D1.1 Technical progress report 1

Authors:

Valentina Bachi (Photoconsortium)

Antonella Fresa (Photoconsortium)

HISTORY OF CHANGES			
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EXECUTIVE SUMMARY

This deliverable illustrates the progress in the various areas of the EUreka3D-XR project that has just completed its first six months.

The EUreka3D-XR project is co-funded to enrich the common European data space for cultural heritage with tools and resources that enable the reuse of 3D and other digital cultural resources in XR experiences which appeal to visitors of cultural collections onsite and online. EUreka3D-XR is the continuation project of EUreka3D (2023-2024) and builds upon the resources and work done to support the digital transformation of the Cultural Heritage Institutions (CHIs) in the context of the data space for cultural heritage as based on the Europeana platform.

In summary, the project is actively performing various tasks relating to:

- The development of five open access tools that allow curators and other CHI staff to create tours and other AR-XR experiences and narratives about cultural heritage collections:
  - AR TOUR BUILDER: Online tool for creating custom AR tours, retrieving 3D objects from CH repositories and associating them with locations on a map
  - AR TOUR EXPERIENCE: Mobile app that allows visitors to experience phygital tours by superimposing 3D digital objects onto the physical world and providing other types of digital information
  - AI 3D BUILDER: 3D Modelling software pipeline based on AI
  - 3D XR STUDIO: Web tool for creating XR/AR experiences, using a range of predefined layouts
  - AVATAR BUILDER: Predefined datasets tools allowing to create the digital representation of human characters that talk to visitors of CH sites.
- The extension of the services and cloud resources of the EUreka3D Data Hub, the infrastructure developed in EUreka3D project that operates as a direct entry-gate for collections in the data space for cultural heritage, by allowing storage, management, visualization, sharing and publication in Europeana of 3D cultural items;
- The creation of three demonstration scenarios set in Girona (about 3D reconstruction of medieval walls), Bibracte (about an AR tour in the archaeological site) and Paphos (about virtual re-enactment of life in a monastery) to showcase the use of the tools in real-life setting;
- A capacity building programme to improve the knowledge and digital transformation capacity of professionals in the cultural sector, with specific focus on how XR experiences can benefit CHIs in addressing their target audiences with compelling and modern narratives;
- A communication and dissemination programme that, besides promoting the project and its achievements, showcases the tools and inspiration scenarios in Europeana also with publications, editorials, case studies for providers' journey and reuse of digital cultural collections in various areas.

The project is complemented by project management and sound impact assessment activities that supports the design of sustainability routes for the project's achievements, resources and outcomes.

The project is well on track with first outcomes, milestones and due deliverables achieved.

The document is composed of the following chapters:

1. Introduction
2. Overview of the progress
3. Details on Work Packages and Activities
4. Conclusions

1. INTRODUCTION

According to the project's Grant Agreement, this document *D1.1 Technical progress report 1* is the first progress report of the EUreka3D-XR project, with detail of the activities, data added or updated, updated risk assessments, the progress towards the project objectives in percentages, highlighting and justifying deviations from the original plan.

The periodic reports are submitted following the templates published on the EU Funding & Tenders Portal for reporting and in facts this deliverable D1.1 is composed by the content provided on the EC Portal (Part A of the Technical Report) and by this document that contains the narrative parts of the Technical Report (Part B). The Financial Report is not part of D1.1 and is expected to be submitted to EC at the end of the Action.

This document provides an overview of the progress achieved at Month 6 and the status of execution of the workplan, including details on the progress of each WP and task, and information about achieved milestones and deliverables.

ROLE OF THIS DELIVERABLE IN THE PROJECT

This deliverable summarizes the activities performed in the project towards the expected objectives in the first 6 months of work, and is complemented with the *D1.2 Integration Report* that describes the planning of the work that will be carried out to integrate the outcomes of the EUreka3D-XR project into the common European data space for cultural heritage.

The deliverables D1.1 and D1.2 are verification means for Milestone 1 that is timely achieved.

2. OVERVIEW OF THE PROGRESS, BASED ON THE TECHNICAL REPORT TEMPLATE (PART B CHAPTER 1)

Summary of work performed and achievements, results and impacts

The project is concluding its first semester with valuable results in the different work packages:

WP1 Project management and coordination: the progress monitoring is on track, with regular internal communication via various tools (zoom, basecamp, emails) and with project and WP meetings to review status and plans for the various tasks. A kick-off meeting in Pisa (26-27 February 2025 including the public launch of the project in a hybrid workshop), monthly telcos, and a second project meeting held online (7-8 July 2025, also with involvement of the project's Advisory Board) were organised with participation of the partners. The due deliverables and milestones were timely submitted. Regular online meetings take place with the PO to inform about the project's updates. An ethics board was formed, with the original aim of supporting the development of the *D1.6 Ethics issues mitigation measures*, and will continue to operate in the course of the project. Intensive discussions with the data space operator (Europeana Foundation) led to the definition of the integration scenarios for the EUreka3D-XR outcomes, as described in the *D1.2 Initial integration report*.

WP2 EUreka3D-XR re-usable scenarios: detailed planning for the work ongoing in the three scenarios was defined and published (*D2.1 Pilots specification and planning*) and in depth discussions and alignment with technology partners is taking place, both in bilateral communication and in the regular WP2-WP3 coordination meetings, which took place since M1 of the project twice a month. Additionally, physical meetings and local visits took place or are being planned: CUT surveyed the monastery in Paphos in May 2025; Swing-it team visited Girona for a drone aerial photoshooting of the walls on 14-15 July 2025; NTUA team plans to visit Bibracte archaeological site on September 16-18 2025.

