



# HERIFORGE D4.1

## Hubs' Profiles and Inclusivity Strategies

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## DELIVERABLE



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## Hubs' Profiles and Inclusivity Strategies

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### Executive summary

This document represents the Deliverable 4.1 Hubs' Profiles and Inclusivity Strategies; of the HERIFORGE project, which has received funding from the European Union's Horizon Europe Research and Innovation programme (Grant Agreement No 101186573).

The deliverable presents an analysis of the ecosystem surrounding the three excellence hubs located in Cyprus, Poland, and Türkiye and focusing on the intersection of extended reality (XR) technologies and cultural heritage. The analysis aims to understand the needs of the stakeholders to shape the goals of these hubs and to develop an inclusive community engagement strategy as part of the HERIFORGE project.



The analysis revealed distinct socio-economic and cultural contexts in Cyprus, Poland, and Türkiye, each presenting unique challenges and opportunities in the intersection of XR technologies and cultural heritage. Despite differences in population and income, all three countries share rich cultural assets, active research communities, and growing tech sectors.

A SWOT analysis uncovered shared strengths such as cultural richness and cross-disciplinary collaboration, while key weaknesses included limited resources and reliance on external platforms. Opportunities included emerging technologies, accessibility, and education integration, whereas economic instability was a common threat.

Key learnings from one-on-one in-depth interviews highlighted specific local, national, and international needs, challenges, and opportunities within each country. In Cyprus, the need for a centralised platform, accessible training, bicommunal collaboration, and international networking was emphasised. In Poland, issues around the lack of local ecosystems, financial instability, communication barriers, and workforce gaps were noted. In Türkiye, fostering collaboration, building talent, addressing bureaucratic processes, and ensuring project continuity were key concerns.

The resulting community engagement strategy is grounded in future scenarios and guided by key principles: inclusivity, participation, evidence-based decision-making, transparency, impact orientation, responsiveness, efficiency, collaboration, engagement, visibility, groundedness, and open-mindedness. The strategy outlines a shared vision for the hubs and sets out specific objectives and actions across five core areas: building a dynamic community and fostering collaboration; improving access to funding and economic sustainability; promoting continuous and inclusive learning; enabling international exchange and visibility; and advancing policy and institutional awareness.

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## Table of contents

Table of figures	6
List of acronyms	7
1. Introduction	8
1.1 Project and Task Overview	8
1.2. Methodology	8
2. Hubs' Profiles	9
2.1. Overview	9
2.1.1. Context	9
2.1.2. Stakeholders at a Glance	11
2.2. Connecting the Dots	16
2.2.1. Assessing Where We Stand	16
2.2.2. Key Learnings from Each Country	26
2.2.3. What Lies Ahead?	31
2.2.4. Who's in the Story?	36
3. Community Engagement Strategy	42
3.1. Approach	42
3.2. Guiding Principles and Values	42
3.3. Vision, Objectives and Actions	43
3.4. Indicators and Monitoring	48
3.5. Implementation	54
References	55
Annexes	56
A. Stakeholder Mapping Sectoral Categorization	56
B. Online Questionnaire	58
B.1. Online Questionnaire Form	58
B.2. Ecosystem Roles Explanations	64
B.3. SWOT Explanations	65
C. 1:1 Interviews	69
C.1. Interview Questions	69
C.2. Individual Harvesting Documents	69
D. Focus Group Agenda	99
E. Strategy Workshop Agenda	99



## Table of figures

Figure 1: Methodology Diagram .....	9
Figure 2: Stakeholder Categories Aggregated (%).....	12
Figure 3: Stakeholder Types by Country (%) .....	13
Figure 4: Total Number of Stakeholders by Type and Quadruple Helix Classification .....	13
Figure 5: Influence-Interest Matrix - All Stakeholders by Quadruple Helix and Type.....	15
Figure 6: Distribution of Respondents by Quadruple Helix Classification (Online Questionnaire).....	17
Figure 7: Distribution of Registered Respondents by Type (Online Questionnaire) .....	17
Figure 8: Distribution of Registered Respondents by Sector Group (Online Questionnaire) .....	18
Figure 9: Distribution of Registered Respondents by Ecosystem Role (Online Questionnaire) .....	18
Figure 10: Distribution of Registered Respondents by Their Interests (Online Questionnaire) .....	19
Figure 11: Distribution of Long-Term Motivations of All Respondents in the XR and Cultural Heritage .....	20
Figure 12: Strengths Rated by Respondents – Overall Summary .....	21
Figure 13: Weaknesses Rated by Respondents – Overall Summary .....	22
Figure 14: Opportunities Rated by Respondents – Overall Summary .....	23
Figure 15: Threats Rated by Respondents – Overall Summary.....	24
Figure 16: Distribution of Hub Support Services and Activities (All Respondents) .....	25
Figure 17: Preferred Learning Topics in XR and Cultural Heritage - All Respondents .....	26
Figure 18: Preferred Network and Community Types Among All Participants.....	26

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## List of acronyms

Acronym	Description
AI	Artificial Intelligence
AR	Augmented Reality
CCIs	Cultural and Creative Industries
EIP	Europeana Impact Playbook
EU	European Union
EUROSTAT	Statistical Office of the European Union
GDPR	General Data Protection Regulation
GDP	Gross Domestic Product
GUS	Główny Urząd Statystyczny (Central Statistical Office - Poland)
IP	Intellectual Property
IPR	Intellectual Property Rights
IoT	Internet of Things
IT	Information Technology
KER	Key Expected Result
MR	Mixed Reality
NGO	Non-Governmental Organisation
PPS	Purchasing Power Standards
R&D	Research and Development
ROI	Return on Investment
SMEs	Small and Medium-sized Enterprises
SWOT	Strengths, Weaknesses, Opportunities, Threats
TURKSAT	Turkish Statistical Institute
UNCTAD	United Nations Conference on Trade and Development
UNESCO	United Nations Educational, Scientific and Cultural Organization
UX	User Experience
VR	Virtual Reality
WP	Work Package





## 1. Introduction

### 1.1 Project and Task Overview

The current document represents the Deliverable 4.1 *Hubs Profiles and Inclusivity Strategies*; of the HERIFORGE project and has been prepared in line with “Task 4.2 Mapping excellence hub ecosystem, profiles and inclusivity strategies” under “Work Package 4 Strengthening Excellence Hubs Innovation Ecosystem”.

*HERIFORGE aims to develop a network of three interconnected place-based ecosystems in Poland, Cyprus, and Türkiye. The project seeks to establish an excellent research and innovation (R&I) environment that fosters innovation in the cultural and creative industries (CCIs) through the responsible use of extended reality (XR) technologies and cultural heritage. By leveraging these technologies, HERIFORGE aims to contribute to social resilience, enhancing cultural engagement, accessibility, and sustainable development within the participating regions and beyond.*

There are 14 partners in the HERIFORGE project, forming a consortium that represents the four roles of the Quadruple Helix model—research, business, government, and civil society—from each participating country.

To complete Task 4.2, a dedicated and interdisciplinary team was formed. A total of 18 individuals contributed to this task, representing diverse roles and expertise. Their collaborative efforts, carried out across different countries and institutional contexts to ensure the alignment with the objectives of the HERIFORGE project.

### 1.2. Methodology

The current report is the result of work conducted within Task 4.2 *Mapping Excellence Hub Ecosystem, Profiles and Inclusivity Strategies*. This task analysed the wider ecosystem in three excellence hubs located in Cyprus, Poland, and Türkiye and addressed their needs and goals with an inclusive approach representing the non-technological stakeholders' position as well. It consisted of stakeholder mapping and analysis (incl. SWOT) to understand the profile of each hub's ecosystem, creating and implementing a community engagement strategy for the HERIFORGE Hubs Network.

The Europeana Impact Playbook (EIP) (Europeana, 2018) and a bottom-up strategic planning methodology were adopted in the development of this report and strategy. While the EIP offers a framework for measuring and understanding impact, the strategic planning methodology provides a structured approach for defining objectives and actions based on stakeholder insights and contextual analysis.

The process began with the creation of a data inventory to compile key metrics for Cyprus, Poland, and Türkiye, ensuring a broader understanding of the context. This context is provided in the section 2.1.1.

Next, a stakeholder mapping was conducted. Relevant stakeholders were identified and categorized by type, sector group, sector, subsector, and location in line with EIP. To classify the sectors, the United Nations Trade and Development (UNCTAD) classification as given in the Creative Economy Report 2010<sup>1</sup> was used and slightly adapted to incorporate emerging technologies. Each stakeholder was assessed by project team members based on their level of influence and interest in the intersection of XR and cultural heritage. The profile of the stakeholders and the related data are given in the section 2.1.1.

Following this, an online questionnaire was developed and disseminated. The questionnaire was instrumental in expanding the stakeholder list by allowing respondents to register, inform a SWOT analysis, and explore stakeholders' expectations and motivations regarding the hubs. Online questionnaire was also aimed to gather insights according to the empathy map of EIP as well as overall impact design. The questionnaire responses are presented and discussed in section 2.2.1.

Based on the survey findings and stakeholder mapping, 19 one-on-one in-depth interviews were conducted—seven in Türkiye and six each in Cyprus and Poland—to gain deeper insights into the specific dynamics of each hub. These interviews provided a more nuanced understanding of stakeholder perspectives on the place-based ecosystem,

<sup>1</sup> <https://unctad.org/publication/creative-economy-report-2010>



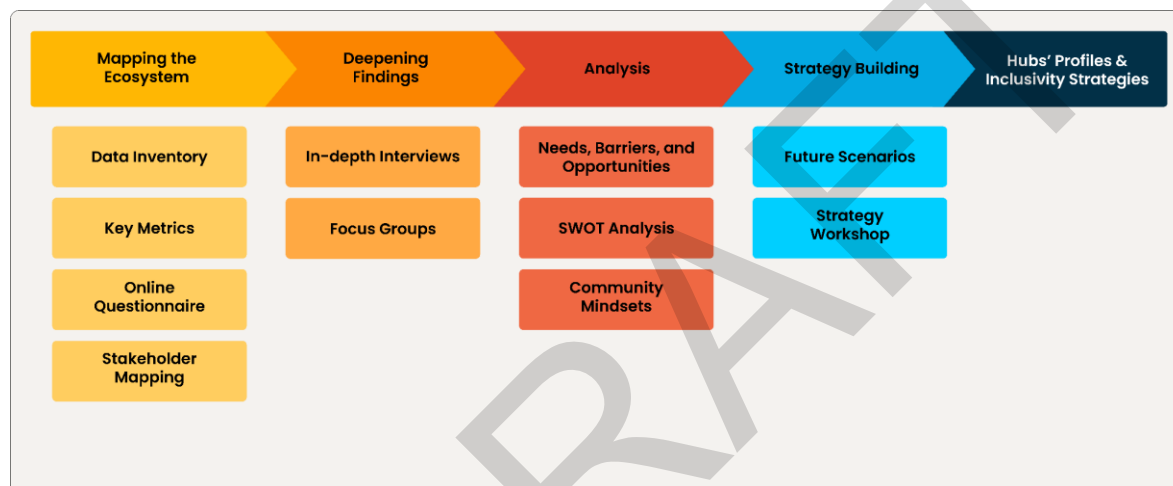


complementing the survey data. These interviews also contributed to building the change pathways (objectives) as given in the impact design section of the EIP. The results of the interviews are given in the section 2.2.1 and Annex C.2.

Subsequently, four focus group meetings were held, one in Cyprus, one in Poland, and two in Türkiye (due to its larger population). These sessions aimed to explore future scenarios, identify priorities for community engagement in each Hub, and define personas and mindsets that are or could be involved in hubs' activities. These focus group meetings were organized in line with impact design section of the EIP as well as additional sessions to further understand the expectations and needs of the stakeholders.

Based on the findings and analysis from these steps, a strategy workshop was conducted with the larger HERIFORGE Consortium (i.e. members from each Hub by including WP1, WP2, WP3 and WP5 team members). This workshop served as a platform to share synthesised insights with the wider HERIFORGE Team, learn from other WP results and align priorities in order to collaboratively shape the vision, objectives, actions, and expected impact of the community engagement strategy as presented in section 3.

**Figure 1: Methodology Diagram**



## 2. Hubs' Profiles

Understanding the socio-economic and cultural landscape of each hub is essential for designing an effective community engagement strategy. Cyprus, Poland, and Türkiye each have distinct demographic, economic, and cultural characteristics that shape their approaches to cultural heritage and XR technologies. At the same time, they face similar challenges, including inadequate financial resources, migration, and regional conflicts.

Since there is insufficient secondary data on XR and cultural heritage to conduct a comparative quantitative analysis across the countries, this study heavily relies on primary data collection.

### 2.1. Overview

#### 2.1.1. Context

This subsection examines key indicators across Cyprus, Poland, and Türkiye, highlighting both their differences and commonalities within the broader European Union (EU) context. Given the limited availability of official and secondary data on cultural heritage and XR technologies, analysing key statistics—such as population size, economic performance, research and development capacity, and cultural infrastructure—offers a broader perspective and deeper understanding.

As seen in the Table 1, the countries vary significantly in some aspects while sharing similarities in others. For instance, Cyprus has a population of less than 1 million, whereas Türkiye is approaching 90 million, with Poland positioned in between with a population of 38 million. However, when considering GDP per capita, the trend is



reversed—Cyprus has the highest GDP per capita among the three, aligning closely with the EU27<sup>2</sup> average, while Poland and Türkiye lag behind. Despite these differences in population size, income levels, and related economic indicators, all three countries possess rich cultural heritage, strong research communities, and emerging technology sectors, offering valuable opportunities to foster innovation in the intersection of XR and cultural heritage.

Moreover, all three countries are situated at historical crossroads, experiencing continuous migration, conflicts and cultural interactions across Europe, Asia, and Africa. This historical and geopolitical complexity has shaped their diverse societies, influencing their cultural heritage, artistic expressions, and technological adaptations. Their shared experience of being in transitory zones has not only fostered resilience and adaptability but also created a rich tapestry of traditions, narratives, and innovations. These dynamic conditions make them particularly well-positioned to leverage XR technologies in cultural heritage, enabling immersive storytelling, preservation, and community engagement that reflects their unique histories and evolving identities.

**Table 1: Key Indicators**

	Year	Cyprus	Poland	Türkiye	EU27
<b>Population</b>	2024	933.505	36.620.970	85.372.337	449.206.579
<b>GDP per capita in Purchasing Power Standard (PPS)</b> (in market prices - €)	2023	32.720	19.900	12.080	38.150
<b>GDP per capita in PPS</b> (EU27 in 2020 = 100)	2023	97	77	72	100
<b>Arrivals at Tourist Accommodation Establishments</b>	2023	3.165.534	36.239.201	77.298.091*	1.019.098.401
<b>Research &amp; Development (R&amp;D) Expenditure</b> (as a % of GDP)	2023	0,7	1,56	1,42	2,24
<b>Total Researchers</b> (full time equivalent)	2023	1.590	142.643,6	230.533	2.151.301,8
<b>Share of Women Researchers</b> (as a % of total researchers)	2021	38,71	36,24	37,18	33,71
<b>Number of Museums</b>	2023	16**	732***	606****	-
<b>Number of Archaeological Sites</b>	2023	12**	7.835*****	24.031****	-
<b>Number of World Heritage Sites*****</b>	2024	3	17	21	384
<b>Number of European Capitals of Culture*****</b>	2024	1	1	1	38
<b>Number of Cities in the UNESCO Creative Cities Network*****</b>	2024	-	5	8	-

Source: EUROSTAT (2025) (indicated otherwise); \* Ministry of Culture and Tourism of Türkiye (2025); \*\* Ministry of Culture of Cyprus (2025) (only public museums) \*\*\* GUS (2025); \*\*\*\* TURKSTAT (2025); \*\*\*\*\* National Institute of Cultural Heritage (2025); \*\*\*\*\* UNESCO World Heritage Convention (2025), \*\*\*\*\* European Commission – Culture and Creativity (2025), \*\*\*\*\* UNESCO Creative Cities Network (2025)

<sup>2</sup> EU-27 refers to the group of 27 member states that currently make up the European Union, as defined since 2020.



### 2.1.2. Stakeholders at a Glance

To understand the ecosystem across the three hubs, relevant stakeholders in XR and cultural heritage were identified based on their sector, type, location, interest, and influence. This is reflected in Table 2 which presents identified stakeholder categories.

The listed stakeholders were categorised based on the Quadruple Helix model, which includes academia, civil society, private sector, and public sector. To ensure inclusivity, individual stakeholders and other relevant categories were also incorporated. The Quadruple Helix categories were further categorised by the type of the organisation or entity. Although some types—such as museums—could logically belong to multiple Quadruple Helix categories, they were assigned to a single category to facilitate clearer analysis as summarized in Table 2.

**Table 2: Stakeholder Category per Type of Entity**

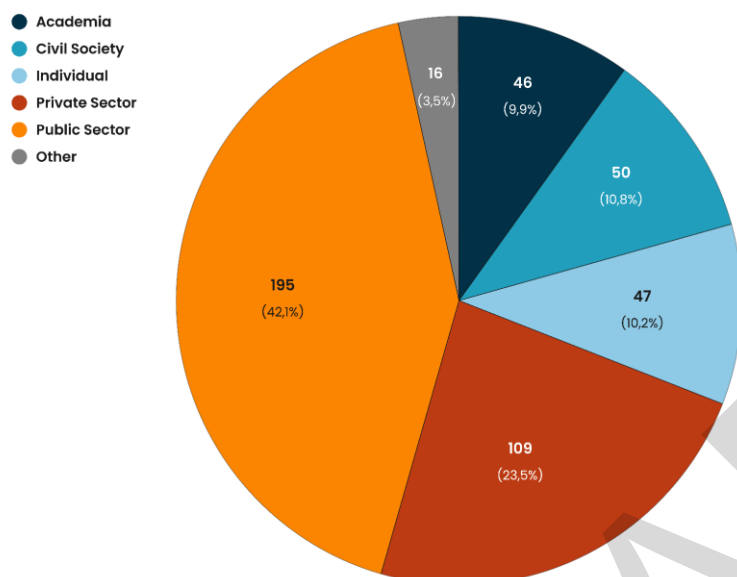
Category	Type
Academia	Institute
	Research Center
	University
Civil Society	Chamber of Commerce/Industry
	Museum
	Non-Governmental Organization (NGO)
	Platform
Private Sector	Company
	Consortium
	Cooperative
	Performance Hall (Theatre, Opera, Music etc.)
	Startup
Public Sector	Archaeological Site
	Archive
	Library
	Ministry
	Municipality
	Provincial Directorate
	Regional Development Agency
Individual	Individual
Other (Please specify)	Other (Please specify)

The total number of stakeholders by Quadruple Helix categories, along with their respective shares, is illustrated in Figure 2 and Table 3. A total of 461 stakeholders were listed: 54 from Cyprus, 95 from Poland, 295 from Türkiye, and 19 from other countries.



The majority of stakeholders fall under the public sector, mainly due to the inclusion of various units within ministries as well as public museums, which are one of the key target groups. The “Other” category includes some international organisations and entities without formal legal status.

**Figure 2: Stakeholder Categories Aggregated (%)**



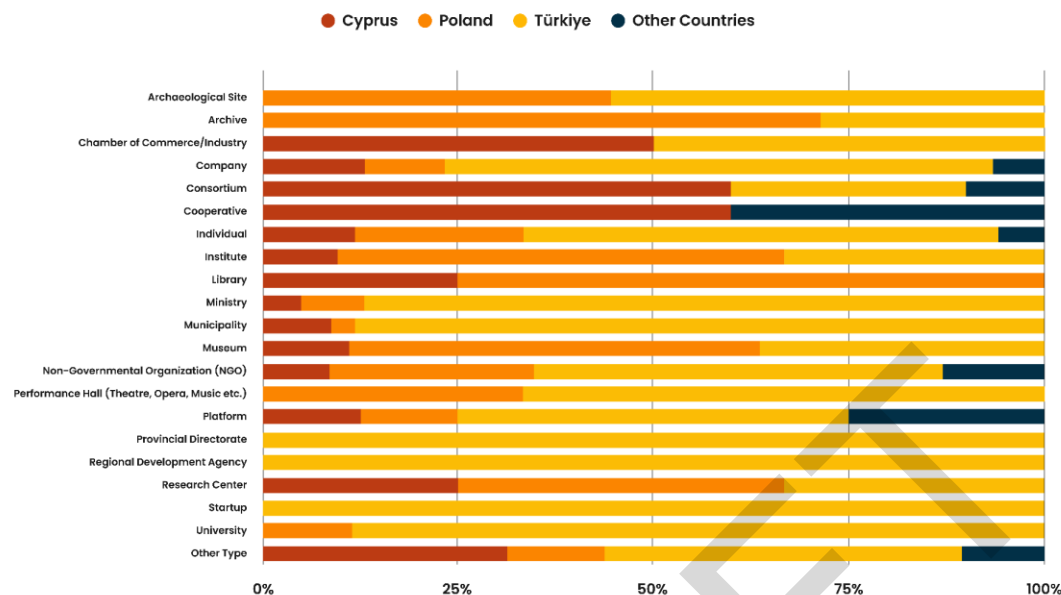
**Table 3: Share of Stakeholders in Each Category Within the Total, by Country (%)**

Category / Country	Cyprus	Poland	Türkiye	Other Countries	Total
Academia	9,3	7,4	11,5	0	9,9
Civil Society	12,9	6,3	10,5	31,6	10,8
Individual	1,8	12,6	10,5	15,8	10,2
Private Sector	42,6	11,6	23,1	36,8	23,5
Public Sector	27,8	57,9	41,7	10,5	42,1
Other Category	5,6	4,2	2,7	5,3	3,5

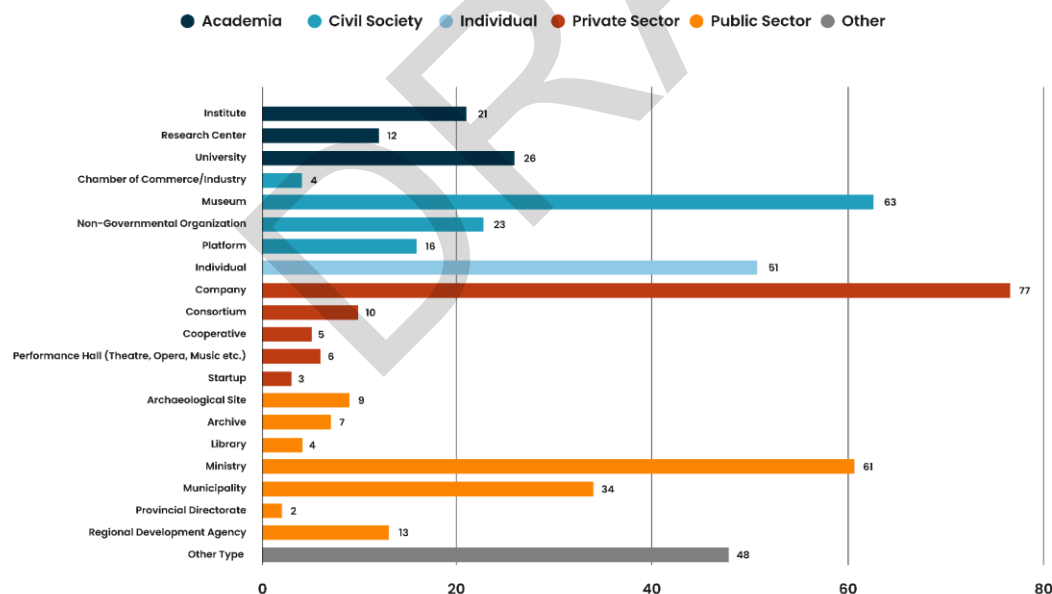
The largest stakeholder entity type consists of companies, followed by museums and ministerial units—reflecting a similar pattern observed in the Quadruple Helix classification, where the private sector, civil society, and public sector are predominant as shown in Figure 4. However, the analysis also identified more than 15 additional stakeholder types, including biennials, federations, and councils, highlighting the diversity of stakeholder representation.



**Figure 3: Stakeholder Types by Country (%)**



**Figure 4: Total Number of Stakeholders by Type and Quadruple Helix Classification**



The listed stakeholders were classified into five sector groups, along with an “Other” category, based on the UNCTAD classification of the creative economy. This classification was used and slightly adapted to incorporate emerging technologies. Emerging technologies, comprising four sectors and fourteen subsectors, were added as the fifth sector group to the original classification, which previously included four sector groups: heritage, arts, media, and functional creations (see Annex A). The majority of stakeholders were grouped under the heritage sector, followed by other sectors as Table 4 presents. This is primarily due to many stakeholders operating across multiple sectors and public institutions offering a wide range of services.


**Table 4: Share of Sector Groups within Each Country (%)**

Sector Group Country	Cyprus	Poland	Türkiye	Other Countries	Total
Arts	23,4	24,4	16,6	18,5	19,6
Emerging Technologies	32,8	14,0	12,8	22,2	15,7
Functional Creations	0,0	4,3	4,7	0,0	3,9
Heritage	25,0	32,9	24,9	25,9	27,2
Media	1,6	17,1	5,6	18,5	9,0
Other	17,2	7,3	35,3	14,8	24,7

The sector groups were further categorised into specific sectors, including an “Other” and if selected “please describe” option. The majority of the stakeholders were grouped under “Other”, the second most selected sector was cultural sites as presented in Table 5. This reflects a similar pattern observed in earlier classifications and is driven by the same factors—primarily, stakeholders working across multiple domains that do not fit into one sector, showing cross-disciplinarity in the field. Notably, if emerging technologies had not been included—despite being highly relevant to the creative economy and arguably part of it—the “Other” category would have accounted for an even larger share. The “Other” category includes creative industries, venture capital, community management, digital humanities, cultural activism, copyright, cultural diplomacy, as well as multidisciplinary and cross-sectoral fields. This highlights the need for a more comprehensive and nuanced classification system.

**Table 5: Share of Sectors within Each Country (%)**

	Cyprus	Poland	Türkiye	Other Countries	Total
Artificial Intelligence (AI)	3,8	2,3	3,6	8,3	3,4
Audiovisuals	5,1	10,9	4,1	8,3	6,5
Blockchain and Web3	3,8	0,5	4,3	2,8	3,0
Creative Services	3,8	5,0	2,6	2,8	3,4
Cultural Sites	13,9	11,8	16,1	8,3	14,2
Design	3,8	7,3	3,6	2,8	4,7
Immersive Technologies	25,3	10,0	10,7	13,9	12,2
IoT (Internet of Things)	1,3	0,0	3,8	5,6	2,5
New Media	1,3	13,6	3,8	13,9	7,0
Performing Arts	3,8	7,7	3,3	0,0	4,5
Publishing and Printed Media	0,0	3,6	1,5	5,6	2,2
Traditional Cultural Expressions	3,8	6,4	2,3	2,8	3,7
Visual Arts	11,4	13,6	8,2	11,1	10,3
Other	19,0	7,3	32,1	13,9	22,3

The project team who mapped the stakeholders were also asked to assess each listed stakeholder based on their influence and interest over the success of the hubs and the HERIFORGE Project. The outcome of this mapping exercise is shown in Figure 5.



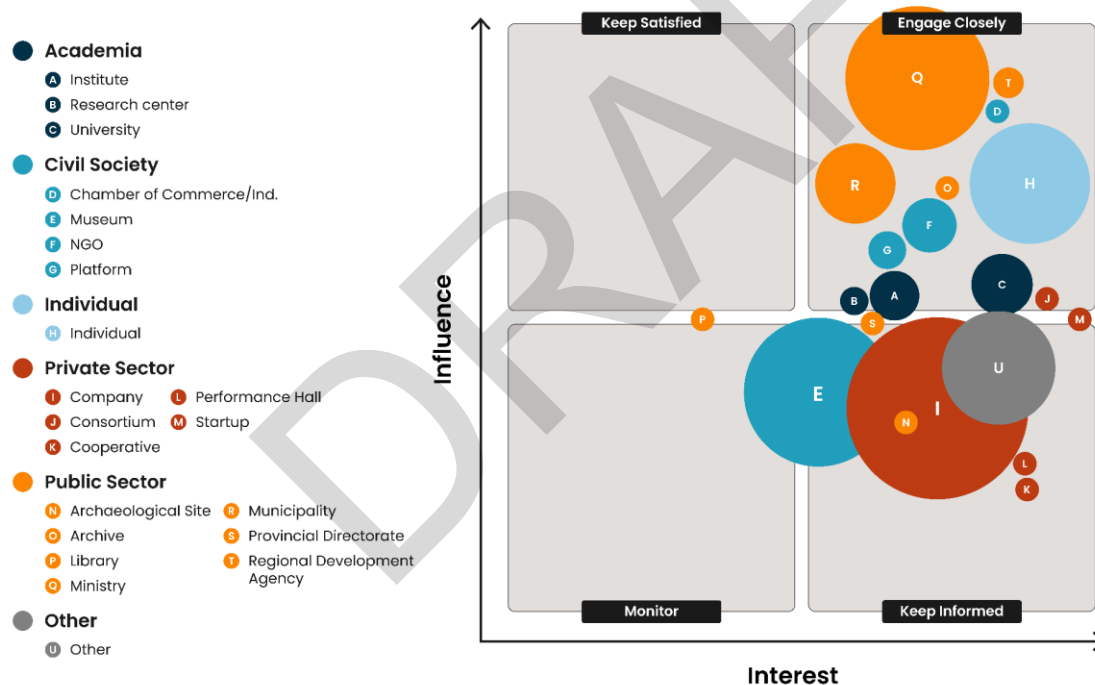
Since the mapping specifically focuses on XR and cultural heritage, most of the mapped stakeholders are naturally already engaged or relatively interested in these areas. While there is significant diversity in both influence and interest levels, some trends emerged:

- Public institutions were generally scored with a strong influence over the field.
- Private institutions were scored with a higher interest in XR and cultural heritage.
- Academia, civil society, and individuals exhibit a more mixed distribution across influence and interest levels.

The Influence-Interest Matrix was developed to categorise stakeholders effectively, ensuring that their expectations and engagement needs are addressed accordingly. This matrix divides stakeholders into four distinct categories as well as their Quadruple Helix classification and types as outlined in Figure 5 and Table 6.

The matrix displays weighted average scores for each stakeholder type, as assessed by the project team. Public institutions appear in the high-influence, high-interest quadrant, whereas private sector stakeholders show higher interest but relatively lower influence. Civil society and individual stakeholders are positioned between the public and private sectors, while academic stakeholders show slightly lower influence scores than civil society on average. As these are weighted averages, it is important to note that individual stakeholders within each Quadruple Helix category may vary—some exhibiting significantly higher or lower influence and interest levels. “Other” stakeholders align closely with private sector and academic stakeholders in the matrix. This is likely due to their identification both by the project team and through responses to the online questionnaire.

**Figure 5: Influence-Interest Matrix - All Stakeholders by Quadruple Helix and Type**






**Table 6: Stakeholder Engagement Framework**

Category	Explanation	Engagement Approach
High Influence, High Interest	Key players who are highly invested in the project/hub and have significant power to influence its success.	Engage closely: Prioritise engagement by actively involving them in decision-making and ensuring their needs and expectations are met.
High Influence, Low Interest	Powerful stakeholders who are not highly invested but can significantly impact the project/hub if motivated.	Keep satisfied: Provide key and periodic updates and involve them strategically to maintain their support and prevent resistance.
Low Influence, High Interest	Supporters who are very interested in the project/hub but lack the power to drive significant change.	Keep informed: Regularly update them and involve them where feasible, as they can become advocates and ambassadors.
Low Influence, Low Interest	Minimal impact on the project/hub and little concern about its outcomes.	Monitor: Maintain minimal engagement, keeping them informed only when necessary while focusing resources elsewhere.

## 2.2. Connecting the Dots

### 2.2.1. Assessing Where We Stand

To better understand and assess the Hubs' profiles, an online questionnaire was designed. Through the online questionnaire, respondents were asked to evaluate the strengths, weaknesses, opportunities, and threats at the intersection of XR and cultural heritage, both in relation to their own work and their respective countries.

#### 2.2.1.1. Profile of respondents

A total of 168 people participated in the questionnaire, 60 of whom chose to remain anonymous and did not provide profile details. The remaining 108 respondents chose to register in the HERIFORGE stakeholder list as seen in Table 7.

