European Commission

Shaping the Future of
CULTURAL HERITAGE

Exploring the nexus between the **Cultural Heritage Cloud**, the **common European data space for cultural heritage**, and the **European Open Science Cloud**

INTRODUCTION

Cultural heritage plays an essential role in our societies. It fosters our identity, collective memory and connections across generations and across societies, while it offers opportunities for inclusion, participation and economic growth. Cultural heritage institutions are the facilitators for engaging with, preserving, and securing our heritage for the present and the future. These institutions are currently undergoing a radical shift, embracing rapid digitisation and adopting new, collaborative governance models. This transformation is impacting fundamental activities like outreach, co-creation, research and innovation in profound ways.

The **Cultural Heritage Cloud (ECCCH)** is a new ambitious European initiative, which will **join forces with the common European data space for cultural heritage and the European Open Science Cloud**, to strengthen support for Europe's cultural heritage institutions and research community to fully embrace the digital age.

Cultural Heritage Cloud

Data Space for Cultural Heritage

European Open Science Cloud

THE CULTURAL HERITAGE CLOUD

The Cultural Heritage Cloud is an EU initiative aimed at creating a digital infrastructure that will enable unparalleled cooperation of cultural heritage professionals and researchers across the EU in a **secure digital environment.** It will provide, among others, **cutting-edge tools** to share research and scientific work and findings online, digitise artefacts and study them collaboratively. Through continuously updated virtual replicas of heritage, called digital twins, the Cultural Heritage Cloud will also contribute to **documenting and virtually preserving heritage**, including threatened heritage, for future study and immersive interaction. This collaborative Cloud will significantly improve preservation, conservation, and restoration processes, as well as open new avenues for research. **The creation of the Cultural Heritage Cloud is supported by Horizon Europe, the 9th EU framework programme for research and innovation.**

Research and Innovation

Key Features and Benefits

The Cultural Heritage Cloud will enable unprecedented scientific exchanges, contribute to the protection of intellectual property rights and help make cultural heritage institutions more digitally adept across institutional, national and disciplinary borders. Professionals such as cultural heritage scholars, curators, archivists and conservators will have access to advanced technologies while keeping full control and ownership of the data.

THE CULTURAL HERITAGE CLOUD IS BASED ON THREE PRINCIPLES

Digital twins
of cultural heritage goods, continuously updated as new data becomes available, to reflect the full available set of information and knowledge linked to this heritage good

A digital continuum,
tracing all interactions with and modifications of digital heritage objects and related data objects

A digital ecosystem,
where all different stakeholders, professions and activities can interact with each other and with the digital heritage objects

COMMON EUROPEAN DATA SPACE FOR CULTURAL HERITAGE

Funded by the Digital Europe programme, the **common European data space for cultural heritage** is an **EU flagship initiative to accelerate the digital transformation of the sector and foster creation, access and reuse of heritage data.** Alongside 13 other data spaces – ranging from health to tourism – it is central in the European data strategy to harness the value of data and its free movement for Europe's economy and society.

More specifically, the data space builds on the investments under consecutive funding programmes since 2008, the longstanding collaboration between Member States and their cultural heritage institutions, and the established network and experience of the **Europeana Initiative**. It features cutting-edge infrastructure (building on the foundations of the Europeana Digital Service Infrastructure), a suite of products, frameworks and tools which facilitate the open and trustworthy sharing of heritage data across Europe, and a vibrant community. It currently **provides access to 57 million heritage items from over 3,500 data partners on Europeana.eu**.

EU Member States are committed to the data space, in line with the European Commission **Recommendation**[1] **on a common European data space for cultural heritage.** The Recommendation encourages Member States to **develop digital strategies with clear digitisation and digital preservation goals**, including ambitious targets for digitising cultural heritage assets and making them available for access and reuse in the data space. This includes digitisation of cultural heritage at risk, and the most physically visited monuments and sites in 3D. The aim is to **help cultural heritage institutions accelerate their digitisation and preservation efforts and seize the opportunities created by the digital transformation.**

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1 **Commission proposes a common European data space for cultural heritage | Shaping Europe's digital future (europa.eu)** (C (2021) 7953)

