EUreka3D European Union's reconstructed content in 3D

EU project co-funded by the Digital Europe Programme

Start date: 1/1/2023

Duration: 2 years

Coordinator: Photoconsortium International Association

Partners: CRDI, Bibracte, Museo della Carta, Cyprus University of Technology, EGI, Cyfronet, imec, Europeana Foundation

Objectives:

- To support Cultural Heritage Institutions implementing high quality 3D digitization
- To deliver the EUreka3D Data Hub made of cloud services
- To integrate the results in the Data Space for Cultural Heritage

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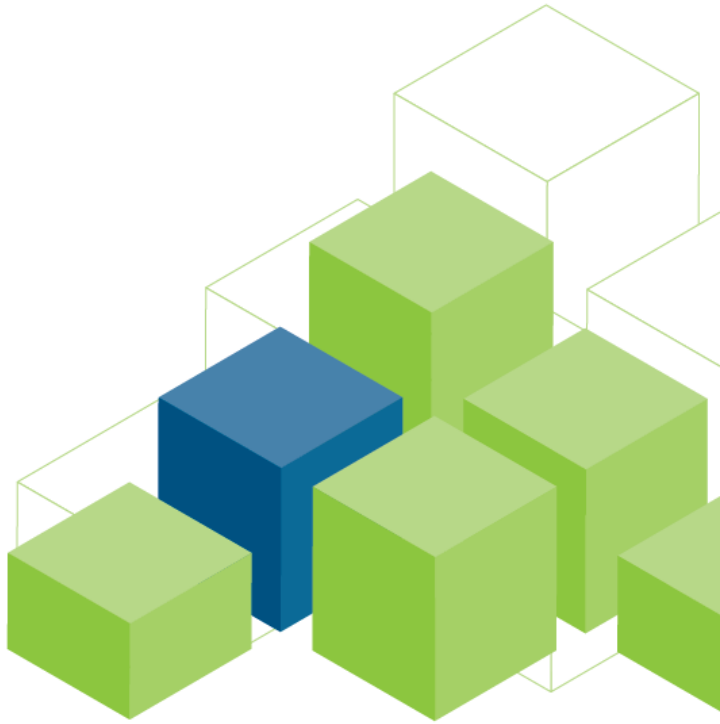
Short summary of work performed

EUreka3D has worked to provide support, capacity building and technical solutions to these challenges, by:

- Developing and testing a **pilot e-infrastructure for 3D cultural collections** that provides useful features that institutions can use in managing their 3D assets and related information
- Producing **training resources and a capacity building programme** of onsite and online events
- **Digitising** cultural objects and sites from Girona Museum of Cinema, Bibracte archaelogical site and Cyprus historical boat and churches
- **Publishing** new contents in Europeana



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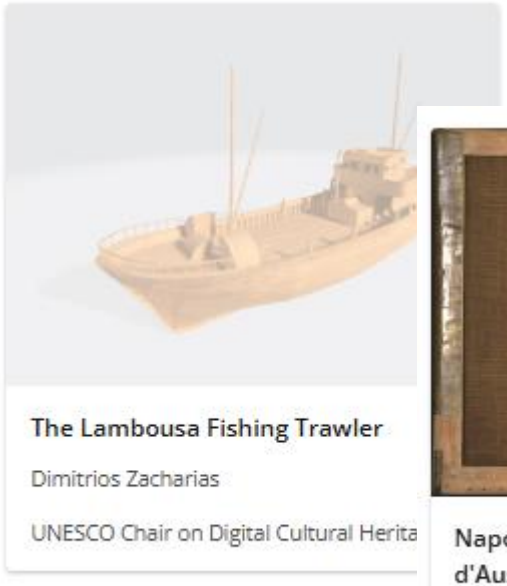
Publications in Europeana

The **EUreka3D collections published in Europeana** (nearly 6.000 records) enrich the availability of open access cultural content for use and reuse by all stakeholders

The collections are showcased in a **variety of editorials, galleries and dissemination materials**



