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Winter School 2025

20 - 23 January 2025
Seville, Spain

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Today's Topics

- The trip from Thessaloniki to Seville
- A tour de horizon through the programme of the Winter School
- The journey towards the EOSC Federation
- Your role

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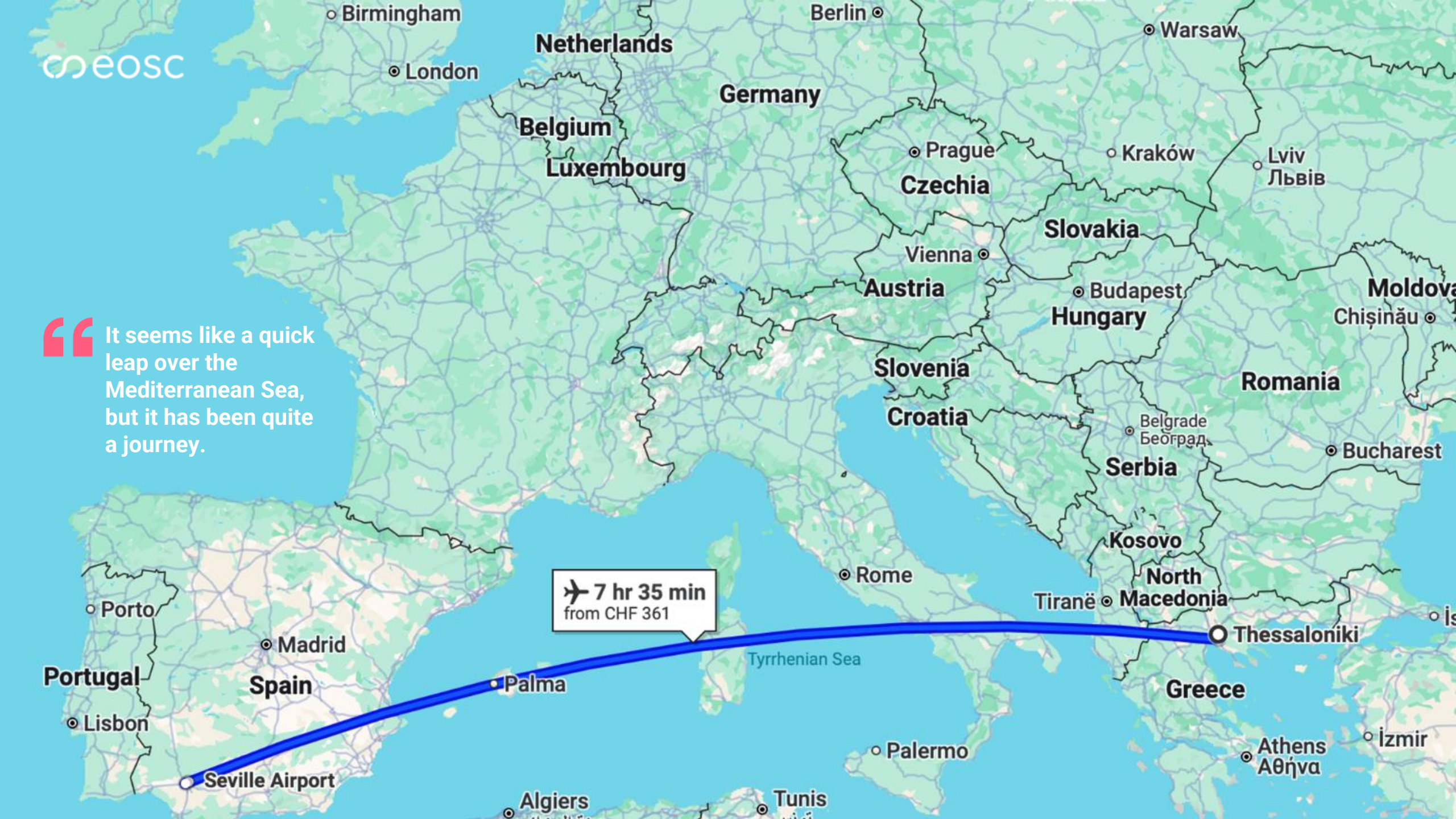
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Birmingham
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Hungary
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Chișinău
Slovenia
Romania
Croatia
Belgrade
Београд
Bucharest
Serbia
Kosovo
North
Macedonia
Tiranë
Rome
Porto
Madrid
Portugal
Spain
Palma
Tyrrhenian Sea
Thessaloniki
Greece
Lisbon
Seville Airport
Palermo
Athens
Αθήνα
İzmir
Algiers
Tunis
7 hr 35 min
from CHF 361
It seems like a quick leap over the Mediterranean Sea, but it has been quite a journey.

Our itinerary in 2024

Thessaloniki

Image by Dimitris Vetsikas from Pixabay

Leuven

Image by Roland Jacobs from Pixabay

Brussels

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Berlin

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Seville

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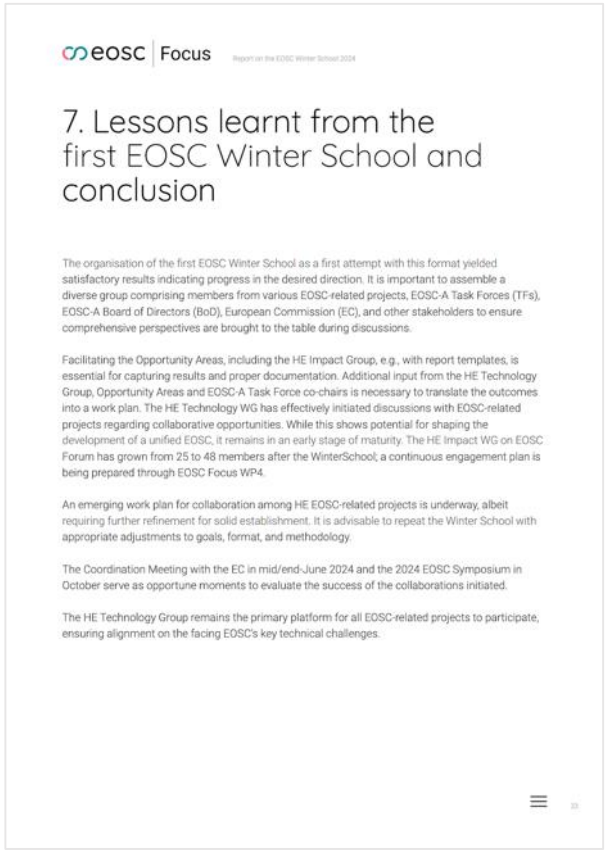
Report on the EOSC Winter School

2024

29 January -
1 February 2024

Thessaloniki, Greece



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7. Lessons learnt from the first EOSC Winter School and conclusion

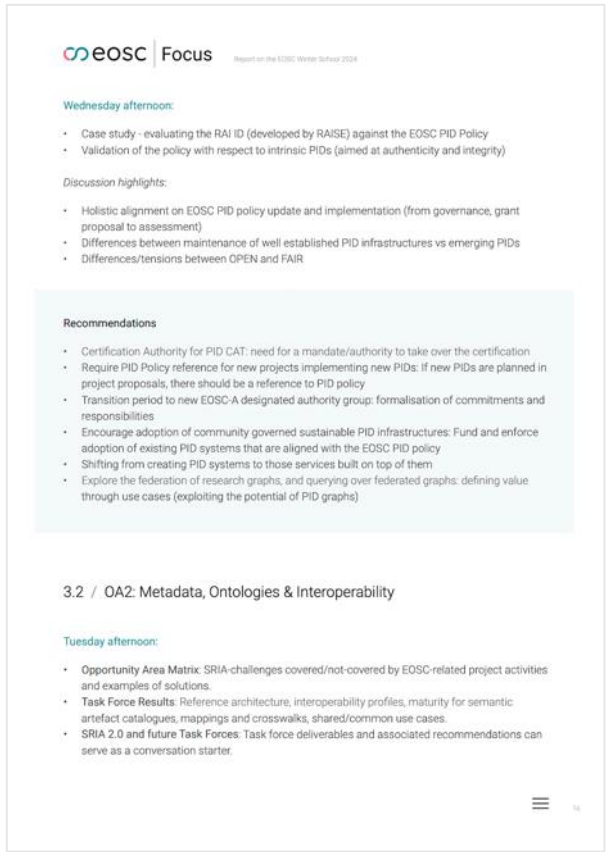
The organisation of the first EOSC Winter School as a first attempt with this format yielded satisfactory results indicating progress in the desired direction. It is important to assemble a diverse group comprising members from various EOSC-related projects, EOSC-A Task Forces (TFs), EOSC-A Board of Directors (BoD), European Commission (EC), and other stakeholders to ensure comprehensive perspectives are brought to the table during discussions.

Facilitating the Opportunity Areas, including the HE Impact Group, e.g., with report templates, is essential for capturing results and proper documentation. Additional input from the HE Technology Group, Opportunity Areas and EOSC-A Task Force co-chairs is necessary to translate the outcomes into a work plan. The HE Technology WG has effectively initiated discussions with EOSC-related projects regarding collaborative opportunities. While this shows potential for shaping the development of a unified EOSC, it remains in an early stage of maturity. The HE Impact WG on EOSC Forum has grown from 25 to 48 members after the WinterSchool; a continuous engagement plan is being prepared through EOSC Focus WP4.

An emerging work plan for collaboration among HE EOSC-related projects is underway, albeit requiring further refinement for solid establishment. It is advisable to repeat the Winter School with appropriate adjustments to goals, format, and methodology.

The Coordination Meeting with the EC in mid/end-June 2024 and the 2024 EOSC Symposium in October serve as opportune moments to evaluate the success of the collaborations initiated.

The HE Technology Group remains the primary platform for all EOSC-related projects to participate, ensuring alignment on the facing EOSC's key technical challenges.



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Wednesday afternoon:

- Case study - evaluating the RAI ID (developed by RAISE) against the EOSC PID Policy
- Validation of the policy with respect to intrinsic PIDs (aimed at authenticity and integrity)

Discussion highlights:

- Holistic alignment on EOSC PID policy update and implementation (from governance, grant proposal to assessment)
- Differences between maintenance of well established PID infrastructures vs emerging PIDs
- Differences/tensions between OPEN and FAIR

Recommendations

- Certification Authority for PID CAT: need for a mandate/authority to take over the certification
- Require PID Policy reference for new projects implementing new PIDs: If new PIDs are planned in project proposals, there should be a reference to PID policy
- Transition period to new EOSC-A designated authority group: formalisation of commitments and responsibilities
- Encourage adoption of community governed sustainable PID infrastructures: Fund and enforce adoption of existing PID systems that are aligned with the EOSC PID policy
- Shifting from creating PID systems to those services built on top of them
- Explore the federation of research graphs, and querying over federated graphs: defining value through use cases (exploiting the potential of PID graphs)

3.2 / OA2: Metadata, Ontologies & Interoperability

Tuesday afternoon:

- **Opportunity Area Matrix**: SRIA-challenges covered/not-covered by EOSC-related project activities and examples of solutions.
- **Task Force Results**: Reference architecture, interoperability profiles, maturity for semantic artefact catalogues, mappings and crosswalks, shared/common use cases.
- **SRIA 2.0 and future Task Forces**: Task force deliverables and associated recommendations can serve as a conversation starter.


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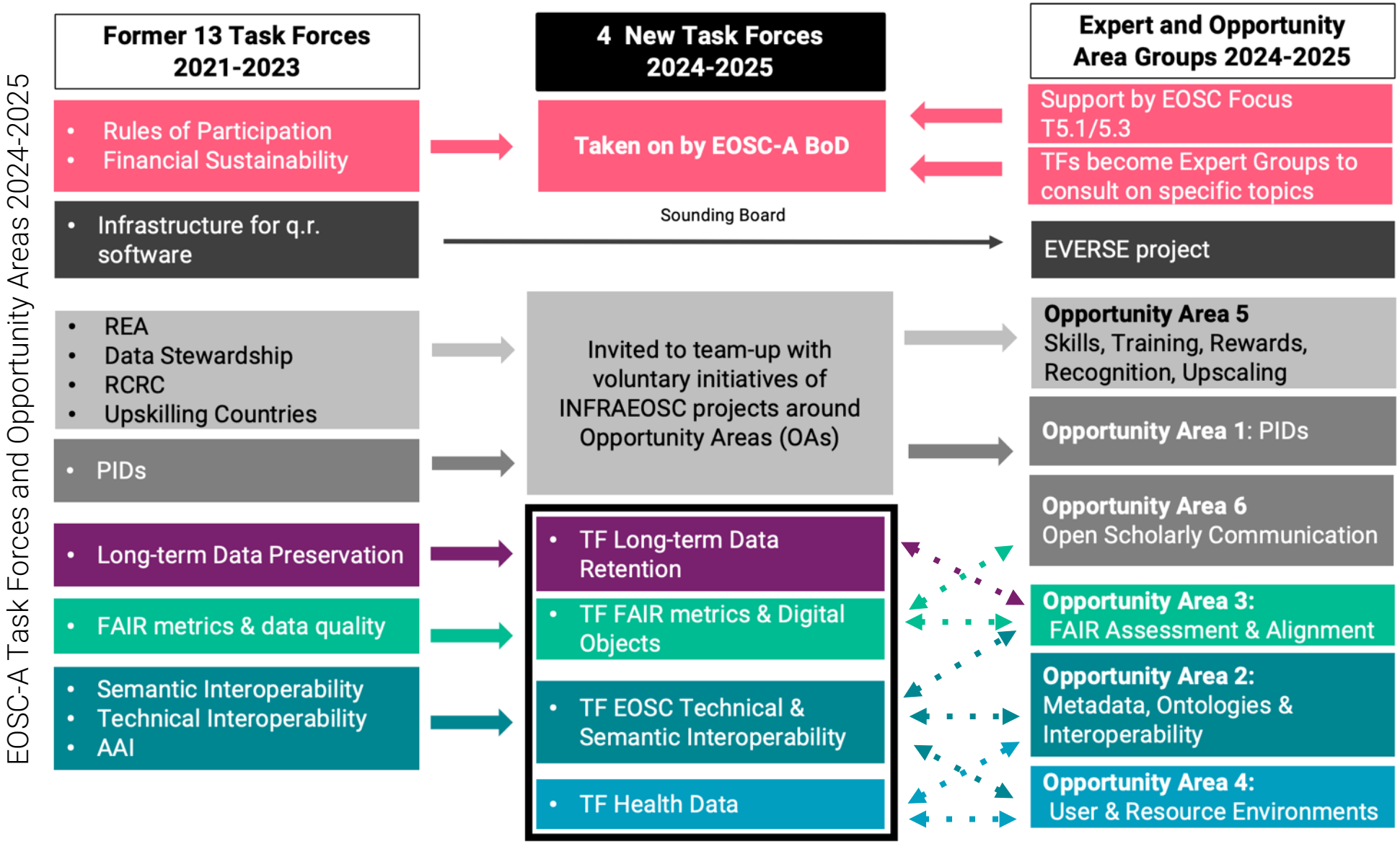
Group 6
Arch of Galerius
"Kamara"

EOSC Association General Assembly #8

27-28 May 2024, Leuven, Belgium

Photo by Frank Barning on Pexels

Strategic reconfiguration of EOSC-A Task Forces



EOSC Opportunity Area Expert Groups

OA Expert Groups are an **important mechanism for collaboration** on technical and related matters within the EOSC Partnership

All OA Expert Groups have developed work plans and **meet roughly every four weeks**

EOSC Symposium 2024 featured a **panel discussion** dedicated to the collaboration within OA Expert Groups

Winter School 2024, Thessaloniki

- OA Expert Group: Open Scholarly Communication
- OA Expert Group: User and Resource Environments
- OA Expert Group: Research Software
- OA Expert Group: Persistent Identifiers
- OA Expert Group: Metadata, Ontologies and Interoperability
- OA Expert Group: FAIR Assessment and Alignment
- OA Expert Group: Skills, Training, Rewards, Recognition and Upscaling

3rd Meeting of INFRAEOSC Projects

20-21 June 2024, Brussels


Building up the
EOSC Federation
eosc
EOSC Symposium 2024
21-23 October | Berlin

EOSC Symposium 2024
Project session on day 1

Photos by Andrew Grauman

eosc | Community

2021

EUROPEAN OPEN SCIENCE CLOUD

2023 / 2024

- eosc | AquaINFRA
- eosc | Blue-Cloud2026
- eosc | FAIR-EASE
- eosc | EuroScienceGateway
- eosc | FAIRCORE4EOSC
- eosc | FAIR-IMPACT
- eosc | Focus
- eosc | RAISE
- eosc | ENTRUST
- eosc | SIESTA
- eosc | TITAN
- eosc | OSCARS
- eosc | Lumen
- eosc | DataGEMS
- eosc | FAIR2Adapt
- eosc | BEYOND
- eosc | EVERSE
- eosc | cancer
- eosc | GRAVITY
- ClimateAdapt | eosc
- AI4 | eosc
- CRAFT-OA | eosc
- RDA TIGER | eosc

eosc | Partnership

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Image from Pixabay

Weather forecast

Photo by revac film's&photography on Pexels

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EOSC Winter School 2025
Programme

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Convergence towards the EOSC Federation

Encouraging collaborative efforts among stakeholders

Monday 20.1.
Reception & Soft Launch

Welcome and registration
Networking & informal interactions

Informal drink / Welcoming event

Tuesday 21.1.
Working Day

Kick-off (Welcome, Outline, Goals)

Intro: Strategic Pillars (Priority Areas of the EOSC Multi-Annual Roadmap (MAR) 2026–2027)

Updates from EOSC EU Node & EOSC Federation Handbook

SP1: Sustaining and enhancing the EOSC Federation

OA1+TF4	OA2+TF1,3	OA3+TF2,4
OA4+TF1,3	OA5	OA6+TF1,2

SP1: breakout sessions (BRs) reporting

Gala dinner / Social event

Wednesday 22.1.
Working Day

SP2: Contributing to the web of FAIR data and the uptake of AI

OA1+TF4	OA2+TF1,3	OA3+TF2,4
OA4+TF1,3	OA5	OA6+TF1,2

SP2: BRs reporting

SP3: Ensuring research security and sovereignty
SP4: Linking with other Common European Data Spaces and beyond

OA1+TF4	OA2+TF1,3	OA3+TF2,4
OA4+TF1,3	OA5	OA6+TF1,2

SP3, SP4: BRs reporting

Outside / individual activities

Thursday 23.1.
Working Day + Closing

Reporting SP1-SP4

Key outcomes, communication & sustainability

Closing, reflections & way forward

Legend	
Strategic Pillars (Priority Areas of the the EOSC Multi-Annual Roadmap (MAR) 2026–2027)	**SPs**
Breakout Sessions	**BRs**
Opportunity Area Expert Groups Opportunity Area Expert Group 1-6	**OAEGs** **OA1-OA6**
EOSC-A Task Forces EOSC-A Task Force 1-4	**TFs** **TF1-TF4**

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Detailed programme available at: eosc.eu/eosc-focus-project/winter-school-2025/

Breakout room locations

Research Software (OAEG7)	**ARCOS**
Open Scholarly Communication (OAEG6+TF1+TF2)	**EL PALMAR**
PIDs (OAEG1+TF4)	**CONIL**
FAIR Assessment and Data Objects (OAEG3+TF2+TF4)	**TRIANA**
User and Resource Environments - Trusted VREs and EOSC Federation Model (OAEG4+TF1+TF3)	**ROTA**
Skills and Engagement (OAEG5)	**TARIFA**
Interoperability in EOSC (OAEG2+TF1+TF3)	**NERJA**

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Winter School Programme

Tuesday morning, 21 January

Opening Plenary
Room NERJA

09.00–09.15	Welcome on behalf of the EOSC Association
09.15–09.45	Update EOSC-A & Intro: Strategic Pillars
09.45–10.00	EOSC Association Task Forces
10.00–10.15	Opportunity Area Expert Groups
10.15–10.30	EOSC Impact & Sustainability
10.30–10.45	Coffee break & networking
10.45–11.00	EOSC Federation Principles
11.00–11.20	Updates to the EOSC EU Node
11.20–11.35	Updates from the EOSC Federation build-up phase
11.35–11.45	EOSC Federation Handbook
11.45–12.45	Panel Discussion – Convergence towards the EOSC Federation
12.45–14.00	Photo call / Lunch

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Winter School Programme

Tuesday afternoon, 21 January

Individual breakout rooms

14.00–15.30	SP1 Sessions: Sustaining and enhancing the EOSC Federation Designated Session Speakers
15.30–16.00	Coffee break & networking
16.00–17.00	SP1 Sessions: Sustaining and enhancing the EOSC Federation Designated Session Speakers
17.00–18.00	SP1 plenary reporting (NERJA)
18.30	Social event: Guided walking tour of Seville
20.00	Gala Dinner (Abades Triana Restaurant)

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Winter School Programme

Wednesday morning, 22 January

09.30–11.00	SP2 Sessions: Contributing to the web of FAIR data and the uptake of AI
11.00–11.15	Coffee break & networking
11.15–12.00	SP2 Sessions: Contributing to the web of FAIR data and the uptake of AI
12.00–13.00	SP2 plenary reporting
13.00–14.00	Lunch

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Winter School Programme

Wednesday afternoon, 22 January

14.00–15.30	SP3 Sessions: Ensuring research security and sovereignty/SP4 Sessions: Linking with other Common European Data Spaces and beyond
15.30–16.00	Coffee break & networking
16.00–17.00	SP3 Sessions: Ensuring research security and sovereignty/SP4 Sessions: Linking with other Common European Data Spaces and beyond
17.00–18.00	SP3 & SP4 plenary reporting

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Winter School Programme

Thursday, 23 January

09.30–09.35	Welcome & introduction
09.35–10.05	Sustainability in EOSC
10.05–10.20	Introducing OA Expert Group 7 –OAEG Co-chairs
10.20–11.20	Reporting on Strategic Pillars and Panel Discussion
11.20–11.30	Key outcomes, closing remarks & way forward
11.30–13.00	Closing lunch

