



EOSC in the EU's research and digital policy agenda

Current developments and Commission support

EOSC national tripartite event - Netherlands
22 May 2024

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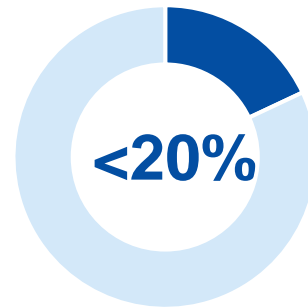
Some figures about research data practices in Europe



Researchers who store data in personal physical data storage or institutional local data storage¹



Researchers who occasionally store research data in shared repositories²



Researchers who put FAIR principles into practice³



3€ billion per year

National public funding for pan-European Research Infrastructures⁴



>10€ billion per year

The cost for the EU of not having FAIR research data⁵

^{1, 2, 3} European Research Data Landscape study (2022) [doi/10.2777/3648](https://doi.org/10.2777/3648)

⁴ ESFRI roadmap (2021) <https://roadmap2021.esfri.eu/>

⁵ Study 'Cost of not having FAIR research data' (2018) [doi/10.2777/02999](https://doi.org/10.2777/02999)

European Open Science Cloud - EOSC:

the EU's flagship initiative for the digital transformation of research

- An effective **policy process** to mobilise, align and scale resources and engagement across Europe towards accelerating open science, FAIR data management, higher productivity and increased reproducibility in research.
- A trusted **federation of research data and services** for R&I in Europe, deployed as a network between data repositories and services of research infrastructures and other scientific service providers ('EOSC nodes').

EOSC rooted in the EU research & digital policy agenda

- 2024** 2nd staff working document on the **Common European Data Spaces**
- 2023** Council Conclusions on '**High-quality, transparent, open, trustworthy and equitable scholarly publishing**'
- 2022** Council Conclusions on '**Research assessment and implementation of Open Science**'
- 2021** Council Recommendation on '**A Pact for Research and Innovation in Europe**'
- 2021** Council Conclusions on the '**Future governance of the European Research Area**'
- 2020** Commission Communication on '**A new ERA for Research & Innovation**'
- 2020** Commission Communication on '**A European strategy for data**'
- 2018** Council conclusions on the '**European Open Science Cloud (EOSC)**'
- ...

EOSC in the ERA policy agenda

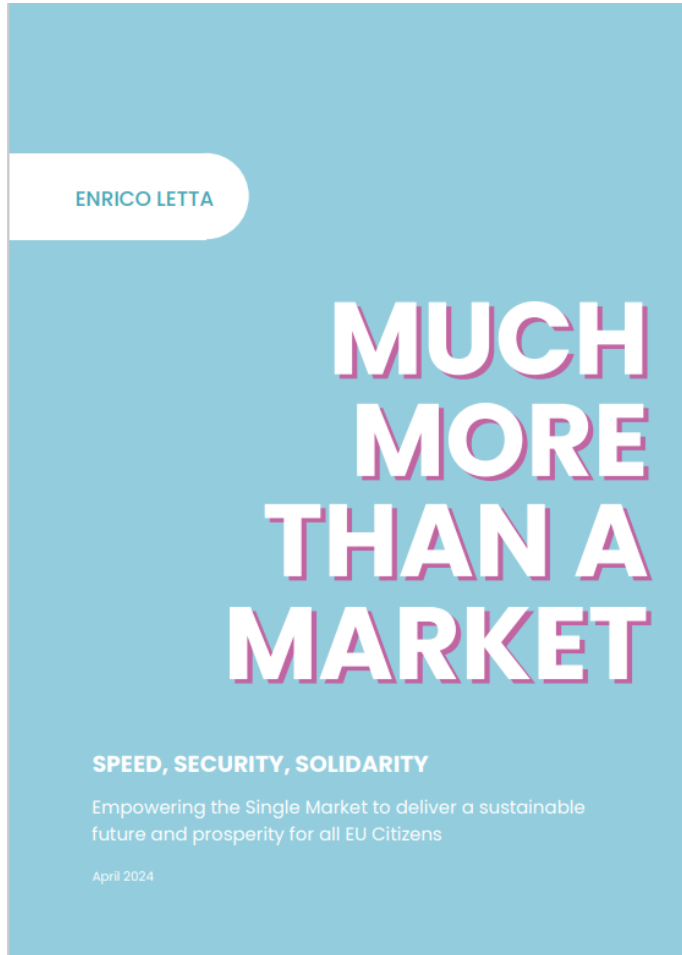
ERA Action 1: Enable the open sharing of knowledge and the re-use of research outputs, including through the development of the European Science Cloud (EOSC)

