

Entering the next phase of EOSC

Rupert Lueck

EOSC EB, Co-Chair WG Sustainability

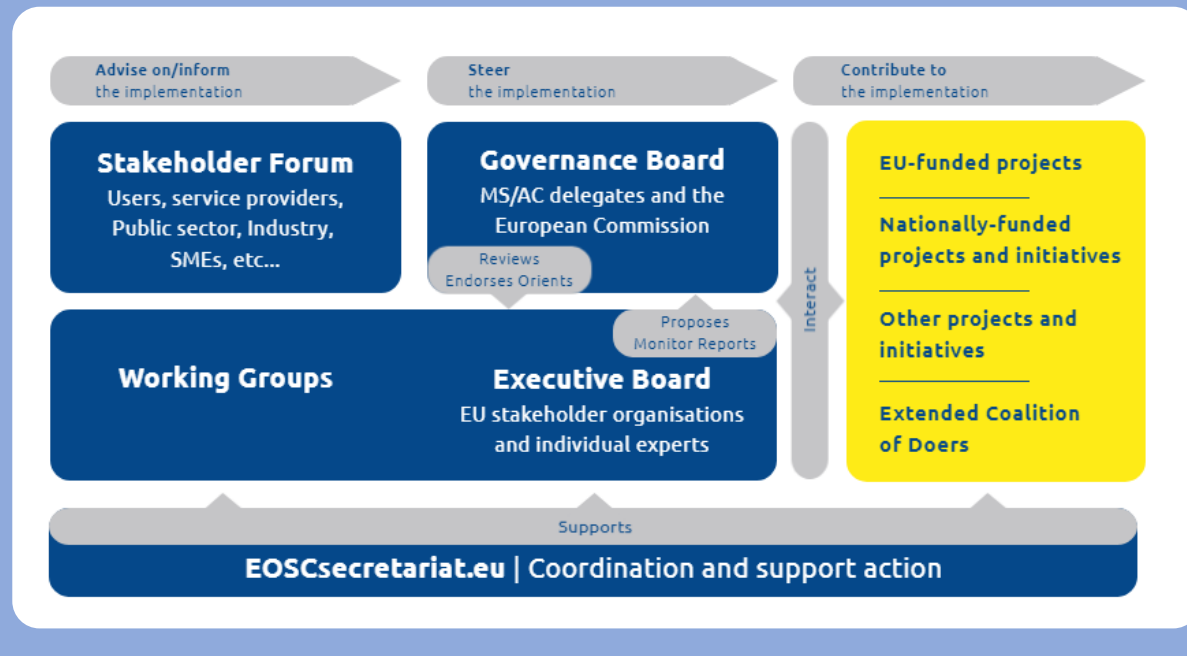
PaNOSC and ExPaNDS Symposium
9th November 2020