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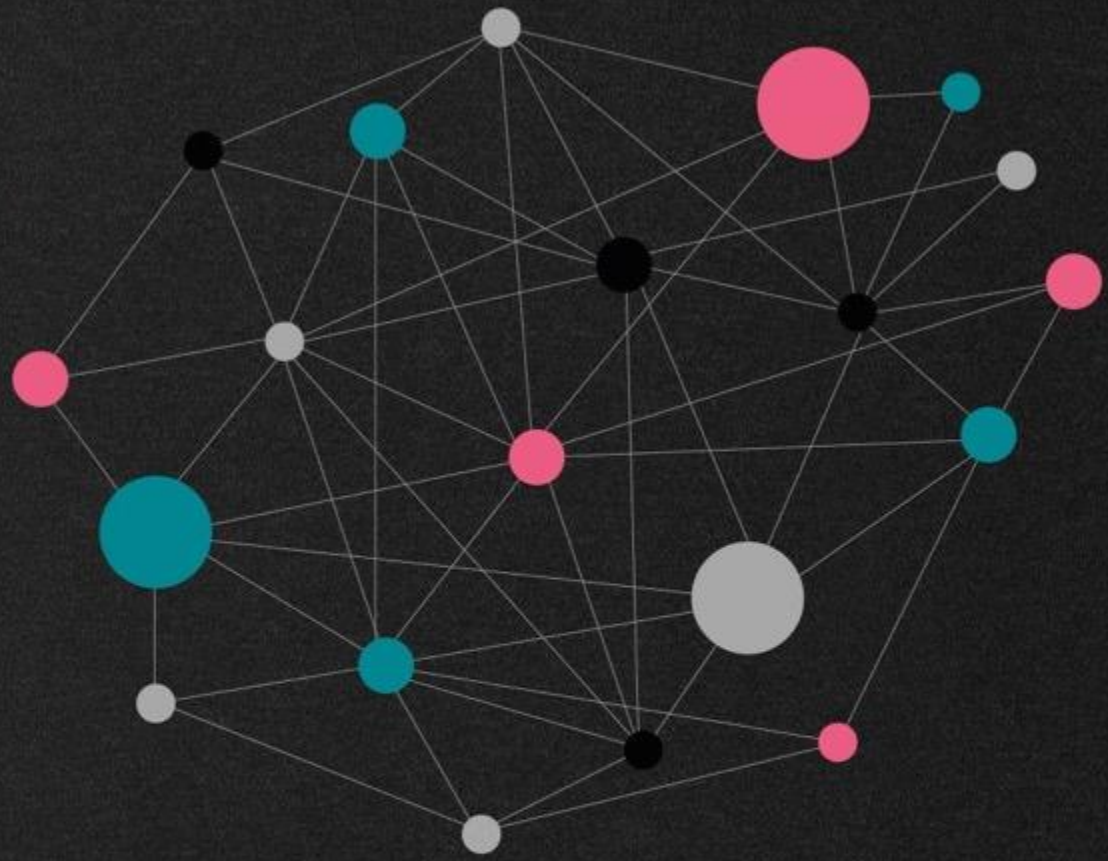


Building the EOSC Federation

Timeline: Towards the EOSC Federation

August 2024

- Questionnaire for parties interested in contributing to the build-up phase of the EOSC Federation closes, attracting 121 responses
- Questionnaire period: 12 June to 31 Aug 2024

October 2024

- Consultation on the EOSC Federation Handbook launched – deadline extended to 17 Nov 2024

November 2024

- Tripartite Group presents assessment of responses to the questionnaire at the European Tripartite Event in Budapest
- Assessment period: 1 Sep to 7 Nov 2024

Q1 2025

- Potential Candidate Nodes are selected
- Dialogue with Potential Candidate Nodes starts

Q3 2025

- Build-up phase of the EOSC Federation culminates
- Period: Q1-Q3 2025

Your role

Driver

Photo by Lê Minh on Pexels

Passenger

Photo by Jeffrey Czum on Pexels

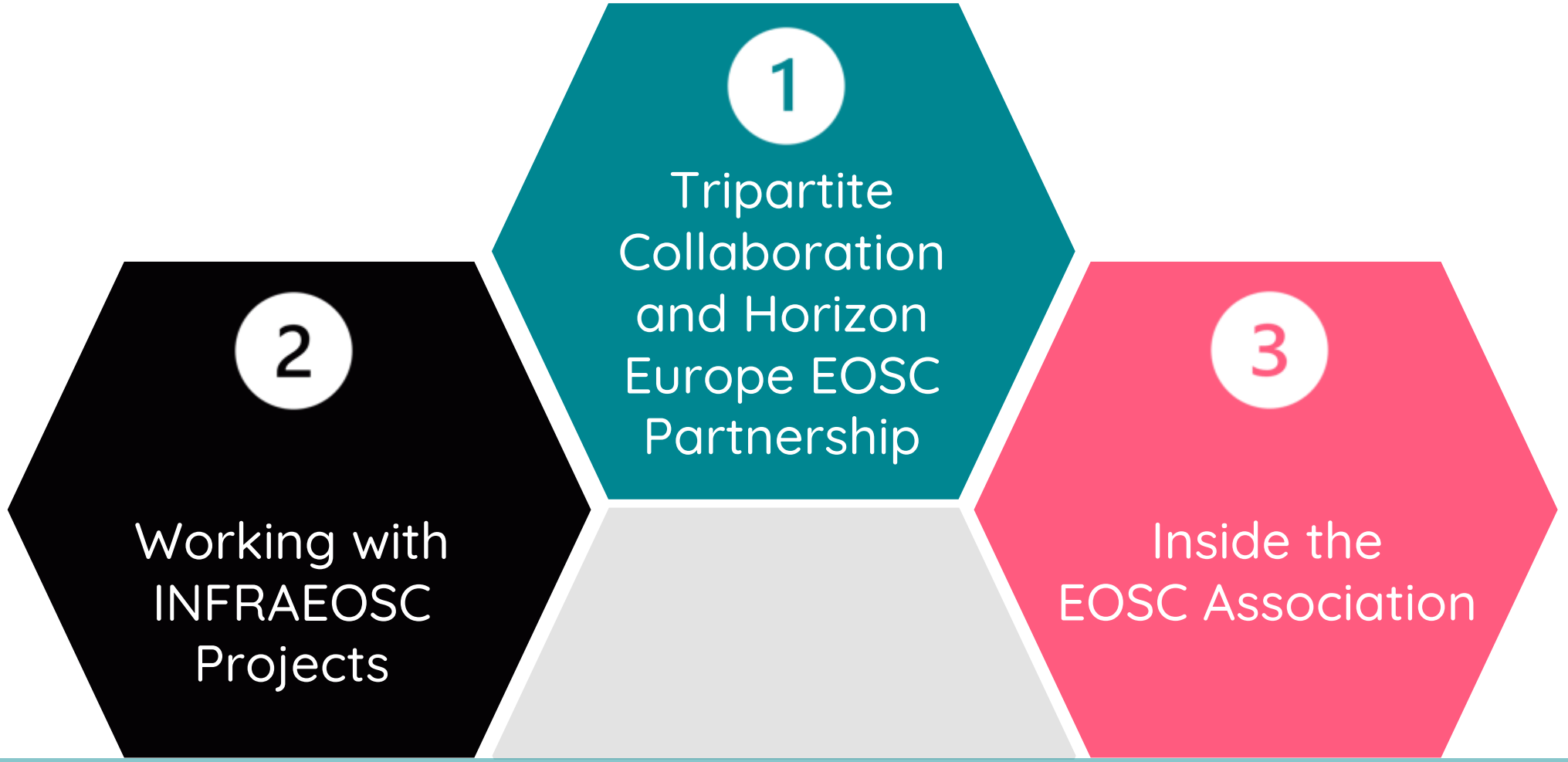
Pathfinder

Photo by Tima Miroshnichenko on Pexels

Update EOSC-A intro Strategic Pillars

Karel Luyben

Three overarching dimensions of interest



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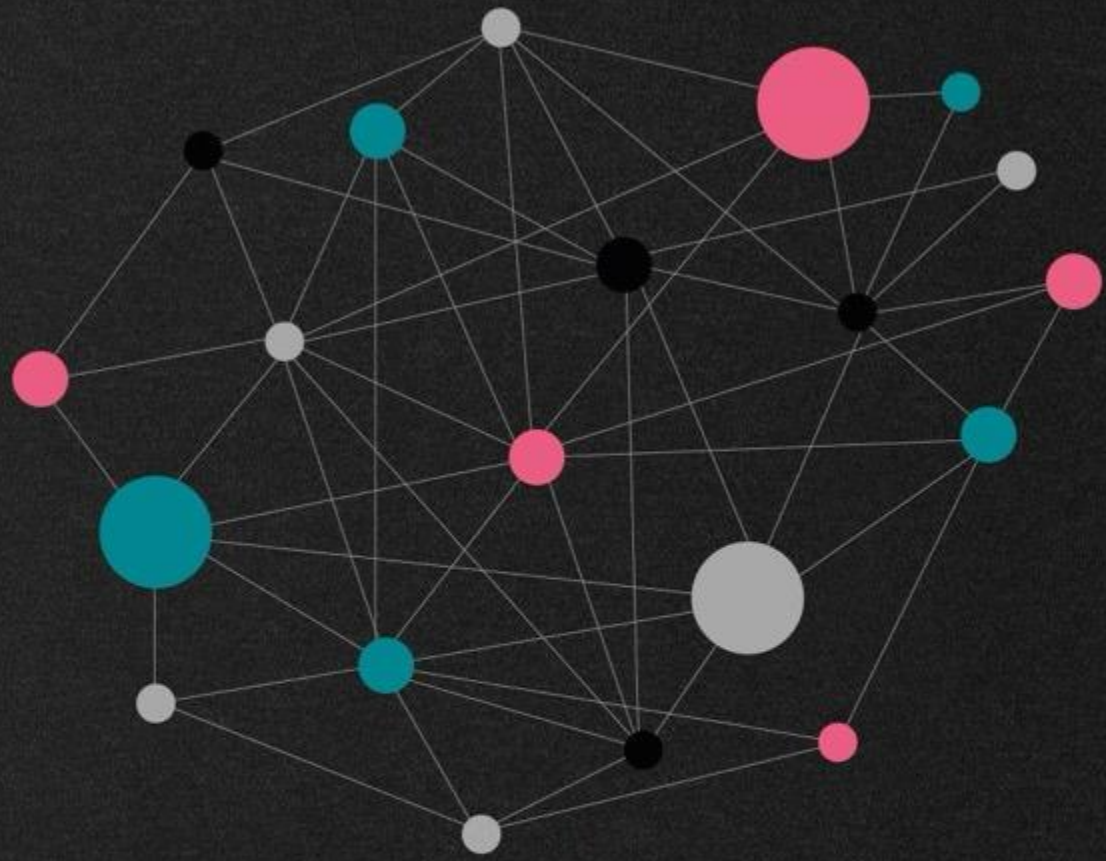
Building the EOSC Federation



Next steps to be discussed under Item 08

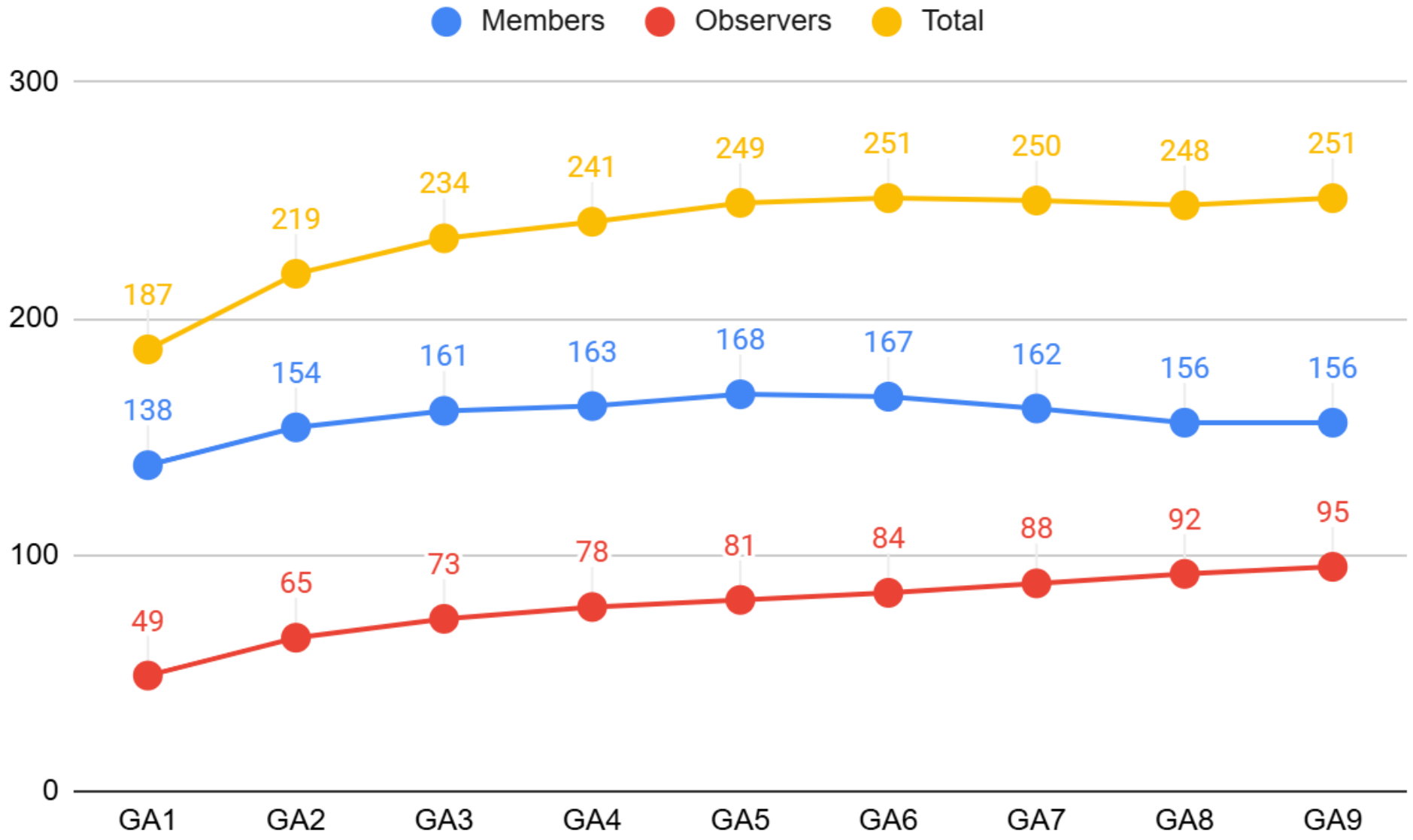
11 December 2024

Draft outline of SRIA 2.0

1. Introduction
2. EOSC description
3. Interoperability
4. FAIR data and metadata
5. AI for FAIR and FAIR for AI
6. Services
7. Governance
8. Roadmap

Photo by Dids on Pexels

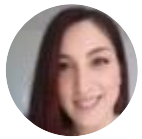
Evolution of the EOSC-A member base



Deepening the relationship with the member base through dedicated fora

	Meetings in 2024
Mandated Organisations	6
ESFRI RI Working Group	4
E-infrastructures	6
Research-performing umbrella organisations	3
Funders	7

EOSC Association Task Forces

	FAIR Metrics and Digital Objects	Health Data	EOSC Technical and Semantic Interoperability	Long-Term Data Retention
Co-chairs	  Elli Papadopoulou, Athena RC; and Mark Wilkinson, UPM	  Lene Krøl Andersen, Computerome, DTU; and Petr Holub, BBMRI-ERIC & Masaryk University	   Diego Scardaci, EGI Foundation; Jiří Marek, Masaryk University; Christos Kanellopoulos, GÉANT	  Jenny O'Neill, HEAnet; Jacques Flores, Utrecht University
Members	51	44	60	37
Board liason	 Klaus Tochtermann	 Ignacio Blanquer	 Bob Jones	 Sara Garavelli

Linking EOSC and EHDS

27 attendees

- EOSC-A Members (5)
- EOSC Health Data TF co-chairs (2)
- EOSC Association Board of Directors (4)
- EHDS-related Projects or initiatives of interest (6)
- HDABs-Community of Practice (2)
- DG-SANTÉ, DG-CNECT, DG-RTD European Commission (8)

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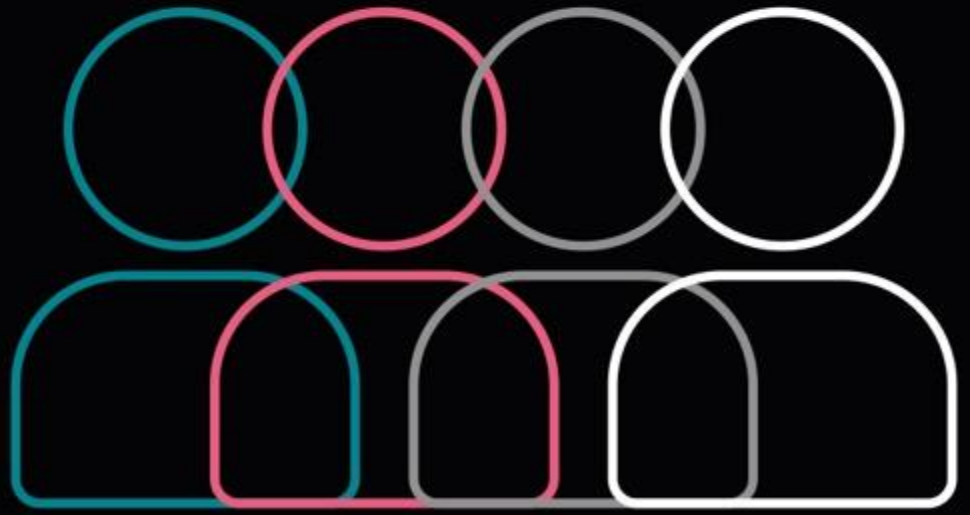
Call for Candidates for four Directors



Submission deadline:
25 October 2024, 23:59 CEST

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Photo by Viridiana Rivera on Pexels

Key performance 2024

Driving the Future

- Driving the build-up phase of the EOSC Federation in the context of the EOSC Tripartite Governance incl. the drafting of the EOSC Federation Handbook.
- Delivering SRIA 1.3 incl. MAR 2026-2027
- Achieving the requested In-kind Contributions of 500 MEUR of Additional Activities already after two years
- Establishment of four new EOSC-A Task Forces with over 200 volunteers
- Facilitating 7 Opportunity Area Experts Groups with nearly 190 participants
- Consolidating internal communication channels along 5 dedicated Fora
- Organising the EOSC Symposium with EOSC Focus support

11 December 2024

SRIA 1.3 and MAR 2026-2027

Strategic pillars

1. Sustaining and enhancing the EOSC Federation
2. Contributing to the web of FAIR data and the uptake of AI
3. Ensuring research security and sovereignty
4. Linking with other Common European Data Spaces and beyond

The SRIA 1.3, including MAR 2026-2027, will serve as the EOSC Partnership's **direct input into the Horizon Europe Work Programme** for the final years of Horizon Europe.

A full revision of the SRIA is planned for 2025, which will result in SRIA 2.0

SP1: Sustaining and enhancing the EOSC Federation

European level:

A. Further develop the EOSC Federation model: a diverse set of national, regional, thematic and other EOSC Nodes integrating and sharing resources (Objective 3).

B. Improve and upgrade service provision based on users' needs and preferences to ensure a strong uptake by researchers (Objective 3).

C. Develop and adopt funding and governance models that will ensure sustainable long-term co-investment at European and national levels, including the additional costs for delivering resources beyond a Node's normal geographical or thematic user base (Objective 3).

D. Support concertation actions directed towards greater and more in-depth stakeholder engagement, coordination, governance and monitoring (Objectives 1 and 3).

E. Continue to stimulate the development and maintenance of open interfaces, alignments, guidelines, crosswalks and APIs that enable interoperability (Objectives 2 and 3).

SP1: Sustaining and enhancing the EOSC Federation

National level:

A. National policy makers should support Research Infrastructures, e-Infrastructures and national service providers to align activities and establish EOSC support structures (Objectives 1 and 3).

B. Support and incentivize the use, maintenance and adoption of open standards and APIs to enable resource composability and to achieve interoperability across communities (Objectives 2 and 3).

Institutional level:

A. Support professional development programmes to ensure research support staff have the required data stewardship and information security management skills (Objective 1).

B. Research institutions should encourage and support researchers to adopt the data and services federated by EOSC to scale up usage (Objectives 1 and 3).

C. Encourage sharing of quality-assured software through institutional or thematic repositories (Objective 3).

SP2: Contributing to the web of FAIR data and the uptake of AI

European level:

A. Support the establishment of a lightweight, widely representative governance body to incentivise more FAIR artefacts and elaborate more coherent FAIR assessment (Objectives 2 and 3).

B. Accelerate the adoption of interoperability and semantic artefact catalogues. Support AI-enabled services, engaging discipline-specific groups, that facilitate interoperability and reuse in a more automated way by automatic annotation, data linkage, data homogenisation, and data transformation, or other similar approaches, including global alignment (Objective 2).

C. Accelerate the uptake of AI in science, while addressing relevant challenges and risks. Support the development of AI-ready FAIR research data as well as tools and services that enable the development of scientific AI models. (Objective 2).

D. Support the development of standardised guidelines (e.g. ethical, legal), to describe the potential uses of Open Data in AI research to ensure transparency and fairness in AI model development across Europe (Objective 2).

SP2: Contributing to the web of FAIR data and the uptake of AI

National level:

A. Use European and domain-specific semantic artefact catalogues in national infrastructures and guidelines, aligned with European standards and vocabularies (Objective 2).

B. Support adoption of both general and domain-specific standards to increase adoption of FAIR practices and develop plans to facilitate reuse (Objective 2).

C. Support the implementation of aligned European curricula for data stewardship and encourage their inclusion in research programmes, with a practical focus involving service providers (Objectives 1 and 2).

D. Establish protocols for dealing with the cost of data management, data stewardship, maintenance and preservation of research outputs (including software and semantic artefacts) and making them eligible within national funding schemes (Objective 1).

E. Promote collaborations between national infrastructures and cross-border initiatives to promote consistent FAIR data standards and enhanced international interoperability (Objective 1).

