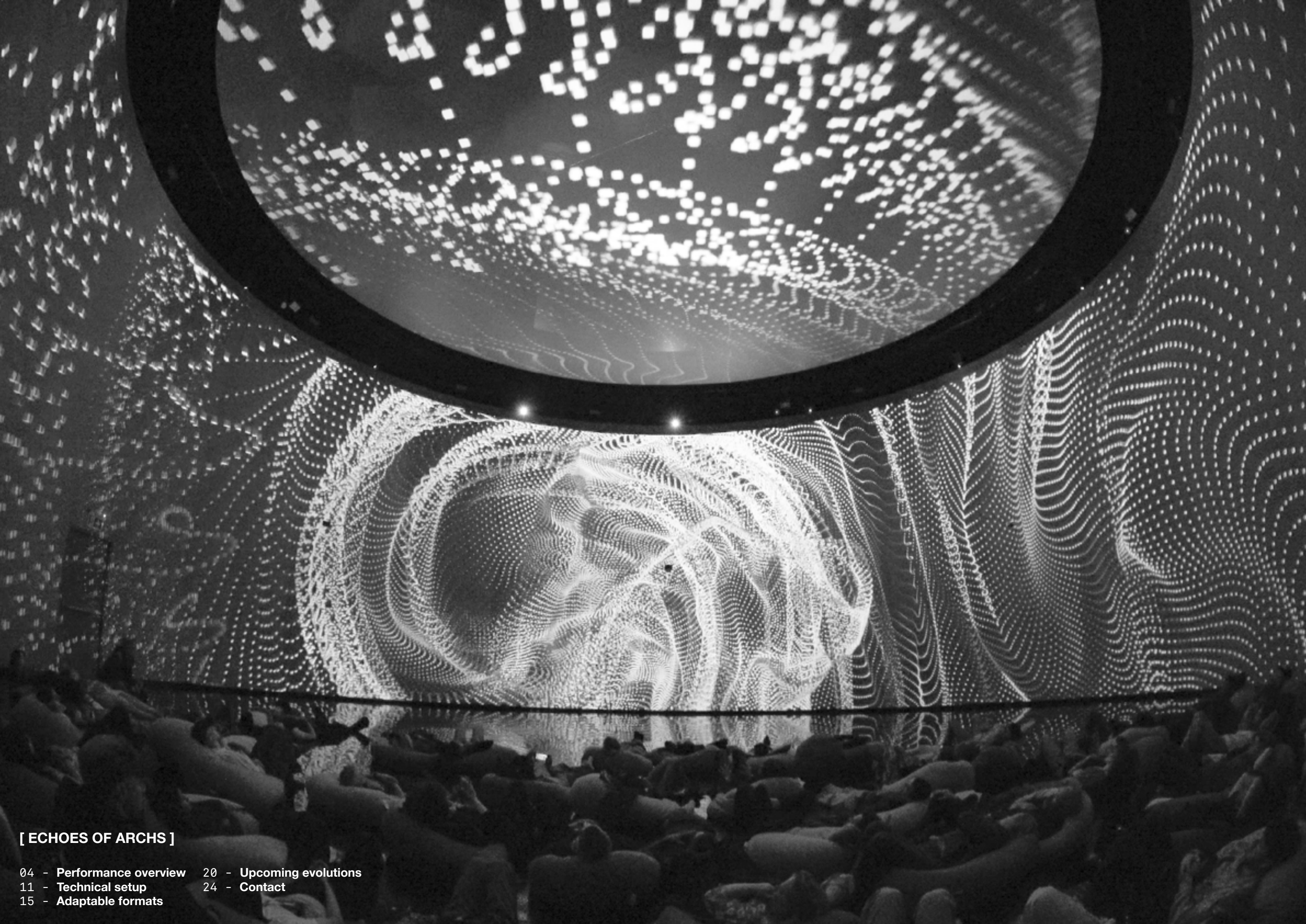


[ECHOES OF ARCHS]

Owelle x Structurals



[ECHOES OF ARCHS]

- 04 - Performance overview
- 11 - Technical setup
- 15 - Adaptable formats
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[PERFORMANCE OVERVIEW]

«Echoes of Archs» invites to embark on a journey through generative universes, sinusoidal waveforms, and pointcloud architectural scans of local environments.

This immersive audiovisual performance is designed to transport the public through a 20 minutes evolution of both digital and physical spaces, merging abstract creation with tangible reality.

SEQUENCE AND EVOLUTION

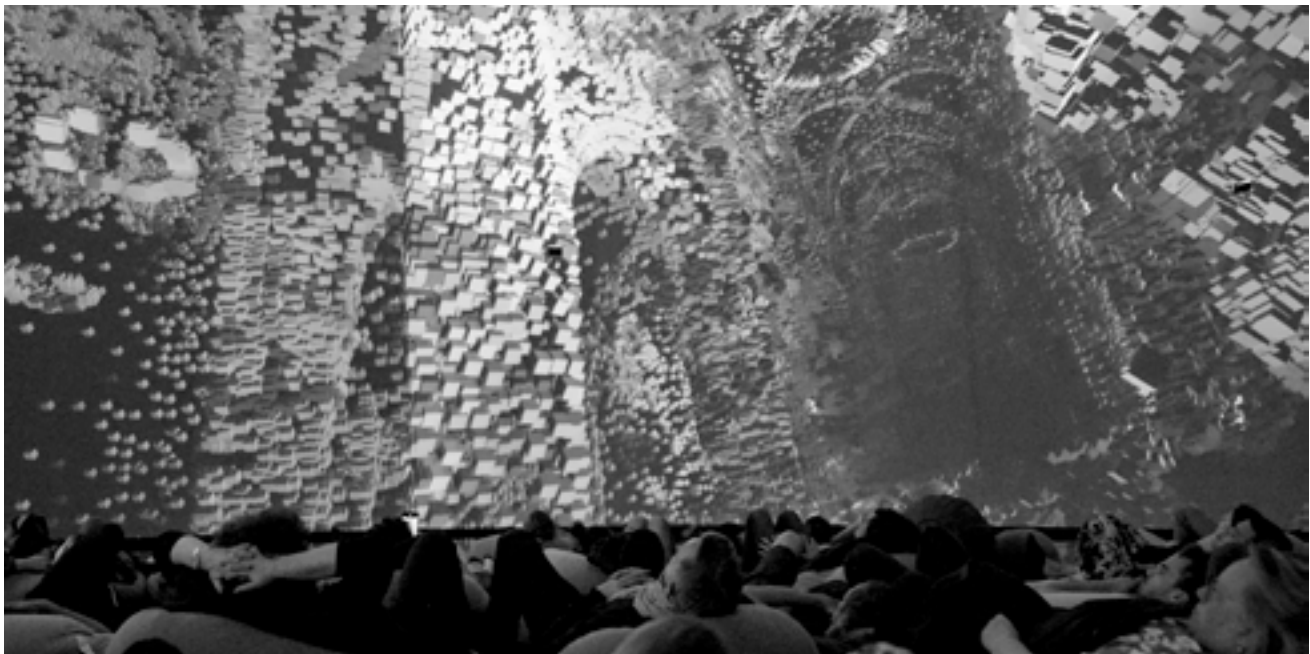
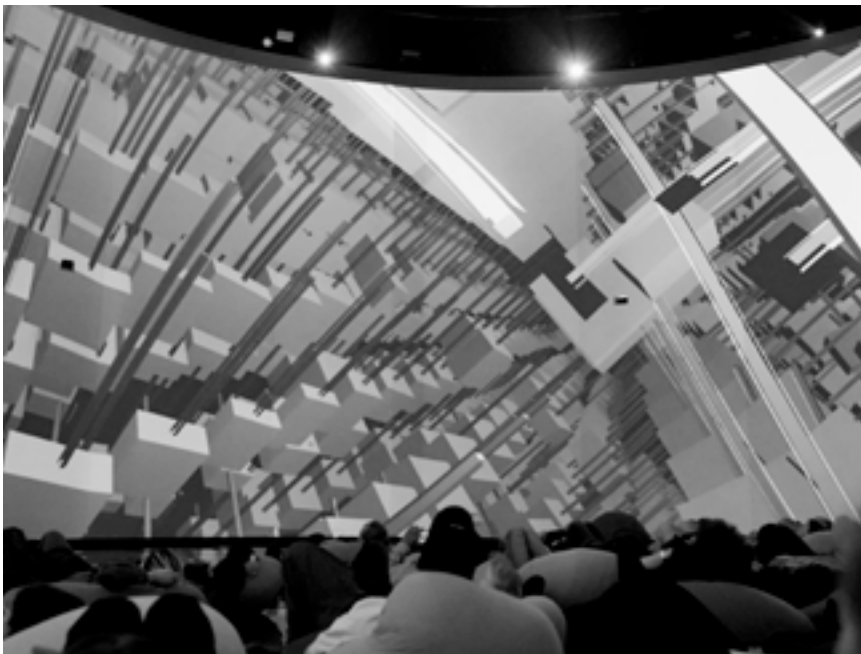
The sequence begins with the construction of intricate procedural spaces built from 3D volumes. These digital architectures are dynamically generated, creating a visually captivating introduction to the performance. As the journey progresses, these synthetic structures gradually dissolve and transform, seamlessly merging into pointcloud 3D scans of spaces and architectures. This evolution creates new states of perception, transforms notions of scales and dimensions.