**Table 7: Respondents of the Online Questionnaire**

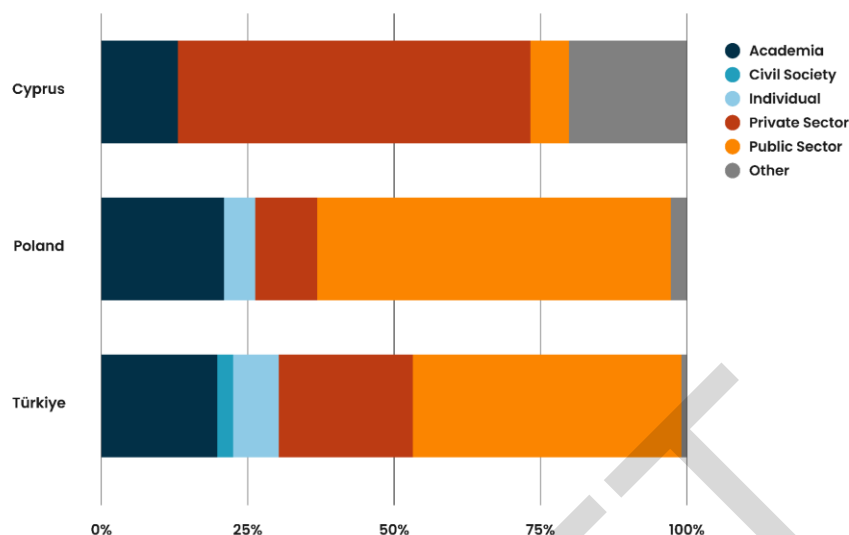
Registration / Country	Cyprus	Poland	Türkiye	Total
Registered	9	27	72	108
Not Registered	6	11	43	60
Total	15	38	115	168

The distribution of respondents by Quadruple Helix categories per country is reflected in Figure 6. Private sector respondents are higher in Cyprus while public sector respondents are higher in Poland and Türkiye. Differences between countries also appear in entity types, sector groups, ecosystem roles, and interests of respondents. Types, sector groups, ecosystem roles, and interests were only filled by respondents who chose to register, while those who chose to remain anonymous provided information on the SWOT analysis.

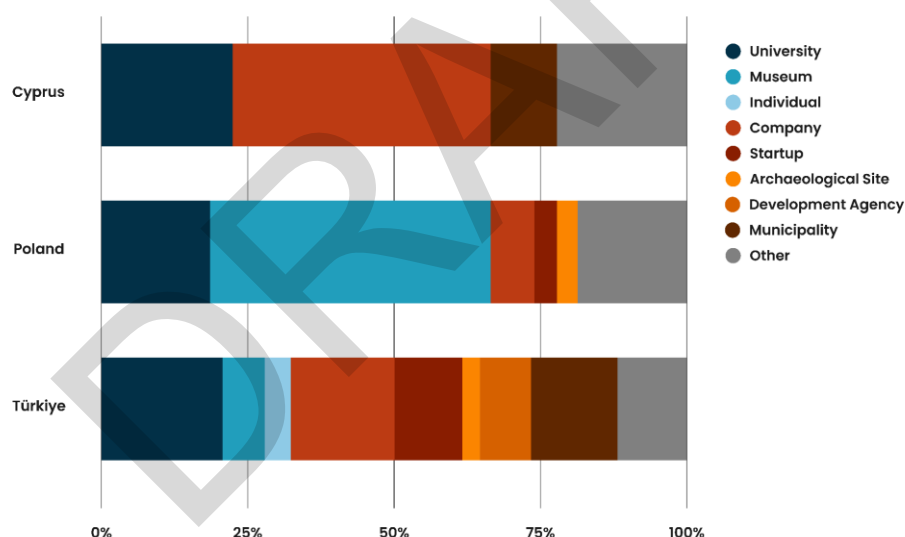
The majority of respondents are affiliated with companies in Cyprus, museums in Poland, and universities in Türkiye as shown in Figure 7. The second most common affiliations were universities in both Cyprus and Poland, and museums in Türkiye. The "Other" category includes a variety of stakeholder types such as departments within public institutions, tourism offices, studios, and labs.



**Figure 6: Distribution of Respondents by Quadruple Helix Classification (Online Questionnaire)**



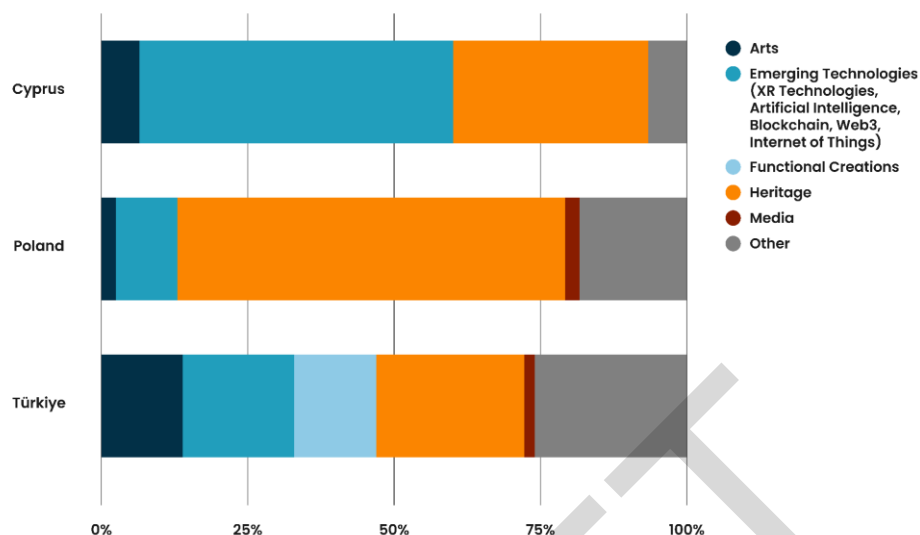
**Figure 7: Distribution of Registered Respondents by Type (Online Questionnaire)**



Sector group representation varies by country, with emerging technologies leading in Cyprus, and heritage sectors more prominent in Poland and Türkiye as can be seen in Figure 8. The “Other” category includes a variety of sectors such as municipal services, creative industries, climate change, cultural studies, and various other multidisciplinary fields.



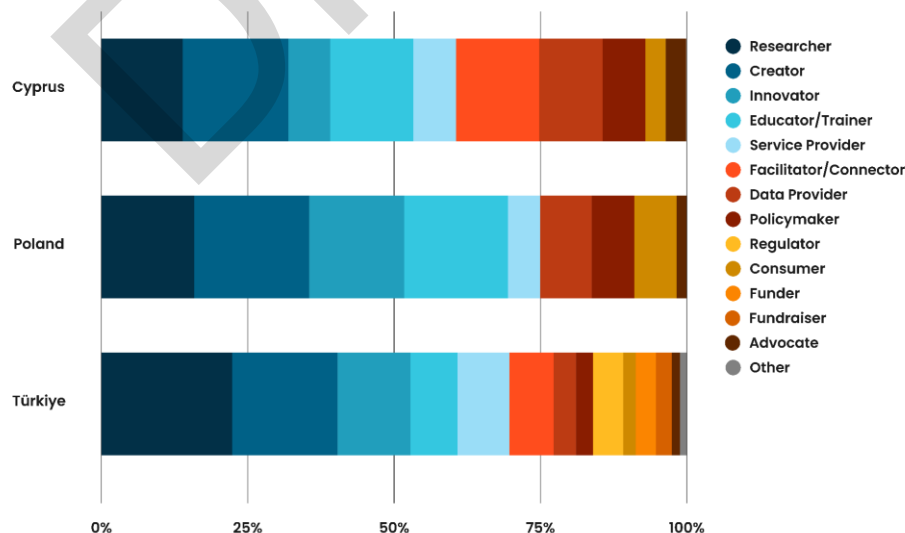
**Figure 8: Distribution of Registered Respondents by Sector Group (Online Questionnaire)**



In the online questionnaire, respondents were also asked to identify their ecosystem roles. The most frequently selected role was researcher, followed by creator and innovator<sup>3</sup>. The “Other” category was selected less frequently, and responses in this group typically included specific job titles or occupations. All responses about the roles are reflected in Figure 9.

However, some notable gaps were observed at the country level: in both Cyprus and Poland, there were no respondents identifying as regulators, funders, or fundraisers. Additionally, Poland had no responses for the role of facilitator/connector. In contrast, all ecosystem roles were represented among respondents from Türkiye, possibly indicating broader role diversity. These gaps are possibly also influenced by the response volume from each country within the given data collection timeframe.

**Figure 9: Distribution of Registered Respondents by Ecosystem Role (Online Questionnaire)**



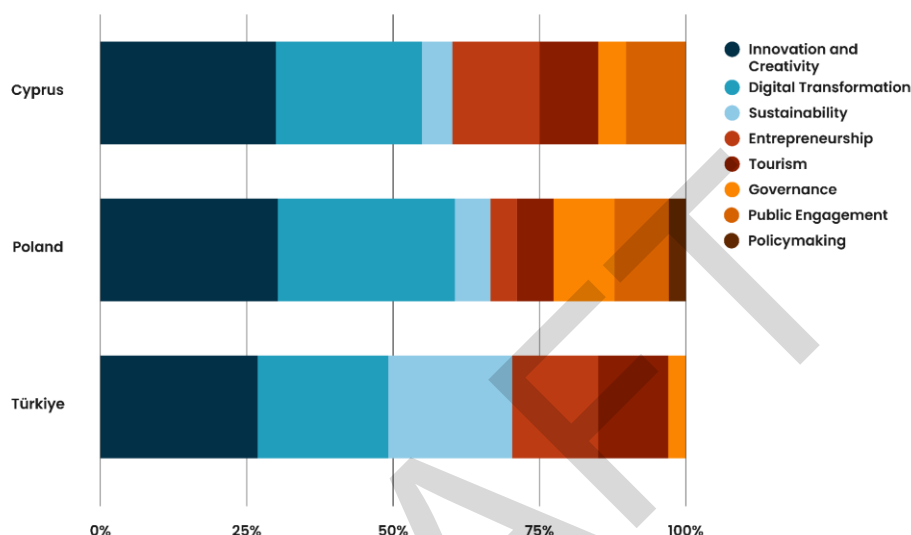
<sup>3</sup> To support respondents’ understanding, explanatory text was provided for each role, clarifying its meaning within the context of the questionnaire as shown in. Annex B.2.



Both overall and at the country level, respondents most frequently selected innovation and creativity as their primary areas of interest, followed by digital transformation as shown in Figure 10. Additionally, sustainability was highly emphasized in Türkiye, while entrepreneurship stood out in Cyprus, and governance in Poland.

Tourism was selected overall more frequently than governance, public engagement, or policymaking, suggesting that many respondents view XR as a significant opportunity for the tourism sector.

**Figure 10: Distribution of Registered Respondents by Their Interests (Online Questionnaire)**

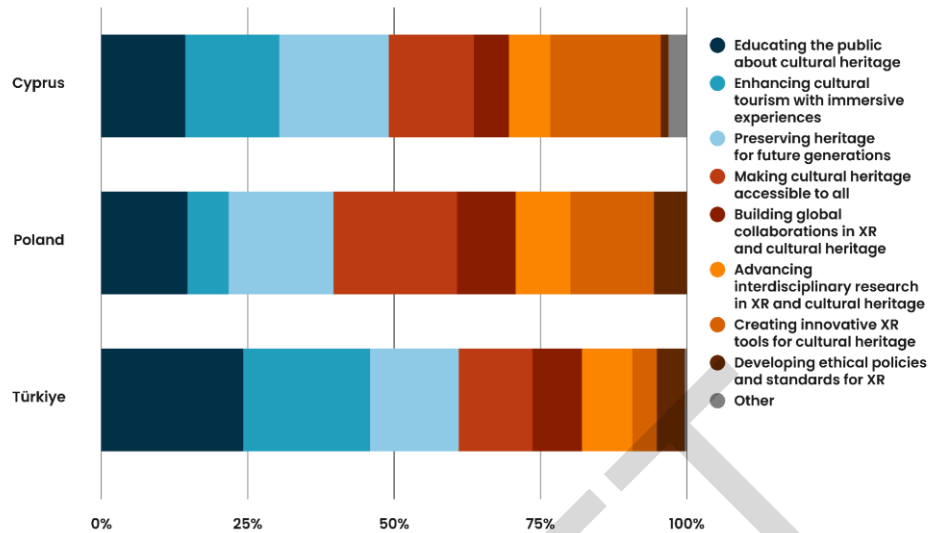


In exploring long-term motivations for engaging with XR and cultural heritage, the most commonly selected response across the three countries combined was educating the public about cultural heritage. This was followed by enhancing cultural tourism through immersive experiences and preserving heritage for future generations. Distribution of long-term motivations is shown in Figure 11.

This overall pattern was also reflected in the responses from Türkiye. In contrast, respondents from Cyprus placed greater emphasis on creating innovative XR tools, while in Poland, the most frequently selected motivation was making cultural heritage accessible to all—highlighting the diversity of priorities and perspectives across the three countries.



**Figure 11: Distribution of Long-Term Motivations of All Respondents in the XR and Cultural Heritage**



### 2.2.1.2. Results of the Online Questionnaire

Respondents were provided with fixed response options, each accompanied by an explanation, and were asked to rate each option on a five-point scale:

1. Completely Irrelevant
2. Somewhat Irrelevant
3. Neutral / Unsure
4. Somewhat Relevant
5. Very Relevant

While the overall results for the three countries show notable similarities, key differences also emerge. In terms of strengths, the responses for Poland and Türkiye are quite similar, whereas for Cyprus, technological expertise, successful pilot projects, and existing infrastructure were rated slightly higher in relevance. In contrast, rich cultural heritage resources in Cyprus were rated slightly less relevant compared to Poland and Türkiye.

Across all three countries, data availability, organisational commitment, and internal funding sources received lower ratings than other strengths, indicating common challenges faced by stakeholders in all three contexts as shown in Figure 12 and Table 8.

The top three most relevant strengths identified for each country are as follows (additional strengths are included if multiple options received equal ratings):

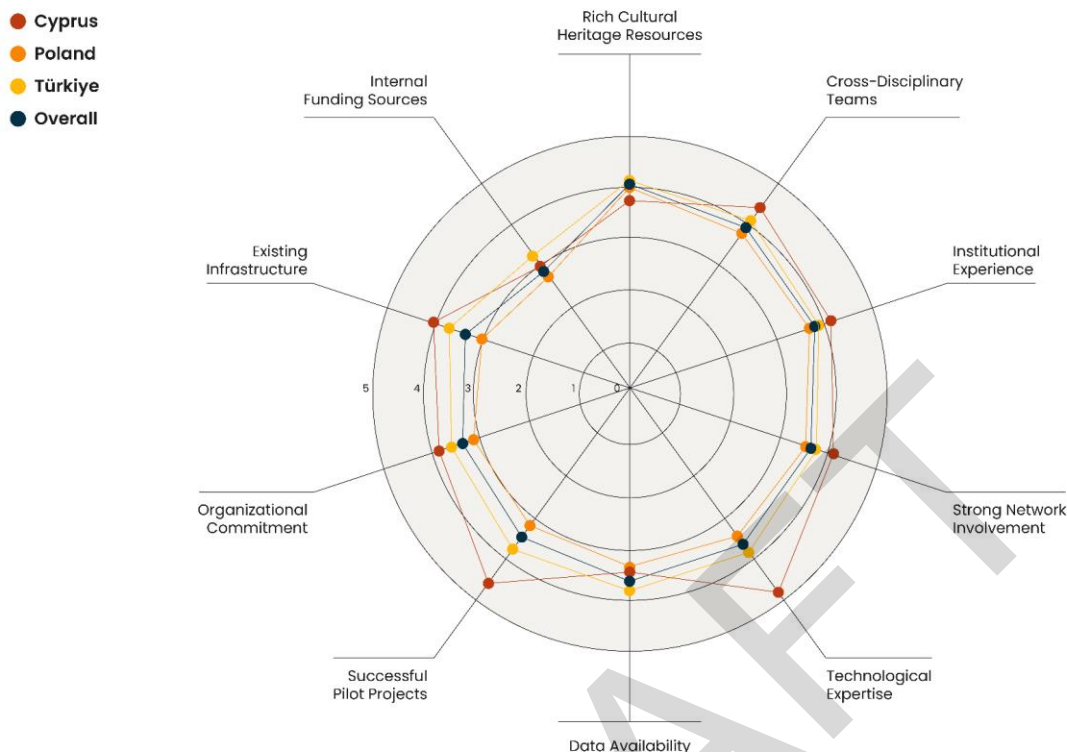
**Cyprus:** Technological expertise, successful pilot projects, and cross-disciplinary teams

**Poland:** Rich cultural heritage resources, cross-disciplinary teams, and institutional experience

**Türkiye:** Rich cultural heritage resources, cross-disciplinary teams, and institutional experience



**Figure 12: Strengths Rated by Respondents – Overall Summary**



**Table 8: Strengths Rated by Respondents – Country-Level Breakdown**

Strengths	Cyprus	Poland	Türkiye	Overall
Rich Cultural Heritage Resources	3.7	4.1	4.2	4.2
Cross-Disciplinary Teams	4.4	3.8	4.1	4.0
Institutional Experience	4.1	3.7	3.9	3.8
Strong Network Involvement	4.1	3.5	3.7	3.6
Technological Expertise	4.7	3.4	3.8	3.6
Data Availability	3.5	3.4	3.7	3.6
Successful Pilot Projects	4.5	3.2	3.6	3.4
Organizational Commitment	3.8	3.1	3.6	3.4
Existing Infrastructure	4.1	3	3.6	3.3
Internal Funding Sources	3	2.7	3.2	3.0

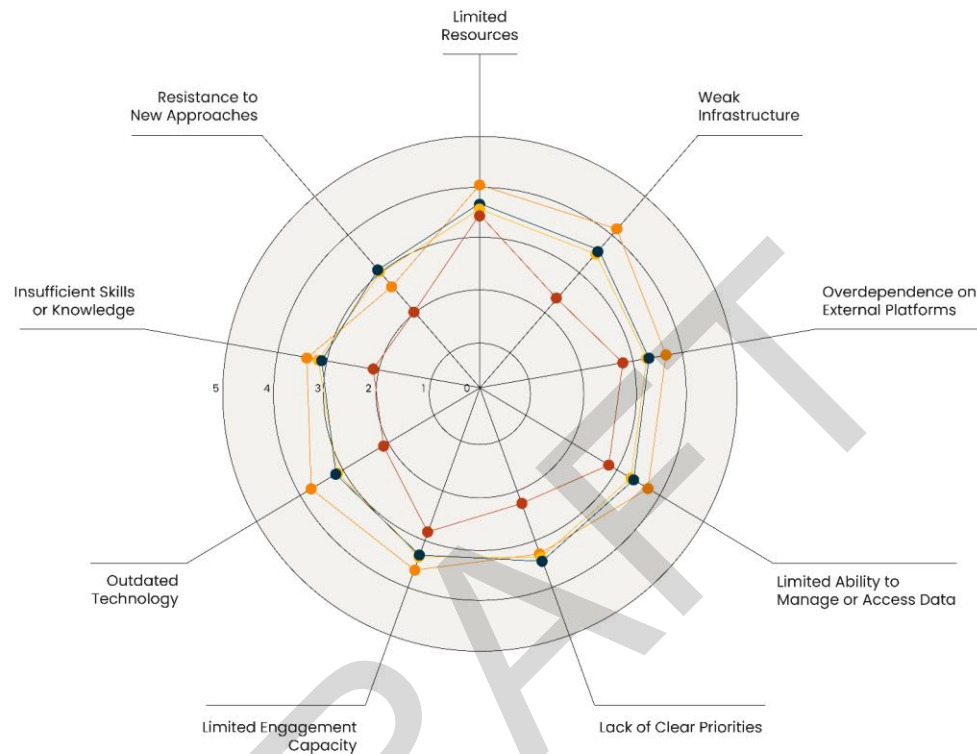
When it comes to weaknesses, limited resources received the highest rating, reinforcing the findings from the strengths assessment. Conversely, resistance to new approaches received the lowest rating across all three countries, indicating that respondents perceive their countries as open to new approaches—a crucial factor for XR adoption. Ratings for weaknesses are shown in Figure 13 and Table 9. The top three most relevant weaknesses identified for each country are as follows (additional weaknesses are included if multiple options received equal ratings):

**Cyprus:** Limited resources, overdependence on external platforms, limited ability to manage or access data, and limited engagement capacity

**Poland:** Limited resources, weak infrastructure, overdependence on external platforms, and limited ability to manage or access data

**Türkiye:** Limited resources, weak infrastructure, overdependence on external platforms, limited ability to manage or access data, and lack of clear priorities

**Figure 13: Weaknesses Rated by Respondents – Overall Summary**



**Table 9: Weaknesses Rated by Respondents – Country-Level Breakdown**

Weaknesses	Cyprus	Poland	Türkiye	Overall
Limited Resources	3.5	4	3.6	3.6
Weak Infrastructure	2.4	4.1	3.5	3.5
Overdependence on External Platforms	2.8	3.7	3.4	3.4
Limited Ability to Manage or Access Data	2.8	3.7	3.4	3.4
Lack of Clear Priorities	2.3	3.3	3.4	3.4
Limited Engagement Capacity	2.8	3.6	3.3	3.3
Outdated Technology	2.1	3.7	3.1	3.1
Insufficient Skills or Knowledge	2.1	3.4	3.1	3.1
Resistance to New Approaches	2	2.7	3	3

Regarding opportunities, respondents from all three countries found many options highly relevant. However, some notable differences emerged. Corporate involvement received the lowest ratings in Cyprus and Poland, whereas in Türkiye, rising interest in the heritage metaverse was rated the least relevant opportunity.

Another key difference is in the perception of cultural tourism growth. While respondents from Cyprus and Türkiye rated it as a highly relevant opportunity, those from Poland viewed it as a relatively lower priority as seen in Figure 14 and Table 10. The top three most relevant opportunities identified for each country are as follows (additional opportunities are included if multiple options received equal ratings):



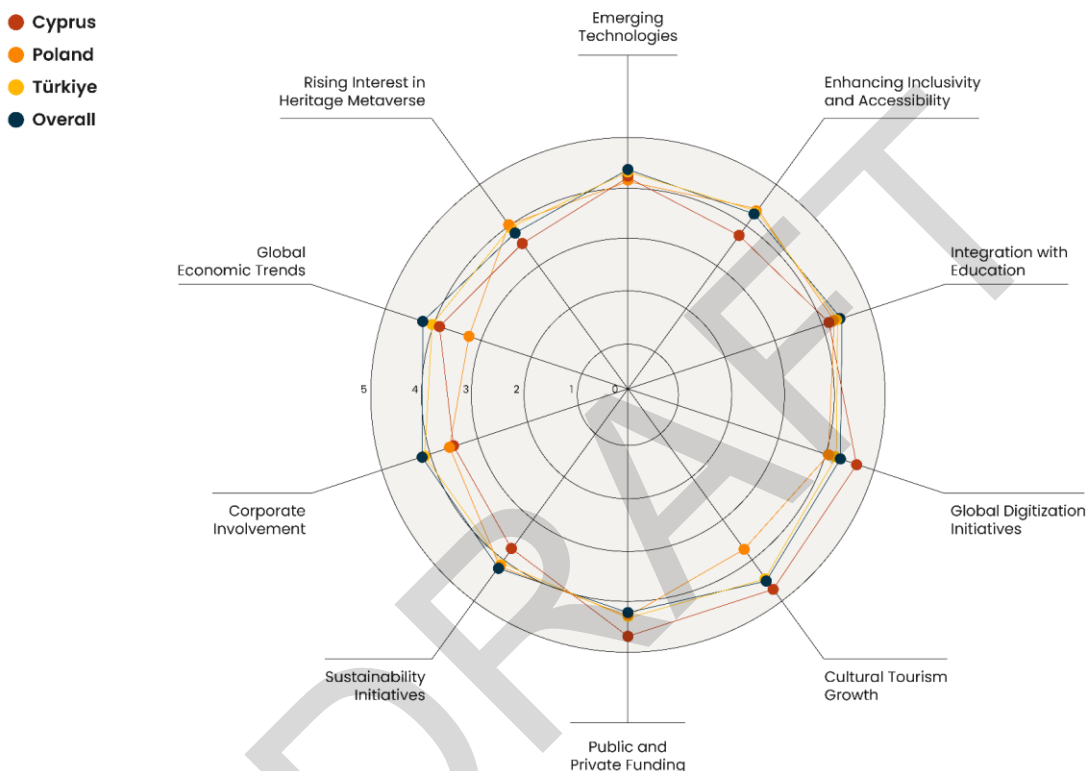


**Cyprus:** Cultural tourism growth, public and private funding, and global digitization Initiatives

**Poland:** Enhancing inclusivity and accessibility, public and private funding, emerging technologies, integration with education, and sustainability initiatives

**Türkiye:** Emerging technologies, enhancing inclusivity and accessibility, integration with education, global digitization initiatives, cultural tourism growth

**Figure 14: Opportunities Rated by Respondents – Overall Summary**



**Table 10: Opportunities Rated by Respondents – Country-Level Breakdown**

Opportunities	Cyprus	Poland	Türkiye	Overall
Emerging Technologies	4.3	4.2	4.4	4.4
Enhancing Inclusivity and Accessibility	3.7	4.4	4.3	4.3
Integration with Education	4.2	4.2	4.3	4.3
Global Digitisation Initiatives	4.5	4.1	4.3	4.3
Cultural Tourism Growth	4.6	3.8	4.3	4.3
Public and Private Funding	4.6	4.2	4.2	4.2
Sustainability Initiatives	3.7	4.2	4.1	4.1
Corporate Involvement	3.5	3.5	4.1	4.1
Global Economic Trends	4	3.3	4.1	4.1
Rising Interest in Heritage Metaverse	3.5	4	3.8	3.8

With respect to threats, economic downturns emerged as the most relevant concern across all three countries' respondents. However, notable differences were observed between Poland and Türkiye and Cyprus regarding



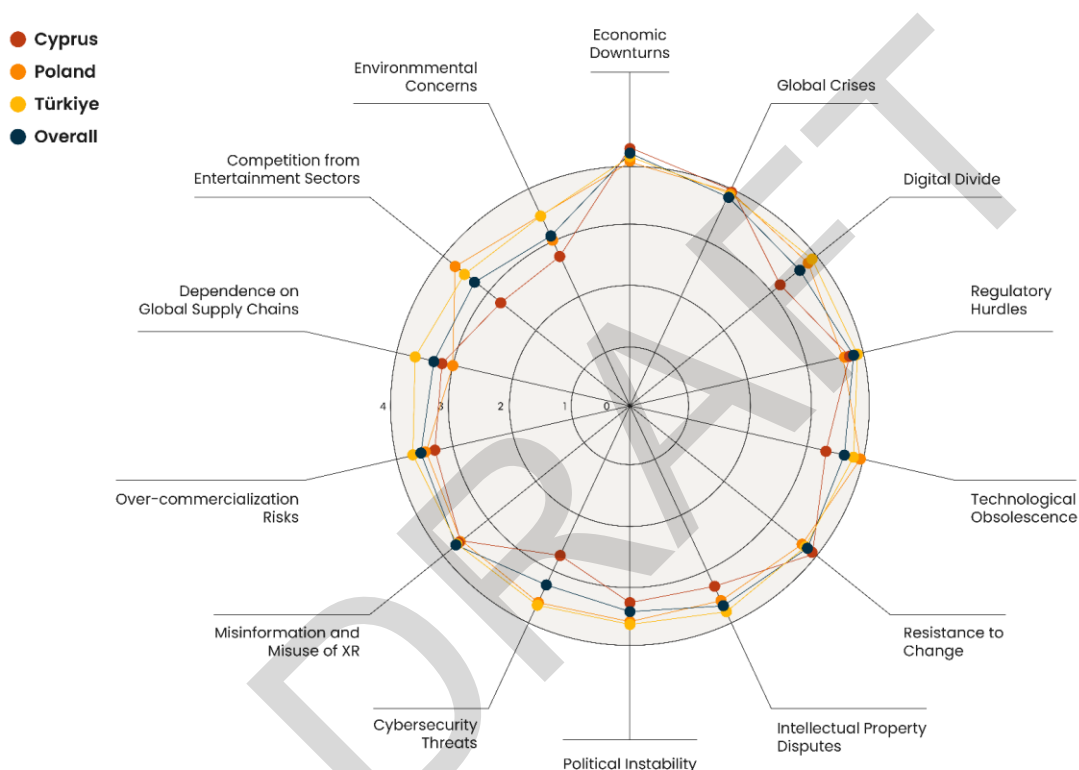
cybersecurity threats, competition from the entertainment sector, and environmental concerns. While these threats were generally rated as less relevant across all countries, they were perceived as significantly less relevant in Cyprus as can be seen in Figure 15 and Table 11. The top three most relevant threats identified for each country are as follows (additional threats are included if multiple options received equal ratings):

**Cyprus:** Economic downturns, resistance to change, global crises, and regulatory hurdles

**Poland:** Economic downturns, technological obsolescence, global crises; and digital divide

**Türkiye:** Economic downturns, global crises, digital divide, and regulatory hurdles

**Figure 15: Threats Rated by Respondents – Overall Summary**



**Table 11: Threats Rated by Respondents – Country-Level Breakdown**

Threats	Cyprus	Poland	Türkiye	Overall
Economic Downturns	4.4	4.1	4.2	4.2
Global Crises	3.8	3.8	3.9	3.8
Digital Divide	3.2	3.8	3.9	3.6
Regulatory Hurdles	3.8	3.7	3.9	3.8
Technological Obsolescence	3.4	4	3.8	3.7
Resistance to Change	3.9	3.7	3.8	3.8
Intellectual Property Disputes	3.3	3.5	3.8	3.5
Political Instability	3.4	3.7	3.7	3.6
Cybersecurity Threats	2.8	3.6	3.6	3.3
Misinformation and Misuse of XR	3.6	3.5	3.6	3.6

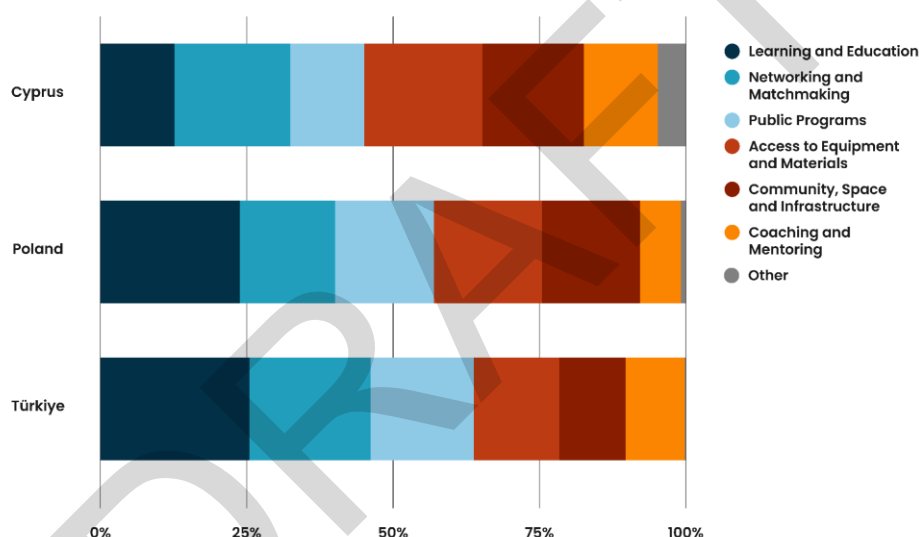


Over-commercialization Risks	3.4	3.5	3.6	3.5
Dependence on Global Supply Chains	3.2	3	3.6	3.3
Competition from Entertainment Sectors	2.7	3.6	3.4	3.2
Environmental Concerns	2.7	3	3.4	3.0

To better understand what kind of support participants expect from the hub, the questionnaire included a section on preferred support services and activities, allowing respondents to select up to three options. The top three responses were “Learning and Education”, “Networking and Matchmaking”, and “Public Programs” as shown in Figure 16. Although fewer participants selected other options, some may fall under these broader categories. Notably, “Funding” also stood out as a key priority, underlining the need for better access to grants and financial resources.

Country-specific differences were also observed. While “Networking and Matchmaking” ranked second overall, participants from Cyprus and Poland prioritised “Access to Equipment and Materials” as their second most preferred option—highlighting regional variations in infrastructure needs.

