



Empowering the EOSC Federation: Resource Mobilisation and Community Engagement

French National EOSC Tripartite Event

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The role of the EU in the development of EOSC: State of Play & Challenges Ahead

Yesterday

The emergence of EOSC in the context of a broader EU policy on Open Science

Today

Towards the creation of EOSC Federation:
The deployment of the EOSC EU node

Tomorrow

EOSC post-2027:
Scenarios under discussion

EOSC in the context of a broader EU policy on Open Science



What is EOSC ?

- **A process**
- Accelerate Open Science, FAIR data management and use of digital methods and services
- 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**
- Access existing Research Infrastructures in Europe;
- Enable circa 2 million European researchers to store, share, process, analyze, 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

EOSC in the context of a broader EU policy on Open Science



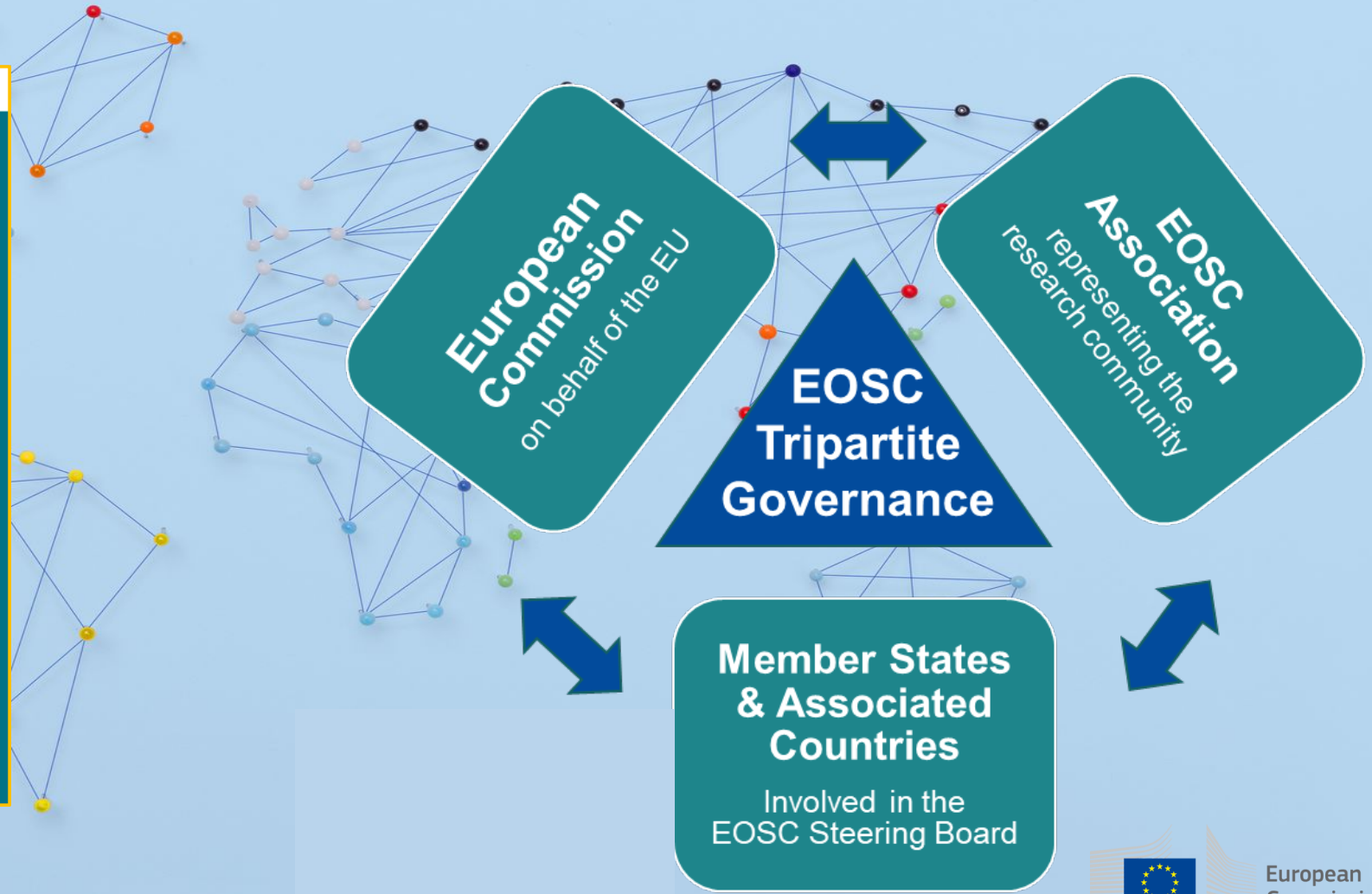
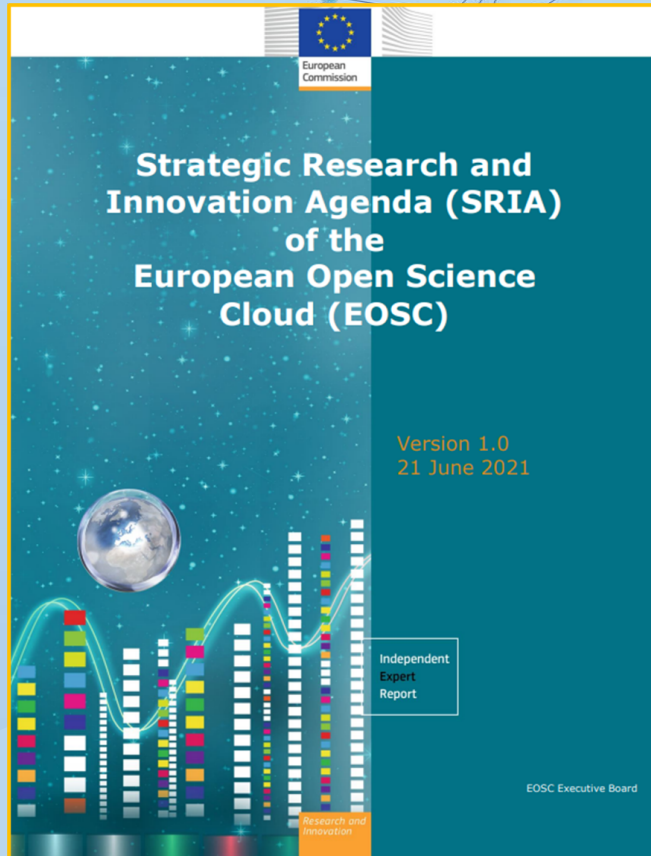
2015	Council Conclusions on ‘ open, data-intensive and networked research as a driver for faster and wider innovation ’
2016	Council Conclusions on ‘ the Transition Towards an Open Science System ’
2017	EOSC Declaration (#1): The European Open Science Cloud – New research and innovation opportunities
2018	Council conclusions on ‘ European Open Science Cloud (EOSC) ’
2020	EOSC declaration (#3) by the German Presidency of the EU “Opening the Door to a World of FAIR Research Digital Objects – On the Threshold to the European Open Science Cloud”