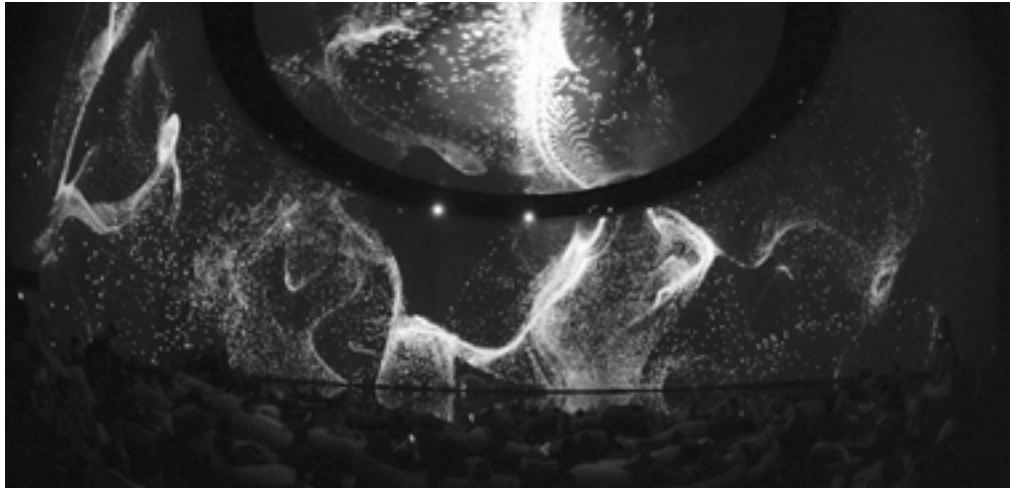
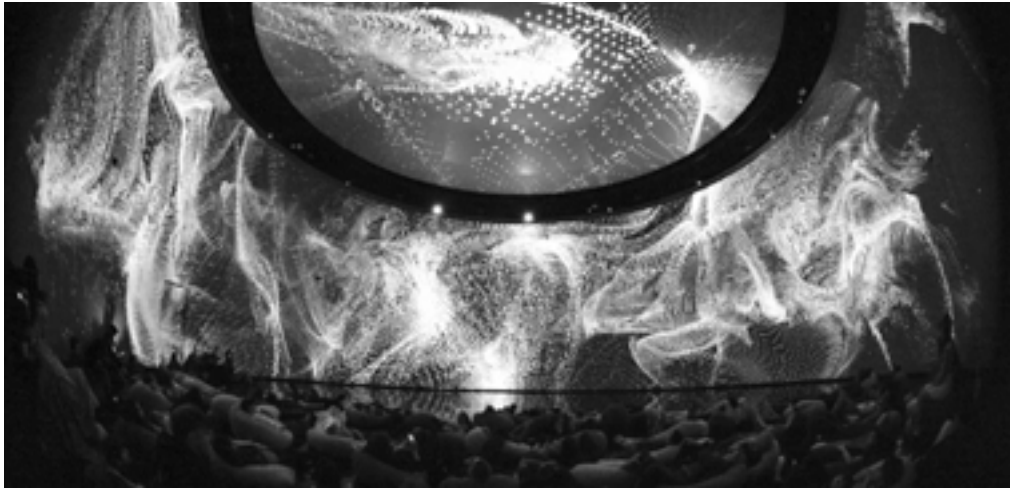
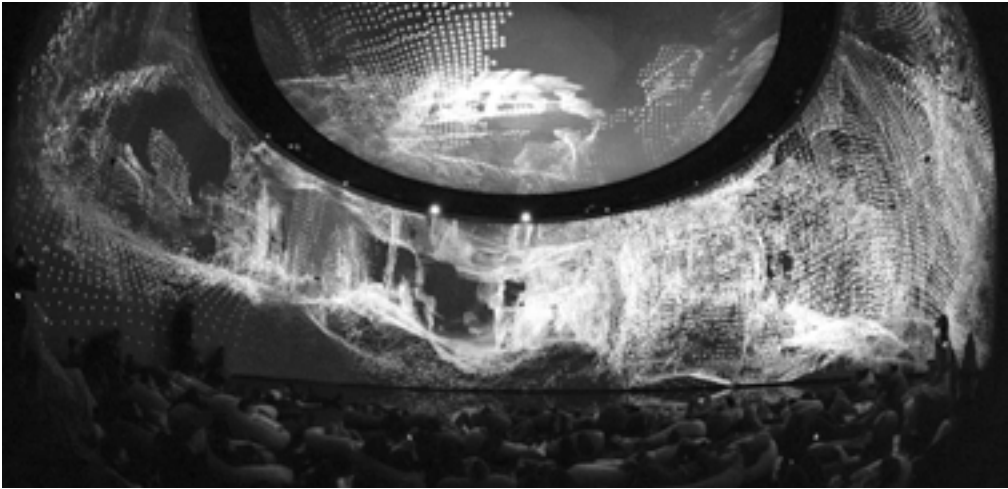
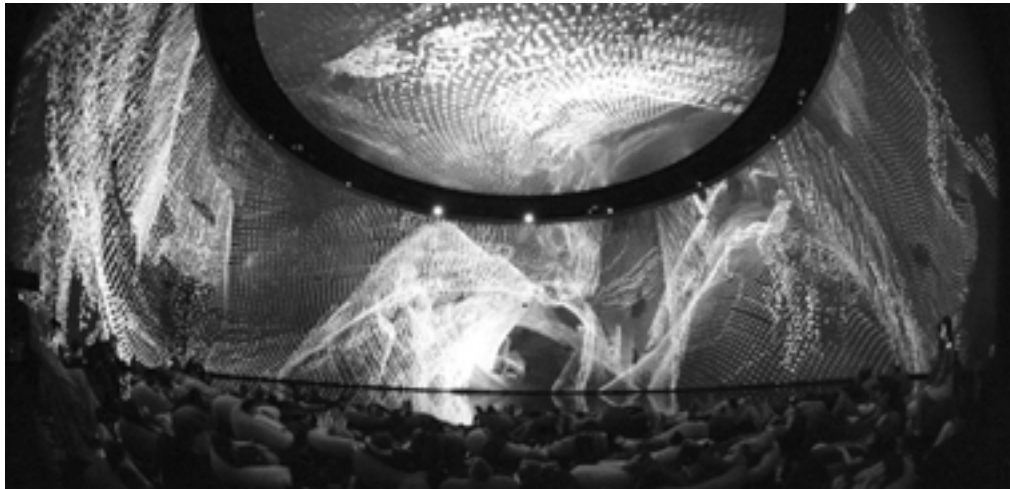
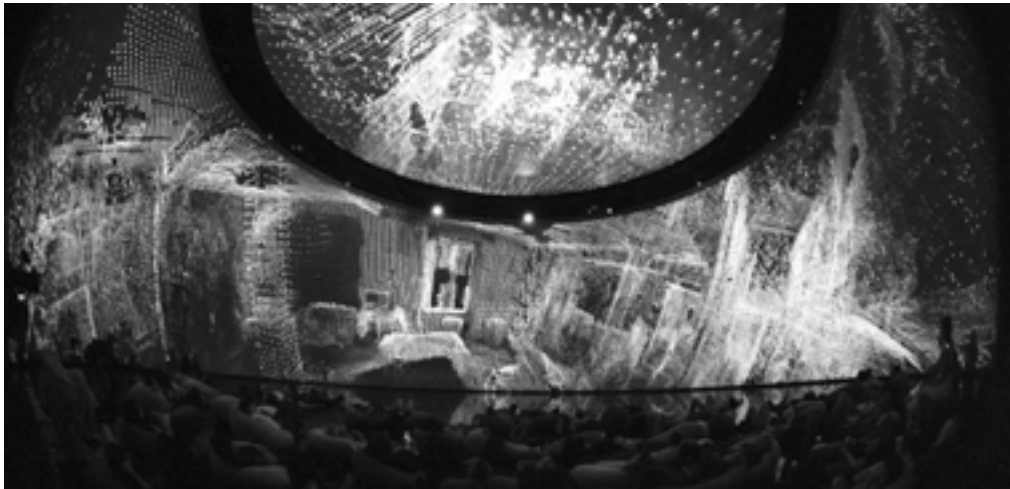
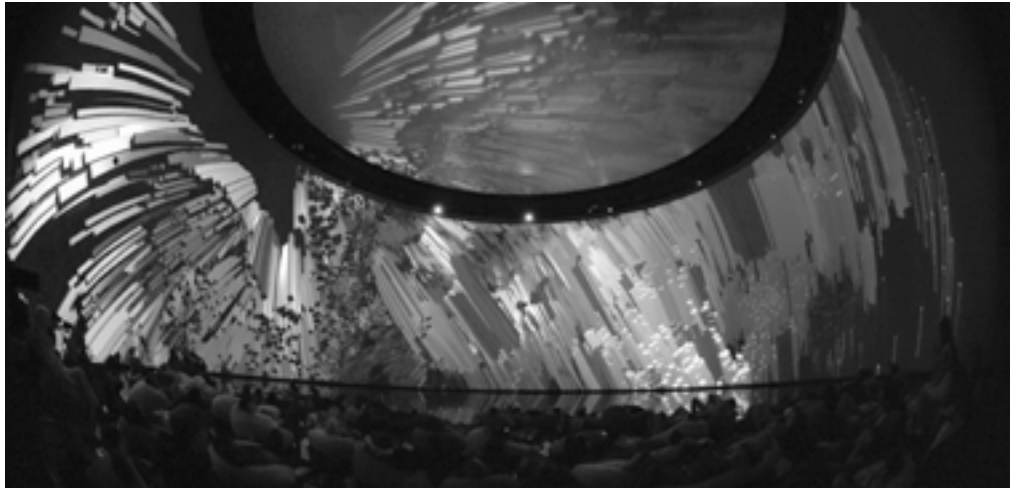
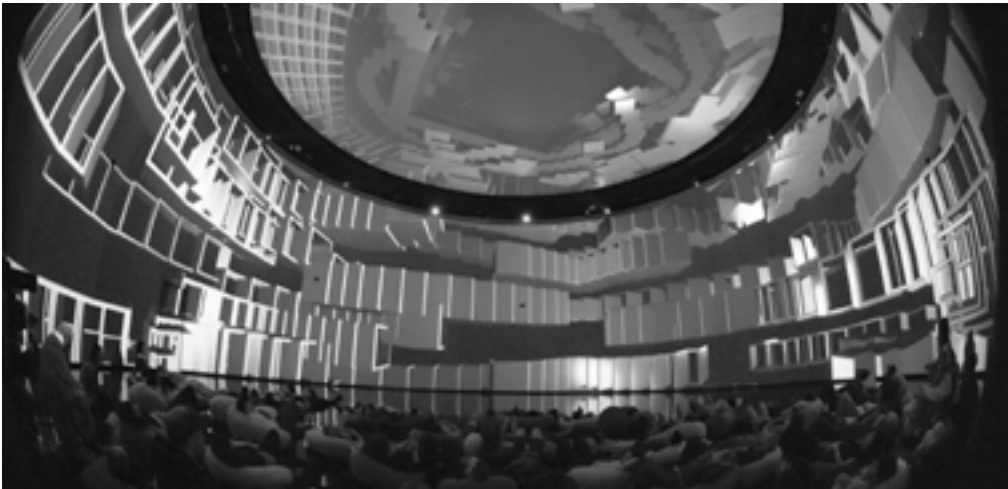
IMMERSIVE EXPERIENCE