**Figure 16: Distribution of Hub Support Services and Activities (All Respondents)**

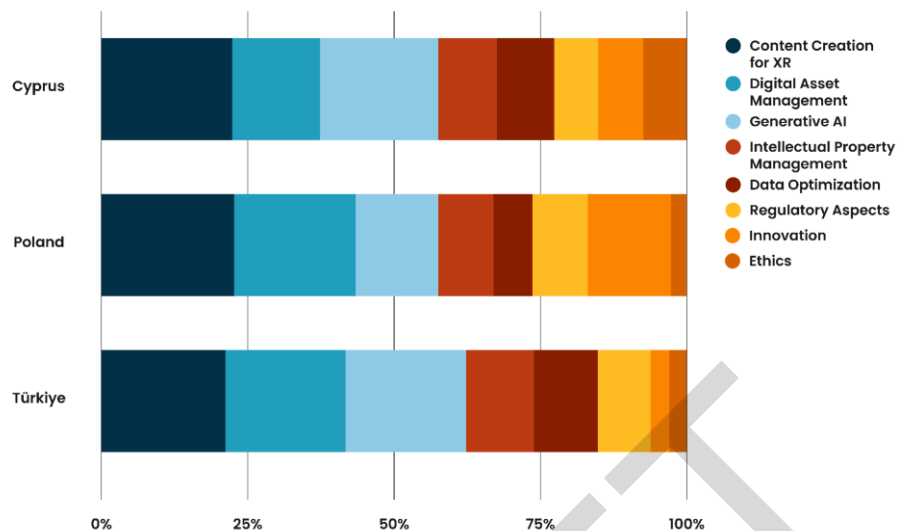


All participants in the online questionnaire were also asked which types of learning topics would best meet their needs in the context of XR and cultural heritage. Eight options were provided, and the majority of respondents selected “Content Creation for XR,” followed by “Digital Asset Management” and “Generative AI”. Preferred learning topics are indicated in Figure 17.

Regional preferences also revealed some nuances. Although “Digital Asset Management” ranked second overall, participants from Cyprus identified “Generative AI” as their second-highest priority. This distinction reflects differing local needs across the countries.

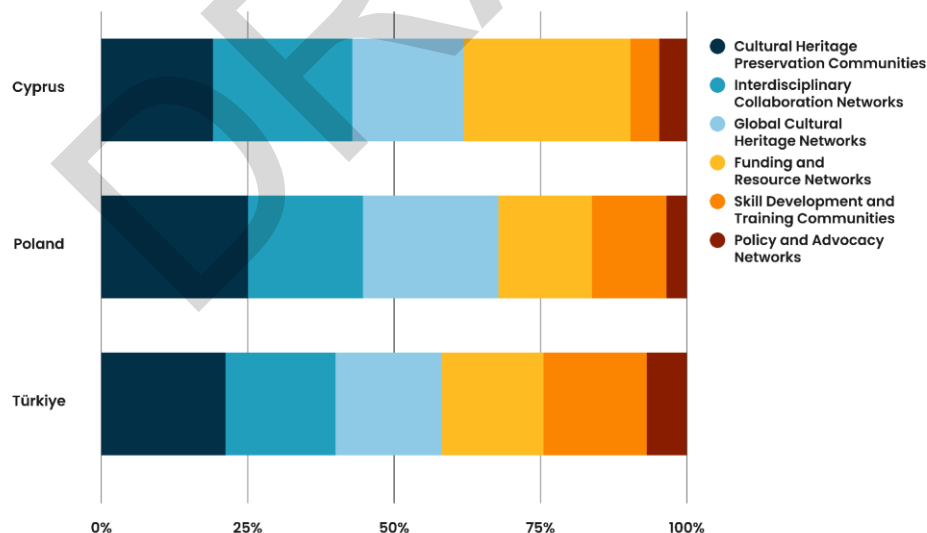


**Figure 17: Preferred Learning Topics in XR and Cultural Heritage - All Respondents**



As part of the questionnaire, participants were invited to share the types of networks or communities they would like to engage with in their field. Most expressed interest in communities focused on “Cultural Heritage Preservation” and “Interdisciplinary Collaboration”. “Global Cultural Heritage Networks” were also a popular choice, highlighting a desire for international integration. In Cyprus, participants prioritised “Funding and Resource Networks” as their top choice, highlighting a different set of local priorities. The choices for preferred network and community types are shown in Figure 18.

**Figure 18: Preferred Network and Community Types Among All Participants**



### 2.2.2. Key Learnings from Each Country

This section presents the key insights derived from the one-on-one in-depth interviews conducted with stakeholders in Cyprus, Poland, and Türkiye. These interviews constituted a crucial phase in the project’s methodology, aimed at deepening the findings from the initial ecosystem mapping and data collection. The perspectives gathered are instrumental in understanding the diverse viewpoints of stakeholders operating at the intersection of extended reality



(XR) technologies and cultural heritage in each country. Furthermore, these insights have been pivotal in shaping the strategy's objectives and defining its intended impact, aligning with the principles and methodologies outlined in the Europeana Impact Playbook to ensure measurable and meaningful outcomes.

### 2.2.2.1. Cyprus

The HERIFORGE interview sample consists of six interviewees, the meetings with whom were conducted between March 5 and March 14, 2025. The interviewees represent a mix of categories: four from the private sector (Task.4.2-CY-2, CY-3, CY-4, CY-6), one from an NGO/public sector/non-profit research center (Task.4.2-CY-1), and one from the public sector (Task.4.2-CY-5). Their sectors span a diverse range, including XR, digital twins, mixed reality (MR), immersive technologies, 3D scanning/printing, cultural heritage, urban planning, education, health, architecture, and heritage preservation. Occupations vary from information technology (IT) project managers and digital twin specialists to co-founders of XR-focused companies, architects, mechanical engineers, and the Head of the Cyprus National UNESCO Committee. This diversity reflects a rich ecosystem of professionals leveraging technology for cultural heritage and beyond. A key theme uncovered across interviews is the tension between Cyprus' potential as a small, agile testbed for innovation and its challenges with bureaucratic delays, siloed efforts, and limited local resources, underscoring a need for hubs to bridge gaps, foster collaboration, and amplify visibility both locally and globally.

#### Local, National, and International Needs

- There is a need for a centralised platform to unify fragmented cultural heritage data and efforts across local stakeholders to enhance accessibility and reduce duplication.
- Professionals require accessible training, and awareness campaigns to educate public sector, cultural institutions, and private companies on the benefits and applications of XR and related technologies.
- A hub is needed to facilitate bicommunal (Greek/Turkish Cypriot) collaboration, potentially via international partnerships (e.g., with Türkiye), to address geopolitical divides and promote shared cultural heritage projects.
- There is a demand for international networking opportunities and funding to connect Cypriot innovators with global XR and heritage communities, enabling knowledge exchange and project scaling.
- Local professionals need shared access to advanced tools (3D scanners, printers) and technical expertise to lower entry barriers and accelerate innovation.

#### Challenges

- Bureaucratic delays and siloed operations in the public sector (such as municipalities, ministries) hinder project timelines and collaboration, often exacerbated by a lack of strategic vision.
- Limited awareness and resistance to new technologies among stakeholders slow adoption, requiring significant education efforts and cultural mindset shifts.
- Regulatory hurdles, such as drone restrictions near the Turkish Cypriot border and EU overregulation (such as safety and privacy), impose constraints on project scope and increase costs.
- Funding shortages and a small local market limit the sustainability and scalability of XR and cultural heritage initiatives, particularly for startups and pilot projects.
- A lack of strong local XR/3D tech communities fosters competition over collaboration, leaving professionals reliant on self-learning or international networks.

#### Opportunities

- Hubs can centralise and digitise cultural heritage data, creating interactive XR/MR experiences to boost engagement, accessibility, and global visibility.
- Leveraging Cyprus' small size as a manageable testbed, hubs can pioneer niche XR innovations (such as urban digital twins, inclusive heritage experiences) with scalable potential.
- Hosting workshops, hackathons, and other collaborative events can build a community, bridging industry, academia, and cultural sectors.
- Hubs can showcase Cypriot XR projects internationally, elevating the country's profile and attracting funding and partnerships.
- By focusing on social inclusion (e.g., accessibility for disabilities, youth engagement), hubs can expand the reach and impact of cultural heritage, aligning tech with societal benefits.



### 2.2.2.1. Poland

To ensure a comprehensive understanding of the intersection between XR and cultural heritage within the Polish community, this study included interviews with experts from various sectors. A total of six individuals were interviewed. One participant was classified as a civil society representative working in the XR technology sector as an artist. Another individual was employed in the private sector, specifically in the domain of XR technology, heritage and museums, assuming the roles of an XR technologist, filmmaker, producer and artist. One interviewee was classified as an individual working in the XR technology, heritage and museum sector as an academic researcher and user experience (UX) researcher. Two individuals represented the public sector in the context of heritage and museology; one had a research background in history and worked in popularisation and cultural management, and the other was the Head of the Department of Exhibitions and Popularisation of Science. The final interviewee represented the academic sector within the heritage and museology domain, holding the role of an academic researcher (specialising in sociology) and independent associate of museums.

Key issues and barriers were listed around the:

- **Lack of Local Ecosystems & International Integration:** Many institutions struggle to operate effectively in international networks due to weak local support structures.
- **Lack of Established Local XR Community:** No active media labs, absence of a formal platform or community for sharing best practices and knowledge in this area, no cooperation between cultural heritage workers and technological experts, limited number of specialised companies in the AR/VR for heritage sector, lack of sustainable technological partnership across cultural heritage sector.
- **Financial Instability:** Funding is project-based, leading to financial gaps. Grants often prioritise new implementations over maintenance and technology renewal.
- **Key Role of NGOs:** Non-governmental organisations play a crucial role in implementing XR/AR in museums.
- **Rapid Technological and User Behaviour Changes:** The fast pace of innovation and shifting user expectations create challenges for sustainable adoption.
- **Lack of Museum Engagement in Innovation:** Innovative ideas often come from external sources, with limited cooperation from museums and local communities. There is a lack of critical reflection and strategic alignment with long-term institutional goals.
- **Communication Barriers:** Collaboration between technologists and museum professionals is often hindered by misunderstandings and differing priorities.
- **Workforce Gaps:** Museums lack in-house IT specialists with relevant competencies, while museum staff often lack the necessary technological skills.
- **Challenges in Procurement & Implementation:** Difficulties arise in defining tender requirements, verifying technical specifications, and finding reliable technology providers.
- **Limited Funding for Research & Innovation:** While funds are available for project execution, there is a lack of financial support for research into technological solutions and their impact.
- **Need for Showcasing & Education:** Awareness and education about XR/AR solutions remain insufficient, affecting adoption and informed decision-making.
- **Demographic Disparities in Engagement:** Young adults (16–21) show low cultural participation, while seniors embrace technology. Accessibility and inclusivity for people with disabilities require further attention.
- **Lack of Suitable Funding Programmes:** Lack of funding for programmes and staff training to effectively utilise new technologies, despite funding for equipment; high costs of implementing advanced technologies, especially for smaller institutions; no long-term duration funding programmes in area of new technologies adaptation for cultural heritage. It makes impossible strategic planning of XR adaptation; low or little funding for XR technologies for cultural heritage.
- **Internal Policy Issues:** Formal procedures such as tendering (przetargi) can be cumbersome and time-consuming; no government oversight in technical innovation processes between museums.

### Local, National and International Needs

- Networking Needs:
  - o Participation in conferences and international events
  - o Help in establishing international contacts
  - o Create a place for different communities where they can meet and collaborate





- Establishing contacts that would facilitate the implementation of projects and obtaining more serious funds
- Share Polish experiences and innovations with international partners
- Aim to enhance the museum's visibility and recognition both nationally and internationally
- Recognise the potential for exchange of collections through digital repositories
- Educational Needs:
  - Support innovative initiatives and research, not only projects based on already existing solutions
  - Strong interest in learning about international applications of new technologies in heritage
  - Suggest creating a shared manifesto outlining the purpose and understanding of technology use in heritage
  - Creation of an international community, opportunities to exchange knowledge and experiences (study visits), to learn about each other's projects
- Financial needs:
  - Provide grants for researchers to pushing the boundaries of technology - not just to finish a project but to do the research
- Fostering dialogue on technology in cultural heritage sector:
  - Focus on integrating technologies into practice, not just teaching about them
  - Encourage caution and critical thinking about the necessity of technology adoption
  - Foster a more reflective use of technology in museums, moving beyond mere attraction or superficial engagement
  - Explore how technology can address inclusivity and the needs of diverse audiences, potentially through co-creation
  - Facilitate discussions about the ethical dimensions of using immersive technologies to simulate experiences

### Challenges

- Increase awareness of XR technologies usage in the cultural heritage sector
- Establish local XR communities
- Establish knowledge exchange and partnerships between cultural heritage and technological sector
- Establish network between cultural heritage and XR subcontractors
- Share knowledge of XR technology usage among cultural heritage sector
  - Sharing good practices of XR technology usage
  - Networking cultural heritage workers with XR technologist
- Share cultural heritage needs in XR technology adaptation and innovation with governance stakeholders
- Establish knowledge exchange and partnerships between international stakeholders

### Opportunities

- Emerging XR and VR trends locally
- Emerging financial opportunities in digital culture and XR technologies for CCIs (but still very limited)
- Create and support the community:
  - There is a need of a place where people from different sectors can meet and talk about ideas and projects. Receive all the information about possible grants or open calls and fairs where they could present their projects or find someone new to cooperate with
  - There is a need for an interdisciplinary space—connecting technology, literature, music, and art—where cutting edge technology serves as a tool for advancing a deeper understanding of culture
  - Connecting professionals in the field (supporting study visits) is critical.
- Providing digital competences in the form of services for museums
- Offering various training courses and workshops, which are very expensive on the market
- The hub can increase awareness and understanding of these technologies among stakeholders.
- New technologies adaptation as a new way of obtaining contemporary audiences.
- Potential for collaboration with technology companies to realize innovative exhibition and educational projects.
- Opportunity for the hub to bridge the gap between the museums and the technological sector.
- Facilitate discussions about the ethical dimensions of using immersive technologies to simulate experiences.
- Network NGOs with cultural heritage institutions.





### 2.2.2.1. Türkiye

To explore the local needs and expectations from HERIFORGE Hub in Türkiye, the team interviewed seven professionals as diverse voices of the local ecosystem. Spanning across a variety of professions, such as digital artists, museum archivists, local cultural development managers as well as talent cultivators and promoters of the existing local network, the interviewees were selected from different cities, years of expertise, and genders. Key issues and barriers were listed around the capacity building, funding mechanisms, accessibility of XR technologies, bureaucratic processes and delays, as well as continuity of emerging projects and supporting local talent. Despite the existing hurdles, the interviews uncovered opportunities for mapping communities, building capacity for future collaborations, facilitating partnerships and storytelling for vast and unseen cultural heritage.

#### Local, National and International Needs

- Fostering meaningful collaborations requires active community organising —continuously connecting individuals, matching them with relevant projects, and supporting experimental concepts—while providing tangible support through financial resources, training, and networking opportunities to share best practices and sustain long-term engagement.
- Building and keeping senior talent is crucial to execute projects in XR and cultural heritage, in order to sustain the technical expertise for development, troubleshooting and maintenance.
- Cross-disciplinary translation is needed to bridge artistic concepts, technical realities, institutional requirements, and bureaucracy. Mediating understanding between diverse talents and showcasing case studies of successful collaborations can help merge and unify different areas of expertise.
- To address XR's commercial viability, costs and investment benefits must be communicated for buy-in for cultural institutions, considering rapid technological evolution and long-term resilience. Advocacy, awareness, and capacity building are critical for actualising the sustainable and future-proof value of XR in cultural heritage for buy-in.
- Empowering local digital art and XR creators to stand out in global organisations enhances their visibility and recognition. By facilitating partnerships with renowned organisations and festivals and supporting their applications, hubs can help expand the influence of their communities and networks internationally.
- For healthy and reliable collaborations, a tailored matchmaking of partners needs to be composed, bringing complementary capabilities.
- To promote collaboration over competition, transparent and objective standards can ensure reliability in project development and partner selection. As a reputable, neutral entity, the hub can provide credibility and prevent conflicts of interest.
- Continuity of projects relies on sustained partner involvement, consistent funding, resiliency to leadership changes and open access to heritage data.
- Early adopters in the community are needed to showcase XR's value in cultural heritage, to encourage broader adoption.
- Authenticity and historical accuracy of heritage needs to be preserved by involving locals and beneficiary representative groups.

#### Challenges

- The current ecosystem is seen as fragmented, due to diversity of sectors: arts, cultural heritage, and tech providers.
- The rapid pace of change in XR technologies creates investment hesitancy about its long-term relevance for cultural institutions. Limited government and private funding as well as high cost of XR development prevents many institutions from experimenting with immersive technology.
- Scaling XR projects in cultural heritage is challenging due to specialised technical equipment and infrastructure dependency. Lack of concrete impact measurement hinders the ability to demonstrate XR's value, secure investment and institutional buy-in.
- Bureaucratic delays, lack of institutional continuity, and unclear strategy ownership obstruct the progress of immersive technology use in cultural heritage. These issues force emerging leaders to navigate workaround solutions and seek alternative funding, often using their own personal resources, which results in one-off projects.
- The commercial viability of tourism is putting pressure on expedited cultural heritage projects.
- Conflicting interests arise when multiple organisations work on the same popular heritage sites.
- Previous attempts to unite tech provider companies have faced setbacks due to misrepresentation and personal gain, when done without a legal entity.

#### Opportunities



- Documenting the siloed XR, CCIs, and academic ecosystem can highlight diverse talents and collaboration opportunities. An open-source platform linking these professionals can foster cross-sector communication, and incentivised community engagement.
- Hubs can facilitate both in-person and digital networking, workshops and events to foster collaboration, as well as resource and talent sharing, going beyond mere communication and avoiding gatekeeping.
- Hubs can upskill talent to build senior capabilities essential for project development and execution (such as cultural heritage research, business modelling, curation). Also alternative learning paths for youth can be created in cultural heritage and digital arts, offering a faster alternative to traditional university curriculums.
- Events, exhibitions, and festivals help local talent gain recognition, exchange knowledge and showcase successful hub collaborations. Bringing international organisations to Türkiye and collaborations of local and international professionals can transfer working-knowledge, elevate projects, and boost global visibility.
- Hub collaborations can serve as proof of concept for XR's use in cultural heritage by demonstrating its viability, identifying scalable solutions to reach a wider audience through enhanced funding and impact measurement.
- Hubs can advocate for prioritizing XR's usage in the cultural heritage and tourism sector, through awareness and capacity building amongst national strategy and policy-makers, for continuous support and sustained funding.

### 2.2.3. What Lies Ahead?

Considering uncertain future possibilities is essential for developing resilient and adaptive strategies, especially given the dynamic nature of integrated global economic systems and the escalation of regional and global conflicts. To support this need, four future scenarios were developed and discussed during focus group meetings held in each hub. These four scenarios were developed by the project team prior to the focus group meetings to ensure more efficient use of time during the sessions. The scenarios were constructed based on insights gained from one-on-one in-depth interviews, secondary data collection, global developments and trends, as well as the expertise of the project team. The four scenarios were categorized into two groups: the first two represent negative scenarios, as they highlight potential challenges and obstacles, while the third and fourth are viewed as positive scenarios, reflecting growth, development, and the integration of XR technologies into daily urban life. Table 12 contains a summary of each scenario that was provided.

**Table 12: Future Scenarios**

Scenarios	Summary
Scenario 1: Shrinking Hubs	<p>All XR technologists, researchers, and cultural professionals migrated to different cities across Europe and other countries. The motivation to develop new projects in XR and cultural heritage are more about showcasing cultural heritage to different countries that members are now living in.</p> <p>There are very few professionals remaining in the field within the home hub country. There is a risk of braindrain. There is a need to retain talent and resources. Fewer people at home country might mean less local collaboration and fewer in-person events.</p>
Scenario 2: Scarcity-Based Hubs	<p>Funds are limited due to local and global economic shifts. The hub can no longer rely on traditional grants or institutional support. The community must self-organise, find alternative revenue models, and make tough resource allocation decisions and potentially operate on grassroots-driven conditions. There could be tensions between different groups over who gets priority for the limited funds.</p>
Scenario 3: Regionally Expanding Hubs	<p>The hub has grown into a regional leader in XR and cultural heritage, becoming knowledge producers, setting standards, attracting talent, and influencing policy. Other countries and institutions look to them for best practices, partnerships, and knowledge-sharing. Cross-border collaborations emerge, leading to new governance challenges, potentially.</p>
Scenario 4: XR-Embedded Smart Cities as Living Labs	<p>The excellence hub partners with urban planners and policymakers to embed XR experiences into smart cities. Digitised cultural heritage becomes an integral part of</p>



	<p>everyday life—people can access dynamic AR layers of history while walking in historical districts, and tourists can experience city-wide immersive storytelling.</p> <p>The hub becomes an innovation lab for testing how XR can reshape public engagement with heritage in urban spaces.</p>
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Focus group meetings in each country reflected local realities and challenges, leading to different interpretations and preferences for the scenarios. Participants were asked to choose one of the two negative and one of the two positive scenarios, which helped reveal these variations more clearly.

In Cyprus, “Scenario 2: Scarcity-Based Hubs” was viewed as the most realistic, emphasising the need for self-organisation, alternative funding models, and transparent resource distribution. At the same time, “Scenario 4: XR-Embedded Smart Cities as Living Labs” sparked aspirational thinking, particularly around the use of XR in tourism, education, and accessibility. Participants noted that cultural resistance and funding constraints remain significant barriers.

In Poland, “Scenario 2: Scarcity-Based Hubs” was again seen as a likely negative scenario, with strong concerns about funding scarcity and the digital divide. Participants emphasised the need for community self-organisation. Their preferred positive vision was “Scenario 4: XR-Embedded Smart Cities as Living Labs”, focusing on digital inclusion and community engagement. However, concerns were raised about a lack of diversity in XR solutions.

In Türkiye, “Scenario 1: Shrinking Hubs” was identified as the most negative, due to concerns over brain drain and diminishing collaboration opportunities. “Scenario 2: Scarcity-Based Hubs” was regarded as the most realistic, reflecting historical experiences with limited resources and inequitable allocation. Participants’ preferred long-term vision was “Scenario 3: Regionally Expanding Hubs”, though they expressed doubts about its current feasibility—particularly due to current challenges within the country.

The following sections provide detailed information on each scenario and the responses gathered across the three countries.

### 2.2.3.1 Cyprus

Based on the focus group discussion held on March 26, 2025, “Scenario 2: Scarcity-Based Hubs”, was the most voted scenario with 7 participants in favor. The scenario envisions a hub grappling with a critical shortage of funds, forcing it to adopt survival strategies to sustain operations. Participants saw this as a realistic challenge for Cyprus, reflecting local economic constraints and cultural barriers.

#### Key insights revealed the following:

- The hub must focus on self-organisation, alternative revenue models (e.g., commercialisation via spinoffs), and transparent funding allocation from tender competitions or grants. Activities like leveraging free ecosystem resources (e.g., EU grants) and launching low cost ventures (e.g., pop-up XR cinemas) were proposed to offset funding gaps.
- Beyond financial scarcity, cultural resistance such as “old school thinking”, and operational costs (e.g., energy, salaries etc.) threaten progress. Egos and inflexible planning further complicate efforts.
- In terms of how the people with different personas connect and collaborate, persona mindsets like Mobilizer (funding), Connector (networking), and Integrator (tech-creative bridge) are pivotal, supported by Creative, Digital Genius, Tech Hunter/Explorer, and Cultural Steward. The ecosystem map shows a tight-knit network reliant on collaboration to maximize limited resources.
- Interestingly, entertainment emerged as a lifeline (e.g., XR cinema), alongside a “fake it till you make it” marketing tactic to maintain relevance. Fragmenting into smaller teams using open-source tools was a pragmatic shift to stretch funds.

Under “Scenario 2: Scarcity-Based Hubs”, the hub confronts an uncertain future defined by financial scarcity, yet participants see a path forward through resilience and ingenuity. The focus group underscored the need for a clear organisational structure and sustainable revenue models, beyond traditional funding, to ensure survival. Priorities include transparency in resource allocation, especially with government support, and diversifying income via



consulting, sponsorships, and community resources like open-source tools. Creative, low-cost XR projects, such as immersive cultural experiences tapping into Cyprus's tourism and heritage strengths, emerged as key opportunities, with the Cultural Steward anchoring relevance.

Barriers to success include high operational costs, internal disputes, and cultural resistance—particularly a public sector mentality slow to embrace change, marked by biases and isolated thinking. Participants warned against over-reliance on a single plan, advocating contingency strategies, small autonomous teams, and actionable tasks to maintain efficiency. Solutions like Web3/metaverse events and partnerships with cultural heritage institutions could unlock new revenue and reach.

Engagement hinges on fostering collaboration through hackathons, workshops, and networking, bolstered by incentives like awards and legal/strategic support (e.g., Intellectual Property (IP) guidance). Success depends on adaptability, with Mobilizers and Connectors securing resources and partnerships amid constraints. Cultural resistance poses a risk of stagnation, but a **"fake it till you make it"** approach could attract stakeholders, buying time for small wins to build trust and funding. The hub's next few years will likely be lean, with survival tied to niche innovation and proactive community engagement, and the ability to create tangible value within a constrained environment.

Between the two optimistic versions, "Scenario 4: XR-Embedded Smart Cities as Living Labs", imagines Cyprus as a regional leader where XR technologies transform smart cities into living labs for innovation. While vote counts were not explicit, its extensive discussion suggests strong interest as a hopeful vision.

#### Key insights revealed the following:

- The hub should prioritise immersive XR applications (e.g., smart driving and navigation, tourism enhancements) and flagship projects to showcase potential. Activities include integrating XR into education, tourism, and accessibility solutions, leveraging Cyprus's strengths.
- Upskilling locals to use XR interfaces and differentiating Cyprus in a saturated global market are key barriers. Bureaucratic fragmentation and funding remain concerns, though less acute than in "Scenario 2: Scarcity-Based Hubs".
- Digital Genius (tech innovation), Cultural Steward (heritage focus), and Creative (idea generation) drive this vision, supported by Connectors (partnerships), Mobilizers (funding), Integrators (tech-creative fusion), and Tech Hunters/Explorers (tech matching). The ecosystem thrives on synergy between tech, funding, and external stakeholders like cultural heritage institutions.
- During the discussion, immersive navigation emerged as a unique perspective, alongside accessibility (e.g., aiding disabled individuals) as a social anchor. Tourism and education can be pivotal in linking economic and societal benefits.

"Scenario 4: XR-Embedded Smart Cities as Living Labs" envisions a transformative future where the hub positions Cyprus as a regional XR leader by integrating immersive technologies into smart cities.

The focus group identified XR's potential to enhance cultural heritage experiences, from AR layers in historical districts to city-wide storytelling, boosting tourism through virtual tours and interactive experiences such as XR-enhanced Nicosia summers. Immersive navigation could set a global benchmark by seamlessly blending physical and digital spaces, while XR in education promises long-term cultural and economic benefits by engaging a tech-savvy generation. Ensuring accessibility remains a priority, particularly for disabled users, to promote broader participation. Collaboration across multiple sectors will be critical to realising this vision. Cultural Stewards and Digital Geniuses can bridge heritage with technology, supported by those who develop and integrate XR applications. Mobilizing the Cypriot diaspora, through initiatives such as the Cyprus Diaspora Forum, could attract investment, while strategic partnerships with global XR companies like Threedium would strengthen international networks. Urban planners and policy-makers must be involved early to ensure XR integration into infrastructure, with clear regulatory frameworks, including General Data Protection Regulation (GDPR) compliance, to facilitate responsible adoption. Local small-medium enterprises (SMEs) and startups can play a significant role in developing impactful XR applications, such as those linked to the New Cyprus Museum, with public-private partnerships fostering innovation.

Several challenges need to be addressed, including securing initial R&D funding, bridging local skill gaps, and distinguishing Cyprus from AI-driven markets (this has been identified as a threat). Government funding should take the lead, encouraging private sector engagement over time. Public procurement strategies must prioritise quality over





cost to ensure sustainable and effective solutions. Open calls for proposals can serve as a mechanism to encourage SME-driven innovation, generating locally relevant XR applications.

Over the next decade, Cyprus has the potential to establish itself as an XR innovation hub by blending elements of scenarios 2 and 4. In the short term (1-3 years), limited resources will require low-cost pilot initiatives, such as XR pop-ups, to build credibility and demonstrate impact. By 2030, with stabilised funding and industry momentum, Cyprus could lead in smart city applications, particularly in navigation, tourism, and education. Long-term success will depend on securing EU and tourism-driven funding, overcoming cultural resistance, and maintaining a unique tech-culture advantage through continuous innovation and collaboration.

### 2.2.3.2 Poland

One focus group was held in Poland on April 7th, 2025 with 6 participants, representatives of museums, academia, business and technology companies, with different levels of expertise in XR and/or cultural heritage. Among the negative scenarios, the “Scenario 2: Scarcity-Based Hubs” was chosen with 5 votes in favor. Main outputs from the discussions were:

- pointing out limited funds due to local and global economic changes. This means that the hub cannot rely on traditional grants or institutional support
- the need for communities to self-organise, find alternative revenue models, and make difficult decisions about how to allocate limited resources. The action could be based on bottom-up considerations
- potential tensions between different groups over who gets priority for limited funds.

The following **main issues** emerged during the discussion of this scenario:

- key priorities for such a hub should include eliminating digital divide,
- fast and efficient data flow,
- ensuring stable funding,
- finding sources of funding independent from cultural institutions,
- focusing on recognisable heritage at least at the beginning,
- conducting evaluations and tests,
- raising awareness and understanding of XR technologies.

The main barriers and challenges to the success of such a hub include **war and diversion of funds** to the army, **resistance to innovation in institutions** (especially culture), **generational barriers** and lack of understanding among senior staff, political influence, **lack of proper coordination and staff turnover**, rapidly changing technologies and technological debt/obsolescence, **digital divide of recipients**, climate change and energy management, lack of time, emotional and energy resources to lead and implement projects, scale mismatch between grassroots hubs and large institutions, and issues of maintaining the hub and its results after the funding ends.

The positive scenario chosen by the group, “Scenario 4: XR-Embedded Smart Cities as Living Labs” (voted for by 4 people), presents a vision in which Excellence Hubs work with urban planners and policymakers to embed AR experiences in smart cities. In this scenario, digitised cultural heritage becomes an integral part of everyday life. People can access dynamic layers of history, use AR while walking in historic districts, and tourists can experience immersive stories throughout the city. The hub becomes an innovation laboratory to test and explore how AR can transform public engagement with heritage in urban spaces. The following key aspects were raised during the discussion of this positive scenario:

- Priorities for such a hub in favorable conditions should include **striving for digital inclusion, building strong communities around specific projects** with an emphasis on the co-responsibility of participants, and experimenting with a variety of narratives and ways of experiencing the city in cooperation with different communities. **Safety in public spaces** in the context of implementing XR projects is also an important priority.
- Barriers and challenges to the success of such a hub, even in a positive ecosystem, may be the **lack of diversity and flattening of solutions to generic patterns**, the illusion of virtualisation and underestimation of the importance of in-person meetings and rootedness in reality, as well as the potential problem of social isolation.
- Generating new projects and building partnerships in such a hub could be based on reaching out to the community and building projects together, enabling grassroots initiatives where local communities create their own content, and on participation in the whole creation process. The concept of “digital graffiti” could also be



used as a way to dialogue with the space.

- Fundraising in favorable conditions could include **crowdfunding**, due to the greater understanding and appreciation of technology by society. Innovation and rapid development of XR technologies can generate new projects and demand for them in themselves.
- Engaging the members of the hub could be achieved through **participation similar to Wikipedia, with a system of moderators**. It is also crucial to choose topics close to the community, which naturally increases engagement.

#### 2.2.3.3 Türkiye

Two focus group meetings were held for Türkiye—one online (with 4 participants) and one in-person (with 5 participants)—bringing together representatives from academia, private sector, public sector, and civil society. In both sessions, participants expressed a generally pessimistic view of the future, both in broader societal terms, and specifically regarding XR and cultural heritage.

In both meetings, “**Scenario 1: Shrinking Hubs**” was perceived as the **most negative**, while “**Scenario 2: Scarcity-Based Hubs**”, though scarcity-based in nature, was seen as the **most realistic**. After additional prompting, participants also selected “**Scenario 3: Regionally Expanding Hubs**” as their preferred long-term vision, though with important considerations. The discussion revealed a mix of systemic challenges, socio-economic dynamics, and creative resilience shaping Türkiye’s XR and cultural heritage landscape.

