# Osaka ’70, Narrating the Invisible*

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**Abstract**

*Osaka ’70* is a virtual reality project that revives a kinetic pavilion designed by Maurizio Sacripanti for the 1970 Osaka Expo, which was never realized. Coordinated by John Volpato and Valentina Temporin within the T.E.A.M. (Time Enhanced Architectural Modeling) research project, *Osaka ’70* allows viewers to experience this visionary architecture, which integrates time and movement as core design elements. The VR experience, enriched with a virtual guide, fosters social interaction and honours Sacripanti’s interdisciplinary approach and dynamic vision. Showcasing immersive virtual heritage, *Osaka ’70* exemplifies how digital tools can reinterpret cultural artifacts and deepen our engagement with the architectural heritage.

*Keywords:* Digital Architecture; Virtual Reality; Maurizio Sacripanti, Osaka ’70

**Abstract**

*Osaka ’70* è un progetto in realtà virtuale che rievoca un padiglione cinetico progettato da Maurizio Sacripanti per l’Expo di Osaka del 1970, mai realizzato. Coordinato da John Volpato e Valentina Temporin nell’ambito del progetto di ricerca T.E.A.M. (Time Enhanced Architectural Modeling), *Osaka ’70* consente ai visitatori di esplorare questa architettura visionaria, che integra tempo e movimento come elementi essenziali del design. L’esperienza VR, arricchita da una guida virtuale, promuove l’interazione sociale e rende omaggio all’approccio interdisciplinare e alla visione dinamica di Sacripanti. *Osaka ’70* dimostra come gli strumenti digitali possano reinterpretare il patrimonio culturale e approfondire il nostro rapporto con il patrimonio architettonico.

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*Parole chiave:* Architettura digitale; Realtà virtuale; Maurizio Sacripanti; Osaka '70

## 1.Introduction

*Osaka '70* is an immersive virtual reality work that allows exploration of a never realised, extraordinary kinetic architecture, designed by visionary architect Maurizio Sacripanti and his project team. Sacripanti realised his most innovative projects between the 1960s and 1970s, using time as a design material, an architectural tool like any other. Among these unrealised projects is the pavilion that secured second place in the competition to represent Italy at the 1970 Osaka International Expo. In 2020, thanks to the T.E.A.M. (Time Enhanced Architectural Modeling) research project[1], coordinated by John Volpato and Valentina Temporin, the pavilion was brought back to life. To show the outcome of the scientific project, at a time when the pandemic and resulting restrictions prevented museums and exhibition venues to open, the project coordinators devised a home delivery format. This resulted in an itinerant tour, which also witnessed the emergence of the working methods that characterise Volpato and Temporin's work today: social experiences with several participants interacting within the digital environment and a virtual human guide who accompanies guests on their visit, ensuring respectful narration of the cultural content they are translating for the virtual environment.

The tour got one hundred Italian professionals involved: designers, architects, lecturers and museum directors. This offered numerous opportunities for discussion and the chance to have conversations about technology that is changing the way we see and transmit art and culture.

Osaka '70 is a clear example of how a virtual reality experience, conceived as an immersive digital work, can serve as a powerful tool for the dissemination of cultural heritage, while illustrating the importance of the chosen mode and language of representation in conveying the message in an effective, respectful and engaging manner.

1 T.E.A.M. - Time Enhanced Architectural Modeling was born in 2019 thanks to POP LAB s.r.l.'s winning of the Veneto Region POR FESR 2014-2020 Call for Proposals. The project team members were: Valentina Temporin, project coordinator; John Volpato, project coordinator and design manager; Pio Lorenzo Cocco, computational designer; Andrea D'Angelo, developer; Marco Tieghi, developer; Marta Grossi, communication consultant; Gabriel Pressman, English language consultant; and Luca Trombin, digital production support. *Osaka '70* and the other research products developed within the T.E.A.M. project were released as free software under the MIT licence: https://github.com/TEAM-Poplab/Osaka70.