WP3 Supporting technology: the technology partners started planning and developing the five tools, with work progressing in parallel and coordinated through bi-weekly joint WP2-WP3 meetings in addition to dedicated bilateral meetings. This included collecting technical requirements; identifying expected functionalities and key desiderata for each of the five tools; discussing the visualization of advanced 3D models, particularly of animated human characters; ensuring interoperability with the EUreka3D Data Hub for AAI and check-in services and for sourcing and sharing of data; and exploring expected impact, exploitation routes and marketing strategies. All outcomes are documented in deliverable *D3.1 Technical requirements*.

WP4 Communication and Dissemination: communication and dissemination tools were implemented including: the reuse of the EUreka3D website, newsletter and social media as channels to support the online visibility of EUreka3D-XR; the realization of a project poster, postcards, banners and other paper-based and online communication materials for the promotion of the project and its events; the realization of a project video, and another short video with clips about the three pilot scenarios developed within the project; the participation in various conferences and sectoral events; the promotion on Europeana and data space channels such as with five items published on Europeana Pro and the definition of the editorial calendar. All this is captured in the *D4.1 Dissemination and exploitation plan*. Two hybrid events were realized in the period: the public presentation workshop focused on announcing the three scenarios organized in the context of the kick-off meeting (27/2/2025 in Pisa and online), and the conference *Photography and archives: discovery, technology and innovation* (29/5/2025 in Florence and online), that besides promoting the project and its scenarios also served as a capacity building action dedicated to (photographic) archives and CH curators. The communication and dissemination plan dedicated to the upcoming capacity building events (July - December 2025) has been developed, with specific actions and tasks. Planning for the preparation of the final booklet and for the organization and promotion of the final conference, which will take place in the context of the Cyprus Presidency celebration event in May 2026, also started. The task on impact assessment and sustainability also started with initial reflections captured in the project's deliverables and in the next paragraphs of this document.

WP5 Capacity Building: detailed planning of the capacity building action including target audiences, learning goals,

expected materials, resources, actions and events was defined, published and documented in the deliverable *D5.1 Capacity Building Implementation plan*. Big efforts were dedicated in the period to organize the two upcoming events in 2025: the capacity building event in Brussels, on 26/9, composed of a morning session in English also streamed online and a hands-on afternoon with activities expressly dedicated for local CHIs; and the online training programme in collaboration with ICA the International Council on Archives that is planned to take place on 19/11, 26/11 and 3/12, composed each of a lecture and interactive session animated with a specialized facilitator. Reflections on the Girona demonstration event in January 2026 were also initiated. A training course for the Europeana Learning Platform, which was initiated already in 2024 in the frame of the EUreka3D project, with focus on 3D digitisation guidelines and quality, is going to be officially launched in September 2025, and will be expanded by the end of the project with additional resources and modules on XR.

OUTCOMES ANALYSIS AND IMPACT ASSESSMENT ON TARGET USERS

In the reporting period, EUreka3D-XR has consulted with an Advisory Board of experts in the area of 3D and XR to highlight specific areas of interest and guide the project in ensuring that the actions of EUreka3D-XR will have the best chance of achieving its impact goals to stakeholders. More specifically, on 8 July 2025 a meeting took place with the Advisory Board members, to present the mockup of tools and scenarios and to collect preliminary feedbacks, which will be taken into account to support further development of tools, scenarios and other project's outcomes.

Given the project just marked the first 6 months, the initial outcomes are at a very early stage to provide a comprehensive analysis and impact assessment for the various target groups, even if it is possible to provide the following considerations:

Capacity Building – Main target: CH professionals, archivists, collection curators, museum and site staff

All the EUreka3D-XR partners are involved in the capacity building task, both as learners and as operators. All partners in facts contribute to the capacity building actions as follows: presentations delivered in online and onsite events; participation in the development of training materials; evaluation of training needs and of expected learning outcomes; impact assessment and quality evaluation of project scenarios and tools. Training materials and other learning resources produced by the project are made publicly available in various channels such as the project's online channels, the Zenodo community, partners' own channels, thus openly accessible by stakeholders. The project leverages the online course on 3D digitization created for the Europeana Learning Platform from the EUreka3D Digitization Guidelines, by expanding its contents with new content and materials derived from EUreka3D-XR capacity building work, to deliver and share EUreka3D-XR training outcomes to a larger community, with the expected impact of contributing to improve digital literacy and knowledge in the CH sector.

Scenarios and tools – Main target: CHIs and other reuse communities

The discussions about requirements, functionalities and resources of the EUreka3D-XR tools and extensions of the cloud-based EUreka3D Data Hub are progressing intensively between technology providers and cultural heritage partners, who represent a sample of user communities. The realization of XR applications, albeit used in various cases, poses feasibility challenges to CHIs who need to set aside resources and investments to outsource the activity to technical partners, and presents barriers linked with the low level of digital literacy of CH staff and with the limits connected to the use of proprietary software and to the lack of flexibility in updates. While the aim of EUreka3D-XR tools is not to by-pass the role of creative industry in enhancing cultural storytelling with XR, it is expected that the availability of open access, easy-to-use creator tools and their inspiration / demonstration scenarios will expand the possibilities for CH curators and staff in exploring new ways of engaging user communities. The open access approach and the interoperability and links of the EUreka3D-XR tools with existing resources such as the EUreka3D Data Hub and Europeana represent added value elements which have the potential to make a difference in the CH landscape. The expected impact of EUreka3D-XR scenarios and tools is preliminarily assessed in a change of the XR paradigm in the CH sector, where CH staff becomes more active in creating XR experiences and more capable of accessing tools and interact with creative industry for advanced implementations, regardless having less or more knowledge in coding or other IT competences.

