European Collaborative Cloud for Cultural Heritage Pere Brunet, Universidad Politécnica de Cataluña



Objetivos

El patrimonio cultural digital y las necesidades en las próximas décadas

Herramienta europea y pública que cubra las necesidades presentes y futuras

- De museos, conservadores, restauradores, investigadores
- Dirigida tanto a grandes instituciones como a las más pequeños
- Indirectamente, dirigida al gran público
- Dirigida y controlada a partir de los propios usuarios: objetivo social, no TIC.
- Integrando las presentes iniciativas
- Almacenamiento, intercambio, uso, colaboración, calidad, seguridad
- Generación de material diverso, exposiciones, aplicaciones interactivas, etc
- Condiciones claras de uso de los datos

Solución europea, aglutinadora, dinámica y con voluntad de persistencia



Situación actual

				Storage &	Storage &	Storage &	Storage &	Storage &	Internet	Interact w.	for cloud	for cloud		
				5	5	5	5	5	Interact w.				Long term	Long term
	HW		Collaboration	retrieval	retrieval	retrieval	retrieval	retrieval	data	data	evolution	evolution	access	access
	Data space	Computing	VRE	Catalogue	Portals	Repository	Repository	Semantic	Visualizatio	Data	Software as	Assessment	Open	Data
EOSC	Yes	Yes	Yes	Yes	Yes	Part	No	No	No	Part	Yes	?	Part	Part
OpenAIRE	No	No	No	Yes	Yes	Part	No	No	No	No	Part	Yes	Yes	Yes
EGI	Yes	Yes	Yes	Yes	Part	No	Yes	?	No	No	?	Part	Part	No
D4Science	Yes	Yes	Yes	Yes	Yes	No	No	No	Yes (not all	Part	Yes	Yes	Yes	No
Commercial Clouds: Amazon, Google	Yes	Yes	Part	No	No	No	No	No	No	No	Yes	No	No	Part
and Microsoft (Azur)														
CLARIN (EC Infra)	Yes	No	Part	Yes	Yes	Yes	Part	Yes	Part (limited)	Part (on text)	Yes	Part	Yes	Yes
DARIAH (EC Infra)	No	No	Yes (limited)	Yes	Part (limited)	No	No	No	No	No	No	No	Yes	Part
E-RIHS (EC Infra)	Yes	Plan	Plan	Yes	Yes	No	No	Plan	Plan	Plan	Plan	No	Plan	Plan
Getty's Vocabularies	No	No	No	Yes	Yes	No	No	Yes	No	No	Yes	Part (voc.	Yes	Part
Getty's ARCHES	Yes	No	No	Yes	Yes	Yes	No	Yes	Yes	Part	Yes	?	Part	Yes
ARIADNE+ (EC proj.)	No	No	Yes	Yes	Yes	Yes	No	Yes	Yes	Part	Yes	Part (VRE)	Part	Part
TimeMachine	No	No	No	Yes	Yes	No	No	Part	No	No	No	No	Yes	Yes
4CH	No	?	No	Plan	Plan	?	?	?	?	No	?	Plan	Part	Plan
Europeana	No	No	No	Yes	Yes	No	No	No	No	No	No	No	No	Part
V-MUST	No	No	No	No	No	No	No	No	Yes	No	No	Yes	No	No
3D-ICONS	No	No	No	No	Yes	No	No	Yes	No	No	No	No	No	No
ESPADON (Equipex Patrimex, Fr)	Plan*	Plan*	Plan	Plan	Plan	Plan	Plan	Plan	Plan	Plan	No	No	Plan*	Plan*
UK "Discovery Projects"	Plan	No	No	Plan	Plan	Plan	Plan	Plan	Plan	No	No	?	?	Plan
IIIF	No	No	No	No	No	No	Yes	Part	es 2D, Plan 30	Part	No	No	Yes	Part
Google Arts & Culture	No	No	No	No	Yes	Yes	No	?	Yes	No	No	No	No	Yes

Iniciativas desconectadas

Note: No = not supported; Plan = planned serv; Part = partially implemented; Yes: fully operational service; ?: unknown; Plan*=planned service by cooperating with CNRS TGIR HumaNum

Las propuestas e iniciativas actuales no cubren las necesidades de la comunidad europea (museos, investigadores, restauradores, conservadores) en patrimonio cultural digital

Análisis:

- Es necesario un esfuerzo coordinado desde la CE
- Preservar, aglutinar, conectar, dar valor al patrimonio cultural europeo

Necesidad de nuevas herramientas: públicas, europeas, no comerciales, perdurables (ciclo de vida