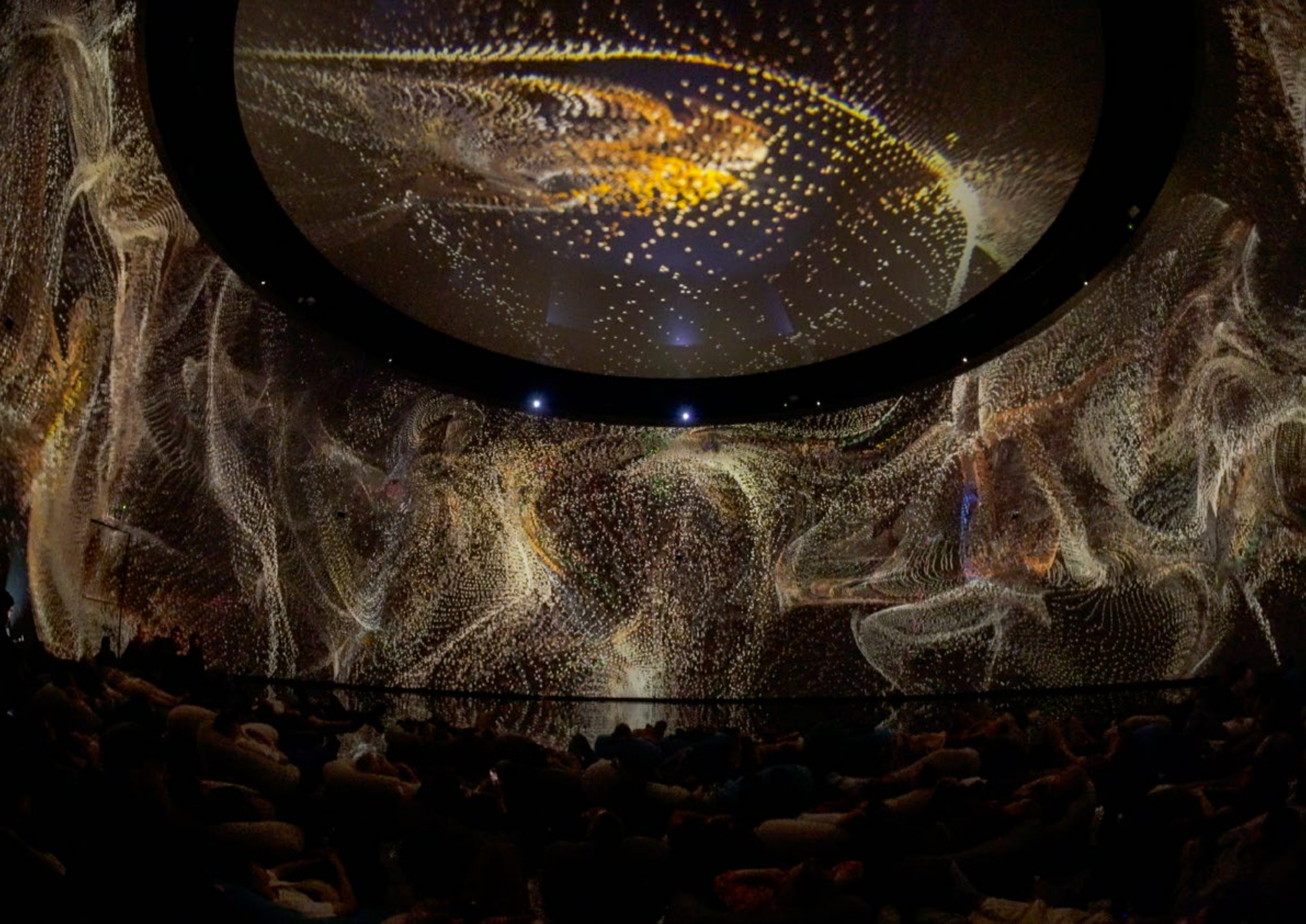
Every sound and visual element is processed in real-time, ensuring a unique and responsive presentation on each venue. The spatialization of both sound and visuals is designed to envelop the audience, creating the feeling of being part of this parallel reality.