Editorials and publications - Target: Europeana users and wider data space community

An editorial calendar with expected publication dates on Europeana website and Europeana Pro was agreed, as indicated in D4.1. The editorials to be produced by the project are clarified and are in preparation, under coordination of the Communication and Editorial Subgroup. Additionally, publication of the lessons learnt from the project and from the demonstration scenarios as use cases is planned in a more advanced stage of the project, also converging the final project's booklet. The expected impact for these outcomes, which will be maintained beyond the end of the project, refers to attracting stakeholder communities linked to the data space for cultural heritage to know about the project outcomes as an inspiration for learning more, to attend project's events and to try the tools when available in due time. In the same spirit, news items about the project are regularly published in the project's blog and in all project's communication channels.

Implementation plan and efficient use of resources

Implementation plan

Report on underline changes to the implementation plan (if any).

No modifications in the implementation plan occur in the reporting period.

The final event of the project is due by M18, and according to the Grant Agreement (T4.4) it is planned to happen in Cyprus, in the context of the events celebrating the semester of EU presidency of the Republic of Cyprus, and/or in conjunction with the Euromed conference.

The final celebration of the Cyprus EU Presidency is set in the last week of May 2026 (24-31 May) in Limassol. In this week, the celebration of the EU presidency of Cyprus is accompanied with two major events: the Euromed 2026 conference, exceptionally moved forward as it normally happens in the Fall, and the final event of the Twin-It part 2 campaign, organized by the European Commission in collaboration with Europeana Foundation. The final conference of the EUreka3D-XR project is therefore set on one of the days in that week (exact date TBC). This means that the final event of the projects happens in M16, thus also moving forward the realization of the final booklet. This change does not impact on the successful delivery of the event and of the project's outcomes. Retro planning for the booklet production and final conference organization and promotion already started between PHC, CUT, EF and CRDI (WP4 leader).

Project management, quality assurance and monitoring and evaluation strategy

Report on underline changes to the overall project management concept, quality assurance and monitoring and evaluation strategy (if any).

The project's management is coordinated by PHC in close collaboration with the WP leaders and the other partners, according to the expected quality assurance and monitoring processes as described in the Grant Agreement.

The project was launched with a kick-off meeting hosted by the coordinator in Pisa on 26-27 February 2025. In the meeting, the overall review of the implementation plan, with a focus on planning the first 6 months of work, was provided. All WP leaders provided a detailed plan for each task, with allocation of roles and expected activities to be carried out in the next period. Planning for deliverables and milestones was also done with the allocation of peer reviewers for each deliverable. Already at the kick-off meeting, the date and location of the first public events of the project were discussed, resulting in the conference in Florence (29th May 2025). The planning of the capacity building event in Brussels, initially considered to be organized in July 2025, joined with the M06 plenary meeting, then was reconsidered to guarantee better participation, avoiding the summer period that is generally critical because of the overlapping with people's holidays. In this light, it was decided to have the plenary meeting at M06 online (actually held on 7-8 July 2025), and to move the public capacity building event in Brussels after the holiday period. Also, the networking event planned in Brussels by HaDEA on 24 September 2025 was an incentive to organize the EUreka3D-XR capacity building event in the same week, on 26 September 2025, saving some travel costs of partners. At the time of writing, preliminary information was shared about the possibility of the other event organised by DG CNECT on 25 September 2025, which the project is willing to attend too.

Monthly project telcos run regularly among the partners. Furthermore, topic-specific telcos took place, especially for the coordination of the activities of WP2-WP3 (pilots and tools) and for planning the actions of WP4-WP5 (dissemination and communication, capacity building, impact assessment and evaluation). These meetings were very important to ensure that the several deliverables due by M06 were timely finalized for submission. In each meeting, the agenda is circulated beforehand and minutes are shared afterwards.

Cost effectiveness and financial management *(n/a for Lump Sum Grants)*

Inform about significant underline budget overruns or important underline changes in the financial management (if any).

Nothing to report in the period.

Critical risks and risk management strategy

Report on the <u>state of play</u> concerning the risks and risk mitigation measures (if any).

Nothing to report in the period.

None of the critical risks indicated in the Grant Agreement was encountered in the period and no additional risk is envisaged.

Consortium cooperation and division of roles (if applicable)

Report on <u>changes</u> in the way the participants work together (Beneficiaries, Affiliated Entities, Associated Partners,etc.).

Nothing to report in the period.

The consortium cooperation and division of roles is effective and do not present any difficulty among the partners.

Project teams and staff

Report and explain <u>deviations</u> from Annex 1 of the Grant Agreement regarding the organisation of staff or project teams. .

No major deviations occur from the GA relating to project team and staff.

Partner EF appointed Jolan Wuyts as the main contact point for the work of EF in the project. After he left EF in June 2025, Emma Collins replaced him as the main contact point, together with Valentine Charles, Georgia Evans and Beth Daley.

Partner CUT originally included in the team Panayiotis Panayiotou, who left CUT in March 2025. Other 3D and XR experts at CUT continue to work on the project. Main contacts for the work of CUT in the project are confirmed as Marinos Ioannides and Drew Baker.

Consortium management and decision-making (if applicable)

Report on important <u>changes</u> in the management or decision-making mechanisms.

Nothing to report in the period.

Consortium management and decision making mechanisms established and agreed among the partners at the start of the project are confirmed and considered to be effective.

Impact

The strategy for impact delivery of Eureka3D-XR builds upon the work done in the previous EUreka3D project.

Following the preliminary impact analysis that consider the specificity of the Eureka3D-XR action, the consortium started reflections both internally and with support of the Advisory Board.