F. Further co-develop and evaluate research review mechanisms to ensure FAIR research outputs, use of PIDs and other Open Science practices are appropriately recognised and rewarded (Objective 1).

SP2: Contributing to the web of FAIR data and the uptake of AI

Institutional level:

A. Adjust, follow up, and evaluate research review mechanisms to ensure FAIR research outputs and Open Science are appropriately recognised and rewarded (Objective 1).

B. Integrate widely used and adopted PIDs into institutional services and incentivise usage of PID technologies being developed for EOSC (Objectives 1 and 2).

C. Encourage institutions to develop training modules on data stewardship, FAIR principles and assessment tools, PID usage and other Open Science practices to ensure long-term adoption and better integration with EOSC services (Objective 1).

SP3: Ensuring research security and sovereignty

European level:

A. Further co-design, develop and deliver secure AAI solutions for the EOSC Federation, building on existing AAI and standards and drawing on the community's accumulated experience with developing and managing federations (Objectives 2 and 3).

B. Clarify the EOSC Rules of Participation and then develop machine-actionable means to monitor compliance with them (Objective 3).

C. Define a harmonised operational (including cybersecurity aspects) and legal framework to facilitate the secure sharing and governance of, and access to, data (including sensitive data) and services. (Objectives 2 and 3).

D. Encourage the development and coordination of national data sovereignty frameworks that align with European and international research initiatives (Objective 2).

SP3: Ensuring research security and sovereignty

National level:

A. Encourage national policy makers to review and adjust national policies, funding and regulations, and to develop training programs that enable services and data to be used in cross-border and cross-domain contexts, preserving data sovereignty and ensuring broader interoperability and accessibility (Objectives 2 and 3).

B. Support and embed appraisal, retention and preservation procedures for long-term data and other digital assets (e.g. software) and monitor the value and costs of the procedures (Objective 1).

Institutional level:

A. Offer accredited and certified core Open Science, FAIR and CARE training to researchers and research support units at all levels and recognise the skills as part of the individual's professional development through certified means (Objectives 1 and 2).

B. Define and implement training and procedures to select and curate data, software and other research outputs that merit preservation (Objective 2).

C. Define and implement training and procedures to develop information security management skills especially relating to managing sensitive data in line with national and, where appropriate, European procedures (Objective 1).

D. Encourage the creation of institutional strategies and training programmes for data risk management that are aligned with European standards for research security (Objectives 1 and 2).

SP4: Linking with other Common European Data Spaces and beyond

European level:

A. Engage and bridge with other Common European Data Spaces and relevant initiatives, including the EU Missions, EuroHPC and other relevant European Partnerships (Objectives 1 and 3).

B. Support and incentivize the use, maintenance and adoption of open standards and APIs to enable resource composability and to increase the interoperability between the research and other communities, including in the public administration and the private sector (Objective 2).

C. Encourage more focused collaboration with private sector data spaces to foster innovation while ensuring that data sovereignty, ethical standards and data privacy regulations are upheld (Objective 2).

D. Promote fora that will enable the EOSC Federation to contribute to the establishment of a global data commons (Objectives 1 and 3).

SP4: Linking with other Common European Data Spaces and beyond

National level:

A. Leverage existing national Competence Centres and strengthen their participation in coordination networks at the European level (Objectives 1 and 3).

B. Support the integration of national-level Research Infrastructures into sectoral Common European Data Spaces. (Objectives 1 and 3).

Institutional level:

A. Ensure that researchers are aware of and can reference existing and domain-specific semantic artefact catalogues and other data services, including repositories and registries developed and used in EU initiatives (Objective 2).

B. Promote participation in existing initiatives, like Data Spaces, EU missions and European Partnerships at national and European level (Objective 1).

Aims of the Winter School 2025 breakouts

For all the breakout sessions

- Discuss your work / plans in the context of the Strategic Pillar on the agenda of the breakout session
- Consider the sustainability of your work using the template that will be supplied
- Think about contributing to the informal paper the EOSC-A Board is going to supply to the EC for helping the delivery of the INFRAEOSC calls for 2026-2027

Photo by Leeloo The First on Pexels

Q&A

Navigating the future: current results, highlights and the way forward for the EOSC Association Task Forces

Ignacio Blanquer, EOSC-A BoD

21 January 2025 by EOSC-A

Content

1. Objective of Task Forces
2. Output of the former TFs
3. Creation of the 2024-26 TFs
4. Highlights from the TFs

1) Objective of Task Forces

Advisory Groups - Committees to provide advice on the fulfilment of the association's mission - are defined in the article 6 of the statutes and the article 6.2 of the EOSC-A Bylaws

Five groups approved by the EOSC-A GA on 31/8/2021 (one more at GA#7), leading to 13 Task Forces in 2021-2023, and 4 TFs in 2024-2026.

- **Implementation of EOSC**
- **Metadata and Data Quality**
- **Research Careers and Curricula**
- **Sustaining EOSC**
- **Technical Challenges**
- **Data Spaces and Industry**

The Task Forces of an Advisory Group typically produce the following **outcomes:**

- Provide input for, and feedback on, strategic documents of the EOSC-A partnership, such as the SRIA and the Multi-Annual Roadmap.
- Technical Reports on topics related to the objectives of the SRIA.
- Task Forces have been a highly valuable strategic asset on building EOSC.

The implementation of services or components goes beyond the capacity of the EOSC-A TFs instrument.

The creation of an Advisory Groups must be approved by the EOSC-A General Assembly, but decisions on the Task Forces can be taken at the level of the Board of Directors.

Output of the former TFs

2) EOSC-A Task Forces (2021-2023)

Metadata and data quality
- FAIR Metrics and Data Quality Task Force
- Semantic Interoperability Task Force
- PID Policy and Implementation Task Force (PID TF)

Research careers and curricula
- Data Stewardship, Curricula and Career Paths Task Force
- Research Careers, Recognition and Credit Task Force
- Upskilling Countries to Engage in EOSC Task Force
- Researcher Engagement & Adoption Task Force (REA TF)

Sustaining EOSC
- Financial Sustainability Task Force
- Rules of Participation Compliance Monitoring Task Force (RoP TF)

Technical challenges
- Authentication and Authorization Infrastructure Architecture Task Force
- Infrastructures for Quality Research Software Task Force
- Technical Interoperability of Data and Services Task Force
- Long-Term Data Preservation Task Force

394 experts
28 Co-chairs

27 deliverables published

Wide dissemination of results

Task Forces 27 Deliverables Published

	Task Force	Title	URL
1	Financial Sustainability	Towards Sustainable Funding Models for the European Open Science Cloud	https://zenodo.org/records/7318481
2	FAIR metrics and data quality	Community-driven Governance of FAIRness assessment: An Open Issue, an Open Discussion	https://zenodo.org/record/7390482
3	FAIR metrics and data quality	FAIR Evaluation/Assessment Tools: Towards an "Apples to Apples" Comparisons	https://zenodo.org/records/7463421
4	FAIR metrics and data quality	Towards a data quality framework for EOSC	https://zenodo.org/records/7515816
5	Long-term data preservation	EOSC Preservation: Overview Discussion Paper-LTDP TF	https://zenodo.org/records/7516259
6	Technical interoperability of data and services	Design Considerations for Technical Interoperability in EOSC	https://zenodo.org/records/8109528
7	Infrastructures for quality research software	Research Software Lifecycle	https://zenodo.org/records/8324828
8	Financial Sustainability	Analysis of the TF FinSust - Consultation on the Progress Report	https://zenodo.org/records/8335179
9	Technical interoperability of data and services	A landscape overview of the EOSC Interoperability Framework Capabilities and Gaps	https://zenodo.org/records/8399710
10	Long-term data preservation	Recommendations Consultation	https://zenodo.org/records/10014698
11	Infrastructures for quality research software	SIRS Gap Analysis Report	https://zenodo.org/records/10376006
12	AAI Architecture	EOSC AAI Architecture	https://zenodo.org/records/10379293
13	Research careers, recognition and credit	Position paper by the TF on RCRC looking towards the period 2024-2026	https://zenodo.org/records/10417069
14	FAIR metrics and data quality	Report on "FAIR Signposting" and its uptake by the community	https://zenodo.org/records/10490289

Task Forces 27 Deliverables Published

	Task Force	Title	URL
15	Data stewardship curricula and career paths	Recommendations for Data Stewardship Skills, Training and Curricula with Implementation Examples from European Countries and Universities	https://zenodo.org/records/10573892
16	Infrastructures for quality research software	Review of Software Quality Attributes and Characteristics	https://doi.org/10.5281/zenodo.10647227
17	Infrastructures for quality research software	Ensure Software Quality	https://zenodo.org/records/10723608
18	FAIR metrics and data quality	Report on FAIR evaluation community survey	https://zenodo.org/records/10797765
19	Semantic Interoperability	Developing and implementing the semantic interoperability recommendations of the EOSC Interoperability framework	https://zenodo.org/records/10843882
20	Long-term data preservation	LTDP-TF Final Report & Recommendations	https://zenodo.org/records/10820893
21	Long-term data preservation	LTDP-TF Recommendations & Assertions	https://zenodo.org/records/10848331
22	RCRC	Fostering Open Science in Europe: Engagement Strategies from EOSC's Task Forces on Research Careers and Curricula	https://zenodo.org/records/10925394
23	Data stewardship, curricula and career paths	Data Stewardship Career Paths: State-of-the-Art Report and Recommendations	https://doi.org/10.5281/zenodo.11077722
24	Upskilling countries to engage in EOSC	Progress towards engagement in EOSC - a report on the activities and impact of the Upskilling Countries to Engage in EOSC Task Force	https://zenodo.org/records/11108790
25	Financial Sustainability	FinSust Final Report	https://doi.org/10.5281/zenodo.11317576
26	PID policy and implementation	Community-Specific (and Stakeholder Category-Specific) Perspectives	https://zenodo.org/records/11396803
27	PID policy and implementation	Mapping current PID-related activities in the EOSC context	https://doi.org/10.5281/zenodo.11396767

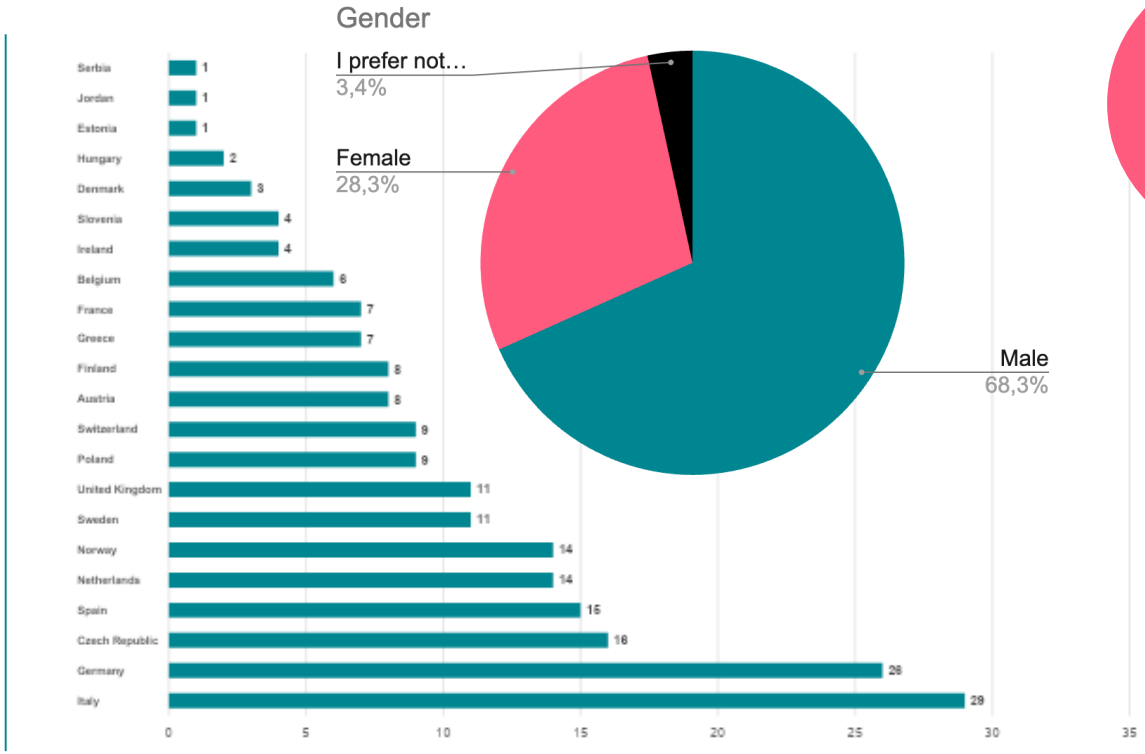
3) Creation of the 2024-26 TFs

Open call published on our web site

- Applications evaluated by BoD members and selected experts from previous TFs.

High acceptance ratio (194 out of 206 applications)

- Rejection in cases of absolutely outsides or applicants that do not fulfil the inclusion criteria.



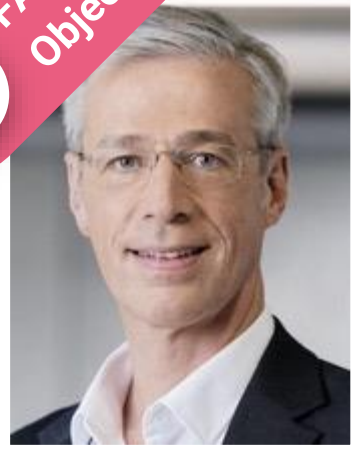
Total: 206

Total: 22 countries

The New EOSC-A TFs starting phase

1 **FAIR Metrics and Digital Objects**

Focused on extending the FAIR metrics beyond the repositories and considering a wide range of objects.



Klaus Tochtermann

2 **EOSC Technical and Semantic Interoperability**

Focused on Technical Interoperability of services, Semantic interoperability of Data and AAI.

Bob Jones

3 **Long-term Data Retention**

Focused on defining policies for retention, appraisal, and re-appraisal of data.

Sara Garavelli

4 **Health Data**

Focused on the convergence of EOSC and EHDS in relation to the interoperability of health data.

Ignacio Blanquer

The New EOSC-A TFs from 2025

1 **FAIR Metrics and Digital Objects**

Focused on extending the FAIR metrics beyond the repositories and considering a wide range of objects.

Kamran Naim

2 **EOSC Technical and Semantic Interoperability**

Focused on Technical Interoperability of services, Semantic interoperability of Data and AAI.

Licia Florio

3 **Long-term Data Retention**

Focused on defining policies for retention, appraisal, and re-appraisal of data.

Roxanne Wyns

4 **Health Data**

Focused on the convergence of EOSC and EHDS in relation to the interoperability of health data.

Ignacio Blanquer

21 January 2025 by EOSC-A

Tools and services provided by the EOSC-A

Web page
eosc.eu/eosc-task-forces/

EOSC Forum
forum.eosc.eu/

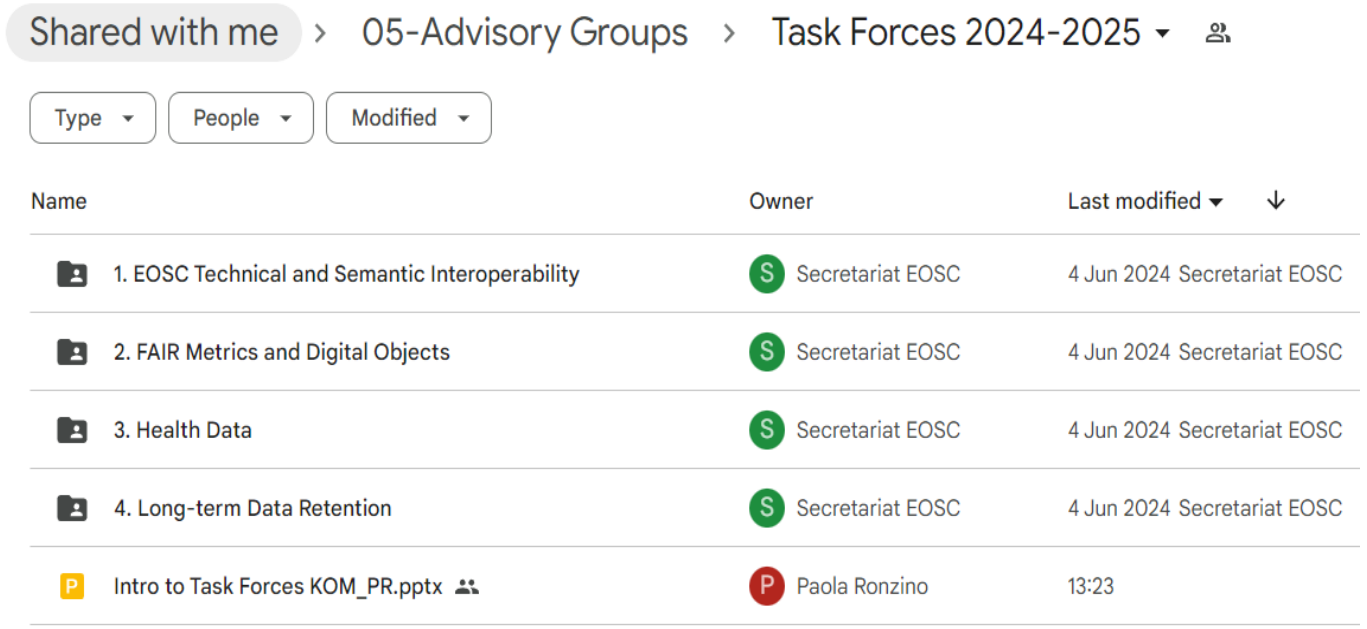
Mailing lists
eosc-interoperability-tf@eosc.eu
fair-metrics-digital-object-tf@eosc.eu
newhealthdatatf@eosc.eu
data-retention-tf@eosc.eu

Google Drive

Oplek

zoom

Task Force Support Officers (TSO)



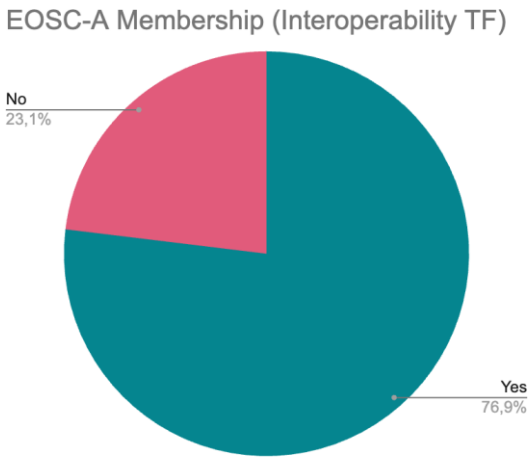
Highlights from the 2024-26 TFs

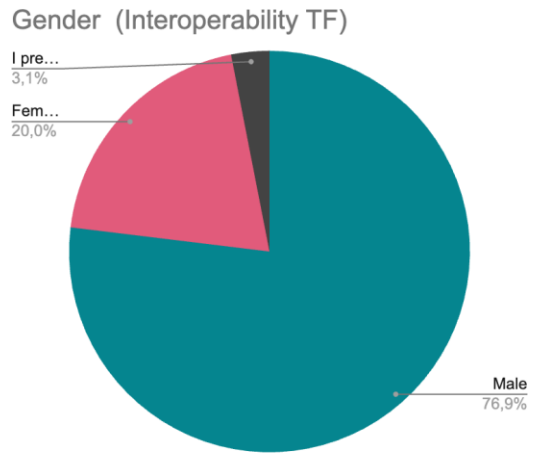
EOSC Technical and Semantic Interoperability TF: Composition

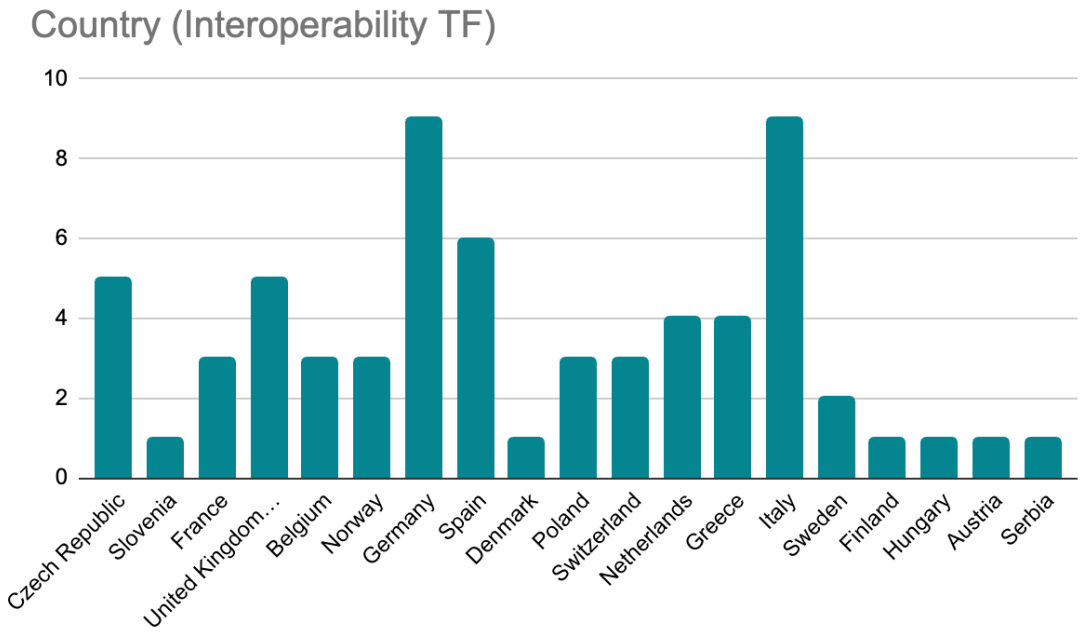
Members

Adam Vials Moore Jisc LBG	**Alessandro Margara** Politecnico di Milano	**Alexandra Kokkinaki** NOC-BODC	**Alexandros Papadopoulos** Radboudumc
Alexandros-Themistoklis Ioannidis-	**András Micsik**	**Andrea Scharnhorst**	**Antònia Tugores**
Tomasz Kuczyński PSNC	**Tomasz Miksa** TU Wien	**Tommi Suominen** CSC	**Wolfgang Pempe** DFN-Verein

