



FAIRCORE4EOSC

The views and expectations of the European Commission

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What is EOSC?

A process

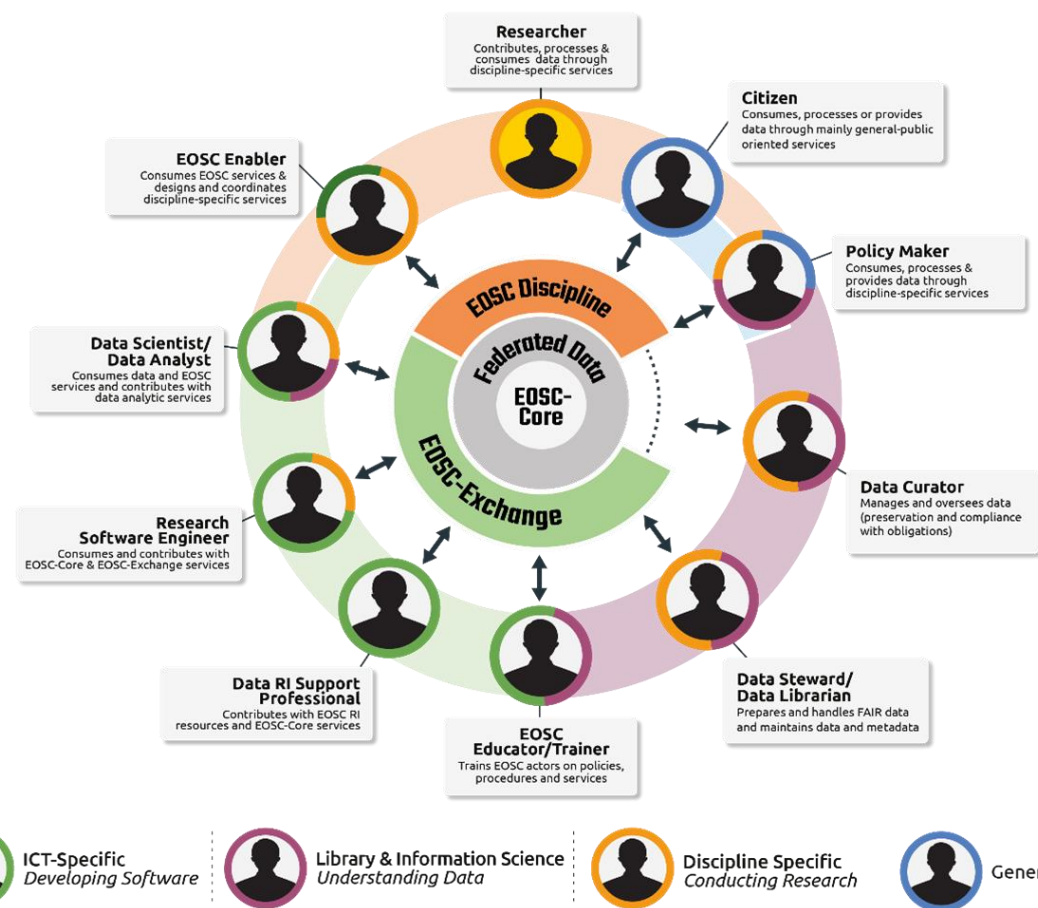
- To accelerate Open Science, FAIR data management and use of digital methods and services
- To stimulate co-operation in science and research, new insights and innovations, higher research productivity and improved reproducibility in science.

An open, trusted, federation of infrastructure

- To access existing Research Infrastructures in Europe;
- To enable circa 2 million European researchers to store, share, process, analyse, and reuse research digital objects (e.g. data, publications and software)

An evolving ecosystem

- Bringing together the European Commission, the governments and the many R&I stakeholders involved in the European Research Area
- Co-created across European, national and institutional levels



Horizon Europe

Research and Innovation Programme 2021-27



June 2021



"Horizon Europe will set a new standard for dissemination of knowledge and new skills across European societies. With clear and immediate open access requirements for beneficiaries, the Open Europe Research publishing platform and a strengthened European Open Science Cloud, we are well underway in making truly open science a reality!"

Mariya Gabriel Commissioner for Innovation, Research, Culture, Education and Youth