## 2. Maurizio Sacripanti: The Architect and His Vision

Maurizio Sacripanti (a Roman architect born in 1916, who passed away in 1996) was always drawn to the conquest of the fourth dimension inspired and influenced by the avant-garde, but also by abstract art, kinetic art and programmed art, movements whose artists and leaders he personally knew and with whom he had an ongoing exchange of ideas and experiences. In designing the Osaka Pavilion, Sacripanti was able to materialise his lifelong pursuits, surpassing the architectural precedents of his predecessors.

As he himself wrote, "the architect's task is to take possession of technology and transform it into language," (Neri, Thermes 1998, 111) foreseeing the themes that would later develop in *high-tech* architecture in the 1980s. Franco Purini, dispelling any comparisons of Sacripanti's work with sterile contemporary experimentation, asserts: "Contrary to common belief, he was an architect attentive to functional issues, to the point of considering function itself the crevice through which to trigger the mechanism of invention." (Purini 1998, 18-19) The Osaka pavilion, in Paolo Portoghesi's words, is a Pantheon set in motion[2]. The adaptable arrangement of the elements that make up architectural space is not unique to the Osaka project alone, but a recurring theme in Sacripanti's work, which explored dynamic possibility in structures as early as the early 1960s. Examples include the design for the Peugeot Skyscraper in Buenos Aires, consisting of movable panels for the façade cladding, and the Teatro Lirico in Cagliari, inspired by John Cage's ballet performances [3] , where the floor and ceiling configurations define the space through variable arrangements. Fascinated by structural movement possibilities, Sacripanti also tried his hand at bizarre experiments in interior design such as a propulsion wardrobe, able to move around the different rooms of the house according to the actual needs of the user (Purini 2021).

In Sacripanti's work, alongside the pursuit of kinetics in architecture, there is an equally innovative feature: his interdisciplinary approach to each design challenge. He was a master "conductor," able to harness the talents of different professionals, such as physicists, engineers, artists, writers, designers. Even in his design lectures at La Sapienza University in Rome, he engaged his favourite artists in a fruitful, cross-curricular exchange with his students. Far from speculative mindsets and a true outsider in the university context, in his

2 From the *lectio magistralis Progettare il mutevole. Maurizio Sacripanti 1916-1996*, given in 2016 by Paolo Portoghesi.

3 "At the last Biennale, a ballet by Cage with sets and costumes by Rauschenberg was being performed. We went there. Upon entering, we were greeted by eclectic, mixed, pensive and remixed music. It was a new performance: no longer a scene with fixed objects, but a 'non-stage' organised with mobile elements and a language derived solely from the modularity of moving planes, painted dancers' bodies, material images, and tapis-roulants," Maurizio Sacripanti quoted in Giancotti, Pedio, 2000,18.

studio-workshop brimming with stimuli, inventions and visions of the future, Sacripanti's projects thrived on unpredictability, the latter understood as the impossibility of encapsulating the entirety of architecture in a single frame, due to the ever-changing nature of time and humanity. It is impossible to capture in a single frame the numerous configurations especially of his early works; perhaps the only way to grasp their essence is to walk through them and experience them. That is why we did not settle for digitally reconstructing the form and mechanics of the Osaka pavilion in detail; instead, we went so far as to create a virtual reality experience in order to immerse ourselves in it, finally becoming spectators of a dynamic and ever-changing architectural landscape.

## 3. The Osaka Pavilion Competition

The pavilion's design was submitted to a 1968 ideas competition to select Italy's representative building at the 1970 International Exhibition in Osaka, Japan[4].

In the project's accompanying report, Sacripanti and his team emphasise how International Exhibitions always serve as experimental platforms. Referencing pavilions by Ludwig Mies van der Rohe in Barcelona in 1929 and by Alvar Aalto in New York in 1939, they advocate for unprejudiced inventiveness that inspires future directions. Sacripanti points out how these pavilions were able to convey intrinsically new ways of using space and, between the lines, one can also read his intolerance for certain undefined aspects in the competition brief, such as the absence of specific exhibition content guidelines, on which he comments: "The call for tenders focuses merely on the shell, neglecting the contents to be exhibited: thereby programmatically severing the relationship between signifier and signified." (Neri, Thermes 1998, 110) Sacripanti's solution, then, is that architecture itself implicitly encompasses its contents: "that is to say, architecture would be entrusted with the very task of promoting and defining them." (Neri, Thermes 1998, 110) To him, kinetic space therefore also takes on a political role, as it is intended to symbolise a nation that, amidst a thousand difficulties, is dynamic and constantly in motion. This then becomes the aim of the project: identifying a fundamentally contemporary way of experiencing architecture and using time as an incisive parameter. More precisely, in Sacripanti's words, "the project proposition is simply to use time as an incisive parameter, one that can be tangibly manipulated, as an architectural medium on a par with others on a technical level. By doing this, navigating through a constructed space becomes navigating through a combinatorial bundle of constructed spaces, each novel in dimensional values but always tightly bound within the project's framework: the fourth dimension availing itself of the other three." (Sacripanti 1969, 2).