- 61 members
- Co-chairs
  - Christos Kanellopoulos (GÉANT)
  - Diego Scardacci (EGI)
  - Jirí Marek (Masaryk University)





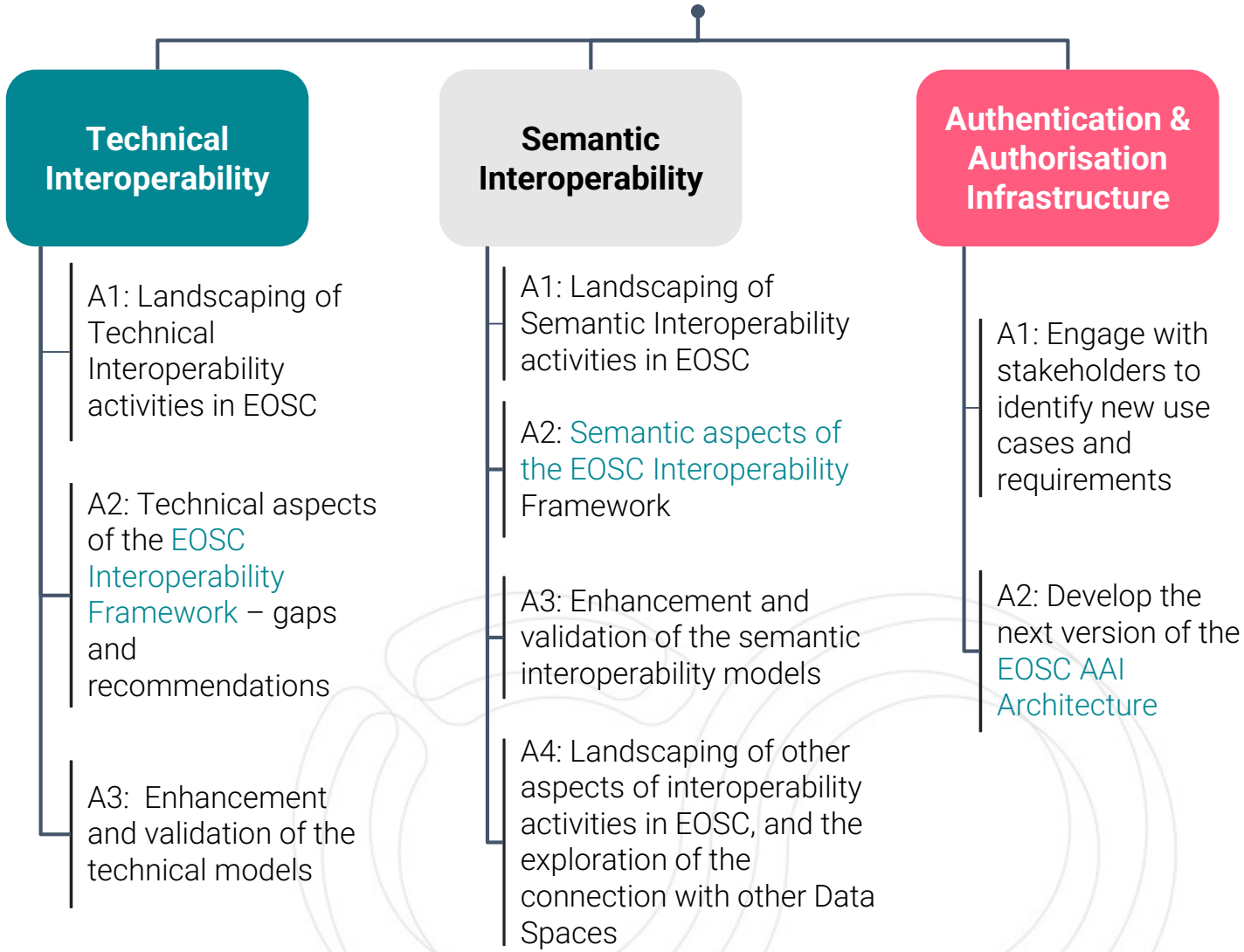


EOSC Technical and Semantic Interoperability TF: Terms of Reference

Objectives

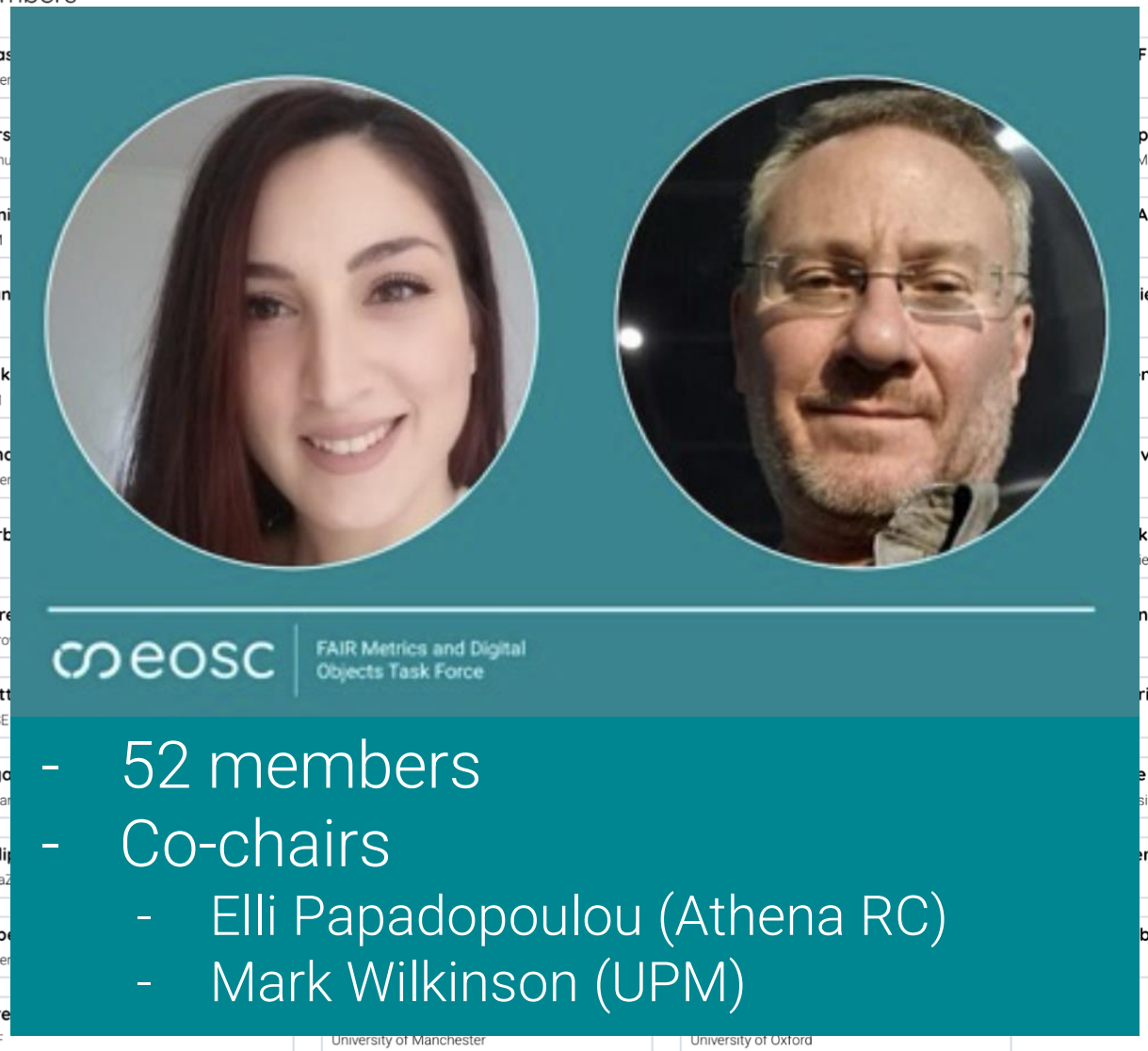
- Gather feedback and requirements from the research communities and national initiatives, such as NFDI or EOSC CZ, for data and service interoperability.
- Facilitate interactions and common developments of EOSC-related projects and initiatives. Identify gaps and strategic challenges related to the TF's key focus areas.
- Identify high-value use cases that can help to define specifications that could be useful for a wide set of research communities.

Structure

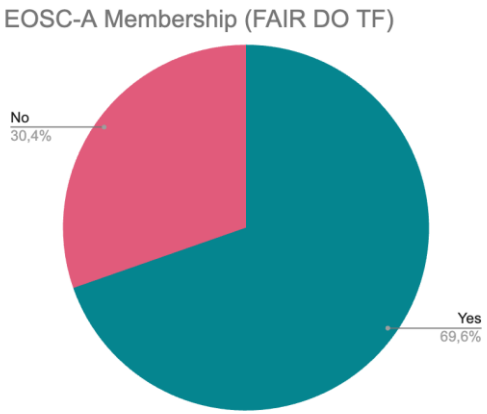


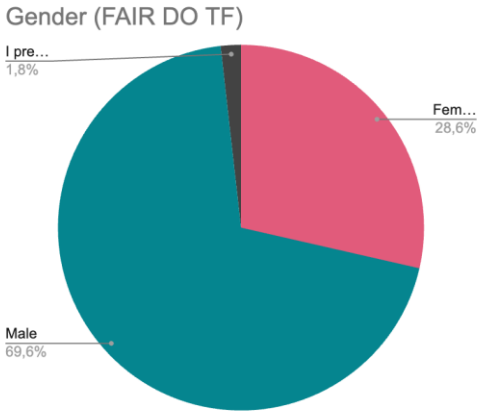
FAIR Metrics and Digital Objects TF: Composition

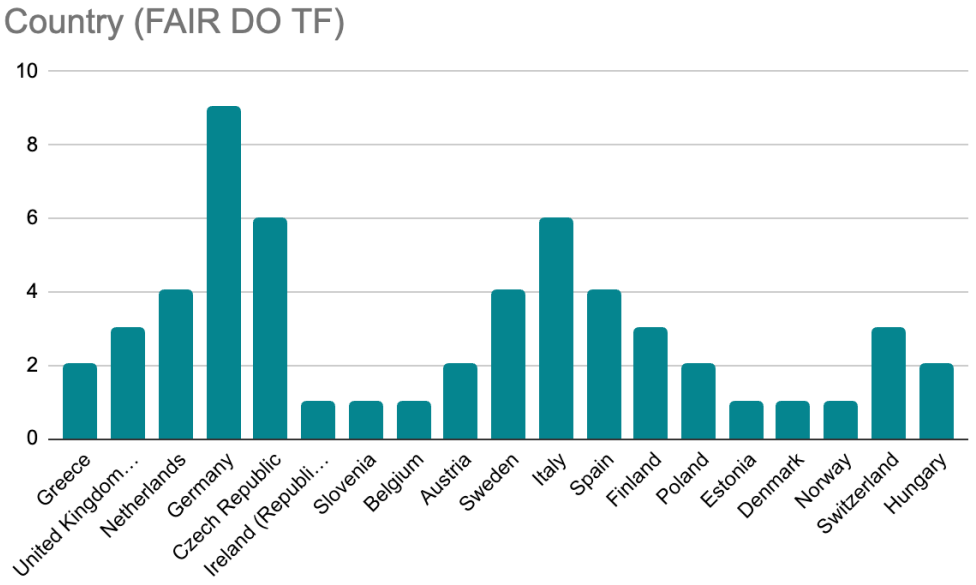
Members



- 52 members
- Co-chairs
  - Elli Papadopoulou (Athena RC)
  - Mark Wilkinson (UPM)







FAIR Metrics and Digital Objects TF: Terms of Reference

Objectives

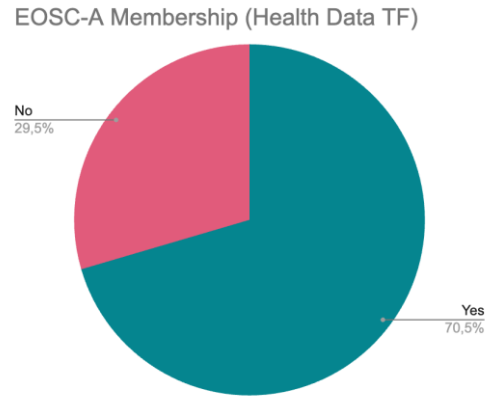
- Identify the limitations of the current FAIR assessment concerning the for-purpose reuse of digital objects.
- Foster alignment with international initiatives and resources in EOSC to facilitate common metadata schemas and their interoperability.
- Identify common issues on data privacy.
- Analyse support for provenance records of digital objects in the EOSC federation.
- Examine or propose the creation of standards for data quality in FAIR metadata
- Explore the intersection and gaps of FAIR for selecting digital objects in automatic processing.
- Align with the FAIR Assessment Governance task in INFRA OSTrails project and broadly.

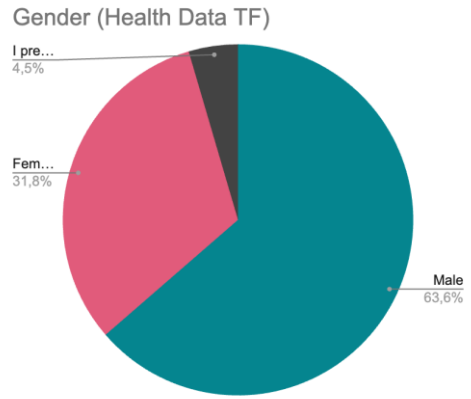
Key Focus Areas and Deliverables

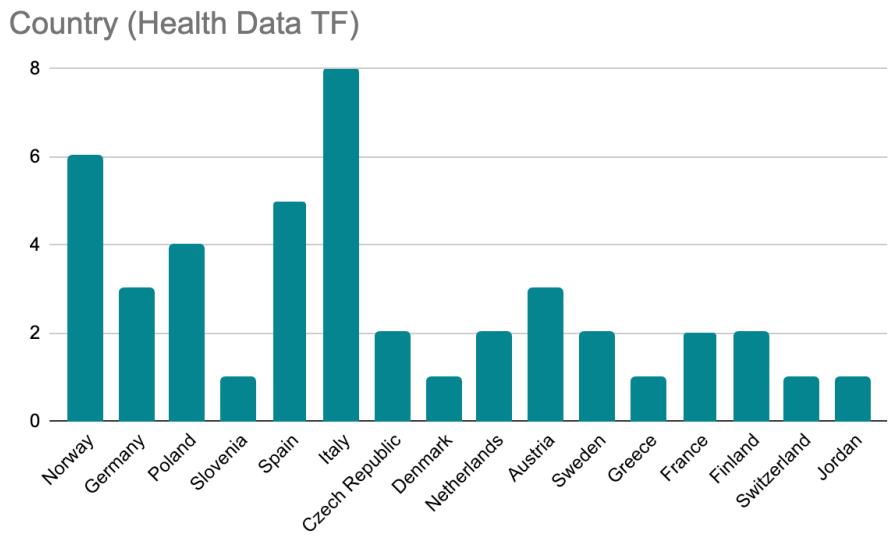
- KFA1: Survey and analyse the benefits, limitations and adoption of metadata schema standards, focusing on the reusability of data and provenance.
- KFA2: Identify issues and limitations when handling sensitive data in repositories.
- KFA3: Proposal of FAIR Metrics for evaluating the reusability of data.
- KFA4: Identify synergies and complementarities between the Data Spaces.
- Outputs
  - Report on Repository Support for Data-level Interoperability/Reusability
  - Workshop and position paper on data spaces w.r.t. to FAIR metadata and FAIR data.

The EOSC-A TF on Health Data: Composition

- 44 members
- Co-chairs
  - Lene Krol Andersen (Computerome, DTU) - Resigned last week.
  - Petr Holub (BBMRI-ERIC & Masaryk University)







The EOSC-A TF on Health Data: Objectives & ToR

Objectives

- Define the EOSC Strategy towards the extensive use of Health Data in research projects through the identification of requirements and regulations o make the access and processing of health data equitable and safe.
- Foster the interoperability with EHDS including legal, organisational, semantic and technical interoperability requirements, to minimise redundancies and maximise synergies between EOSC and EHDS.
- Build networks and partnerships mobilising EOSC and EHDS communities.

Activities and Deliverables

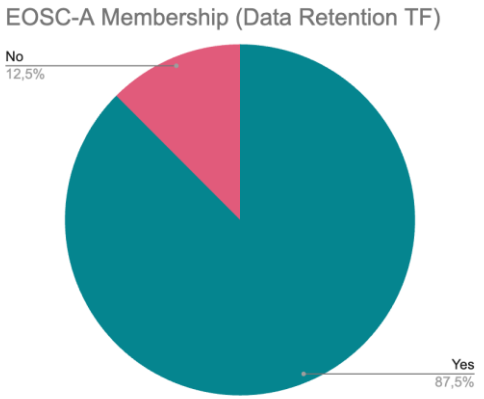
- A1: Map involvement of different stakeholders with EOSC and EHDS on the national level. Identify user journey of health data research projects in the context of EOSC.
- A2: Explore and identify gaps, redundancies, and possible synergies in EHDS and EOSC.
  - Deliverable 1 Q2 2025
- A3: Defining strategic view of involvement of EOSC with health data and EOSC supporting establishment and operations of EHDS.
  - Deliverable 2 Q2 2026

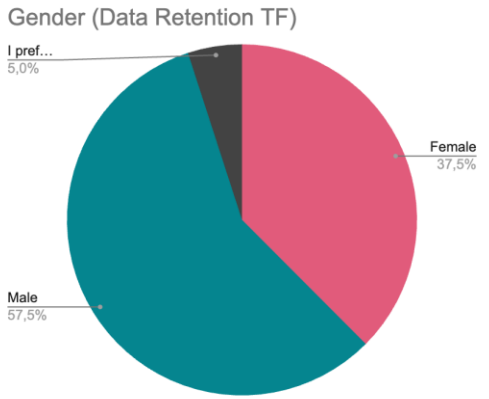
Round table on the alignment of EOSC and EHDS

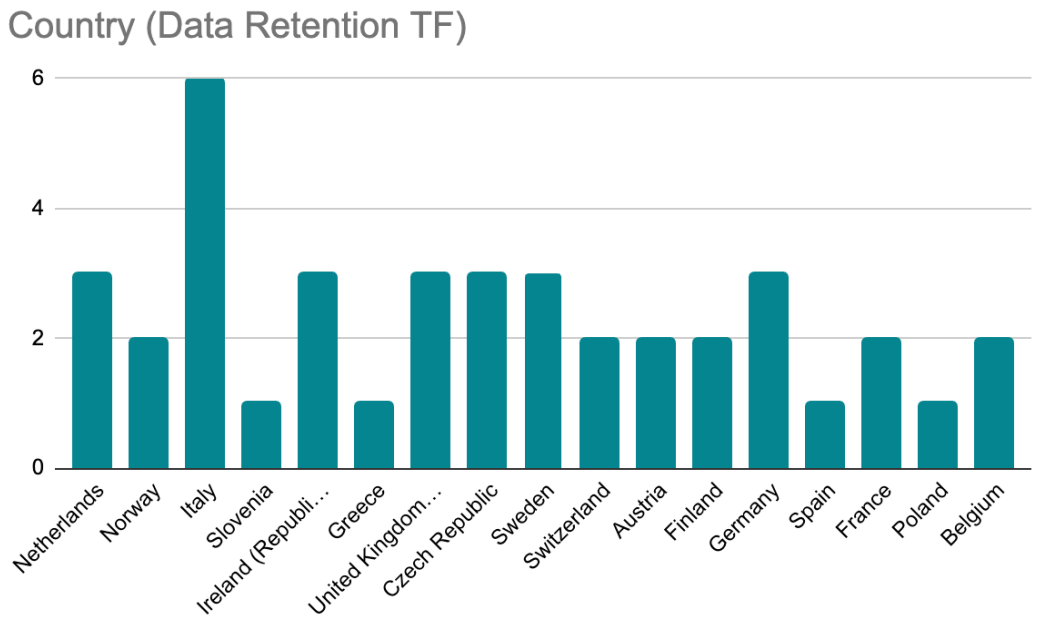
- 27 participants from EOSC-A (Members, Health Data TF co-chairs, BoD), EHDS-related initiatives, HDABs-CoP, EC (DG-SANTÉ, DG-CNECT & DG-RTD)
- Discussions on four topics:Discoverability, permission management, Accessing and processing health data & Reusability of data and outputs.
- Summary recently published in the web.

Long-Term Data Retention Task Force TF: Composition

- 37 members
- Co-chairs
  - Jenny O'Neil (HEAnet)
  - Jacques Flores (Utrecht University)







Long-Term Data Retention Task Force TF: Terms of Reference

Objectives

- Defining the vision on Long Term Data Preservation, proposing the adoption and application of clear 'levels of care' and providing a set of assertions and recommendations for preservation of Digital Objects in the context of EOSC.
  - With a view to retaining, assigning or changing a level of care, or deleting a Digital Object.
- Understanding the different needs of scientific communities, data repositories and archives
- Provide recommendations on all forms of retention, curation, and preservation.

Key Focus Areas and Deliverables

- KFA1: Status, needs and challenges mapping
  - An infographic representing the high-level map of the data retention landscape. Q4 - 2024
  - A report documenting the status of specific data types' or data communities' needs and challenges of the stakeholders/communities identified in the map. Q4 - 2025
- KFA2: feedback and recommendations on retention, appraisal, and re-appraisal of digital objects
  - An expansion of the common standard vocabulary started with the previous Long-Term Data Preservation TF, to include the differentiation of full stack preservation vs. retention. Q3 - 2025
  - A conceptual tool to help stakeholders to implement a workflow for data retention, appraisal, and re-appraisal, in collaboration with EOSC EDEN, Q2 - 2025 / Q4 – 2025

Conclusions

- Task Forces are a key instrument of the EOSC-A to define the strategy of EOSC and to engage with the community, even beyond the boundaries of EOSC-A.
- The participation in the EOSC-A TF has been implemented through an open, transparent and inclusive procedure.
- The interaction of EOSC-A TF with projects is key to gather the implementation workforce that EOSC-A TF do not have.
- The voluntary work of the EOSC-A TF experts, and especially their co-chairs, is extremely appreciated and EOSC-A is eager to promote their results.