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From Stakeholders to Users

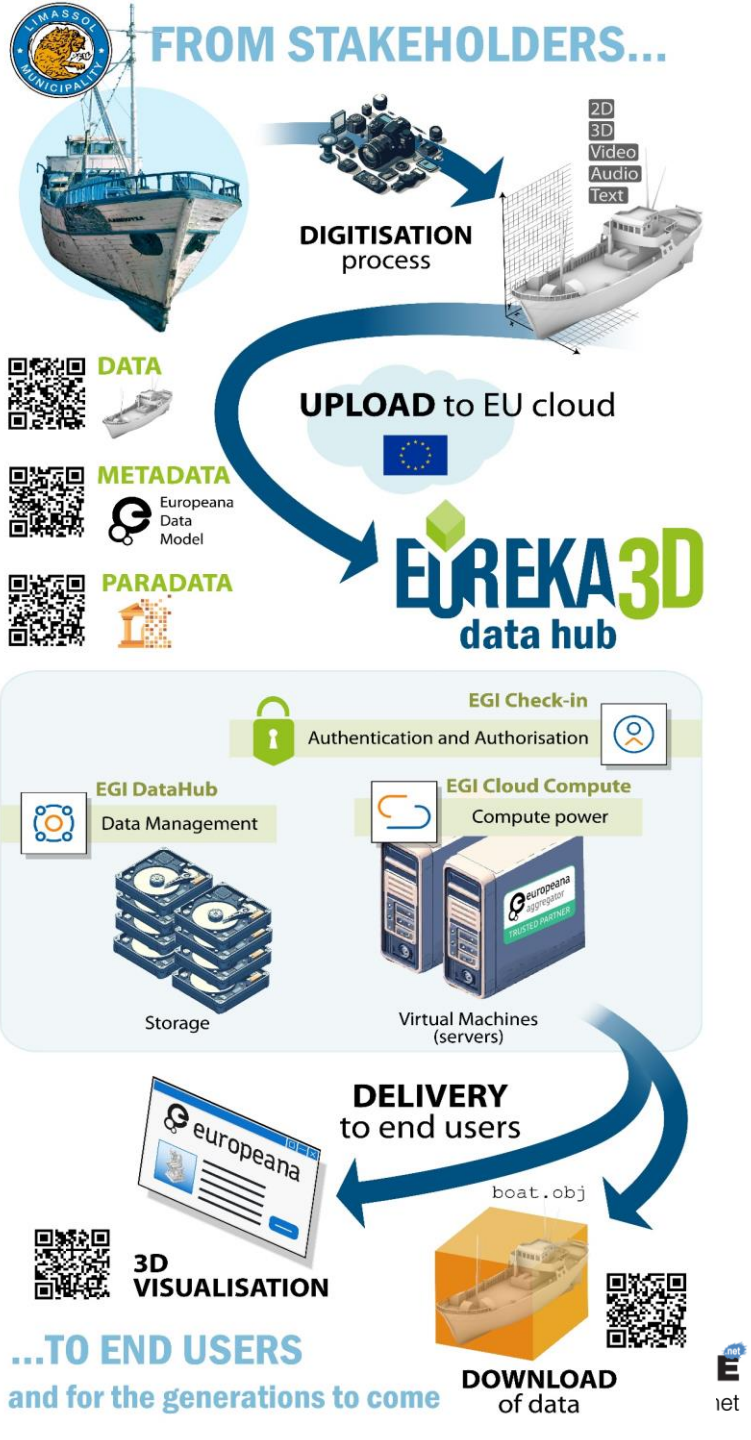
EUreka3D Data Hub: dedicated cloud-based services to store, preserve, manage, share data, metadata and paradata generated in 3D digitization projects, including:

- *European-based storage facilities*
- *AAI for safe access*
- *PIDs service to grant long term preservation of online objects*
- *Visualization tool (3D viewer)*
- *Fully integrated and compatible with Europeana*

Capacity building on high quality 3D digitization, based on milestone VIGIE 2020/654 Study

Aggregation of content for publication in the **Data Space for Cultural Heritage**

EUreka3D concludes on 31/12/2024 and is followed by the **EUreka3D-XR** to explore reuse of 3D assets in XR scenarios.



