

Transforming Cultural Heritage with Extended Reality: The HERIFORGE Project

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» Gaps

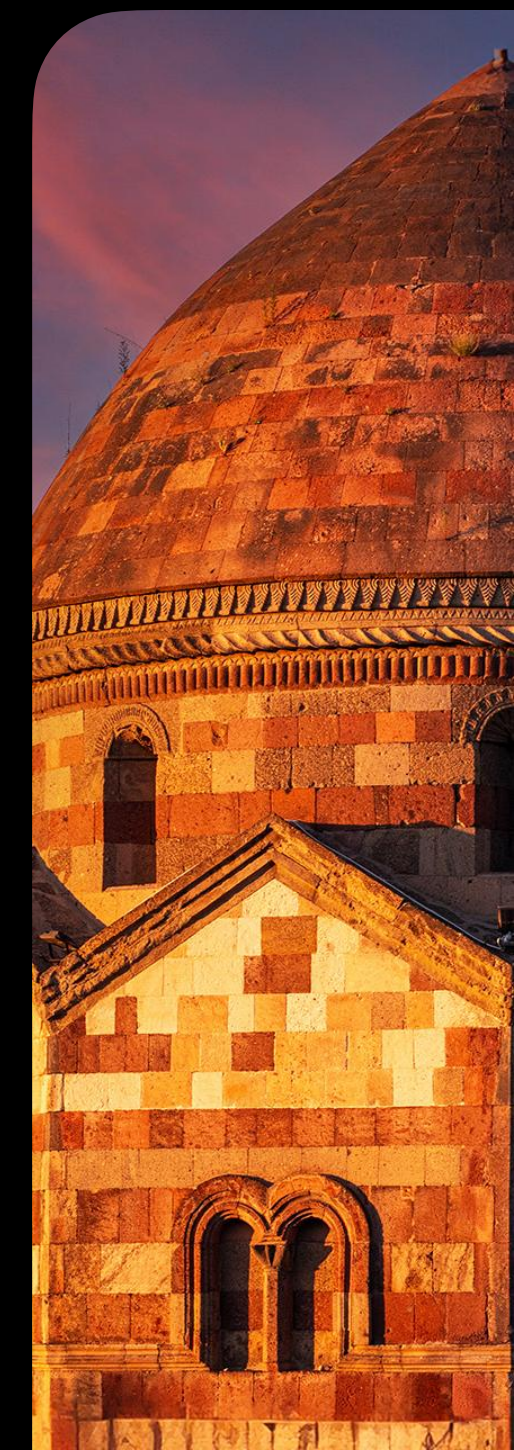
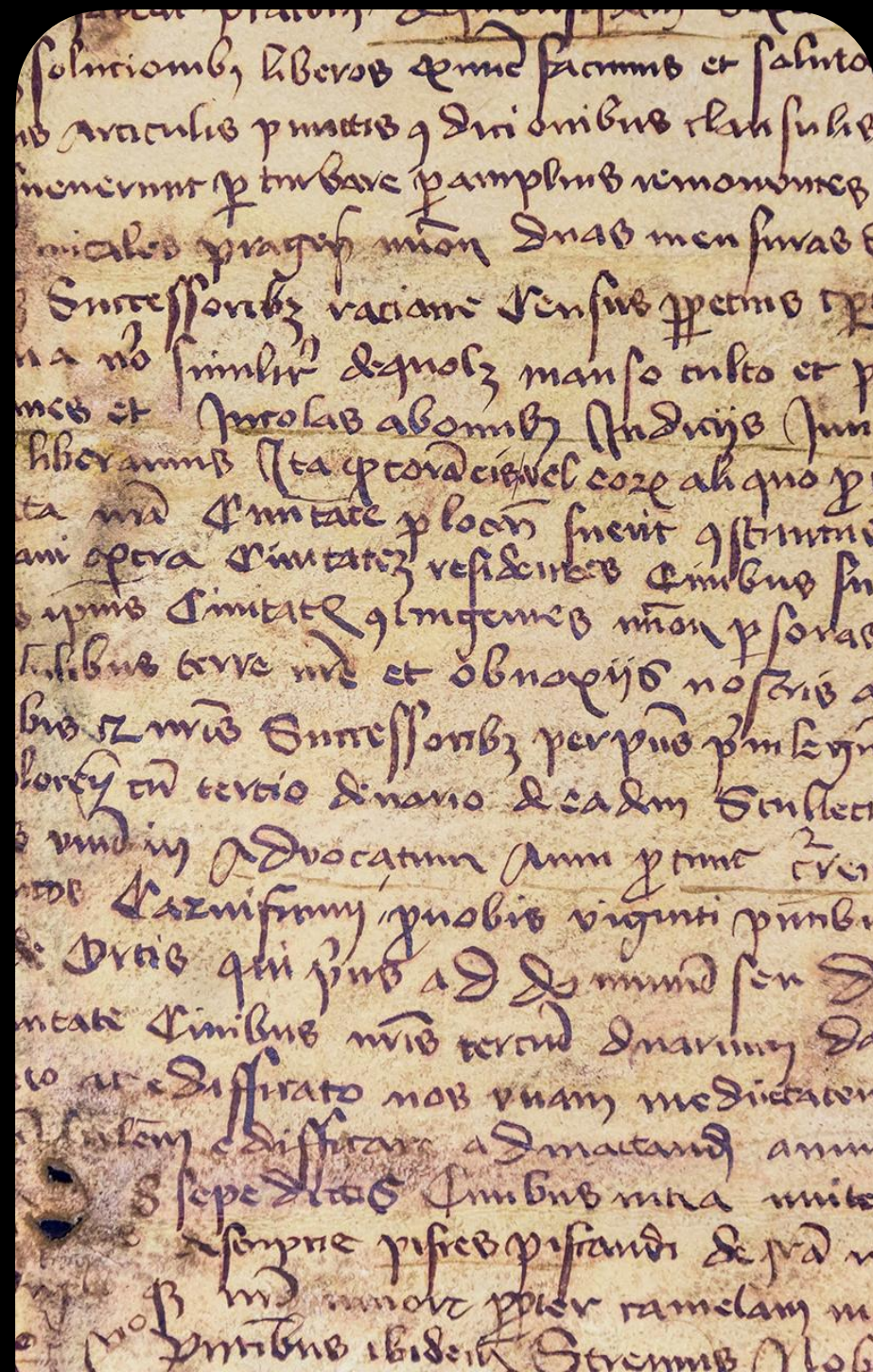
What are the main challenges of using CH assets for XR applications?

