

COMMUNITIES IN TRANSFORMATION

Transdisciplinary contributions
for cultural integrated landscape management

Luiz Oosterbeek, João Fernando Igansi Nunes
(org.)

Transformation

Time / Chronology

Imitation

Aesthetics

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Poetics

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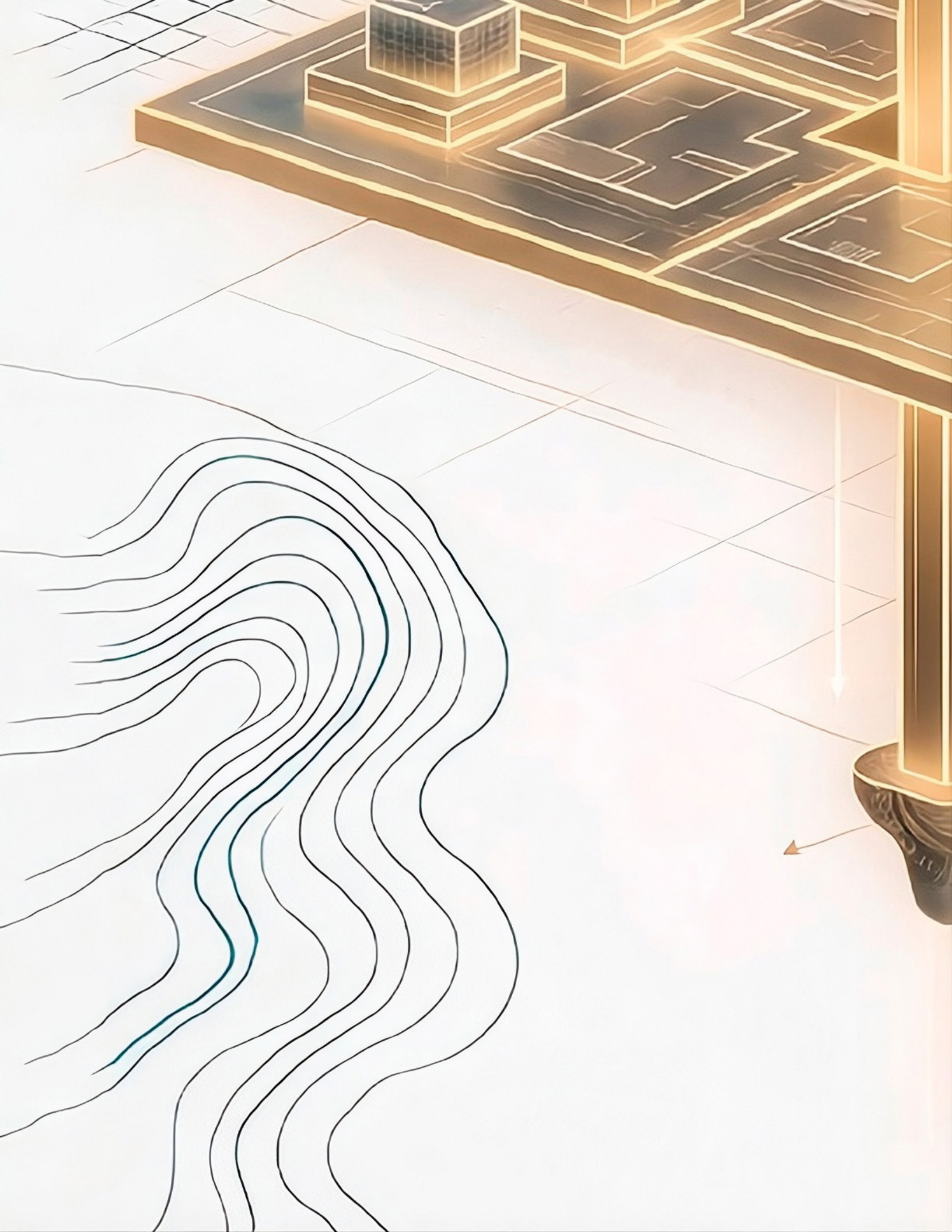
COMMUNITIES IN TRANSFORMATION

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Applied Music for Museums: Elevating Audience Experience and Exhibit Presentation

ALEKSANDAR VL. MARKOVIC¹

Introduction

Applied music—originally composed music tailored to accompany other art forms—is a well-established genre in film and theatre. However, its application in museums and galleries remains significantly underutilized. In recent years, an increasing number of museum professionals (Bubaris 2014; Stocker 1995; Wiens and de Vischer 2019; Cortes 2024) have begun to recognize the growing importance of original music in exhibition planning and design. Research supports the integration of original music and sounds as a fundamental element of museum practice, highlighting its ability to foster deeper visitor engagement through participation, interaction, and immersive experience.