Main impact in the reporting period is connected to the experience of content partners, who had the chance to iteratively co-create tools for the reuse of 3D and other heritage collections in the frame of mixed reality (MR) realisation. The content partners of Eureka3D-XR represent a meaningful sample of the CH community, including a local public archive (CRDI), an archaeology museum and research centre (Bibracte), and the UNESCO Chair on Digital Cultural Heritage (CUT). Stemming from the technology provided by NTUA, Swing-it and Miralab, the content partners could identify areas of expected impact for the use of the tools addressing different types of stakeholders:

- The AR Tour Builder and its connected AR Tour Experience app, used at Bibracte, help managers of outdoor heritage sites to easily develop enhanced experiences for visitors, especially to tell stories that are more complex to illustrate, thanks to the possibility of showing elements that have disappeared or are not directly visible.
- The AI 3D Builder pipeline, used for the Girona city walls, is expected to have a high impact in the archives field, as it leverages historical records for the creation of novel forms of knowledge based on them, thus enabling the use of primary sources for creating new narratives, and also deliver them to final users onsite and online via the 3D XR Studio.
- The Avatar Builder workflow used for the revival of Saint Neophytos Englystra in Paphos, allows the creation of more direct storytelling, to be delivered to users as immersive experiences on headset.

The openness of the tools, available for reuse, combined with the growing availability of reusable 3D cultural content in the data space for cultural heritage, also provides opportunity not only to CHIs but also to other types of stakeholders such as educators, artists and creators to engage with cultural artefacts and data as ongoing sources of inspiration.

Clearly, the tools and demonstration scenarios are at the core of the communication and capacity building action of EUreka3D-XR, that is expected to trigger an impact especially on cultural heritage professionals and other data space stakeholder communities, who can improve their knowledge and be inspired to innovation.

In summary:

Expected impact for CHIs as content providers:

- To learn how to use the XR tools developed in the EUreka3D-XR project and how the data space can support their digital transformation journey

- To expand their knowledge and skills to share and reuse their datasets into innovative XR scenarios

- To be inspired with new ways to deliver storytelling to their target communities.

Expected impact for CHIs and other stakeholders (tourism, education, creators) as content users:

- To discover new content and new stories

- To access and re-use high-value datasets and interact with XR contents.

With regard to the impact of the training actions, besides maintenance of project's learning materials in the project's channels, one element that will support the sustainability of and accessibility to the EUreka3D-XR training resources is the publication of a course in the Europeana Learning Platform. This course has been designed in 2024, by transforming and expanding the EUreka3D guidelines "3D Digitisation: Steps to Success" in a training course with exercises, additional readings, bibliography and a variety of resources. The course in its first iteration that includes an extended set of exercises, is going to be officially published by EF in September 2025, and will be expanded during the project with more advanced features and modules, that will also include training about XR. It is expected that the course, currently targeted to cultural professionals with a basic or none digital literacy about 3D digitisation, will also have a longer-term impact especially with the new modules published in a more advanced stage of the project.

During the first six months, the necessary communication channels and dissemination tools have been activated for the execution of the communication and dissemination plan delivered at M06 (D4.1).

It is worth to mention that existing communication tools from previous project EUreka3D are being reused to support the communication of EUreka3D-XR, in particular the project's website, the project's blog, and social media channels (LinkedIn, Instagram, YouTube, X/Twitter), the newsletter sending platform and subscribers' list, thus avoiding the creation of new online tools as indicated in GA.
Also the EUreka3D Zenodo community is reused to publish the project's publications.

Regular updates with publication of news and information is performed jointly by PHC and CRDI, while the other partners are invited to share information and contribute to communication and dissemination, especially on social media.

Five editorial items were published on Europeana:
- EUreka3D-XR Pro page
- EUreka3D-XR Pisa event page
- EUreka3D-XR Firenze event page
- Rundown of events in 2025
- Terminology on VR/XR/AR applications

In addition, as a follow up of the EUreka3D project, associated partner RAMS produced another blogpost on Europeana Pro, to share their experience as a content provider using the EUreka3D Data Hub to showcase and publish in Europeana their 3D collection.

Online and in-print communication materials were prepared on the occasion of events where the project was showcased:
- Banner and invitation card for the public workshop in Pisa in February 2025
- Banner for the conference in Firenze in May 2025
- Banners and postcards to publicize the upcoming capacity building event in Brussels in September 2025 and the online training programme with ICA in the Fall 2025
- Poster about the project, used for supporting the booths about the project at EGI 2025 conference and Europeana 2025 conference
- Project general video: https://www.youtube.com/watch?v=jY9rz2YNz64&t=20s
- Scenarios promotional video, launched on the occasion of the International Museums Day on 18/5/2025: https://www.youtube.com/watch?v=MAfHHuKp8uc&t=3s

Currently in preparation, a postcard that will promote the course on Europeana Learning Platform (to be officially published in September 2025 by EF) will serve to support communication and dissemination of this resource.

The following events were organized and delivered in the period, with the double scope of raising awareness of the project and of providing elements of capacity building:
- **EUreka3D-XR: XR Applications for Cultural Heritage**, public presentation workshop in Pisa 27/2/2025, hosted at the Museo della Grafica. Ca. 30 participants onsite and over 30 online. Audience reached: CHIs, local organizations, university students, cultural professionals.
- **Photography and archives: discovery, technology and innovation**, conference in Firenze 29/5/2025, in collaboration with the Historical Archives of the European Union. Ca. 30 participants onsite and over 80 online. Audience reached: Photographic archives, cultural professionals, researchers and students in SSH and digital cultural heritage.

