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Organisation [EOSC-PL]

Project Charter

<EOSC-PL: connecting researchers to federated European science>

Content:

1. Project Summary

EOSC Poland (EOSC-PL) is a candidate national node in the EOSC Federation build-up phase, contributing to the development of a federated European research ecosystem that advances open science, collaboration, and seamless access to FAIR (Findable, Accessible, Interoperable, and Reusable) data, services and tools. As a partnership between NCN, Cyfronet, Gdańsk Tech, and UW, EOSC-PL works alongside 13 other candidate nodes across Europe to establish federated services that enhance data findability, accessibility, and interoperability across research infrastructures and research performing organizations.

EOSC-PL supports the EOSC Federation's mission by integrating high-value, country-based resources, such as research data stored at the trustworthy repositories, computing services, high-level, domain-specific data processing services and other technical infrastructures, into the federation while ensuring compliance with FAIR and CARE principles. Through the single sign-on authentication and authorization (AAI), open science interoperability, and federated access management, EOSC-PL facilitates seamless cross-border collaboration and efficient resource utilization for researchers.

The EOSC-PL national node will connect the EOSC Network PL with the broader EOSC ecosystem. However, the geographic and disciplinary scope of EOSC-PL extends beyond Poland, fostering collaboration particularly with widening countries and Central and Eastern European countries to ensure inclusive participation in the EOSC Federation. During the first nine months, we will focus on establishing connections and laying the groundwork for collaboration. While we won't be able to engage fully with this region right away, we will share our lessons learned, experiences, and insights.

A key focus during the build-up phase is on developing use cases that demonstrate the EOSC Federation's value for researchers and research communities, including the long-tail of science, small research groups, and interdisciplinary teams. These use cases highlight how federated services enable collaborative research, cross-border data access, and shared computing power, improving research efficiency and innovation.

EOSC Poland will also contribute to the EOSC interoperability framework, access management, service monitoring, and standards development. By promoting inclusivity, interoperability, and open science, EOSC-PL is committed to building a sustainable, federated research environment that strengthens Poland's role within EOSC and broader European collaboration.

Currently, the EOSC-PL node consists of four institutions, but it is committed to expanding participation and inclusivity. Two options for participation will be available: by becoming a member of the EOSC-PL or onboarding services to the node via National Resource Discovery Hub. By enabling these participation models, EOSC-PL aims to align with the EOSC Federation and create an inclusive and dynamic research environment that will welcome contributions from a wide range of institutions and disciplines.

EOSC-PL will be working closely on the development of multi-node use cases with participants of the build-up (as listed on pp. 5-12), as well as on internal scientific use cases in collaboration with CLARIN-PL and SIOS Svalbard (Center for Polar Studies) through Polish consortium participating in this initiative. In the context of e-infrastructures, EOSC-PL will cooperate with EuroHPC. Additionally, EOSC-PL will seek alignment with other European data initiatives, particularly the European Health Data Space (EHDS).

2. **Value Proposition**

- **Main Goal:**

The main goal is to contribute actively to the building of the EOSC Federation by:

- integrating national resources into EOSC ecosystem,
- integrating European research resources to enhance accessibility for the Polish scientific community,
- ensuring interoperability, and developing use cases demonstrating the benefits of a federated research ecosystem for researchers and research communities.

- **Needs addressed:**

- Lack of a unified national research data infrastructure assimilated into a larger European context, like EOSC,
- Challenges in cross-border access to research data, computing power, and services,
- Limited interoperability and data-sharing frameworks among European institutions,
- A need for aligned / synchronized AAI to ensure seamless and secure access to federation resources across multiple nodes,
- Insufficient resource support for small research groups,
- Insufficient level of standardization in data repositories and computational frameworks.

