8.
Museum Communication, Accessibility, and Technology: The Ticho Project

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Introduction

Museums and cultural heritage institutions have traditionally catered to an educated and culturally engaged audience. However, they are now expected to adopt a more inclusive role, interpreting and disseminating knowledge, and promoting accessibility, integration, and social inclusion. According to the International Council of Museums (ICOM), museums are non-profit, permanent institutions that explore, collect, conserve and exhibit tangible and intangible heritage, ensuring public access and ethical, sustainable engagement with communities (2022).

In order to reach a broader audience, many institutions have adopted new technologies, resulting in advances in digital content, such as text-based, audio, multimedia and multisensory guides, as well as AI-driven tools and tactile resources, including 3D replicas. However, the communicative and linguistic dimensions of museum text production remain largely unexplored despite their importance for visitor understanding and engagement. Linguistic diversity poses an additional challenge: international tourists often require translations, typically into English as a lingua franca. Drawing on Jakobson's (1959) broad model, museum translation encompasses interlingual processes (e.g. transcreation), intralingual practices (e.g. popularisation and narrativisation) and intersemiotic forms of transmediation.

Although translation is central to cultural accessibility, research on museum texts remains limited. Liao (2018) draws attention to its marginal treatment, while Jiménez Hurtado and Soler Gallego (2012) and Neather (2024) highlight its importance. The lack of comprehensive research in this area indicates the necessity for a systematic study of museum translation and its effect on accessibility.

The TICHO project

The project "Translating Italian Cultural Heritage for Outsiders" (TICHO) – which was developed at Ca' Foscari University of Venice within the framework of Italy's *National Recovery and Resilience Plan (Piano Nazionale di Ripresa e Resilienza PNRR)*[1] – aimed to fill this gap by investigating translation and accessibility in museum communication, with a specific focus on cultural institutions in the Veneto region (north-eastern Italy). The main objectives of the project were the following:

1. to assess the current state of accessibility in museums in the Veneto area;
2. to identify effective strategies for improving accessibility;
3. to develop innovative communication models tailored to a diverse audience, based on audience reception research.

To achieve these objectives, the project drew on several interrelated research areas. Theoretical frameworks include mindful mediation (Agorni, 2016, 2018; Katan, 2016, 2021), multimodal theory (Kress, 2010; Maci, 2020) and popularisation (Garzone, 2020). Further methodological insights are drawn from studies on audio description (Neves, 2017; Fina, 2018; Perego, 2023), 3D modelling and rapid prototyping (Sdegno *et al.*, 2013), and translation reception (Agorni, 2018; Katan, 2016). In addition, the project incorporates insights from flow theory (Csikszentmihalyi & LeFevre, 1989; Gilli & Rozzi, 2013) to assess visitor engagement.

The main challenges addressed by the project revolved around knowledge, communication and cognitive barriers that hinder visitor engagement. Visitors can be categorised as "insiders" who share linguistic and cultural familiarity with museum professionals, "partial insiders" who understand the language but lack domain-specific knowledge, and "outsiders" who experience additional barriers due to linguistic, cultural, educational, and/or sensory differences (Katan, 2016).

A key assumption underpinning the project was that all "outsiders" face some form of communicative challenge, broadly understood as (dis)ability. This term is here used in a broad sense to include not only sensory disabilities (e.g. visual and hearing) but also a wide range of differences that may thwart effective communication. These include limited proficiency in the target language, lack of familiarity with cultural heritage

[1] Ca' Foscari University of Venice is part of the iNEST (Interconnected North-East Innovation System) network, Spoke 6. www.consorzioinest.it/en/#content-1-en (last accessed May 2025).

discourse, and socio-cultural constraints that affect reception. The project therefore adopted a broad definition of differently abled visitors, who have been categorised as follows:

1. international visitors of various ages, using English as a native language or as a lingua franca;
2. Italian adult visitors with visual disabilities;
3. Italian adult visitors with hearing disabilities;
4. Italian young visitors, more specifically digital natives aged 15 to 23 years.

By considering these diverse visitor profiles, the project aimed to improve museum accessibility through culturally and linguistically informed translation and communication practices, which were integrated into an inclusive design framework for an interactive mobile application.

