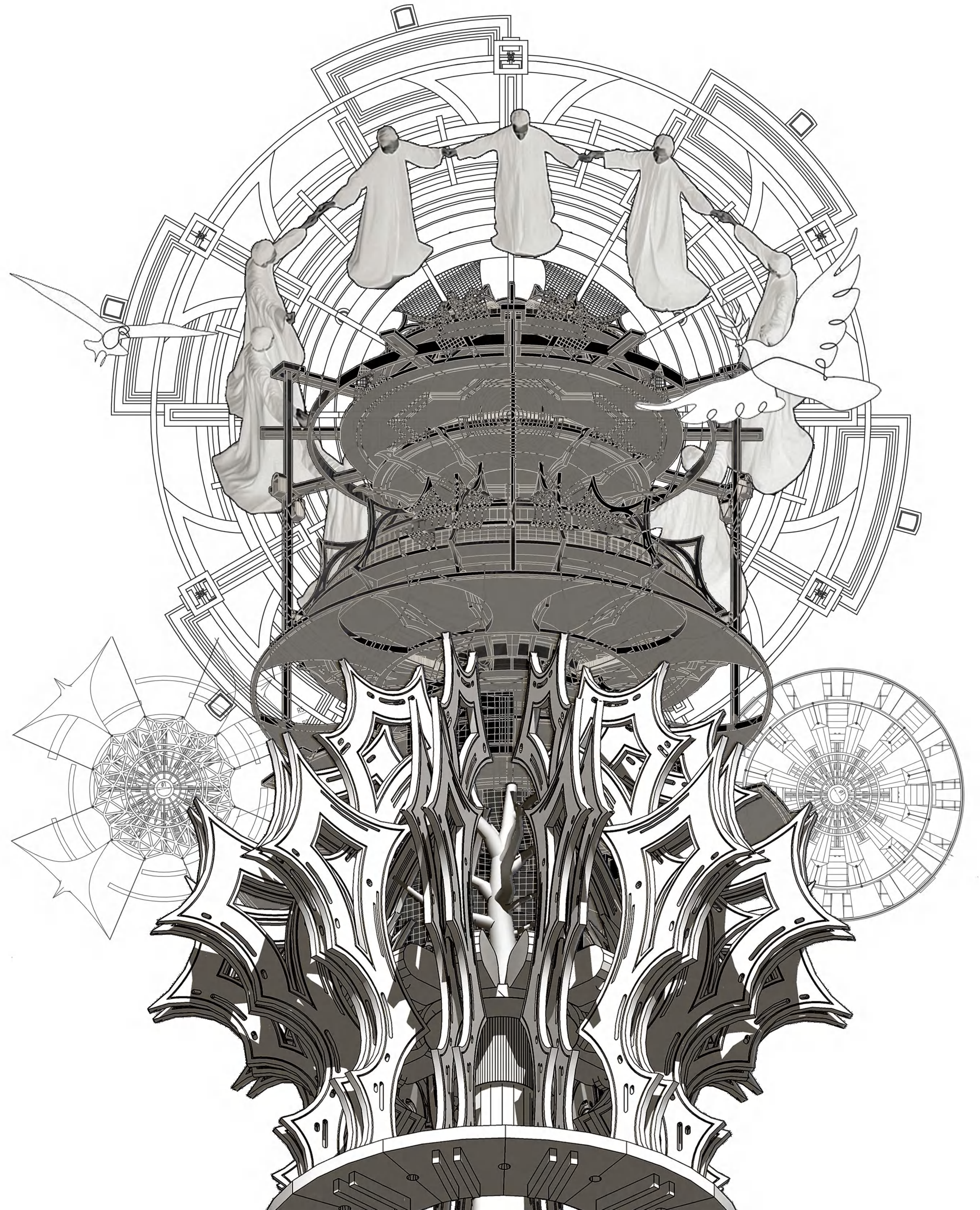


SHIFTING MONUMENT

A Journey through Time, Space, and
Future Urban Design

23013792 DONGCHEN LI
MA INTERIOR & SPATIAL DESIGN



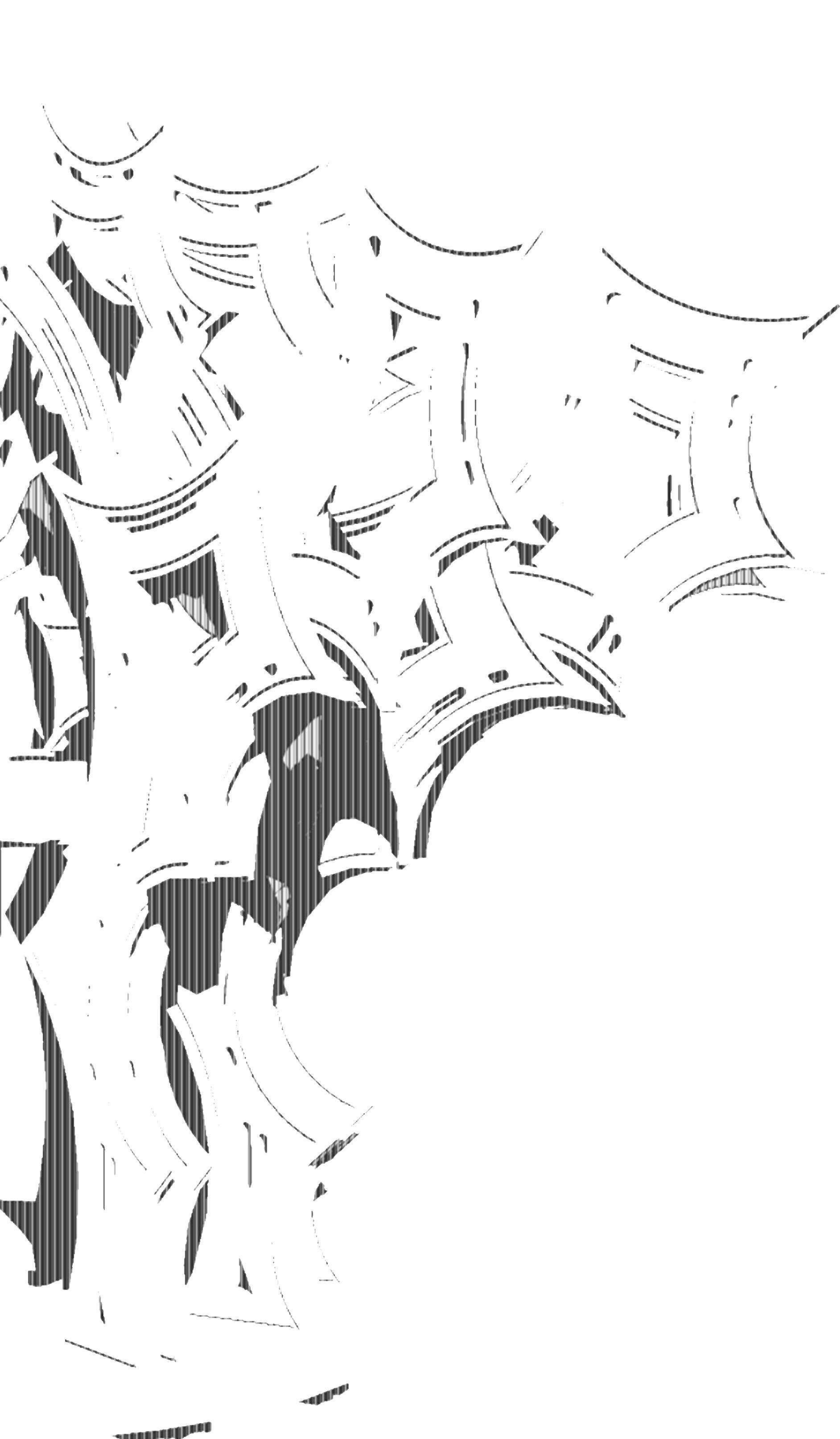


Table of Contents

Preface

Overview and project statement

Project Background

- Dystopian worldview introduction*
- Surface environment degradation and the future city concept*
- Conclusion*

Design Concept

- Case analysis(Prince Albert)*
 - How an independent art installation evolves into an urban platform*
- Timeline of the project (2024-2200)*

Installation Design

- Site analysis*
 - Shape generation*
- first model+second model making*

Packaging Time

- 2024-2099: Closed state and usage as public space*
 - 2099-2199: Growth of the biotic system and city framework formation*
 - 2200: Building and living within the new city structure*
- What if ?*

Conclusion & Outlook

Impact of the project and potential future scenarios
Reflections on traditional architecture and future urban design

References

Preface

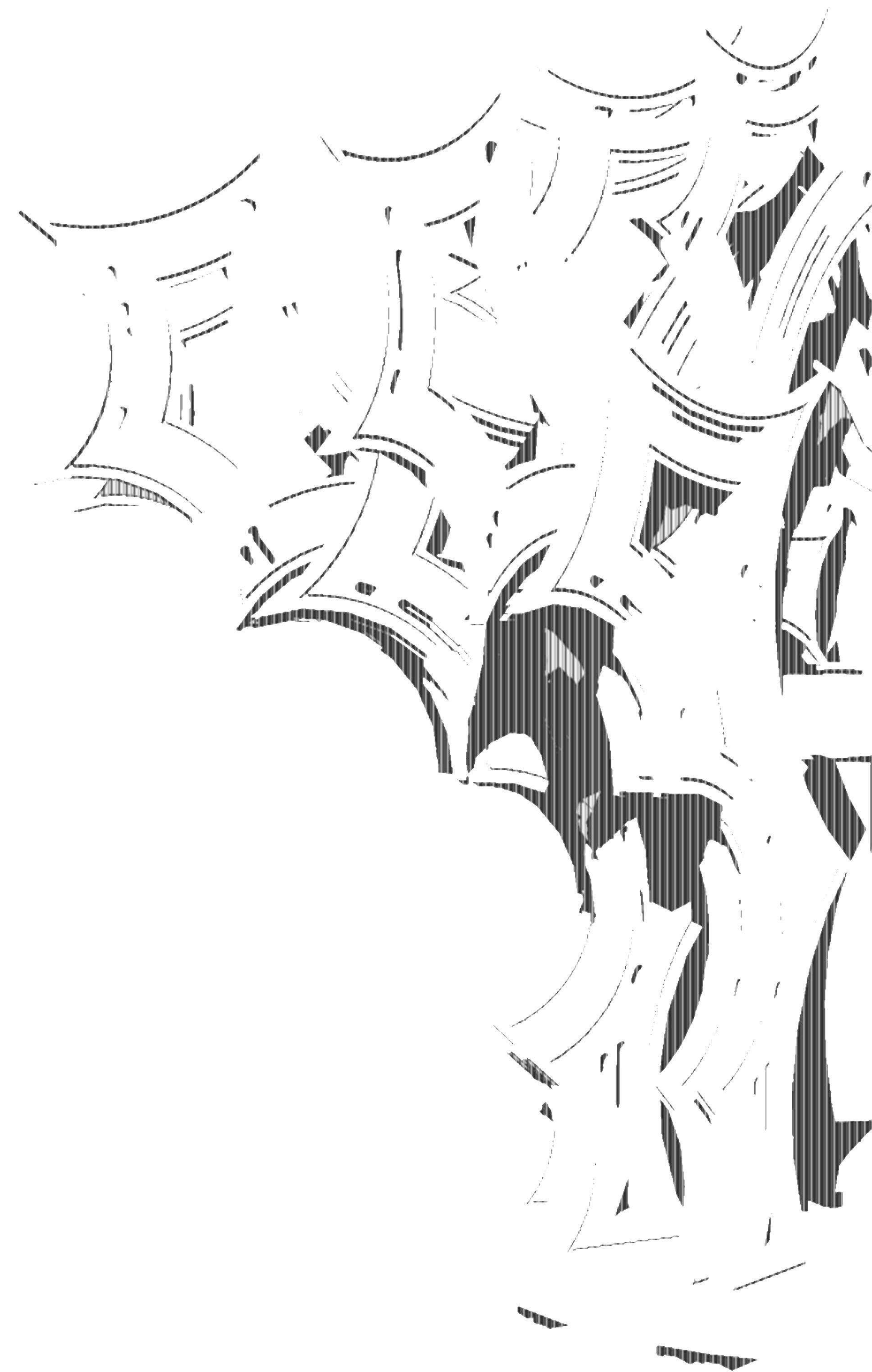
This project envisions a dystopian future where the Earth's surface becomes uninhabitable. It investigates the interaction between organic natural growth and urban decay by integrating living systems, such as mycelium, with architectural structures. Over time, an independent art installation evolves and connects to form a new urban platform. This concept challenges conventional architectural practices and questions how future urban environments might adapt to advancing technologies while maintaining sustainability.

The project is structured around three key phases:

2024-2099: The installation remains dormant and enclosed, surrounded by architectural frameworks that serve as public spaces.

2099-2199: The installation begins to grow, and the mycelium core gradually expands, forming an evolving city framework.

2200: The new urban platform matures, allowing people to build within this natural, self-growing city structure, showcasing a blend of organic growth and human innovation.



Project Background

-Dystopian worldview introduction

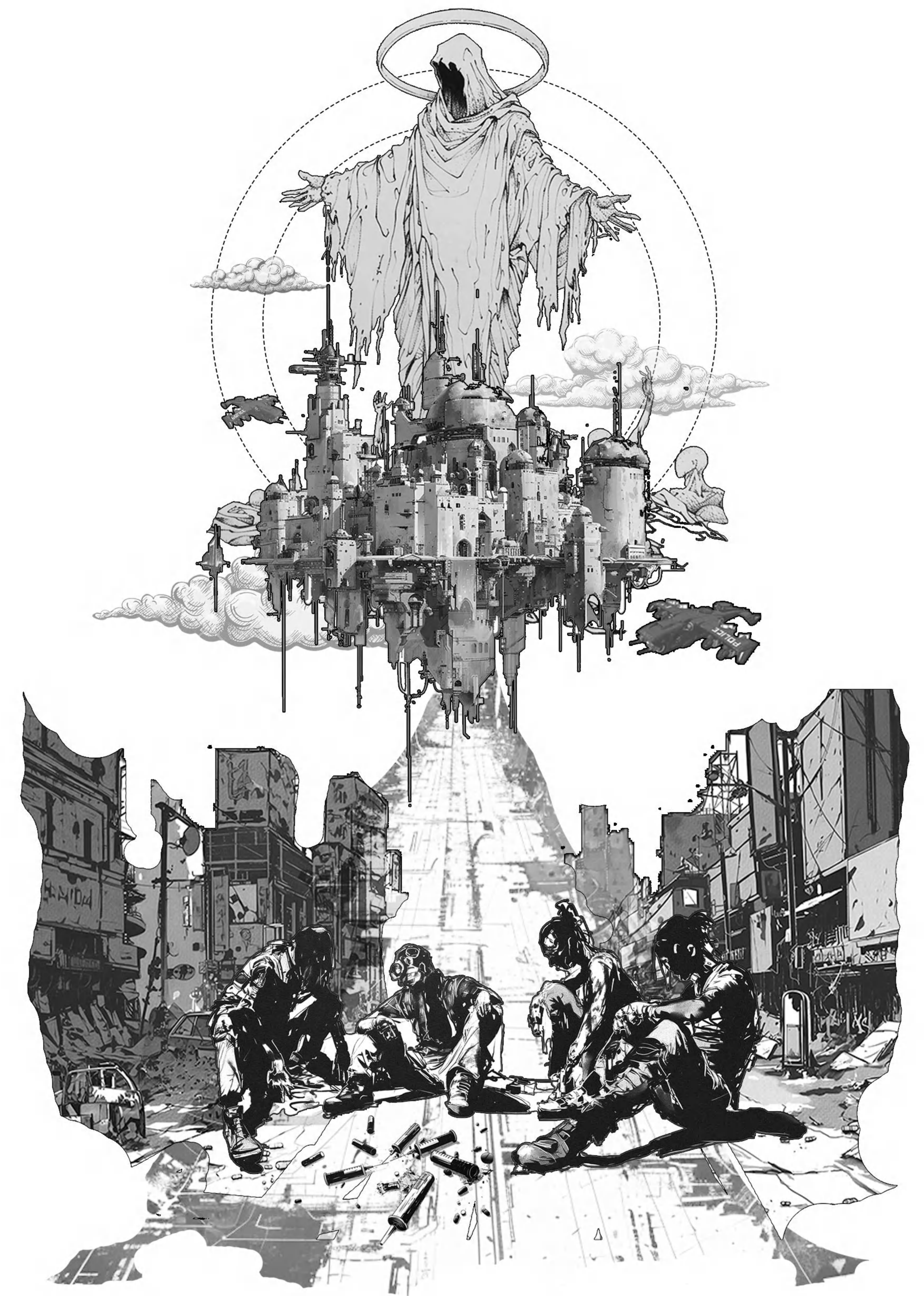
Research on Dystopian Literature and Culture:

Dystopian literature and culture reflect deep anxieties about the future

Works like William Gibson's *Neuromancer* and George Orwell's 1984 reveal concerns about the future, where unchecked technological advancement and increasing social inequality lead to control, oppression, and cultural decline. Through these works, authors express fears of unchecked technology, authoritarian regimes, and the disappearance of human values.

Dystopian literature has inspired critical thinking about future cities and design: Designers and urban planners, influenced by these literary works, explore the challenges that future cities might face and propose innovative solutions that integrate technology and nature. For example, BIG's "Masterplanet" project showcases how a global network of eco-cities can address climate change and resource scarcity through a fusion of technology and nature. Similarly, New York's High Line project repurposes abandoned industrial infrastructure into green public space, reflecting possibilities for urban renewal and ecological recovery. These projects not only respond to the environmental and societal crises depicted in dystopian literature but also explore how future cities can move toward a more sustainable future through design and innovation.

Gibson, W. (1984). *Neuromancer*. New York: Ace Books.
Orwell, G. (1949). 1984. London: Secker & Warburg.
Bjarke Ingels Group (BIG). (n.d.). Masterplanet. Available at: <https://big.dk/#projects-masterplanet>.
Friends of the High Line. (n.d.). The High Line. Available at: <https://www.thehighline.org/>.



Project Background

-Surface environment degradation

Climate Change and Environmental Degradation

DOOMSDAY CLOCK IS ARRIVING

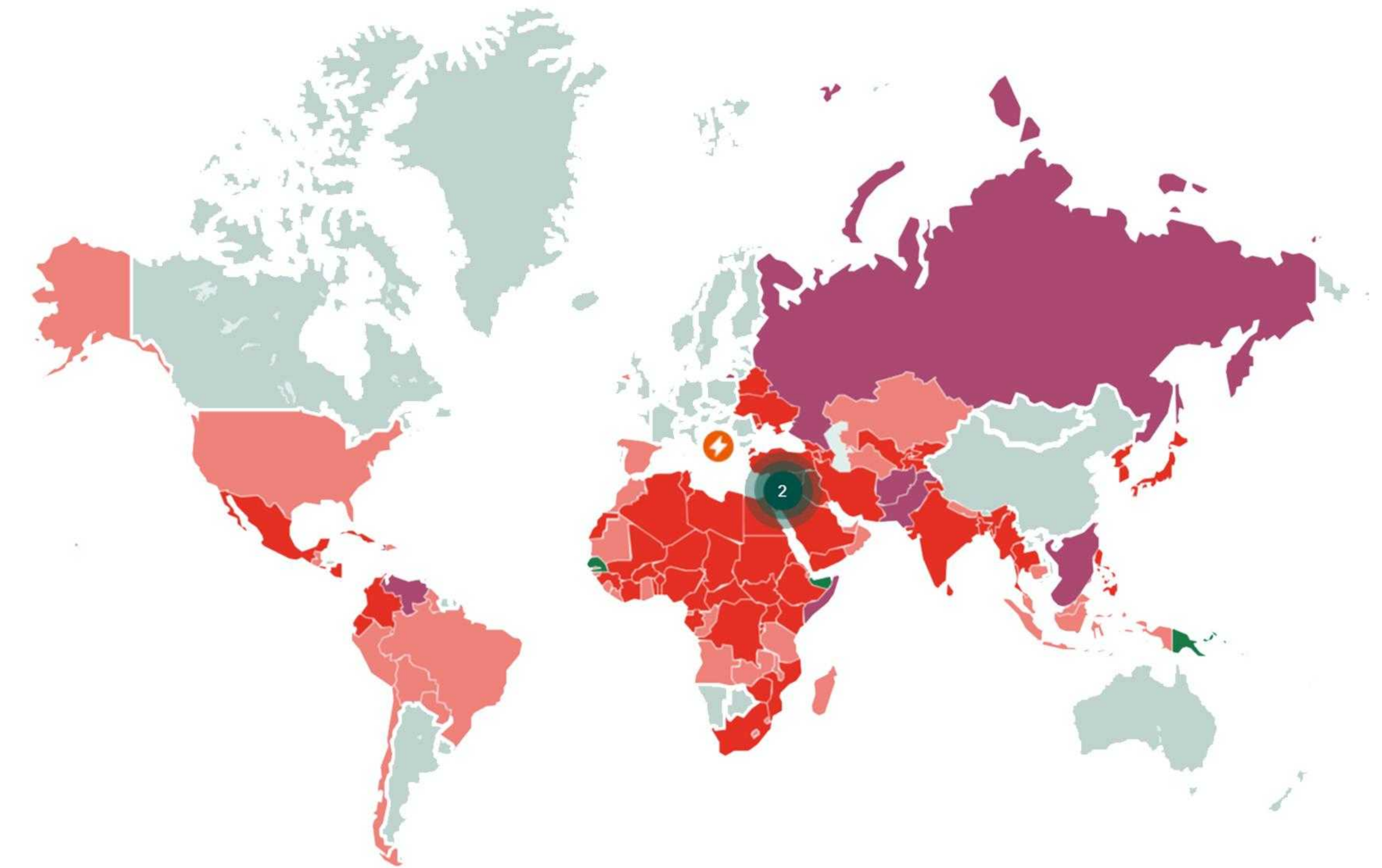
Climate change, war happens frequently and environmental degradation are rendering the Earth's surface increasingly uninhabitable. Issues like global warming, rising sea levels, frequent natural disasters, and pollution are accelerating ecosystem decline. The IPCC reports that global warming intensifies extreme weather events, threatening human living conditions, while UN-Habitat studies link urban decay to environmental degradation, particularly in regions facing climate-driven migration.

Detroit, once an industrial hub, became a "shrinking city" after economic decline, marked by population loss and abandoned infrastructure. Similarly, the Chernobyl disaster led to the city's abandonment, illustrating the connection between technological failure and urban decay. These examples highlight the growing urgency of addressing climate change and urban decline, calling for innovative design and ecological restoration to shape sustainable urban futures.

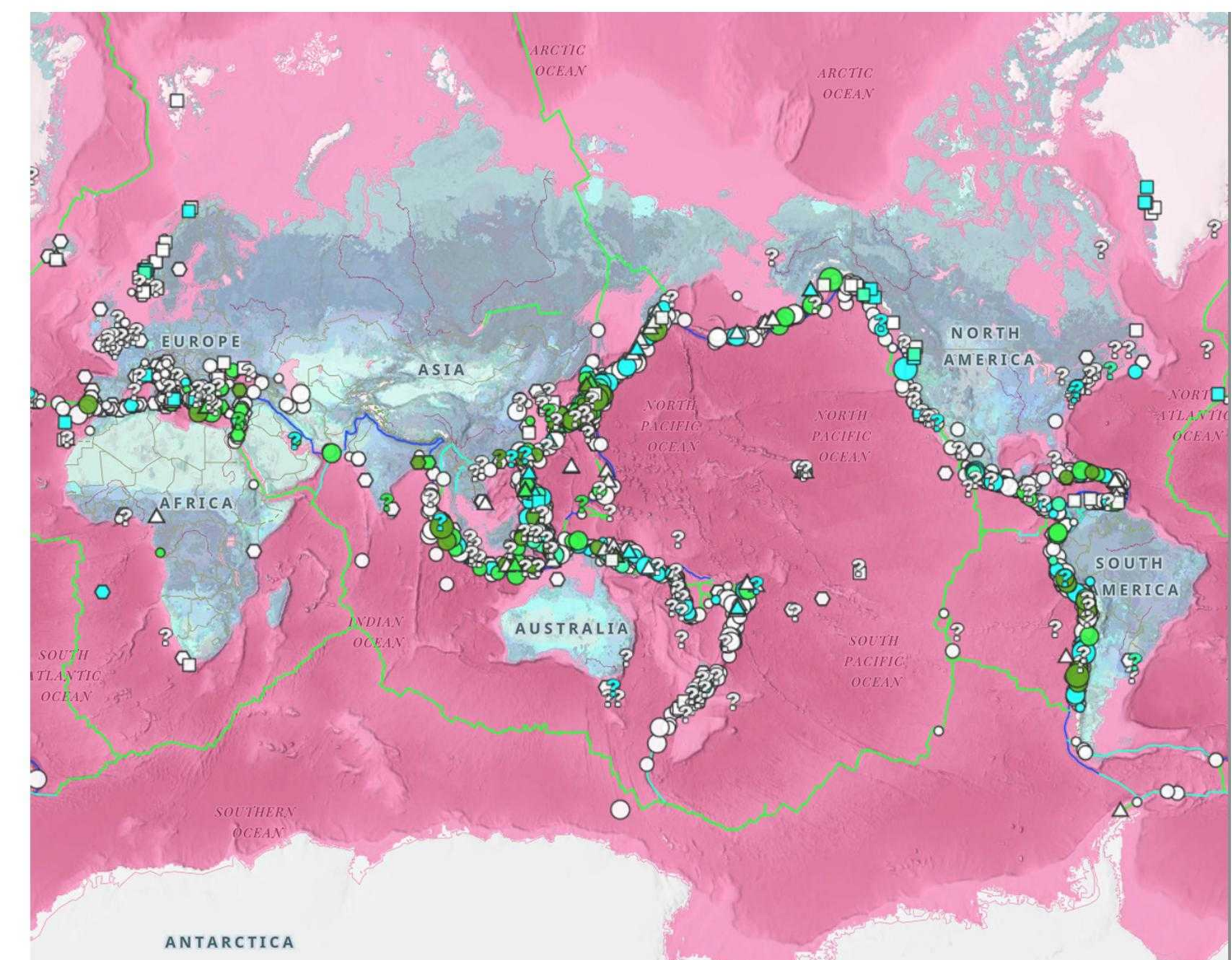
Continuous warfare and extreme climate conditions have made Earth's surface uninhabitable, aligning closely with Phase 2 (2099-2199) of this project. Humanity relocates beyond the surface, leaving abandoned cities and installations behind.

IPCC (2014). Climate Change 2014: Synthesis Report. Contribution of Working Groups I, II and III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change. [Online] Available at: <https://www.ipcc.ch/report/ar5/syr/>
UN-Habitat (2019). The Climate Change and Urbanisation Nexus. [Online] Available at: <https://unhabitat.org/the-climate-change-and-urbanisation-nexus>
Gallagher, J. (2010). Reimagining Detroit: Opportunities for Redefining an American City. Detroit: Wayne State University Press.
Brown, K. (2019). Chernobyl: The History of a Nuclear Catastrophe. New York: W. W. Norton & Company.

War, which is happening:
<https://www.crisisgroup.org/crisiswatch>



Natural catastrophe, which is happening:
<https://www.ncei.noaa.gov/maps/hazards/>



Project Background

-Conclusion

In my project background, dystopian literature, climate change, and environmental degradation serve as the foundational framework, inspiring reflections on future cities and installation art. The core of the project is to design an installation that can grow and evolve over time, exploring the transformative role of the installation across different temporal contexts and its potential function in future urban spaces.

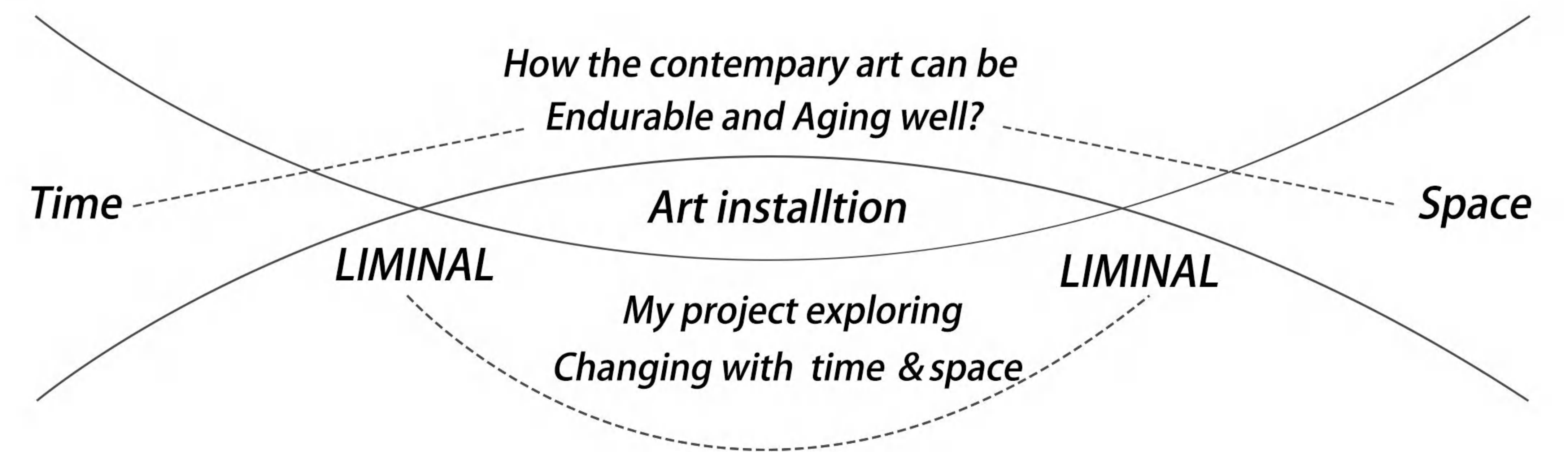
The installation is not just a static piece of art; it has the potential to grow and change. By using organic materials like mycelium, the installation interacts with its surrounding environment while reflecting the possibility of future cities' self-repair and ecosystem construction. Over time, the installation evolves from a singular art object into an integral part of the urban landscape, creating a continuously expanding spatial structure that contributes to the development of a future urban platform.

In this context, the installation is not merely a memorial to the past but also an exploration of future urban forms. It adapts and grows in response to environmental changes and technological advancements, allowing it to play unique roles in different time periods. From being a symbolic monument to becoming part of an ecological system, the installation demonstrates how space and function can shift over time, addressing the increasing challenges of environmental and societal crises in future cities.

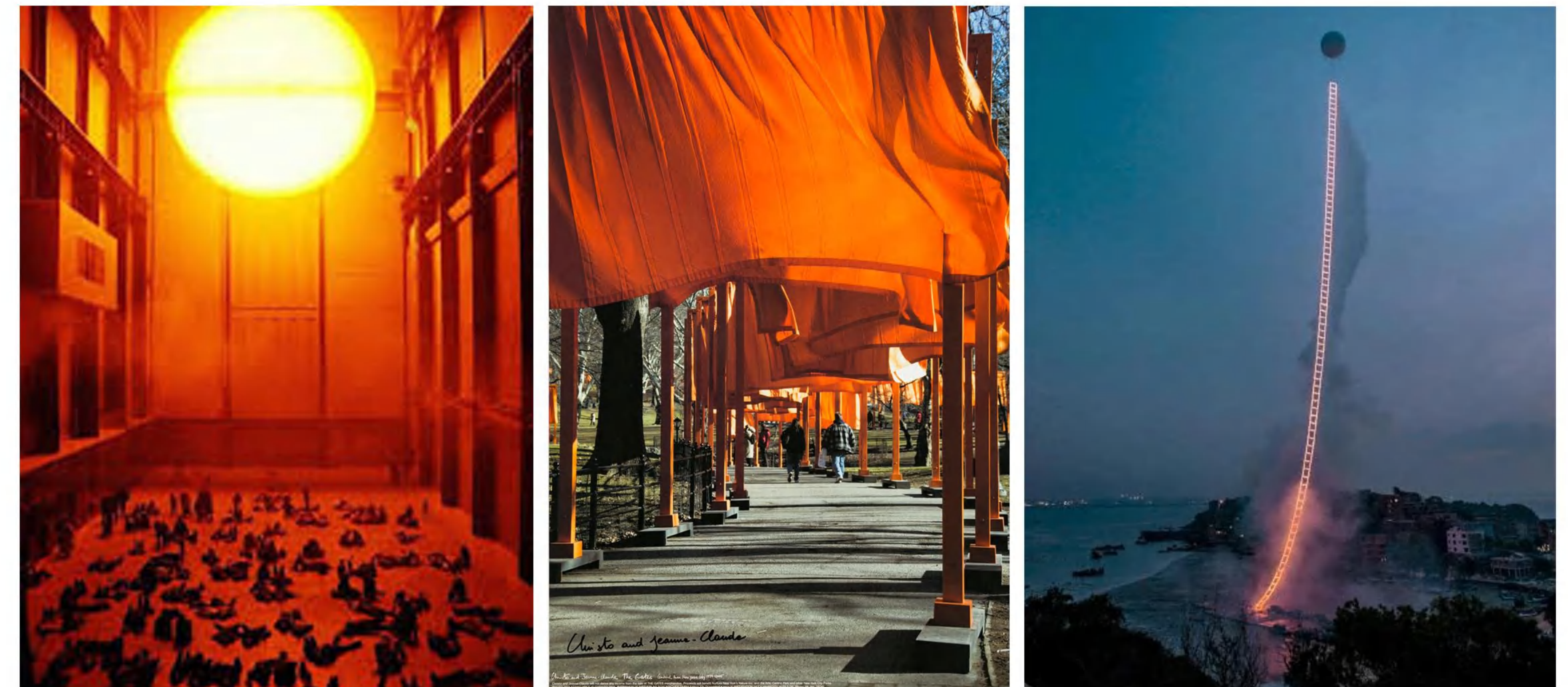
By combining installation art with natural systems, the project explores how future cities can evolve and adapt through innovative design and ecological integration, providing new living spaces for humanity. This concept not only echoes dystopian literature's concerns about future societies but also offers a new path for design, examining the development potential of future urban environments.



Shit but long-lasting



Meaningful but ephemeral

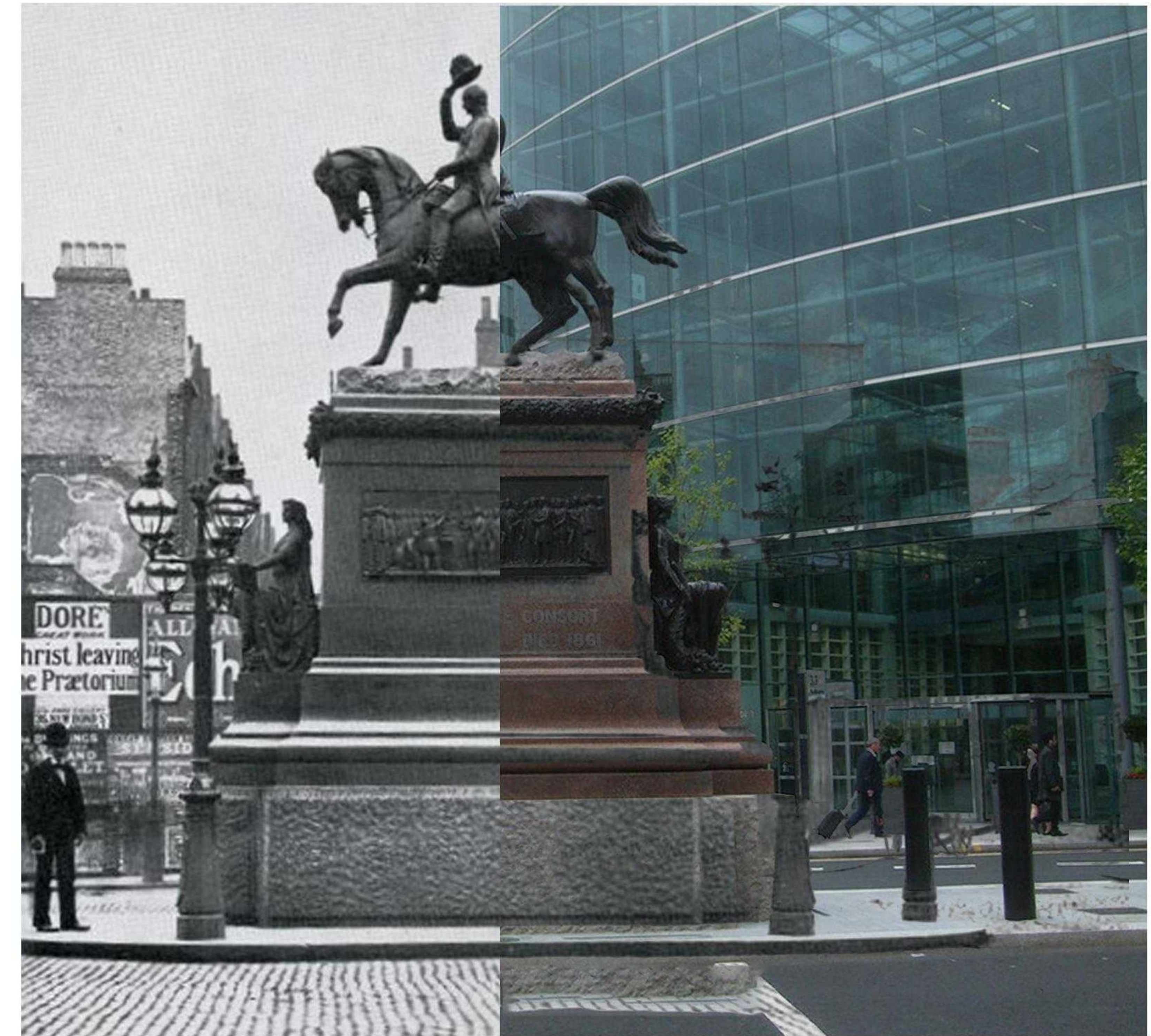


"The Weather Project" by Olafur Eliasson

"The Gates" by Christo and Jeanne-Claude

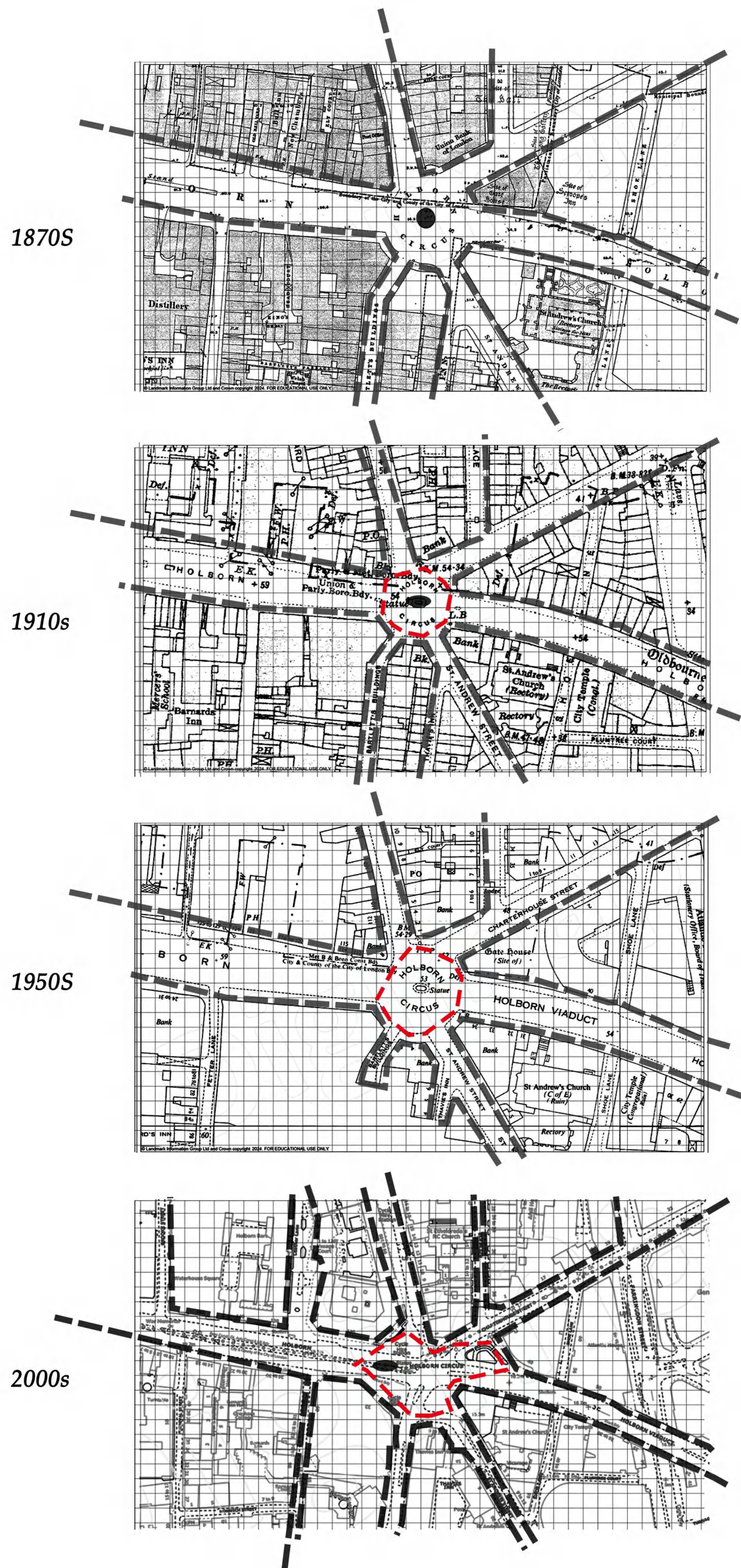
"Sky Ladder" by Cai Guo-Qiang

Design Concept
-Case analysis

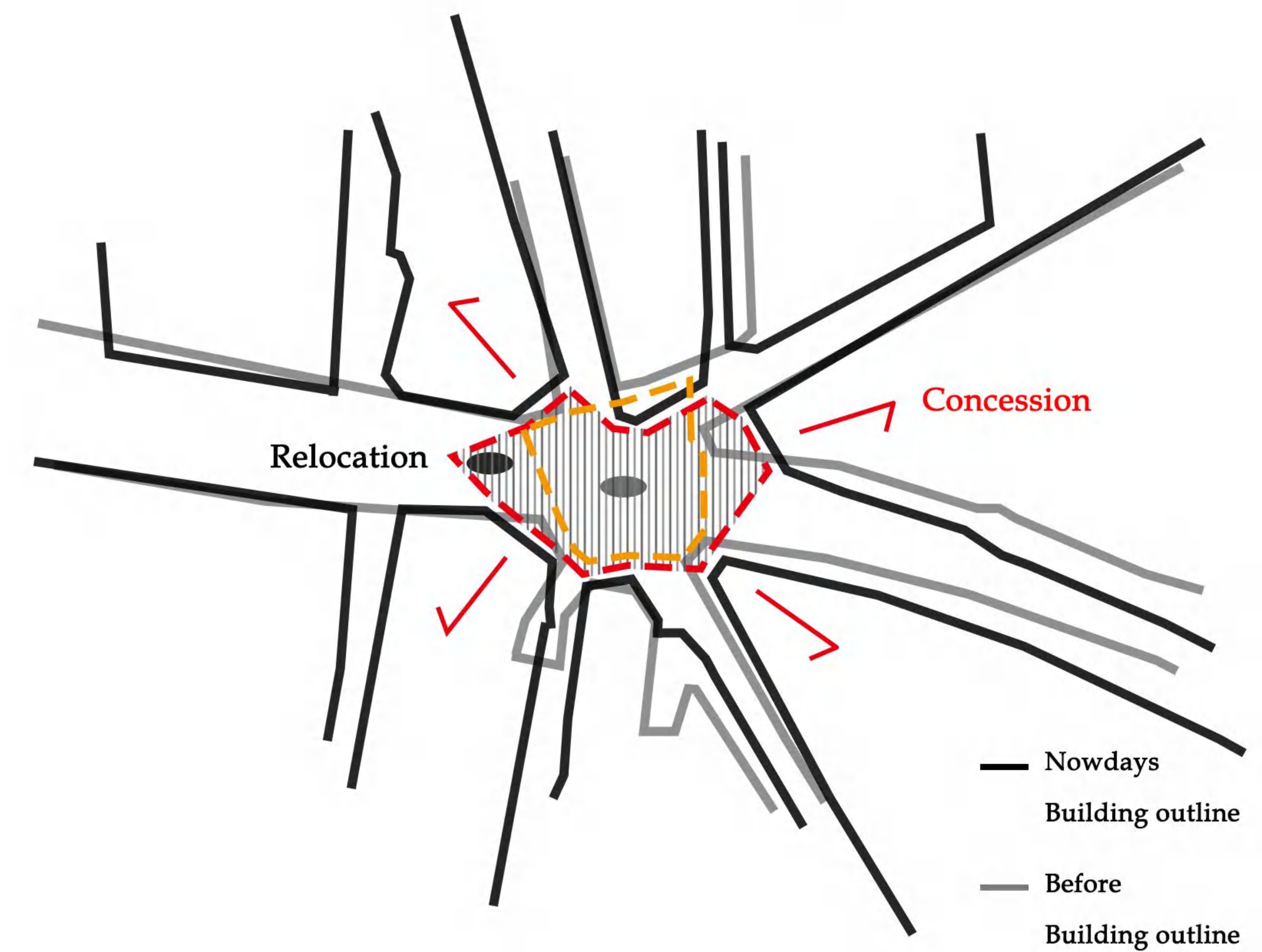
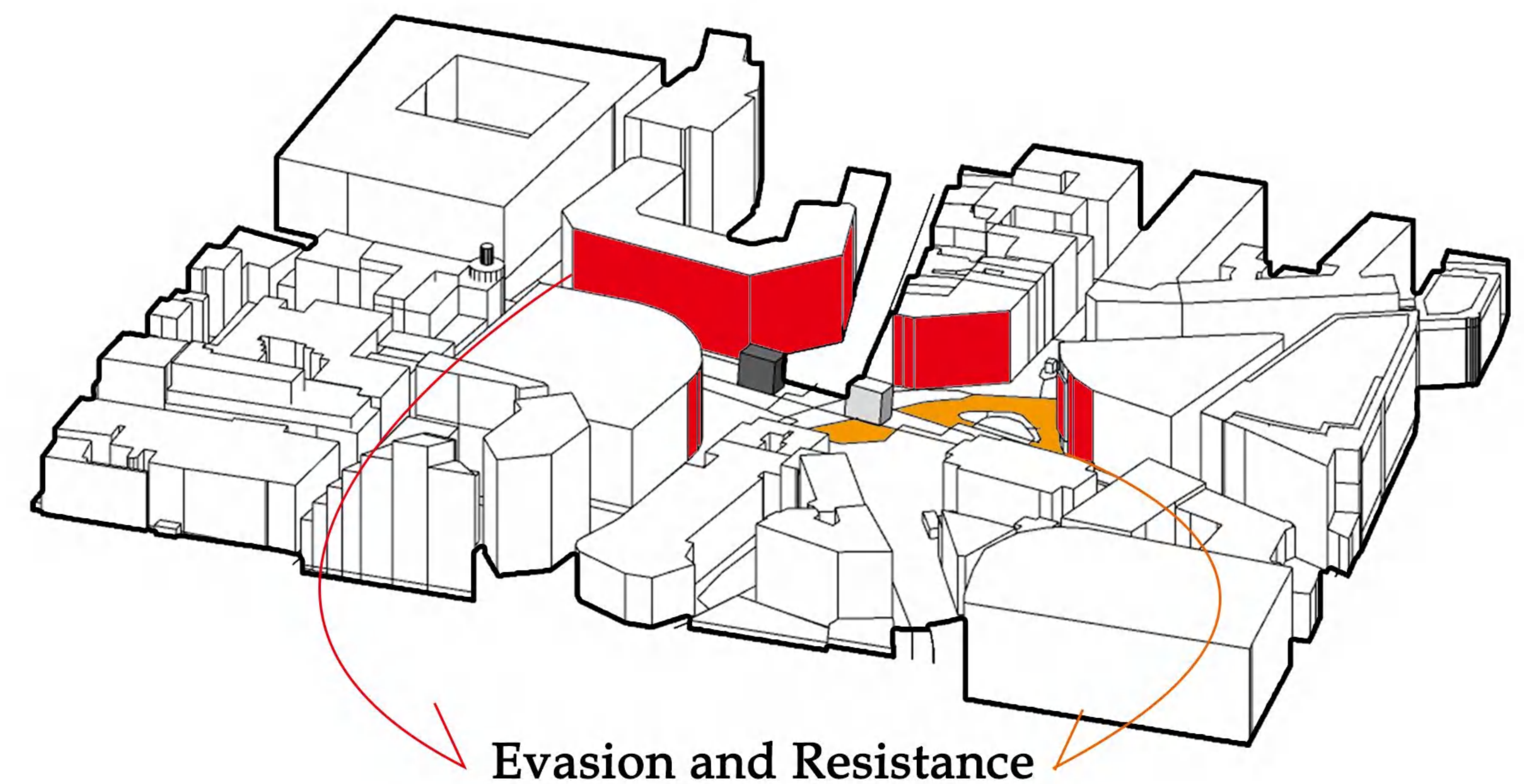


1874 ————— 2024

Prince Albert in Holborn Circus



The Prince Albert statue at Holborn Circus was indeed relocated. Originally positioned at the center of the circus, the statue was moved in 2014 due to traffic safety concerns, as it obstructed drivers' sightlines and contributed to frequent accidents. As part of the junction improvement project, the statue was repositioned near High Holborn to enhance visibility and reduce the accident rate.



Case Conclusion:

The Prince Albert statue at Holborn Circus is largely limited to its commemorative significance, serving primarily as a tribute to a historical figure. However, the environment surrounding the statue and nearby buildings seem to avoid it, creating a sense of isolation, which weakens the interaction between the statue and its surroundings. Over time, while the statue's commemorative significance has continued to expand, the city's evolving traffic routes have increasingly turned it into an obstacle to traffic flow, even contributing to traffic accidents.

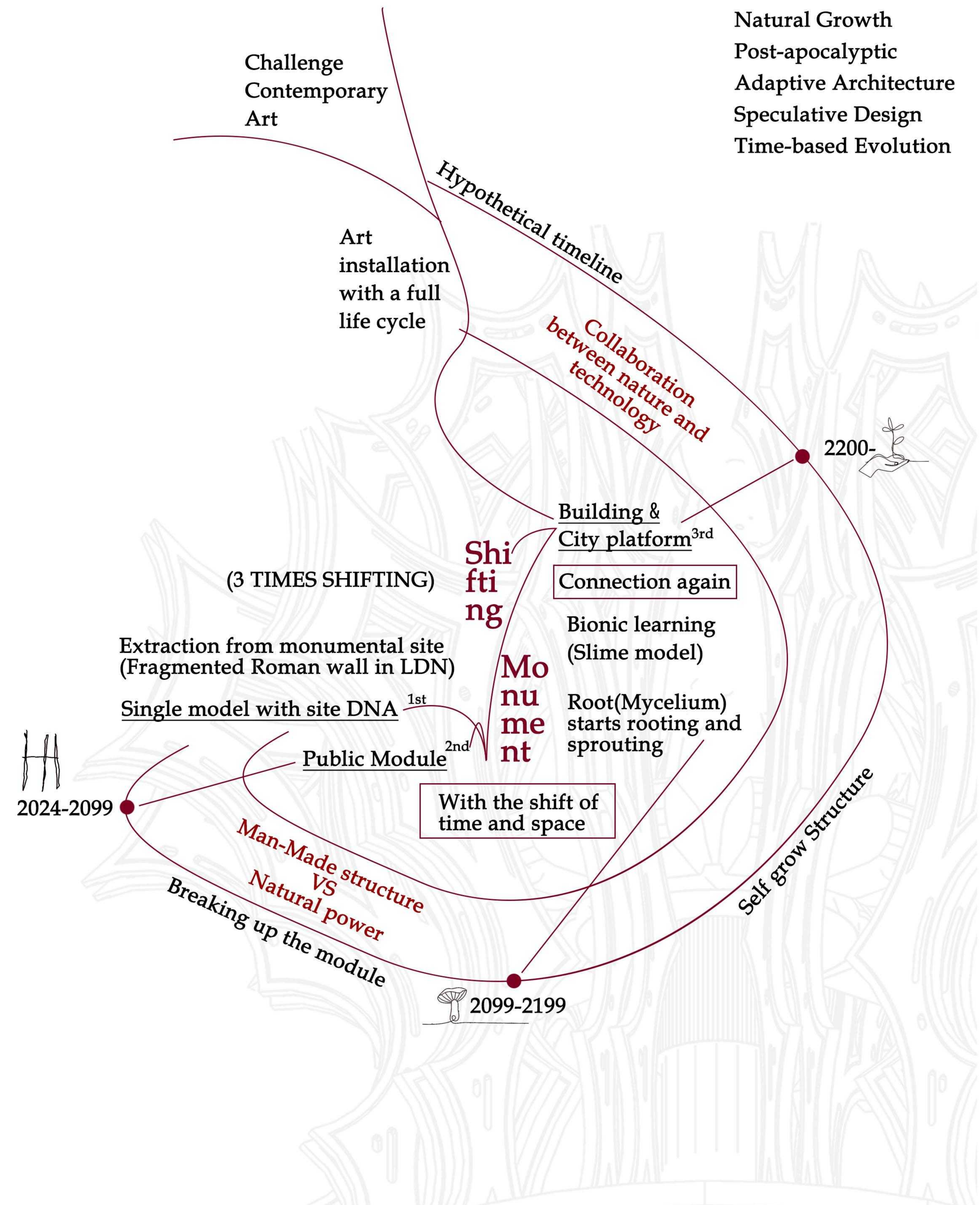
Design Concept

-Conclusion-mindmap

- Biological Systems
- Urban Decay
- Interactive Installation
- Sustainability
- Futuristic Cities
- Natural Growth
- Post-apocalyptic
- Adaptive Architecture
- Speculative Design
- Time-based Evolution

SHIFTING MONUMENT

My design project, set within a dystopian worldview, explores the feasibility of art installations evolving with time and space. It challenges the static aesthetic typically associated with installations, aiming to transform them into dynamic structures that adapt over time, eventually forming the foundation of an idealized new urban platform. The project draws inspiration from biological systems, such as the growth patterns of slime mold and bamboo fungus, and is designed based on current global contexts and predictions. The project is divided into three hypothetical phases, each exploring how the installation evolves under different conditions.

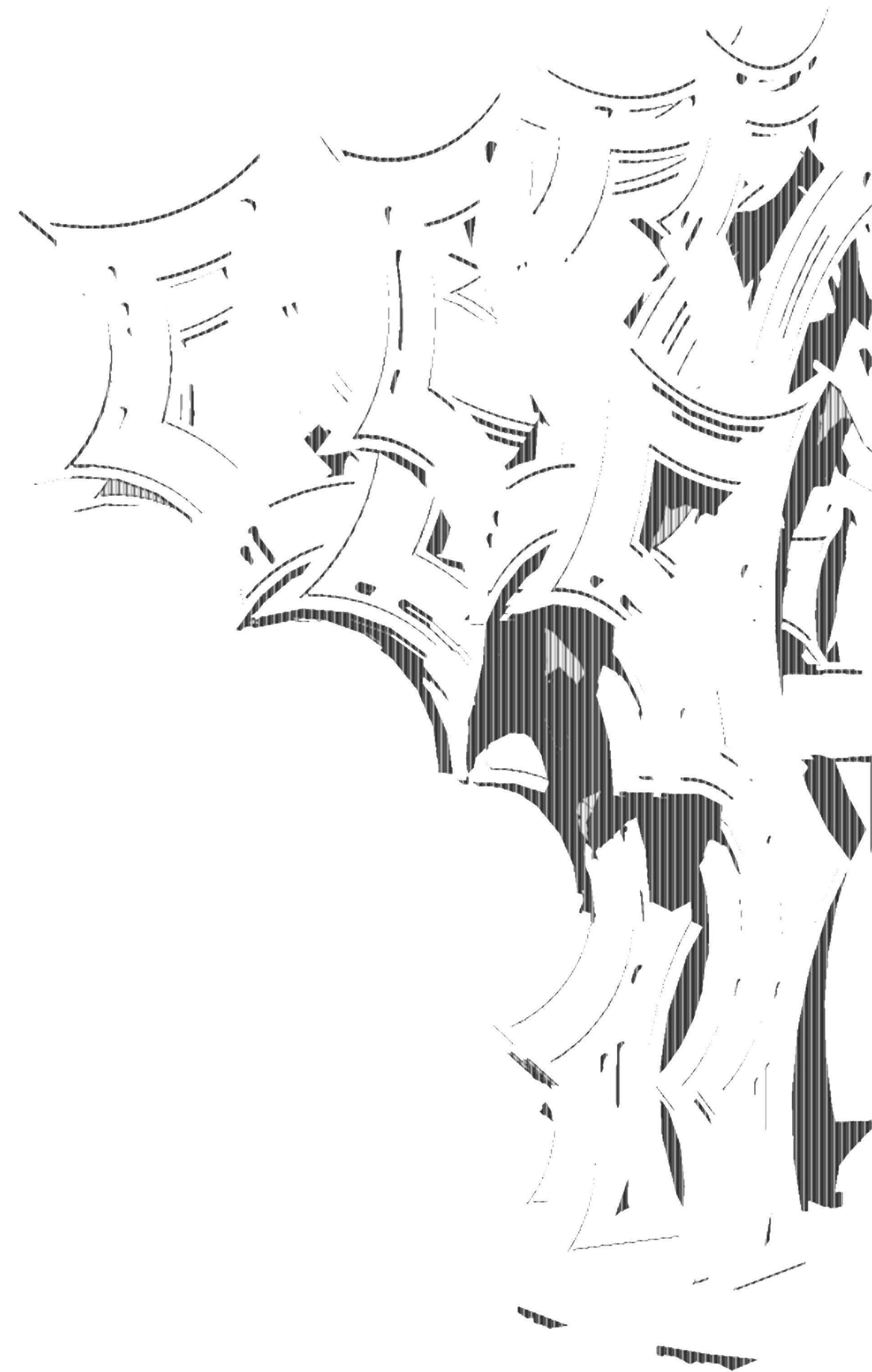


INSTALLATION DESIGN

This chapter will introduce the site from which the project is derived, and how its unique characteristics are extracted to generate an installation design embedded with the site's "DNA."

The content includes site analysis, material exploration, hand-crafted model making, and the analysis of classical elements. Through studying the site's historical and cultural background, the design process will also explore the selection and application of materials suited to the specific conditions of the site.

Hand-crafted models will aid in refining the form and structure of the installation, while classical elements will be analyzed to strike a balance between cultural heritage and contemporary innovation. This ensures the installation not only interacts with the site but also responds to its unique material and historical context.



Installation Design

-Site Analysis



My project is located at the Roman Wall in the City of London. The Roman Wall in London is now fragmented and scattered across various parts of the city, symbolizing the history of urban development. Originally built as a defensive structure during the Roman Empire, the wall has witnessed centuries of change and the expansion of the city. However, over time, urban construction and redevelopment have gradually eroded the integrity of the Roman Wall, leaving the remaining sections as isolated historical relics.

AD200-220

The Romans began building the London Wall to protect the city of Londinium from invasions.

5th Century

As the Roman Empire withdrew from Britain, the London Wall gradually lost its importance for military defense.

Middle Age

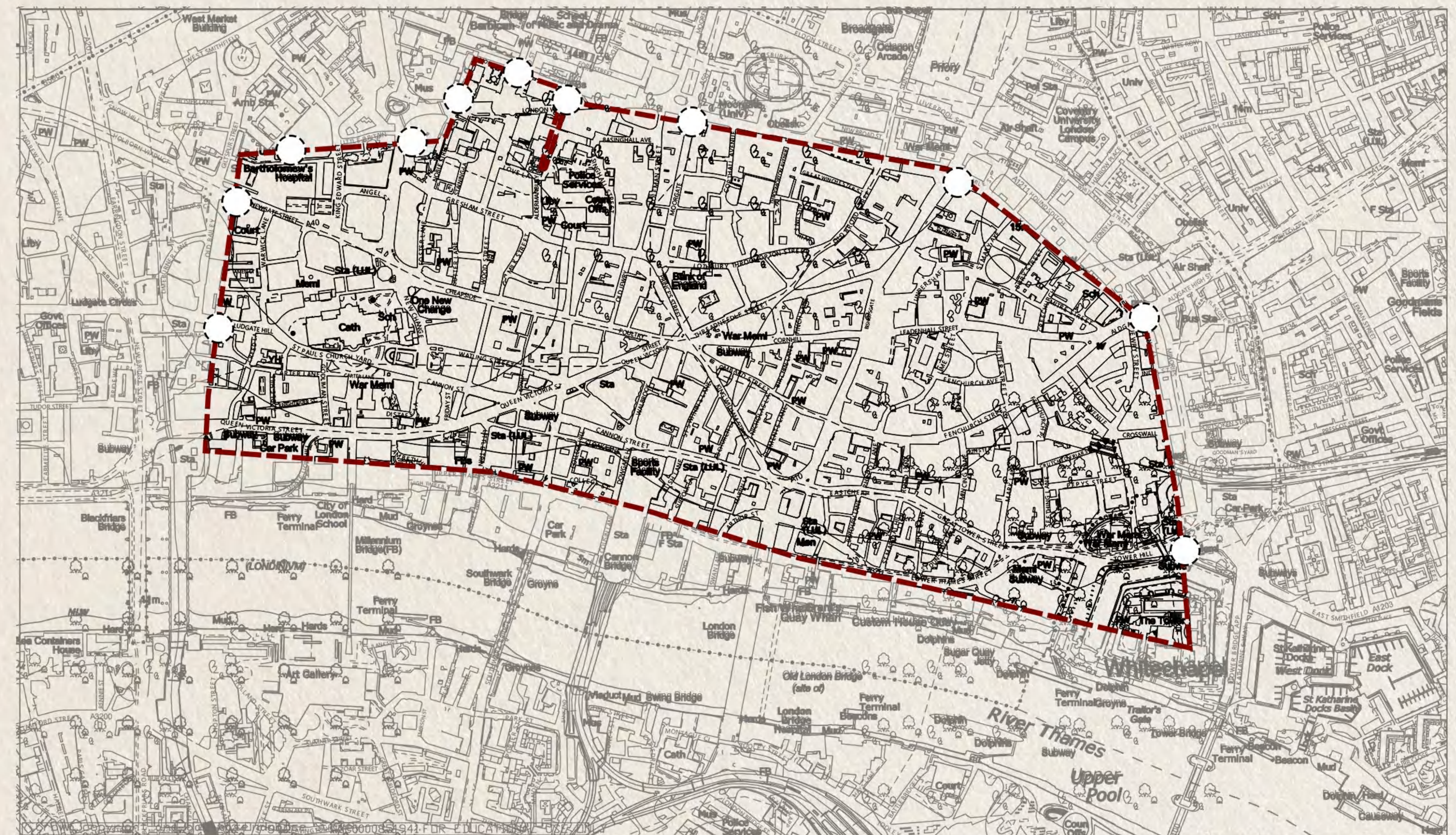
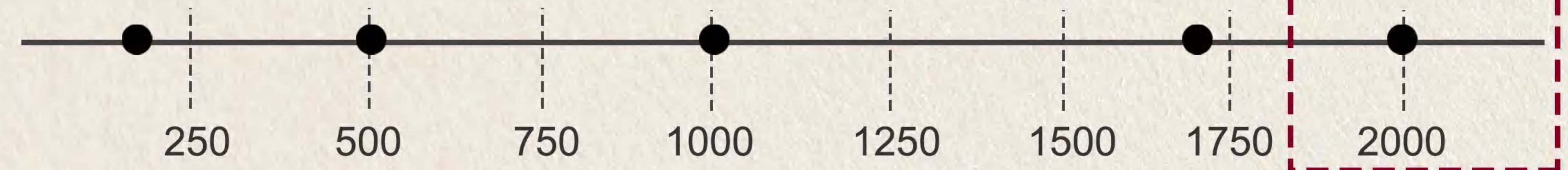
The London Wall was repaired and fortified, and it also served as a marker for the city.

17th Century

Due to London's expansion and population growth, parts of the wall were demolished, and the materials were used for other.

2000-2050

Although much of the wall no longer exists, some remnants are still preserved as historical landmarks.

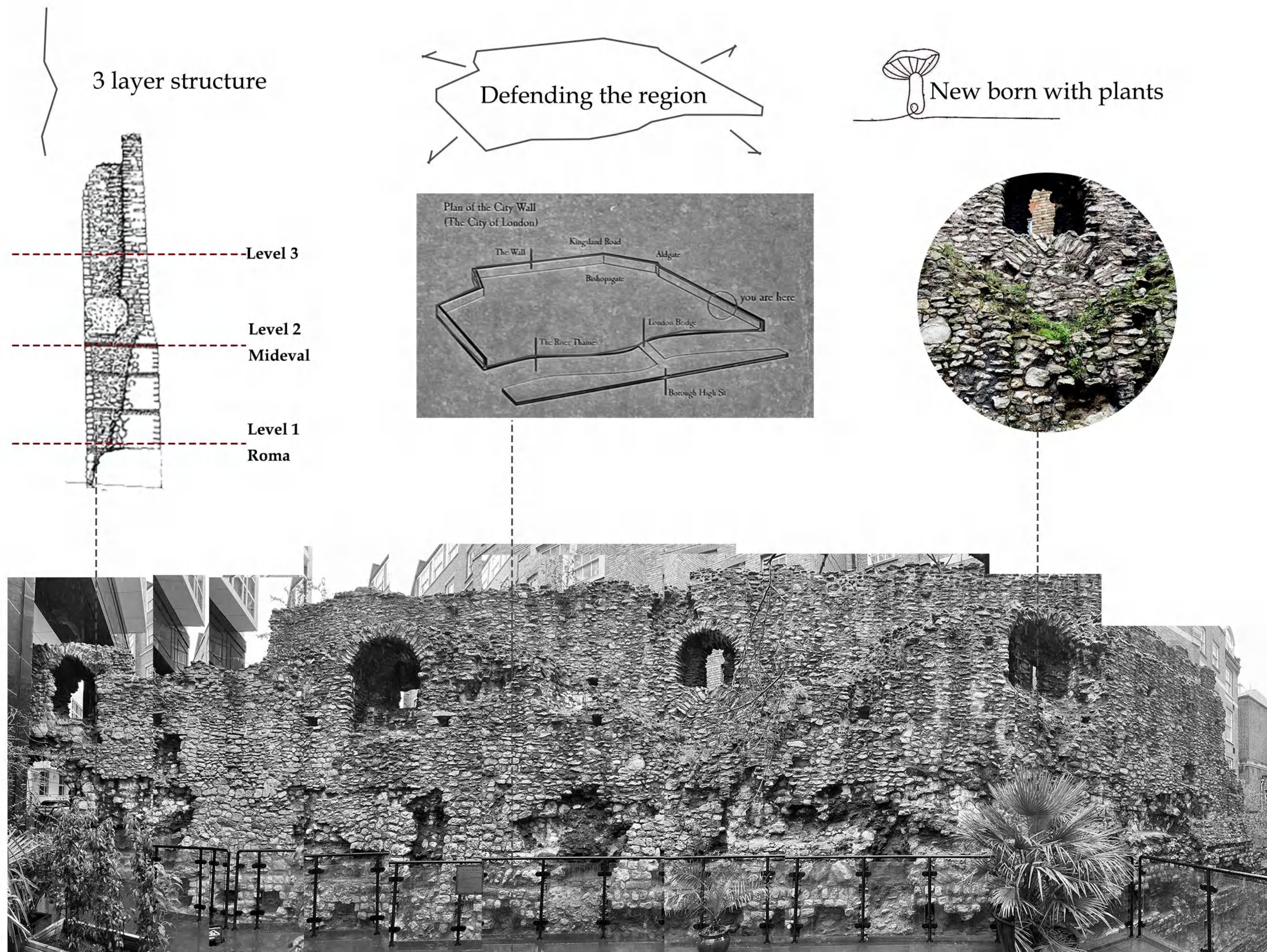


London wall map

● LONDON WALL

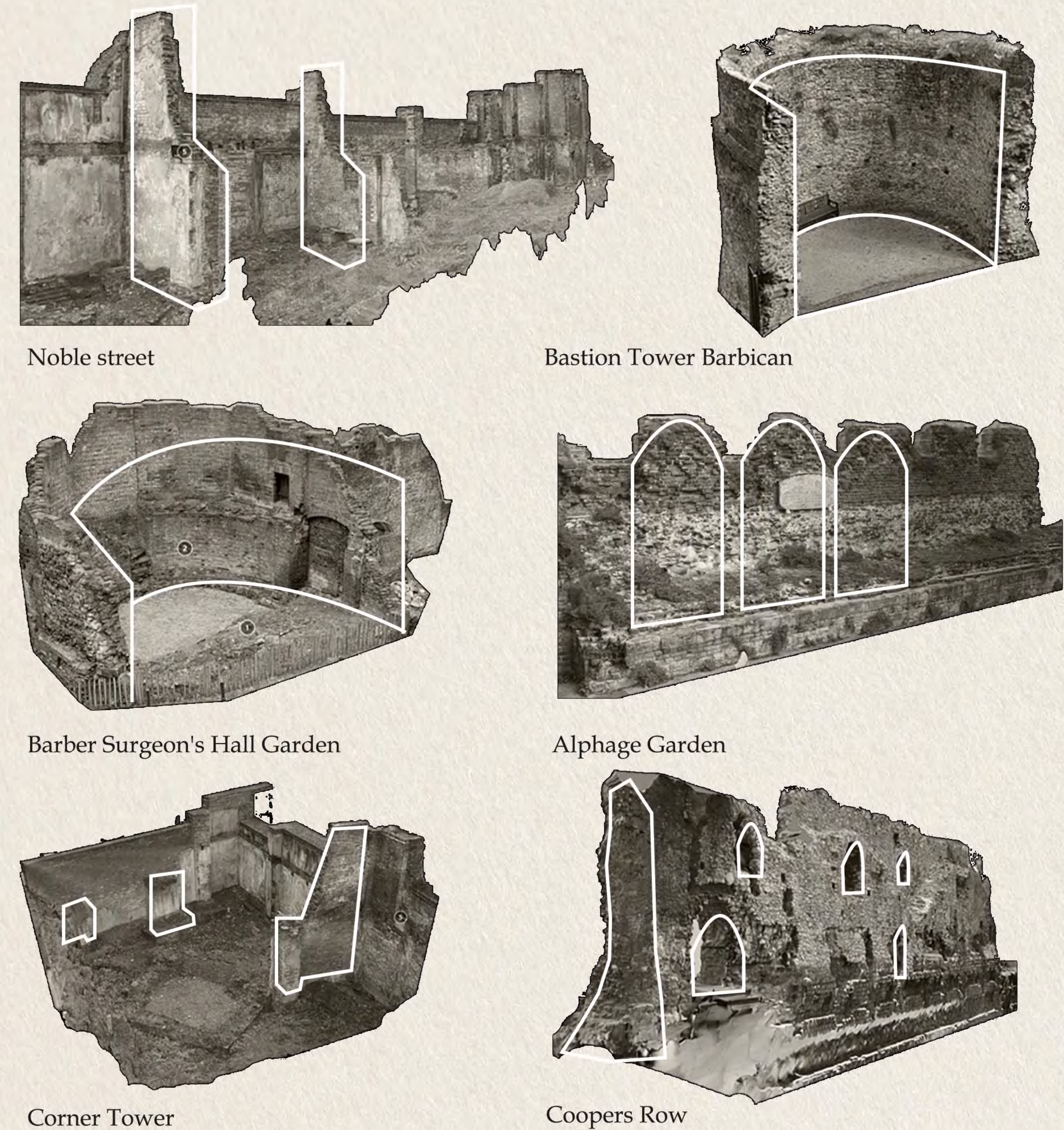
Installation Design

-Site Analysis



Project starts at Coopers Row's Roman Wall section, highlighting its intact three-part structure and historical significance. The plant growth on the wall symbolizes regeneration and life from the ruins.

