



# EOSC National Event Switzerland

# State of Play of EOSC

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08 March 2023 by EOSC-A





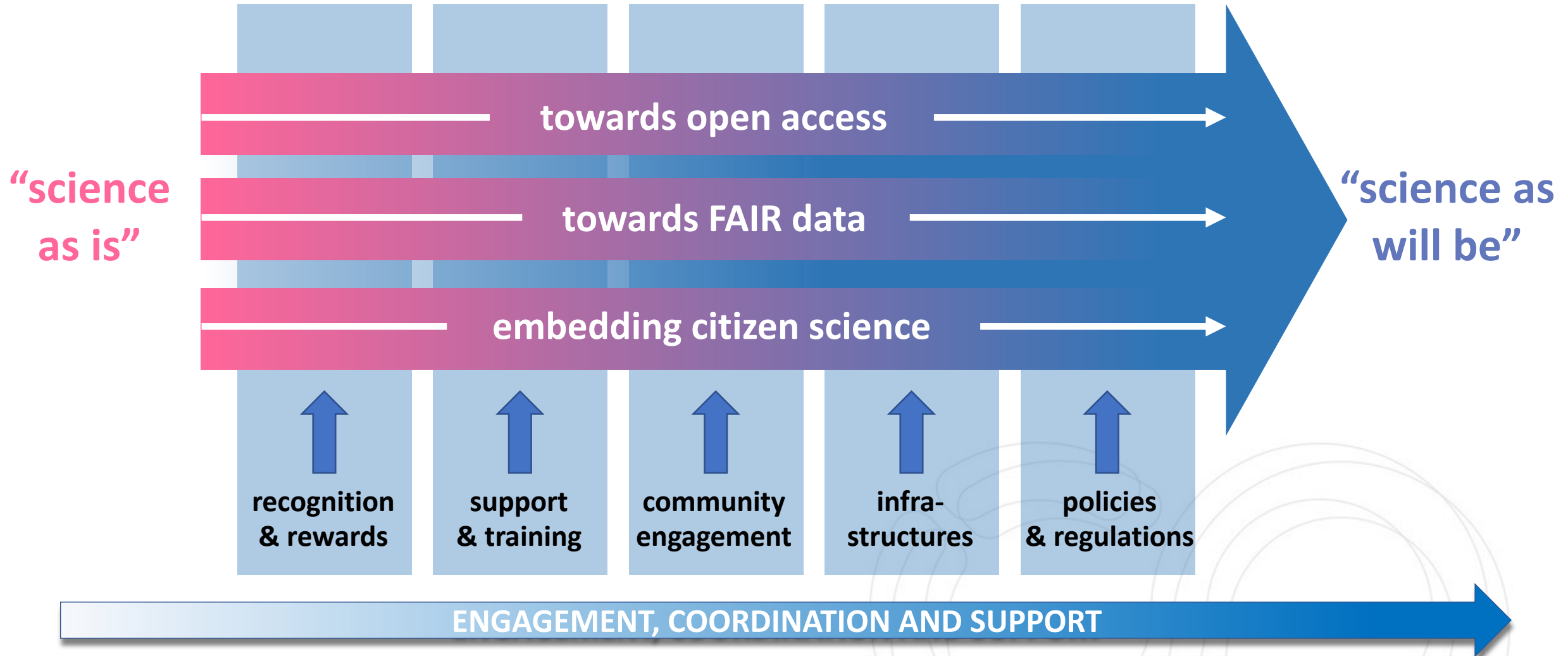
# Today's Topics

EOSC: What is it?

