European Open Science Cloud (EOSC)

Karel Luyben

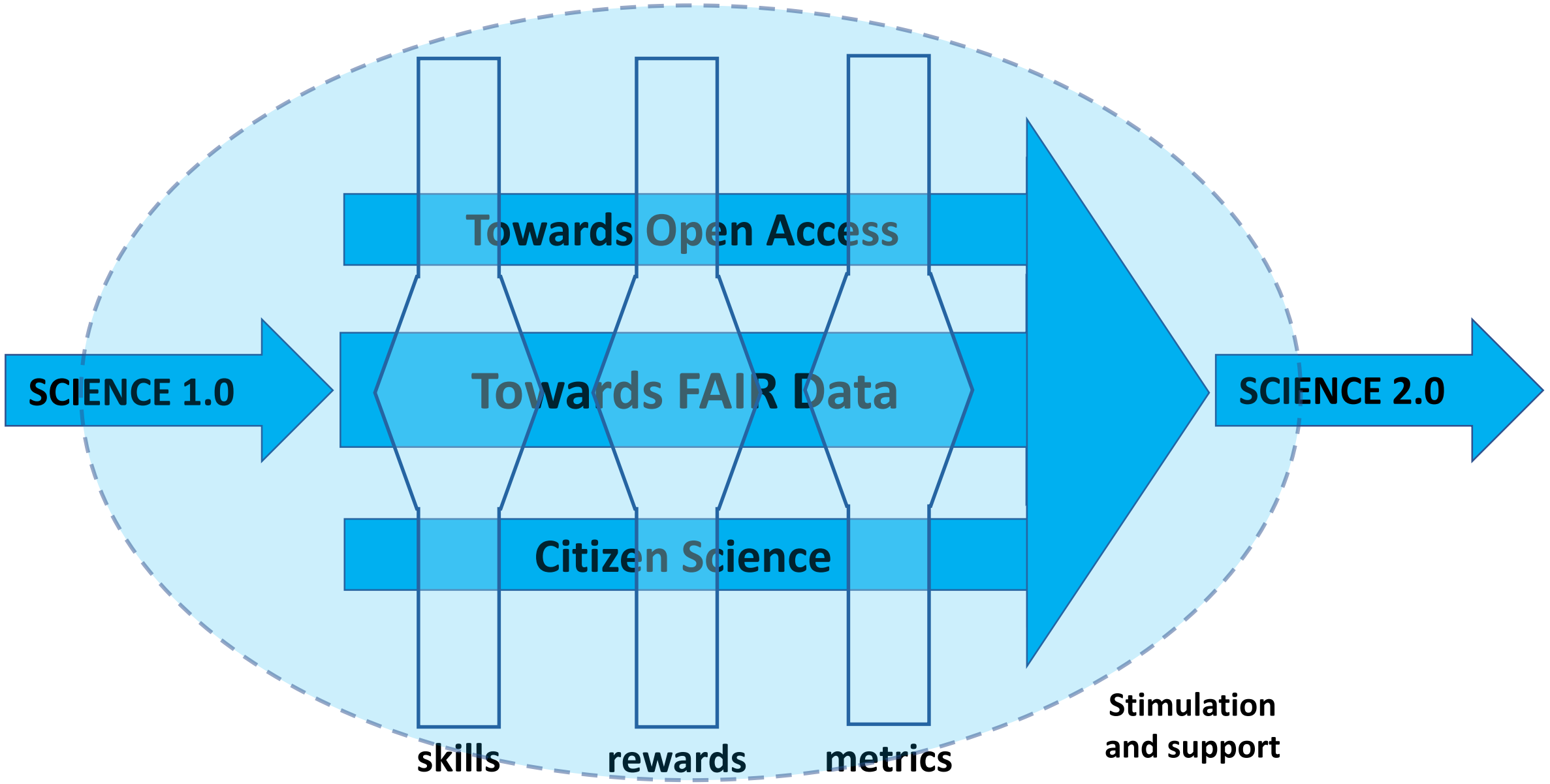
President of the EOSC Association

May 25, 2021

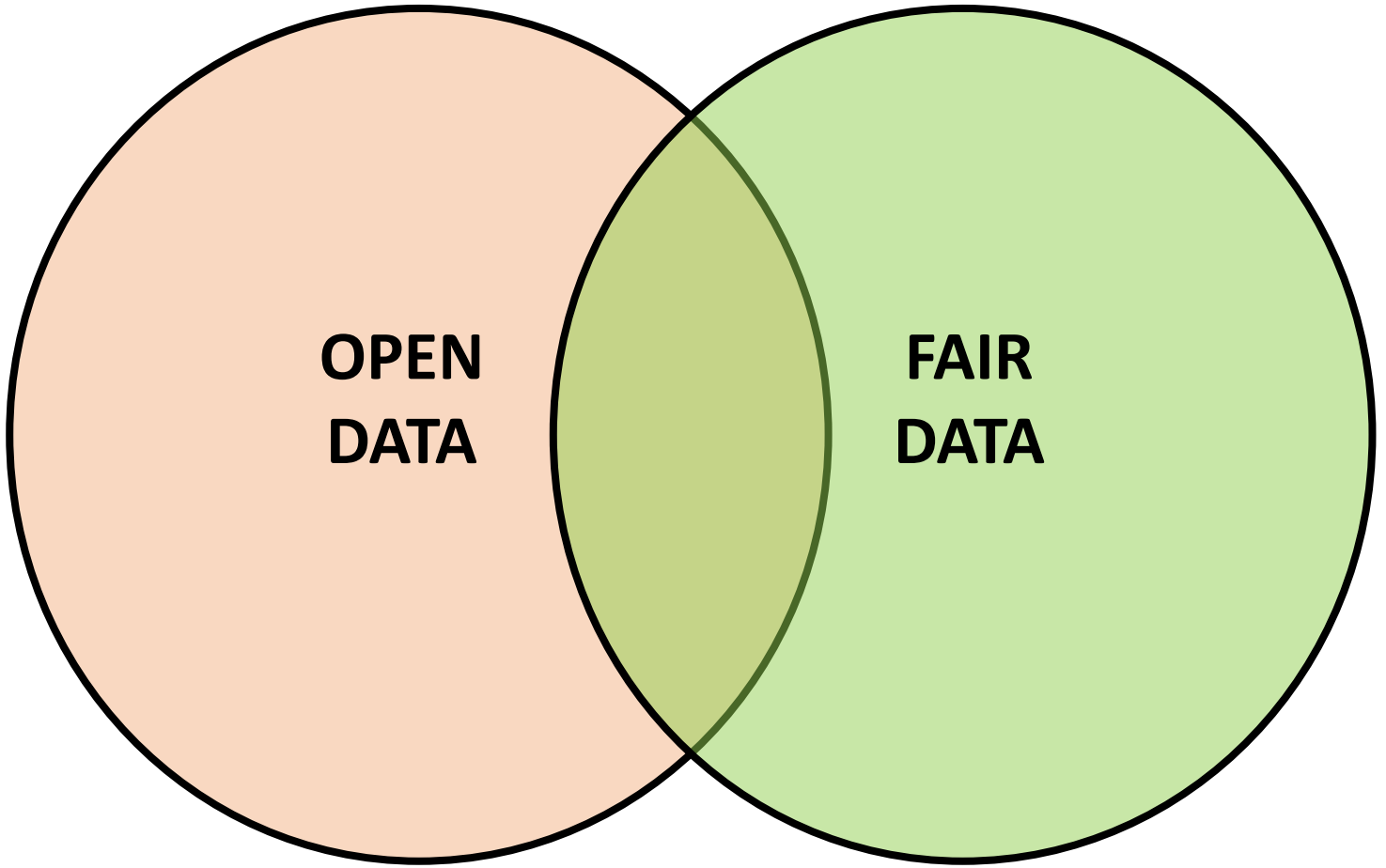
Czech Open Science Day

EUROPEAN OPEN SCIENCE CLOUD

OPEN SCIENCE



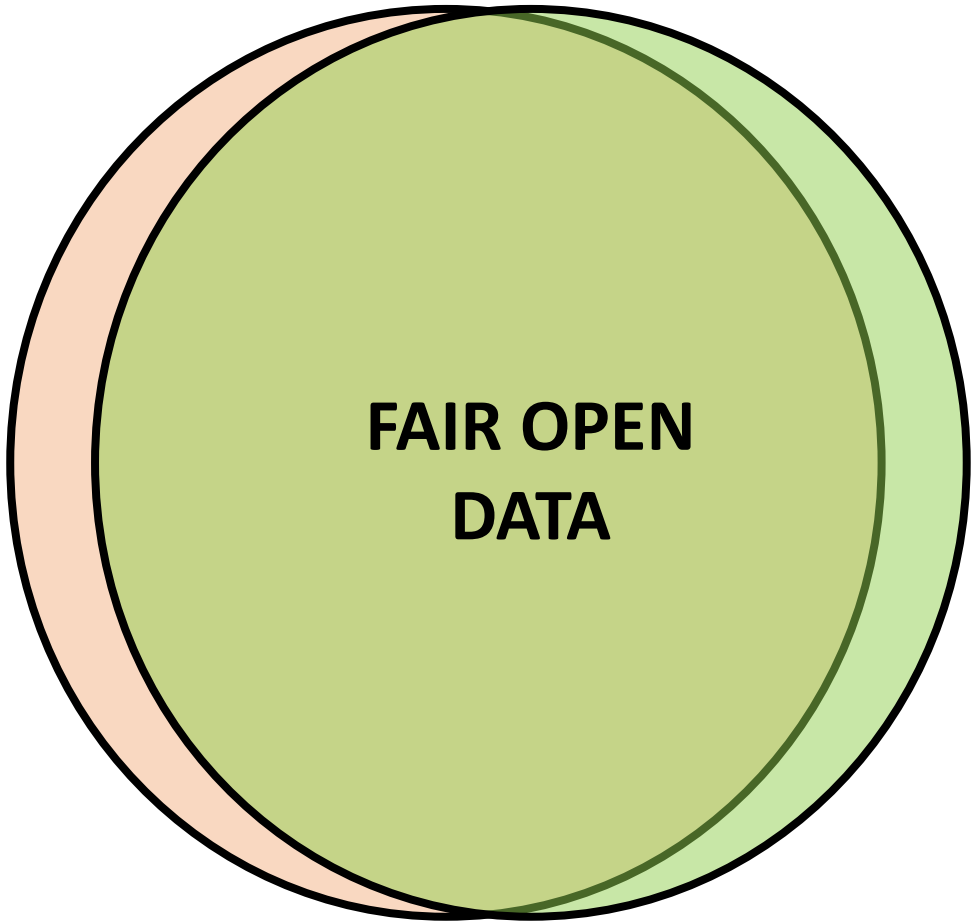
OPEN DATA and/or FAIR DATA



FAIR ≡