SHAPE EXTRACTION



Visible sections of the Roman Wall, like bastions and watchtowers, reveal a strong sense of order and functionality. Now fenced for preservation, they serve only commemorative purposes.

How can relics reawaken and reconnect with the present and future?

PRESERVATION

LIBERATION

RUINS

NEW BORN

OLD STRUCTURE

SYMBOL REUSE

ISOLATION

CONNECTION

NEW
INSTALLATION



SHAPE GENERATION

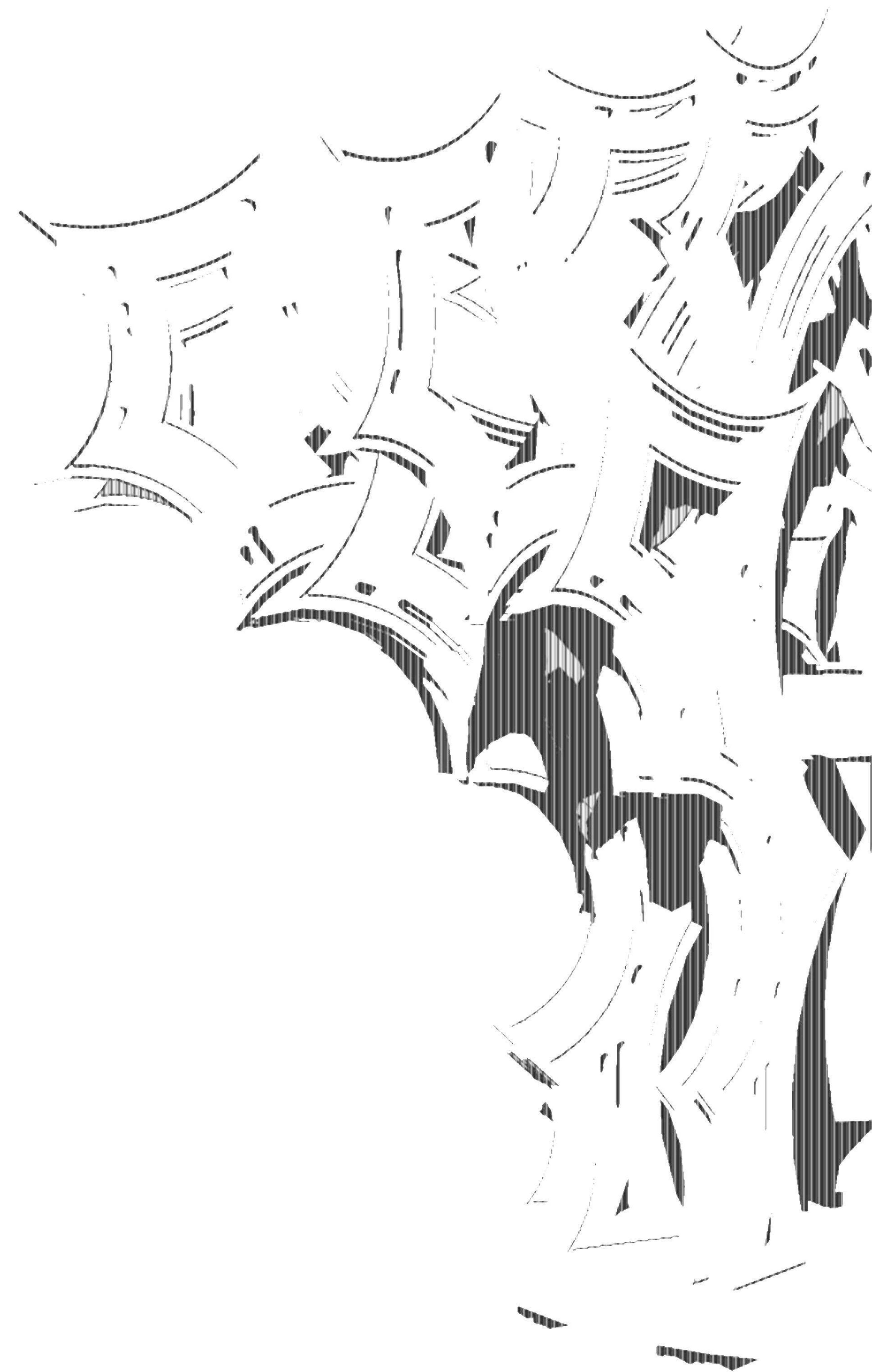
For the form generation of the individual installation model, I drew inspiration from classical Roman elements and integrated ecological plants. By extracting symbolic patterns from the site, I combined and arranged these elements to generate the appearance of the installation.

This section will showcase two models:

The first is the initial model developed during a class project. It was created using laser cutting and 3D printing, though its form was somewhat rigid and lacked sophistication.

The second model represents an evolution, simulating the growth patterns of mushrooms, making each section more organic and expressive, while also embodying the characteristics of the Roman era. In addition to metal cutting, this version incorporates motors and screens, allowing the installation to open and close, imbuing it with a sense of vitality.

This progression lays the foundation for the next stage of the installation's evolution.



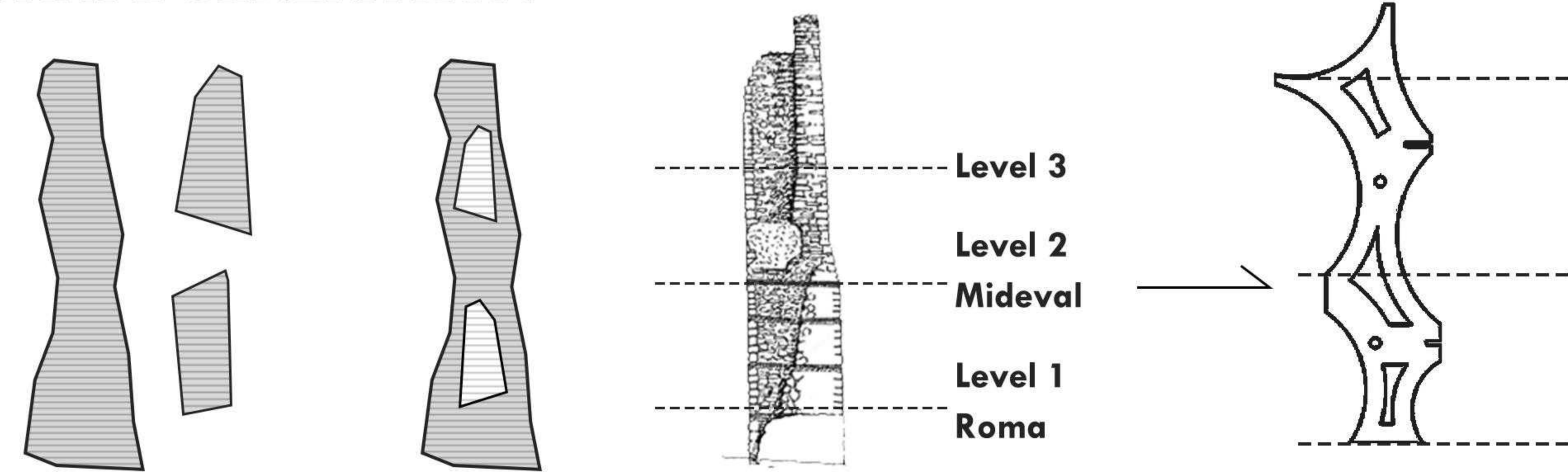


CORINTHIAN CAPITALS

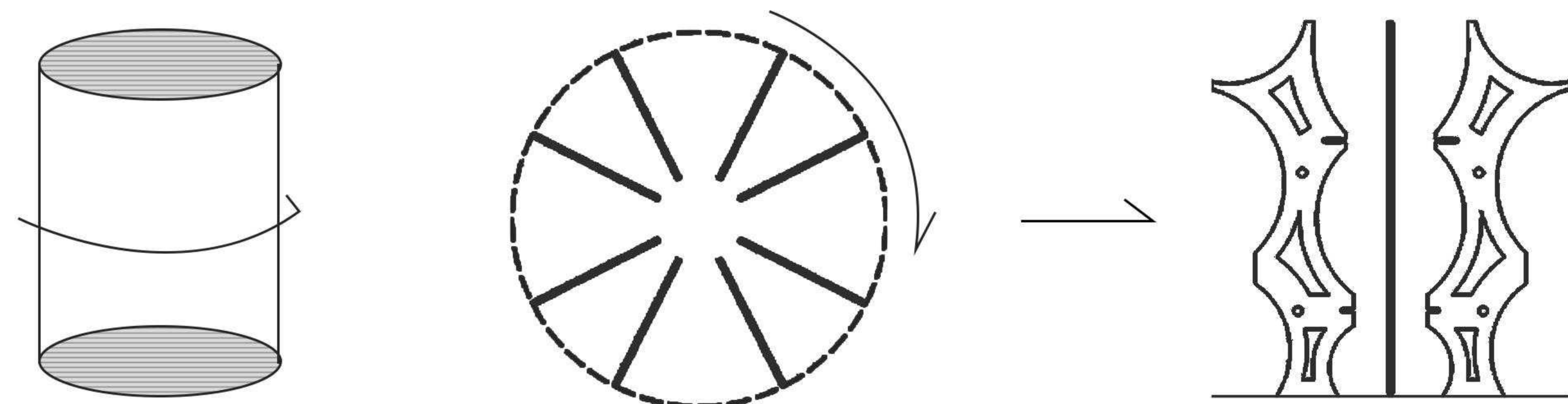


ACANTHUS

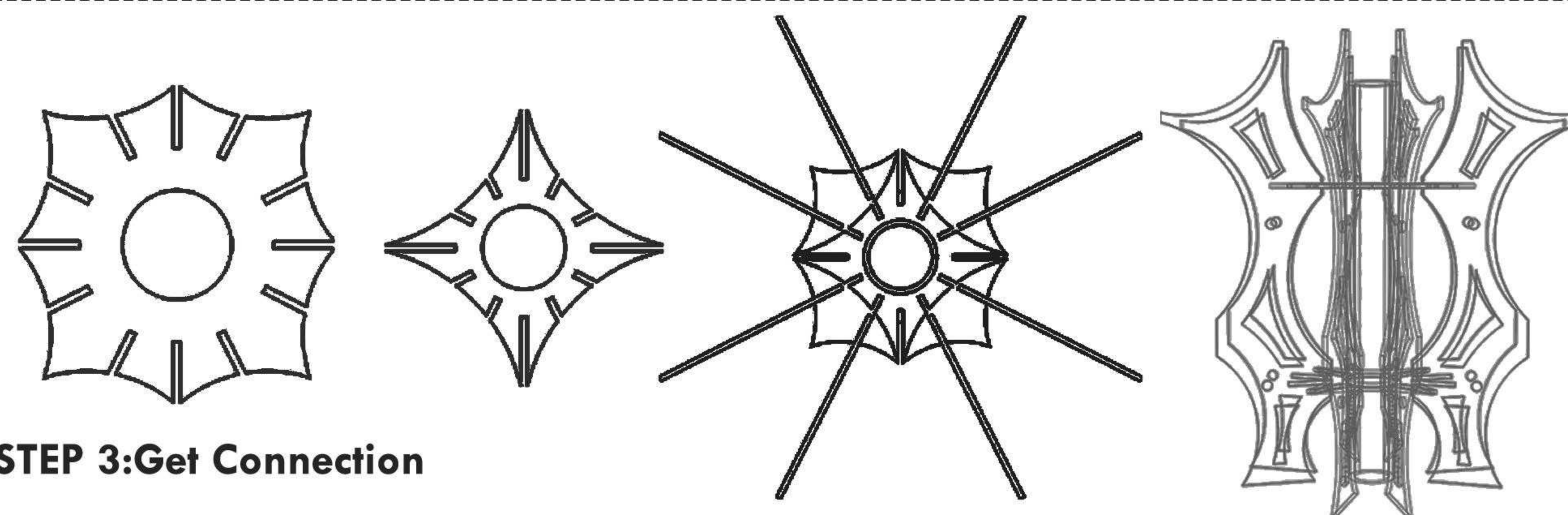
SHAPE GENERATION



STEP 1: Extract shape



STEP 2: Rotation volume

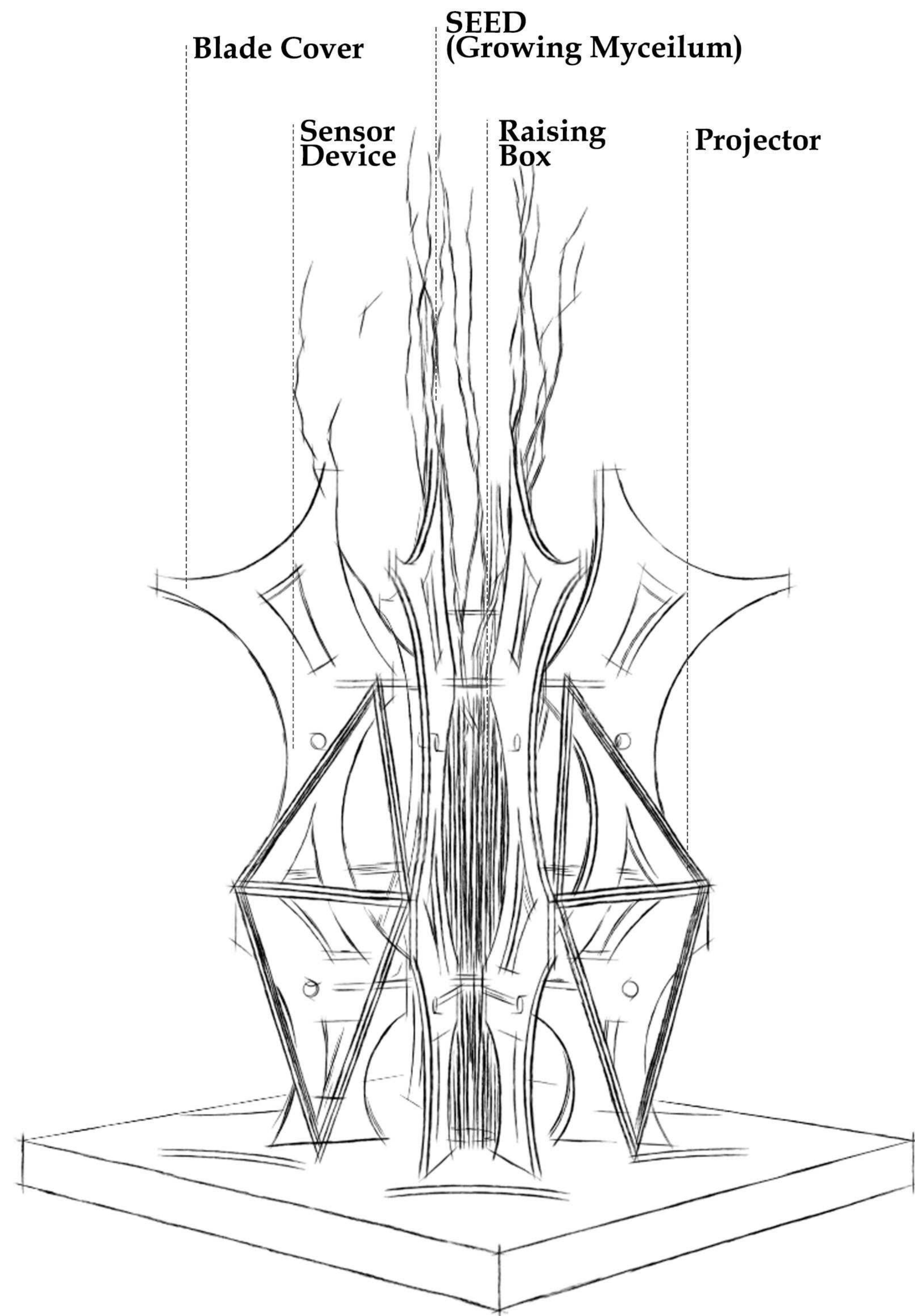


STEP 3: Get Connection

Roman Ornament. Corinthian and Composite Capitals. The Acanthus." World4 Costume Culture History, <https://world4.eu/roman-ornament/>.

SHAPE GENERATION

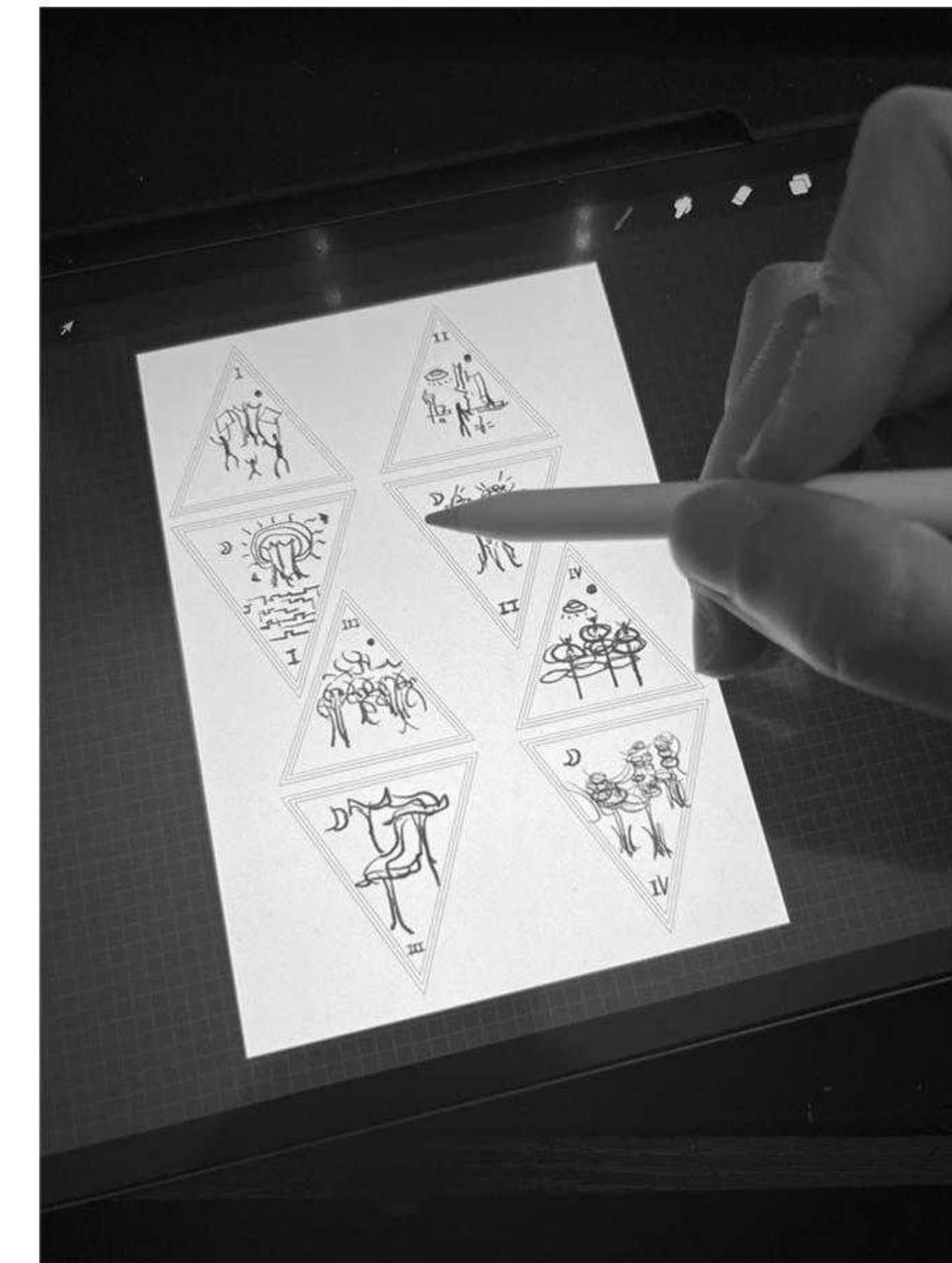
-First Model



A

B

C



D

E



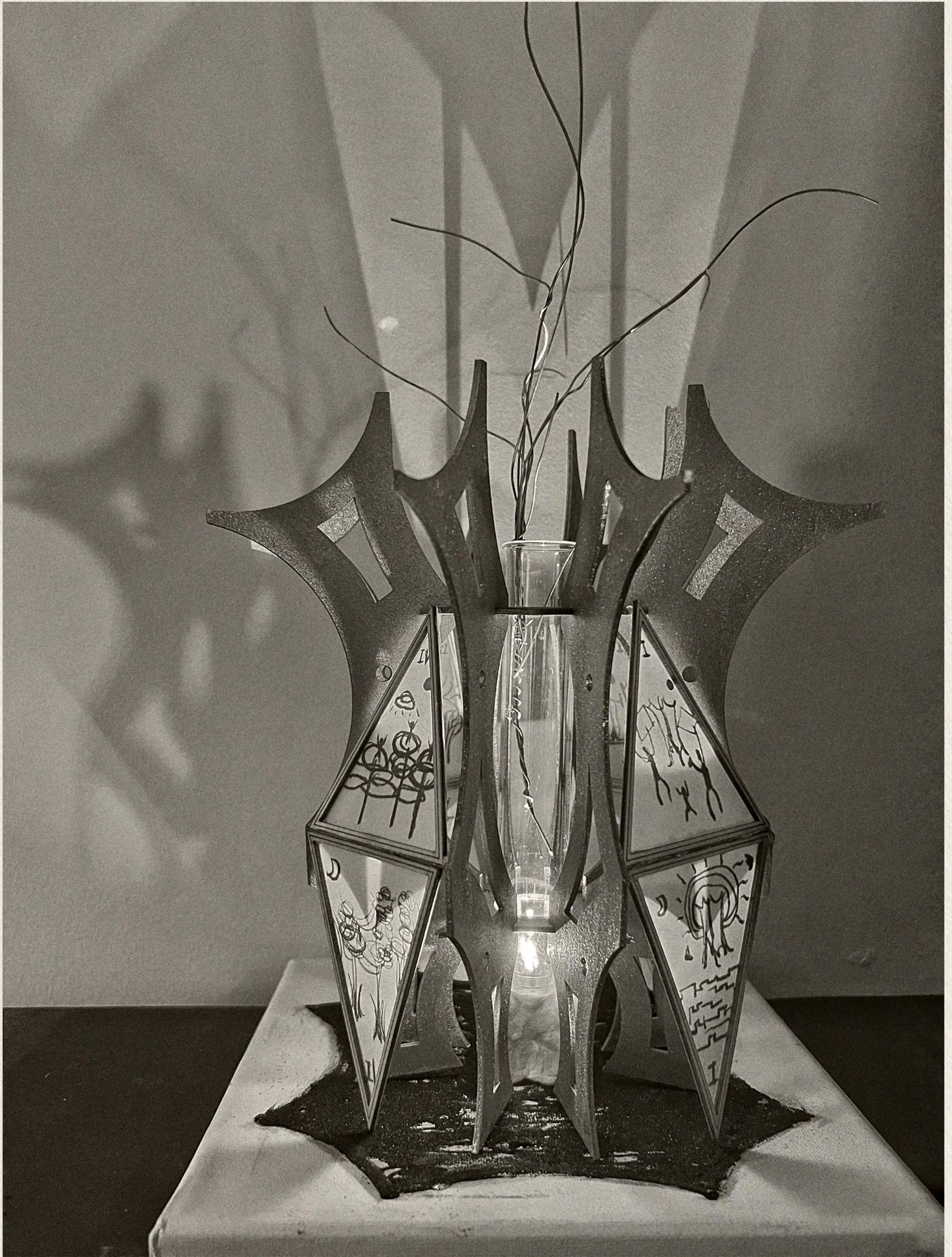
A-CUTTING DRAWING

B-LASER CUT

C-PRE-ASSEMBLE

D-DRAWING TOTEM

E-COMPLETED ASSEMBLE

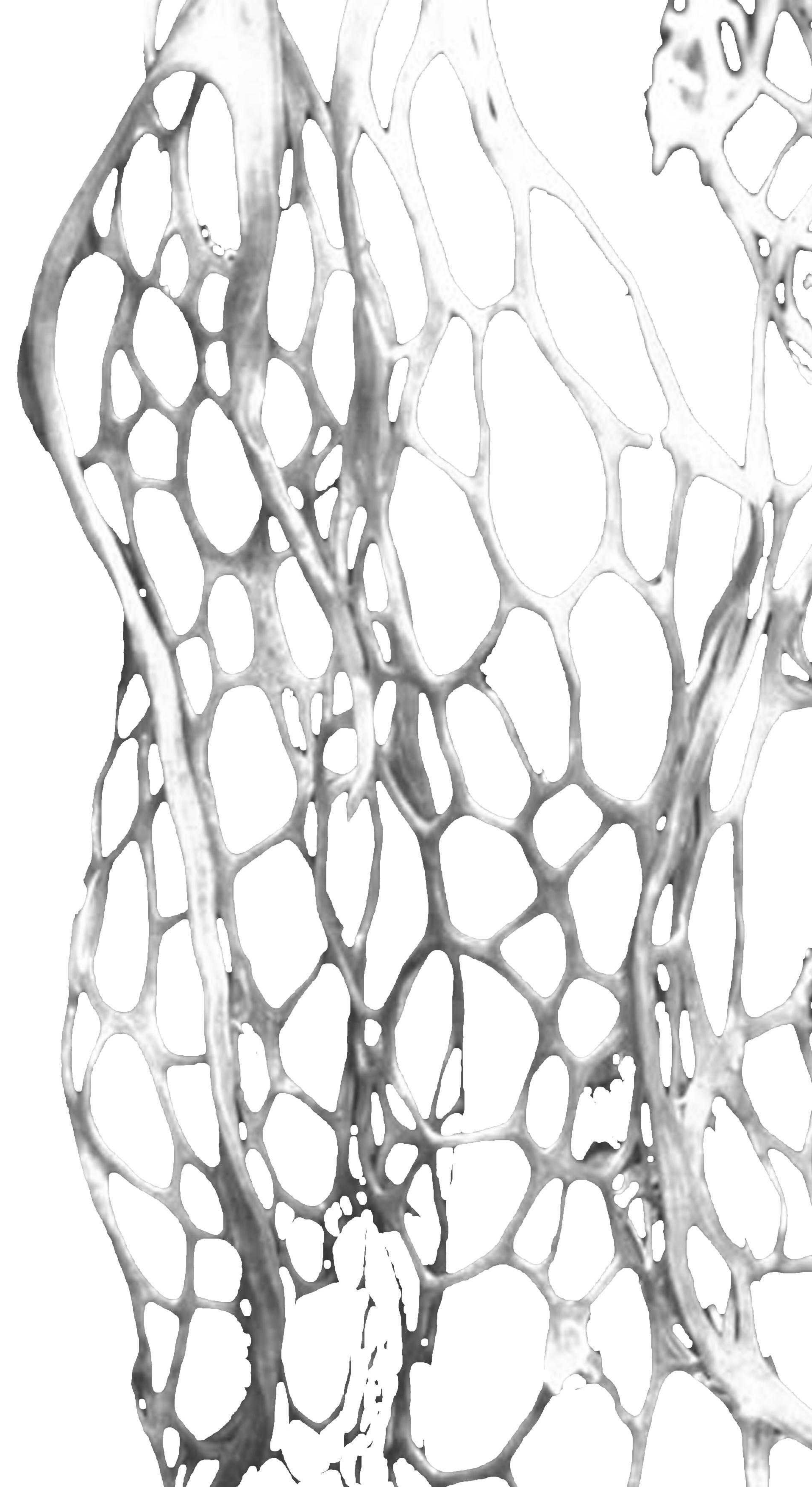


SHAPE GENERATION

-First model thoughts

When I was creating the first model, I simultaneously began exploring mycelium as a material. However, after the first model was completed, I realized its static nature made it difficult to adapt to temporal evolution across different time periods. Therefore, I sought breakthroughs in materials to enhance the dynamic qualities of the model.

*The keywords for the next model:
dynamic, adaptability, more organic form.*

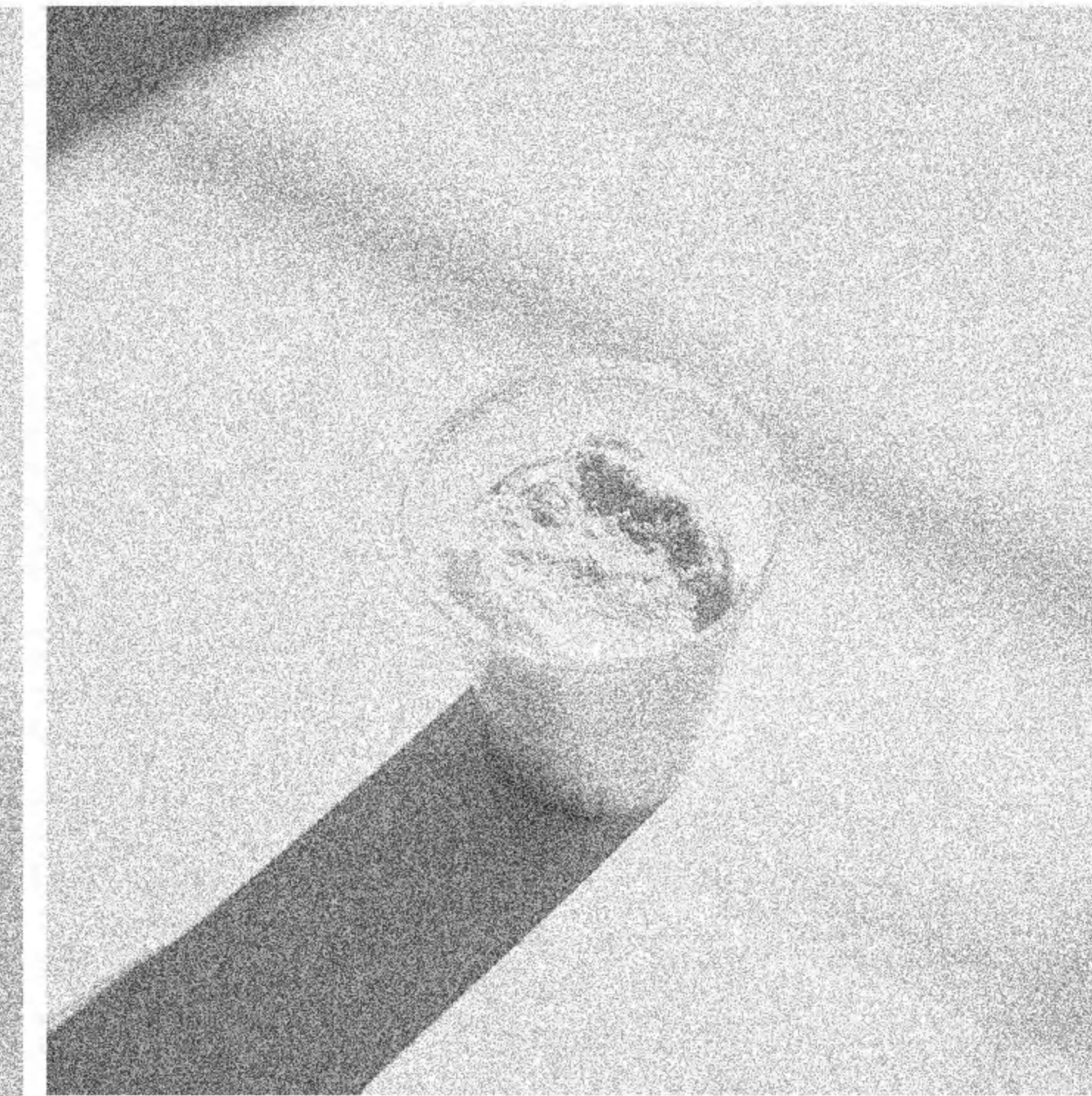


SHAPE GENERATION

*-Cultivate mycelium
&
Bamboo fungus*



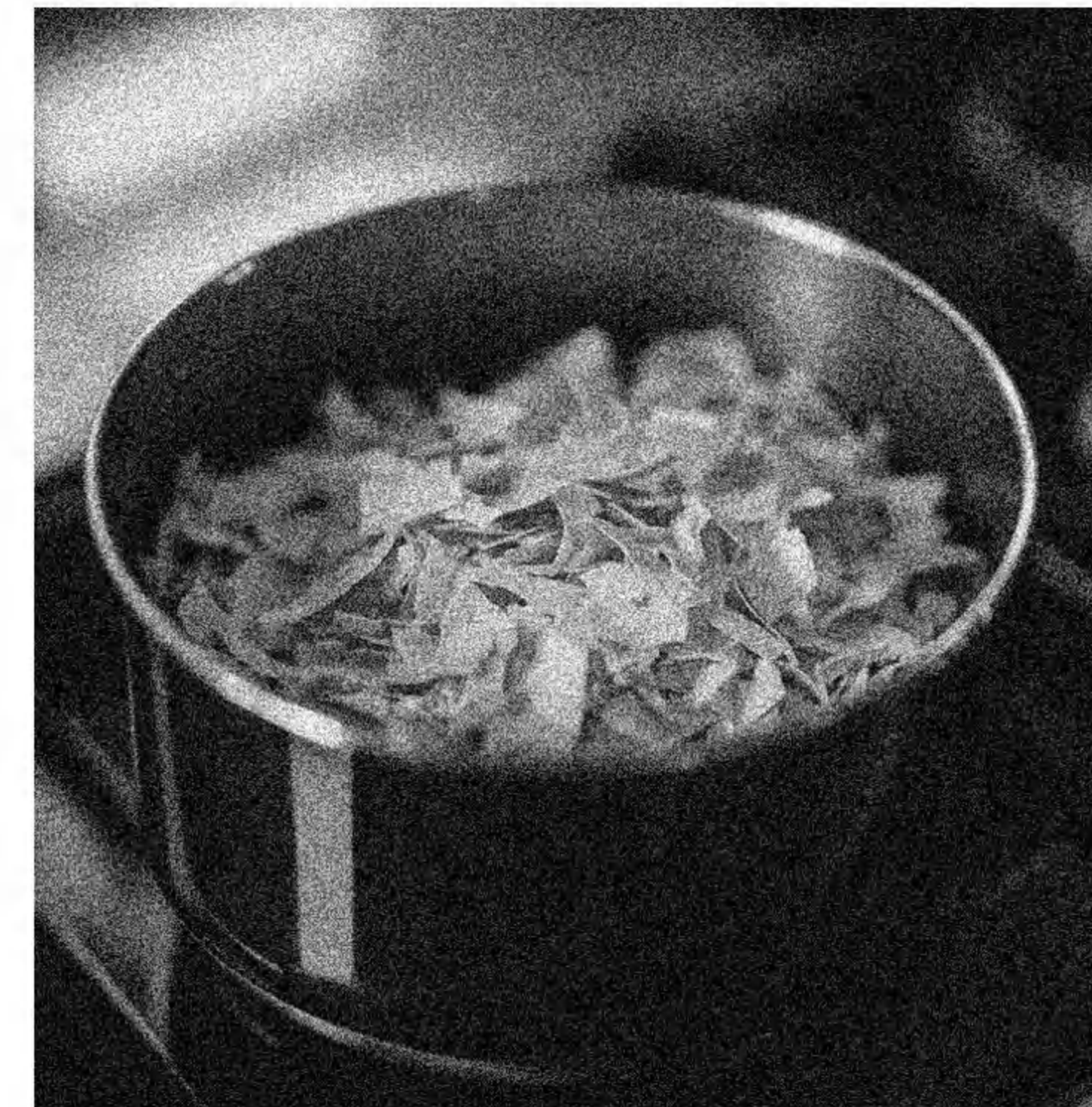
Clean wood chips



Flour



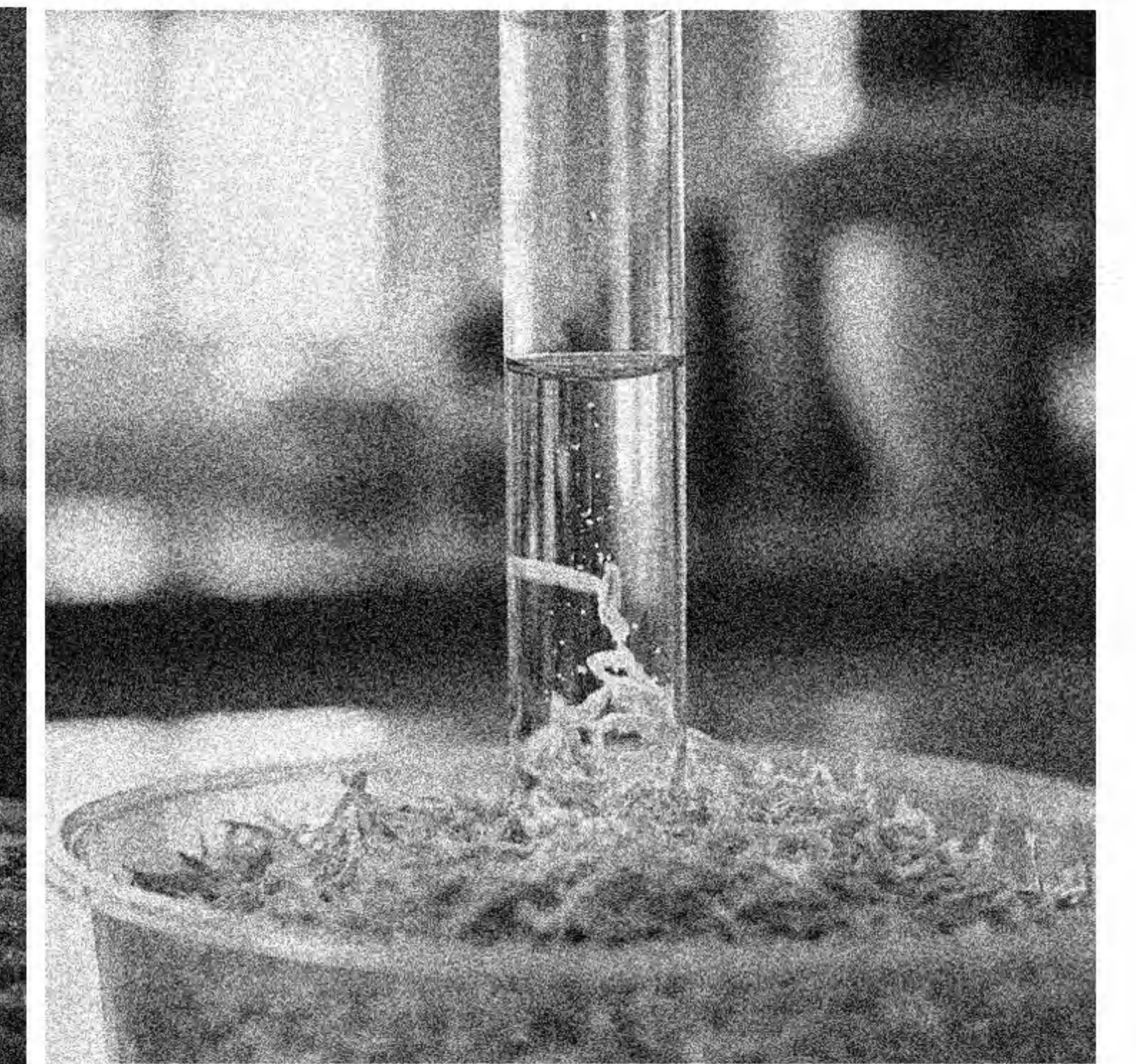
Bamboo fungus liquid



Steam wood chips for 1 hour



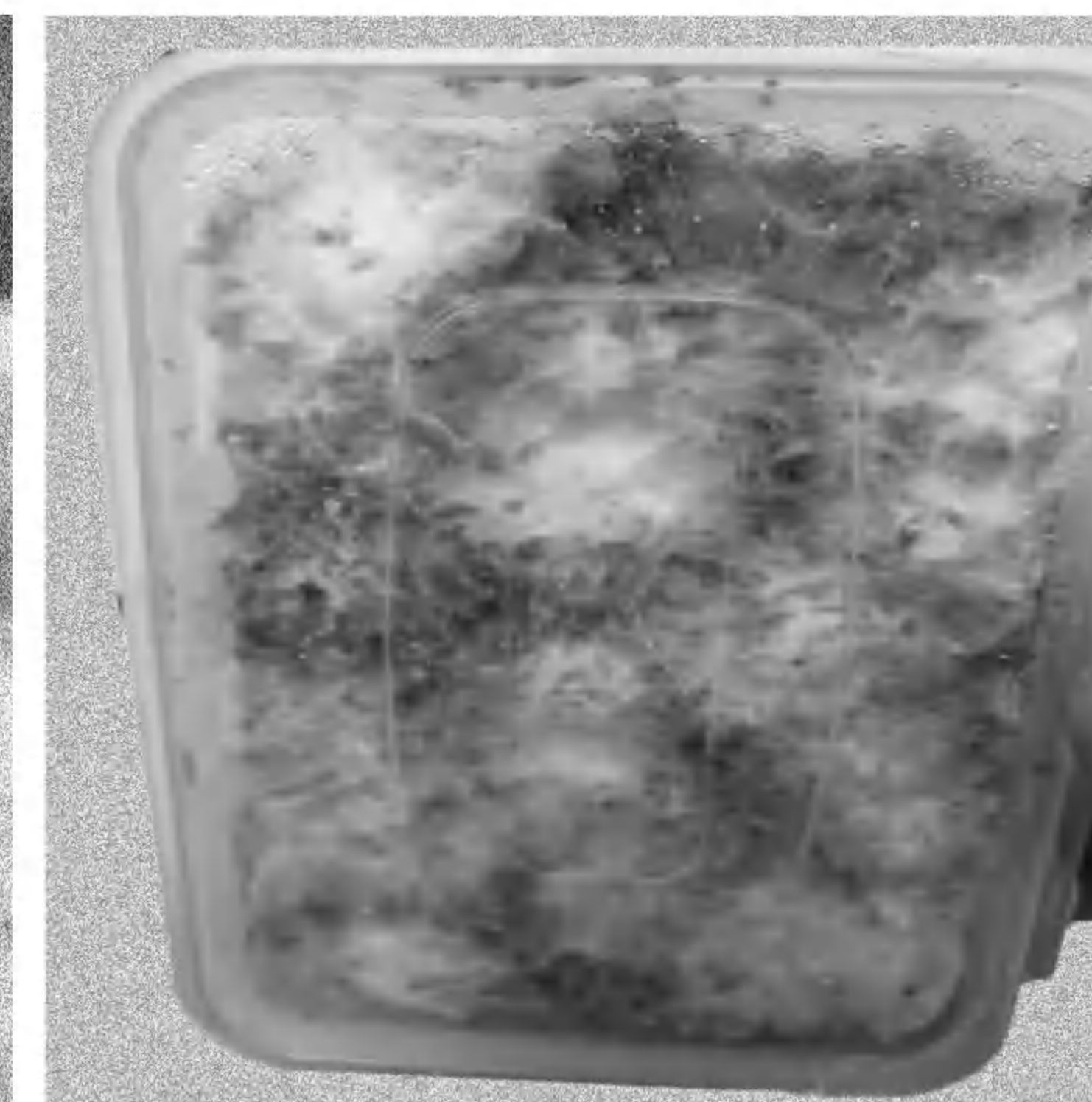
Allow to cool, then weigh.



Add mushroom solution to wood chips at 25% weight



Add one spoon of flour, stir well, and seal.



Seal for 2 weeks until fully covered with mycelium.



Prepare soil for cultivation.



Bury mycelium, water every other day, and grow bamboo fungus.



+45days



+5days



+15 days



Break up and growing in dynamic,



Expanded its shape to surrounding

Can an installation, like bamboo fungus, break through its spore form, keep growing and adaptive?

Future seed

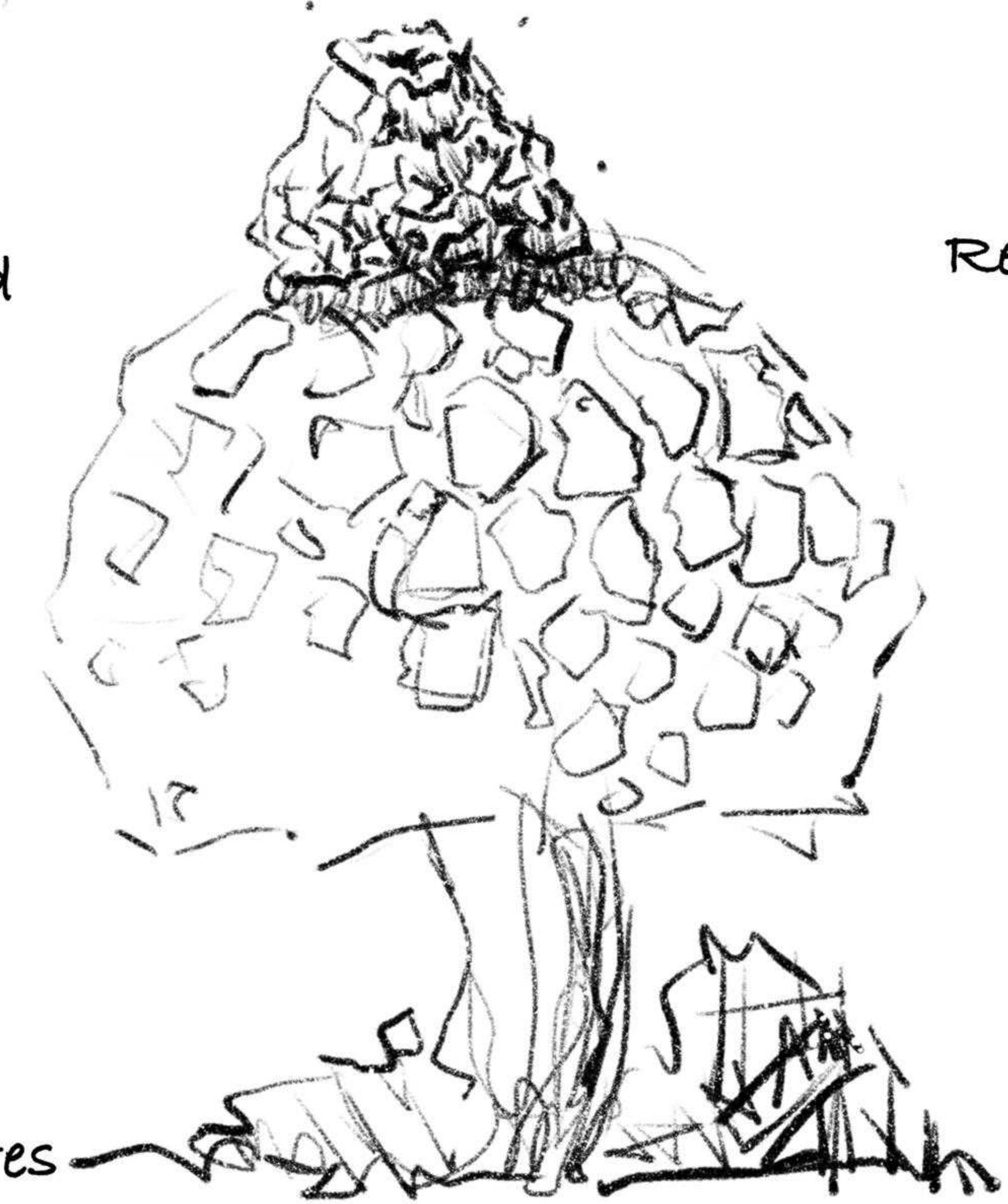
Replicable shape

Shell

Public space

Old structures

Contemporary structures



SHAPE GENERATION

-Second Model

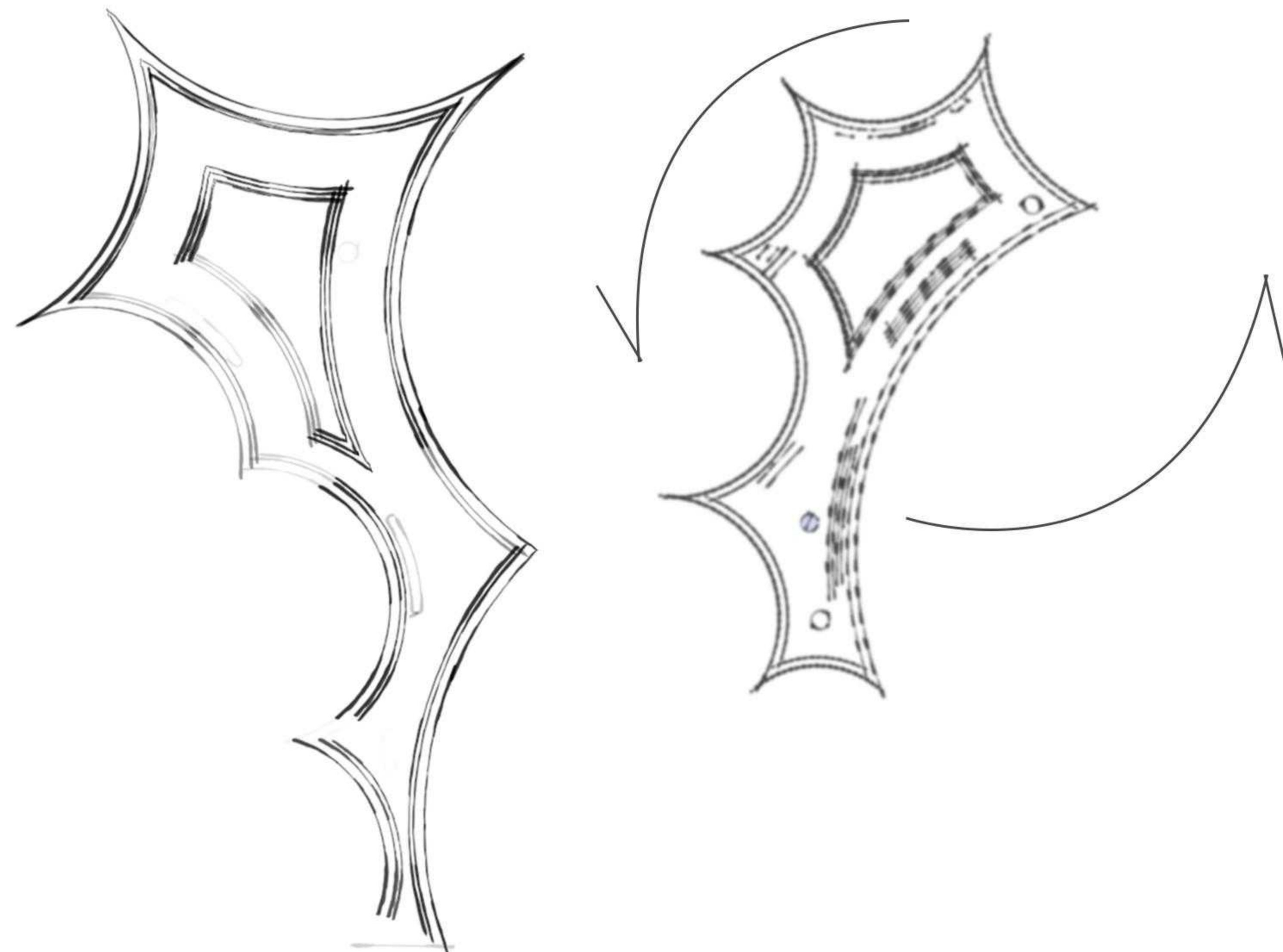
Based on previous experiments and references to classical elements, I upgraded the model to a new generation, redesigning its appearance according to the leaf count and double-layer structure of the Corinthian order. Additionally, I incorporated the growth patterns of bamboo fungus to simulate dynamic opening and closing effects.



