



EOSC in the making

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eosc EOSC – additionality to the web of FAIR data

EUROPEAN OPEN SCIENCE CLOUD

WORLD WIDE WEB

INTERNET

NETWORKS

COMPUTERS

[Modelled after: World Wide Web - Wikipedia](#)

EOSC vision in a nutshell

What

EOSC is the European web of FAIR data and related services for research
Research data that is easy to find, access, interoperate and reuse (FAIR)
Trusted and sustainable research outputs are available within and across scientific disciplines

Why

Unlock the full potential of research data to accelerate discoveries and innovation

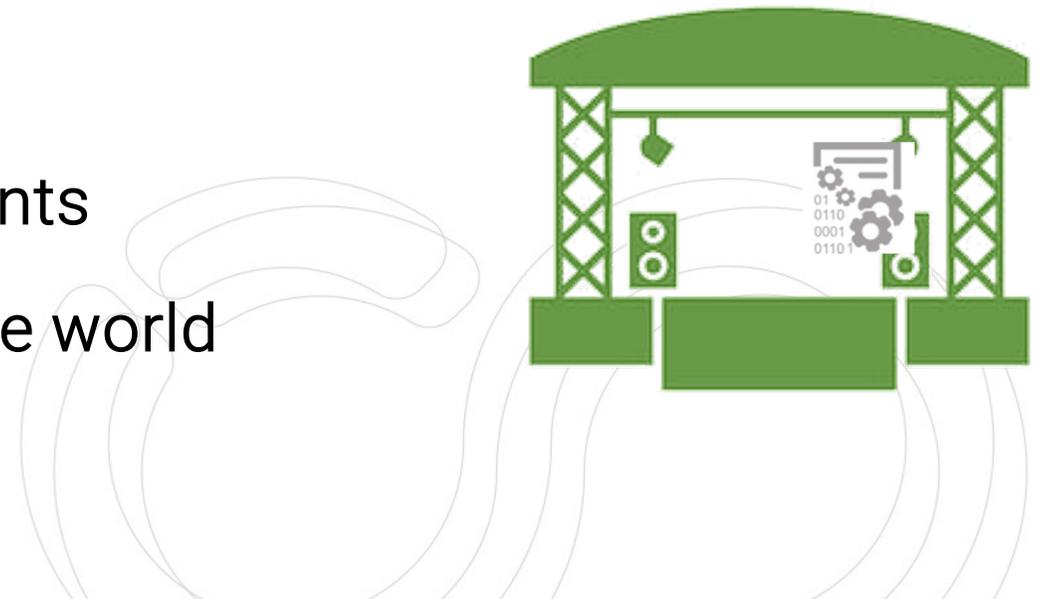
How

- Enabling the definition of standards, and the development of tools and services, to allow researchers to find, access, reuse and combine results
- Establishing a sustainable and federated infrastructure enabling open sharing of scientific results
- Ensuring that Open Science practices and skills are rewarded and taught, becoming the 'new normal'

As described in the Strategic Research and Innovation Agenda (SRIA)

“web of scientific insight”

- Web of FAIR Data and related Services
- Federation of relevant existing and future data sources
- Virtual space where science producers and consumers come together
- An open-ended range of content and services
- Based on the FAIR principles
- Meeting all European data requirements
- In interaction with other regions of the world



