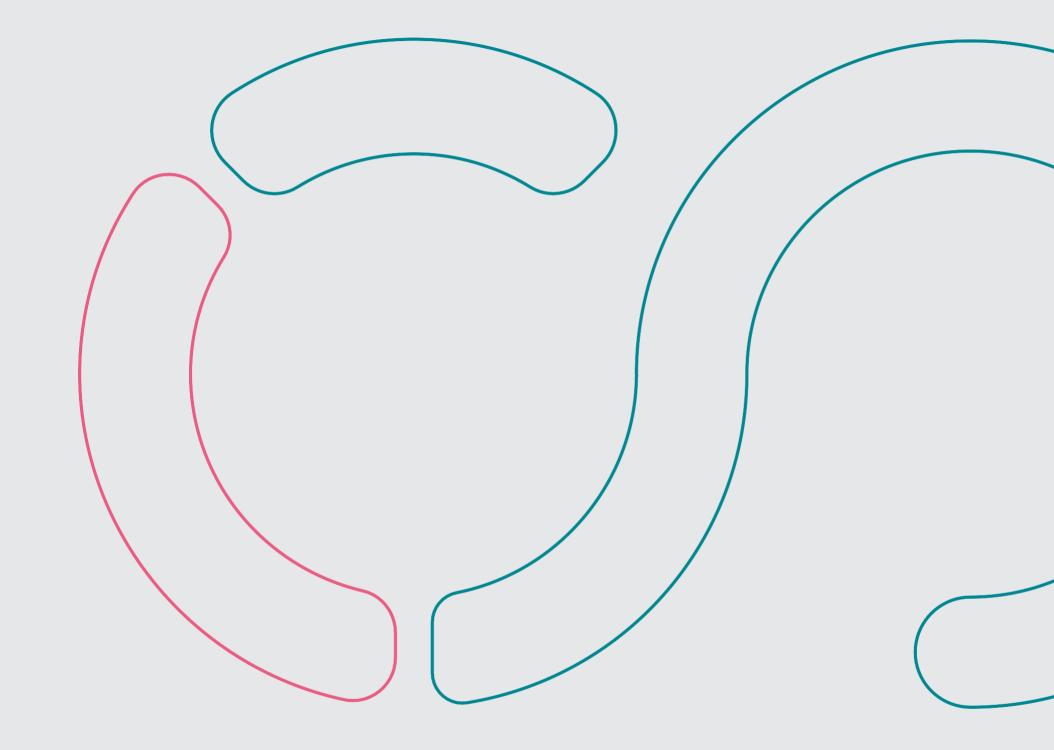
### **EOSC-PL**

Aneta Pazik-Aybar Natalia Galica Jan Wieczorek National Science Centre Poland



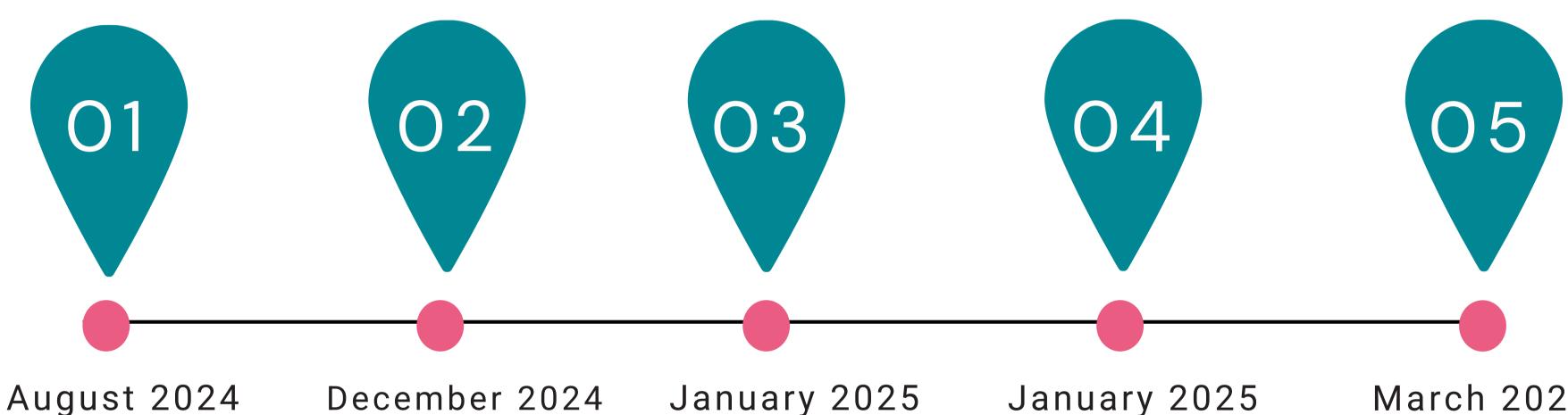








### EOSC Build-up / How did we get here?



Responded to a questionnaire

1st Dialogue (together with other potential candidate nodes)

2<sup>nd</sup> questionnaire

2<sup>nd</sup> Dialogue (indidvidually)