Findable
Accessible
Interoperable
Reusable

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

OPEN DATA and/or FAIR DATA

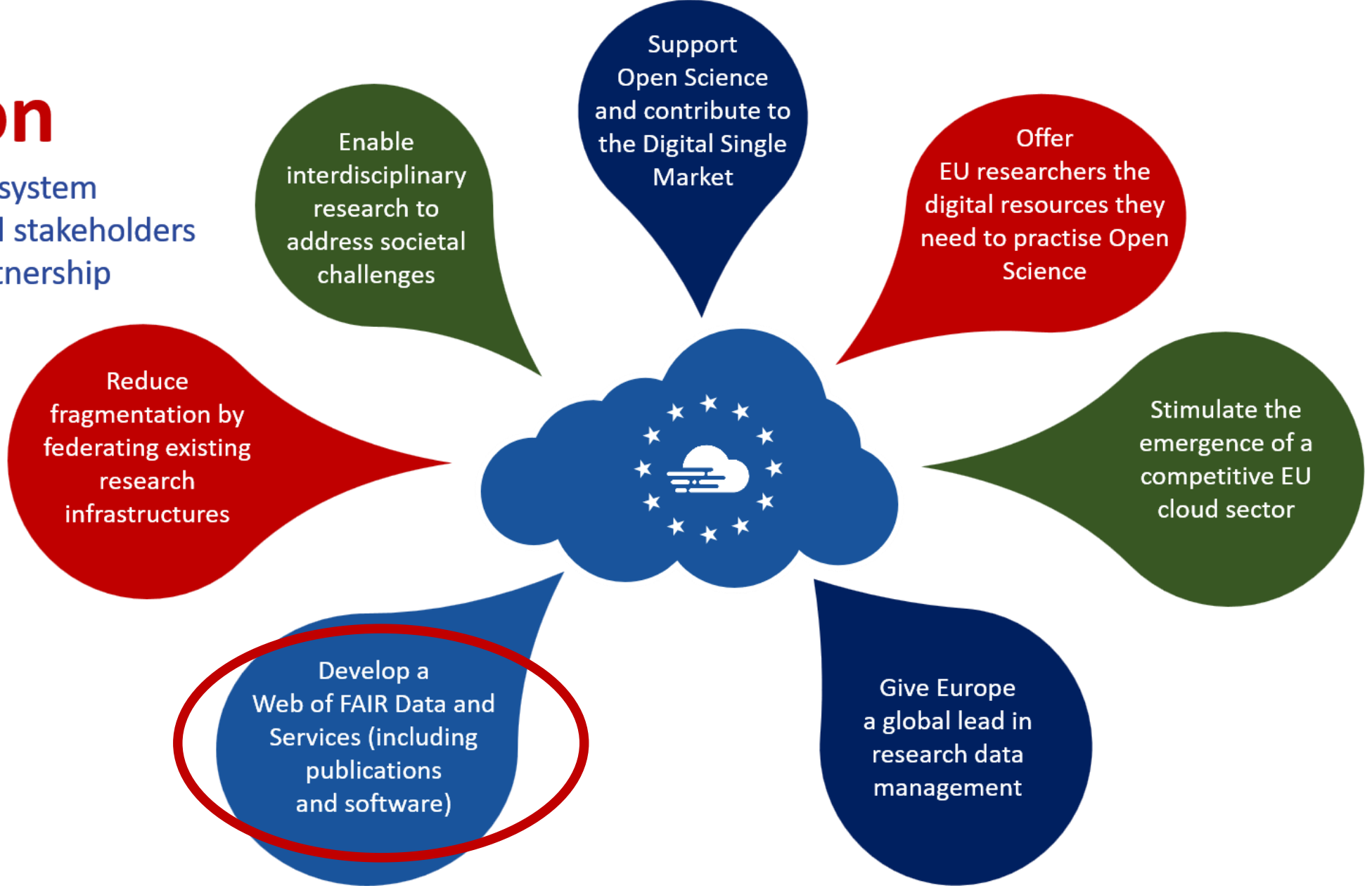


FAIR ≡
Findable
Accessible
Interoperable
Reusable

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

The Vision

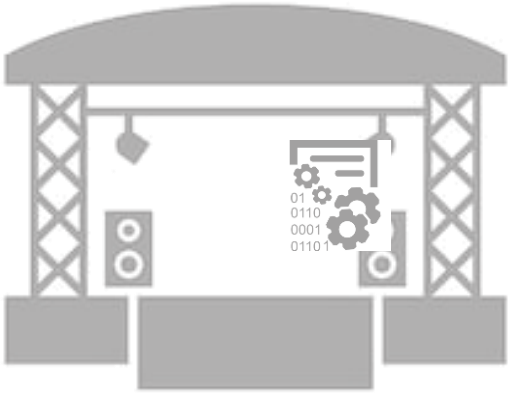