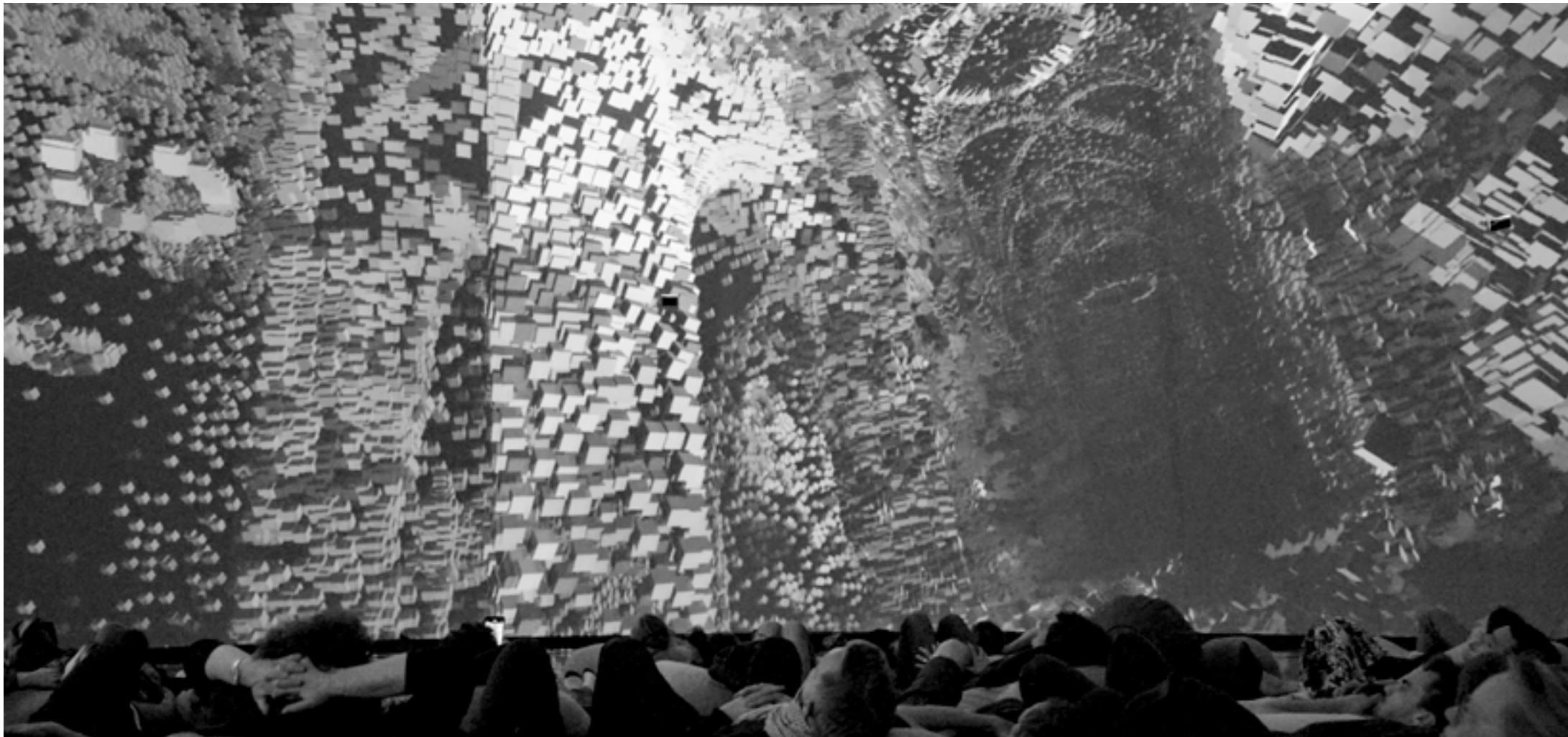
INTERCONNECTED SOUND AND VISUALS

At the core of «Echoes of Archs» is the intricate connection between sound and visuals. The music, composed for this performance and live interpreted, drives the visual transformations, while the visuals influence the auditory experience. Sinusoidal waveforms and complex soundscapes intertwine with the evolving architectural forms, creating a symbiotic relationship that enhances the overall immersion.



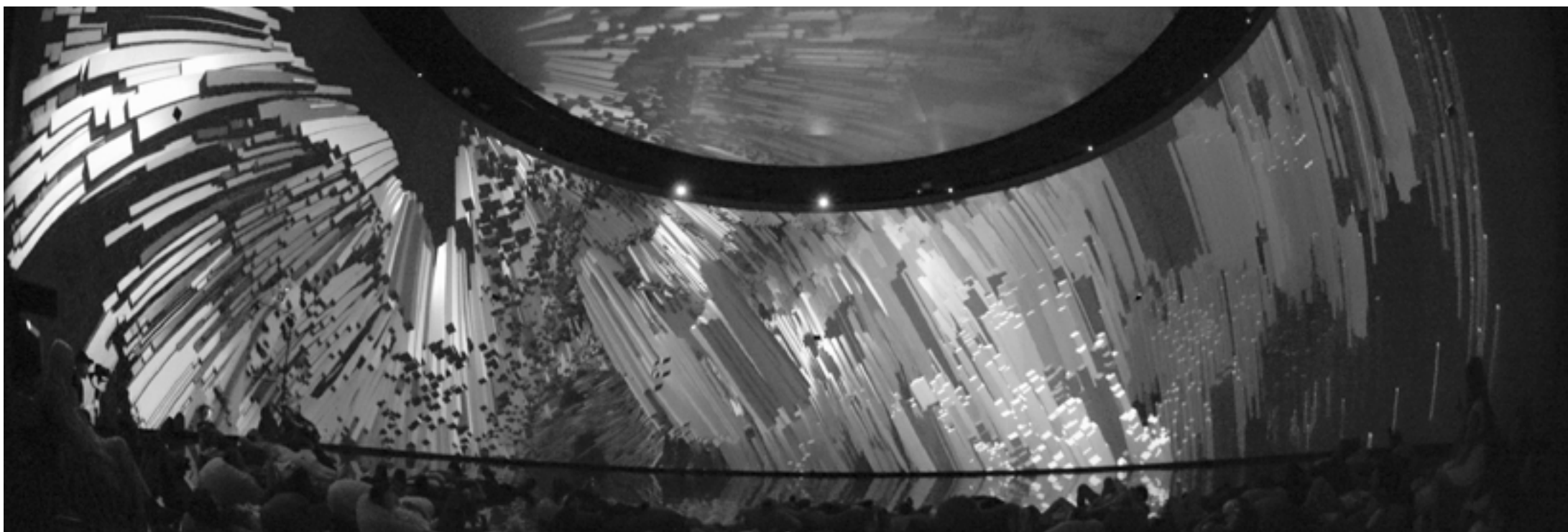






EVOLVING ENVIRONMENT

The crescendo of the performance evolves from an abstract environment, generated randomly, to 3D scans of our surroundings, in which the viewer travels and discovers places from new angles and dimensions. This approach permits us to scan new buildings and locations, incorporating them directly into the show. Each performance transitions from abstraction to reality, offering a unique experience every time



ARCHES - ST. PIERRE CHURCH [GENEVA]

For the first presentation at the Mapping Festival, we chose to create a scan of the St. Pierre Cathedral in Geneva. We took 2,500 photographs of the building and generated a point cloud using photogrammetry. This technique enabled us to create a seamless transition from abstract arches to a flying immersion through the arches and candelabras of the cathedral.

PERCEPTION OF SCALES

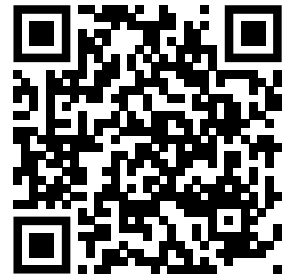
Using LIDAR scanners, we have started to build a library of places, objects, and venues that we can incorporate into the journey. By mixing elements and parts of scans and creating transitions between 3D volumes, we alter the perception of space and the notion of scale, creating a new dimension of perspective. This blending of different environments and scales enriches the performance, offering a continuously evolving and immersive experience.



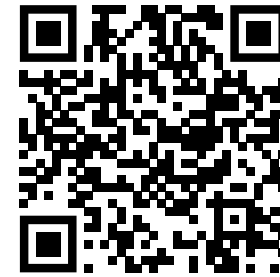
Working in a real-time setup enables us to create a unique show with every performance. This dynamic approach allows us to manipulate the programmed content and shaders as if they were musical instruments, responding to the live energy of the moment.

We believe that this method fosters a more organic and dynamic experience. The spontaneity involved introduces unplanned surprises and imperfections, which bring a more human-like quality to the performance.

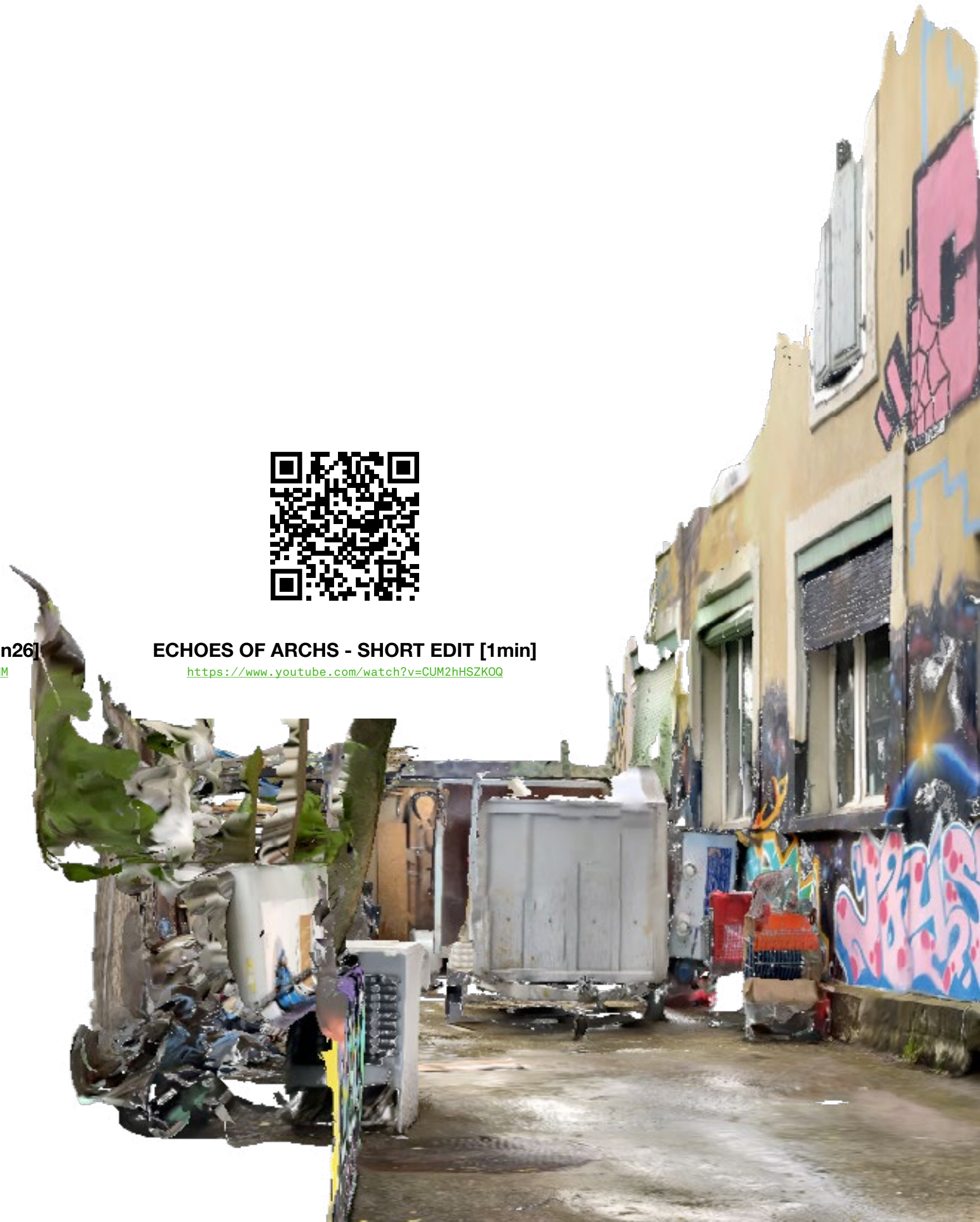
Moreover, this flexible workflow empowers us to tailor each performance to its specific setting. We can modify the spatial dynamics and adapt the visual and auditory elements to suit the unique characteristics of each venue. This adaptability also means that our performances can evolve over time, incorporating new ideas and techniques as we continue to explore the possibilities of real-time creation.



