

Deliverable Reporting

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Partner institutions: KU, PUNO

Work package no: WP1

Work package title: Art - art creation, reception, and art market

Deliverable no: 1.3

Deliverable title: Virtual tour with Kenyan art collector M. Mutuma Marangu

Type: DEC —Websites, patent filings, videos, etc.

Public/ ~~Confidential~~

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1. Description of the deliverable's objectives

Deliverable D1.3, *“Virtual tour with Kenyan art collector M. Mutuma Marangu”*, aimed at producing a high-quality virtual output grounded in systematic research on contemporary virtualization technologies and their application in artistic and cultural contexts. The objective was to explore how immersive digital environments can support artistic creation, exhibition design, audience reception, and new models of cultural exchange.

Within the CAPHE project, the Polish Society for Aesthetics (PTE) conducted in-depth research on the use of Virtual Reality (VR) and Augmented Reality (AR) in relation to artistic production, exhibition practices, modes of presentation and reception, as well as the broader application of immersive technologies in art, education, and cultural commerce. These research trajectories were developed by members of the PTE research team in close collaboration with partners from the CAPHE Consortium, particularly the Conservatorio Giacomo Puccini in La Spezia (CP), the Faculty of Fine Arts at the University of Lisbon (FBAUL), and Kenyatta University (KU).

The experimental research focused on the creation of immersive and auratic virtual exhibition spaces, with special attention given to their visual and acoustic dimensions. An additional objective was to foster transcultural dialogue and knowledge exchange through technologically mediated platforms, enabling encounters between diverse artistic traditions and audiences across geographical and cultural boundaries.

The final virtual exhibition—developed as the core outcome of Deliverable D1.3—was curated by Dr. Bogna J. Gladden-Obidzińska, Prof. Alessandra Montali, and Prof. Aleksandra Łukaszewicz. Its central focus is a selection of sculptures from the collection of Mr. Mutuma Marangu, who served as the originating convenor, founder, and owner of the Mutuma Marangu Sculpture and Art Collection (TMMSAC©). The exhibition presents works by internationally recognized Kenyan master sculptors, including Peter Oendo Kenyaya, Robin Okeyo Mbera, Gerard Motondi, and John Tabule Abuya Ogao.

This curatorial framework guided the research team toward developing a content-driven and culturally situated virtual environment, emphasizing the exploration of transcultural connections and their immersive articulation within technologically defined exhibition spaces.

In addition, the activities carried out within this deliverable enabled Mr. Mutuma Marangu and Kinya Marangu to acquire new technical skills related to 3D scanning and post-processing of sculptural objects. This aspect of the project exemplifies its broader impact through knowledge transfer beyond the consortium, strengthening local capacities and supporting sustainable digital documentation practices.

2. Research paths leading to final production of D1.3

a. Cooperation with Mr. Mutuma Marangu and TMMSAC©

From the outset of the CAPHE project, the team from the Polish Society for Aesthetics (PTE), in particular Prof. Aleksandra Łukaszewicz and Dr. Bogna J. Gladden-Obidzińska, began working systematically towards Deliverable D1.3, *“Virtual tour with Kenyan art collector M. Mutuma Marangu”*, fully recognizing its complexity both in technological and social terms.

Beyond technological experimentation, the realization of D1.3 required establishing a relationship of trust with one of Kenya's most renowned contemporary art collectors, specializing in high-end sculptural practices. This process involved gaining permission to conduct three-dimensional scans of selected artworks from his private collection, which necessitated extensive dialogue regarding intellectual property, digital representation, and ethical documentation of cultural heritage.

The cooperation was initiated at the very beginning of the project, when Mr. Mutuma Marangu was invited to deliver the keynote speech at the International Symposium *“New Coordinates for Creative in Hybrid Space-Experiences”*, held within the CAPHE framework on February 15–17, 2023, at Kenyatta University (KU). His lecture, entitled *“TMMSAC© sculpture collection, its history, ideals, and the concept of ‘phygitality’ in art”*, provided a conceptual foundation for subsequent collaboration.

Following this initial encounter, intensive exchanges continued both online and through in-person meetings during research mobilities to Nairobi, Kenya. A series of working sessions held throughout 2023, 2024, and 2025 enabled progressive development of the deliverable, culminating in the final production phase in August–September 2025.

In 2023, the PTE team introduced Mr. Mutuma Marangu to key partners within the CAPHE Consortium, including Prof. Alessandra Montali from the Conservatorio Giacomo Puccini (CP), Aliko Iovita and Natasha Papathoma from Narratologies (NAR, Greece), as well as Prof. Helena Elias and Prof. José Revez from the Faculty of Fine Arts at the University of Lisbon (FBAUL). This networking significantly expanded the scope and interdisciplinarity of the collaboration.

As a result, the cooperation diversified across consortium partners:

- Two parallel CP teams worked on independent musical projects – each of them collaborating with PTE on different tasks. One focused on virtual performative spaces in a series of hybrid opera performances (CP – Federico Bardazzi and sometimes Prof. Alessandra Montali, PTE – Prof. Aleksandra Łukaszewicz), which will be fully explored in Deliverable D1.1; the other one focused on acoustic virtualization of musical compositions and auralization of virtual twins of physical historic spaces (CP – Prof. Alessandra Montali, PTE – Dr. Bogna Gladden-Obidzińska). Both paths independently contributed to the realization of this deliverable.
- PTE and the second team of CP (CP – Prof. Alessandra Montali, PTE – Dr. Bogna Gladden-Obidzińska, and later Prof. Aleksandra Łukaszewicz) jointly developed the core activities reported in this deliverable, including the creation of the virtual exhibition and the hybrid exhibition *“Resonances of Stones”*, based on four selected works from the TMMSAC© collection:

- a. *"Sleeping Bull"* by Peter Kenyanya Oendo
 - b. *"Economic Downturn #2"* by Robin Okeyo Mbera,
 - c. *"Between the Clouds"* by Gerard Motondi Oroo,
 - d. *"Madonna (Mother & Child)"* by John Tabule Abuya Ogao.
- Narratologies (NAR) pursued parallel research on augmented reality mobile games in urban spaces related to heritage interpretation, forming part of Deliverable D3.2 (*Lectures, presentations, workshops, interviews, research walks, virtual tours for engaging communities in online platforms*), to be delivered by the Jagiellonian University (UJ) in Month 45.
 - FBAUL hosted Mr. Mutuma Marangu on two occasions for seminars and for the International Interdisciplinary Research Conference *"Media and Material Literacy in Extended Reality"*, held at the Faculty of Fine Arts, University of Lisbon, on November 19–21, 2025. These activities will be reported under Deliverable D2.1 (*Report on conference on media and material literacy in online and virtual education*), to be delivered by FBAUL in Month 38.

The cooperation between PTE, CP, and Mr. Mutuma Marangu, as originating convener, founder, and owner of TMMSAC©, focused on several key thematic and methodological dimensions:

- conceptualizing the rationale and benefits of digitizing sculptures for the collector, particularly in relation to the growing importance of digital identifiers for physical and virtual objects;
- defining the curatorial narrative and thematic priorities, including:
 - Afrocubist aesthetics,
 - sculptural traditions in the Kisii region linked to local geological conditions,
 - ecological aspects such as carbon absorption by hard rock materials (basalt and granite), contributing to the carbon-positive character of contemporary sculptures, particularly within the BRAMSA (Basalt Rock and Mineral Sculpture Art) collection of TMMSAC©;
- exploring the multisensory dimensions of art and heritage perception:
 - developing a groundbreaking paradigm (the *Resonances of Stones*) for virtual exhibitions through the introduction of an acoustic digital twin derived from a selected physical environment as a framework for hybridization of purely virtual representations;
 - planning and organizing a hybrid opening event including time-oriented experiences (performance, musical presentation, tour-story telling), as well as olfactory and tactile elements;
- selecting artworks for digitization and shaping the final exhibition concept.

a. **KER2 and KER1**

The work leading to the realization of Deliverable D1.3 was closely aligned with two Key Exploitable Results (KERs) defined in the CAPHE Dissemination and Exploitation Plan, including communication activities: KER2, focused on VR tours for tangible art objects and led by PTE, and KER1, focused on the VR Opera Experience Room and coordinated by CP.

KER2 – VR Tour for Tangible Art Objects

Within KER2, the PTE team developed a series of VR exhibitions that provided essential hands-on experience for achieving the objectives of Deliverable D1.3. These activities were carried out in collaboration with GALERIA KONKRET AR.T on the virtual platform Spatial.io. The virtual environment was created by Dr. Bogna J. Gladden-Obidzińska (PTE), with additional input from Miastopracownia (MP), supported financially by GALERIA KONKRET AR.T as a stakeholder rather than through CAPHE funding.

The realized VR exhibitions included:

- *The Nkrombe Series* by Dr. Anne Mwiti, curated by Dr. Bogna J. Gladden-Obidzińska (PTE), launched on Spatial.io on 08.12.2023.
- *Re-Sensing Sculpture*, curated by Prof. Helena Elias (FBAUL), presented both virtually and at Oratorio Santa Croce in Florence during the XR Festival on 13.06.2024.
- *Ethereal State*, curated by Prof. José Manuel Revez (FBAUL), presented virtually and physically at Oratorio Santa Croce during the XR Festival on 13.06.2024.
- *(In)tangible*, curated by Prof. José Manuel Revez (FBAUL), presented in the same hybrid format and context.

These exhibitions are described in detail in Deliverable D5.2.

A later realization expanded this strand:

- *The Virtual Film Memorial. Hybrid Bio_Geo-Graphies by Jacob Barua*, curated by Prof. Aleksandra Łukaszewicz (PTE), presented both virtually and at the National Museums of Kenya in Nairobi on 10.12.2025.

This sequence of exhibitions enabled CAPHE researchers to explore multiple modes of virtual exhibition-making, ranging from template-based 2D presentations to custom-designed virtual architectures and complex digital–physical interrelations. The investigations addressed various relationships between tangible objects and their virtual counterparts, including digital twins, transformations of scanned physical environments, and virtual objects without direct physical referents. Even where mediated technologically, the focus remained on tangible cultural heritage.

Parallel to this visual strand, research led by Prof. Aleksandra Łukaszewicz and Dr. Bogna Gladden-Obidzińska (PTE) was accompanied by reflection on the role of sound in virtual and hybrid environments, developed in collaboration with Prof. Alessandra Montali (CP) and Dr. Bogna Gladden-Obidzińska (PTE).