Phases of the project

To fulfil the objectives mentioned in the previous section, the project was organised in four main phases, as follows:

1. case study on accessibility in museums in the Veneto region;
2. focus groups organised at the selected museum;
3. application design and creation of contents based on the results of the focus groups;
4. testing of the mobile application.

Focusing on phase 2, the present article describes the organisation of the focus groups and summarizes their results, including the suggestions and needs expressed by the participants. The case study on museum accessibility in Veneto, analysed during phase 1, was published in another article by Alabiso (2026).

The project was carried out at the Palladio Museum in Vicenza, Veneto[2]. The technology-related aspects (i.e. app design) were supervised and catered for by CONFORM S.c.a.r.l., an Italian company operating at both national and international levels to provide multimedia and technological solutions for cultural heritage promotion and tourism development.[3] Before delving into the details of the project, we will provide an overview of international accessibility policies, followed by an outline of existing best practices in accessible communication for visitors categorised as "partial insiders" and "outsiders".

[2] www.palladiomuseum.org/en/ (last accessed May 2025).
[3] https://conform.it/en/ (last accessed May 2025).

Accessibility and Universal Design

Over the past two decades, interest in cultural heritage accessibility has grown considerably, prompting extensive debate among policy-makers and scholars from various fields. This has led to new models of disability[4] and the development of international frameworks. The World Tourism Organization (UNWTO) first referred to "accessible tourism" in its 1999 Global Code of Ethics for Tourism, and the UN Convention on the Rights of Persons with Disabilities (UNCRPD), adopted in 2006, became the first international instrument to establish minimum standards for the rights of persons with disabilities. The Convention defines accessibility as the set of measures enabling persons with disabilities to live independently and participate fully in all aspects of life by ensuring equal access to the physical environment, transport, information, communication technologies and public services (Article 9).

The UNCRPD was ratified by the EU in 2011 and by Italy in 2009. With the 2009 Treaty of Lisbon, the Charter of Fundamental Rights – containing Article 26 on the integration of persons with disabilities – became legally binding. Since 2010, the EU has launched two decade-long strategies to guarantee equal participation and protect disability rights[5]. To meet these objectives, EU accessibility policies rely on Universal Design (Mace, 1976; 1985), defined in Article 2 of the UNCRPD as designing environments and services usable by all people, supplemented where necessary by assistive devices[6].

Lingua-cultural accessibility

In the cultural heritage sector, a significant share of the "partial insiders" and "outsiders" is made up of foreign visitors who have limited to no proficiency in the local language and lack familiarity with the host country's socio-cultural context. Museums, in particular, may pose

[4] For a discussion and comparison between the medical, social and human rights models of disability, see Lawson and Beckett (2021). See also Greco and Di Giovanni (2017) for account of disability and human rights.

[5] They are called, respectively: "European disability strategy 2010-2020" and "Strategy for the rights of persons with disabilities 2021-2030". For a summary on EU policies concerning people with disabilities, see www.europarl.europa.eu/RegData/etudes/BRIE/2021/698811/EPRS_BRI(2021)698811_EN.pdf (last accessed May 2025).

[6] www.un.org/development/desa/disabilities/convention-on-the-rights-of-persons-with-disabilities/article-2-definitions.html (last accessed May 2025).

significant barriers since they are ridden with cultural references. The most widespread solution to such barriers is the complete or partial translation of museum texts. However, as Katan (2012) and Neather (2024) have shown, such translations do not always consider the socio-cultural barriers that lie behind the surface of language difference, resulting in texts that include obscure, unexplained cultural references (ibid). Agorni (2016, 2018) and Katan (2016, 2021) have addressed the issue by developing the concept of "mindful mediation". To mediate in a mindful way is to adopt a translation approach that factors in culturally-informed communication habits and values. Techniques include the explicitation of hidden cultural references, the reorganization of content, the addition or deletion of information, the adaptation of tone and style to the conventions of the reader's culture (Manca, 2013; Katan, 2016; Neather, 2024). Yet, "mindful mediation" does not aim to simplify the text nor to completely adapt it to the reader's culture; rather, it keeps some level of foreignization to engage visitors and fulfil their wish to explore new cultures (Agorni, 2016, 2018).