4 For the competition for the Italian pavilion at the 1970 International Exhibition in Osaka, the project team consisted of: arch. Maurizio Sacripanti; arch. Andrea Nonis; engineer Maurizio Dècina, automatisms; engineer Giulio Perucchini, structures. Contributors: Achille Perilli, Renato Pedio, arch. Sandro Latini, arch. Giancarlo Leoncilli.

The notion of kinetic space was therefore, in Sacripanti's view, an unrestricted and technologically viable domain, waiting to be explored through experimental and iconic realisations.

An additional, important consideration underlying the pavilion's dynamic attributes was understanding the "perceptual parameters inherent to a mutable space." (Sacripanti 1969, 2) Sacripanti draws upon his ties to contemporary art movements (particularly Kinetic and Programmed Art), believing the time had come to integrate its principles into architecture.

The design proposal stands as a masterful synthesis of form and concept. The symmetrical, mirrored, and inverted composition of the pavilion, features two sets of seven blades, which comprise the building blocks and units of measurement of the dynamic space, – a series of large vertical rings generated by two progressively larger, eccentric circumferences, oscillating on pivots via a pneumatic system. Inside the blades are two curved suspended exhibition planes, with an elastic membrane (dubbed the mantle) between them, featuring a contribution by abstractionist painter Achille Perilli. The mantle serves as a cover for the exhibition galleries, adapting to the movements of the blades and contributing to spatial variations enhanced by natural and artificial lighting. However, in the Osaka design, technology is expressly intended as a means, not an end; it serves to animate the structure. The oscillation of the fourteen blades combined with the mantle's flexibility was meant to mimic the breathing in and out of an animate being, resulting in an architecture that resembles a living creature rather than a machine. In Sacripanti's words, "an architecture cannot resemble a piston, or a connecting rod, generating a cyclical movement: a kinetic architecture should become a living thing." (Sacripanti 1969, 2)

The movement of each blade, designed with young engineer Maurizio Dècina, was independent from the other axes, with an unpredictable combinatorial motion, so that the entire system would not repeat the same configuration throughout the Osaka 1970 Exhibition, providing infinite spatial and perceptual changes through controlled randomness. Remarkably advanced for its time, this complexity was to be managed by an Olivetti Elea 9003 electronic computer[5]. The report outlines how blade movements could also adapt to the audience's movements, through motion sensors – a prescient notion of interaction between space, technology and users, a theme that was still foreign to architectural design at the time. The pavilion's generative power thus lies in the visitor's experiential interaction, where internal dynamics manifest externally in the structure's physical form. The blade movements are an invitation, a call to explore the space in the first-person.

Despite its ground-breaking technological and architectural features, Sacripanti's design did not win the competition. The winning project was

5 The Elea 9003 (Machine 1T) is one of the ultra-high-performance mainframe calculator models developed by Olivetti as part of the Olivetti Elea family. Conceived, designed and developed between 1957 and 1959.

realised by Studio Valle, in collaboration with Sergio Musmeci, who was responsible for the structural design.

## 4. The Rebirth of The Pavilion in Digital Form: The Three-Dimensional Model and The Experience for Virtual Reality

*Osaka '70*, a case-study of the T.E.A.M. research project, presented a unique opportunity to explore methods and language suitable for digitally representing an unrealized architectural space. The project unfolded in two phases: scientific research and construction of the pavilion's three-dimensional model from competition documentation in the first phase; and creation of an immersive virtual reality experience and search for a language that both transported visitors into the project's vision and honoured the architect's work.