- “**Scenario 1: Shrinking Hubs**” was considered highly relevant. The possibility of XR professionals and cultural heritage experts migrating abroad raised deep concerns about **brain drain, loss of creative potential, and disconnection from local cultural ecosystems**. Participants reflected on real cases where producers and innovators were not just denied funding but entirely excluded from partnership opportunities due to the increasing relocation of the skilled professionals. A shrinking hub, they warned, could lose access not only to funding but also to collaborative capacity.
- Key risks included a **lack of collaboration muscle** between actors, leading to closed initiatives and fragmentation. Many creatives feel pushed into becoming freelancers or migrating due to market pressures and the inability to build sustainable XR-related careers locally. Some noted that Istanbul may present slightly different conditions, with more resources or networks available, but disparities persist.
- Interestingly, participants noted that “**Scenario 1: Shrinking Hubs**” still links to “**Scenario 2: Scarcity-Based Hubs**”—in the sense that “**Scenario 1: Shrinking Hubs**” is a natural outcome of “**Scenario 2: Scarcity-Based Hubs**”. Therefore, retaining talent, building cross-sector collaborations, and creating sustainable business models—rather than project-based or one-off funding cycles—were highlighted as essential roles the hub could play.
- The need for new revenue streams and scaled-up creative entrepreneurship (especially among freelancers and small initiatives) was emphasised. The hub was seen as a potential connector, able to foster job opportunities, link creative talent, and catalyse collaboration across dispersed geographies—even in a post-migration context where some creatives live abroad but wish to remain engaged.

Despite its challenges, “**Scenario 2: Scarcity-Based Hubs**” was perceived as the most **realistic and actionable** scenario by the Türkiye focus group meeting participants.

- Participants resonated with the limitations it described, pointing out that Türkiye has never truly experienced a “resource abundance” period, and many past projects—such as those tied to EU programmes like development agencies’ grants—have operated under similar constraints. The scenario reminded participants of the 2010–2020 period, when local NGOs and municipalities launched projects under tight budgets and shifting political dynamics.
- Participants stressed that while resources might exist on paper, the real challenge lies in how those resources are allocated. Issues like favoritism, political proximity, and inequity in distribution were seen as structural barriers. Still, they believed progress could be made—particularly through engaging young people (high school and university students), and creating opportunities for those who are curious and willing to learn.
- There was a strong belief that individuals cannot overcome systemic constraints alone—hub structures were seen as essential to survival. Participants stressed the importance of stimulating collaboration between supporting actors, improving digital affordances, and enabling remote participation. Ideas included creating digital hubs, expanding access to technology, and better utilising the media literacy and tech fluency of younger generations.



- Participants spoke of a need to rethink regional balance: moving beyond romanticized notions of Anatolia to actionable, funded initiatives that could re-energize the region—especially in tourism, intangible cultural heritage, and community-based projects. Rather than focusing exclusively on metropolitan cities, participants suggested decentralising efforts and targeting rural areas where cultural heritage can be both preserved and innovatively shared.

While “Scenario 3: Regionally Expanding Hubs” presented an inspiring long-term vision of Türkiye as a **regional XR and cultural heritage leader**, participants expressed hesitation about its feasibility given current conditions.

- The scenario assumed a cultural context where heritage is widely valued—a notion that participants acknowledged is still being established within Türkiye.
- Participants raised concerns around geographic limitations, social uncertainty, and institutional commitment. They questioned: *Where will we find the motivation?* and *What happens without a deep sense of collective dedication?* Without widespread public appreciation for cultural heritage and strong belief in such projects, scalability and influence may remain out of reach.
- However, participants still saw value in this scenario as a long-term goal, especially if current pilot initiatives can demonstrate viability and relevance. They stressed the importance of identifying the right target audiences, differentiating between digital and in-person strategies, and producing accessible, high-impact content that can reach wide audiences across regions.

#### 2.2.4. Who’s in the Story?

Ensuring diversity—particularly in terms of mindsets and perspectives—is essential for the long-term success and resilience of the hubs. Understanding who engages with the hubs, and how they think and operate, is critical to building inclusive, innovative, and sustainable ecosystems. Diverse personas with varying mindsets can enrich the functioning of the hubs and stimulate the creation of new ideas, collaborations, projects, and programmes. For this reason, identifying persona mindsets has been an integral part of the strategy development process.

The one-on-one interviews served as the initial step in defining potential persona mindsets that could engage with the hubs. Building on these initial insights, additional persona mindsets were proposed and validated during the focus group meetings. Participants were asked to select two persona mindsets and fill out a ‘persona mindset card’—one representing themselves and one representing someone they frequently work or collaborate with.

Each card included a set of guiding questions:

- **Obstacles:** What are the biggest challenges and barriers in fulfilling your role?
- **Resources:** What resources or support do you need to be more effective in your role?
- **Connections:** How does your role connect with others in the community?
- **Motivation:** What incentives or motivations would keep you engaged in the hub long-term?
- **Success:** How do you define success in your role within the hub?

The persona mindsets provided to participants were as follows:

- **Creative:** You execute new ideas and artistic concepts with radical creativity, expertise, and diligence; while advocating for experimental approaches.
- **Explorer:** You love researching historical, theoretical, anthropological perspectives of cultural heritage and XR to understand how these technologies shape public memory.
- **Connector:** You act as a liaison, introducing people, forming partnerships, and fostering cross-sector collaboration.
- **Tech Hunter:** You love chasing the newest breakthroughs in XR technologies, exploring how it can be applied to current developments and speculating on the edges of existing capabilities.
- **Cultural Steward:** You prioritise preserving cultural narratives with ethics and authenticity within XR experiences, ensuring respect for conservation ethics and safeguarding cultural assets.
- **Digital Genius:** You develop new technologies, or improve existing ones for responsible and accessible applications in cultural heritage.
- **Bureaucracy Translator:** You understand the government regulations, national strategic priorities, and bridge the gap between stakeholders, cutting through the terminologies for effective partnerships.
- **Celebrator:** You prioritise the involvement of different actors, organising festivals, showcases, and public events.





- **Mobilizer:** Your expertise is on finding and mobilizing grants, seeking corporate sponsorships, crowdfunding, and you are on the lookout for alternative funding models.
- **Convener:** You bring together national and international partners, have a long-term commitment to the hub and convener in critical situations for hub members to connect and resolve critical topics.

Participants were also encouraged to create entirely new persona mindsets beyond those provided, allowing for additional perspectives to emerge. A brief summary of the persona mindsets selected and developed during the focus group meetings is presented below.

#### 2.2.4.1 Cyprus

In the focus group meeting held in Cyprus, participants selected six of the pre-defined persona mindsets—Digital Genius, Creative, Connector, Cultural Steward, Tech Hunter, and Explorer—and also proposed two new personas: Integrator and Actor.

**Digital Genius** - preferred among deep tech companies Chief Technology Officer (CTO), creating XR hardware like haptic gloves and immersive devices for deaf people.

- They play a key role in improving XR technology through hardware innovations, mainly focused on technical expertise and advancement.
- They want to connect with all XR developers to "help them improve their offering" and enhance product immersiveness.
- Their biggest challenge remains human resources, particularly managing remote engineers (e.g., shipping hardware for collaboration), and securing large-scale financing unfamiliar to Cyprus's investor ecosystem.
- Success translates as having an impact and fulfilling their "why" through innovation that improves lives (e.g., accessibility solutions).
- They need significant funding for commercial hardware developments and a local talent pool to reduce reliance on remote workers.

**Creative** - was chosen by a participant who enjoys testing new ideas and collaborating with connectors.

- This persona aligns with their passion for creativity and experimentation, allowing them to "try new things, out of the ordinary".
- They want to connect with the Connector, to leverage partnerships and turn creative ideas into actionable products.
- Time and funding were mentioned as the biggest challenges, preventing them from testing and developing ideas fully, as experimentation requires resources that they often lack.
- For them, success translates into testing ideas and seeing them implemented, even if it is on a smaller scale.
- They need flexible funding and time allocation depending on the project specifics.

**Connector** - Chosen by a few participants who see themselves as connectors within the ecosystem. They leverage their extensive international networks and ties to diverse stakeholders across various markets. In one case, however, this role shifted more toward that of an Actor.

- It has been chosen because they facilitate partnerships and networking, providing access to different actors in the ecosystem.
- They want to connect with all roles together, linking to the broader community.
- Their biggest challenge is materialising things and partnerships beyond initial connections. Success is translated in the form of building lasting and productive relationships.
- They need tools and platforms to sustain and formalise these connections.

**Cultural Steward** - chosen by one participant who has extensive expertise in cultural heritage and works in different cultural institutions.

- Their role aligns well with the HERIFORGE goal and emphasises their role in storytelling and curating cultural content.
- They want to connect with Creative (for storytelling synergy) and Digital Genius (to integrate cultural content with XR).
- Their biggest challenge is resistance to change within cultural institutions or teams.
- Success is in the form of preserving and revitalizing cultural heritage in a way that resonates with modern audiences, possibly through impactful XR experiences.



- They require access to cultural resources and assets, along with support from tech developers to digitise and enhance them.

**Tech Hunter/Explorer (Dual Role)** - chosen by a participant focused on bringing historical events to life through XR. The Explorer seeks and identifies what should be materialised (e.g., historical immersive experiences), while the Tech Hunter matches technologies to achieve those goals, complementary roles reflecting their problem-solving and tech-integration skills.

- They want to collaborate with another Explorer or tech provider to "collaborate and materialise" their vision of immersive historical experiences.
- Their main challenge is finding the right collaborators with aligned goals and passion, as differences in character or focus can hinder progress.
- For them success is achieving a higher purpose with "deeper meaning in life," such as enhancing culture or society through quality XR experiences.
- The resources they need are compatible collaborators and integrated tech solutions (not explicitly detailed but implied as critical).

**Integrator\*** - it was chosen by a participant who sees themselves as a "Swiss army knife," bridging creative and tech industries. The justification for creating this, is because they feel it reflects their ability to connect diverse fields, integrating "lots of ideas together" to create novel solutions, aligning with their work in XR and creative-tech fusion.

- They wish to connect with the Digital Genius (to develop ideas) and the Creative to bridge creativity and technology for "weird and wonderful things".
- The biggest challenge is communicating ideas and visions effectively to stakeholders, ensuring clarity in a complex, interdisciplinary space.
- They consider success as "doing something that's never been done before," achieving breakthroughs through integration.
- They need access to specialised hardware, which is scarce in Cyprus, to prototype and test integrated solutions.

**Actor\*** - it was chosen by a participant, who also chose Connector, based on their international experience and a wide network, including companies, investors, and political figures.

- This role aligns well with their global connections and ability to pitch ideas and make them suited to act as an influential figurehead or advocate within the hub.
- They want to connect with the Creative (for storytelling and narrative development) and with a Mobilizer (to craft a "robust funding strategy" and attract high-net-worth individuals).
- One of the biggest challenges is the lack of resources, specifically "clear marketing tools or clear vision", to align efforts and achieve collective goals
- Success for them is "making s\*\*\*\* happen", turning opportunities into tangible outcomes through effective advocacy and execution.
- They require clear marketing tools, unified vision, and resources to pitch and execute large scale projects.

#### 2.2.4.2 Poland

In the focus group meeting held in Poland, participants selected six of the pre-defined persona mindsets—Creative, Digital Genius, Explorer, Celebrator, Mobilizer and Cultural Steward. Each of the personas was chosen by one participant.

**Creative** – selected by a poet, performer, new media researcher, and academic lecturer

- What the person felt was missing is financial security and access to funds for project implementation, difficulty in creating a team - i.e. developers are usually expensive and not interested in smaller activities; time - results from the first one because you have to do something to have something to live on.
- Motivation to be involved in the hub is linked to the opportunity to work in a structured and interdisciplinary project and management - with a defined workflow.
- Success is achieved with completed projects, fruitful and developing artistic and scientific exchange, keeping up with new technological solutions, participating in the study of effects and verifying assumptions for the development of one's own skills and further creation.
- Support is needed in collaboration with producers and accountants, people raising funds and writing applications.
- She connects by providing ideas and creative solutions, building content, scientific research in connection with the creative process, building relationships with the group through creative practice and sharing knowledge.



**Digital Genius** - chosen by an IT expert, supporting cultural heritage institutions (CHIs) in embracing tech solutions.

- He flagged a couple of challenges: paying off technological debt, lack of well-formulated assumptions by CHIs, lack of understanding of technical issues by the rest of the team (cross-sectoral collaboration including CHIs) and questions around security.
- In terms of support he needs guidance, a well-prepared brief with technical intelligence.
- What motivates him is the sense of responsibility for digital projects with high visibility and high usability, and implementation of projects that spark excitement (innovation)
- He feels successful when he can deliver digital/immersive projects that engage the audience and implement projects accessible to all.
- What connects him to the ecosystem is that he “does what he is briefed to do”. He is responsible for programming and implements solutions based on the prepared creation/project.

**Explorer** - selected by a film and new media director.

- The main obstacles stem from excessive concerns, which lead to a process that is overly superficial, slow, and inconsistent.
- What motivates him are the relatively frequent meetings and conversations "about principles", i.e. "what for?", "why?" and "how?" .
- Success is when things are happening that actually engage more and more people.
- What he is adding is offering additional perspectives and insights theoretical and practical expertise in VR and AI engagement through cross-fertilisation.

**Celebrator** - chosen by a museum curator.

- Obstacles are limited resources - primarily infrastructure, equipment, time, human resources, but also attention and mental space for action.
- To act, he needs support from responsible, trustworthy collaborators-creating time and space to understand mutual needs, expectations, but also resources that different partners have in the process of creating a project/activity/event.
- He is motivated by long-term cooperation on valuable projects/activities/events-possibility to connect with people who have the resources, knowledge, experience that he lacks to implement a joint venture.
- He sees his role as gathering people with different skills, knowledge, and experience to do a joint project/activity/event and giving the joint venture a structure, he provides a platform for its presentation to a wider audience.
- Success is when he manages to gather people with different skills, perspectives and experiences and implement a project/activity/event together (in such a way as not to hurt anyone along the way)

**Mobilizer** - chosen by a museum manager.

- Obstacles: Limited interest in the topic on the part of ministry and local government. Lack of people who want to help in this field. The biggest challenge is to find a good source of financing.
- Motivation: Results that will bring concrete solutions for people now and in the future; the meaning of their work for people, their own professional development. They also add that additional earnings will be nice.
- Success: To find a good public programme to receive the funding for project realisation. To find (create) the group (or one) business company which will be interested in investing in project.

**Cultural Steward** - selected by a museum employee.

- Barriers: lack of understanding of the specifics of working with monuments; young generation is not interested in the subject, lack of appropriate resources.
- The support she needs is around appropriate promotion of cultural heritage - reaching young people, financial resources, substantive support and contact with appropriate institutions, legislative support.
- Her role is linked to appropriate representation of objects in the world of virtual reality, documenting and showing how the objects functioned - bringing the old closer to the next generations.
- She is motivated by visible effects, bringing the museum environment closer to the new technologies environment.

#### 2.2.4.3 Türkiye

In the focus group meetings held in Türkiye, participants selected a variety of personas. In the first focus group meeting, participants selected six of the pre-defined persona mindsets—Creative, Tech Hunter, Connector,



Bureaucracy Translator, Digital Genius, and Cultural Steward—and also proposed one new persona: Creative Tech Hunter.

**Creative** – selected by five participants - a 3D generalist, a designer, a project expert, an industrial designer, and by one participant in reference to a collaborator.

- They highlighted key challenges such as the inconsistent or limited accessibility of materials, high costs of technological tools, lack of space for experimentation, difficulties in merging physical and digital outputs, absence of strategic vision, limited knowledge of project and financial management, and limited project budgets.
- Their motivation is closely linked to being part of active, well-funded projects that offer space for creative contribution, cross-disciplinary collaboration, and effective matchmaking and communication aimed at defining shared challenges and benefits.
- They emphasised the importance of exciting, well-structured events, project-based funding, peer learning, and networking opportunities as core incentives for sustained engagement with the hub.
- Success, from their perspective, involves being able to contribute creative input, broaden the perspectives of collaborators, build meaningful partnerships, and maintain sustainable communication channels.
- They currently connect with others mainly through social media platforms and attend relevant in-person or online events, but noted the lack of a consistent communication space within the XR-cultural heritage community.

**Tech Hunter** – selected by a communication and technology professional and by one participant in reference to a collaborator.

- They highlighted challenges such as working with complex or expensive artistic content, limited access to current technologies, and the lack of resources needed to test and select appropriate tools. A key concern was the difficulty in finding qualified collaborators to exchange ideas and develop projects with.
- Some existing connections were described as unproductive or inactive, pointing to a need for more engaged, skill-aligned collaboration networks. They also expressed the need for accessible technical infrastructure and expertise to help activate and sustain their projects.
- They prefer connecting with peers working on similar technologies, as well as funders and grant providers who understand the specific needs of technology-driven work.
- Their motivation lies in solving new technical challenges that contribute to both personal and professional growth, and in being connected with mentors or experts who can offer guidance and insight throughout the project lifecycle.
- For them, success means delivering seamless, immersive experiences that maintain continuity and depth from concept to execution—in a collaborative process that ultimately reaches and benefits the intended audience.

**Bureaucracy Translator** – selected by two participants working across institutional and regulatory frameworks.

- The primary challenge identified is the low awareness and understanding among partner institutions about the relevance and potential of XR applications in cultural heritage. This is compounded by limited access to current legislation, tools, and an understanding of how these regulatory elements interconnect.
- Participants emphasised the need for more transparent and participatory policymaking processes, along with greater opportunities for institutional interaction and knowledge exchange. They noted that the lack of policy prioritisation for XR and cultural heritage hampers collaboration and slows progress.
- To be more effective, they stressed the importance of involving qualified professionals with both domain expertise and decision-making authority, as well as ensuring access to financial resources within institutional frameworks.
- They see themselves as valuable connectors who are able to inform the community about public funding opportunities, grants, and support mechanisms.
- Their motivation is driven by involvement in international networks and institutional processes, where they can advocate for systemic change and long-term alignment.
- Success in this role is defined as the ability to establish at least one permanent institutional partner that provides continuity and sustained collaboration within the hub. Long-term success also includes embedding XR and cultural heritage innovation into public agendas, and enabling community members to successfully access national and international grants.

**Digital Genius** – selected by two participants in reference to their collaborators.

- They highlighted a core tension between the rapid pace of technological advancement and the short lifespan of





widely praised tools, which can quickly become obsolete or unsustainable. This is compounded by challenges such as limited financial resources, tight deadlines, and the difficulty of keeping up with frequent hardware and software updates.

- Another challenge noted was the disconnect between designers and collaborators, particularly when there's a lack of understanding about design roles and processes. Participants emphasised that designers should be equipped with general digital production knowledge to collaborate effectively in fast-paced environments.
- Connections with others in the community are primarily built through close observation and by actively applying shared instructions or guidance—suggesting a practical, hands-on learning and collaboration style. Festivals and fairs were also noted as key spaces for learning and relationship-building.
- Motivation is strongly tied to economic sustainability, and a relaxed, non-restrictive working environment.
- Success, for them, means being recognised for their contributions, gaining access to new professional opportunities, and achieving efficient, tangible outcomes from their work.

**Cultural Steward** – selected by two participants - an anthropologist advocating for ethical preservation, and an archaeologist and art historian.

- The participants emphasized the importance of maintaining objectivity and openness in cultural data—but noted significant challenges in accessing datasets that are claimed to be open and the inability to intervene when data is filtered or stripped of its objectivity. Bureaucratic, legislative, political, and financial barriers further complicate their work.
- To be more effective, they expressed the need for greater access to truly open-source resources and the opportunity to collaborate with individuals who share a commitment to transparency, ethics, and integrity. They also emphasised the importance of inter-institutional cooperation and updating legal frameworks.
- Their communication and collaboration style is marked by intellectual honesty, objectivity, and shared values, favoring joint projects built on mutual respect and clarity of purpose.
- Their motivation to remain engaged in the hub is tied to economic independence, which would enable them to pursue their mission without external constraints. Concrete outcomes, such as employment opportunities or impactful collaborations, also play a key role in sustaining their involvement.
- Success is defined as the ability to continuously produce meaningful cultural content and ensure that it remains alive and relevant over time. Longevity and integrity in cultural storytelling matter more than one-off achievements, highlighting the need for sustainable systems that support the ongoing life of cultural expression. They envision systems that care for cultural heritage with vision, ethics, and inclusivity.

**Convener** – Selected by one participant in reference to a collaborator, not as a self-identified role.

- They face resistance from professionals who hesitate to come together in neutral settings, often due to sectoral divides or perceived conflicts. Additionally, limited financial resources pose a barrier to sustaining collaboration and supporting production.
- They expressed the need for funding opportunities for project owners, facilitating international co-productions and partnerships, and regional support mechanisms.
- By positioning themselves in a neutral, “grey area”, they create a space where individuals who might not otherwise engage can collaborate and co-create. This positioning increases inclusivity and builds trust across professional divides.
- They are motivated by the desire to build strong, future-oriented networks, and to ensure that both the hub and individual collaborators operate on solid strategic foundations.
- Success for the Convener means that two sector professionals who wouldn't normally work together are able to engage in dialogue and begin collaborating on a shared project—unlocking new possibilities through connection and trust.

**\*Creative Tech Hunter** – created by a VR museum technician combining creativity with cutting-edge technology.

- A key challenge identified was that a multidisciplinary focus—while rich in potential—can make specialisation more difficult and slow down mastery. The participant also cited significant technical and hardware limitations, along with the need for stronger infrastructural support.
- To perform effectively, they require mentorship, access to physical and digital tools, and technical skills training.
- They see their role in the community as that of a connector, bridging creative and technological actors, enabling cross-disciplinary collaborations, and even acting as a mediator between domains.
- Their motivation to stay engaged in the hub includes access to growth opportunities, team-based innovation, prestige, and a space for social and professional development.



- For this participant, success means being able to coordinate content-producing teams and make stronger syntheses and analyses through a multidisciplinary approach—ultimately pushing boundaries in both technological and creative practice.

**\*The Hub as a Connector** - seen as an ecosystem enabler and cross-sector bridge.

Participants interestingly described the hub itself as a connector persona—not just a platform, but an active agent that enables cross-sector collaboration, adapts ideas to different domains, and transforms problems into practical solutions. It was perceived as a catalyst for ripple effects, sparking innovation across creative and technological fields.

Participants emphasized that the hub's role is to match the right people—such as developers and designers—by providing a space where skills and interests align. Success for the hub, in this view, is not about its own visibility but about enabling others to succeed through meaningful connections. The emphasis was on creating an environment where individuals can express themselves clearly and engage in collaborations that are both relevant and productive. Participants also highlighted the relevance of **Connector, Explorer, developer, and Mobilizer** mindsets; however, these personas could not be examined in depth due to time constraints

## 3. Community Engagement Strategy

### 3.1. Approach

The strategy development approach is bottom-up and scenario-based, structured around a baseline scenario and an alternative scenario as outlined in Section 2.2.3. During the focus group meetings, participants selected two scenarios—one to serve as the baseline and the other as the alternative scenario.

While objectives and actions are aligned with the baseline scenario, the risks and opportunities identified in the alternative scenario have also been incorporated. Additionally, all objectives and actions are informed by the findings from the analysis, ensuring a data-driven and context-specific approach.

### 3.2. Guiding Principles and Values

The community engagement strategy is built on a set of core principles that ensure a structured, inclusive, and effective approach to building a sustainable community. These principles provide a foundation for both the development and implementation of the strategy, ensuring that engagement efforts are data-driven, transparent, and adaptable to the diverse contexts of Cyprus, Poland, and Türkiye.

The strategy development process is guided by principles that emphasise inclusion, participation, evidence-based planning, transparency, and impact orientation. In turn, the implementation of the strategy is designed to be responsive, efficient, collaborative, and engaging, ensuring long-term sustainability, and meaningful stakeholder involvement.

By adhering to these principles, the hubs can create a community engagement model that is both actionable and scalable, fostering long-term relationships and innovative approaches to integrating XR technologies into cultural heritage.

#### Strategy Development and Implementation Principles and Values

The following principles and values were identified based on the expertise of the project team:

- **Inclusive:** Ensuring that diverse voices and perspectives are meaningfully involved throughout both the development and implementation of the strategy—actively engaging a wide range of stakeholders, including underrepresented and marginalised groups, to promote equity and reflect the richness of the community.
- **Participatory:** Prioritizing the direct involvement of stakeholders through open dialogue and dedicated meetings and interacting sessions.
- **Evidence-Based:** Using qualitative and quantitative data to inform decision-making, ensuring relevance and impact.
- **Transparent and Accountable:** Fostering a culture of openness, integrity, and shared responsibility by clearly communicating goals, processes, and decisions at every stage—enabling stakeholder input, oversight, and



- trust throughout the strategy's development and implementation.
- **Impact-Oriented:** Focusing on achieving measurable, meaningful, and sustainable results that benefit stakeholders and communities.
  - **Responsive and Adaptive:** Adjusting strategies based on emerging trends, stakeholder feedback, and evolving needs, ensuring continuous improvement.
  - **Efficient:** Optimising the use of resources, time, and efforts to maximise impact and sustainability.
  - **Collaborative:** Working together with stakeholders and community people at every stage of implementation, fostering shared ownership, and ensuring collective decision-making.
  - **Engaging:** Creating accessible, inclusive, and interactive opportunities for stakeholders to actively participate and contribute to the implementation of the strategy.
  - **Visible:** Maintaining a strong and recognisable presence in both digital and physical platforms to raise awareness, build momentum, and ensure stakeholders know how to engage with the strategy.
  - **Grounded:** Ensuring implementation is rooted in local realities, balancing ambition with feasibility and stakeholder capacity.
  - **Open-Minded:** Remaining receptive to new ideas, diverse viewpoints, and unexpected outcomes during implementation, fostering innovation and continuous learning.

### 3.3. Vision, Objectives and Actions

The vision, objectives, and actions of the strategy were developed based on insights and knowledge gathered during the research phase.

A common vision has been established for all three hubs. However, the future scenarios explored during the focus group meetings and further developed by the project team revealed key differences that must be aligned with this shared vision. A consistent theme across all three countries is the prioritisation of access to funding and institutional support, as participants generally anticipate a future where financial resources and institutional backing are more limited than today.

In terms of positive scenarios, Cyprus and Poland envision futures centered on smart cities where XR is widely adopted and embedded into daily life. In contrast, participants from Türkiye did not perceive the future positive, reflecting deeper concerns about national conditions and structural limitations.

Each country also presents distinct characteristics that shape how their respective hubs might operate—even within similar future scenarios. For example, Cyprus, as an island nation with a smaller population and domestic market, must integrate more quickly into international markets to ensure sustainable growth. Poland is a rapidly developing economy, though its growth is tempered by the regional impact of war. As a stable country hosting many Ukrainian citizens, Poland has unique opportunities to tap into both local and incoming talent, enhancing its XR and cultural heritage innovation ecosystem. For the positive scenario to materialise in Cyprus and Poland, stronger collaboration with municipalities and local governments will be critical, especially to embed XR into urban planning and city-wide policy frameworks. In Türkiye, while the country remains a dynamic and growing economy, it also faces challenges from regional instability and domestic political and economic pressures. These challenges contribute to a talent outflow, particularly in fields like XR and cultural heritage. However, this also presents a strategic opportunity: the emerging diaspora of Turkish professionals can become a vital asset for building international collaborations and re-engaging with the national ecosystem. For this reason, connecting with the diaspora should be a strategic priority for Türkiye.

Recognising both the shared characteristics and unique contexts of the three hubs, an overarching vision has been defined to harness their core strengths and provide a common direction. As a unifying aspiration, it aims to position the HERIFORGE Hubs Network as a leader shaping the current and future practices. The vision is **Trendsetter in XR and Cultural Heritage**”

The vision presented here shows a future shaped by creativity, innovation, and collaboration. The hubs are positioned not only as sites of experimentation and excellence but also as models for emerging practices, ethical standards, and inclusive approaches. By aiming to lead rather than follow, the vision aspires to create a dynamic space where diverse perspectives converge, and new possibilities for XR and cultural heritage are continuously explored and defined.





This forward-looking orientation combines the ambition to foster inclusivity, the energy of creativity as a driving force, and the responsibility to serve as a reliable and ethical actor within the broader ecosystem. It is a unifying aspiration that supports each hub's local strengths while encouraging a collective impact that resonates across sectors and geographies.

In this context, each hub functions as an Excellence Hub—a strategic and collaborative platform designed to catalyse innovation, foster interdisciplinary partnerships, and enhance regional and international capacities in XR and cultural heritage. These hubs are more than physical or institutional spaces; they serve as dynamic nodes within a larger ecosystem, where co-creation is embedded. By connecting cultural institutions, researchers, technologists, policymakers, and communities; the hubs enable a fertile environment for experimentation, knowledge transfer, and the co-development of standards and best practices.

As Excellence Hubs, they play a crucial role in shaping not only technical advancement but also the ethical, social, and cultural dimensions of immersive technologies. They facilitate long-term capacity building, equitable access to resources, and the creation of future-oriented frameworks that prioritise sustainability, participation, and cultural relevance. In doing so, they anchor the vision of becoming a trendsetter—not through isolated innovation, but through collaborative excellence that bridges sectors, disciplines, and border.

The objectives and actions outlined in the strategy were developed through a systematic and multi-phase approach, ensuring they are evidence-based and aligned with stakeholder insights. This process involved the following steps, as described in Section 1.2 – Methodology: secondary data analysis (Section 2.1.1), stakeholder mapping (Section 2.1.2), an online questionnaire (Section 2.2.1), one-on-one interviews (Section 2.2.2), focus group meetings (section 2.2.3 and 2.2.4), and strategy workshop.

Throughout these phases, various priorities and action items were identified or directly suggested by the stakeholders. All of these action items were then aggregated into objectives and cross-checked against the priorities identified during the analysis phase. This ensured coherence and alignment with stakeholder needs and strategic goals. As a result, the objectives and actions were structured using a bottom-up approach, grounded in real-world insights and collaboratively defined priorities.