This collaboration culminated in the research and exhibition project “Resonances of Stones. TMMSAC© at Naxos”, which led to the development of an innovative methodology of acoustic virtualization and auralization of virtual spaces proposed and conducted by Prof. Alessandra Montali (CP). The research evolved through a multi-stage process: initial theoretical reflection (CAPHE Symposium, Nairobi, 2023), a pilot experimental phase (Naxos 2024), and a final realization phase (Naxos 2025). Activities included 360° sound recording, 3D scanning, architectural measurement, and immersive acoustic experimentation.

Then, the project “Resonances of Stones. TMMSAC© at Naxos” produced four perceptual models integrating soundscape, music, and visual form, contributing methodological knowledge on heritage perception in XR.

These cumulative experiences enabled the realization of a virtual tour of Kenyan modern sculptures embedded within the scanned and auralized spaces of the Bazeos Tower on Naxos. Virtualization was carried out by Prof. José Revez (FBAUL), Anastasia Tsotsouka (NKUA), and Gianluca Aresu (Conservatorio Castelfranco Veneto), demonstrating strong transdisciplinary integration between visual and sonic research strands.

KER1 – VR Opera Experience Room

KER1 – VR Opera Experience Room. The research activities led within KER1 were divided into three parts:

- a. the one focused on virtual performative spaces in a series of hybrid opera performances (CP – Federico Bardazzi, PTE – Prof. Aleksandra Łukaszewicz and others),
- b. the second one led by CP (CP – Prof. Alessandra Montali, Federico Bardazzi) dedicated to the use of XR technologies in operatic contexts,
- c. the third one focused on acoustic virtualization and auralization of virtual spaces (CP – Prof. Alessandra Montali, PTE – Dr. Bogna Gladden-Obidzińska).

All paths independently contributed to the realization of the deliverable D1.3, supporting different persons in the process of reaching the outcome. The path dedicated to acoustic virtualization and auralization of virtual spaces is described separately as the enrichment of KER2, in order not to be confused with the research leading to the realization of hybrid opera performances, and to the analysis of the forms of presence of sound and music in virtual spaces within the context of the Fourth Industrial Revolution.

- a. The research activities included in KER1 and contributing to the development of the deliverable D.1 3 followed some of the case studies described fully in Deliverable D5.2, prepared by PTE for the 24th month of the project, and to be presented also in the Deliverable D1.1 Development of VR Experience Opera Room, prepared by CP until the 45th month of the CAPHE project:
 - Hybrid Opera Performance with VR in Stage Design and Storytelling: Orpheus, Lwanda, and the Khthónios Journey. The Soul in Spiritual and Hybrid Traditions, Kenyatta University, Nairobi, February 15, 2023.
/It is reflected in Prof. Aleksandra Łukaszewicz's conference presentation and publication available on ZENODO, “Opera Up To Date. Transhuman, Transcultural and VR Opera Staging”.
 - Hybrid Opera Performance with VR in Stage Design and Alternative Performance Space: ORFEO & LWANDA. The Soul in Spiritual and Hybrid Traditions, Cattedrale dell'Immagine, Florence (Italy), and Spatial.io, June 14, 2024.
/Analysed on the basis of the formal interviews realized in November 2024 by Prof. Aleksandra Łukaszewicz and Prof. Karina Banaszekiewicz-Sadowska with Federico Bardazzi and Carla Zanin (in preparation for the publication).

The engagement of Prof. Aleksandra Łukaszewicz from PTE in the analysis and realization of, among others, the above-mentioned musical events allowed the PTE team to understand the importance of the inclusion of sound layers in the virtual spaces, where the Virtual Tour of Mr. Mutuma Marangu was to take place.

- b. The other activities described above included in KER1 and contributing to the development of the deliverable D1.3 focused on hybrid musical performances were connected to Prof. Alessandra Montali's artistic and research work on music and XR technologies, particularly within the project Innovative Approaches in Opera: Integrating XR, AR and AI for Enhanced Immersive Performances, developed and coordinated by the "Giacomo Puccini" Conservatory of Music in La Spezia between 2023 and 2024.

Rather than a series of isolated hybrid experiments, the research activities evolved as a coherent artistic research pathway structured around three documented case studies: *Il Poeta di Campagna* by P. A. Guglielmi, *L'Orfeo* by C. Monteverdi, and *Gianni Schicchi* by G. Puccini. Each case study addressed specific research questions concerning the integration of XR environments, AI-generated visual elements, live performance, and hybrid musical configurations. The work resulted in tangible artistic outcomes, including live performances and immersive virtual environments. It documented audience experiences, offering practice-based evidence for the artistic and methodological insights developed within KER1 and described in detail in the deliverable D1.1 Development of VR Experience Opera Room, prepared by CP until the 45th month of the CAPHE project. Between them, there are:

- Experimental Research on Extended Reality and Opera Performance: *Il poeta di campagna* by Pietro Alessandro Guglielmi, Teatro degli Impavidi, Sarzana (Italy), November 2023.
- Case study on Extended Reality and Opera Performance: *L'Orfeo* by Claudio Monteverdi, Florida Atlantic University (USA), February 10, 2024.
- Case study on Extended Reality and Opera Performance: *Gianni Schicchi* by Giacomo Puccini, Conservatorio Giacomo Puccini in La Spezia (Italy), and Spatial.io, May 17, 2024 – the opera performance using the metaverse.

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This research, which is described above, coincided with the development of the methodology of auralization and virtualization of historic sites, introduced by Prof. Alessandra Montali and Dr. Bogna Gladden-Obidzińska in the Resonances of Stones (RoS) project, which they started in 2024. A new collaboration was drafted in March 2025 between RoS and PTE, in agreement with the TMMSAC©, for a joint preparation and realization of the Virtual Tour with the Kenyan art collector Mr. Mutuma Marangu inside the Bazeos Tower spaces virtualized and auralized by RoS, coordinated by Prof. Aleksandra Łukaszewicz (PTE). All together these paths allowed the development of a framework that ensured continuity, methodological consistency, and the gradual consolidation of expertise in the use of XR technologies in operatic contexts. Together, the KER1 and KER2 strands created a coherent research framework ensuring methodological continuity and the progressive consolidation of expertise in XR-based artistic environments, directly supporting the realization of Deliverable D1.3.

3. Realization of the deliverable D1.3 within the 1st Biennale Resonances of Stones, TMMSAC© at Naxos

- The Concept:

RESONANCES OF STONES
TMMSAC© AT NAXOS

IMMERSIVE HYBRID
EXHIBITION
SCULPTURE · MUSIC · ARCHITECTURE
NAXOS, 30.AUG-04.SEPT 2025

RESONANCES OF STONES
International Research Project

The interdisciplinary research project *Resonances of Stones* explores the relationships between visual forms and sound in cultural heritage through an immersive approach. At the heart of the project lies the concept of Resonance:

Every space, substance, and object interacts with sound through complex processes of reflection, vibration, and reverberation. In historical sites, this continuous dialogue between architecture, matter, sound, and memory transforms the space itself into an integral part of the perceptual experience: a musical piece performed within such a space incorporates unique acoustic characteristics and historical stratifications, inseparable from the place and impossible to reproduce elsewhere.

Architectural proportions, the transformations that time has etched onto stones and building materials, and their location within a specific soundscape all enter into dialogue with the works—musical and visual—placed within them, generating opportunities for discovery and wonder.

Reconstructing these spaces virtually, especially distressed historical sites, requires restoring not only their architectural form, but also their original sonic identity. It is a way of reactivating their comprehensive sensory and conceptual complexity, offering the audience an integral and profound perception of its meaning, in dialogue with time.

In an immersive experience of the interaction between the substantial and conceptual dimensions, an additional resonance is generated: the emotional response of the audience, arising from the tension between the site's embodied memory and its present perception. This amplifies and revives the site, and restores a sense that continues to resonate over time.

Alessandra Montali and Bogna J. Gladden-Obidzińska

RESONANCES OF STONES

TMMSAC® AT NAXOS

IMMERSIVE HYBRID
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THE MUSICAL PROJECT

Coordinated by Alessandra Montali, the project involved twelve musicians, composers, sound designers, and VR developers from Italy, Poland, Greece, & Kenya. Over two years, the musical work developed through four key phases.

1. MAPPING AND RECORDING OF THE ARCHITECTURAL SPACE

To understand and document the acoustic characteristics of the Bazeos Tower, tests were conducted using acoustic pulses generated by balloon explosions. The recordings were made using high-resolution ambisonic technology and then processed to obtain a high-quality acoustic dataset.



In situ ambisonics recording by Lianis Manolis

2. LIVE RECORDINGS OF MUSICAL COMPOSITIONS

Three original works, inspired by early Greco-Byzantine poetic and musical sources, were chosen through a historical-musicological research process:

1. The tradition of sung oral poetry, with texts by Sappho (7th-6th century BC) reinterpreted in the composition *Saffo* by a contemporary composer Dimitris Papadimitriou
2. The sacred Orthodox tradition, with a Byzantine *Kyrie eleison* (9th-10th century AD)
3. The earliest known musical work in Western history by a female composer, Kassia (9th century AD) with the composition *The Five-stringed Lute*

The choice of musical pieces deliberately highlighted two prominent female figures who played a fundamental role in the transmission of poetic and musical culture in the West.



Selection and live recording by Silvia Rio, Ella Nagy and Alessandra Montali

RESONANCES OF STONES

TMM SAC© AT NAXOS

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3. POST-PRODUCTION, AURALIZATION, AND STUDIO RECORDINGS

Through convolution and auralization processes, the recordings made it possible to faithfully simulate the sound propagation and characteristic reflections of the original space within the virtual environment.

In this way, vocal studio recordings and libraries of ancient instruments (Greek and African) are reproduced as if they were actually immersed in the acoustics of the building, allowing visitors to experience the sound environment just as it would occur in the real physical space.



Vocal studio recordings by Emanuele Menconi, Matilde Leonardi, and Simone Emili

This post-production phase, carried out through the mapping and virtualization of architectural spaces led by José Revez, made it possible to digitally reconstruct the acoustics of the historical spaces and integrate the live performances.