### 4.1. Phase I: The 3D Model

Like archaeologists uncovering a partially known structure, we reconstructed the Osaka Pavilion fifty-three years after its conception. For the digital model's design, we first studied the documentation submitted for the 1968 competition. The documents are kept in the archives of the MAXXI museum and at the Accademia Nazionale di San Luca in Rome[6]. The drawings and technical reports detail both the pavilion's architectural structure and the electro-pneumatic system governing the blade movements. As it was an ideas competition, the documentation revealed limited construction detail, complicating interpretation of some architectural and technological aspects. Conversely, the engineering design for the electro-pneumatic system was exceptionally comprehensive, providing essential data for a thorough technical examination of its feasibility and, in our view, affirming the project's safety for public execution, should it be realised. Given occasional inconsistencies in the architectural drawings and omitted specifications for the materials and characteristics of some components (e.g., the parapets of the various exhibition levels), we made some decisions autonomously. To do this as respectfully as possible to the original project, we integrated our study of the documents with interviews with some of Sacripanti's main collaborators in the design process.

6 The archive of Maurizio Sacripanti is divided into two sections: the first, housed at the Fondazione Museo delle Arti del XXI secolo - MAXXI, Centro archivi architettura, was granted in 2011 on a free loan by Sacripanti's heirs for the MAXXI Architettura collections; the other part of the archive is located at the Accademia Nazionale di San Luca, where it arrived in 1995 at Sacripanti's own request.

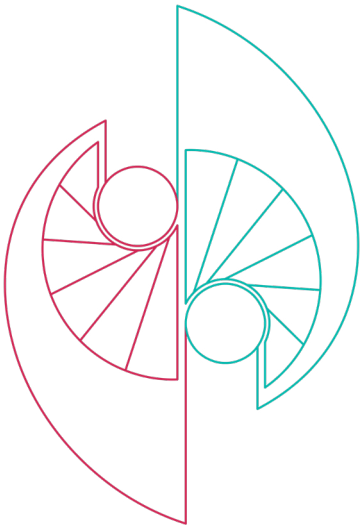

**Figure 1.** Schematic summary of the pavilion developed during the T.E.A.M. research project, courtesy of the studio.

Amid that year's challenging circumstances, that confined us to our studio, we managed to get in touch with key figures for the project. Collaborators, family members and friends[7] gave us invaluable insights both on the pavilion and on Sacripanti as a person and visionary, in a continuous cross-reference between documents and memories. Notably, we would like to mention the initial dialogue with architects Laura Thermes and Franco Purini, with whom we later had the privilege of bringing the experience to life in virtual reality, and the contribution of engineer Maurizio Dècina, project leader of the electro-pneumatic system. The project research was supplemented by the realisation of physical scale models of key architectural elements and construction details, mainly to help us understand the functioning of the pavilion's dynamic elements.

Before starting the reconstruction, we extracted and analysed all available information in the documentation we possessed, developed a framework (Fig. 1) for a geometric synthesis of the structure, and finally delineated a strategy for tackling the task. We continued collecting information, after the first exploratory modelling phase, by contacting Franco Purini, who worked with Sacripanti from 1964 to 1968 and later from 1971 to 1973. While still a student, Purini supplied the drawings for Sacripanti's most important projects of that period, in addition to the Osaka pavilion: the theatre in Cagliari, the hospital in Domodossola, the museum in Padua and the church in Partanna. He is also the author of the ink drawing that became emblematic of the design for the Osaka

7 Special thanks, with affection and esteem, go to architect Carlo Serafini and Sacripanti's son, Andrea.

pavilion itself. The interview with Purini proved to be an extremely valuable contribution, rich in insights not only for gathering information on the pavilion, but also for outlining Sacripanti's personality, understanding his thinking and his approach to his work. Regarding the missing details in the delineation of architectural elements in the documentation, Purini in our conversation provided a comprehensive explanation, of which we report a significant excerpt:

> Due to the experimental nature of the proposal, all the technical solutions necessary to make the project operational were discussed and planned. In fact, this phase would have been addressed if the competition had been won, as the competition announcement, being a competition of ideas for awarding the contract, did not require any particular technological details. The winner would then have prepared the executive details. Even the drawings of Tommaso Valle's project, which won first prize, represented the essential idea of the proposal without a technical description of how it would be realised. Generally, in competitions for ideas, the demands of the call for entries are not detailed and precise, both to allow contestants the possibility of shaping original interpretations of the theme, and to leave the project open to subsequent fine-tuning. It must be noted that the openness of the project to different functional and formal solutions is particularly essential in the case of competitions for an exhibition pavilion. I myself was on the board that chose the Italian Pavilion for the 2010 Shanghai International Expo. The winning project, while remaining tied to its initial formal indication, was reimagined during the implementation phase, especially from a functional point of view. The distribution system, as a matter of fact, cannot be fully defined in the competition proposal since it depends on post-competition planning concerning, for example, what is to be exhibited; the organisations, industries, and artists that will be present; the number of conventions that will be held, the way the public will move, etc. In the case of Shanghai, in the execution phase the winner therefore had to revise and provide a more precise outline of the initial proposal, adapting it to the gradually more detailed requirements. Sacripanti, in competitions like the one in Osaka, focused on providing the decisive elements for conveying the initial idea and indicating mechanisms that we might compare, with a grand but necessary reference, to Leonardo's sketches and their modern reimagining. Although technological invention was a determining factor in the configuration of his projects, he did not go into much technical detail because, moving forward would have required initiating a very long and arduous process of advanced technological design, given the experimental nature of his proposals. Sacripanti, even in the initial stages of design, nevertheless drew on the support of engineers, to ensure that his innovative spatial visions were actually feasible (Purini 2021).

Another practical problem we encountered during the exploration phase was the exact position of the piston, which generated the blades' kinetics. We therefore turned to the system's chief designer, engineer and professor emeritus Maurizio Dècina, who found a scan of the drawing showing the precise

location of the piston. It should be noted that we were not the first to tackle the digital reconstruction of the Osaka Pavilion, but, according to our research, this work had never been undertaken with the aim of making the model explorable in virtual reality. This is significant because, in a virtual reality model, you cannot use tricks to hide any missing information as you can in a static rendering or video. Visitors must be able to explore the pavilion as if they were physically in the space; everything must therefore potentially be present and functioning. To be believable, the work had to be approached from scratch, as if it were to be physically built, starting from the drawings and tackling the "construction."

The various phases of the reconstruction, including the initial strategic and research part, took about four months and were carried out as follows:

- For the 3D modelling, we started with an exploratory model built following the compositional logic of the pavilion to understand how to handle its complexity. Using a trial-and-error strategy, we defined the guidelines for creating successive iterations of the model neatly and efficiently.
- Out of the available digital tools, we chose Rhinoceros[8] as the main software for the model, due to the freedom offered by NURBS[9] , combined with Grasshopper[10] and the Kangaroo physics engine[11] for the initial dynamic simulation. We then used the Blender application[12] to create the groundwork for the animations and for the final optimisation of the mesh (grid defining an object in space) for virtual reality.
- The scenario in VR, the combinatorial motion of the blades, interactions, sound design, and multi-user aspects were programmed in Unity[13] through a combination of C# scripts, VPL nodes[14] and PBR materials[15] .

8 Commercial application software for 3D modelling of sculpted surfaces (*free form*) by Robert McNeel & Associates.

9 NURBS is an acronym that stands for Non-Uniform Rational Basis-Splines.

10 Grasshopper is a visual programming environment and language that runs within the Rhinoceros 3D application. The programme was created by David Rutten at Robert McNeel & Associates.

11 Kangaroo is a *Live Physics* engine for interactive simulation, *form finding*, optimisation and constraint solving developed by Daniel Pikerit. It consists of a software library and a set of components for the Grasshopper software application.

12 Blender is a free, cross-platform modelling, *rigging* (a technique used in so-called '*skeleton animation*' to represent and control a 3D model using a series of interconnected digital bones), animation, video editing, compositing, rendering and texturing of three- and two-dimensional images. It is developed by the Blender Foundation (2002), an independent non-profit organisation.