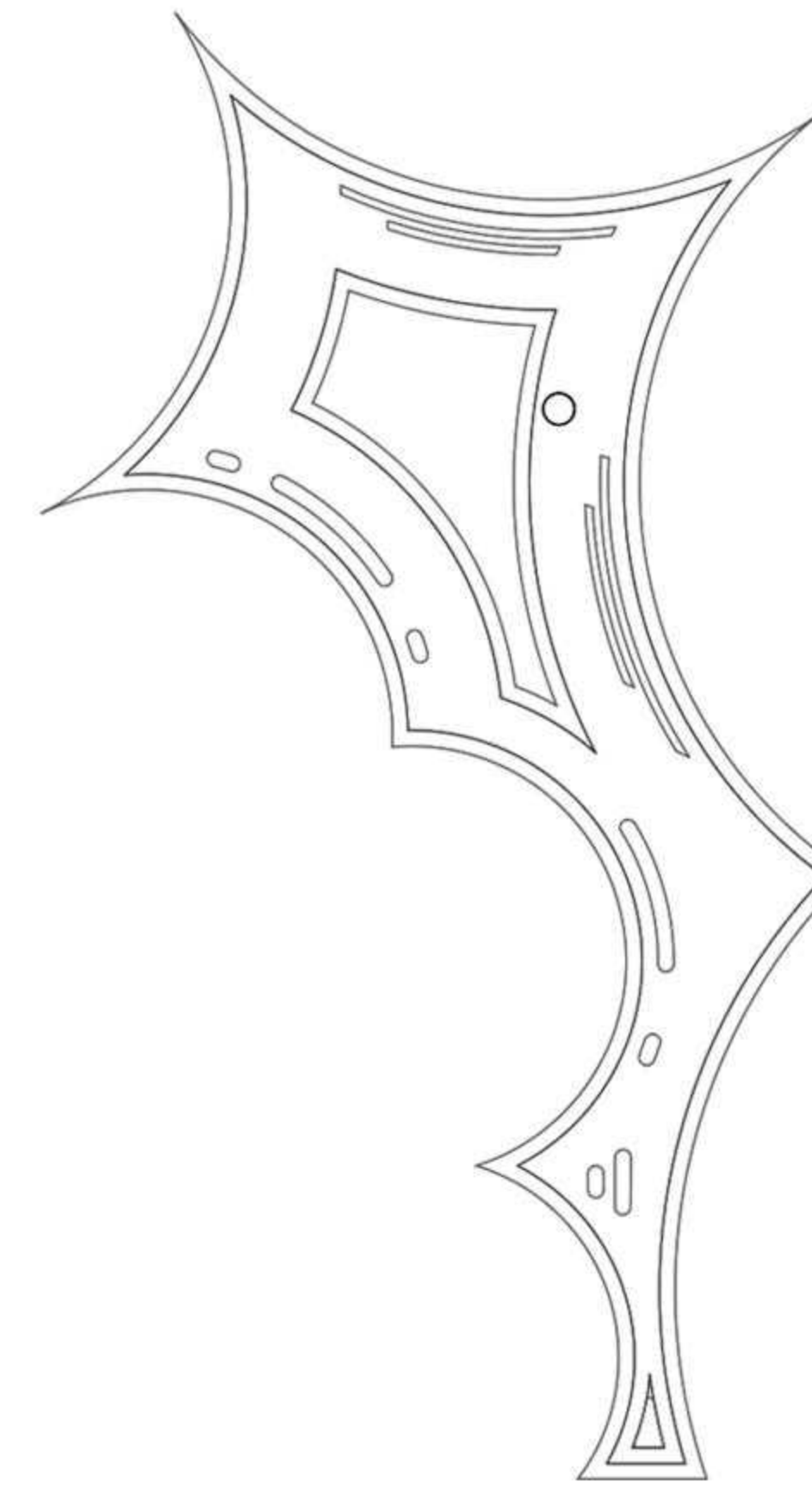
Blade (12 pieces)
2 Layer

Shape

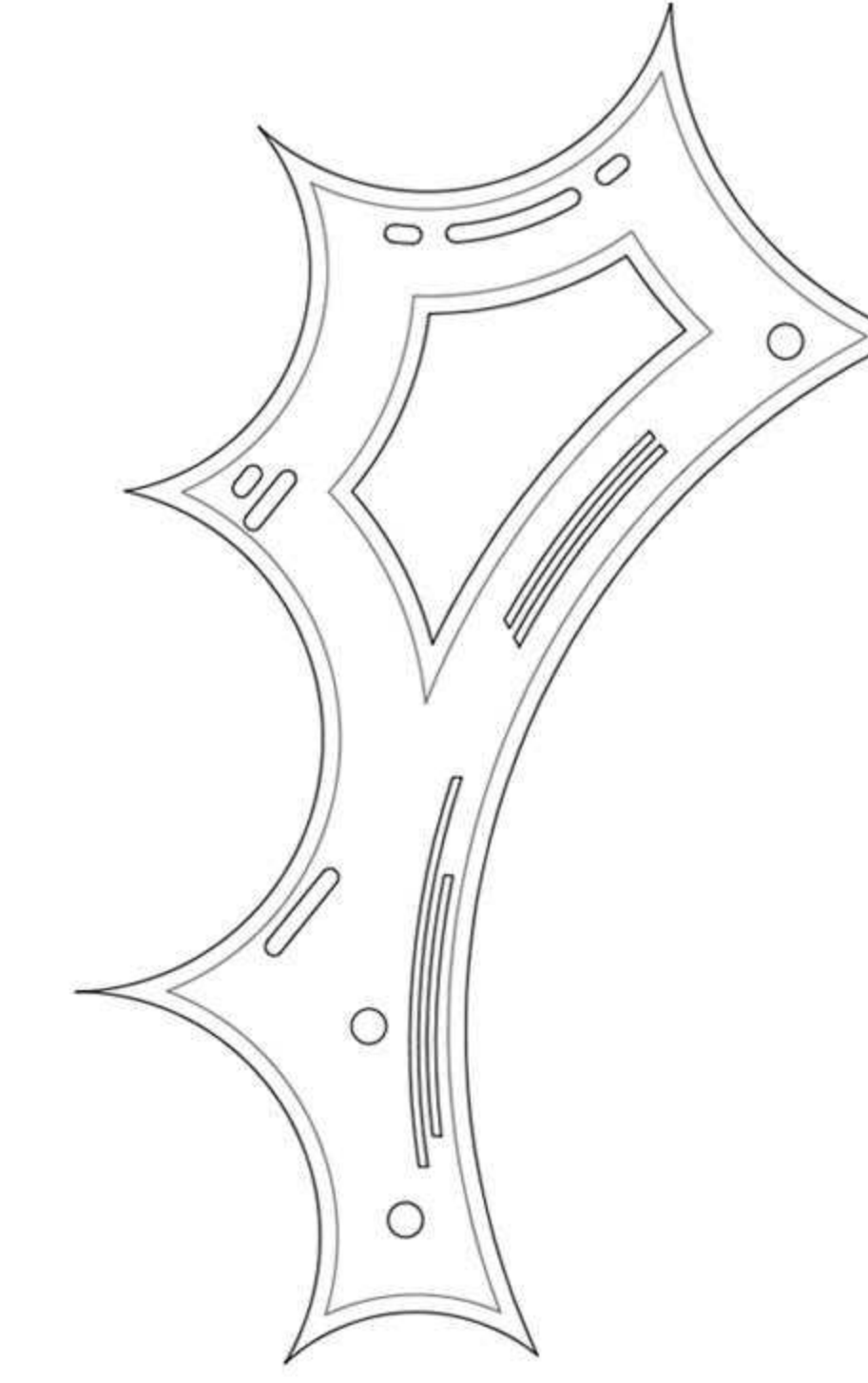
Movement, texture



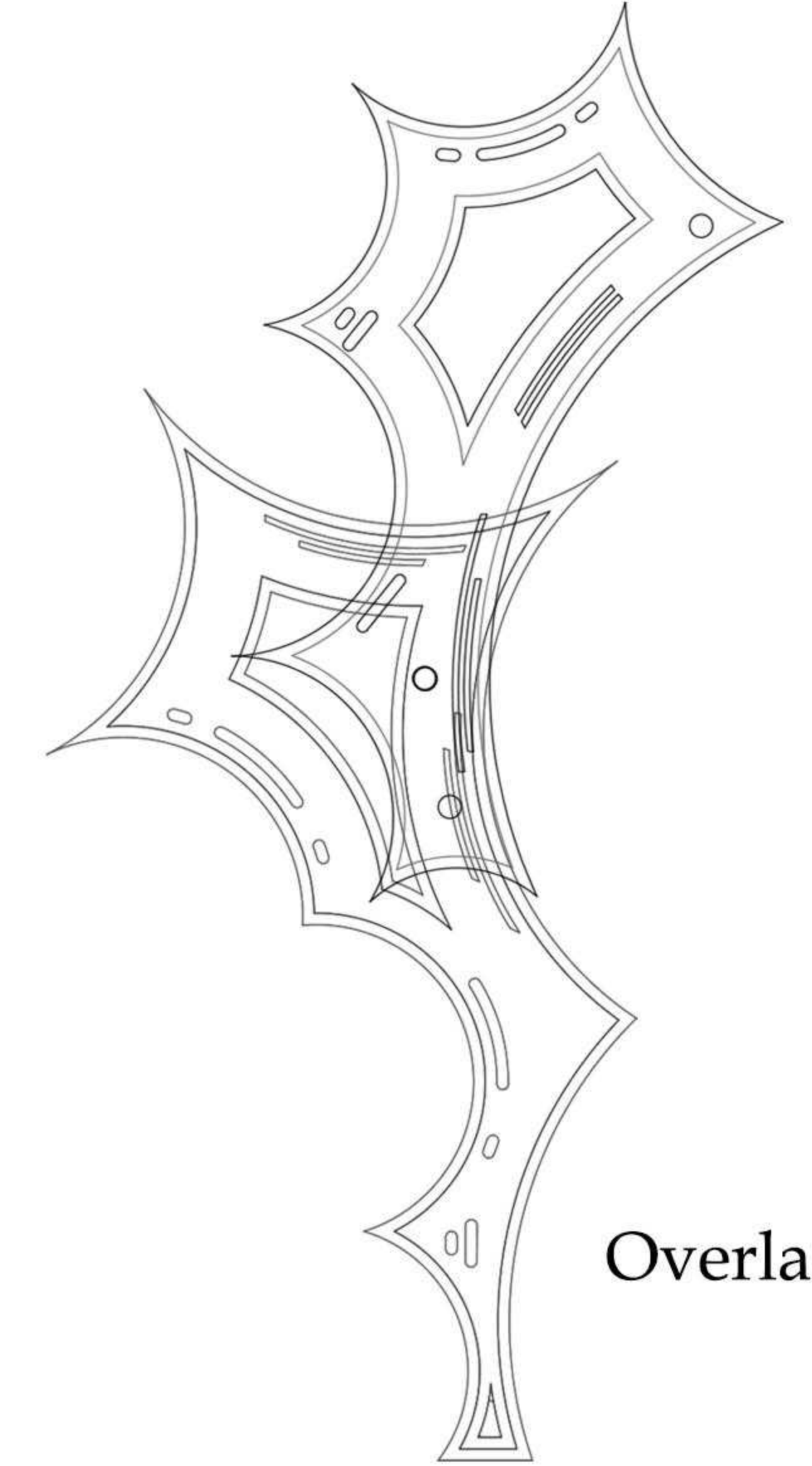
Digitalize Drawing



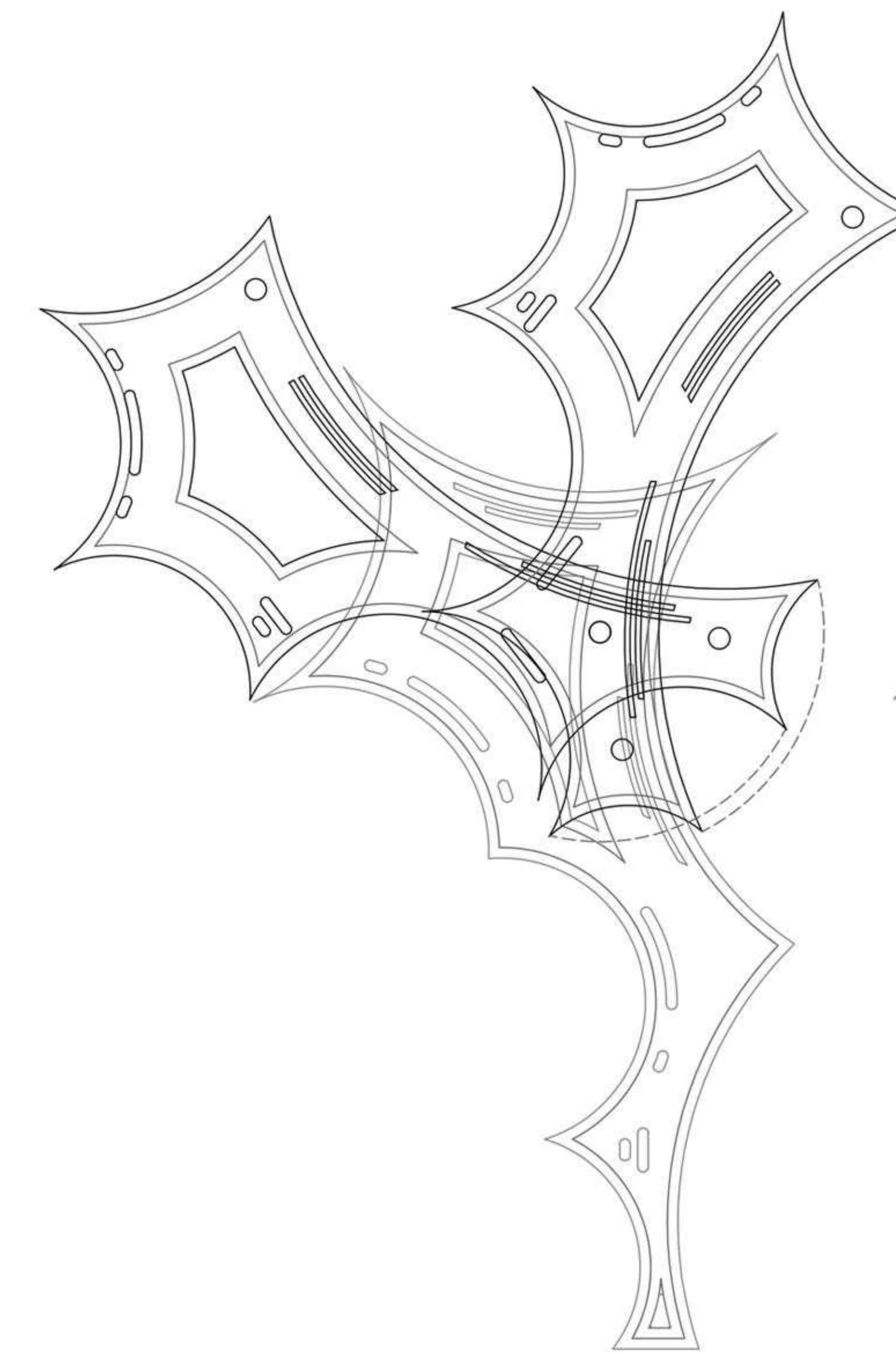
1st layer



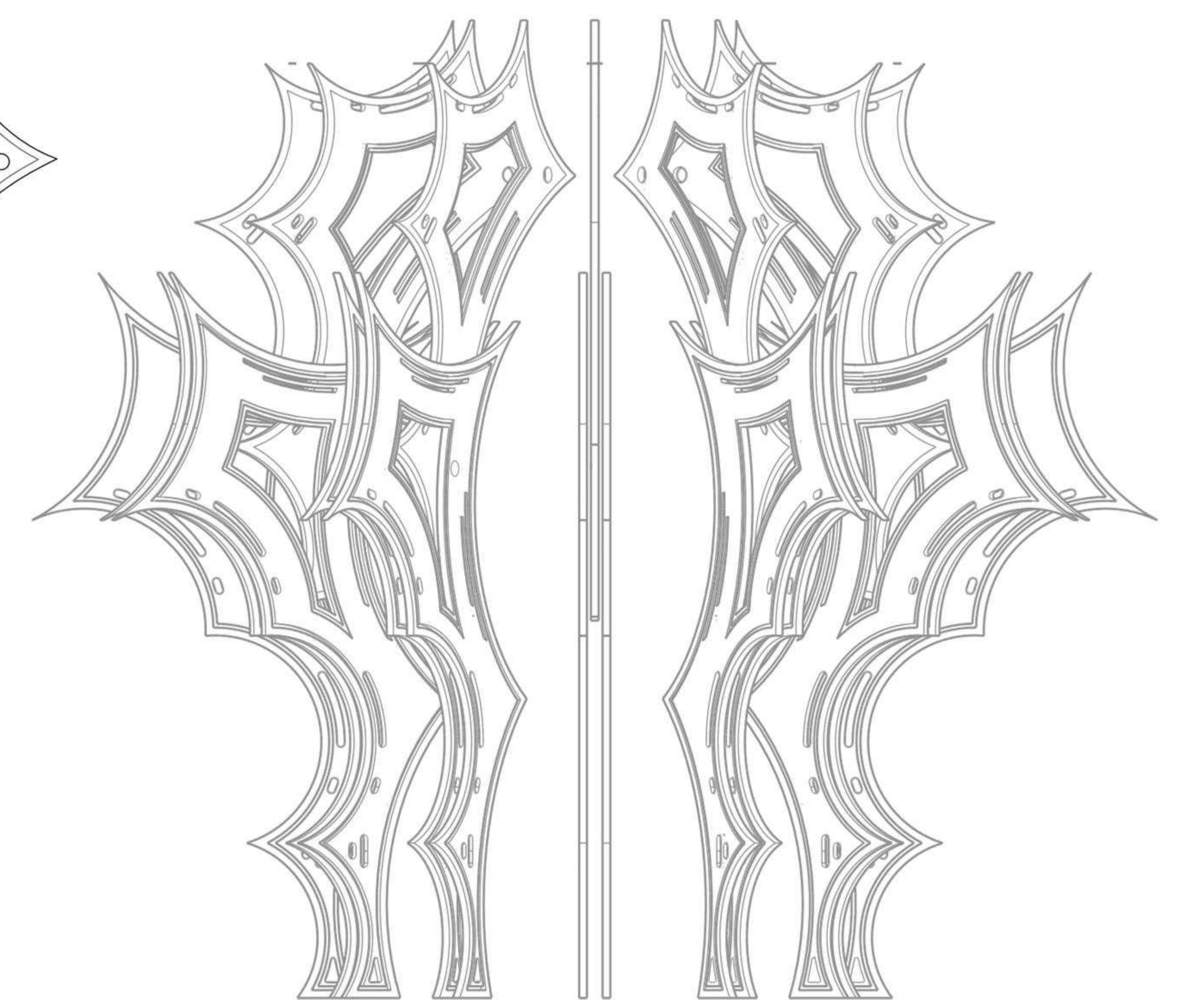
2nd layer



Overlapped



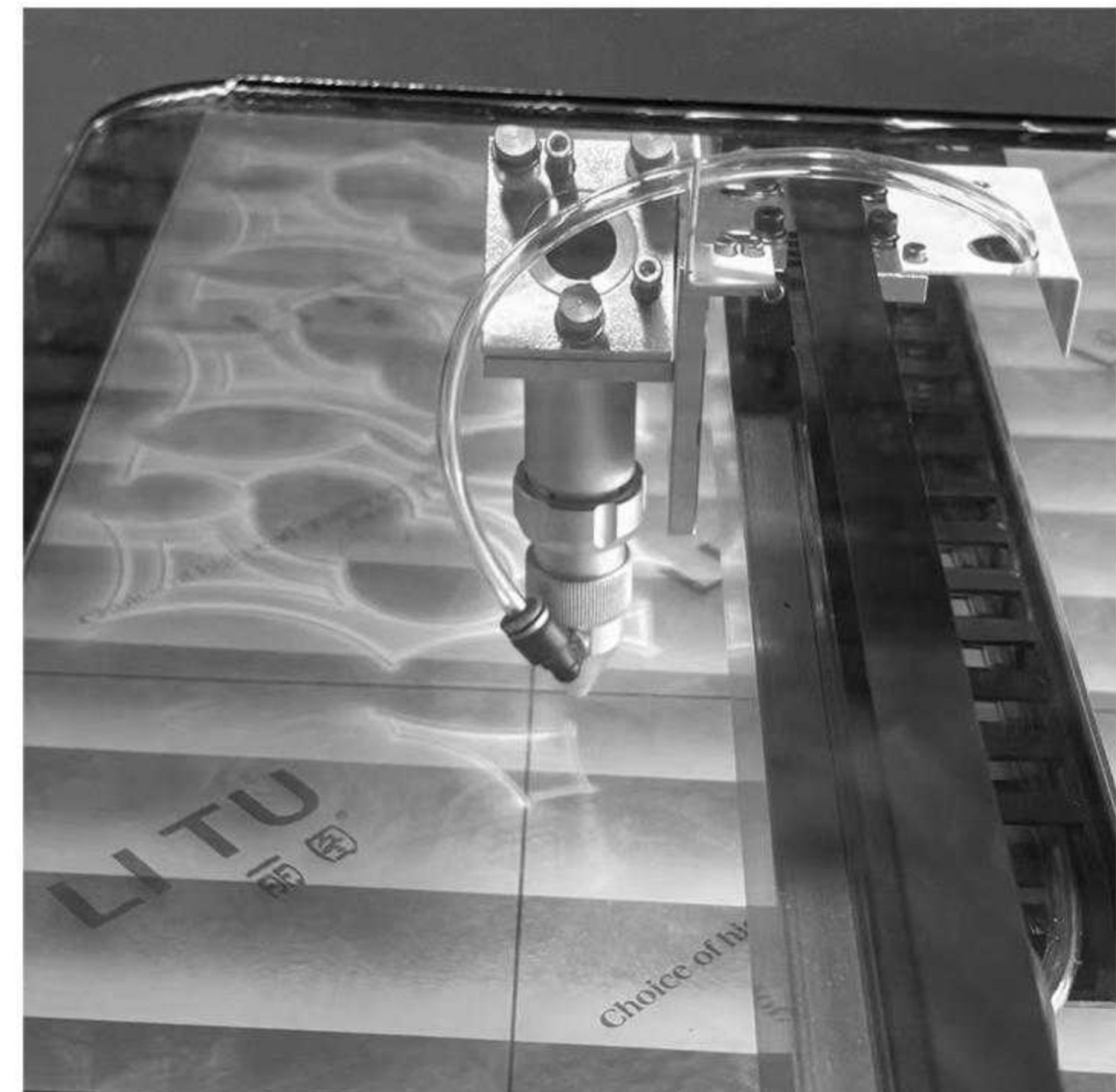
Movement idea



Array 12 blade

SHAPE GENERATION

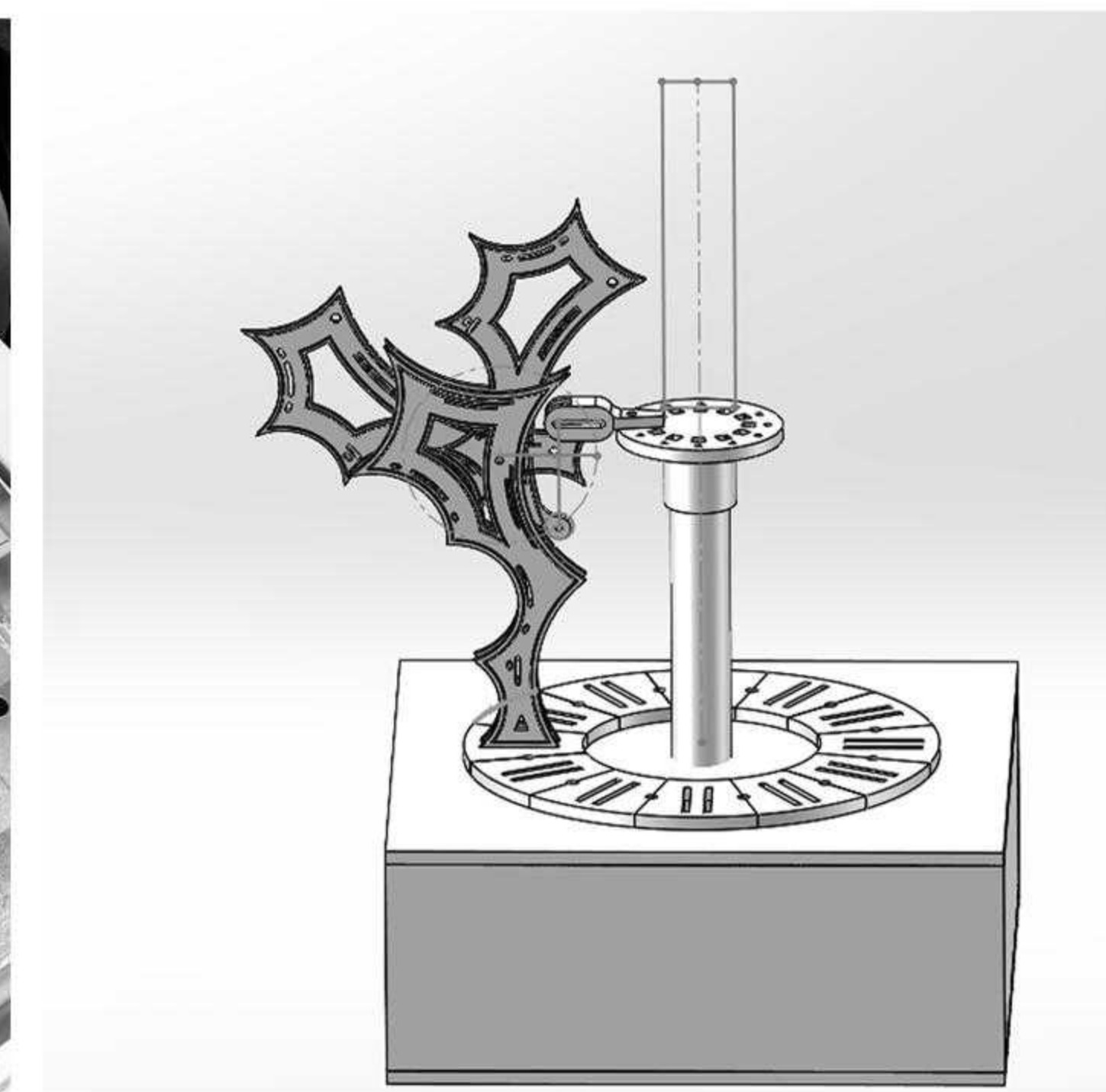
-Second Model Realization



Acrylic laser-cut fan surface



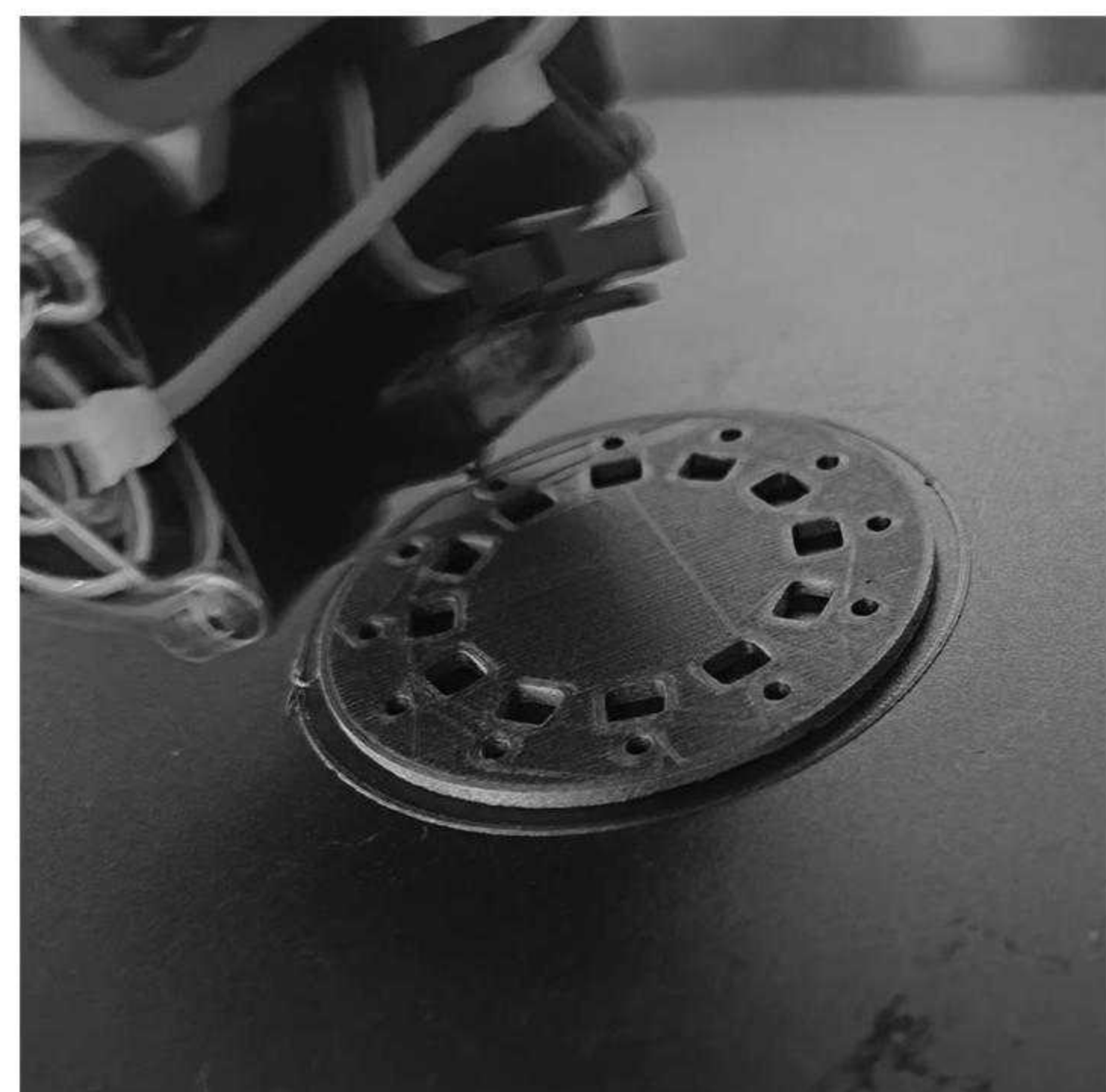
Basic airbrush coloring



Mechanical parts simulation



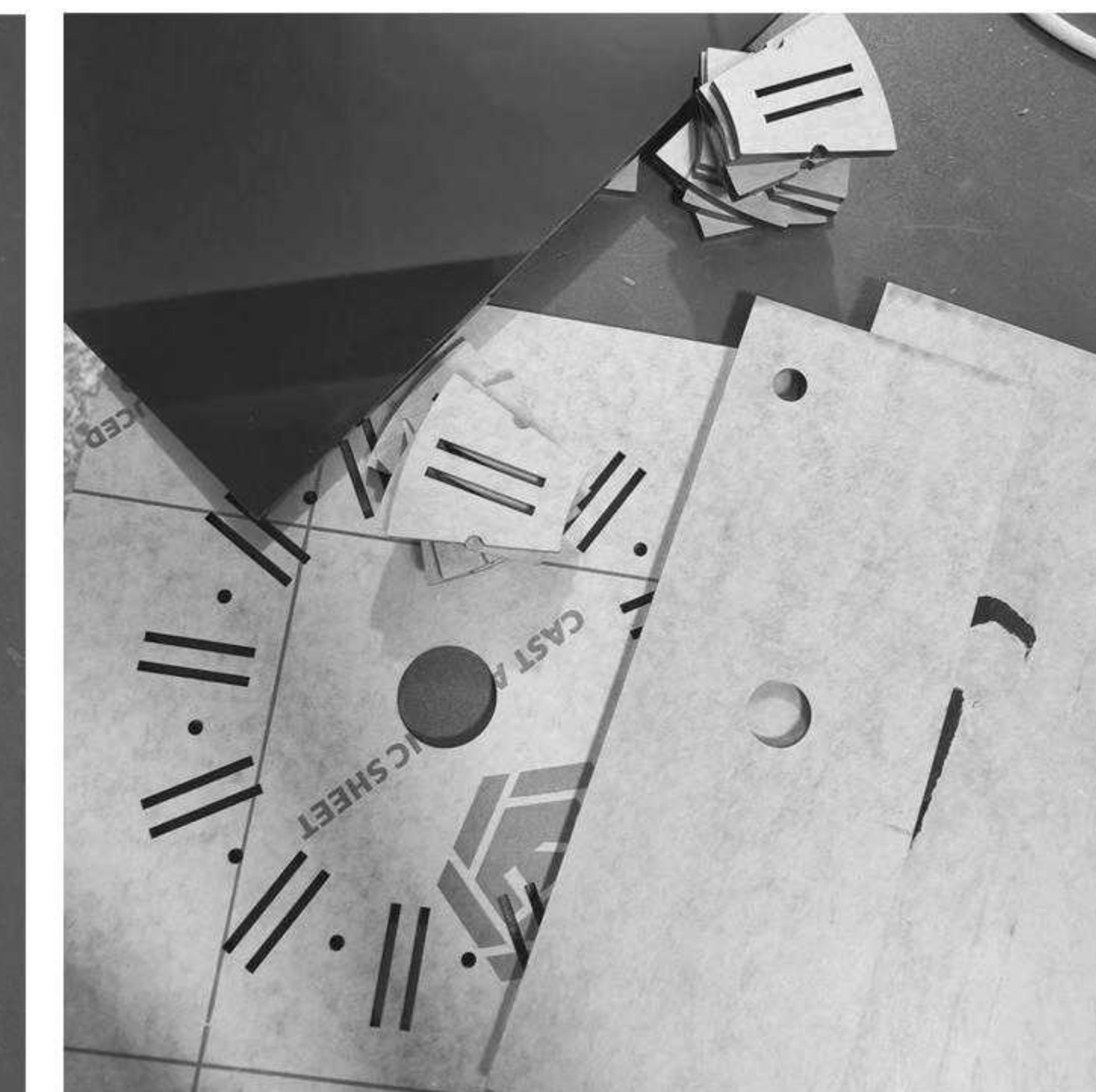
Preparing for initial installation



Dynamic parts 3D printing



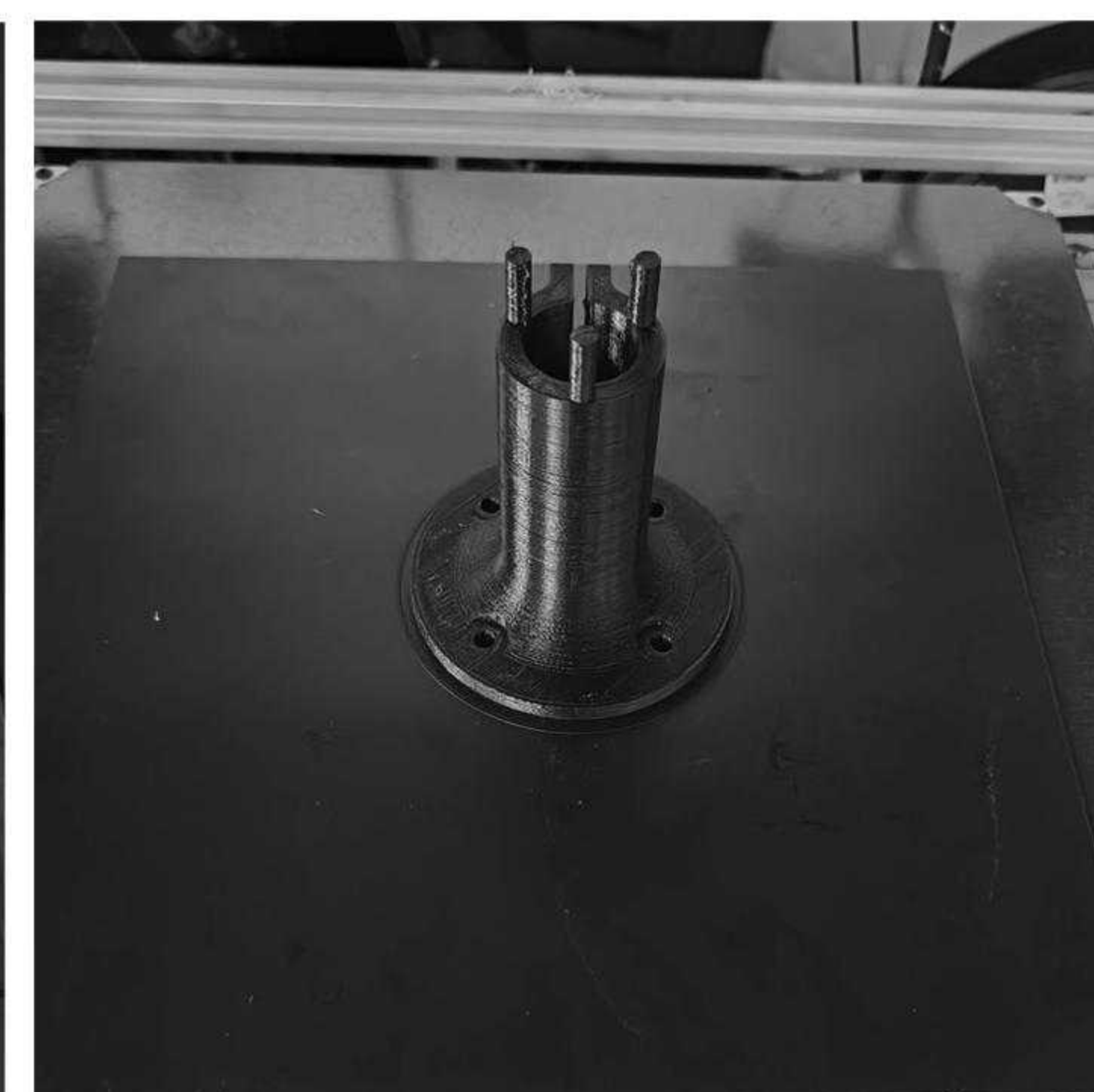
Connector printing



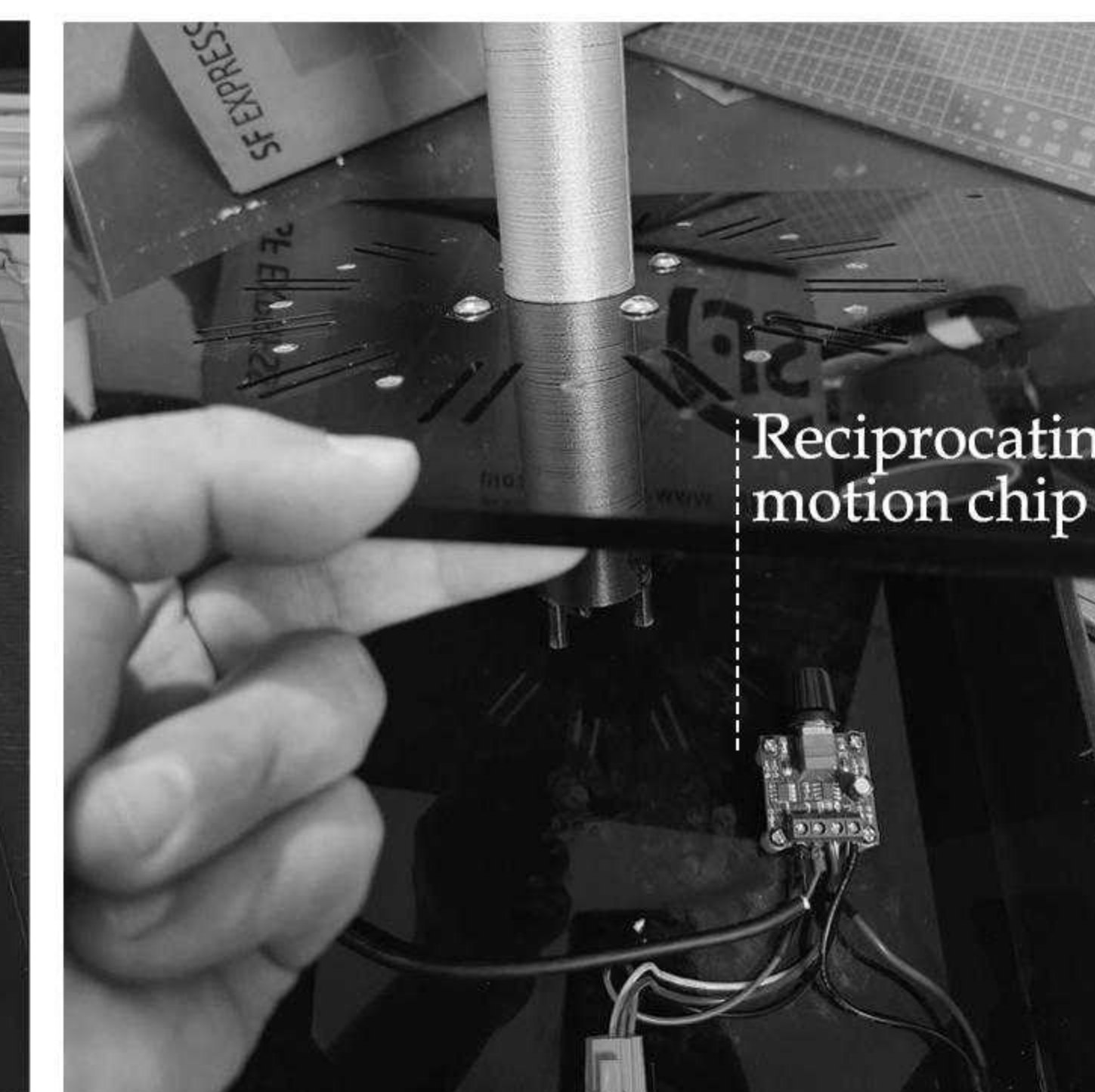
Electrical box base printing



Motor purchase



Motor cover printing



Motor installation





PACKAGING TIME

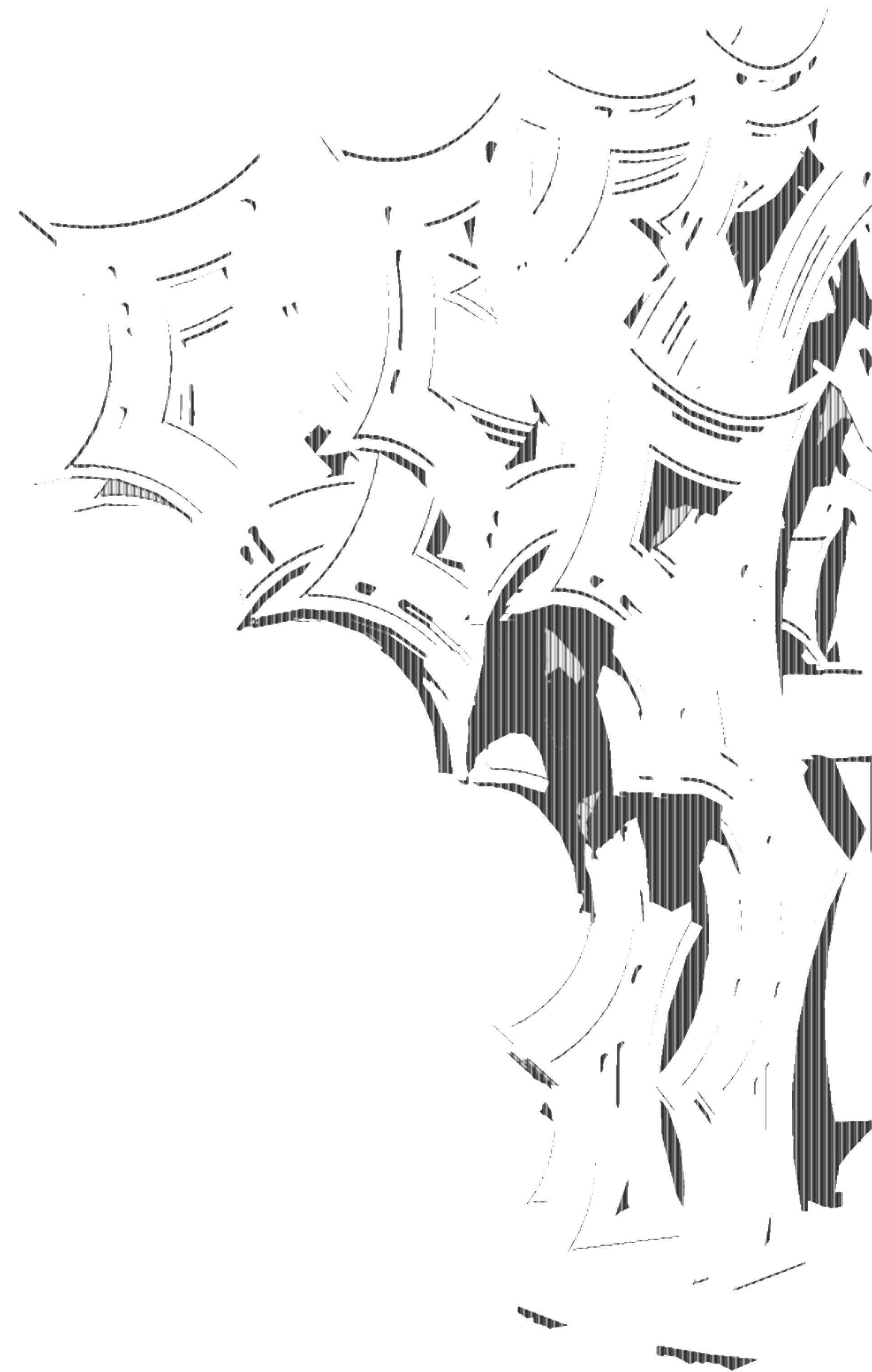
How can the installation embody different roles across time and space?

In this chapter, I will explore the transformation and evolution of the installation across different periods through the approach of Speculative Design, grounded in a dystopian worldview. This narrative unfolds over three main time frames:

2024-2099, where the installation initially exists as an independent entity interacting structurally with human society;

2099-2199, during which, due to the uninhabitable Earth's surface, the installation seeds begin to interlink, forming platform structures;

post-2200, when the organic form of the installation gradually evolves to become a foundational module for future cities.



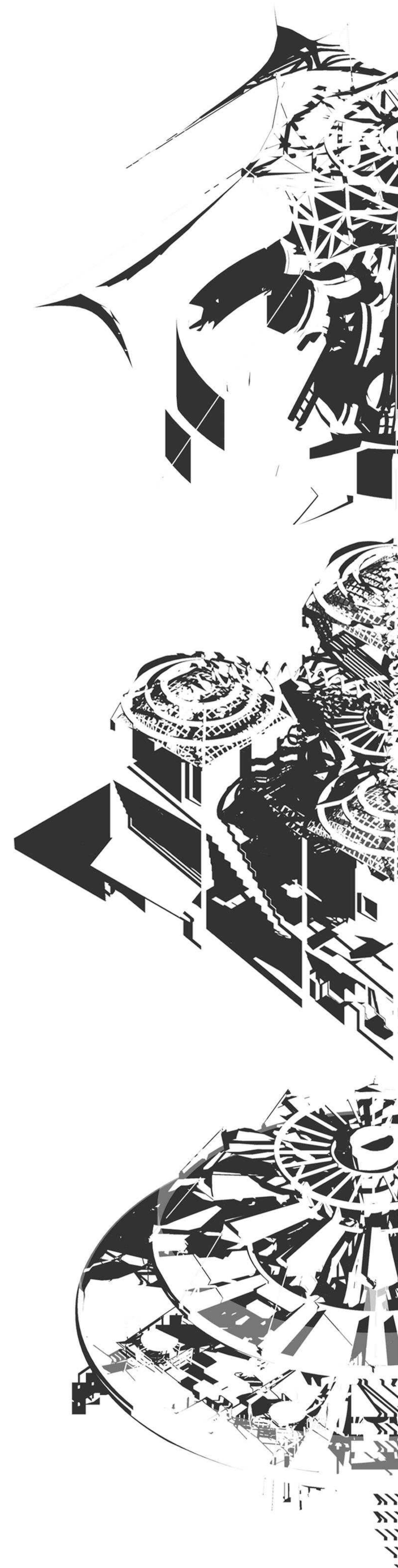
PHASE 1

2024-2099

Social Fabric Module

The Roman Wall of London was originally built to protect the ancient city's boundaries, which made me ponder: could I place my designed installation (inspired by the heritage of Roman Wall) within the city of London to meet the needs of present communities?

"Heritage to Present-Day"



PACKAGING TIME

2024-2099



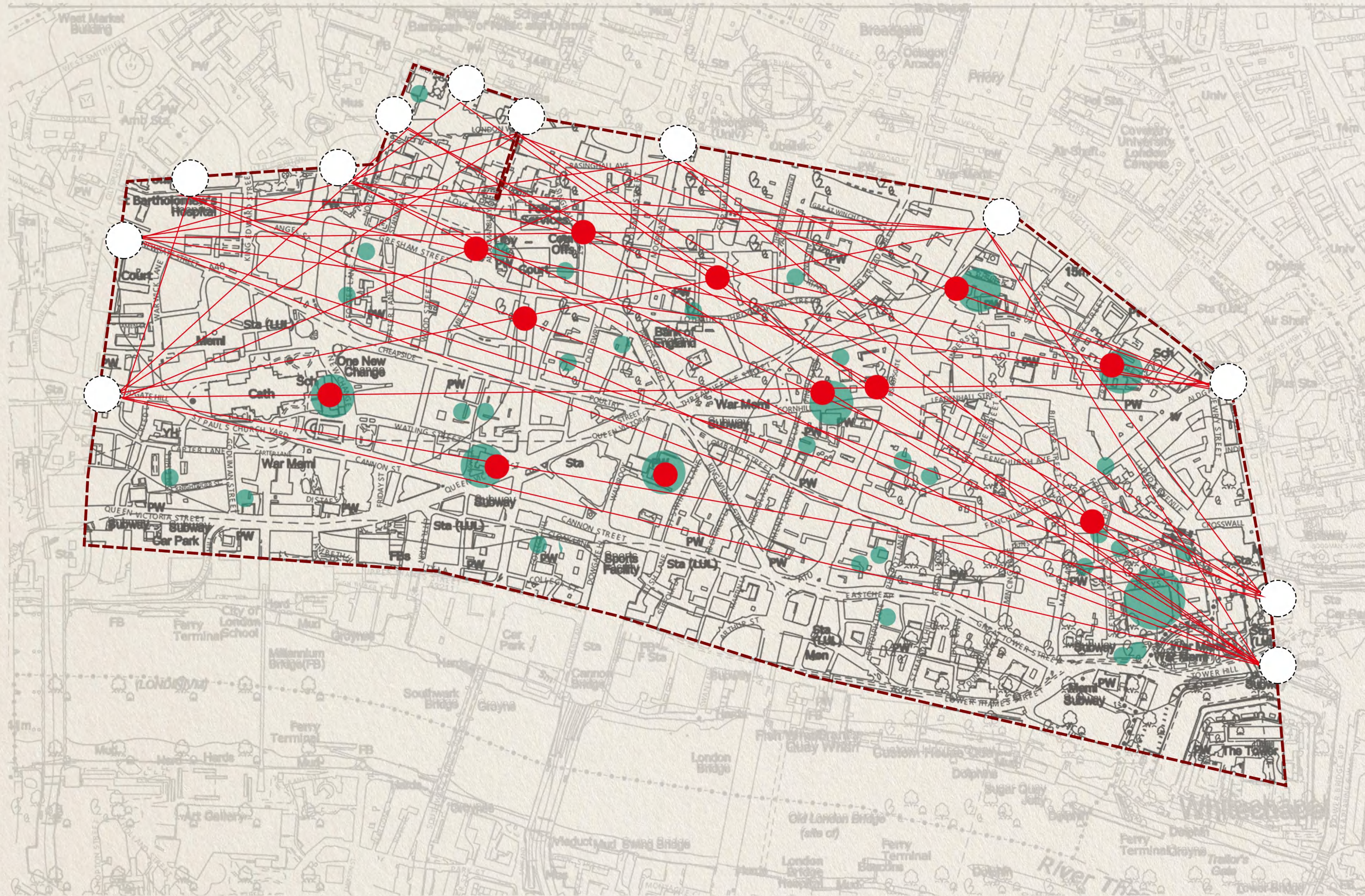
This map shows the 2024 layout of London's Roman Wall and nearby community hubs. Currently unconnected.

I wonder if this ancient relic, once built to defend Londinium, could establish new links with today's society and future generations.

Community informations come from <https://democracy.cityoflondon.gov.uk> › documentsving-sculptures/

PACKAGING TIME

2024-2099



I've connected the existing points of the Roman Wall remnants to create a network of installation sites, enabling the structure to encompass the current community hubs.

- LONDON WALL
- Installation point
- Residence

PACKAGING TIME

2024-2099

To explore the placement of installations within London's public spaces, I randomly selected three areas as ideal locations. These locations are all situated in park zones, adjacent to residential and commercial areas. Based on the site analysis of these three points, the study will delve into how the installation can transition from "Heritage" to "Prsent-Day."

The three modules can be placed anywhere according to the characteristics of their locations.



London wall map



SITE 1 Petticoat Square



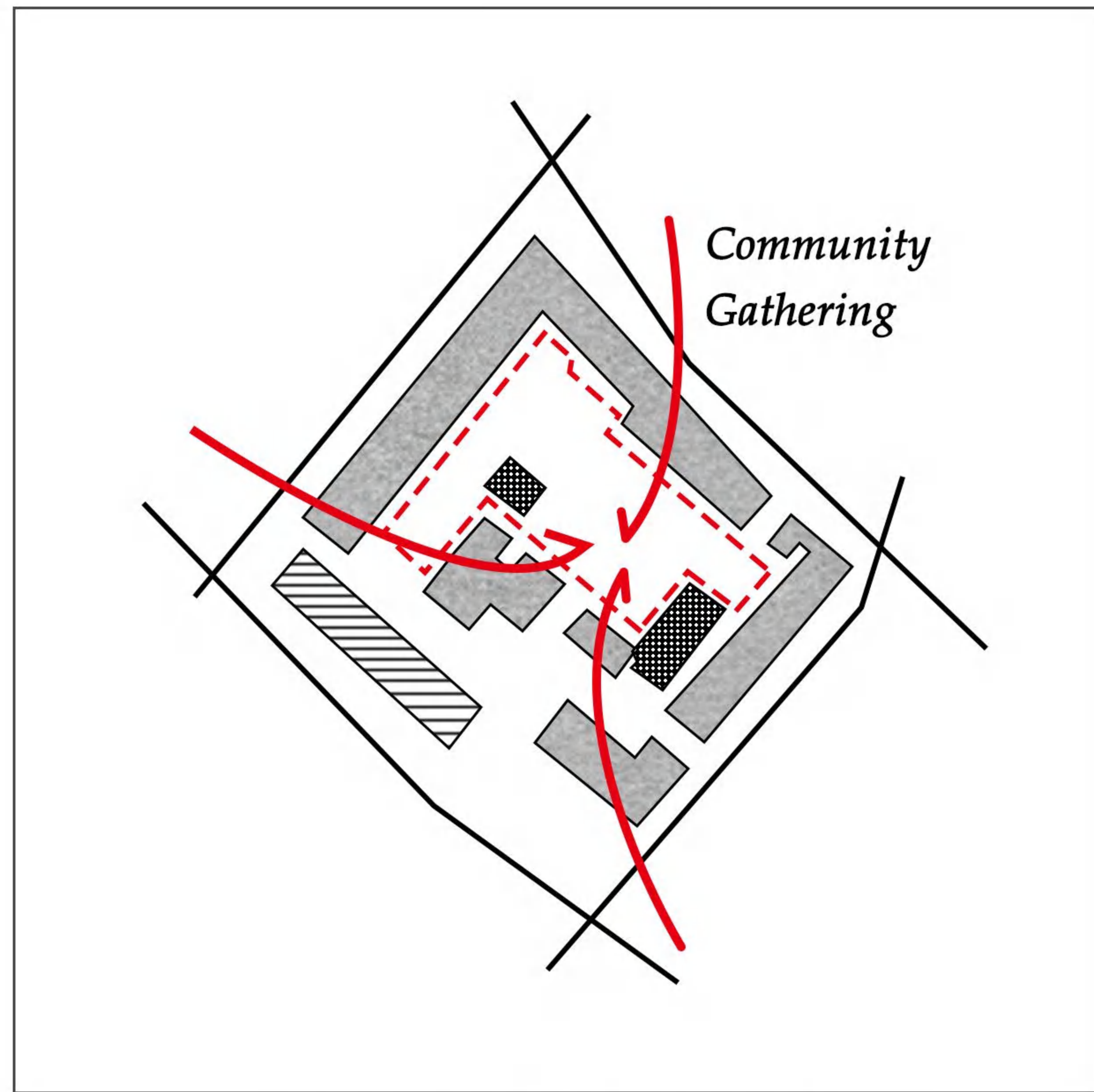
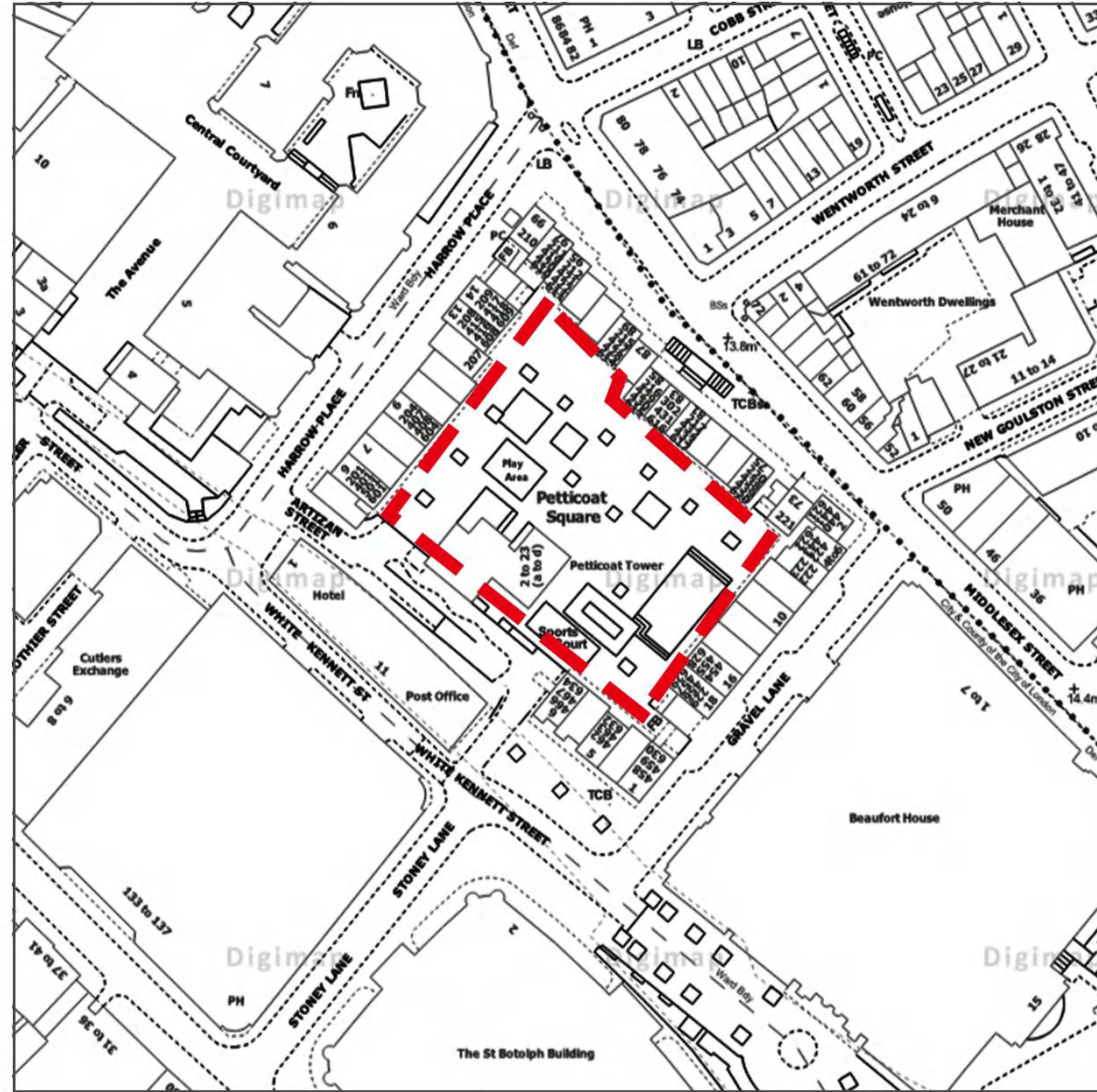
SITE 2 Festival Gardens



SITE 3 Fenchurch Street Square

SITE 1

Petticoat Square E1,7DA

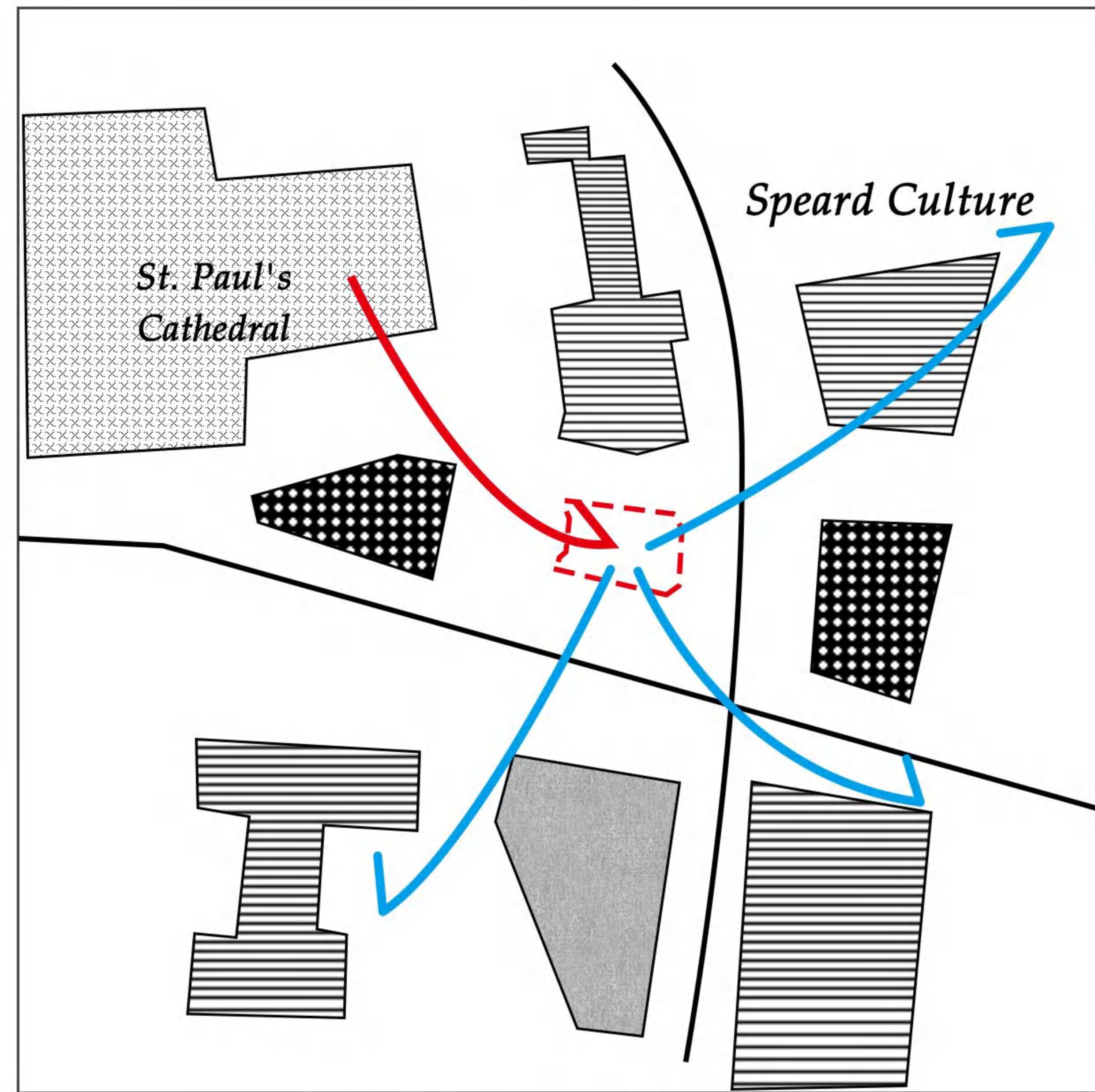
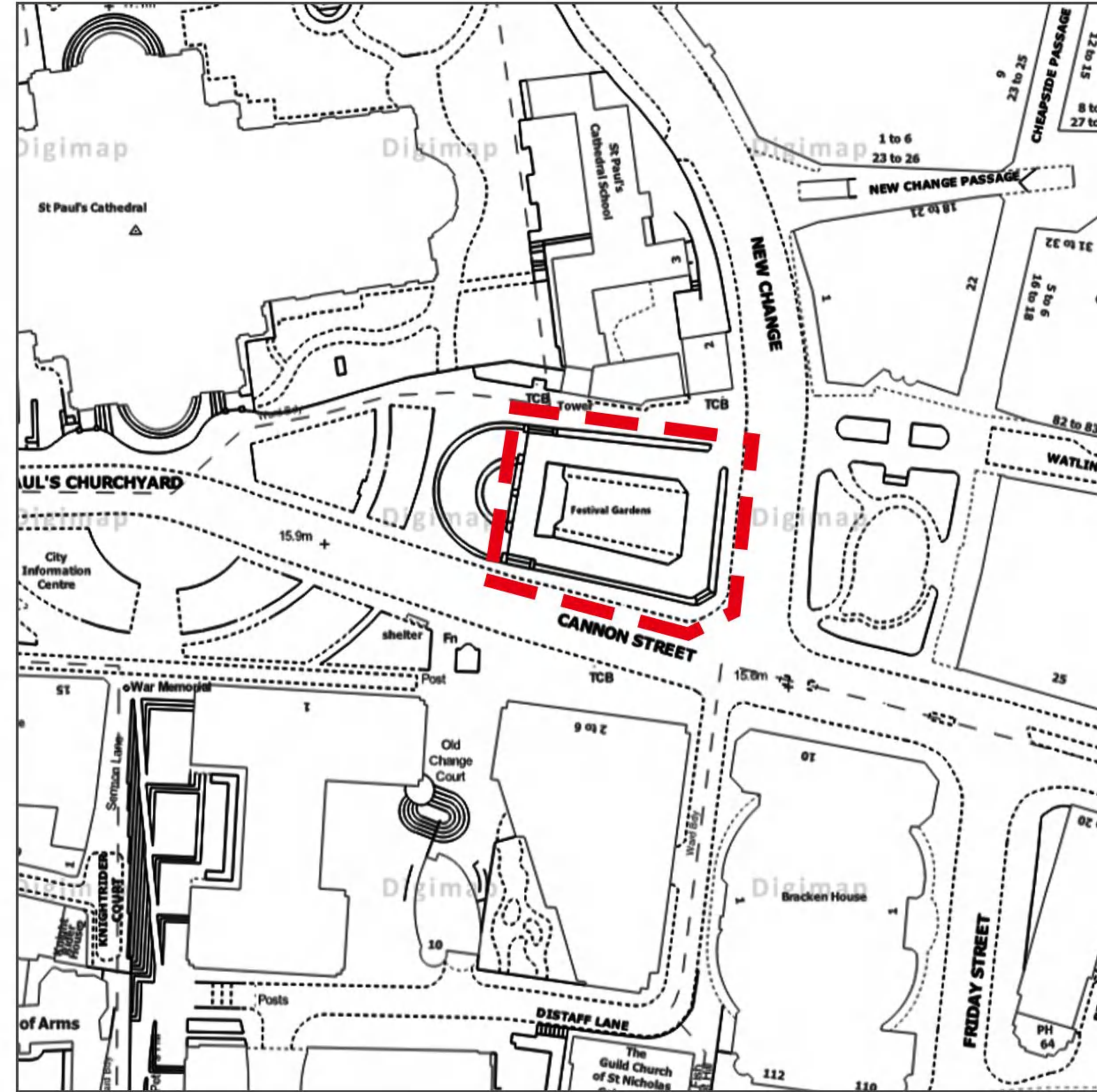


COMMUNITY MODULE

Petticoat Square, a central community space, enhances cohesion by integrating small-scale modules into the existing pocket park layout.

SITE 2

Festival Gardens EC4M,8AD

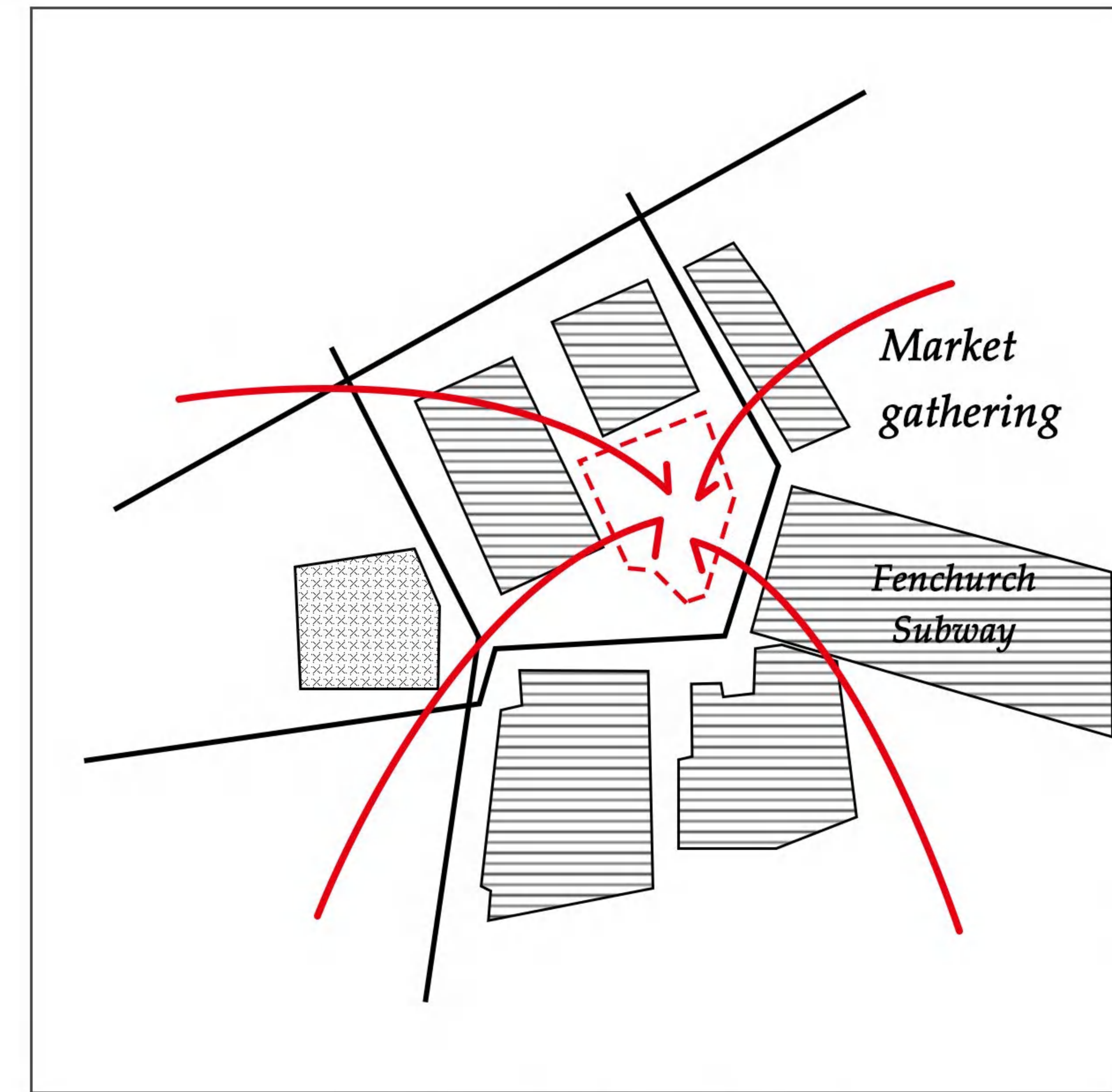
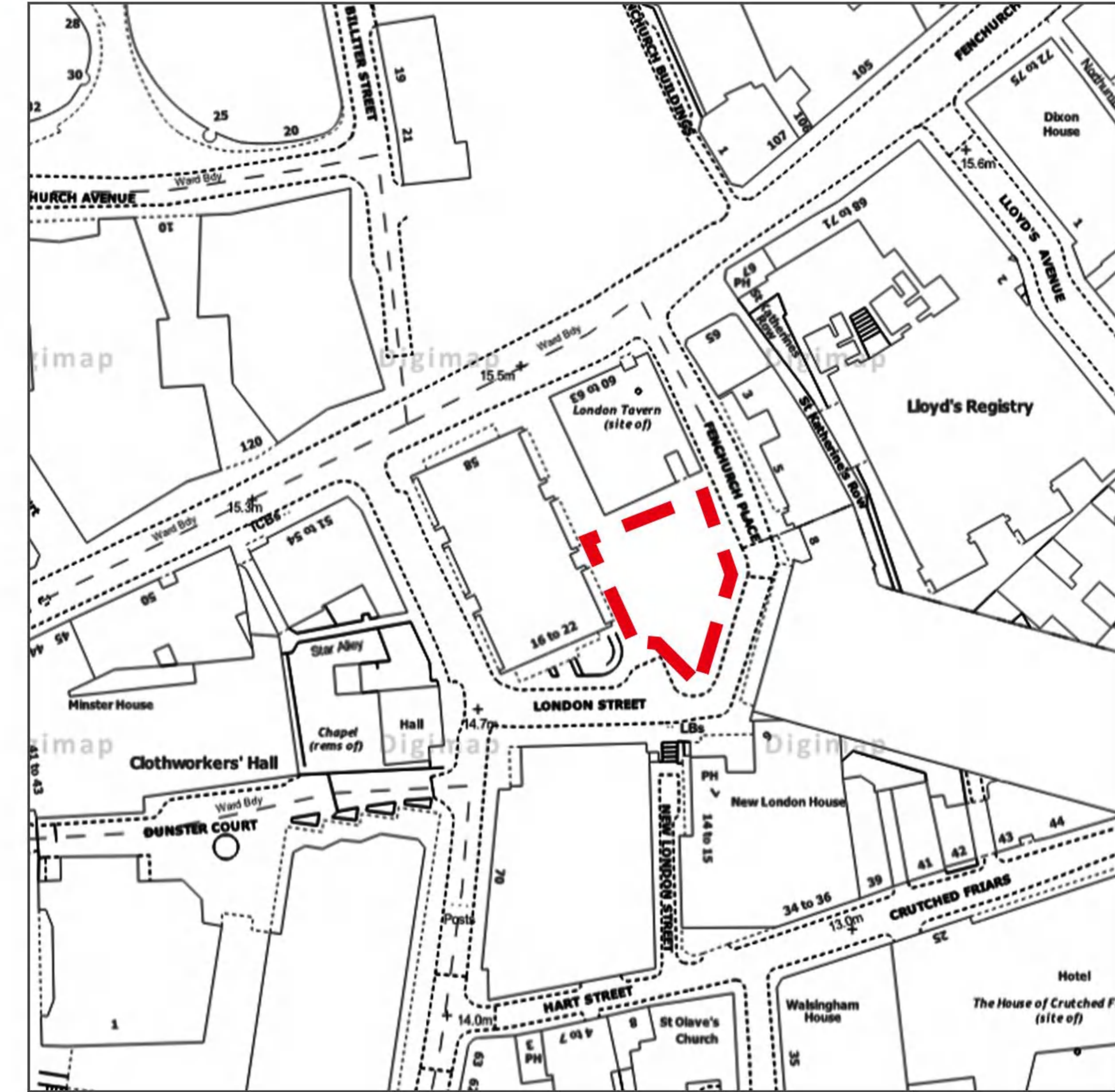


CULTURE MODULE

This open park near St. Paul's Church sees frequent tourist gatherings, making it an ideal location for a cultural promotion module.

SITE 3

Fenchurch Street Square EC3M,4AJ



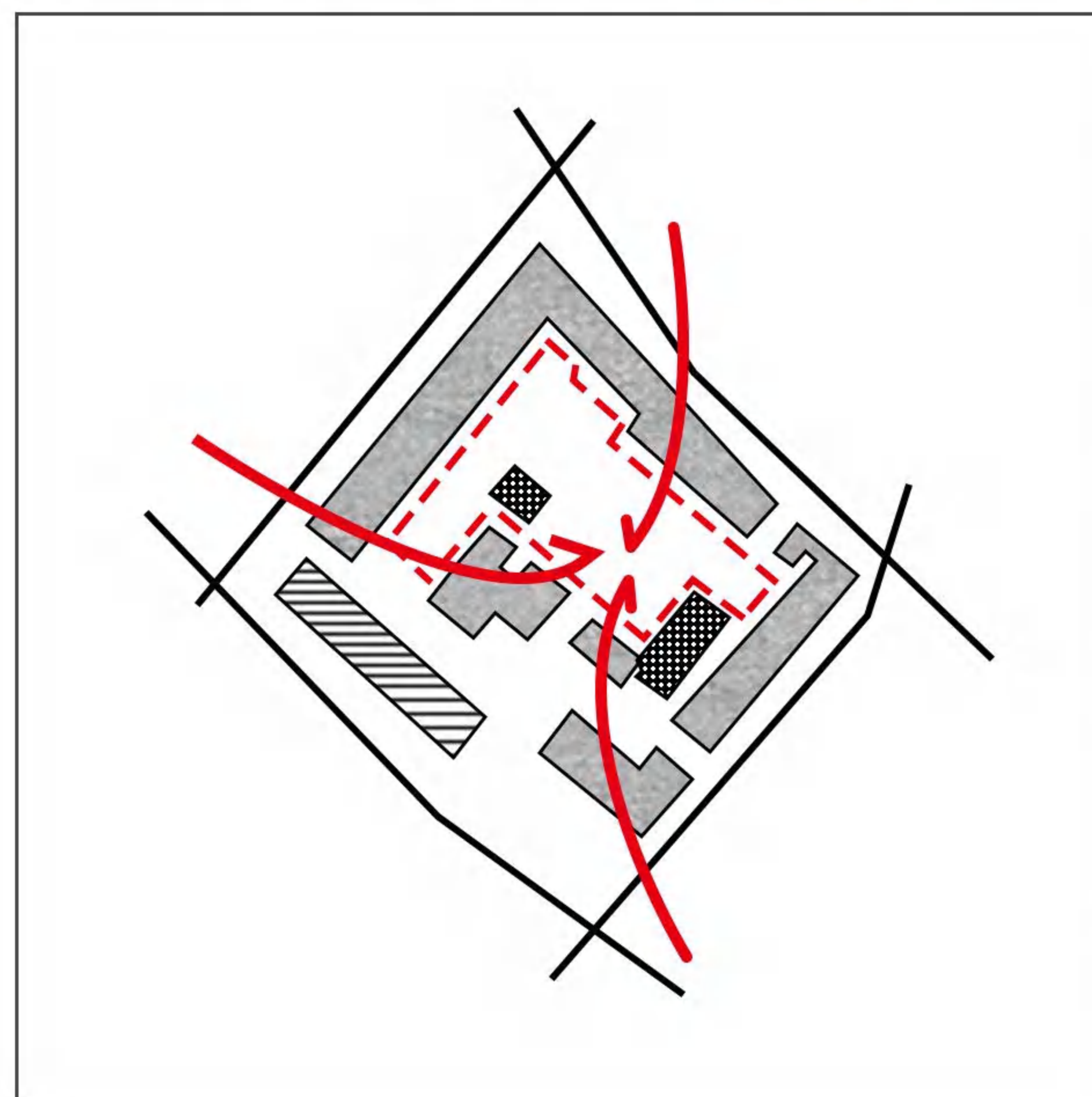
MARKET MODULE

Located in a commercial hub, this street-corner plot frequently hosts markets, ideal for networking and temporary pop-ups.

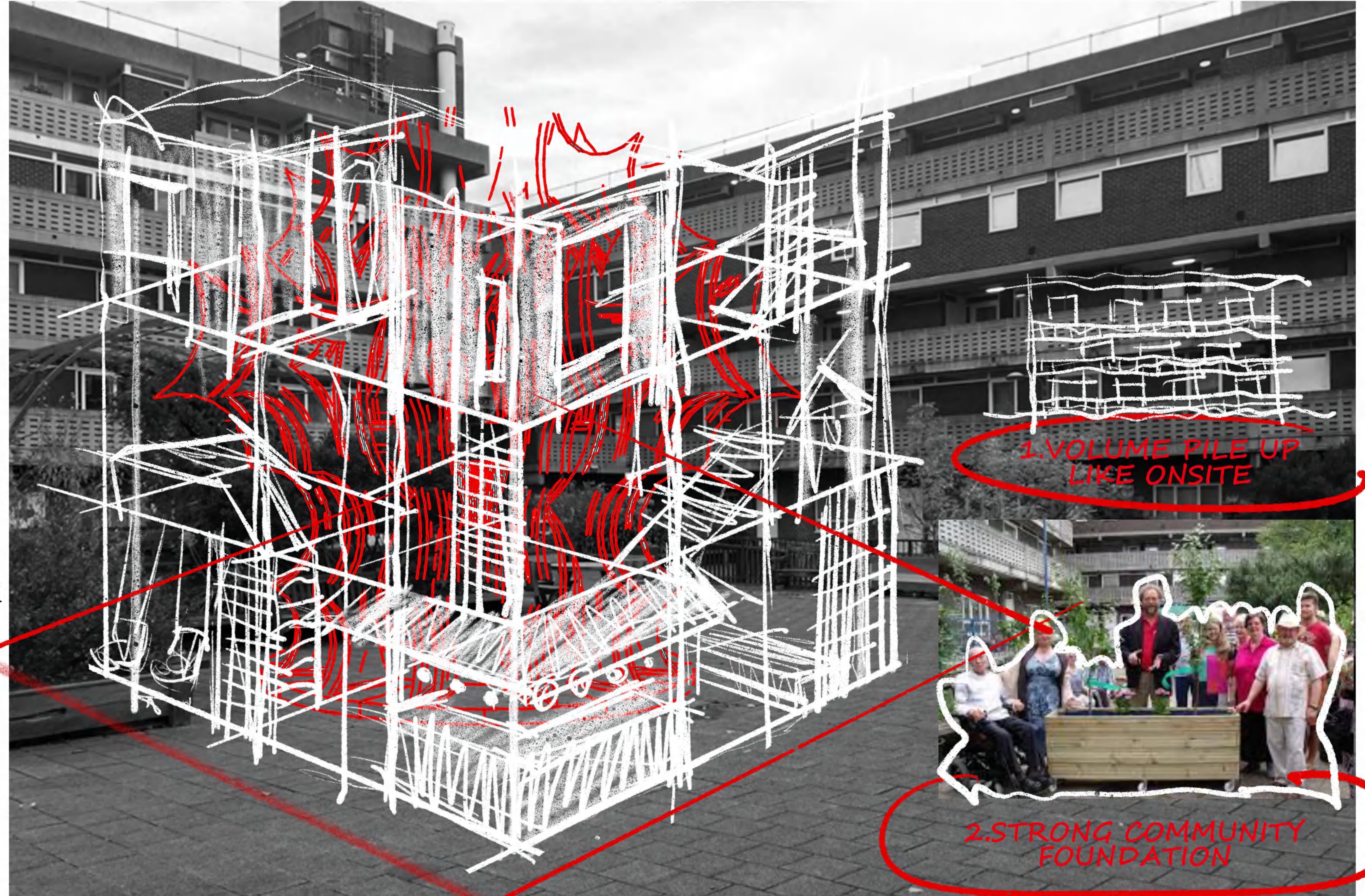
- Residence
- Church(Culture)
- Business
- Gardens

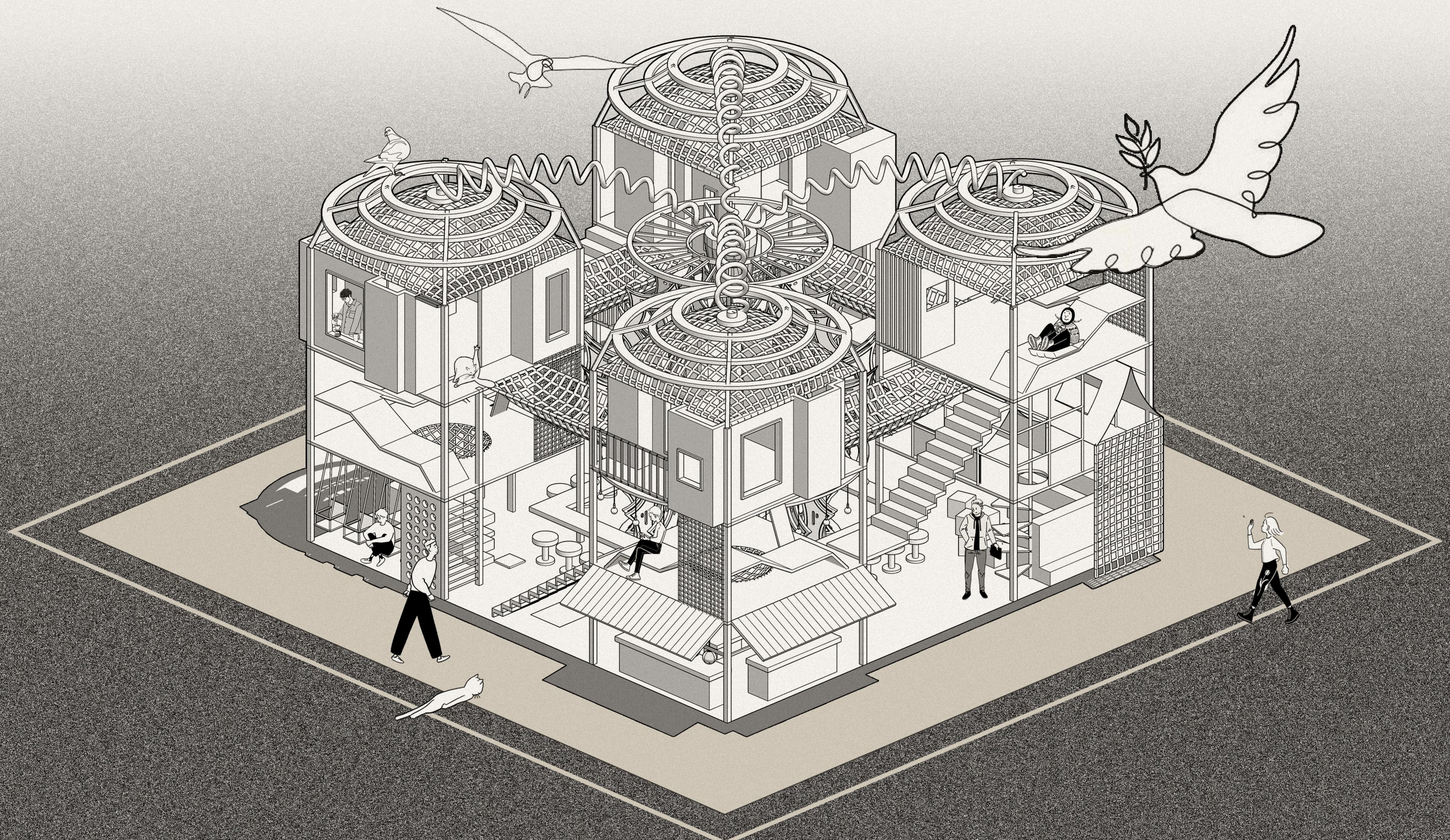
MODULE 1 COMMUNITY MODULE

SITE 1 Petticoat Square E1,7DA

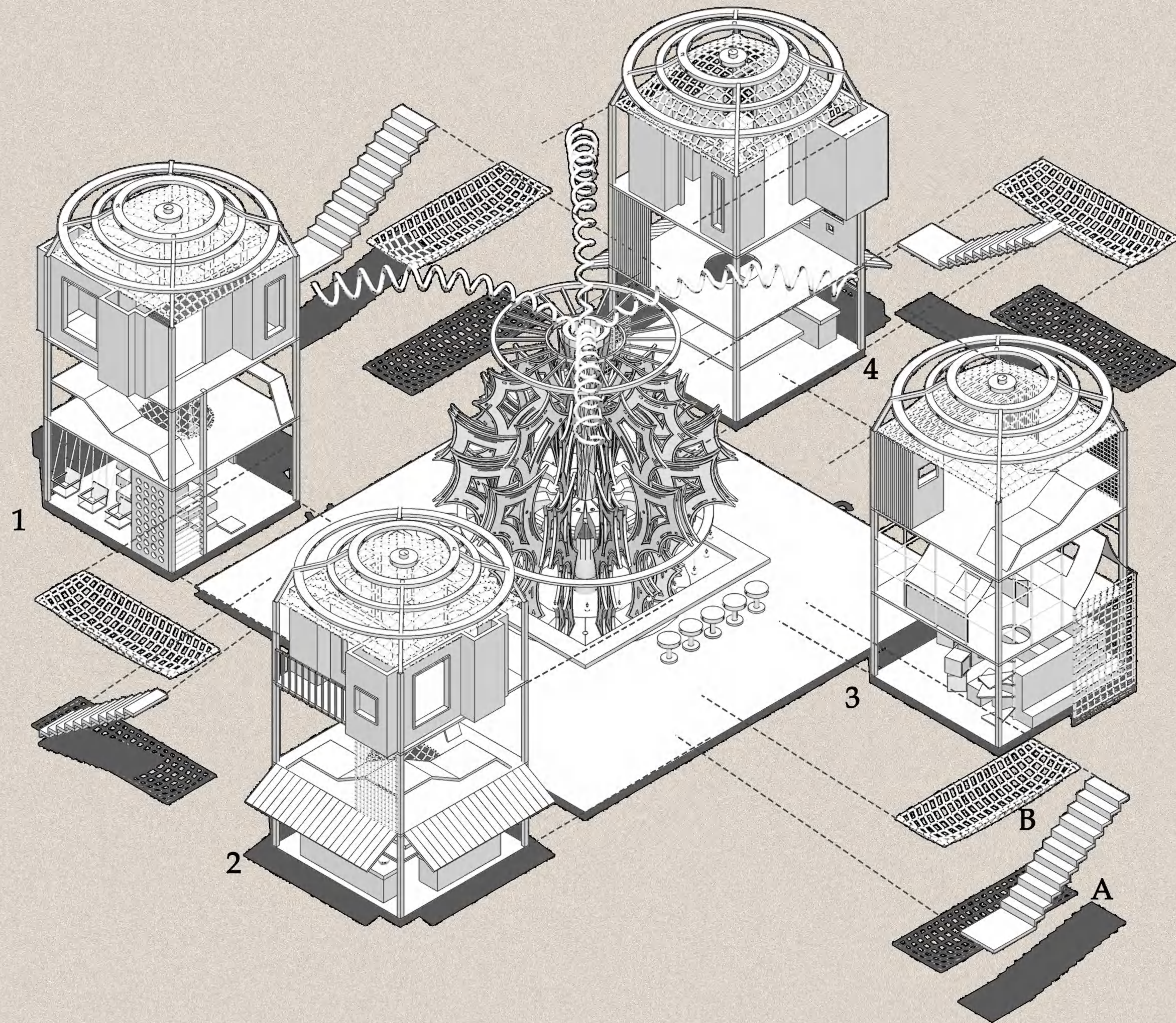


There is a pocket park on-site, featuring a slide and a strong community environment. The design will incorporate layered and enveloping structures, informed by the current spatial layout.