- **Key Benefits:**

- EOSC-PL will provide a consistent framework for national institutions regarding their integration with EOSC ecosystem, ensuring that they move from isolated approaches to a coordinated structure, enhancing collaboration and interoperability; the establishment of the EOSC-PL node will contribute to shaping a coherent and inclusive vision for integrating diverse but crucial scientific components within the EOSC Federation; by aligning research infrastructures, computational resources, domain-specific repositories, and interdisciplinary collaboration frameworks, the project will foster a unified yet flexible ecosystem that accommodates the needs of various scientific disciplines, ensuring balanced development and equitable access to resources across the federation;
- Seamless integration of national research resources, which will enable interoperability of Poland's research data repositories, computing services, and analytical tools within EOSC, ensuring efficient access for researchers;
- FAIR Data implementation, which will enhance findability, accessibility, interoperability, and reusability of country-based research data through standardized metadata, searchability tools, and open-access frameworks;
- Federated authentication, identity management, and service monitoring, which will ensure secure, harmonized authentication and authorization (AAI), comprehensive identity management, and seamless user provisioning across European research infrastructures;
- Support for multi-disciplinary, long-tail and cross-border research, which will facilitate integrated workflows that promote collaboration across disciplines and national borders, supporting large-scale scientific initiatives;
- Interoperability between domain-specific and general-purpose infrastructures, which will bridge the gap between specialized research repositories, large-scale infrastructures, and interdisciplinary research workflows for comprehensive scientific collaboration;

- Development of common policies, which will establish aligned governance, security, access rights, and sustainability policies within EOSC, ensuring cross-institutional and cross-national consistency;
- Developing and facilitating research data support through competence center/s and beyond, raising awareness, and promoting EOSC services and knowledge transfer;
- Gathering the necessary knowledge and insights that will support the sustainability and long-term operations of the EOSC-PL node.

- **Who Benefits:**

EOSC-PL's contributions benefit a broad spectrum of stakeholders, including:

a) Research communities, including:
   - Structured and operational communities focusing on a given scientific discipline or scientific matter,
   - Long-tail researchers (individuals and small research groups) who gain access to federated resources, computing capabilities, and data services they would not otherwise have,
   - Interdisciplinary research teams that can collaborate more efficiently across disciplines using shared infrastructures and open science workflows;

b) Research organizations, which benefit from integrated national and European infrastructures, shared services, and common standards for research data management and interoperability;

c) Public sector bodies and policymakers, who gain better access to open research outputs and data-driven insights to support evidence-based policy and decision-making;

d) Citizens and society at large, who benefit from more transparent, collaborative, and impactful scientific research outcomes, increasing public engagement in open science and knowledge dissemination;

e) Research organisations and technology providers developing and delivering services and other resources for the scientific community. They will gain access to the best standards of the resource delivery and they will be aligned with practices of other resource providers.

3. Use Case(s)

3.1. Federated data discovery for FAIR Research

Use Case ID	UC_EOSCPL_001
Use Case Title	Federated data discovery for FAIR Research

Use Case Description

It will address two key aspects of data discovery:

1) data aggregation on a national and EOSC Federation level

Main user stories supported:

- As a scientist, I want a single entry point to discover open data in Poland and across Europe, ensuring access to high-quality FAIR data.
- As a scientist, I want my data to be discoverable across various FAIR discovery tools, ensuring greater recognition for my work and enabling other scientists to build upon it.

- As a repository manager, I want my tool to be interconnected with a broader range of scientific resources to enhance its recognition and contribute to larger initiatives.
- As a repository manager, I want to stay up to date with the latest implementations of FAIR and CARE principles and have access to expert support, so I can provide the highest level of quality and assistance to my users

2) semantic interoperability of data discovery.

Main user stories supported:

- As a Blue-Cloud researcher, I want to discover data relevant to my research from other scientific communities using the discovery parameters I apply daily. This process should be intuitive, straightforward, and occur within an acceptable timeframe.

As a Blue-Cloud researcher, I want to merge datasets from Blue-Cloud and LifeWatch that are essential for my research so that I can process them as a single dataset in a specialised data processing tool.

Federation Contributions & Value to Users

Researchers across Europe require seamless access to high-quality, FAIR-compliant datasets from various domains and institutions. EOSC-PL enhances federated data discovery by integrating Polish repositories into the National Resource Discovery Hub and enabling semi-automated metadata harvesting. This ensures that national datasets are both findable and accessible within the EOSC ecosystem. With the prospect of mutually beneficial collaboration and integration with the EU Node and other national or thematic nodes, EOSC-PL strengthens the European research infrastructure.
Federating Contributions & Value for users:

1. EOSC-PL harmonises metadata schema to align with EOSC's common standards, ensuring interoperability across repositories;
2. Researchers benefit from automated metadata aggregation and federated search tools, enhancing cross-border and cross-disciplinary data reuse.