Outcomes

- *Deploy **Open Science Principles** and identify **Open Science best practices***
- *Deploy the **core components and services of EOSC** and federate **existing data infrastructures** in Europe, working towards the interoperability of research data*
- *Establish a **monitoring mechanism** to collect data and benchmark investments, policies, digital research outputs, open science skills and infrastructure capacities related to EOSC*



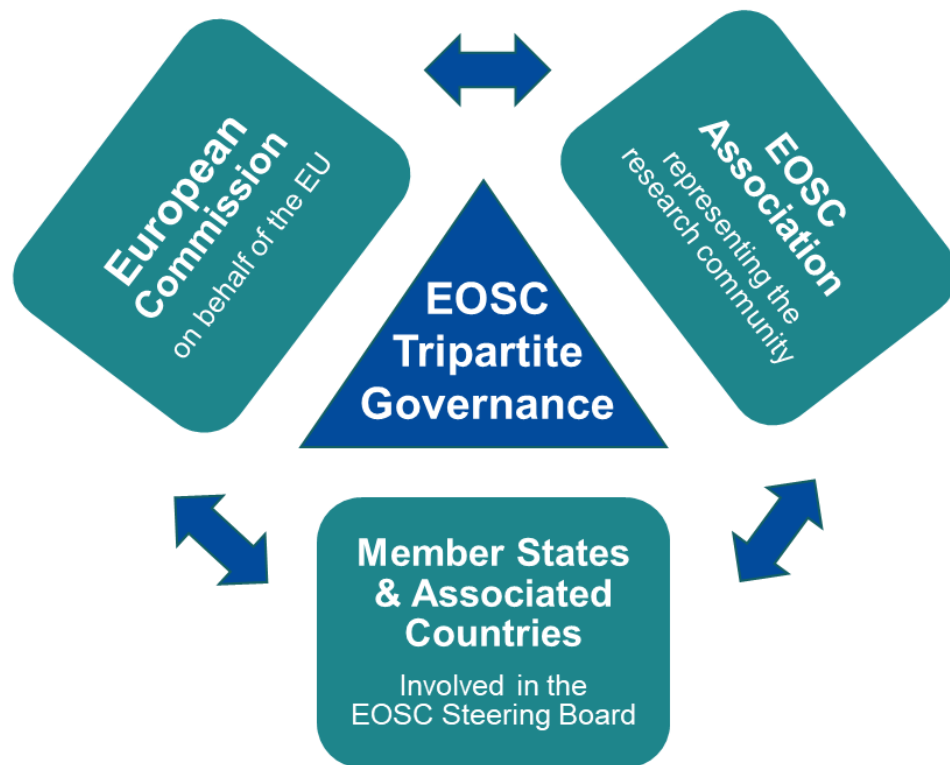
Letta report on empowering the Single Market



*“A **fifth freedom to enhance R&I and education in the single market**”*

*“A central pillar of this strategy is the creation of a **European Knowledge Commons** – a centralised, digital platform providing access to publicly funded research, datasets, and educational resources. ...”*