March 2025

Kick-off of the build-up phase of the EOSC Federation





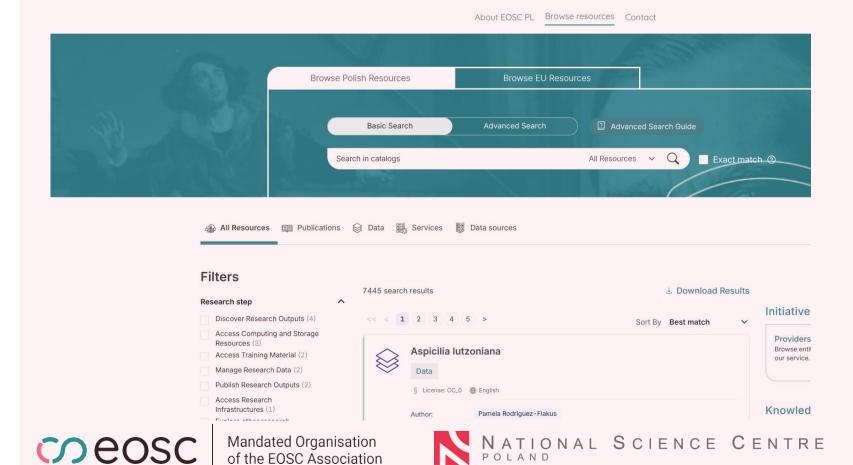


### About

- **EOSC Poland (EOSC-PL)** is a national node in the EOSC Federation build-up phase.
- **EOSC-PL** is one of 13 nodes (incl. 7 national nodes) participating in the EOSC Federation build-up phase (2025), selected out of 121 applying organisations.
- It integrates Poland's research data, tools, services, and institutions into a European ecosystem for OS.
- Through the **Digital Research Hub (eosc.pl)**, Polish scientists will be able to access and contribute to European infrastructures.
- The **Digital Research Hub** is planned to become not just a portal, but a **collaborative space**—enabling cooperation between researchers in Poland and abroad, and fostering future collaboration between science, public institutions, and the private sector.









### EOSC-PL / About NCN

#### **POLAND**

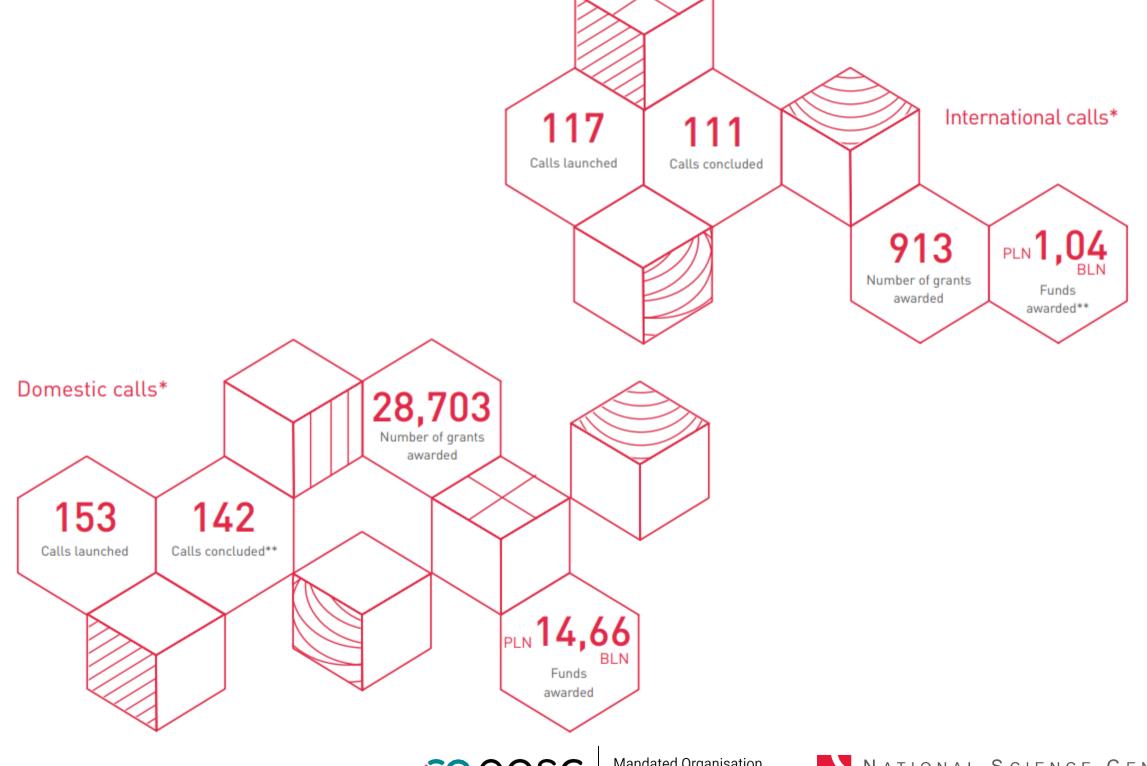
• Researchers: 141 242

• RPOs: 489

• RFOs: 5

#### **NCN**

- Established in 2011
- Main basic research funding organisation in Poland
- Domestic and International calls





Mandated Organisation of the EOSC Association



### NCN OS Policy: impact

10 425 | 10 515

proposals with DMP (2022 and 2023)



