

THE EUROPEAN OPEN SCIENCE CLOUD (EOSC) – A SHORT INTRODUCTION

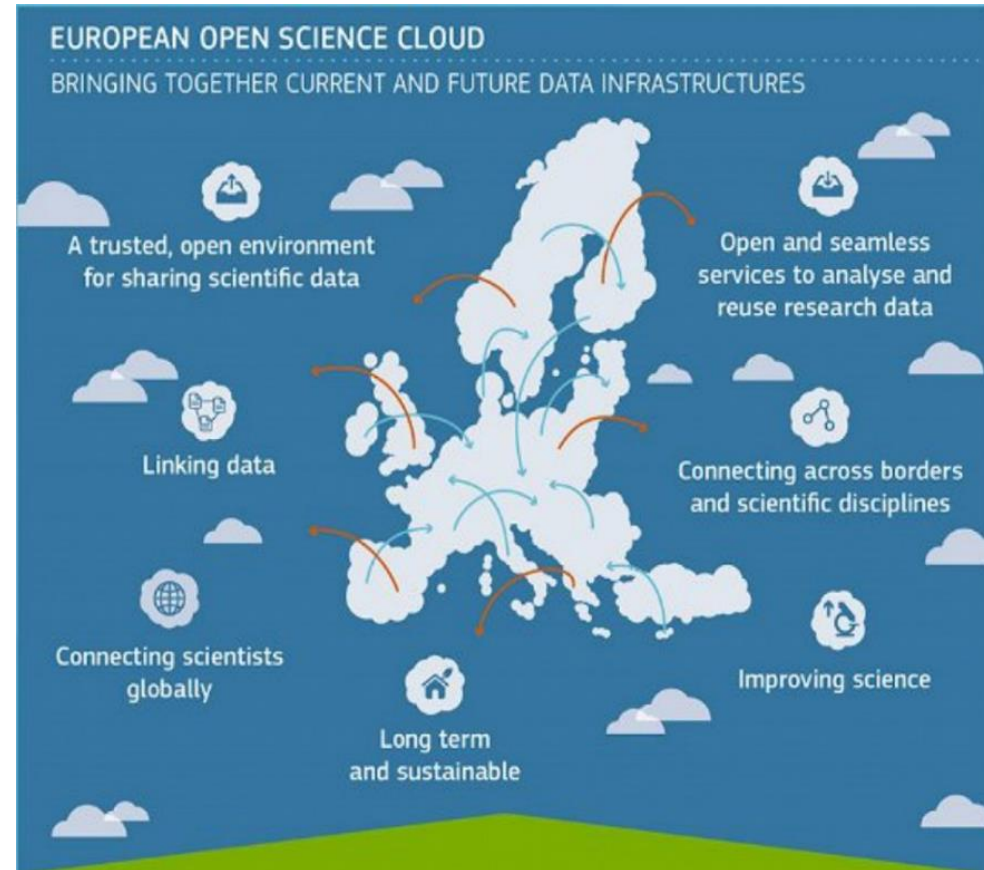
Beate Guba

Open Science Day 2025 at TU Wien, 3 June 2025

EUROPEAN

- Giving Europe a global lead in research data management
- Accelerating innovation
- Co-funding
- GDPR compliance
- Connecting scientists globally
- Access beyond Europe

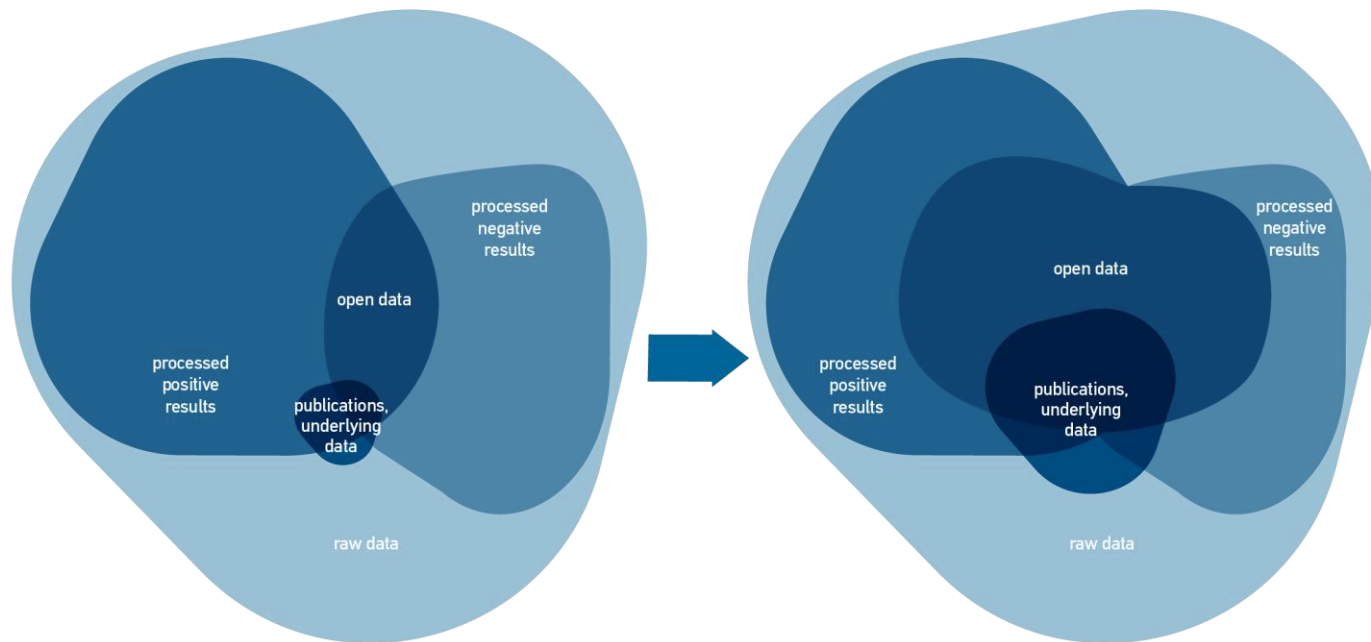
→ European data requirements & data sovereignty