Horizon Europe

Research and Innovation Programme 2021-27



Open Science across the programme

Open
Science

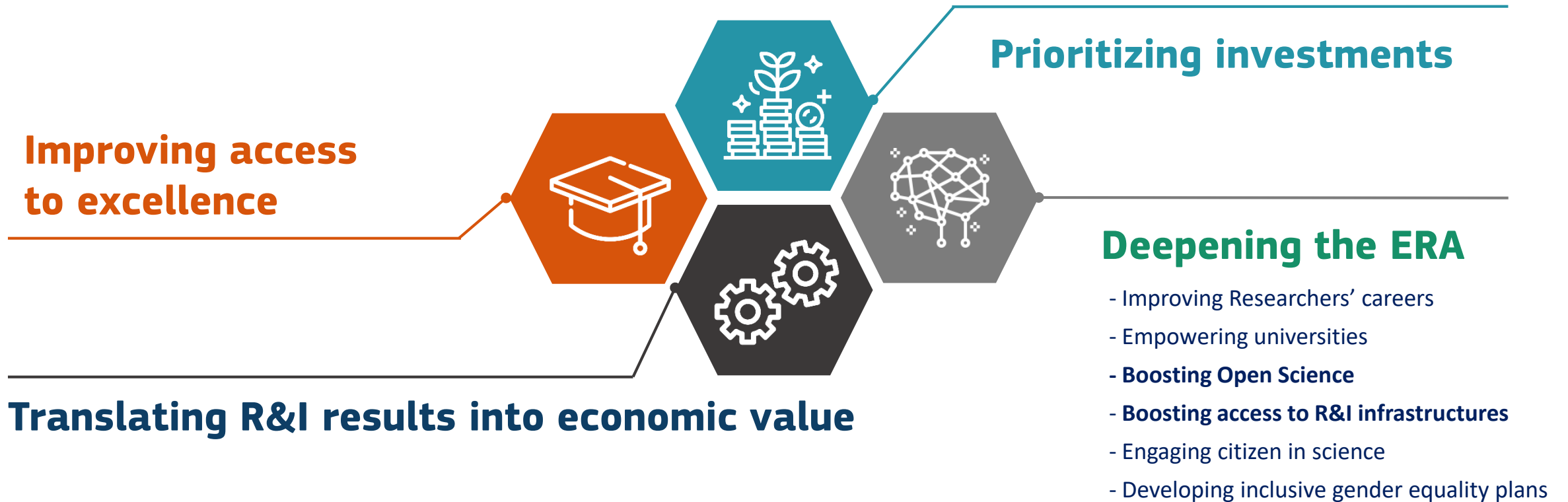
Mainstreaming of open science practices for improved quality and efficiency of R&I, and active engagement of society

Mandatory immediate Open Access to publications: beneficiaries must retain sufficient IPRs to comply with open access requirements;

Data sharing as 'open as possible, as closed as necessary': mandatory Data Management Plan for FAIR (Findable, Accessible, Interoperable, Reusable) research data

- Work Programmes may incentivize or oblige to adhere to **open science practices** such as involvement of citizens, or to use the **European Open Science Cloud**
- Assessment of open science practices through the **award criteria** for proposal evaluation
- Dedicated support to **open science policy actions**
- **Open Research Europe** publishing platform

Widening Participation and Strengthening the European Research Area (ERA)



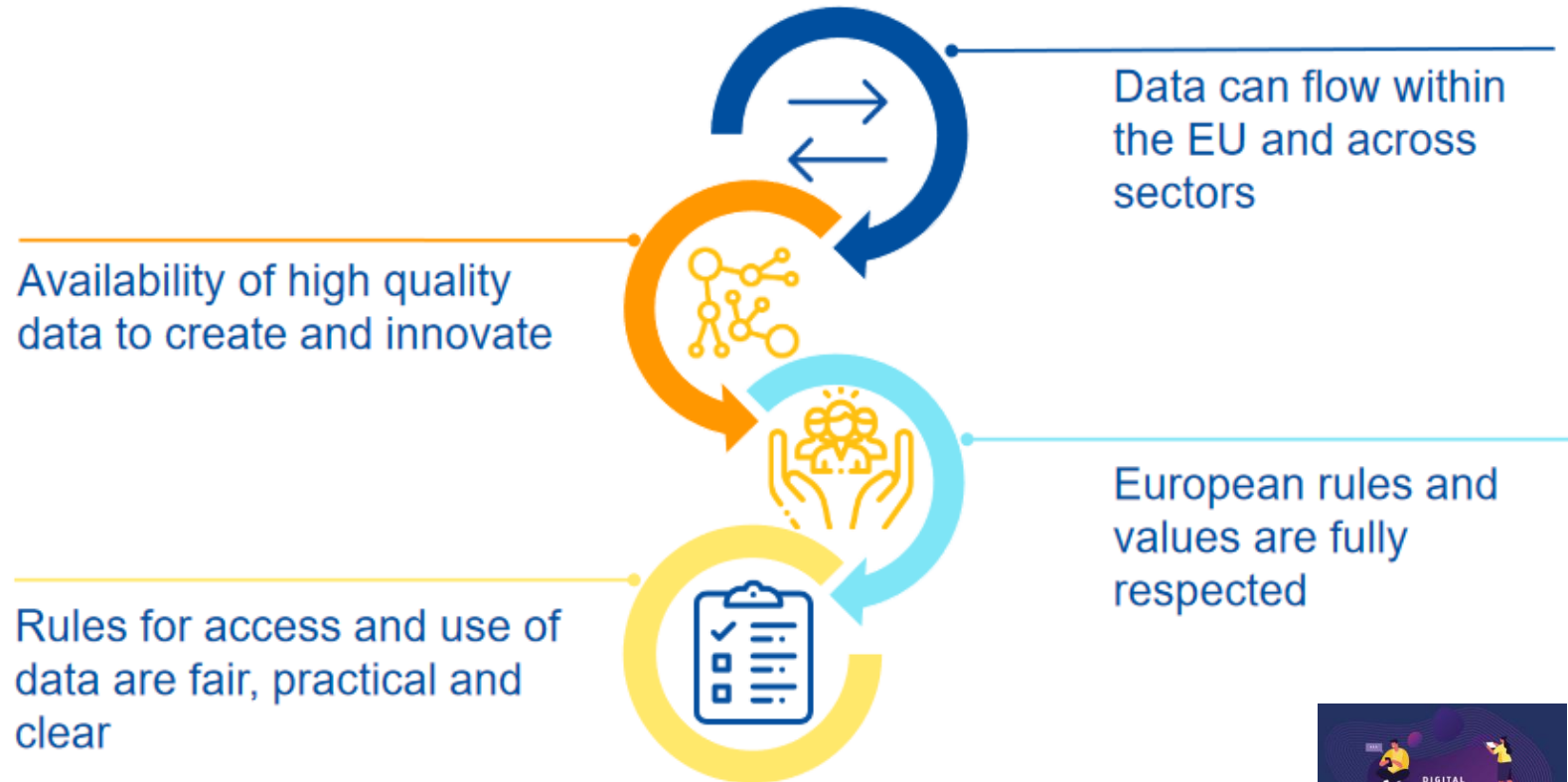
Key action 9 of the ERA roadmap:

