



Science and
Technology
Facilities Council

Scientific Computing

Governance of the European Open Science Cloud

A decade of incremental progress

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Coordinator EOSC*pilot* (2017-18)

Member EOSC Executive Board (2019-2020)

Chair EOSC Rules of Participation WG (2019-2020)

UKRI representative on EOSC Association (2024- ...)

Research Data Alliance Council (2013- ...)

This is going to be a *really-dry* talk

(-: | :-)



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What is EOSC?

“The objective of the EOSC is to give the Union a global lead in

research data management

and ensure that

European scientists reap the full benefits of data-driven science,

*by offering 1.7 million European researchers and 70 million Professionals
in science and technology*

a virtual environment

with

free at the point of use, open and seamless services

for

***storage, management, analysis and re-use of research data,
across borders and scientific disciplines.”***

[EOSC Implementation Roadmap. 2018. Highlighting added]



Overview

Scientific Computing

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- 2025++ EOSC Federation
- 2028-2034 Framework 10

Some personal reflections



A digital single market for Europe (EC Communication)

- *“The Commission will propose in 2016 a European ‘**Free flow of data**’ initiative ... The Commission will launch a **European Cloud initiative** including cloud services certification, contracts, switching of cloud services providers and a **research open science cloud**.”*

Built on (for example):

- **2013: G8 Communique (London) Open Scientific Research Data**
*“(ii) Open scientific research data should be easily **discoverable**, **accessible**, **assessable**, **intelligible**, **useable**, and wherever possible **interoperable** to specific quality standards.” (DAAIUI)*
- **2013: Research Data Alliance** – “Researchers can openly share and reuse data across technologies, discipline, and countries...”
- **2010: “Riding the wave: How Europe can gain from the rising tide of scientific data”**

High Level Expert Group on EOSC

2016

Policy recommendations (4)

...

*P3: Build on **existing capacity***

...

Governance recommendations (4)

*G1: Aim at the **lightest possible...governance**.*

...

Implementation recommendations (7)

...

*I2: Develop, endorse and implement the **Rules of ~~Engagement~~...***

...

*I4: Develop a concrete plan for the **architecture of data interoperability***

...

...





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The *EOSCpilot* project will support the first phase of development of EOSC:

- **Engage with a broad range of stakeholders**, crossing borders and communities, to build the trust and skills required for adoption of an open approach to scientific research
- **Develop a number of demonstrators** functioning as high-profile pilots that integrate services and infrastructures to show interoperability and its benefits in a number of scientific domains
- **Propose a governance framework** for the EOSC and contribute to the development of European open science policy and best practice

January 2017-December 2018, 70 Partners!



*EOSC*pilot: Challenges

Three types of challenges:

Scientific Challenges are really Opportunities

• **Scientific Challenges:** deploying the EOSC to deliver Open Science

Technical Challenges are Barriers to overcome

• **Technical Challenges:** developing technical solutions that meet the scientific needs