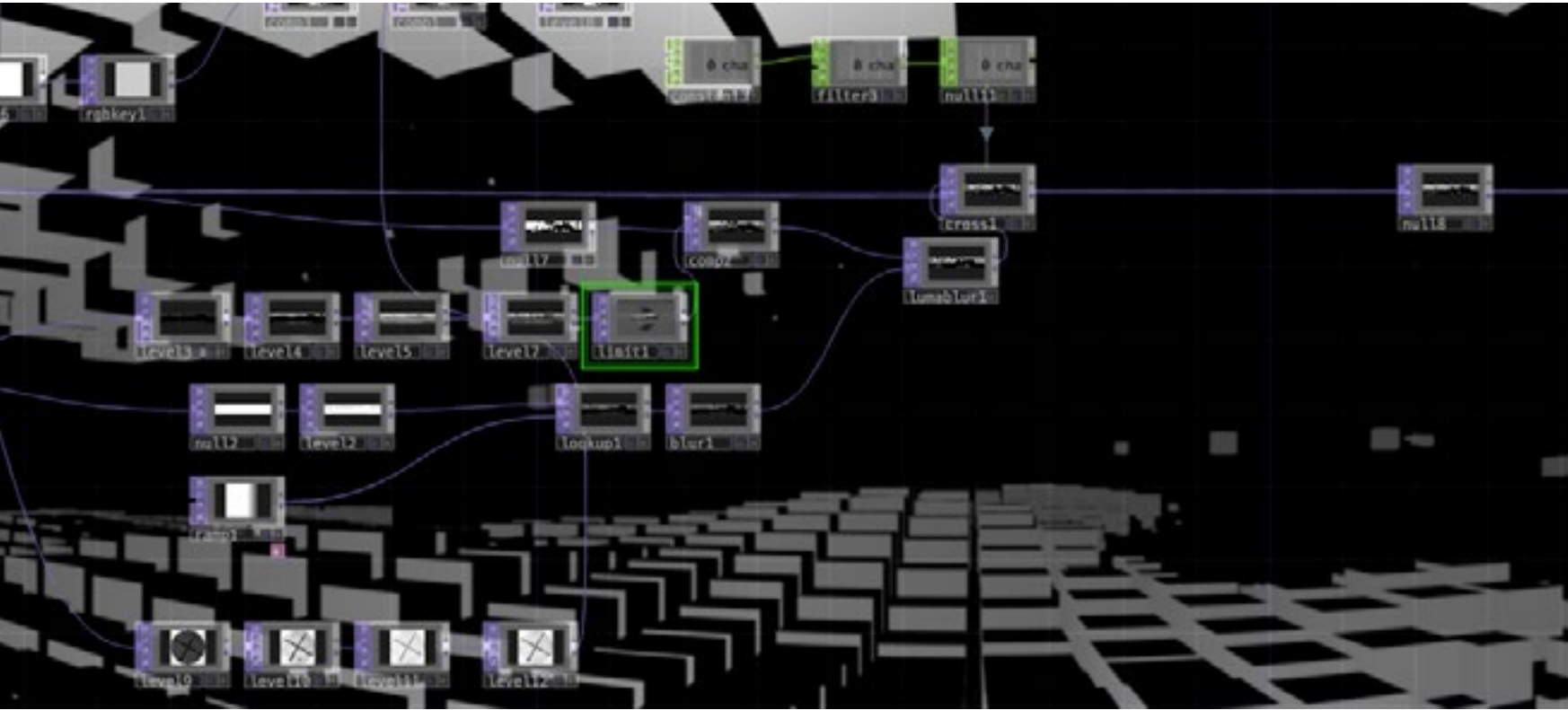
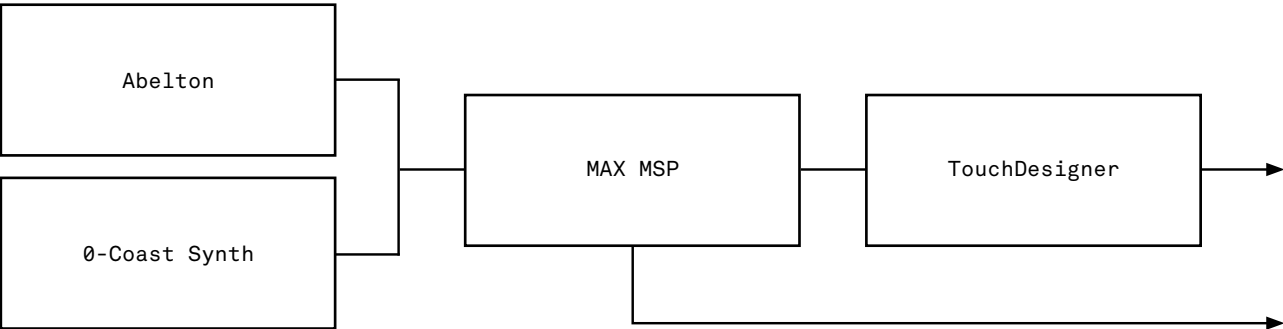
ECHOES OF ARCHS - EXTRACT [3min26]
https://www.youtube.com/watch?v=84_nuG1M_MM



ECHOES OF ARCHS - SHORT EDIT [1min]
<https://www.youtube.com/watch?v=CUM2hHSZK0Q>



[TECHNICAL SETUP]