**Table 13: Objective 1 and Actions**

Objective 1. Grow a dynamic community and foster productive collaborations.		
Actions		Timeframe
<b>Action 1.1</b>	Establish a continuously accessible database where interested stakeholders can register and engage with the hub and the community.	2025–2027
<b>Action 1.2</b>	Develop an assessment model to evaluate and determine community membership, ensuring alignment with the hubs' values and objectives.	2025–2027
<b>Action 1.3</b>	Ensure diversity, equity, and inclusion within the community by fostering representation across gender, sexual orientation, ability, age, race, ethnicity, religion, language, geography, backgrounds, perspectives, and experiences.	Continuous
<b>Action 1.4</b>	Support multilingual communication to better connect and serve the community.	Continuous
<b>Action 1.5</b>	Analyse community personas and identify missing profiles, ensuring efforts to welcome and integrate underrepresented and marginalised groups.	Continuous
<b>Action 1.6</b>	Create or provide both digital and physical space for community members to organise their own events and activities.	2028–2030
<b>Action 1.7</b>	Organise creatively designed stakeholder meetings to gather feedback on community structure, needs, and functions.	Continuous



<b>Action 1.8</b>	Establish open communication channels that enable community members to interact, collaborate, and share ideas freely.	2025–2027
<b>Action 1.9</b>	Design and implement events, such as open XR days, hackathons, forums, and project showcases, that foster networking and collaboration among community members.	Continuous
<b>Action 1.10</b>	Map and regularly update existing tools, software, licenses, 3D models, and other assets to enable shared use by community members and enhance resource efficiency.	Continuous
<b>Action 1.11</b>	Create and maintain a digital collaboration toolkit to support communication, co-creation, and resource sharing across hubs.	2028–2030
<b>Action 1.12</b>	Foster the development of new local XR and cultural heritage communities, especially in underrepresented regions, through outreach, capacity building, and partnership support.	2028–2030

**Table 14: Objective 2 and Actions**

<b>Objective 2.</b> Enhance the access to funding and commercial and economic viability for XR in cultural heritage.		
<b>Actions</b>		<b>Timeframe</b>
<b>Action 2.1</b>	Train local stakeholders on how to apply for international grants and funding.	Continuous
<b>Action 2.2</b>	Advocate for alternative funding models, including public-private partnerships, impact investment, and local, national and international grants.	Continuous
<b>Action 2.3</b>	Position XR projects not just as sponsorship opportunities but as long-term investments with measurable return on investment (ROI).	Continuous
<b>Action 2.4</b>	Promote and support impact assessment practices in XR-driven cultural heritage projects.	Continuous
<b>Action 2.5</b>	Provide financial planning support to cultural institutions helping them scope realistic budgets for XR integration.	Continuous
<b>Action 2.6</b>	Develop targeted market reports to help community members explore international opportunities beyond limited domestic demand.	2028–2030
<b>Action 2.7</b>	Conduct regular market pricing studies to provide stakeholders with clear cost estimations for XR projects.	2028–2030
<b>Action 2.8</b>	Develop concise and accessible reports on emerging technologies to help community members make informed decisions for their work and projects.	2028–2030


**Table 15: Objective 3 and Actions**

Objective 3. Foster continuous and inclusive learning opportunities in XR and cultural heritage.		
Actions		Timeframe
<b>Action 3.1</b>	Support both creative and technical skill-building, ensuring that professionals receive continuous upskilling and professional growth opportunities.	Continuous
<b>Action 3.2</b>	Develop or collaborate with international residency programmes to provide community members with opportunities to learn, exchange knowledge, and engage with global stakeholders.	2028-2030
<b>Action 3.3</b>	Develop and deliver a structured learning programme on best practices in XR and cultural heritage, featuring case studies, expert-led sessions, and hands-on learning components.	Continuous
<b>Action 3.4</b>	Curate and share free learning and education programmes on XR and cultural heritage to enhance community members' skills and knowledge.	2028-2030
<b>Action 3.5</b>	Organise learning programmes to engage high school and college students in XR and cultural heritage.	2028-2030
<b>Action 3.6</b>	Facilitate connections between students and XR companies or cultural institutions by curating and promoting apprenticeship opportunities, helping young people gain hands-on experience and build careers in the field.	2028-2030
<b>Action 3.7</b>	Establish a mentorship programme fostering knowledge transfer and professional growth among XR and cultural professionals.	2028-2030
<b>Action 3.8</b>	Organise learning programs and create practical guides on ethical practices and intellectual property rights (IPR) management in XR-driven cultural heritage projects.	Continuous


**Table 16: Objective 4 and Actions**

Objective 4. Facilitate international exchange and global recognition for XR in cultural heritage.		
Actions		Timeframe
<b>Action 4.1</b>	Create a structured international exchange programme, enabling XR creators to showcase their work globally.	2028–2030
<b>Action 4.2</b>	Facilitate connections between local and international stakeholders, ensuring mutual learning and collaboration.	2028–2030
<b>Action 4.3</b>	Advocate for national XR projects to be featured at major global events, such as fairs, festivals and showcases.	Continuous
<b>Action 4.4</b>	Organise key knowledge-sharing events and extend invitations to international cultural institutions—particularly museums with successful XR implementations—to inspire and build capacity among local and national stakeholders.	2028–2030
<b>Action 4.5</b>	Engage with diaspora professionals through curated events and collaborations to enhance global visibility and foster cross-border knowledge exchange in XR and cultural heritage.	2028–2030
<b>Action 4.6</b>	Create and maintain an XR library that curates open-access articles, reports, case studies, and other resources on XR and cultural heritage, supporting international learning, collaboration, and visibility.	2028–2030


**Table 17: Objective 5 and Actions**

Objective 5. Advocate for policy and institutional awareness on XR in cultural heritage.		
Actions		Timeframe
<b>Action 5.1</b>	Organise awareness events and run public campaigns for policymakers and cultural leaders to demonstrate the value of XR in cultural heritage.	Continuous
<b>Action 5.2</b>	Engage with cultural ministries, technology agencies, and creative networks to advocate for national policies and support schemes through participation in targeted policy meetings.	Continuous
<b>Action 5.3</b>	Co-develop policy recommendations with community members to promote the integration of XR technologies into cultural heritage, fostering collaboration, innovation, and sustainable support structures.	Continuous
<b>Action 5.4</b>	Create clear, practical guidelines for XR-based experiences in cultural heritage settings that address physical, cognitive, and sensory accessibility needs.	2028-2030
<b>Action 5.5</b>	Organise hands-on workshops for cultural institutions and XR creators focused on co-designing with diverse user groups, including people with disabilities.	2028-2030
<b>Action 5.6</b>	Support museums in acquiring and developing XR infrastructure through targeted guidance.	Continuous
<b>Action 5.7</b>	Prepare a practical toolkit to support cultural institutions in integrating XR technologies into their organisational strategies, programming, and audience development plans.	2028-2030
<b>Action 5.8</b>	Provide support to local governments and municipalities in developing institutional and local plans that incorporate XR technologies and cultural heritage priorities.	2028-2030
<b>Action 5.9</b>	Develop an engaging, user-friendly online dictionary that playfully translates and connects the jargon of XR technologies and cultural heritage, making complex terms accessible across sectors.	2028-2030
<b>Action 5.10</b>	Facilitate structured discussions and forums on the ethical implications of using immersive technologies in cultural heritage.	2028-2030

### 3.4. Indicators and Monitoring

It is critical to track progress and measure the impact of the outlined objectives and actions. To achieve this, a progress report should be prepared twice a year, enabling the HERIFORGE Consortium to evaluate the effectiveness of the implemented strategies in fostering a dynamic community, enhancing access to funding, promoting continuous learning, facilitating international exchange, and advocating for policy awareness.

Through diligent monitoring of these indicators, HERIFORGE can foster a culture of continuous improvement and adaptation. The collected data will provide valuable insights into which strategies are proving successful in each national context, while also identifying areas where adjustments or alternative approaches may be necessary. Ongoing monitoring ensures that the community engagement strategy remains responsive to the evolving needs of stakeholders and contributes to the long-term sustainability and impact of the project.

To measure the success of the community engagement strategy, two indicator groups in line with EIP have been identified: success indicators and outputs. Success Indicators and outputs are not exactly the same as KERs and impact indicators because

- Success indicators refer to the broader, longer-term changes or impacts achieved through the strategy and correlates to HERIFORGE Impact Indicators which are in the 5-year horizon after the project end
- Outputs refer to the tangible, short-term results deliverables or activities produced and correlates to

HERIFORGE Key Expected Results (KER) which are aimed to be achieved within the 36 months of the project.

Success indicators and outputs are not exactly the same as HERIFORGE's KERs and impact indicators because they are aligned with EIP methodology and the bottom up expression of the stakeholders the HUBs heard through Task 4.2, but there are similarities and Table 18 and Table 19 track them.

The indicators aligned with EIP are recommendations to the future tasks of the Hubs and guidance on how to monitor strategic progress and assess the overall success and sustainability of the project. The approach to indicator development has been informed by the EIP and strategic planning methodology, ensuring that the strategy remains impact-oriented, adaptable, and aligned with widely used practices in the field of XR and cultural heritage as well as cultural and creative industries.

**Table 18: Success Indicators**

#	Success Indicators	Source of Verification	Related Objective	Related HERIFORGE Impact Indicators
1	# of registered stakeholders	Hub Registries	1	# of entities joining the Hubs beyond beneficiaries 12
2	# of community members	Hub Registries	1	# of clients (e.g. companies) of DOP: 30 # of policymakers beyond project's beneficiaries engaged in HERIFORGE ecosystem activities: 15 researchers trained in innovation ecosystem: 600
3	Gender balance in community	Hub Registries	1	
4	# of collaborations or partnerships formed between community members	Community Surveys	1	# of developed or improved prototypes and services within hubs ecosystems: 30 # of services/products that will be guided to initialise patenting (IP) and join IP booster activities: 3
5	# of collaborations or partnerships formed between community members and international stakeholders	Community Surveys	1	# of researchers trained in innovation ecosystem: 600
6	# of collaborations or partnerships formed between cultural institutions and XR companies or initiatives via hub	Community Surveys	1	# of entities joining the Hubs beyond beneficiaries 12 # of events (e.g. webinars, workshops) organised in cooperation with EU networks, projects or initiatives: 6 (KER)
7	# of member-initiated events and programmes	Hub Annual Reports	1	# of workshops and trainings (e.g. on the process of co-development, IP guidance, policy & management for valorisation of intellectual assets): 10
8	Frequency of use of opportunities provided by the hubs	Hub Annual Reports	1	# of clients (e.g. companies) of DOP: 30
9	# of new local XR communities supported	Community Members	1	# of entities joining the Hubs beyond beneficiaries 12 #of researchers trained in innovation ecosystem: 600



10	# of community members successfully applying for international grants and funding	Community Surveys	2	# of externally funded proposals to be submitted (e.g., through subgrants by the EU initiatives like ECCCH, OSCARS): 3  # of researchers trained in innovation ecosystem: 600
11	# of impact assessment done by community members for their projects	Community Surveys	2	# of researchers trained in innovation ecosystem: 600
12	# of cultural institutions integrated XR costs into their budgets	Institutions' Activity Reports	2	# of entities joining the Hubs beyond beneficiaries: 12  # of services/products that will be guided to initialise patenting (IP) and join IP booster activities: 3
13	# of community members who expanded their market by using the knowledge produced by the hubs	Community Surveys	2	# of developed or improved prototypes and services within hubs ecosystems: 30
14	Increase in skills and knowledge of the community people and wider stakeholders	Evaluation Forms	3	# of workshops and trainings (e.g. on the process of co-development, IP guidance, policy & management for valorisation of intellectual assets): 10  # of researchers trained in innovation ecosystem: 600  # of services/products that will be guided to initialise patenting (IP) and join IP booster activities: 3
15	# of international programmes community members attended	Hub Annual Reports	1, 3	# of events (e.g. webinars, workshops) organised in cooperation with EU networks, projects or initiatives: 6 (KER)
16	# of national XR projects showcased at major global events with the hubs' support	Hub Annual Reports	4	# of presence in reputable XR events (e.g., VR Days Immersive Tech Week, Stereopsia, World XR Forum): 3 (e.g. 1 per year) (KER)  # of publications emerging from HERIFORGE hubs network R&I activities: 9
17	Increased international visibility of the hub and its community people	Media Reports	4	# of routines and resources onboarded on marketplaces (e.g. EOSC & ECCCH): 9  # of quality datasets integrated on Europeana 3D: 30.
18	Usage statistics (e.g., downloads, views) of the XR library	Library Webpage	4	# of quality datasets integrated on Europeana 3D: 30.  # of clients (e.g. companies) of DOP: 30
19	# of adoption or integration of XR-related considerations or support schemes	Official Documents	5	# of developed or improved prototypes and services within hubs ecosystems: 30





20	# of cultural institutions that adopted XR technologies	Institutions' Activity Reports	5	
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**Table 19: Outputs**

#	Outputs	Source of Verification	Related Success Indicator	Related HERIFORGE KERs
1	Establishment of a continuously accessible stakeholder database	Project Website	1, 2	KER3: Fully operational HERIFORGE Hubs Network composed of 3 hubs in Cyprus, Poland and Turkey
2	Development of an assessment model for community membership	Hub Annual Reports	1, 2, 3	KER4: Guidelines for building innovation ecosystems # of knowledge exchange events: 30
3	# of networking and collaboration events organised	Hub Annual Reports	1, 2, 4	KER4: Guidelines for building innovation ecosystems # of knowledge exchange events: 30
4	Development of a digital collaboration toolkit	Project Website	4, 5, 6	KER1: Strategic impact package # of entities from outside of consortium participating in workshops in preparation for co-developing the Guidelines: 20
5	# of open communication channels for the community	Hub Annual Reports	4	
6	# of outreach and capacity building initiatives undertaken to foster new local XR communities	Hub Annual Reports	1, 2, 9	KER4: Guidelines for building innovation ecosystems # of workshops and trainings: 6
7	# of digital and physical spaces for the community provided by the hubs	Hub Annual Reports	7, 8	KER4: Guidelines for building innovation ecosystems # of knowledge exchange events: 30 # of researchers trained in innovation ecosystem: 300 # of workshops and trainings: 6 # of entities from outside of consortium participating in workshops in preparation for co-developing the Guidelines: 20
8	# of existing XR tools, software, licenses, 3D models, and other assets mapped	Hub Annual Reports	8	
9	# of training sessions conducted for local stakeholders on applying for international grants	Hub Annual Reports	10	KER4: Guidelines for building innovation ecosystems # of knowledge exchange events: 30



				# of researchers trained in innovation ecosystem: 300 # of workshops and trainings: 6
10	# of resources and guidance provided on impact assessment practices	Hub Annual Reports	11	KER1: Strategic impact package # of entities involved in consultations around the Strategic impact package: 20
11	# of cultural institutions receiving financial planning support	Hub Annual Reports	12	KER1: Strategic impact package # of entities involved in consultations around the Strategic impact package: 20 KER4: Guidelines for building innovation ecosystems # of workshops and trainings: 6
12	# of targeted market reports developed and disseminated	Project Website	5, 6	KER1: Strategic impact package # of entities involved in consultations around the Strategic impact package: 20
13	# of regular market pricing studies conducted and disseminated	Project Website	12	
14	# of reports on emerging technologies developed and disseminated	Project Website	12	
15	# of community members participating in international residency programmes	Programs' Websites	5, 14	
16	# of community members completing structured learning programmes	Hub Annual Reports	14	KER4: Guidelines for building innovation ecosystems # of workshops and trainings: 6
17	# of apprenticeship opportunities facilitated between students and XR companies or cultural institutions	Hub Annual Reports	6, 14	All KERs # of events (e.g. webinars, workshops) organised in cooperation with EU networks, projects or initiatives: 6
18	# of community members mentored	Hub Annual Reports	14, 15	
19	# of XR creators participating in the structured international exchange programmes	Hub Annual Reports	5, 14	
20	# of initiatives undertaken to facilitate connections between local and international stakeholders	Hub Annual Reports	5	
21	# of efforts made to feature national XR projects at global events	Hub Annual Reports	5, 17	

Project website	4, 19	# of entities involved Strategic impact p
Project Website	20	KER4: Guidelines ecosystems  # of entities from o participating in wor developing the Gu



## 3.5. Implementation

The cross-sector collaborative strategy of HERIFORGE requires a deep understanding of the target stakeholders. This report constitutes a guideline for each hub to cultivate their broader innovation ecosystem, ensure its operational vitality and foster partnerships between academia, civil society, business entities and policy makers.

As the first deliverable of Work Package 4 Strengthening Excellence Hubs; this deliverable D4.1 Hubs' Profiles and Inclusivity Strategies paves the way for further work to be done by several other tasks (elaborated below) by way of evolving into the D.4.2 Common organisational and governance models of the HERIFORGE Hubs Network to be delivered by Task 4.1, in two takes by months 18 and 36.

In summary, D4.1 Contributes to HERIFORGE in two takes. First by providing a deep understanding of the target stakeholders mapped and profiled (questionnaire and SWOT) according to their needs and goals (interviews), while projecting into each place-based ecosystem's probable future scenarios (focus groups) from the eyes of the stakeholders. As a second step it onboards project partners from other tasks in an interactive strategy workshop which starts by informing them on Task 4.2 findings to provide an informed and contextualised space for co-designing with project partners, what could be framed as the initial design sprints of the HERIFORGE Hubs Network. Through the strategy workshop, this deliverable gives a broad insight regarding the profile of the 3 local ecosystems and what it may mean to each WP (WP2, 3 and 5), and a more granular insights by way of making action recommendations for the following tasks and deliverables that are in direct connection with Task 4.2:

**Task 4.1 - Establishing HERIFORGE Hubs Network:** "Objective 1 - Grow a Dynamic community and foster productive collaborations" (Table 13) gives a summary of the needs expressed by the ecosystem actors in order to build a community and translates them into recommended actions to be taken into account by T4.1 and D4.2 Common organisational and governance models of the HERIFORGE Hubs Network.

**Task 2.2. Framework for cross-border R&I strategy for cross-sectoral collaboration:** "Objective 4. Facilitate international exchange and global recognition for XR in cultural heritage" (Table 16) recommends actions to support a cross-border shared innovation ecosystem that can be taken into account by D.2.2 Ecosystems strategy.

**Task 2.3. Action and investment plans for effective and responsible public policies in XR:** "Objective 2 - Enhance the access to funding and commercial and economic viability for XR in cultural heritage" (Table 14) summarizes the bottom-up needs expressed by the ecosystem actors and translates them into recommended actions to be taken into account by T2.3 and D2.3 Action and investment plans.

**Task 4.3 - Sharing technology and best practices between the excellence hubs ecosystems:** "Objective 3. Foster continuous and inclusive learning opportunities in XR and cultural heritage" (Table 15) recommends topics to be covered in Task 4.3 activities and D4.4 Guidelines for building human-centric and trustworthy innovation ecosystems.

**Task 4.4. Open Calls & FSTP Management,** are provided insight by the mapping and profiling activity creating the HHNR contributing to T4.4s preparation, launch, dissemination by way of creating a stakeholder registry and target audience for the Open Calls.

**Task 3.1. Design of Joint Pilot Research Projects and Task 3.4. Support for external projects, open call facilitation and evaluation:** "Objective 5. Advocate for policy and institutional awareness on XR in cultural heritage" (Table 17) provides insights on practical and technical gaps that offer hints for the Open call challenges as well as the Joint Pilot research Projects.

To conclude, this deliverable provides a deep understanding of HERIFORGE's target stakeholders and their needs and sets the ground for future work to ensure that the HERIFORGE Hubs Network (KER3) is delivered as a tangible organisational structure of 3 local hubs, facilitating engagement of research organisations, companies, cultural sector and policymakers into a cross-border shared innovation ecosystem.



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## Annexes

### A. Stakeholder Mapping Sectoral Categorization

Sector Group	Sector	Subsector
Heritage	Traditional Cultural Expressions	Art Crafts
		Festivals
		Celebrations
	Cultural Sites	Archaeological Sites
		Museums
		Libraries
		Archives
		Exhibitions
Arts	Visual Arts	Painting
		Sculpture
		Photography
		Antiques
	Performing Arts	Music
		Theatre
		Dance
		Opera
		Circus
		Puppetry
Media	Publishing and Printed Media	Books
		Press
		Other
	Audiovisuals	Film
		Television
		Radio
		Other
Functional Creations	Design	Interior
		Graphic



		Fashion
		Jewellery
		Toys
	New Media	Social Media
		Advertising Services
		Streaming Services
		Video Games
	Creative Services	Architectural Services
		Advertising Services
		Other
Emerging Technologies	Immersive Technologies	Virtual Reality (VR)
		Augmented Reality (AR)
		Mixed Reality (MR)
		Extended Reality (XR)
	Artificial Intelligence (AI)	Generative AI
		Conversational AI
		Big Data
		Other
	Blockchain and Web3	Digital Assets
		Smart Contracts
		Decentralized Applications (dApps)
		Decentralized Cloud Storage
		Other
	IoT (Internet of Things)	Smart Home Integration
		Wearable Technology
		Other





## B. Online Questionnaire

### B.1. Online Questionnaire Form

Stakeholder Questionnaire: Overview, Insights, and Resources for Immersive Technologies and Cultural Heritage  
We appreciate your participation in this questionnaire, which is part of the HERIFORGE project\* which aims to develop a network of three interconnected place-based ecosystems in Poland, Cyprus and Türkiye providing an excellent Research & Innovation (R&I) environment for innovation in the cultural and creative industries (CCIs) with the responsible use of extended reality (XR) technologies and cultural heritage for the benefit of social resilience.

By sharing your information and insights through this questionnaire, you contribute significantly to:

- Mapping stakeholders, identifying opportunities, and addressing challenges in the implementation of XR technologies to cultural heritage.
- Shaping strategies to promote the responsible use of XR technologies in cultural heritage.

HERIFORGE aims to provide its stakeholders opportunities, including:

- **Open Calls for Funding:** Up to 50.000 Euro financial support to innovative projects aimed at developing technical solutions addressing specific challenges in the application of immersive technologies to cultural heritage,
- **Tools and Platforms:** Access to software or tools developed on an open source basis, or provided by project partners on co-design sessions, or training programs,
- **Learning and Networking:** Workshops, co-design sessions, and training programmes bringing together academia, businesses, policymakers, and society,
- **Publications:** Open access to all project publications and best practices.

For more information about the HERIFORGE project, please visit [our website](#). For further questions on the project contact: [info@heriforge.eu](mailto:info@heriforge.eu)

By proceeding, you consent to your data being used in aggregate for analysis and reporting. If you have any concerns, please contact [dataprotection@heriforge.eu](mailto:dataprotection@heriforge.eu).

\*HERIFORGE is a project funded by the European Union under Grant Agreement no. 101186573.

**The questionnaire may take 5 to 15 minutes to complete, depending on your responses and selected path. Please choose your preferred path\*:**

- ☐ Register for the HERIFORGE Stakeholder List and share your ideas and insights as well.
- ☐ Skip registration and proceed to share your ideas and insights only.

#### 1. Data Protection

##### Data Protection Notice \*

By registering to our Stakeholders List you are sharing with us your personal data such as your name, contact information, and country of residence. This information will be shared between the project partners to seek your advice or future consultations and/or to inform you about our Hub's upcoming activities such as open calls, training, networking events.

You can freely withdraw your consent at any time, as well as exercise your rights as data subject under Regulation (EU) 2018/1725, by contacting HERIFORGE data protection officers at the address provided in the Data Protection Notices published on [our website](#).

- ☐ I give my consent for being contacted via email for future consultations regarding Cultural Heritage and Immersive Tech.
- ☐ I give my consent for being contacted via email for future communications regarding the HERIFORGE project.

#### 2. HERIFORGE Stakeholder Registry General Information

In this section, we ask questions to understand how you relate to cultural heritage and/or to immersive technologies, metaverses or XR technologies. The level of detail is to better understand you and your needs, but most questions are not mandatory; you can skip them.



- First Name \*
- Last Name \*
- Email Address \*
- Country of Residence \*
- City of Residence \*
- Organization, if applicable
- Please select the option that best describes your organization or affiliation. (If none apply, please select "Other" and specify.)

- ☐ Archaeological Site
- ☐ Archive
- ☐ Chamber of Commerce/Industry
- ☐ Company
- ☐ Consortium
- ☐ Cooperative
- ☐ Individual
- ☐ Institute
- ☐ Library
- ☐ Ministry
- ☐ Municipality
- ☐ Museum
- ☐ Non-Governmental Organization (NGO)
- ☐ Performance Hall (Theatre, Opera, Music etc.)
- ☐ Platform Provincial Directorate
- ☐ Regional Development Agency
- ☐ Research Center
- ☐ Startup
- ☐ University
- ☐ Other:

### 3. Affiliation Category

- Please select the category that best describes your affiliation. (If none apply, please select "Other" and specify.)\*
- ☐ Academia
- ☐ Civil Society
- ☐ Individual
- ☐ Private Sector
- ☐ Public Sector
- ☐ Other:

### 4. Sectoral Information

In the following three sections, you will answer questions about the sectoral categories that best represent you or your organization.

The sector categories listed in this section are based on the UNCTAD classification and have been slightly revised to include emerging technologies.

- Please select the sector group that best represents you or your organization. (If none apply, please select "Other" and specify.)\*
- ☐ Arts
- ☐ Emerging Technologies (Immersive Technologies, AI, Blockchain, Web3, IoT)
- ☐ Functional Creations (Design, New Media, Creative Services)
- ☐ Heritage
- ☐ Media
- ☐ Other:

#### 4.1. Sectoral Information (Heritage)

- Please select the sector that best represents you or your organization. (If none apply, please select "Other" and specify.)
- ☐ Traditional Cultural Expressions
- ☐ Cultural Sites
- ☐ Other:

##### 4.1.1. Subsectoral Information (Heritage)

- Please select the subsector that best represents you or your organization. (If none apply, please select "Other" and specify.)



specify.)

- ☐ Art crafts
- ☐ Festivals
- ☐ Celebrations
- ☐ Archaeological Sites
- ☐ Museums
- ☐ Libraries
- ☐ Archives
- ☐ Exhibitions
- ☐ Other:

#### 4.2. Sectoral Information (Arts)

- Please select the sector that best represents you or your organization. (If none apply, please select "Other" and specify.)
  - ☐ Visual Arts
  - ☐ Performing Arts
  - ☐ Other:

##### 4.2.1. Subsectoral Information (Arts)

- Please select the subsector that best represents you or your organization. (If none apply, please select "Other" and specify.)
  - ☐ Painting
  - ☐ Sculpture
  - ☐ Photography
  - ☐ Antiques
  - ☐ Music
  - ☐ Theatre
  - ☐ Dance
  - ☐ Opera
  - ☐ Circus
  - ☐ Puppetry
  - ☐ Other:

#### 4.3. Sectoral Information (Media)

- Please select the sector that best represents you or your organization. (If none apply, please select "Other" and specify.)
  - ☐ Publishing and Printed Media
  - ☐ Audiovisuals
  - ☐ Other:

##### 4.3.1. Subsectoral Information (Media)

- Please select the subsector that best represents you or your organization. (If none apply, please select "Other" and specify.)
  - ☐ Books
  - ☐ Press
  - ☐ Film
  - ☐ Television
  - ☐ Radio
  - ☐ Other:

#### 4.4. Sectoral Information (Functional Creations)

- Please select the sector that best represents you or your organization. (If none apply, please select "Other" and specify.)
  - ☐ Design
  - ☐ New Media
  - ☐ Creative Services
  - ☐ Other:

##### 4.4.1. Subsectoral Information (Functional Creations)

- Please select the subsector that best represents you or your organization. (If none apply, please select "Other" and specify.)
  - ☐ Interior
  - ☐ Graphic
  - ☐ Fashion
  - ☐ Jewellery
  - ☐ Toys
  - ☐ Social Media



- ☐ Advertising Services
- ☐ Streaming Services
- ☐ Video Games
- ☐ Architectural Services
- ☐ Other:

#### 4.5. Sectoral Information (Emerging Technologies)

- Please select the sector that best represents you or your organization. (If none apply, please select "Other" and specify.)
  - ☐ Immersive Technologies
  - ☐ Artificial Intelligence (AI)
  - ☐ Blockchain and Web3
  - ☐ IoT (Internet of Things)
  - ☐ Other:

#### 4.5.1. Subsectoral Information (Emerging Technologies)

- Please select the subsector that best represents you or your organization. (If none apply, please select "Other" and specify.)
  - ☐ Virtual Reality (VR)
  - ☐ Augmented Reality (AR)
  - ☐ Mixed Reality (MR)
  - ☐ Extended Reality (XR)
  - ☐ Generative AI
  - ☐ Conversational AI
  - ☐ Big Data
  - ☐ Digital Assets
  - ☐ Smart Contracts
  - ☐ Decentralized Applications (dApps)
  - ☐ Decentralized Cloud Storage
  - ☐ Smart Home Integration
  - ☐ Wearable Technology
  - ☐ Other:

### 5. Profile Details and Engagement Scope

In this section, you will provide details about your expertise, role within the ecosystem, interests, available resources, and the audience or community you engage with. This information will help us better understand your profile and how you contribute to or interact with the broader ecosystem.

- Your Interests (Please select up to three.)
  - ☐ Digital Transformation
  - ☐ Entrepreneurship
  - ☐ Governance
  - ☐ Innovation and Creativity
  - ☐ Policymaking
  - ☐ Public Engagement
  - ☐ Sustainability
  - ☐ Tourism
  - ☐ Other:
- Your Role in the Ecosystem
 

Below is a description of each role to help you identify your position in the XR and cultural heritage ecosystem. (Please select up to three.)

Please [click here](#) to view the definitions/explanations for the options.

  - ☐ Advocate
  - ☐ Consumer
  - ☐ Creator
  - ☐ Data Provider
  - ☐ Educator/Trainer
  - ☐ Facilitator/Connector
  - ☐ Fundraiser
  - ☐ Funder
  - ☐ Innovator
  - ☐ Policymaker
  - ☐ Regulator
  - ☐ Researcher



- ☐ Service Provider
- ☐ Other:

- If you have any project(s) related to XR technologies and cultural heritage, please share their name(s) below.
- If you've listed any project(s), please include their website(s) below, if available.

## 6. About You

- Please select the category that best describes your affiliation. (If none apply, please select "Other" and specify.)\*
  - ☐ Academia
  - ☐ Civil Society
  - ☐ Individual
  - ☐ Private Sector
  - ☐ Public Sector
  - ☐ Other:
- Please select the sector group that best represents you or your organization. (If none apply, please select "Other" and specify.)\*
  - ☐ Arts
  - ☐ Emerging Technologies (Immersive Technologies, AI, Blockchain, Web3, IoT)
  - ☐ Functional Creations (Design, New Media, Creative Services)
  - ☐ Heritage
  - ☐ Media
  - ☐ Other:
- Please select the country you share your ideas and insights for. \*
  - ☐ Cyprus
  - ☐ Poland
  - ☐ Türkiye

## 7. Ideas and Insights

In this section, you will share your insights on strengths, weaknesses, opportunities, and threats related to XR technologies and cultural heritage.

- Please evaluate the strengths you or your organization possess that support the adoption and implementation of XR technologies in cultural heritage. Please indicate strength level using the following scale: Completely Irrelevant, Somewhat Irrelevant, Neutral / Unsure, Somewhat Relevant, Very Relevant. If you are answering on behalf of an organisation, please consider your organisation's strengths, not your own. \*

Please [click here](#) to view the definitions/explanations for the options.

- ❖ Rich Cultural Heritage Resources
- ❖ Cross-Disciplinary Teams
- ❖ Institutional Experience
- ❖ Strong Network Involvement
- ❖ Technological Expertise
- ❖ Data Availability
- ❖ Successful Pilot Projects
- ❖ Organizational Commitment
- ❖ Existing Infrastructure
- ❖ Internal Funding Sources

- What internal weaknesses or limitations do you or your organization face that hinder the use of XR technologies in cultural heritage? Indicate weakness level using the following scale: Completely Irrelevant, Somewhat Irrelevant, Neutral / Unsure, Somewhat Relevant, Very Relevant. If you are answering on behalf of your organisation, please consider your organisation's weaknesses or limitations, not just your own. \*

Please [click here](#) to view the definitions/explanations for the options.

- ❖ Limited Resources
- ❖ Weak Infrastructure
- ❖ Overdependence on External Platforms
- ❖ Limited Ability to Manage or Access Data



- ❖ Lack of Clear Priorities
- ❖ Limited Engagement Capacity
- ❖ Outdated Technology
- ❖ Insufficient Skills or Knowledge
- ❖ Resistance to New Approaches

- What external opportunities do you see that could support the growth of XR technologies in cultural heritage for your country? Please indicate opportunity level using the following scale: Completely Irrelevant, Somewhat Irrelevant, Neutral / Unsure, Somewhat Relevant, Very Relevant. \*

Please [click here](#) to view the definitions/explanations for the options.

- ❖ Emerging Technologies
- ❖ Enhancing Inclusivity and Accessibility
- ❖ Integration with Education
- ❖ Global Digitization Initiatives
- ❖ Cultural Tourism Growth
- ❖ Public and Private Funding
- ❖ Sustainability Initiatives
- ❖ Corporate Involvement
- ❖ Global Economic Trends
- ❖ Rising Interest in Heritage Metaverse

- What external factors or threats could pose challenges to the adoption or growth of XR technologies in cultural heritage for your country? Please indicate threat level using the following scale: Completely Irrelevant, Somewhat Irrelevant, Neutral / Unsure, Somewhat Relevant, Very Relevant. \*

Please [click here](#) to view the definitions/explanations for the options.

- ❖ Economic Downturns
- ❖ Global Crises
- ❖ Digital Divide
- ❖ Regulatory Hurdles
- ❖ Technological Obsolescence
- ❖ Resistance to Change
- ❖ Intellectual Property Disputes
- ❖ Political Instability
- ❖ Cybersecurity Threats
- ❖ Misinformation and Misuse of XR
- ❖ Over-Commercialization Risks
- ❖ Dependence on Global Supply Chains
- ❖ Competition from Entertainment Sectors
- ❖ Environmental Concerns

## 8. Networks and Communities

In this section, you will share information about your involvement in XR and cultural heritage networks or communities. If you are a member of any, you will be asked to provide their names and suggest potential improvements. If you are not a member, you will have the opportunity to share what types of networks or communities you would like to see and why.

- Do you have any memberships in networks and/or communities in your field?
  - ☐ Yes
  - ☐ No
- Please share the name of the networks and/or communities you are a member of in your field.
- How could these networks and/or communities work better?
- What types of networks or communities in your field would you like to be a part of?
  - ☐ Cultural Heritage Preservation Communities
  - ☐ Interdisciplinary Collaboration Networks
  - ☐ Global Cultural Heritage Networks
  - ☐ Skill Development and Training Communities





- ☐ Policy and Advocacy Networks
- ☐ Funding and Resource Networks
- ☐ Other:

## 9. National Hub

As part of the HERIFORGE project, a national-level hub will be established to foster XR and cultural heritage collaborations. Here, we invite you to share your thoughts on how such a hub can best support the ecosystem.

- Please select the most important support services and activities that your hub can provide you? (Please select up to three)

- ☐ Learning & Education
- ☐ Networking & Matchmaking
- ☐ Coaching & Mentorship
- ☐ Access to Equipment & Materials
- ☐ Public Programs
- ☐ Community, Space & Infrastructure
- ☐ Other:

- What type of learning activities would best meet your needs? (Please select up to three)

- ☐ Data Optimization
- ☐ Digital Asset Management
- ☐ Regulatory Aspects
- ☐ Intellectual Property Management
- ☐ Innovation
- ☐ Ethics
- ☐ Content Creation for XR
- ☐ Generative AI
- ☐ Other:

## 10. Vision and Future

- What is your main motivation to do in the intersection of XR and cultural heritage in the long-term?

