



**EUROPEAN OPEN
SCIENCE CLOUD**

EOSC-A

Overcoming Data Challenge

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Board of Directors EOSC-A

January the 26th, 2022
Science Mesh Workshop

The European Open Science Cloud (EOSC) initiative

- EOSC aims to offer a **virtual environment for open access to services to store, share, process and reuse research data** and other research digital objects, such as **software**
 - The EOSC initiative was proposed in 2016 by the EC as part of the European Cloud initiative, funded through the so-called H2020-INFRAEOSC-2018-2020 (€ 157M).
 - Main objective of HEU destination 2 with 89M€ in the HORIZON-INFRA-2021/22-EOSC-01 calls.

First [report](#) from the HLEG EOSC “Realising the European Open Science Cloud”

EOSC Declaration

Launch of the European Open Science Cloud

EOSC-A foundation

EOSC Association 1st GA

Set-up of the EOSC-A Task Forces

Jan 2018

Jan 2019

July 2019

July 2020

Dic 2020

Oct 2021

Oct 2016

Oct 2017

Nov 2018

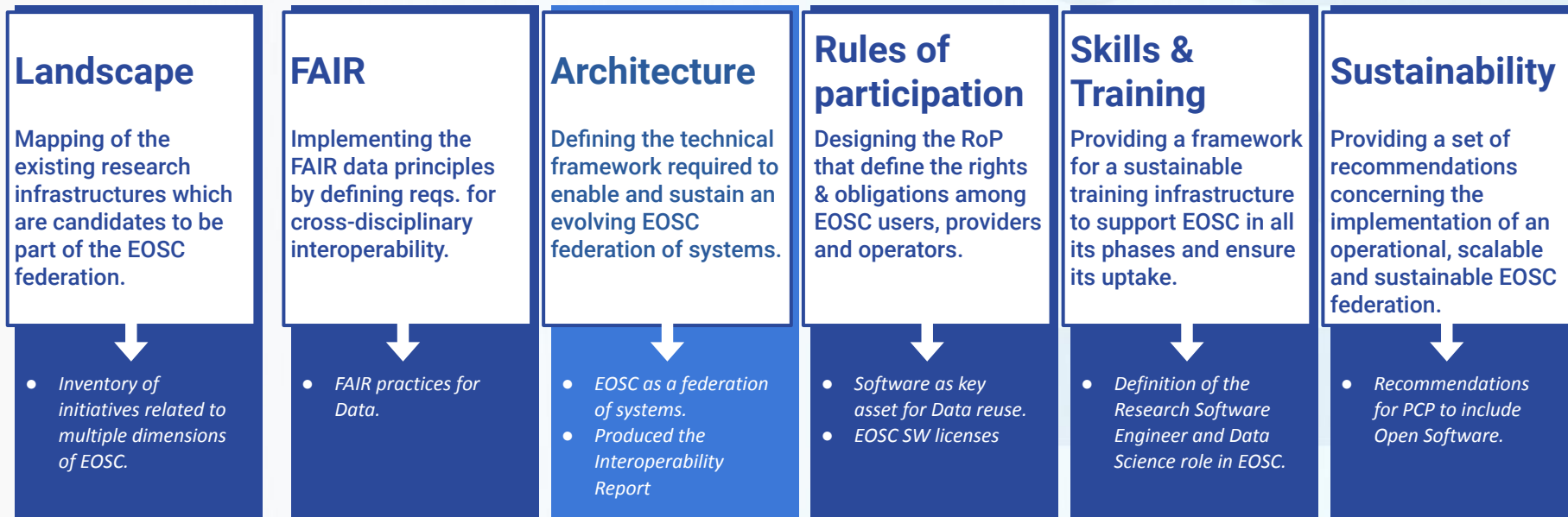
INFRAEOSC Projects

Start of EOSC-Secretariat

EOSC EB Working Groups

EOSC Executive Board Working Groups

- EOSCsecretariat.eu was a project addressing the set-up of an operational framework supporting the overall governance of the EOSC.
- The EOSC Executive Board set up **6 Working Groups**, with some relations to Open Software and interoperability.