2036 | 1533

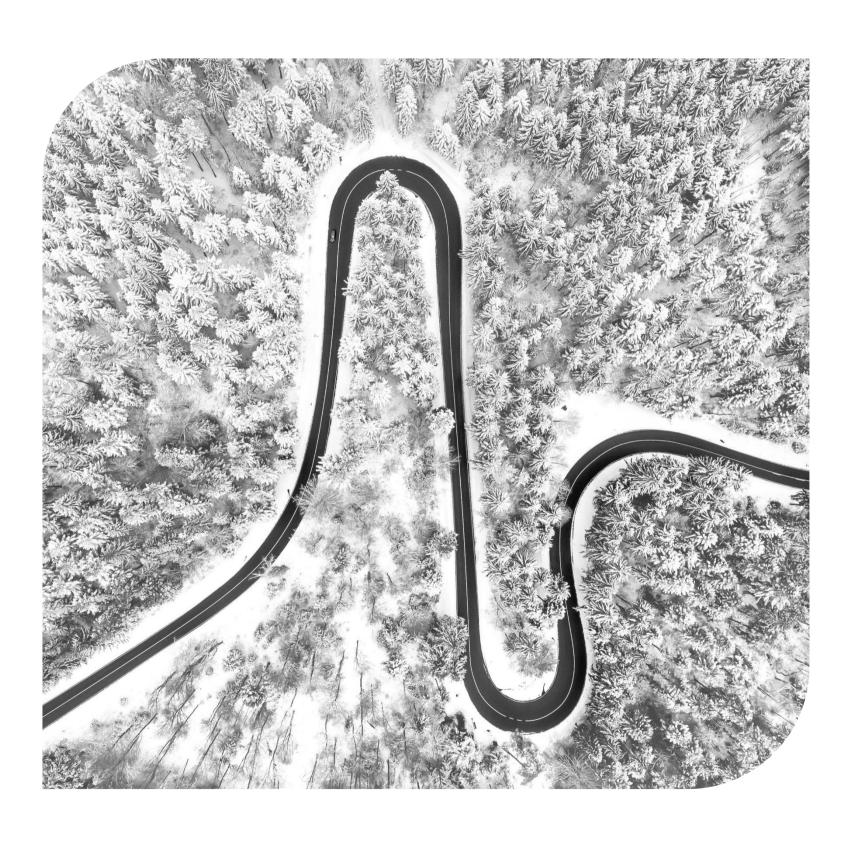
qualified for funding implementing DMP (2022 and 2023)



### NCN / OS activities since 2018



- Financial incentives
  2% of direct costs can be spent on OS-related activities
- Provide different types of trainings mainly available online (for applicants, PIs, panel experts); webinars, outreach activities
- Guidelines
  How to develop a DMP; Guidelines for
  Open Access Policy
- 4 Individial support
- FAIR data dedicated call CHIST-ERA 2022