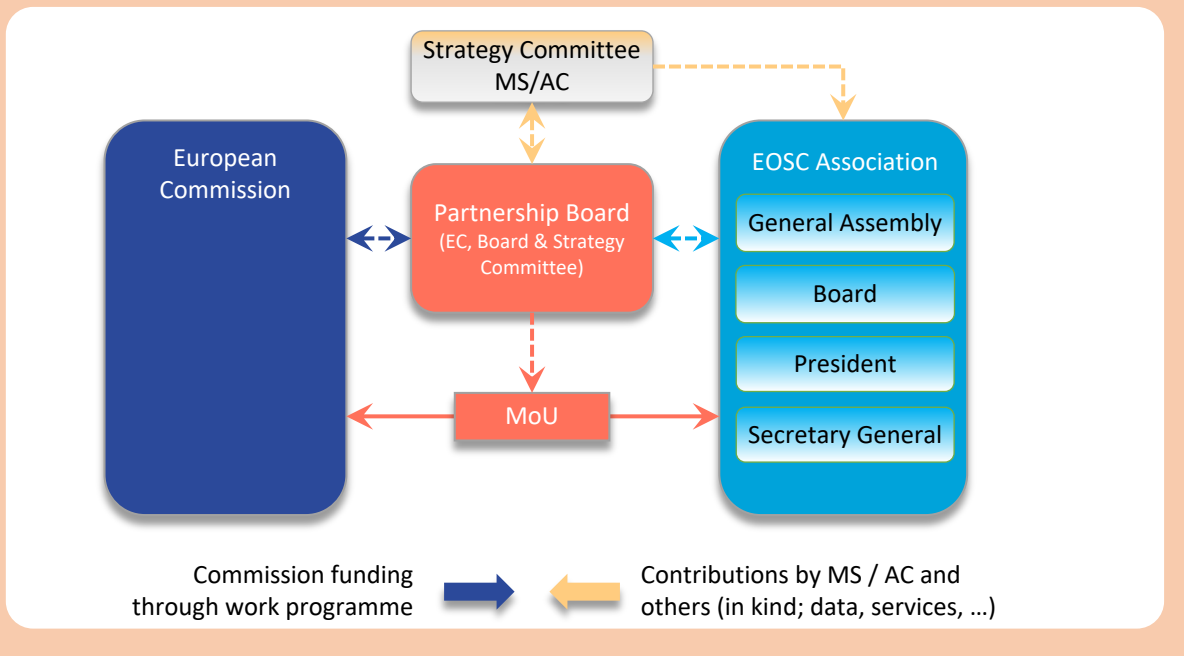
**EUROPEAN OPEN
SCIENCE CLOUD**

EOSC governance is transitioning

Current governance structure until 31 December 2020



New EOSC European Partnership



Join the EOSC Association to influence future directions

EOSC Partnership: EOSC Association and SRIA

- ★ EOSC Association to sign the MoU with the EC in January 2021
- ★ Officially founded in July 2020
- ★ CAESAER, CSIC, GÉANT and GARR as founding members
- ★ Initial set of 139 members and 48 observers provisionally accepted
- ★ 1st General Assembly 17 December 2020
- ★ Strategic Research and Innovation Agenda (SRIA) will be annexed to the MoU
 - ★ Stakeholder consultation over the summer
 - ★ Version 0.8 was made available during the EOSC Symposium:
<https://www.eoscsecretariat.eu/news-opinion/eosc-strategic-research-and-innovation-agenda-version-08>
 - ★ Version 0.9 will be submitted to the EOSC GB on 13th November
 - ★ Version 1.0 in early December

EOSC Association timeline

15 OCT	Deadline for the first round of applications
19-30 OCT	Open consultation on Bylaws
28 OCT	1 st Meeting of the Board (1 st batch of provisional members)
25 NOV	Bylaws finalized
20 NOV	All legal materials for first General Assembly ready
17 DEC	1 st GA to elect President, Board and set budget (2 nd batch of members)
31 DEC	Mandate of current Governance ends
Early 2021	EOSC Association and EU sign European Partnership Agreement

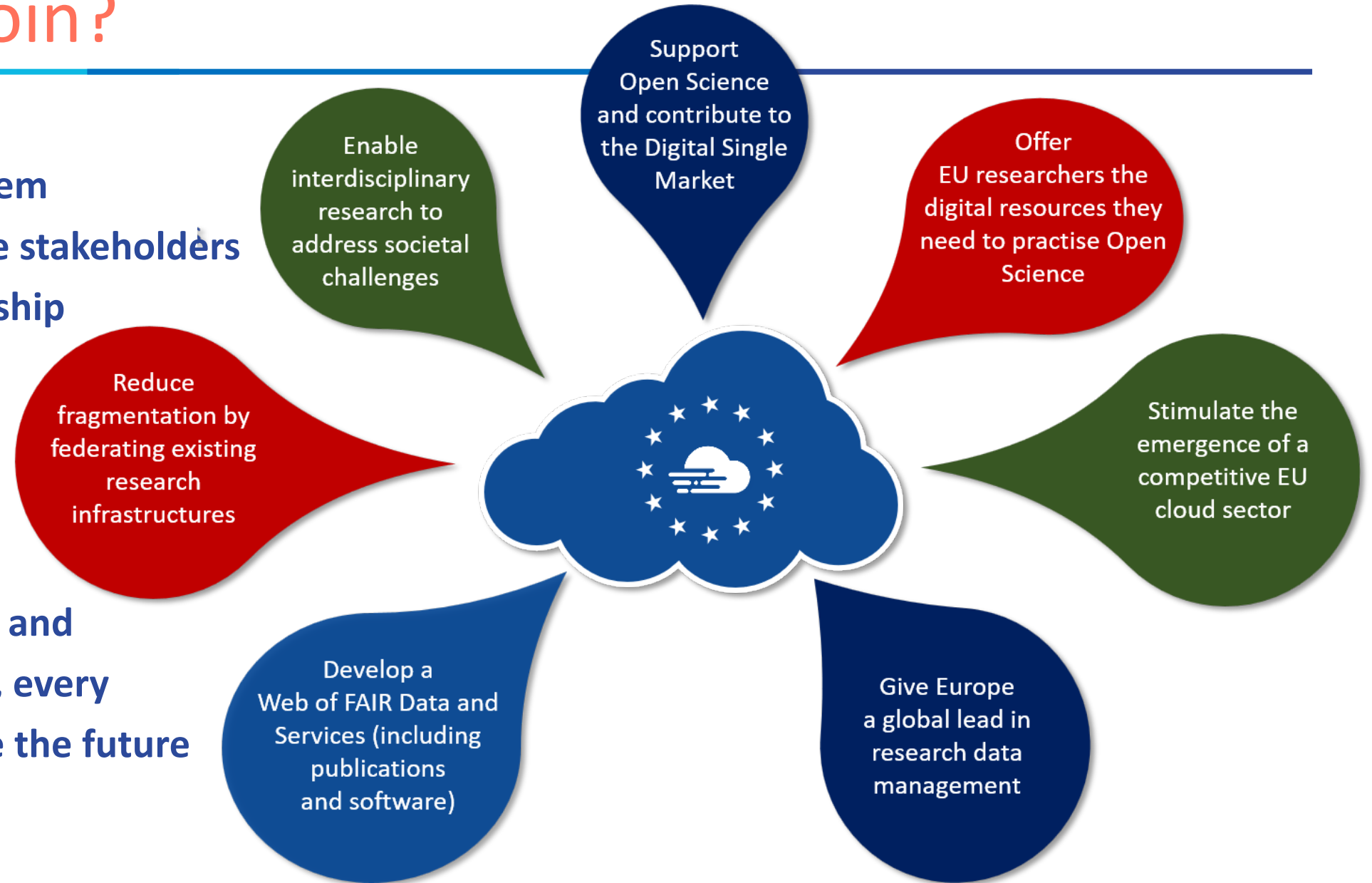
Why should I join?