Accessibility for patrons with visual disabilities

In the museum context, the most common methods to enable access for blind or low vision patrons rely on multi-sensoriality, primarily using hearing (audio descriptions), touch (tactile replicas) or both senses (such as tactile tours and explorations). Audio description (AD) and its linguistic, paralinguistic and multimodal features have been researched extensively over the past two decades (Perego, 2023; Igareda, 2012; Fryer, 2010, 2016; Jimenez Hurtado & Soler Gallego, 2013; Braun, 2008; Braun & Starr, 2020; Neves, 2016, 2017; Eardley *et al.*, 2016; among others). Some scholars have also developed free training materials for AD professionals as part of the EU-funded *ADLAB* and *ADLAB PRO* projects[7] (Remael *et al.*, 2015), and a set of guidelines has also been developed by *Art Beyond Sight* (Giansante, 2015) in the USA. As far as Italy is concerned, museum AD guidelines have been set out by non-profit *Associazione Nazionale Subvedenti Onlus* as part of the *DescriVedendo* project.[8] AD guidelines address all aspects of a museum visit, from how to operate the AD equipment to navigation and description of artworks.

[7] www.adlabproject.eu/ (last accessed May 2025).

[8] www.descrivedendo.it/wp-content/uploads/2021/12/SINTESI-linee-guida-DescriVedendo-aggiornate-2021.docx.pdf (last accessed May 2025).

Accessibility for patrons with hearing disabilities

Deaf communities around the world have a strong identity basis and their members share common (sign) languages and cultures on a national basis. For a great share of Deaf[9] people, sign language is their mother tongue (Roque Martins, 2016), whereas their country's oral/written language is their second language. Nonetheless, an equally significant share of people with hearing disabilities do not know sign languages, and some using hearing aids can communicate orally. Such diverse language landscape leads to complex language interactions within mixed groups of deaf people, with some members seamlessly switching between oral and sign languages (Goss *et al*., 2015). Therefore, to properly address such a composite audience, museum communication should include oral languages (in their written and oral modes) as well as sign languages.

Accessibility for young visitors

Research by the Arts Management & Technology Laboratory at Carnegie Mellon University (Pittsburgh, PA) emphasises how the combination of playful elements and interactive storytelling within museum tours not only helps capture the attention of digital natives but also promotes longer-lasting learning and a greater sense of belonging to cultural heritage (Kowach, 2019; Zhou, 2021). Among the key elements to attract young people to the museum are challenges and games, interactive narration, team-based activities and technologies such as mobile devices and augmented reality AR (see also Boschetti *et al*., 2022). These latter allow museums to design unique visit experiences, while at the same time allowing visitors of all ages and backgrounds to adjust the visit to their time constraints and interests.

The Palladio Museum

The museum that was selected for the TICHO project is the Palladio Museum in Vicenza. The selection took place by means of a public call for

[9] The capital letter is used to refer to people who associate their deafness with their social or personal identity and identify as part of the Deaf community (Kalisher 1998). Not all people with hearing disabilities identify as part of the community, thus the use of d/Deaf later in the text (Roque Martins 2016).

interest that was issued within the above-mentioned framework of Italy's *National Recovery and Resilience Plan*.

The Palladio Museum is housed in Palazzo Barbarano, a well-preserved Palladian building in Vicenza. Owned by the architectural research institute *Centro Internazionale di Studi di Architettura Andrea Palladio* (CISA), it showcases Palladio's construction techniques, design language and key architectural themes mainly through large wooden models. The exhibition includes written captions, videos and video interviews in both Italian and English. An audio guide in Italian and English is also available and tactile tours of the models can be requested by blind visitors in either language.

The museum's visitor demographics show that 41% are Italian and 59% are foreign, and the dominant age group belongs to the 35-55 age range, in line with the audience engaged via the museum's social media channels.

Focus groups

The phase of the research involving focus groups was carried out by Federica Alabiso between September and December 2024 with a two-fold aim: one the one hand, to collect suggestions and feedback regarding the visit options offered at the Palladio Museum at the time of data collection as well as possible intervention strategies to be adopted; on the other hand, to collaborate with the involved stakeholders from the very beginning of the project. Nine focus groups were organised, involving overall seventy-four participants, as follows:

- Focus Group 1: young Italian visitors aged 15 to 16 years (five participants);
- Focus Group 2: German adults aged 30 to 65 years (fifteen participants);
- Focus Group 3: American adults aged 30 to 65 years (seven participants)[10];
- Focus Groups 4 and 5: young Italian visitors aged 20 to 23 years (four and six participants respectively);
- Focus Groups 6 and 7: young German visitors aged 18 to 20 years (thirteen and seventeen participants respectively);
- Focus Group 8: Italian adults with visual disabilities aged 40 to 70 years (four participants)[11];

[10] These were accompanied either by their Italian partners or Italian collaborators.