In-Scope:

- Integration of country-based generic and domain-specific data repositories (compliant with established standards) into EOSC,
- Implementation of metadata harvesting,
- Analysis of semantic interoperability in data discovery,
- Proof-of-Concepts (PoCs) for semantic interoperability in data discovery, applied to two domain-specific repositories (on a best-effort basis).

Out of Scope:

- Development of new repositories (EOSC-PL will integrate and federate existing infrastructures),
- Comprehensive support for semantic interoperability.

3.2. End-to-End federated scientific workflow structure for data-intensive research

Use Case ID	UC_EOSCPL_002
Use Case Title	End-to-End federated scientific workflow structure for data-intensive research

Use Case Description

The diverse resources of EOSC-PL will be integrated into the EOSC Interoperability and Execution Framework mechanisms to facilitate the creation of functional research environments across Europe.

As a researcher, I require access to computing resources to run molecular dynamics simulations for characterising perovskite materials. My research group at the university also needs access to the model to evaluate the results.

Federation Contributions & Value to Users
EOSC-PL facilitates an integrated scientific workflow by federating data discovery, analysis, computation, storage, and visualisation into a seamless, interoperable research environment.
This use case demonstrates how EOSC-PL supports researchers in efficiently finding, analysing, computing, storing, and visualising research data using federated services—transforming raw data into meaningful insights.

Data findability and access:
EOSC-PL integrates national and European research data repositories into the EOSC Federation, ensuring easy discovery and access to domain-specific and interdisciplinary datasets through standardised metadata and adherence to FAIR principles.

Federated analytical and computational tools:
Researchers can access and perform data analysis in a Jupyter Notebook environment, eliminating the need for local software installations and enhancing reproducibility.

On-demand / Grant-based (depending on the scientific or technical use case) access to computing resources:
Researchers can execute computationally intensive tasks on federated computing infrastructures via federated authentication (AAI), ensuring seamless access across institutions. Access provisioning will be regulated by explicitly defined policies and eligibility criteria, established separately (but in line with the EOSC Federation standards) to ensure transparent, FAIR, and practical resource allocation

- Large-scale data transfer and storage: EOSC-PL enables secure, high-speed, and scalable data transfers between research facilities, analytical platforms, and computational environments, ensuring efficient processing of large datasets.
- Processed data storage and long-term availability: EOSC-PL federates research storage solutions, allowing researchers to store processed results within a scalable, distributed storage infrastructure.
- Visualization and interpretation: Researchers can utilise integrated visualisation tools within EOSC-hosted Jupyter Notebooks and interactive dashboards, facilitating data interpretation and insight generation.

Computational "up-scaling"
Users can leverage computational resources from various infrastructures available within the EOSC Federation.

In-Scope:

- Federated authentication (AAI) for secure access to data, tools, and computing resources,
- FAIR-compliant data repositories to enable seamless dataset discovery and access,
- Federated Jupyter Notebook environments for efficient data analysis and visualisation,
- On-demand or grant-based access (depending on the scientific or technical use case) to computing resources for intensive data processing,
- High-speed large-file transfer between research institutions and computing centres,
- Scalable storage solutions for processed data and research outputs,
- Integration with visualisation platforms for real-time data analysis,
- Vertical interoperability for the computing resources,
- Horizontal interoperability across computing resources, processing services, and data.

All of the above depends on the availability and readiness of given kinds of resources in other nodes joining the build-up phase

Out of Scope:

- The development of new visualisation or computing tools (EOSC-PL federates and integrates existing resources),
- Mechanisms that are not supported by other nodes or are not yet ready to be delivered by other nodes participating in this use case.