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VAT number: BE0755 723 931

Thank You

eosc

Winter School 2025

20 - 23 January 2025 / Seville, Spain

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Funded by the European Union

Opportunity Areas Expert Groups

Ilire Hasani-Mavriqi, EOSC Focus

21.01.2025

Funded by
the European Union

HE EOSC-related projects

INFRAEOSC 2021	INFRAEOSC 2022	INFRAEOSC 2023	INFRAEOSC 2024
AI4EOSC	AquaINFRA	EOSC Beyond	CLIMATE-ADAPT4EOSC
EOSC Focus	Blue-Cloud 2026	EOSC ENTRUST	Datagems
EOSC4Cancer	CRAFT-OA	EVERSE	FAIR2Adapt
EuroScienceGateway	GraspOS	OSCARS	EOSC Data Commons
FAIRCORE4EOSC	RDA Tiger	OSTrails	EOSC EDEN
FAIR-EASE	SciLake	SIESTA	EOSC FIDELIS
FAIR-IMPACT		TITAN	EOSC Gravity
RAISE			EOSC Lumen
Skills4EOSC			EOSC RAISE Suite

Neighboring Projects

BY-COVID (2021-EMERGENCY-01)

E-IRGSP7 (2021-DEV-01-05)

StRESFRI3 (2021-DEV-01)

WorldFAIR (2021-ERA-01-41)

36 Projects awarded under the Destination INFRAEOSC calls of the Horizon Europe (HE) framework program (within the context of the EOSC Partnership)

Facilitation of Collaboration by the EOSC Focus Project

EOSC Focus (supports the co-programmed EOSC Partnership) has put in place initiatives to support and assist projects and to structure cross-project coordination

https://eosc.eu/horizon-europe-projects/
https://eosc.eu/eosc-focus-project/

Interviews with representatives from HE EOSC-related projects

- results are mapped to the Strategic Research and Innovation Agenda **(SRIA) Action Areas** to create the **EOSC Macro-Roadmap**
- led to the formation of the **Opportunity Area Expert Groups**

HE Groups: Communication & Enagegement, Technology, EOSC Impact

- **increase visibility of HE EOSC-related project results** through coordinated communication and engagement activities

Opportunity Area Expert Groups (OAEGs)

https://eosc.eu/eosc-opportunity-area-expert-groups/

OA Expert Groups are a bottom-up initiative of the HE EOSC-related projects

- **Focus on Collaboration:** Leverage the existing overlap of expertise to identify areas where concrete collaboration can take place, and transform these into an incremental work plan with evolving time horizons and priorities
- **Approach:** adaptive and dynamic, continuously evolving to integrate new projects and members. Open and flexible engagement, aiming for barrier-free access and complementary efforts
- Milestones: joint session at the EOSC Symposium, EOSC Winter School
- **Facilitation: EOSC Focus & EOSC-A:** Individual OA meetings, EOSC Forum groups, and collaboration schemes

Join OAs

Opportunity Area Expert Groups (OAEGs)

https://eosc.eu/eosc-opportunity-area-expert-groups/

OA Expert Group: Persistent Identifiers

22

OA Expert Group: Metadata, Ontologies and Interoperability

35

OA Expert Group: FAIR Assessment and Alignment

28

OA Expert Group: User and Resource Environments

24

OA Expert Group: Skills, Training, Rewards, Recognition and Upscaling

55

OA Expert Group: Open Scholarly Communication

19

OA Expert Group: Research Software

29

EOSC Winter School 2025

Achieving convergence and supporting the build-up phase of the EOSC Federation
Encouraging collaborative efforts among stakeholders

- Building blocks – 4 Strategic Pillars (SPs) grouping priorities of the MAR 2026–2027
- Aligning the groundwork laid by the Opportunity Area Expert Groups and the EOSC-A Task Forces (TFs) with the long-term vision for EOSC
- Revisiting the medium- and long-term objectives (EOSC WS 2024)
- Embedding impact across all sessions
- Sub-committees: OAEGs, TFs, HE EOSC Impact group and EOSC-A Board Liaisons (standing meetings & individual work)
- Facilitated by EOSC Focus and EOSC-A Secretariat

Funded by the European Union

EOSC WS 2025 Programme

Monday 20.1.
Reception & Soft Launch

Welcome and registration
Networking & informal interactions

Informal drink / Welcoming event

Tuesday 21.1.
Working Day

Kick-off (Welcome, Outline, Goals)

Intro: Strategic Pillars (Priority Areas of the EOSC Multi-Annual Roadmap (MAR) 2026–2027)

Updates from EOSC EU Node & EOSC Federation Handbook

SP1: Sustaining and enhancing the EOSC Federation

OA1+TF4	OA2+TF1,3	OA3+TF2,4
OA4+TF1,3	OA5	OA6+TF1,2

SP1: breakout sessions (BRs) reporting

Gala dinner / Social event

Wednesday 22.1.
Working Day

SP2: Contributing to the web of FAIR data and the uptake of AI

OA1+TF4	OA2+TF1,3	OA3+TF2,4
OA7		
OA4+TF1,3	OA5	OA6+TF1,2

SP2: BRs reporting

SP3: Ensuring research security and sovereignty
SP4: Linking with other Common European Data Spaces and beyond

OA1+TF4	OA2+TF1,3	OA3+TF2,4
OA4+TF1,3	OA5	OA6+TF1,2

SP3, SP4: BRs reporting

Outside / individual activities

Thursday 23.1.
Working Day + Closing

Reporting SP1-SP4

Key outcomes, communication & sustainability

Closing, reflections & way forward

Legend	
Strategic Pillars (Priority Areas of the the EOSC Multi-Annual Roadmap (MAR) 2026–2027)	**SPs**
Breakout Sessions	**BRs**
Opportunity Area Expert Groups Opportunity Area Expert Group 1-6	**OAEGs** **OA1-OA6**
EOSC-A Task Forces EOSC-A Task Force 1-4	**TFs** **TF1-TF4**

Funded by the European Union

Contribution of OAEGs, TFs in SPs (EU, National, Institutional)

Opportunity Area Expert Group	EOSC-A Task Force	SP1: Sustaining and enhancing the EOSC Federation	SP2: Contributing to the web of FAIR data and the uptake of AI	SP3: Ensuring research security and sovereignty	SP4: Linking with other Common European Data Spaces and beyond
1. PIDs	4. Long-Term Data Retention	A, E	A, B, F, I, L	F	B
2. Metadata, ontologies & interoperability	1. Technical & Semantic Interoperability 3. Health Data	A, B, E, G	B, C, E, F, I	C	A, B, G
3. FAIR Metric & Assessment					
4. User & resource environments					B, G
5. Skills, training, reward recognition and upscaling					E, H
6. Open Scholarly Communication	1. Technical & Semantic Interoperability 2. FAIR Metric and Digital Objects	A, G	B, D, F	C	G
7. Research Software		B, E, G, J	A, C, F, G, J	G, F, H	B, E

Strategic Pillar 1: Sustaining and enhancing the EOSC Federation

European level:

A. Further develop the EOSC Federation model: a diverse set of national, regional, thematic and other EOSC Nodes integrating and sharing resources (Objective 3).

Funded by the European Union

Detailed Programme
https://eosc.eu/eosc-focus-project/winter-school-2025/

Plenaries
All participants

PIDS
OAEG1 + TF4

Interoperability in EOSC
OAEG2 + TF1 + TF3

FAIR assessment and data objects
OAEG3 + TF2 + TF4

User and resource environments: Trusted VREs and EOSC Federation Model
OAEG4 + TF1 + TF3

Skills and engagement
OAEG 5

Integrating open scholarly communication within EOSC
OAEG6 + TF1 + TF2

Research Software
OAEG7

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the European Union

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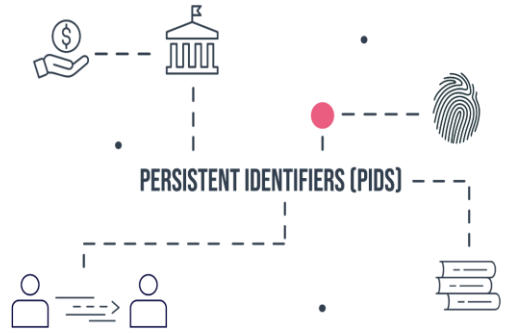
Persistent Identifiers (PIDs)

OAEG1: PIDs

TF4: Long-Term Data Retention



Objectives:

- Highlight benefits of PIDs and data curation for EOSC Federation's sustainability
- Identify challenges and opportunities in adopting PIDs across EOSC Federation nodes

eosc | OA Expert Group: Persistent Identifiers

eosc | Long-Term Data Retention Task Force

Funded by the European Union

eosc | Focus

Interoperability in EOSC

OAEG2: Metadata, Ontologies and Interoperability
TF1: EOSC Technical & Semantic Interoperability
TF3: Health Data

Objectives

- Document state-of-the-art interoperability approaches from projects and Task Forces in a reusable format for the EOSC Federation
- Identify gaps and prospective solutions for EOSC Federation to become a reality

eosc | OA Expert Group: Metadata, Ontologies and Interoperability

eosc | Technical and Semantic Interoperability Task Force

eosc | Health Data Task Force

Funded by the European Union

eosc | Focus

FAIR Assessment and Data Objects

OAEG3: FAIR Assessment and Alignment
TF2: FAIR Metrics & Digital Objects
TF4: Long-Term Data Retention

Objectives

- Promote FAIR assessment, metrics, and data quality to enhance the adoption of AI-ready FAIR research data within the EOSC Federation
- Align efforts across projects to improve FAIRness and streamline practices for digital object

Funded by the European Union

eosc | OA Expert Group: FAIR Assessment and Alignment

eosc | FAIR Metrics and Digital Objects Task Force

eosc | Long-Term Data Retention Task Force

eosc | Focus

User and resource environments: Trusted VREs and EOSC Federation Model

OAEG4: User and Resource Environments
TF1: EOSC Technical & Semantic Interoperability
TF3: Health Data

Objectives

- Introduce the EOSC Federation Model to guide infrastructure, Virtual Research Environment (VRE) and other service providers on the technical requirements to join the EOSC Federation
- Implementation examples based on the “Bring your own …” paradigm

eosc | OA Expert Group: User and Resource Environments

eosc | Technical and Semantic Interoperability Task Force

eosc | Health Data Task Force

Funded by the European Union

eosc | Focus

Skills and Engagement

OAEG5: Skills, Training, Rewards, Recognition and Upskilling

Objectives

- Review each Strategic Pillar and reframe existing OAEG5 workstream activities to support the Strategic Pillars
- Identify priorities and next steps for OA5EG activities, including collaborative opportunities

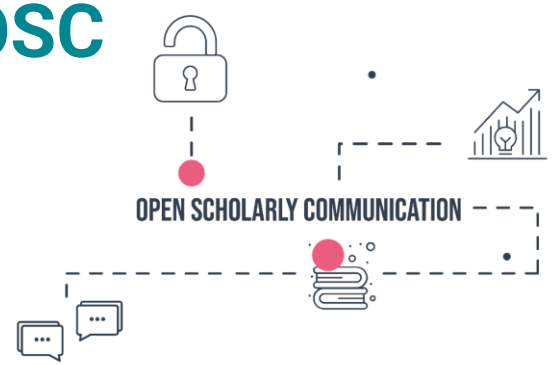
eosc | OA Expert Group: Skills, Training, Rewards, Recognition and Upscaling

Funded by the European Union

eosc | Focus

Integrating open scholarly communication within EOSC

OAEG6: Open Scholarly Communication
TF1: EOSC Technical & Semantic Interoperability
TF2: FAIR Metrics & Digital Objects



Objectives

- Enhance Open Scholarly Communication (OSC) integration within EOSC by uniting stakeholders, aligning with EOSC goals, and respecting diverse origins
- Identify gaps, foster collaboration and set strategic directions for OSC development

eosc | OA Expert Group: Open Scholarly Communication

eosc | Technical and Semantic Interoperability Task Force

eosc | FAIR Metrics and Digital Objects Task Force

Funded by the European Union

OAEG7: Research Software

Objectives

- Implementing an interoperable community driven vision for research software in EOSC
- Map the existing landscape of efforts, initiatives, and infrastructure for research software

eosc | OA Expert Group: Research Software

Funded by the European Union

eosc

“Planning and implementing the exploitation of project results is mandatory.”

Grant Agreement for Horizon Europe, Art. 16

Our support to help you fulfill your obligation as an HE beneficiary

Agenda

1. The EOSC Marco-Roadmap - the starting point
2. The INFRAEOSC Impact Working Group
3. A possible destination for your KERs – the EOSC Federation
4. Processs Proposal
5. Your work during the Winter School

EOSC | Roadmap

The Macro-Roadmap: Background

With support of EOSC Focus
Funded by the European Union

EOSC | Macro-Roadmap

- **Interactive catalogue** of the results of EU projects developing EOSC and the deliverables of the EOSC-A Task Forces
- Inputs are tracked over time and categorised according to selected **high-level objectives** and the respective **Action Areas of SRIA**
- **Joint effort** of EOSC-A, the EOSC-related HE projects, facilitated by EOSC Focus, and the EC
- It is **continuously updated** and extended; all EOSC-related projects will be invited to an interview on behalf of EOSC Focus
- **Almost all projects have contributed**

Macro-Roadmap interviews

- Interview results are mapped onto the **Action Areas defined in SRIA** to create the EOSC Macro-Roadmap
- EOSC-related projects are clustered based on their contributions to the EOSC landscape to:
  - **identify synergies,** technical challenges and potential gaps in terms of EOSC implementation priorities
  - showcase the projects' contribution to achieving **EOSC-related impact,** and
  - showcase the projects' **contribution to EOSC** within the Macro-Roadmap
- **Role of EOSC Focus:** To conduct and analyse the interviews, cluster results, populate the Macro-Roadmap
- **Interviews** with representatives from HE EOSC-related projects **spawned OAEGs**

EOSC Opportunity Area Expert Groups

OA Expert Groups are an **important mechanism for collaboration** on technical and related matters within the EOSC Partnership

All OA Expert Groups have developed work plans and **meet roughly every four weeks**

EOSC Symposium 2024 featured a **panel discussion** dedicated to the collaboration within OA Expert Groups

Winter School 2024, Thessaloniki

- OA Expert Group: Open Scholarly Communication
- OA Expert Group: User and Resource Environments
- OA Expert Group: Research Software
- OA Expert Group: Persistent Identifiers
- OA Expert Group: Metadata, Ontologies and Interoperability
- OA Expert Group: FAIR Assessment and Alignment
- OA Expert Group: Skills, Training, Rewards, Recognition and Upscaling

EOSC | Macro-Roadmap

A fully re-imagined and expanded EOSC Macro-Roadmap was **launched in June 2024**

Type of result

- Report
- Software
- Social impact demonstrator
- Infrastructure
- Toolkit
- Service
- Tool
- Training
- Network

Search

- Macro-Roadmap area
- Macro-Roadmap year
- Country
- Target group
- SRIA Objective
- Type of result
- Task Force
- Project

With support of EOSC | Focus

Funded by the European Union

All resources | Contributions | Project results | Task Force deliverables

EOSC | Technical Interoperability of Data and Services Task Force

Task Force deliverable

Design Considerations for Technical Interoperability in EOSC

EOSC | FAIRCORE4EOSC

Project result

EOSC Research Software APIs and Connectors

BY-COVID

Project result

COVID-19 Data Platform

EOSC | AquaINFRA

Project result

Virtual Research Environment (VRE) for freshwater research

AI4 | EOSC

Project result

Enhanced AI platform for the EOSC

EOSC | Long-term Data Preservation Task Force

Task Force deliverable

LTDP-TF Recommendations & Assertions

eosc | Macro-Roadmap

eosc | Macro-Roadmap

ParlaMint

Funding source	In-kind value	Timeframe	Target group	Scale	Year of reporting
Institutional	€250k–€500k	2020–2024	Researchers	International	2024

Case study

ParlaMint, a CLARIN ERIC flagship project on comparable and interoperable parliamentary corpora, developed uniformly annotated corpora of parliamentary debates of 29 European countries and autonomous regions. ParlaMint I ran between 2020–2021. Its successor, ParlaMint II (2022–2023), not only extended the timespan and geographical coverage of the project, but also provided machine translations into English and improved the usability of the datasets.

CLARIN

Collaborators:

- More than 70 collaborators from 29 European countries and autonomous regions

Added value

- Offers interoperable and comparable **corpora for parliamentary discourse**.
- Enables transnational, cross-lingual, and **multidisciplinary analyses**.
- Provides **insights into societal dynamics** and enhances understanding locally and globally.

Netherlands

eosc | Macro-Roadmap

Data Steward @Unibo

Funding source	In-kind value	Timeframe	Target group	Scale	Year of reporting
Institutional	< €100k	Spring 2022 – ongoing	Researchers	Institutional	2022

Case study

Data Steward @Unibo is a strategic project supporting multidisciplinary research data management. By applying a transversal approach, the project follows the data lifecycle and enhances collaboration between data stewards, privacy officers, and knowledge transfer offices. The initiative is inspired by participation in a Task Force of the EOSC Association, and aligns with the university's digital transformation and commitment to Open Science practices.

ALMA MATER STUDIORUM UNIVERSITÀ DI BOLOGNA

Added value

- **Interdisciplinary collaboration** supports the adoption of FAIR principles, promotes global standards in open research, and ensures the sustainability and local adaptability of EOSC.
- Teaching research data management, data stewardship, and data science at institutions of higher education is essential for **normalising Open Science practices**.
- A disciplinary approach to research data management helps to define specific **interpretations of FAIR principles**.

Italy

eosc | Macro-Roadmap

Spanish COVID-19 Data Portal

COVID-19 Data Portal SPAIN

Funding source	In-kind value	Timeframe	Target group	Scale	Year of reporting
National, regional, institutional	€100k–€250k	First release: Dec 2020	Researchers	International	2022

Use case

The Spanish COVID-19 Data Portal, managed by the Barcelona Supercomputing Center (BSC) facilitates access to resources, tools, and services for researchers using Spanish and European data infrastructures. Aligned with the European COVID-19 Data Portal, it supports data sharing and collaboration, providing guidelines and information to enhance research efforts related to COVID-19.

Barcelona Supercomputing Center

Collaborators:

- Carlos III Health Institute (ISCIII)
- Spanish National Bioinformatics Institute (INB)
- ELIXIR Spain (ELIXIR-ES)

Added value

- Provides information, guidelines, tools and services to support researchers in utilising Spanish and European infrastructures for **data sharing**, particularly the European COVID-19 Data Portal.
- Includes information on scientific publications associated with SARS-CoV-2 and COVID-19 by Spanish researchers, and statistics on the **sequencing of viral and host samples** available in European repositories.
- Brings together and **continuously updates** relevant COVID-19 datasets and tools.

Spain

Impact Working Group of HE INFRAEOSC Projects

Putting Sustainability on top of the agenda

Scope of the HE EOSC Impact WG

The HE EOSC Impact WG would follow the activities of the HE EOSC-related projects towards the **realisation of their EOSC-related impact.**

Objectives

To fully capture the **contribution of the projects** to the EOSC development

To support the **visibility of the projects** and the uptake of their KERs, bridging the connections with the wider EOSC ecosystem and related relevant initiatives

To exemplify the **added value of the projects** and ultimately, of EOSC

HE Impact WG activities

EOSC Winter School
Jan 2025

Sustainability of HE Projects Meeting
Dec 2024

FAIR Impact Synchronisation Workshop
Sep 2024

EC/REA meeting with Projects
Jun 2024

Sustainable Exploitation Planning tool development
Apr 2024

EOSC Winter School
Jan 2024

HE Impact WG Establishment
May 2023

Sustainability of KERs (Key Exploitable Results)

Challenges

- Ensuring funding continuity and effective allocation of resources
- Adapting to evolving regulatory and policy frameworks
- Addressing the lack of sustainability plans for the numerous outcomes produced by EOSC projects
- Overcoming the absence of a unified approach within the EOSC community for integrating and sustaining project outcomes
- Maintaining technological quality and addressing challenges related to rapid obsolescence and high costs

Opportunities

- Fostering stakeholder engagement and promoting collaborative efforts.
- Facilitating technology and knowledge transfer through effective management of intellectual property rights (IPR) and licensing.
- Leveraging environmental sustainability as a key consideration in project planning.
- Exploiting the valuable know-how contributed by experts in EOSC projects to ensure broader dissemination and application.
- Complying with the mandatory requirement to plan and implement the exploitation of project results (Grant Agreement: Article 16).
- Initiating sustainable exploitation planning early during the project lifecycle with active involvement from all partners.

Managing expectations: EOSC Federation BASICS

The EOSC Federation consists of EOSC Nodes	There are several potential destinations for your Key Exploitable Results (KERs)
Each Node is its own legal entity with its specific funding and governance requirements	It is essential to persuade the leadership of the respective Nodes about the added value of your KERs
The EOSC EU Node is being owned by the European Commission	The same principles apply to the EOSC EU Node
The EOSC Federation is collectively governed by the Tripartite, i.e. EC, MS/AC, EOSC-A	For any initiative to receive the EOSC Federation stamp, it must gain approval from 2 DGs, 42 MS/AC, and EOSC-A
The EOSC Federation Handbook is subject to Tripartite approval	This includes 2 DGs, 42 MS/AC, and EOSC-A

Proposal for a Process Approach

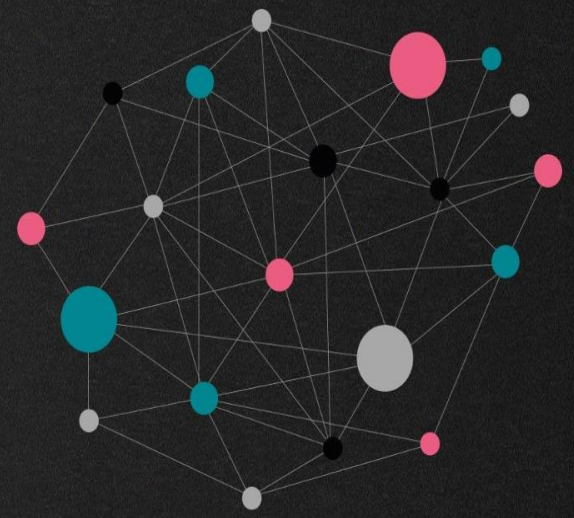
- The EOSC Federation and its elements are **one possible destination** of KERs of INFRAEOSC projects
- It is important to work on KER sustainability **right from the start of the project**
- The work around the **SEP (Sustainable Exploitation Planning)** in the HE Impact Working Group can help systematise/professionalise your approaches
- A **process is needed** to assess the suitability of KERs for the EOSC Federation
- Due to its Tripartite Governance, the **EOSC Association cannot take unilateral decisions**
- **Next step:** EOSC-A to bring this up in the next Tripartite Group meeting

KER quality and relevance are key for becoming part of the EOSC Federation

Leadership, ownership and commitment of the of project beneficiary organisations is essential to ensure KERs uptake and sustainability.

eosc | Tripartite

Building the EOSC Federation



Instructions for breakout discussion

Considering your KERs, how would they contribute to the Pillar/s and the Fedration?