SW support SW support

Independent experts for the ex-ante impact assessment on a European Cloud Platform for Museums ad Other Cultural Heritage Institutions

- Brunet Pere Professor in Computer Science at the Polytechnic University of Catalonia in Barcelona
- De Luca Livio Research Director at CNRS and Director of CNRS-MAP Unit
- Hyvönen Eero Professor at Aalto University, Department of Computer Science
- > Joffres Adeline Ingénieure de recherche, CNRS
- Plaßmeyer Peter Museum Director at Dresden State Art Collection, Mathematisch-Physikalischer Salon
- > Pronk Martijn Head of Digital Van Gogh Museum, Amsterdam
- Scopigno Roberto Research Director at ISTI, an Institute of the Italian National Research Council (CNR)
- Sonkoly Gábor Director of the Department of European Historiography and Social Sciences at Eötvös Loránd University (ELTE)

REPORT ON A EUROPEAN COLLABORATIVE CLOUD FOR CULTURAL HERITAGE

EX-ANTE IMPACT ASSESSMENT

PREPARED FOR EUROPEAN COMMISSION DIRECTORATE-GENERAL FOR RESEARCH AND INNOVATION

PERE BRUNET LIVIO DE LUCA EERO HYVÖNEN ADELINE JOFFRES PETER PLASSMEYER MARTIJN PRONK ROBERTO SCOPIGNO GÁBOR SONKOLY





Copias digitales "permanentes": autoría, de donde proviene, indicadores de calidad, gestión histórica, preservación

Actores: museos, conservadores, investigadores, historiadores, restauradores, divulgadores...

Actividades: visión pluridisciplinar, información visual y semántica, conexiones en espacio y tiempo



Centrada en los intereses de la comunidad y de los usuarios.

Evaluación rigurosa e independiente.

Servicios ofrecidos:

- Nube de patrimonio cultural (Cloud): herramientas, servicios, ayuda
- Repositorio: archivo, catálogo de recursos, seguridad, condiciones de uso
- Portal: recuperación, uso, visualización, etc.
- Dirigidos también a pequeños museos e organizaciones



A CSA action is planned, having the critical role of consolidating a community wider than the project consortia, ensuring a smooth collaboration and a user-driven design, implementing assessment policies (evolutionary model) and contributing to establish a sustainability policy...

... underline that a policy should be defined and put in place to ensure the European Collaborative Cloud for Cultural Heritage would persist in time, remain operational and able to further evolve.





Call - A European Collaborative Cloud for Cultural Heritage - 2023







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Call - A European Collaborative Cloud for Cultural

2023

Design and implement the basic architecture, data model and governance, including steering and steering and coordination entity for all implementation actions 35M€

2024

Research and develop **basic tools** and functionality that make the platform attractive, useful and user friendly

48M€



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Plazos Convocatoria Clúster 2 _2023 - 2024

	2023 Call	2024 Call
Publication	14/12/2022	4/10/2023
Call Deadline	14/03/2023	7/02/2024

* Estimación; Sujeto a cambios

		2023 Call	2024 Call
	Publication	10/01/2023	End 2023-Early 2024
ECCCH	Call Deadline	21/09/2023	Spring/Autumn 2024
	Evaluation	End 2023	End 2024
	Results	2024	2025
	Budget	35 M€	48 M€



A European Collaborative Cloud for Cultural _Call 2023

Topics	Type of Action	Budgets (EUR million)	Expected EU contribution per project (EUR milion)	Indicative number of projects expected to be funded
HORIZON-CL2-2023-HERITAGE-ECCCH-01-01: A European Collaborative Cloud for Cultural Heritage	IA	25	20 to 25	1
HORIZON-CL2-2023-HERITAGE-ECCCH-01-02: A European Collaborative Cloud for Cultural Heritage – Innovative tools for digitising cultural heritage objects	RIA	10	2 to 5	2



HORIZON-CL2-2023-HERITAGE-ECCCH-01-01: A European Collaborative Cloud for Cultural Heritage

Objective:

- Design and establishment of an European Collaborative Cloud for Cultural Heritage (ECCCH) and demonstrating its basic capacities (basic architecture and governance)
- Support an open digital ecosystem that provides the tools and services needed to enable and scale-up future research and innovation in the field





HORIZON-CL2-2023-HERITAGE-ECCCH-01-01: A European Collaborative Cloud for Cultural Heritage

Expected outcome (contribute to all):

- The ECCCH is established as a legal entity, which serves as a Single Entry Point (SEP) and managing body, and is supported by an external independent advisory board.
- Enhances the ability of cultural heritage actors to interact across disciplinary, institutional, sectorial and political boundaries and cooperate effectively
- Use of the ECCCH platform, its tools and services for the study, digitisation, conservation, valorisation and access to cultural heritage artefacts and related data.
- New working approaches to collaborate across geographic, cultural, and political borders within Europe (and beyond), develop new business models and unleash the full potential of a digitally enabled cultural heritage ecosystem connecting cultural heritage actors, activities and objects.
- Supported by stakeholders at European, national, regional and local level, in particular by Member States, and its sustainability at legal, technical, financial, human resources and scientific level is ensured.
- Participants of past and ongoing EU-funded initiatives, activities and networks are invited to cooperate with the ECCCH-related actions and to contribute with data to the ECCCH and testing of ECCCH tools.



