

Why EOSC is pivotal for European competitiveness

Reflections of the EOSC Association on the Letta report “Much more than a market”

The report by Enrico Letta on the Future of the Internal Market was published in April 2024 and presented to the European Council¹. Starting from the analysis of how Europe has changed fundamentally since the Single Market was launched, the report provides policy recommendations for the future of the Single Market, remarking on its crucial importance for strengthening European competitiveness.

One of the main recommendations from the report is to create **“a fifth freedom (in addition to the free movement of people, goods, services and capital) dedicated to research, innovation, knowledge and education”** that can support policy and decision makers with the evidence-based information necessary to deal with complex new scenarios. “Whether it is about shaping public policies, responding to disasters, or enhancing research, **data plays a fundamental role in our understanding of complex social, environmental, and economic issues**. Those who can **freely access new research, increasingly accurate data, and more efficient technologies** can innovate more quickly, improve their processes, and maintain competitiveness in the global market. **Eliminating barriers to data access is a powerful catalyst for innovation, improved public services, and economic growth**. It advances groundbreaking scientific research and arms businesses with tools to compete globally.”

The overall concept aligns closely with EOSC’s mission and the political agenda. This paper elaborates how EOSC assumes a prominent role in enhancing Europe's competitiveness by contributing to four key areas: European digital and data sovereignty, security, productivity, and helping to position Europe as a leader in Artificial Intelligence.

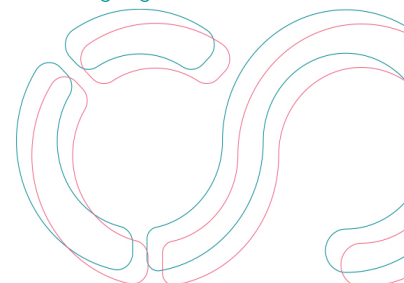
EOSC supports Europe’s digital and data sovereignty

The Letta report calls attention to the challenge of the underutilised pool of data already highlighted and documented in previous reports like, *Cost of not having FAIR research data*² and *European Research Data Landscape*³: “Without full utilisation, there's a risk that this wealth of resources could end up benefiting other global entities better positioned to capitalise on it and hamper the European strategic autonomy and economic security. [...] **Europe should create a European Knowledge Commons, a digital platform providing access to publicly funded research, data sets, and educational resources** to empower citizens, researchers, and

¹ <https://www.consilium.europa.eu/media/ny3j24sm/much-more-than-a-market-report-by-enrico-letta.pdf>

² http://publications.europa.eu/resource/cellar/d375368c-1a0a-11e9-8d04-01aa75ed71a1.0001.01/DOC_1

³ <https://op.europa.eu/en/publication-detail/-/publication/03b5562d-6a35-11ed-b14f-01aa75ed71a1/language-en>



businesses alike, allowing them to tap into a wealth of knowledge for innovation and societal progress”, aiming also to reduce the inequalities that jeopardize the European full research potential.

The ambition of EOSC is to create such a European Knowledge Commons.

Driven by the FAIR (Findable, Accessible, Interoperable, and Reusable) principles, recognised by the scientific community as a key enabler to implement machine-actionability and to address the increasing complexity of research data, and **leveraging on existing data and services** developed by Research Infrastructures and e-Infrastructures, EOSC will **establish a system for researchers in Europe (the EOSC Federation) to store, share, process, analyse and reuse, within and across disciplines and borders, FAIR research outputs.**

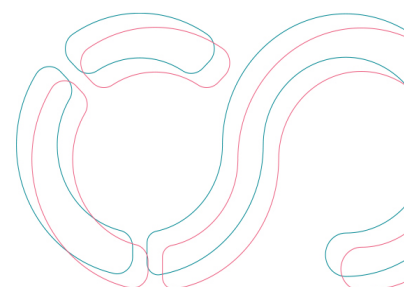
This will equip Europe with an unprecedented amount of FAIR research data, publications and software of controllable quality from different disciplines, sectors, and countries that will be accessible for research in Europe and, at a later stage, to other professionals like teachers, doctors, lawyers, engineers, etc. **The rules of the EOSC Federation will guarantee data sovereignty and compliance with relevant regulations, and preservation of European values and rights.** EOSC will not only continue to support the Open Science movement and related policy developments to build trust and equity in research and boost the sharing of research data in Europe, but will also provide researchers with access to the best research data support services and infrastructures, transcending individual institutions or nations by **promoting European excellence and digital sovereignty.**

EOSC provides a secure environment for performing research in Europe

Two of the most common challenges that come with data sharing are making sure that the data owner remains in control of the data and that data can be shared in a secure manner.