The Vision

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

The Impact

Via the Strategic Research and Innovation Agenda (SRIA), every organisation can influence the future direction of EOSC!





Co-Chairs
Rupert Lueck
EMBL
Lidia Borrell-Damián
Science Europe

WHAT

Provide strategic, legal and financing recommendations for an operational, scalable and sustainable EOSC federation after 2020

HOW

1. Analyse business models and implications on legal entity, costs, regulations, financial strategies, supporting NDI alignment
2. Map potential legal entities, taking into account national and European legislation

WHY

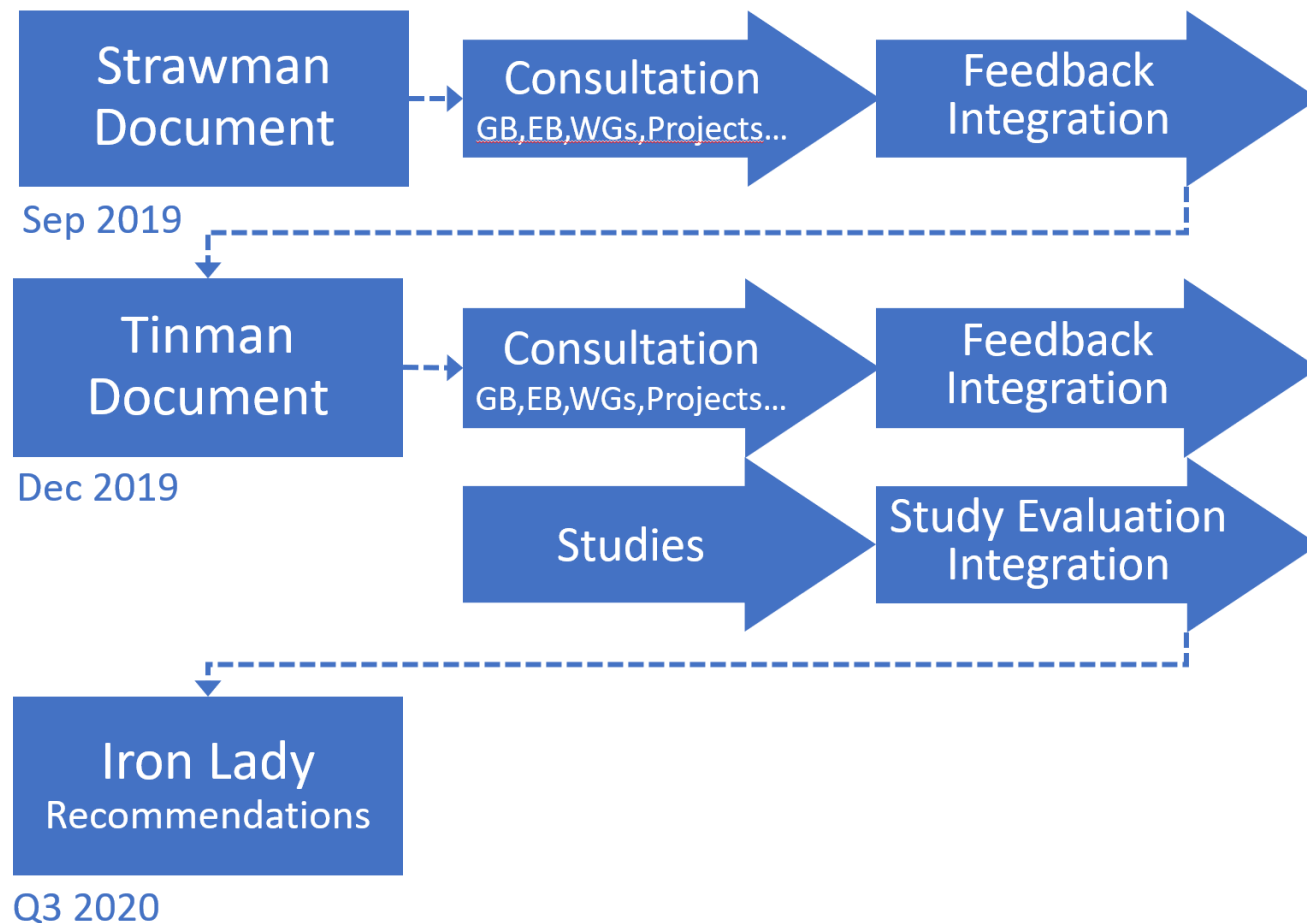
A clear understanding of key strategic, financial and legal aspects is essential for the second phase of the EOSC implementation