The project was presented and showcased in the following occasions:
- TMM-CH 2025 Transdisciplinary Multispectral Modelling and Cooperation for the Preservation of Cultural Heritage Conference in Athens, 9/4/2025, presentation
- Europeana Aggregators Forum 2025, 9/4/2025, presentation
- EGI 2025, 2-6 June 2025, with presentation and booth

- Europeana 2025, 11-12 June 2025, with participation in panel about XR, presentation and booth
- Segones Jornades de Patrimoni Gràfic 2025 in Barcelona, 19/6/2025, presentation by EUreka3D partner Museo della Carta who also briefly illustrated about the continuation project EUreka3D-XR

The project was also showcased as a best practice initiative during the ICA International Council on Archives online social media initiative #TechThursday, in preparation of the International Archives Week.

EUreka3D-XR participated in the submission of the proposal for the '*3D Data in the Data Space for Cultural Heritage*' workshop at DH2025 in Sienna, together with the other DEP projects. The workshop has been accepted and is planned to take place on 8/9/2025.

Eureka3D-XR is showcased on the EU Tourism platform as a project that aims to enhance 3D and XR scenarios for European cultural heritage, offering tools and resources for immersive experiences.

Acknowledgment of EU funding is provided in all communication tools, both online and in print, with regular use of the "co-funded by the European Union" logo.

Sustainability, long-term impact and continuation

Report on changes in your sustainability analysis/strategy (if any).

For the Final Report, describe the follow-up of the project after the end of the EU grant. How will the results be used or further developed. Describe the strategy to ensure sustainability of results and long-term impact. Comment on possible synergies/complementarities with other (EU funded) activities (if any).

No changes are envisaged in the sustainability analysis and strategy for exploitation, long term impact and continuation.

Sustainability is a core element of EUreka3D-XR project, looking at the matter with different approaches in the various areas of project work, given the reflections around impact, exploitation and sustainability are clearly very much linked.

D5.1, D2.1 and D3.1 contain early reflections on the expected impact of capacity building, demonstration scenarios and tools, while in the D4.1 a section is dedicated to planning the exploitation of projects' results. A Sustainability Plan is planned to be delivered at M12, with a clear statement on how the project would maintain data, tools and services after the project is finished, with a plan for 1, 3 and 5 years after the end of the EU co-funding period.

Sustainability and exploitation reflections started since M1 in the context of the Impact assessment activities (T4.3). In addition to the *D4.3 Sustainability Plan*, the *D4.2 Impact assessment report* due at M18 will include a dedicated chapter that provides final considerations about sustainability at the end of the project.

In addition to the tasks dedicated to project outcomes, EUreka3D-XR specifically addresses the challenges of sustainability that CHIs face in their digital transformation journey: T3.6 Paradata and content sustainability guidelines (and corresponding deliverable) support heritage professionals, providing guidelines and tools to collect and document paradata of digitization outcomes and to ensure accessibility, re-usability and sustainability of the content, metadata and paradata. Likewise, quality of digital cultural data and quality of experience are key points to be monitored and assessed, also providing guidelines on usage of sustainable file formats and best practices for interoperability, preservation and visual quality. Tasks T3.4 and T3.5 are expressly dedicated to this.

Finally, EUreka3D-XR is committed to limiting the footprint of digital assets and services produced and used in the project, by making sensible choices during the development and implementation of the tools, by making use of eco-friendly service and cloud providers, by advocating project partners in exploring alternative ways to reduce carbon emissions and energy use, and by following ongoing discussions on the matter in the CH community with participation of coordinator PHC in the Europeana Network Association Climate Action Community.

As a very final note, given that EUreka3D-XR is committed not to create additional websites to promote its activities online, an estimation of the carbon footprint of the EUreka3D-XR webpage was done via the commonly used website carbon calculator https://www.websitecarbon.com/, with a rating of C that indicates the webpage is much cleaner than the global average.

Results as of end of June 2025: https://www.websitecarbon.com/website/eureka3d-eu-eureka3d-xr/

Website carbon results for: eureka3d.eu/eureka3d-xr

Hurrah! This web page achieves a carbon rating of C

This is cleaner than 60% of all web pages globally

Global average

| A+ | A | B | C | D | E | | F |

Follow-up to EU recommendations

Follow-up to EU recommendations
Highlight corrective actions taken as a result of EU monitoring activities (including follow-up to EU project reviews, ifany). List each recommendation/comment and explain how they have been followed up.
Not applicable

3. WORK PACKAGES, ACTIVITIES, RESOURCES AND TIMING, BASED ON THE TECHNICAL REPORT TEMPLATE (PART B CHAPTER 2)

Work Package 1: Project management and coordination			
Activities			
Report on the implementation status of the activities that were to be implemented during the reporting period and explain <u>deviations</u> from Annex 1 of the Grant Agreement. In case an activity was not implemented or a deliverable not produced, please explain why.			
Task No (continuous numbering linked to WP)	Task Name	Implemented? (Yes/No/Partially)	Justification (explain what was done and by whom; explain what was not done and why not; indicate how you intend to handle the situation and new timing; indicate if it was a one-off issue or how you intend to avoid similar issues in the future)
T1.1	Project management	YES, on going	Kick-off meeting and first plenary held, regular project meetings and project reporting on going, with first Technical Report timely submitted (D1.1). Regular communication continues with the PO and with partners through internal communication tools (e-mail, basecamp, Zoom meetings). Reporting guidelines provided to partners including recommendations for high quality deliverables. Complete information provided in the Sygma Continuous Reporting system.
T1.2	Quality control and Data Management	YES, on going	Quality monitoring including keeping track of activities and WP alignment with regular meetings, for which agenda is provided in advance and minutes are shared afterwards. Peer review processes established for deliverables. Measures to ensure GDPR compliance and data management are in place regarding project consortium, external stakeholders and general public engaged with project's events and activities. Ethics issues analyzed and addressed, with D1.6 Ethics issues mitigation measures timely delivered.
T1.3	Reporting on integration with Europeana CSP operator	YES, on going	Regular communication with the Europeana CSP operator to enable integration of project's outcomes in the Data Space for Cultural Heritage. Actions ongoing to ensure interoperability of EUreka3D-XR outcomes with Data Space for Cultural Heritage, in compliance with Europeana Technical and Publishing Frameworks. First Integration Report (D1.2) timely submitted.