EOSC Association

EOSC Governance

# Open Science



# What is FAIR?

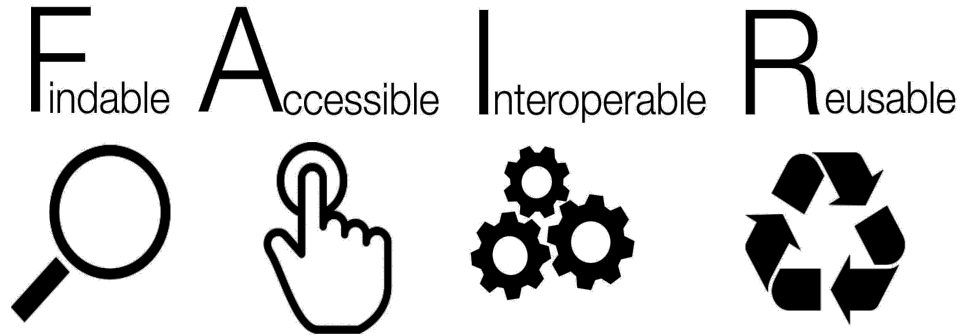


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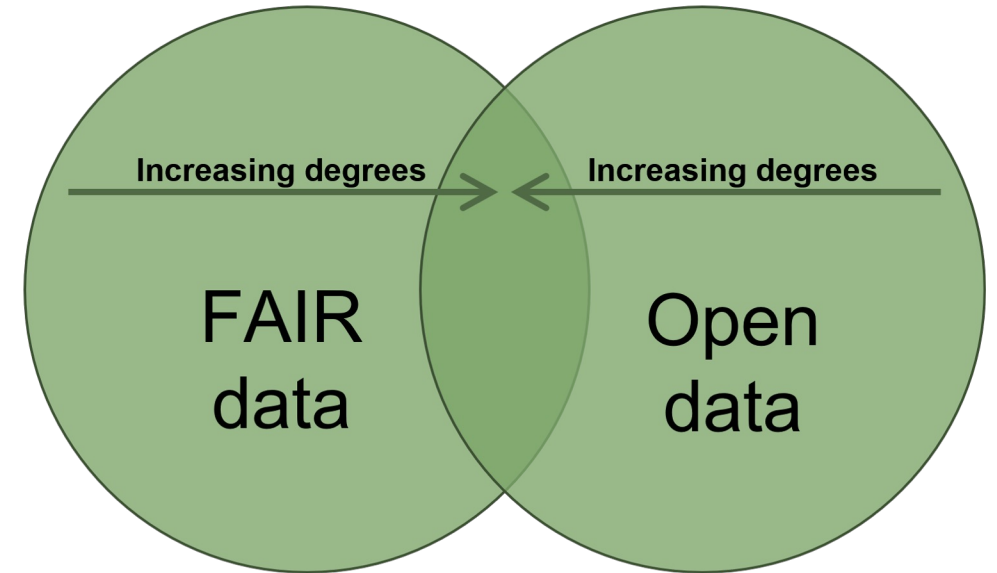
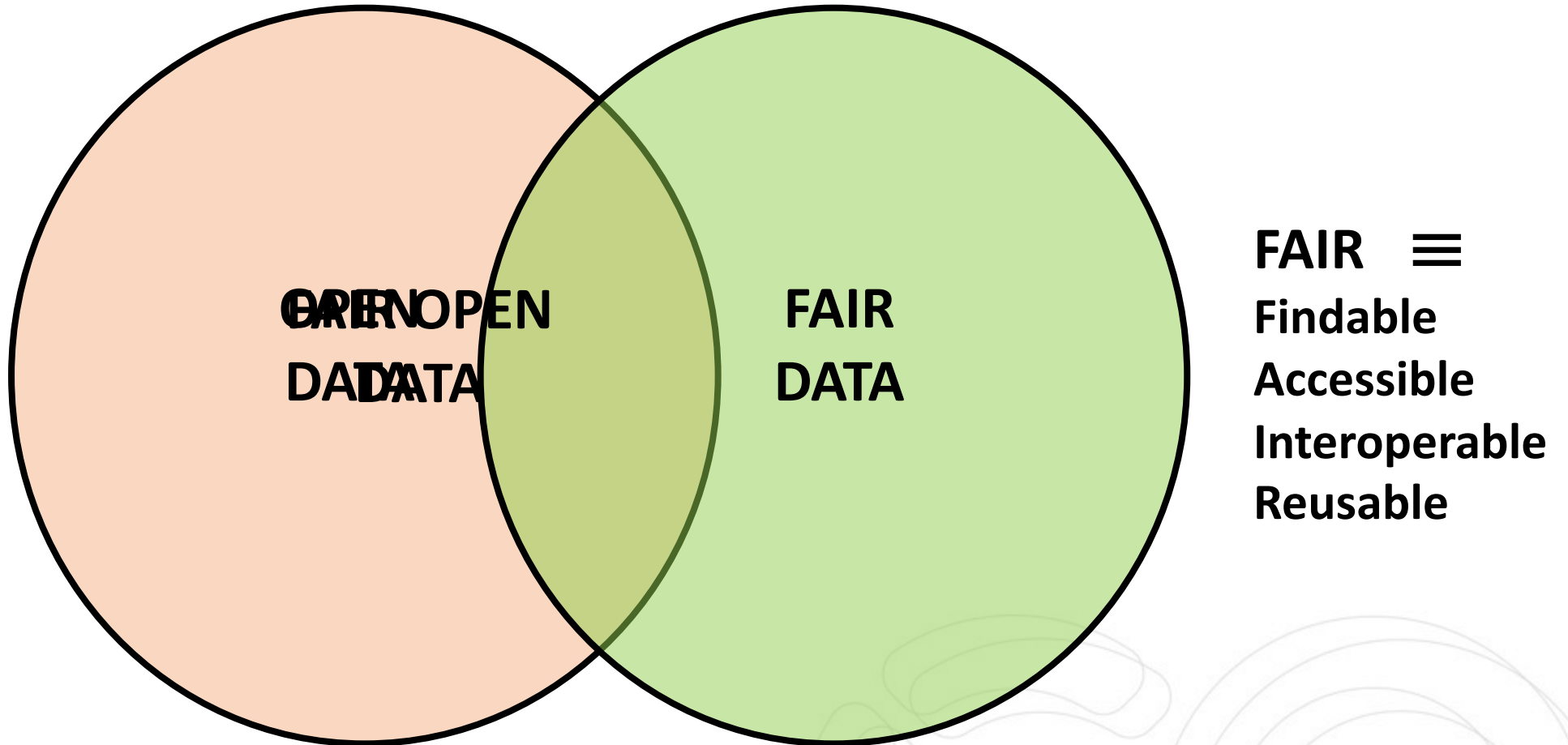