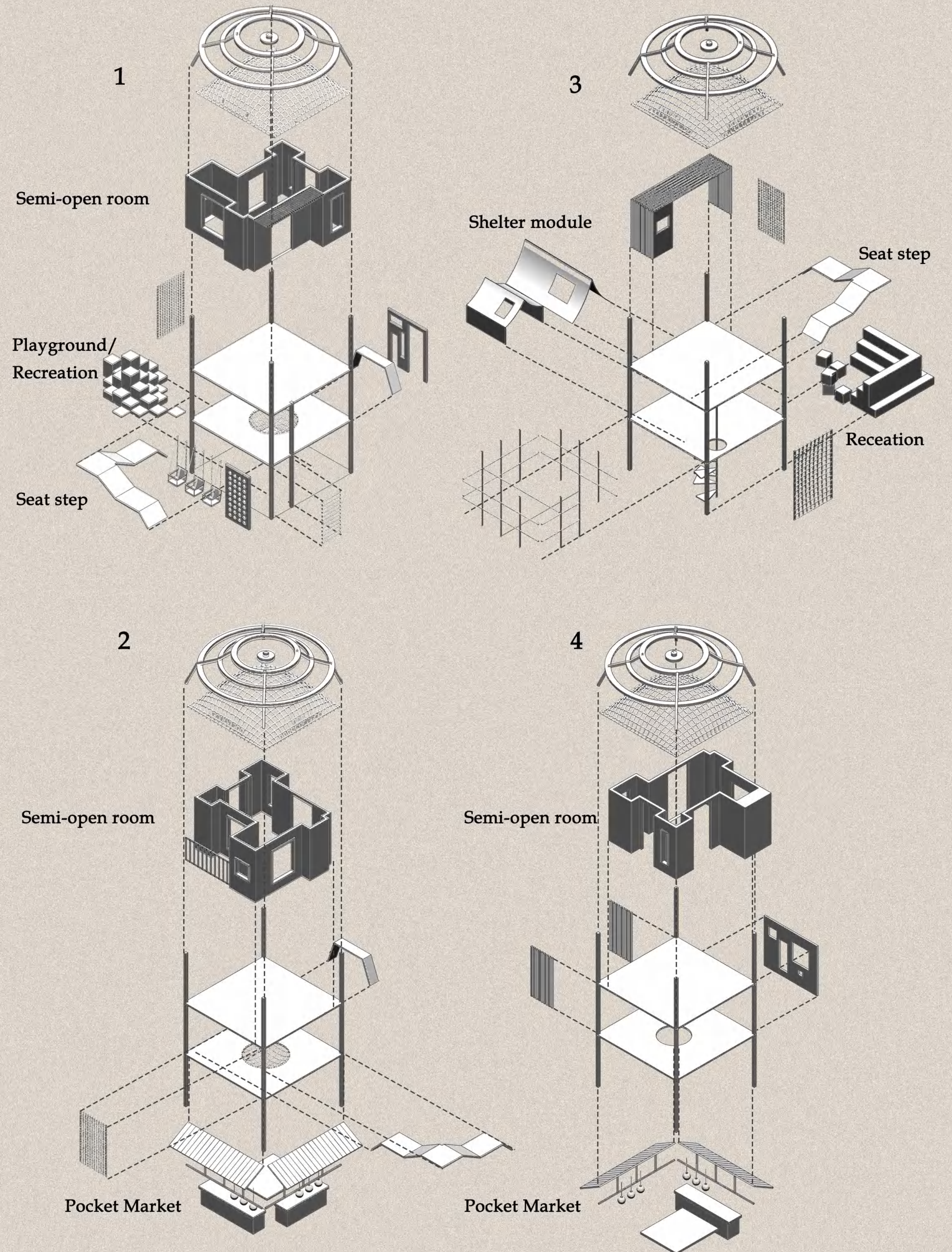
MODULE 1 COMMUNITY MODULE EXPLODED FAÇADE DIAGRAM



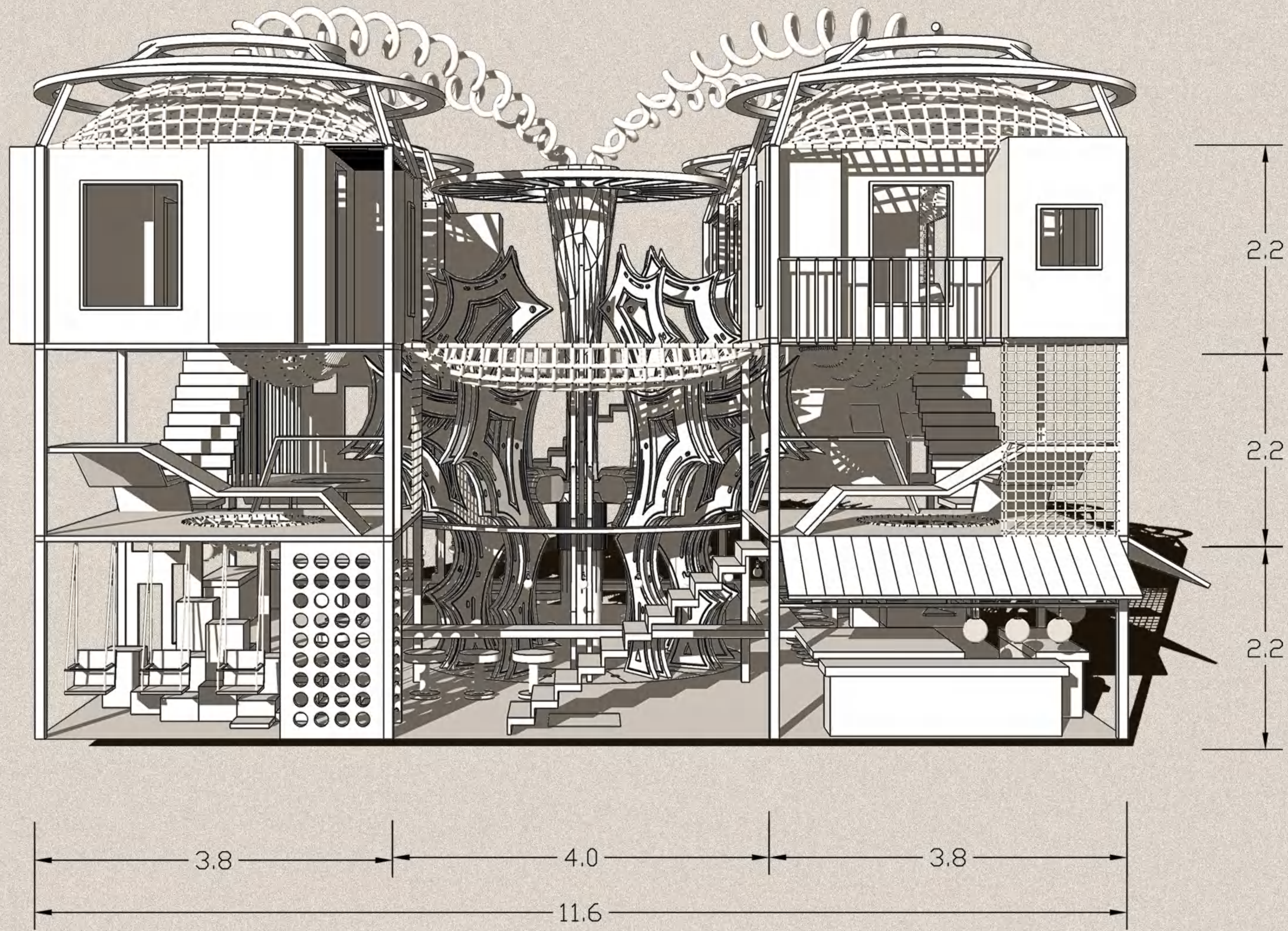
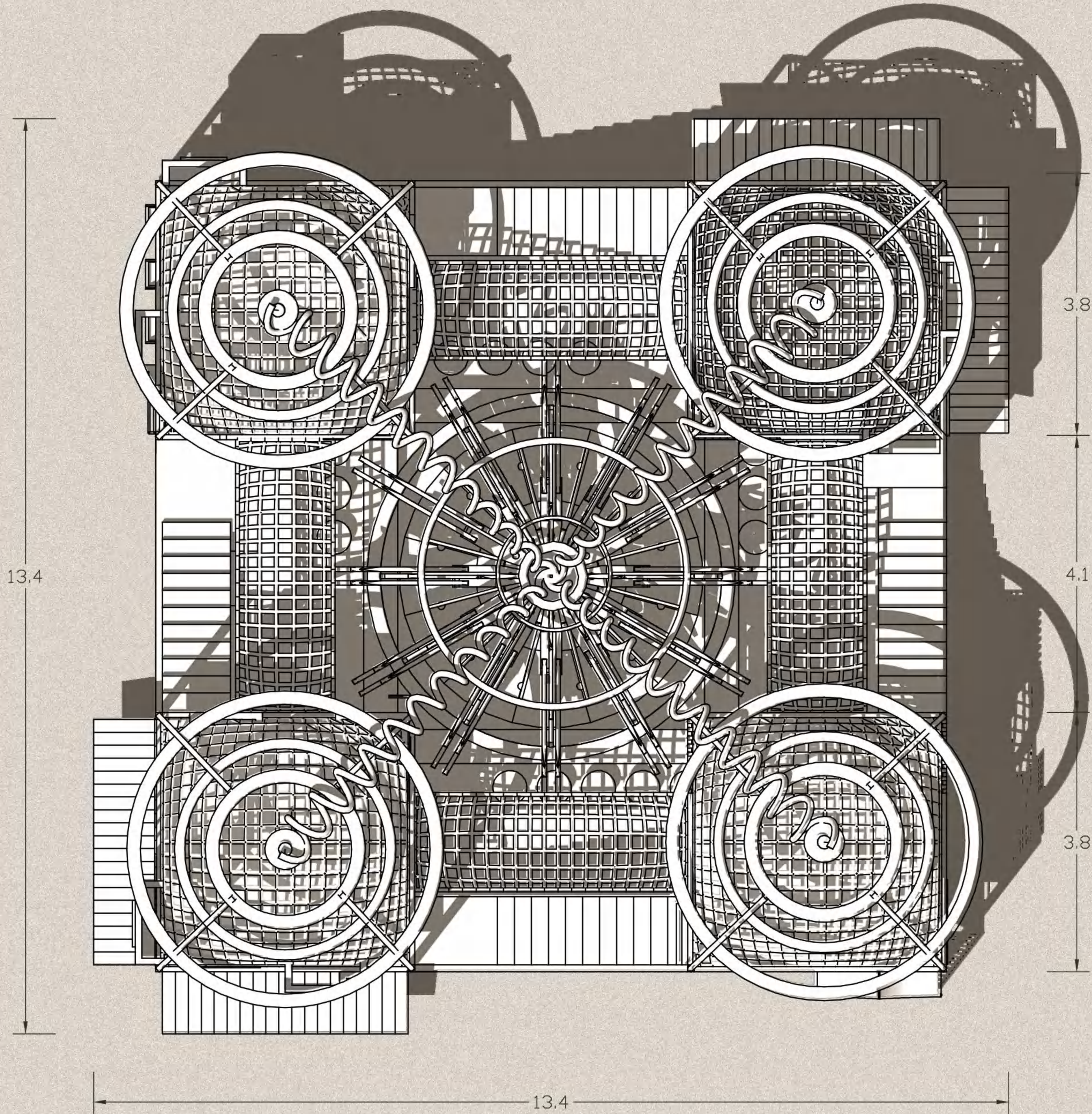
1/2/3/4 Tower Module

A Staircase

B Connection



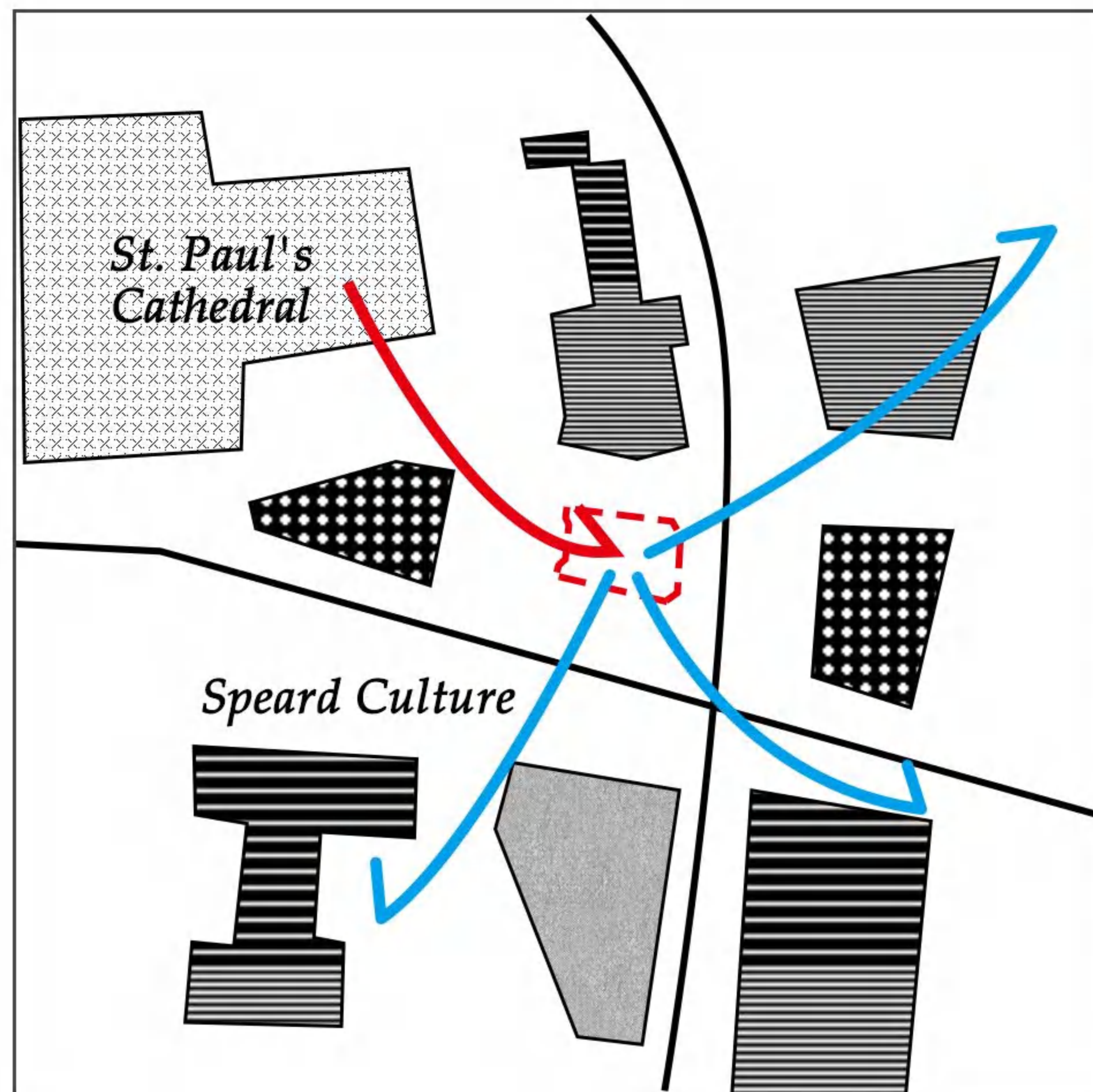
MODULE 1
COMMUNITY MODULE
MEASURES DRAWINGS



MODULE 2

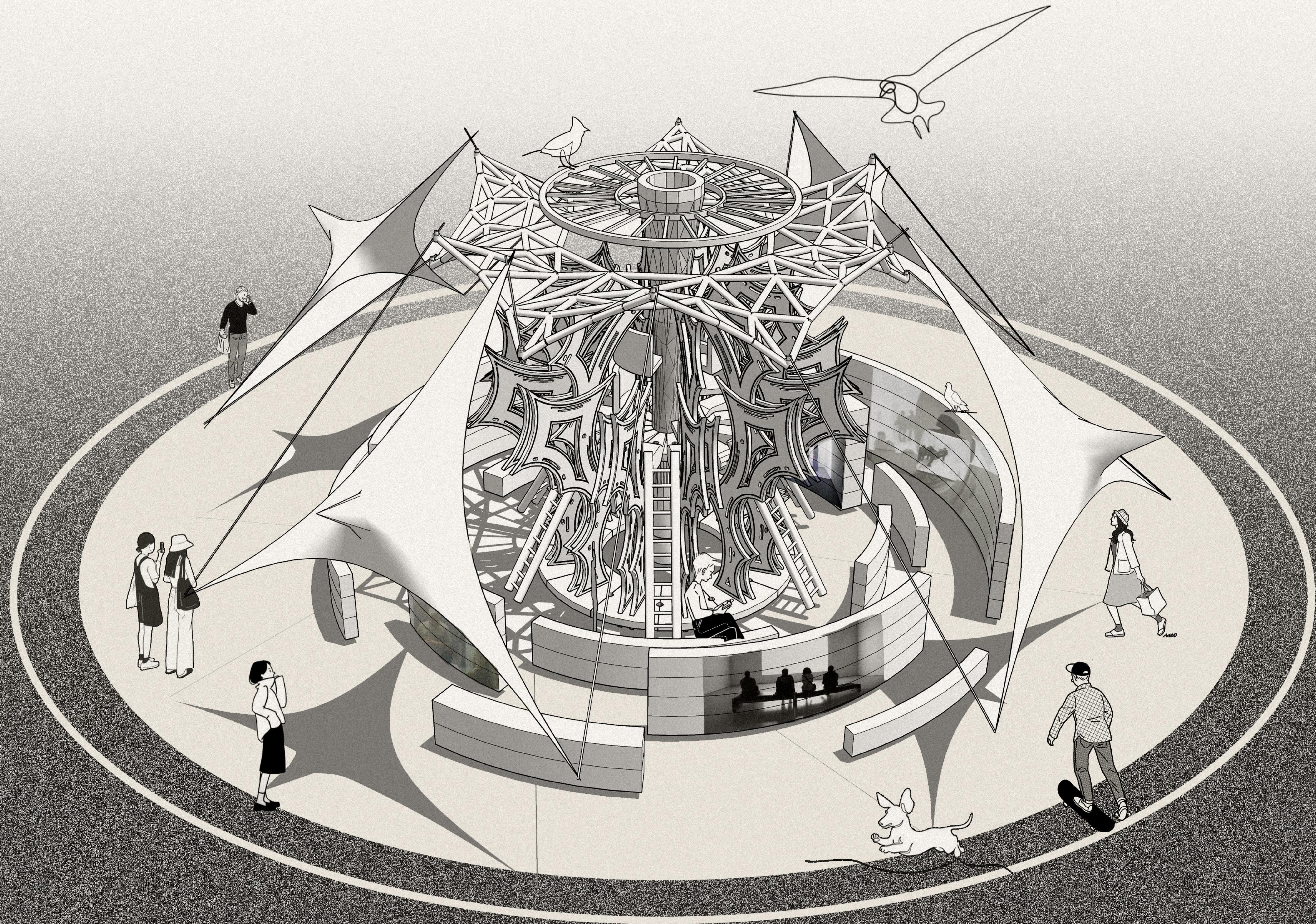
CULTURE MODULE

SITE 2 Festival Gardens EC4M,8AD



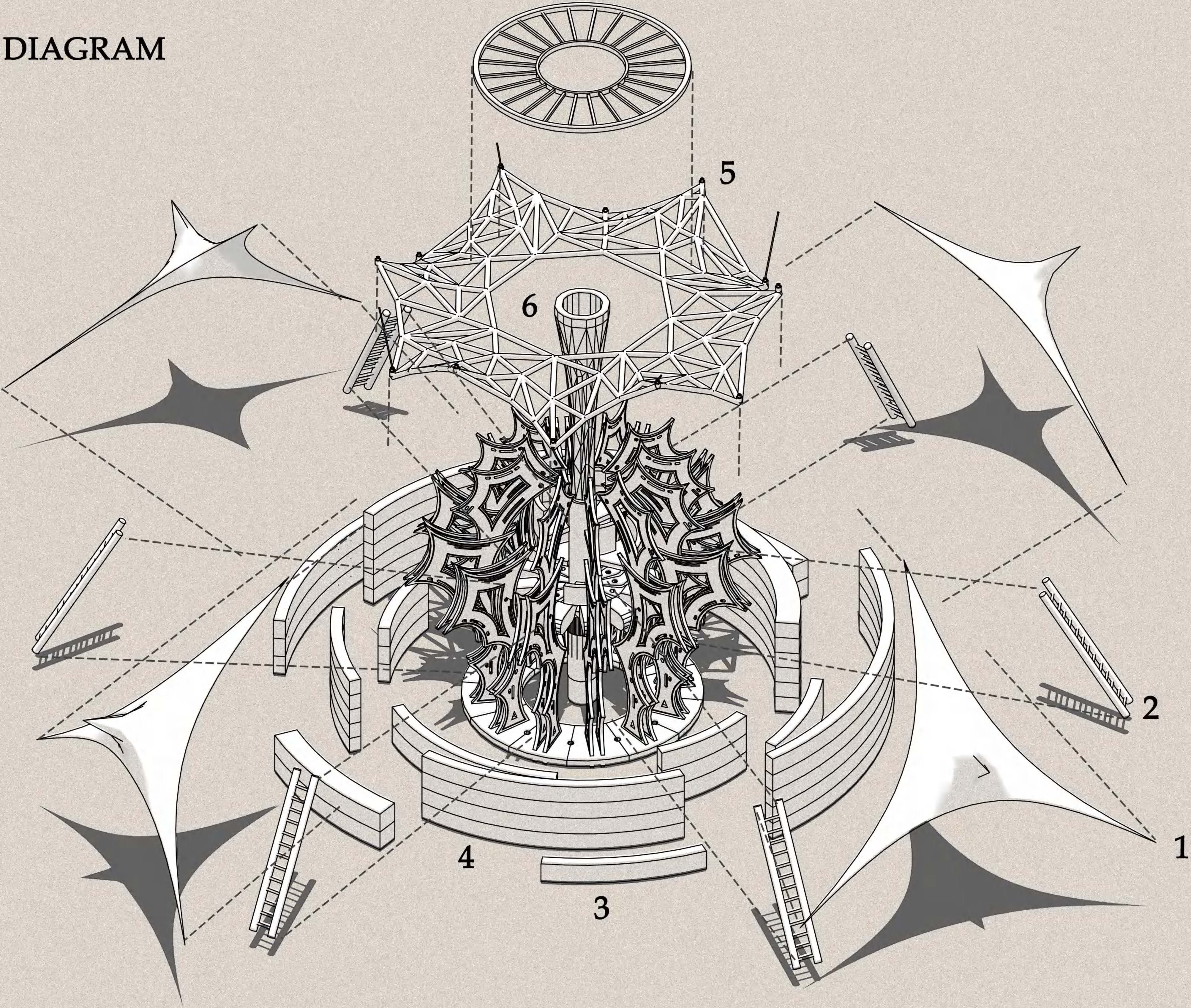
The site is adjacent to St. Paul's Cathedral, with an open pocket garden that frequently attracts tourists, making it suitable for media and cultural dissemination through interactive projections.





MODULE 2
CULTURE MODULE

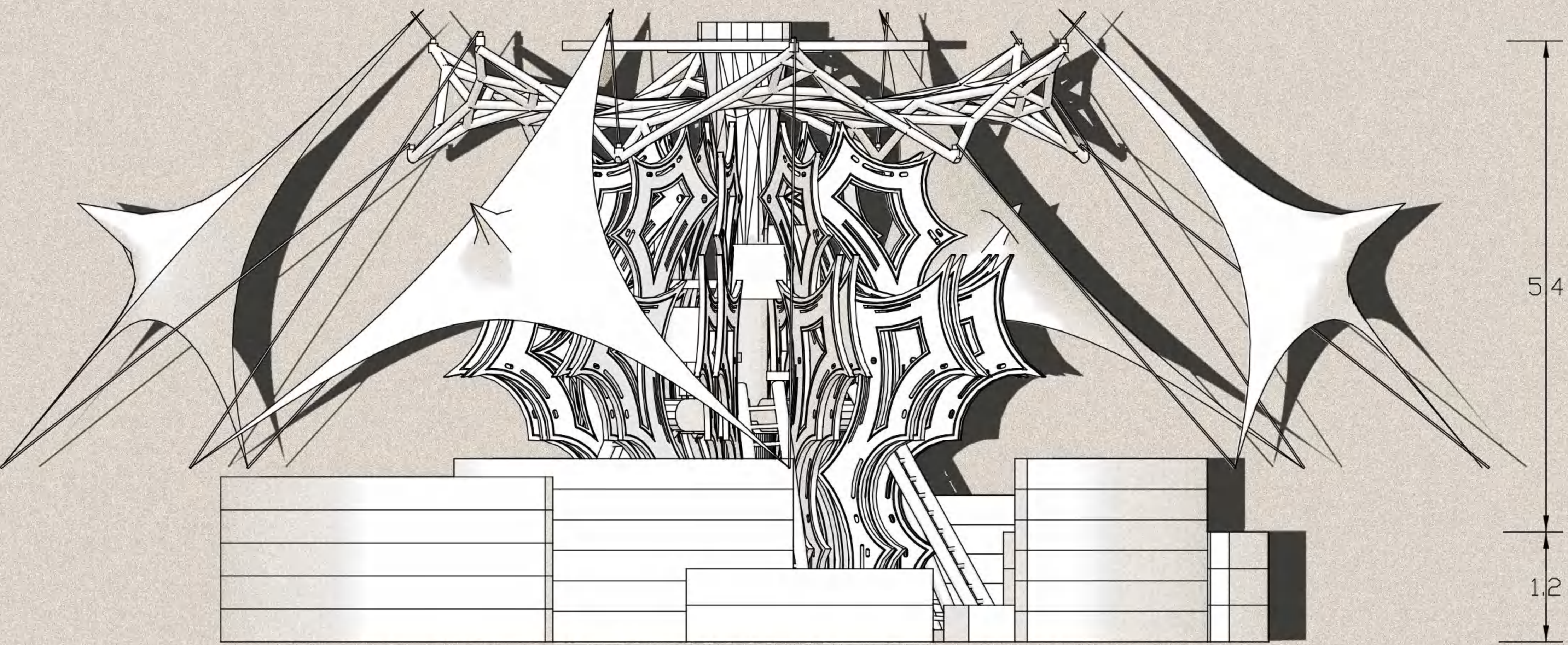
EXPLODED FAÇADE DIAGRAM



- 1 Projector Cover
- 2 Stair case of watchtower
- 3 Seat/bench
- 4 Interaction Wall
- 5 Solar panel
- 6 Mycelium seed

MODULE 2
CULTURE MODULE

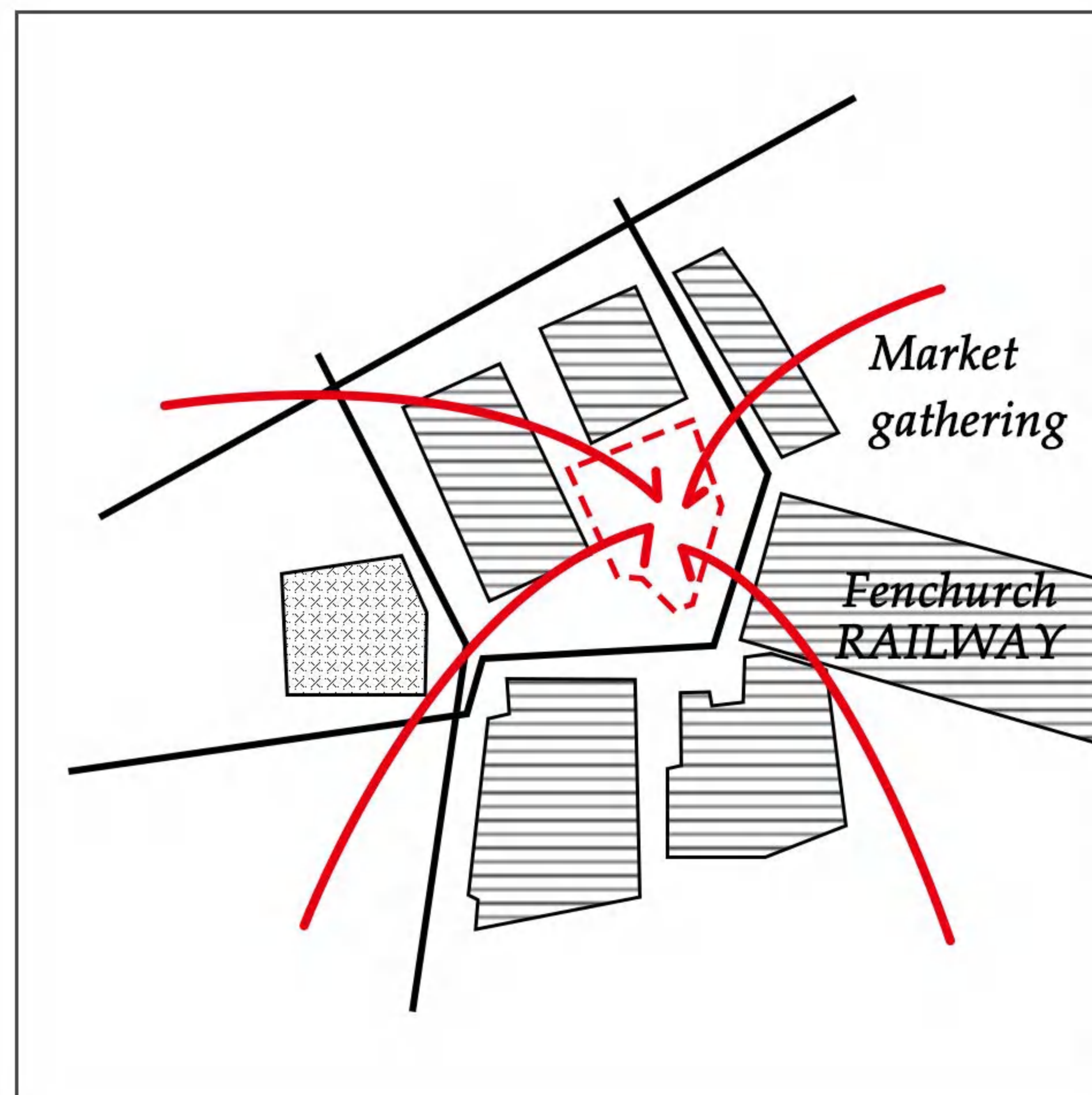
DRAWINGS



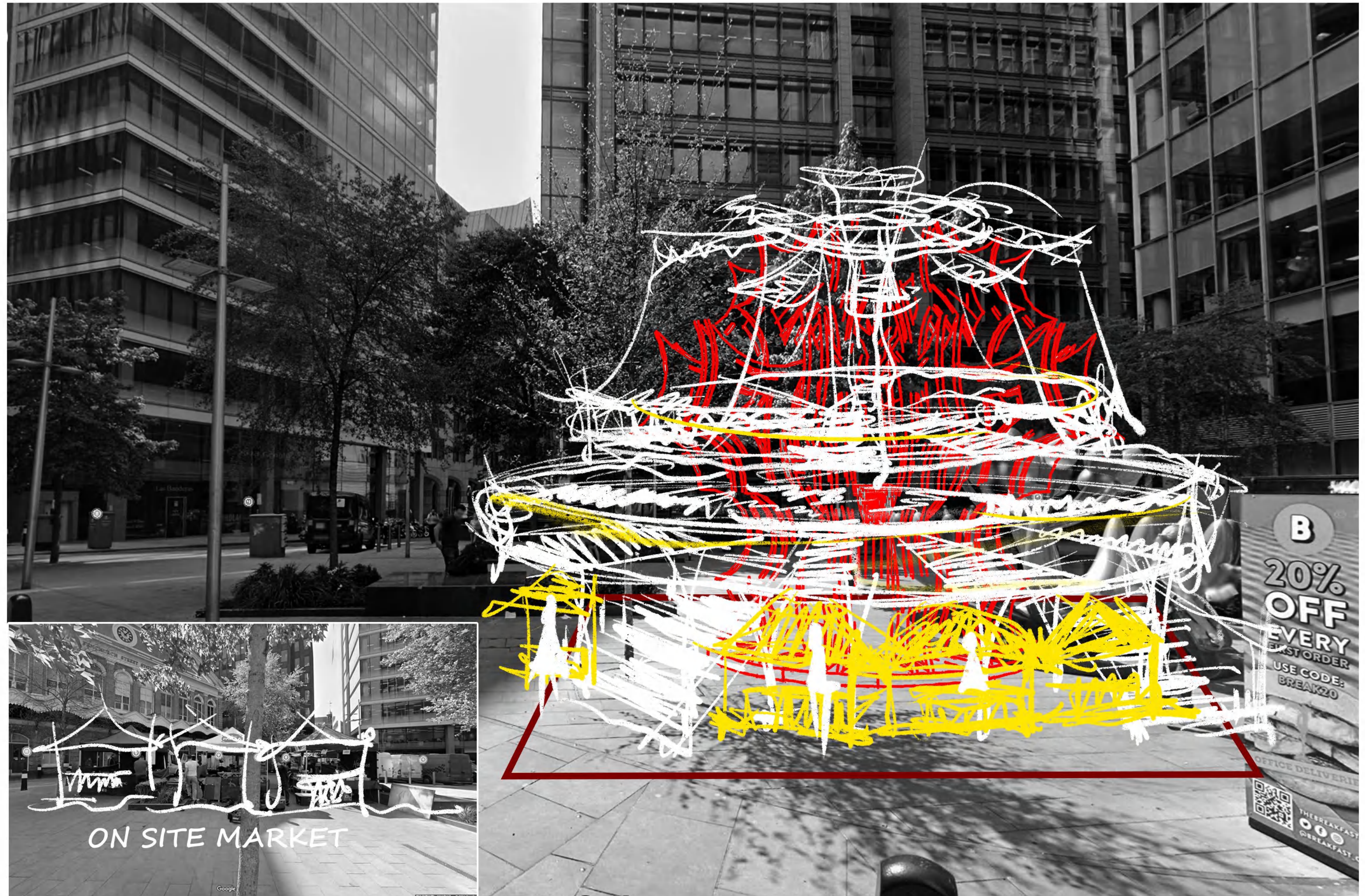
MODULE 3

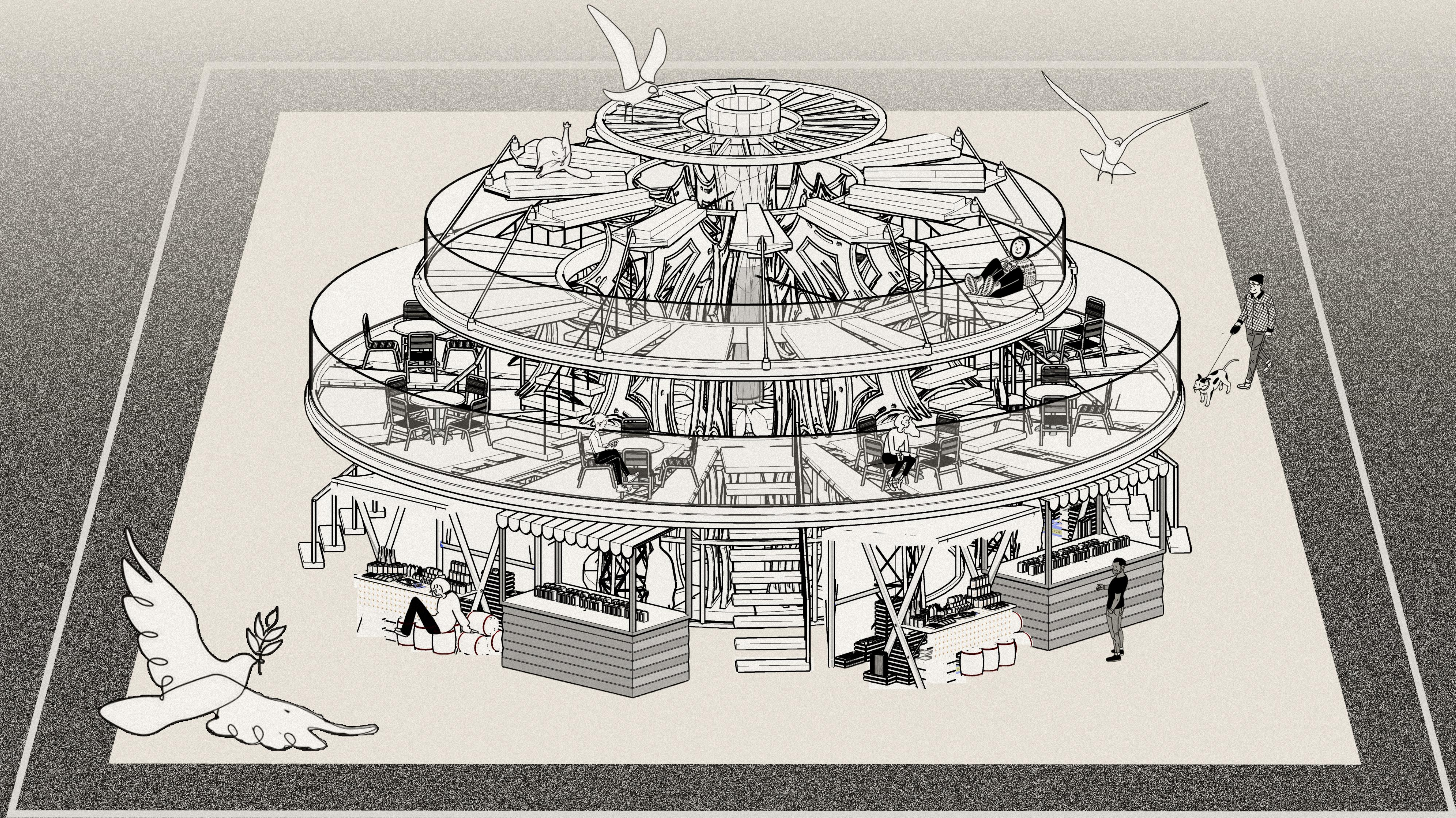
MARKET MODULE

SITE 3 Fenchurch Street Square EC3M,4AJ



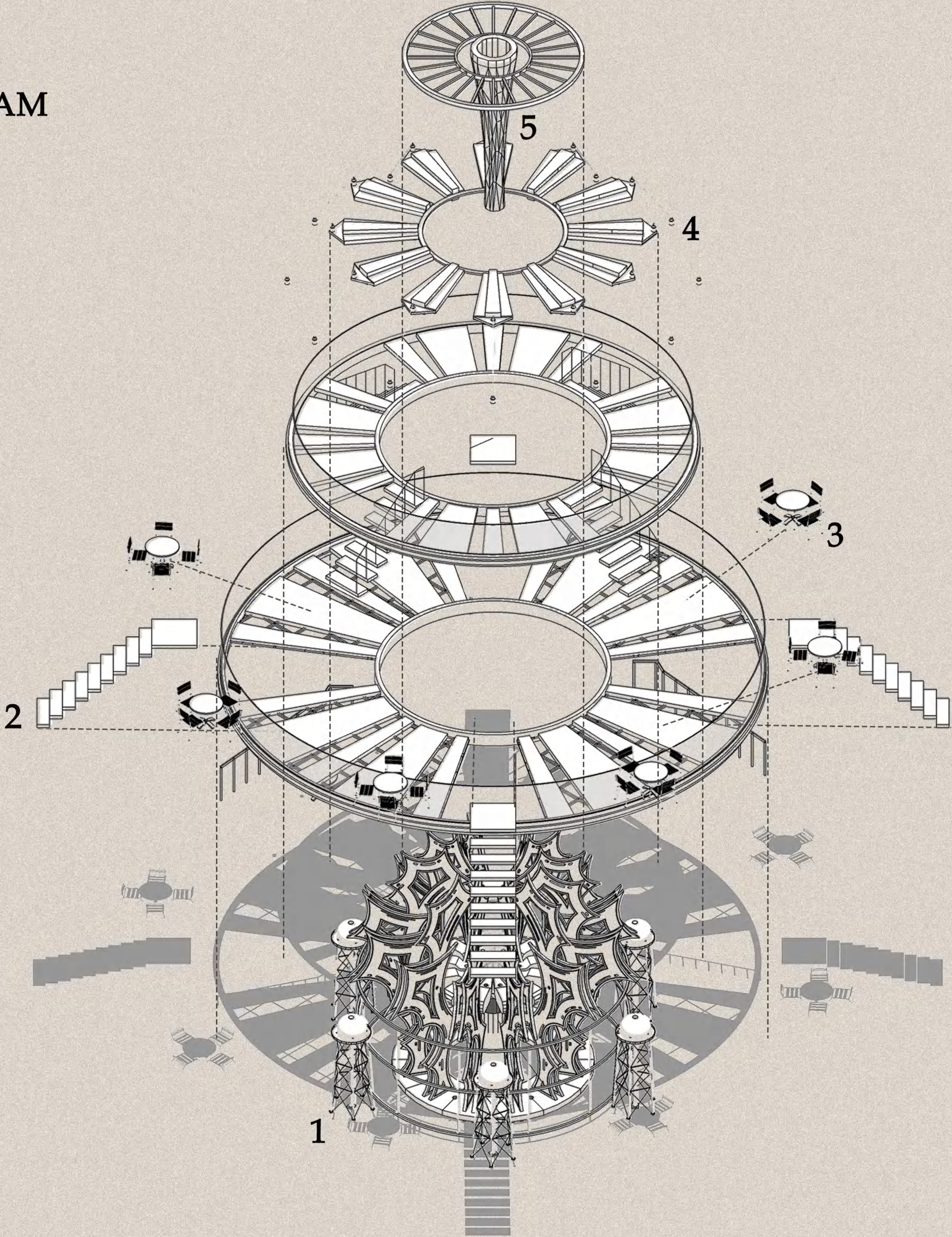
The location is at a street corner where commercial areas converge, often hosting pop-up markets. It is suitable for commercial gatherings, pop-up events, and leisure activities like coffee breaks.





**MODULE 3
MARKET MODULE**

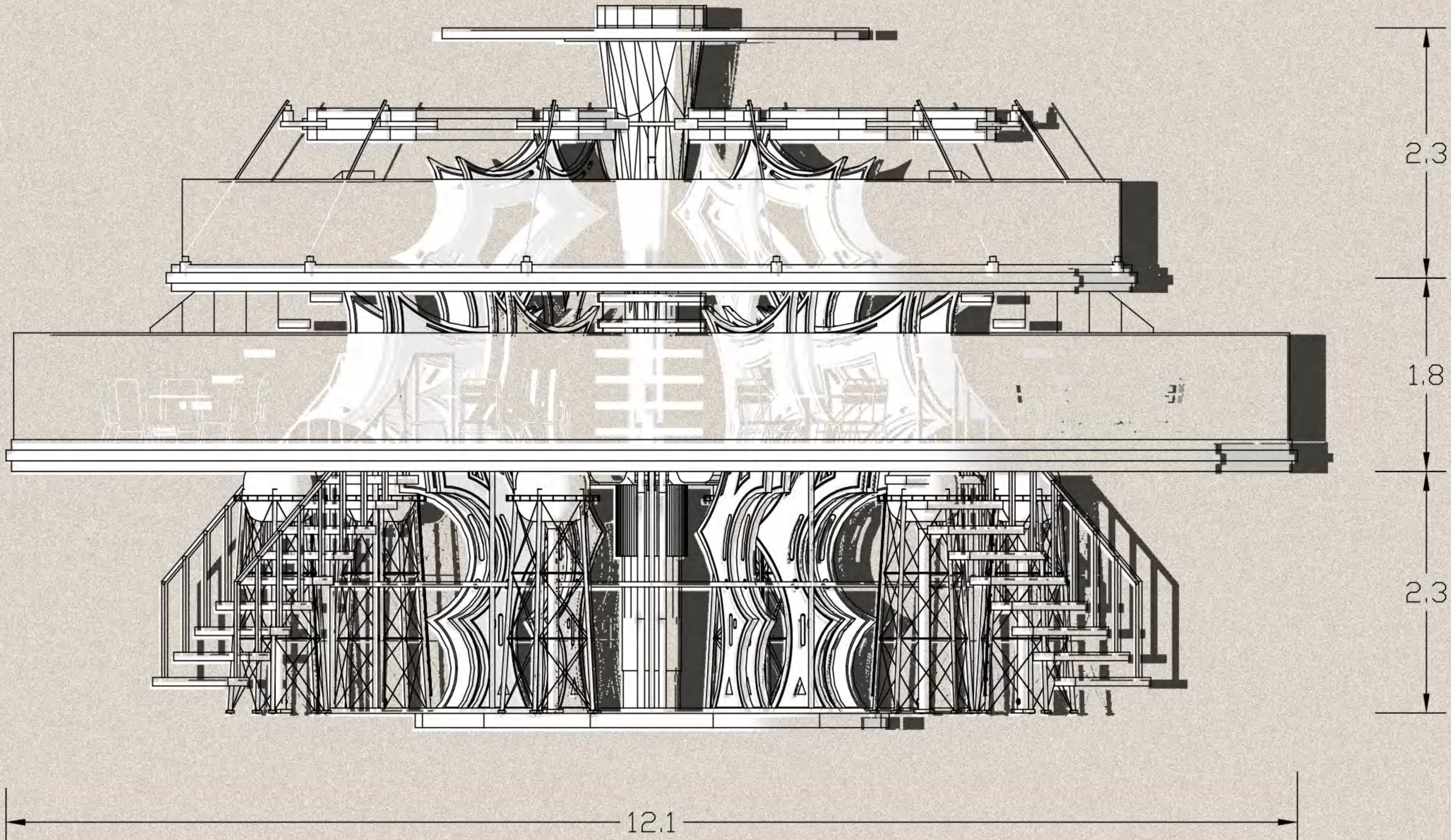
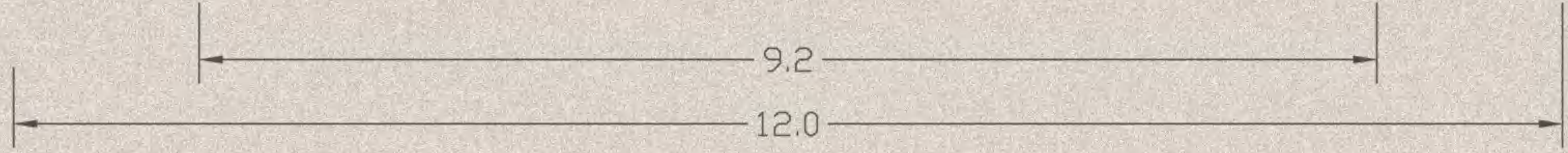
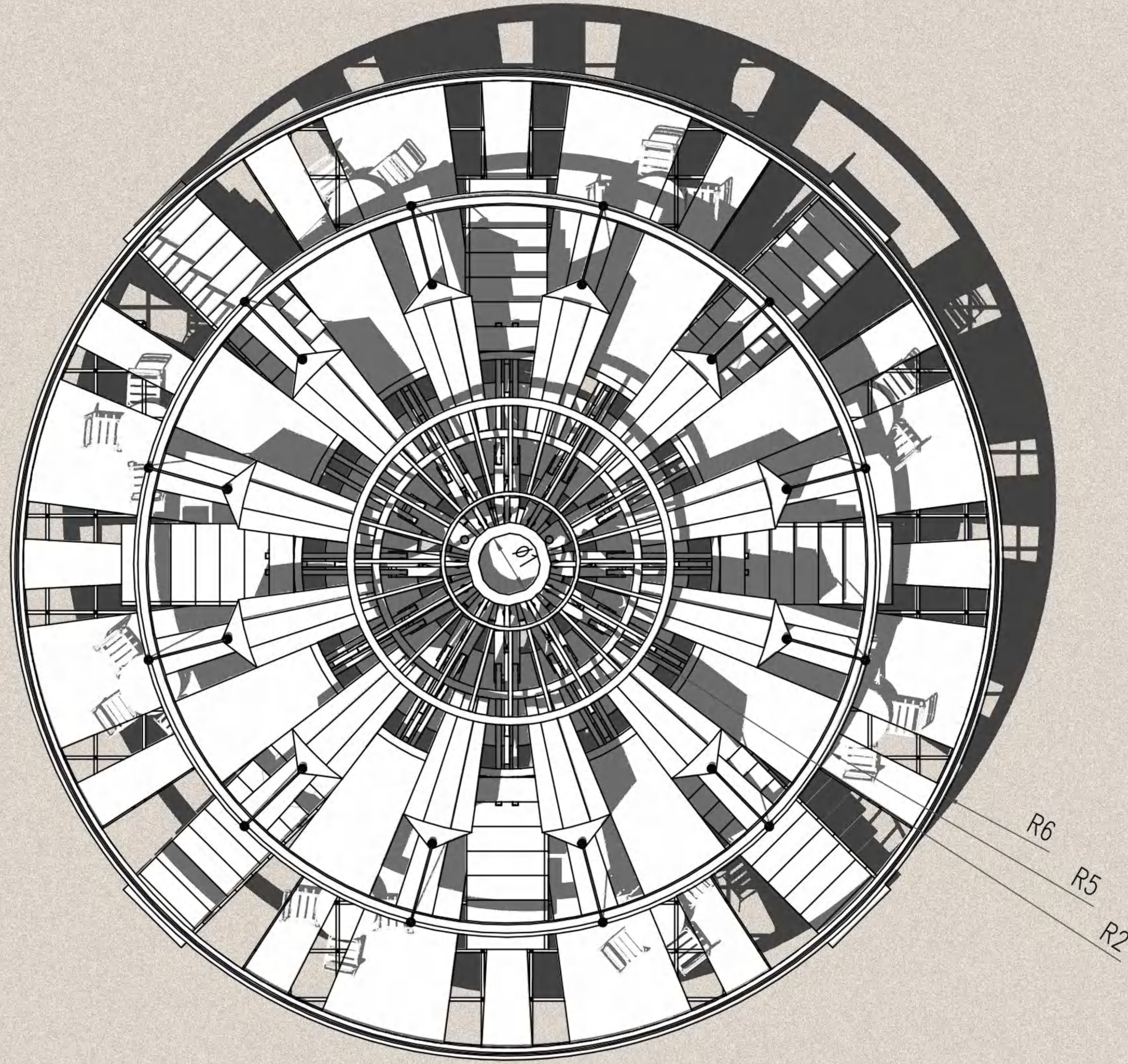
EXPLODED FAÇADE DIAGRAM



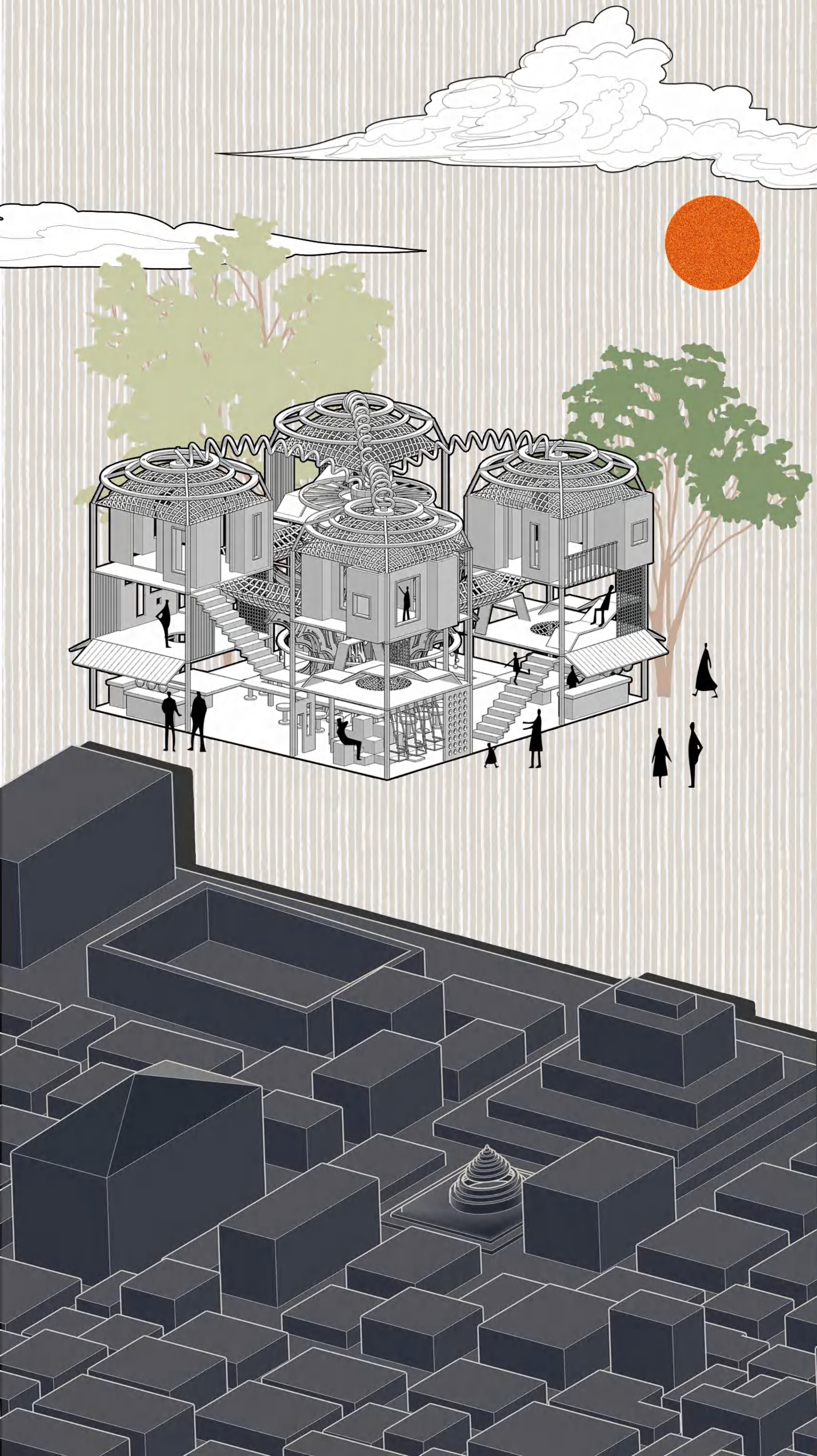
- 1 Power Tank
- 2 Stair case of watchtower
- 3 Public furniture
- 4 Solar Panel
- 5 Myceilum seed

MODULE 3
MARKET MODULE

DRAWINGS



**MODULE 1
COMMUNITY**



**MODULE 2
CULTURE**

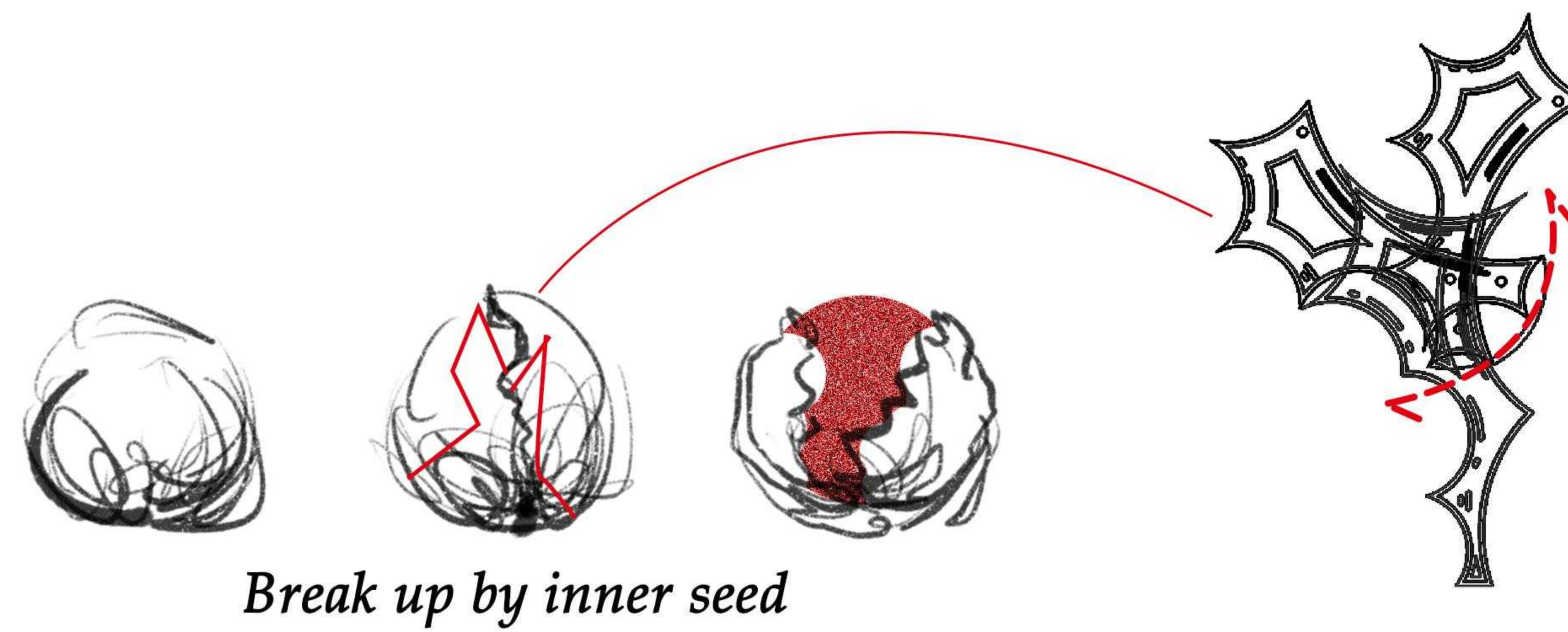


**MODULE 3
MARKET**

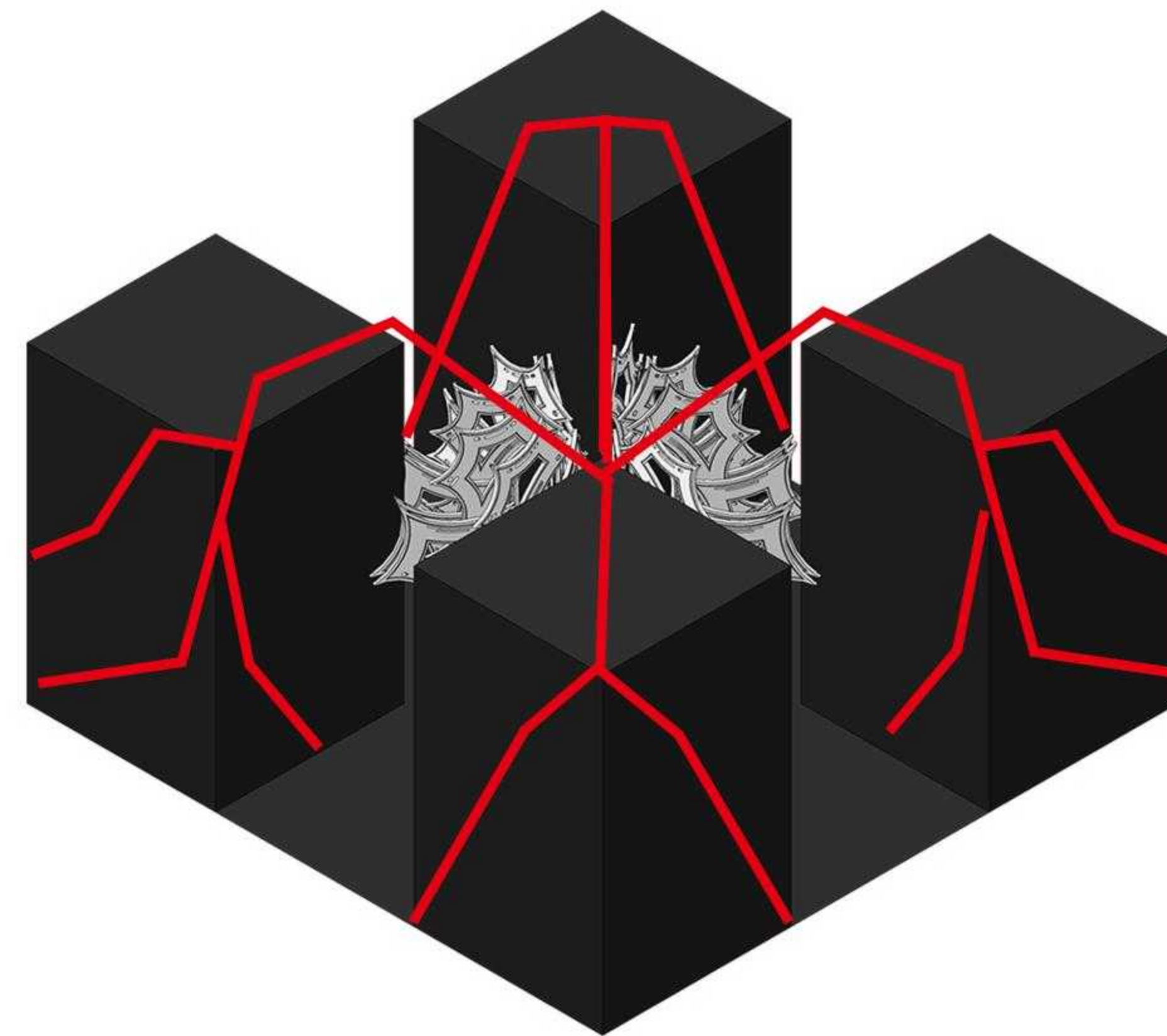


PHASE 1

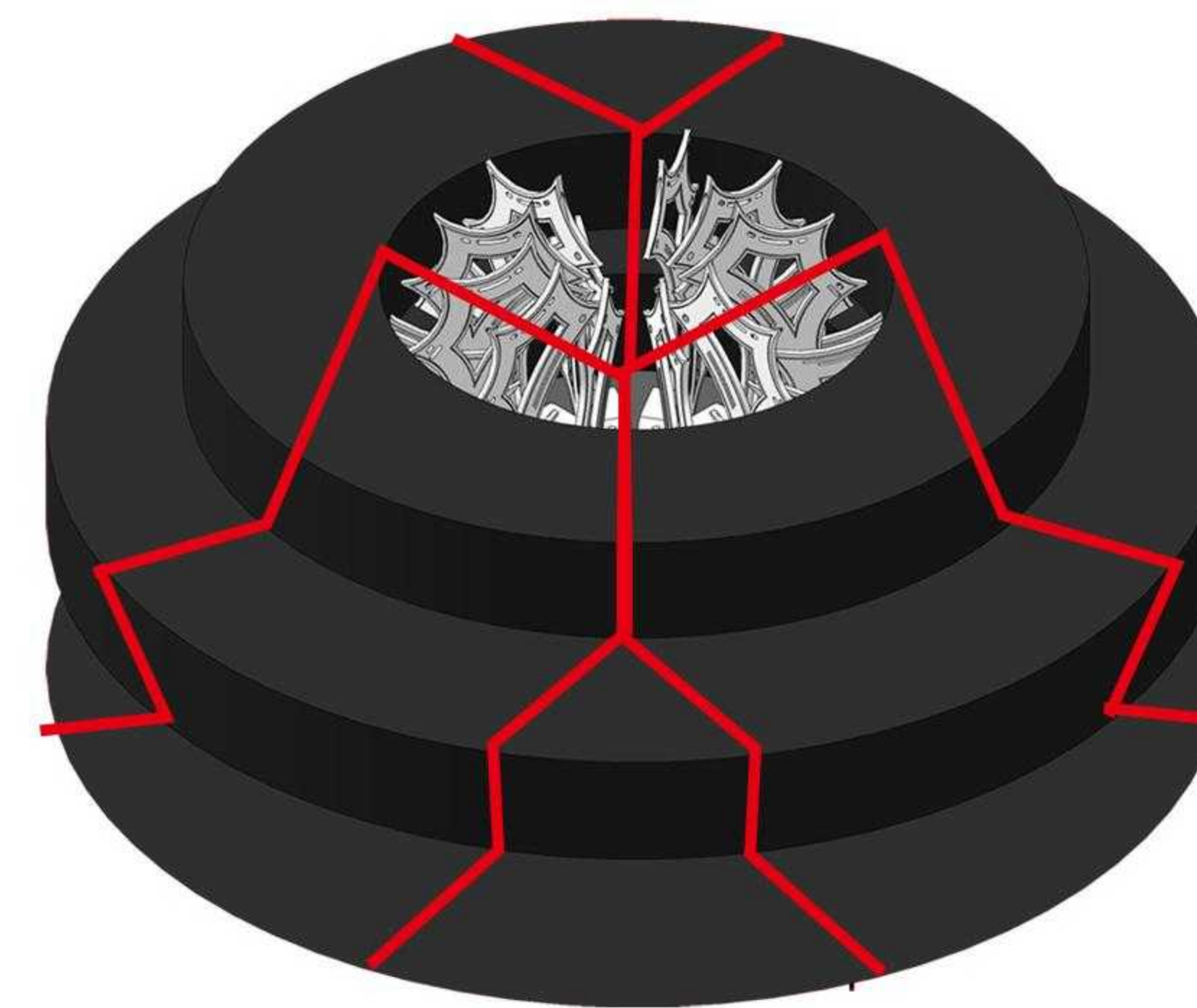
2024-2099
Social Fabric Module
Summary



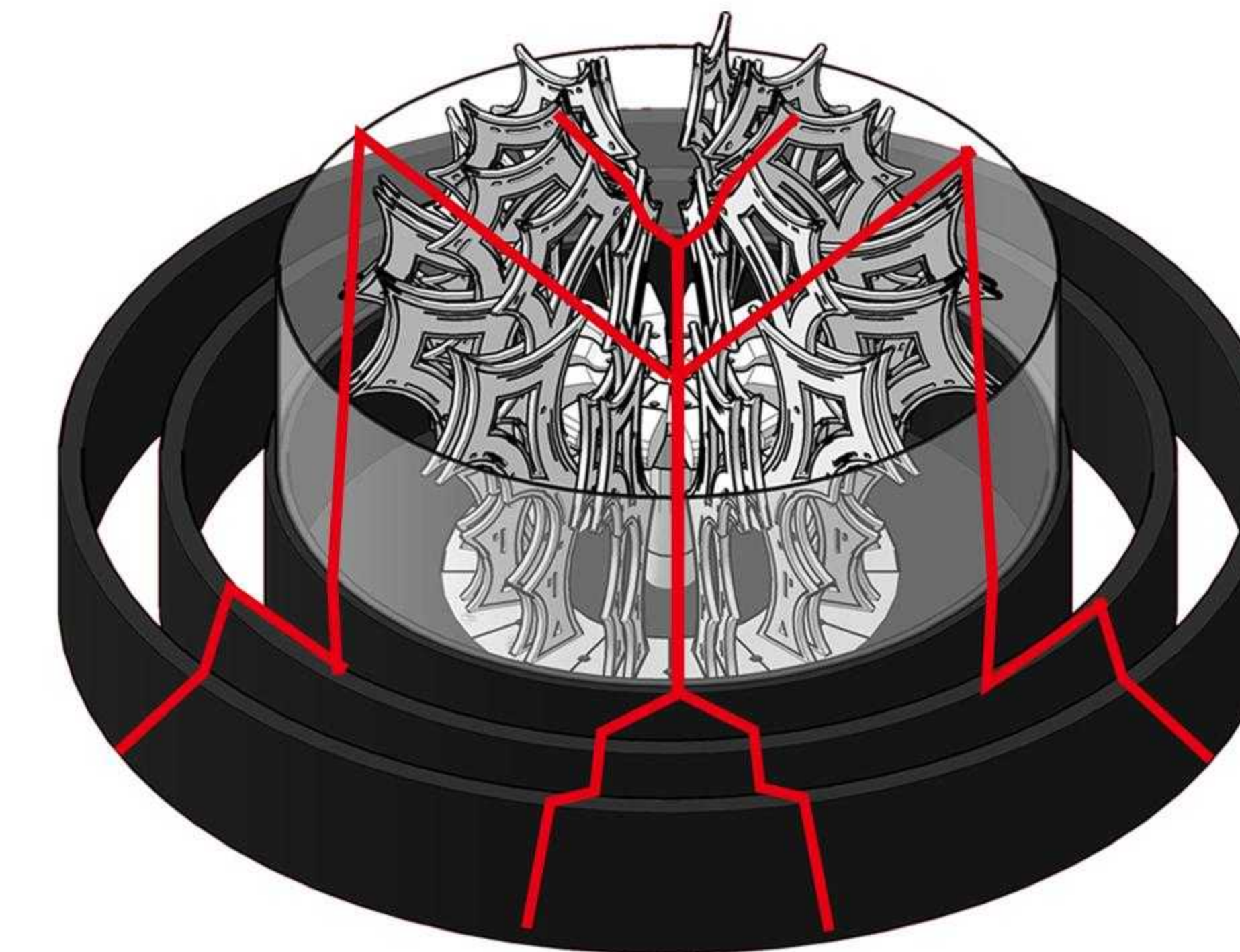
Break up by inner seed



Community module



Market module



Culture module

Perhaps no one knows what the core installation will become; for now, it sits as a static structure within Present-Day framework. But as it fills with life, it may break through modern confines, revealing a new form? (See next phase)

TIME LINE REVIEW
(link to mindmap page)

Phase 1 2024-2099

The installation passively conforms to contemporary structural limits.