- Launch, via the Horizon Europe Programme, a platform of peer-reviewed open access publishing; analyse authors' rights to enable sharing of publicly funded peer-reviewed articles without restriction;
- **Ensure a European Open Science Cloud that is offering findable, accessible, interoperable and reusable research data and services [Web of FAIR data and services for science];**
- Incentivize open science practices by improving the research assessment system.

European Strategy for Data

Market Opportunities for Europe

A common European data space, a single market for data

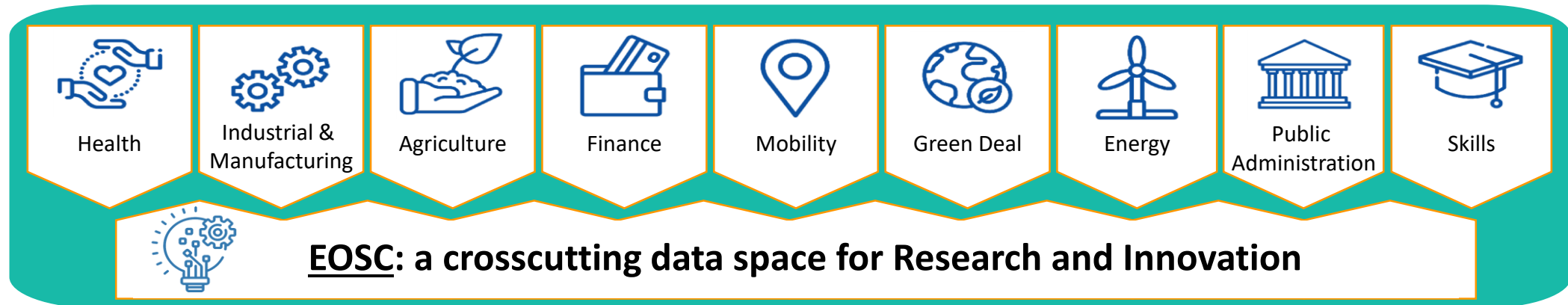


EOSC in the European Data Strategy

The EU will create a single market for data by:

- Setting clear and fair rules on access and re-use of data;
- Investing in next generation standards, tools and infrastructures to store and process data;
- Joining forces in European cloud capacity;
- Pooling European data in key sectors, with EU-wide common and interoperable data spaces;
- Giving users rights, tools and skills to stay in full control of their data.

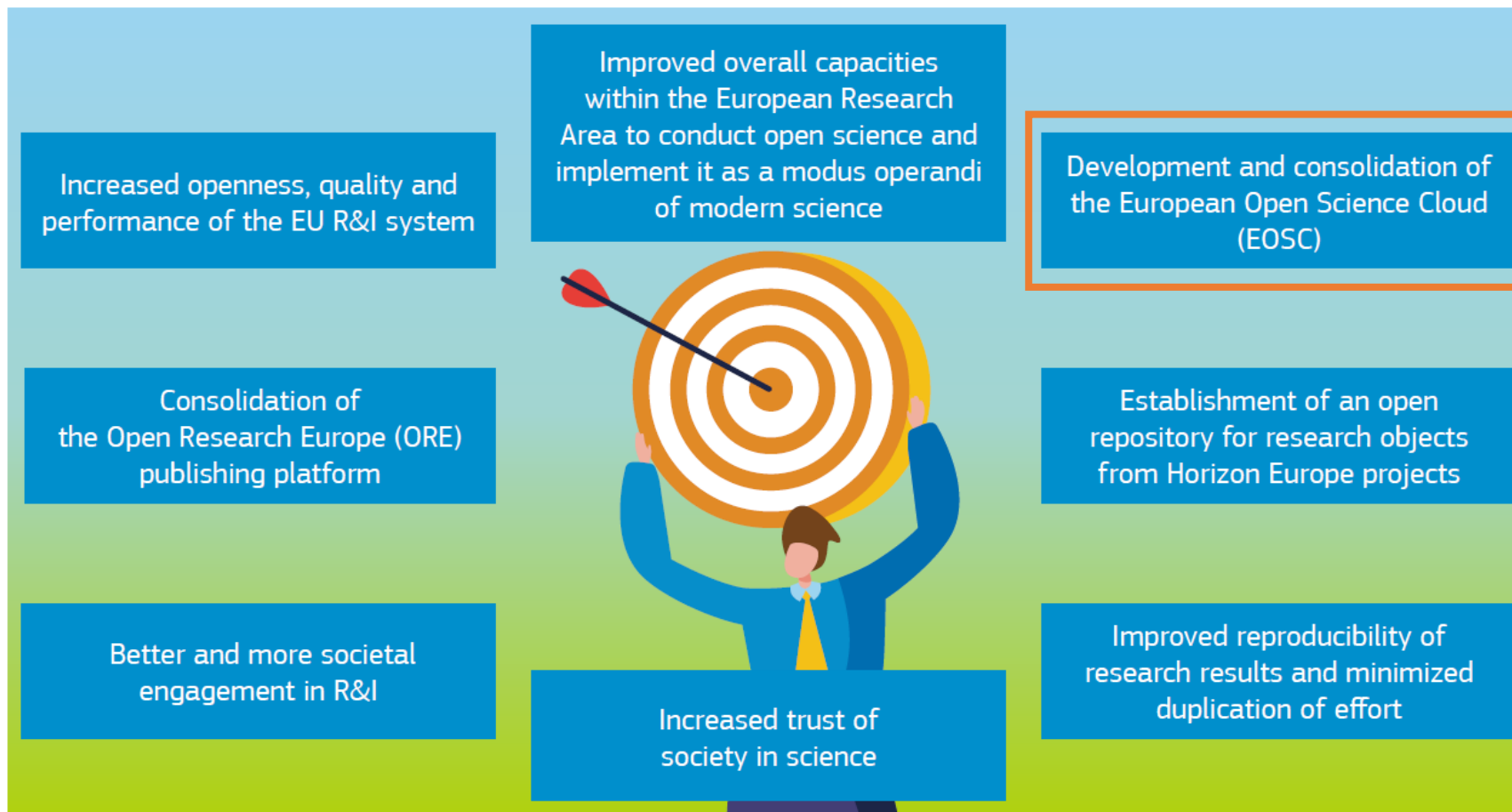
*“**EOSC** is the basis for a science, research and innovation data space that will bring together data resulting from research and deployment programmes and will be connected and fully articulated with the sectoral data spaces.”*
(European Data Strategy, COM(2020) 66 final)