Characteristics:

- Platform for multidisciplinary and multi-sectoral collaboration on cultural heritage
- Focus on users' requirements and needs and ease of use
- **Provide services** to both large and small museums and other cultural heritage institutions.
- ECCCH project web.
- Ensure continued maintenance of the ECCCH platform and the required storage, beyond the lifetime of the project.
- Position the digital ecosystem as a key to connecting cultural heritage actors, activities and objects in synergy with the other related initiatives in the field.
- Open source, licensed under a CC0 public domain dedication or under an open source licence
- FAIR Data; Provide instruments for assessing the quality of the data on the platform (and related attributes in the data model), and for monitoring the effectiveness/usage of the tools integrated into the ECCCH;
- Technologies enabling access and use from geographic areas with low-performance network connections should be provided.
- The system should allow national communities/institutions to link and potentially configure their **own local clouds** in case this is necessary.

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• The project should build on previous investments and already available initiatives, EOSC, the Data Space, Europeana or Gaia-X

HORIZON-CL2-2023-HERITAGE-ECCCH-01-01: A European Collaborative Cloud for Cultural Heritage

 Stakeholders of existing communities and cultural heritage institutions Representatives of a wide range of Member States and Associated Countries, as well as of related EU initiatives. Tasks: drive continuous evaluation processes (independently of the funded consortium) connect technical consortia with the cultural heritage community at large, as well as with an inclusive community of professionals and researchers, through networking and training programs and community building; capture community expectations and oversee user-based assessments of ECCCH resources; contribute to the future development agenda of the ECCCH and ensure economic, organisational and technical long-term sustainability. 	Governance: Legal Entity Single Entry Point (SEP)	Around 5 years
researchers, through networking and training programs and community building ; capture community expectations and oversee user-based assessments of ECCCH resources; 	 Stakeholders of existing communities and cultural heritage institutions Representatives of a wide range of Member States and Associated Countries, as well as of related EU initiatives. Tasks: o drive continuous evaluation processes (independently of the funded consortium) 	ssionals and
	researchers, through networking and training programs and community building ; capture community expectations and oversee user-based assessments of ECCCH resources; 	

Funding:

- 20-25M€
- Lump sum
- The use of significant parts of the project budget to purchase or lease hardware equipment or commercial software is strongly discouraged
- Cascade funding; financial support to third parties to cultural heritage institutions, in take-up of tools, technologies and for populating and validating the relevant use cases through experiments. A maximum of 10% of the budget should be dedicated to financial support to third parties. The maximum amount to be granted to each third party is EUR 60 000.



HORIZON-CL2-2023-HERITAGE-ECCCH-01-02: A European Collaborative Cloud for Cultural Heritage – Innovative tools for digitising cultural heritage objects

This topic aims at designing and implementing innovative tools and methods for digitisation of (a) visible characteristics and (b) non-visible characteristics of cultural heritage objects, to be incorporated into the European Collaborative Cloud for Cultural Heritage (ECCCH).

Expected outcome (all):

- Use a common set of new innovative tools and methods for the digitisation and visualisation of cultural heritage objects (3D and enhanced 2D), which are accessible through and connected to the ECCCH
- Provides cultural heritage institutions and professionals with enhanced technological and methodological capabilities to study cultural heritage objects, to share related data of their visible and non-visible properties and characteristics, and to develop new forms of collaboration.
- All software and other related deliverables should be compliant with the data model and the software development guidelines elaborated by the project funded under topic 'HORIZON-CL2-2023-HERITAGE-ECCCH-01-01
- The tool(s) developed should be compliant with the design of the ECCCH, and should be integrated with the ECCCH before the end of the project, together with proper documentation.
- Project website under the common ECCCH website, managed by the project funded under topic HORIZON-CL2-2023-HERITAGE-ECCCH-01-01.
- Participate in the common activities of ECCCH initiative (included in the budget)
- Case studies, conducted in collaboration with relevant stakeholders.



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4-5 M€

(2 projects)