Other issues	The WP is on track, and it is possible to estimate a progress of 30% against its completion.
Mention and explain unexpected events and adjustments that had to be made. Explain impact on other tasks, available resources and planning/timing.	

Milestones and deliverables (outputs/outcomes)

The following deliverables and milestones are timely delivered and reached:

- D1.1 Technical progress report 1 (M06)
- D1.2 Integration report 1 (M06)
- D1.6 Ethics issues mitigation measures (M03)
- MS1 First technical and integration reporting (M06)

Work Package 2: EUreka3D-XR re-usable scenarios

Activities

Report on the implementation status of the activities that were to be implemented during the reporting period and explain <u>deviations</u> from Annex 1 of the Grant Agreement. In case an activity was not implemented or a deliverable not produced, please explain why.

Task No (continuous numbering linked to WP)	Task Name	Implemented? (Yes/No/Partially)	Justification (explain what was done and by whom; explain what was not done and why not; indicate how you intend to handle the situation and new timing; indicate if it was a one-off issue or how you intend to avoid similar issues in the future)
T2.1	Scenario 1 - Girona	YES, on going	Participation in the discussion on technical requirements, content selection and preparation, storytelling and storyboarding, planning the schedule for pilot's activities, evaluation and promotion. Meeting between CRDI and Swing-it in Girona on 14-15 July 2025 for location survey and aerial photoshooting.
T2.2	Scenario 2 - Bibracte	YES, on going	Participation in the discussion on technical requirements, content selection and

			preparation, storytelling and storyboarding, planning the schedule for pilot's activities, evaluation and promotion. Meeting between Bibracte and NTUA in Bibracte planned for September 16-18 2025 for location survey and AR tour testing.
T2.3	Scenario 3 - Cyprus	YES, on going	Participation in the discussion on technical requirements, content selection and preparation, storytelling and storyboarding, planning the schedule for pilot's activities, evaluation and promotion. Location survey and photoshooting at the Saint Neophytos Englystra on 13 May 2025.
T2.4	Coordination of scenarios development and evaluation	YES, on going	Coordination meetings, co-led with WP3 leader and with participation of content partners and technical partners, held online on a regular basis. Monitoring the progress of pilots planning to capture the information needed to produce D2.1 Pilots planning. The testing of the scenarios with users has started to be planned. Coordination with WP4 to prepare the pilots' demonstrations and scenarios' documentation, to be delivered at the event in Girona in January 2026 and at the final conference in Cyprus in May 2026. Organisation of the encounter with the Advisory Board on 8 July 2025 to gather feedbacks on project's progresses.
T2.5	Aggregation of collections	YES, on going	In the period, initial identification of the collections to be aggregated in Europeana was done and is provided in the D1.2 Initial integration report. For 2D content, the MINT aggregation tool will be used. For 3D content, the EUreka3D aggregation pipeline in the EUreka3D Data Hub will be used, also implementing in due time the extensions of EDM for 3D as foreseen by EF. PHC as accredited aggregator will follow up the aggregation process, together with NTUA for MINT and with EGI for EUreka3D Data Hub, and liaise with Europeana Data Services team for actual publication of the collections.
Other issues *Mention and explain unexpected events and adjustments that had to be made. Explain impact on other tasks, available resources and planning/timing.*			The WP is on track, and it is possible to estimate a progress of 30% against its completion. At the kick-off meeting, a typo was spotted in the GA, where Milestone 4, that is verified by D2.1, was indicated as due at M04 instead of M06. In agreement with the PO, the delivery date of the milestone was corrected in the EC portal to match the delivery date of the corresponding deliverable, i.e. M06.

Milestones and deliverables (outputs/outcomes)

The following deliverables and milestones are timely delivered and reached:

- D2.1 Pilot Specification and planning (M06)

- MS4 Definition of Pilots specifications (M06)

Work Package 3: Supporting Technologies			
Activities			
Report on the implementation status of the activities that were to be implemented during the reporting period and explain <u>deviations</u> from Annex 1 of the Grant Agreement. In case an activity was not implemented or a deliverable not produced, please explain why.			
Task No (continuous numbering linked to WP)	Task Name	Implemented? (Yes/No/Partially)	Justification (explain what was done and by whom; explain what was not done and why not; indicate how you intend to handle the situation and new timing; indicate if it was a one-off issue or how you intend to avoid similar issues in the future)
T3.1	Technical requirements	YES, completed	The technical requirements of the Tools are driven by the needs of the scenarios and documented in D3.1. Bi-weekly coordination meetings joint with WP2 were organized since the start of the project.
T3.2	Cloud infrastructure	YES, on going	Discussions and tests took place to plan the integration of the EUreka3D-XR tools into the cloud infrastructure (EUreka3D Data Hub). This is documented in D3.1.
T3.3	Tools development	YES, on going	Implementation work on all tools has started and is on track for the delivery of a first beta release by month 9
T3.4	Quality assessment	YES, on going	Ensuring high quality of data storing, distribution and rendering is monitored throughout the project via the EUreka3D Data Hub as part of the technical requirements. Discussion has started about the criteria for the assessment of the quality of the XR experiences developed in the project. Initial considerations have been gathered among the partners about the contents of the next D3.6.
T3.5	Formats and quality guidelines	YES, on going	Discussions on the selection of formats to be used throughout the project took place in parallel with the specification of the technical requirements in T3.1 and initial conclusions are included in D3.1. Challenges for the visualization of animated 3D objects are being addressed. Final recommendations and guidelines will be documented in D3.7.
T3.6	Paradata and content sustainability guidelines	YES, on going	Documenting and parsing paradata is handled throughout the project, also discussing the new requirements of the extended Europeana Data Model planned to be implemented in Europeana in the Fall 2025, and reflected in the metadata input form of the EUreka3D Data Hub which will be updated accordingly. Final recommendations and guidelines will be documented in D3.8.

