of activities, partner responsibilities, and the timeline were prepared by the UC5 leader.

Identify Stakeholders: Stakeholders were initially identified and registered by the BIOS team during the stakeholder engagement event. No additional actions related to stakeholder identification were undertaken during the demo design phase.

Plan for Technology: At this stage the functionalities and the technical components meant to be utilized, according to the narrative developed, were discussed and the partners involved were the UC5 leader and Somakanthan Somalingam (WE). Additionally, narrative validation was initiated through user testing of the SoilWise Repository (SWR), following different user paths to ensure a more comprehensive approach. During this process, certain technical issues and bugs were identified and reported. This testing and validation process was carried out exclusively by the UC5 leader.

Build a Timeline: As mentioned above, the first approach to draft the initial timeline was part of the creation of the demo plan.

Partners Involved:

The partners involved were mentioned in detail in the aforementioned description of the Activities & Progress section.

Demo Preparation Start Month: November 2024 End Month: April 2025

Activities & Progress

The Demo Preparation step concerned all the individual activities required for the demo event.

Collect and prepare resources: This activity involved collecting and configuring all the required resources to support the demonstration scenario. It included a detailed breakdown of the demonstration scenario and technical clarifications to ensure the smooth execution of the event. The full preparation and delivery of the HALE Studio demonstration was carried out by the WE team. As the preparation progressed, an additional Use Case narrative was developed, focusing on the utilization of SWR APIs. This part of the demo was presented by Nick Berkvens (ILVO). The evaluation component of the demo, using Mentimeter, was primarily set up by the UC5 leader, with contributions from WE, ILVO, and BIOS.

Engage stakeholders and continue with the identification of stakeholders: Additional identification of relevant stakeholders was carried out by UC5 leader, with input from NP, through targeted stakeholder mapping, drawing from relevant networks. Further engagement followed, including individual meetings with key stakeholders to discuss their interests and expectations regarding the potential of the SoilWise Repository (SWR). Part of the engagement process included the dissemination of the demo event invitation, which was published through the official SoilWise Project website and social media by the BIOS team, and later reshared by other project partners to boost visibility and attract new participants.





Develop demo material (Flyers, Ready-to-send email/messages): The demo materials needed (Flyers, Poster, Ready-to-send email/messages, demo event invitation, zoom link). Where required, the UC5 leader provided specific input, either via email or by submitting mock-ups for review and refinement.

Finalize location and logistics: The location, date, and time of the event were finalized by the UC5 leader in consultation with, and upon confirmation from, all partners involved in the demo event (GAIA, WE, BIOS, ILVO).

In terms of logistics, the agenda and master presentation were drafted by the UC5 leader, with all partners contributing their respective slides. Biljana Tadic (BIOS) acted as the event moderator, while Tuna Coppens (ILVO) facilitated the Mentimeter session, as ILVO holds a Pro license.

Ensure tech support: Ahead of the demo event, the majority of technical issues were resolved. Additional technical support was provided to ensure full functionality during the event. The partners involved in this process were GAIA, NP, WE, and the development team.

Partners Involved: The partners involved were mentioned in detail in the aforementioned description of the Activities & Progress section.

Demo Execution Start Month: March 2025 End Month: April 2025

Activities & Progress

The demo even took place on the 28th of April, at 12:00 – 13:30 CET, and was conducted via Zoom.

Execution of the demo event: The demo event was executed successfully and proceeded smoothly. For the realization of the demo event the following partners presented/ demonstrated their respective sections: UC5 leader (Katerina Sachsamanoglou – GAIA), Welcome and Introduction, Demonstration of SoilWise Repository, Open Discussion – Mentimeter, Tuna Coppens (ILVO), Overview of SoilWise Project and handling of the mentimeter platform, Ramona Resch (WE), Demonstration of Hale studio and finally Nick Berkvens (ILVO) presented the Technical integration with the SWR, and Biljana Tadic (BIOS) who acted as the moderator of the event.