EOSC Governance Model 2021-2027

The new governance model agreed with EU countries for the next EOSC implementation phase after 2020 will be tripartite including:

- The EU represented by the **Commission**
- The European research community represented by the **EOSC Association**
- EU countries and countries associated with Horizon Europe represented through a **Steering Board** to be set up in 2021 outside of the EOSC Association



EOSC membership by geographical spread

160 Members

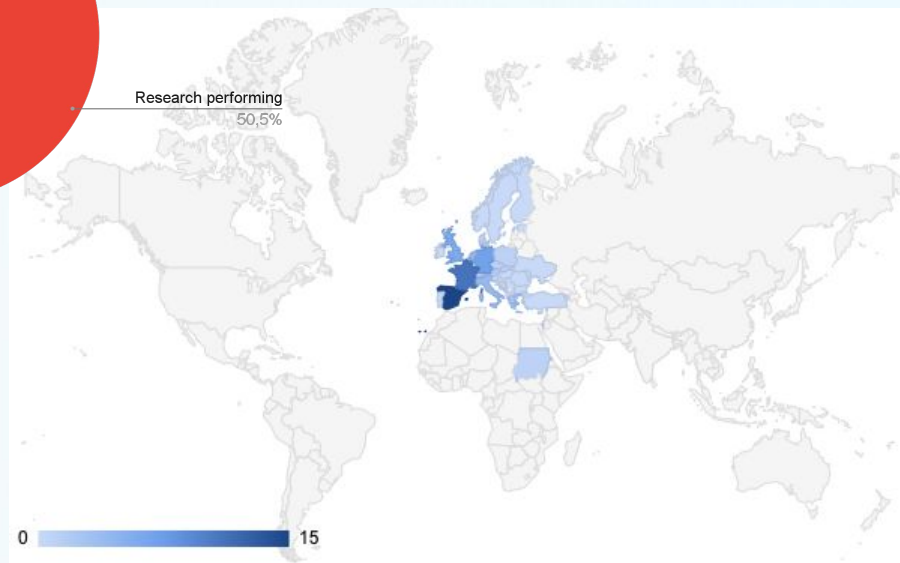
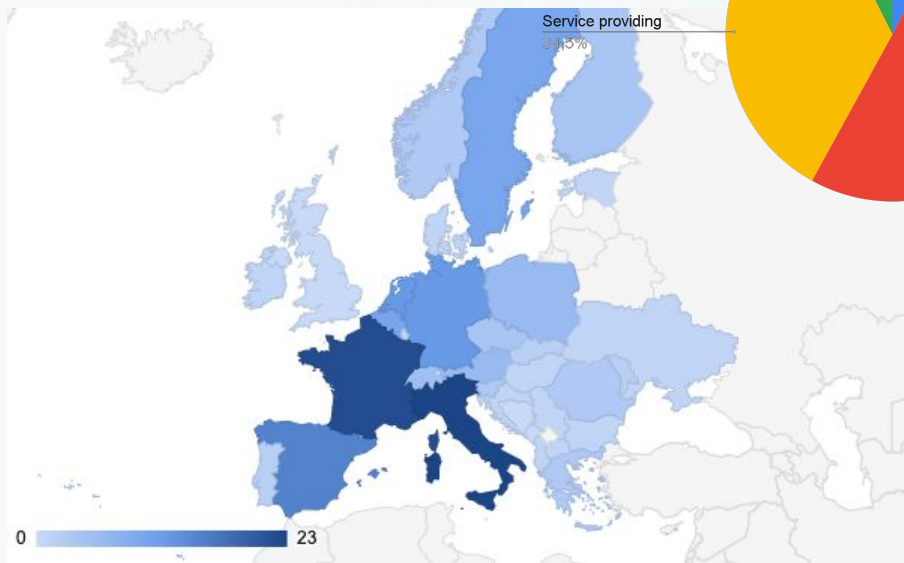
73 Observers