Towards a sustainable EOSC

3. Examine options for a governance framework to oversee EOSC operations and development
4. Analyse regulatory/policy environments and assess impact of proposed structures and funding streams at national & European level



Work Process of the Sustainability Working Group



Identifying recommendations for EOSC post-2020 sustainability, i.e. business models, legal entity options, governance, national policy issues

Strawman – Tinman – FAIR Lady (Iron Lady)

- ★ Iterative approach & gradual growth of EOSC
- ★ Establish a Minimum Viable EOSC (MVE)
- ★ To enable federation of existing and planned research data infrastructures and additional services for publicly-funded research
- ★ Further iterations to include additional services for public sector and industry
- ★ Studies on legal entity, business models ...

WG synergies and contributions to the FAIR Lady (Iron lady)

Landscape WG

Rules of Part.
WG

Architecture
WG

FAIR
WG



Theatrical release poster by Bill Gold
original illustration by Bob Peak



Studies

Legal and strategic advice on EOSC
legal entity : **Kellen Group**

EOSC-core operational costs:
AcrossLimits and BoundaryLess

Strengthening of the EOSC Risk
Governance : **AON Hewitt**

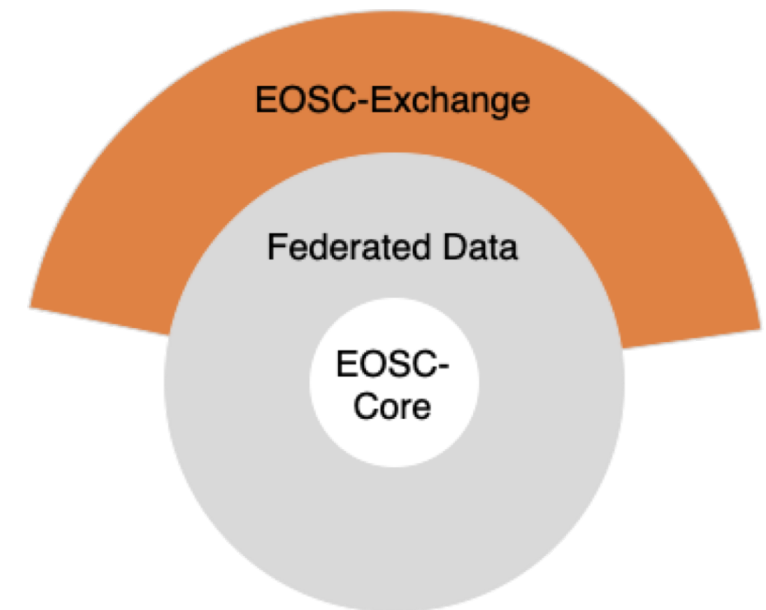
Expanding EOSC:
Industry Commons Foundation

Assessment Country Sheets Analysis:
Digital Curation Centre

FAIR forever: Long Term Data
Preservation: **Digital Pres. Coalition**

First iteration – a Minimum Viable EOSC (MVE)

- ★ Establish an initial MVE that will enable the federation of existing and planned research data infrastructures
- ★ MVE includes EOSC-Core and EOSC-Exchange which work with federated FAIR datasets
- ★ Main focus and added value: connect disciplinary infrastructures and enable cross-disciplinary research
- ★ Federation of research data infrastructures into EOSC via the cluster and regional projects as a critical first step