3.3. Facilitating integration of environmental thematic nodes with National Node EOSC-PL

Use Case ID	UC_EOSCPL_003
Use Case Title	Facilitating integration of environmental thematic nodes with National Node EOSC-PL

Description:
This use case aims to streamline the integration of specialized environmental thematic nodes—data repositories, analytical platforms, and research infrastructures—with the national European Open Science Cloud Node in Poland (EOSC-PL). The integration will enhance data discoverability, interoperability, and accessibility, thus significantly improving the effectiveness of environmental research. Organizations (scientific institutes and broader organizations engaging multiple units as well) conducting environmental research generate and manage extensive datasets, often spanning multiple organizational units. These datasets frequently consist of comprehensive, long-term data series essential for advanced comparative studies, enabling researchers to analyze environmental trends, assess changes, and forecast future conditions.

Key Functionalities:

- Data Integration and Interoperability:
  - Standardized mechanisms and protocols for integrating diverse environmental data sources into EOSC-PL.
  - Ensuring interoperability across thematic nodes through standardized metadata schemas and data formats.
- Enhanced Data Accessibility:
  - Facilitating easy discovery, retrieval, and usage of environmental datasets for researchers across different organizations.
  - Providing federated access points and unified search capabilities across integrated thematic nodes.
- Support for Comparative Studies:
  - Enabling streamlined access to long-term environmental datasets crucial for comprehensive comparative analyses.
  - Providing analytical tools and platforms capable of handling and processing large, complex datasets.

Value proposition:

- Improved efficiency and collaboration among environmental researchers and institutions.
- Enhanced utilization of long-term datasets, resulting in more robust comparative research outputs.
- Strengthened national and international collaboration via seamless integration with EOSC-PL.

In-scope:

- Guidance of the processes needed for integration the Nodes
- Recommendations and good practices for data management processes
- Case Study of integration

Out of scope:

- Development of the infrastructure elements

Additional implementation considerations:

- Compliance with FAIR principles (Findable, Accessible, Interoperable, Reusable),
- Use of internationally recognized standards for environmental data and metadata,
- Coordination with stakeholders for continuous development and sustainability of integrated infrastructures.

3.4. Collaborative platform for scientists: fostering environmental research through plugging in the services into National Node

Use Case ID	UC_EOSCPL_004
Use Case Title	Collaborative platform for scientists: fostering environmental research through plugging in the services into National Node

Description:

Context and Background:

Environmental research increasingly depends on collaboration across diverse scientific disciplines and institutions. Scientists require efficient platforms to share data, methodologies, and results, enhancing collective understanding and accelerating scientific discovery. The European Open Science Cloud Node in Poland (EOSC-PL) provides a national hub for such collaborative research activities.

Objective:

This use case aims to establish a collaborative platform enabling environmental scientists to easily plug their research services and tools into the EOSC-PL national node. The platform will support seamless collaboration, data sharing, and integration of analytical tools and methodologies, ultimately fostering more robust and impactful environmental research with focus on marine domain. There is expected synergy with Blue Cloud Marine Thematic Node.

Key Functionalities:

- **C**ollaborative Environment:
  - Providing secure and user-friendly environments for researchers to collaborate, share, and co-develop research projects.
  - Facilitating real-time communication, data sharing, and knowledge exchange.
- Integration of Research Services:
  - Streamlined mechanisms for Thematic Nodes to integrate their specialized tools and services directly into EOSC-PL.
  - Offering compatibility and easy integration with diverse scientific workflows and applications.
- Data Sharing and Interoperability:
  - Supporting standardized data formats and metadata schemas to enable easy discovery, interoperability, and reuse of environmental datasets.
  - Providing robust mechanisms for data governance, security, and quality assurance.

Value proposition:

- Enhanced collaboration and productivity among environmental scientists across disciplines and institutions.
- Increased visibility, accessibility, and reuse of environmental data and methodologies.
- Accelerated scientific innovation and improved quality of environmental research outputs.

In-scope:

- The design of thematic services enabled on EOSC-PL site
- Deployment of pilot service redirecting metadata data discovery requests between EOSC-PL and Thematic Nodes

Out of scope:

- Development of analysis tools

3.5. Collaborative platform for scientists: fostering environmental research through plugging in the services into National Node

Use Case ID	UC_EOSCPL_005
Use Case Title	Cross-Border Surveillance of Antimicrobial Resistance: Genomic Sequence Analysis

Description:

This project establishes a collaborative framework for large-scale genomic sequence analysis of antimicrobial resistant (AMR) pathogens between CVTI SR and NCN Poland. Integration of European AMR data sources in the EU Node will enable effective monitoring of AMR pathogens in the European area. At the pilot stage, institutions from Slovakia (CVTI) and Poland (NCN) will be involved with the initiative. The Slovak side will provide specialized tools for genomic data management and Slovak AMR genomic datasets. NCN will engage with Polish scientific and healthcare stakeholders to help establish a collaborative ecosystem that supports access to Polish AMR genomic data, bioinformatics expertise, and analytical tools.