Other organisation
7,5%

Research funding
7,5%

Service providing
34,3%

Research performing
50,5%



The Strategic Research and Innovation Agenda (SRIA)

- A key document for the implementation of EOSC is the [“Strategic Research and Innovation Agenda” \(SRIA\)](#) .
- It states three General Objectives
 - GO1. Ensure that **Open Science** practices and skills are rewarded and taught, becoming the ‘**new normal**’.
 - GO2. Enable the **definition of standards**, and the development of **tools and services**, to allow researchers to **find, access, reuse** and combine results.
 - GO3. Establish a **sustainable** and **federated infrastructure** enabling **open sharing** of scientific results.



The Strategic Research and Innovation Agenda (SRIA)

The specific objectives (SOs), which are reflected in the critical success factors include:

...

- SO5 The EOSC **Interoperability Framework** supports an increasing range and quantity of **FAIR digital objects** including data, **software** and other research artefacts;
- SO6 Provide an **increased number of services and resources** to ensure that European research is discovered and reused within and across disciplines to extract new knowledge;
- SO7 EOSC is operationalised and provides a **stable and valuable infrastructure supporting researchers** addressing societal challenges;

...

The Strategic Research and Innovation Agenda (SRIA)

The operational objectives (OOs) include:

- OO1 **Deliver and operate** all the necessary components of the **Minimum Viable EOSC** to **share** openly **research data, publications, software, tools and services** while attracting increasing numbers and categories of users (public and private) ... by 2025;
- ...
- OO5 Provide the **technical components of a FAIR ecosystem** for uptake and customisation by the communities by 2023 (including open specifications, standards, schemas, application programming interfaces (APIs), metadata frameworks supporting FAIR digital objects and their automated processing);
- ...
- OO7 Co-develop a first generation of a robust **pan-European network of infrastructures for software source code** (including incentives for the effective documentation and sharing of research software) by 2025;
- ...

Working Groups EOOSC-A

Implementation of EOOSC

- [Rules of Participation](#) compliance monitoring
- [PID policy](#) and implementation
- Researcher engagement and adoption

Technical challenges on EOOSC

- [Technical interoperability of data and services](#)
- Infrastructure for quality research software
- AAI Architecture

Metadata and data quality

- [Semantic interoperability](#)
- [FAIR metrics](#) and data quality

Research careers and curricula

- Data stewardship curricula and career paths
- Research careers, recognition and credit
- Upskilling countries to engage in EOOSC

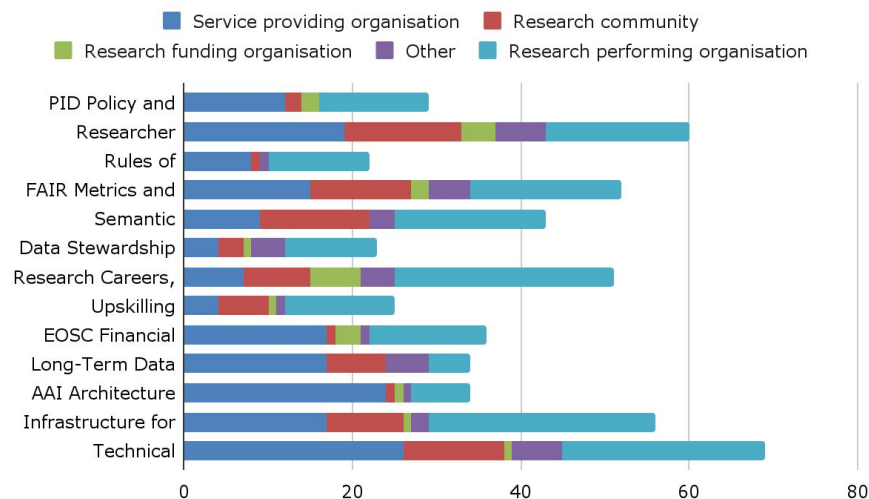
Sustaining EOOSC

- Defining funding models for EOOSC
- [Long-term data preservation](#)