Ambitions of the EU's Open Science Policy

OPEN SCIENCE

EARLY KNOWLEDGE AND DATA SHARING, AND OPEN COLLABORATION



Horizon Europe

Research and Innovation Programme 2021-27



New approach to European Partnerships

New generation of objective-driven and more ambitious partnerships in support of agreed EU policy objectives

Key Features

- Strategic orientation
- Systemic approach
- Simple architecture and toolbox
- Common set of criteria for the life-cycle

CO-PROGRAMMED

Based on Memoranda of Understanding/contractual arrangements; implemented independently by the partners and by Horizon Europe

CO-FUNDED

Based on a joint programme agreed and implemented by partners; commitment of partners for financial and in-kind contributions

INSTITUTIONALISED

Based on long-term dimension and need for high integration; partnerships based on Art 185/187 of TFEU and the EIT legal acts for 2021-2027

EOSC implementation



EOSC phase 1: prototyping

2018 - 2020

H2020 calls/grants approach

EOSC roadmap 2018-2020
by the European Commission

Initial EOSC Governance
- Executive Board (EB)
- Governance Board (GB)



- **Launch event in Vienna**
- **EOSC Declaration**
(AT Presidency of the EU)

EOSC phase 2: continued EOSC rollout

2021 - 2030

Partnership approach in Horizon Europe

EOSC Strategic Research and Innovation Agenda (EOSC SRIA)
2021-2027 by the EOSC community

New EOSC Governance (tripartite)
(increasingly stakeholder-driven, high-level steering role maintained for the European Commission and the Member States)