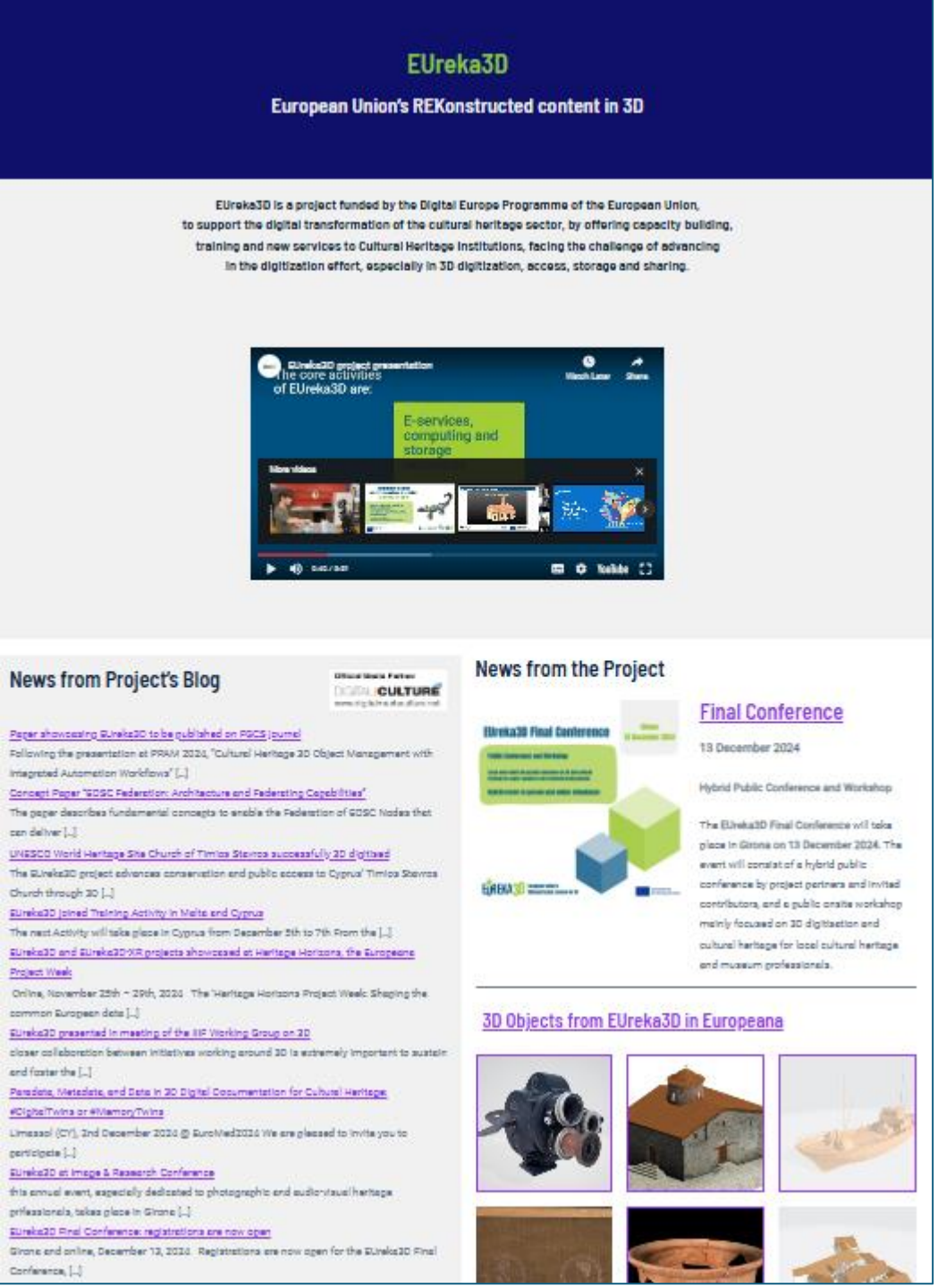
Dissemination and target audience

EUreka3D aimed at disseminating **recommendations** on high quality digitization in 3D, sharing knowledge about key themes such as formats, standards, authenticity and fake media.

Good practices and real-life experiences of digitization of cultural collections and reuse were showcased

Target audience was the community of heritage professionals, irrespectively of the sector (i.e. all GLAMs included) and digital literacy level. Also, the outreach went beyond EU, with participants coming to our webinars from all over the world (!).

All outcomes are **openly accessible** on the EUreka3D website, on the blog hosted by digitalmeetsculture and in the editorials published on europeana.eu.