Federation Contribution:

Cross-node collaboration exemplifies the EOSC federation model by integrating complementary capacities from different European research nodes. NCN Poland can participate by establishing collaboration between Polish research institutions working on AMR to contribute to the EOSC infrastructure. Contributions may include collections of genomic sequences from clinical isolates, and/or the sharing specialized bioinformatic workflows developed by Polish researchers.

Integration of cross-country resources will be made possible by: a) using the involved nodes as entry points; b) using an EOSC-compliant data access policy, c) maintaining the EOSC policy of involving researchers across disciplines, d) gradually incorporating additional nodes as resource providers and entry points, e) managing data according to the standards adopted and promoted in EOSC A.

Value proposition:

For microbiologists and infectious disease researchers, this use case provides unprecedented access to diverse AMR genomic datasets spanning multiple neighboring European regions, enabling more comprehensive analysis of resistance patterns and evolutionary trends. Future integration with the EHDS may enable healthcare institutions to benefit from enhanced surveillance capabilities and early warning systems for emerging resistant pathogens, potentially informing more effective infection control strategies. Public health authorities can gain valuable cross-border insights into AMR transmission dynamics that transcend national boundaries, supporting evidence-based policy

decisions. For bioinformaticians, the platform offers standardized workflows and valuable AMR related datasets.

In-scope:

- Establishment of a cross-node collaboration framework for integrating AMR genomic datasets and bioinformatic tools between Poland and Slovakia;
- Definition of technical, legal, and policy requirements for data sharing and access;
- Design and implementation of a pilot integration enabling shared access to AMR genomic data and analysis tools across involved nodes.

Out of scope:

- Development of new bioinformatics platforms or genomic data analysis tools;
- Full-scale implementation of surveillance systems or healthcare integration beyond the pilot phase;
- Clinical decision-making or direct application of results in public health systems.

3.6. Collaborative platform for scientists: fostering environmental research through plugging in the services into National Node

Use Case ID	UC_EOSCPL_006
Use Case Title	Development scientific use case in cross-collaboration (sensitive health data): Multi-centric validation of AI model for prostate-cancer screening (MCVAL)

Description:
Digital tissue and cell datasets collection and the Virtual Microscope application to access and browse these data. An extensive collection of histological and cytological slides was carefully selected and prepared by pathomorphological experts, processed, and digitized. The collection consists of over 20,000 high-definition images of human tissues and cells accompanied by structured clinical metadata data concerning information about the patient (age, sex, the year of a study, and a clinical description); diagnosis coded by International Classification of Diseases (ICD) the type of the tissue and the material, the way it was collected and the type of staining.
This collection includes more than 600 images of prostate gland organs presenting a diverse spectrum of abnormal lesions. It can be a significant contribution to tools created for early detection of prostate cancer, such as AI-based models being implemented into the EOSC research network.

Federation contribution:
Multi-centric validation of AI model for prostate-cancer screening (MCVAL) aims to validate an existing prostate cancer screening model that was initially developed through a collaboration between the Czech (BBMRI.cz) and Austrian National Nodes of BBMRI (BBMRI.at). The model uses data from research groups at the Masaryk Memorial Cancer Institute (MMCI), Medical University Graz (MUG), and RationAI at Masaryk University. The primary tasks in this use case involve collecting information on the technical requirements needed to validate MCVAL using data sourced from EOSC PL. This information will facilitate the development of a workflow that accommodates the large image sizes and computing capacities involved. Additionally, the workflow must ensure compliance with CEN/CENELEC AI standards relevant to the life sciences and HPC domain federation and support the Secure Processing Environment (SPE) specification under the European Health Data Space (EHDS) Regulation.