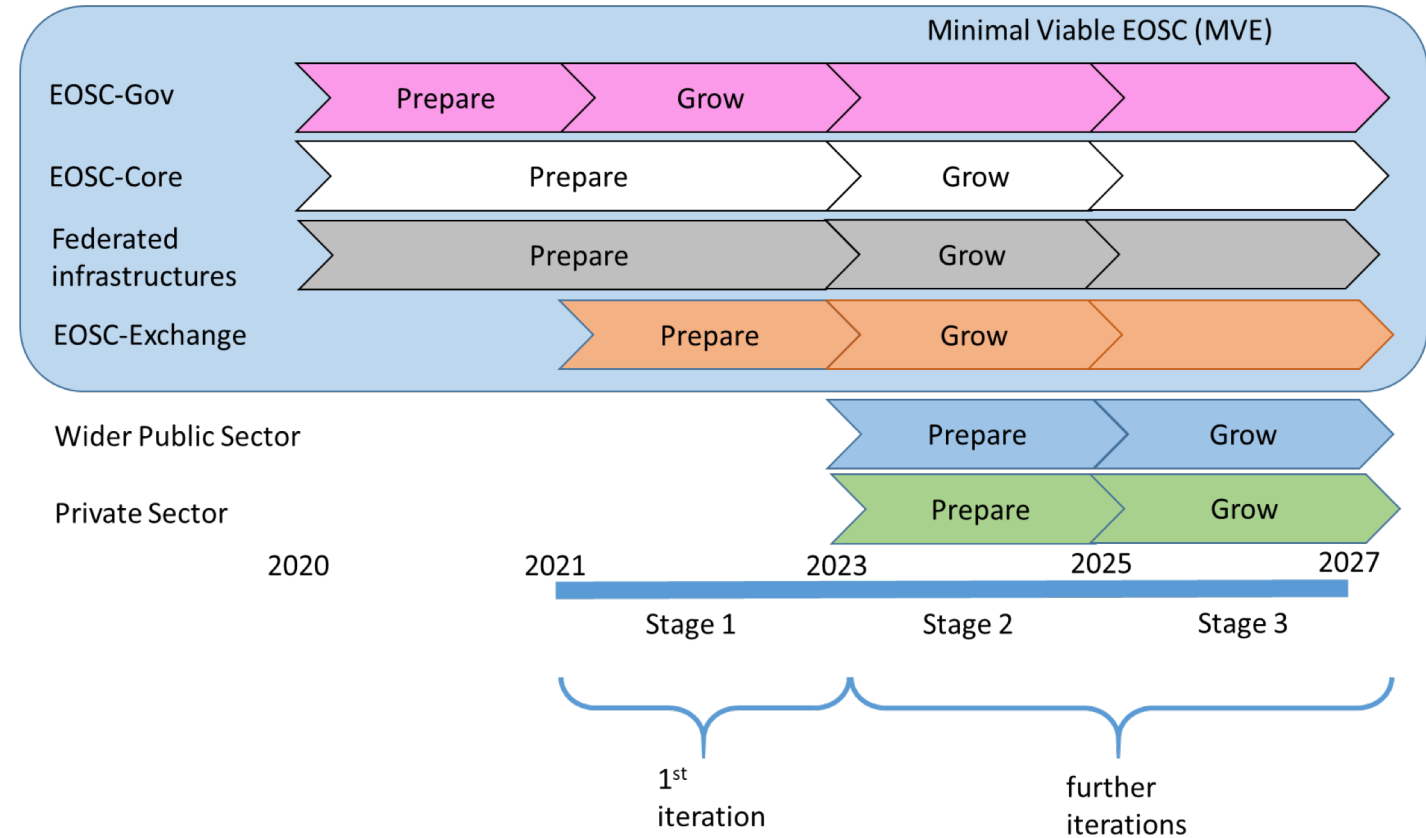
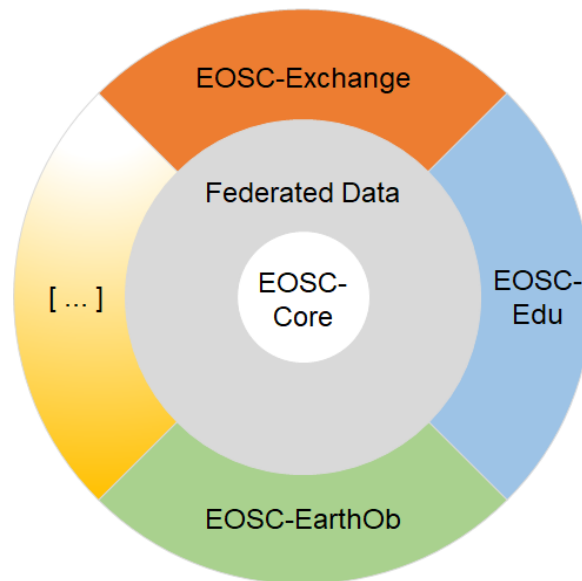
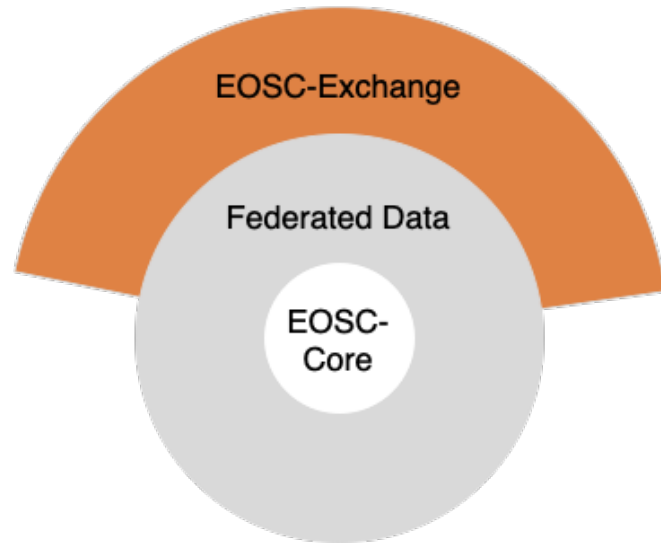