Over the past two decades, the Center for Applied Music (CAM) has

¹ Center for Applied Music, EARTH PR.

developed more than 25 original compositions for museums and galleries across Serbia, developing a new sub-genre of applied music synomusic. Building on research in audible communication and sonic semiotics (Nattiez 1990), CAM investigates how music specifically composed to reflect a museum's content, space, and emotional tone can enrich visitor experience and understanding. A step further was taken in 2021 by CAM, the artistic-research project Applied Music for Museums: The Case of the Museum of Science and Technology in Belgrade, within which, for the first time, original permanent music was composed for the entire museum. This project also conducted pioneering research into the impact of this original music on museum visitors and audience development, and has opened a new research development space for the EuroMuse concept.

Music in Museums

Music employed to support the presentation of visual art—whether exhibits or individual artworks—in galleries and museums generally falls into two categories: *selected music* and *composed music*.

1. Selected Music

Selected music refers to pre-existing compositions not originally conceived in relation to the visual elements with which they interact. This includes music composed for other purposes and later introduced into the museum context, often in the form of curated playlists or ambient soundscapes.

Selected music can be any music played in the exhibition space that was originally composed for different occasions or uses. Even when carefully chosen to align with the exhibition theme, there is a risk that such music may detract from the intended content. If visitors recognize a composition and associate it with unrelated experiences or concepts from their past, the auditory focus may shift toward the music itself, rendering it superfluous—or even inappropriate—within the context of exhibit presentation. This undermines the communicative intent of the exhibition and may lead to a disjointed visitor experience.

Curated playlists of classical or popular music—sometimes styled as DJ sets—are used in institutions such as the Louvre Abu Dhabi (Louvre Abu Dhabi x Ahghami Playlists 2024) and Tate Britain (Hardy Wombell 2022). In museums with installed audio systems, such music may be played continuously to create a general ambiance. However, as outlined above, its effectiveness in supporting curatorial aims remains limited and context-dependent.

On special occasions—such as in so-called “music museums” (Museums.us, 2025) or temporary exhibitions focusing on musical instruments—previously composed music may be used with greater curatorial precision. In such instances, the music is directly related to the melody or historical context of the instruments on display. Here, previously composed music can be harmonically integrated into the visitor’s aesthetic perception, enhancing rather than disrupting the overall experience.

2. *Composed Music*

In contrast, composed music is created specifically in response to the visual and spatial content of the exhibition. It is conceived as a bespoke auditory layer, designed to enrich and deepen the visitor’s engagement with the museum environment.

This category includes several subtypes:

- *Original music with live performance*, as seen in projects such as the Bowes Museum and the Cleveland Museum of Art. These initiatives featured original compositions, composed and performed live as response to specific museum collections or spaces. At the Bowes Museum, a site-specific piece was composed and performed in situ (Laundy 2018). At the Cleveland Museum of Art, six composers from different countries created short pieces inspired by the permanent collection, which were performed in a one-time concert (DeOreo, 2019).
- *Original applied compositions for temporary exhibitions*, such as the Nobel Creations exhibit at the Nobel Prize Museum in Stockholm (Gullö et

al., 2015), where original music was continuously played throughout the four-month exhibition. A similar example is the Silver Cups of the Late Middle Ages in Serbia exhibition at the Museum of Applied Arts Belgrade, (Gajić, 2011), which featured continuous playback of a specially composed piece over a three-month period.

- *Original composition for museum audio guide*, as an ambient auditory layer, combined with recorded actors' storytelling serving as an audio guide, has been developed for the exhibition (Memory 2024 - 2025) at the Ethnographical Museum in Belgrade. In this example, there are voices of actors interacting with original music composed for each of the fifteen sections, creating the impression of an educational radio drama.



Figure 1 - Audio Guide original music for the exhibition Memory, Ethnographical Museum in Belgrade

- *Original compositions for entire museum spaces and permanent exhibitions.* A pioneering case is the project Applied Music for Museums: The Case of the Museum of Science and Technology in Belgrade (2021), in which three original, permanent compositions were created to accompany the entire museum's spatial and curatorial layout (Marković and Jokić, 2022).

Currently, original music is also being composed for three museums as part of the *EUROMUSE project* (2024 - 2026):

- Museum of Ancient Greek Technology – Kotsanas Museum, Athens, Greece
- Museu de Arte Pré-Histórica e do Sagrado do Vale do Tejo, Mação, Portugal
- Museo dei Bambini SCS Onlus, Rome, Italy
- These efforts mark an important shift in museum practice, positioning music not as a supplementary element but as an integral component of the multisensory museum experience.