Virtualization of architectural spaces and auralization by José Revez, Gianluca Aresu, and Tiziano Lotta

4) CREATION OF FOUR SOUNDSCAPE COMPOSITIONS

The exhibition *Resonances of Stones - TMM SAC© At Naxos: Immersive Hybrid Exhibition* stems from the collaboration between the visual-musical project *Resonances of Stones* and the African collector Mutuma Marangu, with the key contribution from Aleksandra Łukaszewicz and the curatorial team. Four sculptures from the TMM SAC© enter into dialogue with both the physical exhibition space and an immersive VR tour. Each is paired with an original soundscape composition blending Greek and African instruments, environmental sounds from Naxos and Nairobi, and compositions recorded in the Bazeos Tower –creating a transcultural, multisensory experience and a unique, innovative musical language.

10. The Originating Convener, Mr. Mutuma Marangu, Founder and Owner of TMMSAC©:

RESONANCES OF STONES
TMMSAC© AT NAXOS

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MUTUMA MARANGU

Mutuma Marangu is the Founder and Owner of "The Mutuma Marangu Sculpture and Art Collection" (#TMMSAC©), arguably, one of Africa's largest private collections of rock and stone sculpture that originates from Kenya.

Based in Nairobi, Kenya and rooted in a multi-generational legacy of land stewardship and artistic patronage, Mutuma started #TMMSAC© in 2006 as a means of identifying and bridging the unreconciled and disassociated connections of interdisciplinary, multidisciplinary, and transdisciplinary connections between and amongst historic African Art cultural heritage with current 21st century Science, under the Cultural Category of "Scientific Culture".

Through #TMMSAC©, Mutuma has pioneered and successfully completed multiple, innovative Exhibitions and Presentations, most recently the "Roots of Removal: Kenyan Basalt Rock and Mineral Sculpture Art and the Carbon Removals Odyssey" Exhibition, presented to the global public in September 2023 at the National Museums of Kenya's Nairobi National Museum, Nairobi Kenya to commemorate the first Africa Climate Summit / Africa Climate Week. This "Roots of Removal" Exhibition explicitly introduced for the first time #TMMSAC©'s novel developed concept of {Climate Positive[CP+]/Carbon Negative[CN-]-Carbon Removals[CO₂R-]}, expressed through the creation of #TMMSAC©'s newly defined "The Afro-Climate Basalt Rock And Mineral Sculptural Art" [hereafter "#BRAMSA©"] Movement; and a newly termed Sculptural Art Movement by #TMMSAC© within what #TMMSAC© further defined as "The Afro-Climate School of Art" [hereafter "#TACSA©"]. Importantly, the linking of Kenyan sculptural traditions and cutting-edge concepts on carbon sequestration research was recognized with the invitation to present two papers at the August 2024 European Mineralogical Conference in Dublin, Ireland.

Through national and global exhibitions, combined with academic engagement and collaborations, together with public access, presentations and education, Mutuma hopes #TMMSAC© will continue to participate and support redefining the role of African Sculptural Art as a medium for highlighting the global intersections of Cultural, Scientific, Intellectual achievement and advancement.



RESONANCES OF STONES

TMMSAC® AT NAXOS

IMMERSIVE HYBRID EXHIBITION

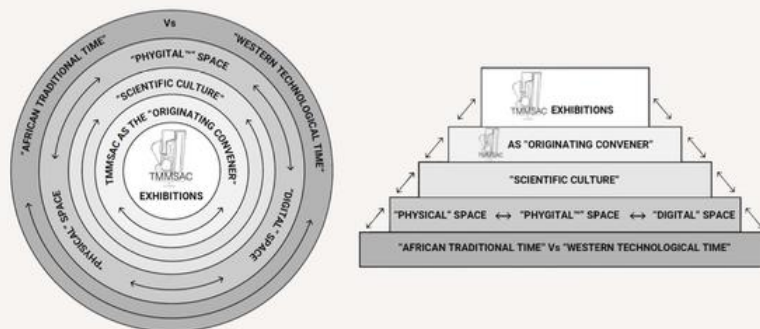
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THE MUTUMA MARANGU SCULPTURE AND ART COLLECTION

The Mutuma Marangu Sculpture and Art Collection (#TMMSAC®) is a unique, Kenyan-founded and based collection formed in 2006, that is focused on 21st-century Kenyan rock and stone Sculpture Art.

Rooted from a perspective of the need to elevate African rock and stone Sculpture to its rightful position on the global Art stage in artistic and financial terms, #TMMSAC® originated from a loose, uncoordinated association of monument-scale Sculpture collaborations into one of Africa's largest collector-scale rock and stone Sculpture collections with 6 Master Sculptors from Kisii, Kenya resident within #TMMSAC®.

#TMMSAC®'s vision and mission, as outlined in the graphic below is to preserve, present, and propel Kenyan Sculptural Art excellence globally by the intentional support of the Master Sculptors resident within #TMMSAC®, through the forging of currently unreconciled and disassociated interdisciplinary, multidisciplinary and transdisciplinary connections between and amongst: a. Art, in all its forms; b. Science, in all its forms; and in c. Space and Time, in all its forms, within the full view of public engagement.



CONTENT BY: MUTUMA MARANGU, TMMSAC®

ILLUSTRATIONS BY: PAULINE KURIA



RESONANCES OF STONES

TMMSAC® AT NAXOS

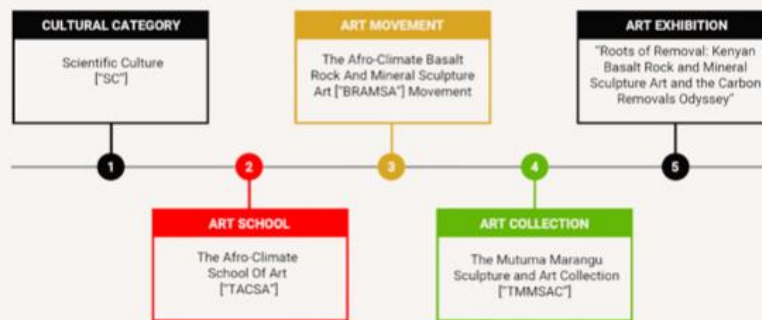
IMMERSIVE HYBRID EXHIBITION

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THE MUTUMA MARANGU SCULPTURE AND ART COLLECTION

The first example of #TMMSAC's vision and mission in practice as outlined in the graphic below was the "Roots of Removal: Kenyan Basalt Rock and Mineral Sculpture Art and the Carbon Removals Odyssey" Exhibition, which was the explicit introduction of #TMMSAC's {Climate Positive[CP+]/Carbon Negative[CN-]: Carbon Removals[CO₂R-]} concept, expressed through the creation of #TMMSAC's newly defined "The Afro-Climate Basalt Rock And Mineral Sculptural Art" [hereafter "#BRAMSA®"] Movement; a newly defined Sculptural Art Movement by #TMMSAC within what #TMMSAC further defined as "The Afro-Climate School of Art" [hereafter "#TACSA®"], which was formally presented for the first time to the global public in September 2023 at the National Museums of Kenya's Nairobi National Museum, Nairobi Kenya to commemorate the first Africa Climate Summit / Africa Climate Week.

TMMSAC 5-Level SCIENTIFIC CULTURAL ART ECOSYSTEM Case Study [2024A]



CONTENT BY: MUTUMA MARANGU, TMMSAC®

ILLUSTRATIONS BY: PAULINE KURIA

Through national and global exhibitions, combined with academic engagement and collaborations, together with public access, presentations and education, #TMMSAC continues to participate and support redefining the role of African Sculptural Art as a medium for highlighting the global intersections of Cultural, Scientific, Intellectual achievement and advancement.




- The Artists:

RESONANCES OF STONES
TMMSAC® AT NAXOS

IMMERSIVE HYBRID EXHIBITION

SCULPTURE • MUSIC • ARCHITECTURE



PETER KENYANYA OENDO

PETER KENYANYA OENDO


Peter Kenyanya Oendo is a contemporary sculptor born in Kisii, Kenya in 1977. He is the founder of the Kenya International Sculpture Park. His stone works explore themes of identity, nature, and African cultural heritage.

Internationally recognized, Kenya represented Kenya at the 60th Venice Biennale (2024) and the Tashkent International Stone Sculpture Symposium in Uzbekistan. He was commissioned by the Trade and Development Bank (2022-2023) to create three monumental sculptures for its Nairobi headquarters.

His work has been exhibited widely, including at the Kenya National Museum in landmark shows such as *Roots of Removal* (2023) and *Nearly Extinct: Rhinos and Elephants* (2019), and in countries including Uganda, Zambia, Tanzania, China, and Romania.


Largely self-taught, Kenya was mentored by his grandfather and refined his practice through international workshops in Changchun (China), Caransebeş (Romania), and Lusaka (Zambia). In 2021, he presented virtually on African art and decolonization at CUNY (New York) and Macerata University (Italy).

With over two decades of practice, Kenya remains a leading figure in contemporary African sculpture, fusing indigenous knowledge with global engagement.



SLEEPING BULL


Stone: Spotted Green Basalt
Source: Kisii County
Weight: 22.80 kg
Dimensions: H: 31.5cm, L: 39.5cm, W: 31cm



RESONANCES OF STONES
TMMSAC® AT NAXOS

IMMERSIVE HYBRID EXHIBITION

SCULPTURE • MUSIC • ARCHITECTURE



ROBIN OKEYO MBERA


ROBIN OKEYO MBERA

Robin Okeyo Mbera is a celebrated sculptor born in 1983 in the Kisii region of Kenya. His artistic journey began in 1998 during his high school years. By 2000, he had joined Design Power Consultants (Dep-Cons) as an apprentice, where he honed his skills in design and sculpture. In 2006, Robin transitioned to creating smaller, collectable sculptures using soapstone, drawn to its fine grain and natural colour variations.

He became a full-time professional sculptor in 2008. Working from his personal studio in Ongata Rongai, Kajiado County, Robin has devoted over a decade to pioneering a distinctive artistic concept known as "Afro-Cubism." Developed in collaboration with renowned art patron Mr. Mutuma Marang'u, this innovative style represents a modern African interpretation of early 20th-century Cubism, while paying homage to the rich traditions of 18th and 19th-century African sculptors who inspired Western modernists.

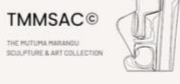
In 2014, Robin Okeyo Mbera created the Afro-Cubism Journey, which shifted his sculptural aesthetic from the old traditional approach into a new dimension he defines as 4D - the Fourth Dimension. His work was selected for the Kenyan Pavilion at the Venice Biennale in 2024.