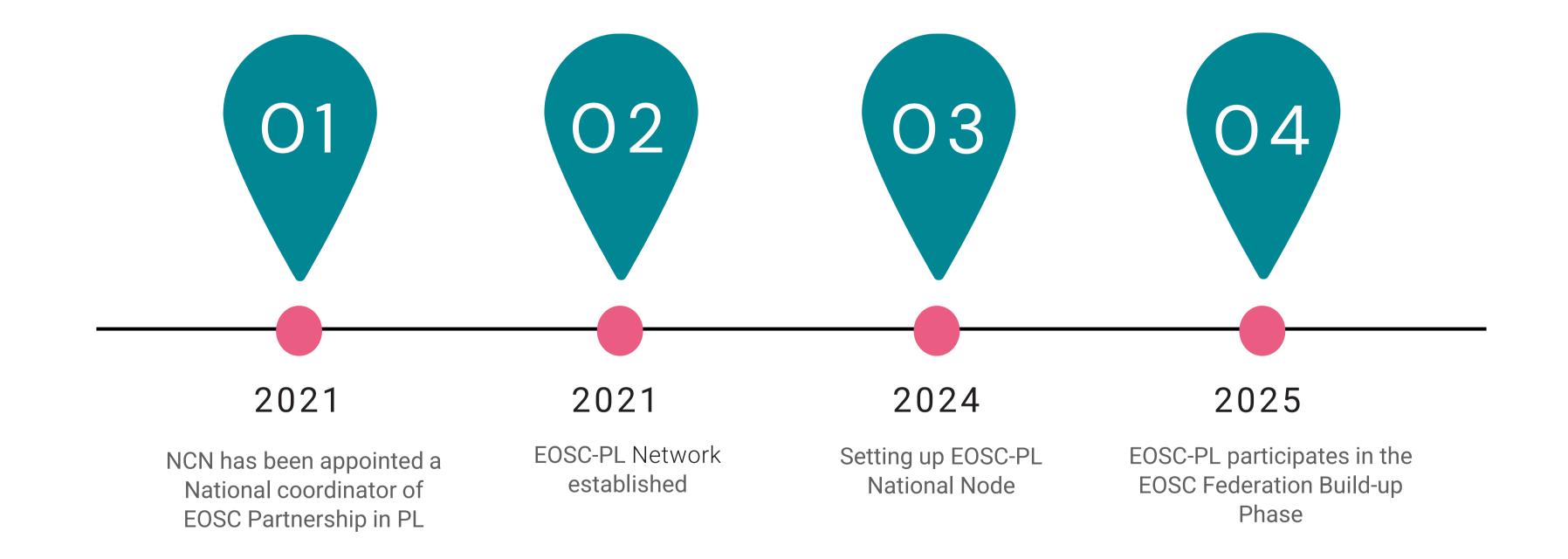








### NCN in EOSC









### NCN's EOSC-related activities

- REPRESENTATIVE ROLE: NCN as a Mandated organisation to the EOSC Association; and supporting role for the Ministry in the EOSC Steering Board
- COORDINATION: Coordination within the EOSC-PL Network and EOSC-PL National Node
- 3 ENGAGEMENT:
  - INFORMING (bi-directional role): informing Polish stakeholders about EOSC developments and informing the EOSC European community about EOSC-PL national structures and stakeholders' activities
  - PROMOTING: calls organized by the European Commission under the Horizon Europe program, national funding opportunities and OSCARS cascading grant calls
  - MAINTAINING: EOSC PL website
  - **ENCOURAGING:** Polish entities to engage in EOSC activities and establishing and maintaining relationships with national beneficiaries within EOSC-PL Network (29 + stakeholders).
  - ORGANIZING: EOSC Festival/NTE Poland 2022, EOSC Festival/NTE Poland 2023, EOSC Widening Countries Round Tables 2023, NTE Poland 2025, ETE, EOSC SB Meeting
  - PARTICIPATING: ESOF 2024, EOSC Symposium 2024, EOSC Winter School 2024 &2025, EOSC TFs and expert groups
  - TRAINING: RDM and discipline-specific RDM webinar scheme; in-person training scheme (outreach activities); the MOOC courses





### specific contractions for the contraction of the co

#### NCN: Regional Engagement



6 Member States



3
Associated
Countries

#### **Actions developed**



9 country pages at eosc.eu

6 interviews with MOs to EOSC-A



3 NTES
2 WIDENING COUNTRIES
ROUND TABLES



1 twinningaction (PolandBulgaria)

## Number of countries participating:



**14** (10 MS and 4 AC)

#### MS (10):

Bulgaria, Croatia, Czech Republic, Estonia, Latvia, Lithuania, Malta, Poland, Romania, Slovakia

#### AC (4):

Georgia, Ukraine, North Macedonia, Serbia



NCN / RDM/DS Trainings

### EOSCPL

#### Massive Open Online Courses

Courses for Data Stewards

- Basic Level
- Intermediate level

Courses for Researchers

- Basic Level
- Intermediate level

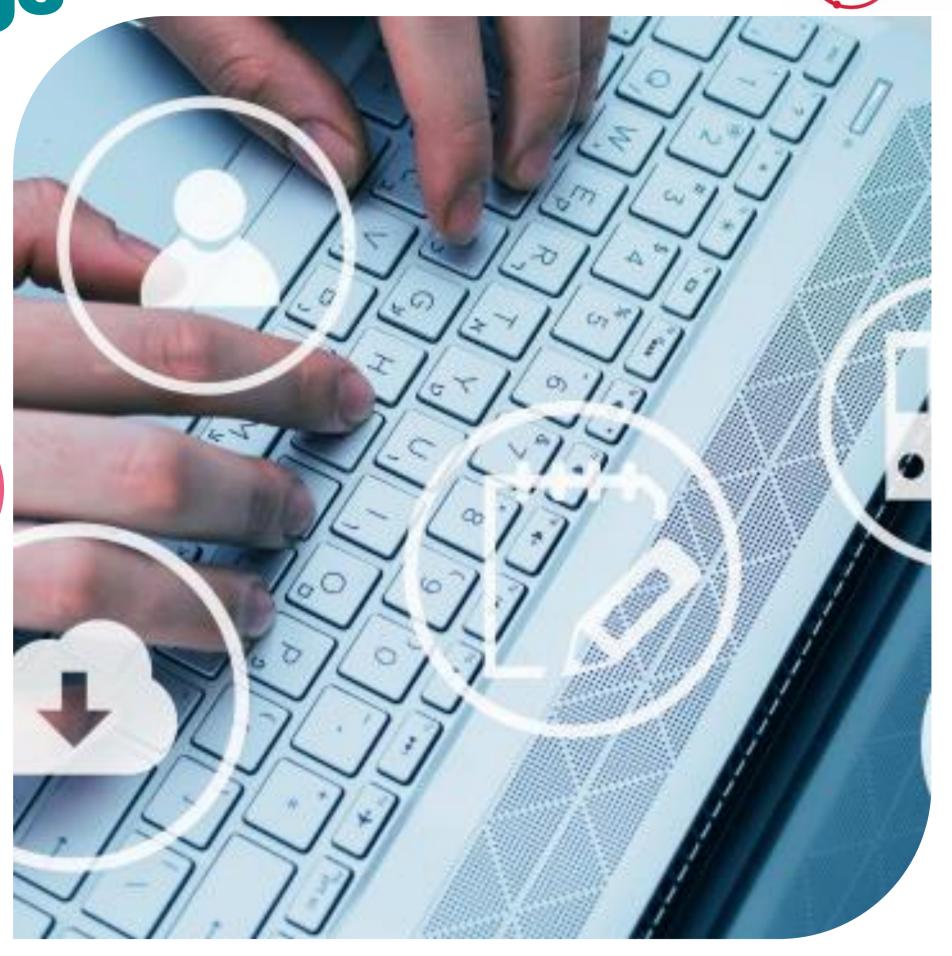
7.5K

#### Webinars for specific disciplines/research domains

Linguistics; Earth and related environmental sciences; Communication and media studies; Sociology; Medical Sciences, pharmacology and pharmacy and health sciences