New strategic orientations



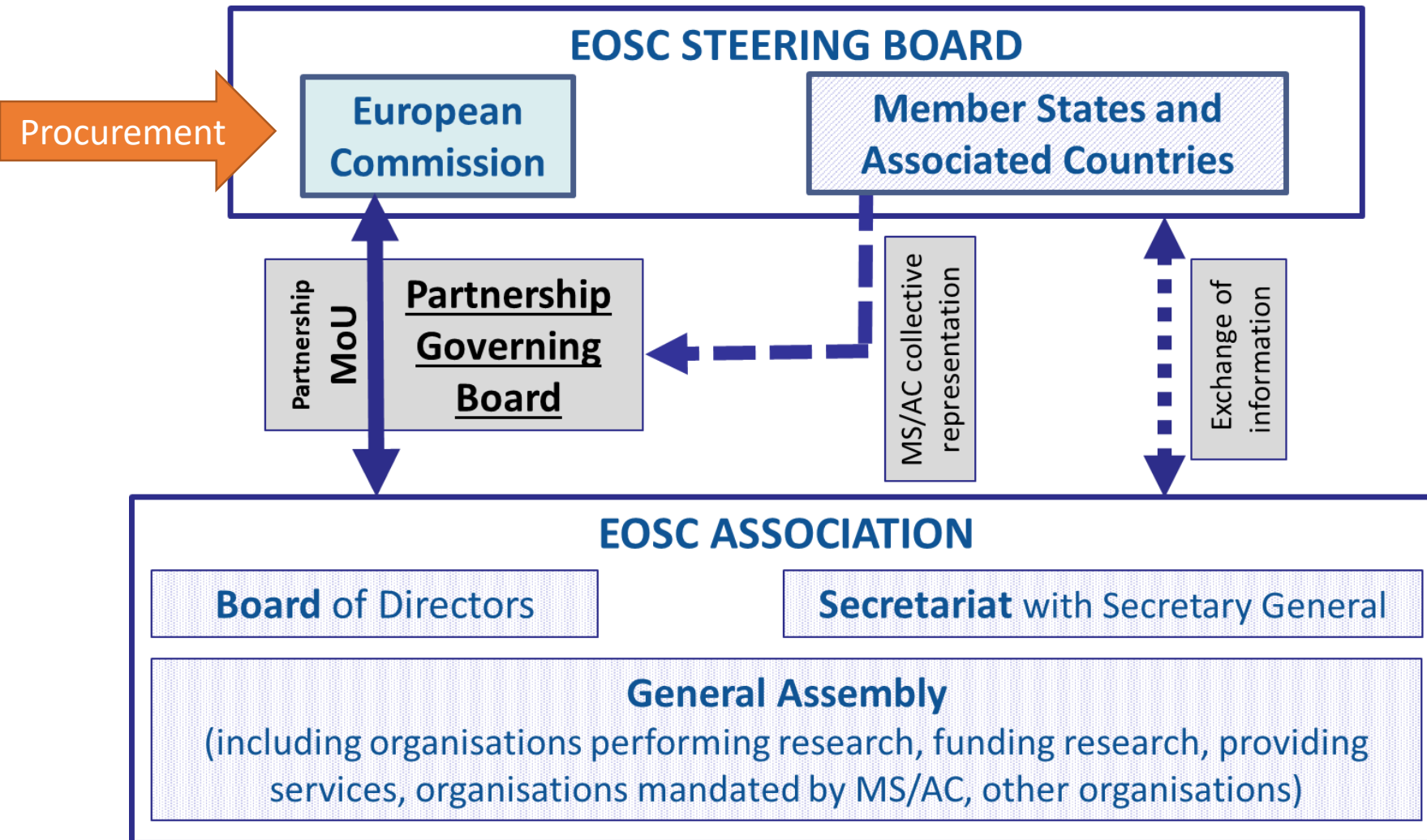
**WE ARE
HERE**

- **Assessment of EOSC Phase 1**
- **EOSC Declaration**
(DE Presidency of the EU)



*Strategic Research and innovation
Agenda for EOSC*

Current EOSC governance since 2021



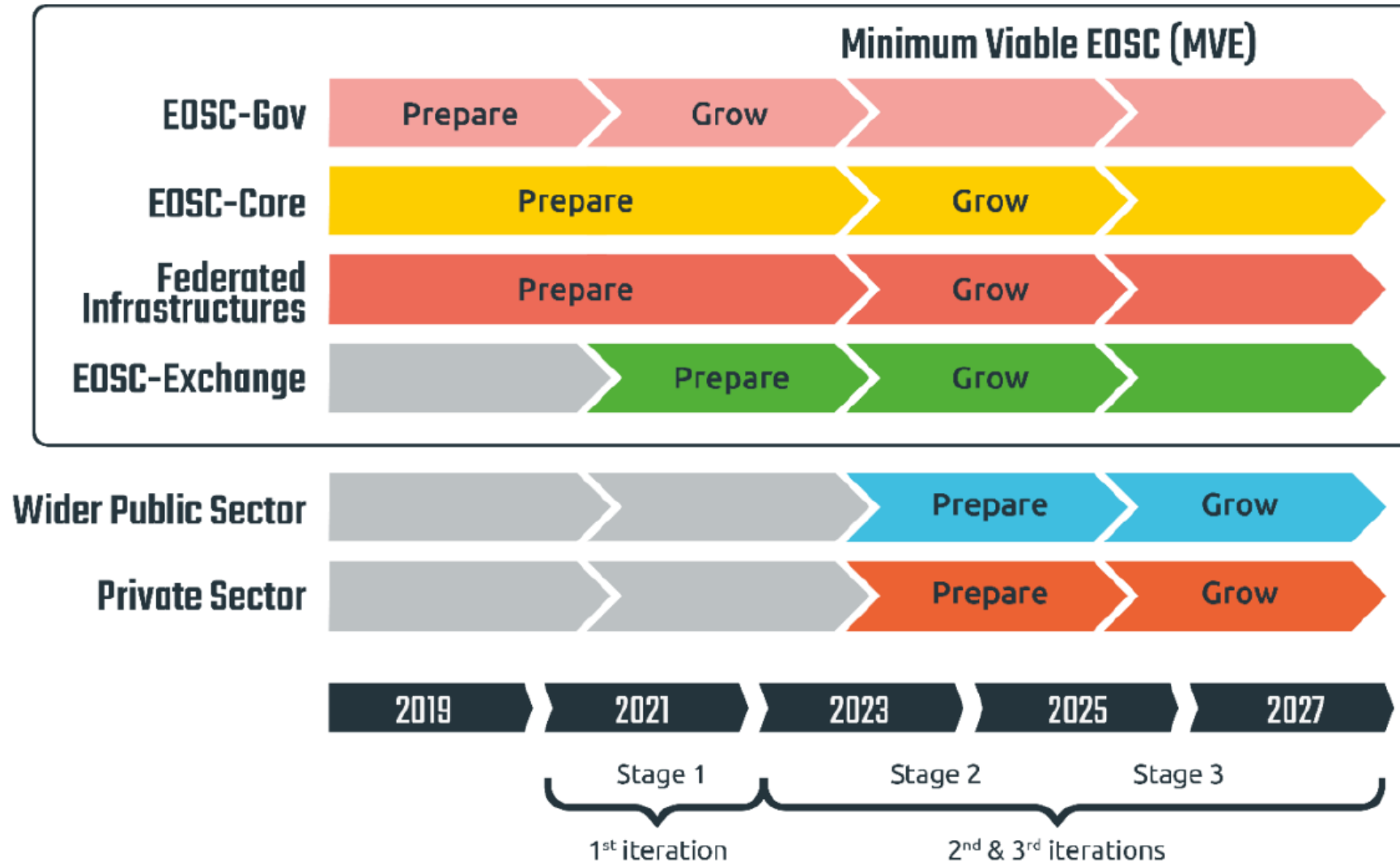
In the second phase [post-2020] the EOSC governance should become mainly stakeholder-driven, while maintaining a higher-level steering role for all Member States and the Commission.