EOSC steering, governance, and financing



EOSC Co-programmed Partnership

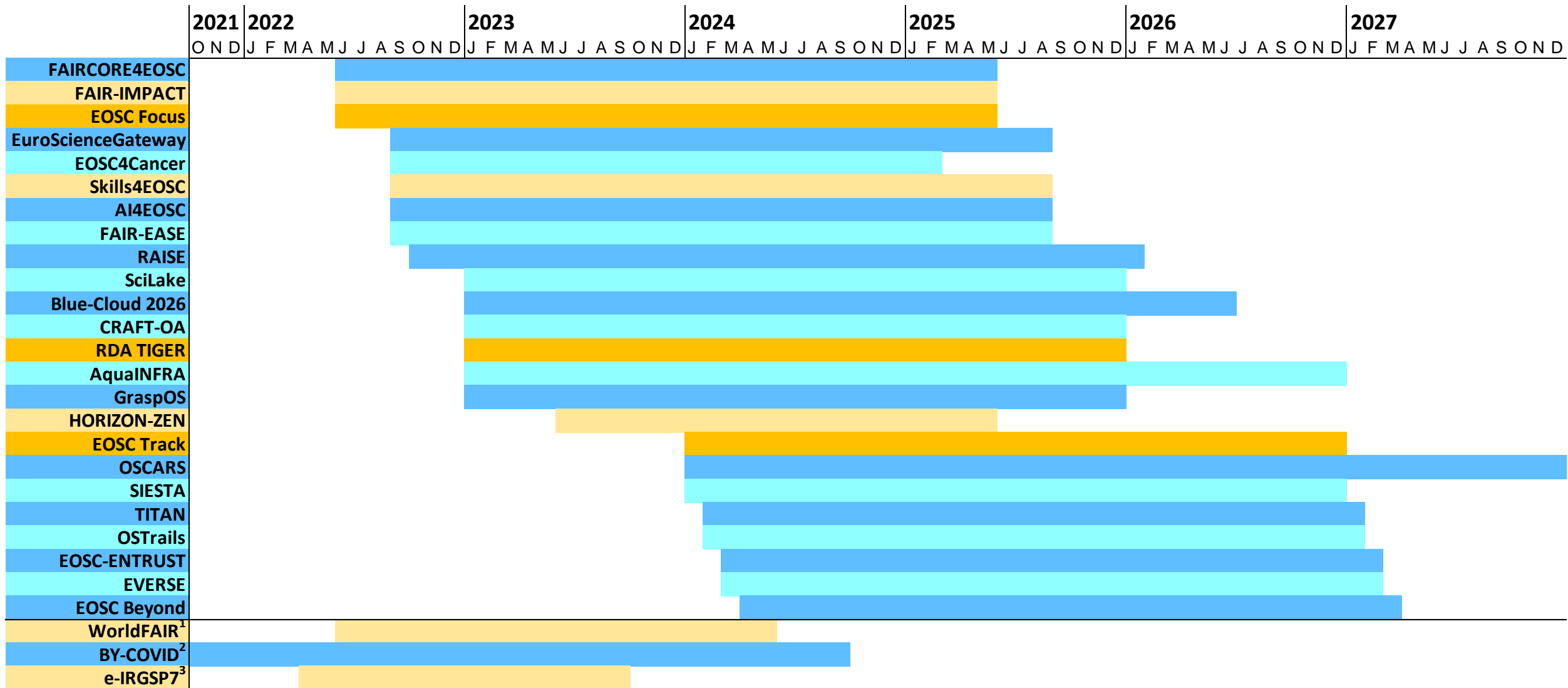
- a community driven process
- pooling commitments and resources along priorities set in the EOSC Strategic Research and Innovation Agenda;
- EUR 1 billion foreseen for 2021-2027

EOSC tripartite governance

- ensuring dialogue and strategic coordination between EC, EU Member States and Associated Countries, and the EOSC Association
- EUR 406 million reported investments in EOSC and open science by MS/AC in 2021



Horizon Europe EOOSC projects



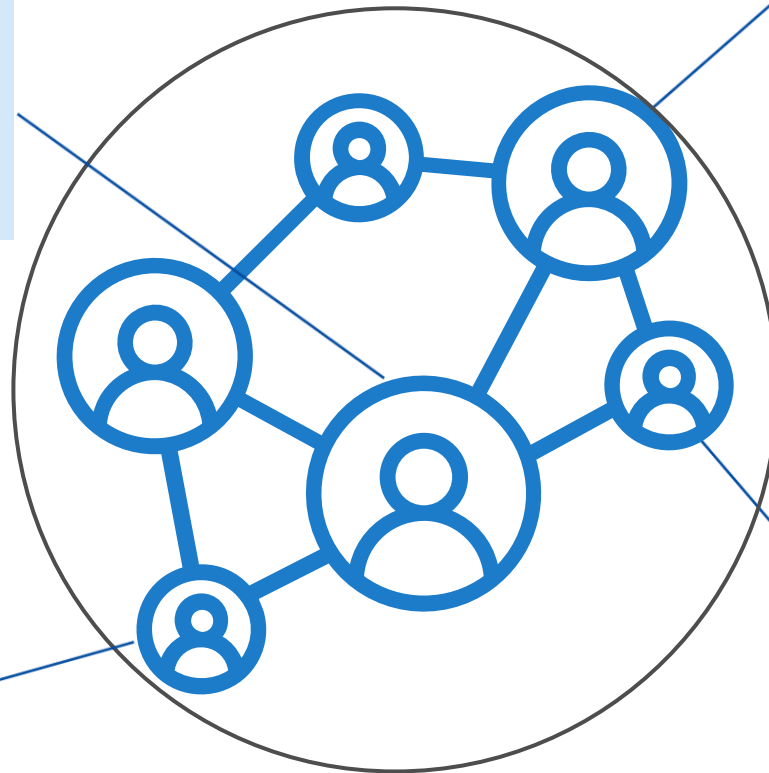
The EOSC federation

EOSC EU node

enabling the federation with common AAI/SSO, application workflows, resource catalogues, monitoring and accounting, etc.