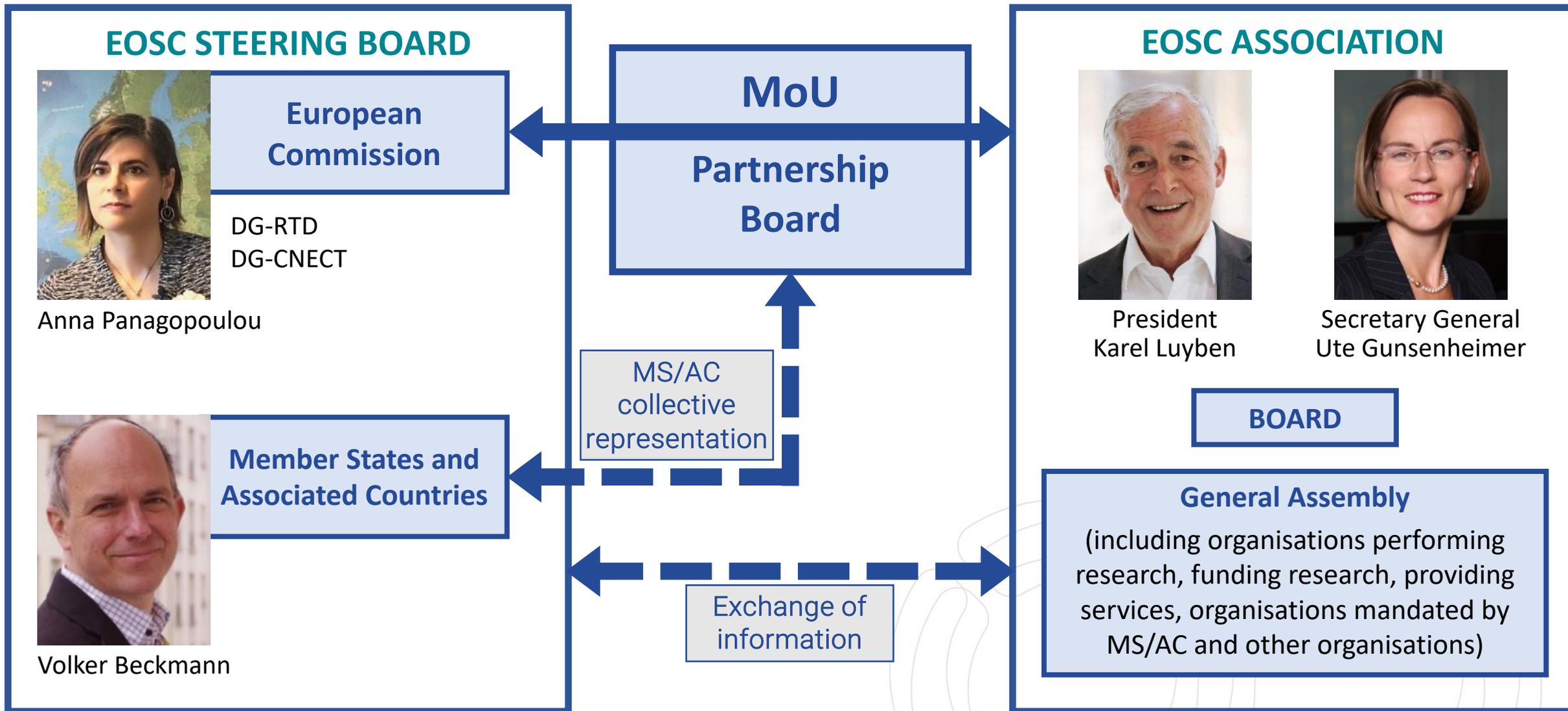
eosC Ten things EOSC is not

- ... a cloud infrastructure
- ... synonymous to Open Science
- ... the EOSC Portal
- ... the EOSC Association
- ... a new research data repository or data management system
- ... owning the data it will help to provide access to
- ... a new pan-European e-infrastructure
- ... substitution of any existing data- or (e-)infrastructures
- ... directly for individual researchers, but it is for research
- ... in competition with anything or anybody

Horizon Europe co-programmed EOSC Partnership

- Launched June 2021
- One billion euros commitment by the European Union and the EOSC Association





Strategic Research and Innovation Agenda



Open Science practices and skills are rewarded and taught, becoming the 'new normal'

Standards, tools and services allow researchers to find, access, reuse and combine results

Sustainable and federated infrastructures enable open sharing of scientific results