- ☐ Creating innovative XR tools for cultural heritage
- ☐ Making cultural heritage accessible to all
- ☐ Educating the public about cultural heritage
- ☐ Preserving heritage for future generations
- ☐ Building global collaborations in XR and cultural heritage
- ☐ Advancing interdisciplinary research in XR and cultural heritage
- ☐ Enhancing cultural tourism with immersive experiences
- ☐ Developing ethical policies and standards for XR
- ☐ Other:

## 11. Additional Thoughts and Suggestions

- Do you have any additional thoughts, suggestions, or feedback you'd like to share?

## B.2. Ecosystem Roles Explanations

Ecosystem Role	Explanation
Advocate	Promotes the importance of the field, raising awareness and influencing public opinion or policy.
Consumer	Uses or benefits from products, services, or experiences created within the ecosystem.
Creator	Produces content, artifacts, or experiences, often directly engaging with innovative tools or practices.
Data Provider	Supplies data, datasets, or information critical for analysis, decision-making, or development within the ecosystem.



Educator/Trainer	Provides education, training, or capacity building programs to enhance skills and knowledge within the ecosystem, fostering development and understanding of innovative tools, methods, or practices.
Facilitator/Connector	Brings stakeholders together, fostering collaboration and partnerships within the ecosystem.
Fundraiser	Seeks and raises funding and resources to support projects, initiatives, or institutions within the ecosystem.
Funder	Provides financial support for stakeholders within the ecosystem.
Innovator	Develops new ideas, technologies, or methods that advance the field.
Policymaker	Develops policies and strategies that guide and support the development of the ecosystem, focusing on long-term goals and societal needs.
Regulator	Establishes and enforces rules, standards, and guidelines to ensure compliance with ethical, legal, and operational frameworks.
Researcher	Conducts studies to generate knowledge and insights that inform the ecosystem.
Service Provider	Delivers essential services, such as technical support, consultation, or operational assistance, that enable ecosystem projects and initiatives to succeed.

### B.3. SWOT Explanations

#### B.3.1. Strengths

Strength	Explanation
<b>Technological Expertise</b>	Existing in-house knowledge and skills in XR technologies for cultural heritage applications.
<b>Rich Cultural Heritage Resources</b>	Access to diverse and significant cultural heritage sites, artifacts, and traditions.
<b>Institutional Experience</b>	Cultural institutions and organizations with a proven track record in heritage preservation and innovation.
<b>Cross-Disciplinary Teams</b>	Collaboration among experts in different fields such as archaeology, history, technology, and design within the organization or initiative.
<b>Existing Infrastructure</b>	Established technical or physical infrastructure, such as labs or archives, for developing XR projects.
<b>Successful Pilot Projects</b>	Previously implemented XR projects in cultural heritage that serve as models for future initiatives.
<b>Internal Funding Sources</b>	Dedicated budget allocations or institutional funds available for XR and cultural heritage initiatives.
<b>Organizational Commitment</b>	Leadership and institutional support for integrating XR into cultural heritage activities.
<b>Strong Network Involvement</b>	Active participation in professional networks and collaborations, enhancing resource sharing and innovation.
<b>Data Availability</b>	Access to extensive, digitized cultural heritage collections and datasets, providing a strong foundation for XR applications and innovation.



### B.3.2. Weaknesses

Weakness	Explanation
<b>Limited Ability to Manage or Access Data</b>	Difficulty in collecting, organizing, or utilizing data effectively, including challenges in accessing relevant databases for XR applications in cultural heritage.
<b>Overdependence on External Platforms</b>	Dependence on external platforms arises from insufficient internal resources, expertise, or infrastructure to develop or maintain tailored solutions.
<b>Insufficient Skills or Knowledge</b>	Limited resources or training opportunities to build knowledge and skills in XR and cultural heritage.
<b>Limited Resources</b>	Challenges in securing sufficient funding, tools, or talent to support XR-related initiatives in cultural heritage.
<b>Weak Infrastructure</b>	Inadequate technological, physical, or institutional infrastructure to support XR initiatives in cultural heritage.
<b>Lack of Clear Priorities</b>	Uncertainty or absence of a clear internal strategy for adopting or implementing XR technologies in cultural heritage.
<b>Outdated Technology</b>	Insufficient access to advanced XR tools or outdated technology limiting innovation.
<b>Resistance to New Approaches</b>	Hesitation or reluctance to embrace new technologies or workflows.
<b>Limited Engagement Capacity</b>	Difficulty in actively participating in partnerships, networks, or collaborative initiatives due to time constraints, lack of connections, or insufficient resources.



### B.3.2. Opportunities

Opportunity	Explanation
<b>Global Economic Trends</b>	The increasing focus on digital transformation and innovation in the global economy creates opportunities for XR applications in cultural heritage, attracting investments and fostering market growth.
<b>Emerging Technologies</b>	Rapid advancements in XR tools enhance immersive cultural heritage experiences.
<b>Global Digitization Initiatives</b>	Increasing global efforts to digitize cultural assets provide opportunities for XR applications in preservation and showcasing.
<b>Cultural Tourism Growth</b>	The growing cultural tourism market offers opportunities for XR through virtual travel experiences and enhanced site visits, attracting tourists seeking immersive engagement with cultural heritage.
<b>Public and Private Funding</b>	Growing interest in funding XR projects from governments, NGOs, and private investors supports heritage-focused innovations.
<b>Integration with Education</b>	Educational institutions are adopting XR tools for teaching history, archaeology, and cultural studies, creating new demands.
<b>Sustainability Initiatives</b>	Aligning XR projects with sustainable development goals attracts partnerships and funding while promoting cultural and environmental preservation.
<b>Enhancing Inclusivity and Accessibility</b>	XR makes cultural heritage more accessible to people with disabilities or those unable to visit physical sites.
<b>Corporate Involvement</b>	Companies are engaging in cultural heritage projects for corporate social responsibility initiatives, opening potential partnerships.
<b>Rising Interest in Heritage Metaverse</b>	Creating immersive metaverse spaces dedicated to exploring historical eras or restored environments fosters XR development.



### B.3.2. Threats

Threat	Explanation
<b>Economic Downturns</b>	Global or national recessions that reduce funding for cultural and technological initiatives.
<b>Political Instability</b>	Uncertainty or conflict that disrupts cultural heritage preservation projects or XR adoption.
<b>Global Crises</b>	Events such as pandemic, natural disaster, or war that divert resources and attention away from cultural heritage.
<b>Regulatory Hurdles</b>	Government regulations or policies that restrict the use of XR technologies and cultural heritage or impose strict compliance requirements.
<b>Environmental Concerns</b>	Rising awareness of the energy consumption and carbon footprint of XR technologies may discourage adoption.
<b>Competition from Entertainment Sectors</b>	XR innovations in gaming and entertainment may overshadow cultural heritage-focused applications.
<b>Over-Commercialization Risks</b>	Excessive focus on monetizing XR experiences could compromise the authenticity of cultural heritage.
<b>Dependence on Global Supply Chains</b>	Reliance on foreign technologies or hardware for XR tools makes systems vulnerable to global supply chain disruptions.
<b>Intellectual Property Disputes</b>	Complex ownership issues related to digital replicas or XR-created content could delay projects.
<b>Digital Divide</b>	Persistent inequalities in access to technology between urban and rural areas or between countries hinder broader adoption.
<b>Misinformation and Misuse of XR</b>	Risks of XR being used to spread false narratives or inappropriately alter historical accuracy.
<b>Cybersecurity Threats</b>	Vulnerabilities in XR platforms could lead to data breaches or manipulation of digital heritage content.
<b>Technological Obsolescence</b>	Rapid innovation cycles in XR make existing tools and platforms outdated quickly, requiring constant reinvestment.
<b>Resistance to Change</b>	Societal or institutional reluctance to adopt emerging XR technologies may slow progress and hinder adoption.



## C. 1:1 Interviews

### C.1. Interview Questions

#### Intro

1. To begin with, how would you introduce yourself to a room if they never have met you before? How would you describe your work?
2. We are eager to learn more about your work in the intersection of XR technologies and cultural heritage. How does your work impact this intersection?
3. What kind of projects have you done in this area?
  - a. Who did you collaborate with?
  - b. What kind of challenges and barriers did you overcome during the project? How?

#### Personal Community Experiences

4. Regarding your field, which communities or circles do you feel you belong to? What made you decide to be part of them?
5. Which community or circles are creating obstacles professionally? Why is that?
  - a. Do these relationships hinder the advancement of XR in cultural heritage? How?

#### National Hub Priorities

As mentioned, we are early in the process of building hubs, connected across three countries for activating the use of XR for advancing innovation in cultural heritage.

6. Thinking about the intersection of XR and cultural heritage, what role do you think that this hub should play?
7. How would you contribute to this hub, if you were a member of it?
8. What types of barriers, challenges or disadvantages might block the hub's success and progress?
  - a. What kind of policies are needed to address these challenges?
9. What exciting opportunities and trends can support the success of this hub?
10. When you think about the barriers and opportunities in your country, whose involvement do you think is crucial for this hub?
  - a. How can they be involved?
  - b. From your point of view on the diversity and inclusion in your country, what are the obstacles and difficulties hindering inclusion and diversity?
11. How might cultural heritage institutions increase the demand in XR technologies to the point of establishing new, breakthrough XR technologies and companies?

#### International Collaboration Opportunities

12. Thinking about the potential international collaborations, how would you expect your country hub to support your work?
13. What would indicate that we are advancing as a country in the international arena?

#### Expectations from Excellence Hub & Wrap-Up

14. What kind of success stories would prove the impact of this hub?
15. Now that you know a little bit about our work and intent for this research, is there anyone you suggest for us to talk to? What might we learn from them?
16. During this interview, what is a question we didn't ask you but should have?

### C.2. Individual Harvesting Documents

#### C.2.1. Cyprus

##### Interviewee 1

#### General Information

Date of Interview:	March 11, 2025
Name(s) of the Interviewers	Anna Margaritova
Duration of the Interview (min.)	57 minutes, 49 seconds

#### Interviewee Profile

Interviewee Code Name	HERIFORGE_1_20250311_digitaltwinspecialist_CY
Interviewee Category	NGO, CoE, public-sector, non-profit research and innovation center
Sector	XR, Digital Twins, Cultural Heritage, Urban Planning





Occupation	IT Project Manager & Digital Twin Specialist
Primary Location: City, Country	Former Team Leader at CYENS Centre of Excellence;
Other Relevant Demographic Info (If applicable)	Nicosia

### Past & Present Experiences with Communities

*What stands out from their connections with professional communities and circles?*

- + Part of CYENS' multidisciplinary ecosystem, collaborating with groups like Extended Experiences and Museum Lab.
- + Engaged with CYENS' Cultural Heritage group (recently formed, name unclear) for holistic XR/heritage projects.
- + No strong personal ties to external XR/cultural heritage communities beyond CYENS.
- + Worked with Nicosia Municipality, UCL, and Bank of Cyprus Culture Foundation on specific projects.
- + Values creative, implementation-focused communities over purely theoretical ones.

### Key Role

*What role might the interviewee play in the Hub? (Connector, networker, thought leader, resourcer etc)*

- + Implementer: Led delivery of tangible digital twin solutions with real-world impact.
- + Connector: Bridged research, public sector, and cultural stakeholders for cohesive outcomes.
- + Advisor: Offers seasoned insights on managing complex, multi-stakeholder projects.

### Pain Points, Challenges, Barriers, Obstacles in the National Ecosystem

*What issues did the interviewee list?*

- + Bureaucratic delays: Public sector (e.g., Nicosia Municipality, Ministries) slow and siloed, lacking big-picture vision.
- + Awareness gap: Stakeholders unfamiliar with digital twins' purpose, requiring extensive education.
- + Political constraints: Drone restrictions near Turkish Cypriot border limited Nicosia Digital Twin scope.
- + Competition: Research groups and hubs (e.g., CUT, Home for Cooperation) work in silos, hindering collaboration.
- + Regulatory hurdles: Permissions for drone flights involve police, Civil Aviation, and safety compliance.

### International Expectations

*How might Hubs play a role for international collaboration opportunities?*

- + Hubs should unite fragmented local efforts under a shared platform for cultural heritage data.
- + Facilitate networking with global XR/heritage communities for knowledge exchange.
- + Support bicommunal (Greek/Turkish Cypriot) collaboration via Turkey hub partnership.
- + Enable showcasing of Cypriot XR projects (e.g., in Louvre) to boost international recognition.
- + Provide funding and access to broader networks to scale local innovations.

### Opportunities

*What are the opportunities for the Hub, according to the interviewee?*

- + Centralize cultural heritage data to avoid duplication and enhance accessibility.
- + Train public sector and cultural institutions on XR benefits and use.
- + Leverage Cyprus' small size as a manageable testbed for urban digital twins.
- + Create inclusive XR experiences (e.g., for disabilities, Gen Z) to broaden heritage engagement.
- + Showcase unique XR/heritage projects globally to elevate Cyprus' profile.

### Critical Quotes (Max. 5)

- + "We understood that a digital twin... should be offered publicly in order to be enhanced constantly with information."
- + "We need something that will bring all the information together... to avoid showstoppers in every area."
- + "If you take the archaeological site of Kourion and transform it into an XR experience... in Louvre, this would be huge."
- + "Bicommunal projects... both communities... work on at the same time with the same benefits, same values."

### Surprising Highlights (Max. 5)

*What did this interviewee say that provoked your point of view about Hubs? Why?*

- + Public-first mindset: His push for free, open digital twins (vs. monetization)
- + Bicommunal angle: Linking the hub to Greek/Turkish Cypriot collaboration
- + Siloed competition: Even within research (e.g., CYENS), rivalry over collaboration stood out as a cultural barrier unique to Cyprus.
- + Singapore benchmark: Citing Singapore's top-down digital twin as a model contrasted sharply with Cyprus' bottom-up struggles—scale matters.
- + Disability focus: His emphasis on XR for accessibility (e.g., disabilities) added a social inclusion layer



## Interviewee 2

### General Information

Date of Interview:	06 <sup>th</sup> March 2025
Name(s) of the Interviewers	Anna Margaritova
Duration of the Interview (min.)	62 mins

### Interviewee Profile

Interviewee Code Name	HERIFORGE_2_20250306_ceocto_CY
Interviewee Category	Private Sector
Sector	Immersive Technologies
Occupation	CEO & CTO
Primary Location: City, Country	Nicosia, Cyprus
Other Relevant Demographic Info (if applicable)	

### Past & Present Experiences with Communities

*What stands out from their connections with professional communities and circles?*

- + Great collaboration with a University on modules for physiotherapy and breast cancer survivors that succeeded well beyond their expectations.
- + A collaboration with an Education foundation and School Authority to create a mixed reality experience center for students.
- + A joint venture which is focused on bringing mixed reality training and remote assistance to shipping and maritime industry. Gradually XR is gaining traction within this slow-moving industry.
- + A module for first responders to train on a triaging method, which gave the company a lot of insight.
- + A collaboration with the military armed forces.
- + Some links with communities of XR developers, however the interviewees don't feel they really identify with them.
- + Strong links with communities of startup / entrepreneurs – they feel they have the same struggles, such as fundraising, grants and running a business. However, given the nature of projects and tenders, the environment is more competitive than collaborative.

### Pain Points, Challenges, Barriers, Obstacles in the National Ecosystem

*What issues did the interviewee list?*

- + The tenders process, which can take a lot of time and hence be prohibitive for a startup which may want to move fast.
- + Slow-moving government institutions, however, the interviewee stresses that they were lucky in that in government they met with people who grasped the technology, were enthusiastic about it and even extended their company's ideas.
- + The state doesn't seem to have a solid and robust policy, with a vision to transition to new technologies.
- + No policies in place and no strategic planning to implement any policies and strategies.
- + European over-regulation is also a problem as it slows down innovation, by forcing innovators to safeguard citizens from challenges that may not even be there.
- + Funds are also a barrier, as ventures are often not viable.
- + Too rigid policies and regulations, regulations and policies for the sake of regulations and policies rather than to help innovation.

### International Expectations

*How might Hubs play a role for international collaboration opportunities?*

- + They may hold events that will support collaboration in good faith, to find people with the right mentality to share information. Such people, when they gather together, they will ideate and learn from each other.

### Opportunities

*What are the opportunities for the Hub, according to the interviewee?*

- + XR may help 'bring to life' cultural heritage artifacts, by displaying them in an exciting, interactive way, and thus showcasing their multi-level value. We have the opportunity to bring to life historical personalities and events, and this can be a key goal of the Hubs.
- + The Hubs may teach people interested to deliver all the things regarding (in this case) cultural heritage through trainings, workshops, technology days when the participants will experience XR, etc.
- + The Hub may be a structure to provide funds to help culture organizations in Cyprus.
- + The Hub may be engage in matchmaking between XR organization and cultural organizations such as museums and galleries, even with universities.
- + More generally, technologies like XR may help people with certain kinds of disabilities experience things (such as cultural artifacts) which they wouldn't be able to experience otherwise.



- + Having digital twins of cultural heritage artifacts in other countries between the Hubs, where users may interact and have conversations with other people or digital archaeologists or historical figures, either with real people or AI, in a gamified experience, with a token of participation at the end.

### Critical Quotes (Max. 5)

- + Since 2017 and after our phases, actually with mixed reality, we realized that when you have a fully ergonomic technology because you can interact with it with your bare hands in an immersive manner, you have the ability and the freedom to create essentially whatever you want.
- + Also, with the government organizations, usually we have a single person that is truly a visionary and tries to support and transition to new technologies and we have the rest of, let's say the organization is 100 people together, the rest 99 people resisting to change and also trying in different ways to redirect the funds towards their desired direction, usually because they have their own reasons. I will leave it at that.
- + And the main issue is that the majority of people involved with the hubs are university professors and they are not business guys, so they can do some research for some years, but the funds are running out and when you stop getting funds, if you haven't paid the product, essentially you don't have any other option other than closing the Hub and continuing on a new venture.
- + In order to create a policy you should have at least one guy from innovation, and at least one guy from a more bureaucratic background, somebody who understands laws and regulations, in order to create a product policy that actually helps, not puts a stop to your efforts.
- + I do not believe that (Cultural Heritage) will push XR to a breakthrough because so many more sectors have more money, sectors like defense and mission-critical sectors.

### Surprising Highlights (Max. 5)

What did this interviewee say that provoked your point of view about Hubs? Why?

- + The interviewee said that everything that the company has done so far is piloting pilot projects, in order to showcase the results to organizations and to the government and then wait and see whether there is adoption. The interviewee attributes this to the local culture and mindset, to not change something when it works even if it works inefficiently, as well as over-regulation on the part of the European Union. I found this surprising and interesting for the Hubs, that they should try to modernize perceptions both at national level, but also, for different reasons, change European Union mindsets too.
- + The second interviewee stated emphatically that they do believe that both the (state) Research Foundation and the Chief Scientist have put in place a good strategy in the last two years in order to make Cyprus better, more sustainable, faster and more cyber. The disagreement between the two surprised me from the perspective of how the Hubs' policy proposals would be judged and if they would be judged innovative or not.
- + One of the interviewees stated that the result of each funding will be a product that will monetize, and then these funds that were essentially the startup will initiate the process of creating such experiences in Cyprus. This is a valuable insight about the funds that the Hub will provide.
- + The interviewee stressed that Heriforge should be viewed as three parts of the same entity, rather than as three different Hubs. Sharing of assets, common databases, a common folder of assets and common projects can be distributed between them and not be reworked. Also, there should be a clear guidance as to where you next want to take the project and the project should serve a specific purpose. This surprised me as I viewed the autonomy within Heriforge as a good thing and as unavoidable.
- + The interviewee suggested that collaborations shouldn't start too soon as they may limit creativity and they may resort to copycat behaviour, that is copying what's already out there and not be creative enough. This was a surprising insight for our project, something I hadn't expected to hear.

### Interviewee 3

#### General Information

Date of Interview:	05/03/2025
Name(s) of the Interviewers	Anna Margaritova
Duration of the Interview (min.)	62 min

#### Interviewee Profile

Interviewee Code Name	HERIFORGE_3_20250305_coceo_CY
Interviewee Category	Private Sector
Sector	Immersive Technologies, Cultural Heritage Preservation
Occupation	Co- CEO, Company



Primary Location: City, Country	Nicosia
Other Relevant Demographic Info (If applicable)	

### Past & Present Experiences with Communities

*What stands out from their connections with professional communities and circles?*

- + No awareness of VR/XR communities in Cyprus; only individual contacts exist locally.
- + Active member of multiple international communities (Greece, California, London, Japan) focused on VR/XR and cultural preservation
- + Collaborated with International Hellenic University to create a community preserving the ancient lyre, including courses for students.
- + Part of a California community linking restaurant/franchise owners with VR/XR for business expansion.
- + Values communities for knowledge sharing, technical expertise, and funding opportunities unavailable in Cyprus.

### Key Role

*What role might the interviewee play in the Hub? (Connector, networker, thought leader, resourcer etc)*

- + Connector: Links international networks and local efforts, bringing global insights to Cyprus.
- + Thought Leader: Offers expertise in XR for cultural heritage and practical community-building strategies.
- + Resourcer: Could provide technical know-how and access to international collaborators.

### Pain Points, Challenges, Barriers, Obstacles in the National Ecosystem

*What issues did the interviewee list?*

- + Funding shortages: Initial seed funding and ongoing financial support are major hurdles for startups.
- + Bureaucratic delays: State institutions (e.g., Nicosia municipality) impose slow decision-making (over 6 months) and excessive paperwork.
- + Lack of state support: Minimal backing or exposure from Cyprus government, unlike other countries.
- + Monopoly dynamics: State-favored organizations limit opportunities for new entrants in XR initiatives.
- + Limited local expertise: Scarcity of developers in Cyprus forces reliance on overseas talent.

### International Expectations

*How might Hubs play a role for international collaboration opportunities?*

- + Hubs should facilitate physical and digital networking with global communities (e.g., workshops, invitations).
- + Enable showcasing of local projects abroad to gain recognition and feedback.
- + Support knowledge and technology transfer through international collaborations.
- + Foster co-creation by connecting Cypriot teams with diverse global perspectives (e.g., solving shared issues differently).
- + Provide a platform for Cyprus to stay competitive in evolving XR technologies.

### Opportunities

*What are the opportunities for the Hub, according to the interviewee?*

- + Create a physical hub in Cyprus for face-to-face community building, critical for local culture.
- + Host hackathons or small team projects (e.g., digitizing local heritage) to spark collaboration.
- + Attract diverse participants (all ages, backgrounds) to enrich problem-solving and innovation.
- + Leverage international memberships to boost visibility and funding prospects.
- + Focus on measurable impact (e.g., user engagement with products) rather than rigid metrics like event counts.

### Critical Quotes (Max. 5)

- + "I'm very, very, very against state collaborations so far, because that's my major bottleneck."
- + "The essence of a community is to have a broad background... you just want them to engage and have that kind of passion."
- + "You cannot be on the top of your game if you don't have collaborators throughout the world."
- + "If you start measuring wrong analytics... you can get any kind of results you want."
- + "Create something... let it out in the market and see how it behaves."

### Surprising Highlights (Max. 5)

*What did this interviewee say that provoked your point of view about Hubs? Why?*

- + Emphasis on physical space: His push for a tangible hub in Cyprus (not just online) highlights a cultural nuance—face-to-face interaction as a community driver.
- + Rejection of state involvement: His strong aversion to politicians in tech hubs challenges assumptions about needing public figures for legitimacy; it suggests a leaner, expert-driven model.
- + Metrics skepticism: His view that traditional success metrics (e.g., event numbers) fail innovative fields like XR made me rethink how hubs should measure progress—impact over quantity.



- + Organic growth: His idea of starting with a small, committed core and expanding gradually contrasts with top-down strategies, offering a more sustainable approach.
- + Franchise use case: Applying XR to restaurant franchises was an unexpected angle, showing broader commercial potential for hubs beyond heritage preservation.

#### Interviewee 4

##### General Information

Date of Interview:	March 11, 2025
Name(s) of the Interviewers	Anna Margaritova
Duration of the Interview (min.)	50 minutes

##### Interviewee Profile

Interviewee Code Name	HERIFORGE_4_20250311_architect_CY
Interviewee Category	Private sector
Sector	Architecture, 3D Scanning, VR, Cultural Heritage
Occupation	Architect and Co-founder of a 3D scanning/VR company
Primary Location: City, Country	Nicosia, Cyprus (with team members in London)
Other Relevant Demographic Info (If applicable)	Studied Masters in Architecture in London

##### Past & Present Experiences with Communities

*What stands out from their connections with professional communities and circles?*

- + No strong affiliation with formal XR or 3D scanning communities in Cyprus or abroad.
- + Aware of others doing similar work but hasn't engaged in knowledge exchange or circles.
- + Relies heavily on YouTube for tutorials and self-learning rather than community support.
- + Initial exposure to 3D scanning/VR came from Masters studies in London, sparking personal interest.
- + Open to joining communities if opportunities arise, valuing knowledge exchange and better practices.

##### Key Role

*What role might the interviewee play in the Hub? (Connector, networker, thought leader, resourcer etc)*

- + Resourcer: Can provide access to 3D scanning equipment and technical expertise.
- + Connector: Bridges architecture and XR, potentially linking creative professionals across fields.
- + Innovator: Brings imaginative perspectives from architectural training to push creative applications.

##### Pain Points, Challenges, Barriers, Obstacles in the National Ecosystem

*What issues did the interviewee list?*

- + Past technical barriers: Clients struggled with file access or weak computers, now largely resolved.
- + Cost of equipment: High expense and limited access to 3D scanning tech posed initial hurdles.
- + Unrealistic expectations: Some clients misunderstand time/effort required, though manageable with communication.
- + Lack of community: No visible XR/3D scanning circles in Cyprus limit local collaboration.
- + Market uncertainty: Cultural heritage projects' value (e.g., tourism revenue) unclear, affecting funding justification.

##### International Expectations

*How might Hubs play a role for international collaboration opportunities?*

- + Hubs should offer networking to spark collaborations and new projects.
- + Support project initiation to build skills and opportunities.
- + Enable creative discussions around project design for innovative outcomes.
- + Facilitate showcasing Cypriot work globally to elevate visibility.
- + Provide a platform for Cyprus to diversify tourism beyond beaches via cultural heritage innovation.

##### Opportunities

*What are the opportunities for the Hub, according to the interviewee?*

- + Act as a playground for imaginative experimentation with XR in cultural heritage.
- + Provide access to tools (hardware, software) and talent to lower entry barriers.





- + Host workshops, hackathons, and training to build capacity and community.
- + Foster diverse collaborations across professions for richer outputs.
- + Shift Cyprus' tourism narrative by digitally contextualizing heritage, boosting year-round appeal.

### Critical Quotes (Max. 5)

- + "The promise of a hub would be to allow people to imagine what could be and... explore new ways of testing these technologies."
- + "If [policies] become overly structured... it might restrain some people from going in."
- + "The more different people you get in a room, the more exciting things come out."
- + "If the statistics of tourism and the type of tourism change in the long run, that would be an indication [of success]."
- + "If more creative people start to have a vision of what these technologies can do... it might start giving back in a big way."

### Surprising Highlights (Max. 5)

What did this interviewee say that provoked your point of view about Hubs? Why?

- + YouTube over communities: His reliance on YouTube instead of communities for learning challenges the assumption that formal networks are essential—self-directed learning is a viable path.
- + Optimism on tech adoption: Unlike others, he sees barriers like technical literacy fading fast, shifting the view on Cyprus' readiness for XR.
- + Playground vs. standards: His tension between playful hubs and rigid standards echoes other interviewees, but adds a fresh angle—overregulation could kill creativity early on.
- + Tourism reframe: Linking hub success to a unified historical tourism narrative (like the UK) was a bold and provides a long-term vision
- + Architect's lens: His architectural perspective as a coordinator between different professional disciplines, suggests hubs could thrive by blending diverse skill sets, not just tech experts.

### Interviewee 5

#### General Information

Date of Interview:	13.03.2025
Name(s) of the Interviewers	Haris Shekeris
Duration of the Interview (min.)	40 mins

#### Interviewee Profile

Interviewee Code Name	HERIFORGE_5_20250313_head_CY
Interviewee Category	Public Sector
Sector	Heritage
Occupation	Head – Cyprus National UNESCO Committee / Recent Head of the Department of Antiquities
Primary Location: City, Country	Nicosia, Cyprus
Other Relevant Demographic Info (If applicable)	

#### Past & Present Experiences with Communities

What stands out from their connections with professional communities and circles?

- + Memorandum signed between the Department of Antiquities and the Cyprus Institute around 2013 as the beginning of engagement with immersive technologies
- + Working with schools through UNESCO, using new technology to raise awareness about cultural heritage in schoolchildren

#### Key Role

What role might the interviewee play in the Hub? (Connector, networker, thought leader, resourcer etc)

- + The Unesco committee may act as a link between government agencies, NGOs, the private sector, they can act as a catalyst.
- + The interviewee may (and wants to, perhaps) act as a thought leader within the Hub, she would like to help in the promotion of cultural heritage especially to the younger generations, for example also to approach the Ministry of Education.

#### Pain Points, Challenges, Barriers, Obstacles in the National Ecosystem

What issues did the interviewee list?

- + Limitations due to the Cyprus Problem, especially when working in the public sector – however the work was facilitated through contact with the Technical Committee on Cultural Heritage

#### Opportunities

What are the opportunities for the Hub, according to the interviewee?

- + Collaboration between the Hub and the Unesco National Committee will be easier due to nature of organizations (as opposed to government agency) – scope for more synergies.





- + The Hub will be a golden opportunity for awareness-raising regarding CH among youth.

#### Critical Quotes (Max. 5)

- + XR may bring to the forth our CH and contribute to awareness-raising among youth, if possible from kindergarten, as CH is not one of the top priorities of our recent governments (past and present)
- + Youth (...), only work with new technologies, hence I consider awareness-raising through new technology and it will be amazing to use it wherever it may be used
- + Sometimes CH is trumped by development considerations, same as in other countries, hence why awareness-raising should start from a very young age so as to cherish CH and be its best ambassadors.
- + I will seek to forge tighter collaboration with Committees in other countries so as to submit for joint funding programs with countries who share the same concerns as we.
- + Digitization is one of the main weapons for the safeguarding of CH – how will I show to authorities that a CH artifact found in China is mine if I don't have technology on my side?

#### Surprising Highlights (Max. 5)

What did this interviewee say that provoked your point of view about Hubs? Why?

- + Cyprus is a huge archaeological site, or a should museum, and it should be viewed as such, and it shouldn't be divided into communities – CH belongs to the whole of humanity.
- + The interviewee highlighted the fact that she would have changed some of her responses had she been speaking with a government agency hat on. This shows that there is a need for the Hub to tread carefully and not ignore politics in order to carry out its work as envisaged.
- + Natural CH and mixed heritage sites an aim of the interviewer to highlight those. This may be a topic for the Hub or for future consideration, I was surprised by the ambition of the interviewee.
- + Cyprus sometimes has to buy stolen or looted cultural heritage artifacts, aim to be part of EU and other efforts to combat this, and as a part of this, the interviewee will aim to raise awareness also among the Army and the Ministry of Defence about issues related to CH.
- + Would like to collaborate with the Ministry of Health on the effects of CH on health, for example on mental health.

#### Interviewee 6

##### General Information

Date of Interview:	14.03.2025
Name(s) of the Interviewers	Anna Margaritova
Duration of the Interview (min.)	30 minutes

##### Interviewee Profile

Interviewee Code Name	HERIFORGE_6_20250314_productdesigner_CY
Interviewee Category	Private sector
Sector	Product Design, 3D Scanning/Printing, Cultural Heritage
Occupation	Mechanical Engineer and Product Designer
Primary Location: City, Country	Cyprus
Other Relevant Demographic Info (If applicable)	

##### Past & Present Experiences with Communities

What stands out from their connections with professional communities and circles?

- + No current affiliation with formal XR or 3D technology communities in Cyprus.
- + Sees potential in future communities to boost awareness and collaboration.
- + Collaborates with private industry (e.g., food/beverage, like KEO, Carlsberg) and CYTA for cultural heritage replication.
- + Believes a community would amplify visibility of services like his, benefiting both providers and users.
- + No mention of international community ties, but open to cross-border collaboration.

##### Key Role

What role might the interviewee play in the Hub? (Connector, networker, thought leader, resourcer etc)

- + Resourcer: Offers expertise in 3D scanning/printing and access to equipment (scanners, printers).



- + Connector: Bridges industry needs with technical solutions, potentially linking professionals and clients.
- + Innovator: Applies reverse engineering to solve practical and heritage-related challenges creatively.