- Underexploited potential - cultural heritage for XR technologies remains underexploited in widening countries
- Fragmented landscape – CH stakeholders operate in silos
- Sustainability – XR applications and CH assets become obsolete
- Poor standardization – inconsistent data formats across disciplines
- Low quality of data assets – re-use is difficult
- Innovation and technology gaps – XR and CH are often two different worlds



» Project in a nutshell

- Horizon Europe CSA project with R&I component
- Network of 3 local ecosystems
 - 14 partners (Poland, Cyprus, Türkiye)
- 36 months
- www.heriforge.eu

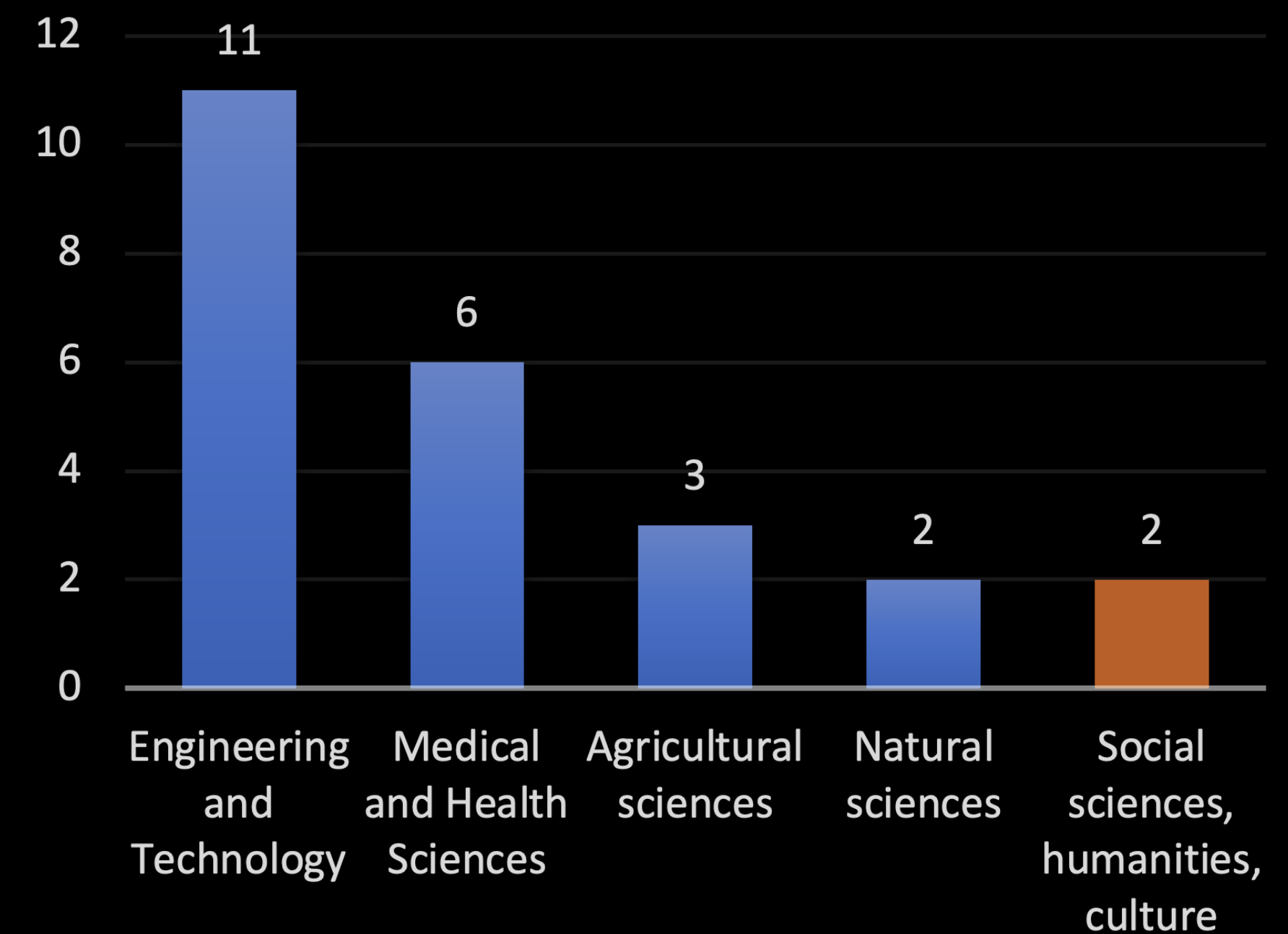


» Excellence hubs (EH)

What are Excellence hubs?

- Excellence Hubs strengthen regional innovation excellence, through innovation ecosystems in Widening countries and beyond, by teaming up, and creating robust linkages between academia, businesses, governments and civil society.
 - Fostering cross-border collaboration and networking among key stakeholders
 - Developing joint R&I strategies and action plans
 - Quadruple helix - consolidating linkages between academia, government, NGOs and business
 - Promoting the uptake of research results into marketable solutions

Number of EH projects



» 3 local ecosystems (hubs)

3
Local
ecosystems
in widening
countries

POLAND

Population (M): 36.6
GDP per capita (€K): 19.5
R&D expenditure (%GDP): 1,56

EXPERTISE

XR technologies, e-infrastructures, humanities research, gamification, business innovation, museum standards, openness and engagement.

NEEDS

Improving the quality and reuse of cultural heritage resources, especially in the context of commercial use and innovation.