Phase 2 2099-2199

**Man-Made structure
VS
Natural power**

Phase 3 2199-

**Collaboration between
high-technology and nature**

PHASE 2

2099-2199

Biotic Expansion Phase

Could it transition from a static module to a dynamically growing urban network? Inspired by natural systems (slime mold), could it expand in response to environmental and community needs, establishing a framework that integrates and enhances London's evolving urban landscape?

"PRESENT-DAY TO FUTURE"

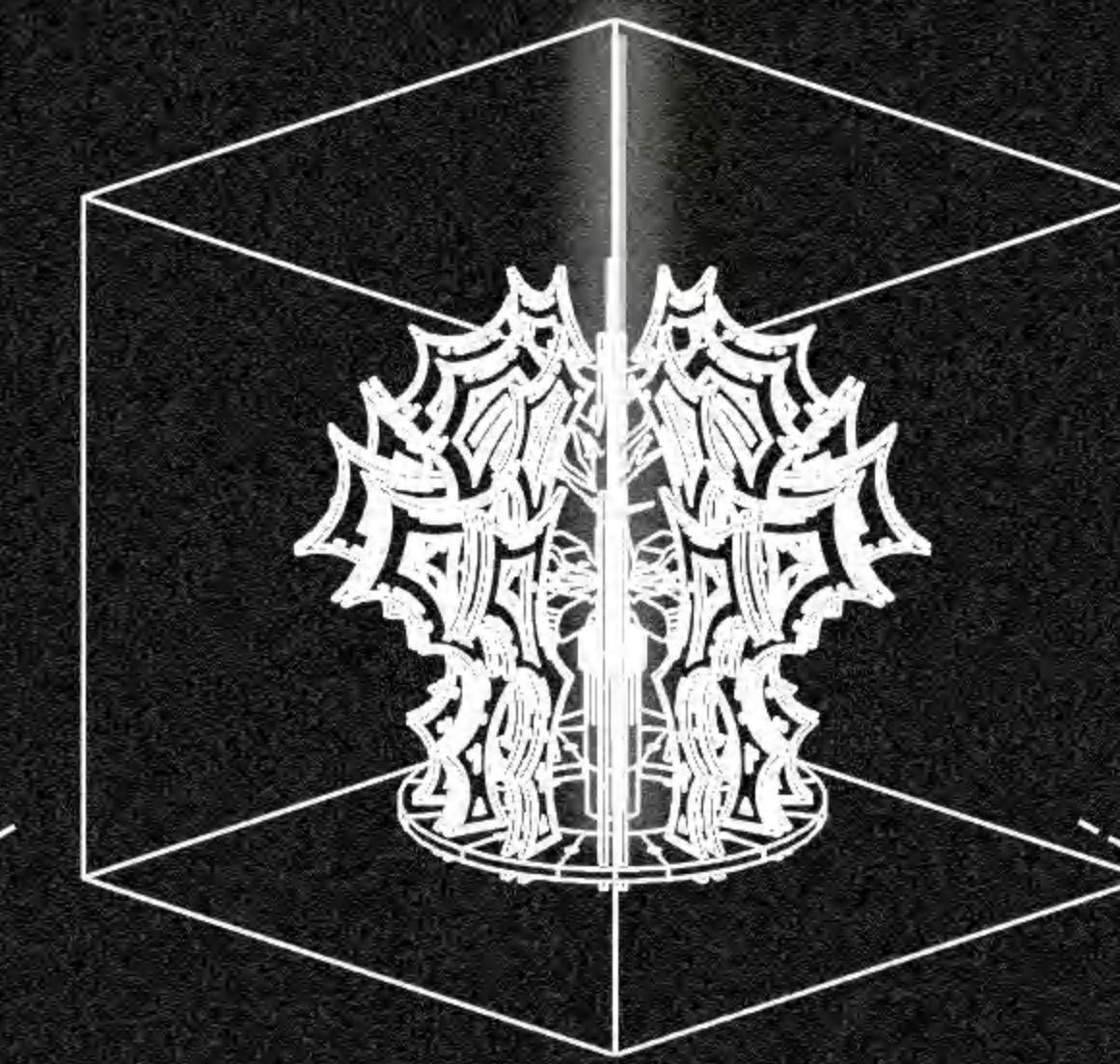
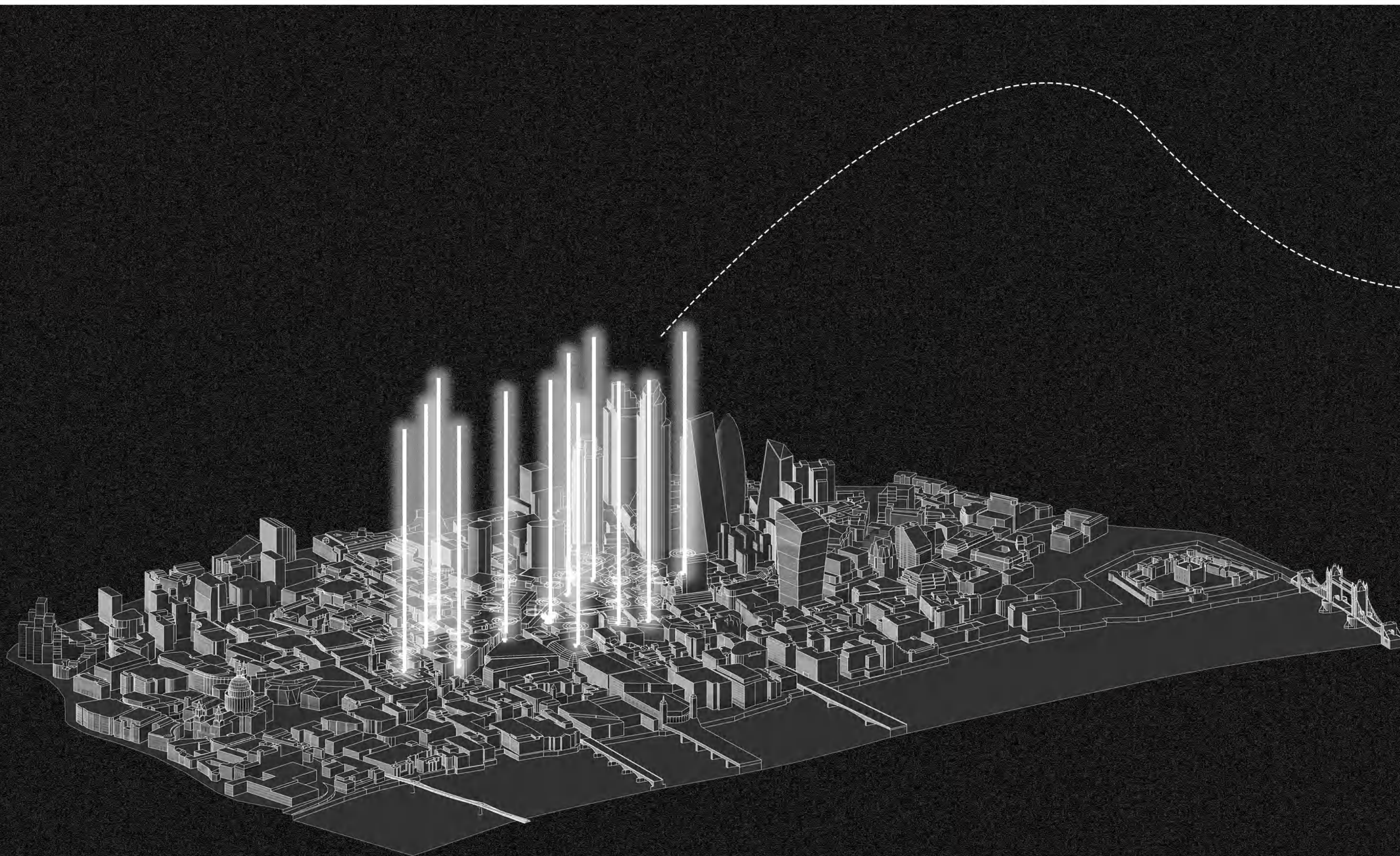
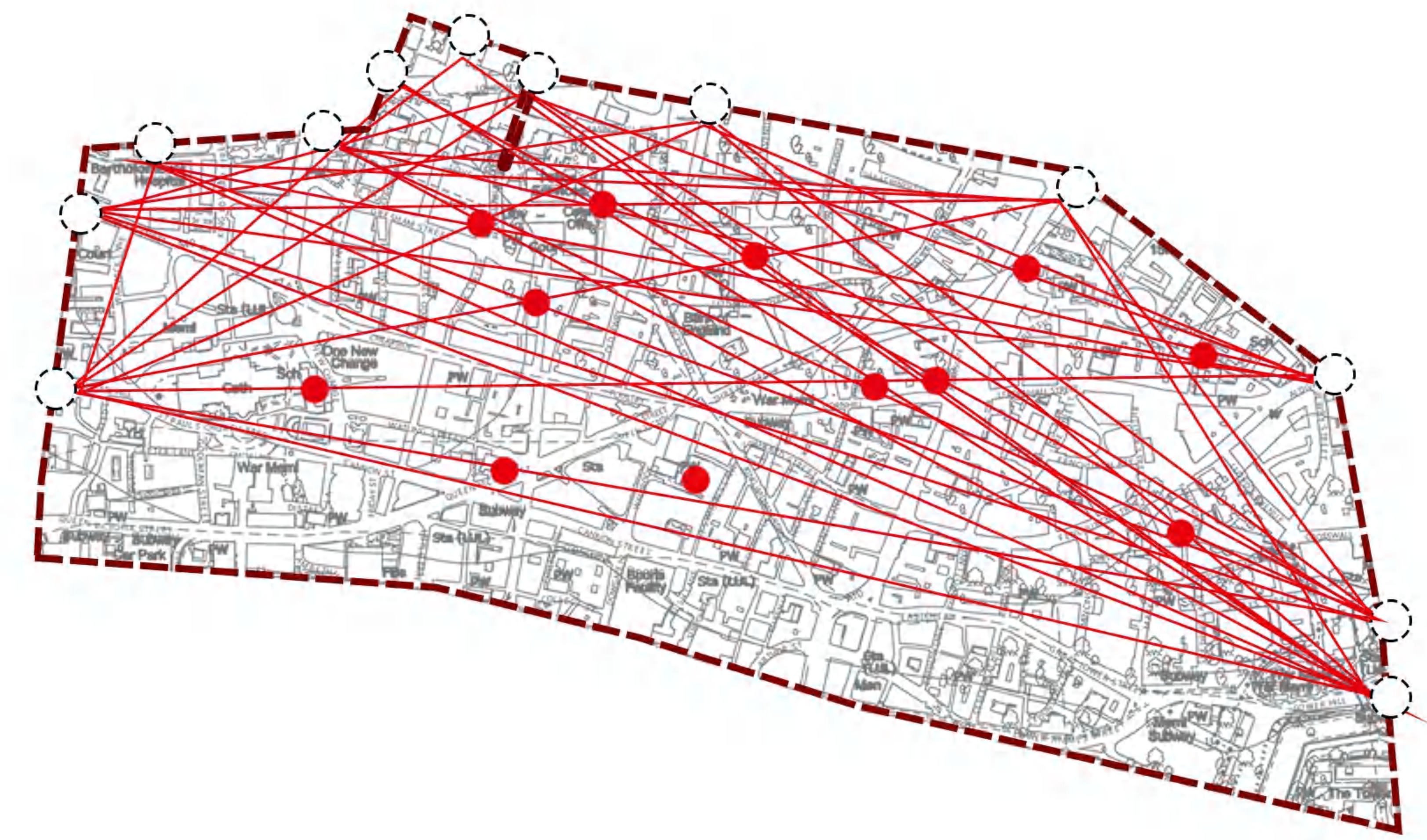


PACKAGING TIME

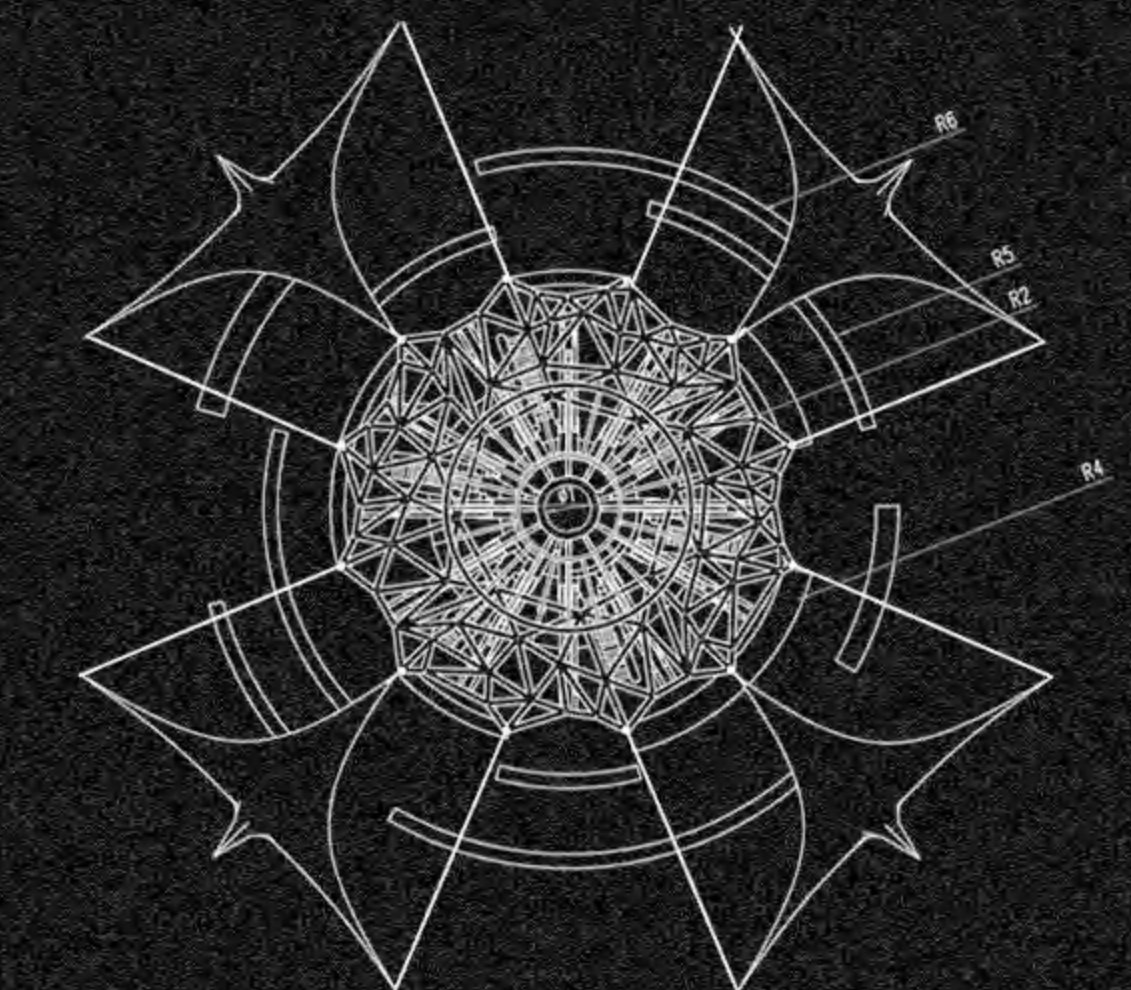
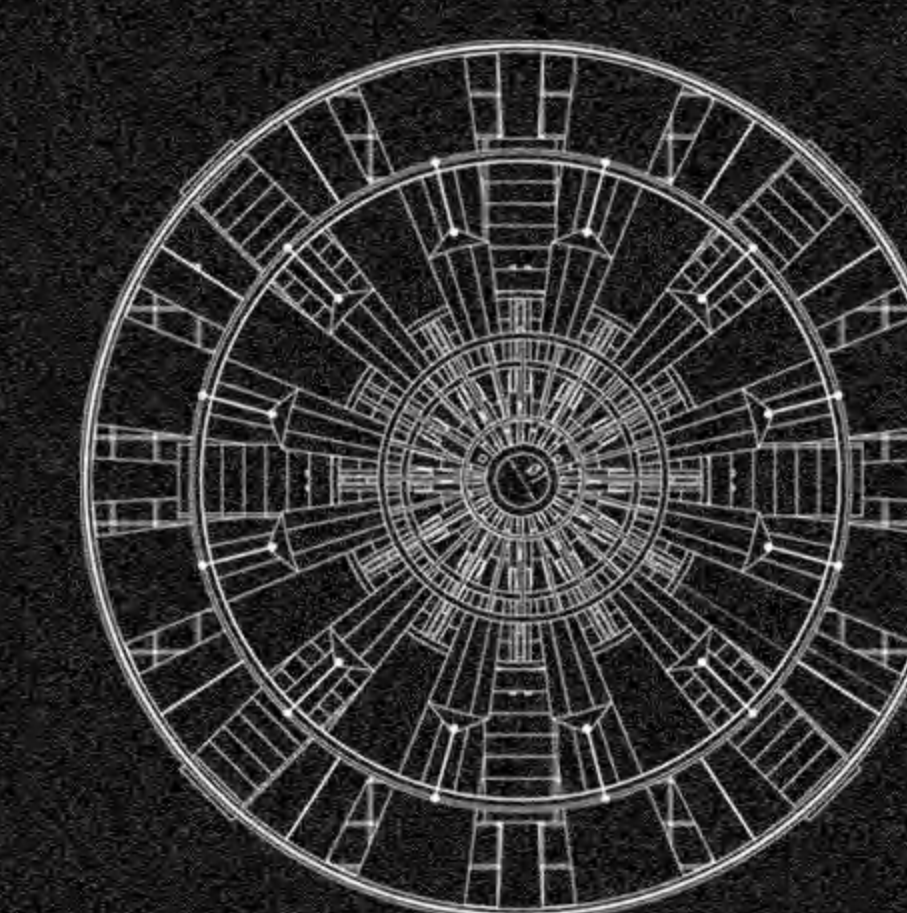
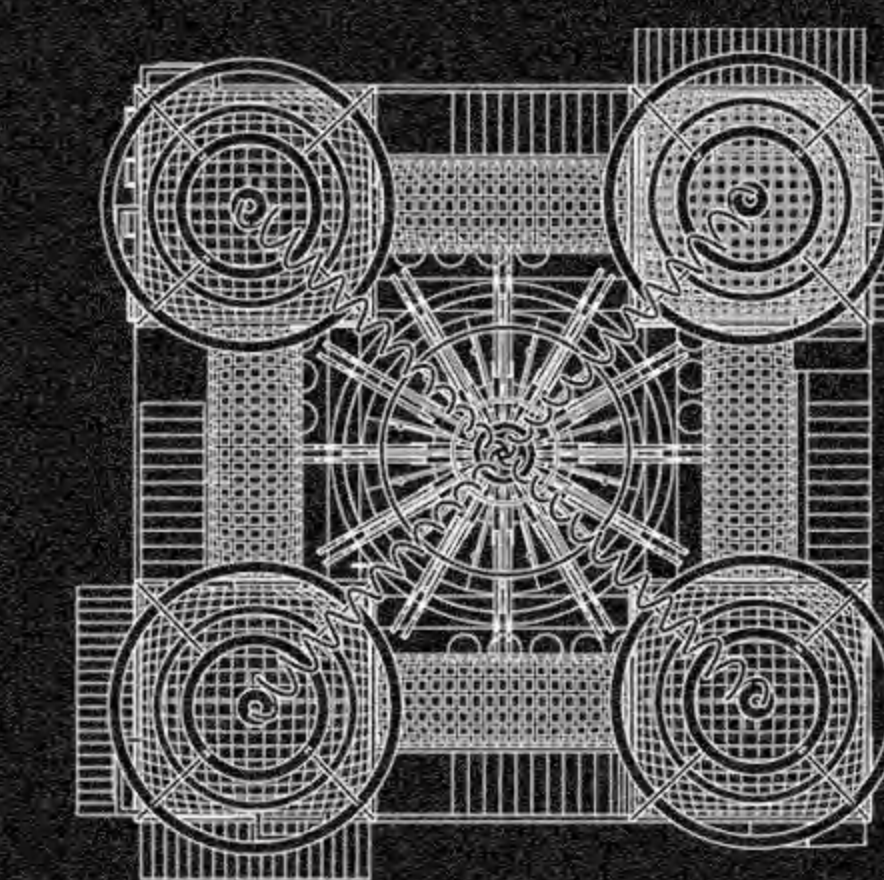
2099-2199

Biotic Expansion Phase

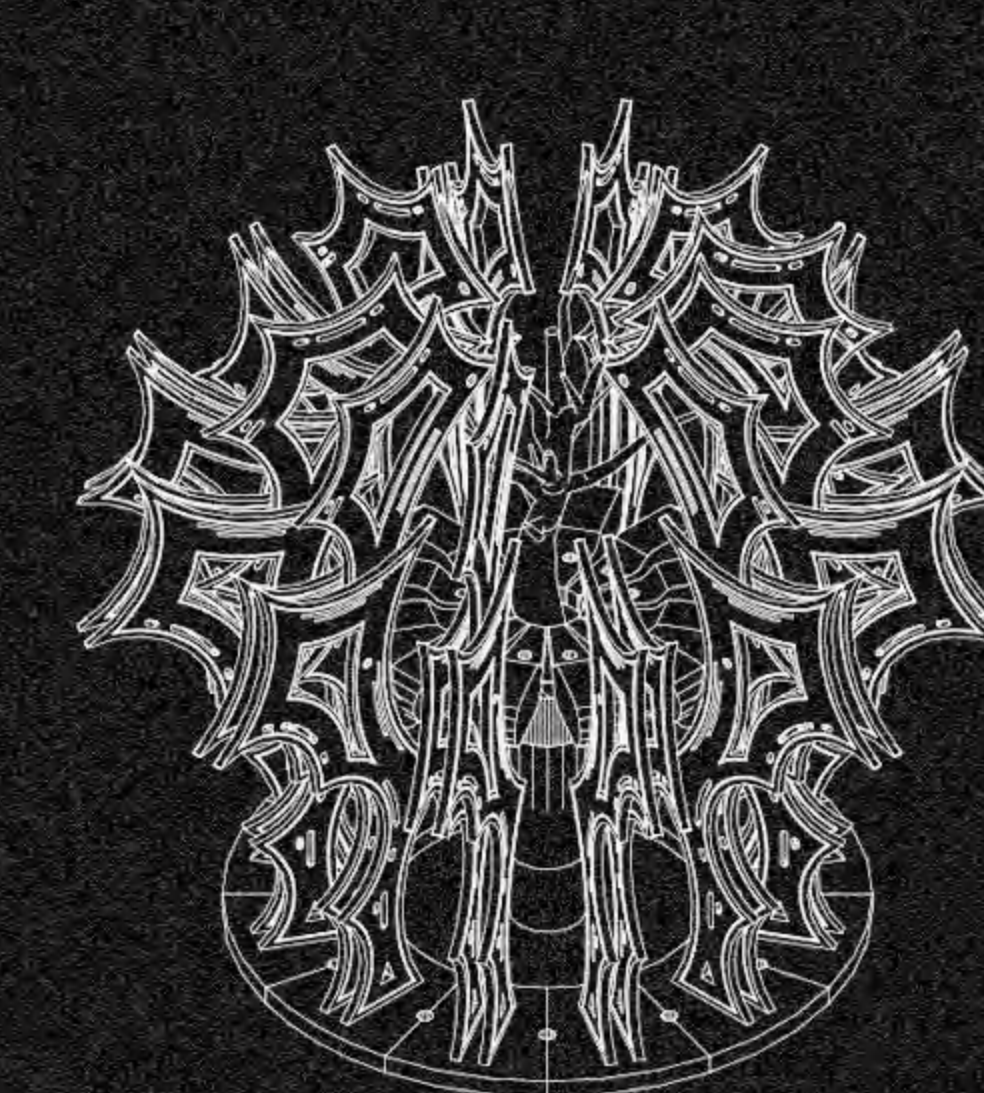
In my speculative world framework, due to war and climate disasters, the Earth's surface has become uninhabitable for humans, forcing humanity to relocate beyond the surface. The installation was placed in the London City area before 2099. At this phase, we will explore the installation's self-evolution and growth from the present day to the future.



Installation Location



In this phase, the installation is positioned according to three distinct modules, placed strategically based on site-specific needs.



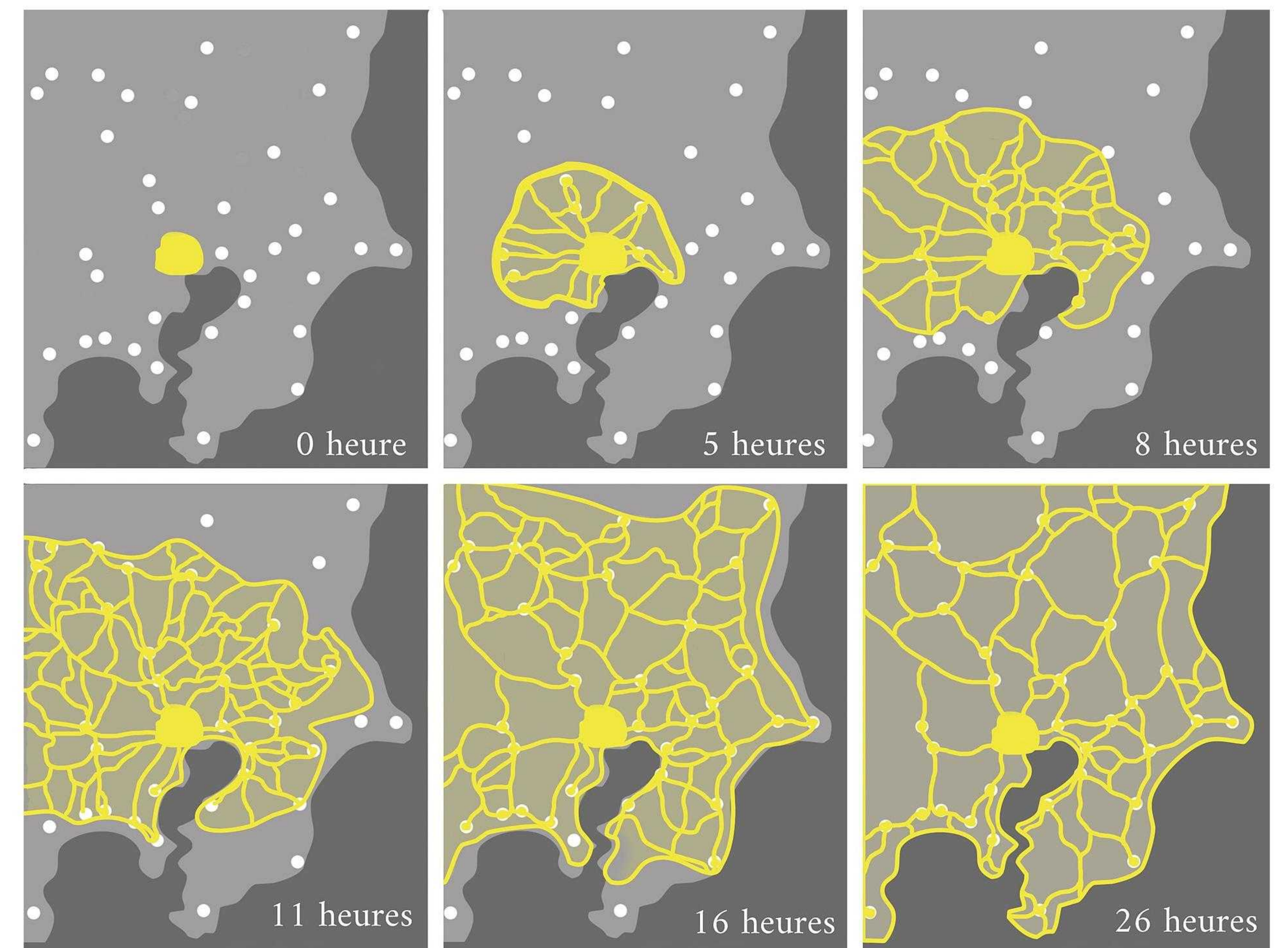
Static into Dynamic

PACKAGING TIME

2099-2199

Biotic Expansion Phase

In the expansion of future city grids, incorporating elements from biological research, I conducted an experiment using slime mold as a model. Inspired by the work of physicist Toshiyuki Nakagaki at Hokkaido University, who used slime mold feeding pathways to simulate the Tokyo urban rail network, this approach provided valuable insights for my design.

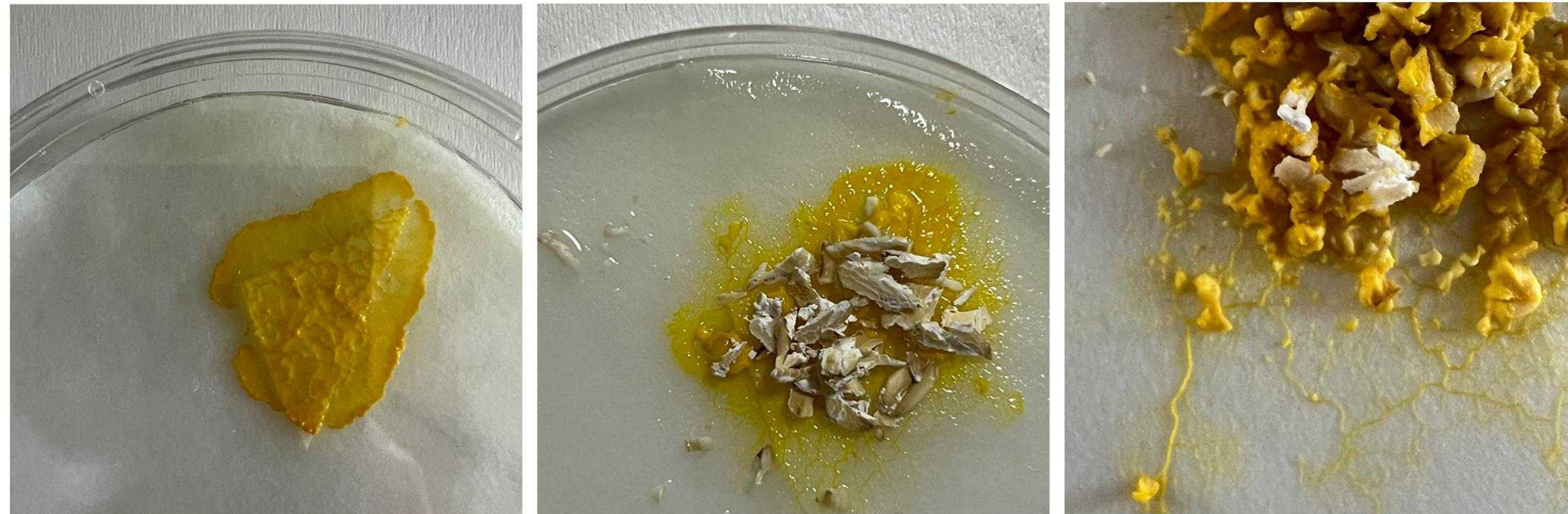


Wikimedia Commons, 2023. *Physarum polycephalum* network. [image online]
Available at:
https://commons.wikimedia.org/wiki/File:Physarum_polycephalum_network.jpg

PACKAGING TIME

2099-2199

Biotic Expansion Phase



Activate slime mold with water



Feed the slime mold,
and store it in a cool,
shaded place



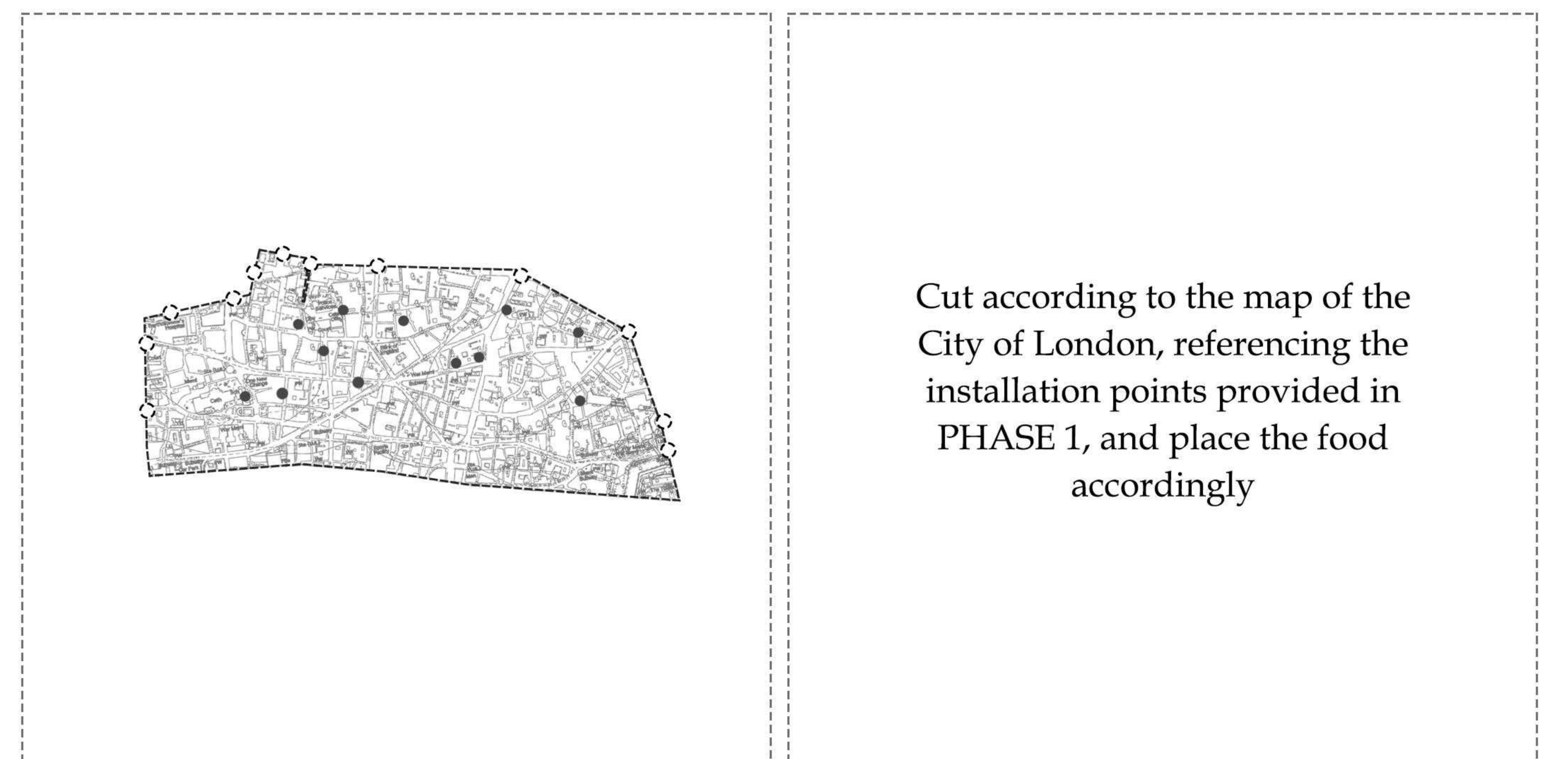
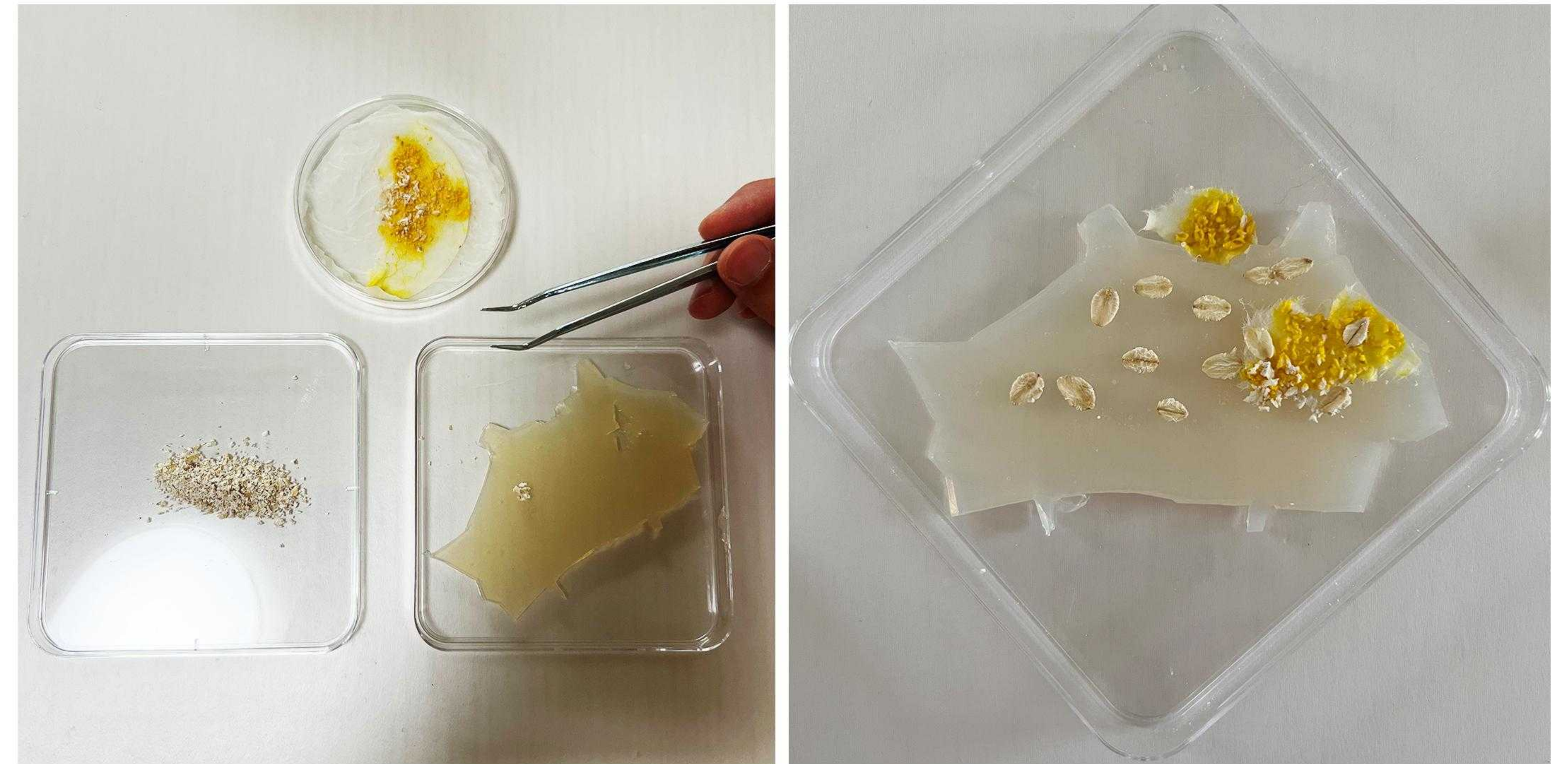
Agar, dish, heating



Cool the agar, then proceed
with map cutting

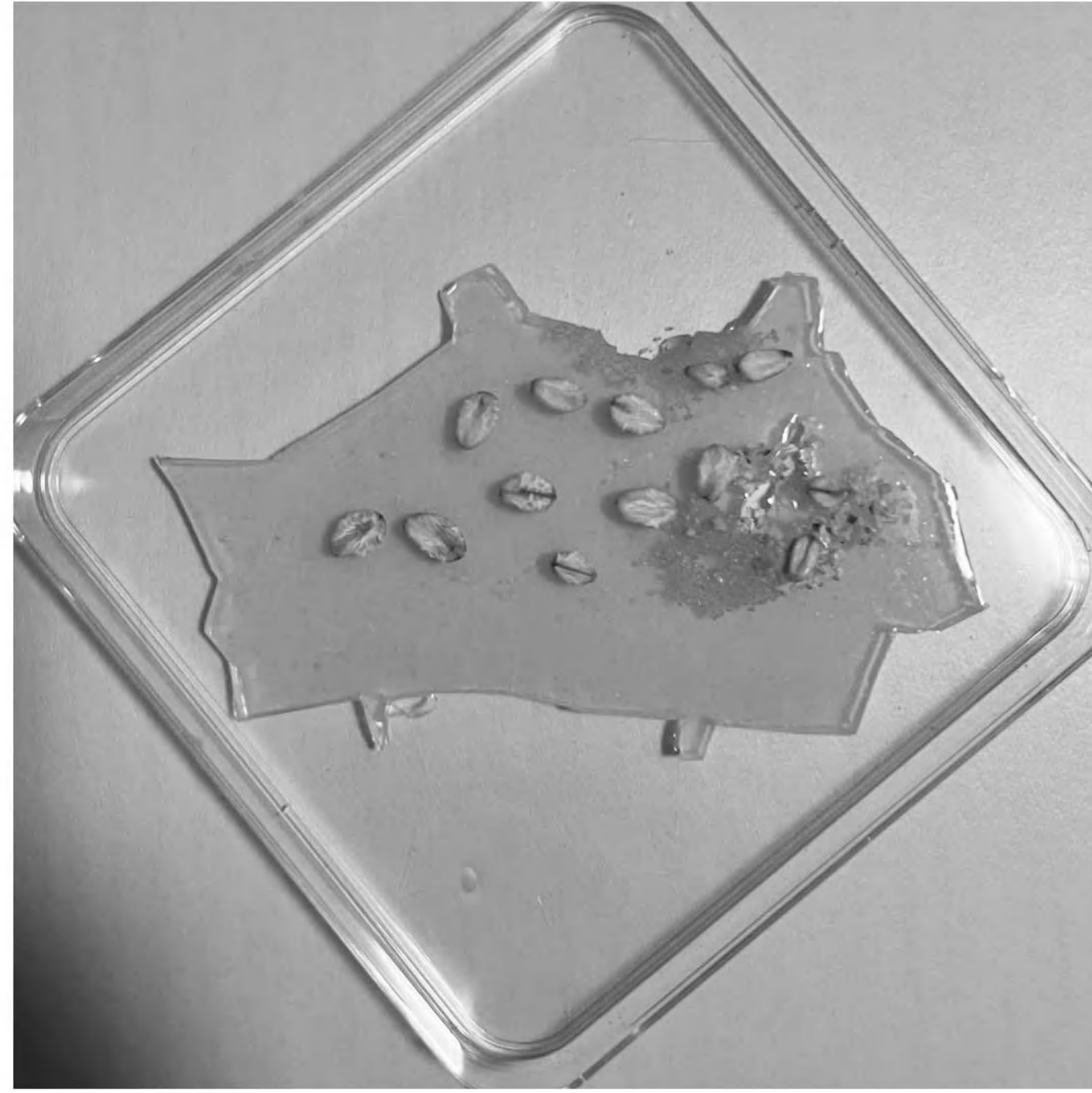


Map cutting still...

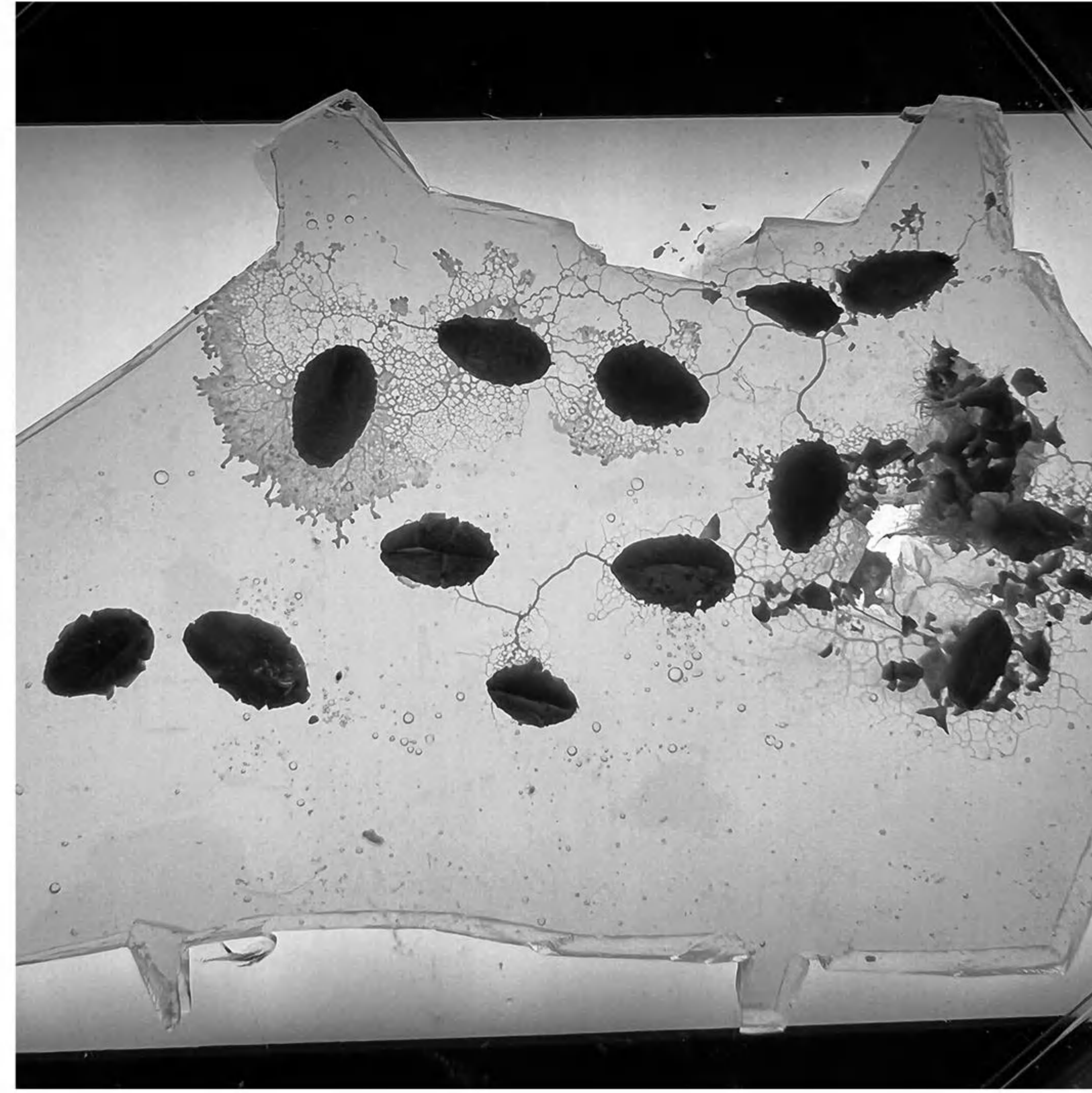


Cut according to the map of the
City of London, referencing the
installation points provided in
PHASE 1, and place the food
accordingly

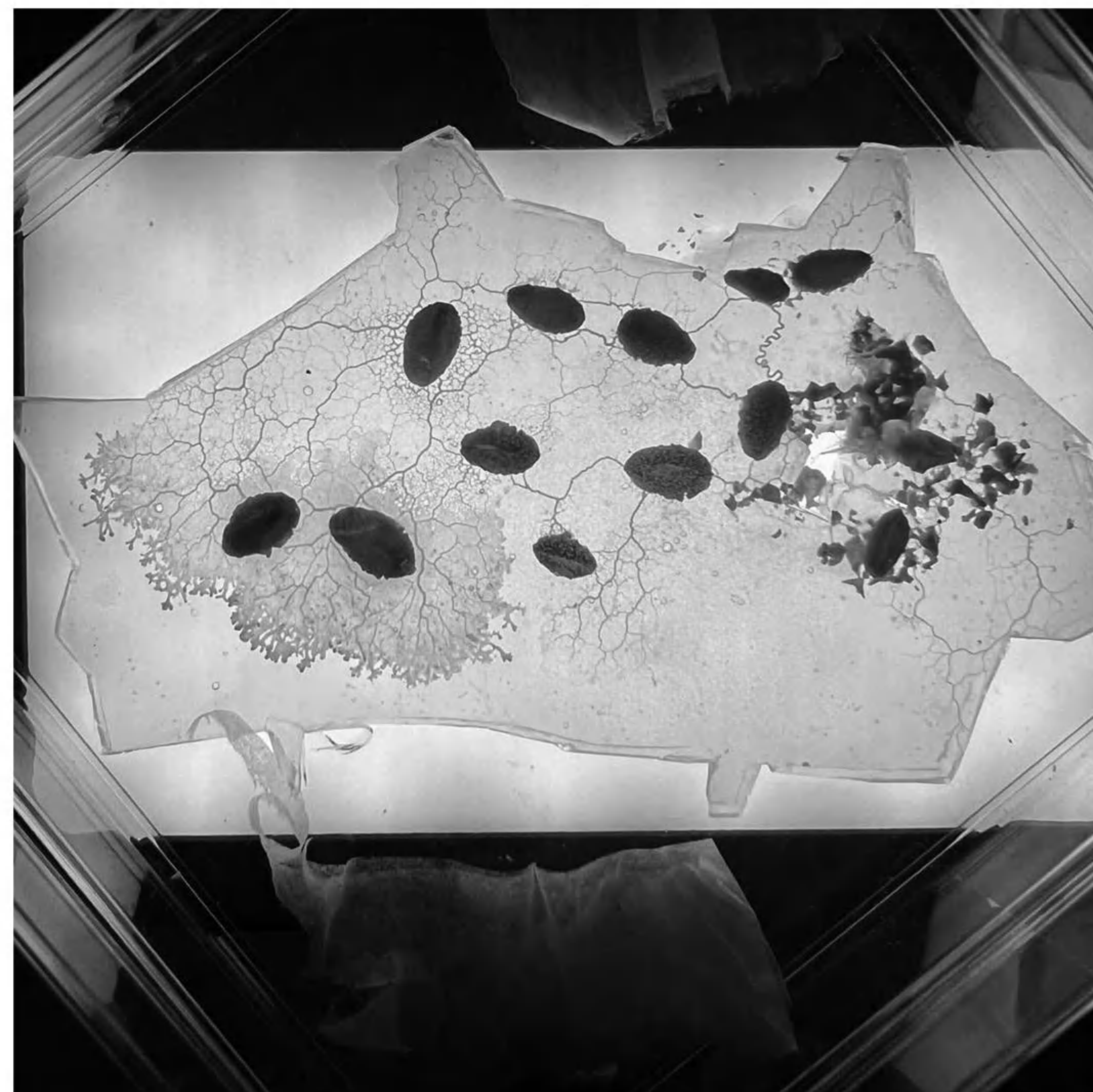
SLIME MOLD EXPERIMENT



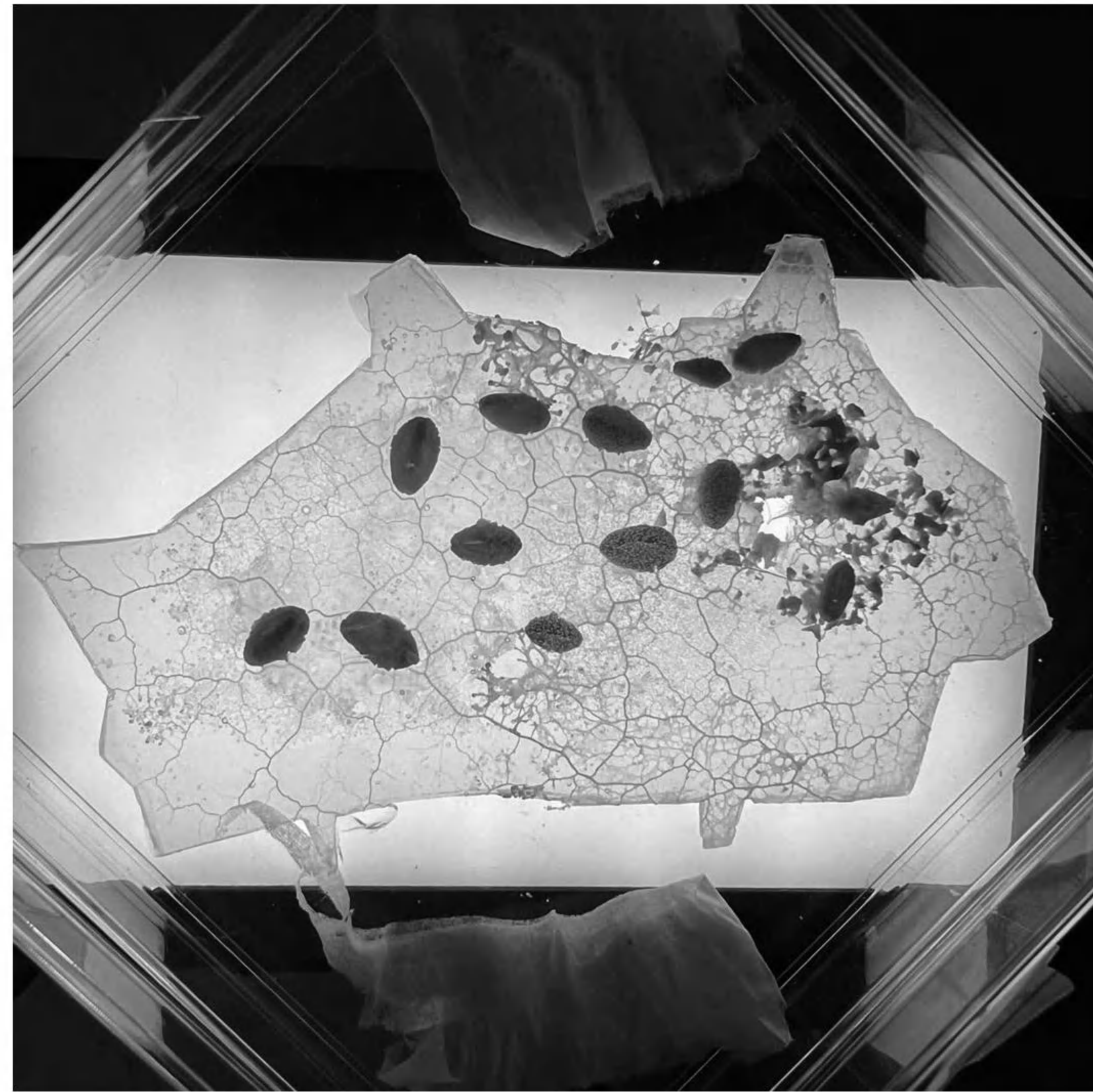
Day 1



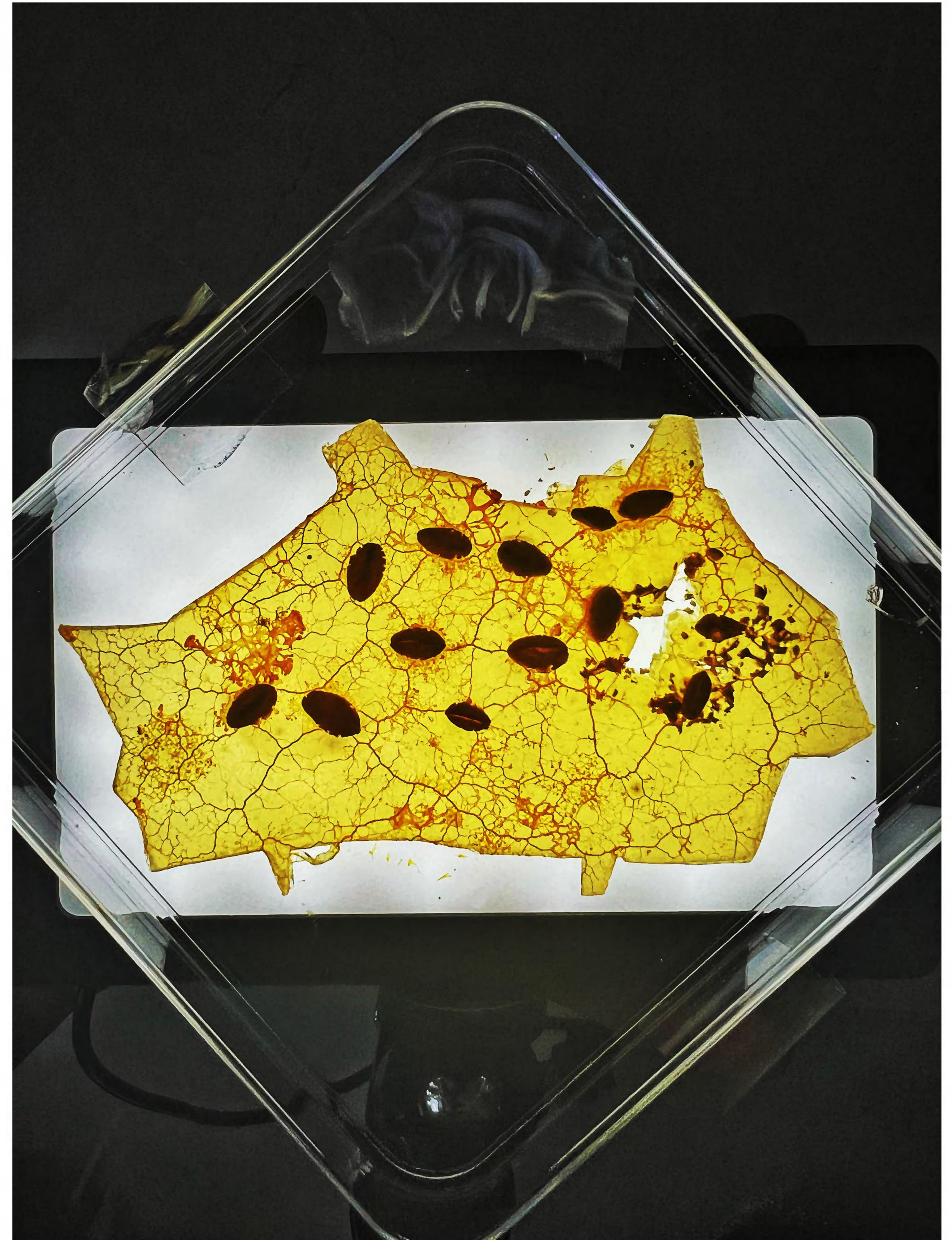
Day 1 +8 hours



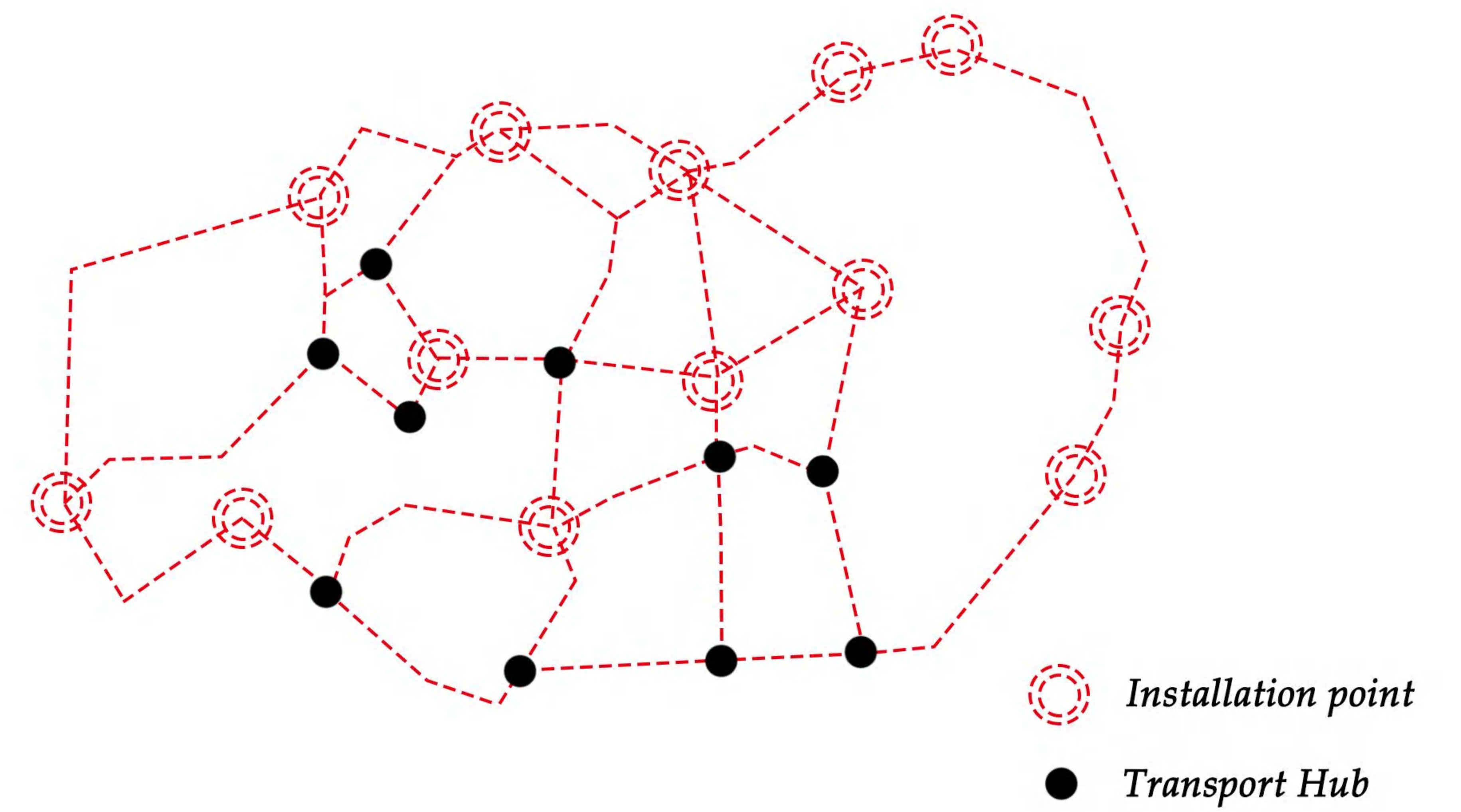
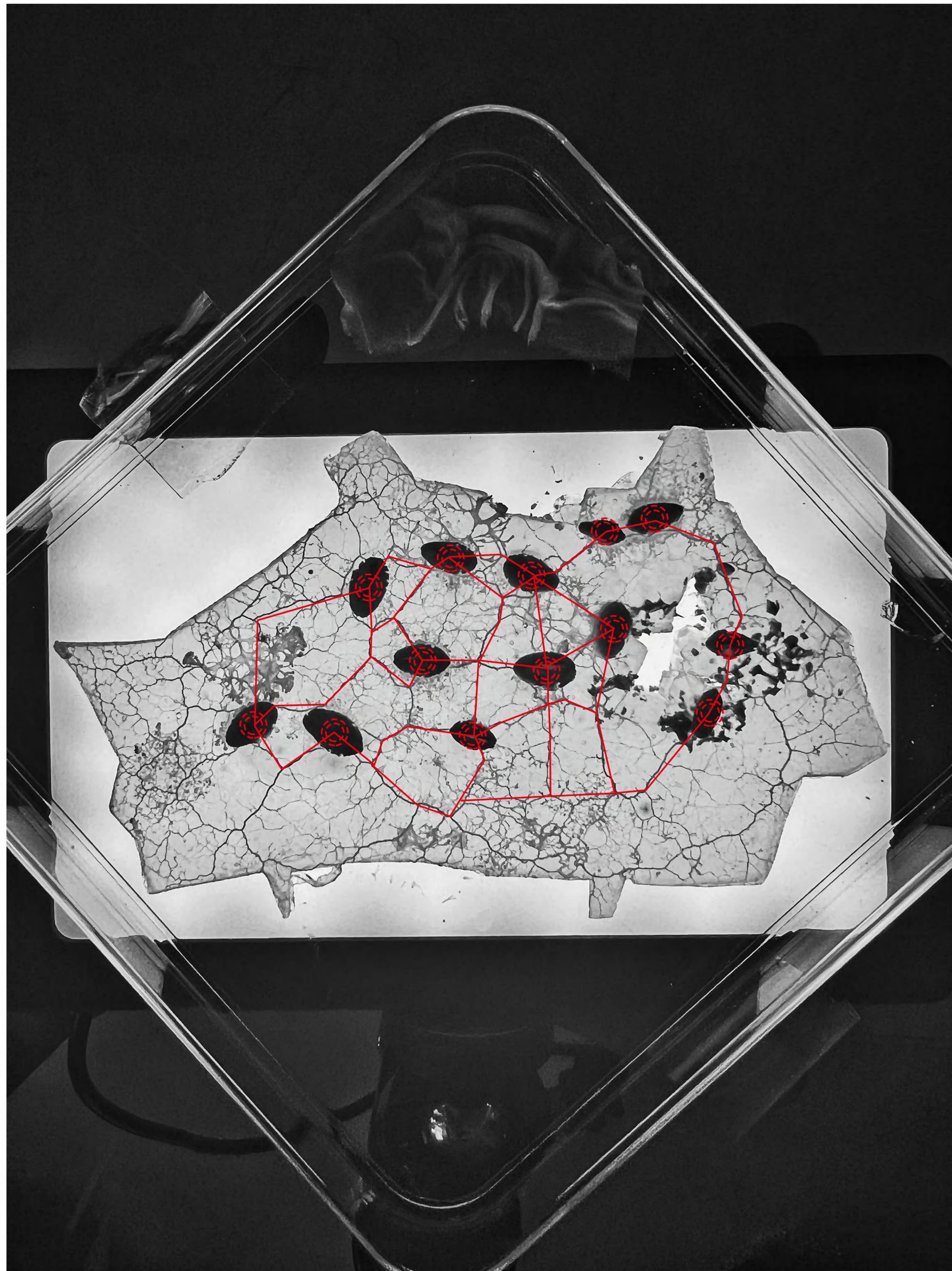
+5 hours



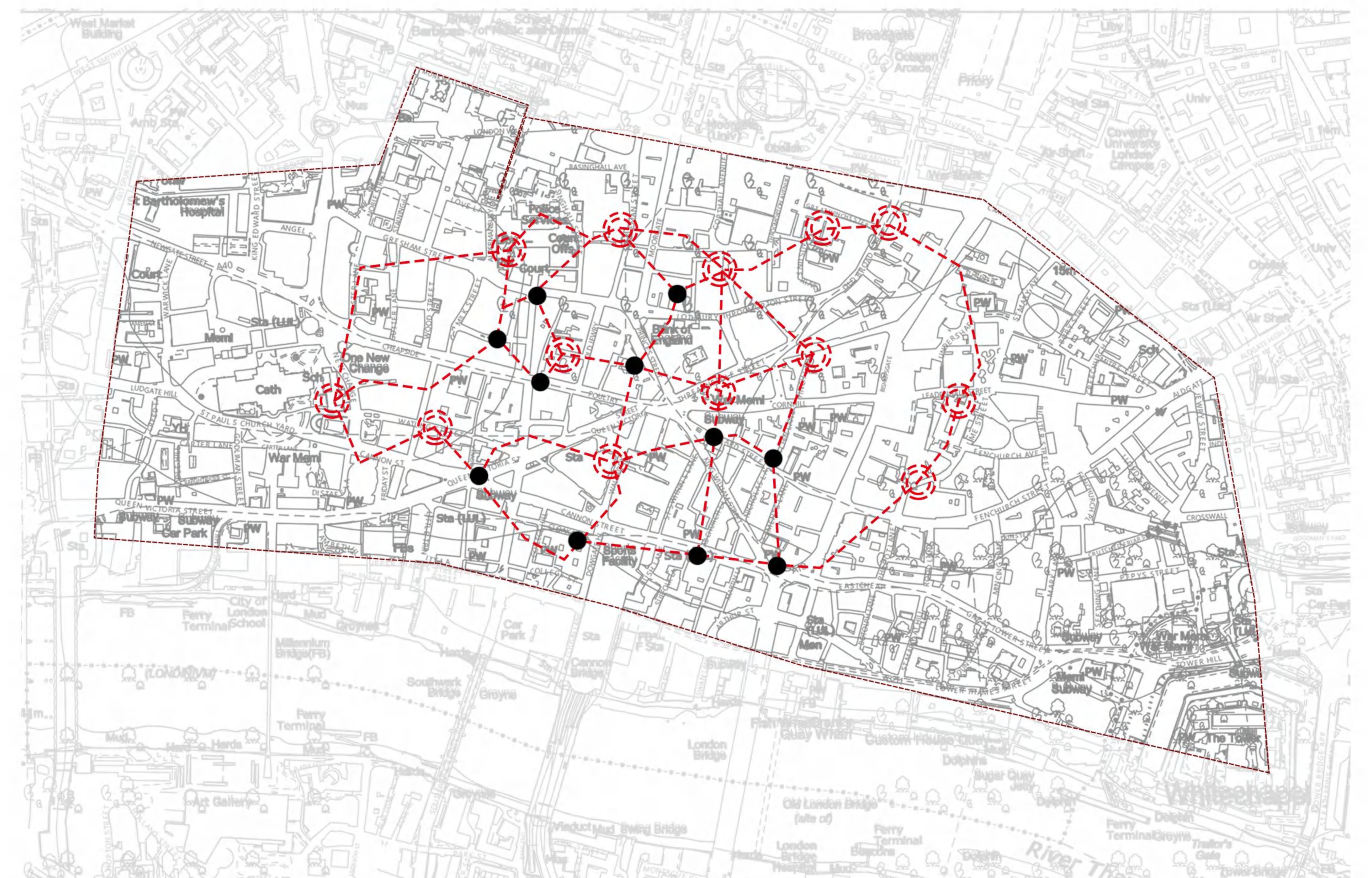
+8 hours



After 2 days



From the slime mold experiment, we used food as a stand-in for the points needing connection (installation point), and successfully derived the desired urban connectivity network(Trans-Hub).