Engagement and interaction with stakeholders: This activity focused on engaging with stakeholders during the event, addressing their questions, and encouraging interaction. The partners involved in this task included GAIA, WE, BIOS, and ILVO.

Feedback material: The feedback material in the form of menti was developed by GAIA, and reviewed and finalized with the contribution of CREA (as the T5.3 leader, encompassing the impact analysis of the UCs), Tuna Coppens (ILVO), Somakanthan Somalingam (WE), and Biljana Tadic (BIOS).

Partners Involved: The partners involved were mentioned in detail in the aforementioned description of the Activities & Progress section.

Evaluation Start Month: April 2025 End Month: May 2025

Activities & Progress

The evaluation took place during the final segment of the demo event through the Mentimeter platform. The questions were designed to assess the usability of the SoilWise Repository (SWR) and the effectiveness of the demonstrated functionalities. Additional questions explored the participants' overall experience and gathered suggestions on how the SWR could be further developed to meet user needs.





Partners Involved: The Menti questions were developed by GAIA, and refined with the contribution of CREA, ILVO, WE, and BIOS.

8.5.4 Evaluation – Impact

Evaluation Objectives:

The purpose of the evaluation was to address the ease of use of the SWR in terms of usability, performance and user satisfaction as well as the overall experience in terms of the added value of SWR as well as ways to enhance the platform in the future.

Evaluation Approach:

A series of various questions with different format were asked using Mentimeter at the end of the demo event after all the different parts of demonstration were concluded.

Feedback from Participants:

The questions included in the feedback are the following:

In which country are you based?

Please specify which stakeholder group you represent?

Usability of the SoilWise Platform:

What is most likely to us?

Use the search bar, by typing a search term or type free text

Select from the available terms below the search bar

Is it important to have the Sort by Date filter to organize results based on their publication or release date? Yes/No

Is it important to have the Sort by Title filter to organize results based on alphabetic order? Yes/No

Rank the filtering categories, in order of preference/usefulness. Type/ Soil Chemical Properties/Soil Biological Properties/Soil Physical Properties/Soil Classification/Soil Functions/ Soil Threats/Soil Processes/Soil Management/Ecosystem Services

Rank the metadata that you would find more valuable for the resulting page: Keywords/Map preview with country of origin/Additional images/Format of material/Contact Details/Links section/ Link liveliness function/Abstract/Short description

Overall Experience:

What kind of benefits/added value can the SWR bring to you?

How likely it will be to integrate the SWR into your current workflow?



Project Number 101112838



Do you use any harmonisation/transformation tools? Yes/No

Do you use any harmonisation/transformation tools?

Would you recommend the SWR to your colleagues?

What could we do to enhance the SWR experience in the future?

Identified areas for improvement based on feedback received.:

Based on the feedback received, the main area identified for improvement relates to the functionalities of the SoilWise Repository (SWR) that were demonstrated during the event, such as the filtering options, etc.

8.5.5 Risks/Challenges & Mitigation Measures/ Solution

Description of Risk/Challenges:

One of the main challenges encountered was the limited number of actual participants which reflects the broader difficulty of engaging stakeholders interested in the SoilWise Repository (SWR), not only to engage as users or data providers but also to provide with user needs. Despite a higher number of registrations in the days leading up to the demo event, actual attendance was significantly lower. This discrepancy is partly attributed to the complexity of the UC5 target group. Notably, most of the participants who did attend were stakeholders previously identified during the earlier stakeholder engagement event and had been contacted well in advance of the demo. This highlights the importance of consistent engagement and relationship-building, which appears to have had a positive impact on participation.

Stage/Activity Concerned:

The main activity affected by the aforementioned challenge is the engagement extended to the actual feedback received.