[11] These were members of the Italian Union of the Blind and Partially Sighted – Vicenza (*UICI*, *Unione dei Ciechi e degli Ipovedenti – Vicenza*).

- Focus Group 9: Italian adults with hearing disabilities aged 25 to 35 years (three participants)[12].

The groups to be interviewed were selected for them to be representative of the target groups involved in the project (see section 2). More specifically, groups 1, 4 and 5 relate to target group 4 of the project (young Italian visitors); groups 2, 3, 6 and 7 relate to target group 1 of the project (international visitors of various ages, using English as a native language or as a lingua franca); groups 8 and 9 relate respectively to target groups 2 (Italian adult visitors with visual disabilities) and 3 (Italian adult visitors with hearing disabilities).

Focus group organisation

The focus group was organised as follows:

- step 1: tour of the museum;
- step 2: structured interview.

Step 1 involved dividing each group into two sub-groups: one sub-group undertook the tour of the museum autonomously, while the other sub-group used the standard audio guide available at the museum.[13] However, for blind and low vision visitors or semi-autonomous elderly visitors a museum operator conducted the tour. This was necessary because, at the time of the study, no self-guided tour options accessible to these groups were available.

Following the museum tour, the participants gathered with the researchers and representatives of the project partners for the interview session (step 2). The focus group was structured as a list of open-ended questions regarding the following topics: the participants' habits and preferences in visiting museums; their experience visiting the Palladio Museum; their opinions regarding museum apps; suggestions for the app to be designed for the Palladio Museum. The focus groups were recorded following permission by the participants and the contents of the recordings were then transcribed into Word files.

[12] These were members of the Italian Association of the Deaf (ENS – Ente Nazionale Sordi) and of the Committee of Young Italian Deaf People – Veneto (*CGSI – Comitato dei Giovani Sordi Italiani – Veneto*).

[13] Obvious exception was made for Group 9 (deaf and hard of hearing visitors).

Focus group findings

The answers to the various questions overall present a high degree of diversification: this is not surprising, considering the subjective filter that normally characterises the museum experience. Due to space constraints, it is not possible to provide a detailed overview of the results obtained from each of the focus groups. Therefore, the results will be summarised for each of the four parts of the interview.

Part 1 – Habits and preferences in touring museums

Starting with visit preferences (solo vs. group visit; audio guided visit vs. no audio guide, group visit with a human guide), opinions are divided according to the perceived advantages and disadvantages of each visiting options. The participants seem to overall agree that a solo visit without an audio guide makes it possible to set their own pace and customise the visit, but it may also result in boredom, especially when the museum does not offer interactive features. The audio guide to the museum is overall considered a useful plus when it allows visitors to customise the tour, for example by choosing which tracks to listen to (cf. Fina, 2018, p. 39). Group visit allows visitors to interact and share views on the displayed items, but imposes a pace which may not suit every visitor. As for group visit with a human guide, the mentioned advantages include communication tailored to the group's needs – which makes content uptake easier – as well as access to information which may not be present in the museum leaflet.

Interestingly, the groups that expressed specific visit-related needs are the blind and low vision visitors, who need to be led by a sighted person if not by a museum guide, and parents with young children, who tend to only visit museums that offer activities and materials specifically devised for children.

Part 2 – Feedback on the Palladio Museum

In this sub-section we will provide an overview of the strengths and weaknesses reported by the groups regarding the museum in terms of the way the visit was organised, the effectiveness/usefulness of the materials they were provided, and issues relating to their background knowledge vs cognitive effort in content uptake.

Strengths and weaknesses

The visit to the museum was overall well-received by the participants of all groups regardless of the visit mode. The strengths of the museum were identified in a number of aspects of the exhibition relating to its layout, its themes, and the building housing it. Particularly appreciated were the detailed scale models reproducing Palladio's original buildings, the sample of the materials used by Palladio, and the video-interviews projected on the walls.