<https://www.gfz-potsdam.de/sektion/seismologie/projekte/eosc-hub-integrating-and-managing-services-for-the-european-open-science-cloud/>

OPEN

- As open as possible, as closed as necessary
- From 'closed by default' to 'open by default' = paradigm shift



OPEN

- Open data must be FAIR, but FAIR data doesn't necessarily need to be open

What does FAIR mean?



Data are described with rich meta-data and are assigned a unique and persistent identifier.

FINDABLE



Metadata and data are available at all times via standardised communication protocols, and access conditions to the data are clear.

ACCESSIBLE



Metadata and data use a formal, accessible, shared and broadly applicable language for knowledge representation.

INTEROPERABLE



Data and metadata are released with a clear data usage license and are associated with detailed provenance.

REUSABLE

Illustrations from Jørgen Stamp (CC BY 2.5 DK) & graphic from LIBER (CC BY), adapted.

- ➡ Web of FAIR data and services
- ➡ Machine-actionability
- ➡ Transparency in science

SCIENCE

- Key target group: researchers
- Fostering interdisciplinarity
- Bringing science closer to society to address societal challenges
- Widening the scope of services to include users from the public sector and industry as well as citizens
- Including research data, cultural heritage data (e.g. <https://www.dissco.eu/>, <https://www.europeana.eu/de>, <https://www.softwareheritage.org/>), open government data (e.g. City of Vienna Street View)

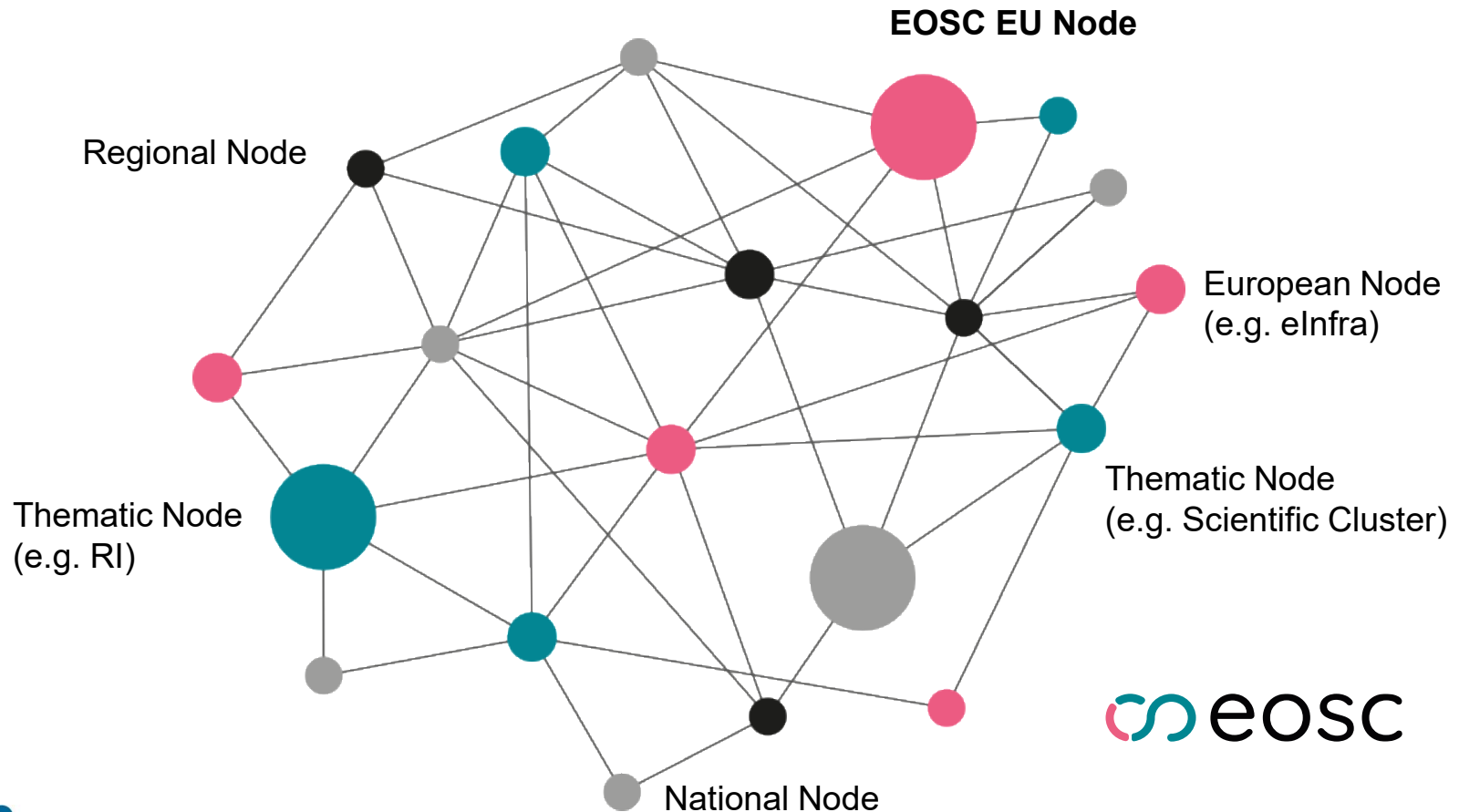
➔ Data space for science producers and consumers, linking with other common European data spaces