Proposed Mitigation Measures/Solution:

To mitigate this challenge, future engagement efforts will focus on earlier and more targeted outreach to stakeholders, supported by follow-ups and clearer value propositions tailored to their specific interests. Additionally, leveraging established relationships and maintaining continuous communication throughout the project will help strengthen participation and ensure more consistent feedback. Finally, organizing a stakeholder event shortly before the second iteration's demo event could prove beneficial in boosting engagement and participation.

8.5.6 Key Performance Indicators (KPIs)

Key Performance Indicators							
KPI No	KPI description	Current value	Target value	Comments			
1	Number of demonstration events organised	1	1				
2	Number of stakeholders invited to each event, and	14	Not set				





			1	1
	total number for the			
2	whole events.	47	10	
3	Number of	47	10	
	stakenoiders			
	overt and total			
	event, and total			
	whole events			
Δ	Number of	17	10	
-	stakeholders	17	10	
	effectively			
	participating to each			
	event. and total			
	number for the			
	whole events.			
5	Number of	1 (is in-progress, not	Not set	
	stakeholders	yet recorded)		
	effectively engaged			
	in Soilwise activities			
	after participating to			
	the demonstration			
	events.			
6	Number of	Not	Not set	
	stakeholders using	recorded/tracked		
	the SWR			
	atter/before			
	participating to the			
	demonstration			
7	llsor storios	Not fulfilled yet	One user story	
/	nroduced as a result	Not fullined yet.	which is in the works	
	of demonstration		derived from the	
	events.		second use case	
			narrative	
8	SWR functionalities	Not able to provide	Not set	
	modified/improved	an answer yet.		
	following	Suggested		
	stakeholders'	improvements		
	suggestions given	concerned filtering		
	during and as a	options		
	follow-up of			
	demonstration			
	events.			
9	SWR functionalities	N/A	Not set	
	added following			
	stakeholders'			
	suggestions given			
	follow up			
	demonstration			
	events			
	evenus.	1		

8.5.7 Gantt Chart & Milestones



		2024						2025			
Activities	Partners involved	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN
Demo design											
Create UC Narrative	GAIA, WE										
Create Detailed Demo Plans	GAIA										
Identify Stakeholders	BIOS										
Plan for Technology	GAIA, WE										
Build a Timeline	GAIA, WE, NP, BIOS, ELO										
Demo Preparation											
Collect and prepare resources	GAIA, WE, NP										
Engage stakeholders and continue with the ide	GAIA, BIOS										
Develop demo material (Flyers, Ready-to-send	GAIA, BIOS										
Finalize location and logistics	GAIA, BIOS, ILVO, WE										
Refine the timeline	GAIA										
Ensure tech support	GAIA, NP, WE, devteam										
Demo Execution											
Execution of the demo event (end April- start M	GAIA, WE, BIOS, ILVO										
Engagement and interaction with stakeholders	GAIA, WE, BIOS, ILVO										
Feedback material	GAIA										
Demo Evaluation											
A1											
A2											

	MS No	MS Name	Mean of verifications	Achievem ent (yes/no)	Achievem ent Date
	MS 1	delivery of initial prototype	Submission of D4.1	yes	
Fi	MS 2	Complete and approve the demo plan, detailing the demo scenarios, activities	This milestone includes completing the detailed demo design, including the demo scenarios, the associated activities, and the comprehensive schedule for each iteration. This should reflect the improvements made to the user case descriptions and provide clarity on the assets and services needed for the demo. The plans must be flexible and easily understandable by all involved stakeholders, ensuring that everyone knows their responsibilities and timelines.	yes	April 2025
rs t lt er at io n	MS 3	Completion of Stakeholder Engagement and Demo Materials	Finalize the preparation for the demo, including confirming stakeholder participation, securing necessary materials (hardware/software). All stakeholders should be engaged and committed, and all resources should be in place to ensure smooth execution. This milestone also includes finalizing any synergies or shared activities with other user cases or work packages (e.g., T4.3).	yes	28 April 2025
	MS 4	Successful Execution of the Demo and Collection of Data	Complete the first demonstration session with active participation from stakeholders. The SoilWise repository (SWR) should be tested in real-world scenarios, and operational data (including any challenges or issues encountered) should be collected. The focus will be on testing the SWR's functionality and ensuring that the demonstration provides tangible insights into its real-world applicability.	yes	28 April 2025
	MS 5	First Deployment and	Delivery of D5.2 Deployment and Evaluation Report	yes	End of May