Building the EOSC ecosystem collaboratively with all stakeholders through the EOSC Partnership



EUROPEAN OPEN SCIENCE CLOUD

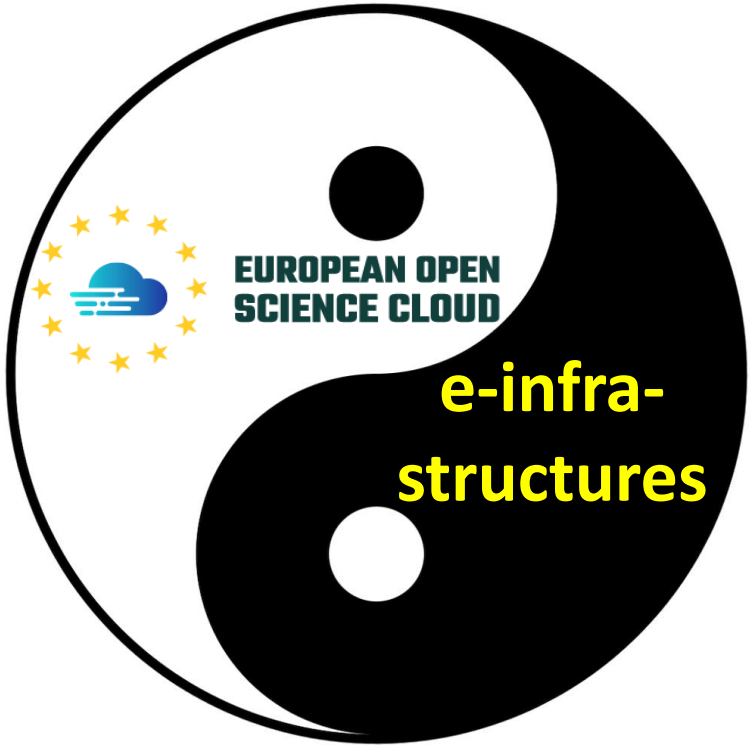
“A web of scientific insight”

- 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
- Meeting all European data requirments
- In interaction with other regions of the world



Twinning the data- to the e-infrastructure

EOSC is a data-infrastructure and could be seen as a twin sister (or brother) of the European e-infra-structure organisations. The last offering the store, compute and connect services used by EOSC to offer the of servicing data and creating interoperability.