Task Forces activities

- EOSC Association members & observers are the primary members of AGs.
- Around 450 applicants have been selected.
- Representatives of the key implementation projects should be members of relevant AGs to present work in progress and receive advice and steers from the community.
- The ideas and priorities of the EOSC Association Advisory Groups should feed into the Descriptions of Work of the upcoming Horizon Europe projects.
- Draft remits can be found in the [web site](#).

Organization type

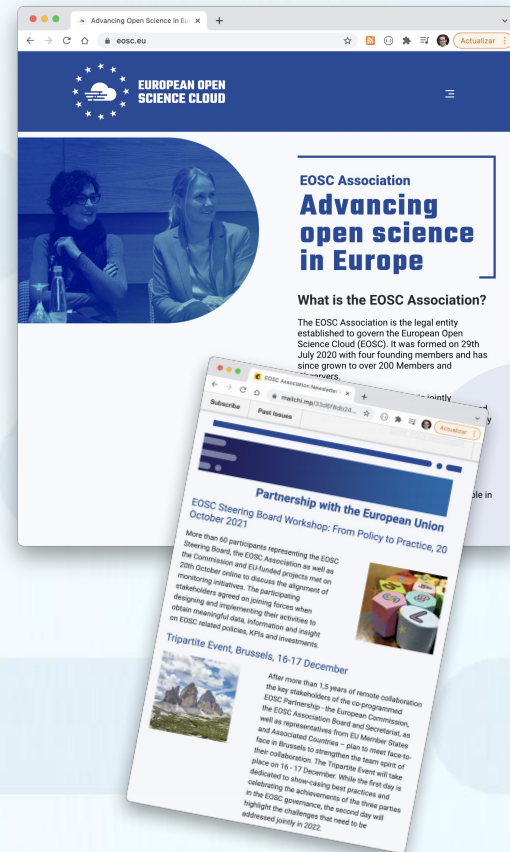


The EOSC-Association Task Force on Technical Interoperability

- Coordinated by [Álvaro López](#) (CSIC-ES) and [Eva Sciacca](#) (INAF-IT).
- Draft Charter [available](#) in the EOSC-A website.
- Objective of the TF
 - The Task Force will take the EOSC Interoperability Framework (EIF) [recommendations](#) around technical architecture as their starting point to help develop the EOSC Core and Exchange.
 - The EOSC Core and Exchange will create interoperability whilst preserving a diversity of components, both on the semantic and the technical level.
 - This Task Force will enable the EOSC-Future project, other EOSC projects and the EOSC resource providers to harmonize their approaches to achieve interoperability.
- 4 subgroups defined, addressing:
 - Landscape, Overview and Scouting:.
 - Data technical interoperability:.
 - Services technical interoperability:.
 - Technical Architecture recommendations:
- Five deliverables expected:
 - A first principles document. (May 2022)
 - A landscape overview (capabilities and gaps) of the EIF. (July 22-July 23)
 - A draft technical architecture description of the EIF. (Nov 2022)
 - A technical architecture description of the EIF, including examples of adaptation hints for major existing solutions. (Nov 2023)

Conclusions

- EOOSC aims at fostering the development of **Open Science** by **enriching publications, data and software** according to the **FAIR** principles in order to make them **usable by machines and scientists** and **Federating infrastructures** to do better and more rewarded research.
- EOOSC-A has created several Task Forces focusing on **Interoperability** of data, software and services improving the reuse and **sustainability** of research assets.
- Important links:
 - Newsletter: <https://eosc.eu/newsletter>
 - Join the EOOSC-A: <https://www.eosc.eu/join-association>
 - Contact: info@eosc.eu
 - Twitter: [@eoscassociation](https://twitter.com/eoscassociation)





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**THANK
YOU**



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