### **Pain Points, Challenges, Barriers, Obstacles in the National Ecosystem**

*What issues did the interviewee list?*

- + Initial lack of awareness: Companies and public unfamiliar with 3D scanning/printing capabilities.
- + Resistance to new tech: Preference for traditional manufacturing delayed adoption early on.
- + Education gap: Needed to inform clients about process, costs, and realistic expectations.
- + Limited local market: Small size of Cyprus requires multitasking across industries, stretching expertise thin.
- + No major ongoing barriers: Awareness improving, and industry now sees value in rapid solutions.

### **International Expectations**

*How might Hubs play a role for international collaboration opportunities?*

- + Hubs should connect Cypriot professionals with global experts for problem-solving and collaboration.
- + Facilitate access to international networks, platforms, and markets to showcase local work.
- + Enable tech transfer (e.g., borrowing solutions or equipment from abroad).
- + Support subcontracting opportunities with foreign companies on large projects.
- + Provide a gateway for Cypriot businesses to expand beyond the island's small market.

### **Opportunities**

*What are the opportunities for the Hub, according to the interviewee?*

- + Bridge industry, academia, and professionals to share knowledge and services.
- + Offer workshops and technical training to keep pace with rapid tech changes.
- + Provide state-of-the-art equipment (e.g., advanced printers) for shared use.
- + Host meetups linking local and international players for collaboration.
- + Increase demand for XR via cultural institutions, driving innovation and visibility.

### **Critical Quotes (Max. 5)**

- + "The biggest challenge is to bridge this gap... the academia, the professionals, the industry."
- + "We can provide all of our expertise and equipment to help this hub and the members."
- + "Transparency is very important... between the members and the companies."
- + "If I have a challenge... I can request help from other professionals or experts... it will be very helpful."
- + "I would like to see the industry use these technologies and... a lot of success stories from industry."

### **Surprising Highlights (Max. 5)**

*What did this interviewee say that provoked your point of view about Hubs? Why?*

- + Industry focus: His emphasis on private sector (e.g., food industry) over cultural heritage suggests XR's impact is not just heritage-specific.
- + Reverse engineering twist: Using 3D scanning to replicate spare parts (even for phone booths) was a practical, unexpected heritage application.
- + No barriers now: Unlike others, he sees few ongoing challenges, suggesting Cyprus' ecosystem may be maturing faster than I thought.
- + Shared equipment idea: Proposing hubs as equipment hubs (e.g., borrowing printers) is a concrete, collaborative angle

Small market strength: Framing Cyprus' size as an advantage (multitasking pros, testbed potential)



## C.2.2. Poland

### Interviewee 1

#### General Information

Date of Interview:	26.03.2025
Name(s) of the Interviewers	Jan Skorupa
Duration of the Interview (min.)	~90 min

#### Interviewee Profile

Interviewee Code Name	HERIFORGE_1_20250326_xrproducer_PL
Interviewee Category	Civil Society
Sector	XR technologies
Occupation	Artist
Primary Location: City, Country	Poznan
Other Relevant Demographic Info (If applicable)	Canada -run XR company, USA - participation in film festivals with XR production

#### Past & Present Experiences with Communities

*What stands out from their connections with professional communities and circles?*

#### + Connections, networking and opportunities

#### Key Role

*What role might the interviewee play in the Hub? (Connector, networker, thought leader, resourcer etc)*

+ **Mentor and Educator in adapting the XR technologies in CH.**

+ **Connector and Networker (XR events curator)**

+ **XR experiences producer and implementer**

#### Pain Points, Challenges, Barriers, Obstacles in the National Ecosystem

*What issues did the interviewee list?*

+ **Low and Little Founding for XR technologies**

+ **lack of established XR community.**

+ **Low XR Technologies awareness among CH workers**

+ **Fear of XR implementations among CH workers**

+ **Low impact of Polish communities in international environment**

#### International Expectations

*How might Hubs play a role for international collaboration opportunities?*

+ **help for the participations in the international events (for networking purpose)**

+ **Help for establish international contacts**

#### Opportunities

*What are the opportunities for the Hub, according to the interviewee?*

+ **Emerging XR and VR trends locally**

+ **Emerging financial opportunities in Digital Culture and XR technologies for CCIS (but still low)**

#### Critical Quotes (Max. 5)

+ **According to the XR implementation in CH:**

“The challenge is their concern, does it even make sense, is it better and different? How different is this form from the ones they are using and is this form better? Does it make sense? Does it justify the financial and time outlay to produce this kind of experience, does it justify the time outlay?”

+ “An important initiative is the one that CRPK (Polish center for CCIS development) is doing, which is the only institution in this country that gives money for prototypes. It is an important step for me to make prototypes. Making a



prototype that we learn from, but also showing to institutions. It's a little starting point somewhere. That's where you can start and then shape a bigger project, a bigger production, based on that, on something you learn."

- + "My first thought was to make it possible to create these prototypes and sort of networking. Bringing together, three groups of people. Creative people who know, or want to know, how to tell either stories through VR like forms. To connect those people with people who have the technical know-how and people from cultural institutions or museums to test some ideas and find out how it can be done. So they can do some prototyping together and so that there is funding for it.
- + According success of Hub  
from my own private activities of my foundation, and my Canadian company, I know that there's a lot of interest (XR applications), there's just a lot of ignorance about how they can do it, and if a hub is created to give them that knowledge, I think the chances of developing such activities are very high.
- + "It would be nice if there was a list of people who do this kind of thing (XR productions) both individuals and companies. In the sense of you can commission a project as a whole, or where you can hire a programmer. Where can you get a director from? Where can you get a particular person for that project? So to make it easier for them to find a subcontractor, you'd have to make a database of those subcontractors."

### Surprising Highlights (Max. 5)

What did this interviewee say that provoked your point of view about Hubs? Why?

- + Lack of any regular event for XR and new technologies in CH
- + Need for linking technical and non technical (storyteller/ artists) specialists for XR projects
- + Hubs locally should be strongly connected with government funded institutions like museums and NGOs . It bring opportunity to work hub after project duration. Institutions bring stability NGOs actions. -it shows that cultural institutions do not impact the changes in adapting to new technologies. NGOs do it.
- + To help develop CCIS in the area of CH in Poland it is needed that CH institutions should be aware of the benefits of using XR technologies. - Very little awareness of XR technologies among CH workers
- + Hub can be initiator of trend changes in CH in area of XR technologies
- + Each XR implementation is unique. Each implementation impacts the XR technology development. There is no one simple way to create XR applications

### Interviewee 2

#### General Information

Date of Interview:	28.03.2025
Name(s) of the Interviewers	Weronika Grochowska
Duration of the Interview (min.)	70 min.

#### Interviewee Profile

Interviewee Code Name	HERIFORGE_2_20250328_xrtechnologist_PL
Interviewee Category	Private Sector
Sector	XR technologies, Heritage, Museum
Occupation	XR Technologist, Creator, Filmmaker, Producent, Artist
Primary Location: City, Country	Łódź, Poland
Other Relevant Demographic Info (If applicable)	

#### Past & Present Experiences with Communities

*What stands out from their connections with professional communities and circles?*

- + Operate between museums and technology as

#### Key Role

*What role might the interviewee play in the Hub? (Connector, networker, thought leader, resourcer etc)*

- + Connector
- + Networker



## Pain Points, Challenges, Barriers, Obstacles in the National Ecosystem

*What issues did the interviewee list?*

- + lack of established XR community
- + low XR Technology awareness and understanding its possibilities among CH workers
- + no possibility of acting in advance, funding programmes announced too late (e.g. in the same year as the event or settlement)

## International Expectations

*How might Hubs play a role for international collaboration opportunities?*

- + create a place for different communities where they can meet and do (create) something together
- + support innovative initiatives and research, not only projects based on already existing solutions
- + provide grants for researchers to pushing the boundaries of technology - not just to finish a project but to do the research

## Opportunities

*What are the opportunities for the Hub, according to the interviewee?*

- + create and support a community - be a place where people from different sectors can meet and talk about ideas and projects and receive all the information about possible grants or competitions and fairs where they could present their projects or find someone new to cooperate with
- + be a place between fields: technology, literature, music, art, etc., which will support the search for the boundaries of technology, thanks to which it will be possible to understand our culture more deeply

## Critical Quotes (Max. 5)

- + About technology in museums:  
For me, three aspects are important. 1. Technology serves the story. It is good if it serves the story. To what extent does it immerse. 2. The new currency is the quality of the experience. We make sure that this experience is deep, intense, not wordy. I believe that AR technology serves this purpose. 3. We are observing a shift towards the museum collection. People are tired of these digital things that do not exist, touch screens. People have their own screens, so why should they touch another [in museums]. There is a shift towards the collection. What happened in Łódź [the "Secret Printing House" project] is really a tribute to the collection, because each of these animations is triggered by a material object that triggers its own story. It is a very interesting trend.
- + About the systemic problem of the time lag between concept and implementation:  
I operate in such a mode that I either infect someone with an idea or I look where there is an idea. (...) That's what it's all about. Looking at what someone is doing and where there is a need. And on building continuity. There's always one problem - with a system. This applies to small projects and large ones. It's time. We are finishing work on the script, on the language we use to tell the story, in 2019, and the museum will not be open until 2026. The viewers are different after this time. They changed. They see differently. They don't need multimedia kiosks anymore. They want "real meat" that will move them.
- + Creative human capital in Poland is very large and these people are here. But sometimes they rot in places like advertising agencies without potential.
- + Vision and determination are needed (...) and institutions that do not have a political overlay, do not engage in politics. (...) It would be nice if they were living organisms, operating in an environment.

## Interviewee 3

### General Information

Date of Interview:	26.03.2025
Name(s) of the Interviewers	Alicja de Rosset
Duration of the Interview (min.)	~70 min.

### Interviewee Profile

Interviewee Code Name	HERIFORGE_3_20250326_xrtechnologist_PL
Interviewee Category	Individual
Sector	XR technologies, Heritage, Museum
Occupation	Academic researcher, UX researcher
Primary Location: City, Country	Warsaw, Poland
Other Relevant Demographic Info (If applicable)	





## Past & Present Experiences with Communities

*What stands out from their connections with professional communities and circles?*

- + Interviewee operates at the interface of culture (museums) and business, mediating understanding and communication between users, the cultural sector and business

### Key Role

*What role might the interviewee play in the Hub? (Connector, networker, thought leader, resourcer etc)*

- + Connector
- + Networker
- + Mentor and Educator in UX in projects

### Pain Points, Challenges, Barriers, Obstacles in the National Ecosystem

*What issues did the interviewee list?*

- + Lack of competences among museum professionals in business matters
- + Lack of competences in articulation of needs for digital projects
- + Lack of people who would be responsible for digital projects in museums, especially as people working permanently, full-time
- + Museums do not have technological partnerships
- + Financing and maintaining projects is not long-term, after implementation, projects are discontinued
- + Lack of communities like medialabs
- + Lack of sufficient support from Ministry of Culture, strong hierarchy in culture sector

### International Expectations

*How might Hubs play a role for international collaboration opportunities?*

- + Participation in conferences, the opportunity to present national achievements
- + Creation of an international community, opportunities to exchange knowledge and experiences (study visits), to learn about each other's projects
- + Establishing contacts that would facilitate the implementation of projects and obtaining more serious funds

### Opportunities

*What are the opportunities for the Hub, according to the interviewee?*

- + providing digital competences in the form of services for museums
- + creating medialab as a community
- + offering various training courses and workshops, which are very expensive on the market

### Critical Quotes (Max. 5)

- + About Hubs functioning  
 "The hub must also have the possibility of financing itself, it must also have a commercial basis to develop a business model that would allow it to last, at least in some extent, independent from grants or changes of government"  
 "such a Hub would also have to be a place where we would work with these target users, whether they be seniors or people with limited mobility, etc. Include the people for whom the design is being made."
- + About technologies in CH  
 "[It is important] to simply think holistically, to think about the visitor as a user and that the visitor is just a part of this person. From my experience, I have the impression that in Polish museums they do not think about the users, or they think that they are [only] on social media."
- + Technologies and lack of long-term support in CH (financial and technological)  
 "Technologies are very expensive and therefore you need a technological partner, someone who will support you. Well, there was a nice example. Unfortunately, I haven't seen this exhibition, but a few years ago there was such an exhibition [...] at the National Museum in Wrocław, which cooperated with IBM. [...] I think they created a Chatbot that could answer questions from visitors about some works from the exhibition, but you know, the project lasted a month. Very briefly, so it was a nice experiment, but they didn't do anything with it further. It didn't turn into a longer-term project. I don't know why, of course the reasons could have been different, but something was launched, but too briefly for the museum to be able to take full advantage of it, apart from the anecdote that we once had such an intelligent Chatbot at the exhibition."

### Surprising Highlights (Max. 5)

*What did this interviewee say that provoked your point of view about Hubs? Why?*

- + low competence of CH employees in both the digital and business areas. CH employees do not know how to run projects and CH institutions do not have any long-term strategies when implementing these projects

## Interviewee 4

### General Information

Date of Interview: 25.03.2025





Name(s) of the Interviewers	Marta Świetlik
Duration of the Interview (min.)	~60 min.

### Interviewee Profile

Interviewee Code Name	HERIFORGE_4_20250325_culturalmanager_PL
Interviewee Category	Public Sector
Sector	Heritage, Museum
Occupation	With a research background (history), interested in popularization, cultural manager
Primary Location: City, Country	Warsaw, Poland
Other Relevant Demographic Info (If applicable)	Male, age group 30-60

### Past & Present Experiences with Communities

*What stands out from their connections with professional communities and circles?*

- + Significant experience co-creating Muzeum Piłsudskiego in Sulejów, including multimedia exhibitions.
- + Current role at Muzeum Powstania Warszawskiego, leading the historical department.
- + Experience with Łódź project using augmented reality, initiated through a personal connection.
- + Notes a good tradition of experience sharing among museums through study visits.
- + Attended a conference by Narodowy Instytut Dziedzictwa on modern technologies in heritage.
- + Feels somewhat disconnected from the latest technological advancements due to recent focus on other projects
- + Lack of a sense of belonging to a community that shares technological interests - doesn't know such people, no knowledge of similar projects or networks to reach out to for support, single contacts with specific people

### Key Role

*What role might the interviewee play in the Hub? (Connector, networker, thought leader, resourcer etc)*

- + Eager to share experience and insights on technology integration in cultural heritage
- + Likely a networker given his appreciation for collaboration and knowledge sharing within the museum community
- + Seeks opportunities to stay in touch with technological innovations

### Pain Points, Challenges, Barriers, Obstacles in the National Ecosystem

*What issues did the interviewee list?*

- + Skepticism and lack of understanding of new technologies from museum management and procurement
- + Difficulties in public procurement for innovative solutions
- + High costs of implementing advanced technologies, especially for smaller institutions
- + Limited number of specialized companies in the AR/VR for heritage sector
- + The rapid evolution of technology leading to potential obsolescence
- + Absence of a formal platform or community for sharing best practices and knowledge in this area

### International Expectations

*How might Hubs play a role for international collaboration opportunities?*

- + Strong interest in learning about international applications of new technologies in heritage.
- + Desire to share Polish experiences and innovations with international partners.
- + Belief that Polish projects can inspire international collaboration, based on past experience.
- + Hubs can facilitate the exchange of information on international projects and trends.
- + They can help connect Polish professionals with international counterparts.
- + Hubs can serve as a platform to showcase Polish expertise globally.
- + By acting as a central point, Hubs can simplify engagement for international partners.

### Opportunities

*What are the opportunities for the Hub, according to the interviewee?*

- + Significant opportunity to create a platform for connecting professionals in the field.
- + The Hub can increase awareness and understanding of these technologies among stakeholders.
- + Potential to stimulate the growth of the domestic market for relevant technology providers.



- + Opportunity to share best practices and lessons learned, avoiding repeated mistakes.
- + Can position Polish institutions as leaders in innovative heritage engagement.
- + Using new technologies helps museums reach and engage contemporary audiences effectively

## Interviewee 5

### General Information

Date of Interview:	27.03.2025
Name(s) of the Interviewers	Marta Świetlik
Duration of the Interview (min.)	~60 min.

### Interviewee Profile

Interviewee Code Name	HERIFORGE_5_20250327_head_PL
Interviewee Category	Public Sector
Sector	Heritage, Museum,
Occupation	Head of Exhibitions and Science Popularization Department
Primary Location: City, Country	Warsaw, Poland
Other Relevant Demographic Info (If applicable)	Female, age group 30-60

### Past & Present Experiences with Communities

*What stands out from their connections with professional communities and circles?*

- + Actively seeks information and inspiration through independent research, online resources, and industry events.
- + Values established collaborations with trusted partners and external specialists for technology implementation.
- + Engages in knowledge-sharing and networking, both domestically and internationally, through events, conferences, and professional networks.
- + Recognizes the importance of continuous learning and organizes training initiatives, such as AI workshops for museum staff.

#### Key Role

*What role might the interviewee play in the Hub? (Connector, networker, thought leader, resourcer etc)*

- + Could be a contributor by sharing her institution's experiences with technology implementation.
- + Potential tester and early adopter of new solutions through the Hub.
- + Sharer of practical insights regarding the integration of technology in museum exhibitions.
- + Could facilitate connections based on her existing network with technology providers

#### Pain Points, Challenges, Barriers, Obstacles in the National Ecosystem

*What issues did the interviewee list?*

- + Financial constraints are the primary limitation for implementing advanced technologies.
- + Formal procedures like przetargi (tenders) can be cumbersome and time-consuming.
- + The process of selecting reliable and experienced subcontractors is challenging.
- + Potential difficulties in technical communication due to a lack of specialized knowledge within the museum staff.
- + Concerns about the costs associated with engaging with new technology providers

#### International Expectations

*How might Hubs play a role for international collaboration opportunities?*

- + Values international exchange of experiences and is already engaged in networks like [Interpret Europe](#).
- + Seeks more than traditional exhibition exchanges, expecting tangible benefits for their institution.
- + Aims to enhance the museum's visibility and recognition both nationally and internationally.
- + Hubs could streamline access to international knowledge, best practices, and professional training.
- + Potential role in supporting technology knowledge transfer and facilitating connections with global networks.

#### Opportunities

*What are the opportunities for the Hub, according to the interviewee?*



- + Significant opportunity for knowledge and experience exchange among museums and technology providers.
- + The Hub could provide professional training on technological possibilities.
- + Potential for collaboration with technology firms to realize innovative exhibition and educational projects.
- + The Hub could help in accessing information and solutions more efficiently than independent searching.
- + Opportunity for the Hub to bridge the gap between the museum world and the digital technology world

## Interviewee 6

### General Information

Date of Interview:	01.04.2025
Name(s) of the Interviewers	Marta Świetlik
Duration of the Interview (min.)	~60 min.

### Interviewee Profile

Interviewee Code Name	HERIFORGE_6_20250401_academic_PL
Interviewee Category	Academia
Sector	Heritage, Museum,
Occupation	Academic researcher (sociology), freelance museum collaborator
Primary Location: City, Country	Warsaw, Poland
Other Relevant Demographic Info (If applicable)	Male, age group 30-60

### Past & Present Experiences with Communities

*What stands out from their connections with professional communities and circles?*

- + Experience spans academic and practical fields, suggesting a broad network .
- + Involvement in diverse projects indicates collaboration with various types of institutions (local government, NGOs, cultural institutions)
- + Participation in initiatives focused on digital literacy suggests connections within the education sector
- + Current focus includes observing the integration of new technologies in educational and cultural institutions
- + Was involved with early MediaLabs, focusing on how media technologies can change knowledge sharing.
- + In recent years, has experienced a turn towards analog approaches concerning heritage
- + Was a researcher in a project of Centrum Projektów Polska Cyfrowa focused on active technology use workshops for young people outside major city centers
- + Conducted evaluation research for an institution called Hatcenter, including questions about AR and bone conduction technologies in theater

### Key Role

*What role might the interviewee play in the Hub? (Connector, networker, thought leader, resourcer etc)*

- + Could offer a critical perspective on the adoption of new technologies in heritage, based on his observations.
- + Might act as a cautionary voice, emphasizing the "why" of technology adoption over the "how".
- + Could serve as a thought leader by prompting reflection on the impact of technology on the understanding and dissemination of heritage.
- + Could contribute insights into the broader context of cultural institutions, including funding models and political influences.
- + Might guide discussions towards the purpose of heritage and the role of technology in serving that purpose

### Pain Points, Challenges, Barriers, Obstacles in the National Ecosystem

*What issues did the interviewee list?*

- + Believes there's often a superficial adoption of technology driven by market trends rather than a clear purpose in heritage.
- + Concern that the desire to adapt technology overshadows the reflection on its actual impact.
- + Institutions may be focused on obtaining funding for technology without a broader strategic vision.
- + Sees a tendency to fetishize technology, where the acquisition and implementation become the primary goal.
- + Perceives a desire to use technology to address a "peripheral country complex".
- + Questions whether audiences genuinely expect or benefit from these technologies.



- + Lack of critical reflection on how technology changes the practical aspects of heritage work.
- + A deficit of substantive justification for technology adoption.
- + Often a lack of funding for programs and staff training to effectively utilize new technologies, despite funding for equipment.
- + New technologies can expose the lack of continuity and holistic thinking in institutions.
- + Concerns about political influences impacting the long-term vision for technology integration

### International Expectations

*How might Hubs play a role for international collaboration opportunities?*

- + Suggests that joint procurement and negotiation of software or technologies could be beneficial.
- + Believes that sharing both successes and disappointments among international partners would be helpful.
- + A hub could foster a culture of thinking about technology as an opportunity rather than a necessity.
- + Recognizes the potential for exchange of collections through digital repositories.
- + Suggests creating a shared manifesto outlining the purpose and understanding of technology use in heritage.
- + Emphasizes the importance of mutual learning and study visits.
- + A hub could help build a shared subjectivity towards technological change.
- + The hub could help institutions become aware of and critically assess corporate narratives surrounding technologies like augmented reality

### Opportunities

*What are the opportunities for the Hub, according to the interviewee?*

- + A hub should focus on integrating technologies into practice, not just teaching about them.
- + It should encourage caution and critical thinking about the necessity of technology adoption.
- + The hub could educate about the fact that technologies influence users and their goals.
- + It should foster a mindset that technology can be a "troublesome supplement" that complicates work in a productive way.
- + The hub should cater to institutions and individuals who want to creatively work through the "ferment" created by new technologies.
- + It should promote thinking about expanding our "sensorium" in ways that go beyond purely visual, technologically mediated experiences.
- + The hub could foster a more reflective use of technology in museums, moving beyond mere attraction or superficial engagement.
- + It could facilitate discussions about how technology can serve the fundamental goals of museums, such as critical reflection.
- + The hub could raise awareness of different technological tools while emphasizing conscious and independent decision-making about their use.
- + It could encourage the exploration of how technology can foster shared and community-based experiences rather than atomized individual ones.
- + The hub could explore how technology can address inclusivity and the needs of diverse audiences, potentially through co-creation.
- + It could facilitate discussions about the ethical dimensions of using immersive technologies to simulate experiences.
- + The hub could help the museum community move away from divisive language related to technology adoption and focus on shared goals.
- + It could encourage the exploration of how technology can revalue types of heritage that are difficult to showcase otherwise.
- + The hub should focus on non-technological goals, with technology being a means to achieve them.
- + It could facilitate the sharing of archaeological insights from previous technological "utopias" in museums (e.g., the introduction of monitors).

### Critical Quotes (Max. 5)

- + "It seems to me that, as in most cases, we have a commercially produced tool that we're trying to justify in other areas. And at the beginning there is this desire to adopt technology. The question is, how does it replace our thinking, why?"

"If these technologies were really able to realise, for example, the idea of a critical museum that shows how representation changes the way we think about ourselves, about collections. If there is such a critical thread here, then it seems to me that these new technologies can also work wonderfully here, only they have to be used not to flirt, not to attract, not to make every ethnographic museum a little Disneyland, but to make us more reflective. To be honest, I don't know of any examples of this, at least not in the Polish context



### C.2.3. Türkiye

#### Interviewee 1

##### General Information

Date of Interview:	06.03.2025
Name(s) of the Interviewers	Nazlı Cangönül
Duration of the Interview (min.)	90

##### Interviewee Profile

Interviewee Code Name	HERIFORGE_1_20250306_digitalartist_TR
Interviewee Category	Individual
Sector	Immersive Technologies
Occupation	XR Technologist
Primary Location: City, Country	Istanbul
Other Relevant Demographic Info (If applicable)	

##### Past & Present Experiences with Communities

What stands out from their connections with professional communities and circles?

- + **Sharing opportunities and supporting the right fit for applying to opportunities is a genuine act of support.**
- + **“Being on the same journey (Aynı yolun yolcusu olmak)—facing the same struggles—creates a sense of shared experience.** There is real mutual support in that. When you share a challenge, there are people who truly understand and either offer help or guide you in the right direction.
- + **“They connect you to opportunities, like Michael, who mentors by suggesting relevant funding or projects.”**
- + **Dynamic and accessible community network that fosters real collaboration, beyond just communication—where members can quickly connect, share skills, and co-create projects, making it easier to test ideas and bring them to life.**
- + **“We’re relying on a WhatsApp group for basic communication, but a faster, more effective network would help. While we’ve had presentation requests, real collaboration is rare. Quick coordination for trial projects, even MVPs, would make a big difference.”**
- + **“Meetings could bring together people in this field and evolve into regular meetups. I remember trying to attend Karma Lab trainings without missing any sessions, but there were definitely days I couldn’t make it. Karma Lab developed an impactful, structured curriculum from scratch, which was impressive”**
- + **“I invite particularly shy/reserved people myself.** We could invite interested people to meetings, perhaps to guide and inspire them. There are many things that can be done, like demo sessions and more. While organizing such events isn’t easy, I know that when people do gather, they often feel grateful, saying, “I’m glad we did this!””

##### Key Role

What role might the interviewee play in the Hub? (Connector, networker, thought leader, resourcer etc)

- + Sharing knowledge and skills with emerging learners, and other community members
- + Building proposals for new creative concepts for partnerships
- + Providing technical and creative support to Hub projects, mentoring emerging talent.
- + Potentially reviewing and gauging projects from a business standpoint, to calculate costs and investment value.

##### Pain Points, Challenges, Barriers, Obstacles in the National Ecosystem

What issues did the interviewee list?

- + **Financial ROI of XR Investments creates hesitancy amongst investors due to its high costs and exponential speed of which the technology is evolving.** (Quote 1)
- + **Relentless effort was required to secure funding, approaching the project like a startup was a critical learning for a technologist to approach investors. Convincing them for the lengthy development process was crucial.** (Quote 2)
- + **Self doubt while pushing new projects in a breakthrough concept.** (Quote 3)





- + **Successful execution of XR projects require senior level (highly skilled and specialized) people, which adds up to the high production costs. Also it has become very difficult to find a skilled workforce in Türkiye due to brain-drain.** (Quote 4)
- + **Different ideological perspectives might risk the objectivity and historical accuracy of CH initiatives** (Quote 5)
- + **Bureaucratic pace and reluctance for new technologies block progress, making it necessary for creatives to seek alternative ways and partnerships for funding.** (Quote 6)

### International Expectations

How might Hubs play a role for international collaboration opportunities?

- + **Learning how to stand out in international applications is a need.**
- + “We applied for various EU funds, but we weren’t successful. I think we didn’t fully grasp the requirements, especially when it comes to collaboration between universities, the private sector, and government institutions. We made a few attempts, filling out extensive applications with pages of information. We’d make it to the first stage, but then get stuck for some reason.”
- + **Showcasing noble XR projects in global avenues is a missed opportunity, which is now only given to gov. related offices.**
- + “To enhance Turkey’s cultural heritage and share that data with different audiences, **it should definitely be promoted at international events. There are many summits where this could be showcased.** For instance, presenting it with VR glasses at such events would be very impactful. Last year, **I attended the Web Summit in Lisbon and visited the Turkey Pavilion, which felt like a government office. It was a place for tech enthusiasts, but it was quite disconnected. They were showcasing military tech from Aselsan, which was confusing. How can I develop something in this environment?**”
- + **International funding opportunities come with other countries’ own agenda.**
- + “Do you know what foreign investors want? They want you to go there, to Dubai. They say, “Come to Dubai, promote our culture.” They’re not interested in doing that in Turkey. They might invest personally here, but they’re not focused on cultural heritage projects.”

### Opportunities

What are the opportunities for the Hub, according to the interviewee?

- + **Growing and connecting senior people in the area to emerging projects**
- + **Creating funding opportunities for exciting projects that are not tied to bureaucratic processes of government institutions.**

### Critical Quotes (Max. 5)

- + **(Quote 1)** “There is a certain barrier. You might be someone who has proven themselves in the field of technology. But this is a new technology—I’m talking about VR headsets since that’s our main focus. Investors have concerns about how sustainable a project developed with VR headsets can be. The second issue is that they are aware it’s a costly project, even if the idea is excellent. **The high costs, along with uncertainties about when they will see a return on their investment, create hesitation.** This may not apply to every technology, but it’s definitely the case with VR. In the XR world, this is a real concern—it’s something people talk about. **The main reason for their hesitation is the long and expensive production process. So, as a result, they tend to hold back, saying, “Let’s wait a little longer. Let’s see this technology develop further and become easier.”**”
- + **(Quote 2)** Where would we find the budget? The financial scale of the project was massive. Anyone familiar with technology knows that ideas are always there, but they often don’t come to life because of funding. **Investment is a crucial element, and securing it is a major challenge. This was, after all, a startup.** We were essentially launching a new venture. To develop it, we knocked on every possible door. We explored countless opportunities, applied to numerous incubation programs, and engaged with many different networks. Eventually, we found an investor who believed in our project. This investor, was someone I had known from a previous professional engagement. That project had established a foundation of trust between us. When I introduced this new project, they were initially surprised but didn’t dismiss it outright. Being from the tourism industry, they found the idea intriguing. **From the outset, we emphasized that what we were creating wasn’t a final product but an ongoing project. We never saw it as something complete, and I made that clear to the investor as well.**
- + **Quote 3** “And throughout this process, I became really exhausted. **When you have to explain yourself so many times, you start to doubt your own beliefs.** You begin to wonder, “Am I on the wrong path? I read, I believed in it, but... what if I was wrong all along?”
- + **Quote 4** The team members need to be highly skilled and effective. They must have deep expertise in their respective areas. For instance, in a pipeline, the concept artist is separate from the technical artists and software specialists. You need a ZBrush expert, a 3D modeling specialist, and many other specialists—each with advanced proficiency in their tools. This is because when a problem or crisis arises, they must be able to resolve it immediately. Junior and mid-level professionals are generally there to support the process, but they cannot drive the project on their own. **Successfully completing a project with only mid-level or junior staff is simply not feasible. Naturally, hiring highly skilled professionals increases costs and you**





**can't even find them in the country anymore.** Finding skilled professionals is truly difficult. **Many of them have moved abroad...** Back when we were working on projects in Bristol (2019) and Central (2022), it was already challenging to find the right people. Now, it's even harder—they are practically nonexistent in the market. Right now, I have a new project in hand, and I'm looking for talented people to collaborate with—someone truly impressive. But honestly, there's just no one available. Building the right team is absolutely crucial.

- + (Quote 5) "In my opinion, 'cultural heritage' shouldn't be tied to any ideology—it needs to be objective and focus on historical references. Bringing this to life in a clean environment is not easy. If we hadn't done this independently with Time Travel project, the outcome might have been different."
- + (Quote 6) "... said 'We'll talk later,' and we never spoke again. The problem is, people working in ministries or such institutions often have a certain slowness. There's hesitation or laziness when it comes to taking action because they feel, 'I'm already doing my job, why bother with something new?' In my opinion, it's hard to progress with them, and honestly, it didn't work out. But perhaps it was for the best. That's why, moving forward independently feels better for me—it gives me peace of mind."

### Surprising Highlights (Max. 5)

What did this interviewee say that provoked your point of view about Hubs? Why?

- + **What happens if multiple groups work on the same heritage sites? How can we incentivize collaboration over competition?**
- + **Creators find meaningful support in accelerators/incubations, because it allows them to approach their work from a business perspective. How can capacity programs can help artists/creators to adopt this lens for seeking investment to their projects?**
- + "İTÜ Çekirdek, really broadened my perspective. I realized I had made a lot of mistakes, especially in investor relations in the past. And while I couldn't fix past decisions, I made sure to learn from them for future projects."

### Further Quotes

- + "Authorities are very inadequate. There's very little work being done, and there should be much more. For example, we've been trying to develop a project on our own, even finding an investor independently. Why didn't the government take this on? The answer is simple: because they prefer working with certain people. Connections and mindset are crucial here. Personally, I might not want to work with everyone, and I think the mindset of the people involved needs to align at a certain level for effective collaboration."
- + "Interestingly, ... Museum also now wants to do something in Cappadocia. We spent a whole week exploring the area, visiting sites, taking notes with guides, and discussing how to approach the project. Those underground cities there are fascinating, but some people can't visit due to claustrophobia. Even I get dizzy and short of breath when going down the tunnels. Imagine experiencing that with VR glasses and animations—showing what life might have been like there would be amazing."