Cultural Challenges are also Barriers

• **Cultural Challenges:** adopting new, more open ways of working

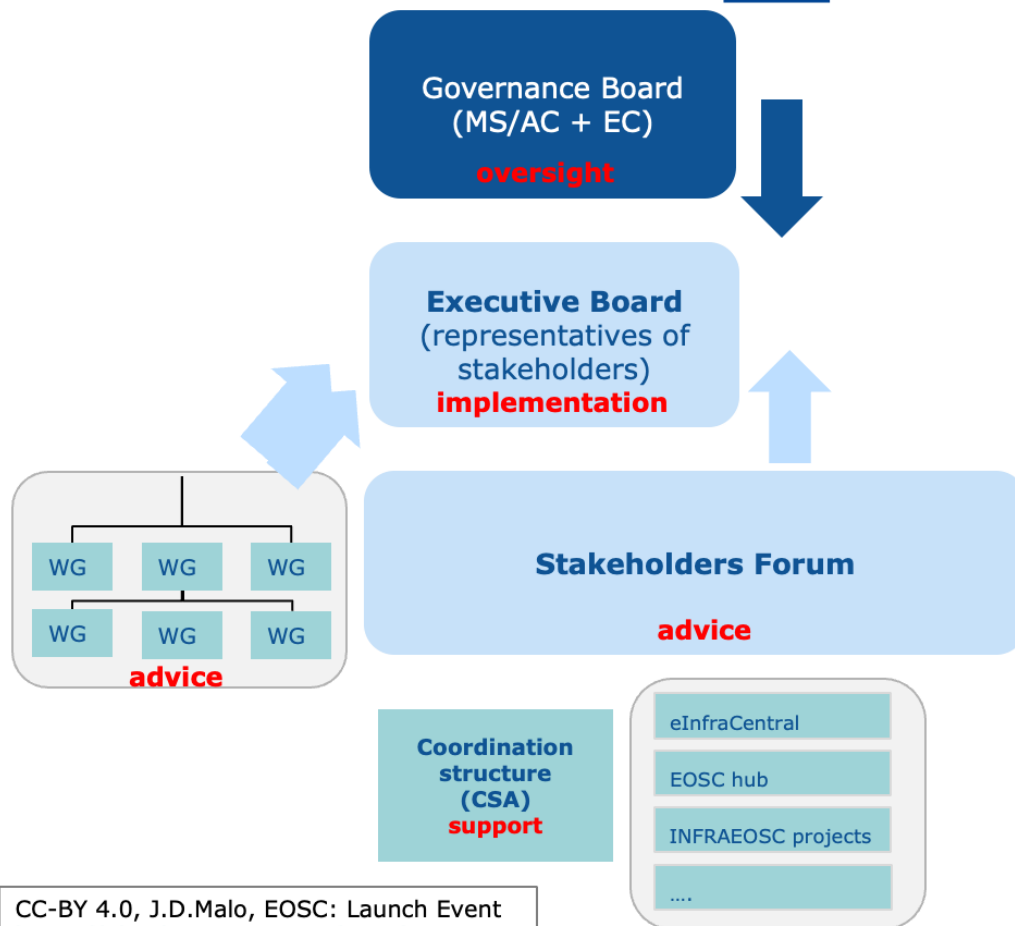


EOSCpilot
The European Open Science
Cloud for Research Pilot Project
www.eosc-pilot.eu

EOSCpilot: Results

- 👤 Science Demonstrators
- 👤 Architecture and Services – Reports, Services Landscape
- 👤 Governance and Policy – Recommendations
- 👤 Skills Framework and Competencies – Definitions, Lists, Use cases
- 👤 Community – “Coalition of Do-ers”

The EOSC Governance



Three layer structure

- *EOSC Board* of MS/AC and EC representatives to ensure effective supervision of EOSC implementation
- **Working Group of the strategic configuration of the Programme Committee**
- *Executive Board* of stakeholder representatives to help ensure proper EOSC implementation and accountability
- **Commission expert group**
- *Stakeholder Forum* to provide input from a wide range of actors
- **Self-organised with EC support**

2019-2020

Interim Governance

The EOSC Governance Board
Reps of MS/AC and EC
Oversight of Executive Board

The EOSC Executive Board
11 members
Monitoring and reporting on implementation

The Stakeholder Forum,
the full EOSC community
Provides feedback via events,
consultations, etc

All supported by the
EOSCsecretariat.eu project



EOSC Executive Board

2019-2020

- Strategic Implementation Plan
- Strategic Research and Innovation Agenda (SRIA)
- Multi-Annual Roadmap (MAR)
- Working Groups:
 - Landscape
 - FAIR
 - Architecture
 - **Rules of Participation**
 - Sustainability
- Established the EOSC Association (2020++)
- Led to the “tripartite” governance model (2021++)

 [SRIA 1.3 \(December 2024\)](#)

 [SRIA 1.2 \(December 2023\)](#)

 [SRIA 1.1 \(November 2022\)](#)

 [SRIA 1.0 \(June 2021\)](#)





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EOSC Association

2021++

- Established late 2020
- Now has:
 - 29 “Mandated” Members
 - 128 Organisation Members
 - 95 Observers
- Represents the community in the tripartite governance
- Legal Entity (AISBL)
- Has MoU with EC:
 - https://www.eosc.eu/sites/default/files/EOSC_Memorandum_30_July_2021.pdf
 - 26 Objectives (some quite specific)
 - €500m from EC
 - €500m from Association (In-kind)