EUreka3D website

https://eureka3d.eu/

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www.digitalmeetsculture.net

EUreka3D blog on digitalmeetsculture.net

https://www.digitalmeetsculture.net/projects/eureka3d-blog/

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Eureka3D editorials in Europeana

Discover the EUreka3D collections, stories and galleried in the Europeana.eu

Blogs

STORIA

3D digitisation, history and future

STORIA

Optical views

a way to travel through Europe

STORIA

Bibracte

a 2000-year-old town under a forest

STORIA

The Pescia Paper Museum

Keeper of paper-making heritage in Italy since the 13th century

STORIA

The Lambousa Fishing Trawler

Cyprus' Mediterranean maritime legacy

STORIA

The magic lantern

A story of art and technology

Editorials and publications in Europeana include various multilingual blogs on Europeana website, publications on Pro, and galleries.

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EUreka3D blogs in Europeana Pro

Pro Blogs

EUreka3D

European Union's REKonstructed content in 3D

VIGIE study

EU-funded study sheds light on 3D digitisation of tangible cultural heritage

Supporting the data space

Discover how the EUreka3D project supports 3D in the data space for cultural heritage

Fikardou Village

3D scanning preserves a Cypriot village for the future

Bibracte

Bibracte exploits the potential of 3D digitisation

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EUreka3D galleries in Europeana

Galleries

GALLERY

3D archaeological treasures

GALLERY

3D wonders

GALLERY

Famous monuments in 3D

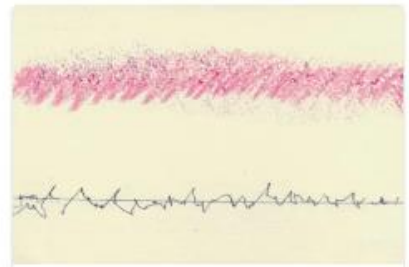
GALLERY

Bibracte

GALLERY

Paper Moulds from Museo Della Carta

Digital representations of wired moulds used to handcraft paper in the historical paper mill in Pescia



GALLERY

Modern art from Museo Della Carta

A collection showing contemporary artworks using paper by artists in residence at the Paper Museum of Pescia.

GALLERY

Flavors of Cyprus

Explore a selection of the best items from Cypriot heritage in Europeana!

GALLERY

Girona cinema museum magic lanterns

Explore a selection of magic lanterns digitized in 3D from the collections preserved at the Cinema Museum in Girona