Each breakout session to identify candidate KERs on the EOSC Macro Roadmap, to be proposed to the Tripartite, for adoption by the EOSC Federation (only essential KERs)

In the discussion, try and identify:

- **How will this KER help the EOSC Federation**
  i.e.: what would the EOSC Federation look like with/without this solution,
  i.e. how would this KER be of value to the Federation
- **Who is it for**
  i.e.: who is the target user / provider in the EOSC Federation
- **Where should this KER be adopted in the the EOSC Federation**
  e.g. Handbook, White paper, EU Node, EOSC Nodes, etc.
- **Main organisation/s responsible for maintaining the KER**
- **Sustainability issues**

Break-out-session report (on day III of WS2025)

Template Slide

- Summary of the discussion, challenges/opportunities

- A table of (some of) the discussed KERs (name/project, type of result, value added, challenges)

Number /name of KERs identified	
Type of result (Service, network, infrastructure..)	
Value for the EOSC Federation	
Envisaged challenges for sustainability	

WS 2025 Reporting Template (by 05 Feb. 2025)

Essential KER contributions to the PILLARS

• **Name of KER on Macro Roadmap + Name of Project responsible for the KER**	
• Type of deliverable – guideline, software, service, …	
• Pillar name + Breakout session name	
• Describe how this KER will be of value the EOSC Federation	
• Who is the target user / provider in the EOSC Federation	
• Where should this KER be adopted in the the EOSC Federation (e.g.: Handbook, White paper, EU Node, EOSC Nodes etc. How do the Projects contribute to the pillar	

• What is the plan to implement the envisaged solution? Reflect on:
  • Kind/amount of effort/investment needed for the implementation in the short/medium/long term;
  • Management of the implementation process
  • Are all the needed resources in place;
  if not: Which potential shareholders should be engaged to ensure the process is sustained?	


eosc
Coffee break
10:30-10:45

EOSC Federation Principles

Bob Jones
CERN / EOSC Association

EOSC-A | January 2025

Guiding principles for the EOSC Federation

The vision for EOSC is to put in place a system for researchers in Europe to store, share, process, analyse and reuse, within and across disciplines and borders, FAIR research outputs, such as research data, publications and software

- **System of systems** approach, building on existing (and planned) infrastructures
- **Inclusive**, with low barriers to entry and ease of use
- Participation on a **voluntary** basis in full respect of institutional autonomy and with data/service owners keeping full control on the shared resources and degree of openness (through appropriate registration)
- **Safe and trusted**, with clear rules and monitoring and enforcement mechanism
- **Consensus-based and community-driven** process, for and by the research community

EOSC Nodes

The EOSC Nodes will be the entry points for end users to the entire EOSC Federation.

An organisation may therefore *enrol* its activities as an EOSC Node in the EOSC Federation or *onboard* its services on an existing EOSC Node as a provider.

A **Node** is composed of FAIR datasets and/or services.
A legal entity (organisation / institute) responsible for the Node commits to comply with a set of common rules and regulations defined by the Federation

The input provided and experience gained from a **first wave** of EOSC Nodes will be used to define the first version of the rules and regulations Nodes must comply with as members of the Federation

A set of **minimum requirements** agreed by the Tripartite group (https://eosc.eu/building-the-eosc-federation/).

Goals of the build-up phase of the EOSC Federation

By **Q4 2025** the **EOSC Federation** will …

… consist of **several enrolled EOSC Nodes**

… have established a first operational **governance and organisational structure**, including clear description of the roles and responsibilities of its constituent bodies

… have detailed the **application process** to become an EOSC Node, including assessment of organisational, legal and technical requirements

… have established a first edition of **Federation-wide policies**, such as Rules of Participation, Access and Acceptable Use policies, cybersecurity, privacy and data protection

… have established a first edition of the **EOSC Interoperability Framework**

… have demonstrated cross-Node utilisation of some of the **federating capabilities** such as monitoring, accounting or helpdesk

Guiding principles for the build-up phase

- **Community-driven**: The goals will be further detailed and may be modified and/or additional goals may be included in agreement with the Tripartite governance and the participating organisations. The work plan of the build-up phase will be co-developed by the participating organizations, jointly with the EOSC Tripartite.

- **Flexible and evolutive:** Defining core elements of the EOSC Federation is largely an exploratory journey, that may require adaptation according to the findings and lessons learnt as work progresses.

- **Co-creation:** Key elements of the EOSC Federation (specific requirements for nodes, Federation wide policies) will be co-created together with involved organisations.

- **Community engagement:** Interested organisations not directly involved in the build-up phase shall be informed on relevant developments and regularly

Updates to the EOSC EU Node

Peter Szegedi, European Commission

The EOSC EU Node

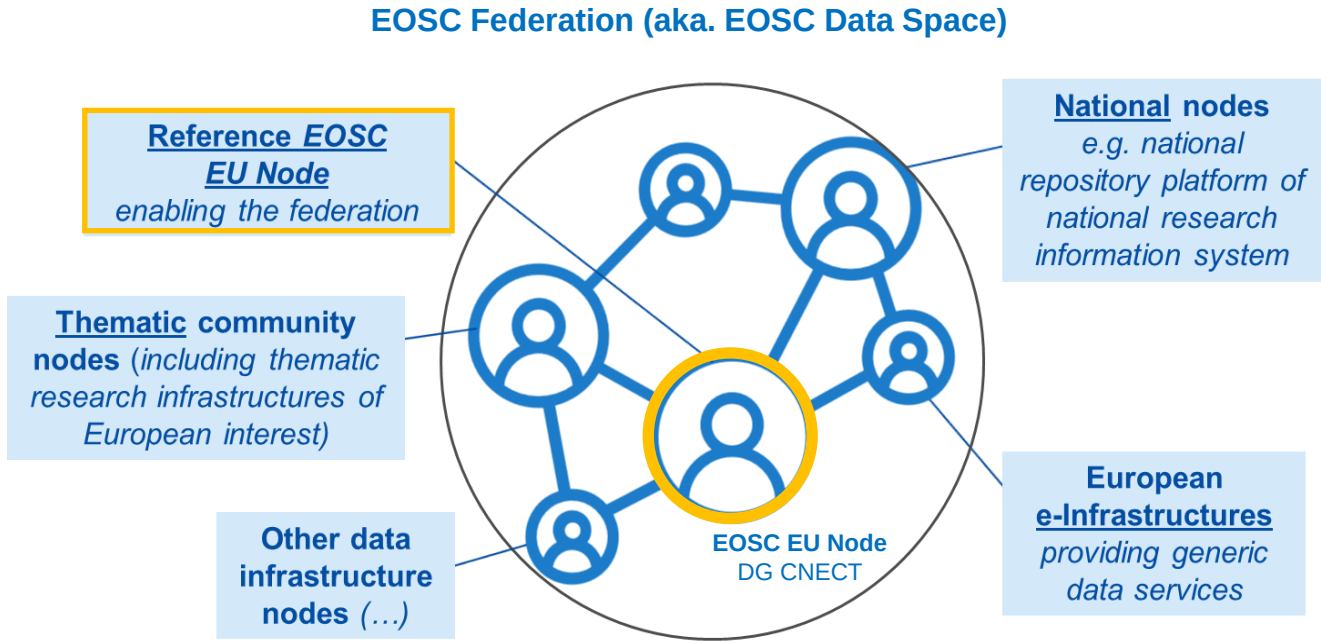
https://open-science-cloud.ec.europa.eu/

Peter Szegedi

DG CNECT C.1

EOSC EU Node's role in the EOSC Federation

- EOSC Federation must be established as a **European Common Data Space** for Research and Innovation
- EOSC Data Space is a distributed system of system with **multiple EOSC Nodes**.
- EOSC Nodes are being formulated as we speak, driven by the EOSC Tripartite Governance via the official Node Candidates Dialogue process
- **EOSC EU Node is just the first reference implementation of an operational node**



EOSC EU Node

- EOSC EU Node has been kick-started by DG CNECT (procurement and deployment)
- EOSC EU Node currently offers core federating capabilities (operations, business-as-usual)
- **The future role of the EOSC EU Node depends on the build-up phase and capabilities of the EOSC Federation**

European Commission

EOSC EU Node: Technical and Public Launch

18 September 2024 – ERA Stakeholders Conference, Brussels, Belgium

During the ERA Stakeholder Conference held on 18-19 September 2024 in Brussels, the upcoming launch of the European Open Science Cloud (EOSC) EU Node was announced. *Iliana Ivanova, the European Commissioner for Innovation, Research, Culture, Education, and Youth, highlighted EOSC and the EU Node in her keynote speech as an example of collaborative efforts aimed at promoting Open Science across Europe*.

10 October 2024 – Technical Launch Event, Brussels, Belgium

This event marked a significant milestone and provided the opportunity for panel discussions surrounding the EOSC Federation build-up and European data spaces.

https://www.youtube.com/watch?v=67mirPt-FhY

22 October 2024 – EOSC Symposium, Berlin, Germany

The recent EOSC Symposium in Berlin (October 21-23) was a landmark event, marking the **official launch** of the EOSC EU Node and showcasing its potential to enhance the development of an integrated and effective digital research ecosystem.

https://open-science-cloud.ec.europa.eu/

European Commission

Unique Features - New User Experience

- **Authentication, Authorization, Accounting (AAA)**
  - eduGAIN and EU Login (with eIDAS) integration
  - Policy-based Access Control (PBAC) retrieving user attributes from home IdP
  - Virtual Credits and Wallets (personal, group)
- **Contributor tiers (discoverable, onboarded, native)**
  - Resource Hub collecting 127 mil research objects from OpenAIRE, CORDIS, data.europa.eu, Software Heritage and more
  - Curation service for resource object owners
  - Recommendations, Favourites, Persistent Identifiers
- **Integrated User Space with Automated deployment workflows**
  - TOSCA templates into Virtual Machines and Kubernetes containers
  - Application and Data to Infrastructure
- **Monitoring and Helpdesk**
  - Availability dashboard and support for end-users

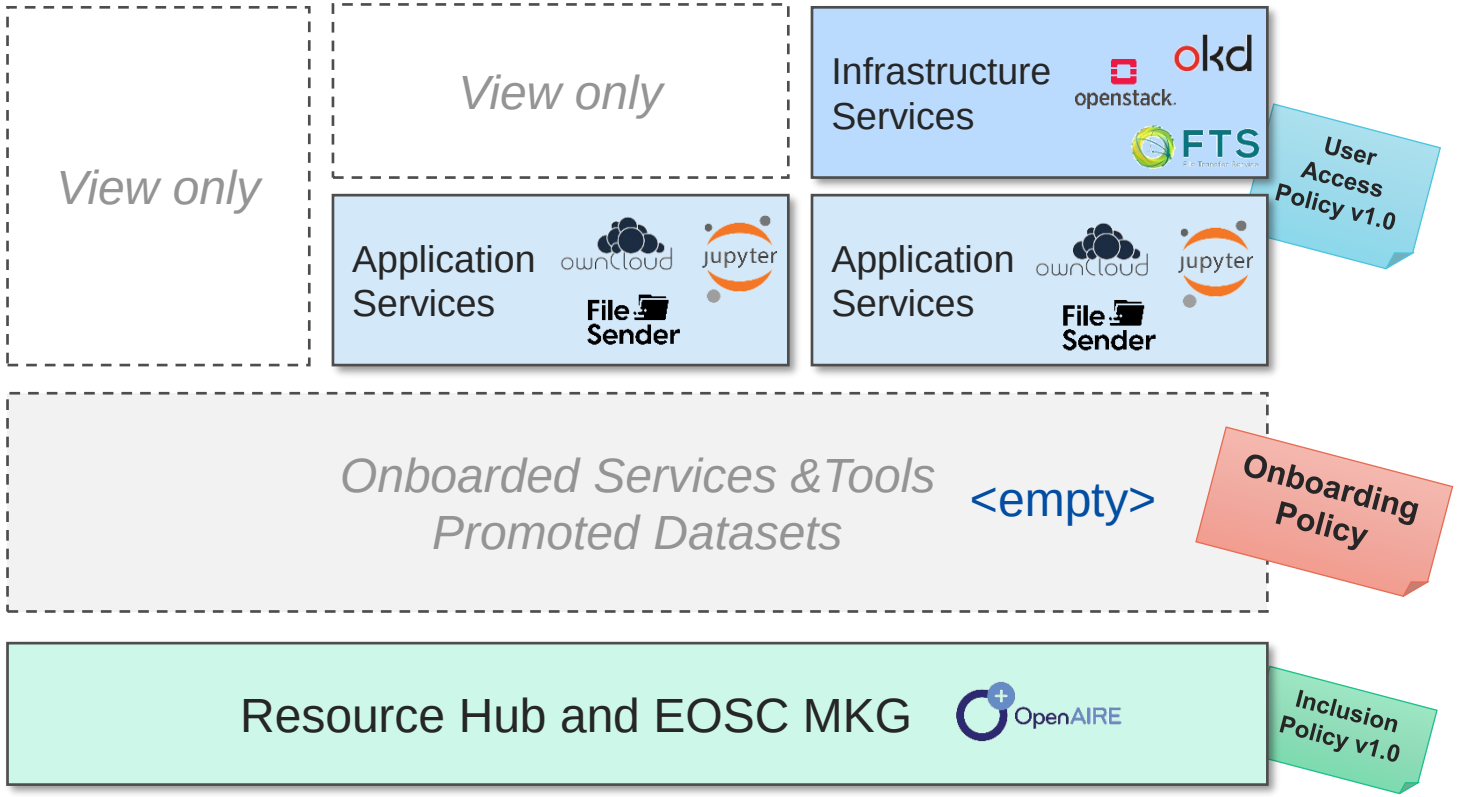
Access Policy and Contributor Tiers

Contributor Tiers

Tier-1
Native

Tier-2
Onboarded

Tier-3
Discoverable



AP-A
View only

AP-A1
100 Credits

AP-B
500/1000 Credits

Access Policy Groups

Services procured for the EOSC EU Node

ORDERING FUNCTION FOR GATED RESOURCES

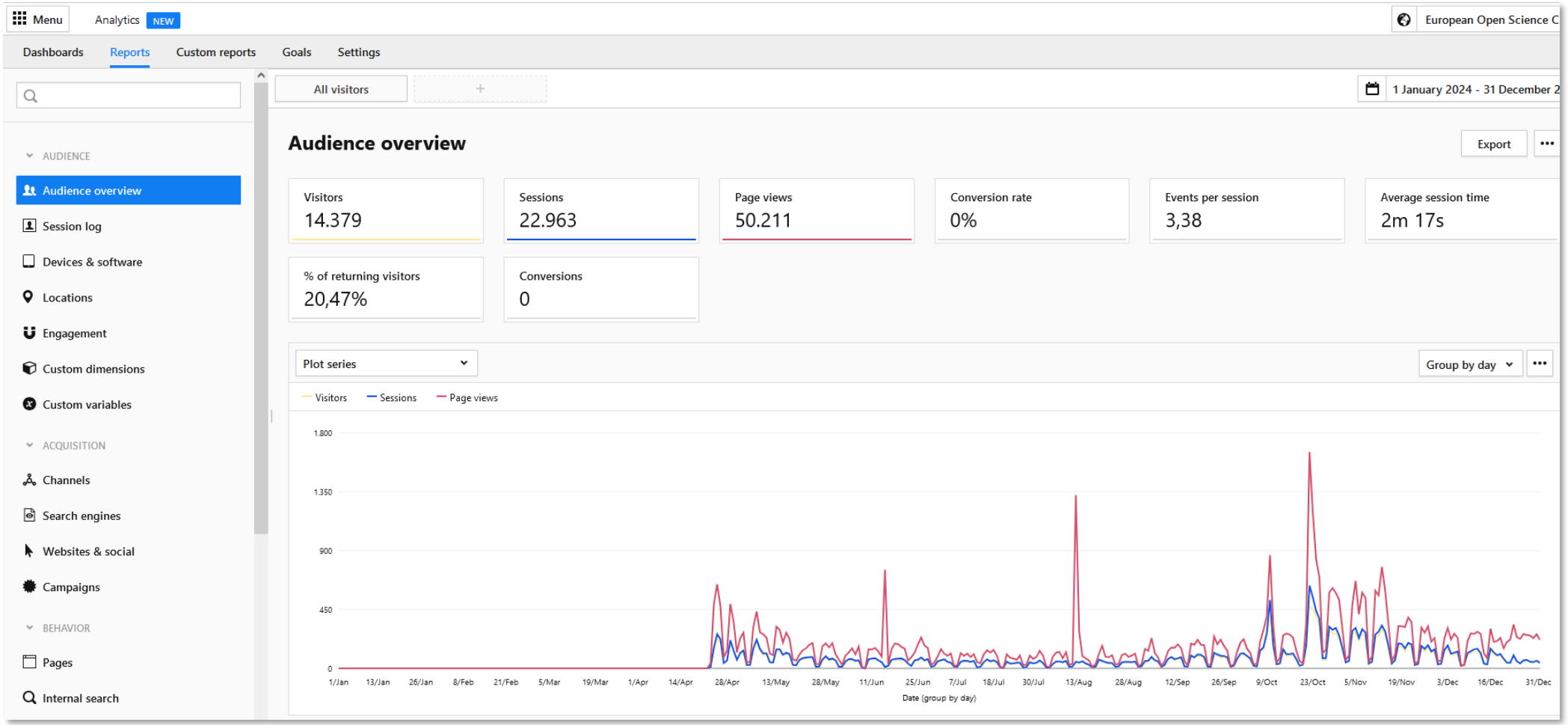
Planned to be open in November 2024

Virtual credits and access model

ATTRIBUTE-BASED AAA

European Commission

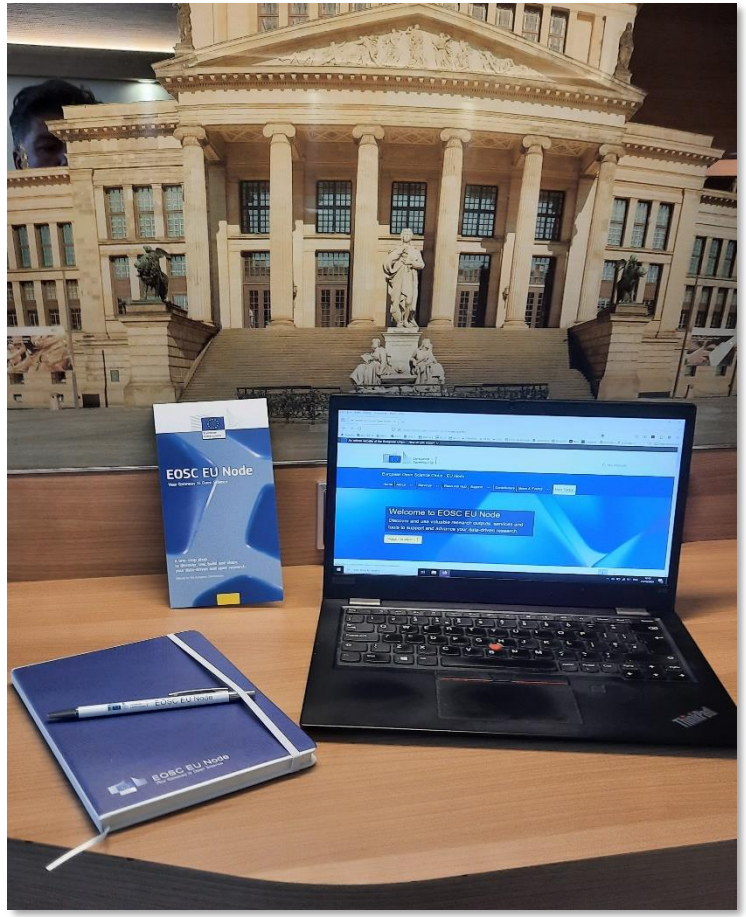
Visitors and Page views



European Commission

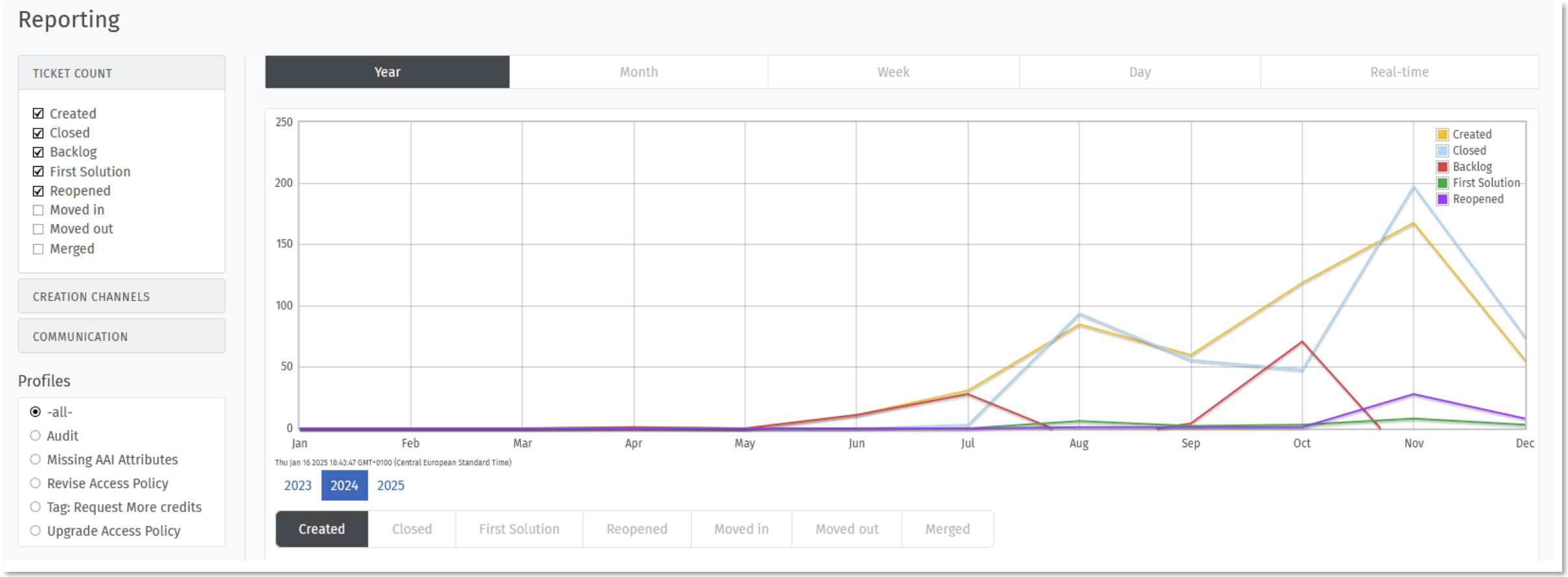
Users in numbers *

- **1816** registered users
  - 37 Group projects
- **265.400** Virtual Credits for individual users
  - 84.000 Virtual Credits for group projects
- Policy Groups:
  - Policy Group A (0 credits – view only): 28.5%
  - Policy Group A1 (100 credits - apps): 53.6%
  - **Policy Group B (500 credits – full access): 17.9%**