Value proposition:

- Contribution to creating a workflow for using diverse, multi-centric data from different EOSC nodes for the development and validation of AI-based tools;
- Including high-resolution tissue images provided by EOSC-PL, biopsy reports, and histopathological descriptions with grading of lesions attached to these images improves the accuracy and reliability of AI-based screening tools.

In-scope:

- Preparation and provisioning of high-resolution digital histopathological datasets, including structured clinical metadata, for cross-node research use;
- Coordination of technical and procedural requirements to support multi-centric validation of an existing AI model within the EOSC Federation framework.
- Design of a pilot workflow for secure, interoperable data sharing and AI validation.

Out of scope:

- Development of new AI models or algorithms for prostate cancer detection (only validation of an existing model is in scope);
- Full-scale deployment or clinical certification of the validated AI tool;
- Long-term storage infrastructure development (use case relies on existing federated storage services);
- Implementation of the Secure Processing Environment itself (only alignment with its requirements will be addressed);
- Broader integration with national healthcare systems or electronic health records (outside the pilot scope).

4. External Dependencies & Key Risks

Disclaimer: the deadlines and the effectiveness of the mitigation measures depend on the engagement of other stakeholders involved in the build-up phase.

External Dependencies & Risks	Related affected use cases	Actions	Deadline
Cross-node functional and technical dependencies	ALL	Establishing collaboration channels (regular coordination meetings with other nodes)	May-October 2025
		Organizing joint testing sessions	October 2025
Metadata and semantic interoperability issues	UC-EOSCPL_001 UC-EOSCPL_003 UC-EOSCPL_005	Harmonizing metadata schema to the current EOSC metadata models, implementation of harvesting APIs and align semantic schemas	July-August 2025
Authentication and Authorization interoperability issues	UC-EOSCPL_001 UC-EOSCPL_002	Establishing a compliance team / working group across nodes; standardised and support for the AAI implementation	April 2025
		Standardizing the AAI policies implementation	September 2025

		Harmonizing identity federation policies	September 2025
		Interoperability tests	October 2025
		Real-monitoring for authentication failures, latency issues, and attribute mismatches	December 2025
Lack of common policies, which might lead to GDPR, licensing, or security violations	UC-EOSCPL_001 UC-EOSCPL_003 UC-EOSCPL_005 UC-EOSCPL_006	Forming a user policy task force	April 2025
		Developing cross-node policies and user guidelines and best practices	October 2025
		Conducting user training	December 2025
Technical infrastructure interoperability issues	UC-EOSCPL_002 UC-EOSCPL_004 UC-EOSCPL_006	Developing and standardizing the first PoC APIs for the vertical interoperability	July 2025
		Conducting interoperability testing across technical components	October 2025
		Providing technical documentation for system integration	October 2025
		Setting up a dedicated Helpdesk	October 2025
Low resource availability for data-intensive and compute-heavy use cases	UC-EOSCPL_002 UC-EOSCPL_005 UC-EOSCPL_006	Assessing capacity, align access policies	September 2025
Data integration challenges	All	Providing integration guidance, defining standards	September 2025
Tool and workflow incompatibilities across nodes	All	Defining minimal compatibility standards, running joint validations	September 2025
Low stakeholder or institutional engagement	All	Organizing workshops, webinars, sharing use cases	October 2025

5. Contributions

ID	Deliverable Name	Deliverable Description	Deliverable Owner
1	**Technical updates summary deliverable**	The summary of the technical upgrades regarding the EOSC Federation state-of-the-art at the moment	Cyfronet
2.	**Summary of the federation activities and lessons learned and**	The summary findings of the case study on building the EOSC Federation of Nodes from EOSC-PL perspective (documenting key milestones, technical integrations, and collaborative efforts within the EOSC ecosystem; it will highlights successes, challenges, and best practices); the summary	NCN