Online trainings on DMP requirements

Outreach trainings on RDM for researchers and data stewards







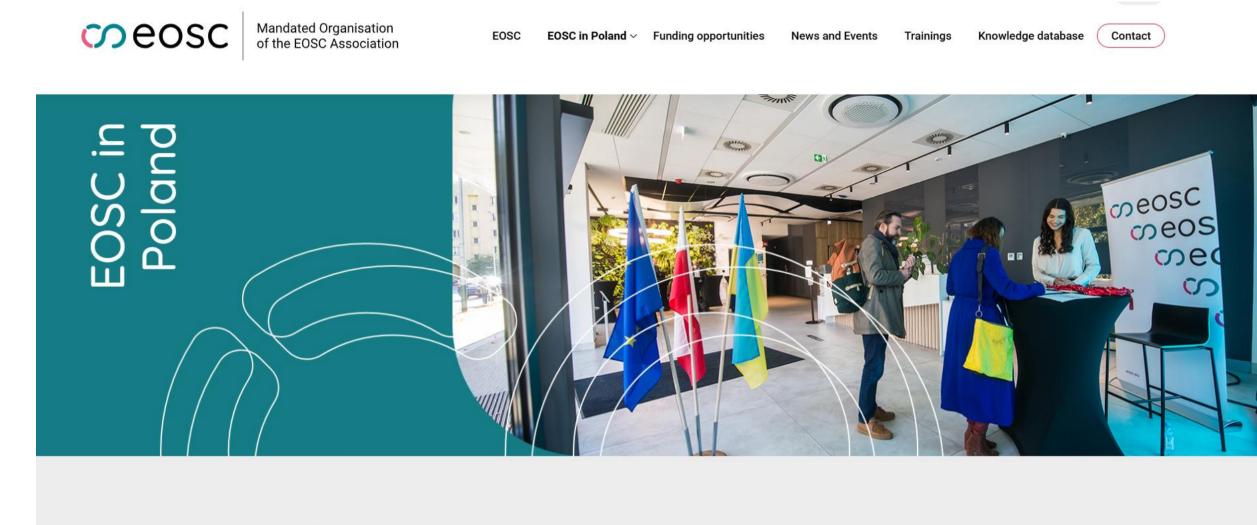


### Website: eosc.gov.pl

#### **Content:**

- EOSC and EOSC-PL Network
- Data base of Polish partners and experts
- News and Events
- Infra-EOSC projects
- Training opportunities
- Funding opportunities
- Good practice and use cases
- Knowledge hub

**Goals:** increase EOSC-related awareness, knowledge, engagement of Polish stakeholders but also to increase visibility of Polish stakeholders' input to EOSC.



EOSC Poland is the national structure of the EOSC, coordinated by the National Science Centre. The network was established to support the development of EOSC, to coordinate and strengthen EOSC-related activities nationwide and to place them in an international context.



**EOSC Poland Network** 



### **EOSC-PL structure**

#### **EOSC-PL National Node/2024**

- National Science Centre, NCN (RFO, gvmt agency)
- Cyfronet AGH, PLGrid consortium (SP, RPO)
- Gdańsk University of Technology (SP, RPO)
- ICM University of Warsaw (SP, RPO)



#### **EOSC-PL Network/2021**



- 1. Center for Geospatial and Satellite Analysis of the Warsaw University of Technology
- 2. CLARIN-PL Wrocław University of Science and Technology
- 3. Collegium Medicum Jagiellonian University
- 4. Cyfronet AGH
- 5. Gdańsk University of Technology
- 6. Institute of Biochemistry and Biophysics of the Polish Academy of Sciences (PAN)
- 7. Institute of Literary Research of the Polish Academy of Sciences (PAN)
- 8. Institute of Geophysics of the Polish Academy of Sciences (PAN)
- 9. Institute of Oceanology of the Polish Academy of Sciences (PAN)
- 10. Interdisciplinary Center for Mathematical and Computational Modeling, University of Warsaw
- 11. Jagiellonian University
- 12. Lublin University of Technology
- 13. Łukasiewicz Research Network
- 14. Medical University of Bialystok
- 15. Medical University of Gdańsk
- 16. Ministry of Science and Higher Education
- 17. National Information Processing Institute State Research Institute (OPI POB)
- 18. National Science Centre Poland
- 19. National Synchrotron Radiation Center SOLARIS
- 20. Nicolaus Copernicus University in Toruń
- 21. Polish Polar Consortium
- 22. Poznań Supercomputing and Networking Center
- 23. SANO Centre for Computational Medicine
- 24. SWPS University
- 25. University of Gdańsk
- 26. University of Łódź
- 27. University of Siedlce
- 28. University of Silesia in Katowice
- 29. Sano: Centre for Computational Personalised Medicine International Research Foundation







# EOSC-PL / Ways of work / Our main principles

1.

#### **Collaboration**

Work together across sectors and borders to co-create solutions and maximize impact.

2.

#### Interoperability

Ensure that systems, data, and tools can work together seamlessly across institutions, sectors, disciplines and countries.

3.

#### **Sustainability**

Build lasting infrastructure, governance, and services that ensure long-term value and return on public investment.

4.

#### **Co-creation**

Design solutions with direct involvement from researchers, institutions, and other stakeholders to ensure real-world relevance and usability.