Synomusic: Original Music for Galleries and Museums

Applied Music for Exhibitions and Museums—referred to as Synomusic or Synocomposition—is specially composed, permanent music designed to support exhibitions by connecting the exhibit, the observer, and the surrounding space into a unified synesthetic experience. Synomusic is a distinct form of applied music, created specifically for a given exhibition or museum setting. It is entirely original and shaped by the exhibition’s theme, narrative content, and the character of the exhibited objects (Synomusic, Marković and Jokić, 2022). As a subgenre of applied music, Synomusic possesses unique characteristics that distinguish it from music composed for film or theatre. While music in those contexts is closely tied to the passage of time and synchronized moving images, Synomusic is dedicated to shaping spatial atmosphere in real time. It creates an open-ended immersive muscape environment that exists independently of temporal constraints.

The Role and Mission of Synomusic in Museums

Synomusic—a subgenre of applied music designed specifically for museums—serves multiple functions that span curatorial, communicative, and experiential domains.

1. Presentational Function

The primary objective of synomusic in museum environments is to enhance the communicative and emotional link between the exhibit, the architectural space, and the visitor. Unlike randomly selected background music, synomusic is curated or composed to match the curatorial narrative, spatial acoustics, and intended visitor journey. Its presentational aims include:

- Creating an appropriate and immersive ambient atmosphere
- Deepening emotional responses during the contemplation of artworks
- Enhancing cognitive recall and memory of the exhibits
- Increasing the duration of visitors' engagement with exhibitions
- Contributing to a more pleasant and contemplative environment

2. Synthesis of Artwork, Space, and Audience

Synomusic aspires to fuse three core components of the museum experience—artwork, physical space, and audience—into a unified synesthetic whole. The music acts as a mediator between the visual and spatial stimuli and the perceptual and emotional experiences of the visitor. This synthesis transforms the act of museum-going into a multisensory, immersive journey.

3. Audience Development

As a distinct mode of auditory communication, applied music for museums has notable potential in the field of audience development. These aspects are currently being explored in the ongoing EUROMUSE research initiative, which aims to assess the impact of synomusic under various audience conditions and marketing frameworks.

4. Contribution to Visitor Well-being

Numerous interdisciplinary studies have documented the positive effects of music on human well-being (Chia-Li and Chen-Gia 2015). A pioneering example in the museum sector is the project implemented at the Museum of Science and Technology in Belgrade, which integrated original applied music compositions across the entire museum, including three permanent syncompositions, and examined their influence on the psychological and emotional states of visitors.

5. Synomusic as a Digital and Communicative Product

Beyond physical exhibition spaces, synomusic functions as a versatile digital product suitable for use in a museum's broader integrated communication strategy. When specifically composed for a collection, exhibition, or curatorial concept, synomusic can be integrated into various digital formats, enhancing online and virtual museum experiences. These include:

- Virtual Reality (VR) and Augmented Reality (AR) applications
- Museum websites and mobile applications
- 360-degree photographic and video tours
- Interactive slideshows and digital storytelling platforms

In this capacity, synomusic supports the museum's branding and corporate identity, offering a consistent and immersive auditory signature across both physical and digital channels.

Methodology: Stages of Synomusic Implementation

1. Researching the Collection and Exhibits

The process begins with in-depth observation and study of all museum sectors, collections, and exhibits to gain insight into the material and develop artistic inspiration. A key task at this stage is to identify a curatorial or thematic entry point that can spark the creative impulse behind the musical composition. Special attention is also given to exhibits that produce or reference sound, which may serve as sonic accents within the final composition.

2. Researching the Museum Acoustics and Audio System

Understanding the museum's acoustic environment and sound system is critical. The duration of the music is determined by the number of exhibition sections and the average time visitors spend in each area. . Composition length and dynamics are tailored to the size of the gallery and the expected visitor pace.

3. Composing and Designing the Musical Material

The direction of the musical composition is informed by the exhibition's

content and themes. Dominant historical or contemporary narratives guide decisions on instrumentation—whether to use traditional, electronic, or hybrid sounds—and whether to incorporate exhibit-generated sounds into the music. Each exhibit contributes to the overall sonic palette, enhancing the continuous musical flow that accompanies the visitor. Historical objects or artworks displayed in the present day communicate best when the music bridging the exhibits and the observer is contemporary, with elements from the specific period represented.

4. Studio Recording

All musical segments, including the sounds of the exhibits and instrumental performances, are recorded in a professional studio setting. This ensures high-quality audio that faithfully reflects both the artistic intent and the museum context.

5. Music Production

In this stage, the recorded material undergoes editing, mixing, and mastering. The entire composition is shaped and finalized to suit the spatial and thematic character of the museum. The goal is to achieve sonic clarity, balance, and continuity across the final audio track.