Beyond sculpting, he is an accomplished illustrator and a passionate researcher of traditional and contemporary African art. His work bridges cultural heritage and modern aesthetics, while emphasising sustainability and the use of traditional African materials in response to climate change challenges.



ECONOMIC DOWNTURN #2 OF 2

Stone: Green Basalt
Source: Kisii County
Weight: 4.8g
Dimensions: H: 34.5cm, L: 14cm, W: 13cm



RESONANCES OF STONES

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IMMERSIVE HYBRID EXHIBITION

SCULPTURE • MUSIC • ARCHITECTURE



GERARD MOTONDI OROO

GERARD MOTONDI OROO

Gerard Motondi Oroo was born in Kenya in 1965. He holds a Bachelor's degree in Fine Art and Kiswahili from Kenyatta University, graduating with Second Class Honours (Upper Division). He also holds a Master's degree in Fine Art (Sculpture) and is currently pursuing a PhD in Fine Art at the same institution.

Since 2006, he has served as a lecturer in Arts and Crafts at Asumbi Teachers College and has also taught sculpture at Kenyatta University. Motondi has received numerous awards in recognition of his artistic achievements.

In 2008, he was awarded a Gold Medal and Olympic Torch at the Beijing Olympic Fine Art Exhibition. In 2011, he was honoured with a Head of State Commendation in Kenya, followed in 2013 by an award for creating the Mashujaa monumental sculpture at Uhuru Gardens in Nairobi. He has also undertaken several site-specific installation commissions at the National Museums of Kenya, the Heroes Museum, and other private institutions.

He has participated in many international sculpture symposia and workshops across the world, including in Kenya, India, Canada, the United States, and South Korea. In 2024, his work was selected to represent Kenya at the Venice Biennale.

In 2022, Motondi received a UNESCO Award of Honour for his contribution to preserving national heritage through sculptural art.



PHOTO: BLOO

BETWEEN THE CLOUDS

Stone: Turkana Basalt
Source: Turkana County
Weight: 14.90 kg
Dimensions: H: 31cm, L: 38.5cm, W: 32cm

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RESONANCES OF STONES

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IMMERSIVE HYBRID EXHIBITION

SCULPTURE • MUSIC • ARCHITECTURE



JOHN TABULE ABUYA OGAO

JOHN TABULE ABUYA OGAO

John Tabule Abuya Oga was born in Kisii Gucha District, Kenya, in 1963. He is a Master Sculptor from the Kisii region.

Although his beginnings were humble, rooted in artisanal practice using local soapstone, he gradually developed the technical mastery and artistic vision to work with various hard rocks, including granite and basalt. His abstract sculptures explore themes related to social and economic conditions and often touch upon political issues.

He collaborated with renowned art dealer Michelle Capri, with whom he held several exhibitions in Kenya and Italy.

Oga has completed major commissions and exhibited widely across Kenya and internationally, including the TMMSAC® collection Roots of Removal exhibition at the National Museums of Kenya in Nairobi. His work was also featured in the Kenyan Pavilion at the Stranieri Ovunque Venice Biennale 2024.

Currently, he is working on two basalt stone sculptures, each approximately 13 inches in height, titled Uplifting and Self-Fitting, as well as two commemorative works titled Wise Birds—all created in honour of his mentor, Professor Elkana Ongesa, a master sculptor from Kenya.



PHOTO: BLOO

MADONNA (MOTHER & CHILD)

Stone: Green Basalt
Source: Kisii County
Weight: 17.30 kg
Dimensions: H: 32cm, L: 38.5 cm, W: 32 cm

TMMSAC®

THE MUTURA MARANGU SCULPTURE & ART COLLECTION



- The Curators:

RESONANCES OF STONES

TMMSAC® AT NAXOS

IMMERSIVE HYBRID
EXHIBITION

SCULPTURE · MUSIC · ARCHITECTURE
NAXOS, 30.AUG-04. SEPT 2025

CURATORS

Alessandra Montali, PhD

PhD in Musicology and Musical Heritage, Alessandra Montali is Professor of Music History and Coordinator for Research at the Puccini Conservatory in La Spezia. A pianist and choir director, she also serves as Coordinator of the curriculum Immersive Technologies Applied to Music within Italy's National PhD Program led by the Conservatorio di Castelfranco Veneto, and as Affiliate Professor at Florida Atlantic University (USA).

Her research spans twentieth-century music history, systematic musicology (with a focus on cognitive and cultural processes of music listening), and the interdisciplinary use of new technologies for the enhancement of cultural heritage.

She currently leads the international research project Opera VR – Virtual Learning and Research Hub, which develops virtual reality modules for teaching music history and opera, within the PNRR Music Theatre & New Technologies Project – A New Paradigm for Opera Performance.

Dr. Montali also coordinates Resonances of Stones, an initiative exploring the interplay of architectural reconstruction and acoustic auralization through VR to enhance cultural heritage. She is actively involved in the Experimental Art Research Project: A Prototype for Virtual Opera, applying VR, XR, and AI technologies to opera performance as part of the HORIZON Europe-funded project CAPHE.

In addition, she curates the artistic and scholarly project The Role of Women in the Birth of Musical Theater – Conference & Performances, under the PNRR Casta Diva initiative – an international digital research and production platform.

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Aleksandra Łukaszewicz, PhD

PhD in Philosophy (University of Warsaw, 2010) and Habilitation in Culture and Religion Studies (University of Łódź, 2020). Aleksandra Łukaszewicz is a specialist in philosophical aesthetics and theory of culture and art, with a focus on posthumanism, transhumanism, personhood, and ethics in transcultural contexts.

She is President of the Polish Society of Aesthetics and has received numerous distinctions, including a Kościuszko Foundation scholarship for research on Joseph Margolis and a grant for her book *Are Cyborgs Persons? An Account on Futurist Ethics* (Palgrave Macmillan, 2021).

She coordinated two EU-funded international projects: TICASS (2017-2021) and TPAAE (2020-2023), and currently serves as coordinator for the Polish Society of Aesthetics in the Horizon Europe project CAPHE: Communities and Artistic Participation in Hybrid Environments (2022-2026).

Trained in photography (BA, Academy of Fine Arts in Poznań), she is active as an artist and co-curator. She participates in the international, multi-year Numerical Art project, which has exhibited in Poland and Italy in collaboration with institutions from France and Portugal. Aleksandra also leads the East African Art Endeavour Foundation, which has curated exhibitions in Szczecin, Berlin, Warsaw, and other locations.

From 2010 to 2024, she taught at the Academy of Art in Szczecin, serving first as Assistant and then Associate Professor and previously as Director of the Multimedia Library (2011-2015) and Head of the Institute of History and Theory of Art (2012-2016).

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Bogna J. Gladden-Obidzińska, PhD

A philosopher of culture and aesthetician with over 20 years of academic experience, Dr. Gladden-Obidzińska serves on the board of the Polish Society for Aesthetics and is part of the Horizon Europe-funded international research project CAPHE. She earned her PhD from the University of Warsaw, completed an NCN-funded postdoctoral programme at the Jagiellonian University, and held visiting fellowships in the UK, US, Spain, & Italy.

She lectured at the University of Warsaw and the Jagiellonian University and is the author, editor, and translator of numerous academic books and articles. Her scholarly work focuses on the visual arts, taste, and the evolving life cycles of aesthetic values.

As an entrepreneur, Bogna manages operations at the Mantinea Institute and is the founder and director of GALERIA KONKRET ART, where she curates and facilitates hybrid art exhibitions and events. She also leads research initiatives in heritage management and valuation, and is currently developing a project focused on redefining intangible heritage by integrating aesthetic values into preservation practices. As a consultant, she supports individuals and organisations in achieving their strategic and sustainable development goals.

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- Virtual realizations:
 - photorealistic and oneiric

RESONANCES OF STONES

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IMMERSIVE HYBRID
EXHIBITION

SCULPTURE • MUSIC • ARCHITECTURE
NAXOS, 30.AUG-04 SEPT 2025

VR • AR • ANIMATION



José Revez, PhD

Assistant Professor at the Sculpture Department of the Faculty of Fine Arts, University of Lisbon and Integrated Researcher at CIEBA.

His research focuses on Digital Sculpture, VR and AR Sculpture, 3D Scanning, and 3D Representation.

Prof. Revez is responsible for the systems of virtual environments at the Master's and Bachelor level in order to enhance the capacity of advanced technologies in academic and practical settings.

His research interests include creating platforms for virtual sculpture that can be applied in multicultural settings.



Anastasia Tsoutsouka

A multidisciplinary artist and researcher, born in Greece. She studied at Athens School of Fine Arts and in the Faculty of Fine Arts of the University of Lisbon, with a focus on applied digital arts.

Having explored a variety of visual media, painting and sculpture, in recent years she has shown profound interest in 3d design, animation and generative art.

She continues to cross fields in digital poetics, philosophy, aesthetics, and storytelling, while exploring artistic expression through mathematics and the interplay between traditional and digital art.

- audiovisual

- acoustic virtualization and visual reconstruction of spaces and environments by Gianluca Aresu, matching with the natural acoustics of the Bazeos Tower in an interactive and permeable way – allowing the user to experience the soundscape inside and outside of the building.

RESONANCES OF STONES
TMMSAC© AT NAXOS

IMMERSIVE HYBRID EXHIBITION
SCULPTURE • MUSIC • ARCHITECTURE



GIANLUCA ARESU

GIANLUCA ARESU

Gianluca Aresu is a composer, sound designer, and audio engineer, currently a PhD student in the Italian "National Doctorate in Artistic Research on Musical Heritage" program, in the curriculum "Immersive Technologies Applied to Music" at the Conservatory of Castelfranco Veneto (operational headquarters in Parma). He graduated with honors in Electronic Music from the Conservatories of Catania and Parma, where he studied with Renato Messina, Andrea Saba, and Javier Torres Maldonado.

He specialized in sound design, audio programming and sound direction for immersive installation and multimedia production. He has also worked in the field of sound engineering, from stage to studio production. He was in the sound direction for some editions of the "Labirinti Sonori" in Parma.

His most notable compositions include Stratwarming for accordion and electronics (performed in Parma and Gdansk), a version of John Cage's Fontana Mix with a graphic vector score in Iannix, performed in Catania, Vortex for piano and electronics and Automod for electronics. He composed soundscapes and original music for various installations in contemporary art galleries in Catania (e.g. White Garage) and participated in live electronics installations with the CaneCapovolto collective.