Guiding principles for EOSC

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

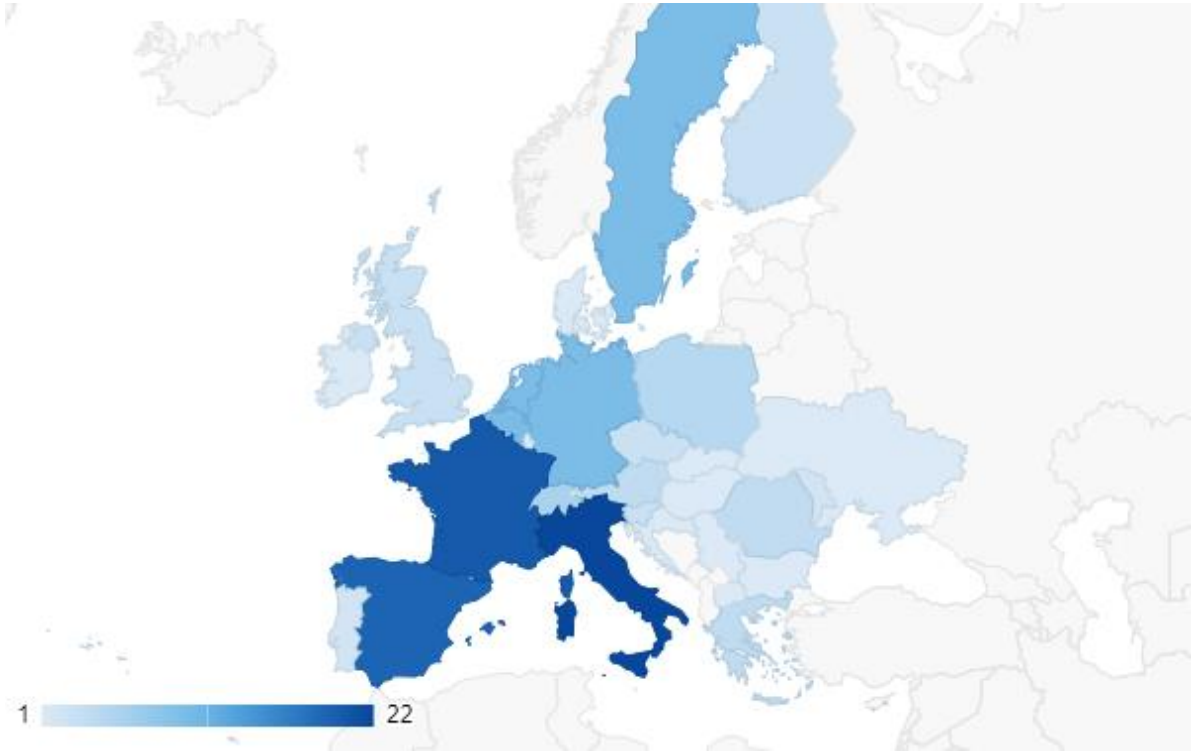
- **Multi-stakeholderism**
  EOSC will succeed if and only if it follows a multi-stakeholder approach;
- **Openness**
  EOSC will ensure research artefacts be ‘as open as possible, as closed as necessary’;
- **FAIR principles**
  EOSC research artefacts need to be findable, accessible, interoperable and reusable;
- **Federation of infrastructures**
  EOSC will federate existing and upcoming data- and e-infrastructures;
- **Machine-actionable**
  EOSC will strike the right balance between machines and people in delivering the services that will serve the needs of European scientists.

EOSC Association

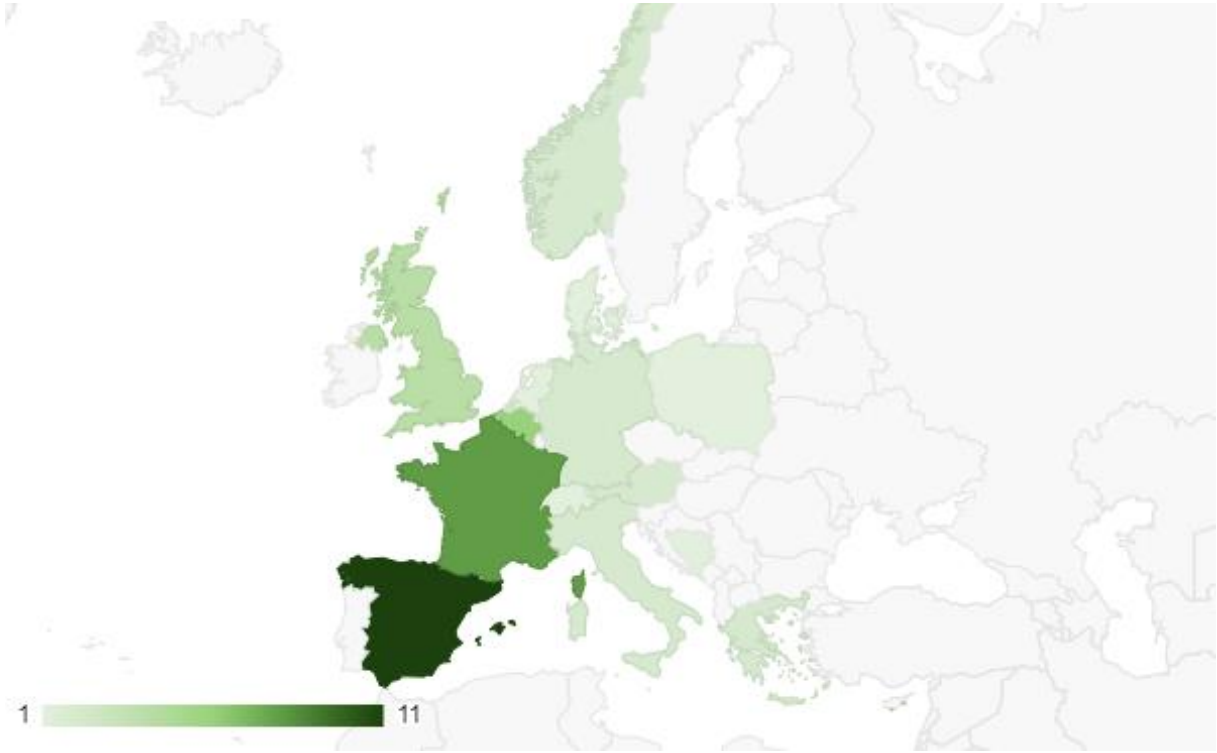
- Four founding members (CESAER, GEANT, GARR, CSIC)
- Was incorporated as AISBL on Wednesday 29th July 2020
- Obtained Royal Decree on Friday 11th September 2020
- First General Assembly on 17-12-2020 elected President and Board
- Research Performing; Research Funding and Service Proving organisations
- Now ~ 150 members and ~ 60 observers (62% - 8% - 30%) (May 2021)
- A European Co-programmed Partnership, between the EC and the EOSC Association, MoU to be signed 23 June 2021
- Joining the EOSC Association = Joining the EOSC Partnership!