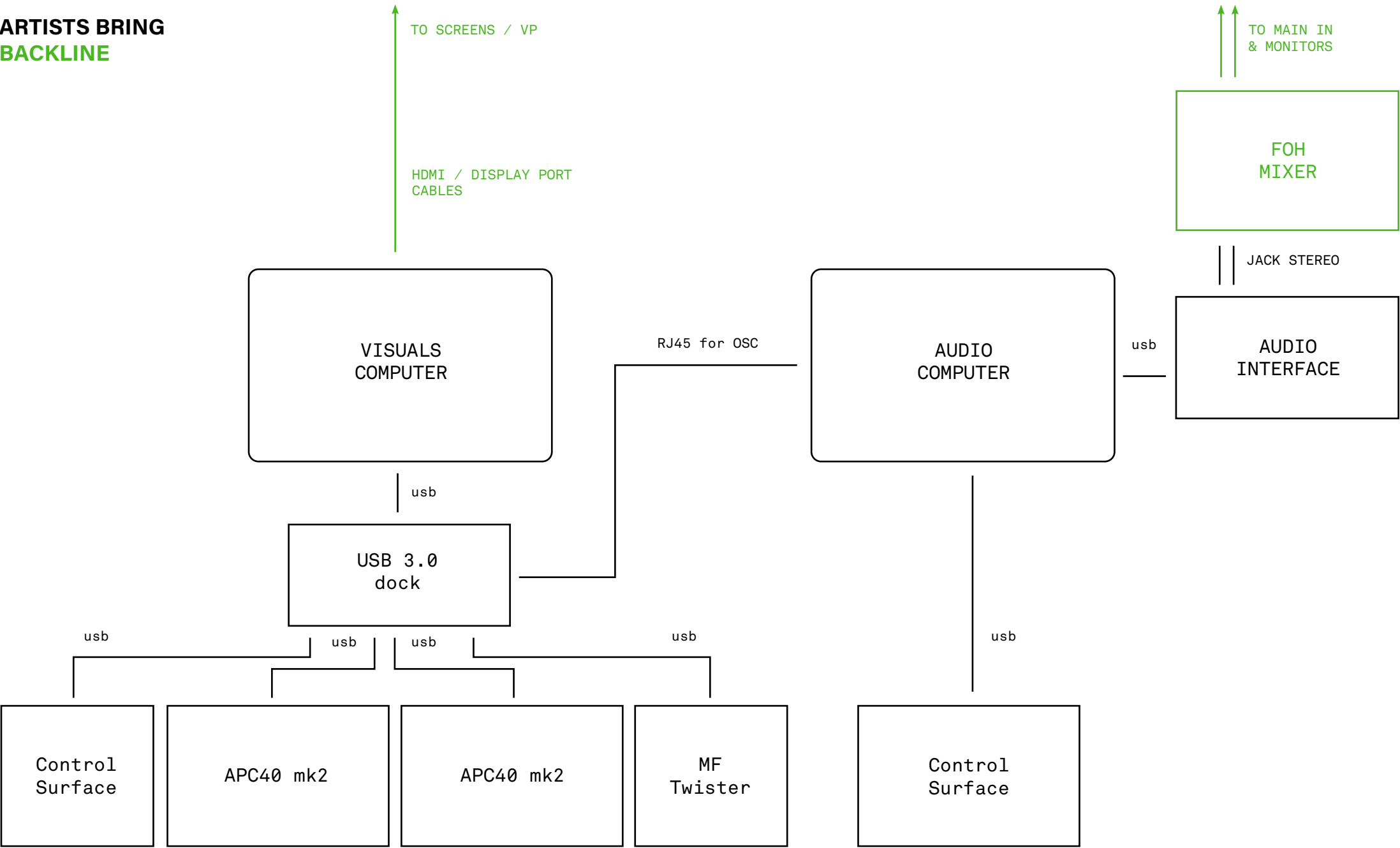


A/V PROGRAMMING

«Echoes of Arches» is built around a custom software system programmed using TouchDesigner, Ableton, and Max MSP, with communication facilitated via the OSC protocol. This node-based process provides immense flexibility, allowing for continuous evolution and variation within the project.

This setup enables us to incorporate noises and random elements, dynamically altering spatialization, visual components, and sound. Additionally, it allows for the control of various elements using MIDI controllers and sound reactivity, enhancing the overall interactivity and responsiveness of the performance.

ARTISTS BRING
BACKLINE



BACKLINE

- Stage Table covered with black curtains [W200cm x D100cm x H100cm]
- 10x Power Socket on table
- 1x lamp if the booth is not adequately lit to see the setup

AUDIO

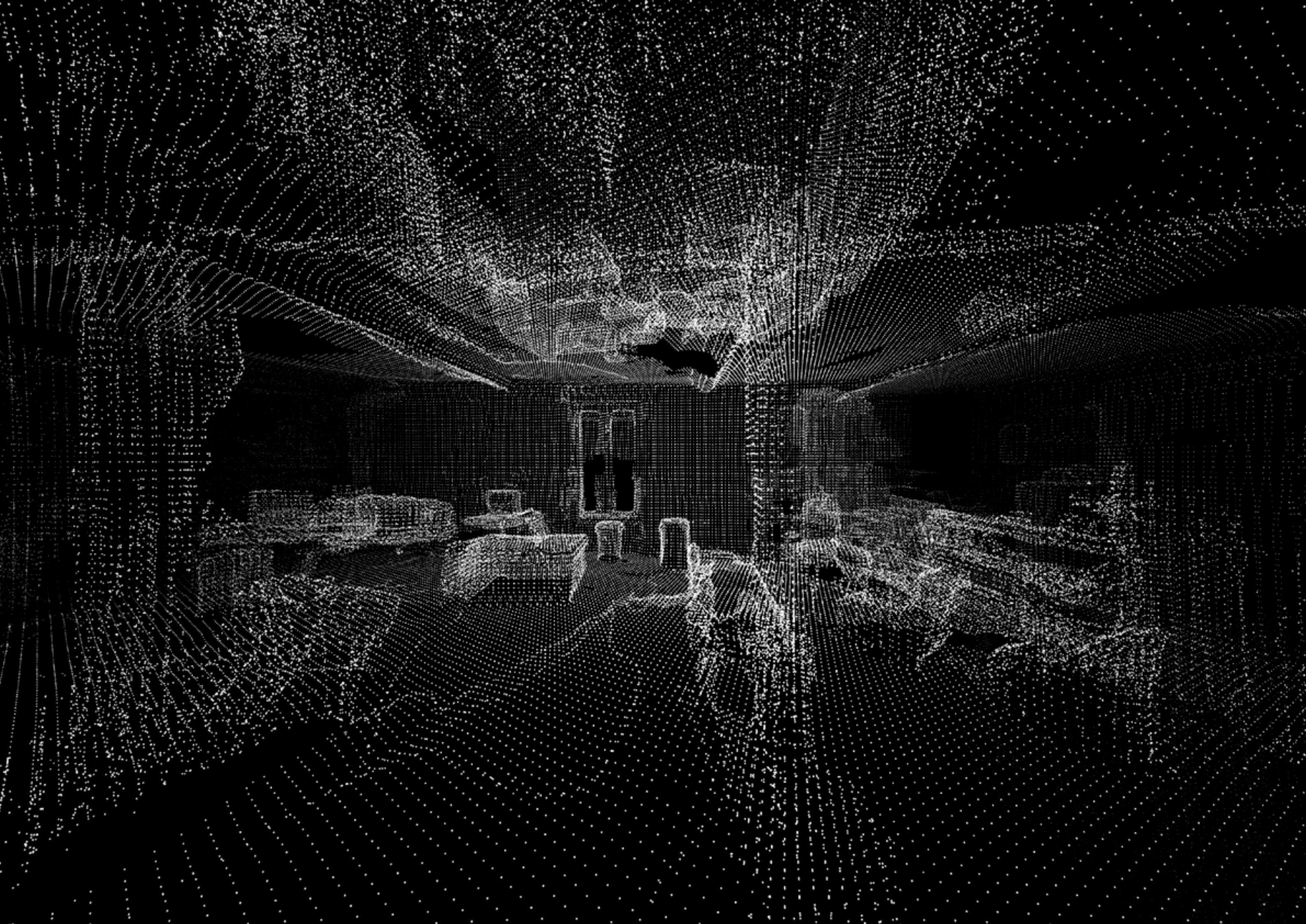
- Stereo high quality monitor speakers placed on the ground
- Stereo high quality FOH sound system with subwoofer

VIDEO

- HDMI connection to the video setup or LED screens

SET UP

- 30min for the installation
- 30min to test the performance
- 30min for adjustments



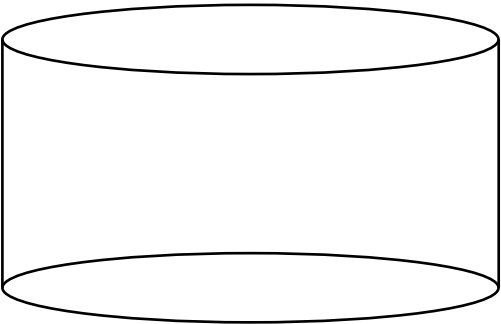
[ADAPTABLE FORMATS]

Our performance is programmed on a procedural system, allowing it to be easily adapted to various screen and audio setups and VR systems.

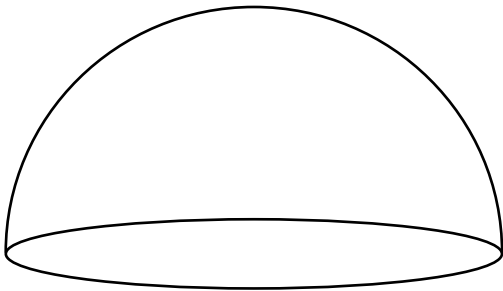
While the project is designed with an immersive approach in mind, it can also be effectively adapted for 2D projections with a stereo sound system.

For live performances, the system supports a maximum resolution of 10,000 x 1,800 pixels [18 million pixels].

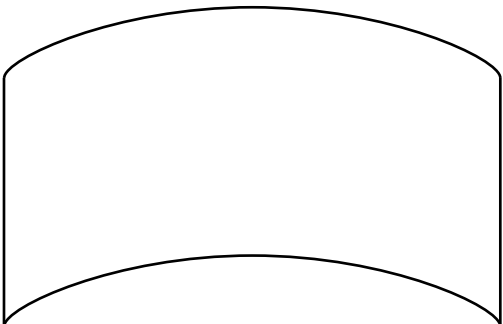
If the setup is not adapted for live performance, exported sequences can be produced for any space [max. 20mio pixels].