EOSC-Core services

Agreed with FAIR & Architecture WGs

- ★ **Shared open science policy framework**, which effectively embeds a data compliance framework for open / FAIR data. It defines and applies the rules of how the data elements are published, shared and re-used.
- ★ An instantiation of the **EOSC interoperability Framework** including
 - ★ **Authentication and Authorization Interoperability (AAI) framework**,
 - ★ **Persistent Identifiers framework**: Services to generate, resolve and validate persistent identifiers (PID)
 - ★ **Interoperable metadata framework**: Within & between discipline interoperability
 - ★ **Data access framework**, whose primary role is to offer data as a service. It enables open interfaces where data consumers (users and machines) are able to discover and use data.
 - ★ **Service management and access framework**, consistent and agreed upon understanding of e-science services: what they offer, which science problem they address, what operational capacity, how accessed, who pays.
 - ★ **Open metrics framework**, which sets the rules (usage, performance, value for money, user satisfaction) for the assessment of EOSC elements, i.e., policies, access framework, services, data, business, funding and usage models.
- ★ **Security policies and procedures** to ensure consistent and coordinated security operations across the federated services. This will include incident response policies and a service request and problem management scheme
- ★ **Operational support services** for EOSC-Core and made available to those federating services connecting to the EOSC-Core.
- ★ **Web-portal** including web-content as well as supply and demand facing services providing for accessing the EOSC resources.

EOSC implementation: Structure, iterative process & timelines



Widening EOSC to public and private sectors – the PaNOSC use case

- ★ Sustainability WG launched study - Options to expand EOSC to the public and private sectors
 - ★ Conducted by Industry Commons Foundation funded by Co-creation budget
 - ★ Collected 23 use cases
- ★ PaNOSC use case
 - ★ PaNOSC value-added SME application for industry/commercial use
 - ★ Large volumes of data generated by the photon and neutron laboratories gathered together under the PaNOSC umbrella
 - ★ Technical challenge to create software as a service (SaaS) allowing industry to apply the new knowledge created in the research environment.
 - ★ Vision: a SME with the commercial incentive to provide this bridge would be able to provide such an innovative service solution

The big picture

- ★ The EOSC vision is not limited to linking datasets, federating infrastructures, or aligning policies
 - ★ It links stakeholders throughout the data lifecycle and across the European research ecosystem
- ★ EOSC must be inclusive and supplement the activities of research communities
- ★ Divergence across and within stakeholder groups about the benefits and costs of EOSC as well as the disruption it may cause to existing structures, decision making processes and funding models
 - ★ EOSC must acknowledge that such tensions exist and work to reconcile them
 - ★ An iterative approach is needed to progressively build trust and resolve conflicts between the stakeholders while acknowledging that not all the solutions and answers are known today
- ★ There must be an objective assessment of what has been achieved with each iteration
- ★ The creation of the EOSC Association is an important achievement and it could provide a forum where the stakeholders resolve their differences and confirm their commitment to EOSC