EOSC Association membership geographical spread

~ 150 Members



~60 Observers



How to join the Association: https://www.eosc.eu/join-association

Board of Directors

Karel Luyben, CESAER (President)

Klaus Tochtermann, ZBW; 3-year

Marialuisa Lavitrano, University Milano – Bicocca; 3-year

Suzanne Dumouchel, CNRS; 3-year

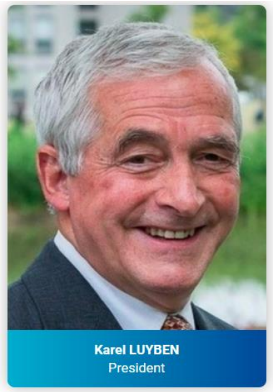
Sarah Jones, GÉANT; 2-year

Ignacio Blanquer, UPV; 2-year

Ronan Byrne, HEAnet; 1-year

Bob Jones, CERN; 1-year

Wilhelm Widmark, University of Stockholm; 1-year



EUROPEAN OPEN SCIENCE CLOUD

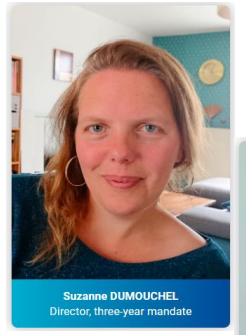
Functions for EOSC Association 2020+

- Develop and govern federating core
- Manage compliance framework
- Manage trusted certification
- Manage the AAI
- Manage PID policies
- Outreach to stakeholders
- Monitor services and transactions
- Manage ‘EOSC’ trademark(s)
- Contribute to Horizon EU policy

EUROPEAN OPEN SCIENCE CLOUD

Advisory Groups with liaisons from the Board

- Implementation of EOSC – Suzanne Dumouchel
- Technical challenges on EOSC – Ignacio Blanquer
- Metadata and data quality – Sarah Jones
- Research careers and curricula – Wilhelm Widmark
- Sustaining EOSC – Bob Jones



EUROPEAN OPEN SCIENCE CLOUD

Task Force topic within Advisory Groups

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

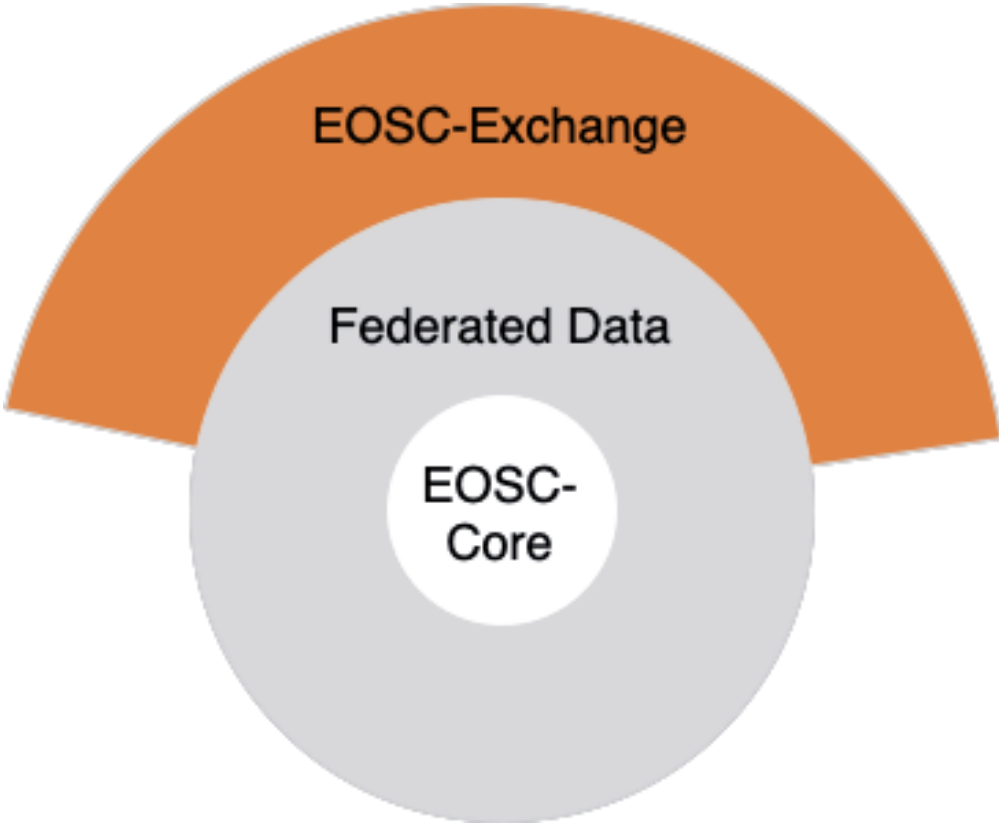
- Defining funding models for EOSC
- Long-term data preservation