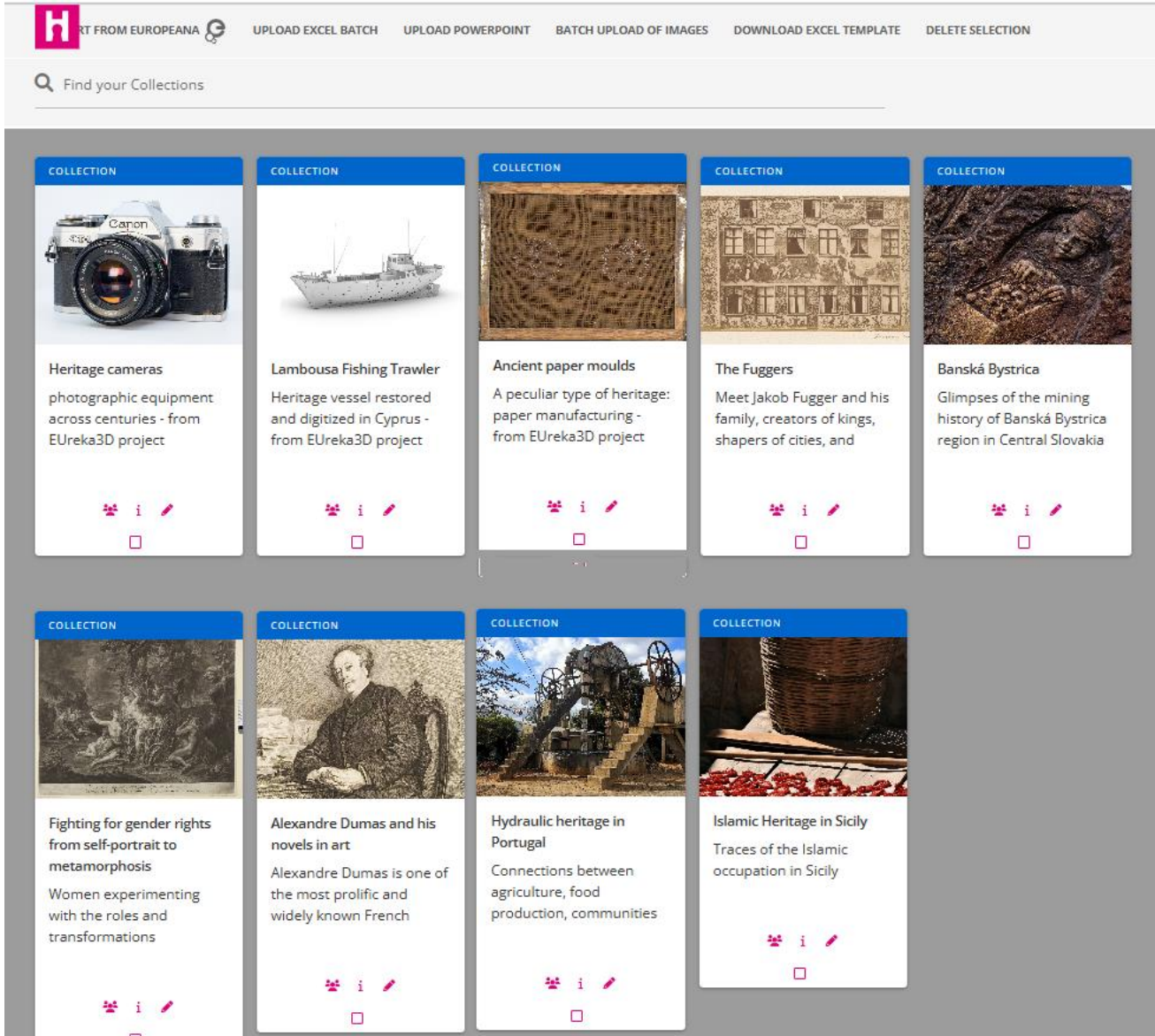
GALLERY

Heritage cameras and photographers

Enjoy a gallery of heritage cameras and heritage photographers at work!

EUreka3D on Historiana

Source collections are also published in Historiana, as open access digital resources available for teachers and students.



Actions for capacity building

- Production of **learning and training resources**, openly accessible in the project's website, YouTube and on the Zenodo channel
- **Online and onsite events**, including hands-on training
- **Cooperation and cross collaborations** with stakeholder organizations in cultural heritage and other sectors such as education and tourism
- Participation in **relevant conferences and seminars** to share knowledge and presente workflows of reuse and use cases, including demonstrations of the EUreka3D Data Hub