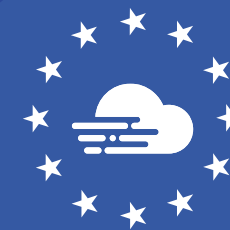
Summary

- ★ The Minimum Viable EOSC (MVE) will enable the federation of existing and planned research data infrastructures for the benefit of publicly funded researchers accessing openly available FAIR data.
- ★ The MVE is necessary in order to establish an initial implementation of EOSC that brings value to users beyond their current use of infrastructures.
- ★ Draft Iron lady / FAIR lady document now available via EOSC liaison platform

https://www.eoscsecretariat.eu/system/files/solutions_for_a_sustainable_eosc_-_ironlady_draft_19oct20.pdf

THANK YOU

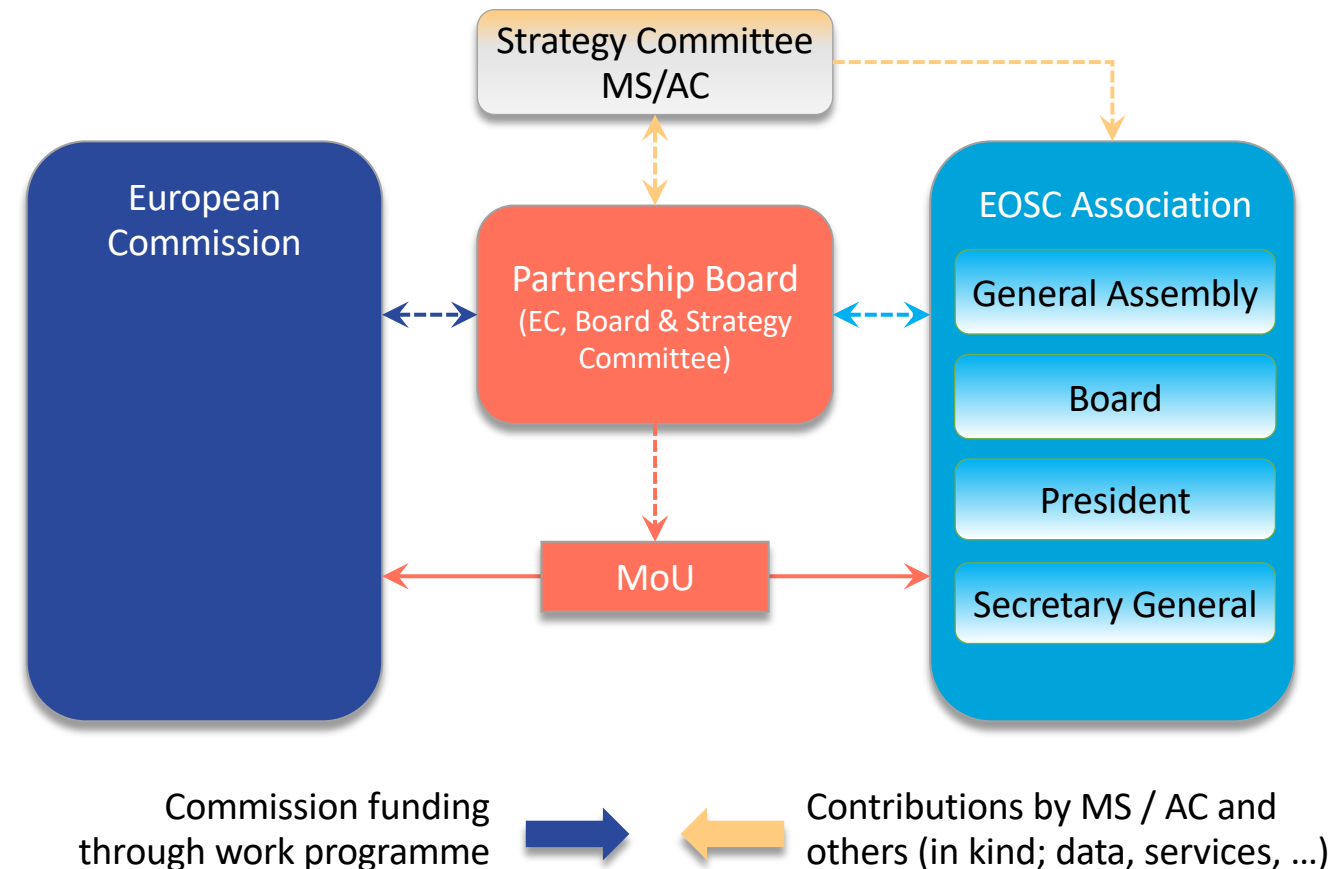
ANY QUESTIONS?