5 Organisations in UK

| Country: United Kingdom x | | | | |
|--|--|--|--|--|
|  |  UK Research and Innovation |  |  |  |
| Jisc is the UK's digital body for tertiary education and research. Jisc provides UK universities and colleges with shared digital... | Member UK Research and Innovation (UKRI) | Observer European Centre for Medium-Range Weather Forecasts | Observer The Open University | Observer United Kingdom Atomic Energy Authority |
|  United Kingdom |  United Kingdom |  United Kingdom |  United Kingdom |  United Kingdom |
| → | → | → | → | → |



Tri-partite Governance

2021++

1. **Steering Committee (National Funder reps)**
2. **EOSC-Association**
3. **European Commission**

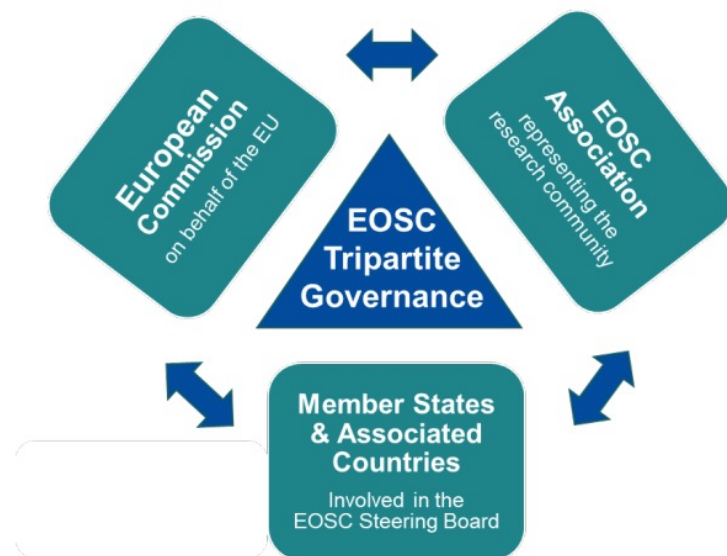
Scope:

- Define and oversee the INFRA-EOSC programme
- Develop strategic plans for EOSC
- Funding model for the EOSC partnership:
 - co-funded, **co-programmed**, institutionalized

Tri-partite Governance

2021+

EOSC steering, governance, financing *current set-up*



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

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**





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The EOSC Federation

2025++

- Now creating EOSC “Nodes” who deliver the EOSC services
- One *EU Node*, commissioned by the EC
- Other Nodes are *National* or *Thematic*
- Discussing how the *Federation of Nodes* fits into governance

- 13 initial nodes:



eosc | Blue-Cloud2026





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The EOSC Federation Handbook

2025++

Chapters:

1. Purpose
2. Governance and legal framework
3. Operational structure and responsibilities
4. Federation Platform
5. Federation scientific resources
6. Federation policies

Chapters 1-3: consulted on and near completion (18 pages)

Chapters 4-6: exist in outline only

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



Chapter 2. Governance and legal framework

- Governance structure
 - Tripartite continues
 - Nodes comply with decisions, rules and policies “agreed to be applied across” the EOSC Federation
 - Apart from that, each EOSC Node is fully autonomous
 - How the *Federation of Nodes* fits into tripartite being discussed
- Legal framework
- Communication and external relations
- Risk management



Chapter 6. Federation policies

- Rules of Participation
- Access Policy
- Acceptable Usage Policy
- Ethical, legal and societal issues
- Cybersecurity, Privacy and Data Protection Policy
- Intellectual Property Policy
- Code of Conduct

EOSC in Framework 10

2028-2034

- EOSC in FP10 now being considered by Tripartite:

EOSC as the **overarching**
data, FAIR data services and open numerical analytics infrastructure
of Europe,
providing a **unifying backbone**
for FP10 research and innovation

Considering support models for:

- The EOSC EU Node
- The EOSC Nodes
- The EOSC instrument development
- Open Access
- Widening Countries
- Skills and competences

Refinement and sustainability of the EOSC governance model

Linking to other European Data Spaces, EuroHPC, AI-Factories and Research Infrastructures



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In conclusion: Three Lessons Learned

- Do have a grand vision
 - Don't try and get there is one step
 - Do agree small steps *and take them*
- Do put in governance that's good enough for now
 - Don't expect it to last forever
 - Do build in *ability to change*
- Do expect disagreements
 - When there is *purely technical* disagreement, their probably both right
 - Do look for the human reasons behind the disagreement



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