EOSC in the context of a broader EU policy on Open Science



2020	Commission Communication on ' A new ERA for Research & Innovation '
2021	Council Recommendation on ' A Pact for Research and Innovation in Europe '
2021	Council Conclusions on the ' Future governance of the European Research Area '
2022	Council Conclusions on ' Research assessment and implementation of Open Science '
2023	Council Conclusions on ' High-quality, transparent, open, trustworthy and equitable scholarly publishing '

EOSC in the context of a broader EU policy on Open Science



EOSC in the context of a broader EU policy on Open Science



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ERA ACTION 1

Enable the open sharing of knowledge and the re-use of research outputs, including through the development of the European Science Cloud (EOSC)

OUTCOMES

1. Deploy Open Science Principles and identify Open Science best practices
2. Deploy the core components and services of EOSC and federate existing data infrastructures in Europe, working towards the interoperability of research data
3. Establish a monitoring mechanism to collect data and benchmark investments, policies, digital research outputs, open science skills and infrastructure capacities related to EOSC

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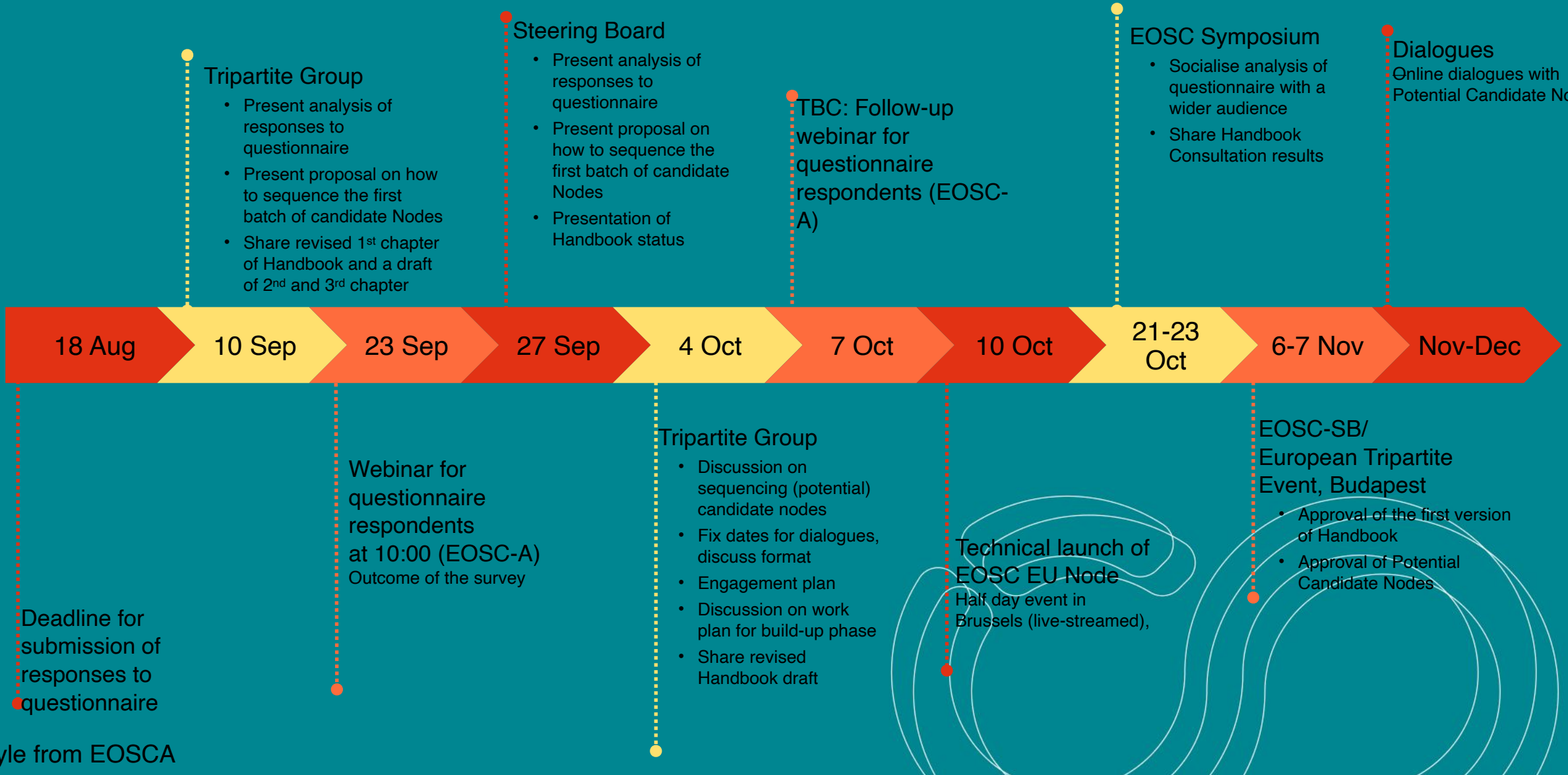
Embracing open science as the modus operandi of research



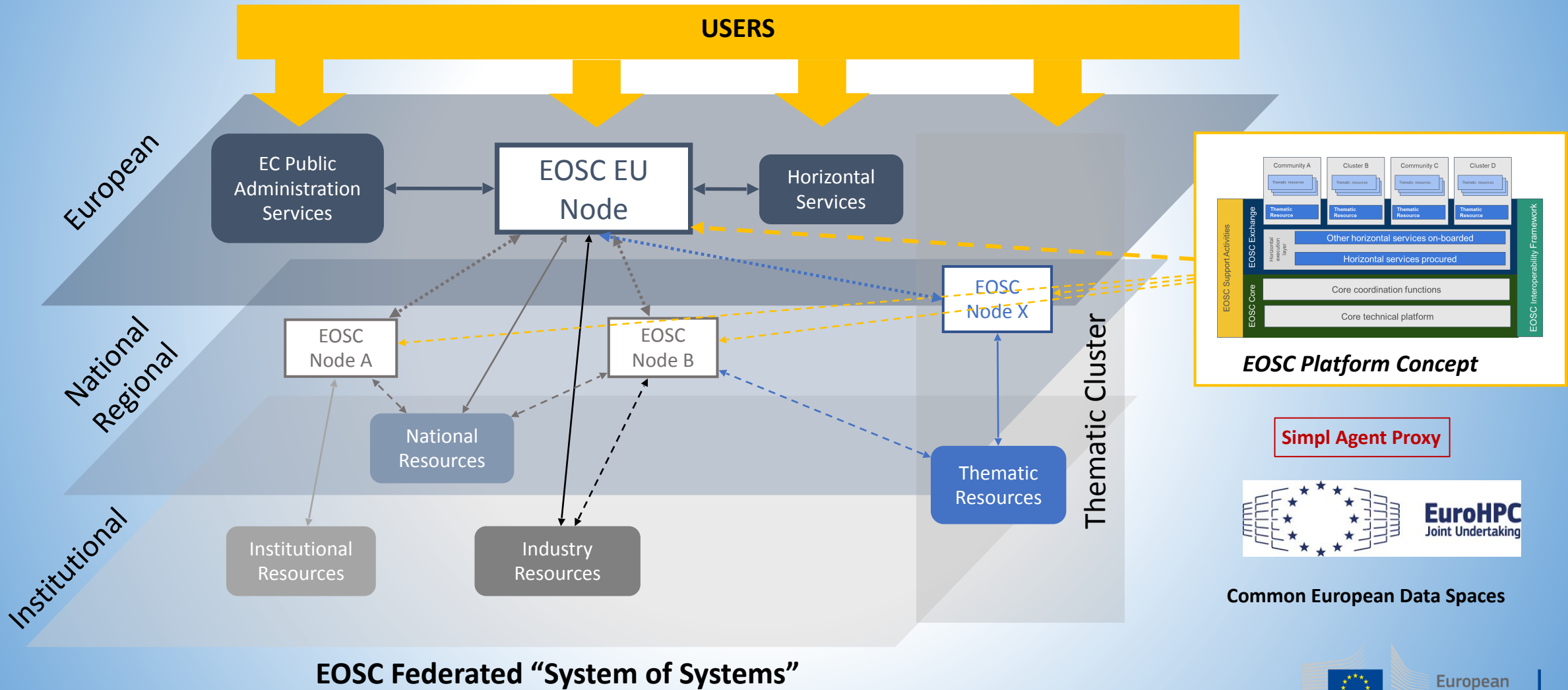
Towards the creation of EOSC Federation: The deployment of the EOSC EU node