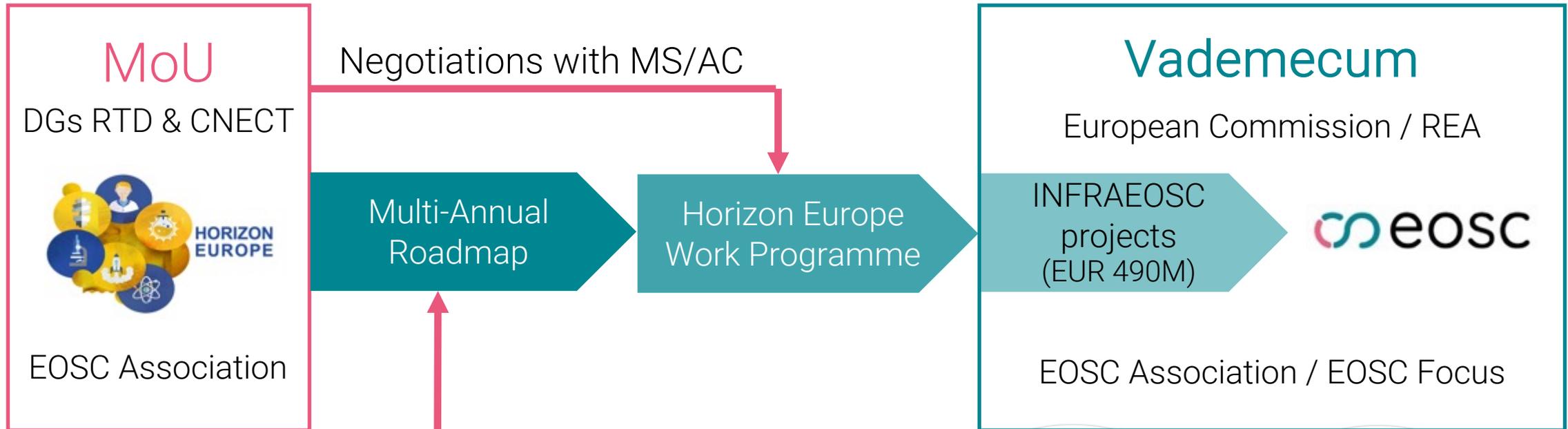
Multi-annual roadmap sets priority activities and outcomes grouped by three implementation levels – European, National, Institutional

Three phases of MAR

- 2021-2022: development towards a functional federation of infrastructure
- 2023-2024: expansion to production that generates added value
- **2025-2027: expansion to develop impact from Open Science**

eosc Delivering EOSC – the Process

The critical role of the INFRAEOSC Projects



Community Consultation

Present action: MAR 2025 - 2027

eosc Demonstrating Added Value by 2025

Additional Activities of EOSC-A Members



22-23 May 2023
6th General Assembly

AAP 2021 (Pilot)
EUR 309.005.000
Eligibility of all months
unclear

EUR 292 M

AAP 2022
EUR 312.453.697
1468 FTEs
Demonstrators: EUR 64M

AAP 2023
EUR 383.929.296
2105 FTEs
Demonstrators: EUR 94M

eosc National level G01 priorities for 2025-2027

- Support the implementation of **aligned European curricula** for data stewardship and encourage the inclusion of these as a core element in research programmes. The establishment of proper career paths for research support professionals is also needed.
- **Establish the cost of data management, data stewardship, maintenance and preservation of research outputs** (including software and semantic artefacts) **as eligible within national funding schemes.**
- **Leverage existing national Competence Centres** and strengthen their participation in coordination networks.
- **Use cases from the public sector, citizen science and industry** should be encouraged in the next period in parallel to the research sector, whilst ensuring that services developed remain under the control of academics. Also use cases running at national or regional level are interesting. Emphasis should be to support uptake (2025).



eosc National level GO2 priorities for 2025-2027

- Promote and sustain the use of PIDs that are already common practice. Support activities where PID usage is not yet a common practice.
- Integrate widely used and adopted PIDs into national services. Incentivise usage of PID technologies being developed in EOOSC
- Support and incentivize the use, maintenance and adoption of open standards and APIs to enable resource composability and to achieve interoperability across communities, including in the private sector.