## Interviewee 2

### General Information

Date of Interview:	11.03.2025
Name(s) of the Interviewers	Nazlı Cangönül, Mustafa Gül
Duration of the Interview (min.)	60

### Interviewee Profile

Interviewee Code Name	HERIFORGE_2_20250311_museumexpert_TR
Interviewee Category	Private Sector
Sector	Heritage, Museum
Occupation	Museum Expert
Primary Location: City, Country	Istanbul, Türkiye

### Past & Present Experiences with Communities

What stands out from their connections with professional communities and circles?

- + **Relationships with donors are based on deep trust, meaningful connections through preserving cultural heritage.** (Quote 1)
- + **Collaboration issues made the process a bit difficult for smooth delivery of the project, even though the issues are not from institutions but from individuals.**



- + They prefer not to participate in crowded-partnerships with many voices on the table (Quote 8)

#### Key Role

*What role might the interviewee play in the Hub? (Connector, networker, thought leader, resourcer etc)*

- + **Budgeting the XR applications for museum integrations: The Hub might help scope the costs, to better support museums in estimating a realistic-enough budget.** (Quote 12)
- + **With their 3D scanning experiences, they have a knowledge about bureaucratic processes.**

#### Pain Points, Challenges, Barriers, Obstacles in the National Ecosystem

*What issues did the interviewee list?*

- + **Concerned about the pace that tech is evolving exponentially. Fearful of the fact that the technologies they invest in might become redundant in 4-5 years.**
- + **Reliability in partnerships is sometimes hindered by collaborators' commitment issues.** (Quote 2)
- + **The high cost of new technologies and the limitations of the museum's budget. Despite being supported by the Koç Foundation, there is a necessity to stay within the budget.** (Quote 10)
- + **Political concerns about an exhibition changed their level of engagement for an exhibition abroad, from a more active role to a more indirectly-involved role.** (Note: We couldn't ask too much around this issue) (Quote 4)
- + **Artefacts can't be moved out of the museum, without permits of the Foundation and Ministry of Culture. Technical processes will need to be carried out within the Museum.** (Quote 6)

#### Opportunities

*What are the opportunities for the Hub, according to the interviewee?*

- + **They expect to partner with scientifically credible organizations in digitization, to avoid past difficulties that arose from past partnerships. This might open a role for the Hub as a quality-controller role for smooth operations in GLAM's digitization efforts.** (Quote 2 & 7)
- + **XR can be used to tell the story of how artifacts have been produced and used in their origins.** (Quote 9)
- + **The hub can support museums and relevant stakeholders in identifying market prices for XR technologies** (Quote 12)

#### Surprising Highlights (Max. 5)

*What did this interviewee say that provoked your point of view about Hubs? Why?*

- + **Private foundation museums have a more bureaucratic point of entry for collaborations. Private funding also blocks seeking external corporate sponsorships and making them tied to a single and preset source of funding.** (Quote 10)
- + **Preserving the museum's own legacy beyond its past exhibitions is seen as critical.** (Quote 13)

#### Critical Quotes (Max. 5)

1. "A deeply impactful human connection for me is the relationship we build with donors at our museum. Many people trust us enough to donate valuable family heirlooms or collected artifacts... **There's a unique emotional exchange—sometimes so strong that farewells feel like heartfelt goodbyes. This trust and human connection are, in many ways, one of the museum's most important roles.**"
2. "A scanning device was provided by ..., but the operator gave irrelevant answers. Despite scheduling, they didn't show up on the day, or they came with their entire family. Additionally, the scan was ineffective, so the museum photographer stepped in to photograph, capturing it from various angles. The experts responsible for distributing credits were two lab technicians who helped with the process. **There were issues with some individuals, but no problems with the institutions.**"
3. "We are already trying to carry out various projects in a very intense workflow. **We are not actively looking for projects internally or externally. Honestly, organizing our own exhibitions and publishing our works already take up enough of our time.**
4. "... we received an offer to exhibit artworks digitally in Germany. As discussions progressed, other groups got involved, likely due to the digitization aspect. However, **a political issue arose, leading us to cut ties with the organizer. A Turkish academic ...in Berlin took the lead, securing funding and reshaping the project.**"
5. "Digital imaging, including video or 3D rendering, provides more robust data. **This is crucial for verifying artworks, especially in case of theft.** Detailed imaging helps measure, define, and preserve accurate records of the piece... Scanning is truly important for cultural heritage... The intangible side seems like a more advanced and different approach. From this perspective, **scanning museum artifacts is extremely beneficial. However, it is very time-consuming and a daunting task since we can barely keep up with photographing them.**"
6. "Taking our artifacts outside the museum is not an option. **Everything must be done on-site, and extensive permissions are required,** up to approval from the Foundation and the Ministry of Culture. A dedicated center could be established for certain studies, but I believe **only a mobile team could effectively assist us.**"
7. "We need to collaborate with people we can trust scientifically".
8. "**We prefer to avoid overly crowded environments** of collaboration with too many voices on the table."
9. "We don't have precise details about the conditions, origin, or creation of an artifact, but we do have largely accurate information about how items like glasses were produced and used. These can be brought to life, especially for curious individuals like young people or those unfamiliar with the field, and digital tools can help craft their story."



10. **"We don't work with many sponsors**, mostly corporate-affiliated institutions. These organizations fund us through the Foundation. **We don't take large sponsorships that allow for extensive branding, but it's not impossible.** Smaller-scale sponsorships do happen occasionally."
11. **"We are concerned about the accelerating pace of technologies.** Will we need to replace these equipment in 5 years?"
12. **"We will need to know the approximate price. The cost matters—whether it's high, reasonable, or even free.** These considerations are crucial when making a request from the Foundation beforehand."
13. "While we prioritize in-person visits, digital technologies help those who can't attend. Preserving the museum's legacy is important. **Digital projects can support both future innovation and maintaining access to past exhibitions."**

### Interviewee 3

#### General Information

Date of Interview:	11.03.25
Name(s) of the Interviewers	Nazlı Cangönül, Ivon Bensason, Evren Yantaç
Duration of the Interview (min.)	60

#### Interviewee Profile

Interviewee Code Name	HERIFORGE_3_20250311_digitalartist_TR
Interviewee Category	Individual
Sector	XR Technologies
Occupation	Artist
Primary Location: City, Country	Istanbul, Türkiye
Other Relevant Demographic Info (If applicable)	Travels for exhibitions between NY, London, nowadays in St. Petersburg

#### Past & Present Experiences with Communities

*What stands out from their connections with professional communities and circles?*

- + **Creating a sense of belonging and a desire for joint production within communities in Turkey is difficult. People do not become part of a community unless they see a clear benefit and measurable financial gain.**

#### Key Role

*What role might the interviewee play in the Hub? (Connector, networker, thought leader, resourcer etc)*

- + **Mentor for emerging creatives in the Hub to elevate their work**
- + **Connect international contacts to the Hub programs for talent and ideas exchange**
- + **Connect or host their residency program under the Hub to institutionalize it**
- + **Strengthen and continue his advocacy work with support of the Hub**

#### Pain Points, Challenges, Barriers, Obstacles in the National Ecosystem

*What issues did the interviewee list?*

- + **Existing creative outlets (like festivals, fairs, media organizations) can not fully grasp the extent of storytelling possibilities that XR enables. That's why they are trying to bring alternative structures themselves like SONICA.** (Quote 2)
- + **Authorities need to have basic knowledge about these media arts and emerging technologies to be able to develop a vision. Currently, they receive requests for copying a foreign project without initiating it beforehand.** (Quote 8 & 9)
- + **Lack of institutional continuity is blocking progress on their collaborations.** (Quote 13)
- + **Lack of policies for the intersection of art and technology is forcing residency programs to find alternative funding and oftentimes from creative entrepreneur's own resources.** (Quote 1, 3 & 4)
- + **Adaptation of cultural institutions to XR technologies is very slow. There is a risk of being outdated, redundant by not integrating these technologies.** (Quote 12)

#### International Expectations

*How might Hubs play a role for international collaboration opportunities?*

- + **Hubs can bring global best practices and practitioners to introduce to local talent, share expertise and vice versa.** (Quote 5 & 11)



- + **Showcasing local projects and artists' work in international organizations, festivals, media fairs to promote their work abroad.** (Quote 11)

### Opportunities

*What are the opportunities for the Hub, according to the interviewee?*

- + **The Hub can lead advocacy for institutional awareness, long-term vision for using XR technologies in cultural heritage by demonstrating the future-proof value of XR. This can be done through trainings for building awareness, vision and trust as well as showing global and local examples of successful implementations.** (Quote 8 & 9)
- + **The Hub can support emerging creators and technologists, in a continuous way, moving from one-shot support mechanisms. Their need for tangible (financial, training, making connections) requires continuity in the support they receive, to convince them to stay long-term.** (Quote 4, 6 & 7)

### Critical Quotes (Max. 5)

1. "In 2020, we launched an online artist residency program. Since then, around 700–800 people have received training through it. It provided significant financial support, often from our own pockets."
2. "Existing institutions — museums, festivals, fairs, media—don't fully grasp art and technology. That's why we're creating alternatives, bringing international examples like Sonica to Turkey. We even launched our own media art fair last year."
3. "They (people in their community) actually didn't start out as well-known people, but now each of them is working in galleries, holding exhibitions, and traveling the world. Of course, we have our own community first and foremost."
4. "We collaborate with a residency program in the US and send participants from our program there, sometimes even sponsoring them. The community experience there is very different from Turkey—here, people usually only engage if there's a clear, measurable benefit. **You constantly have to highlight what they'll gain. That romantic side for being with people, or working on joint projects, we don't have that here**"
5. "We connected with the community around Ars Electronica and went there; we brought artists from there to here, and now we are going to start sending artists from here to there. We are working on a new program for this."
6. "In the US we attended 2-3 residencies. There, when you create something good, people naturally gather around you. **Their mindset is: "if I'm around someone successful and building something positive, I'll benefit too—I'll learn something and it's valuable. In contrast, here, gaining knowledge isn't always viewed as a benefit."**
7. "In Türkiye, the mindset is often: 'What's in it for me? Who will I meet?' **Many artists don't see others as partners but as competitors.** We don't know how to change this. Since we're not educators, it's challenging. What works is offering tangible support—like funding from various sources—then people get involved... **In Türkiye, to build a community and establish status early on, you need something that motivates people to contribute or participate—something that stimulates their willingness to give.**"
8. **"The people we engage with need at least basic knowledge of the subject. We bring the ideas and select the artists, but we struggle to convey the potential—what can be done in performance, education, funding, and how this space can become self-sustaining and make its own democratic decisions. We need to explain what this is really about."**
9. "We couldn't convince university professors to integrate teaching technology because they didn't believe in it. They rejected new movements like generative art, clinging to traditional art (painting). Major museums have begun to host such exhibitions. To convince institutions, it is necessary to explain the benefits (often self-interest focused)."
10. "When Koç University, European funds, etc., get involved, things will likely improve. It's better to institutionalize and move away from relying on individuals."
11. "Enabling individuals contributing to major festivals and libraries here – those creating content and developing projects – to participate in international collaborations abroad. Facilitating reciprocal visits and joint projects between professionals. This mutual cooperation will automatically lead to Turkey becoming a recognized authority in this field. **It would help to take as many projects abroad as possible and bring as many projects here to showcase examples.**"
12. "Institutions in Türkiye have no policy. It remains as a closed circuit, an archaic system. In the end, the business collapses on its own. Or a visionary person comes and says this needs to evolve."
13. "Authorities lack a distinct personality. You're faced with an individual and everything hinges on that person's vision. You have to explain things to that individual and convince them. Then, when that person leaves and another person arrives, they often scrap all of the previous person's work and start anew."
14. "Most of the time authorities love to copy from something they see abroad, just thinking it's a screen or a specific individual without initiating it here from ground up"

### Surprising Highlights (Max. 5)

*What did this interviewee say that provoked your point of view about Hubs? Why?*

- + **Continuity of support is crucial for not just emerging creatives, but also their work to do advocacy in institutions as visionary thought leaders.**
- + **Integrating XR technology-learning for artists is facing resistance by traditional university professors, and need to be thought in a different setting (could be ideal for Hub)**

+

### Interviewee 4

#### General Information





Date of Interview:	18.03.25
Name(s) of the Interviewers	Nazlı Cangönül, Evren Yantaç
Duration of the Interview (min.)	60

#### Interview Profile

Interview Code Name	HERIFORGE_4_20250318_technologist_TR
Interview Category	Individual
Sector	XR Technologies
Occupation	Academic & XR Technologies
Primary Location: City, Country	Türkiye
Other Relevant Demographic Info (If applicable)	

#### Past & Present Experiences with Communities

*What stands out from their connections with professional communities and circles?*

- + The inherent challenge in communities that don't have a "tüzel kişilik" is causing competition among member companies without fostering collaboration. difficulty in balancing competition and collaboration within these ecosystems as a key challenge
- + There were attempts to bring together companies in the XR ecosystem, aiming to act as their voice and advocate for them legally. However, this initiative faced issues with an individual who misrepresented their involvement and created a negative perception focused on personal gain. (Quote 8)
- + lack of proper structure and governance, including clear roles, election processes, and term limits, can hinder the sustainability of such organizations
- + even organizations supported by large entities or industrial zones struggle financially.
- + Involvement of a university or a large, reputable industry/technology organization could provide a secure and more objective foundation for such community structures
- + initiatives where standards were high, mentioning that even established entities struggled to meet the requirements
- + A need for a mediator or system integrator role within the ecosystem to connect technology providers with cultural institutions and ensure project continuity beyond individual companies

#### Key Role

*What role might the interview play in the Hub? (Connector, networker, thought leader, resourcer etc)*

- + Bringing digital expertise, especially for projects with education and tourism purposes
- + Maybe they can be a good outreach point of contact for large corporations like Turkcell, Turk Telekom, İGA etc.

#### Pain Points, Challenges, Barriers, Obstacles in the National Ecosystem

*What issues did the interviewee list?*

- + Commercial viability for cultural heritage projects utilizing XR technologies is not visible, leading potential business partners to view them primarily as sponsorship opportunities rather than mutually beneficial collaborations. Firms often do not see enough direct benefit from these projects. (Quote 1)
- + Scaling XR projects within the cultural heritage domain is challenging, since the impact of this is limited due to technical equipment needed. (Quote 2)
- + Measuring the impact of XR technologies on cultural heritage engagement and learning is difficult. Lack of demonstrable, concrete impact measurement makes it harder to secure investment and support. (Quote 3)
- + Cultural institutions like museums and libraries often face funding limitations that hinder their ability to initiate and support XR projects
- + Smaller scale cities with heritage sites need more accessible funding opportunities for cultural heritage projects. (Quote 6)

#### International Expectations

*How might Hubs play a role for international collaboration opportunities?*

- + Being part of HERIFORGE with a project can make it easier and more organized for tech provider firms to participate in international shows and fairs, for international recognition.



### Opportunities

*What are the opportunities for the Hub, according to the interviewee?*

- + **The Hub can act as a trusted intermediary for cultural institutions and technology startup partnerships, by providing a secure environment and potentially offering guarantees regarding project continuity and access to resources like source code. Current lack of trust and the risks perceived by cultural institutions can be addressed while working with new companies.** (Quote 7)
- + **The Hub can facilitate scaling of successful XR projects for cultural heritage, by becoming a platform for collaboration for reputable organizations, by finding scalable solutions for technological equipment for reaching to a wider audience.** (Quote 2 & 5)

### Surprising Highlights (Max. 5)

*What did this interview say that provoked your point of view about Hubs? Why?*

- + **The ecosystem needs "initial risk-takers", either individuals or institutions, to successfully implement and showcase the benefits of XR in cultural heritage to encourage broader adoption** (Quote 4)

### Critical Quotes (Max. 5)

1. **"Most companies aren't interested because they see it as sponsorship with little commercial return.** For example, ... only accepted our cultural heritage project because it was linked to tourism ... otherwise, they wouldn't have approved it. Municipalities are more supportive but often lack the necessary funding."
2. **"Using characters like Karagöz for educational purposes, like teaching children respect for elders or raising environmental awareness through storytelling, makes a lot of sense. This creates a playful learning environment where children absorb values without realizing it, but funding and scaling are major challenges due to limited access to the necessary technology, and only a few kids can experience that."**
3. **"There's no clear research or measurable outcome to show, like "this will increase engagement by X%." It's more about belief — if someone thinks it will work, they might support it. Especially in areas like cultural heritage, it's hard to quantify the return on investment in concrete terms."**
4. **"Often, the key is finding the first institution willing to take the initial risk and show results.** For example, if a Municipality used this technology for values education and it succeeded, others would follow. A proven success story with concrete data would demonstrate the value, paving the way for more projects and investment."
5. **"Libraries must evolve into experience spaces rather than just quiet reading areas. With many public and private libraries available, they could host such technologies in partnership with tech firms, as they gather people like hubs, helping scale access and support wider digital engagement."**
6. **"The Municipality at ... is so passionate about the site that he insists everyone should know about it. But to realize his vision, funding is needed — both for his project and for us to support him."**
7. **"In Türkiye, there is a strong desire for transformation, especially in museums, accelerated by the pandemic, but there's a lack of digital and scientific centers. The biggest challenge is finding the right partners and securing sustainable funding; even when funds are found, there's often difficulty in relying on partners for long-term success. A solution could be having a mediator role, like your project, that connects museums with trusted startups, ensuring security and continuity through clear guarantees."**
8. **"Companies join these non-official platforms to get new business, these platforms didn't have a legal entity. There were cases where such platform owners used its leverage to take commissions, which is a big issue. It's important to maintain a balance that supports both healthy competition and fair collaboration."**

### Interviewee 5

#### General Information

Date of Interview:	18.03.2025
Name(s) of the Interviewers	Nazlı Cangönül, İvon Bensason, Mustafa Gül
Duration of the Interview (min.)	60

#### Interviewee Profile

Interviewee Code Name	HERIFORGE_5_20250318_museumprofessional_TR
Interviewee Category	Private Sector
Sector	Emerging Technologies
Occupation	Marketing director





Primary Location: City, Country	Istanbul, Turkey
Other Relevant Demographic Info (If applicable)	3 people joined the interview from the same organization

### Past & Present Experiences with Communities

*What stands out from their connections with professional communities and circles?*

- + They work with various local and international firms and artists, selecting them based on the specific project needs, collaborations with designers, producers, technologists while supporting the technical infrastructure with their own expertise.
- + They bring together individuals with different skills and mindsets, such as designers, technologists, and operations personnel. Their wish is for the visionary and the technical teams to understand each other's constraints and possibilities while collaborating.

### Key Role

*What role might the interviewee play in the Hub? (Connector, networker, thought leader, resourcer etc)*

- + Defining themselves as an 'experience design' company, they orchestrate different aspects, including technical know-how, design, and architecture. Given their comprehensive approach encompassing museum creation, operation, content design, and historical site management, they could be a knowledge source for the management and operational aspects of digital museums and exhibitions.

### Pain Points, Challenges, Barriers, Obstacles in the National Ecosystem

*What issues did the interviewee list?*

- + Coordinating and aligning diverse experts and their opinions (archaeologists, historians, academics) during the concept creation process is a significant challenge, they speak different languages. (Quote 1)
- + There's an initial resistance from older generations of historians and museum managers towards integrating digital technologies with historical artifacts (Quote 2)
- + For the continuity of one-shot experiences, investment is needed for its technological maintenance too. (Quote 3)
- + Artists, creatives and technologists should consider and ensure the commercial sustainability of their projects is crucial, from the initial design phase. (Quote 4)
- + The rapid technological change requires constant adaptation and consideration of equipment maintenance and lifecycles. (Quote 5)

### International Expectations

*How might Hubs play a role for international collaboration opportunities?*

- + Since they already collaborate with international talent, the Hub could show professionals and companies abroad, with different expertise and from various regions.

### Opportunities

*What are the opportunities for the Hub, according to the interviewee?*

- + Facilitate networking and categorization of the fragmented ecosystem of professionals and companies in the sector.

### Critical Quotes (Max. 5)

1. "Not every designer can create everything, as each project requires specific expertise. **You need the right skills, such as knowledge of history, design, and storytelling, which must be clearly differentiated, like interactive designers, historians, animators, and game developers. Mixing these roles can lead to chaos**, so it's important to respect each person's design language and expertise."
2. "Museum managers initially resist combining digital technology with historical artifacts, believing that old pieces should be displayed traditionally. However, today, digital tools allow us to complete unfinished works and bring new experiences, helping people see what they couldn't before. **The key issue is getting the older generation of museum professionals to adopt a more flexible perspective, as new technologies are necessary to engage future generations with cultural heritage.**"
3. "There are two aspects to technology in this work: the creative technology and the infrastructure technology that require investments to make these spaces sustainable. Without proper maintenance agreements, many projects fail, as even a small issue, like a pixel on a screen, can ruin the entire experience."
4. "**For creatives, it's important not to overlook the commercial expectations, as projects can fail without sustainability or commercial value.** Artists and curators must align their creative goals with commercial aspects of the experience."
5. "When choosing equipment, it's important to consider that technology can quickly become outdated, as even innovations like holographic screens can become standard within just two years. All of these factors, including costs and upgrade times, must be carefully considered."



6. “Virtual museums are becoming more popular as people increasingly seek remote access to cultural experiences. While the initial trend slowed down as people grew tired and sought in-person visits, **digital access will continue to expand in different creative outlets, such as fashion shows and music concerts.**”

## Interviewee 6

### General Information

Date of Interview:	19.03.2025
Name(s) of the Interviewers	Nazlı Cangönül
Duration of the Interview (min.)	45

### Interviewee Profile

Interviewee Code Name	HERIFORGE_6_20250318_museumprofessional_TR
Interviewee Category	Individual
Sector	
Occupation	Artist
Primary Location: City, Country	Dubai, The UAE & Istanbul, Turkey
Other Relevant Demographic Info (If applicable)	
Name and Links of Past Projects	

### Past & Present Experiences with Communities

*What stands out from their connections with professional communities and circles?*

- + **Networking and mutual benefit are important aspects for community engagement. Community's members should be able to support each other by sharing their networks and connections without gatekeeping.** (Quote 1)
- + **They feel a sense of belonging in communities where they can communicate with people who have similar education and understanding of art and philosophy.**
- + **They have been part of various communities related to digital arts and curatorship throughout her career, currently a member of SIMAM, an international community of museum directors and also involved in IKT, a community of curators and museum directors in the MENA region**
- + **They collaborate with the teams of major festivals like Ars Electronica, trying to bring it to Turkey this year.**

### Key Role

*What role might the interviewee play in the Hub? (Connector, networker, thought leader, resourcer etc)*

- + **A good connector, they can offer their network to others. Connecting people and sharing networks within a community is important to them.**
- + **Experience in establishing festivals and museums positions her as a potential connector and resourcer for the Hub**
- + **Their contacts in international art circles makes them an important networker for international collaborations.**
- + **Their insights about the evolution of digital art and cultural heritage could position them as a thought leader, sharing their vision about the digital heritage of today's culture.**

### Pain Points, Challenges, Barriers, Obstacles in the National Ecosystem

*What issues did the interviewee list?*

- + **There is a scarcity of women in the digital art ecosystem in Turkey.** (Quote 2)
- + **There is a lack of expertise and understanding regarding curatorial practices in digital arts**
- + **Traditional cultural institutions and museums are slow to adopt and understand digital art**
- + **There is a lack of expertise and understanding regarding curatorial practices in digital arts.** (Quote 3)

### International Expectations

*How might Hubs play a role for international collaboration opportunities?*

- + **Hubs can send deal-makers abroad to facilitate international partnerships. A key aspect of these collaborations is establishing direct and physical connections with individuals and festivals abroad. Being there in person is critical in making these partnerships work.** (Quote 4)



- + **Bringing internationally known organizations/festivals to Turkey will also increase the visibility of local artists internationally and elevate the quality of work in the international arena. Hubs can be a platform for information and experience exchange through these organizations.**
- + **Local digital art community needs to expand by involving international individuals. This demonstrates that benefiting from international knowledge and being included in global networks is an important expectation for the development of digital art in Turkey.**

#### Opportunities

*What are the opportunities for the Hub, according to the interviewee?*

- + **Bringing digital arts to a broader audience by connecting it with traditional cultural institutions. (Quote 7)**
- + **Elevating the international visibility of local talent and projects, by local-international joint projects and events.**

#### Critical Quotes (Max. 5)

1. "Networking term sounds terrible — to me, it means being able to call someone when I'm stuck and instantly getting five useful contacts, and doing the same for others when they reach out. We shouldn't be gatekeeping. **The key is not wasting time with pointless chats but actively sharing connections, keeping the community engaged, and finding a balance between staying active and not overwhelming people.**"
2. **"There are very few women in Türkiye's ecosystem"**
3. "It often starts like this: "Oh, digital art is popular, let's do something too!" But **there's no real curatorial approach behind it — digital arts curation is not just jumping on trends.**"
4. "I'm spending a lot of money to bring Ars Electronica and setting up the infrastructure. Being there in person and finalizing the deal at the table is still very important because not everything works remotely...It takes 3 years of work, it doesn't happen overnight. That person comes here 2-3 times and the story gets bigger. **We need to add international people to events here.**"
5. "The reason I left Turkey is this: my festival life was full of fairs, I established things, I did everything, and then I thought 'let me go abroad and at least provide support to Turkey from there'. In my opinion, the biggest lack here is community"
6. "There is no community, and the new opportunities are directed to a small pool of insiders, just like what happened with Istanbul Biennial's new curator. You need to invite new people in and give them a chance."
7. "We need to bring it down to speak to the general public, so you must present it in a way that speaks their language. I simplify my language, like explaining to a five-year-old, because the real challenge is making it accessible—once you do, change happens naturally."

#### Surprising Highlights (Max. 5)

*What did this interviewee say that provoked your point of view about Hubs? Why?*

- + **Not giving critical opportunities to the same celebrated people but expanding it to emerging talents to grow the community. (Quote 6)**

#### Interviewee 7

##### General Information

Date of Interview:	21.03.2025
Name(s) of the Interviewers	Nazlı Cangönül, Ivon Bensason, Mustafa Gül
Duration of the Interview (min.)	75

##### Interviewee Profile

Interviewee Code Name	HERIFORGE_7_20250321_localdevelopmentmanager_TR
Interviewee Category	Public Sector
Sector	Sustainable local development
Occupation	Manager
Primary Location: City, Country	Izmir, Turkey
Other Relevant Demographic Info (If applicable)	

#### Past & Present Experiences with Communities

*What stands out from their connections with professional communities and circles?*



- + They established strong connections with writers, artists, collectors, academics, and excavation leaders through the cultural publishing initiative and the development of the Time Travel project. Synergistic environment emerged where ideas and feedback are exchanged, enriching their projects.
- + Collaboration with university students and researchers has been fruitful, such as the architecture student becoming a Hafıza İzmir intern and the collaboration with Cizre University on İzmir Passages (“Han” in Turkish)

#### Key Role

*What role might the interviewee play in the Hub? (Connector, networker, thought leader, resourcer etc)*

- + They can share the 3D models created for the Time Travel project, so could be a valuable knowledge and heritage resource provider for the Hub initiatives.
- + The development of the Hafıza İzmir and Time Travel projects, including their evolution and challenges, could mean that they can be shown as an example of noble collaboration and a case study, in combining culture and immersive technologies.
- + Could be an advisor for project management for securing funding and navigating bureaucratic processes.

#### Pain Points, Challenges, Barriers, Obstacles in the National Ecosystem

*What issues did the interviewee list?*

- + Getting permission from and cooperation with authorities was difficult, while trying to integrate a QR code to museums to show Time Travel.
- + Conflict of interest might arise from the commercialization of historical sites when there are both private and public entities involved. It might make it difficult for public institutions to offer complementary digital experiences within those sites. (Quote 2)
- + Convincing the game development sector to utilize their 3D models has been challenging, for reasons that are elusive to them. (Quote 3)
- + Within public policy, the ownership and responsibility of the creative industries is unclear. (Quote 4)
- + Partnering solely with a technology firm in developing a heritage project, might result in high-tech outputs with poorly-researched historical context. Collaborating with multiple partners is needed. (Quote 6)

#### International Expectations

*How might Hubs play a role for international collaboration opportunities?*

- + Integrating their collected digital archive with Europeana is a goal that aligns with international accessibility and collaboration. (Quote 5)

#### Opportunities

*What are the opportunities for the Hub, according to the interviewee?*

- + Building ground-up solutions as a bureaucratic workaround show great potential for existing projects to generate funds. Hubs can play an enabler/connector role by finding the right development partner for these projects that are already brewing.
- + Through Hub activities, different members can share experiences and best practices in developing digital cultural heritage projects. Also increasing interaction and networking among professionals working at the intersection of culture, technology, and gaming. Facilitate mutual awareness of ongoing projects, technologies used, and potential synergies between different initiatives. (Quote 8)

#### Critical Quotes (Max. 5)

1. “When we started cultural publishing, we connected with many people and institutions and really enjoyed it, often outside regular work hours. **As our publications continued, we received increasing feedback and ideas from authors, collectors, academics, and excavation leaders, leading to more engagement and project suggestions.**”
2. “For our project, we considered integrating it with a QR code into another historical site, but there is already a museum operated by a private entity. **As a public institution, offering a similar service could create a conflict of interest, since the private entity profits from it.**”
3. “We made efforts to engage the gaming sector but haven’t yet convinced any studios to implement our models professionally. **Although our models are technically compatible with game engines, and we encouraged development through university ideathons in İzmir, only student-level projects have emerged so far.** Despite many meetings, we haven’t yet established a solid collaboration with professional game studios.”
4. “Creative industries merging cultural heritage and technology face an unresolved question: who is responsible at the policy level? It’s unclear which ministry this falls under, since it overlaps with culture, software, and exports. Rather than being confined to a single ministry, an independent agency or directorate can coordinate creative industries and their role in heritage preservation and technology.”
5. “**We want to integrate our digital archive with Europeana, so it can be accessible worldwide and serve as a resource for cultural publications and new projects.** Beyond preserving the city’s identity, this archive will offer open access to locals, researchers, and global audiences under open data principles.”
6. “Initially, we worked with a firm experienced in 3D modeling, assuming they could manage the content themselves, but the historical content they provided was unsatisfactory. As a result, we took over the content development ourselves, writing



everything and also invested in a new model library compatible with various technologies, including gaming and digital museums.”

7. “We’re considering whether to monetize our project to fund cultural initiatives or at least cover maintenance and modest development costs. However, **managing commercial interests and navigating complex dynamics led us to explore offering the experience via a separate app, where we could also potentially include ads and reach users as a workaround solution for the conflict of interest**”
8. “We believe a hub is essential for sharing our content—both models and other materials—and increasing interaction with other stakeholders in the ecosystem. **It would allow us to exchange knowledge, technologies, and project opportunities, fostering awareness and collaboration, which we see as highly valuable but currently lacking.**”

#### **Surprising Highlights (Max. 5)**

What did this interviewee say that provoked your point of view about Hubs? Why?

- + **Forming healthy and fruitful relationships first will pave the way to finding and generating funding opportunities:**
  - + “It’s important to facilitate interaction and raise awareness, rather than focusing solely on funding. **Once this awareness is established, funding and other relationships will naturally develop, as teams collaborate and many financing options, like those from the EU, will become accessible.**”
  - + **Popular sites can pose difficult questions around balancing preservation and viability.**
- “The paradox between cultural preservation and revenue generation, along with the pressure to finish excavations quickly for commercial purposes, creates significant stress and risks for preserving the site’s integrity.**

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## D. Focus Group Agenda

Time	Activity
15 mins	Check-in
10 mins	Context Setting
10 mins	Scenario Introductions & Dot Voting
20 mins	Scenario Discussion 1
20 mins	Scenario Discussion 2
10 mins	Break
10 mins	Personas Individual Reflection
20 mins	Personas Share-out
5 mins	Next Steps & Check-out

## E. Strategy Workshop Agenda

Duration	Activity
5 mins	Arriving Together
10 mins	Check-in & Agenda
10 mins	WP 4.2 Findings Share-out
10 mins	WP 2.1 Findings Share-out
5 mins	WP 3 Share-out
5 mins	WP 5 Share-out
10 mins	Collective Discussion
5 mins	Introduction of Objectives
15 mins	Objectives Discussion
10 mins	Share-out & Discussion
10 mins	Break
10 mins	Introduction of Breakout Rooms & World Cafe Instructions
25 mins	World Cafe Round 1
25 mins	World Cafe Round 2
20 mins	Share-out & Discussion
5 mins	Reflections & Check-out





## PARTNERS



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