EOSC EU Node Value Proposition

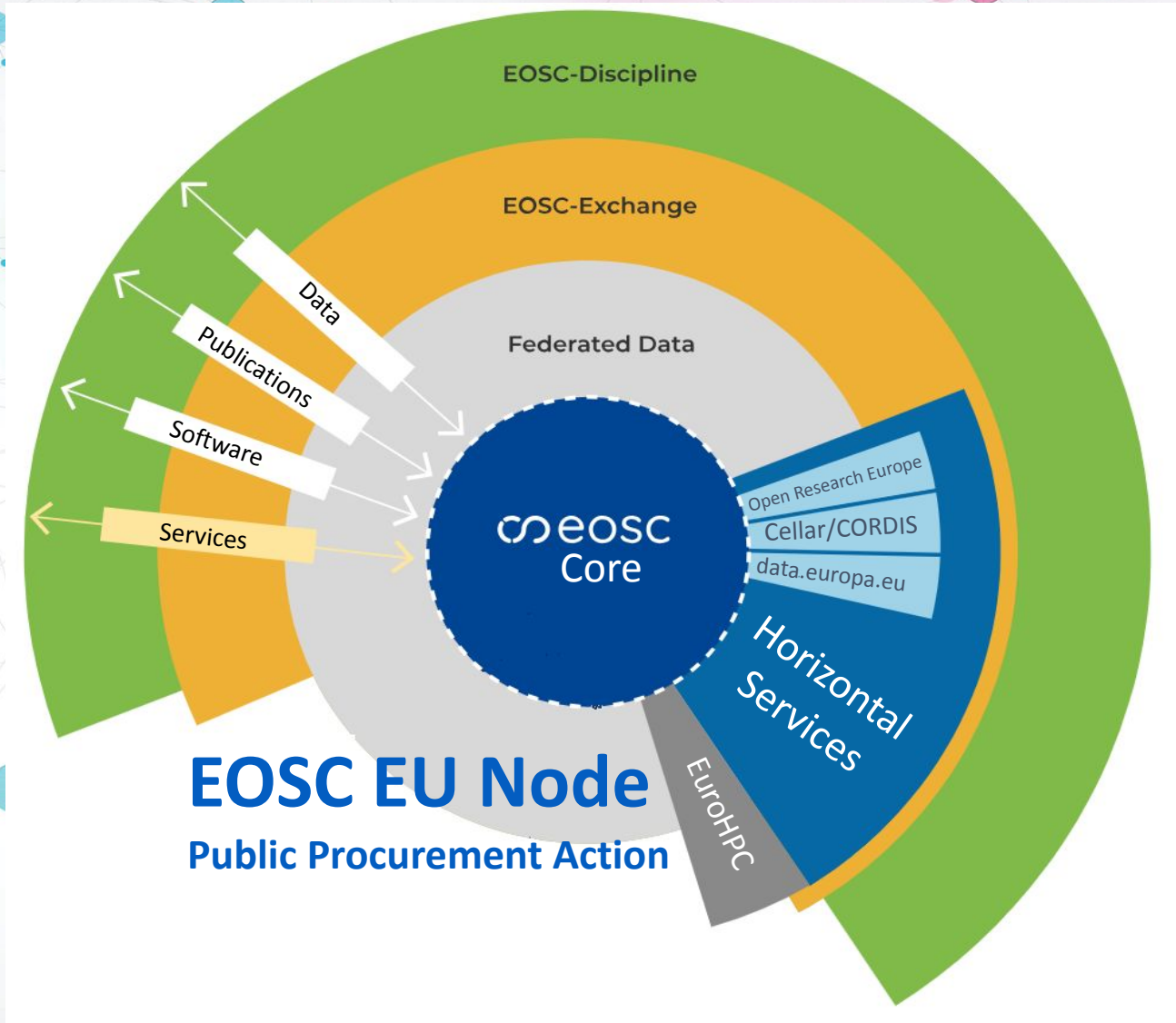
- **Facilitate** the creation of the “*Web of FAIR data and interoperable services*” (aka. EOSC Federation) under the Open Science Policy
- **Put** a “*seed in the ground*” by operationalizing the first recognised EOSC Node at the European level for the initial 3 years
- **Offer** “*core services*” for scientific research infrastructures to federate (single-sign-on, catalogues, knowledge graph, application workflow, monitoring, accounting, helpdesk) and common “*horizontal services*” for end-users to benefit from (compute, containers, data transfer, notebooks, file sharing, open research data)
- **Define** the *pathway and blueprint* (EOSC Interoperability Framework) for other potential EOSC Node operators to join the federation