Complementarities with the Cultural Heritage Cloud

The data space serves as the main EU entry point for access to cultural heritage data, for use and reuse by large audiences, including educators, creatives and citizens, as well as by other sectors and other data spaces. Through capacity-building activities, **the data space helps cultural heritage institutions in their digital transformation.**

The Cultural Heritage Cloud will serve as an advanced collaborative workspace for heritage professionals to advance heritage science and offer tools and services that will **boost the digital transition of cultural heritage institutions.**

While distinct, the **Cultural Heritage Cloud and the Data Space for Cultural Heritage will complement and reinforce each other**, particularly in terms of data-sharing and capacity building. Through interoperable frameworks, data from the data space will flow securely to the Cloud for heritage professionals to work with, while research outputs and data generated in the Cloud will be accessible through the data space for reuse across various sectors. To enable exchange, both initiatives' tools and services will be based on **Findable, Accessible, Interoperable and Reusable (FAIR) principles**.

By enabling the documentation and virtual preservation of cultural heritage, including heritage that is threatened, and the creation of digital twins for future study and immersive interaction, the **Cultural Heritage Cloud will support Member States and their cultural heritage institutions in the realisation of the objectives outlined in the Commission Recommendation of 2021.**

The two initiatives will also join forces to support capacity building, fostering a more inclusive, sustainable and unified digital heritage environment.

EUROPEAN OPEN SCIENCE CLOUD – EOSC

The vision for EOSC is to put in place **a system for researchers in Europe to store, share, process, analyse, and reuse** within and across disciplines and borders, FAIR research outputs, such as research data, publications and software.

It is rooted in open science and deployed as a network between data repositories and services of research infrastructures and other scientific service providers to develop a **trusted federation of research data and services for R&I in Europe**. The development of the building blocks of the EOSC Federation will count on the latest community know-how, **adopting and building on well-established and well-functioning existing structures and frameworks**.

A major step to realise this vision is the **launch of the EOSC EU Node, foreseen in Autumn 2024, as the first node of the EOSC Federation**. The EOSC EU node will provide services to researchers and act as a blueprint, facilitating the enrolment of other potential EOSC nodes to the federation.

At the same time, partly through investments by the EU, its Member States and Horizon Europe associated countries, several thematic communities and national initiatives are maturing their infrastructures and services for EOSC readiness.

The EOSC Nodes will be the entry points for end users to the EOSC Federation, with each node offering its own research and data services and possibly services of other providers, in compliance with the EOSC Federation's common rules and requirements as well as the own policies of the EOSC Node. An organisation may therefore enrol its activities as an EOSC Node in the EOSC Federation or onboard its services on an existing EOSC Node as a provider.

These nodes will thus offer scientific services and/or data that adhere to the FAIR principles, including curated research outputs such as publications, datasets or software, specialised knowledge, applications, tools, infrastructure or platform services, and data processing and storage capabilities.

Complementarities with the Cultural Heritage Cloud

The EOSC is the EU's flagship initiative for the digital transformation of research, recognised as the Common European Data Space for research and innovation, alongside the other domain-specific European Data Spaces. Interconnecting the Cultural Heritage Cloud with EOSC will enable an **expanded access to multi-disciplinary research data for the users of the Cultural Heritage Cloud**, while researchers from other disciplines will be given access to open research data hosted in the Cloud.

CONCLUSION

The EU has never before dedicated such significant resources to support cultural heritage professionals and researchers in the digital transition. The effort to support Europe's cultural heritage sector to take full advantage of the many opportunities offered by the digital transformation does not start from zero, and it is not limited to the three initiatives mentioned above. However, support to these three complementary and mutually re-enforcing European key initiatives marks a strategic shift. The EU has acknowledged the needs of the sector, the urgency and immense importance of the challenge, and has decided to step up its actions.

Over the coming years, these initiatives together will offer an enormous range of opportunities for Europe's cultural heritage professionals, researchers, cultural and creative industries, and society at large. However, the success of this investment ultimately depends on the users, in the cultural heritage sector and beyond.

There are many ways to engage: as part of a project consortium, as an expert or as an active user.
Take the opportunity to contribute to shape your future working environment!

LEARN MORE ABOUT EACH **EU INITIATIVE**:
- The Cultural Heritage Cloud
- European Open Science Cloud – EU Node
- Common European data space for cultural heritage

ALSO SEE:
- Funding & Tenders Portal

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