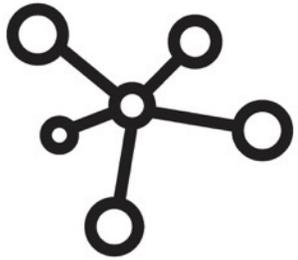
eosc National level GO3 priorities for 2025-2027

- National policy makers should work with Research Infrastructures, e-Infrastructures and national service providers to establish and operate national or regional EOOSC support structures to accelerate the integration with EOOSC with regards to the provision as well as usage of data and services.
- Encourage national policy makers to review and adjust national policies and regulations to enable services to be used in a cross-border context, and engage in a series of in-depth trials to evaluate the utility of proposed resourcing models to agree approaches for EOOSC.
- National policy makers should work with the National Research and Education Networks (NRENs) and National grid Infrastructures (NGIs) to ensure the AAI is available to national research infrastructures, resource providers and users and can be used within and across borders. (2025)
- Acknowledge European and domain specific semantic artefact catalogues in national infrastructures and guidelines.
- Support the establishment of last resort data repositories/stores to support European and national open access data policies.
- Support repositories to become machine-actionable for greater reuse of content via funding programmes and technical support actions. (2025)

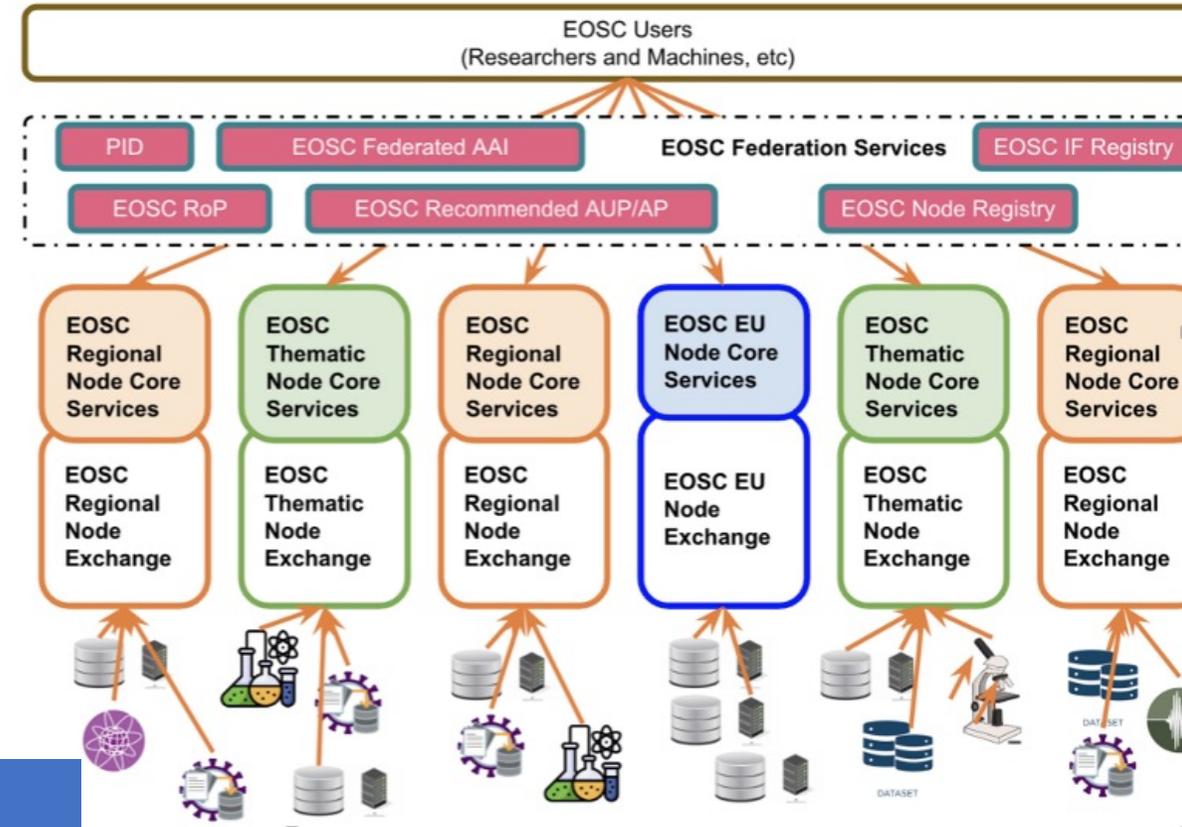
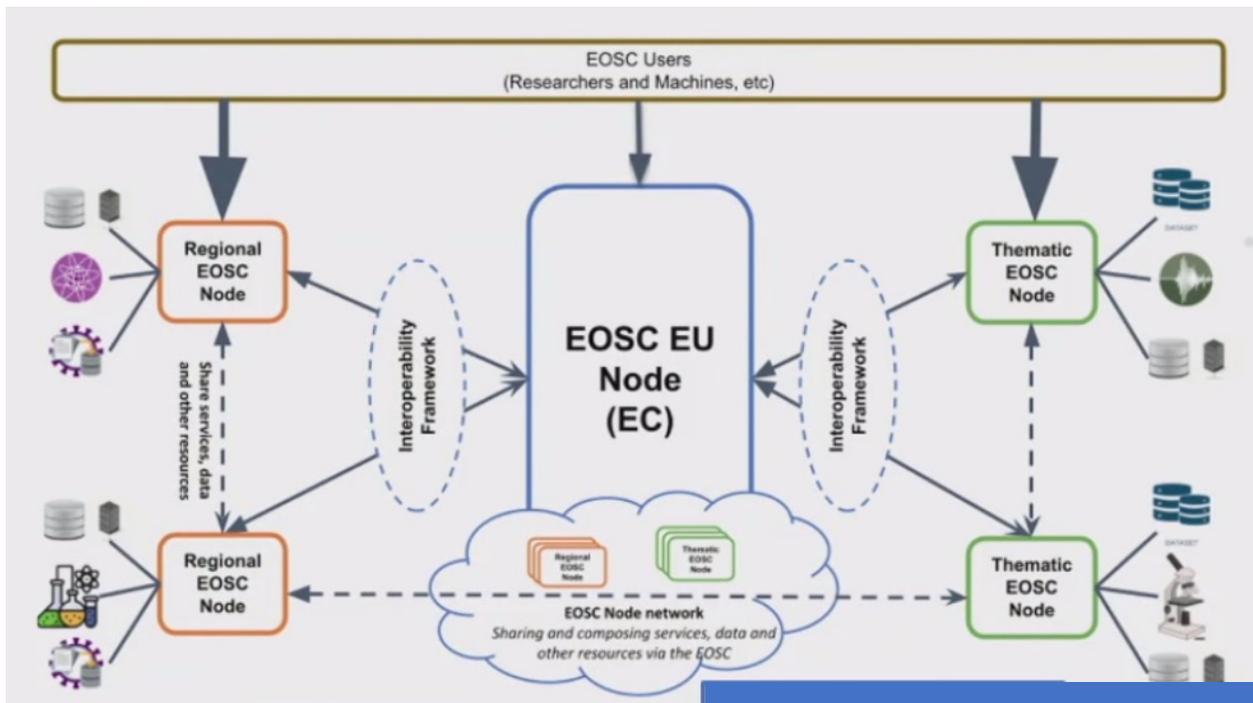
eosc Outlook to the future