Towards the creation of EOSC Federation: The deployment of the EOSC EU node

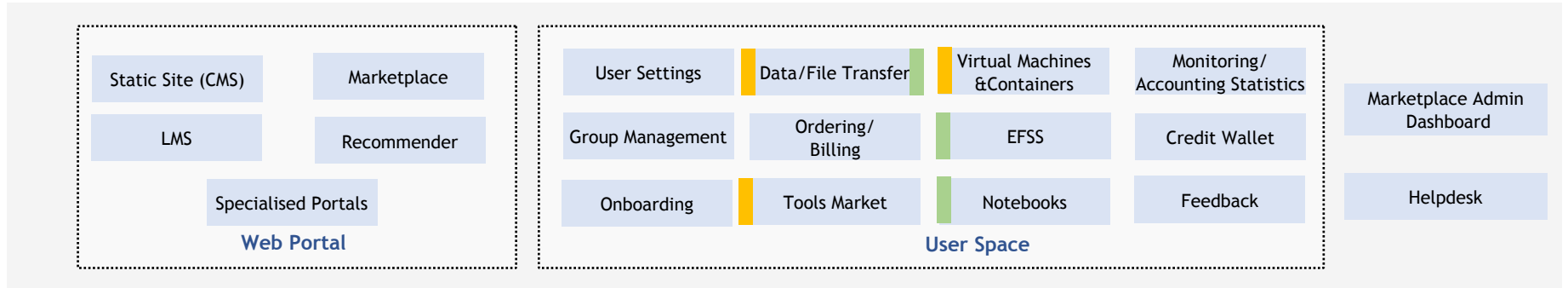


Towards the creation of EOSC Federation: The deployment of the EOSC EU node



EOSC EU Node Conceptual Overview

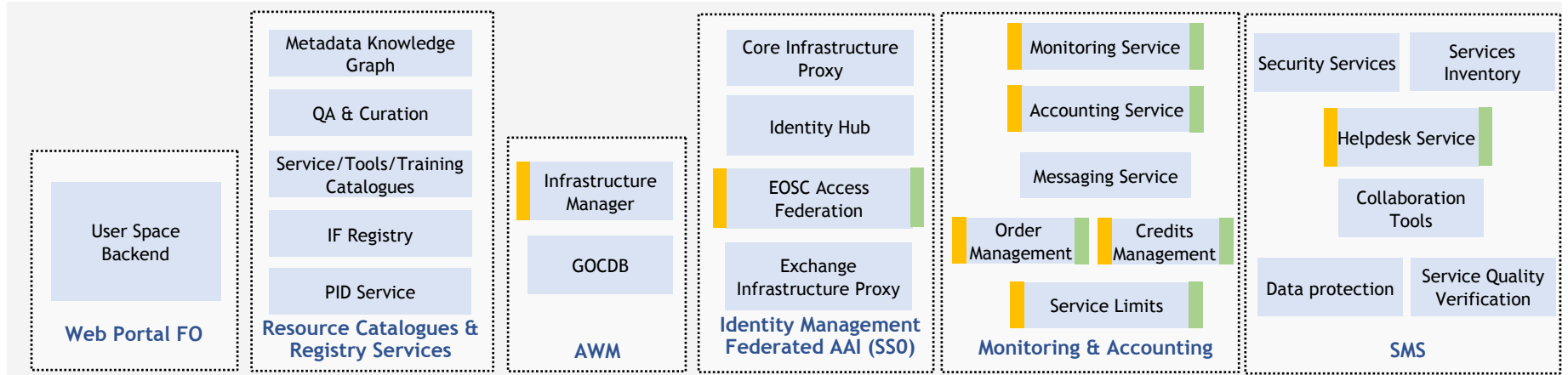
Web Portal FO



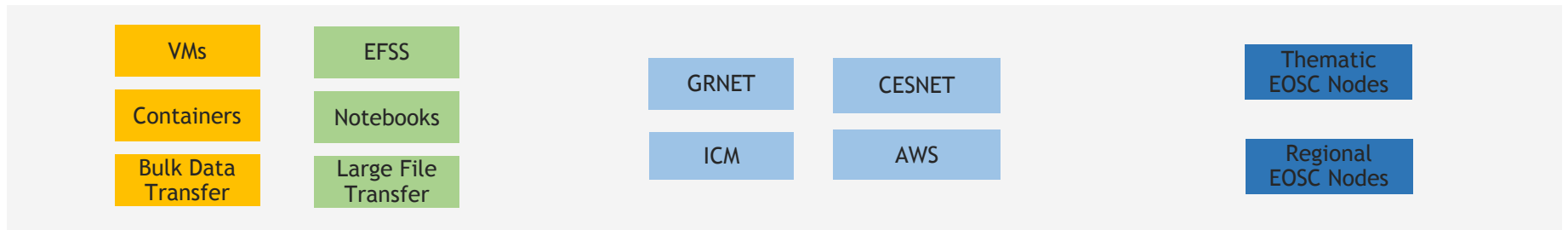
Platform Middleware



Managed Services Backend



Infrastructure



LEGEND

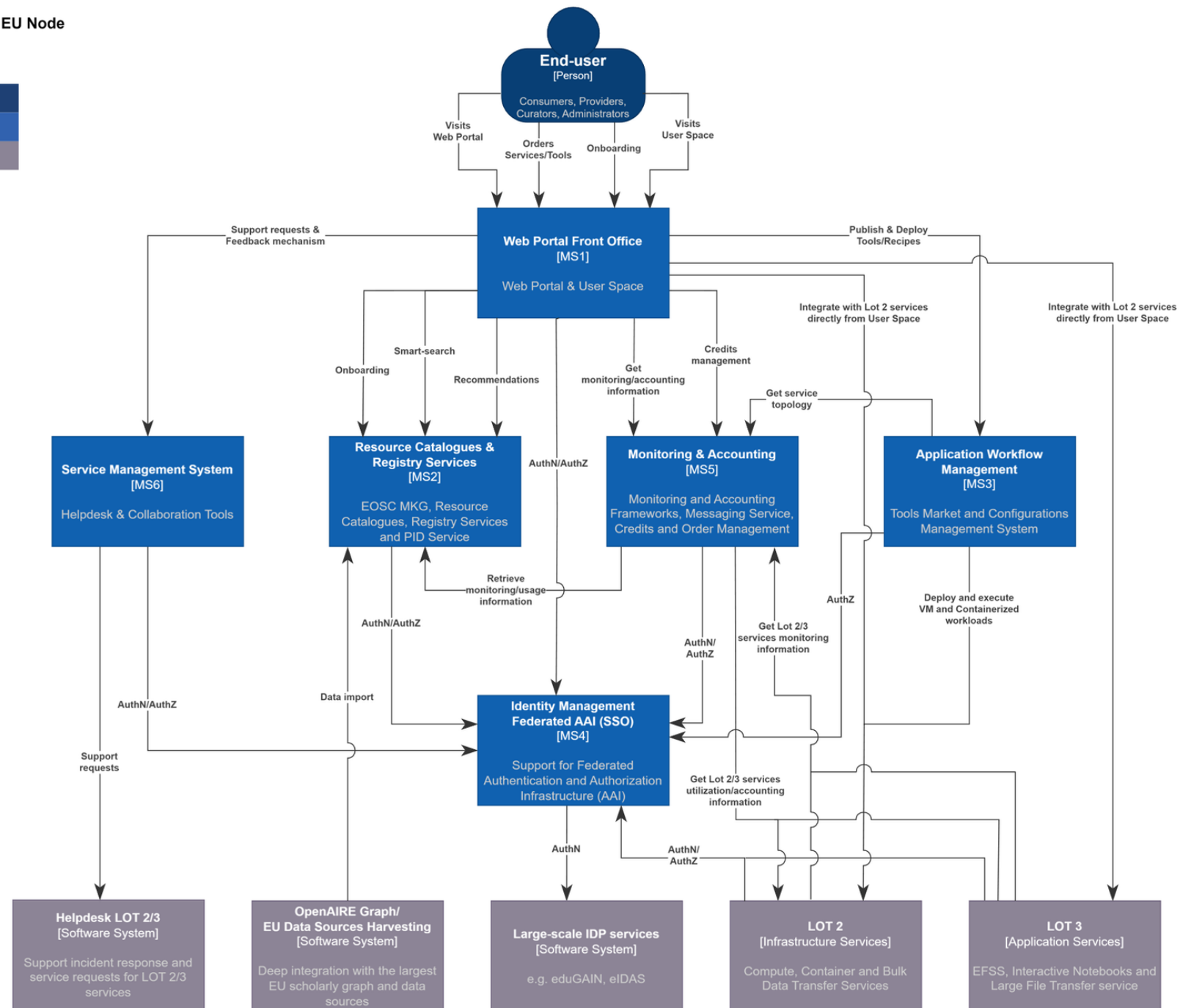
- Lot 1 Component
- Lot 1 Infrastructure
- Lot 2 Infrastructure services
- Lot 3 Application Services
- Other Nodes
- Integration with Lot 2 services
- Integration with Lot 3 services

EOSC EU Node Architecture Overview

[System Landscape] EU Node
Conceptual view

Legend

Person
Lot-1 Managed Service
External Software System



EOSC EU Node initial web presence

European Commission

European Open Science Cloud - EU Node

Home | About | Services | Resource Hub | Support | Contributors | News & Events

EOSC EU Node

A European platform and information gateway to explore, engage, and enrich your research collaborations.