CYPRUS

Population (M): 0.9
GDP per capita (€K): 32.7
R&D expenditure (%GDP): 0,7

EXPERTISE

Scientific and interdisciplinary processes of documentation and digitisation of 3D objects, data orchestration, digital twins, semantics, ontologies, metadata, co-creation

NEEDS

Guidance on intellectual property rights, access to creative industries, gamification

TÜRKIYE

Population (M): 85.3
GDP per capita (€K): 12.0
R&D expenditure (%GDP): 1.42

EXPERTISE

Methodologies for engaged research and methodology development, storytelling for exhibitions, XR technologies, intangible heritage

NEEDS

Improving the quality of solutions for intangible cultural heritage



» Barriers in XR use for cultural heritage

According to surveys and interviews with stakeholders (168 surveys, 19 interviews, 23 focus groups)

Legal & Regulatory Gaps

- Low awareness of XR-specific laws among cultural stakeholders.
- Unclear legal frameworks and lack of standard definitions hinder XR application.
- Copyright and ethics issues in digital/virtual environments remain unresolved.
- National legislation lags behind EU-level digital heritage initiatives.

Collaboration & Skills

- Limited XR competence in the cultural sector.
- Weak cross-sector cooperation between tech and culture.

Funding Challenges & Future Needs

- Structural Funding Barriers
- High dependence on EU and national grants.
- Complex funding procedures discourage small institutions.
- Shift to repayable instruments (loans) limits access for under-resourced actors.
- Lack of long-term support post-project.

Strategic Recommendations

- Develop future-oriented legal and ethical frameworks.
- Recognize digital assets as legitimate cultural heritage.
- Strengthen legal and digital skills through training.
- Design simplified, inclusive funding mechanisms for XR innovation.

» Solution

The main project goal

- To develop a network of three interconnected, place-based R&I ecosystems (hubs)
- that foster innovation in Cultural and Creative Industries
- through the responsible use of XR technologies and cultural heritage,
- ultimately strengthening social resilience.

Ensure Visibility & Long-term Collaboration

Promote the hubs' network across Europe via strategic dissemination and links with key EU initiatives (DARIAH) to sustain impact and attract future partners

1

Joint Strategy for CH-Driven Transformation

Develop a shared R&I strategy and action plans leveraging XR and CH to guide innovation in the hubs, aligned with EU policies and smart specialisation strategies.

2

Market-Oriented R&I Projects

Implement cross-border pilot research projects and a shared Data Orchestration Platform (DOP) to address knowledge gaps, support XR applications, and create future innovation opportunities.

3

Strengthen EU Innovation Ecosystems

Build a fully operational network of excellence across the three hubs, facilitating knowledge transfer, skills development, and cross-hub collaboration under the New European Innovation Agenda.

4

Support SMEs, NGOs and Start-ups

Provide financial support to at least 12 third-party projects to develop CH and XR solutions, stimulate product incubation, and foster innovation in CCI.

5

» Strategy

Hub profiles and inclusivity strategy

Mapping the
Ecosystem

Data Inventory

Key Metrics

Online
Questionnaire

Stakeholder
Mapping

Deepening
Findings

In-depth Interviews

Focus Groups

Analysis

Needs, Barriers, and
Opportunities

SWOT Analysis

Community
Mindsets

Strategy Building

Future Scenarios

Strategy
Workshop

Hubs' Profiles &
Inclusivity Strategies

» Joint Pilot Research Project (JPRP)

Goals

- To enable re-using CH resources by companies and other stakeholders
- To pilot innovative XR applications and bring solutions into the market

Key components

Data Orchestration Platform (DOP)

- Use across all 3 hubs
- Standardized ways to organize information-ECCCH/ECHOES
- Ensure the quality of the digital assets.
- Human centric and market driven approach for specific pilot projects

XR applications

- Developed through living labs methods in each hub.



» Cascading funding

Open calls pre-announcement

- Innovative projects using immersive technologies in the cultural heritage sector
- 2 open calls (6+6)
- Up to €50,000 per selected project
- Includes technical mentoring over a maximum of 6 months

Who Can Apply?