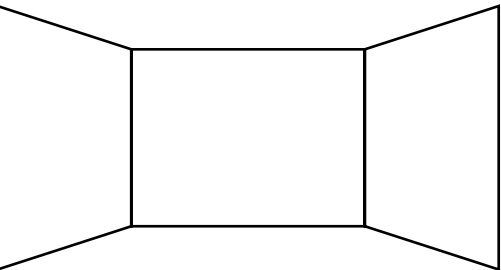
Citerne - 360°



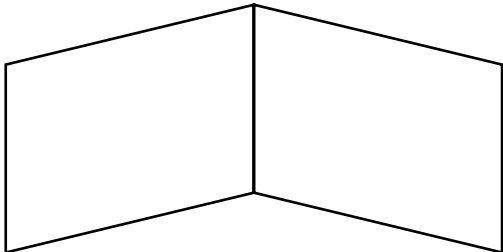
Dome - 360°



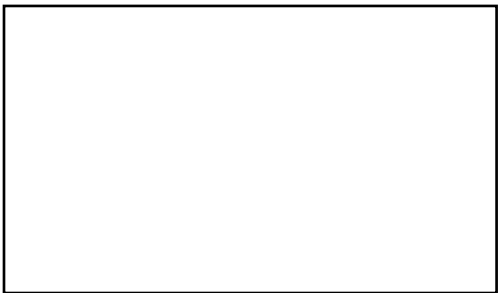
Circular - 180°



Square immersive - 270°



V screens - 180°

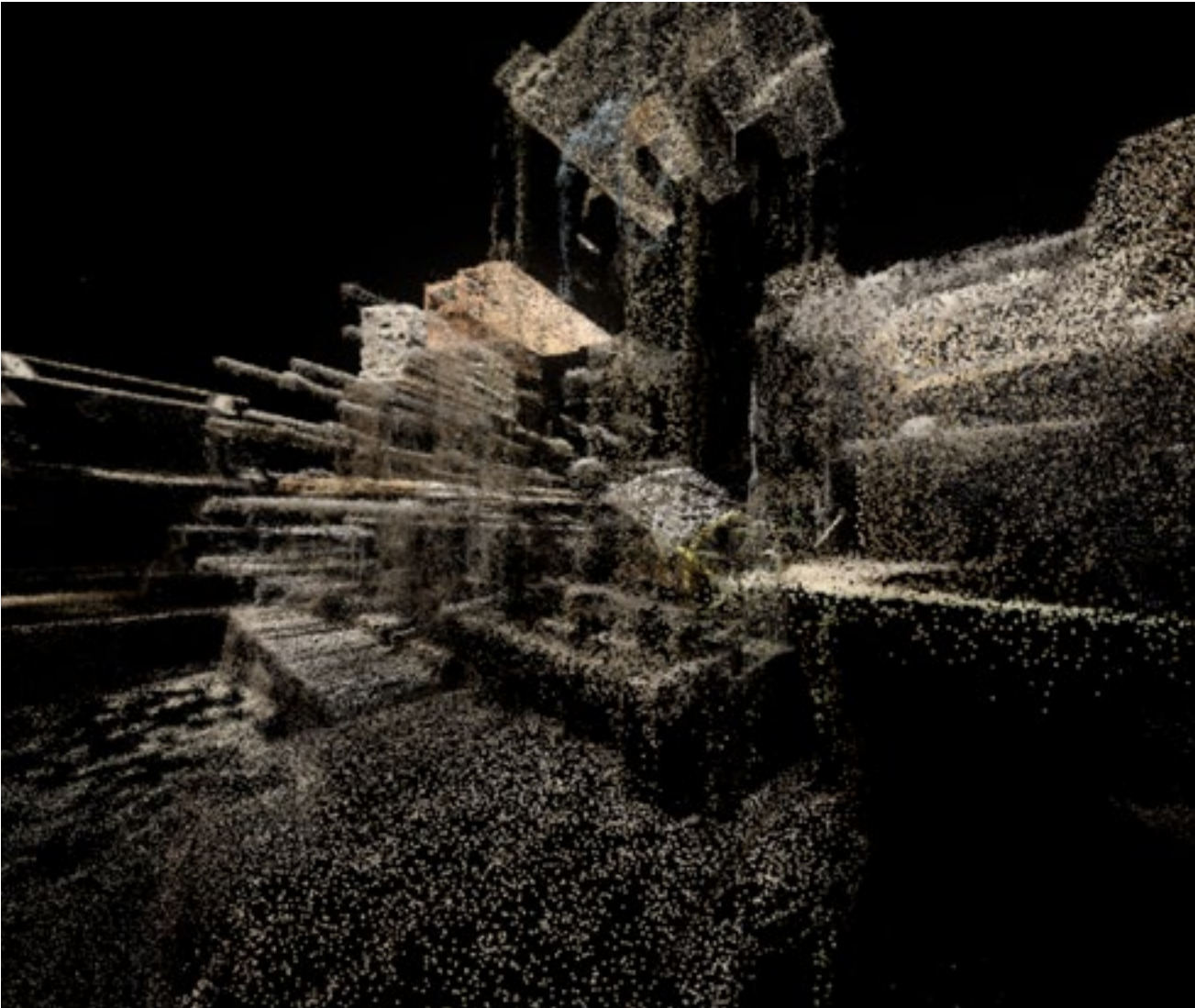
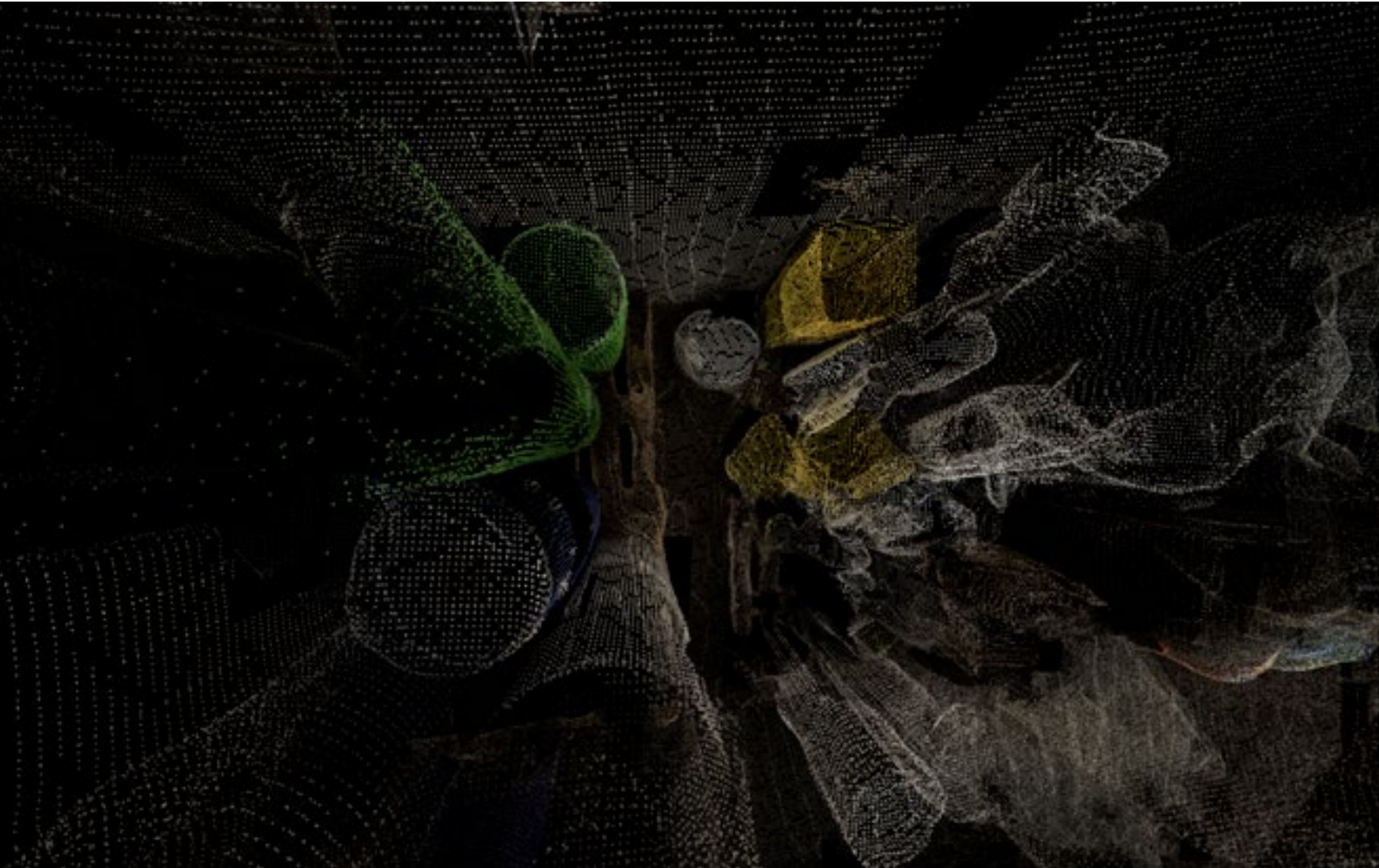


Rectangular - 2D





[UPCOMING EVOLUTIONS]