He develops interactive systems and generative tools on Max/MSP, Unity, and Wwise, working on multichannel spatialization (Ambisonics, WFS).



SLEEPING BULL

Sound environment for *Sleeping Bull* by Peter Kenyanya Oendo

The piece opens with a dialogue between voice and guitar, where the voice—spatialized—moves around the listener along well-defined trajectories, while the guitar remains a stable sonic anchor in space. This section is followed by a more experimental and material phase; here, the voice is deconstructed and reworked, while concrete sounds of stones and masses intertwine and move dynamically in space, enhancing a tactile and immersive perception.

In the central section of the piece, Greek instruments and African percussion develop the initial melodies of the voice and guitar across various instruments, creating new harmonies and reworking the main theme.

The form concludes with a return to the original sound objects, now immersed in a transformed soundscape in which the boundaries between gesture, object, and space become fluid and permeable.

- compositions

RESONANCES OF STONES
TMM SAC@ AT NAXOS

IMMERSIVE HYBRID EXHIBITION
SCULPTURE • MUSIC • ARCHITECTURE



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RESONANCES OF STONES
TMM SAC@ AT NAXOS

IMMERSIVE HYBRID EXHIBITION
SCULPTURE • MUSIC • ARCHITECTURE



ROBERTO CIPOLLINA

ROBERTO CIPOLLINA

Roberto Maria Cipollina is a composer active throughout Europe. He holds a bachelor's degree with honors in classical guitar and studied composition with Joe Schittino and Andrea Nicolò.


His works include *A Lover's Tale* (premiered in Noto, later performed in the UK and Ireland), a philological study on Castelnuovo-Tedesco, and the book *Applied Guitar Writing*, awarded by the Albatros II Filo publishing group and later translated into English.

He composed *Alchimie* for string orchestra (commissioned by the Museum of Contemporary Art in Lucca) and presented lectures at Castello Ursino and the Amfiteatrof Music Festival, where he discussed the use of memory systems in compositional practice. His *Variations on a Theme by Bellini* were featured at the Royal Northern College of Music in Manchester as part of Maestro Davide Sciocca's doctoral research.

He also released four string quartets with Academy of Ideas.

More recently he composed *Lu Re d'Amuri* (premiered at the Palermo Conservatory, release scheduled by Da Vinci Records in 2025), *Aparuit* (third prize, Sax and Villas 2024), and *Al-Qantarah* (commissioned by Icarus Ensemble, premiered 1 December 2024, dedicated to the victims of the conflicts in Gozli).

He is currently pursuing research in composition for VR and working on an opera exploring the relationship between digital and human identity through AI.



ECONOMIC DOWNTURN #2 OF 2

Sound environment for *Economic Downturn #2 of 2* by Robin Okeyo Mbera

Divided into six parts, the piece is built, in Kassi's text, around five figures of martyrs, each placed at the center of a section that takes on their distinctive traits. It unfolds as an essential sound space—almost bare and outside of time—where the voice guides the listening experience. Around it, bells and electronic effects alternate between supporting and contrasting the voice, outlining a rarefied perceptual landscape, inhabitable in its immersivity.

In moments of greater intensity, vocal *organa* emerges: voices that imitate, accompany, and emphasize passages of the text, amplifying its expressive tension. The main voice, always at the center of the composition, acts as a pivot; the others are positioned in the surrounding sound space. Added to these are moving whispers, creating a dimension of intimacy and proximity. The six sections converge towards a climax in the penultimate part, before dissolving into the conclusion, where only the voice remains, followed by distant bells. To close, an isolated male echo amplifies the sense of distance and absence.

RESONANCES OF STONES

TMMSAC® AT NAXOS

IMMERSIVE HYBRID EXHIBITION

SCULPTURE • MUSIC • ARCHITECTURE



KINYA MARANGU

KINYA MARANGU

Kinya Marangu is a #TMMSAC Coordinator focusing on all aspects of sound and music in physical and virtual environments.

With a B.A. Honours in Music with a Concentration in Composition and a Minor in Cyber Defense from Olivet Nazarene University, Illinois, USA.

Kinya specializes in video game music compositions and mastery of virtual technologies, which includes but is not limited to the 3D scanning of the 4 Roots of Return BRAMSA sculptures in the Resonances of Stone Exhibition in Naxos, Greece.

She is also interested in hearing how music can serve as a storytelling medium within physical and virtual mediums.

BETWEEN THE CLOUDS



Sound environment for *Between the Clouds* by Gerald Motondi Oroo

The piece unfolds across three main layers: a base of nocturnal soundscape composed of environmental recordings, a modal melodic line, and an African percussion part providing support, with deep and resonant timbres alternating with carefully placed silences to underscore the cyclical breathing of the night.

A distinctive element is its openness to audience interaction: the composition is structured to include and welcome spontaneous percussive actions by listeners, thanks to instruments made available in the space. The result is an experiential sound environment, designed to enhance the perception of space and foster a connection with the nocturnal natural world.

RESONANCES OF STONES

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IMMERSIVE HYBRID EXHIBITION

SCULPTURE • MUSIC • ARCHITECTURE



AGATA SZLŻZAK

GIANLUCA ARESU AND AGATA SZLŻZAK

Agata Szlżzak was born in Lublin, Poland. She graduated from the Karol Lipiński State Music School in Lublin, where she studied cello. She earned her Bachelor's and Master of Arts degree in music education and conducting of vocal and instrumental ensembles at the Karol Lipiński Academy of Music in Wrocław, in the class of choral conducting under Professor Halina Bobrowicz.

During her time in Wrocław she served as assistant conductor for the "Consonanza" Chamber Choir of Wrocław University of Science and Technology. After completing her studies, she worked as a choral conductor, choir and orchestra teacher at a music school, a music teacher in primary schools, and a mentor at the Teachers' Internet Academy within the Center for Civic Education. She conducted music classes for infants, promoting Edwin E. Gordon's Music Learning Theory, including presenting an article at a conference in Lublin, as well as editing books and articles.

She participated in choral workshops, didactic courses and seminars. Agata performed with her choirs at concerts and festivals and organized musical events. In December 2024, she began doctoral research as part of the Italian National Doctorate in Artistic Research on *Musical Heritage* program, in the curriculum *Immersive Technologies Applied to Music*.

MADONNA (MOTHER & CHILD)



Sound environment for *Madonna (Mother & Child)* by John Tabule Abuya Ogaoo

The liturgical chant *Kyrie eleison*, conceived for the Chapel of the Tower, emphasizes the sacredness of both the composition and the space. The composition opens with an exposition of the vocal theme, characterized by repetitions and choral responses, over which percussion is gradually layered. A central section follows, dominated by the modal development of the *Kyrie* melody, entrusted to string instruments from the ancient Greek tradition, whose timbre blends with electronic textures inspired by them.

A musical *drone* serves as the structural axis, creating a continuous sonic fabric around which vocal, electronic, and instrumental interventions gravitate. The final section is marked by the entrance of flutes and natural environmental sounds—evoking African atmospheres—that close the piece with expanded textures and evolving timbres.

- Opening of the Immersive Hybrid Exhibition. Sculpture. Music. Architecture. “Resonances of Stones. TMMSC@ at Naxos” with the performance by Aleksandra Łukaszewicz “Pasiphae – Ariadne: Meanders of Sleep and Return” – the Municipal Foyer Gallery, Naxos, Greece, August 30, 2025, 7:30 pm

RESONANCES OF STONES

TMMSC@ AT NAXOS

IMMERSIVE HYBRID EXHIBITION

SCULPTURE • MUSIC • ARCHITECTURE



CURATED BY
Bogna J. Gladden-Obidzińska
Aleksandra Łukaszewicz
Alessandra Montali

Municipal Foyer Gallery, Naxos
Exhibition Opening: 30 Aug 19.30
Opening hours: 31 Aug - 4 Sept: 10.00-17.00
No admission fee

RESONANCES OF STONES THE EXHIBITION

Resonances of Stones TMMSC@ at Naxos: Immersive Encounters through Sculpture, Architecture, and Music is a hybrid exhibition blending layers of perception through VR, XR, and physical experience on Naxos Island, Greece.

Basalt works by acclaimed Kenyan sculptors – Gerald Motondi Oloo, John Tabule Abuya Ogao, Peter Kenyanya Oendo, and Robin Okeyo Mbera – from the Mutuma Marangu Sculpture and Art Collection (TMMSC@), acting as Originating Convener, are explored both in their physical and virtual identities, resonating in original musical compositions inspired by the sculptures and the Bazeos Tower's architecture and surroundings.





ACOUSTIC RESONANCE AND MUSICAL SPACE EXPERIENCE

Italian, Polish, Kenyan, and Greek composers, musicians, and sound engineers invite you to delve into immersive, site-specific soundscapes crafted for each sculpture and integrated into the physical and virtual spaces of the exhibition.

You will experience this layered heritage through all senses – visual, aural, tactile, and olfactory – and connect past and future, physical and digital, Europe and Africa, with Naxos as a point of convergence.

CAPHE HORIZON EUROPE PROJECT

The Exhibition makes part of the Communities and Artistic Participation in Hybrid Environments (CAPHE) - a Horizon Europe programme that creates, studies, and implements hybrid environments for the amelioration of physical and virtual space experience. The Polish Society for Aesthetics, led by Prof. dr hab. Aleksandra Łukaszewicz, is the main facilitator of the Exhibition on behalf of CAPHE.



RESONANCES OF STONES THE INTERNATIONAL RESEARCH PROJECT

Resonances of Stones is a multi-year research commenced within the CAPHE framework in 2024 by Prof. Alessandra Montali, Prof. José Revez, and Dr. Bogna J. Gladden-Obidzińska to explore XR technologies' capacity to enhance the perception of space through enriching them with virtual acoustic characteristics. The Resonances of Stones research starts with but reaches beyond the CAPHE project, as it also investigates the potential for reconstruction and preservation of historic acoustic heritage in hybrid environments worldwide.