- SMEs, NGOs, or natural persons
- Entities in PL, CY, TR or other countries with local footprint

28 Oct
2025

Deadline



1

PLANNING 20%

Detailed plan for development and mentoring

2

DEVELOPMENT 50%

Technical work and reports

3

DEMONSTRATION 30%

Showcase of archived results
Possibly at one of events of workshops



2026

2nd
Open Call

» Open Call – 4 Challenges

Poland

- Unlocking Interactive Stories: **XR** storytelling and **gamification** tools for **cultural heritage**

Cyprus

- **Collaborative XR Experiences** for Innovation in Cultural Heritage

Türkiye

- Re-imagining Historical Rituals: Volumetric **Intangible Heritage** for XR
- Crafted Realities: Modular Immersive Heritage for **Multi-Surface XR Spaces**

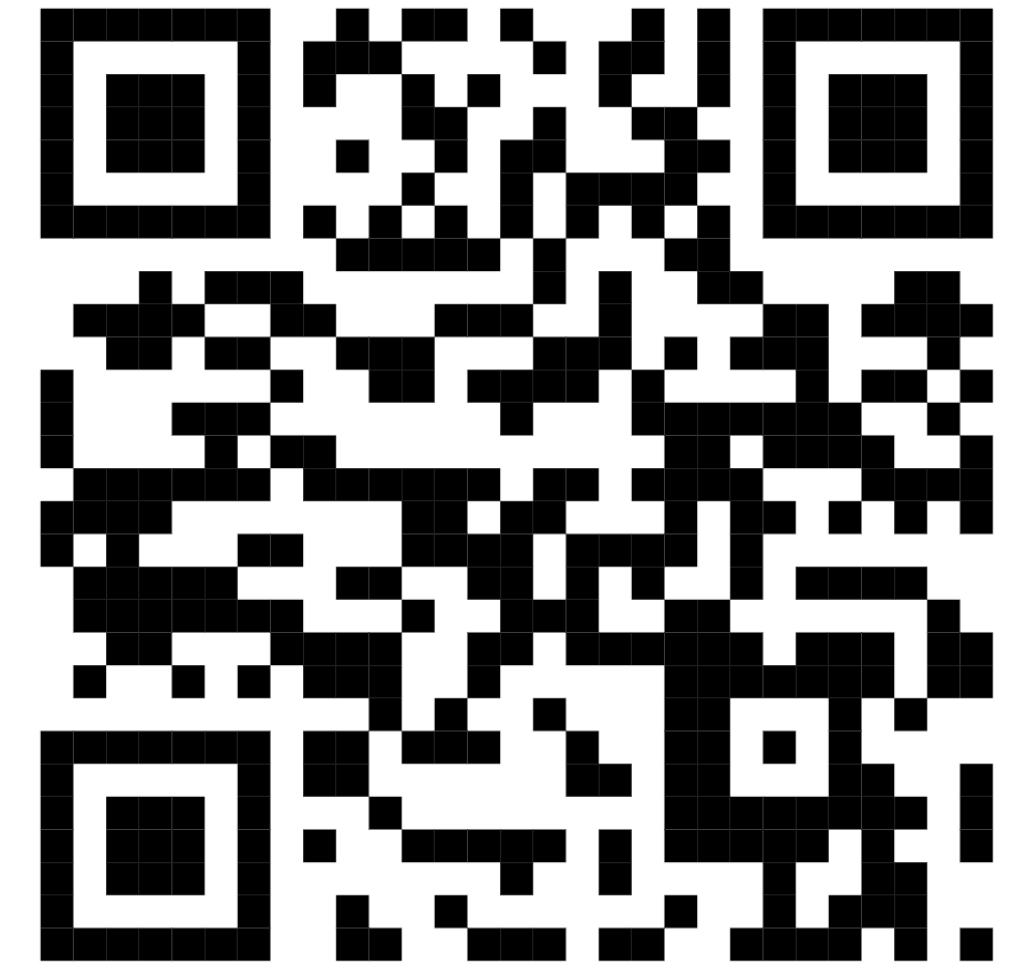
» More information

Where I can find more information?

- **Project web page:** www.heriforge.eu
- **Social media:** Linked-In, Facebook, Instagram
- **Podcasts:** heriforge.podbean.com
- Webinar and workshops organized by local communities, Conferences



Acknowledgements



www.heriforge.eu



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