83



Evaluation		
Report		



8.6 Annex II: User Cases Progress Report Template:

User Cases Progress Report Template

1.User Case (UC) Overview

User Case No & Name: (Provide the UC number and name)

User Case Leader & Contact Information: (Include the name and contact details of the user case leader)

UC Partners: (List the other partners involved in the user case)

Target Groups: (Specify the intended audience or beneficiaries of the user case)

Challenge (Need/Problem): (Describe the specific challenge, need, or problem the user case addresses)

2.Demonstration Overview/Description

Event Title: (Provide the title of the event)

Date and Time: (Specify the date and time of the event)

Location: (Indicate whether the event is online or physical, and provide the location details)

Event Objective: (Briefly explain what you aim to achieve with this demonstration)

Demonstration Scenario/Showcase:

(Provide a brief description of the demonstration scenario, highlighting its specific added value.)

Data/Knowledge Sources:

(Specify the data and knowledge sources to be used for the demonstration)

Existing Solutions to Be Integrated and Needs/ Improvement for Integration:

(Detail the existing solutions that will be integrated into the demonstration and outline the needs and improvements required for their integration with the SWR)



Project Number 101112838



Main Technologies/Functionalities to Be Presented:

(List the main technologies or functionalities to be showcased)

Stakeholder Groups and Participation:

(Identify the primary participants or stakeholder groups who are directly involved in or invited to the event, including whether their participation is for testing/validation, or showcasing purposes.)

Materials used/ Needed & Dissemination Channels:

(Indicate the materials required for the event and the dissemination channels, such as flyer, posters, newsletters, social media, etc.)

Potential Collaboration with Other Projects:

(Mention any opportunities for collaboration with other projects)

3.Demonstration Steps and Activities

Demo Design Start Month: MXX End Month: MXX

Activities & Progress

(Please provide a brief summary of the main activities carried out under each step, along with the overall progress.)

Partners Involved:

(List the partners involved in the activity and their responsibilities)

Demo Preparation Start Month: MXX End Month: MXX

Activities & Progress

(Please provide a brief summary of the main activities carried out under each step, along with the overall progress.)

Partners Involved:

(List the partners involved in the activity and their responsibilities)

Demo Execution Start Month: MXX End Month: MXX

Activities & Progress

(Please provide a brief summary of the main activities carried out under each step, along with the overall progress.)

Partners Involved:

(List the partners involved in the activity and their responsibilities)

Evaluation Start Month: MXX End Month: MXX

Activities & Progress

(Please provide a brief summary of the main activities carried out under each step, along with the overall progress.)





Partners Involved:

(List the partners involved in the activity and their responsibilities)

4. Evaluation - Impact

Evaluation Objectives:

(Describe the purpose of the evaluation, including which aspects of the SWR will be assessed—such as performance, usability, user satisfaction, usefulness, and added value.)

Evaluation Approach:

(Outline the methods and tools to evaluate impact and performance, such as survey, interview, KPIs)

Feedback from Participants:

(List the topics to include in the feedback questionnaire, such as the usefulness of technologies, ease of understanding, or suggestions for improvement)

Identified areas for improvement based on feedback received.:

((Highlight any areas that could be enhanced or optimized based on received feedback.))