Image CC-BY by European Commission FAIR data expert group

- **FAIR  $\neq$  Open**
- **FAIR ensures data can be found, understood and reused**
- **Data can be shared under restrictions & still be FAIR**

***"As open as possible, as restricted as necessary"***

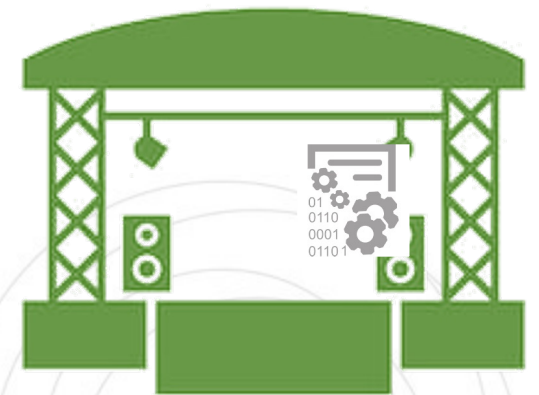
# OPEN DATA and/or FAIR DATA



Towards “as FAIR as possible” and “as open as possible”

# **“A 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**



# Guiding principles for EOSC

The **overarching** principle for developing EOSC is that research has to be at the centre of the EOSC initiative.

- **Multi-stakeholderism**  
EOSC will succeed if and only if it follows a multi-stakeholder approach;
- **Openness**  
EOSC will ensure research artefacts be 'as open as possible, as restricted as necessary';
- **FAIR principles**  
EOSC research artefacts need to be findable, accessible, interoperable and reusable;
- **Federation of infrastructures**  
EOSC will federate existing and upcoming data- and e-infrastructure;
- **Machine-actionable**  
EOSC will ensure that machines can find, access and interoperate on data helping people in servicing the needs of European scientists.



# Position of EOSC according to the European Commission

*Taken from EC slides*



“EOSC is the basis for a science, research and innovation data space that will bring together data resulting from research and deployment programmes and will be connected and articulated with the sectoral data spaces”

*(European Data Strategy, COM(2020) 66 final)*



# EOSC Strategy – 2022 Status of Thinking

What

## **EOSC is a 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

### **Access and interoperability of research data and results**

- Define ownership, authorship and responsibility of data and research outputs
- Ensure long-term preservation of data throughout its lifecycle
- Enable the creation of standards for all research domains
- Make data machine-actionable
- Enable new scientific discovery methods and science disciplines
- Train researchers on adopting FAIR principles as an integral part in their activity