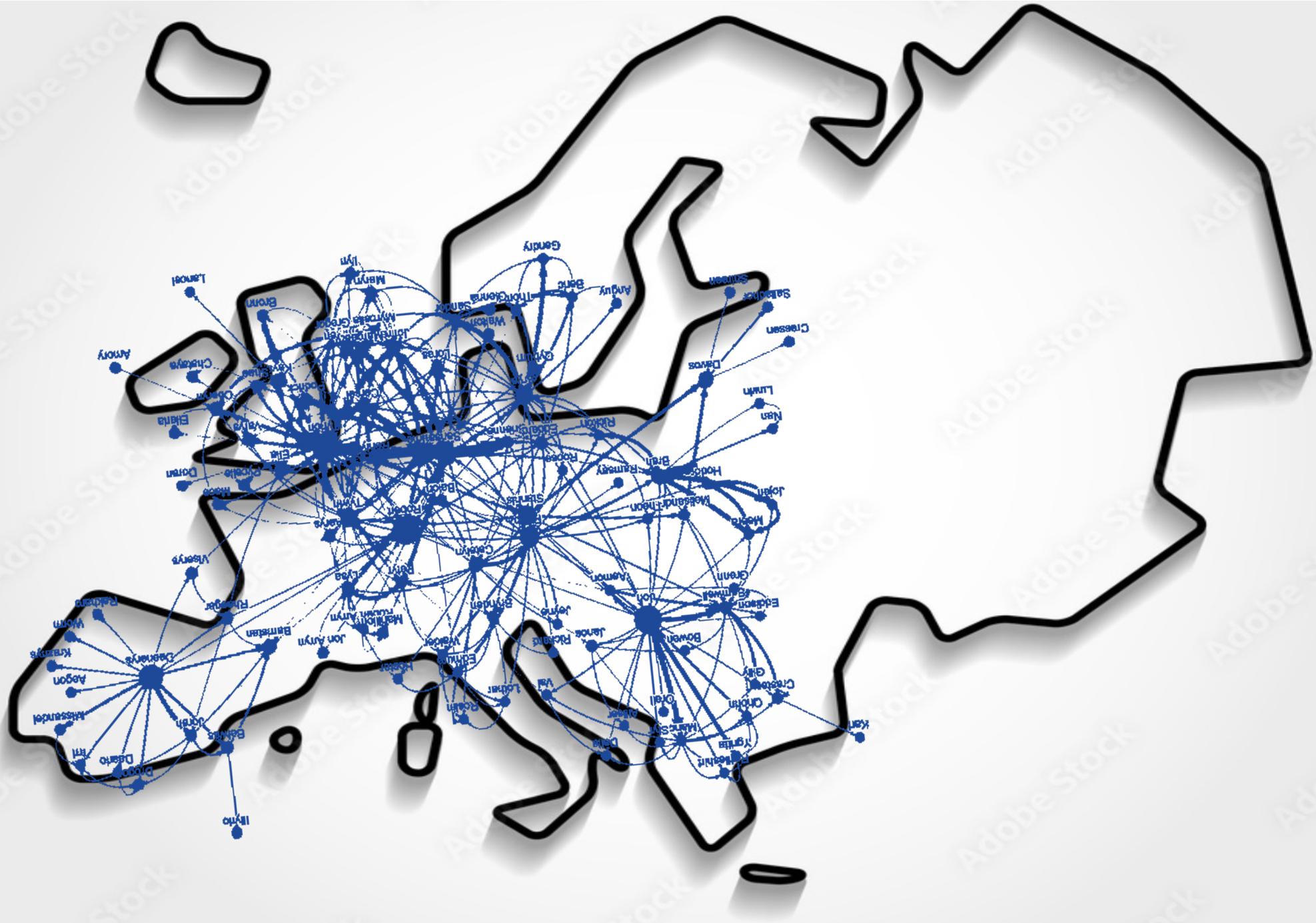
eosc EOSC federation



EOSC intends to become a **federation of distributed systems**, combined into a system of systems, **consisting of multiple "nodes"** that are interconnected and can **collaborate to share and manage information and resources (FAIR data & services) across thematic and geographical boundaries.**



Courtesy of EGI



eosc Defining the EOSC federation

- EOSC A will continue to lead on shaping the **definition of the EOSC Federation and the role of Nodes**
- The EOSC-A Board of Directors will **present its position paper to the EOSC Partnership** in December 2023
- In 2024 the ambition is to **evolve and extend the paper into a formalised handbook of operations*** that provides guidelines for administration of and engagement with the EOSC nodes.
- A key dependency to this evolution, and indeed that of the nodes concept itself, is the definition of **access policies at both the node and Federation levels**

**Elixir's Handbook of Operations provides a good reference model: <https://elixir-europe.org/aboutus/governance/handbook-operations>*

Some conclusions

- EOSC is a federated initiative that aims to deliver extras on the Web of FAIR Data and Services
- EOSC has entered a critical convergence phase, because in 2024
 - the EOSC EU Node is meant become operational
 - the EOSC Federation will be better defined and get started
 - the scenario of EOSC beyond 2027 will be decided on
- And in parallel ... several other challenges:
 - demonstrating EOSC added value for the research process
 - establishing a structured collaboration with >20 HE projects
 - deploy EOSC as a European Data Space connecting to other Data Spaces
 - EOSC National Tripartite Events
 - EOSC helps to enable citizen science
 - EOSC to support the EU Missions