(Council conclusions on EOSC, 19 May 2018)

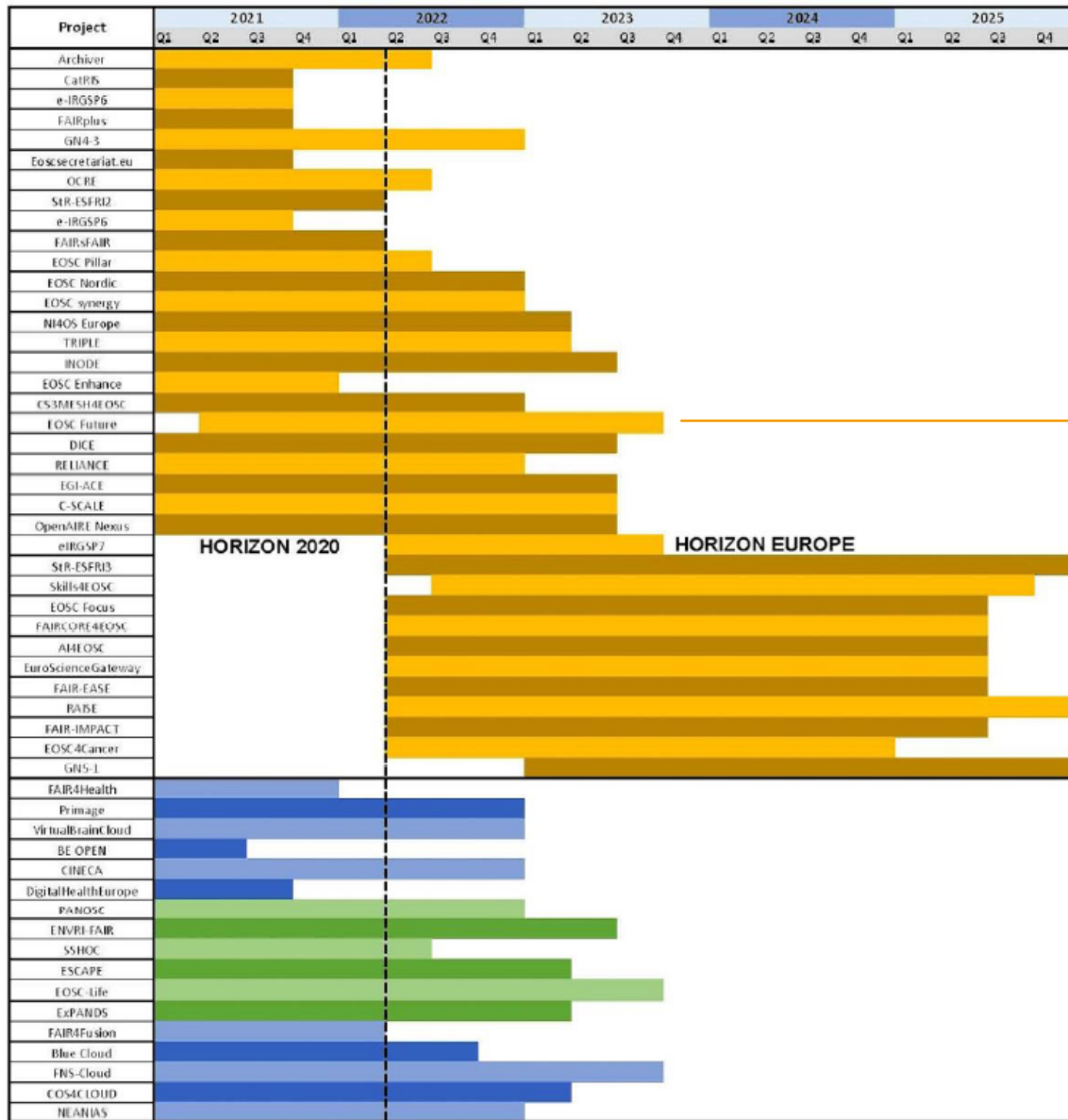
The council of the Union calls on the Commission and participating States to serve in a tripartite governance and to further develop and implement the European Open Science Cloud (EOSC) [...].