### EOSC-PL - Inclusivennes



### **EOSC-PL** will be open to a broad spectrum of institutions, including:

- Universities and research institutes
- Public institutions
- Cultural institutions (e.g. museums)
- NGOs, citizen science groups
- Private sector

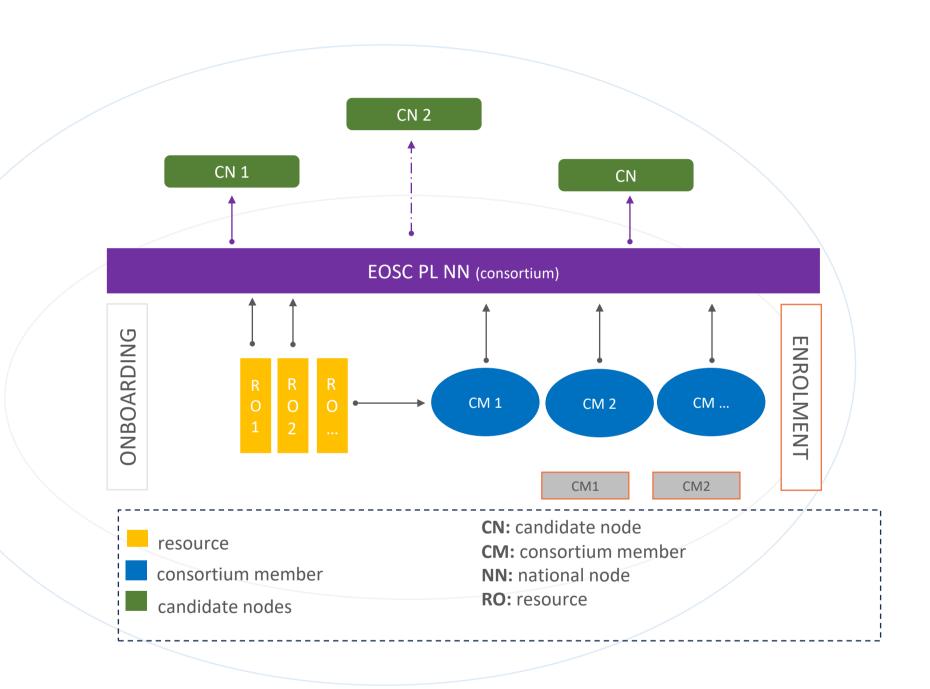
#### **Onboarding Pathways**

Institutions will be able to participate as:

- Consortium Members with full involvement in EOSC-PL activities
- Resource Providers onboarding specific services, datasets, or tools without full membership

#### EOSC-PL will support **flexible and guided onboarding**, with:

- Clear procedures for integrating services, tools, or data,
- Technical and organizational support tailored to each type of institution,
- Opportunities for small or specialized providers to join via modular onboarding ("no wrong door" approach).









### EOSC-PL / Expectations (Build-up)

Policy Data Services Training Infrastructure

Collaboration Integration Providing access

#### **Research Community:**

- Access high-quality data and discipline tailored services
- Enabling highquality research projects
- Access to training and best practices

#### **Organisation:**

- Integration of distributed highquality resources
- Strengthening collaboration
- Enhancing impact of resources

#### **Users:**

- Simplifying access to data and resources
- Harmonization of RDM and access to tools
- Acces to workflows and algorithms for RD processing

Digital Research
Hub (PL)