Explore our services >

Who is it for

Researchers

If you are a researcher or citizen scientist in Europe interested in collaborative, data-driven open science, the EOSC EU Node offers easy access to diverse data, publications, software, and services from across Europe's research networks.

Contributors

If you are a scientific resource provider in Europe, the EOSC EU Node invites you to contribute your research objects - software, services, and tools - to support the mission of Open Science.

Upcoming Services

The EOSC EU Node will offer the following services (currently under development):

- File Sync & Share**
Enable automatic file syncing and secure sharing across locations and teams.
- Interactive Notebooks**
Create and share documents with real-time code execution.
- Large File Transfer**
Streamline large file transfers online with added security and integrity.
- Virtual Machines**
Design and conduct experiments with flexibility while ensuring reproducibility.
- Cloud Container Platform**
Deploy cloud-native containerised applications that can easily scale.
- Bulk Data Transfer**
Move data effortlessly to data-intensive execution environments.

Discover European Research Outputs

Search in all resources

Search by Resource type

DATA | PUBLICATIONS | SOFTWARE | SERVICES | TRAINING

Explore the Resource Hub >

Updates from EOSC Community

- EOSC Future signs off**
28 March 2024
March marked the end of the EOSC Future project, which paved the way for the emergence of the EOSC EU Node in its place. Get a breakdown of how this transition will take place and what it...
- Commission awards €41 million contract to develop infrastructure for Common European Data Spaces**
14 December 2023
The European Commission has awarded a €41 million contract to develop Simpl, a robust middleware platform aimed at enhancing data access and interoperability across European data spaces.
- The Commission announces winners of the EOSC Procurement**
24 November 2023
The European Commission's DG Connect has revealed the winners of the EOSC Procurement, a key step in advancing the European Open Science Cloud (EOSC).

- Enrich your Scientific Endeavours**
Explore the Web of FAIR data and interoperable service
- Enter the Gateway to Open Science**
Access a diverse range of research objects and supplementary services all in one place
- Manage your Research Workflows**
Conduct your research while ensuring interoperability throughout the entire lifecycle
- Exchange with your Peers**
Collaborate, disseminate, and reuse research outputs across teams and domains

Events

- 27-28 MAY 2024: EOSC Association 8th General Assembly
- 12-16 JUN 2024: EuroScience Open Forum 2024
- 20-21 JUN 2024: 2024 Coordination meeting of EOSC-related projects funded under Horizon Europe
- 21-23 OCT 2024: EOSC Symposium 2024

European Open Science Cloud - EU Node

Contact us: Contact our Help desk, Accessibility, FAQs, Policy statement, EOSC EU Node Acceptable Use Policy

About us: The European Open Science Cloud aims to establish a federation of infrastructures facilitating effortless access to interoperable research assets and enhanced services spanning geographical boundaries and diverse academic fields.

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Resource Hub

The screenshot displays the 'Resource Hub' page of the European Open Science Cloud EU Node. At the top, the European Commission logo is on the left, and a 'Log in' button and a search bar are on the right. Below this is a blue navigation bar with 'European Open Science Cloud EU Node' text. A secondary navigation bar contains links for Home, Services, Resource Hub (highlighted), Contributors, Support, News and Events, About, and User Space. A breadcrumb trail shows 'Home > Resource Hub'. The main heading 'Resource Hub' is followed by a search bar with a dropdown set to 'All resources'. A horizontal menu lists various resource categories: All resources, Data, Publications, Software, Other Products, Services, Data Sources, Training Resources, and Interoperability Guidelines. The 'Filters' section on the left includes a 'Research Step' dropdown, a search box for research steps, and checkboxes for 'Select all (23)' and 'Discover Research Outputs (2)'. The main content area shows 'Showing 1 to 10 of 123456 resources' and a 'Download results' link. Active filters include 'Process and Analyze', 'Open access', 'Natural Sciences', and 'Medical & Health Sciences'. A 'Most recent' sort option is also visible. The first search result is a 'PUBLICATION' titled 'Homo stimulus - Fundamentals of Human Adaptation and Development in the Age of' with a star icon, and metadata including 'Year: 2023', 'Licence: CC-BY-4.0', 'Downloads: 127', 'Views: 2378', and 'Language: English'.

User interface

The screenshot displays the user interface for Jane Doe's EOSC EU Node account. The interface is divided into a left sidebar and a main content area.