5.Risks/Challenges & Mitigation Measures/ Solution

Description of Risk/Challenges:

(Describe the specific risks or challenges associated with the demonstration)

Stage/Activity Concerned:

(Identify the steps/ activities affected by the risk or challenge)

Proposed Mitigation Measures/Solution:

(Outline the solutions of measures proposed to mitigate the identified risks)

6.Key Performance Indicators (KPIs):

(Please indicate the KPIs relevant to your user case for evaluation)

Key Performance Indicators						
KPI No	KPI description	Current	Target value	Comments		
		value				
1	Number of					
	demonstration					
	events organised					







2	Number of		
	stakeholders		
	invited to each		
	event, and total		
	number for the		
	whole events.		
3	Number of		
	stakeholders		
	registered to each		
	event. and total		
	number for the		
	whole events.		
4	Number of		
•	stakeholders		
	effectively		
	participating to		
	participating to		
	tatal avent, and		
	total number for		
	the whole events.		
5	Number of		
	stakeholders		
	effectively engaged		
	in Soilwise activities		
	after participating		
	to the		
	demonstration		
	events.		
6	Number of		
	stakeholders using		
	the SWR		
	after/before		
	participating to the		
	demonstration		
	events.		
7	User stories		
	produced as a result		
	of demonstration		
	events		
8	SWR functionalities		
	modified/improved		
	following		



Project Number 101112838

	stakeholders'
	suggestions given
	during and as a
	follow-up of
	demonstration
	events.
9	SWR functionalities
	added following
	stakeholders'
	suggestions given
	during and as a
	follow-up of
	demonstration
	events.

GanttChart& MileStones

		2024 2025									
Activities	Partners involved	SEP	ОСТ	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN
Demo design		MS1									
A1-Design and Detail the Demonstration Scenarios											
A2-Establish the Demo Plan and Timeline											
A3-Align and Collaborate with Technology Providers											
A4-Identify needed data and components											
A5-Identify Stakeholders											
Demo Preparation				MS2							
A6-Communication and collaboration between the Partners and Tech pr											
A7-Prepare Demo Materials and Resources											
A8-Prepare and Integrate Required Technical Components											
A9-Conduct Internal Testing and Validation											
A10-Engage Stakeholders and Confirm Participation											
A11-Finalize Logistics and Demo Setup											
Demo Execution							MS3		MS4		
A12-Execute the Demonstration as Planned											
A13-Monitor and Troubleshoot During the Demo											
A14-Engage and Interact with Participants											
A15-Capture Data and Feedback for Analysis											
Demo Evaluation										MS5	
A16-Reporting on the progress											
A17-Identify and Define Key Evaluation Aspects											
A18-Select and Prepare Evaluation Tools and Methodology											
A19-Provide Feedback and Baseline information , if needed											
A20-Provide Feedback and Recommendations for Improvement											

	MS	MS Name	Mean of verifications	Achievement	Achievement
	MS1	delivery of initial prototype	Submission of D4.1	yes	Date
First Iteration	MS2	Complete and approve the demo plan, detailing the demo scenarios, activities	This milestone includes completing the detailed demo design, including the demo scenarios, the associated activities, and the comprehensive schedule for each iteration. This should reflect the improvements made to the user case descriptions and provide clarity on the assets and services needed for the demo. The plans must be flexible and easily understandable by all involved stakeholders, ensuring that everyone knows their responsibilities and timelines.	yes	
	MS3	Completion of Stakeholder Engagement and Demo Materials	Finalize the preparation for the demo, including confirming stakeholder participation, securing necessary materials (hardware/software). All stakeholders should be engaged and committed, and all resources should be in place to ensure smooth execution. This milestone also includes finalizing any synergies or shared activities with other user cases or work packages (e.g., T4.3).	yes	