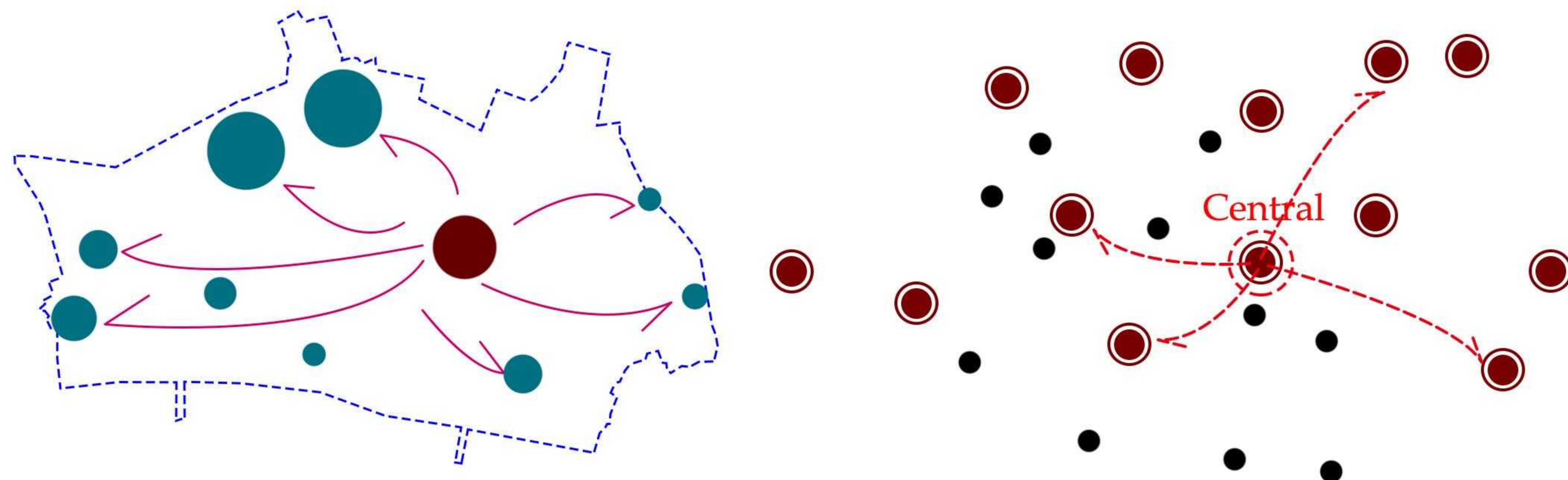
PACKAGING TIME

2099-2199

Biotic Expansion Phase

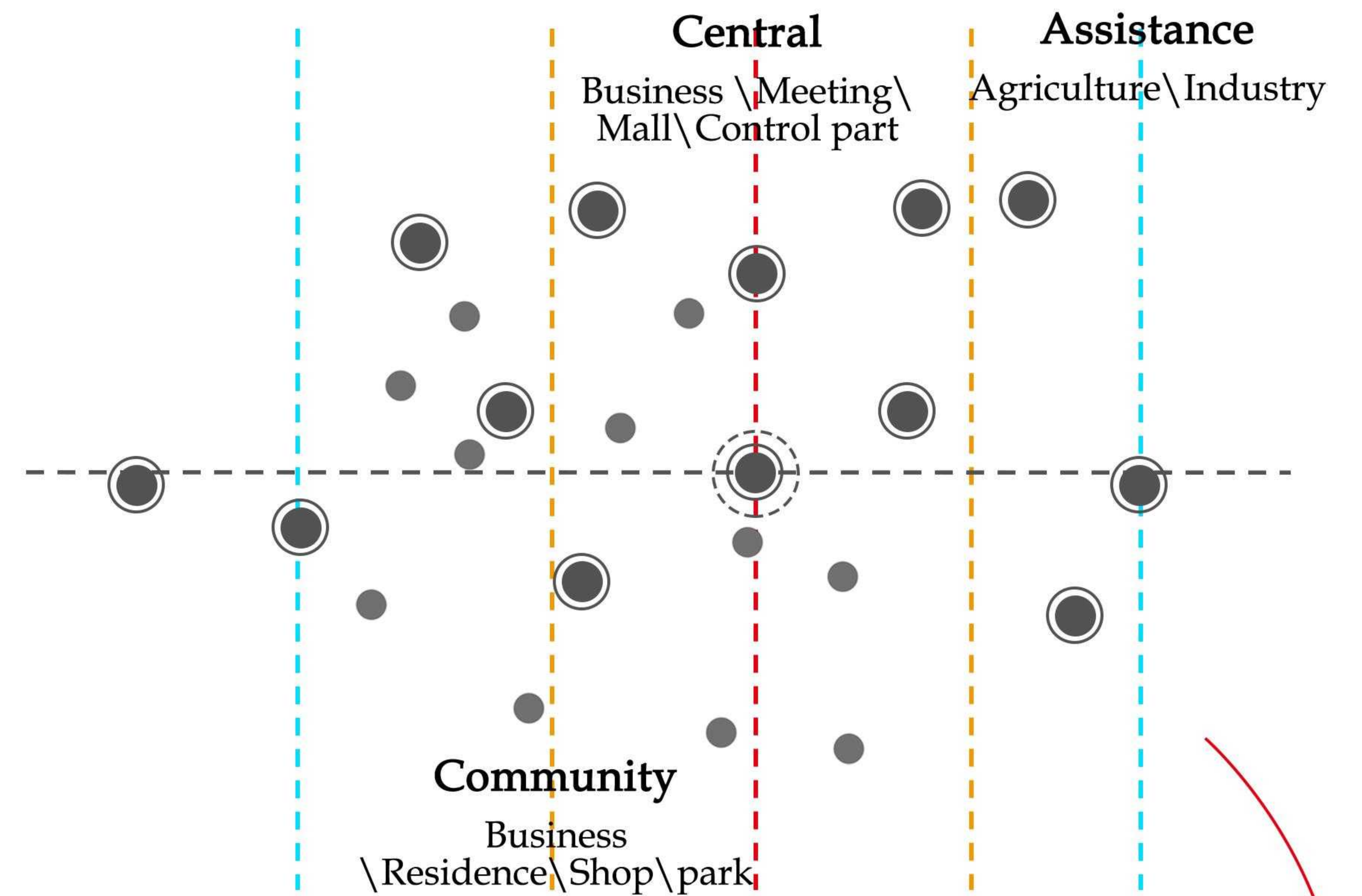


With the foundational city blueprint established, the urban grid will follow a concentric model, aligning with the City of London's history and the 2036 plan. The core will house the central business district, surrounded by residential and support areas.

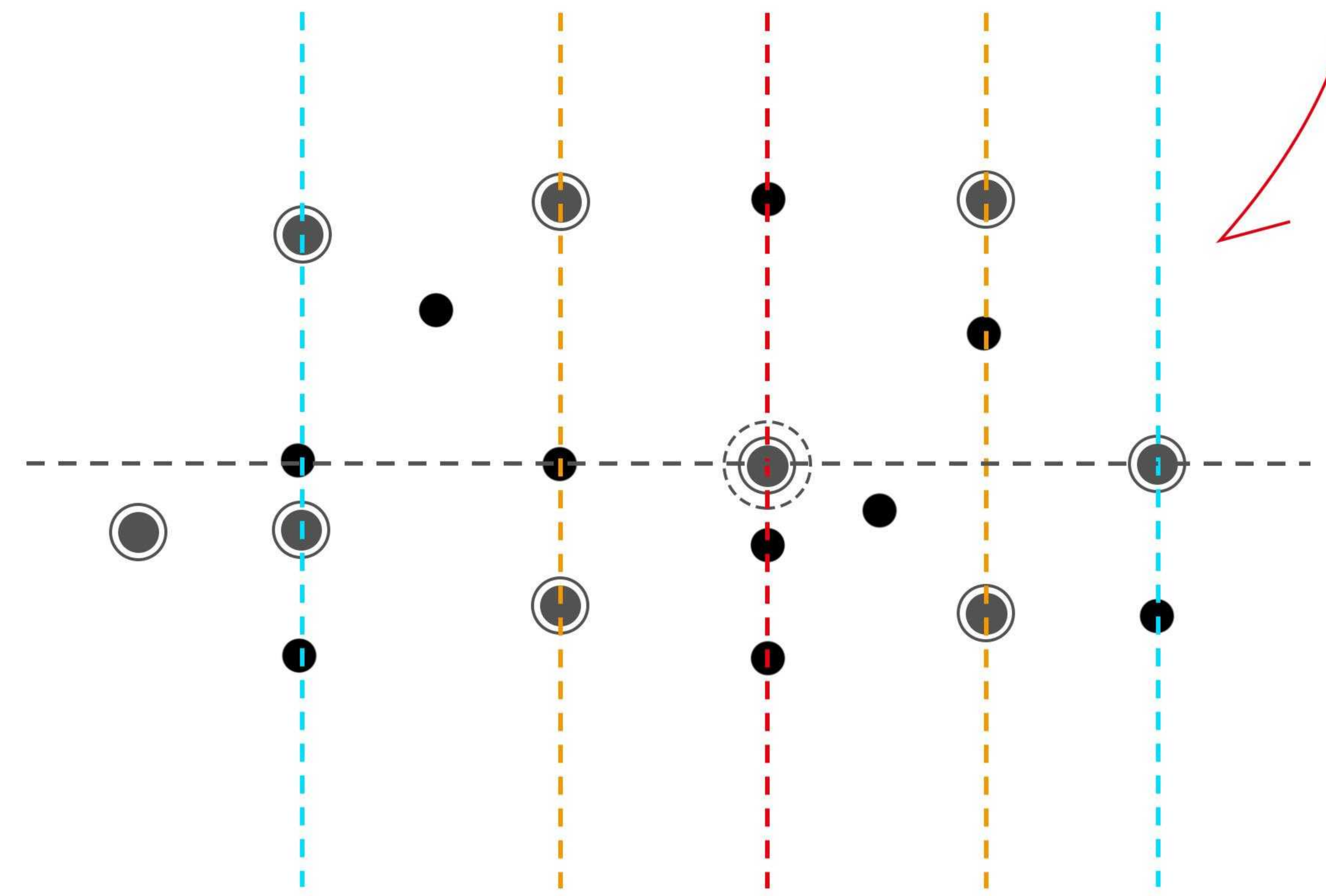


Concentric Zone Model

INFO FROM City of London Corporation. (2018). City Plan 2036: Shaping the Future City(pp.24). Draft Local Plan. London: City of London Corporation.



To optimize the urban grid, installation points and transport hubs are aligned linearly.

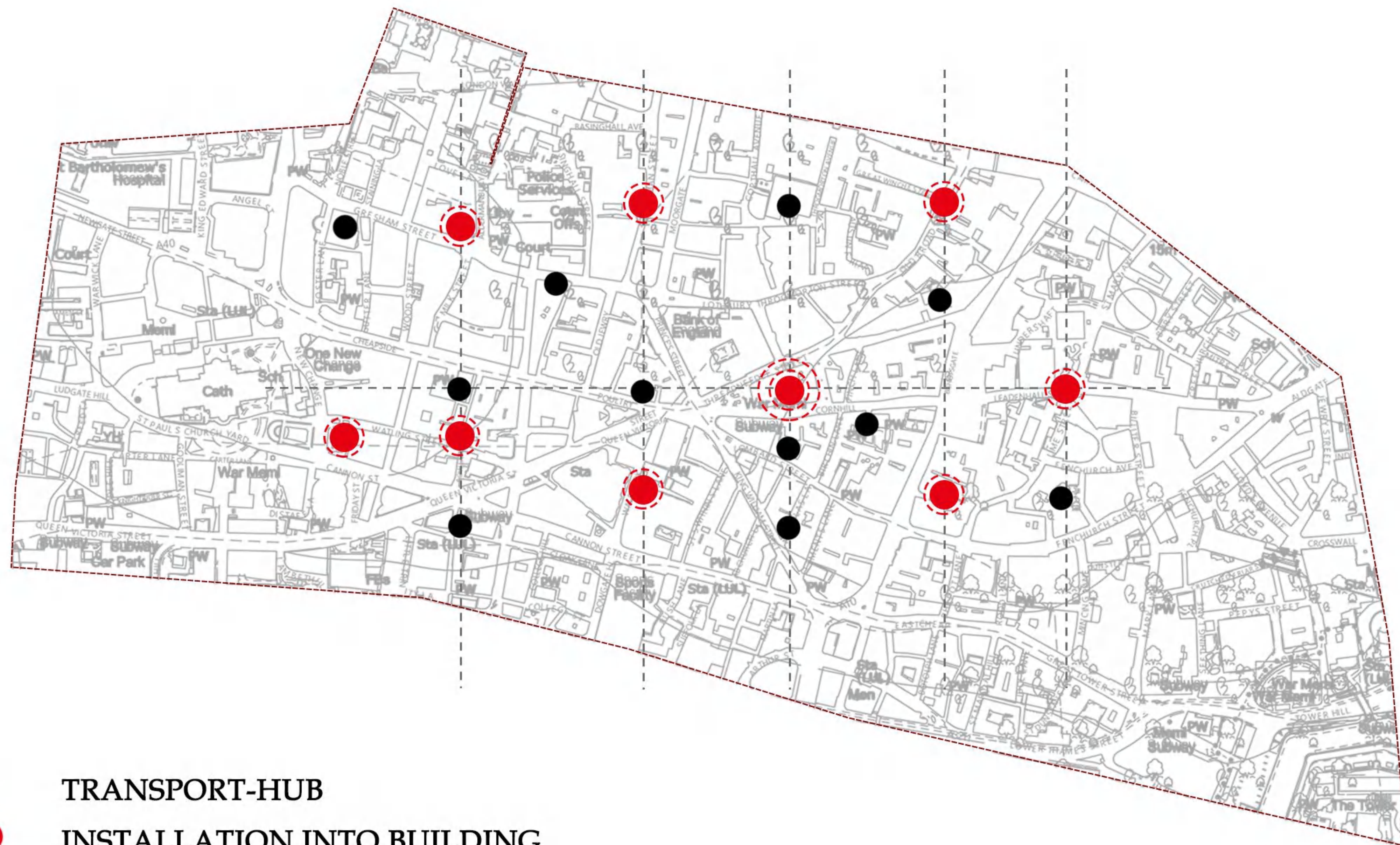


PACKAGING TIME

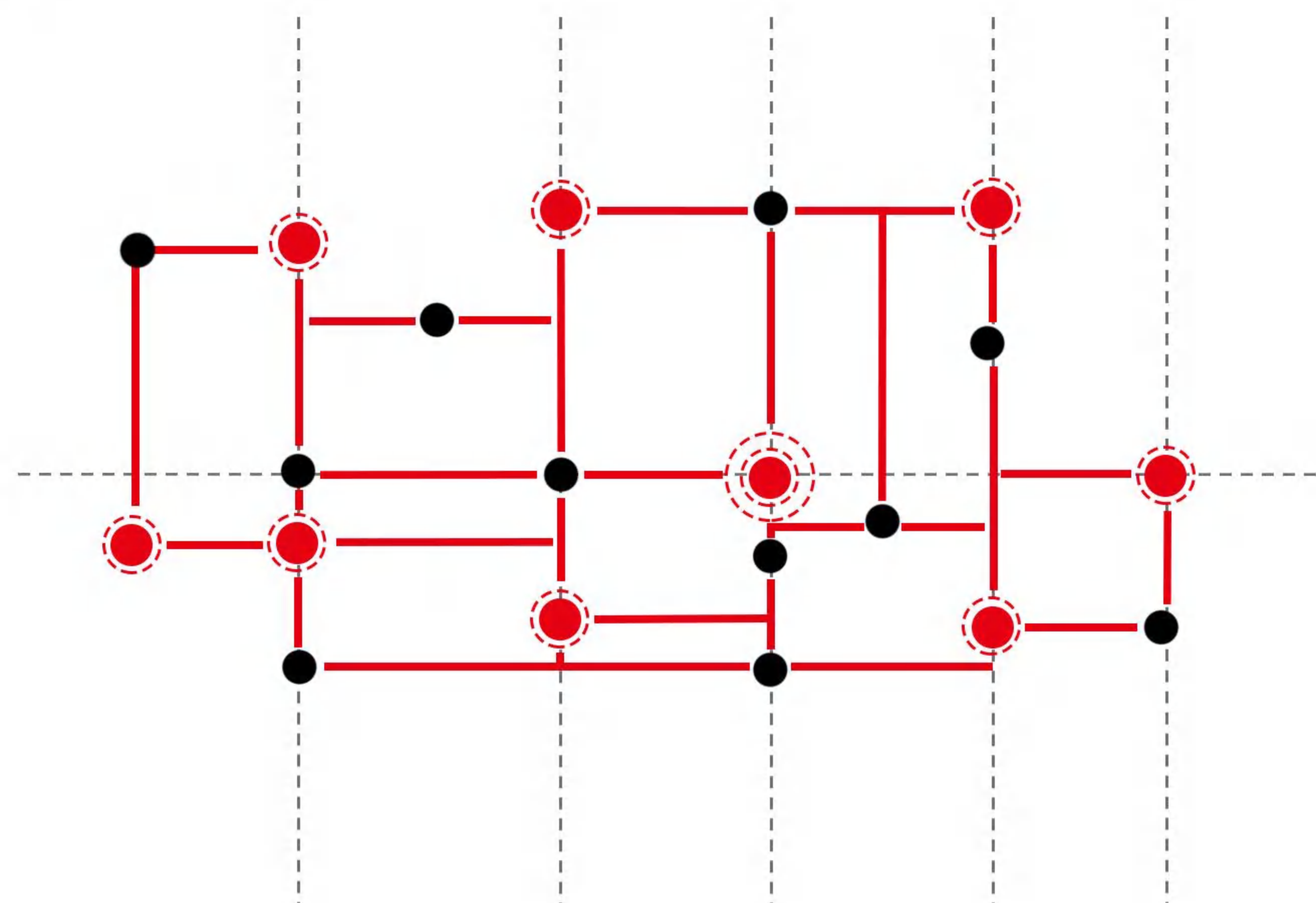
2099-2199

Biotic Expansion Phase

Place the refined point layout onto the London city map and connect the transport network point-to-point.



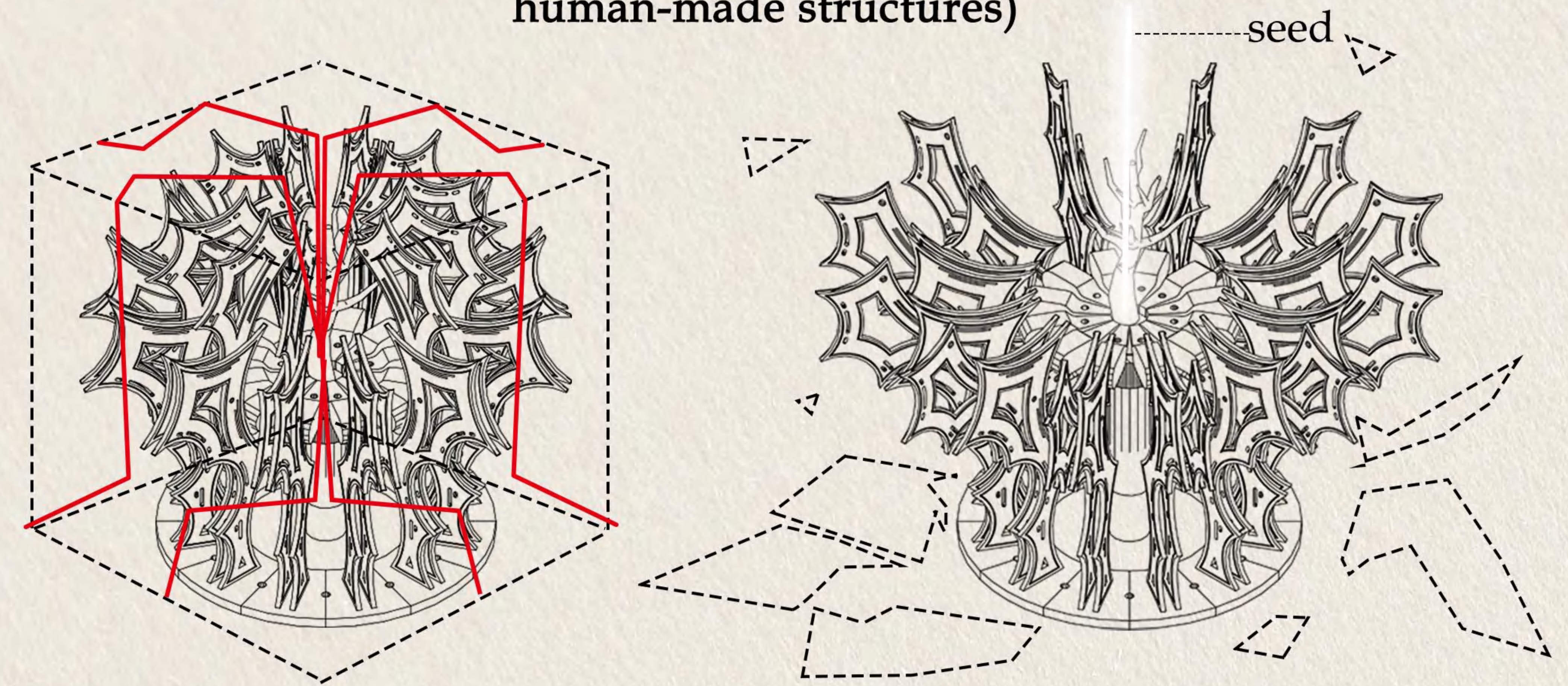
- TRANSPORT-HUB
- INSTALLATION INTO BUILDING
- ROAD/VESSEL



FROM MODULE INTO CITY

STURCUTRE

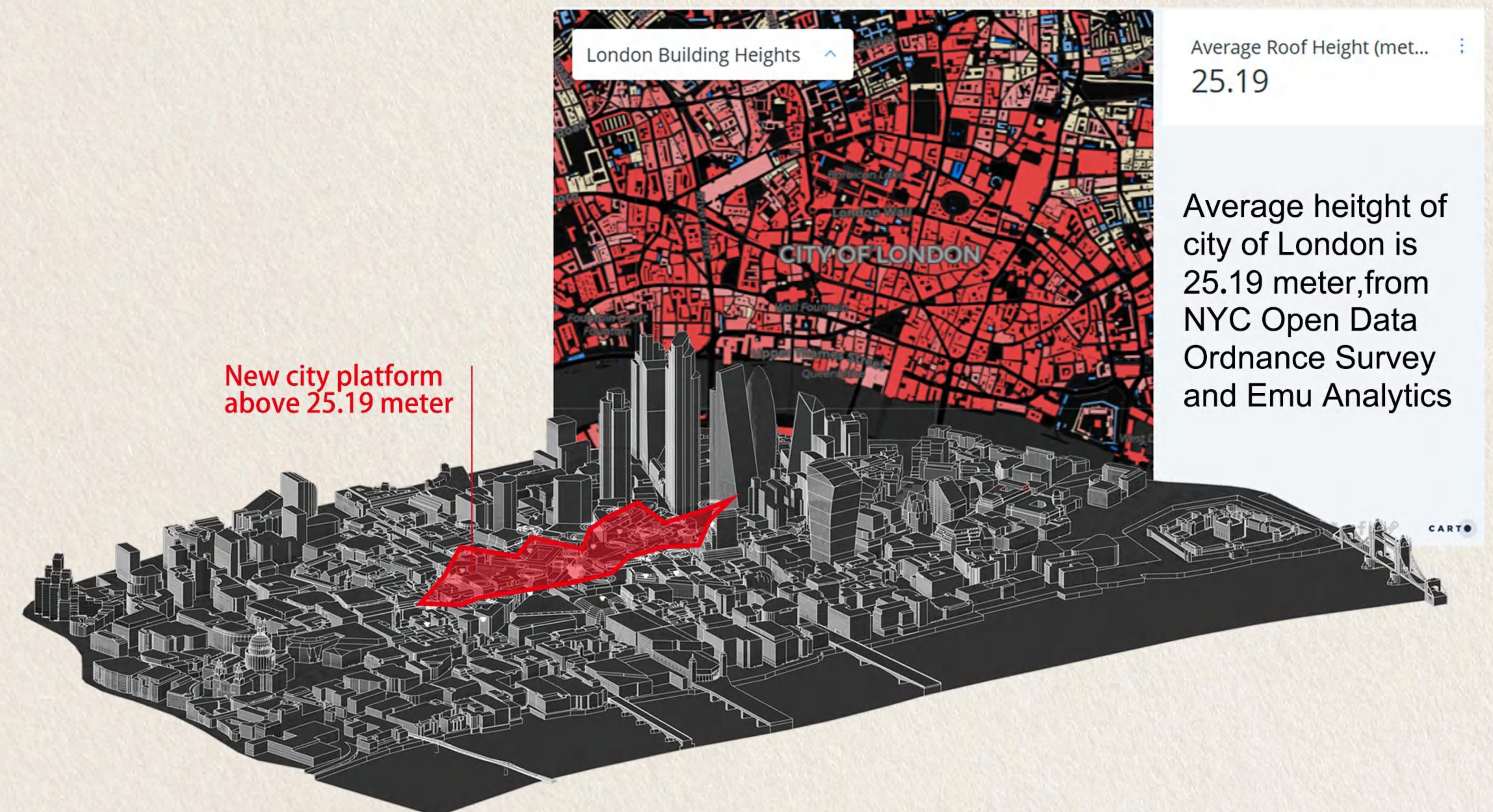
(Nature's power begins to oppose human-made structures)



1. Break up from Previous Module(2024-2099)

2. Growing Central(myceilum) as New City Platform Structure(2099-2199)

Based on speculative design, assumes that extreme climate and conflict have made the Earth's surface unlivable. The desolate landscape holds abandoned cities and Phase 1 modules. This vision leads to a new urban grid built above ground to meet future needs.



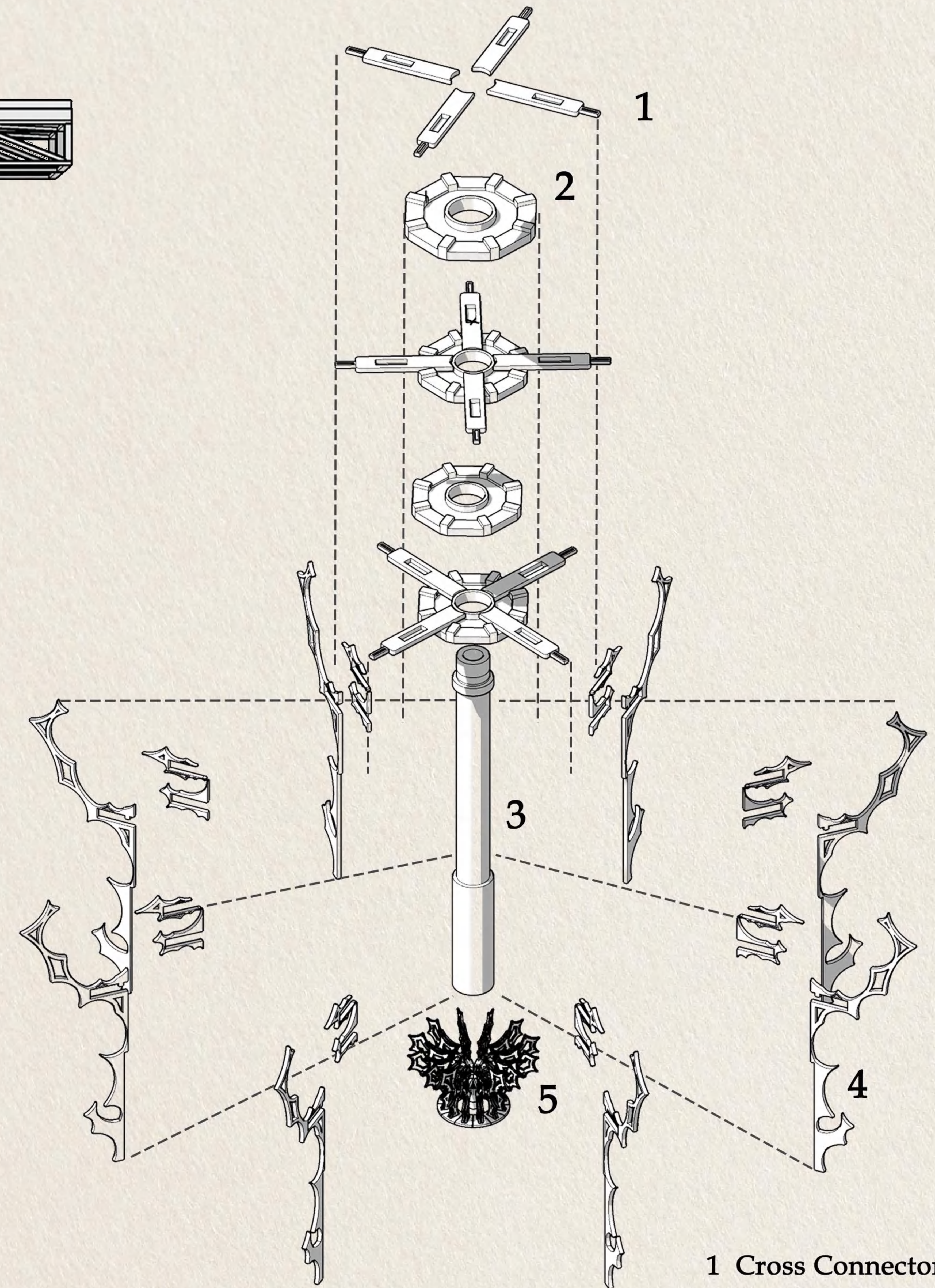
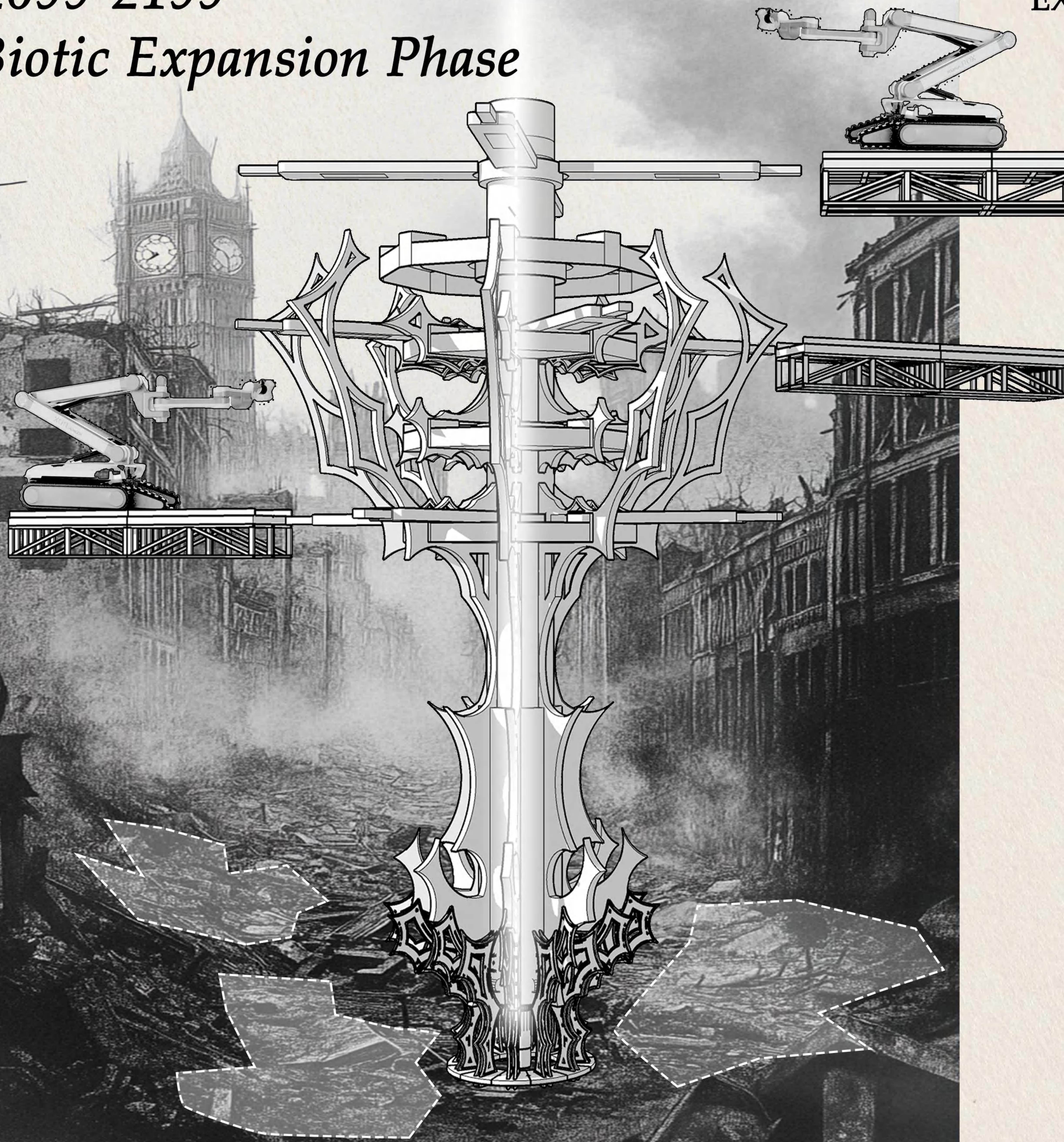
PACKAGING TIME

2099-2199

Biotic Expansion Phase

TRANSPORT-HUB

EXPLODED FAÇADE DIAGRAM



- 1 Cross Connector
- 2 Pallet structure
- 3 Mycelium pillar(seed)
- 4 Bracing System
- 5 Installation(Dynamic)

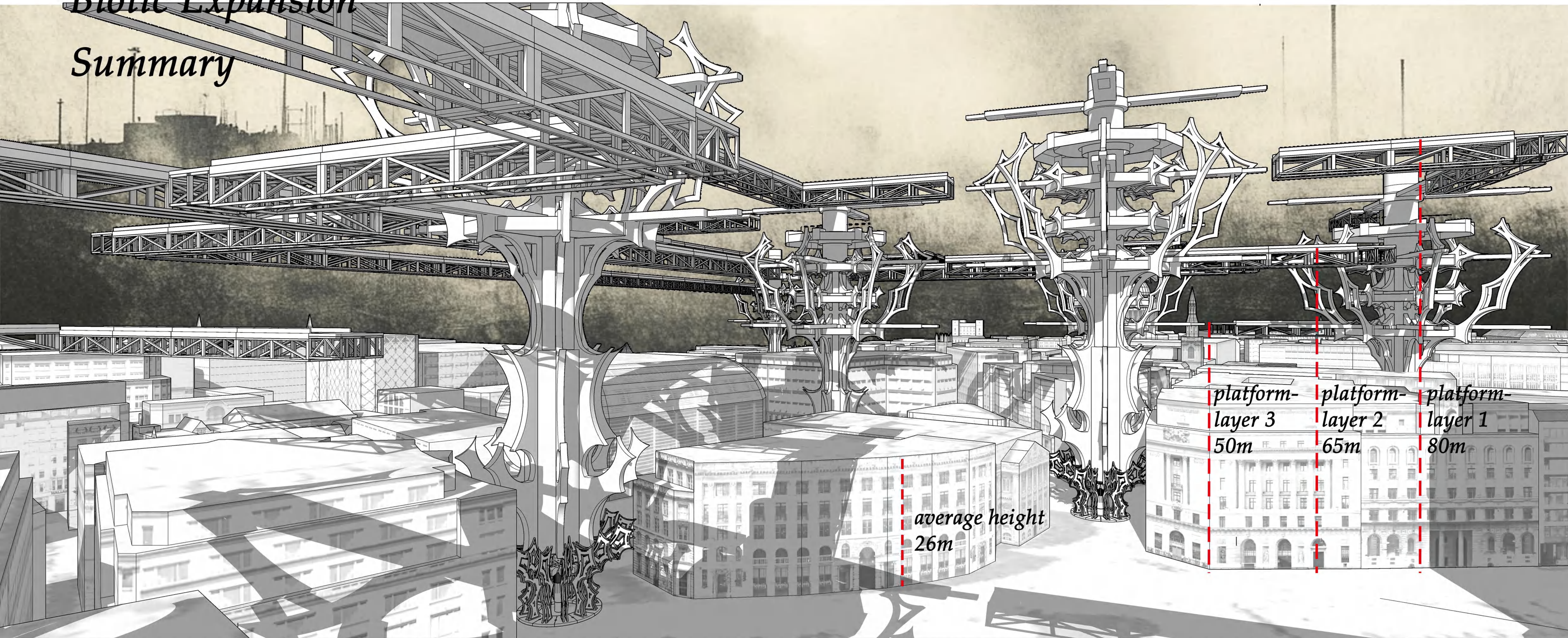
PHASE 2

2099-2199

Biotic Expansion

Summary

At this stage, the installation has broken free from the modern modular enclosure of Phase 1, transforming into structural pillars of the Phase 2 urban platform, laying the groundwork for growth in Phase 3.



TIME LINE REVIEW (link to mindmap page)

Phase 1 2024-2099

The installation passively conforms to contemporary structural limits.

Phase 2 2099-2199

Man-Made structure
VS
Natural power

Phase 3 2199-

Collaboration between high-technology and nature

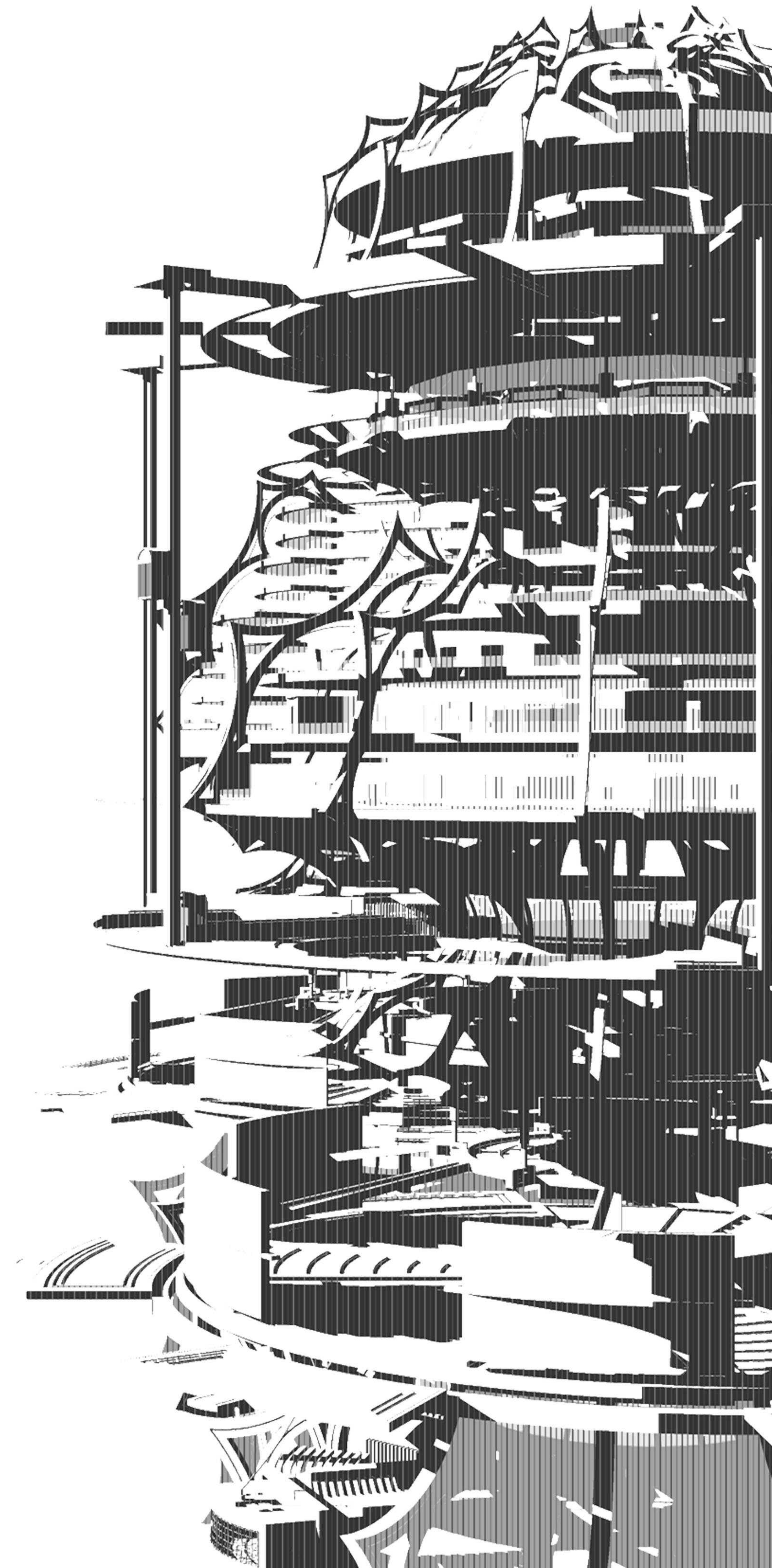
PHASE 3

2199-

Future Urban Phase

Could the installation, evolving from the modular structures of Phase 1 (2024-2099) into the continually growing platform of Phase 2 (2099-2199), transform into a new future city according to current urban theories, symbolizing humanity's hope to one day return to the Earth's surface?

"Now, It's future"



PACKAGING TIME

2199-

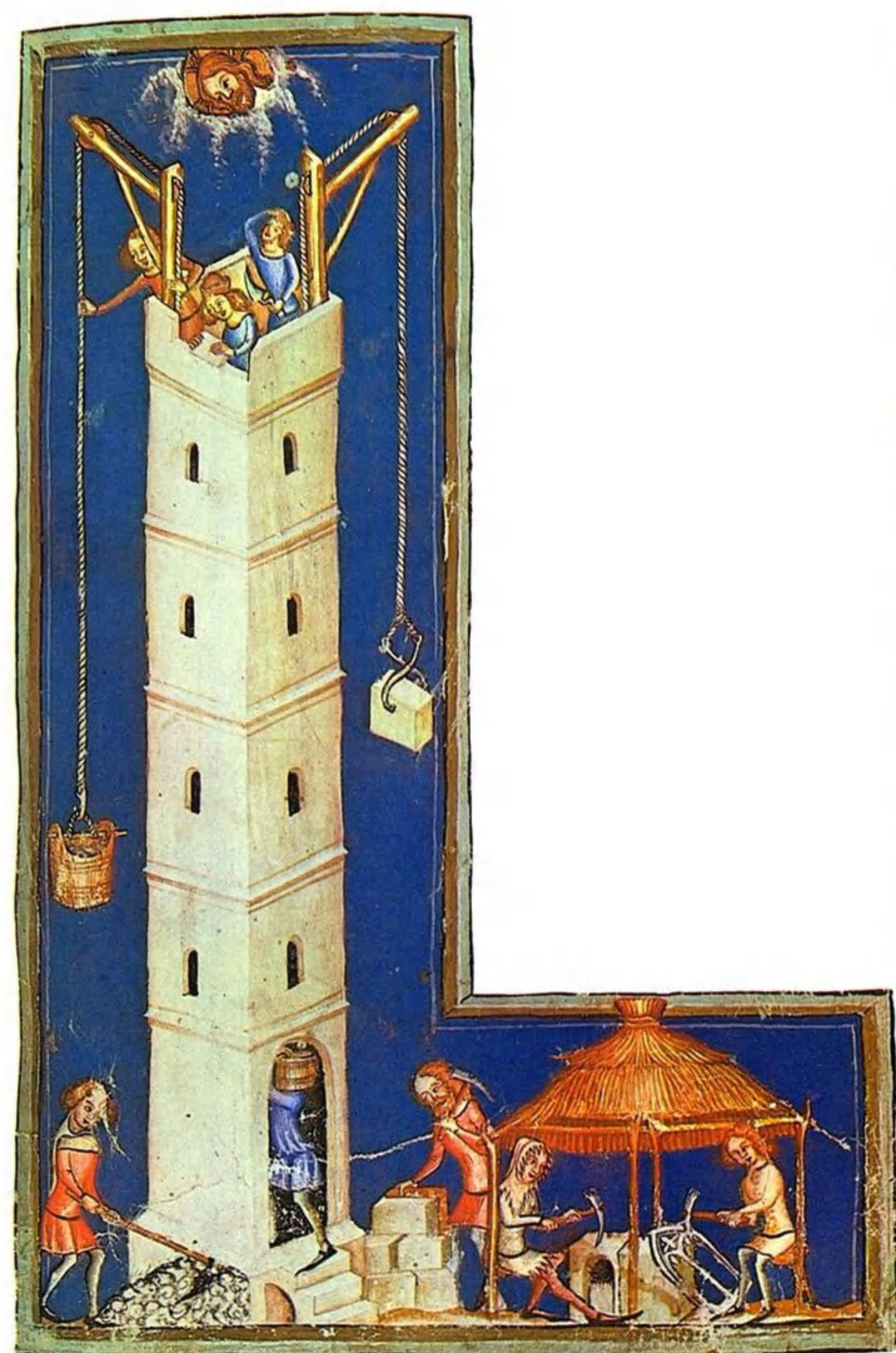
Future Urban Phase

While conducting the temporal and spatial projections for the project, The Tower of Babel and A Bird's-Eye View of the Bank of England, along with their underlying symbolism, served as significant sources of inspiration for my conceptual development.

I will present the project by addressing the following questions:

How will it grow into a future city?

Who will build it?



Tower of Babel

Picture from <https://www.britannica.com/topic/Tower-of-Babel>

In Phase 3, I will explore how the central mycelium structure of the installation achieves self-growth on an urban scale and how the surrounding architecture is progressively constructed. The Tower of Babel has inspired me with a model of phased, collaborative building. In this stage, my project will unfold through a synthesis of natural systems and advanced technology.

Within the context of a dystopian storyline, where does the future of the new city lie?

What is the ultimate hope?



Bird's eye view of the Bank of England

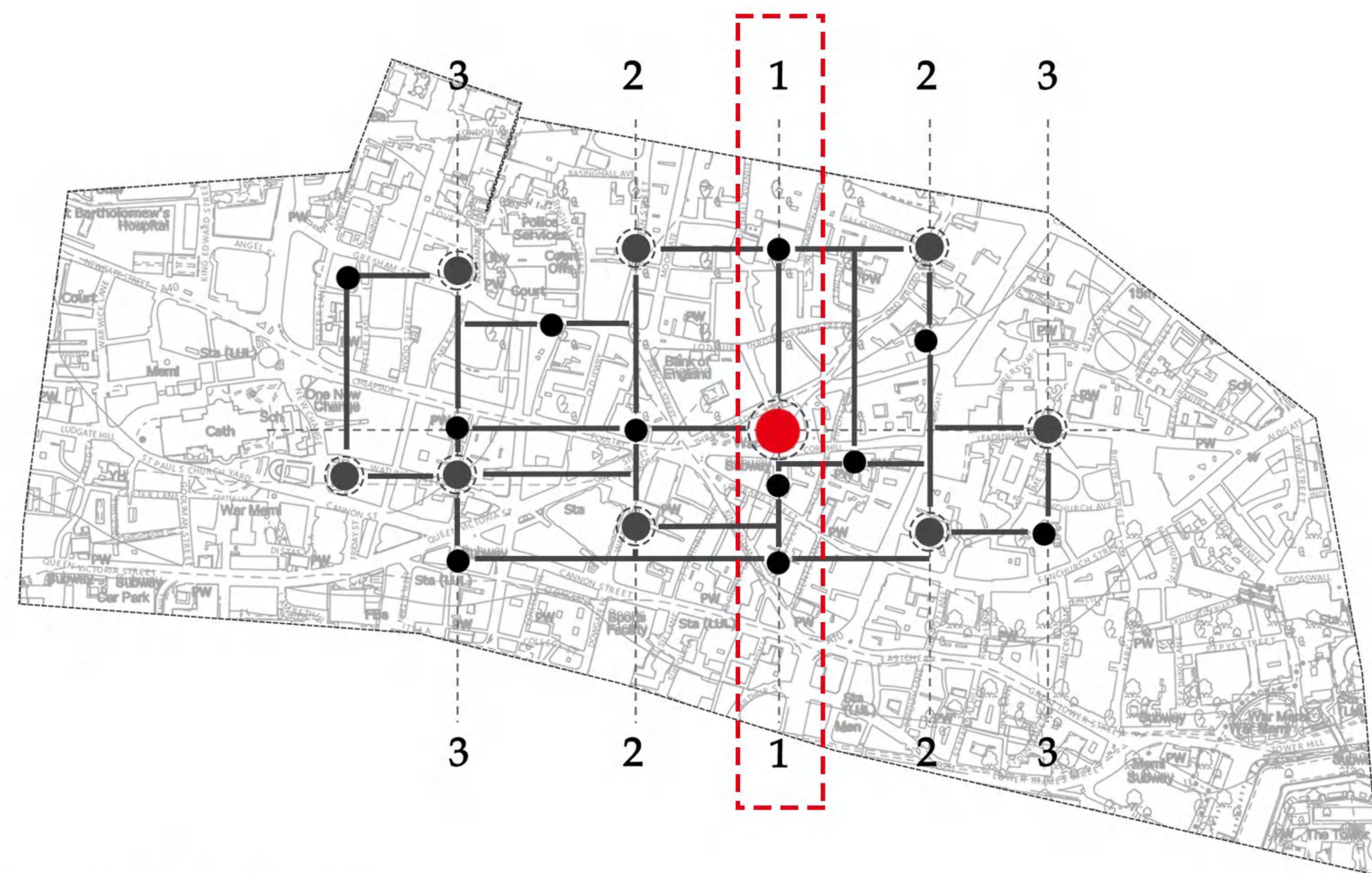
Picture from <https://collections.soane.org/object-p267>

This piece aligns with my speculative design in PACKAGING TIME. Viewing it from a dystopian lens emphasizes the need to anticipate future events based on present realities. The Bank of England's commemorative nature becomes a starting point for rethinking architectural permanence – not as static but as adaptable to future needs, directly tying into the flood scenario in my project's final phase.

PACKAGING TIME

2199- City Generation

1-1 Central



● CENTRAL BUILDING

The 1-1 zone serves as the central hub in Phase 3, adhering to a concentric structure layout. At its core, it hosts key buildings and amenities, including large commercial spaces, conference centers, hotel facilities, and a central garden, providing essential services for the area.

Since the central structure of the building grows from the bottom up through mycelium, its construction logic aligns well with the concept of Vertical Zoning Functional Layout.

This approach allocates different functional zones layer by layer, allowing the building to form a complete functional structure that naturally follows the upward growth of the mycelium.



Building

Installation

Earth surface

Mycelium
Bottom to up growing

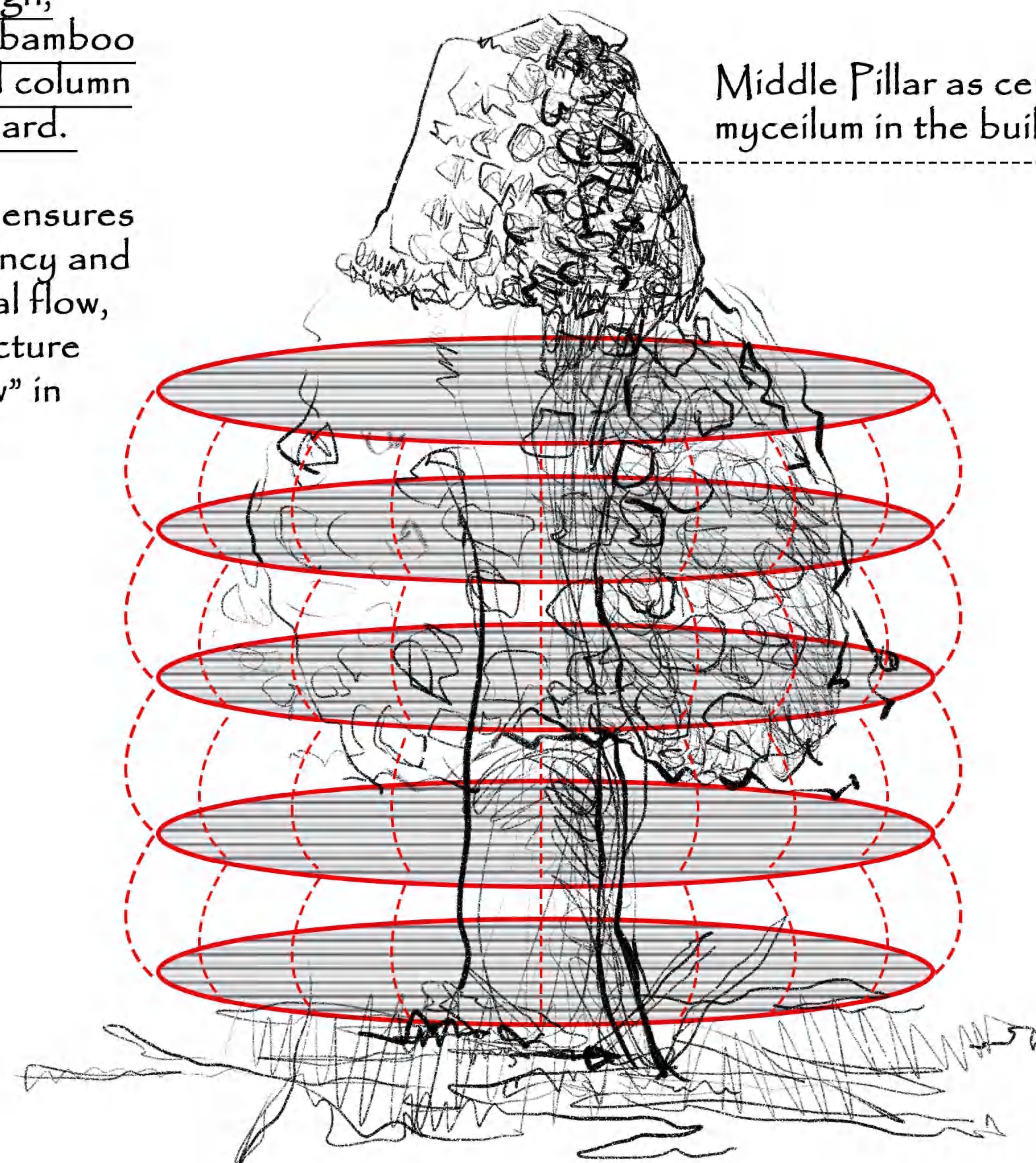
PACKAGING TIME

2199- City Generation

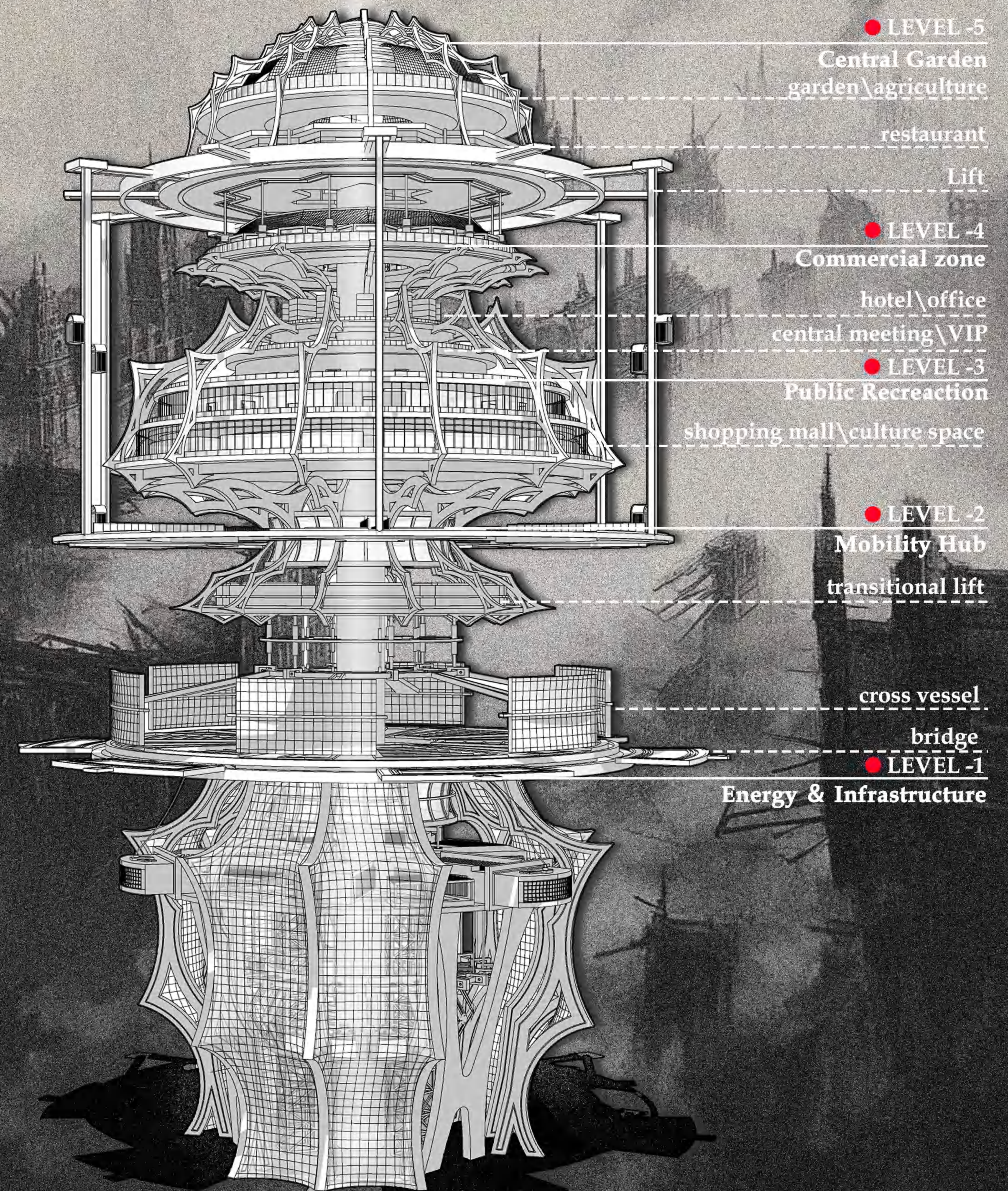
1-1 Central

In shaping the building's form, integrated elements from the installation design, inspired by the bamboo fungus's central column expanding outward.

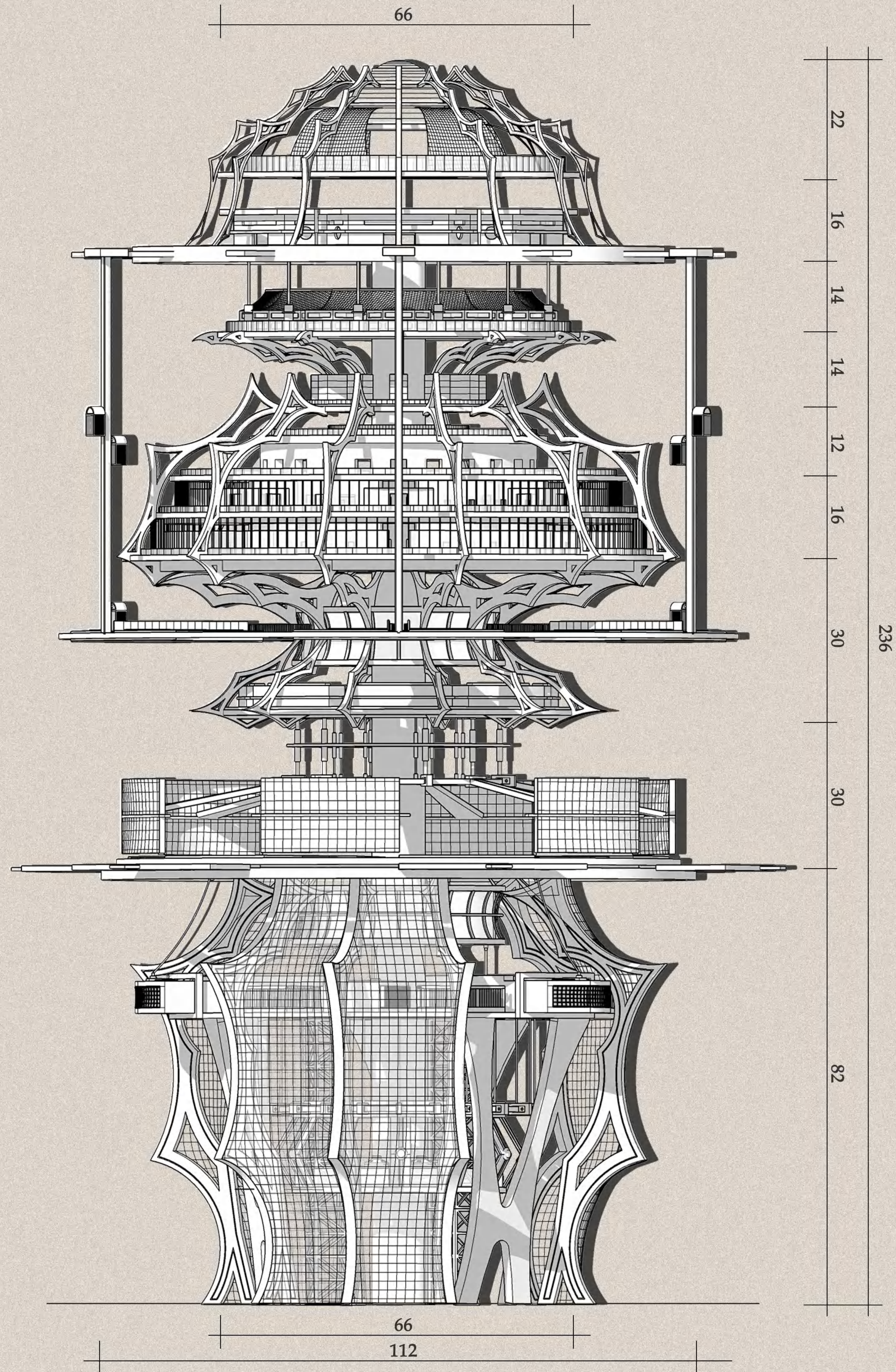
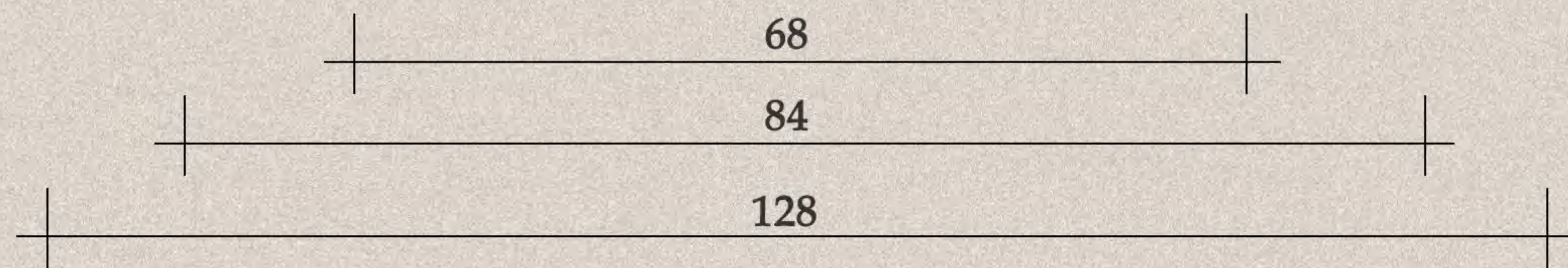
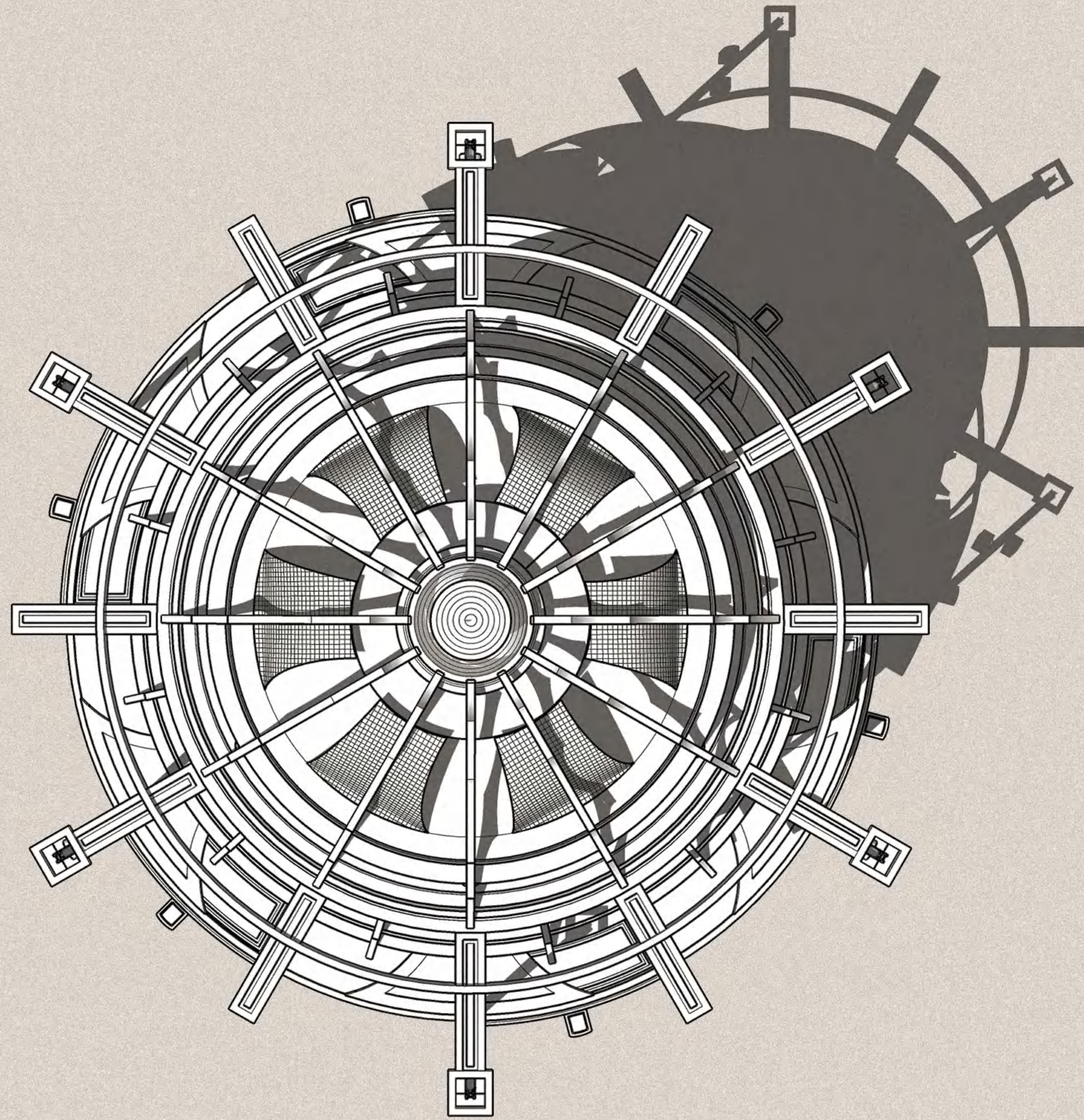
This approach ensures design consistency and creates a natural flow, making the structure appear to "grow" in response to its environment.