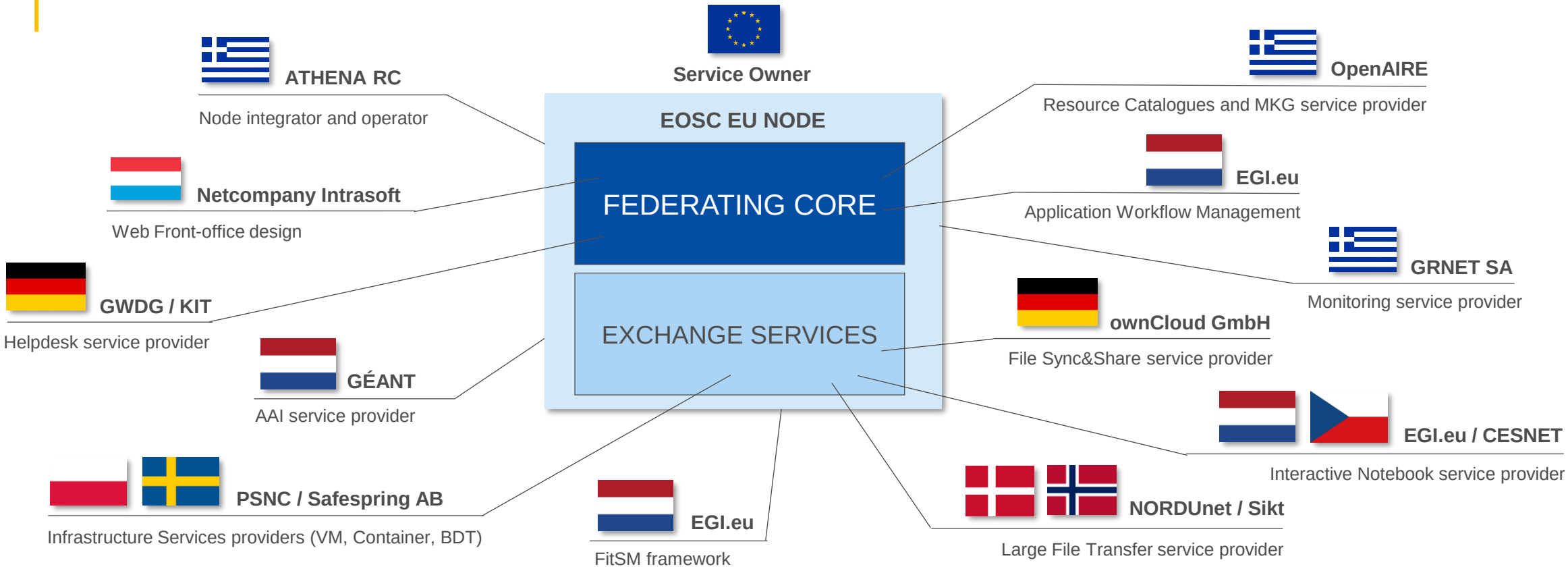
** 15 January 2025*

Helpdesk tickets



European Commission

EOSC EU Node – Contractors



CURRENT OR PLANNED NODE CANDIDATES

EU Node | Polish Node | Czech Node | German Node

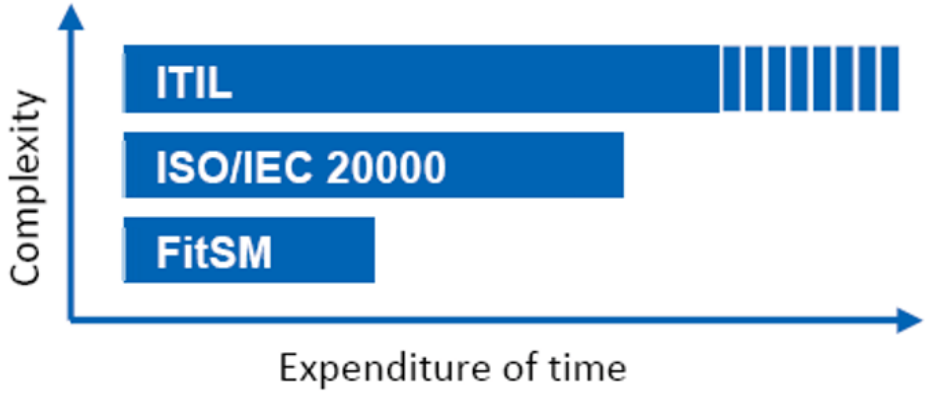
EOSC Provider vs. Node Operator

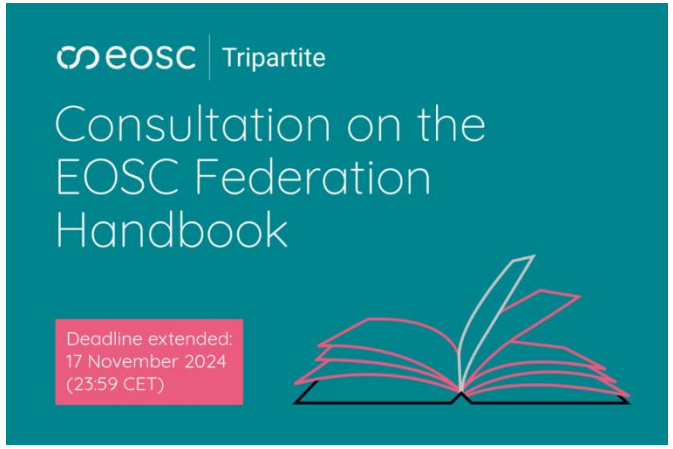
	EOSC Node Operator	EOSC Provider
Participation method	**Enrolled into the EOSC Federation**	**Onboarded to an EOSC Node**
Compliance to EOSC Federation level policies	Yes	Yes
Has its own policies	Acceptable Use Policy, User Access Policy, Privacy Statements	User Access Policy, Privacy Statement
Entry point	To the entire EOSC Federation	To the particular service/data of the Provider
Onboarding capability	May be able to onboard third-party EOSC Providers (if not a "single purpose Node")	No onboarding capability (may use underlying providers to offer the service)
Representation	Representing the EOSC Federation	Representing its own services
Responsibility	Responsibility for their own services and onboarded Providers	Responsibility only for their own services
Awareness	Awareness of all the other EOSC Nodes and their services in the Federation	Awareness of its own services and perhaps the other services of its EOSC Node
Main value proposition	Unique features of the Node: geolocation, discipline, service/data portfolio, user community	Unique feature of the services/data sets, use cases, impact, etc.
Cost of operations	Operations of its own native services and the middleware capabilities for onboarded Providers. (May also contribute to the core federating capabilities of the EOSC Federation)	Operations of their own services plus connecting to its EOSC Node middleware (core)
Technical capabilities	Core federating capabilities interoperating with other EOSC Nodes.	Interoperating with the minimum required core capabilities of its EOSC Node
Access to INFRAEOSC funding	Yes	Yes

FitSM-based Operations in EOSC Handbook

- Recommendation to EOSC Nodes is to operate a Service Management System (SMS) according to ITIL compatible standards and industry best practices.
- The EOSC EU Node uses FitSM-based SMS provided by EGI.eu for both EOSC Core and Exchange service operators.

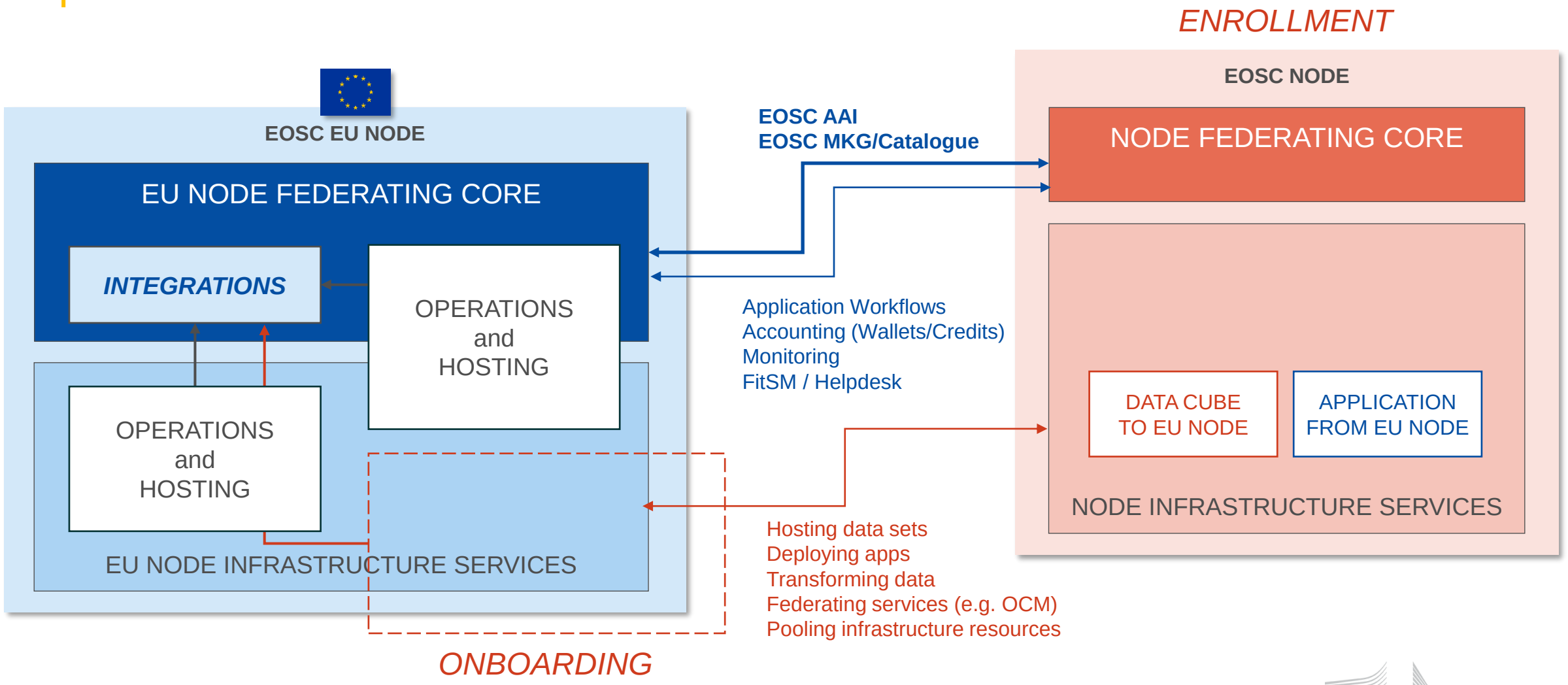
https://eosc.eu/eosc-federation-handbook/





European Commission

EOSC EU Node – Enrolment Modalities



Minimum requirements

Onboarding (Service End-point/API)

- **Web/UI integration**
- **Use EOSC AAI (AuthN)**
- **Automatic inclusion in EOSC MKG**
- **Respect policy groups and entitlements (AuthZ up to SP) + AUP / UAP**
- **Allocate virtual credits**
- **Use order management – dispatch to SP**
- **ITIL/FitSM based ops (SOC + CSIRT / GDPR)**

Opt-in

- Tools Hub for auto-deployment (AWM)
- Helpdesk as a Service (Level 1 dispatch only)
- Monitoring as a Service (probes to be installed by SP)

Enrolment (Node End-point/API)

- **Common identity space (AARC BPA compliance) / *MyAccessID***
- **EOSC MKG inclusion (catalogues) / *OpenAIRE***
- **ITSM (ITILv4 compliant) / *FitSM***
- **Security compliance (ISO27k or similar) + CSIRT / GDPR**
- **EOSC Policy compliance AUP / *RoP? (sign MoU?)***

Opt-in

- Virtual Credits / Wallets
- Helpdesk federation
- Tools Hub / Multi-node workflow orchestration (AWM)
- Infrastructure-level federations (e.g., OpenStack/Kubernetes)
- Application-level federations (e.g., OCM)

Federating Capabilities and “aaS” offers

	EOSC EU Node	Offer “as a Service”	Federating capability
User Space - Web	ec.europa.eu	*FOSS will soon be released*	n/a
Authentication and Authorization Infrastructure	IdPs, Single-Sign-On, Federated login	Hosted infrastructure proxy	AAI federation, core proxy
Resource Catalogues and Registry Services	Catalogues and EOSC Knowledge Graph	Hosted catalogues, KG filtering	Actual catalogue of the federated entities (nodes)
Application Workflow Management	Orchestration and deployment into VM/OKD	Deploy into multiple cloud infrastructures	Exchange of recipes and execution
Monitoring/Accounting	Virtual Credits model and basic monitoring	Separate instance with probes to install	Monitoring information exchanged for accounting mostly
Helpdesk/SMS	Level 1,2,3	Level 1 and dispatch	Automatic distribution of tickets from single user interface

Thank you!

European Commission

Update from the EOSC Federation build-up phase

EOSC Winter School 2025

Javier Lopez Albacete
European Commission
Open Science and Research Infrastructures

#EOSC #EOSCTripartite
#OpenScience #EUResearchArea

Research and Innovation

Timeline towards the build-up phase of the EOSC Federation

Establishment of the EOSC Tripartite Group

Tripartite document on minimum requirements for EOSC nodes

Questionnaire for organisations interested in joining the EOSC Federation

Tripartite Governance
Approval of plans for build-up phase of the Federation

Dialogue phase

1st stage (Dec)
Identification of 1st wave of candidate nodes

2nd stage(Jan-Feb)

Tripartite Governance
Approval of potential candidate nodes

Tripartite Governance
Decision on candidate nodes and way forward

Kick-off the build-up phase

- EOSC EU node
- 1st wave candidate nodes
- Tripartite Group

2nd enrolment wave (tbc)

EOSC Symposium 3-5 Nov

Q2 2024 | Q3 2024 | Q4 2024 | Q1 2025 | Q2-Q4 2025

EOSC Symposium – Launch of EOSC EU Node

Drafting of the **EOSC Federation Handbook** [lead by EOSC-A]

European Commission

Goals of the build-up phase of the EOSC Federation

By **Q4 2025** the **EOSC Federation** will …

… consist of **several enrolled EOSC Nodes**

… have established a first operational **governance and organisational structure**

… have detailed the **application process** to become an EOSC Node

… have established a first edition of **Federation-wide policies**

… have established a first edition of the **EOSC Interoperability Framework**

… have demonstrated cross-Node utilisation of some of the **federating capabilities**

By **Q4 2025** a **user of the EOSC Federation** will be able to …

… access the resources offered through the EOSC Federation through (possibly) a **single EOSC sign-on**

… search and find the resources through a **common EOSC catalogue of resources**

… access **high-value, FAIR and machine actionable** research data and other outputs from diverse domains

Goals of the build-up phase of the EOSC Federation

By **Q4 2025** **communities interested to contribute to the EOSC Federation** will be provided with …

… detailed **practical information** about the key aspects and components of the EOSC Federation, such the governance, operations, policies, procedures, technical specifications and standards (included in the **EOSC Federation Handbook**)

… **guidance** on the procedures for enrolment of Nodes and onboarding of resources,

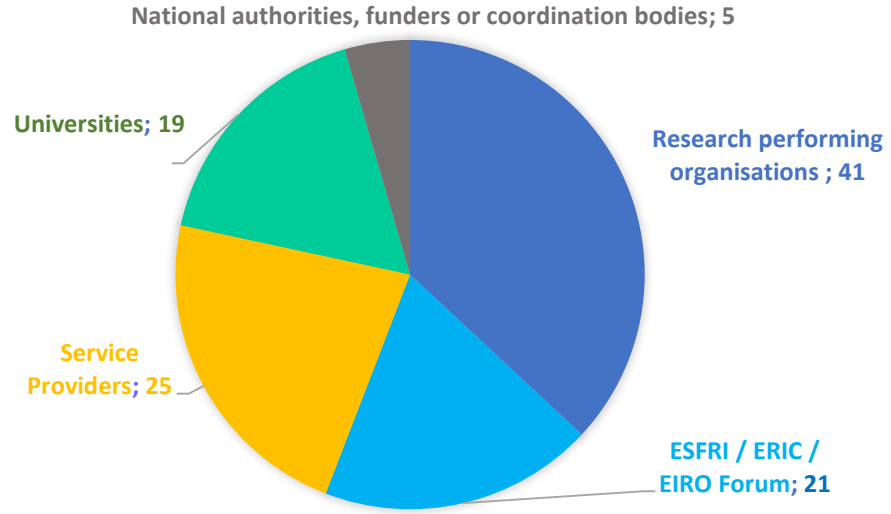
… demonstration of multi-node end-to-end **use cases** that showcase the added-value of the EOSC Federation

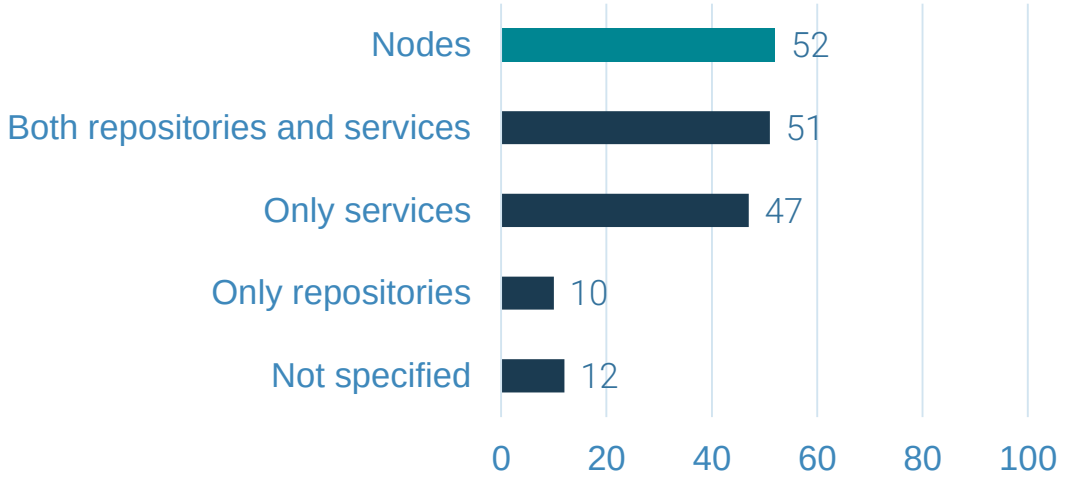
… continuous opportunities to be **consulted** in the stages of development of the build-up phase

Questionnaire for organisations interested in joining the EOSC Federation

[Open: 12 Jun 2024 - 18 Aug 2024 (late submissions accepted until 31 Aug)]

- **Goal**: To explore the interest and readiness of the community to participate in the build-up phase of the EOSC Federation and to collect their views about their possible contributions to it.
- **121 submissions:**





- A **staged approach** consisting of sequenced enrolling/onboarding waves + engagement plan was agreed:
  - **1st wave of candidate nodes** entering the build-up phase in Q1/Q2 2025.

European Commission

29 potential candidate Nodes
approved by Tripartite Governance

Life science
- BBMRI ERIC
- Elixir Hub
- EMBL
- Euro-BioImaging ERIC
- Instruct ERIC

Social Sciences & Humanities
- ARIADNE
- CESSDA
- CLARIN
- ERIC

Environment
- ACTRIS ERIC
- CNR (Blue-Cloud)

Photon & Neutron
- ESRF
- (PANOSC)

Astroparticle physics
- CERN
- CNRS-LAPP (ESCAPE)

Multinational e-infra
- EUD
- AT

National scope/mandate
- AT — ACONET / EOSC Support Office
- DE — NFDI
- DK — DeiC
- FI — CSC – IT Center for Science
- FR — CNRS (Data Terra)
- HR — SRCE
- HU — HUN REN
- IT — Foundation ICSC
- LU — Lux NDS
- NL — SURF
- NO — NRIS
- PL — NCN
- SE — NDS
- SI — ARNES
- SK — CVTI SR
- UA — BITP

Dialogue phase

1st stage (Dec 2024) – confirm interest to join build-up phase

- **29 potential candidate nodes**; EOSC Tripartite Group; EU Node representatives
- Topics: Expectations from organisations, levels of commitments and resources, possibilities for community coordination.
- Followed-up by an additional questionnaire

2nd stage (Jan-Feb 2025) – technical and organizational deep dives

- **Potential candidate nodes (reduced list);** EOSC Tripartite Group; EU Node representatives
- Topics: Organisational capacities, technical requirements and gaps; concrete objectives and challenges
- Including one-on-one meetings.

Proposal to Tripartite Governance of a reduced list of a **1st wave of candidate nodes** to kick-off the build-up phase.