National nodes

e.g. national repository platforms of national research information system



Thematic community nodes

e.g. ESFRI/ERIC or other thematic research and/or data infrastructures

e-Infrastructure nodes

providing generic data services

The value proposition of the EOSC federation

- **economies of scale:** EOSC nodes will take advantage of commonly pooled resources and functionalities, enabling them to focus on their core business.
- **interdisciplinarity:** EOSC will make a step change in fertilising research that cuts across established disciplinary boundaries, while increasing visibility and re-use of discipline-specific data and services.
- **enabling AI:** by pooling massive amounts of high-quality FAIR research data, software and compute, and by connecting to other common European data spaces, EOSC aspires to become a key driver of European leadership in AI for science.
- **research security:** researchers will find in EOSC a trusted and sovereign environment where they can securely store, analyse and share their results and collaborate with their peers within and across disciplines.
- **policy implementation:** scientific and data services provided in EOSC will comply with the EU's research and digital policies that are enshrined in the rules and policies of the EOSC federation.

The EOSC EU node value proposition

Operate 24/7 the first EOSC Node at the European level

Offer “core services” for scientific service providers to federate:

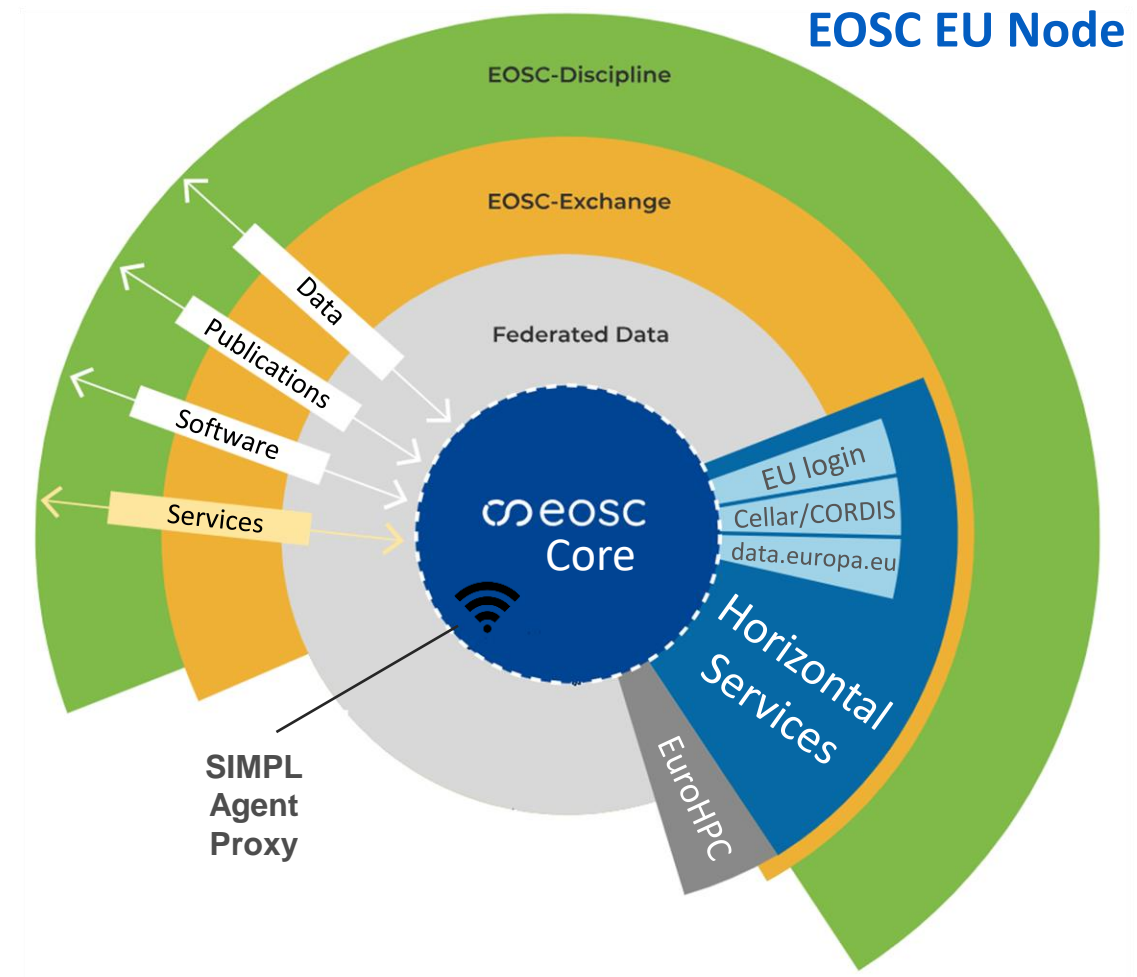
- authentication and authorization
- resource catalogues
- application workflow management
- monitoring and accounting, etc,