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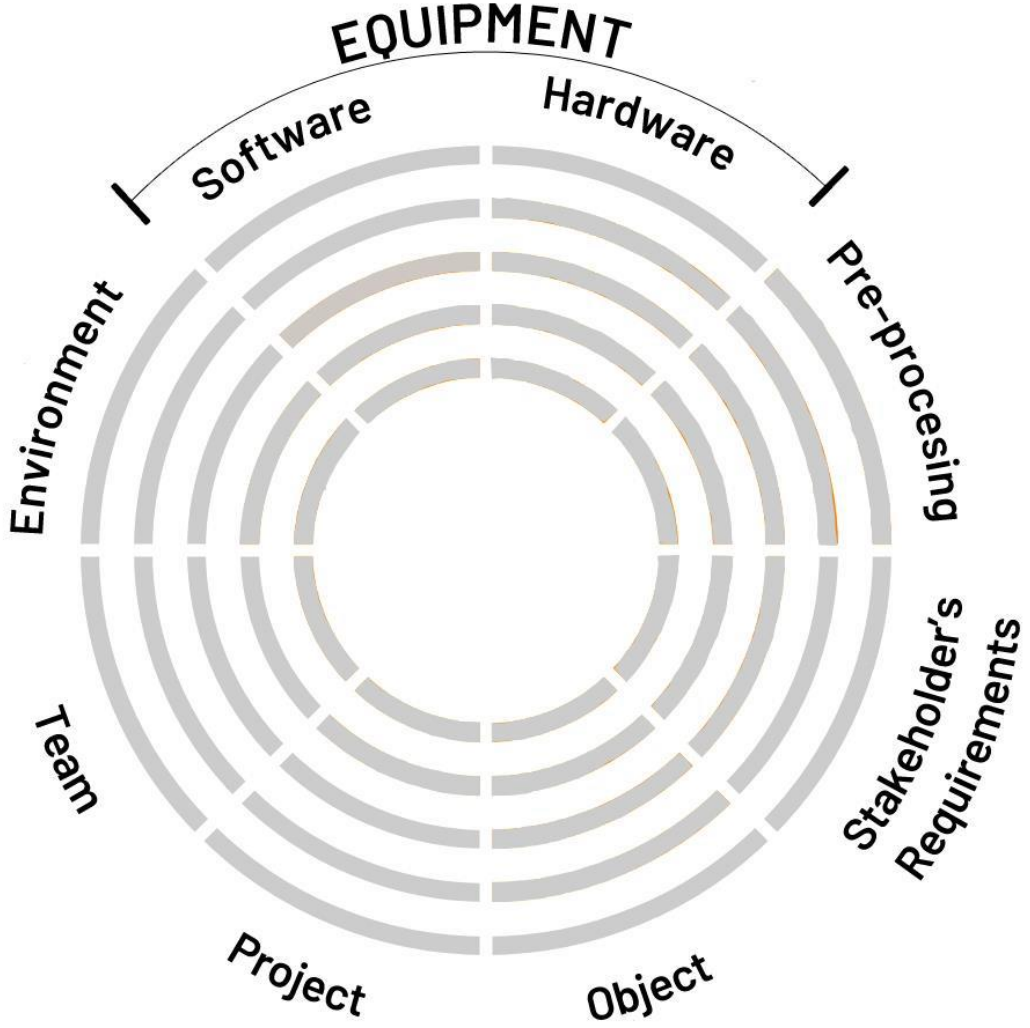
3D digitisation: a question of complexity

- The experience of high-quality 3D digitisation during EUreka3D confirmed the importance of a rigorous quality assessment as an essential step for creating **memory twins**
- The concept of ***memory twin*** goes beyond the notion of digital twin, looking at the process that includes the critical integration of paradata, metadata and data

- **Data**: the geometrical information of the 3D model
- **Paradata**: the processes and tools used for creating the data
- **Metadata**: the information that explains the digital content

Quality matters

- Digitization is a static capture of a dynamic object at a certain moment in time
- A still image of a painting, the picture of a monument or a cultural site, they are all 2D projection of a 3D object
- Equipment, practices, actual setting, software processing all impact the final result



VIGIE Study 2020/654

XR for cultural heritage

- Technology is crucial when we explore the possibilities of using primary archival sources for creating new **narratives** around our shared heritage, to the benefit of a **variety of users** and **stakeholders**.
- The current push towards 3D digitization is only a first step in a long journey that will enable better and more advanced **interactions** with heritage resources.
- We are currently witnessing the dawn of the future for museums and archives within a context of **digital transformation**.
- The virtual 3D reconstruction of lost heritage from archival materials is a totally new field where **primary sources** are exploited to create new narrative contents adopting a scientific approach.

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EUreka3D-XR scenarios

The XR narrative of excavations in process in the Bibracte archaeological site

The XR life of Saint Neophytos Englystra in Cyprus, in the virtual space

XR reconstruction of the middle-ages walls of the city of Girona

Concluding remarks

3D digitisation: a scientific process

- It requires careful preparatory tasks, complexity analysis, preliminary study of working conditions, understanding of the requirements of the cultural heritage institution that enters into this challenge
- Collaboration with sound technological partners is crucial

Reuse: a big potential that requires new approaches and understanding

- To establish solid and accessible infrastructures
- To develop trustable methodologies
- To adopt standards

Digital transformation: a need for new capacities

- Improvements in the IT and networking services of Cultural Heritage Institutions
- Awareness of the new opportunities offered by the technical evolution
- Solid understanding of the needs of the users

Thank you

EUreka3D website https://eureka3d.eu/

EUreka3D blog https://www.digitalmeetsculture.net/projects/eureka3d-blog/

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