PROGRAMME FOR THE EXHIBITION OPENING ON 30 AUG 2025

19.30

- addresses by: the Mayor of Naxos and Lesser Cyclades, the Founder/Owner of TMMSC@ and Collection Originating Convener, the Coordinator of the CAPHE project, and the Exhibition's Curators

20.00-22.00

- guided tours of the physical, virtual, and augmented layers of the exhibition
- transcultural performance



Opening Hours:
31 Aug - 4 Sept: 10.00-17.00

Venue:
Municipal Foyer Gallery of Naxos and Lesser Cyclades - Agiou Georgiou 101, Naxos

Contact:
- 39 351 359 7171 • biemle@monteianstitute



CREDITS

Collection Originating Convener and Cosponsor:

TMMSC@
TMMSC@ is a collection of basalt sculptures by Kenyan sculptors.

Producer and Lead:
XOX
Association of Artists

Patron and Host:
Δήμος Νάξου
Municipality of Naxos and Lesser Cyclades

Partners:
Conservatorio Arrigo Boito di Parma
Department of Music Studies
Faculty of Education
University of Athens

b a belas-artes
a ulisboa

Sponsors:
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These activities are part of the CAPHE project, which has received funding from the European Union's Horizon Europe research and innovation programme under grant agreement no. 101086391. The perspectives and opinions expressed herein belong to their authors and do not necessarily reflect those of the European Union or the European Executive Agency. Neither the European Union nor the funding institution is responsible for them.

RESONANCES OF STONES

TMMSAC® AT NAXOS

IMMERSIVE HYBRID
EXHIBITION
SCULPTURE · MUSIC · ARCHITECTURE
NAXOS, 30.AUG-04 SEPT 2025

PASIPHAË-ARIADNE: MEANDERS OF SLEEP AND RETURN

PERFORMANCE BY ALEKSANDRA ŁUKASZEWICZ

Pasiphaë-Ariadne putting the bull to sleep and leading a meandering procession in eternal iterations.

In this performance, the artist embodies Ariadne, living in a world where the bull-Minotaur lies immersed in sleep, while she herself also becomes the good mother Pasiphaë. Her movements are shaped by music composed by Gianluca Aresu, reaching the ears, skin, and entire body through surrounding sounds - perceived also tactilely thanks to a specially designed costume.

The artist grinds herbs to lull the bull-Minotaur into peaceful and safe sleep, and to bring calm to the environment.

The herbs were gathered in the valleys of the island of Naxos.

- Hibiscus - soothes the spirit, lowers blood pressure, and strengthens the heart.
- Althaea - calming, helpful in stomach and skin ailments, adorning young women in spring.
- Rose - a symbol of youth, resilience, and well-being.
- Vervain - enhances memory, brings spiritual clarity, slows aging, supports metabolism, and has anticancer effects.
- Calendula - its petals evoke the sun and warmth.
- Cistus - in antiquity dedicated to nymphs; with medicinal and cosmetic uses, protects against free radicals and supports healthy cholesterol.
- Oregano and wild mint - for endurance and vitality.

With the dried herbs, she sprinkles the sculpture of the bull (*Sleeping Bull* by Peter Kenyaya), and then the audience. In doing so, she offers a sacrifice - different from that of Minos, free of his guilt - keeping the bull-Minotaur in the little death of sleep from which endless returns are possible.

She then dances the sleep and death of the bull-Minotaur, tracing a meandering line. Her body becomes a dynamic meander, a wave traversing space, with movements inspired by the crane. This dance symbolizes death as transformation, opening the way to a new beginning - returning in successive manifestations.

The crane, which according to Slavic belief once embodied an enchanted maiden, dances not only in Europe but also in Africa, Asia, and the Americas. It signifies a bond with nature, restores balance, ensures longevity and happiness, and is linked to agrarian cults. The Slavic performer, wearing an African leso, with Asian signs hidden on her body, and with the floral motif of Mother Earth of the Mixtec people of Central America, unites through her body, movement, and symbols the continents and cultures. On her head shines a nine-part diadem, recalling Dionysus's gift to Ariadne, which later became the constellation Corona Borealis. It is a sign that although time has already been fulfilled, it endlessly returns in new iterations, whose shape also depends on us.

"I am a wave, I move as a wave, the eternal return of not-the-same, in the process of endless iteration of archetypes that weave human beings together across cultures and beyond time."

11. international Symposium “Transcultural Immersive Encounters through Sculpture, Architecture and Music”, Municipal Hall, Naxos, Greece, September 1, 2025, 11:00 am-5:30 pm

RESONANCES OF STONES

INTERNATIONAL SYMPOSIUM

Transcultural Immersive Encounters through Sculpture Architecture and Music



Municipal Theatre, Chora, Naxos
1 Sept. 2025 11:00-17:30

RESONANCES OF STONES THE SYMPOSIUM

The Transcultural Immersive Encounters International Symposium brings together artists, researchers, composers, architects, curators, and digital designers to explore the dialogue between sculpture, architecture, and music through immersive technologies and hybrid environments. The event accompanies the opening of the exhibition Resonances of Stones - TMMSCA© at Naxos, an innovative project interweaving African basalt sculpture, Greek architectural landscapes, original sound compositions, and virtual reconstructions. Organized within the framework of the HORIZON-MSCA project “Communities and Artistic Participation in Hybrid Environments”, the symposium addresses topics such as:

- Multisensory engagement with cultural heritage
- Sound and space as mediators of cultural memory
- Site-specific composition and immersive auralization
- Community participation and cross-continental co-creation
- Artistic experimentation with VR, AR, XR in heritage contexts

An opportunity to share critical, speculative, and interdisciplinary perspectives on the future of immersive cultural practices in transcultural contexts.

DOI: 10.5281/ZENODO.16875715

BRIEF PROGRAMME

11:00-11:20 Welcome from the CAPHE coordinator and organisers
11:20-12:00 Keynote presentation
12:10-13:30 Presentations
13:45-15:30 Lunch Break
15:30-17:00 Presentations
17:00-17:15 Closing remarks

CREDITS

Collection Originating Convener and Cosponsor:

TMMSCA©
THE MULTISENSORY TRANSCULTURAL IMMERSIVE ENCOUNTERS

Producer and Lead:
RESONANCES OF STONES

Patron and Host:
Alteon Néteon
Naxos Municipality

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PROGRAMME OF THE SYMPOSIUM

11:00-11:10 Address from Prof. Jakub Petri, the Main Coordinator of the CAPHE project

11:10-11:20 Welcome from the organisers. Prof. Dr. Alessandra Montali, Prof. dr hab. Aleksandra Łukaszewicz, Dr. Bogna J. Gladden-Obidzińska, and Prof. Massimo Felici, Director of the Conservatory of Parma (PhD DIN Programme)

11:20-12:00 Keynote address by Mr. Mutuma Marangu, TMMSCA©
TMMSCA© relationship with CAPHE - The Evolution of TMMSCA© as Originating Convener

Presentations:

12:10-12:30 Prof. José Manuel Revez, Anastasia Tsoutsouka
Spatial Dematerialization as a Plastic Reinterpretation

12:40-13:00 Prof. Alessandra Montali
Resonances of Stones: Connections between Artistic Practices and Acoustic-Visual Digitization of Historical Spaces

13:10-13:30 Gianluca Aresu, Roberto Cipollina, Kinya Marangu, Agata Szlązak
From Mapping to Composition: Technical Workflow and Sound Design in Resonances of Stones

13:45-15:30 Lunch Break

15:30-15:50 Prof. Małgorzata Szyszowska
Reverberating Self: The Process of Hearing Oneself as a Way to Becoming Recognized

16:00-16:20 Dr. Małgorzata Dancewicz-Pawlik
Will Transcultural Immersive Encounters Need the Ecology of Sound?

16:30-16:50 Prof. Aleksandra Łukaszewicz
Naxos as Nexus or back to Herodotus. The World of Adjacent Lands and Reciprocal Inspirations

17:00-17:15 Discussion and Closing Remarks

Accompanying events:

Sunday, 31st Aug. at 16:00 in the Foyer Gallery.
Dr. Dorota Hrycak-Krzyżanowska
Walking the Resonances: AI, Sound, and Storytelling in Hybrid Heritage Games a lecture followed by a workshop and an interactive augmented educational game

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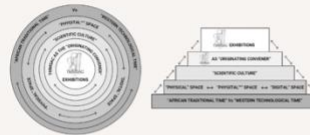
ABSTRACTS

Marangu Mutuma

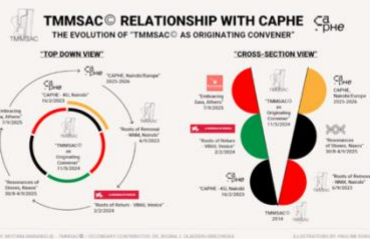
TMMSC@ RELATIONSHIP WITH CAPHE - THE EVOLUTION OF "TMMSC@ AS ORIGINATING CONVENER" - KEYNOTE ADDRESS

TMMSC@ is honoured, for a second time, to be invited to provide a CAPHE Keynote Address to the Resonances of Stones - International Symposium at the Municipality Theatre in Chora, Naxos, Greece. The first TMMSC@ Keynote Address delivered to the Symposium, "New Coordinates for the Creative Hybrid Space Experiences," was held at Kenyatta University in Nairobi, Kenya, on 16 February 2023, and established the foundational basis for a long-term, multi-year relationship with multiple CAPHE partners and stakeholders, of which this International Symposium is a material result.

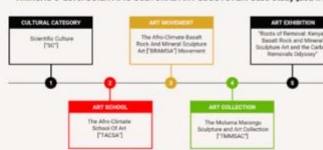
This second Keynote Address, "TMMSC@ RELATIONSHIP WITH CAPHE - THE EVOLUTION OF "TMMSC@ AS ORIGINATING CONVENER" will be guided by the Graphic depicted below, in the hope that the points introduced and discussed provide deeper context for asking questions and beginning the process of answering those questions presented of "where" we have collectively come from over the past two and a half year and "where" we might be heading individually between now and the end of CAPHE.



TMMSC@ presents this Keynote Address as a way to introduce interdisciplinary, multidisciplinary, and transdisciplinary concepts created by TMMSC@ that have evolved and emerged during these past two and a half years of engagement with CAPHE partners and stakeholders. Further, it is hoped that the re-evaluation and application of these concepts created by TMMSC@ will provide greater clarity on "how" and in "what" way the future of "Transcultural Immersive Encounters through Sculpture, Architecture and Music" might look like theoretically, with the physical, physical, and digital "Resonances of Stones" Exhibition in Chora, Naxos, Greece, being the first such practical Exhibition presentation.