CLOUD

- Federation of existing and upcoming infrastructures and services to overcome current fragmentation, providing distributed resources and services remotely
 - > not a new dedicated infrastructure or software, not a Cloud platform
 - Infrastructures are connected via standards, e.g. for authentication, authorisation, rules of participation
- A trusted virtual environment for storing, sharing, processing, analysing and reusing data, for providing seamless services
- A federation of nodes operating infrastructures and services

FEDERATION OF NODES

EOSC EU Node launched in 2024: <https://open-science-cloud.ec.europa.eu/>



FEDERATION OF NODES

Organisations participating in the first phase of development of an operational EOSC Federation



<https://eosc.eu/eosc-about/building-the-eosc-federation/eosc-federation-handbook/>

WHERE DO WE STAND?

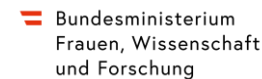
EOSC SUPPORT OFFICE AUSTRIA (SOA)

- Started in 2021 by an initiative of TU Wien Bibliothek
- Collaboration based on a memorandum of understanding

eosc.AT
support office austria



eosc



PERFORMANCE AGREEMENT 25-27

Project Establishment of an EOSC National Node

Unit Vice Rectorate Digitalisation and Infrastructure

Objectives

- ❖ Transfer the EOSC SOA into an EOSC National Node to facilitate research in Austria
- ❖ Consolidate project results from recently finished or ongoing projects
- ❖ Create synergies within the partnership
- ❖ Operate and scale up infrastructures and services, training, helpdesks, community building and working groups with researchers
- ❖ Overcome siloed networks and avoid double governance structures
- ❖ Keep pace with international developments

Duration 07/2025-12/2027

OSTrails

Cloud4Geo

REST-GDI-AGRAR



Skiis
4 EOSC

...

Join our EOSC
community
and TU project
team!

CURRENT CALLS

- HORIZON-INFRA-2025-01-EOSC-01: EOSC Nodes with federating capabilities for the EOSC Federation
- HORIZON-INFRA-2025-01-EOSC-02: FAIR Integration for Enhanced Research Data in the EOSC ecosystem and beyond
- HORIZON-INFRA-2025-01-EOSC-03: Advancing AI-readiness and Machine-Actionability in the EOSC Ecosystem
- HORIZON-INFRA-2025-01-EOSC-04: Data stewards, skills and training for Open Science and FAIR practices
- HORIZON-INFRA-2025-01-EOSC-05: Using Generative AI (GenAI4EU) for Scientific Research via EOSC

WHAT'S IN IT FOR RESEARCHERS?

POTENTIALS

- Easier access to data
- Improved reproducibility and reuse of research outputs within and across disciplines through standards, leveraging multi-disciplinary research and cross-border collaborations
- Reduced metadata efforts through an ecosystem of persistent identifiers
- Recognition of a broader set of research outputs and activities in research assessments
- New skills and career options such as Research Software Engineer, Data Analyst, Research Infrastructure Professional, Data Curator, ...
- Funding instrument via infrastructure calls, ...

**LET'S
DISCUSS!**

THANKS!

Beate Guba

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EOSC Association Delegate

EOSC SOA Steering Committee Speaker

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<https://www.tuwien.at/bibliothek>