	MS4	Successful Execution of the Demo and Collection of Data	Complete the first demonstration session with active participation from stakeholders. The SoilWise repository (SWR) should be tested in real-world scenarios, and operational data (including any challenges or issues encountered) should be collected. The focus will be on testing the SWR's functionality and ensuring that the demonstration provides tangible insights into its real-world applicability.	
	MS5	First Deployment and Evaluation Report	Delivery of D5.2 Deployment and Evaluation Report	
Second iteration	MS6	Delivery of improve repository	Delivery of tech Deliverables V2	
	MS7	Complete and approve the updated demo plan and demo scenarios,	This milestone includes completing the detailed demo design, including the demo scenarios, the associated activities, and the comprehensive schedule for each iteration. This should reflect the improvements made to the user case descriptions and provide clarity on the assets and services needed for the demo. The plans must be flexible and easily understandable by all involved stakeholders, ensuring that everyone knows their responsibilities and timelines.	
	MS8	Completion of Updated Stakeholder Engagement and Demo Materials	Finalize the preparation for the demo, including confirming stakeholder participation, securing necessary materials (hardware/software). All stakeholders should be engaged and committed, and all resources should be in place to ensure smooth execution. This milestone also includes finalizing any synergies or shared activities with other user cases or work packages (e.g., T4.3).	
	MS9	Successful Execution of the Demo and Collection of Data	Complete the second demonstration session with active participation from stakeholders. The SoilWise repository (SWR) should be tested in real-world scenarios, and operational data (including any challenges or issues encountered) should be collected. The focus will be on testing the SWR's functionality and ensuring that the demonstration provides tangible insights into its real-world applicability.	
	MS10	Intermediate Deployment and Evaluation Report	Delivery of D5.4 Deployment and Evaluation Report	
	MS11	Delivery of improve repository	Delivery of tech Deliverables V2	
Third iteration	MS12	Complete and approve the updated demo plan and demo scenarios,	This milestone includes completing the detailed demo design, including the demo scenarios, the associated activities, and the comprehensive schedule for each iteration. This should reflect the improvements made to the user case descriptions and provide clarity on the assets and services needed for the demo. The plans must be flexible and easily understandable by all involved stakeholders, ensuring that everyone knows their responsibilities and timelines.	
	MS13	Completion of Updated Stakeholder Engagement and Demo Materials	Finalize the preparation for the demo, including confirming stakeholder participation, securing necessary materials (hardware/software). All stakeholders should be engaged and committed, and all resources should be in place to ensure smooth execution. This milestone also includes finalizing any synergies or shared activities with other user cases or work packages (e.g., T4.3).	
	MS14	Successful Execution of the Demo and Collection of Data	Complete the last demonstration session with active participation from stakeholders. The SoilWise repository (SWR) should be tested in real-world scenarios, and operational data (including any challenges or issues encountered) should be collected. The focus will be on testing the SWR's functionality and ensuring that the demonstration provides tangible insights into its real-world applicability.	
	MS15	Last Deployment and Evaluation Report	Delivery of D5.5 Deployment and Evaluation Report	



8.7 Annex III: Mentimeter Results

1.1.1 Feedbacks of the UC2 stakeholders during the online demonstration of 29 April 2025 ('demo 2')

The feedbacks are gathered in PDF files located at this URL :

https://filesender.renater.fr/?s=download&token=afe19184-c9a1-4db0-8f11-d40c96a0e845

Please note that the files are too large to be included in the deliverable, but they are available upon request.

1.1.2 Mentimeter responses from UC5 stakeholders during the online demo event held on April 28th, 2025

The full report can be founded using the following link

UC5 DemoEvent Menti Responses

Please note that the files are too large to be included in the deliverable, but they are available upon request.

8.8 Annex IV: Survey, Question......

1.1.3 Feedbacks of the UC2 Soil Mission stakeholders during the 5 hands on session interviews ('demo 1')

[BUG / Improvement] Xavier Rotllan (Sus-Soil) - Filters :

As a soil scientist making a query about 'subsoil' with the facet 'dataset',

I would like to have the number of datasets in each of the 'Soil_chemical_properties' filter representative of the number of records. Maybe this number should be obtained from the words included in the abstracts and titles of datasets, and not only from the keywords of each dataset.

in order to have a more effective search when I click on each 'Soil_chemical_properties' keywords.