TMMSC@ 5-Level SCIENTIFIC CULTURAL ART ECOSYSTEM Case Study [2024A]



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ABSTRACTS

Aresu Gianluca, Cipollina Roberto, Llanis Manolis, Marangu Kinya, Sziqzak Agata

From Mapping to Composition: Technical Workflow and Sound Design in Resonances of Stones

This presentation offers a detailed overview of the technical workflow developed for Resonances of Stones, focusing on the methodologies and professional solutions employed to capture, process, and transform the acoustic identity of the Bozeos Tower within the immersive exhibition TMMSC@. Specifically, the presentation addresses:

- The description of acoustic mapping procedures for historical spaces, with particular attention to the selection of sampling points, surveying techniques, and the methods used for the acquisition of impulse responses through balloon bursts and high-resolution ambisonic recordings. Criteria for data validation and for the three-dimensional reconstruction of the actual sound environment will be illustrated.
- An overview of the post-production, editing, and auralization process for the collected data, with a focus on processing methods, de-noising, and rendering, as well as the auralization algorithms used to deliver an accurate and faithful immersive simulation of the original acoustic conditions.
- The description of the four soundscape compositions specifically created for the TMMSC@ exhibition, including an analysis of compositional choices, sound spatialization, and the interplay between soundscapes and the visitors' immersive experience. The software tools adopted and strategies for positioning audio sources within the exhibition's sound design will also be presented.

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ABSTRACTS

Dancewicz-Pawlik Malgorzata

Will Transcultural Immersive Encounters need the ecology of sound?

In thinking about the intersections of postcolonial discourse and digital curating, many issues arise related to the boundaries of sound, its reach, its production, and distribution, and therefore the technological nature of its ecology and ethics. In considering the ecology of sound, I would like to refer to the philosophical concept of the phonocene by Vinciane Despret and Donna Haraway and analyze the project entitled Phonocene.

Phonocene is the title of an immersive, hybrid installation inspired by the concept of the phonocene, created by philosopher and ethologist Vinciane Despret. The project was presented during the pandemic, in October 2020, as part of the Biennale de Pensament in Barcelona. Right after the presentation, during an online conversation with Donna Haraway, Vinciane Despret, explaining her understanding of the phonocene, gave the example of this aesthetic concept.

The initial question of the presentation will be to what extent this type of immersive activities as in Phonocene project fit into the ecology of sound and how the concept of the phonocene can function in the space of VR, AR and HR.

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ABSTRACTS

Hrycak-Krzyżanowska Dorota

Walking the Resonances: AI, Sound, and Storytelling in Hybrid Heritage Games

A lecture held on the 31st of August at 16:00 in the Foyer Gallery followed by an interactive, augmented, educational game

As part of the EU-funded CAPHE project (Communities and Artistic Participation in Hybrid Environments), I explore how AI-enhanced hybrid games can create synesthetic, transcultural encounters in heritage spaces. My practice draws on McLuhan's concept of synaesthesia as a bridge between the senses, combining architecture, soundscape, narrative, and embodied movement to design immersive experiences.

My first project in this domain was *Odyssey, Dionysus and Ariadne*, a hybrid game created for the island of Naxos using the Actionbound platform. The game invited participants to walk through myth and space, engaging with the island's architecture and natural landscape through layered storytelling and sound. Building on this experience, I developed *Walking on Water: Secrets of London's Hidden Rivers and Secrets of Liguria* in the Footsteps of Poets and Painters, each expanding the practice to new cultural and geographical contexts. In these projects, AI functions as a creative companion, generating narrative elements, visual textures, and soundscapes that enrich the sensory and emotional dimensions of the experience. Participants are invited to explore cultural memory through multisensory, participatory journeys that blur the boundaries between physical and digital presence.

This presentation will reflect on the design strategies, creative outcomes, and participant responses from these hybrid games. I will also discuss how such approaches might inform future practices of immersive heritage storytelling, particularly within resonant architectural spaces such as Bazeos Tower. Through AI-enhanced hybrid games, we can imagine new ways of allowing stones, sounds, and stories to speak across time and culture.

ABSTRACTS

Hrycak-Krzyżanowska Dorota

Ariadne and Dionysus in Naxos: Hybrid Storytelling, Participatory Art, and a Virtual Gallery

A workshop held on the 31st of August at 16:30 in the Foyer Gallery followed by an interactive, augmented, educational game

This CAPHE workshop combines digital storytelling, a location-based game, participatory art, and an online exhibition to explore the myth of Ariadne and Dionysus in Naxos. Participants begin with an interactive game visiting symbolic island sites, followed by an audio narration blending classical myth with contemporary atmosphere. They then co-create a large-scale map of emotions on a paper roll-divided for Ariadne and Dionysus—guided by an "Emotions-Colours-Symbols" palette. The outcome, along with photographs and multimedia from Naxos, is showcased in a virtual gallery, extending the creative experience beyond the physical workshop and illustrating how place-based narratives and collaborative art-making can deepen cultural engagement.

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ABSTRACTS

Lukaszewicz Aleksandra

Naxos as Nexus or back to Herodotus: The World of Adjacent Lands and Reciprocal Inspirations

Cycladic Island Naxos on the Aegean Sea in the context of the presented exhibition, *Resonances of Stones: TMMASAC on Naxos 2025* is symbolic. It emerges as a nexus on the sea, recognized as the central water basin for the ancient world. Connected with Dardanelles, the Sea of Marmara, the Bosphorus, the Black Sea, the Kerch Strait, and the Sea of Azov it composed the complex system that allowed ancient Greek mariners to differentiate between adjacent lands, that together were forming a single, interconnected "world island," the *Orbis Terrarum*, recognized later as the Old World, juxtaposed to the New World. This view can be found in Herodotus who in the 5th century BC was writing "Another thing that puzzles me is why three distinct women's names should have been given to what is really a single landmass," and in Emanuel Bowen, who in 1752 wrote that "A continent is a large space of dry land comprehending many countries all joined together, without any separation by water. Thus, Europe, Asia, and Africa is one great continent, as America is another." The descriptions of continents and their boundaries, which have evolved over millennia, mark a fascinating journey through ideological, geopolitical, and even racial conceptualizations of the world inhabited by humans. Differentiating one from another in one mass of land, due to political and cultural reasons, turns out to be a human characteristic. This, however, is not eternal, nor does it cherish transcendental standing, but is something that we, as people, do on the way and transform on the way, sometimes solidifying certain notions in religious interpretations or in considered to be objective scientific textbooks.

In one mass of land composed of Europe, Asia, and Africa, despite the inland waters seeping into its tissue, the relations constituted by trade, culture, and politics were always present. Art from the Hellenic region was spread all around the water basin of the Mediterranean Sea, and the art from the Middle East and Maghreb countries from later periods was strongly inspiring European culture, which was explicit in times of Orientalism in the 19th century. Thus, exhibiting Kenyan basalt sculptures by contemporary master sculptors in the historical walls of Castro of Naxos town that resonate physically and virtually in an immersive audiosphere, helps us to listen carefully to the resonances of times in our common land - the Old World.

ABSTRACTS

Montali Alessandra

Resonances of Stones: Connections between Artistic Practices and Acoustic-Visual Digitization of Historical Spaces

The international project *Resonances of Stones* proposes an interdisciplinary approach to the valorization of historical heritage, integrating visual arts, music, sound studies, and immersive technologies. At the center of the research lies the concept of Resonance, understood not merely as an acoustic phenomenon, but as a complex relational dynamic between matter, memory, architecture, and perception—capable of generating new forms of experiential and affective knowledge.

Using the Bazeos Tower (Naxos, Greece) as a case study, the project carried out an in-depth acoustic and spatial investigation through 3D digital modeling, and high-resolution ambisonic recordings. These data enabled the development of an integrated approach to digitization and auralization that reconstructs not only the visual form of the space but also its sonic identity, revealing the specific acoustic character of the architectural site.

A distinctive and innovative aspect of the project is the integration of this digital-acoustic framework with a site-specific artistic proposal comprising sculptural installations, original musical compositions, and also olfactory elements. This convergence gives rise to an immersive and synesthetic environment, where the physical and virtual dimensions are conceived as interdependent.

DOI: 10.5281/ZENODO.16875713



- Lecture followed by a workshop and an interactive educational game “Walking the Resonances: AI, Sound and Storytelling in Hybrid Heritage Games” by Dr. Dorota Hrycak-Krzyżanowska – Municipal Theatre, Naxos, Greece, August 31, 2025, 4:00 pm
- Film screening and discussion by Dr. Bogna J. Gladden-Obidzińska, “Hollowing the Rock to Fill the Gaps”. A documentary featuring Mutuma Marangu, the TMMSAC© founder and owner, and the Master Sculptors: Peter Oyendo Kenyaya, Robin Okeyo Mbera, and Gerard Motondi in conversation with Bogna J. Gladden-Obidzińska – Municipal Theatre, Naxos, Greece, September 2, 2025, 5:00 pm
- Workshops by Prof. Małgorzata Szyszkowska on re-defining community through common sound-making meditative practices based on Pauline Oliveros’ “Sonic Meditations”, 1971 – Agia Ana, Naxos, Greece, September 3, 2025, 5:00 pm
- Workshops by Gianluca Aresu on sensing music by tactile sense in vibrations from the vest – Municipal Theatre, Naxos, Greece, September 4, 2025, 4:00 pm

4. Documentation, dissemination and communication of results

- Dissemination:

Presentations from International CAPHE Symposium “Transcultural Immersive Encounters through Sculpture, Architecture and Music” (published on Zenodo):

Lukaszewicz, A., Gladden-Obidzinska, B. J., & Montali, A. (2025). Transcultural Immersive Encounters through Sculpture, Architecture and Music. Transcultural Immersive Encounters through Sculpture, Architecture, and Music, Chora, Naxos, Greece. Zenodo. <https://doi.org/10.5281/zenodo.16875713>

Marangu, E. M. (2025, wrzesień 10). TMMSAC© relationship with CAPHE – The Evolution of TMMSAC© as Originating Convener. Transcultural Immersive Encounters through Sculpture, Architecture and Music, Naxos, Greece. Zenodo. <https://doi.org/10.5281/zenodo.17091518>

Santos Silva Garcia Revez, J. M. e ., & Tsoutsouka, A. (2025, wrzesień 11). Spatial Dematerialization as a Plastic Reinterpretation. Transcultural Immersive Encounters through Sculpture, Architecture and Music, Chora, Naxos, Greece. Zenodo. <https://doi.org/10.5281/zenodo.17097979>