### **A sustainable coordinated infrastructure**

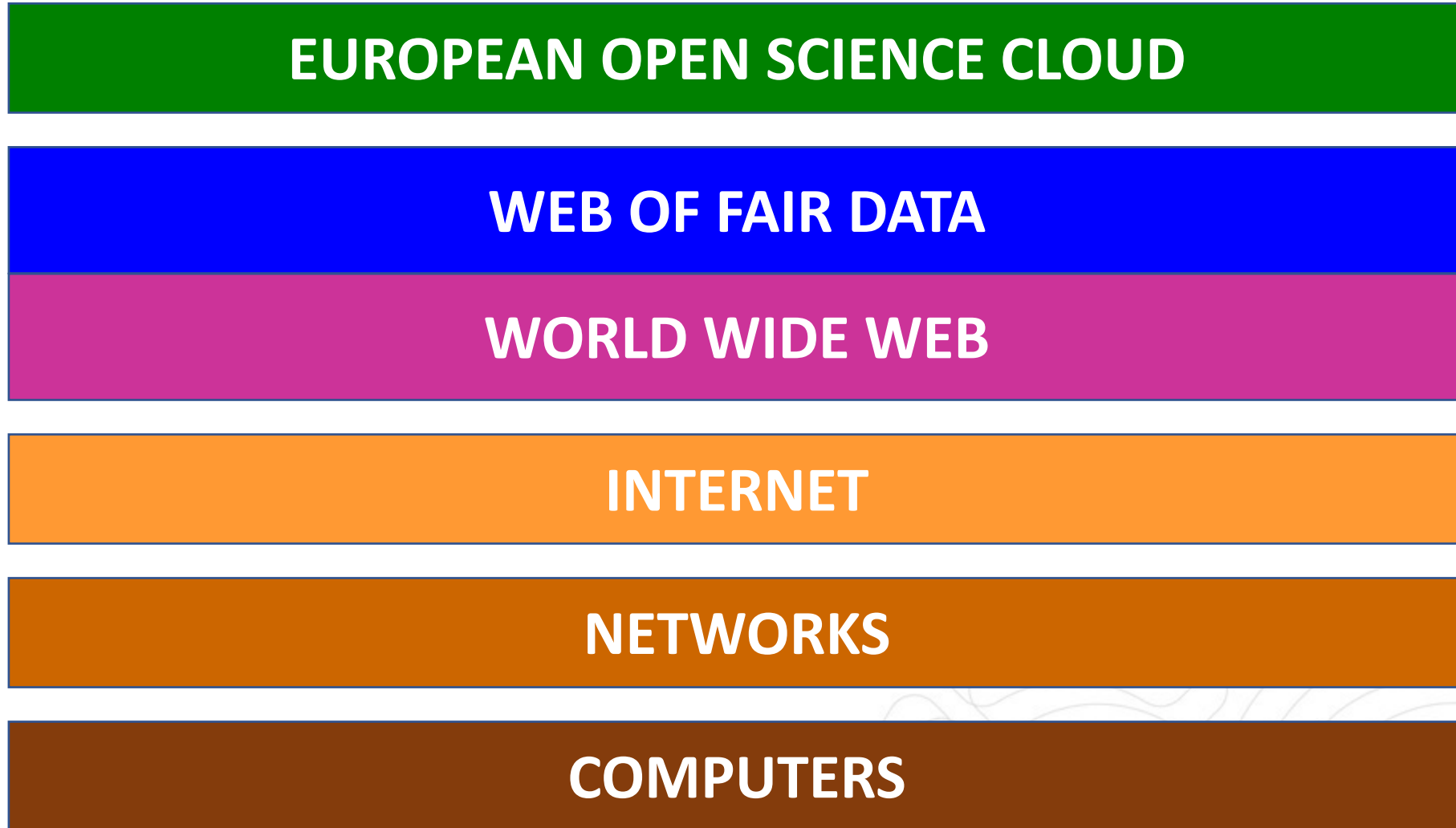
- Establish and maintain a coordinated federated reference architecture
- Implement an operational infrastructure framework that is long term sustainable
- Ensure high quality of data and services
- Ensure secure access to data and services
- Define clear standards for API and interoperability of data and services
- Apply user friendly practices
- Inspire EOSC ambassadors to assist in on-boarding of researchers

### **Inspired people and robust governance**

- Communicate an inspiring EOSC vision and strategy
- Implement an unambiguous and clearly mandated governance structure
- Establish a framework to engage human capital in institutions, countries and scientific communities
- Enable disciplinary and cross-disciplinary transnational research to find new insights from existing and new research data and outputs