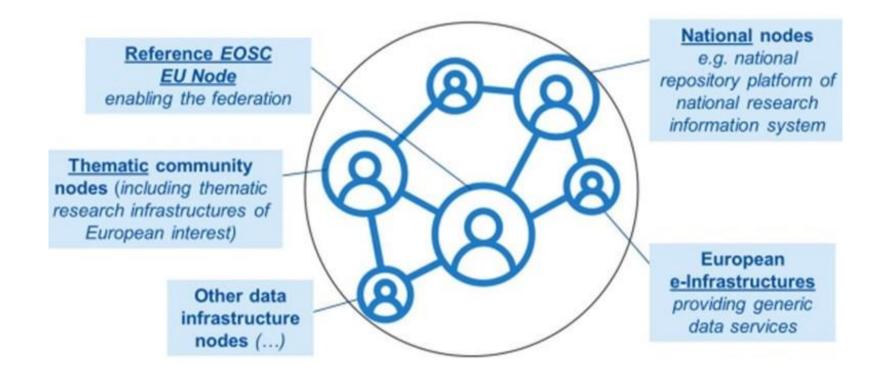
EOSC Federation

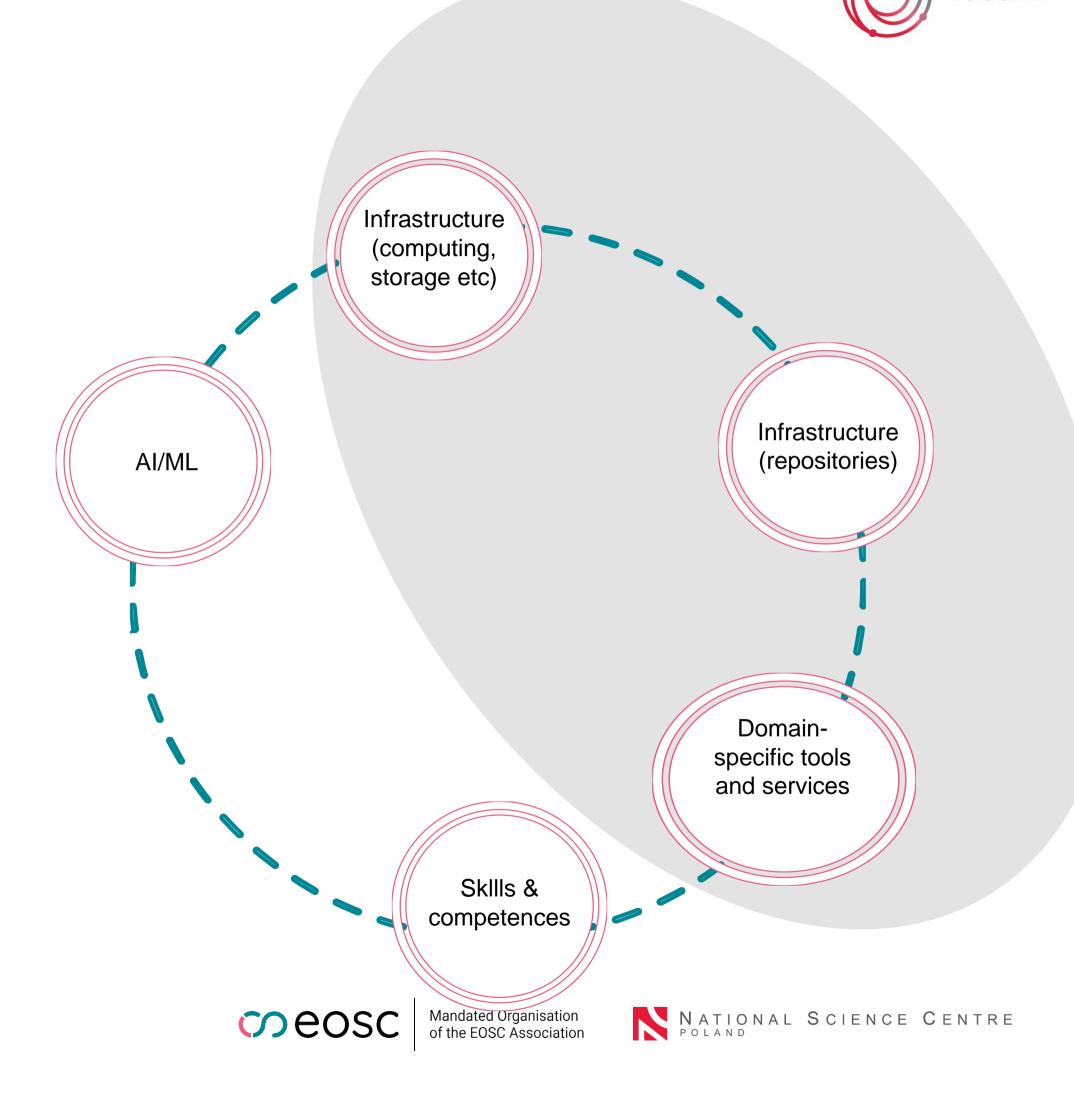






# **EOSC-PL/Types of resources**

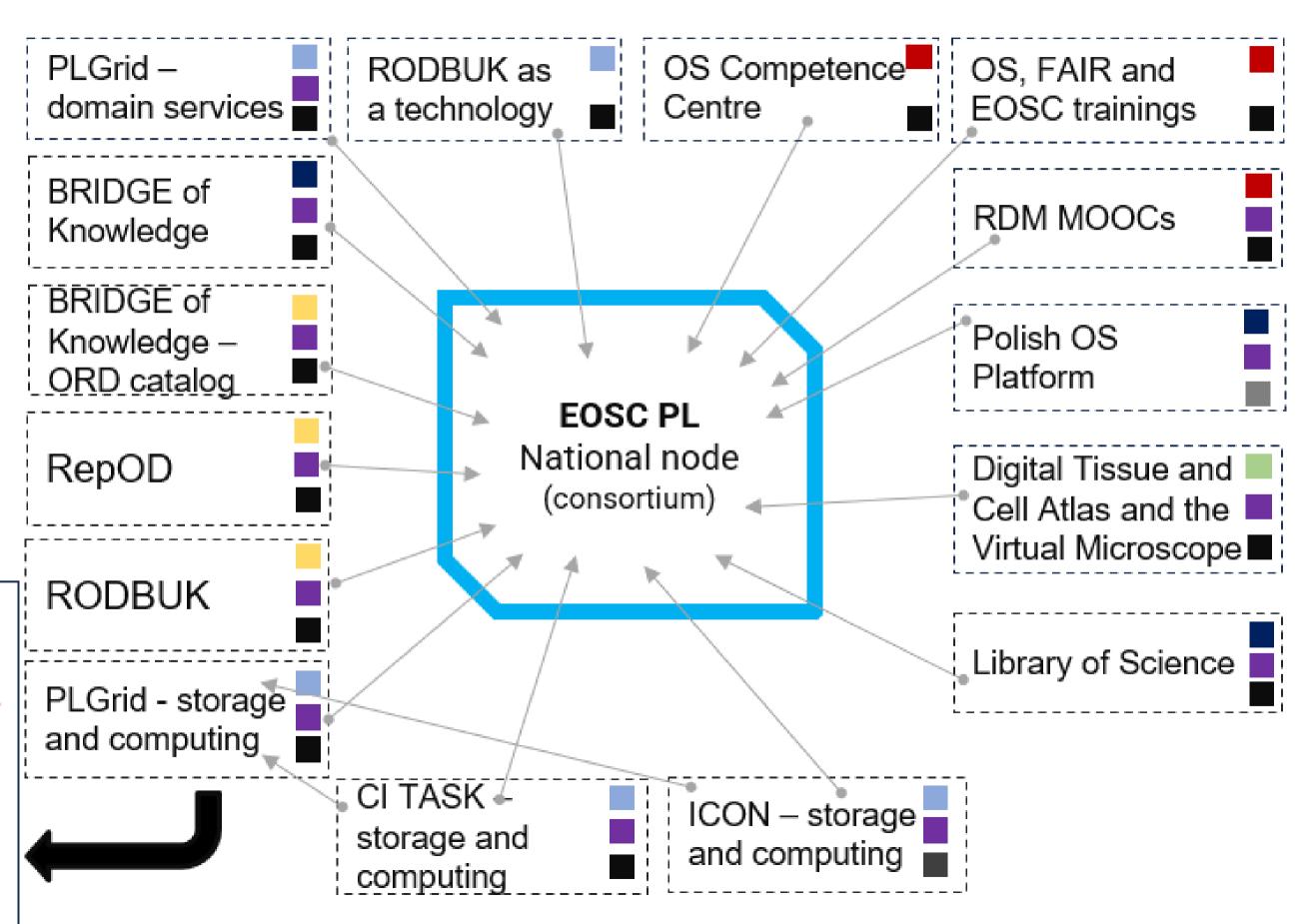






### EOSC-PL // Resources

- Open data and research repositories
- Digital infrastructure for research
- Specialized research tools
- Knowledge sharing and training
- Platforms for Open Science
- Core services for resource discovery and access
- CLTASK
- Cyfronet
- National Centre for Nuclear Research
- Poznań Supercomputing and Networking Center
- Wrocław Centre for Networking and Supercomputing



### **EOSC-PL Project Charter 2.0**



### Main goal

to contribute actively to the building of the EOSC Federation by:

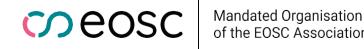
- integrating national resources into EOSC ecosystem,
- integrating European research resources to enhance accessibility for the Polish scientific community,
- ensuring interoperability, and developing use cases
- demonstrating the benefits of a federated research ecosystem for researchers and research 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 interoperability;
- EOSC-PL node will contribute to shaping a coherent and inclusive vision for integrating diverse but crucial scientific components within the EOSC 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 of country-based research data;
- Federated authentication, identity management, and service monitoring will ensure secure, harmonized authentication and authorization (AAI), comprehensive identity management, and seamless user provisioning across to European research infrastructures;
- Support for multi-disciplinary, long-tail and cross-border research, which will facilitate integrated workflows, supporting large-scale scientific initiatives;
- Interoperability between domain-specific and general-purpose infrastructures for comprehensive scientific collaboration;
- Development of common policies, which will establish aligned governance, security measures, access rights, and sustainability 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.







### EOSC-PL / Use cases in Project Charter 2.0

- EOSC-PL will be working closely on the development of multi-node use cases with participants of the build-up phase, contributing to federating capabilities and scientific use cases.
- It will also conduct national scientific use cases in collaboration with CLARIN-PL and Polish Polar Consortium.
- Additionally, EOSC-PL will seek alignment with other European data initiatives, such European Data Spaces or EuroHPC.







### EOSC-PL/Use cases

- 1. Federated data discovery for FAIR Research
- 2. End-to-End federated scientific workflow structure for data-intensive research
- 3. Facilitating integration of environmental thematic nodes with National Node EOSC-PL
- 4. Collaborative platform for scientists: fostering environmental research through plugging in the services into National Node