Montali, A. (2025, wrzesień 10). Resonances of Stones: Connections between Artistic Practices and Acoustic-Visual Digitization of Historical Spaces. Transcultural Immersive Encounters through Sculpture, Architecture and Music, Chora, Naxos, Greece. Zenodo. <https://doi.org/10.5281/zenodo.17093941>

Aresu, G., Szlązak, A., Marangu, K., & Montali, A. (2025). From Mapping to Composition: Technical Workflow and Sound Design in Resonances of Stones. Transcultural Immersive Encounters through Sculpture, Architecture and Music, Naxos, Greece. Zenodo. <https://doi.org/10.5281/zenodo.17179408>

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Szyszkowska, M. A. (2025, wrzesień 11). Reveberating Self: The Proces of Hearing Oneself as a Way to Becoming Recognized. Transcultural Immersive Encounters through Sculpture, Architecture and Music, Chora, Naxos, Greece. Zenodo. <https://doi.org/10.5281/zenodo.17097932>

Dancewicz-Pawlik, M. (2025, wrzesień 11). Will Transcultural Immersive Encounters Need the Ecology of Sound?. Transcultural Immersive Encounters through Sculpture, Architecture and Music, Chora, Naxos, Greece. Zenodo. <https://doi.org/10.5281/zenodo.17097874>

Lukaszewicz, A. (2025, wrzesień 10). Naxos as Nexus or back to Herodotus. The World of Adjacent Lands and Reciprocal Inspirations. Transcultural Immersive Encounters through Sculpture, Architecture and Music, Chora, Naxos, Greece.

Zenodo. <https://doi.org/10.5281/zenodo.17094282>

Hrycak Krzyżanowska, D. (2025, wrzesień 11). Walking the Resonances: AI, Sound, and Storytelling in Hybrid Heritage Games. Transcultural Immersive Encounters through Sculpture, Architecture, and Music, Chora, Naxos, Greece.

Zenodo. <https://doi.org/10.5281/zenodo.17098144>

Compositions for Resonances of Stones Biennale Naxos 2025 (published on Zenodo):

Cipollina, R., & Montali, A. (2025, wrzesień 22). RoS Soundscape - Roberto Cipollina - From Kassia. The Five Stringed Lute and Fivefold Lamp. Resonances of Stones Biennale Naxos 2025, Naxos, Greece. Zenodo. <https://doi.org/10.5281/zenodo.17179582>

Aresu, G., & Montali, A. (2025, wrzesień 22). RoS Soundscape - Gianluca Aresu - From Dimitris Papadimitriou to Sapho. Resonances of Stones Biennale Naxos 2025, Naxos, Greece. Zenodo. <https://doi.org/10.5281/zenodo.17179635>

Szlązak, A., Aresu, G., & Montali, A. (2025, wrzesień 22). RoS Soundscape - Agata Szlązak & Gianluca Aresu - Kyrie-Eleison. Resonances of Stones Biennale Naxos 2025, Naxos, Greece. Zenodo. <https://doi.org/10.5281/zenodo.17179720>

Marangu, K., & Montali, A. (2025, wrzesień 22). RoS Soundscape - Kinya-Marangu - CO2. Resonances of Stones Biennale Naxos 2025, Naxos, Greece. Zenodo. <https://doi.org/10.5281/zenodo.17179799>

Videos of VR and AR environments (published on Zenodo):

Santos Silva Garcia Revez, J. M. e . (2025, wrzesień 11). A Virtual Tour of the Bazeos Tower VR Reinterpretation and the TMMSAC©© at Naxos Immersive VR Exhibition. Resonances of Stones Biennale Naxos 2025, Chora, Naxos, Greece. Zenodo. <https://doi.org/10.5281/zenodo.17098030>

Zanin, C., & Bardazzi, F. (2025, kwiecień 24). Trailer of ORFEO & LWANDA. The Soul in spiritual and transcultural traditions. VR Hybrid Opera. Zenodo. <https://doi.org/10.5281/zenodo.15274153>

Gladden-Obidzinska, B. J., Mwiti, A., Gladden, M., & GALERIA KONKRET AR.T. (2024, listopad 20). Anne Mwiti. The Nkrombe Series. Zenodo. <https://doi.org/10.5281/zenodo.14637782>

Interviews (published on Zenodo):

Gladden-Obidzinska, B. J. (2025, marzec 16). "Numerical Art: Fractality of the Universe", XR Festival "Liquid Spaces", Florence 2024 – Interviews with the Artists and Curators. Zenodo. <https://doi.org/10.5281/zenodo.15034936>

Gladden-Obidzinska, B. J. (2025, wrzesień 10). Hollowing the Rock to Fill the Gaps. Resonances of Stones Biennale Naxos 2025, Naxos, Greece. Zenodo. <https://doi.org/10.5281/zenodo.17091261>

Catalog on The Nkrombe Series (published on Zenodo):

Mwiti, A., Gladden-Obidzinska, B. J., & da Coasta, J. (2024). The Nkrombe Series. Anne Mwiti. Zenodo. <https://doi.org/10.5281/zenodo.14637365>

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Gladden-Obidzinska, B. J. (2025, luty 27). The Role of Sound in the Perception of Form in Hybrid Environments. Enhancing Artistic Experience in Hybrid Environments, Conservatorio Giacomo Puccini La Spezia, Italy. Zenodo. <https://doi.org/10.5281/zenodo.14940355>

Kawalec, A. (2026). Immersion in Art: Hybrid and Living Art. Roczniki Kulturoznawcze. Annales Des Etudes Culturelles. Annals of Cultural Studies, 16(4), 113–130. <https://doi.org/10.18290/rkult25164.7>

Lukaszewicz, A. (2025, sierpień 12). Opera Up To Date. Transhuman, Transcultural, and VR Opera Staging. Technology, Art and the Posthuman: The End or a New Beginning for Humanism?, John Cabot University, Rome, Italy. Zenodo. <https://doi.org/10.5281/zenodo.16814324>

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Montali, A. (2025, sierpień 20). Case Study 1: Pietro Alessandro Guglielmi "il Poeta di Campagna". Enhancing Artistic Experience in Hybrid Environments, Conservatorio di Musica Giacomo Puccini La Spezia. Zenodo. <https://doi.org/10.5281/zenodo.16910433>

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- Communication

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https://www.galeriakonkret.art/hybrid-bio_geo-geographies-of-jacob-barua/

5. From project to permanent structures: institutional and research impact

Beyond the scientific and creative outputs described above, the elaboration of D1.3 by the CAPHE partners has generated two distinct types of long-term impact: a formal-institutional impact and a research-driven impact. Together, they contribute to the structural sustainability of the project and ensure continuity beyond its official lifetime.

Formal and institutional impact

At the formal level, CAPHE has led to the establishment of two independent legal and organizational entities, created by project participants. These structures consolidate both consortium members and newly engaged stakeholders, providing durable frameworks for the exploitation of project results, the expansion of collaborative networks, and the long-term dissemination of research outcomes.

The first entity, GALERIA KONKRET AR.T (galeriakonkret.art), was established in November 2023 by Bogna J. Gladden-Obidzińska as a direct institutional outcome of the artistic and research activities developed within CAPHE. The gallery has been financed through private resources provided by its founder via her company Syntagma JDG (NIP 5342055679), a stakeholder collaborating with the Polish Society for Aesthetics within the project. Conceived as a virtual exhibition and dissemination platform, GALERIA KONKRET AR.T was developed during CAPHE with the explicit intention of operating beyond the project on Spatial.io and other virtual environments, thus ensuring sustained public access to research-based artistic content.

The second entity, the Mantinea Institute (mantinea.institute), was founded in October 2024 as a legal organization (Sàlsola SRLS, CF/IVA 01580670113) on the initiative of Alessandra Montali and Bogna J. Gladden-Obidzińska. Its establishment represents a formal consolidation of collaborative partnerships developed within CAPHE, creating a permanent institutional framework for further interdisciplinary research, artistic experimentation, and stakeholder engagement.

Research and methodological impact

At the research level, the Mantinea Institute has functioned as an incubator for the project *Resonances of Stones*, embedding the continuation and further development of this research line within its core programme. Through this structure, CAPHE results are extended to new environments, cultural contexts, and stakeholder ecosystems, addressing key challenges related to the study and safeguarding of both tangible and intangible cultural heritage.

In this way, the CAPHE methodology was not only tested under real field conditions but also further refined into a scalable research model, applicable to future projects in digital heritage valorization and XR-based performance practices. This confirms the project's methodological contribution beyond its original scope.

As articulated in the *Manifesto of the Resonances of Stones* project:

“We propose an innovative model of artistic and cultural engagement, one that merges the evocative power of art with the sensory intelligence of space and the immersive strength of technology. At the foundation of each event is a carefully selected artwork, individually placed in a unique environment chosen for its architectural and acoustic qualities. These works are not merely displayed, but activated through interdisciplinary performances that combine sound, light, scents, movement, and immersive technologies.

These experiences are designed to enhance the physical and emotional depth of perception, creating complex sensory environments where each encounter becomes a living, embodied, and collective resonance.

Alongside the physical event, we develop digital pathways within the same spaces—interactive tours, virtual reconstructions, augmented narratives—that expand and prolong the experience, making it accessible, layered, and participatory. Technology thus becomes a poetic extension of space and artwork, a bridge connecting memory, presence, and imagination.”
(source: mantinea.institute/ros_manifesto)

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The impact of the activities carried out within the research leading to the realization of D1.3 is further documented in the peer-reviewed publication:

Fortuna, P., Szubielska, M., Dunin-Kozicka, M. (2026). *Everyday usage of digital technologies for aesthetic experience and creativity*. In: *Routledge International Handbook of Wellbeing Arts. Arts and Everyday Aesthetics as Positive Psychology Interventions*. Ed. by Giraldez-Hayes, A., Seligman, M., Burke, J. Routledge.

Within this study, the authors analyse as a case study the exhibitions realised at GALERIA KONKRET AR.T in Florence during the XR Festival (June 2024), demonstrating how CAPHE-derived practices contribute to wellbeing-oriented artistic engagement and digitally mediated cultural participation. This provides independent academic validation of the project’s broader social and cultural impact.

document prepared by: Aleksandra Łukaszewicz