Other issues	The WP is on track, and it is possible to estimate a progress of 30% against its completion.
Mention and explain unexpected events and adjustments that had to be made. Explain impact on other tasks, available resources and planning/timing.	

Milestones and deliverables (outputs/outcomes)

The following deliverables and milestones are timely delivered and reached:

- D3.1 Technical requirements (M06)
- MS8 Technical requirements (M06)

Work Package 4: Communication and dissemination

Activities

Report on the implementation status of the activities that were to be implemented during the reporting period and explain <u>deviations</u> from Annex 1 of the Grant Agreement. In case an activity was not implemented or a deliverable not produced, please explain why.

Task No (continuous numbering linked to WP)	Task Name	Implemented? (Yes/No/Partially)	Justification (explain what was done and by whom; explain what was not done and why not; indicate how you intend to handle the situation and new timing; indicate if it was a one-off issue or how you intend to avoid similar issues in the future)
T4.1	Outreach, Dissemination and exploitation plan	YES, on going	A Dissemination and Exploitation Plan, including the communication and dissemination plan to support the delivery of the Capacity Building programme, was discussed and agreed among partners, and timely published as D4.1. This plan is an open document constantly updated based on the actual project's initiatives, which will guide any future development of communication, dissemination and exploitation actions. Organisation and participation in public events and guaranteeing online presence, including sector wide and cross-sector communication. Performance monitoring is ongoing.
T4.2	Editorials coordination	YES, on going	The project's Editorial, Communication and Capacity Building Board has been set and

			regularly meets. A tentative calendar for the Europeana editorials has been agreed with the Europeana team and included in D4.1. This calendar covers the commitments described in the GA regarding editorial and goes beyond, planning to exceed the number of editorials and covering the various topics addressed throughout the project. News, resources and information on the capacity building programme are regularly published in the project's blog.
T4.3	Impact assessment and sustainability	YES, on going	In D4.1, there is a dedicated section offering an overview of the initial reflections around exploitation and sustainability for the project's outcomes. More elaboration will be captured in the next deliverables and specifically D4.3 Sustainability Plan (M12) and D4.2 Impact assessment report (M18). Initial reflections about the sustainability of project's results already started, especially related to the EUreka3D Data Hub, the five tools of the EUreka3D-XR toolbox, the demonstration scenarios, the collections on Europeana.eu, and the learning and dissemination materials. Specific Key Exploitable Results have been established for the project, and the impact of each KER is being analysed and tracked in the course of the project
T4.4	Final conference	YES, on going	Retroplanning started early for the final conference, which will take place in Limassol (Cyprus) in the week 24-31 May 2026, in conjunction with the Cyprus EU Presidency celebration event, the Euromed 2026 conference and the final event of the Twin-IT 2 campaign. It is considered a core communication and dissemination activity dedicated to the final conference. Project partners are working on the definition of the exact date. The event's main structure will include a hybrid conference on the project outcomes and lessons learnt, a training workshop and side activities and presentations. Dissemination materials and the final booklet will be distributed during the conference.
Other issues *Mention and explain unexpected events and adjustments that had to be made. Explain impact on other tasks, available resources and planning/timing.*		The WP is on track, and it is possible to estimate a progress of 30% against its completion. The fixed dates for the final conference are 24-31 May 2026 (exact date TBC), thus setting the event to happen on M16 of the project.	

Milestones and deliverables (outputs/outcomes)
The following deliverables and milestones are timely delivered and reached: - D4.1 Dissemination and exploitation plan (M06)   - MS15 Planning communication, dissemination, and capacity building (M06)

Work Package 5: Capacity building			
Activities			
Report on the implementation status of the activities that were to be implemented during the reporting period and explain <u>deviations</u> from Annex 1 of the Grant Agreement. In case an activity was not implemented or a deliverable not produced, please explain why.			
Task No (continuous numbering linked to WP)	Task Name	Implemented? (Yes/No/Partially)	Justification (explain what was done and by whom; explain what was not done and why not; indicate how you intend to handle the situation and new timing; indicate if it was a one-off issue or how you intend to avoid similar issues in the future)
T5.1	Capacity building programme	YES, on going	The capacity-building programme was developed and illustrated in D5.1, with plans for online events, in-person activities, training materials and collaborative efforts. Two events were organized in the reporting period, which are elements of capacity building: the public workshop in Pisa (27/2/2025) and the conference in Firenze (29/5/2025). The organization of the capacity building event in Brussels (26/9/2025) is ongoing as well as the planning and preparation of the online training programme in collaboration with ICA (Fall 2025).
T5.2	Training resources	YES, on going	Work is ongoing to provide translated versions of the 3D digitization guidelines; in addition, materials and inputs are being collected from the other WPs to produce new resources. Final refinement for the publication of the course on 3D digitization in the Europeana Learning Platform has been discussed and actual publication has been agreed with EF to occur in September 2025.
Other issues *Mention and explain unexpected events and adjustments that had to be made. Explain impact on other tasks, available resources and planning/timing.*		The WP is on track, and it is possible to estimate a progress of 30% against its completion.	
Milestones and deliverables (outputs/outcomes)			
The following deliverables and milestones are timely delivered and reached: - D5.1 Capacity Building Implementation plan (M04) - MS15 Planning communication, dissemination, and capacity building (M06)			

Budget implementation — Use of resources (deviations) *(n/a for Lump Sum Grants) (n/a for Additional Prefinancing Report)*

Explain <u>deviations</u> from the budget planning (i.e. differences between actual and planned use of resources, especially for personnel).
Include explanations on transfers of cost categories in the estimated budget (if applicable)
If needed, add explanations linked to the report on the use of resources filled in online. Ensure consistency with that report.