- 5. Cross-Border Surveillance of Antimicrobial Resistance: Genomic Sequence Analysis
- 6. Development scientific use case in cross-collaboration (sensitive health data): Multi-centric validation of AI model for prostate-cancer screening (MCVAL)







# Multi-centric validation of AI model for prostate-cancer screening (MCVAL)

**Description of the resource:** the collection consists of over 20,000 high-definition images of human tissues and cells accompanied by structured clinical metadata, alongside the Virtual Microscope. This collection of the Gdańsk University of Technology includes more than 600 images of prostate gland organs. 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 and Austrian National Nodes of BBMRI** (BBMRI.cz and BBMRI.at). The model uses data from research groups at the **Masaryk Memorial Cancer Institute (MMCI), Medical University Graz (MUG), and Ratio nAI at Masaryk University**.

**Tasks:** collecting information on the technical requirements needed to validate MCVAL using data sourced from EOSC-PL. Additionally, the development of a workflow that accommodates the large image sizes and computing capacities involved. 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.







## **Cross-Border Surveillance of Antimicrobial Resistance: Genomic Sequence Analysis.**

**Description of the resource:** The initiative combines resources and expertise of the **Slovak Centre of Scientific and Technical Information (CVTI SR) and NCN** to create a comprehensive cross-border surveillance system for antimicrobial resistant (AMR). The workflow involves collecting, processing, and analysing genomic sequences from various AMR pathogens to identify resistance patterns, track their spread, and predict emerging threats. CVTI SR will provide specialized tools for genomic data management and Slovak AMR genomic datasets. NCN Poland will contribute by facilitating access to Polish AMR genomic datasets and bringing expertise in bioinformatics algorithms for resistance gene identification.

**Federation contribution:** The use case implements FAIR principles as outlined in CVTI's existing methodologies, making AMR genomic data findable through standardized metadata schemas, accessible through secure APIs, interoperable through common data formats, and reusable through comprehensive documentation. This collaborative, multinational analysis of pathogens demonstrates how the EOSC federation can address transnational public health challenges that require coordinated surveillance and data sharing across borders and multiple research infrastructures.

**Tasks:** CVTI has the relevant data for the Slovak area, NCN needed to identify the holders of analogous data for Poland. The institution collecting genome sequencing data of antibiotic-resistant pathogens is the National Institute of Public Health - National Institute of Hygiene. Negotiations regarding the scope and technical aspects of data integration and sharing by the EOSC Federation are underway.