Without this modification, the number of datasets indicated in each of the 'Soil_chemical_properties' filter in not representative of the real number of datasets concerning each of the soil chemical properties.

[BUG / Improvement] Xavier Renom (Loess)- Spatial Filters bug

When searching for 'soil fertility', then apply filter, no results, remove filter and click refresh, the data does not reappear, bounding box.

[BUG / Improvement] Sonia Rodrigues (Curiousoil) - knowledge capture





Soil literacy assessment - EU project from UK but with Soil from Africa <u>https://durham-repository.worktribe.com/output/1628546/the-abc-of-soil-literacy-evidence-from-ghana-south-africa-and-zimbabwe</u>

is not captured by SoilWise (note : no DOI assigned to this reference).

[BUG / Improvement] Vassilis Askonitis (Gov4All) - Feedback

Feedback box : preventing from signing in with GitHub to let a feedback because researchers do not always know what is GitHub and do not have account.

[NEW US] Xavier Rotllan (Sus-Soil) – CSV

As a data user for Sus-soil project, when I make a query and that I have 20 results, I would like to download the 20 metadata (at keast title, date, organization) in a signle CSV file so that I do not have to open each search results to have the metadata informations. Would also be interesting to know which variables/columns are in the dataset, either Soilwise checks this in the actual dataset or this is provided in the metadata and we use it from there (in view of metadata- template setting up with JRC, integrate need for this in metadata)

[NEW US] – Patricia Gilarte Padilla (Bin2Bean) – Proposition of good practices

As a soil scientist, I want to understand fastly the measured components that are present in a given dataset, so that I can easily make an estimate on the usability.

This is a problem for the entire research community. The current situation is that this way of working is not always applied yet and if it is applied at all there is no convention in the soil community on the template/format yet.

Example : Good practice from her own research to incorporate a .txt file next to the datasets. In the meeting it was mentioned that this was a requirement of the figshare platform and that different open source journals had this as a requirement. However, no concrete documentation was found on the website. Just recommendation to "Ensure that your outputs are published with descriptive metadata (information describing your data):"

See example of Patricia: <u>Role of Soil Fauna in Nitrogen Cycling and Plant Succession: Soil and Plan</u> <u>measurements</u>

Patricia could be available for more details about this US.

[NEW US] – Sonia Rodrigues (Curiosoil) and Xavier Renom (Loess)





As a coordinator of Curiosoil project, I want to know what are the requiered repositories to share the education material and to make it findable so that I respond to the obligation in the Grant agreement and it is a need because it is useless to prepare educational material if students/teachers/users/parents/citizens/community of practice cannot use them. I need to provide material for soil literacy for different stakeholders. SoilWise should propose a categorization on educational material (videas, websites that are not deposited on Zenodo). Educational material is :

- o learning hub (part of the website) <u>https://www.learning-hub.curiosoil.eu</u>
- Curiosity kit in the website https://curiosoil.eu/curiosity-kit/
- MOOC on GAIA education repository (sustainable) and made available through the learning hub access from the website
- Courses available from MOOC and learning hub (coming soon)
- Website gives access to images videos but not same material as in the MOOC. All in Curiosity kit.

Without SoilWise : we worked on sustainability with Zenodo and other repositories to make sure material will be avail after the project. The website in ensured for 5 years after the project so we would need to extend the sustainability after these 5 years. Link should be available for people. Need to store info from the website.

The current visibility of the material provided by social media is OK but more visibility for the project as a whole could beexpected from SoilWise.

What is expecting from SoilWise : guidances on repositories (and metadata protocol for another US to write when metadata filling will be performed).

[NEW US] – Karina Marques (Gov4all) and Vassilis Askonitis (Gov4All)

Need guidances about metadata and where to store their databases, which sustainable solution ?