# **EOSC – additionality on top of the web of FAIR data**



# EOSC Association – the Voice of the Community

Next General Assembly #6, 22-23 May 2023

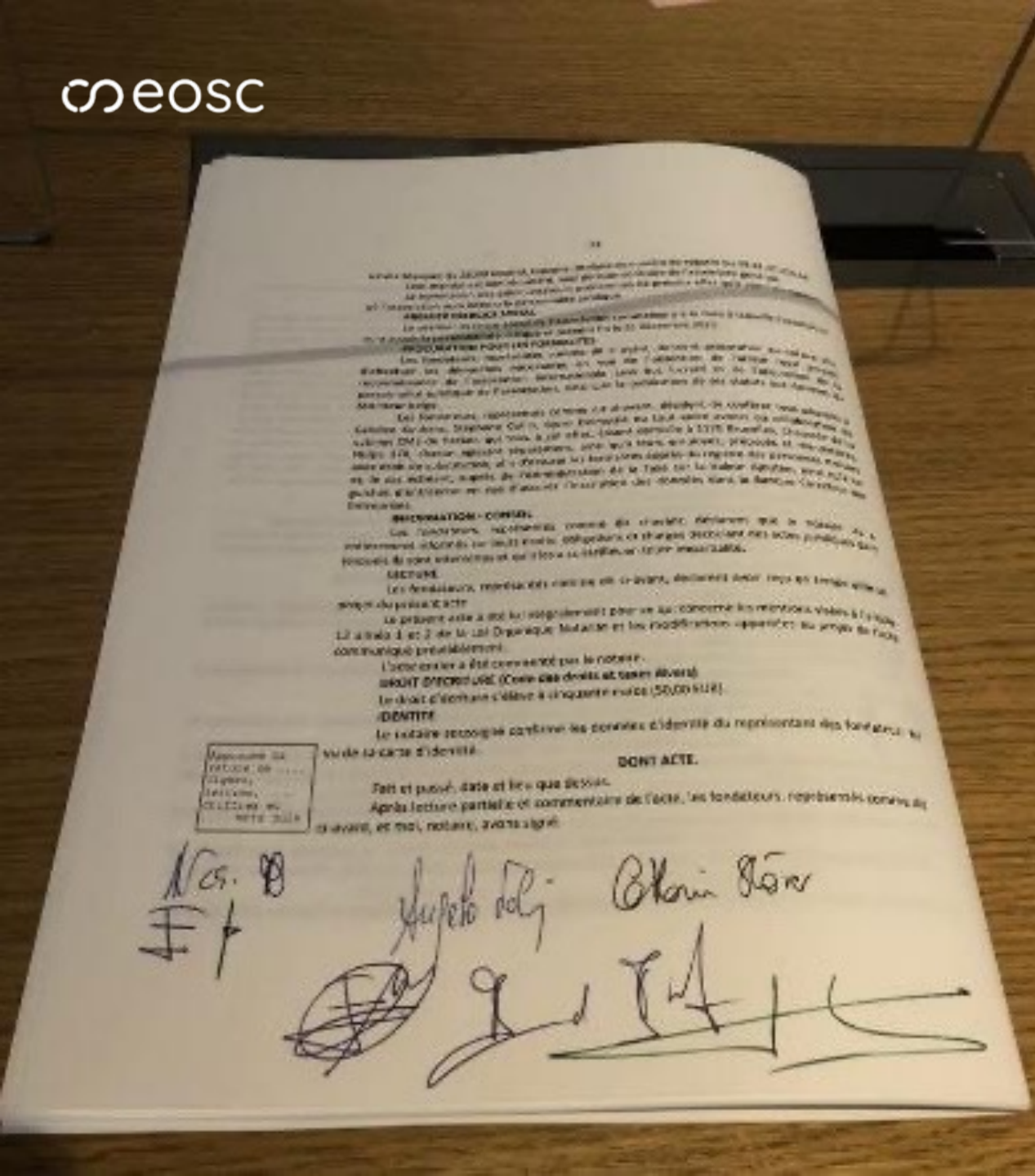




# The Purpose of EOSC-A

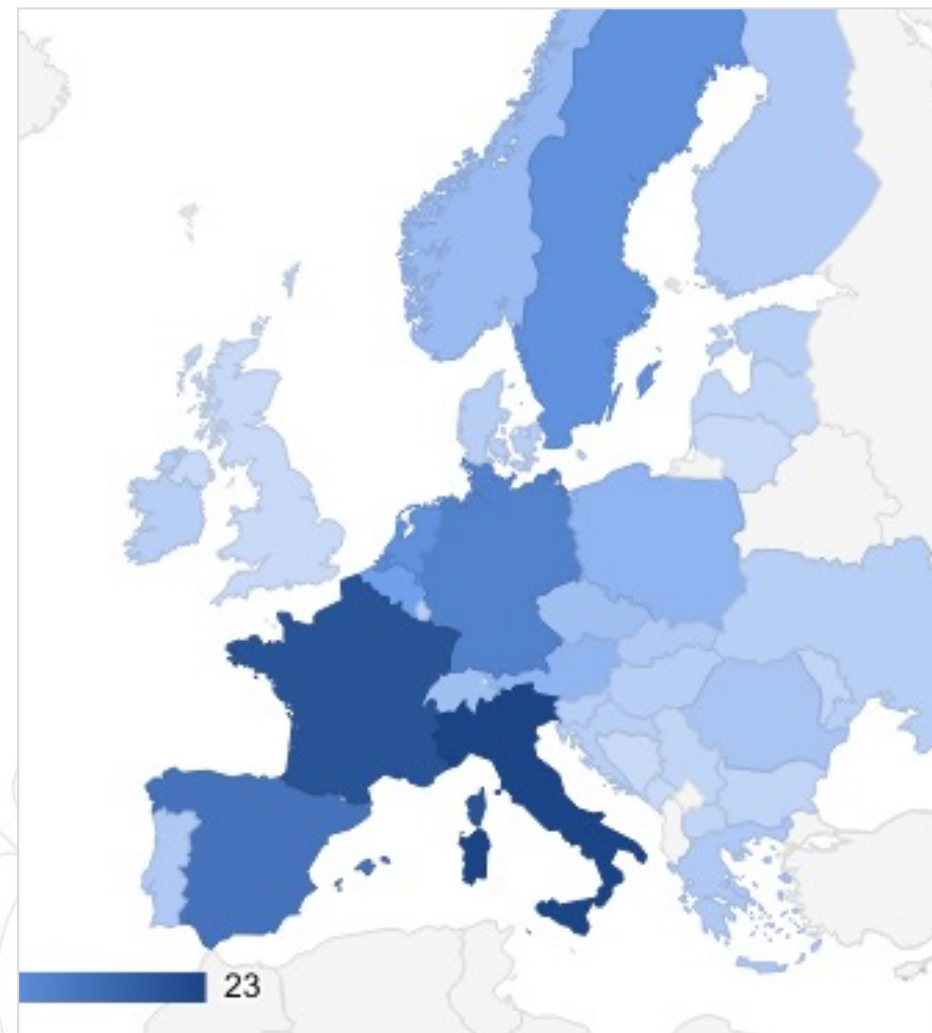
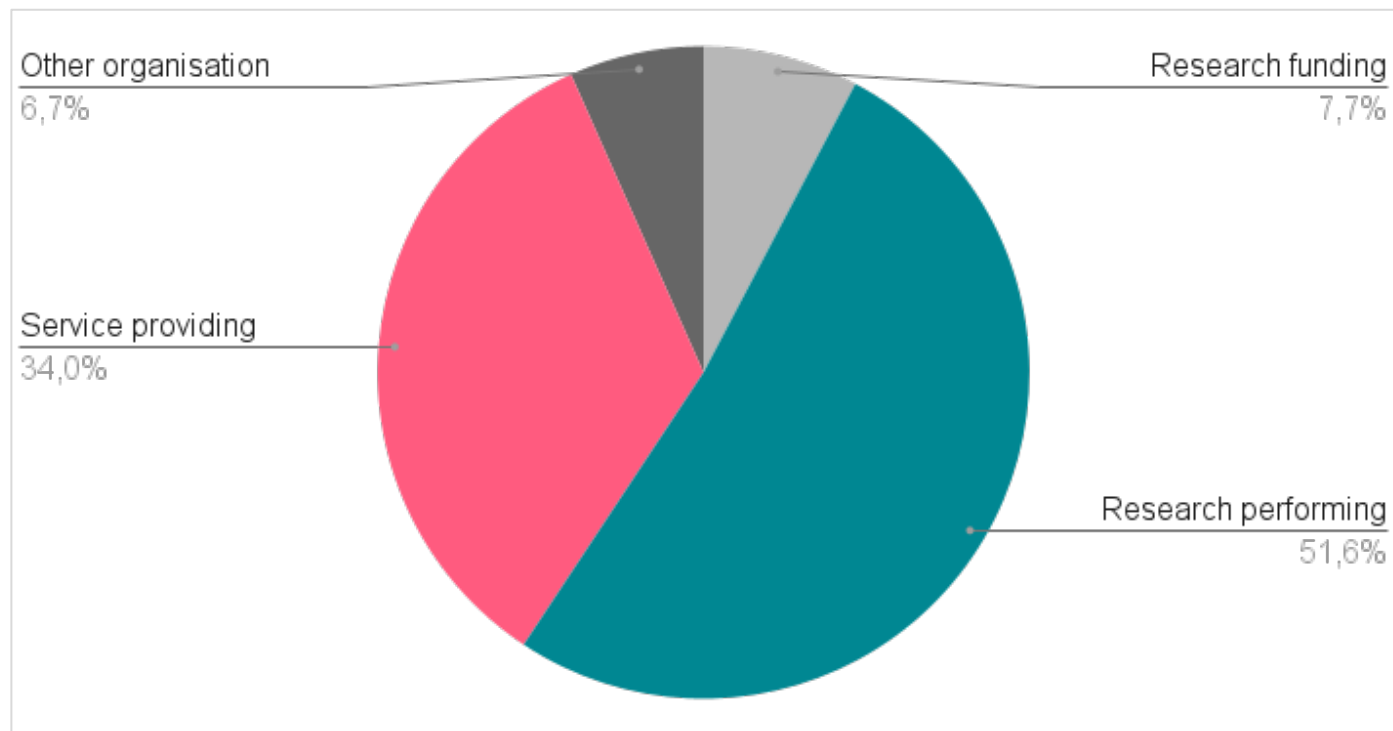
Incorporation, 29 July 2020