		will serve as a reference for future national nodes.	
3	**Case study on how to collaborate effectively in a diverse scientific environment**	The outline of the methodologies and collaboration mechanism to ensure the successful implementation of goals set out in the EOSC Federation Build-Up Phase	All
4	**Communication and Training Plan**	This document describes the communication and training strategy for the EOSC-PL project. It includes stakeholder engagement, communication through existing networks and tools, and the development of a flexible training and education plan.	NCN, Gdansk Tech, UW
5	**IT Architecture Design**	The IT Architecture Design document outlines the technical landscape of the EOSC-PL node, describing in big picture the integration of multiple national infrastructures and resources into the EOSC Federation. The content of this document will be shaped by developed solutions and agreements within the EOSC Federation, ensuring alignment with evolving standards and best practices. As an initial guideline, it will serve as a preliminary reference for both interoperability guidelines and use cases, helping define the technical requirements for system connections, authentication and authorization mechanisms (AAI), metadata harmonization, and data exchange protocols. This deliverable will provide a structured blueprint for how Polish research infrastructures integrate within the EOSC landscape, supporting long-term scalability, security, and usability for researchers.	Cyfronet, UW, Gdansk Tech
	Use Case Implementation Report	This deliverable will compile a consolidated report summarizing the implementation progress, technical integration, lessons learned, challenges encountered, and initial impacts of the prioritized EOSC-PL use cases. Each use case will be evaluated based on its alignment with EOSC Federation goals, technical deliverables, and expected value to end-users.	All

6. Timing and Milestones

Disclaimer:
The EOSC-PL Node is listing below only the milestones connected to EOSC Core, as all the other ones will depend on other nodes' development progress, therefore they cannot be assessed at this stage (only after the kick-off phase or later). However, based on their complexity and potential challenges, their expected delivery date is set for the end of the year.

For EOSC Core integrations, the Target Delivery Dates might also differ depending on the availability and responsiveness of the core service providers.

Use Case ID	UC_EOSCPL_001	**Target Delivery Date**
Use Case Title	Federated data discovery for FAIR Research	
1.	Integration of the basic resource discovery in EOSC	**July 2025**
2.	Basic integration with the EOSC Helpdesk federating capability	**July 2025**
3.	Basic integration with the EOSC AAI	**August 2025**
4.	Basic integration with the EOSC monitoring federating capability	**August 2025**
5.	Extended integration with the EOSC Helpdesk Federating Capability	**November 2025**
6.	Extended integration with the discovery federating capability	**November 2025**
7.	Extended integration with the EOSC AAI	**November 2025**
8.	Extended integration with the EOSC monitoring capability	**November 2025**

Use Case ID	UC_EOSCPL_002	**Target Delivery Date**
Use Case Title	End-to-End federated scientific workflow for data-intensive research	
1.	Basic integration with the EOSC order management federating capability	**October 2025**
2.	Vertical interoperability of the computing resources of EOSC-PL	**December 2025**
3.	PoC Horizontal interoperability of different kinds of resources of EOSC-PL	**December 2025**

Use Case ID		UC_EOSCPL_003	**Target Delivery Date**
Use Case Title		Facilitating integration of environmental thematic nodes with National Node EOSC-PL	
1.	Preparation of integration guidelines and metadata standards		**July 2025**
2.	Collection of integration use cases and best practices		**August 2025**
3.	Completion of case study on thematic node integration		**October 2025**

Use Case ID		UC_EOSCPL_004	**Target Delivery Date**
Use Case Title		Collaborative platform for scientists: fostering environmental research through plugging in the services into National Node	
1.	Design of thematic service integration architecture		**July 2025**
2.	Deployment of pilot of metadata redirect service		**September 2025**
3.	Validation of cross-node metadata exchange functionality		**October 2025**

Use Case ID		UC_EOSCPL_005	**Target Delivery Date**
Use Case Title		Cross-Border Surveillance of Antimicrobial Resistance: Genomic Sequence Analysis	
1.	Identification of Polish scientific and healthcare data owners and bioinformatics tools providers		**May 2025**
2.	Development of node-to-node resource integration plan (goals, data/tool source assessment, metadata harmonization approach)		**July 2025**
3.	Pilot of harmonized metadata model and enabling data and tools visiting implementation		**October 2025**

Use Case ID		UC_EOSCPL_006	
Use Case Title		Development scientific use case in cross-collaboration (sensitive health data): Multi-centric validation of AI model for prostate-cancer screening (MCVAL)	**Target Delivery Date**
1.	Dataset and metadata validation		**July 2025**
2.	Technical requirements and workflow planning		**August 2025**
3.	Pilot workflow design and integration test		**October 2025**

7. Contact & Submission

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