Middle Pillar as central mycelium in the building



1-1
CENTRAL BUILDING
MEASURES DRAWINGS



1-1

CENTRAL BUILDING

EXPLODED FAÇADE DIAGRAM

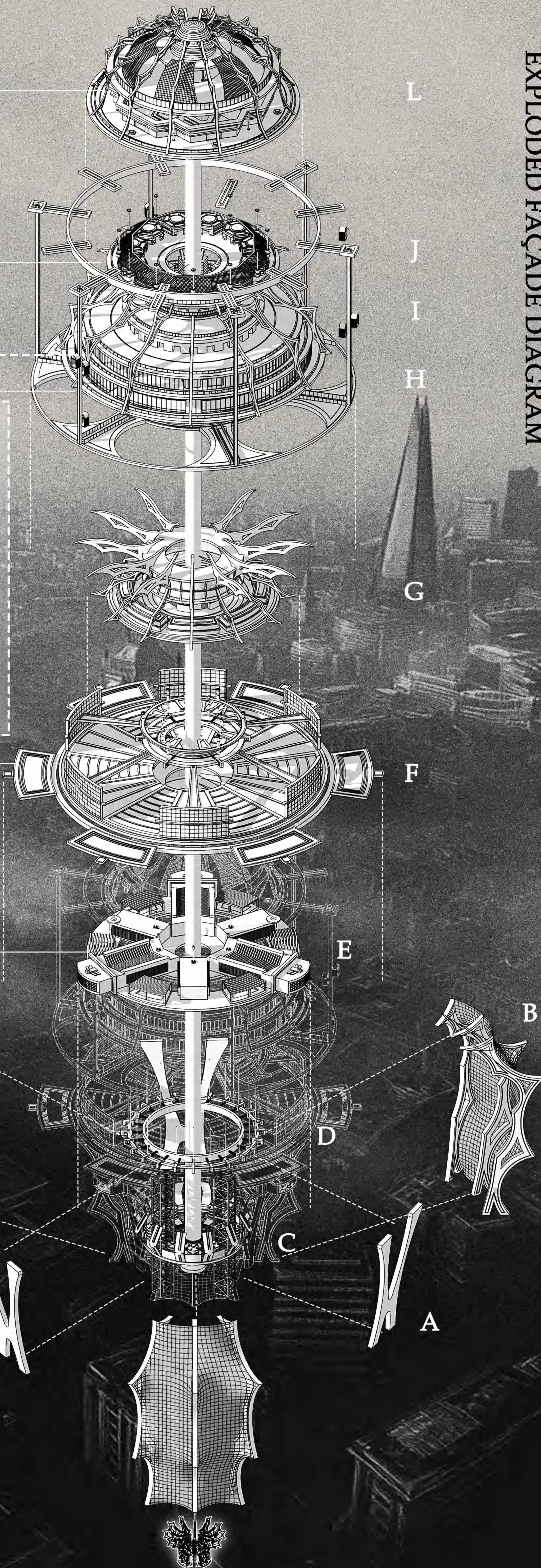
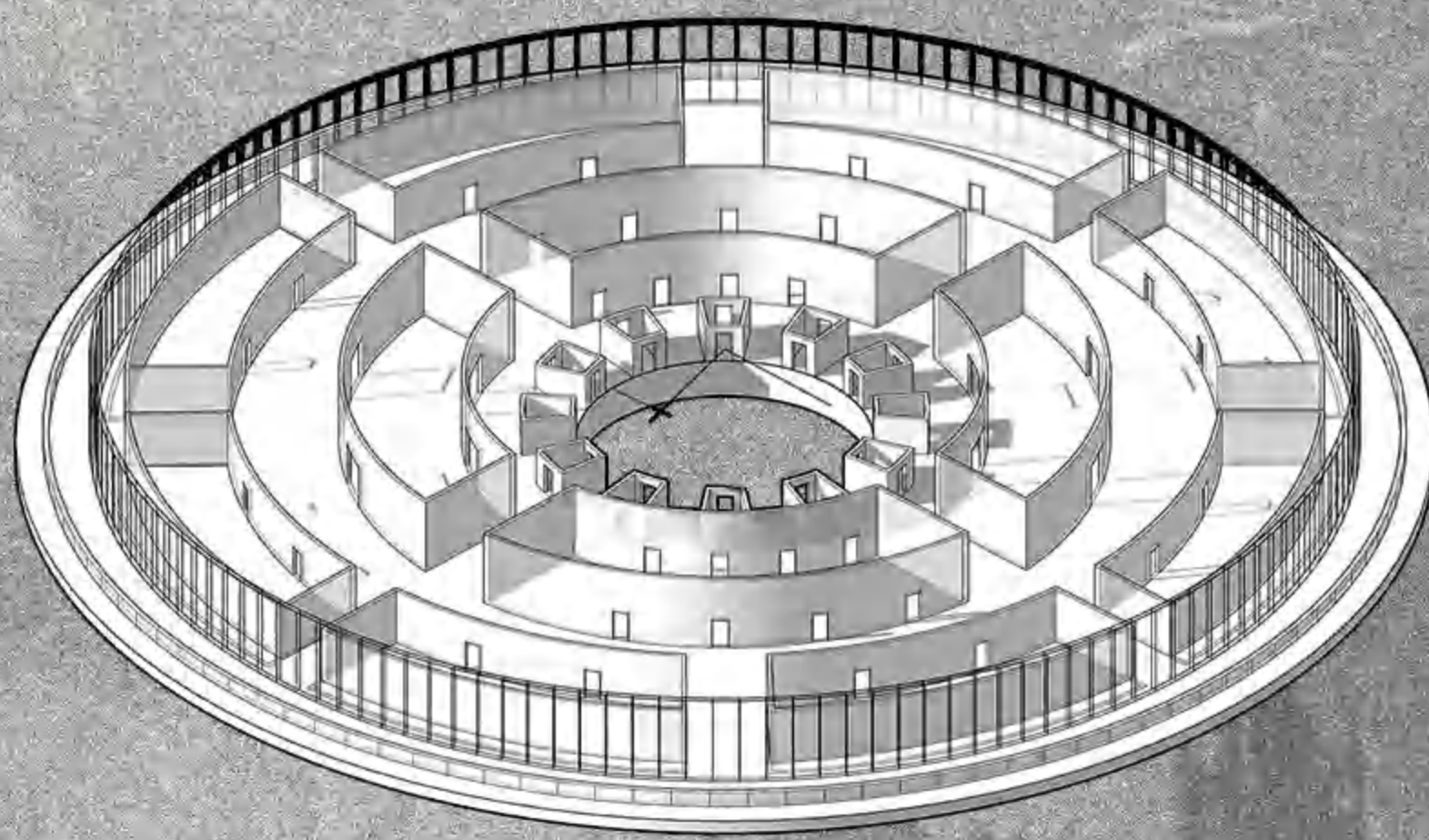
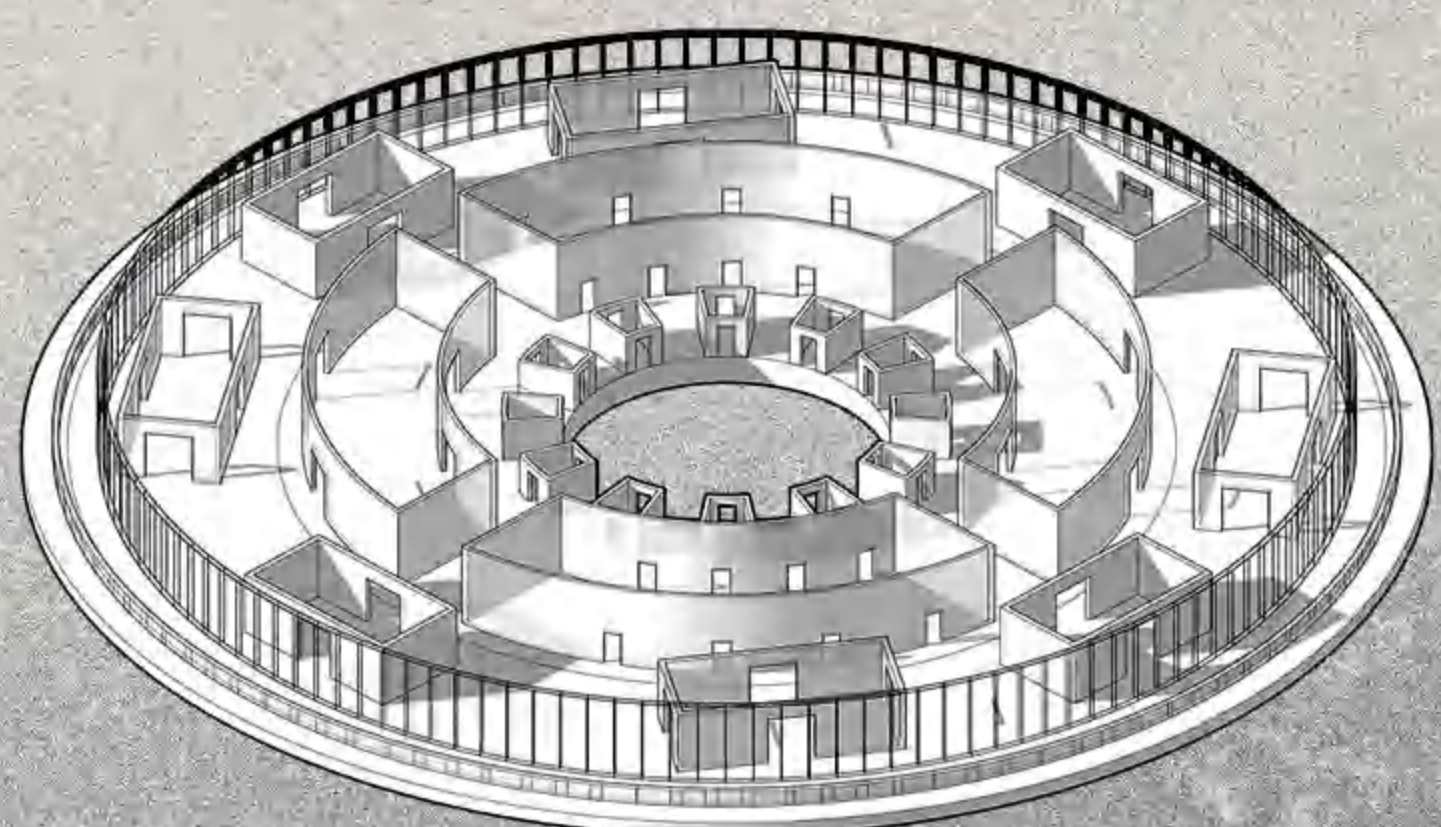
● LEVEL-5

● LEVEL-4

● LEVEL-3

● LEVEL-2

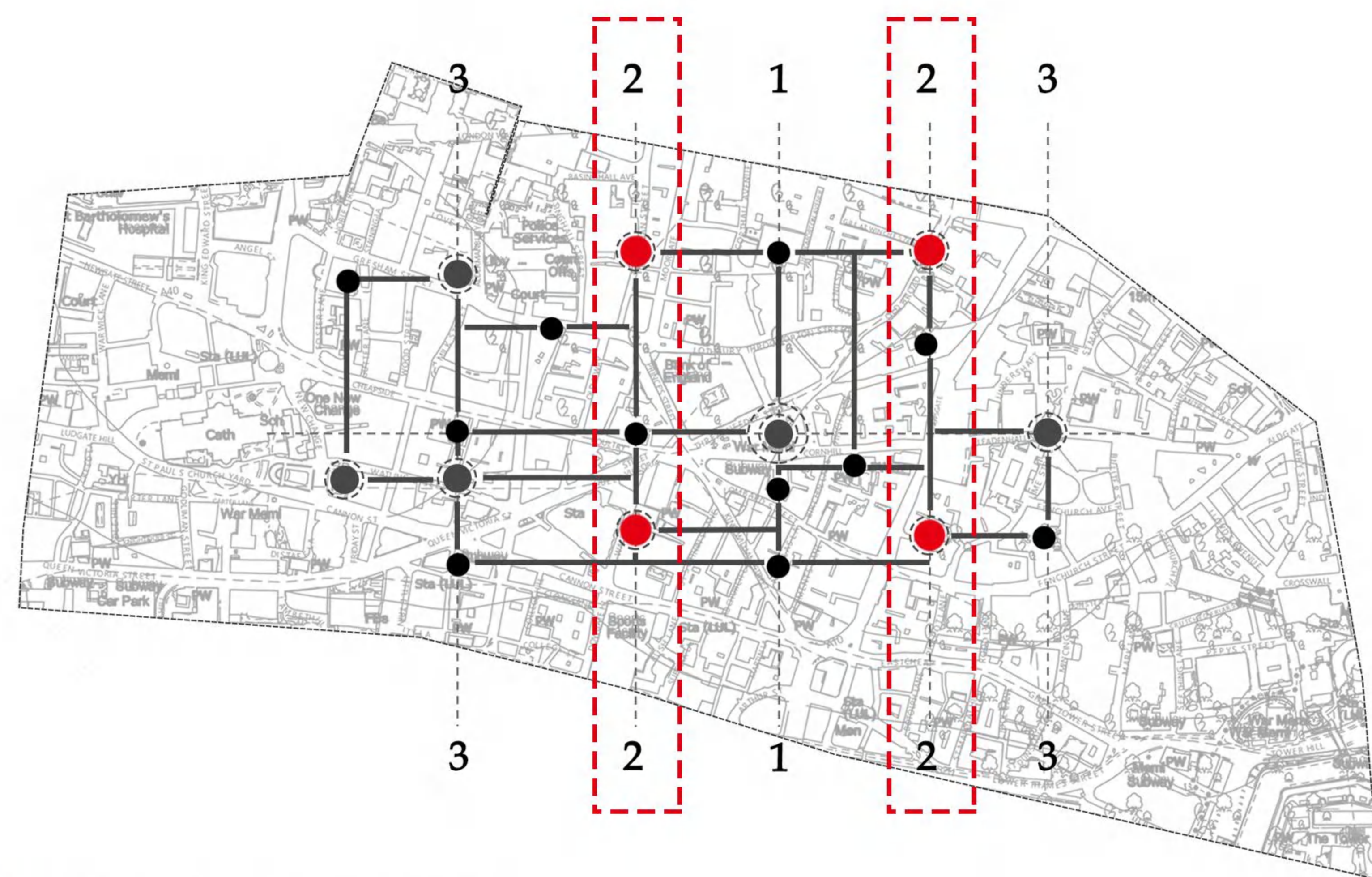
● LEVEL-1



- A/B Base Support Structure
- C HVAC
- E Transport Storage
- F Traffic Distribution Hub
- G Transitional Lift
- H Central Mall
- I Central Office
- J Hotel
- L Central Garden/Restaurant

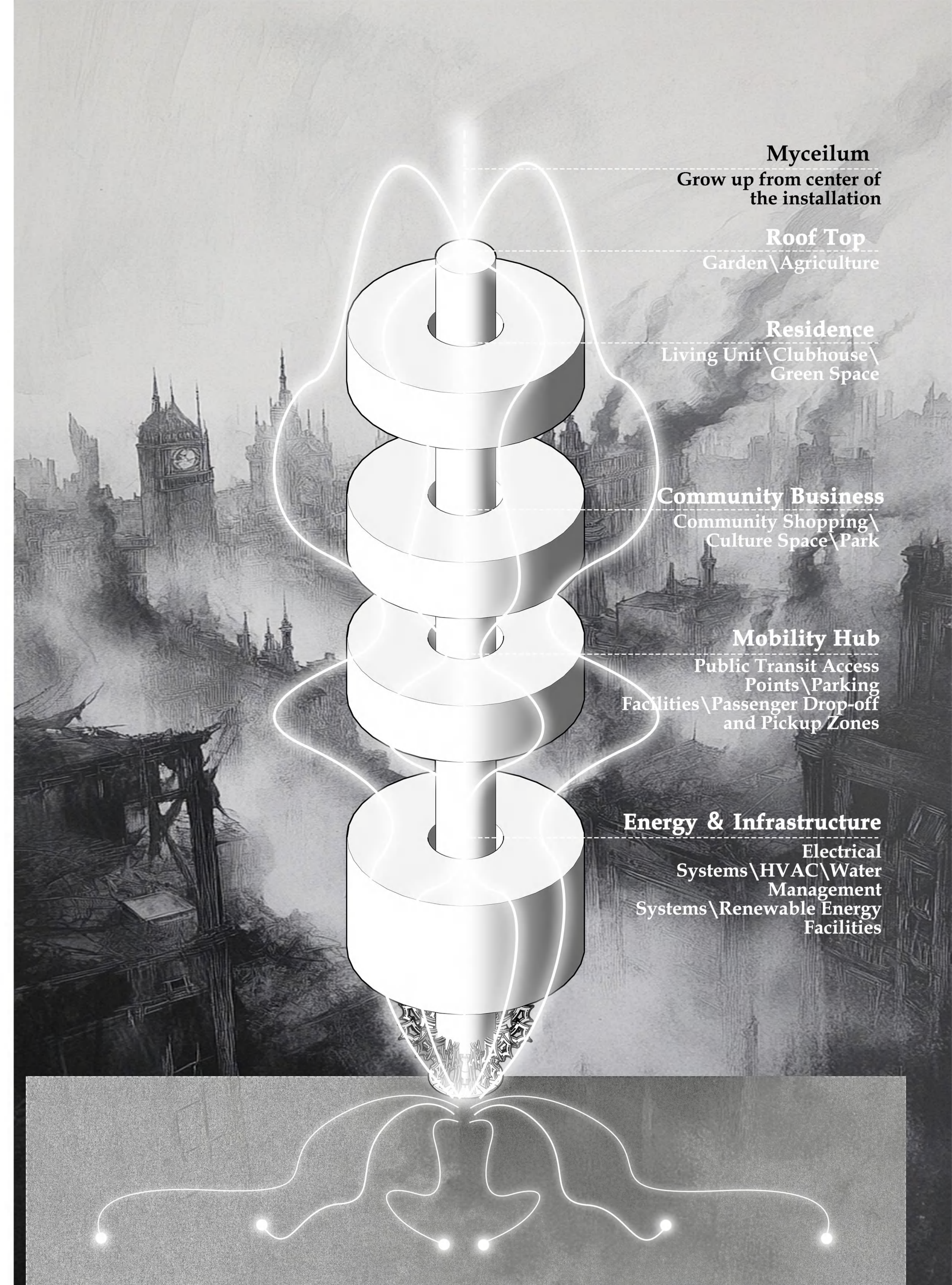
PACKAGING TIME

2199- City Generation 2-2 Community



● COMMUNITY BUILDING

The 2-2 zone serves as the Community area in Phase 3, encompassing residential zones, supporting commercial facilities, a community park, and small retail stores. It provides essential services to meet the daily needs of residents in the surrounding residential areas.

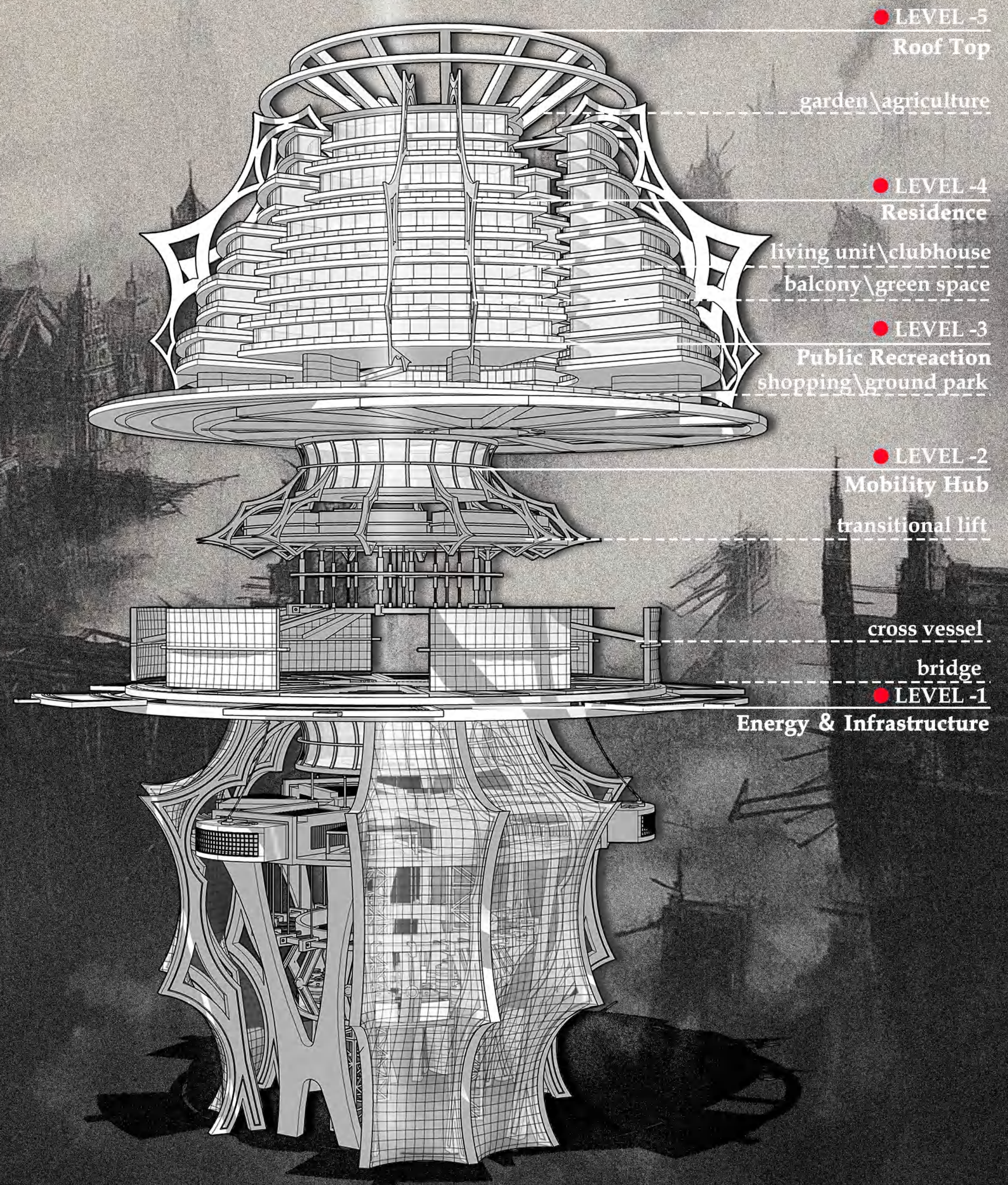
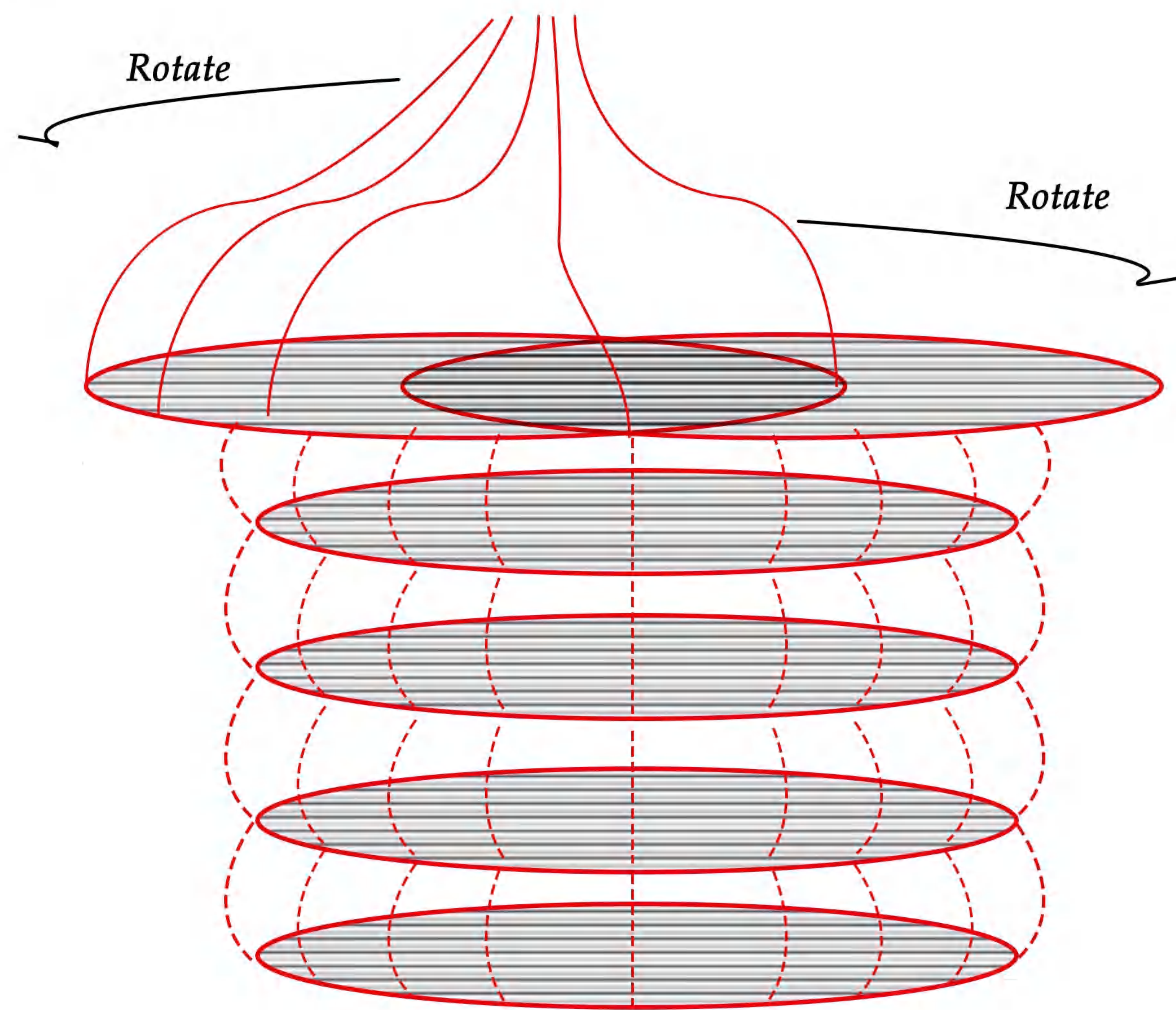


PACKAGING TIME

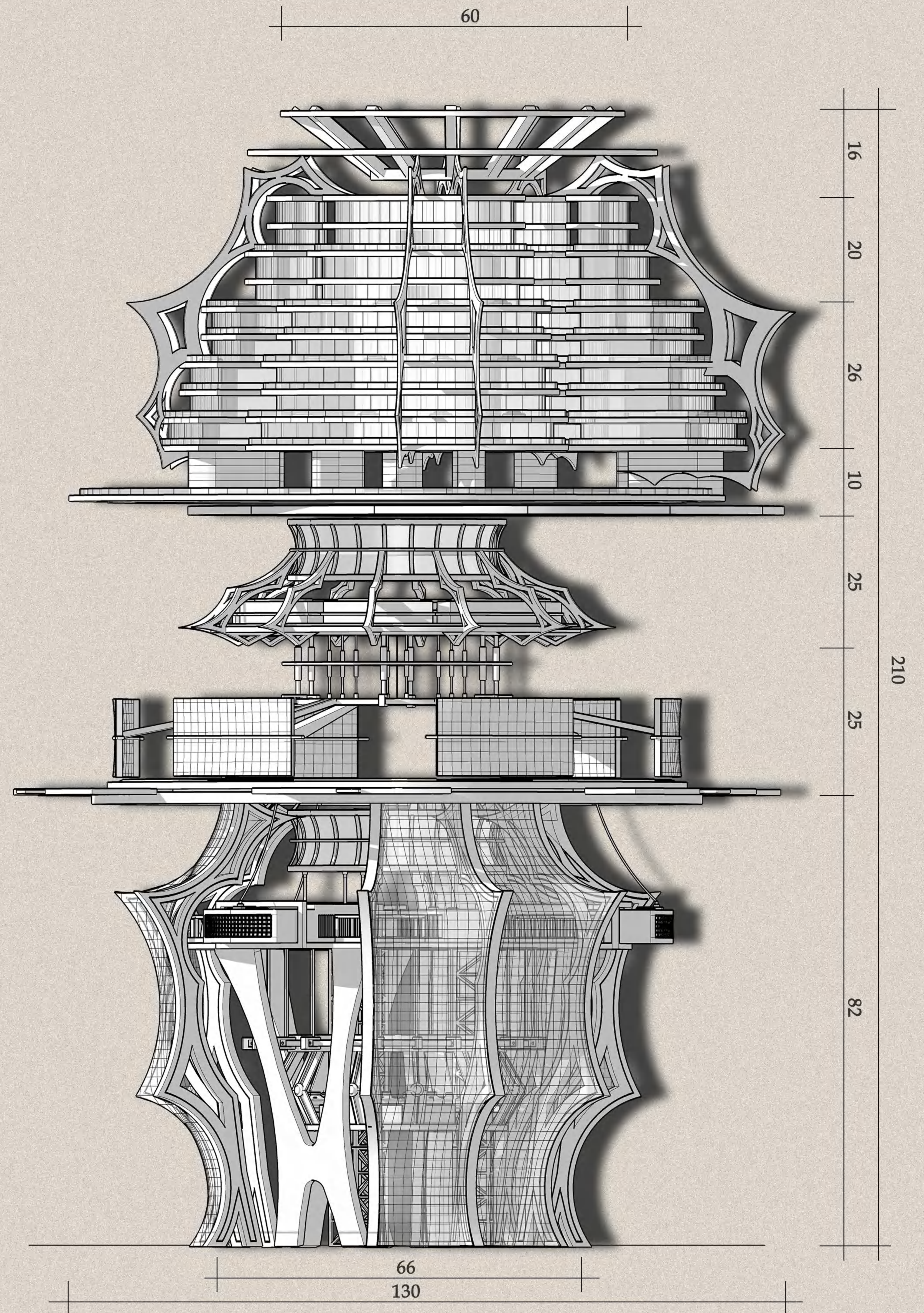
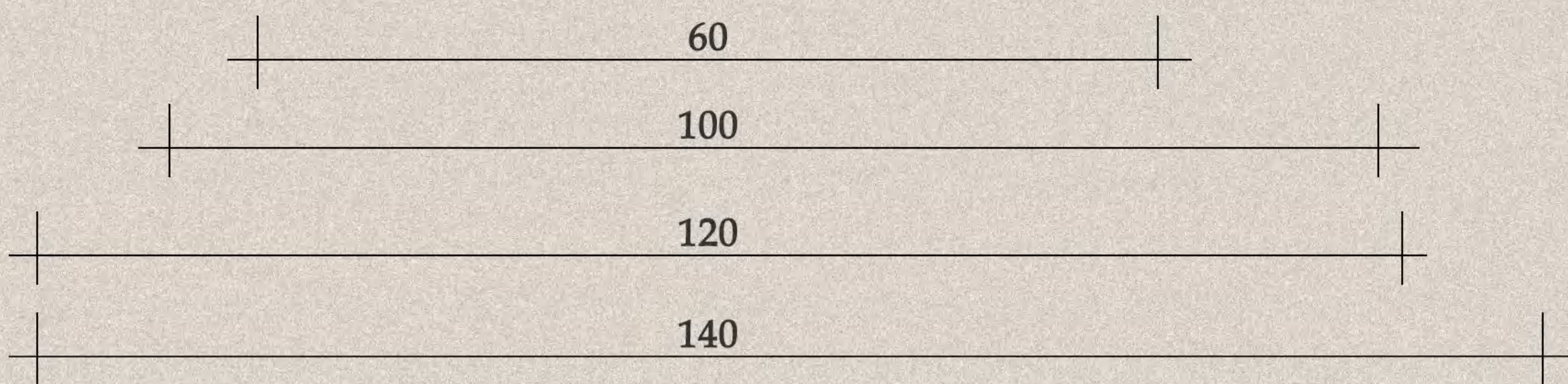
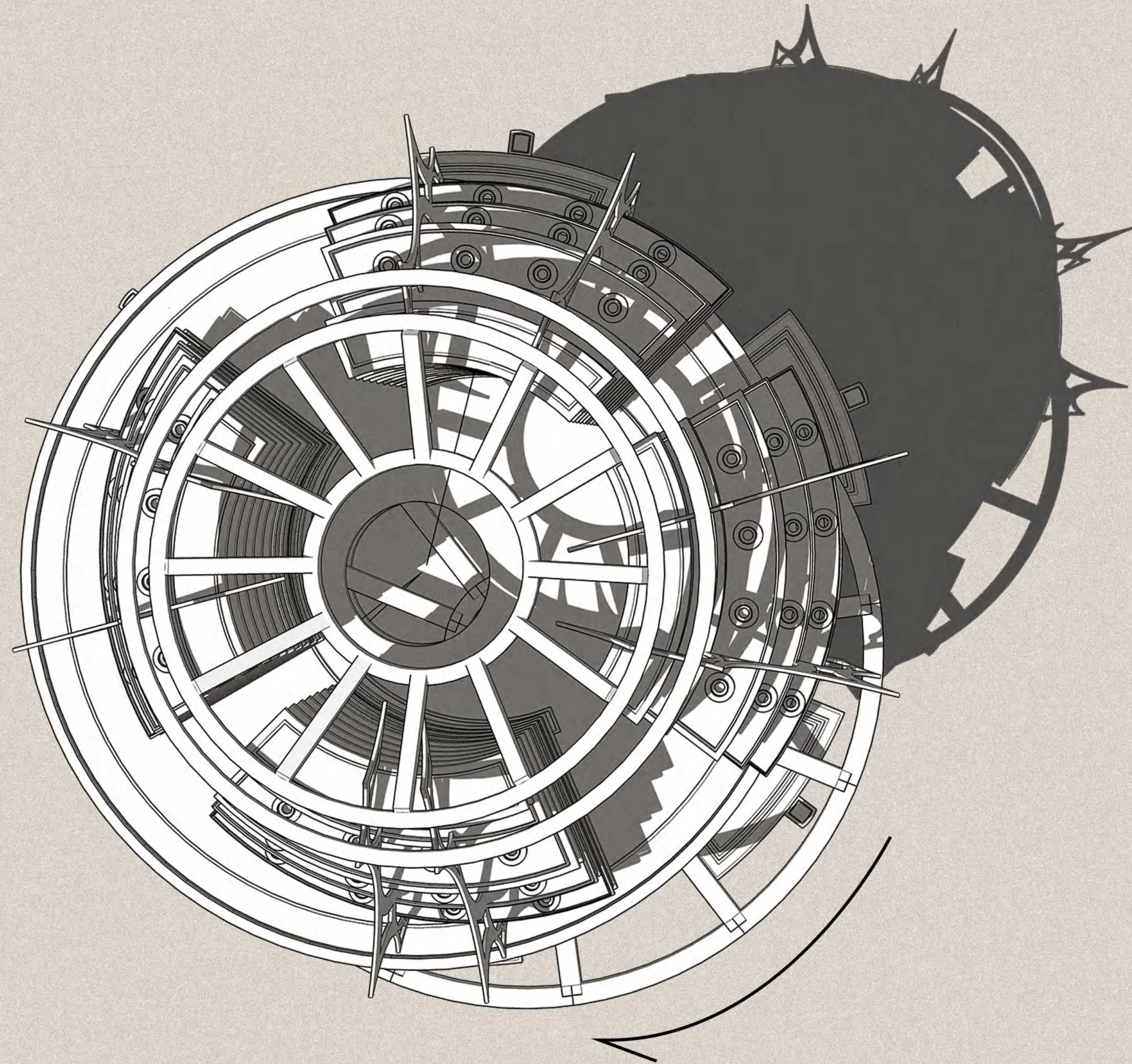
2199- City Generation

2-2 Community

The residential structure can rotate along its main axis, allowing each modular unit to receive even sunlight exposure.



2-2
COMMUNITY BUILDING
MEASURES DRAWINGS



COMMUNITY BUILDING
EXPLODED FAÇADE DIAGRAM

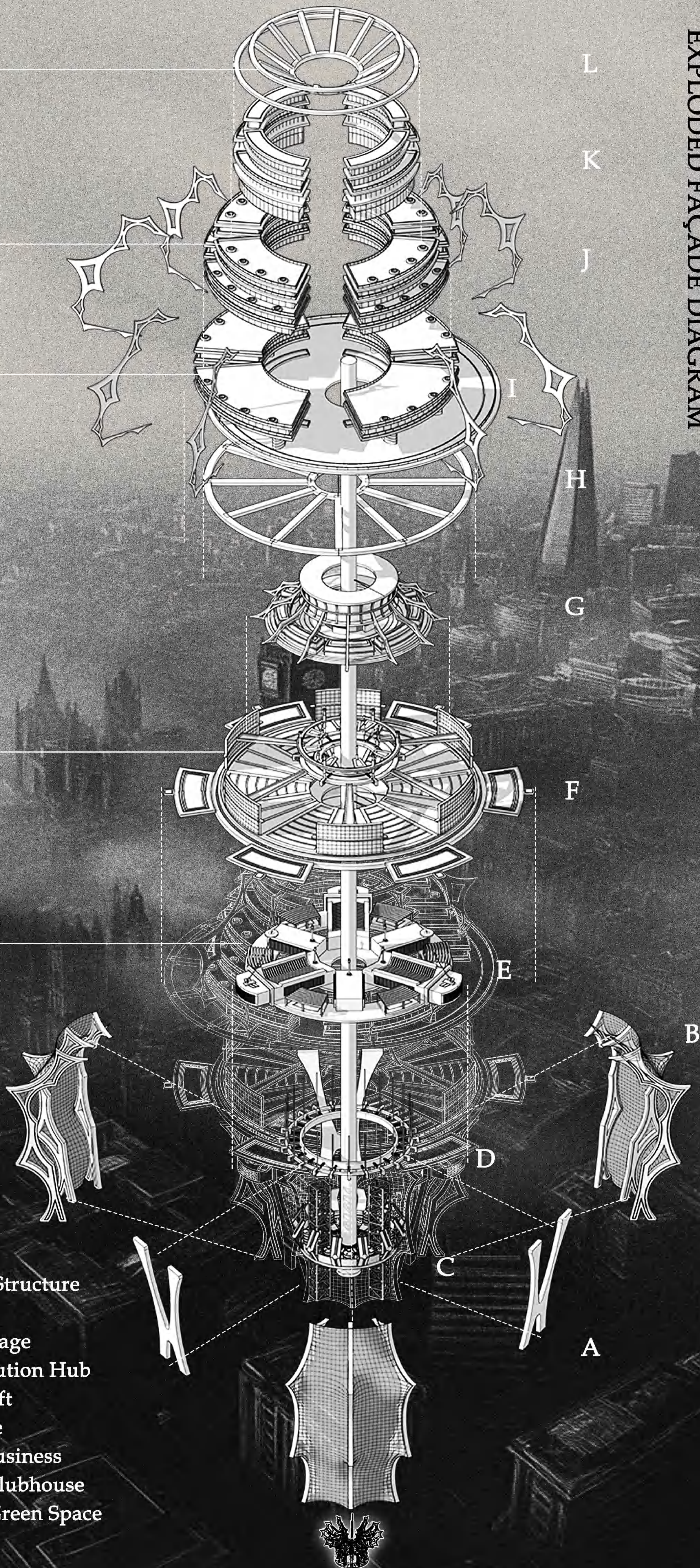
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● LEVEL-4

● LEVEL-3

● LEVEL-2

● LEVEL-1

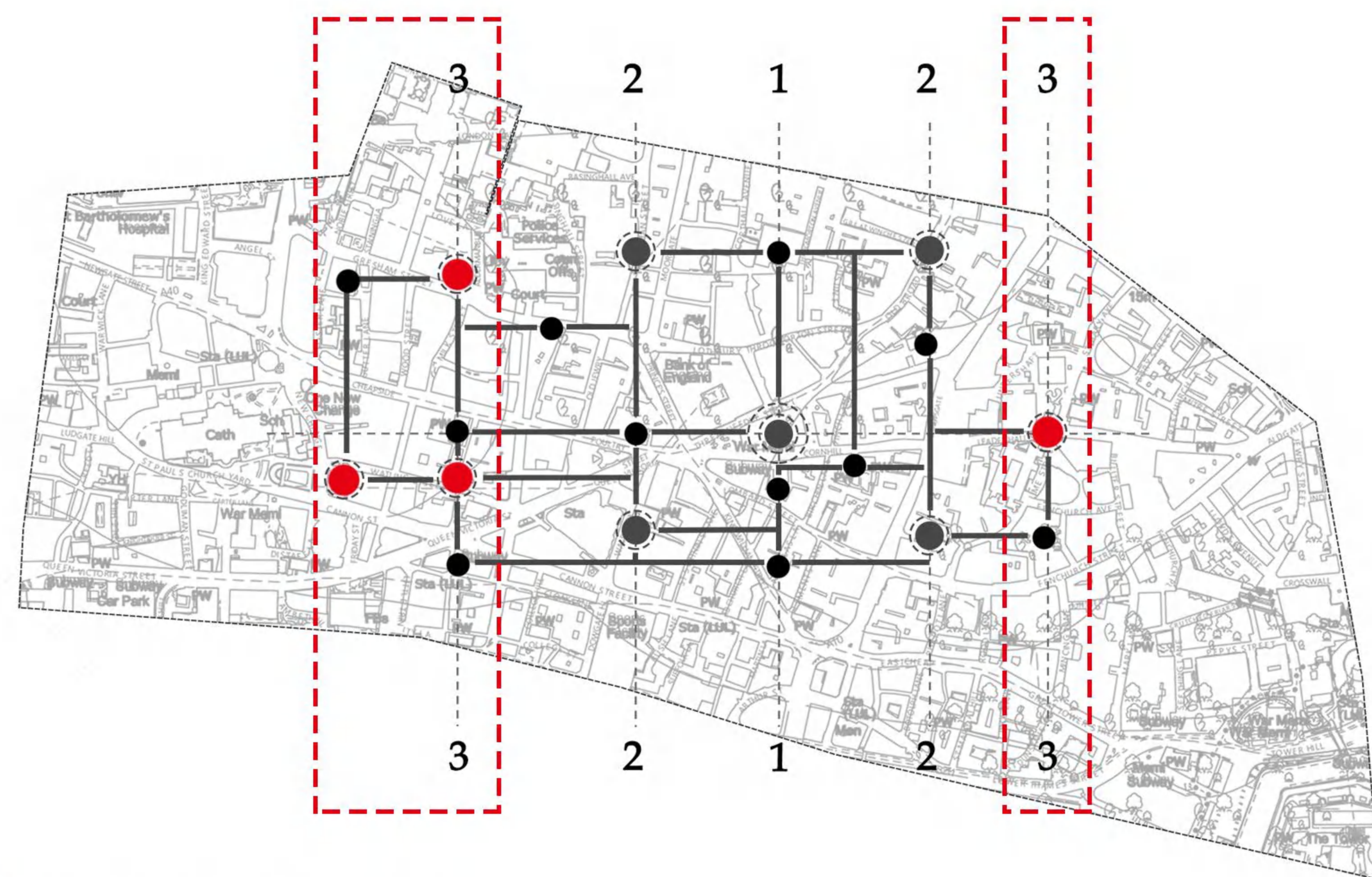


- A/B Base Support Structure
- C HAVC
- E Transport Storage
- F Traffic Distribution Hub
- G Transitional Lift
- H Rotary Module
- I Community Business
- J Living Unit/Clubhouse
- K Living Unit/Green Space
- L Roof Top

PACKAGING TIME

2199- City Generation

3-3 Auxiliary Building



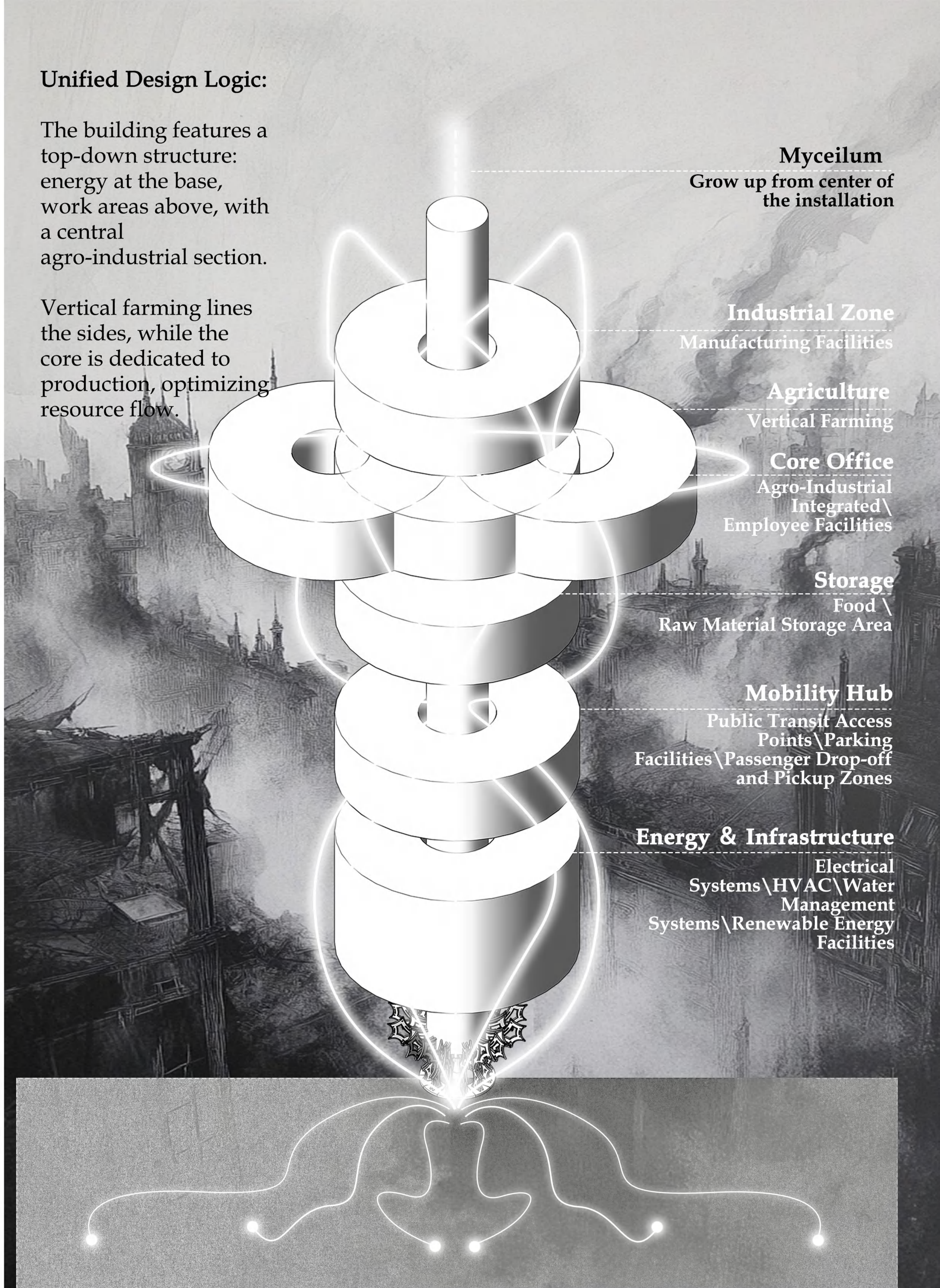
● AUXILIARY BUILDING
INDUSTRY/AGRICULTURE

The 3-3 zone serves as the Auxiliary area in Phase 3. This area includes functions for agriculture cultivation, production, and processing, along with industrial manufacturing, serving as the headquarters and agricultural-industrial building for the entire region. The design integrates vertical farming and on-site industry to supply reserve energy to the buildings in zones 1-1 and 2-2.

Unified Design Logic:

The building features a top-down structure: energy at the base, work areas above, with a central agro-industrial section.

Vertical farming lines the sides, while the core is dedicated to production, optimizing resource flow.



Myceilum
Grow up from center of the installation

Industrial Zone
Manufacturing Facilities

Agriculture
Vertical Farming

Core Office
Agro-Industrial Integrated \ Employee Facilities

Storage
Food \ Raw Material Storage Area

Mobility Hub
Public Transit Access Points \ Parking Facilities \ Passenger Drop-off and Pickup Zones

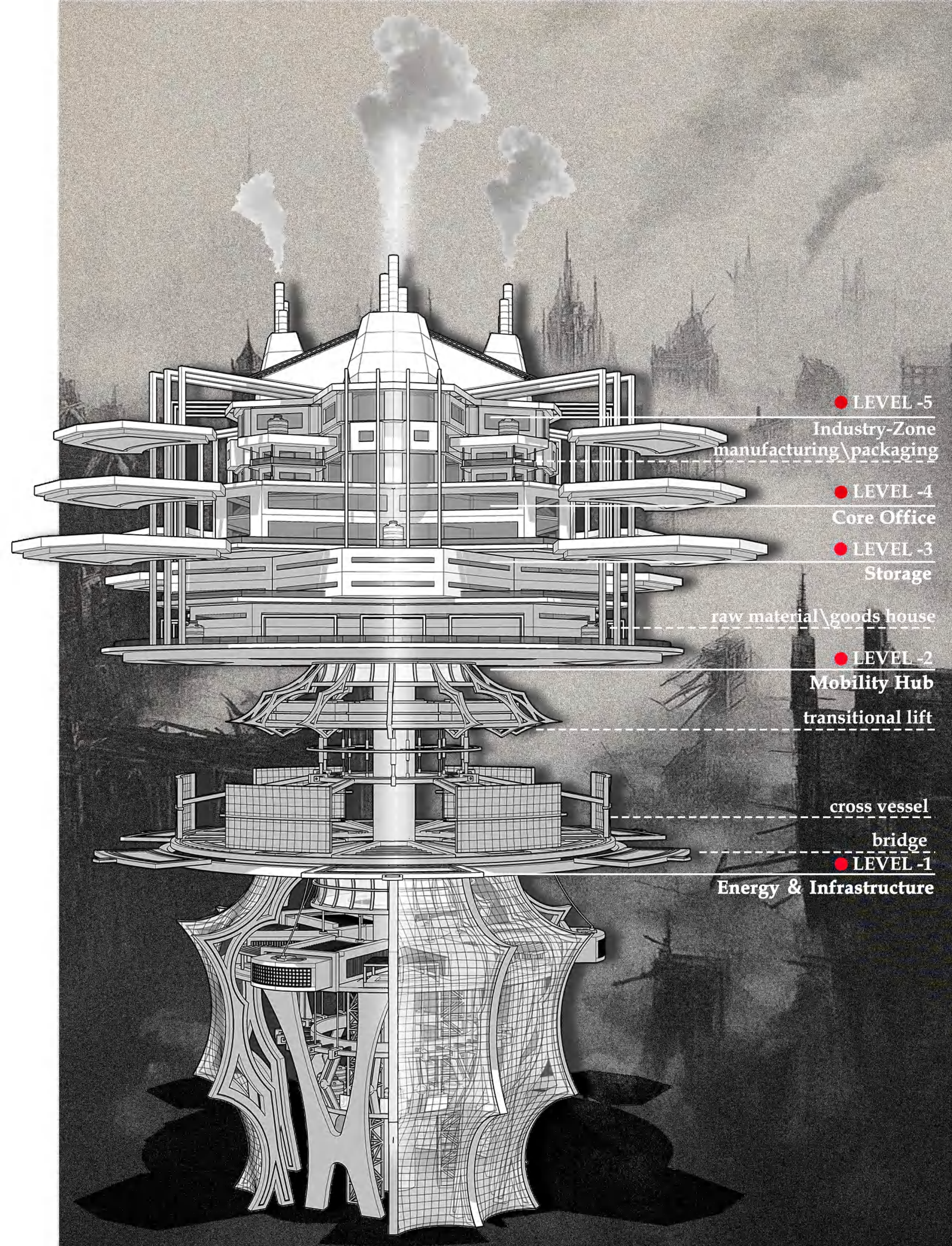
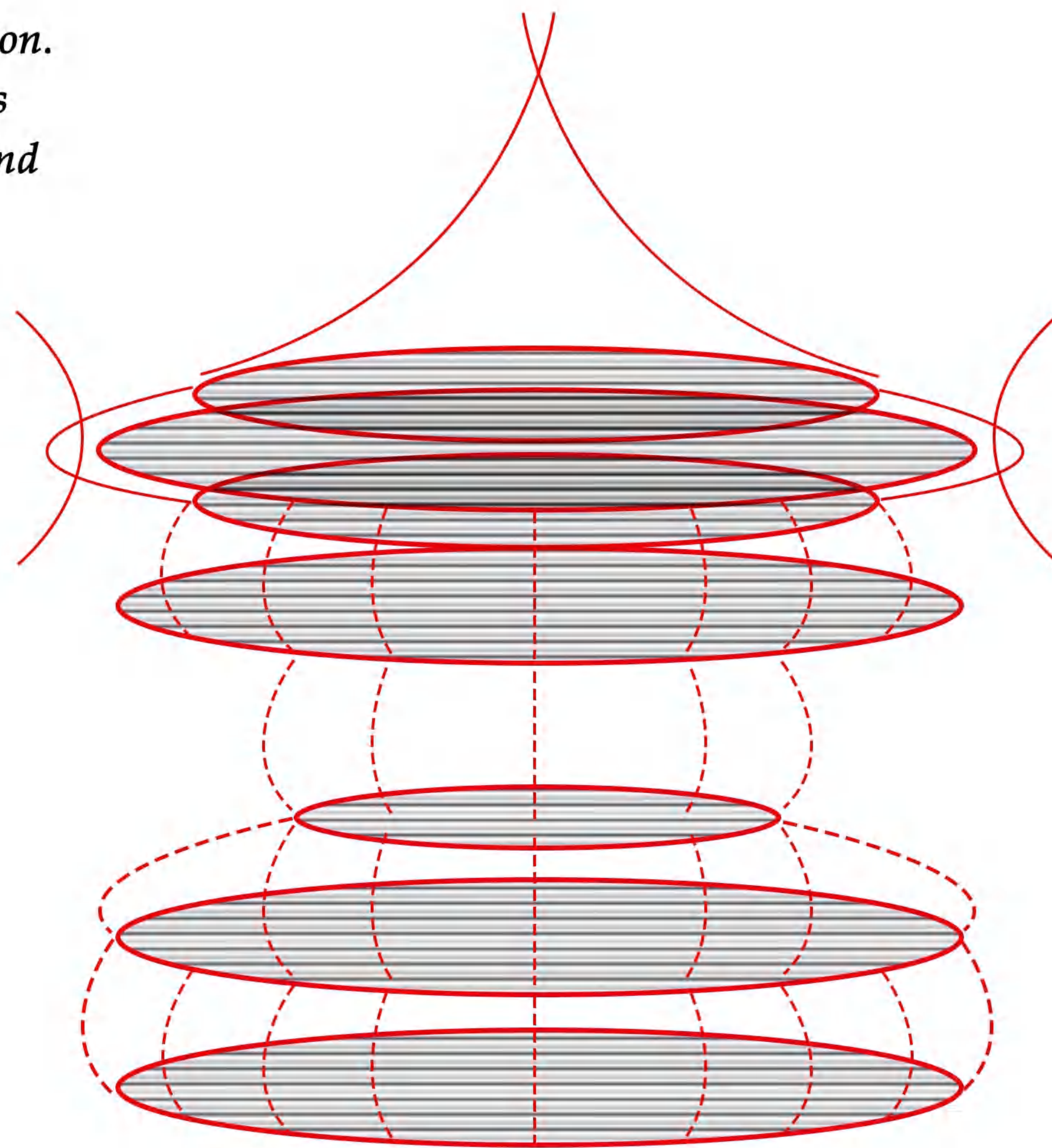
Energy & Infrastructure
Electrical Systems \ HVAC \ Water Management Systems \ Renewable Energy Facilities

PACKAGING TIME

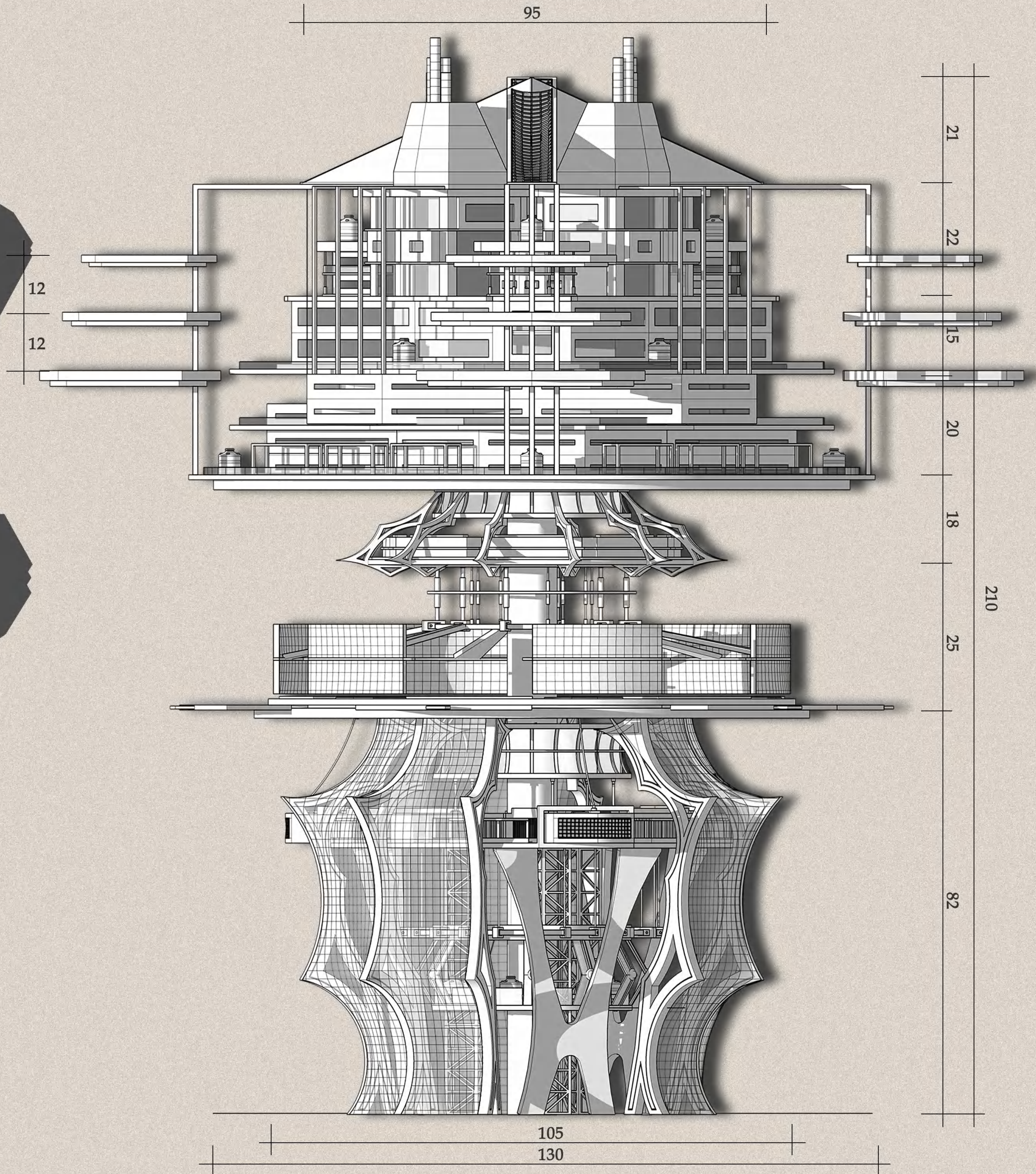
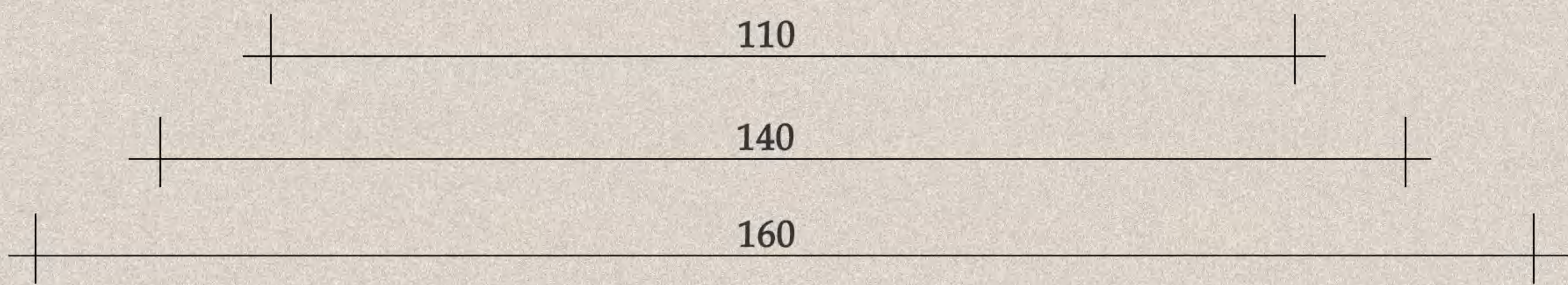
2199- City Generation

3-3 Auxiliary Building

with an agro-industrial collaboration section in the center. Vertical farming is integrated along the sides, and the core is dedicated to industrial production. This layout ensures efficient resource and production flow.



3-3
AUXILIARY BUILDING
MEASURES DRAWINGS



AUXILIARY BUILDING
EXPLODED FAÇADE DIAGRAM

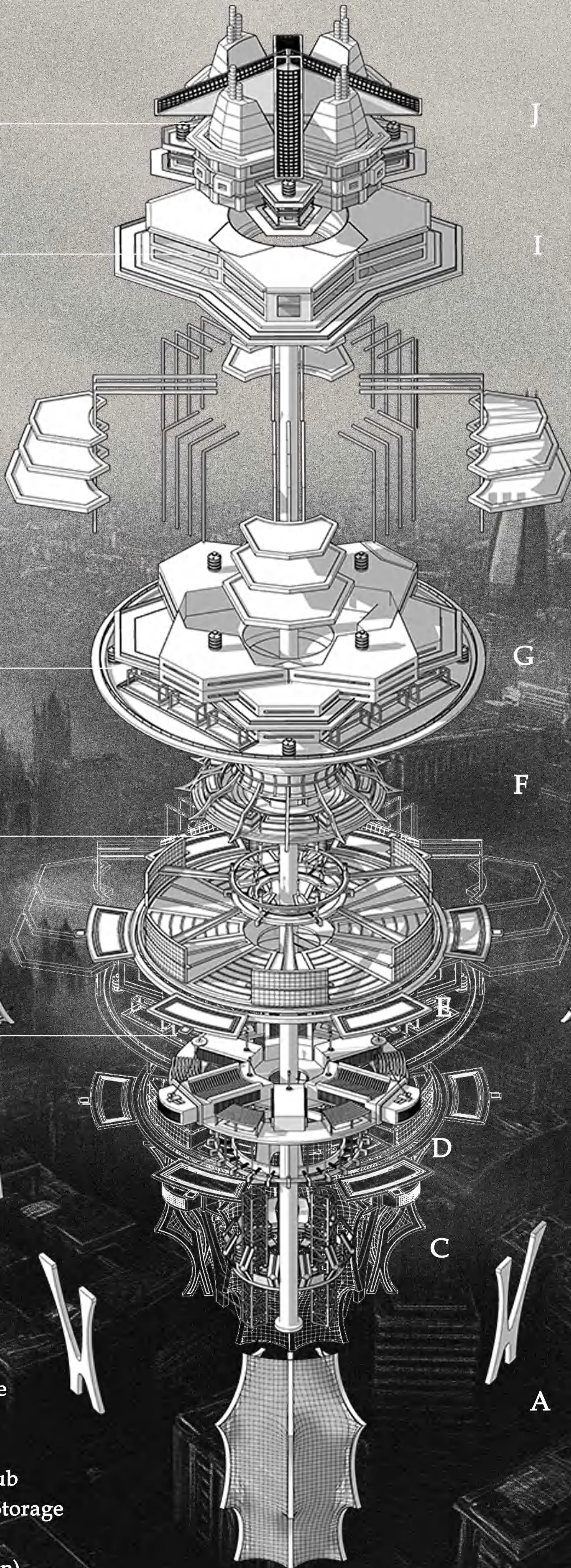
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● LEVEL-2

● LEVEL-1



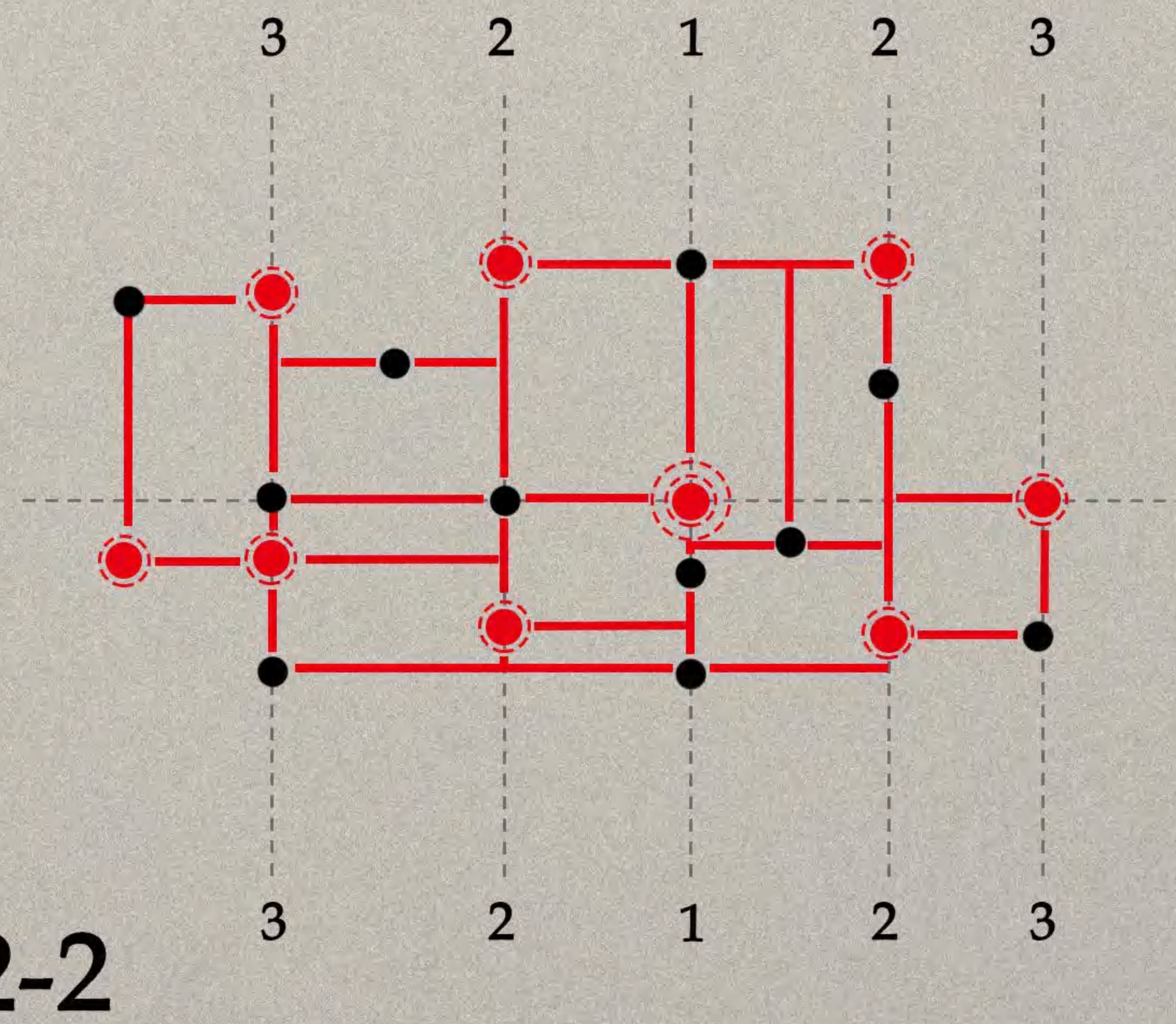
- A/B Base Support Structure
- C HAVC
- E Transport Storage
- F Traffic Distribution Hub
- G Goods/Raw material Storage
- H Vertical Farming
- I Core Office (integration)
- J Industry Area



PACKAGING TIME

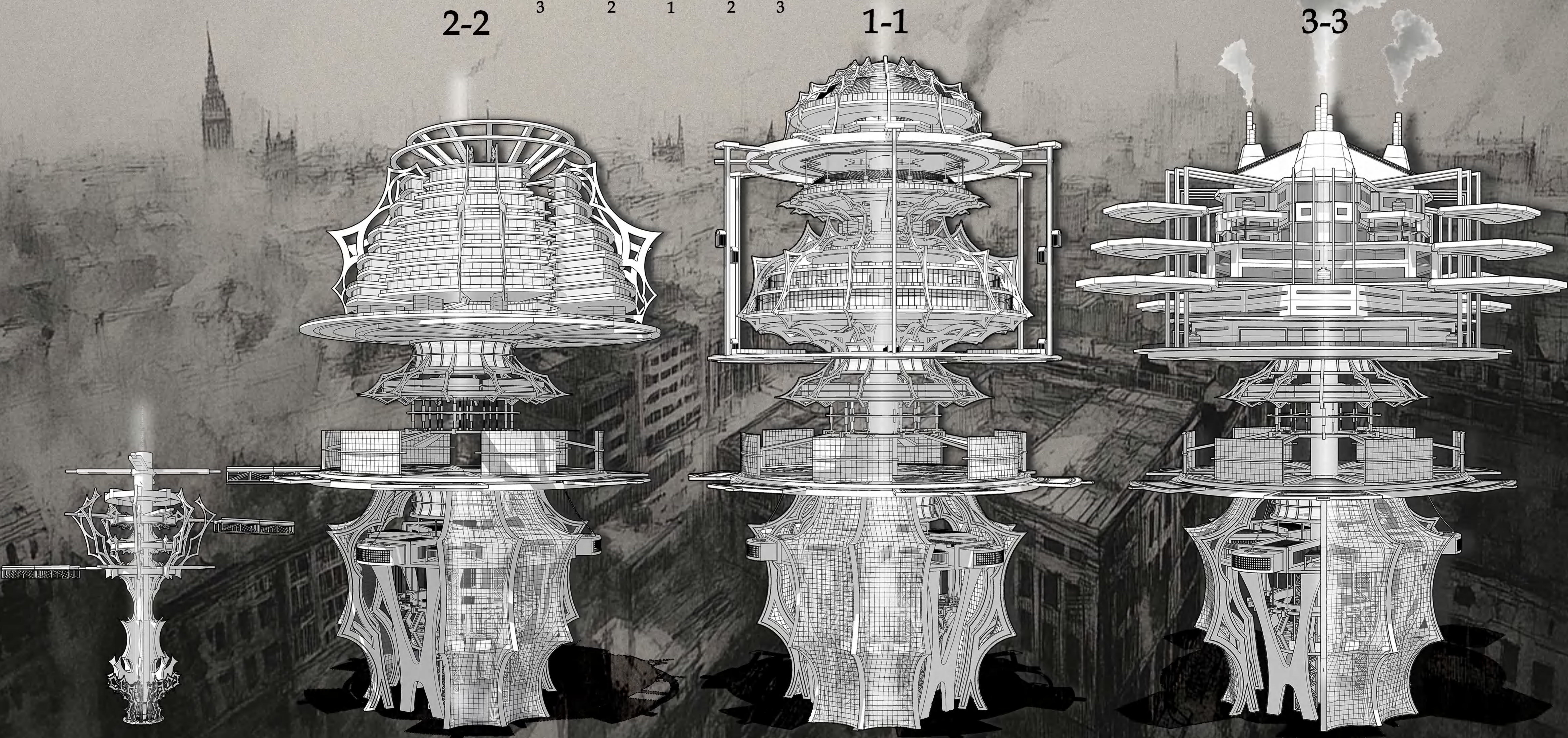
2199-
City Generation

Building Integration



- Central**
1-1 Business \ Meeting \ Mall \ Control part
- Community**
2-2 Business \ Residence \ Shop \ park
- Auxiliary**
3-3 Agriculture \ Industry

- CENTRAL BUILDING
- TRANSPORT-HUB
- INSTALLATION INTO BUILDING
- ROAD/VESSEL



Transport Hub

Community Building

Central Building

Auxiliary Building

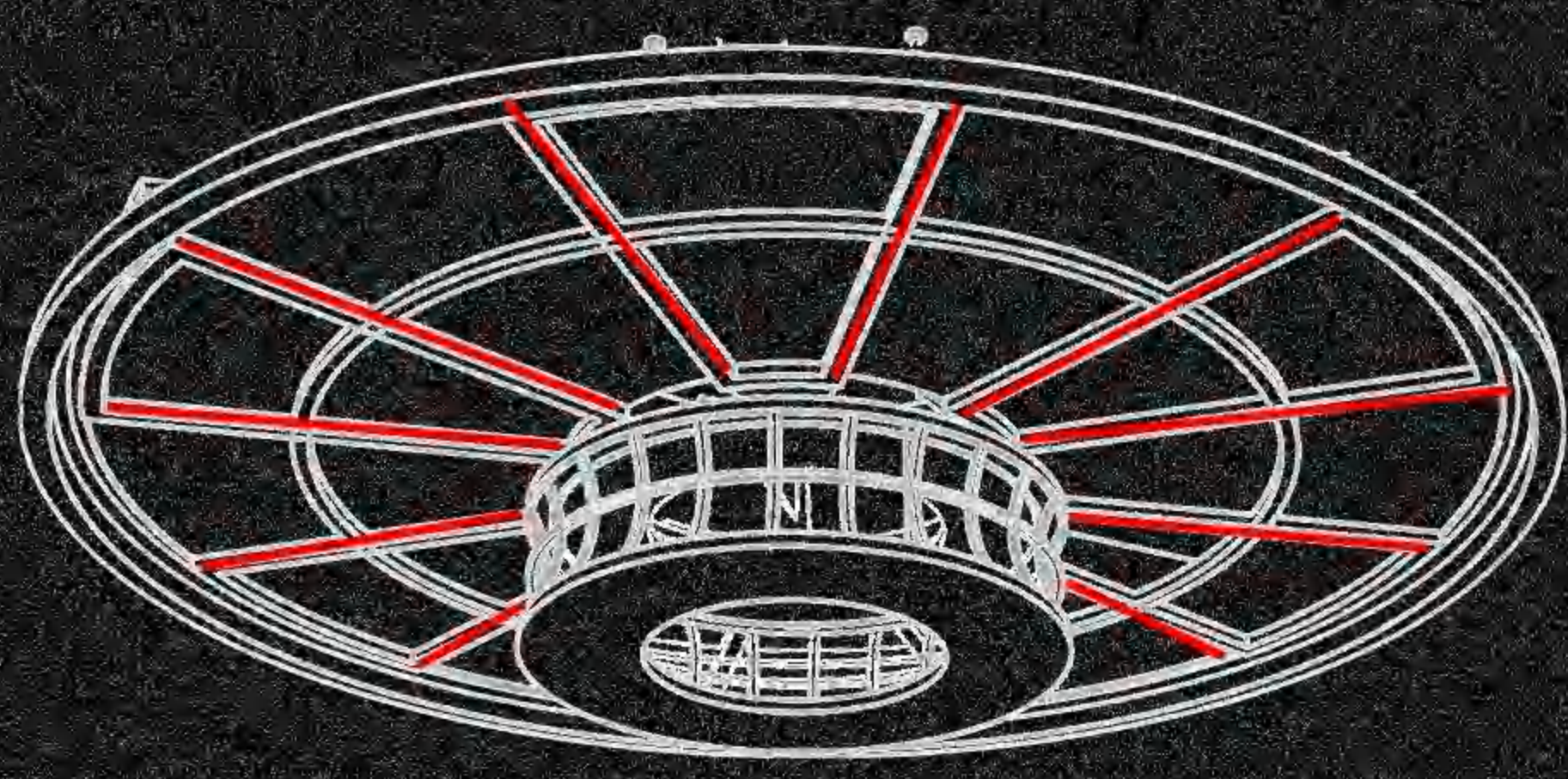
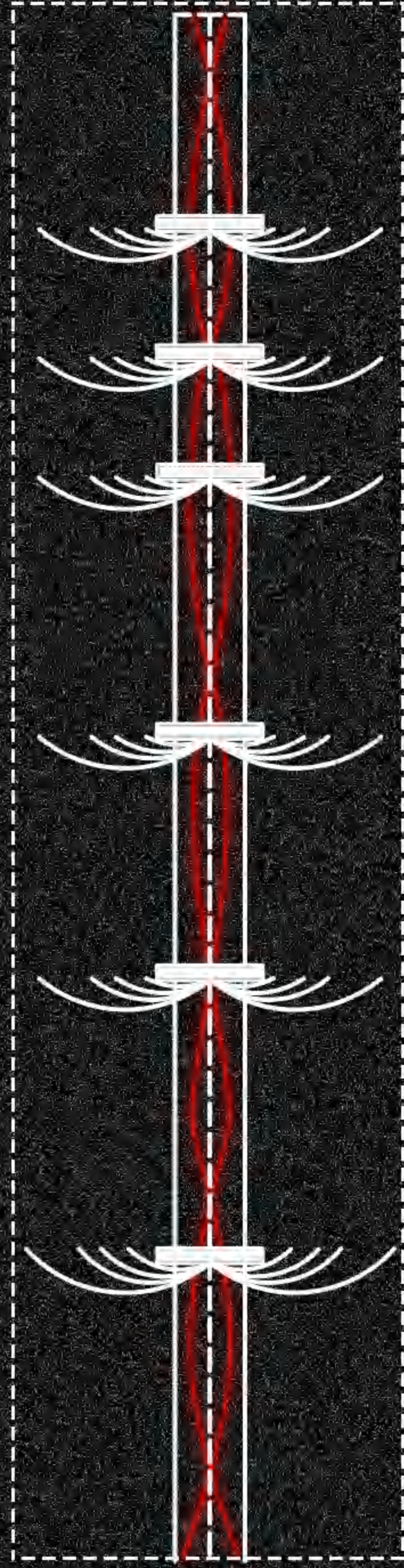


City Generation Building Diagram

The structure begins with the surface installation activating. Mycelium seeds grow upwards to form a central core column. Once vertical growth completes, robotic arms extend outwards to build horizontal layers, sliding along the central column.