(Council conclusions on the new ERA, 1 Dec. 2020)


EOSC Roadmap



Overview of HE projects (2021-)



EOSC Procurement Action



European Commission

European Open Science Cloud

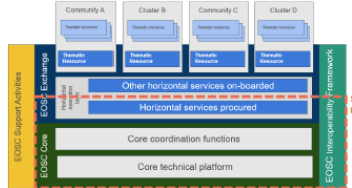
Public Procurement Action 2022

Facts Sheet

Funding instrument: Horizon Europe Programme
 Form of Funding: Procurement
 Type of action: Public procurement
 Indicative timetable: Third quarter of 2022
 Indicative budget: EUR 35 million
 Indicative contract duration: 36 months

Expected Outcome

- A fully operational, secure, cloud-based EOSC infrastructure, including a federated EOSC Core platform and the EOSC Exchange, offering high quality professional services and providing for a superior user experience, usability and ease of use for a very large number of users, with the functionalities available 24/7.
- Population of EOSC with a rich set of innovative, modular, customizable and composable services for a wide variety of users from the research communities and beyond.
- A large number of data and service communities aligned in terms of standards and consolidated at subdomain, domain and interdisciplinary levels.
- Established links with common European data spaces in crucial sectors, such as green deal or health, and synergies with the work on the European cloud federation as described in the Member States' joint declaration on building the next generation of cloud in Europe.
- Increased discovery and reuse of European research output as a result of FAIR data and services provided through EOSC, and cross-fertilisation and a wider sharing of knowledge and technologies.



What is EOSC?

The European Open Science Cloud (EOSC) is a digital platform for the scientific community, providing seamless access to data and interoperable services that address the whole research data cycle, from discovery and mining to storage, management, analysis and re-use across borders and scientific disciplines.

Scope of the procurement

The public procurement action aims to build and deploy a fully operational enabling infrastructure for EOSC, providing access to a rich portfolio of FAIR (Findable, Accessible, Interoperable, Reusable) data and professional quality FAIR services in all relevant domains from data handling to computing, processing, analysis and storing.

The infrastructure should be robust, secure, scalable, flexible and user-centric. It should constantly be improved and upgraded following user feedback and the state-of-the-art of the underlying core technologies. It intends to offer high quality of service management compliant with industrial standards. The EOSC services platform should also provide a superior user experience, usability and ease of use for a very large number of users with the functionalities available 24/7. It should offer seamless access to data, software and services through customised user interfaces, allowing users to navigate with built-in guidance tools and analytics for (re)use and service composition. It should build on the key concept of federation, standards and processes for Open Science, such as the EOSC Interoperability Framework and FAIR-by-design data and services.

The contractor(s) will work closely with the EOSC Association and its members, the European Commission, and the representatives of the EU Member States and Associated Countries under the EOSC Co-programmed Partnership and Tripartite Governance.

The use of common Free and Open Source Software (FOSS) is going to be required, in line with both the open source software strategy of the European Commission and the recommendation of the European Interoperability Framework.

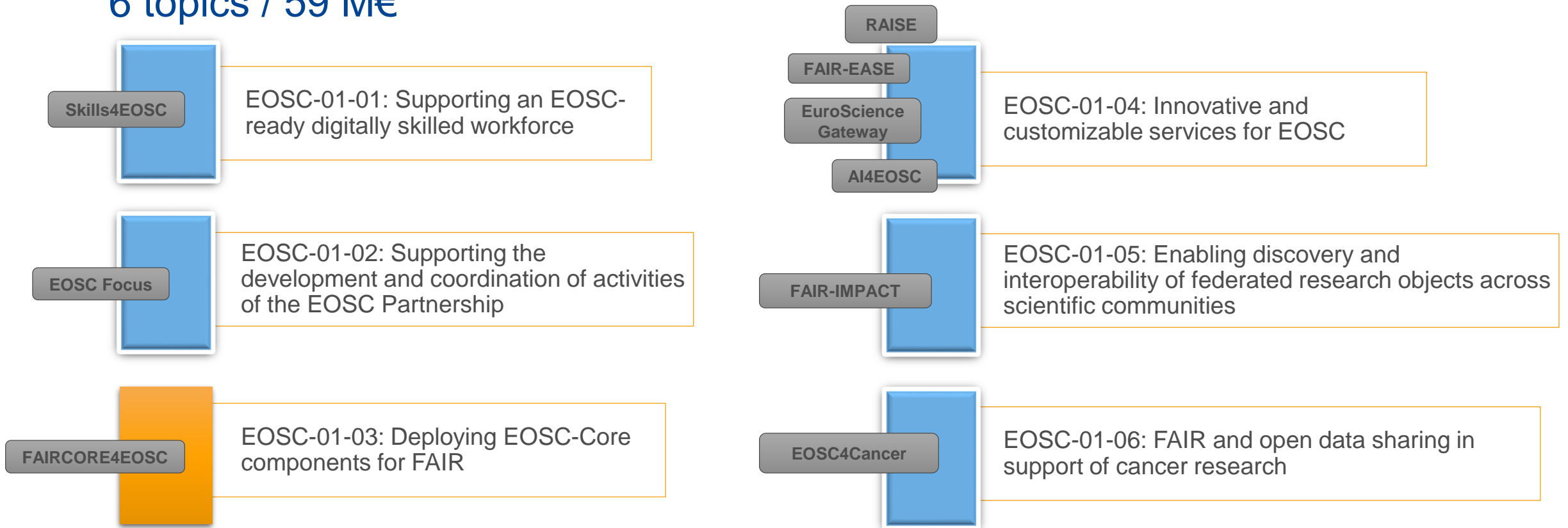
Following the managed service contracts with the European Commission, the procured EOSC Core infrastructure and federated EOSC Exchange platform will be the property of the European Union, and it will be made available for its Member States and Associated Countries.