Rules of Participation (RoP)

- Minimal set of rules that specify the rights, obligations and accountability governing EOSC activities
- RoP are set at a level to encourage wide participation, including from less advanced research communities
- Many of the Rules will need to provide encouragement rather than impose strict requirements, but can develop over time to include more stringent conditions
- The EOSC Association will be responsible for the RoP
  - Guidelines on ownership and evolution of RoP: https://doi.org/10.2777/67118

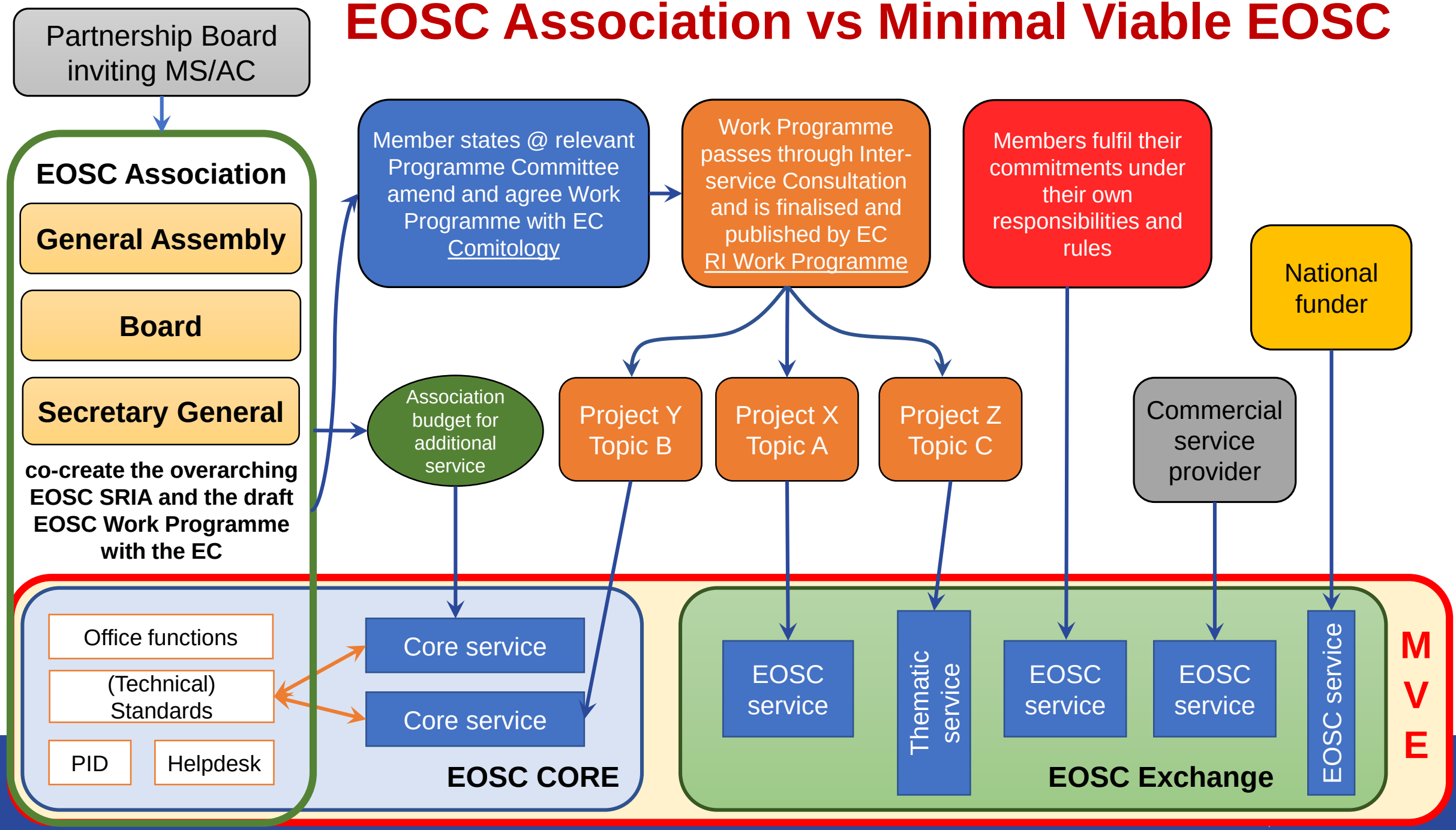
First iteration-minimum viable EOSC (MVE)