13 Unity is a cross-platform game engine developed by Unity Technologies, announced and first released in June 2005 during the Apple Worldwide Developers Conference as a Mac game engine.

14 VPL, which stands for Visual Programming Language, is a type of programming language that allows users to create programmes by manipulating programme elements graphically rather than specifying them textually.

15 PBR, an acronym for Physics-Based Rendering, is a *pipeline* (i.e. the logical queue of all instructions for parallel processing of the computer processor) of virtual materials that can simulate any type of physical material to define the representation of a 3D model.

### 4.2. Phase II: The Virtual Reality Experience

Having completed the careful research and reconstruction phase described above, the next challenge was to define the correct language of representation for this architecture in immersive virtual space. We were at this point confronted with the correspondence to an original that never existed, with the limitations of experience, with the connection between reality and virtuality, with the flow of time, so dear to Sacripanti, and lastly with the modalities of fruition of a purely digital architecture (made of bits and not atoms).

The pavilion for Osaka was not built, and the project never reached executive detail; therefore, trying to reproduce a realism that never occurred seemed to us from the outset a sterile and meaningless operation. Our choice was rather to conceive the virtual reality experience as a dream-like journey, imagining that we could enter Sacripanti's vision. *Osaka '70* is thus a dream, composed of essential symbolic elements: glass, metal, cement, the mantle and the light that defines its contours. The digital materials outline an almost sketched (we could perhaps say "16-bit") world that, like a literary text, leaves the viewer's imagination free to complete the vision. In order to facilitate this transference, we chose not to reconstruct the surroundings, i.e. the Expo panorama. The plot of land dedicated to the project became an island suspended over a stretch of water extending to the horizon. Having developed a language consisting of a *palette* of essential symbolic elements we were then able to devote a large part of the performance to another essential aspect: appreciating the pavilion in all its lighting conditions. Thus, we decided to integrate dynamic lighting whereby shadows and reflections are generated in the scene in real time. The sun rises, moves across the sky, and sets several times during the experience; a day on "Osaka Island" lasts about 8 minutes, during which the materials of the architecture are coloured in a dynamic relationship with the environment. The changing pattern of the shadows, together with the continuous movement of the blades and the mantle, contributes to understanding the kinetic aspects of the pavilion.

In this dreamscape, we also felt it was important to suggest a connection to the real event; we therefore incorporated soundtracks originally used by some of the national pavilions bordering the Italian building in 1970. When, in the virtual scenario, you approach the boundaries of the project area and stand outside the pavilion, near the stretch of water, you can hear the distant sound as if carried by the wind.

As for the user experience, we decided from the outset that visitors should enjoy the experience with maximum freedom. Creating a scenario free of "photorealistic" ambitions made it possible to use VR headsets completely independent of a computer, such as the then brand-new Oculus Quest[16] . These tools

16 Oculus Quest is a virtual reality device developed by Oculus, a brand of Facebook Technologies, LLC, released on 21 May 2019. It is a standalone device that can run games

offer the advantage of being fully autonomous; however, their performance is limited compared to the graphics cards of a modern computer. We took full advantage of two other features of this headset. The first is its ability to read the user's hands and use them to interact within virtual reality without the need for the controllers typically used with these devices. The second feature is its ability to accommodate multiple visitors simultaneously within the scenario. *Osaka '70* is therefore a multi-user experience: guests, each with their own headset, enter the scene with an avatar and can communicate and move around as they would in the physical world. What is noteworthy is that it is possible to share the virtual scenario even while being physically in different places.

## 5. The Tour and Virtual Human Guide

One aspect that deserves special attention and that distinguishes this work from many VR experiences is the presence, during the immersive experience, of a human guide who is accompanies the guests in the virtual environment. The guide can be physically in the same exhibition environment or remotely active, even from faraway places.