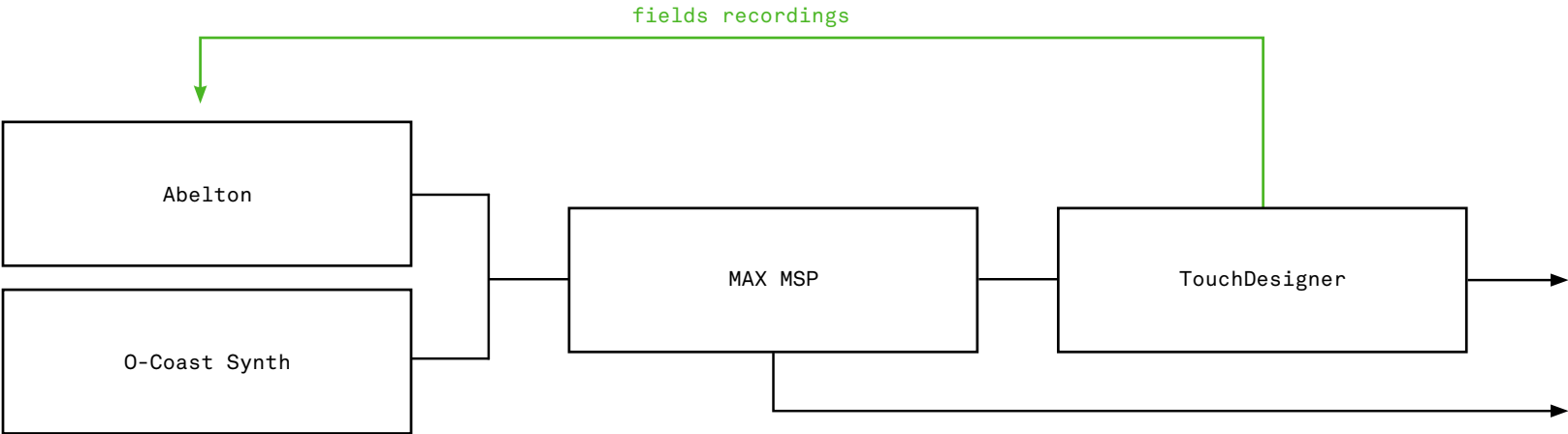


AUDIO TO VISUAL, VISUALS TO AUDIO

One of the things we wish to improve in this project is the link between audio and video in both directions.

As we will scan spaces, the idea is to also record sounds from these places to incorporate them into the work. Those extracts of sound will be placed at the corresponding position in the virtual 3D world, as a sound object. The challenge is to make the moving position in the virtual world correspond to the fixed position of the speaker in the physical world.

This improvement would not only reinforce the immersive aspect of the project, but also create real audiovisual captures of our direct environment - one of the key aspects of the project.

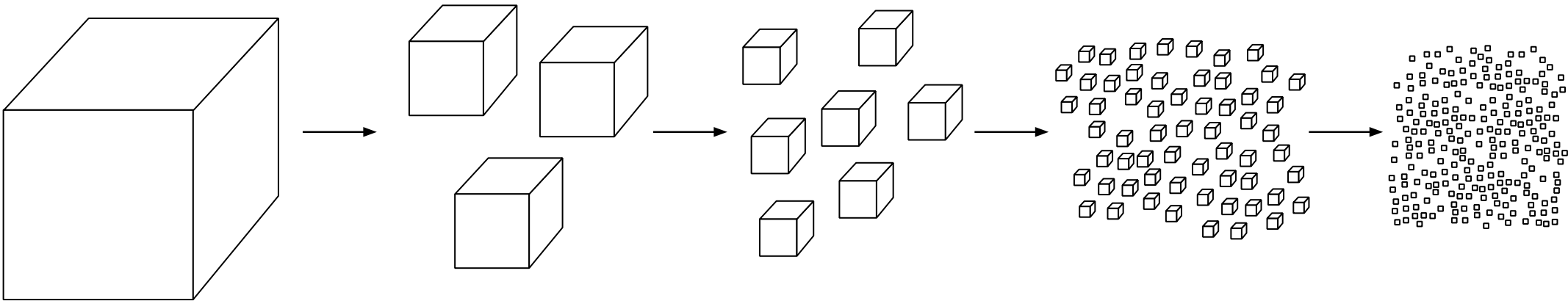


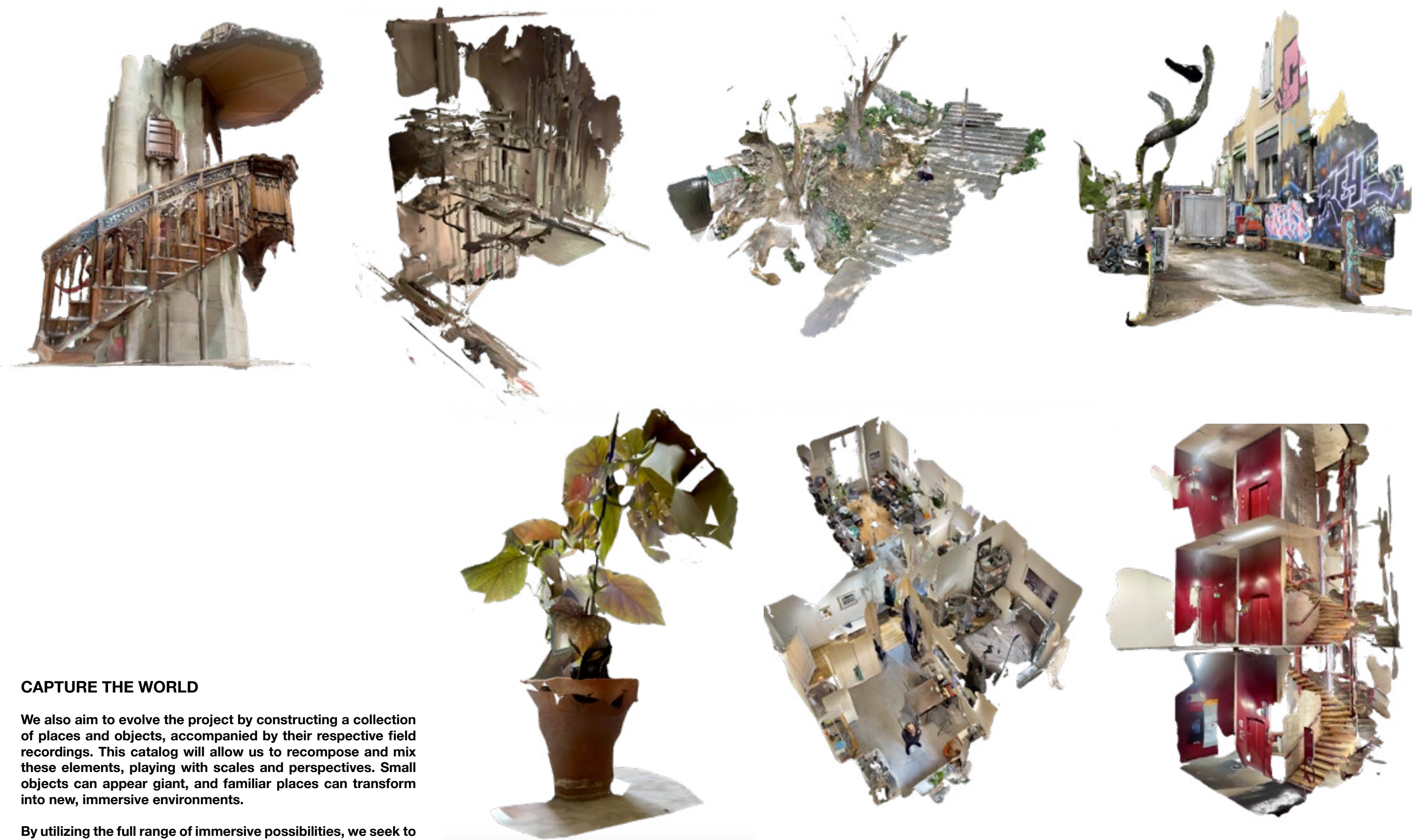


LAST PART - CLOSER TO REALITY

We have successfully programmed a system that allows us to work with high-resolution point clouds, handling up to 18 million points, compared to the previous 800,000. This advancement enables us to create high-quality renders from these detailed point clouds.

In the final part of our performance, we aim to get even closer to reality by scanning high-quality elements and seamlessly recomposing them within the scene. This approach will enhance the crescendo, as shapes become progressively more detailed and lifelike. By incorporating these high-resolution scans, we can create a more realistic and immersive experience, bridging the gap between abstract forms and tangible reality.





CAPTURE THE WORLD

We also aim to evolve the project by constructing a collection of places and objects, accompanied by their respective field recordings. This catalog will allow us to recompose and mix these elements, playing with scales and perspectives. Small objects can appear giant, and familiar places can transform into new, immersive environments.

By utilizing the full range of immersive possibilities, we seek to create novel perceptions and experiences. This evolving catalog of scans and recordings will ensure that each performance is unique, offering a fresh and dynamic base that changes every time the show is presented.



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