- The MVE includes EOSC-Core and EOSC-Exchange which work with federated FAIR datasets
- MVE must enable the federation of existing and planned research **data** infrastructures
- Begin with simple use cases – FAIR open data not sensitive or closed



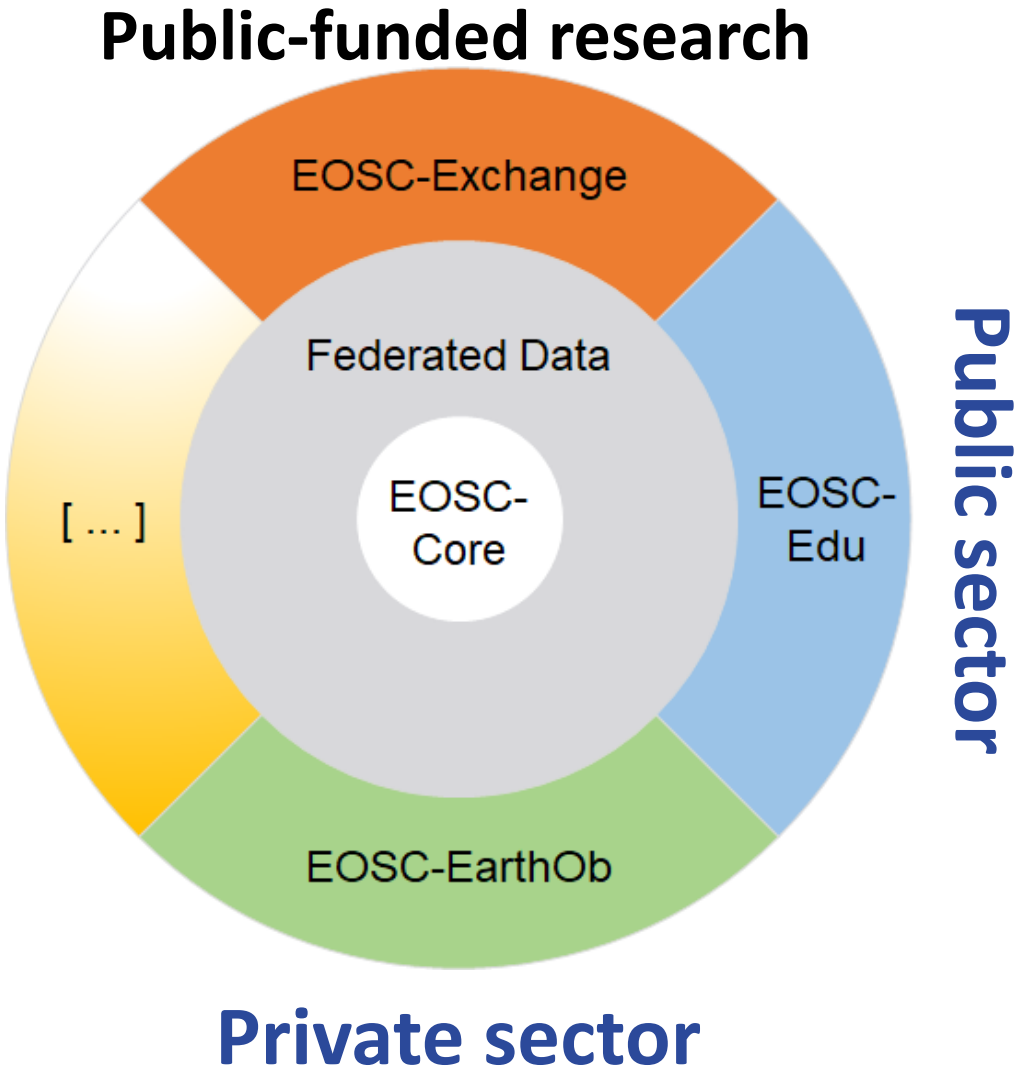
EUROPEAN OPEN SCIENCE CLOUD

EOSC Association vs Minimal Viable EOSC



Proposed second and third iterations

- Extensions to serve public sector and industry
- These are not completely new users as some public sector and industrial partners will already be involved in MVE
- Would ideally be one ‘marketplace’ but differing requirements and legislation may require linked but alternately governed spaces



EOSC on a global stage

- Service providers from third countries can participate in EOSC
  - Adhere to EOSC Rules of Participation and applicable legislation

- EOSC will work with other regional initiatives towards common goals for Open Science, driving global convergence on standards in support of the implementation of an open science commons

THANK YOU

EUROPEAN OPEN SCIENCE CLOUD


Let’s co-create EOSC