European Commission

General criteria for the sequencing/identification process

- Focus on defining, testing and implementing **federating capabilities and the enrolment process**
- **Technical and organizational readiness** to contribute to the goals of the build-up phase already from Q1/Q2 2025 through **voluntary** work.
- **Maturity** and **diversity of resources** that can be offered through the EOSC Federation.
- **Inclusivity** and **diversity** of resources, geographic scope, thematic research communities and types of organisations, while encouraging **community coordination** and synergies.

Guiding principles for the build-up phase

- **Community-driven**: The work plan of the build-up phase will be co-developed by the participating organizations, jointly with the EOSC Tripartite.
- **Flexible and evolutive:** Defining core elements of the EOSC Federation is largely an exploratory journey, that may require adaptation according to the findings and lessons learnt as work progresses, in co-creation with involved organisations.
- **Community engagement:** Interested organisations not directly involved in the build-up phase shall be informed on relevant developments and regularly consulted to collect their views on the main elements of development of the EOSC Federation.
- **Successive enrolment waves** will be put in place, possibly already in 2025

!! ANNOUNCEMENT – Save the date !!

*The **2025 Coordination meeting of EOSC-related projects funded under Horizon Europe*** will take place **26-27 June** in Brussels.

Save the date! Looking forward to

- Meeting you all in Brussels
- Receiving your suggestions for the programme

European Commission

Thank you!

European Commission

Questionnaire

Open: 12 Jun 2024 - 18 Aug 2024 (late submissions accepted until 31 Aug 2024)

1. Do you intend to offer your institutional resources through a future EOSC Node of the EOSC Federation?
2. Do you wish to join the build-up phase with the intention to build a potential future EOSC Node?
3. Are you able to identify the legal entity that would assume legal responsibility for the potential EOSC Node?
4. Please list the resources your organisation intends to make available via the node. For each entry give the Technology Readiness Level (TRL 1-9), any restrictions that apply to use of the resource, and describe their added value to the EOSC Federation.
5. Are all these resources owned/operated by your organisation?
6. Please estimate when you would be able to start offering resources to the EOSC Federation?
7. What support/competences/training will be offered to the users of the resources made available via the potential node?
8. What is the added value that you see for you and for your users in contributing to the EOSC Federation?
9. Please add any additional remarks you would like to make about the EOSC Federation
10. Upload supporting documents (optional)

41 Research Performing Organisations

BE	ARIADNE RI
BE	EBRAINS AISBL
BE	Meise Botanic Garden
CH	Paul Scherrer Institute
DE	DESY
DE	FAIR
DE	GSI
DE	Helmholtz Centre Potsdam, GFZ
DE	Helmholtz-Zentrum HZDR
DE	IBG-5, Institute for Bio- and Geosciences
DE	NFDI
DE	GKFI e.V.
DE	ZB MED Information Centre for Life Sciences
ES	ALBA Synchrotron
ES	CREAF
ES	European Solar Telescope Fundacion Canarian
FI	Finnish Geospatial Research Institute FGI-NLS
FR	CNRS
FR	CNRS
FR	CNRS-CCSD
FR	IFREMER
FR	INRAE
FR	Inria
FR	Institut Français de Bioinformatique
FR	INSERM
FR	Observatoire Astronomique de Strasbourg
FR	Observatoire de Paris-PSL
FR	Synchrotron SOLEIL
HE	CERTH/ EVERSE
HU	Hungarian Research Network
IT	CNR
IT	CNR - H2IOSC
IT	CNR - IMAA
IT	Elettra Sincrotrone Trieste
IT	Fondazione ICSC
IT	INAF
IT	INFN
IT	OGS
IT	Trust-IT Services
NL	Naturalis
UA	BITP

19 universities

AT	TU Wien
BE	KU Leuven
CH	ETH Zürich
IT	Scuola Normale Superiore
IT	University of Catania
IT	Università del Piemonte Orientale
IT	University of Milan-Bicocca
IT	University of Bologna
IT	Università di Torino
IT	Politecnico di Milano
IT	Università degli Studi di Milano
IT	Università per Stranieri di Siena
IT	Università degli Studi di Padova
IT	Università degli Studi della Tuscia
NL	Utrecht University
NL	Vrije Universiteit Amsterdam
PL	Gdańsk University of Technology
PL	University of Warsaw
UK	University of Dundee

25 service providers

AT	EODC
BE	Belnet
CH	Switch
CZ	CESNET
DK	DeiC
ES	CSUC
FI	CSC
FI	EUDAT
HE	OpenAIRE
HR	SRCE
IT	GARR
LU	LNDS
NL	SURF
NL	EGI Foundation
NL	GÉANT Association
NL	GO FAIR Foundation
NO	NRIS
NO	Sikt
PL	ACC Cyfronet
SE	Swedish National Data Service
SI	Institute of Information Science
SI	ARNES
SK	CVTI SR
TR	Tubitak Ulakbim
UK	Jisc

21 EIRO Forum / ERIC / ESFRI*

FR	Inria (SLICES-RI)
IO	ACTRIS ERIC
FR	EURO-ARGO ERIC
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IT	METROFOOD-RI
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FR	ESRF
BE	OPERAS AISBL
IO	CESSDA ERIC
IO	CLARIN ERIC
IO	DARIAH-EU
IO	ESS ERIC

* landmark, project or science cluster

5 national authorities, funders, or coordination bodies

AT	EOSC Support Office Austria
BE	Flemish Government, Department of Economy, Science & Innovation (EWI)
FR	French Ministry of Higher Education and Research, representing the Recherche Data Gouv consortium
IO	European Commission DG CNECT
PL	National Science Centre Poland (NCN)

+ 10 organisations that have not given their consent to share their name

Questionnaire

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EOSC Federation Handbook update @ Winter School 2025

Andy Götz on behalf of **Mark Dietrich** + **Miguel Rey**, **Bob Jones**, **Karel Luyben**

EOSC Winter School, 21 January 2025

EOSC Federation Handbook co-creation

Aim

Prepare the Handbook for the EOSC Federation of Nodes which covers the essential aspects of the purpose of the federation, what a node is, how to join, rules of governance, value proposition and rules of participation

Who

Driven by the EOSC-A and contributors from all interested parties (EC, Member states/ACs, RIs, EOSC-A members, etc.) who volunteered to participate in the co-creation of the Handbook

Progress

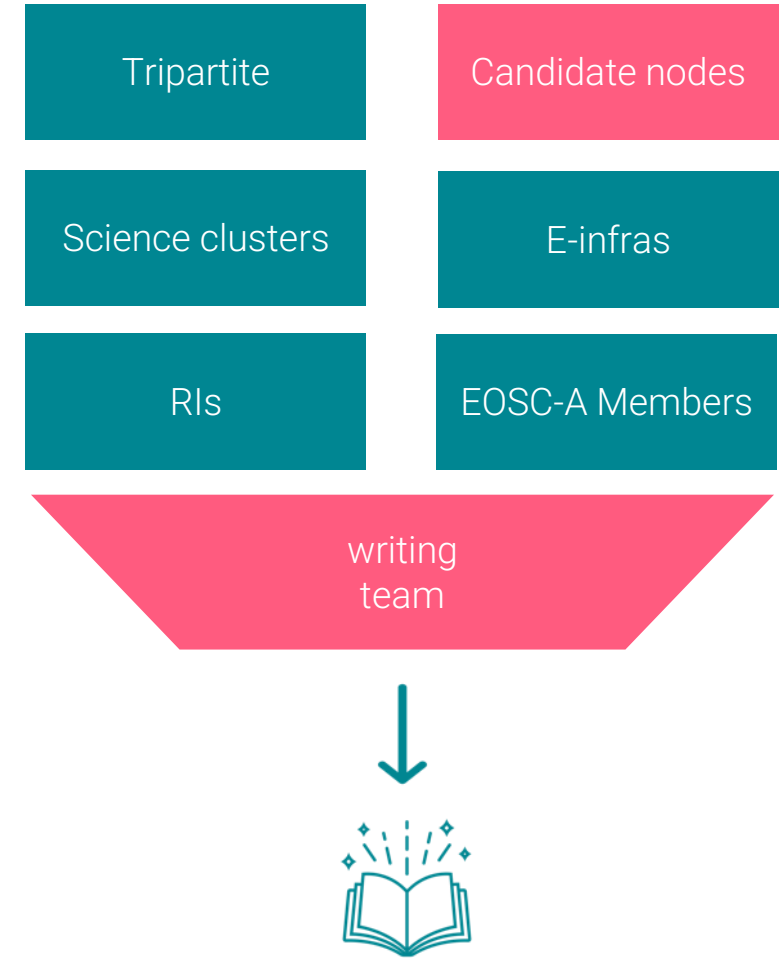
The first full draft of the handbook have been written collaboratively through weekly meetups, and monthly review meetings led by the EOSC-A

EOSC Federation Handbook - actors

Open and Collaborative Work Plan

Actors

- Tripartite governance (**Reviewers**)
- Member states (**5 Writers**, **1 Reviewer**)
- EOSC-A membership (**15 Writers**)
- RIs/Science clusters (**5 Writers**)
- EOSC projects (**10 Writers**)
- E-infras (**5 Writers**)
- EOSC-A members (**Open consultation**)
- Candidate nodes (*not identified yet*)



EOSC Federation Handbook
(endorsed by all EOSC stakeholders)

What is a Federation?

- **Federalism is a philosophy, doctrine and arguably an ideology that favors a distinct territorial pattern of government, one that combines the centralization of some political powers and the decentralization of others.**
- **A federation may be defined as a political system in which at least two territorial levels of government share sovereign constitutional authority over their respective division and joint share of law-making powers**

*The **etymological** origins of **federalism** derive from "**foedus**," the Latin for "**alliances**" or "**leagues**" of **states** that **joined together in pacts, covenants or agreements**, …*

https://pesd.princeton.edu/node/431

Encyclopedia Princetoniensis

EOSC Federation Handbook progress since Symposium

First full draft now available

- **31 October 2024** –
  - Completed community survey on Chapters 1-3 and outline of Chapters 4-6
- **2 December 2024** –
  - Full draft with Chapters 4-6 sent to Tripartite + Reviewers
- **14 January 2025** –
  - **Chapters 1-3** with feedback from survey to Tripartite
  - Address comments which are within scope of the Handbook
  - Provide a list of comments which need to be escalated to the Tripartite
- **20 January 2025** –
  - Distribute full draft with feedback from survey integrated by editors (do not wait for Tripartite) to Winter School and Tripartite
- **31 January 2025** –
  - Feedback from Winter School on how to integrate output from EOSC projects
- **February 2025** – new draft integrating feedback from Winter School + Tripartite
- **October 2025** – new draft integrating feedback from first EOSC Nodes

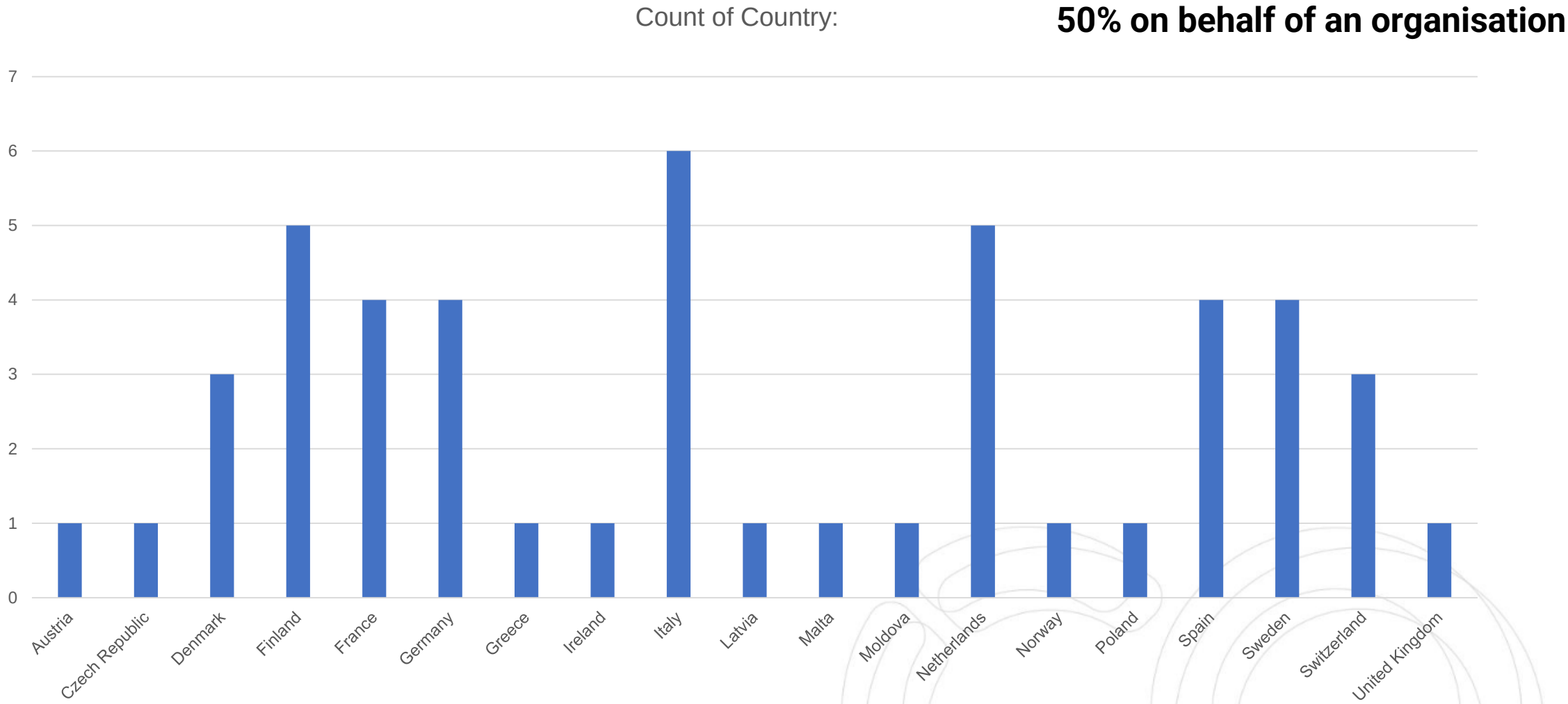
Open Consultation results

- Community survey in October + November 2024:
  - **48 responses** with **~150 comments**
- Survey covered Chapters 1-3 (draft) and Chapters 4-6 (outline)
- Full draft distributed to Winter School has feedback integrated in Chapters 1-3 following this approach :
  1. Address comments which are within scope of the Handbook
  2. Escalate comments which required feedback from Tripartite,
  3. Keep a list of comments which cannot be treated now

⍰ Waiting for review from Tripartite on Ch1-3 feedback

Open Consultation – 48 answers by 31/11/2024

Breakdown by country



50% on behalf of an organisation

Feedback from Open Consultation

- **Chapter 1 – Purpose**
  - 37 comments, 17 integrated
  - No comments escalated to Tripartite
- **Chapter 2 – Governance**
  - 44 comments, 4 integrated, 2 moved to Ch6
  - **4 comments escalated to Tripartite**
- **Chapter 3 – Operational structure**
  - 34 comments, 17 integrated
  - **3 comments escalated to Tripartite**

Feedback from Open Consultation

- **Chapter 4 – Node architecture**
  - 27 comments, all integrated
  - **1 comment escalated to Tripartite**
- **Chapter 5 – Scientific resources**
  - 24 comments, 20 integrated, 4 kept for future
  - No comments escalated to Tripartite
- **Chapter 6 – Policies**
  - 18 comments, 13 integrated, 5 kept for future
  - No comments escalated to Tripartite

Examples of Feedback from Open Consultation escalated to Tripartite

- **Chapter 2 – Governance**
  - *How will a Node exert influence: they pay the bill for consequences of decisions making but are not a formal part of process. Lacking: clear responsibility for (updating) key elements eg RoP. Lack section on liability. Clarify EOSC stakeholder community. Suggest SLS, and SLA only on federation fabric*
- **Chapter 3 – Operational structure**
  - *Not clear who does operations? Central team? In-kind node contribs? Outsourced party? Timeline unclear: docs/policies to be agreed before fed starts, in many steps (eg AAI before data movement). Not mentioned in doc. Contract = financial obligation. Is there? Nodes getting money? Otherwise not needed*

Will the Handbook enable the EOSC Federation to achieve it's objectives?

Based on 48 answers by 21/11/2024

- **Agree**
  - 40%
- **Strongly agree**
  - 19%

59% Agree

- Neutral = 27%

- **Disagree**
  - 10%
- **Strongly disagree**
  - 4%

14% Disagree

Chapters 4, 5 and 6 – written and reviewed

Writers split into 3 groups and parallelized the work:

- **Chapter 4** – EOSC Federation and Node architecture
  - edited by Miguel Razon-Rey
- **Chapter 5** – Scientific Resources
  - edited by Andy Götz
- **Chapter 6** – EOSC Federation Policies
  - edited by Mark Dietrich

- **17 January** - **Tripartite** extensive review of new chapters

Next steps towards a final full draft of the EOSC Federation Handbook

1. **Editors + Writers to integrate feedback from Tripartite on Chapters 4-6**
2. **Tripartite** to give feedback on **Community Survey comments to Chapters 1-3**
3. **Editors** to review language to ensure a common and easy to understand style
4. **Winter School 2025** to identify outputs which could be eventually accepted to be integrated in the handbook
5. **Editors** compile useful feedback for future drafts

Useful insights gained writing the Handbook

- Very useful exercise to finally define and agree (or disagree) on what the EOSC Federation is / will be
- Need more discussion to agree on what typical nodes will be: (1) a limited number of aggregators of scientific and IT resources or (2) a large number of small non-aggregated resources?
- Final version of Handbook must reflect vision of **Tripartite, EOSC Nodes** and the **Community**

EOSC Federation Handbook Update - Conclusion

1. Finish full draft and submit to Tripartite
2. Work with INFRAEOSC projects to see if some outcomes can be integrated in the Handbook (cf. request by Ilaria)
3. Produce an infographic explaining the EOSC Federation
4. First Nodes to review and prepare next draft

EOSC Federation Handbook Acknowledgements

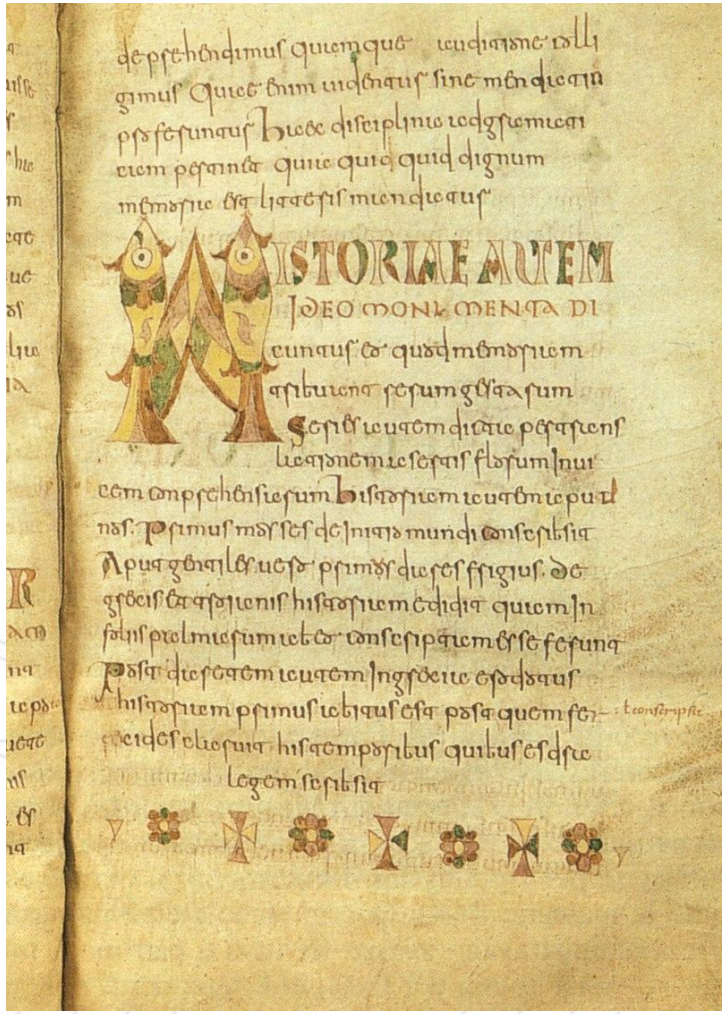
The Community i.e. YOU

Tripartite Group

EOSC Editors, Writers + Reviewers

	Name
Owner	EOSC Tripartite Governance
Editors	Andy Götz (EOSC-A), Mark Dietrich (EGI), Miguel Rey Mazón (TU Graz), Karel Luyben (EOSC-A), Bob Jones (EOSC-A)
Writers	Abdulrahman Azab (Sikt/Sigma2), Susanne Blumesberger (Uni Wien), Korbinian Bösl (Uni Bergen), Sally Chambers (DARIAH-EU), Helen Clare (JISC), Oscar Corcho (UPM), Matthew Dovey (JISC), Annika Glauner (ETH Zurich), Petr Holub (BBMRI-ERIC), Emma Lazzeri (CNR), Josefine Nordling (CSC), Jana Pavlic-Zupanc (BBMRI-ERIC), Nanette Rissler-Pipka (MWS), Martino Romaniello (ESO), Davide Salomoni (INFN), Diego Scardaci (EGI), Carlos Oscar Sorzano (Instruct-ERIC), York Sure-Vetter (NFDI), Jonathan Tedds (ELIXIR), Mark van de Sanden (SURF), Kannan Venkatesh (ICHE), Alen Vodopijevec (CESSDA).
Reviewers	Victoria Dominguez Del Angel (INRIA), Daniel Garijo (UPM), Natalia Galica (NCN PL), E. Gonzalez (UPM), Paolo Manghi (OpenAire), Peter Maccullum

May the **EOSC Federation Handbook** have a **long life** like the **Etymologiae** by **Isidore of Sevilla** i.e. 1000+ years **!**



Panel Discussion
Convergence towards the EOSC Federation

Bob Jones, EOSC-A Director
Javier Lopez Albacete, European Commission
Peter Szegedi, European Commission