As far as weaknesses are concerned, the participants detected flaws in way-finding and navigation, for example the lack of a portable map and instructions for self-orienting, and of numbers or names labelling the rooms.

Flaws were also detected in the descriptions of the items and in the fact that some useful information (such as the museum introduction and the description of the frescoes and courtyard) is only available in the audio guide.

Particularly interesting are the weaknesses that can be related to accessibility in its broad sense. Among the flaws reported by the interviewees we find the lack of playback controls for the video interviews and poor interactivity (e.g. the fact that architectural scale models cannot be touched).[14] Language barriers were also detected: the video interviews in Italian are only subtitled in English, which makes them inaccessible to non-Anglophone deaf visitors, since there is no interpretation into Italian Sign Language (LIS) either. Interpretation in LIS is deemed essential by Group 9 as many deaf people have LIS – and not Italian – as a mother tongue; as a result, they might not be able to understand technical terms but also all those features of spoken language that are used in the museum texts.

On a more technical level, the participants reported excessive volume of audiovisual items, which can be disruptive for visitors using the audio guide or taking part in a guided tour and the lack of chairs or benches for visitors to rest during the tour or to sit for admiring the frescoed ceilings.

The visitors with visual disabilities took the human guided tour "Palladio per mano / Touch", since no self-guided option was available at the time of data collection. As a result, for this category of visitors the weaknesses of the museum can be identified in complete lack of accessibility when visiting alone.

The weaknesses identified by the groups were of pivotal importance to the research, because they were used as a basis for structuring the museum

[14] Touch is allowed only in specific guided tours.

app and its contents as well as making decisions on how to improve the existing materials.

Background knowledge and cognitive effort

We will now explore the responses concerning potential challenges experienced by the groups in understanding the content and how these challenges possibly relate to their background knowledge on architecture. The museum's contents were deemed overall intelligible by most of Italian and Italian-speaking visitors. As they explained, they were more or less familiar with the topic because they remembered it from school studies. However, some visitors noted that the information contained in the written texts was not always fully clear, but its meaning could be deduced from the context.

Interestingly, the visitors who took the audio guided tour seem to have experienced fewer problems in content comprehension because the audio guide helped bridge the gap in background knowledge and navigate the rooms.

Difficulties in content comprehension were mainly raised by non-Italian speaking visitors. LIS (Italian Sign Language) and German native speakers attributed these difficulties to the fact that they had to take the tour in a foreign language (Italian for LIS speakers, and English for German visitors). In contrast to the Italian visitors, the American visitors, despite being native English speakers, found some architecture-related terms unclear. Interestingly, one of the Italian companions in Group 3 suggested that the difficulties encountered by the American visitors were probably due not to the language itself, but to a lack of these architectural items both in the architecture and in educational programmes in their own geo-cultural context. This issue is strongly in line with the concept of "mindful translation" illustrated in Chapter 8 and validates our decision to adopt this culturally sensitive approach to accessibility.

Part 3 – Opinions regarding museum apps

Regarding the participants' opinions about museum apps in general, their answers can be summarised in a list of features that would make a museum app useful as well as of possible disadvantages. Their answers are based either on their prior experiences with museum apps or on how they imagine such an experience, and are summarised in Table 10:

Table 10 - Participants' general opinions on museum apps

Features that make museum apps useful	Possible disadvantages of museum apps
• Standard interface with playback controls • Features for way finding within the museum • Possibility to customise the tour (selecting contents according to age, interests or time) • Access to extra contents • Instant recognition of the work via Bluetooth (for blind visitors) or QR code	• Decreased or hindered group interaction • Distraction from onsite experience (loss in direct engagement with the artworks) • Reduced incentive for in-person museum tours (if the app contains extensive content accessible from home) • Distraction caused by pop-up notifications if the app is used on a personal smartphone

As can be noticed, the aspects that seem to be highly valued by participants are customisation and autonomy (cf. Fina, 2018, p. 45), with a museum app making sense only if it contributes to enhance and enrich the visitor's experience.

Part 4 – Suggestions for the Palladio Museum app

The final part of the focus groups is the most interesting one as it provides the participants' responses regarding the app of the Palladio Museum. The following list contains the features that the participants suggested that we include, classified according to specific areas of intervention:

- Technical aspects:
  - Easy to download and install, compatible with Android and iOS and their related screen readers, low storage consumption;
  - Eye-catching and user-friendly interface;
  - Adjustable playback speed for audio tracks.