Left Sidebar:

- European Commission logo and a back arrow.
- Resource Hub icon.
- User profile: Jane Doe, User, 363 / 500 credits remaining, 22 GB / 50 GB used.
- Navigation menu: Overview (selected), Notifications (99+), Tools Hub, Credits, Orders (7).
- SERVICES section: File Sync & Share, Interactive Notebooks, Cloud Container Platform, Virtual Machines, Large File Transfer, Bulk Data Transfer.
- GENERAL section: Favourites (3).

Main Content Area:

- Greeting: Hello Jane Doe. This is the overview of your EOSC EU Node account.
- Services Overview:**
 - File Sync & Share:** 22 GB / 50 GB used. View Service >
 - Interactive Notebooks:** Small, 23 credits (3 credits / hour), Expires in: 12 days. View Service >
 - Cloud Container Platform:** Small, 45 credits (15 credits / day), Expires in: 12 days. View Service >
 - Virtual Machines:** Medium, 60 credits (12 credits / day), Expires in: 4 days. View Service >
 - Large File Transfer:** 138 GB / 200 GB used. View Service >
 - Bulk Data Transfer:** 2 active links. View Service >
- New in Tools Hub:** View all Tools
 - Item 1: Author name, Upvote 32. Title: **web-app-stack.yaml**. Description: Template for a web application stack, including web servers, databases, etc. Public. Actions: Public, star, play, plus, download.
 - Item 2: Author name, Upvote 32.

Credits

European Commission

Resource Hub

Jane Doe
User
363 / 500 credits remaining
22 GB / 50 GB used

Overview
Notifications 99+
Tools Hub
Credits
Orders 7

SERVICES

File Sync & Share
Interactive Notebooks
Cloud Container Platform
Virtual Machines
Large File Transfer
Bulk Data Transfer

GENERAL

Favourites 3

Credits

One-liner of the main actions the user can do.

Viewing resources for:
Jane Doe (Personal project)

Your credits

363 / 500 Remaining credits <small>Actual credits calculated every 24 hours. Last calculation: June, 20 2024, 23:59</small>	23 Currently in use <small>Actual credits calculated every 24 hours. Last calculation: June, 20 2024, 23:59</small>	24 days Next refresh <small>July, 14 2024</small>
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Services

File Sync & Share Small 22 GB / 50 GB used View Service >	Interactive Notebooks Small 23 credits (3 credits / hour) Expires in: 12 days View Service >	Cloud Container Platform Small 45 credits (15 credits / day) Expires in: 12 days View Service >
Virtual Machines Medium 60 credits (12 credits / day) Expires in: 4 days View environments >	Large File Transfer 138 GB / 200 GB used View Service >	Bulk Data Transfer 2 active links View Service >

How credits work

EOSC post-2027: Scenarios under discussion



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ENRICO LETTA

MUCH MORE THAN A MARKET

SPEED, SECURITY, SOLIDARITY

Empowering the Single Market to deliver a sustainable future and prosperity for all EU Citizens

April 2024

“A central pillar of this strategy is the creation of a European Knowledge Commons – a centralised, digital platform providing access to publicly funded research, data sets, and educational resources. This empowers citizens, researchers, and businesses alike, allowing them to tap into a wealth of knowledge for innovation and societal progress. To remove barriers to knowledge sharing, the EU must harmonise cross-border data flow mechanisms, particularly interoperability and data protection regulations, and invest in robust digital infrastructure. This facilitates the secure and efficient transfer of non-personal data vital to research and innovation within the EU, supporting the development of European data spaces in key sectors - the chapter on health will focus on the European Health Data Space (EHDS) - to promote data sharing and use for the benefit of the economy and society, and strengthen cybersecurity through regulations, standards, and practices that protect critical infrastructures and citizens' data.”

EOSC in the context of a broader EU policy on Open Science

The future of European competitiveness

Part A | A competitiveness strategy for Europe

SEPTEMBER 2024

“An important factor that would enhance R&I capacity is the availability of world-leading research and technological infrastructure, capable of serving the whole European ecosystem. Most Member States cannot achieve the necessary scale in their financial or organisational capacities. This calls for a strategic coordinated approach, with a central role for the EU.”

“Focus on European values: The EU’s efforts to hone its competitive edge need to be guided by European values, which should be further reinforced by its action. These encompass fundamental values, including human rights, the rule of law and democracy, but also values of specific relevance to research and innovation, such as academic freedom and independence, research integrity and ethics, transparency, diversity, inclusion, gender equality, open science and open access to scientific publications and research data. These values and principles should remain at the core of Europe’s approach and constitute the strength of its model of excellent, collaborative research. Promoting these values makes Europe a more attractive place for researchers and businesses from around the world.”

“Increase joint investment in world-leading research and technology infrastructure. Research and technology infrastructure is essential for ground-breaking R&I, and often serves as a focal point of R&I ecosystems”.

Thank you



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