- (1) to provide a single voice for the advocacy and representation of the boarder EOSC stakeholder community,
- (2) to promote the alignment of European Union research policy and priorities with activities coordinated by the Association;
- (3) to enable seamless access to data through interoperable services that address the entire research data life cycle.

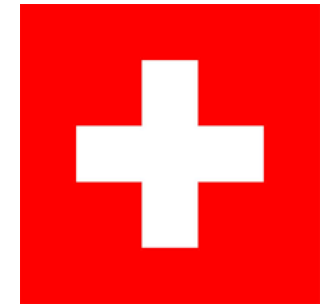


# eosc 168 Members and 81 Observers

A strong memberbase



# eosc Swiss Membership in EOSC-A



**ETH** zürich



SWITCH





# EOSC-A Brain-Pool: 13 Task Forces

Over 400 volunteers

## **Implementation of EOSC**

- Rules of Participation compliance monitoring
- PID policy and implementation
- Researcher engagement and adoption

## **Technical challenges on EOSC**

- 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 EOSC

## **Sustaining EOSC**

- Financial sustainability
- Long-term data preservation



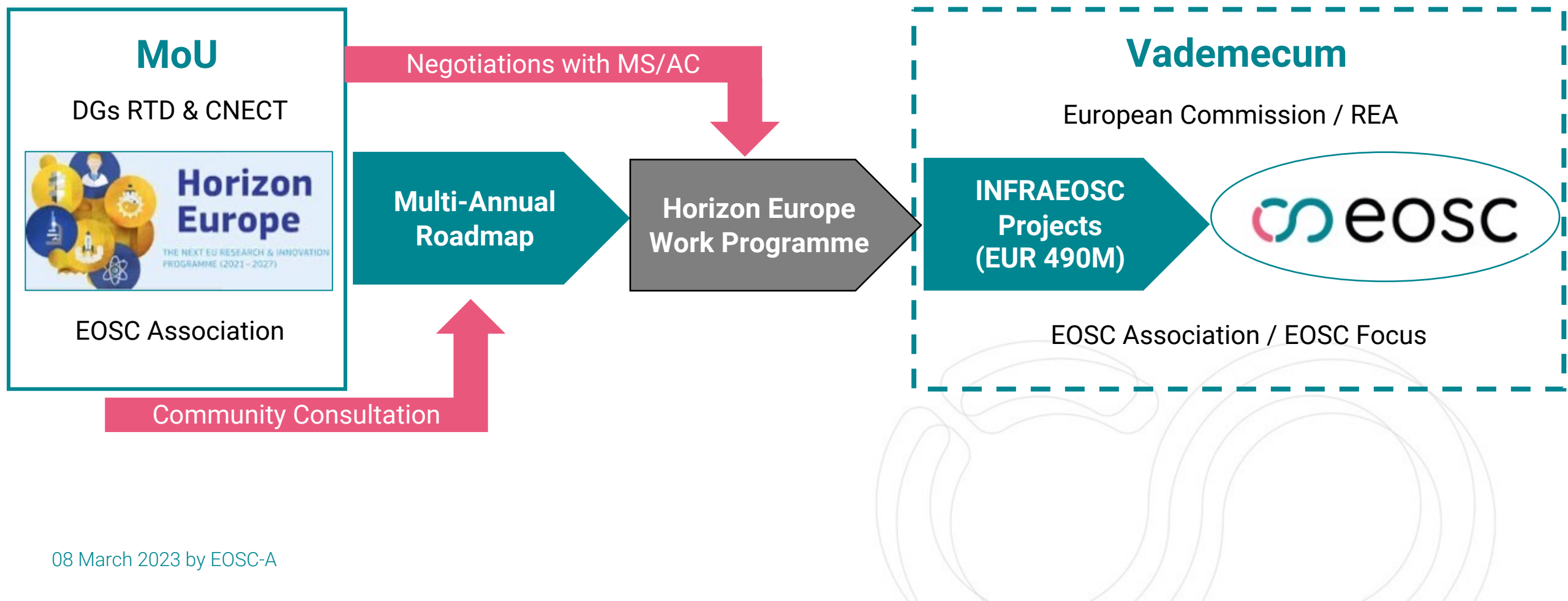
# Horizon Europe co-programmed EOSC Partnership