Minor shifts between categories of individual budgets are expected to happen in the project, either as specific requests from the partners or as upcoming needs or unforeseen costs. Such occurrences are reported to the PO for information and, where applicable, for verifying the eligibility and feasibility.

In the period M1-6, the following partners notified the following:

NTUA: the partner requested a shift of 4,000 euro from category "Other goods and services" to category "Equipment", since this budget is expected to cover the equipment necessary for testing the tools to be offered by NTUA. This equipment is essential for the project's implementation.

Required Equipment:

1.   Laptop for configuring and testing the online tour editor

2.   Mobile phone (Android) for testing the AR application

The above mentioned equipment is necessary for the successful execution of experiments and user testing of the AR Tour Builder and AR Tour Experience. The equipment will be used in the Bibracte use case scenario (WP2: EUreka3D-XR re-usable scenarios T2.2 Scenario 2 Bibracte and T2.4 Coordination of scenarios development and evaluation), and for the preparation of the following deliverables: D2.3 Bibracte Pilot Prototype v0.1 and D2.6 Bibracte Pilot Prototype v1.1.

According to the feedback received from HaDEA, this case does not require to introduce an amendment, as budget flexibility is applied.

PHC: in the scope of preparing the online training programme in collaboration with ICA in the Fall 2025, the coordinator requested information about the eligibility of costs for a service to animate and facilitate the interactive sessions with trainees participating in the online training programme. The expected cost is in the range of 3,000 euro.

According to the feedback received from HaDEA, this cost may fall under the category Other Costs for purchased services.

meemoo: for the capacity building event in Brussels, to be hosted in an equipped location and to be streamed online, the quotation received is slightly higher than the foreseen budget for the event in the GA (originally, the GA budgeted for the event 5,000 euro). In case it is not possible to obtain discounts or find alternative solutions, partner meemoo is considering the possibility of using its travel budget to cover the extra amount requested for the capacity building event.

CRDI: to ensure accuracy of the reconstruction of Girona walls in the pilot, an aerial drone photoshooting is necessary to complement the historical archival materials in the holdings of CRDI. This cost is in the range of 1,500 euro. The results of the drone photoshooting will also be used for dissemination and promotional purposes and the images will be selected for aggregation in Europeana. This cost will fall under the category of Other Costs for purchased services.

BIBRACTE: the partner will claim a small amount (in the range of 1,000 euro) in the category Other Costs to purchase a mobile device needed for the testing of the pilot scenario, following its usual accounting practices.	
Other issues	Nothing to report in the period

No major changes from the Grant Agreement.

The discussions and retroplanning for T4.4 Final conference started in M6 due to the fact that the final conference will take place in conjunction with the events of the Cyprus EU Presidency, Euromed and Twin-It 2 which are all set to take place in Limassol at the end of May 2026, corresponding to M16 (cfr. explanation in section "Implementation plan").

Timetable (projects up to 2 years)

Report on deviations from Annex 1 of the Grant Agreement.

Fill in the planned implementation in beige and the deviations in red. Adapt and repeat lines/columns as necessary.

Starting date:	01 February 2025																	
ACTIVITY	**MONTHS**																	
	M1	M2	M3	M4	M5	M6	M7	M8	M9	M10	M11	M12	M13	M14	M15	M16	M17	M18
T1.1 Project management																		
T1.2 Quality control and Data Management																		
T1.3 Reporting on integration with Data Space for Cultural Heritage coordinator																		
T2.1 Scenario 1 - Girona																		
T2.2 Scenario 2 - Bibracte																		
T2.3 Scenario 3 - Cyprus																		
T 2.4 Coordination of scenarios development and evaluation																		
T2.5 Aggregation of collections																		
T3.1 Technical requirements																		

Task																									
T3.2 Cloud infrastructure																									
T3.3 Tools development																									
T3.4 Quality assessment																									
T3.5 Formats and quality guidelines																									
T3.6 Paradata and content sustainability guidelines																									
T4.1 Outreach, Dissemination and exploitation plan																									
T4.2 Editorials coordination																									
T4.3 Impact assessment and sustainability																									
T4.4 Final conference																									
T5.1 Capacity Building programme																									
T5.2 Collecting inputs and creating resources																									

4. CONCLUSIONS

This document illustrates the progress of EUreka3D-XR project in its first 6 months. It constitutes the Part B of the Technical Report. The Technical Report refers also to the information provided in the EC Portal, which constitutes the Part A of the report.

D1.1 Technical Report 1 is complemented by D1.2 Integration Report. This first release of the two reports is timely delivered on M06.

The project is on track with excellent collaboration among partners and all activities initiated, with the first outcomes delivered as planned.

No risks materialized and no deviation is expected.

All the deliverables planned for month 6 are submitted.

All the milestones planned for month 6 are reached.

Project management and partners coordination is effective and appreciated by the partners.

Development of the scenarios and technical development is progressing as planned.

Efforts to raise awareness of the project and of its capacity building programme are ongoing, and a stakeholders' network is growing. Retro planning for the final conference and final booklet's production has started, considering the event is set in the week 24-31 May 2026, in conjunction with the celebration week of the CY EU Presidency which will also embed Euromed 2026 and Twin-It part 2 campaign.

The impact of the project is being tracked, under diverse points of view: impact of the tools, impact of the demonstration scenarios, impact of the capacity building actions and dissemination.