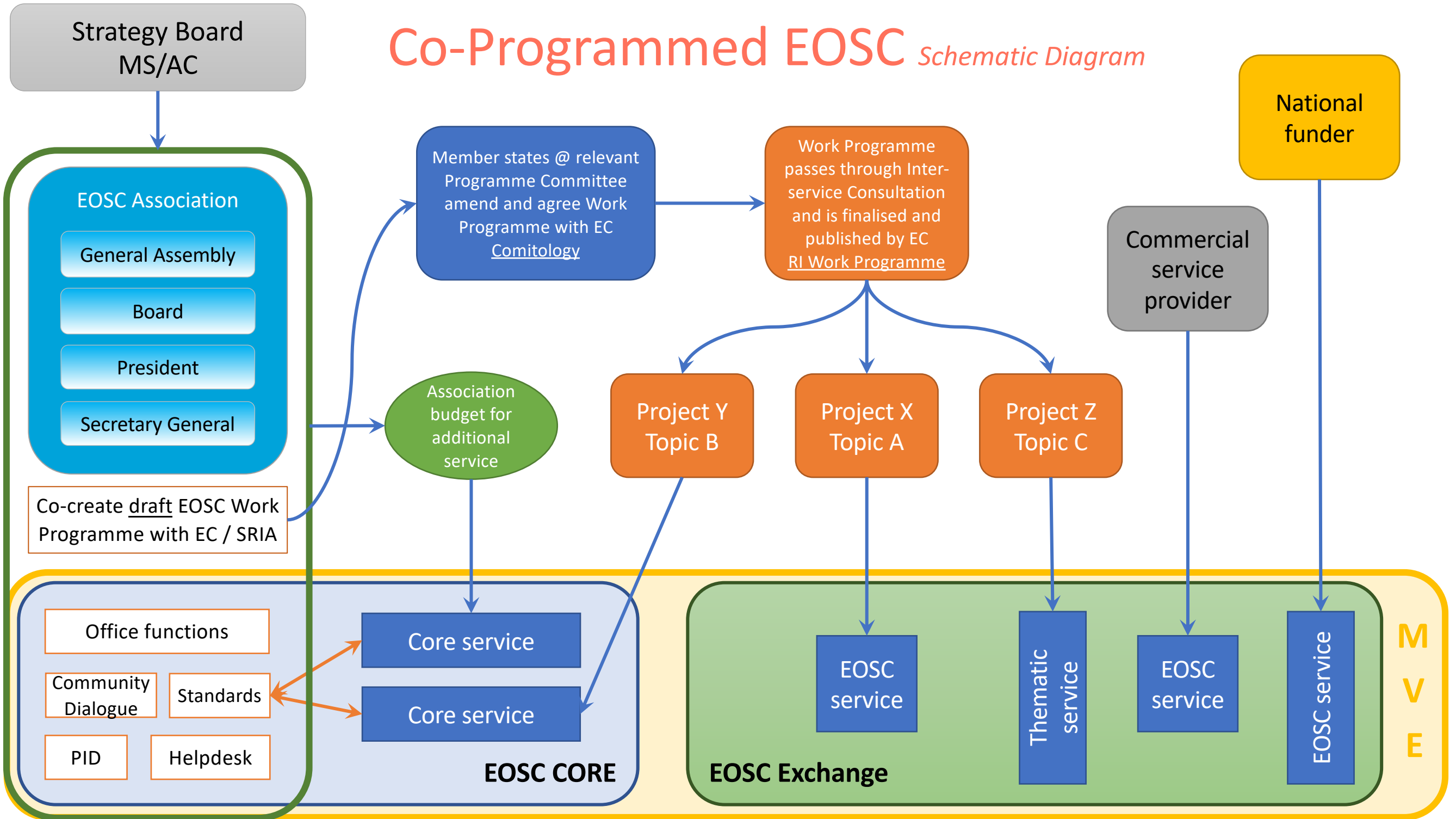
**EUROPEAN OPEN
SCIENCE CLOUD**

EOSC as a European Strategic Partnership with the EC

- EOSC foreseen to enter into a **co-programmed European Strategic Partnership**
provide a long-term funding mechanism for strategic development of EOSC
shape strategic alignment of policies and set common standards through a common **Strategic Research and Innovation Agenda (SRIA)**
EC funding expected to match partnership-based commitments by EU Member States & Associated Countries; mainly be “in-kind”, data, services ...
- **MoU between EC and EOSC Association**
Association currently being set up to be operational by Dec 2020 to sign the MoU with the EC
Association comprised of EOSC partner organisations
Association Core Tasks: SRIA, Standards, Monitor, Community Dialogue, Helpdesk, Training ...



Co-Programmed EOOSC Schematic Diagram



EOSC (M)architecture

- EOSC-Core
 - Minimum architecture elements to enable the Federation
- EOSC-Exchange
 - Evolving Federation to serve the needs of research communities
 - Widening to the general public and the private sector
- Minimal Viable EOSC (aka MVE)
 - Minimum Federation to bring value to users