The idea emerged during the initial stages of the tour (Fig. 2): whereas in filmic virtual works the experiencers' point of view remains consistent for the entire duration of the event, in the case of *Osaka '70* the space is interactive, allowing users to be active participants who can move around freely and explore every detail. However, external help during the virtual experience can be counterproductive, acting as "another" voice that is not part of the immersive experience. Hence, the concept of accompanying visitors as one would in a museum, where the presence of an expert can enrich the understanding of the works. Over time, the role of the virtual guide has gained additional meaning and functionality. During the tour (Fig. 3), we tested the quality of the user experience in a practical manner and improved it based on participants' suggestions. Today, the *Human Virtual Guide* system is used in each of our projects, and we believe it enriches the experience by adding depth to the interaction between virtual environments and real-time narration. This role includes additional functionalities compared to other users: a special toolkit that facilitates operations and helps support guests if needed, without requiring assistance from the outside world.

The tour not only helped us refine many technical details but also provided a unique opportunity to test the experience with a very large audience. In addition to the one hundred official numbered tickets, we presented *Osaka '70*

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and software wirelessly with an Android-based operating system. It supports positional tracking with six degrees of freedom, using internal sensors and a camera *array* at the front of the device rather than external sensors.

at universities and public events and exhibited it at the InnoCult International Festival held at MEET in Milan in spring 2022 and at the Campus OnLive Festival in Turin in 2023. To date, more than five hundred guests have experienced this work, expressing their appreciation for both the experience and the project's originality. The wealth of feedback we have received has allowed us to refine the way we design new experiences, understanding that the work does not begin with putting on the headset and does not end with taking it off. For us, the rituals that come before and after are part of the work itself and complement the attention given to the person and their entry into a new dimension which, if well-designed, can expand artistic and cultural content in ways never experienced before.

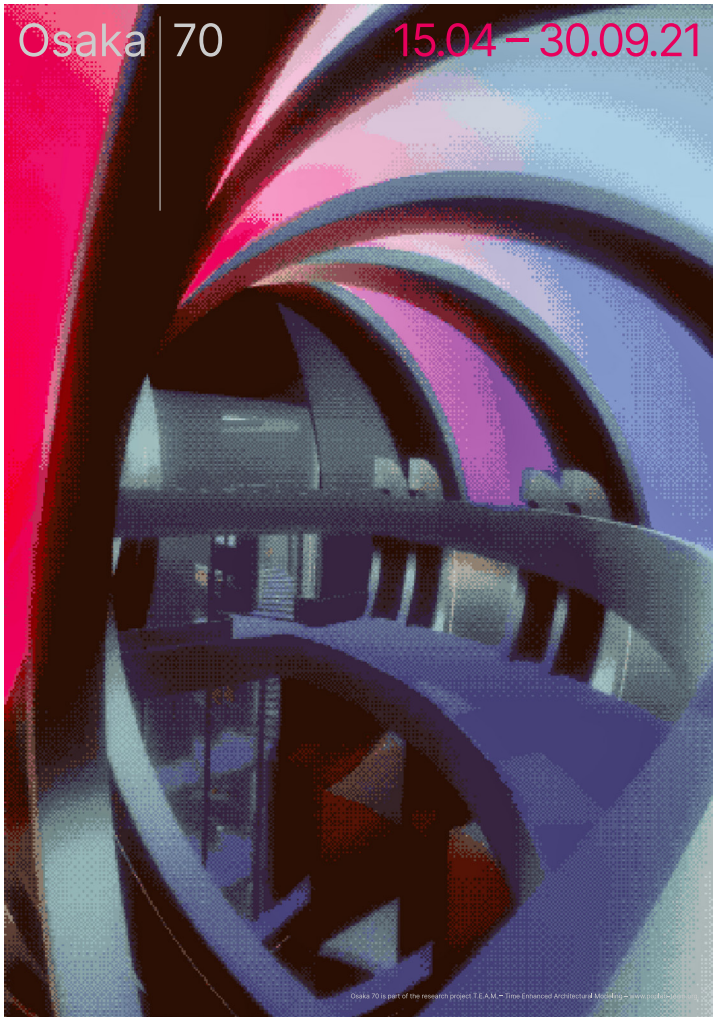


**Figure 2.** Image of one of the posters created for the Osaka '70 tour, courtesy of the studio.


**Figure 3.** Image from the Osaka ‘70 tour featuring Valentina Temporin and John Volpato, courtesy of the studio.

**Figure 4.** Image from the Osaka ‘70 tour featuring Valentina Temporin and John Volpato, courtesy of the studio.

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