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



# Delivering EOSC – the Process

The critical role of the INFRAEOSC Projects



# eossc Horizon Europe INFRAEOSC Projects / 2021

AI4 |  eossc

 eossc | FAIR-EASE  eossc | Focus

 eossc | cancer  Skills  
4 eossc

 eossc | RAISE

 eossc | FAIR-IMPACT

 eossc | FAIRCORE4EOSC

 eossc | EuroScienceGateway



# Horizon Europe INFRAEOSC Projects / 2022

 | AquaINFRA

 | **Blue-Cloud2026**  
A federated European FAIR and Open Research Ecosystem  
for oceans, seas, coastal and inland waters

 **TIGER**

 | **CRAFT-OA**  
Part of the OPERAS Network

 **eosc**



  
open research metrics dataspace





## TRIPARTITE EVENTS IN NUMBERS



**1195**  
Total number  
of participants



**151**  
Total number of speakers,  
moderators and panelists



**16**  
Total number  
of countries targeted





# Reflection Paper Next Steps

Today deadline for submitting feedback by  
EOSC-SB and EOSC-A

16.02. Discussion EC – EOSC-A

22.02. EOSC Steering Board meeting

April SWOT analyses on short-listed  
models

24.05. Tripartite Event / online

## Supporting document EOSC operations and evolution post-2027

For discussion in the EOSC Tripartite event on 14 November 2022

Authors: EOSC Association and Commission services

This document supports an initial strategic discussion at the level of the tripartite governance of the European Open Science Cloud (EOSC) regarding the **models for operating, governing, evolving and sustaining the EOSC Federation after 2027**. The document lists the main EOSC deliverables expected by 2027, thus portraying 'where we plan to be in 2027' and defines three main questions respectively on the governance, the funding and the partnership approach for the EOSC federation post 2027.

Following the discussion at the November 2022 Tripartite event, retained options will be further explored during 2023-2024, so as to be well prepared for incorporating the best scenario into the FP10 proposal foreseen for 2025, in view of the expected launch of FP10 in 2028.

The EOSC vision is to set up a 'Web of FAIR Data and Services' for science in Europe. Central to this ambition is the deployment of a trusted, virtual, federation of existing infrastructures in Europe to store, share and reuse FAIR research outputs across borders and scientific disciplines also called the **"EOSC Federation"**. Such a distributed EOSC 'system of systems' shall bridge across thousands of participating research infrastructure nodes of different nature operated across the EU and associated countries. EOSC can be seen as a thin federation layer based on the FAIR principles. The EOSC Federation should provide coordinated entry points primarily for researchers in Europe to find and access FAIR data and interoperable services that address elements of the whole research cycle (from discovery and mining to storage, management, analysis, publication, and re-use). The EOSC federation should also enable the monitoring of the re-use of research outputs and of the uptake of open science practices across borders and disciplines.

### 1. Where do we plan to be by 2027?

The overall objectives set for EOSC are to deploy operations to serve EU researchers and to progressively open-up, connect and articulate EOSC with the wider public sector and the private sector<sup>1</sup>.

The successful uptake of such a federation depends on multiple aspects ranging from the adoption of minimum common technical solutions to the uptake of appropriate governance,

<sup>1</sup> As defined in the European data strategy (COM(2020) 66 final) which defines the European Open Science Cloud (EOSC) as "the basis for a science, research and innovation data space that will bring together data resulting from research and deployment programmes and will be connected and fully articulated with the sectoral data spaces."

# Thank you!