6. Implementation, Testing, and Synchronization

The final phase involves installing the composition into the museum's audio system, fine-tuning it for spatial and acoustic coherence. Sound levels are carefully adjusted and tested multiple times to ensure they support visitor engagement without becoming intrusive. Volume adjustments may be necessary based on visitor numbers and ambient noise levels (e.g., footsteps, conversations). If some sound installations or exhibits have their own sounds, fine-tuning of all audio channels is performed to prevent cacophony.

Applied Music for Museums: The Case of the Museum of Science and Technology in Belgrade

The project *Applied Music for Museums: The Case of the Museum of Science and Technology in Belgrade* was developed and implemented by the Center for Applied Music, Belgrade, between May and December 2021.



Figure 2 - Museum of Science and Technology, Belgrade

The project explored the aesthetic and functional dimensions of applied music in museum environments, specifically focusing on the emerging subgenre of synomusic. As part of its artistic dimension, three original, permanent compositions were created for the MST's core exhibition spaces (Marković, 2021).

Three original compositions:

Toy Gallery by Misha Cvijović – 14:43 min

Man and Technology by Aleksandar Vl. Marković – 54:00 min

Science Playroom by Dušan Đorđević – 15:44 min

These works played continuously, enhancing ambiance, emotional resonance, and intuitive navigation

Applied Music for the Museum of Science and Technology, Belgrade

(Scan the QR codes to activate the audio-video preview for each exhibition)



CAM - "Quo vadis"

Synomusic for the Permanent
Exhibition *Man and Science*
– Aleksandar Vl. Marković
(54:00)



CAM - "Vibroskien"

Synomusic for the Permanent
Exhibition *Toy Gallery*
– Miša Cvijović
(14:43)



CAM - "Music box"

Synomusic for the Permanent
Exhibition *Science Workshop*
– Dušan Đorđević
(15:44)

Research Design, Findings, and Accessibility Insights

To assess the impact of applied music—specifically synomusic—on the museum visitor experience, a pilot study was conducted at the Museum of Science and Technology in Belgrade. The research involved 332 participants, including seven individuals with visual impairments, and employed a combination of pre- and post-visit surveys, in silent and music conditions (Jokić and Marković 2022), along with observational methods, to evaluate emotional, cognitive, and behavioral responses.

Key findings:

- Synomusic improved emotional atmosphere and memory recall.
- It stimulated exploration, especially among children.
- It was perceived as essential to the exhibit, not auxiliary.
- Visually impaired visitors benefited from: Emotional and narrative guidance; and Greater inclusivity

These results support synomusic's use in accessible and multisensory exhibition design.

The EUROMUSE Concept

EUROMUSE, funded by Creative Europe and coordinated by EARTH PR and the Center for Applied Music, advances applied music in museums through six original compositions by young composers selected from across Europe. These works were created during residencies at partner museums Museum of Ancient Greek Technology – Kotsanas Museum in Athens, Greece; the Museu de Arte Pré-Histórica e do Sagrado do Vale do Tejo in Mação, Portugal; and the Museo dei Bambini SCS Onlus in Rome, Italy, fostering collaboration between composers, curators, and Community Muse Boards (CMBs).

A central innovation is its co-creation model, involving local community members in the music-making process to align sound with each museum's identity and audience. The project also includes research on synomusic's impact on visitor engagement and is developing tools for ongoing collaboration among stakeholders.

EUROMUSE promotes a new museological model, using original music to enhance heritage visibility and visitor experience in both physical and digital spaces.

Conclusion

The exploration of synomusic as a form of applied music tailored specifically for museums marks a significant advancement in both the theory and practice of museum interpretation. As demonstrated through the pioneering project Applied Music for Museums: The Case of the Museum of Science and Technology in Belgrade and the ongoing EUROMUSE initiative, synomusic offers an innovative sensory framework that enhances visitor engagement, deepens emotional resonance, and supports inclusive cultural access.

Unlike background music or curated playlists, synomusic is intrinsically linked to the spatial, curatorial, and narrative dimensions of the exhibition. It functions as a bespoke auditory layer that binds together objects, space, and audience into a cohesive and immersive experience. The research findings confirm its capacity

to positively affect cognitive and emotional responses, increase visitor retention and participation, and improve accessibility for visually impaired audiences—positioning music not merely as an enhancement, but as a fundamental interpretive tool.

Moreover, the co-creation model introduced by EUROMUSE extends the relevance of synomusic beyond artistic innovation into the domains of community engagement and participatory museology. By involving composers, curators, and local communities in the creation process, synomusic becomes a collaborative practice that reflects both institutional identity and audience needs.

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