The information provided herein is not legally binding and should not be construed as a substitution for the official tender publication in TED and OJ of the EU.
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<https://digital-strategy.ec.europa.eu/en/policies/open-science-cloud>

Destination 2 – ENABLING AN OPERATIONAL, OPEN AND FAIR EOSC ECOSYSTEM (INFRAEOSC)

6 topics / 59 M€



HORIZON-INFRA-2021-EOSC-01-03: Deploying EOSC-Core components for FAIR

1. Overall aim of INFRA-EOSC calls:

- Develop EOSC in a cohesive manner and operationalize it, realizing the vision of a web of FAIR data and services for science
- Consolidate the role of EOSC as a data space for science, research and innovation, articulated with the other data spaces set forth in the [European Strategy for Data](#)

2. What the topic focuses on:

Implementation of the FAIR principles throughout EOSC, enabling researchers to find, access, and re-use an increasing amount of research outputs by targeting technologies for discovery and interoperability

3. Scope of activities:

- Consolidate an interoperable ecosystem of PID Infrastructures
- Develop EOSC PID services
- Develop open schemas and APIs based metadata frameworks
- Develop and deploy a federated search service across EOSC
- Develop services and tools based on standards and common practices
- Develop services for maintenance, data source and data sharing monitoring

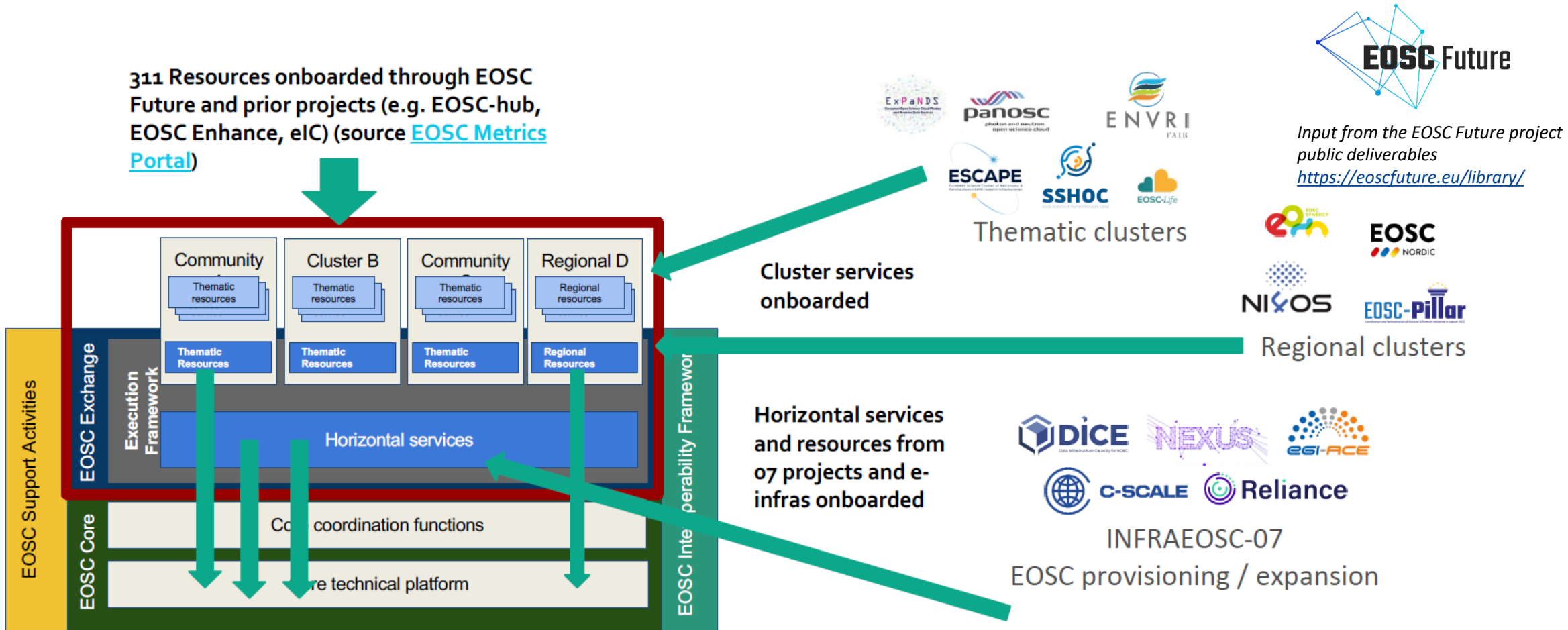
4. Expected Outcome:

- Enforcement and implementation of the EOSC PID policy and support its alignment throughout the EOSC federation
- Development of tools, processes and additional infrastructure leveraging on PIDs and metadata along the research data management cycle
- Ensure the adoption and use of coherent metadata frameworks and the deployment of a common dataset search to enhance discovery via EOSC

10 M€ / proposal
1 project funded



Populating the EOSC ecosystem (on-boarding)



EOSC Horizontal services are delivered (e.g. data transfer, container deployment and orchestration)

The **onboarding process** is extended to include validation of **data sources**

Ability to create **thematic execution environments / VREs** based on integration of compliant thematic, horizontal, and core resources



Thank you



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