- Way-finding, navigation, and instructions:
  - Map of the museum (plus portable tactile version);
  - Numbered audio tracks matched with the rooms and the exhibited objects;
  - Enlarged, high-contrast numbers and Braille or tactile QR codes next to the exhibited objects;
  - Ability to recognise the work that is being approached – either via Bluetooth or phone camera – and to automatically play the corresponding track;

  - Video tracks in LIS associated with a picture of the corresponding object;
  - Audio description containing explicit and easy-to-follow directions for moving safely and independently.

- Contents:
  - Versions into other foreign languages;
  - Customisable visit paths (different lengths, thematic focuses, audience-tailored content, content choice);
  - Additional information on the rooms (decorations, artworks, original uses of the rooms);
  - Images depicting intricate details of the building's decorations;
  - Supplementary material on Palladio's architecture and the related national and international historical context;
  - Videos explaining the construction process of the buildings;
  - Video interviews projected in the rooms embedded in the app;
  - Glossary of technical terms (including LIS video interpretation);
  - Video interpretation in LIS of all materials;
  - Alternative narration strategies (e.g. narration delivered by a fictional character voicing Palladio).

- Technology:
  - 3D models to explore the villas from the smartphone;
  - A 3D model of Palazzo Barbarano allowing visitors to self-orient within the building;
  - AR to visualize the real-world context of the villas represented by the exhibited models.

- Interactivity:
  - Mini games;
  - Quiz for testing learning;
  - AD matched to tactile exploration.

Other suggestions include making the materials in the app accessible also outside the museum facilities, either in the app itself or in downloadable format. Furthermore, deaf participants suggested installing a video in LIS at the museum's entrance, providing practical information about the visit and app usage. However, they also firmly believe that ticketing staff should receive basic training in LIS interaction.

The features that the interviewees mentioned as undesirable are very few and include mandatory registration or account creation (which should

be optional, instead), advertisement, pop-ups or paid premium versions, and information/materials overload.

We will now summarise the responses to the very last question, which investigated the participants' potential interest in a gamified treasure hunt. Several participants declared themselves very interested in engaging with a quiz-style game whose aim would be to assess their acquired knowledge and enable competition with other visitors. This gamification item could be either real-time or asynchronous. In the former case, the game would involve whole groups or other individuals visiting the museum at the same time. This option was deemed particularly well-suited for family and educational visits. In the latter case, the game would be supported by a ranking system tracking scores from all players, with visitors achieving top scores in their respective groups being awarded a museum token.

While the proposal seems to have been welcomed with interest and enthusiasm, several participants emphasized the imperative that the treasure hunt remain optional rather than replace the standard visit.

Conclusions and future steps

The focus groups aimed to gather the views and needs of visitors with different profiles and characteristics concerning their experience of the Palladio Museum and the accessible features to be incorporated into the app. The needs expressed by each group closely reflect the barriers they encounter. Their suggestions largely revolve around two core requirements: a personalised visiting experience and greater autonomy in navigating the museum. Non-Italian-speaking visitors emphasised the need for communication tailored to diverse cultural backgrounds, while deaf visitors stressed the importance of content in LIS. Visitors with visual disabilities highlighted the importance of AD enriched with spatial directions and tactile aids to support independent exploration. All groups shared the desire for autonomy, particularly with regard to wayfinding. Clear, accessible instructions for moving around the museum were considered indispensable by visitors with and without sensory disabilities.

Views on gamification were similarly aligned. While participants accepted that a treasure hunt could be an enjoyable optional activity, they agreed that it should never replace the standard visit. This suggests a shared perception of museums as fundamentally educational institutions, whose educational role may be supported but not replaced by edutainment.

Focus group findings informed the structure and content of the app, which was developed according to Universal Design principles. Despite

budgetary and curatorial constraints, the app provides on-demand access to textual, visual, auditory and tactile resources. Three communication strategies were prioritised: narrative adaptation (simplification, transcreation and mindful translation), popularisation for non-specialist audiences and multimodal integration (AD, tactile elements and visual enhancements).

The materials were tested in summer 2025, and the findings from this phase will contribute to the development of accessible communication frameworks that enable diverse audiences to fully engage with cultural heritage.

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