and common “horizontal services” for end-users:

- virtual machines
- cloud container platform
- bulk data transfer
- file sharing, etc.

Offer a pathway and blueprint for other potential EOSC Node operators to join the federation.

Facilitate the creation of the “web of FAIR data and interoperable services” under the open science policy.



EOSC EU Node initial web presence

European Commission

European Open Science Cloud - EU Node

Home | About | Services | Resource Hub | Support | Contributors | News & Events

EOSC EU Node

A European platform and information gateway to explore, engage, and enrich your research collaborations.

Explore our services >

Who is it for

Researchers

If you are a researcher or citizen scientist in Europe interested in collaborative, data-driven open science, the EOSC EU Node offers easy access to diverse data, publications, software, and services from across Europe's research networks.

Contributors

If you are a scientific resource provider in Europe, the EOSC EU Node invites you to contribute your research objects - software, services, and tools - to support the mission of Open Science.

Upcoming Services

The EOSC EU Node will offer the following services (currently under development):

- File Sync & Share**
Enable automatic file syncing and secure sharing across locations and teams.
- Interactive Notebooks**
Create and share documents with real-time code execution.
- Large File Transfer**
Streamline large file transfers online with added security and integrity.
- Virtual Machines**
Design and conduct experiments with flexibility while ensuring reproducibility.
- Cloud Container Platform**
Deploy cloud-native containerised applications that can easily scale.
- Bulk Data Transfer**
Move data effortlessly to data-intensive execution environments.

Discover European Research Outputs

Search in all resources

Search by Resource type

DATA | PUBLICATIONS | SOFTWARE | SERVICES | TRAINING

Explore the Resource Hub >

Updates from EOSC Community

- EOSC Future signs off**
28 March 2024
March marked the end of the EOSC Future project, which paved the way for the emergence of the EOSC EU Node in its place. Get a breakdown of how this transition will take place and what it...
- Commission awards €41 million contract to develop infrastructure for Common European Data Spaces**
14 December 2023
The European Commission has awarded a €41 million contract to develop Simpl, a robust middleware platform aimed at enhancing data access and interoperability across European data spaces.
- The Commission announces winners of the EOSC Procurement**
24 November 2023
The European Commission's DG Connect has revealed the winners of the EOSC Procurement, a key step in advancing the European Open Science Cloud (EOSC).

- Enrich your Scientific Endeavours**
Explore the Web of FAIR data and interoperable service
- Enter the Gateway to Open Science**
Access a diverse range of research objects and supplementary services all in one place
- Manage your Research Workflows**
Conduct your research while ensuring interoperability throughout the entire lifecycle
- Exchange with your Peers**
Collaborate, disseminate, and reuse research outputs across teams and domains

Events

- 27-28 MAY 2024** Conferences and summits: EOSC Association 8th General Assembly
- 12-16 JUN 2024** Conferences and summits: EuroScience Open Forum 2024
- 20-21 JUN 2024** Conferences and summits: 2024 Coordination meeting of EOSC-related projects funded under Horizon Europe
- 21-23 OCT 2024** Conferences and summits: EOSC Symposium 2024

European Open Science Cloud - EU Node

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About us

The European Open Science Cloud aims to establish a federation of infrastructures facilitating effortless access to interoperable research assets and enhanced services spanning geographical boundaries and diverse academic fields.

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



The way ahead

now



- The EOSC EU node increases uptake by researchers and data/services contributors.
- The node-enrolment requirements, and the common rules, policies and frameworks of the EOSC federation are set.
- Additional thematic and national/regional nodes enroll in EOSC, offering their services and increasing the EOSC user base.
- EOSC secures long-term growth and sustainability with a model for its governance, operations and financing after 2027.

2027

Thank you



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