The EOSC Federation will be designed as a virtual environment that researchers can use to conduct research and innovation activities in a **secure and trusted way.** **The EOSC Federation policies and enrolment rules will be compliant with the relevant European regulations (including GDPR, cybersecurity directives, Data Act, etc.) and values.**

The resources (data and services) made available via the EOSC Federation will come from **European providers** and will be subject to **compliance assessment** towards the rules of the EOSC Federation. Compliance will be measured towards selected adequate **standards and certifications.** The users of the EOSC Federation will have access to the provenance and compliance information of the resources enabling them to make informed decisions regarding their usage based on their needs. **Only authenticated users will be granted access to the EOSC Federation resources,** thereby protecting European data and services from misuse and abuse. Specific frameworks will be set up in EOSC for the treatment and use of **sensitive data** to meet



the need for research and policy-driven analysis of sensitive datasets such as health-related information.

EOSC boosts European productivity

In 2018 the European Commission published the report, *Cost of not having FAIR research data*⁴. The report elaborates a cost-benefit analysis of FAIR research data, and one of the main conclusions is that “the cost of not having FAIR research data has been estimated to be more than 10 B€ every year for Europe”.

By facilitating the implementation of FAIR policies and practices, EOSC will minimise such costs and will make available an increased amount of FAIR data for Europe. Organised within a European Data Space for Research and Innovation, these data will become a reference point for research, academic, public and private sector actors seeking to innovate. Thanks to the interconnection enabled by the Simpl middleware, an open-source solution currently implemented with the funding of the European Commission, the **EOSC Federation will be able to interoperate with other Common European Data Spaces. This will reduce duplication of efforts, speed up time to market and enable sector- and domain-specific data spaces to benefit from the horizontal services and multidisciplinary environment of EOSC.**

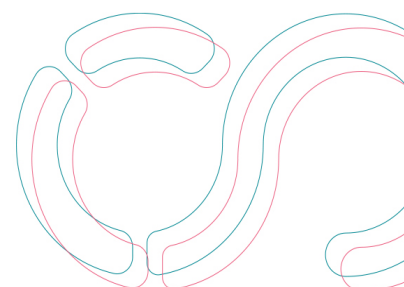
Researchers and businesses will be able to discover and access resources beyond borders and disciplines, and an increased awareness of existing solutions will facilitate reuse and deployment, saving efforts and costs for development. Furthermore, **EOSC will enable economies of scale** by providing researchers and businesses with access to a pool of resources that will complement those available in their country or community and equipping them with a mechanism to support larger-scale projects.

EOSC fosters the positioning of Europe as leader in AI

Access to research data is critical for developing AI solutions that can address complex societal challenges, from healthcare to climate change and green transition. To train an AI model, large amounts of data are required. To make an AI model trustworthy and well-functioning, quality data are needed. The FAIR principles are a powerful instrument to articulate the attributes that data need to enable reuse by humans and machines. Well described data, interoperable and compliant with community standards, are the basis for trustworthy AI.

EOSC will contribute to AI developments by providing Europe with a pool of high-quality FAIR research data that can be utilised by scientific communities and businesses to train AI models and to improve their trustworthiness.

⁴ Cost of not having FAIR research data, https://publications.europa.eu/resource/ellar/d375368c-1a0a-11e9-8d04-01aa75ed71a1.0001.01/DOC_1





In conclusion, EOSC is crucial for European competitiveness as it addresses the new priorities and strategic objectives of the EU, including digital and data sovereignty, security, productivity, and the positioning of Europe as a leader in AI.

The necessity of EOSC has become more critical than ever before. It is our European tool for driving research and innovation, and for equipping Europe with the means to maintain a strong competitive position in the global market.

Disclaimer

The purpose of this document is to elaborate an easy-to-understand narrative for EOSC linked to the most recent political and policy-related developments. The document briefly describes how EOSC could contribute to the challenges highlighted in the recently published Letta report. Clarifying how EOSC could contribute to tackling these challenges can help policy and decision makers to better understand EOSC and contextualize it in their European and national agendas. The document can also help the EOSC Tripartite Governance in achieving consensus / start the discussion on the role of EOSC in certain areas such as security, AI, and competitiveness at large.

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