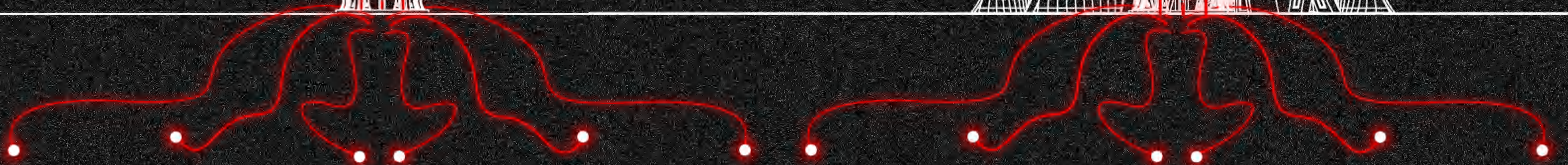
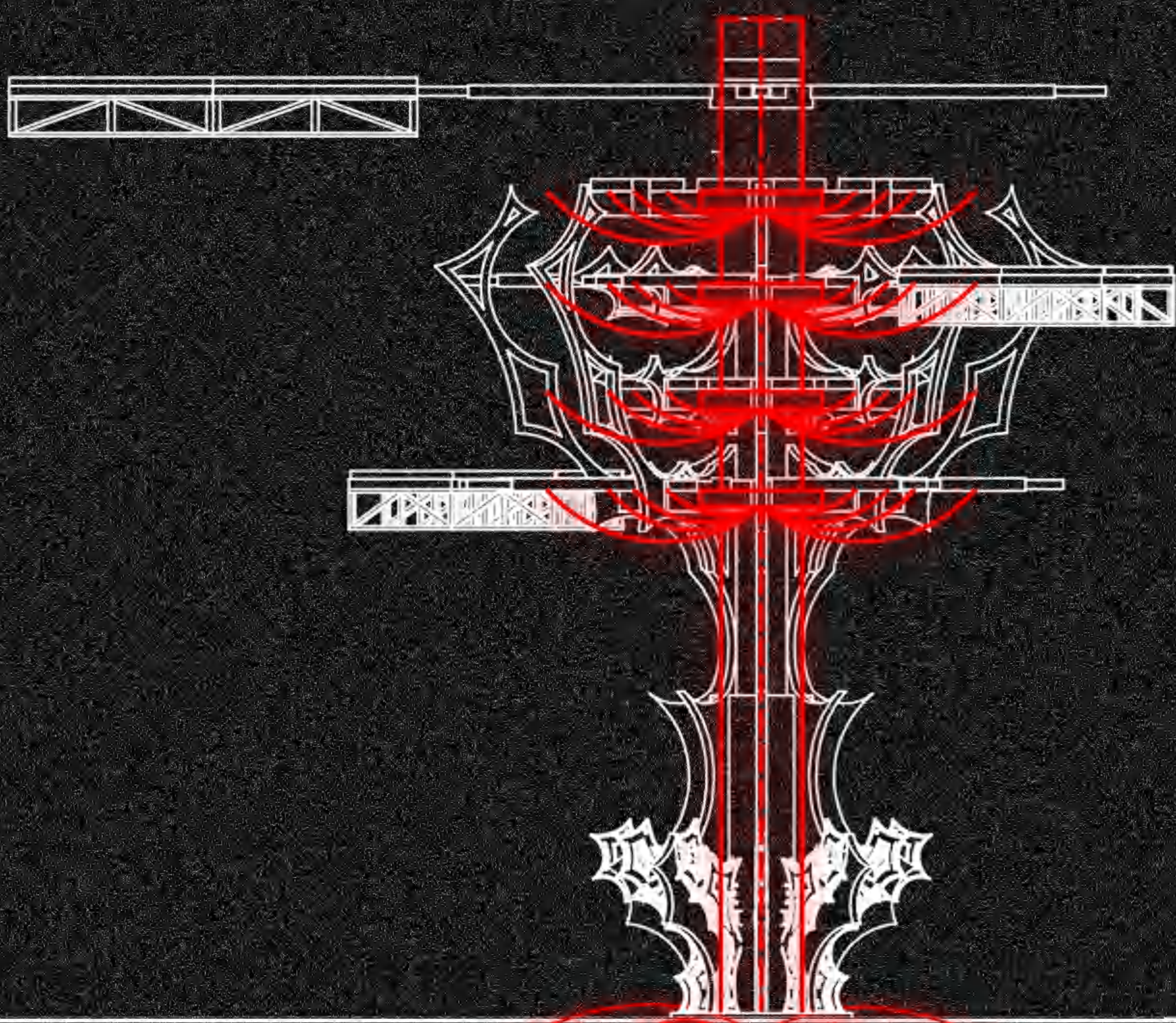
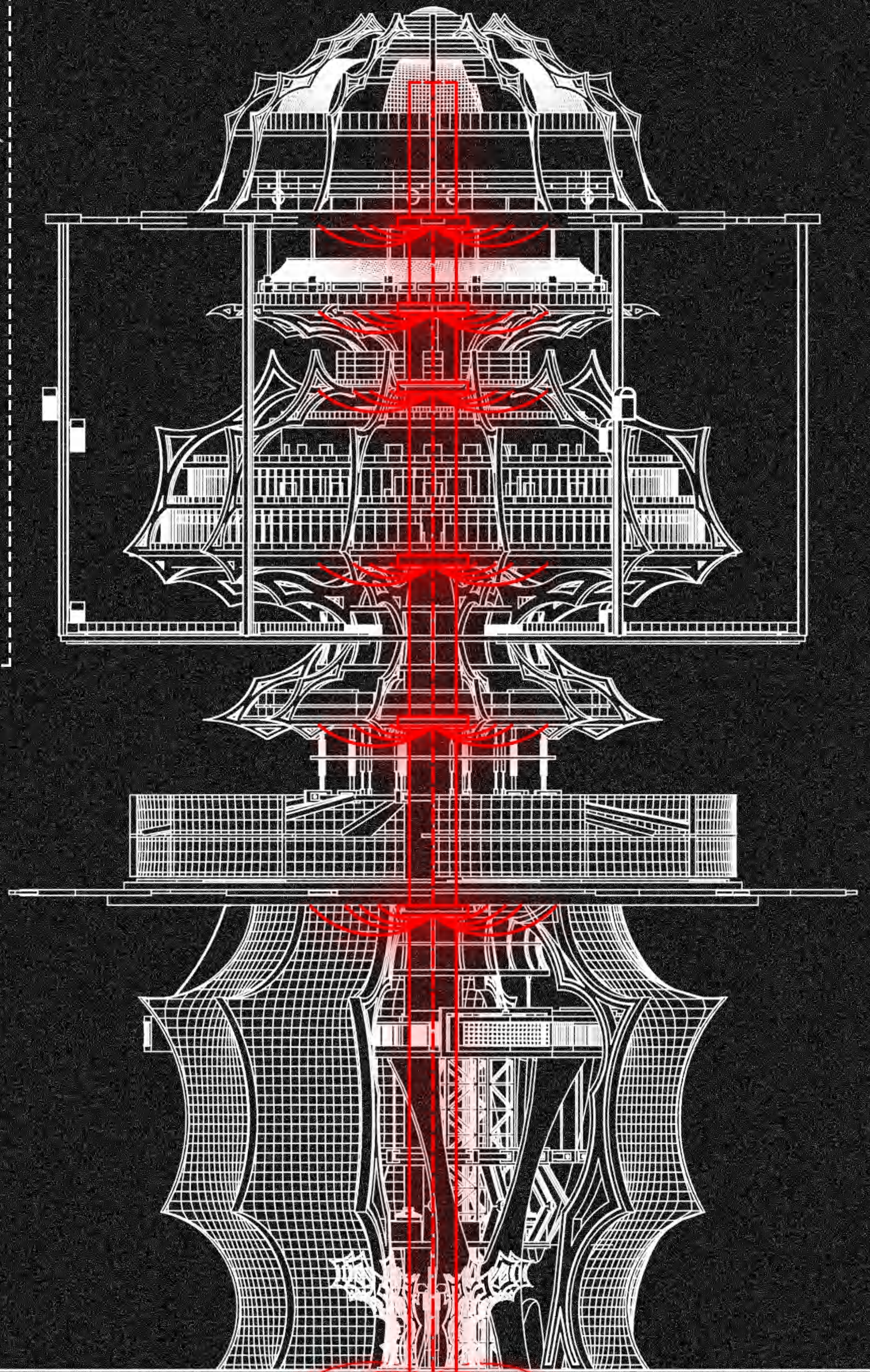
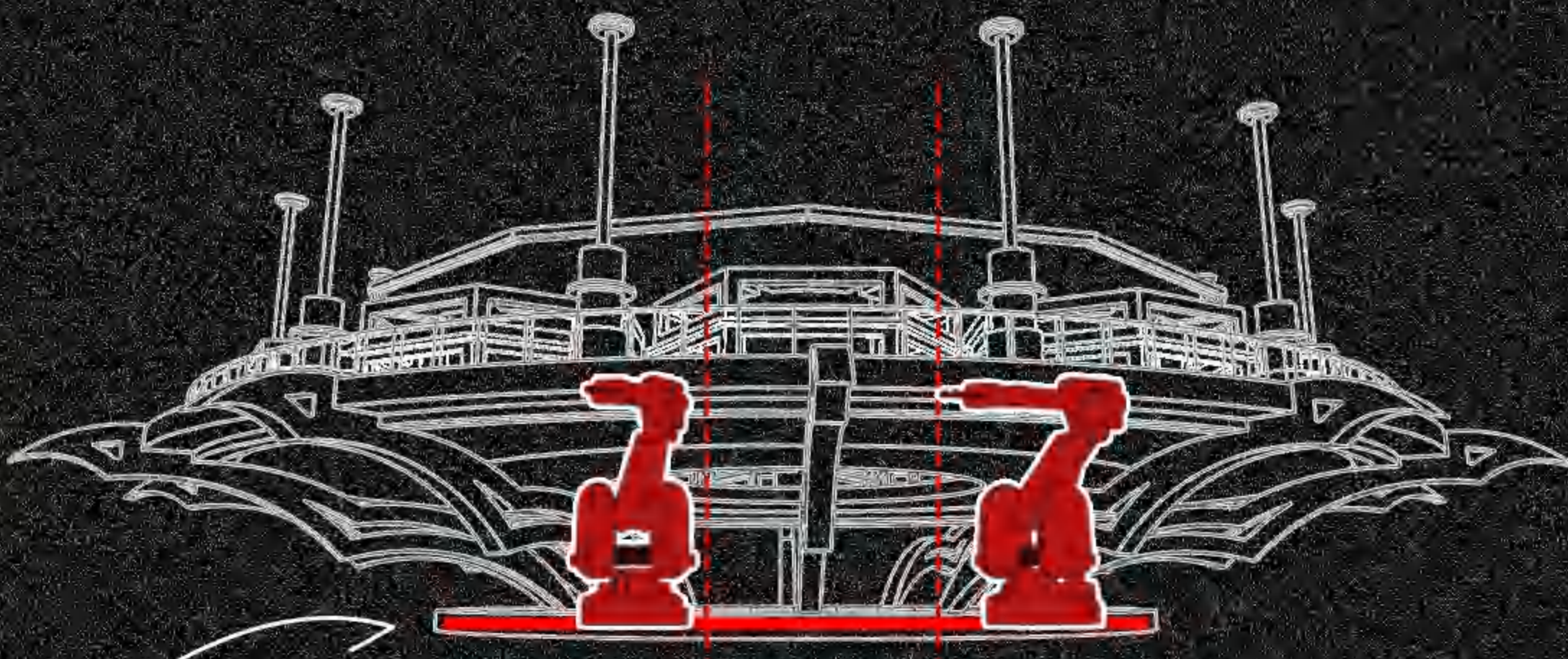
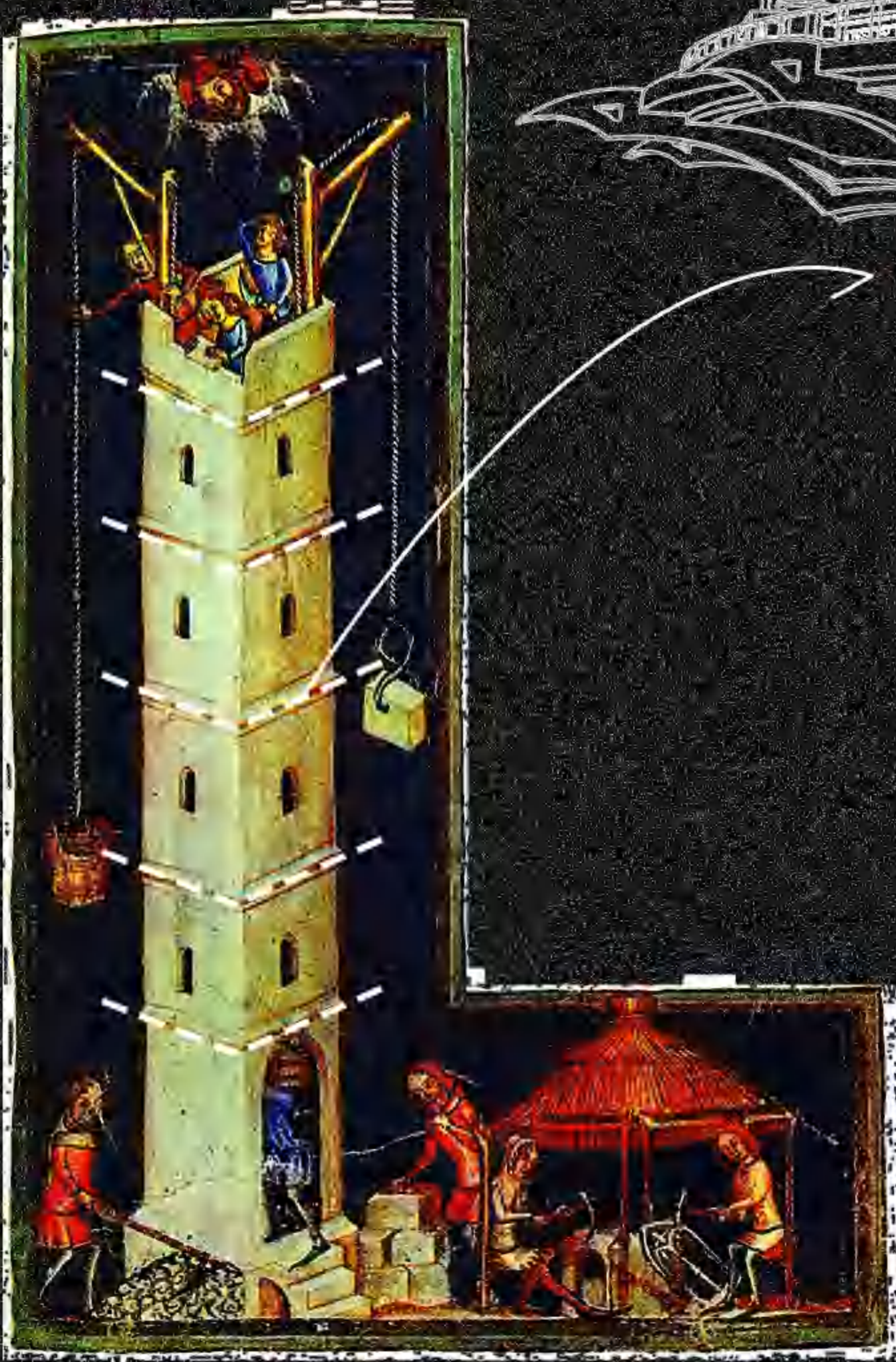
Step 1 Vertical Growing:

In Phase 2 (2099-2199), the installation begins its bamboo-like growth. The embedded "Mycelium seeds" within gradually surface, forming a central structural column. When expansion is required, joints lift the building levels, allowing the structure to extend upward continuously.



Step 2 Horizontal Build:

Once the mycelium structure completes its vertical growth, robotic arms initiate horizontal construction from the central bamboo-like nodes. These arms move along the central shaft to transport materials, allowing for efficient outward building.



PACKAGING TIME

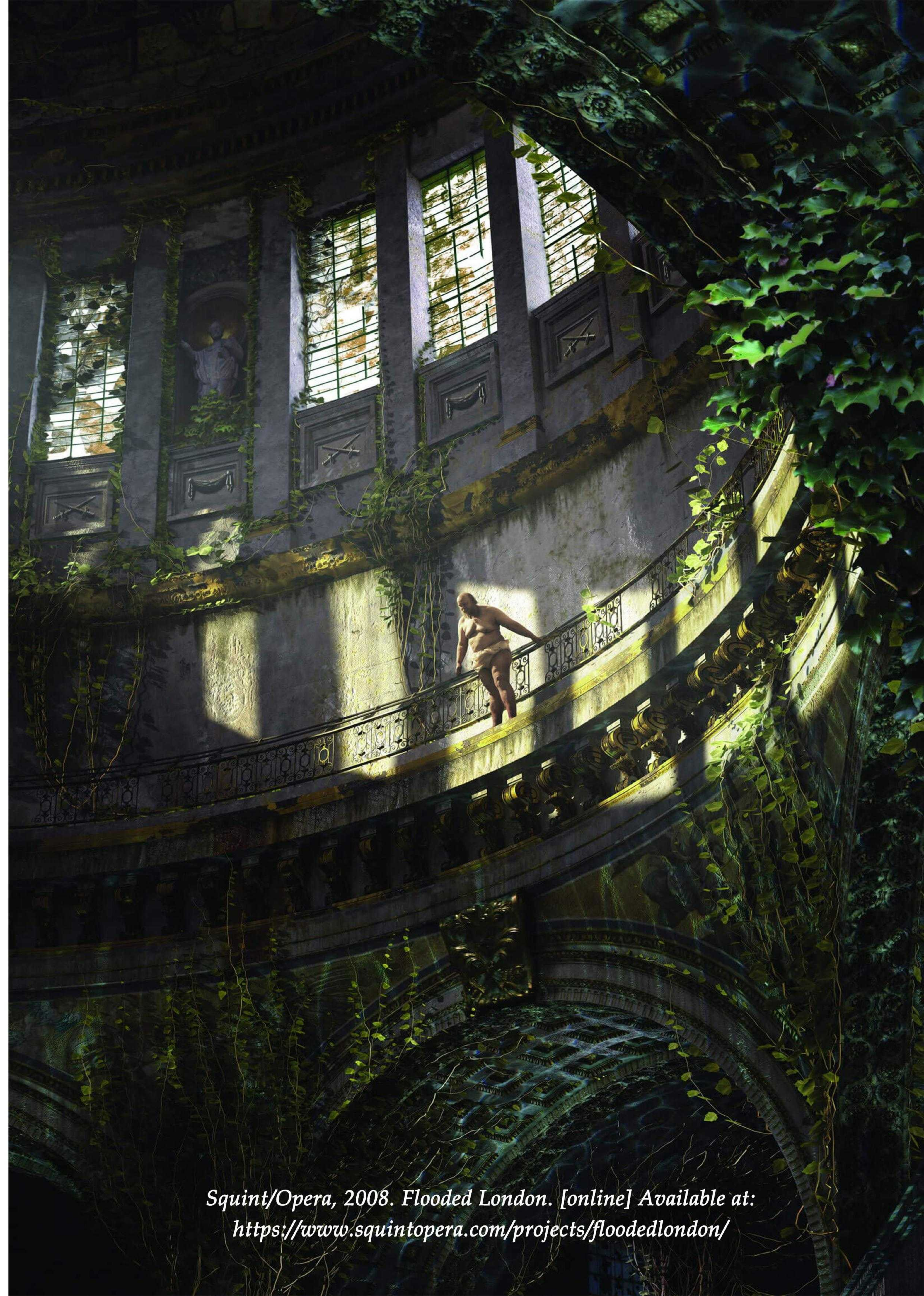
2199-

Future Urban Phase

WHAT IF

*In the future, cities face the risk
of being submerged?*

*The projection is based on existing official documents:
Thames Estuary 2100 (TE2100).*

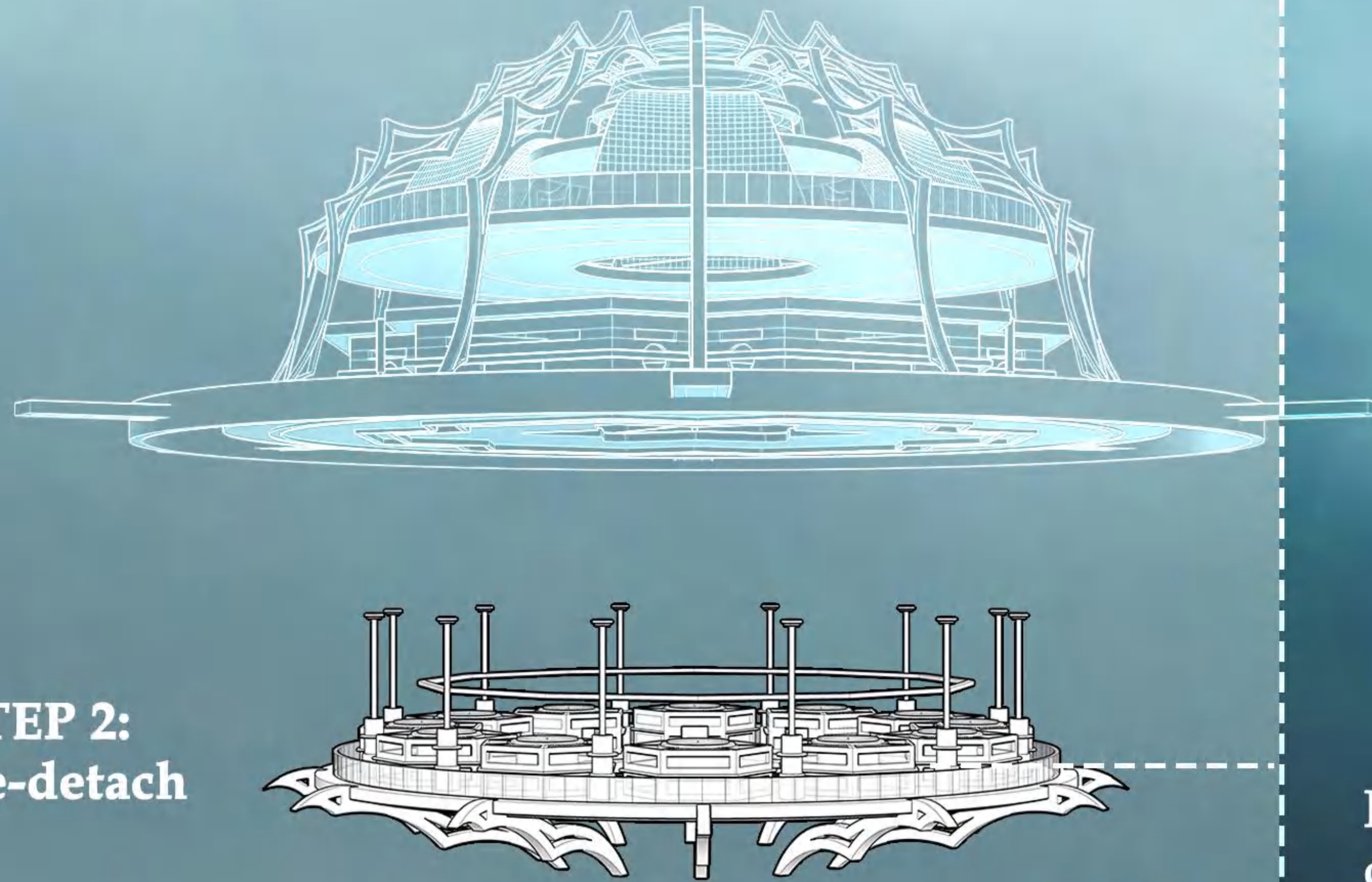


*Squint/Opera, 2008. Flooded London. [online] Available at:
<https://www.squintopera.com/projects/floodedlondon/>*

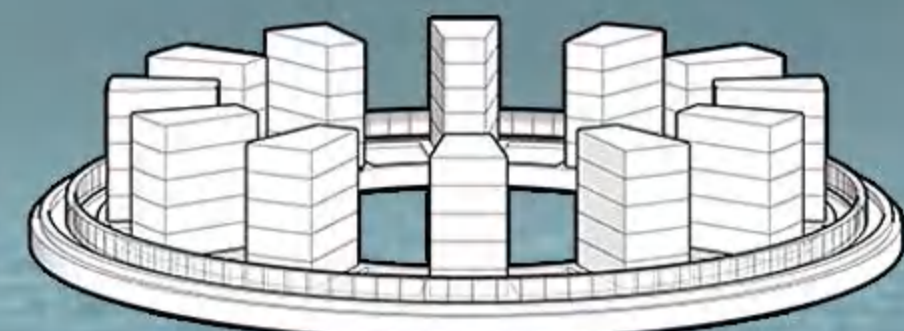
WHAT IF?

The circular structure has floating modules in Central and Community Buildings. When flood levels rise, detachment activates, allowing modules to float away with mycelium seeds for new growth.

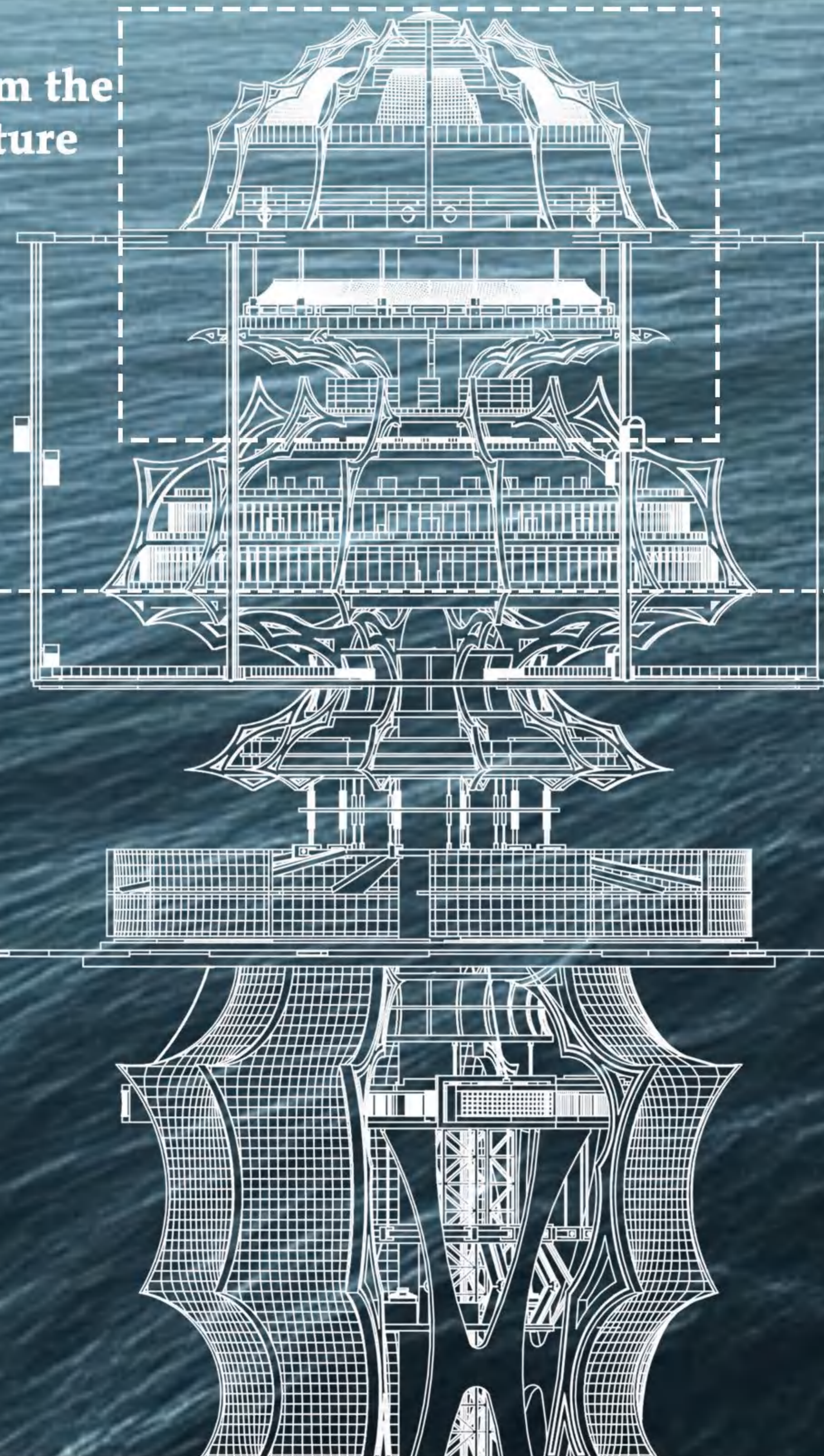
STEP 2:
Re-detach



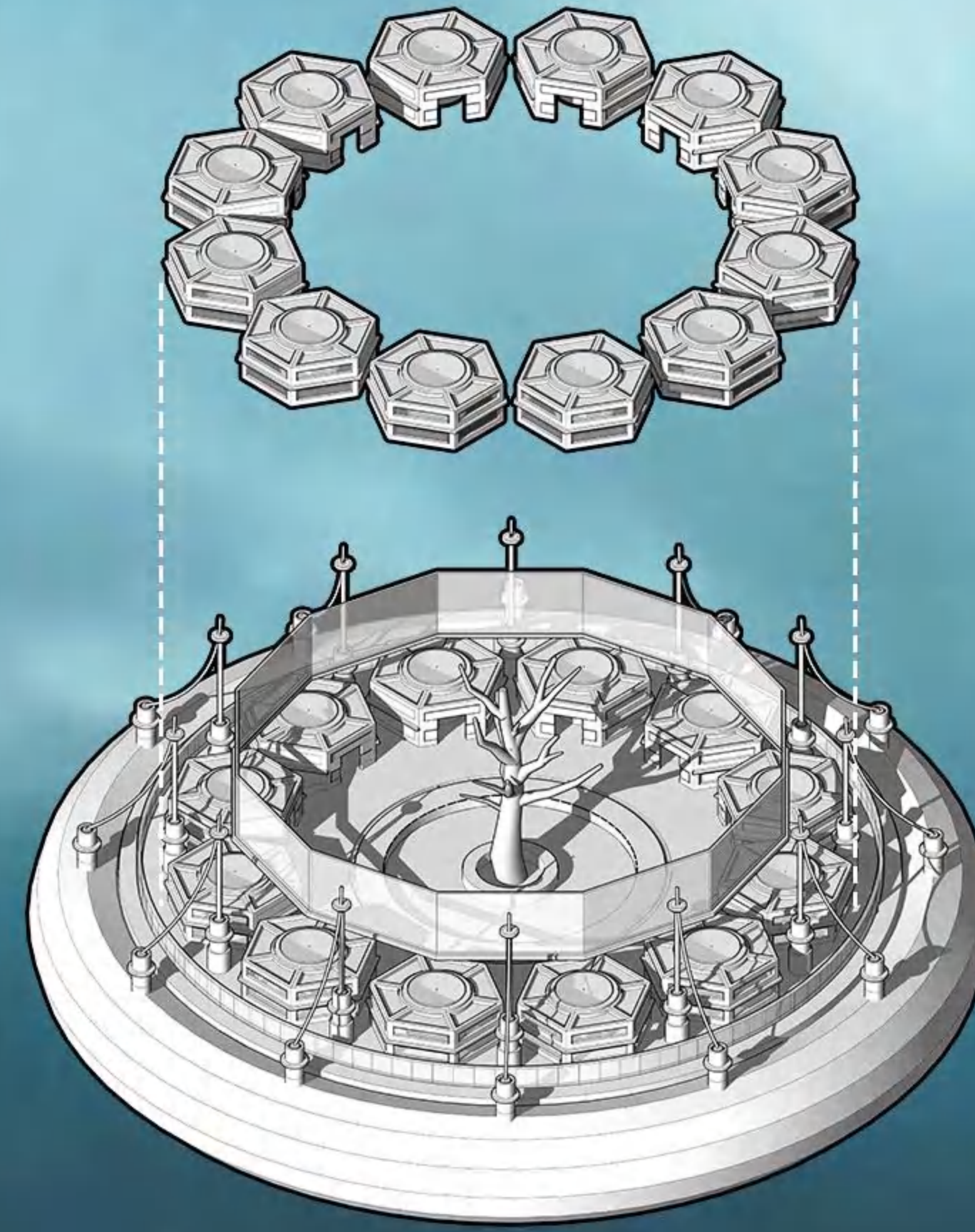
STEP 3:
Inflation



STEP 1:
Detach from the
main structure



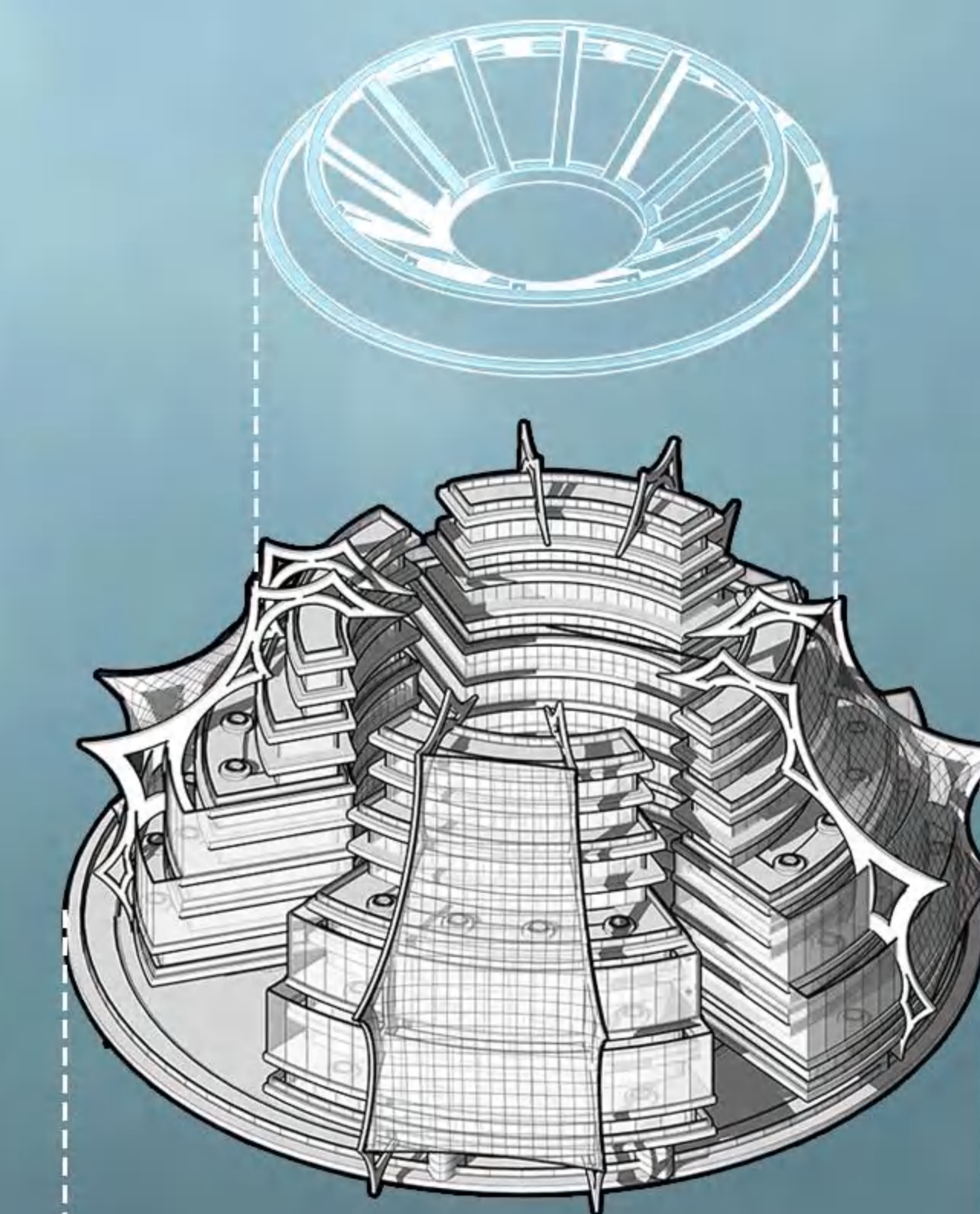
Individual modules can also detach and away independently.



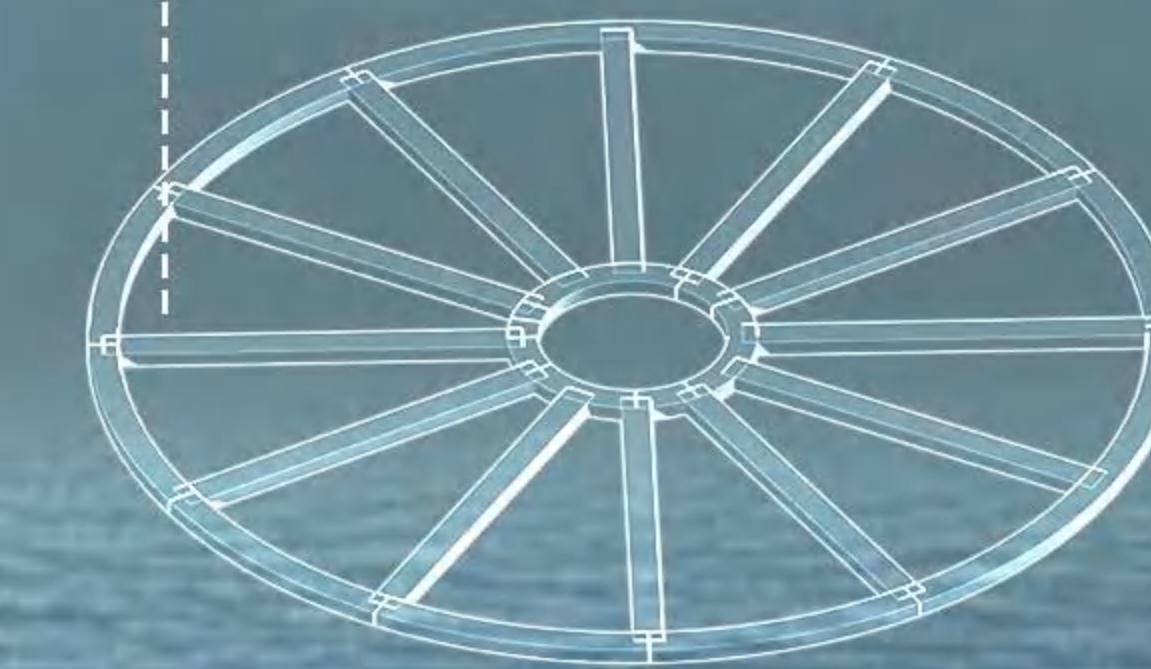
Flood Alert Level

Once the water level surpasses the warning threshold, the building will undergo sectional detachment. The original core office and hotel areas will inflate at their bases, allowing them to float. In the central section of the floating platform, new mycelium seeds can be planted, enabling a second iteration of growth once the danger recedes.

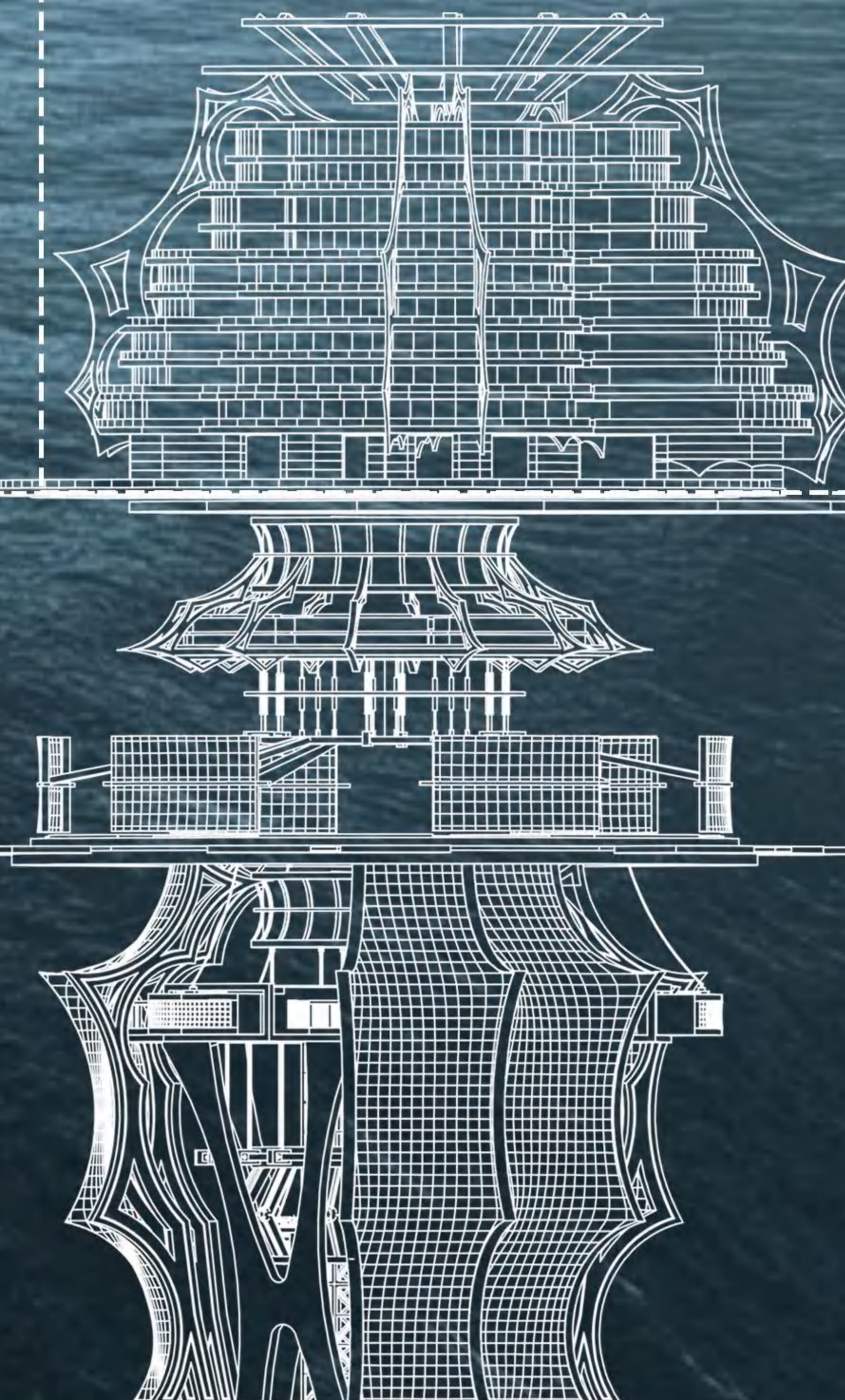
STEP 2:
Re-detach



STEP 3:
Inflation



STEP 1:
Detach from the
main structure



Separate clusters can detach, while the central area continues to cultivate mycelium seeds.

Flood Alert Level

For the Community Building section, the structure will detach directly from the rotating disk section, preserving the upper residential units while initiating a split. When the detached modules encounter water, the base rapidly inflates, allowing the residential modules to float on the surface.

PACKAGING TIME

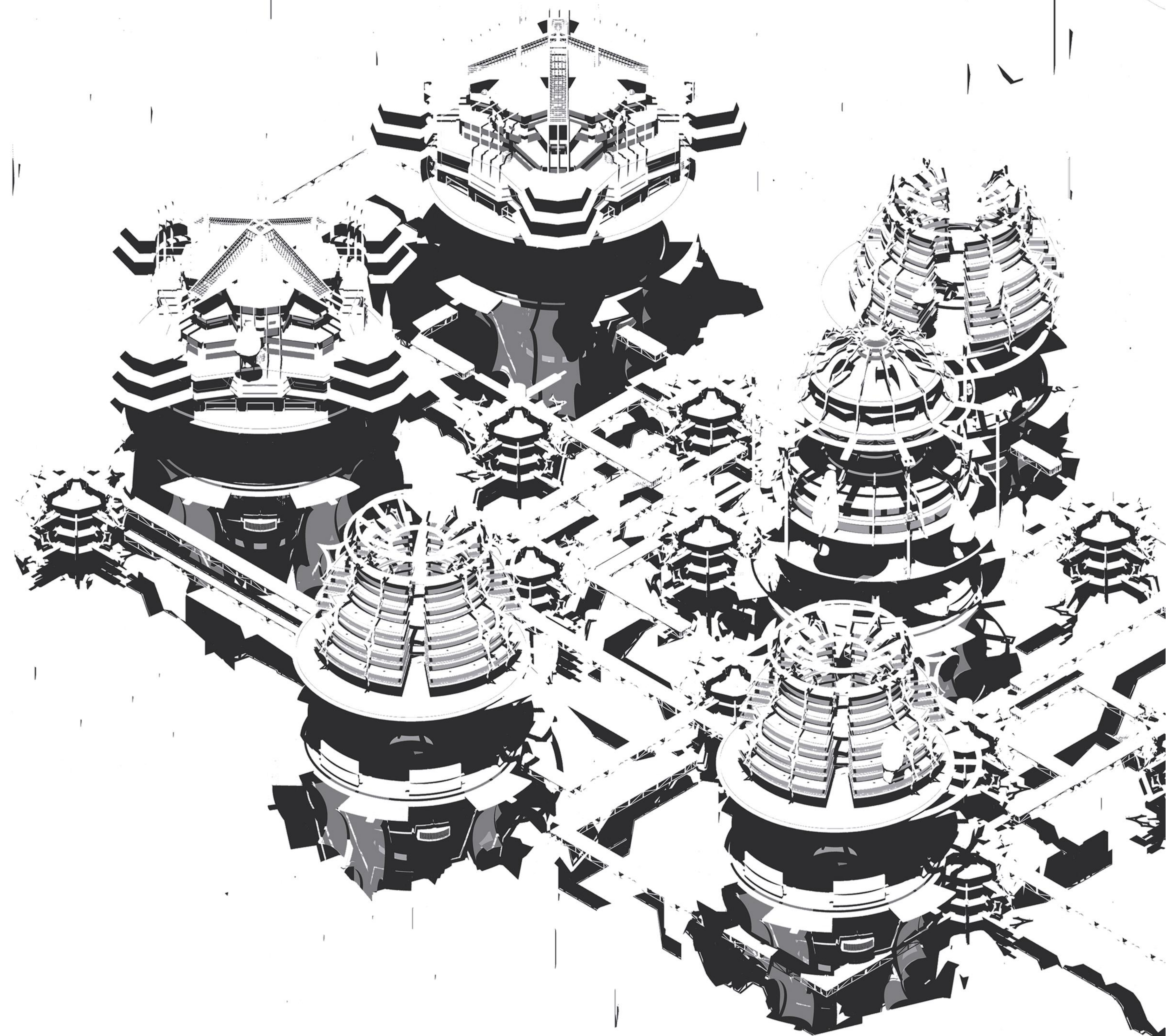
2199-

Future Urban Phase

Future Community

Governance

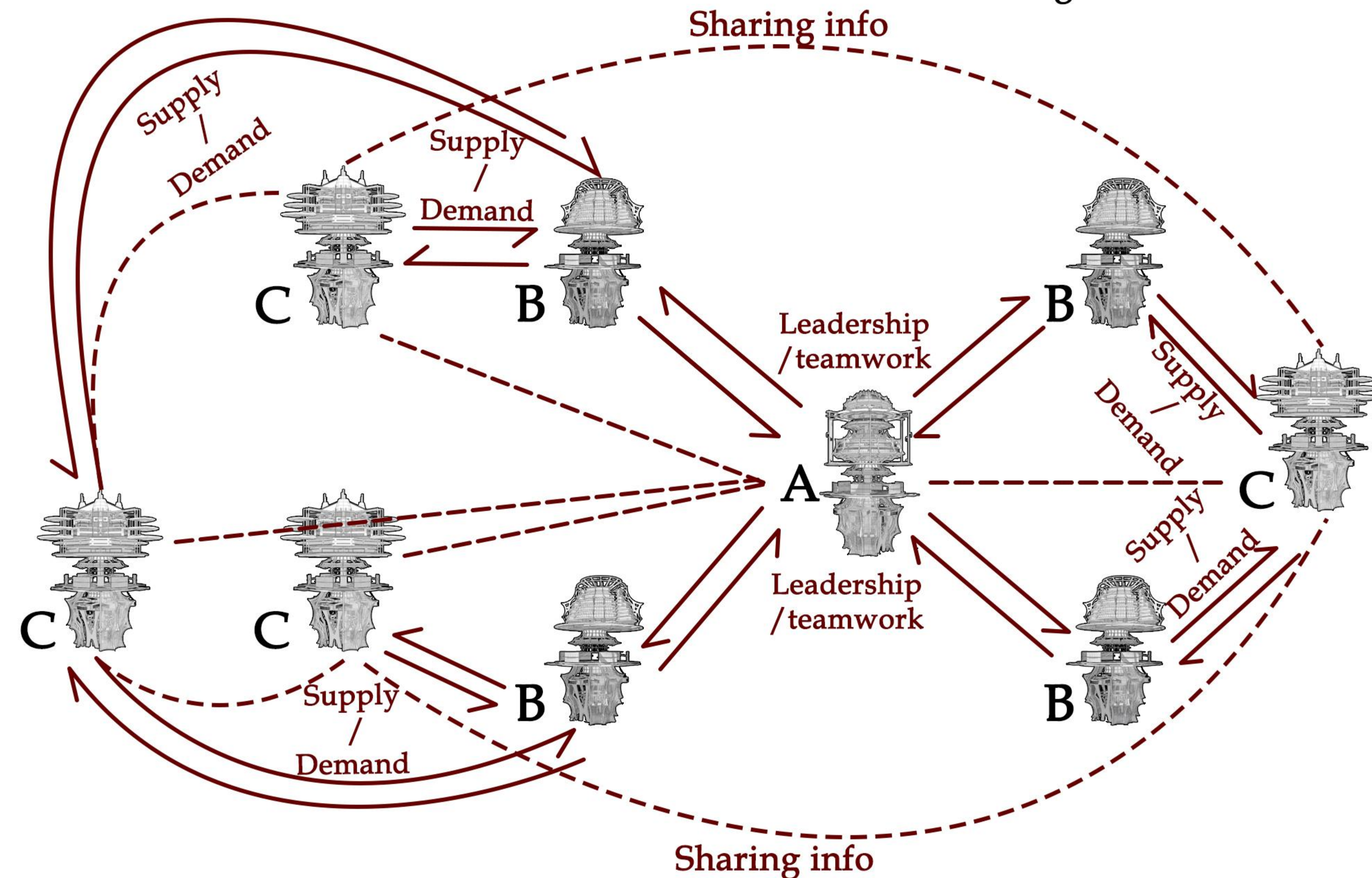
Decentralization and Sustainable Adaptation



PACKAGING TIME

2199- Future Urban Phase Community Governance

- A Central building
- B Community building
- C Agro-Industrial Building



Relationships between A, B, and C

A-B (Leadership & Collaboration):

Central Building A provides oversight and coordination, while Community Buildings B manage themselves autonomously under its guidance.

B-C (Supply & Demand):

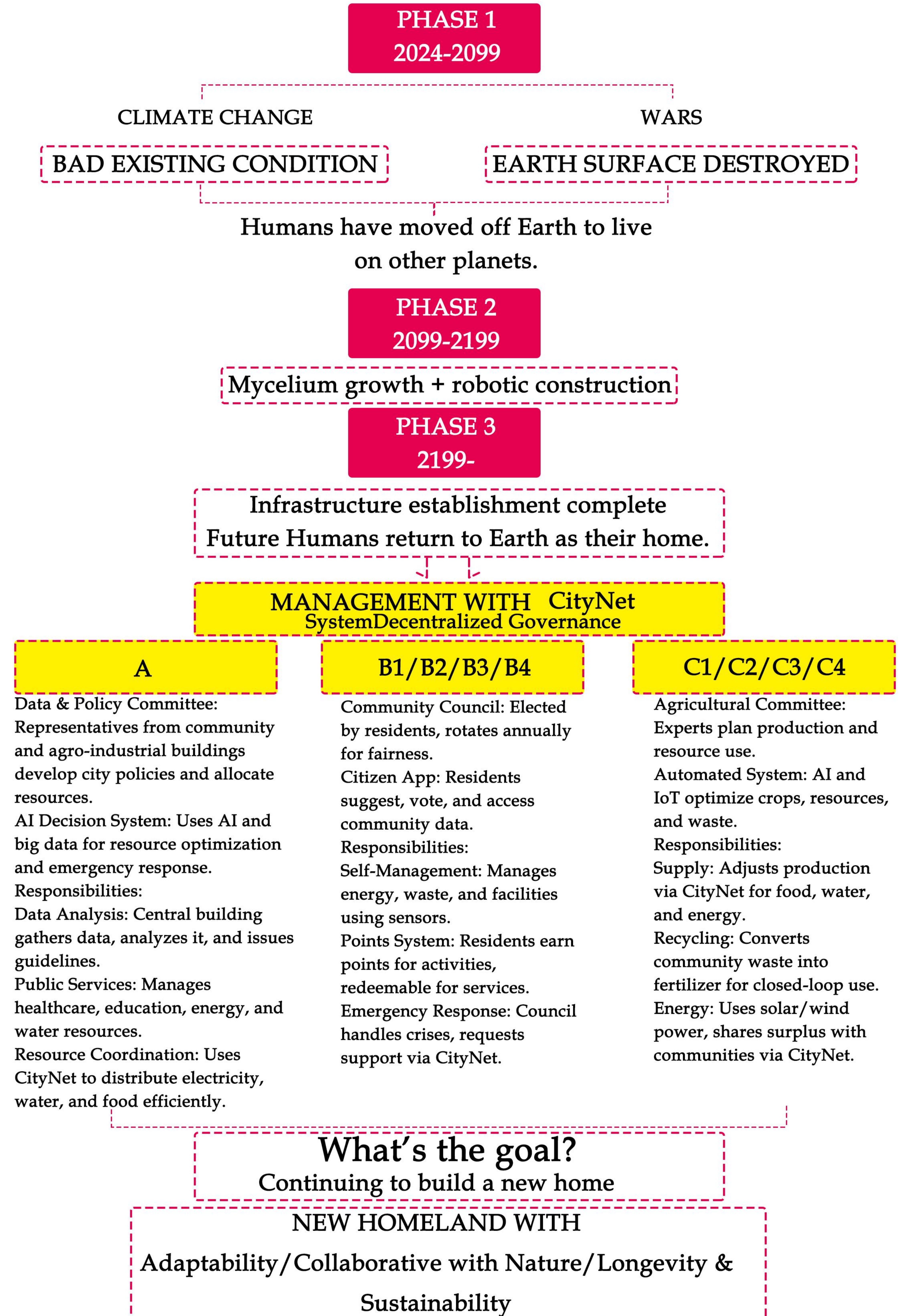
Community Buildings B request resources from Agro-Industrial Buildings C based on residents' needs, and C supplies goods accordingly.

C-C (Information Sharing):

Agro-Industrial Buildings C share production data and resources with each other, optimizing efficiency and providing mutual support during shortages.

B-B (Collaboration & Resource Sharing):

Community Buildings B collaborate and share resources via a data-sharing platform, enhancing overall living standards through cooperative efforts.



FUTURE URBAN RENDERING

*“While humans land on
Earth again”*

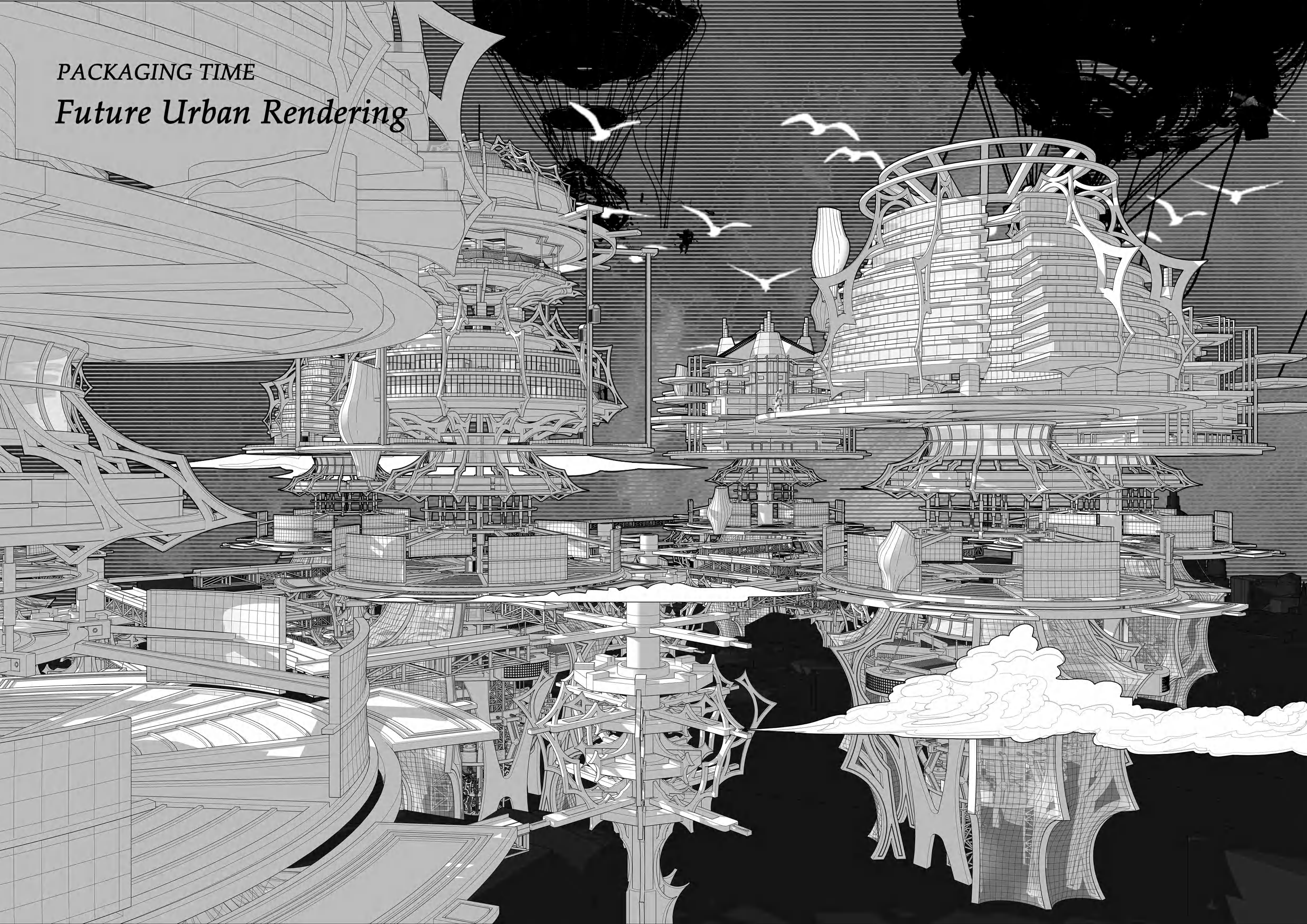
The renderings depict the foundational framework of a future city, illustrating scenes where humans transport resources from other planets back to Earth to rebuild their homes, symbolizing renewed hope for future urban life.

PACKAGING TIME

Future Urban Rendering



PACKAGING TIME
Future Urban Rendering



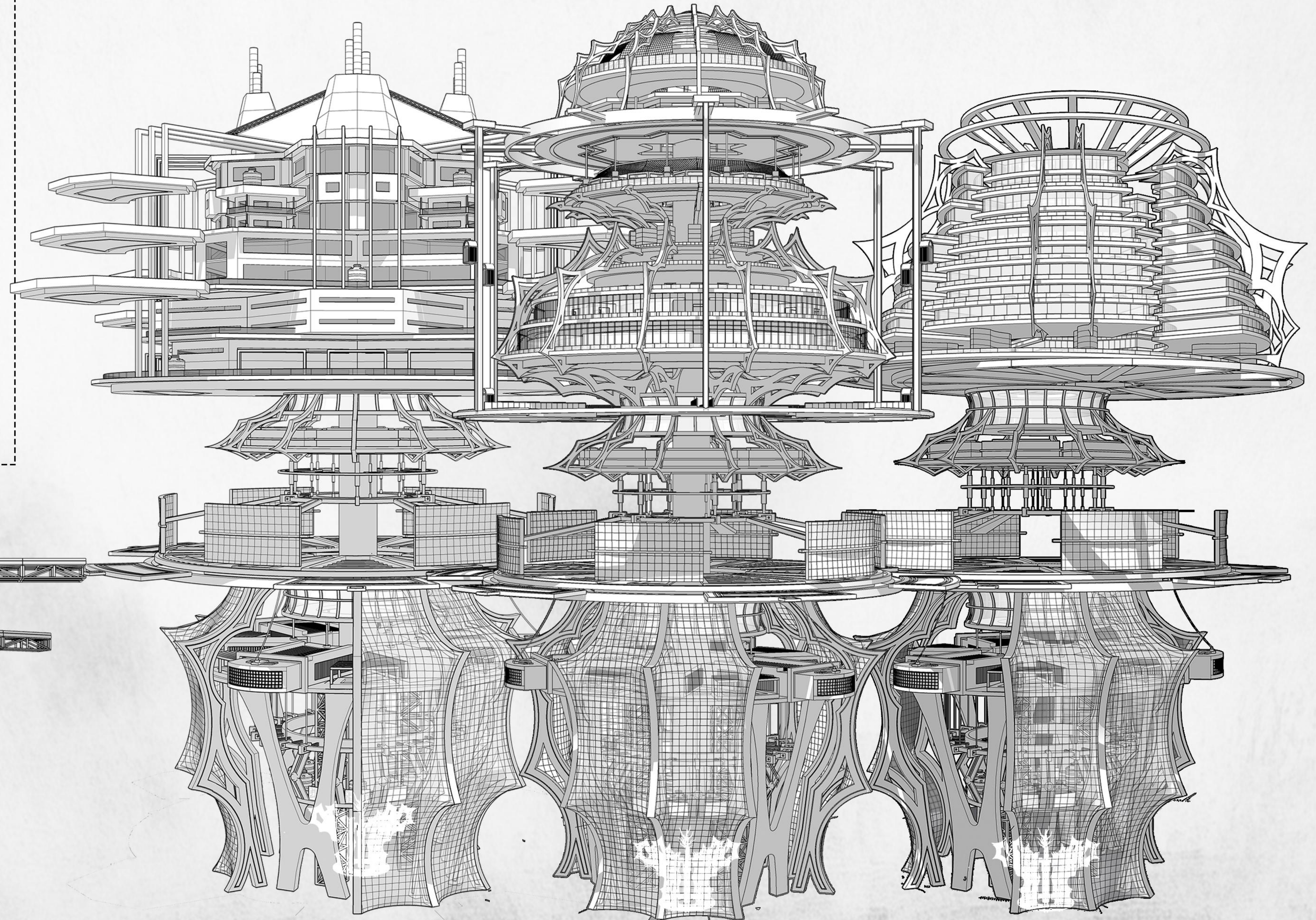
PACKAGING TIME
Future Urban Rendering



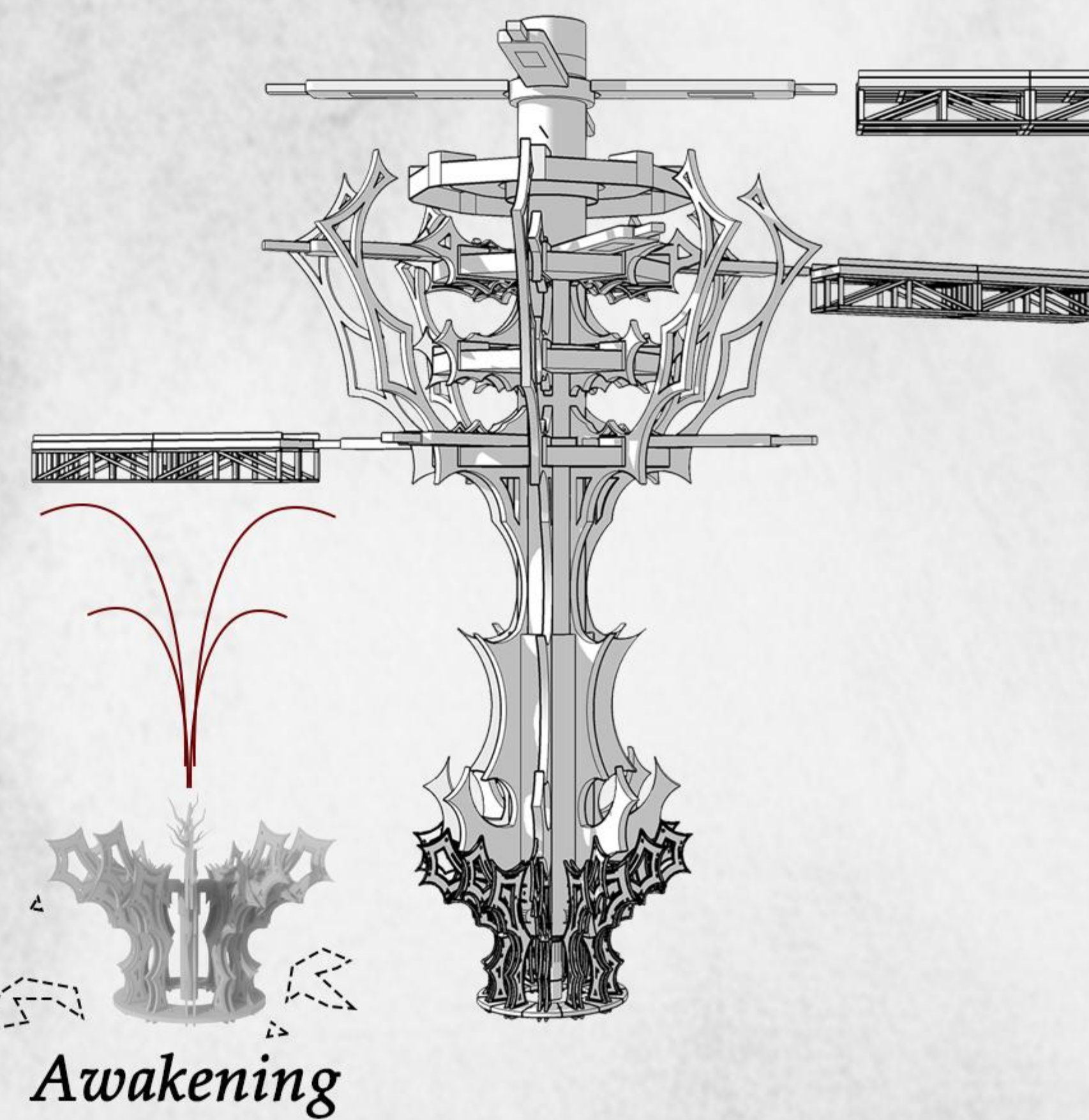
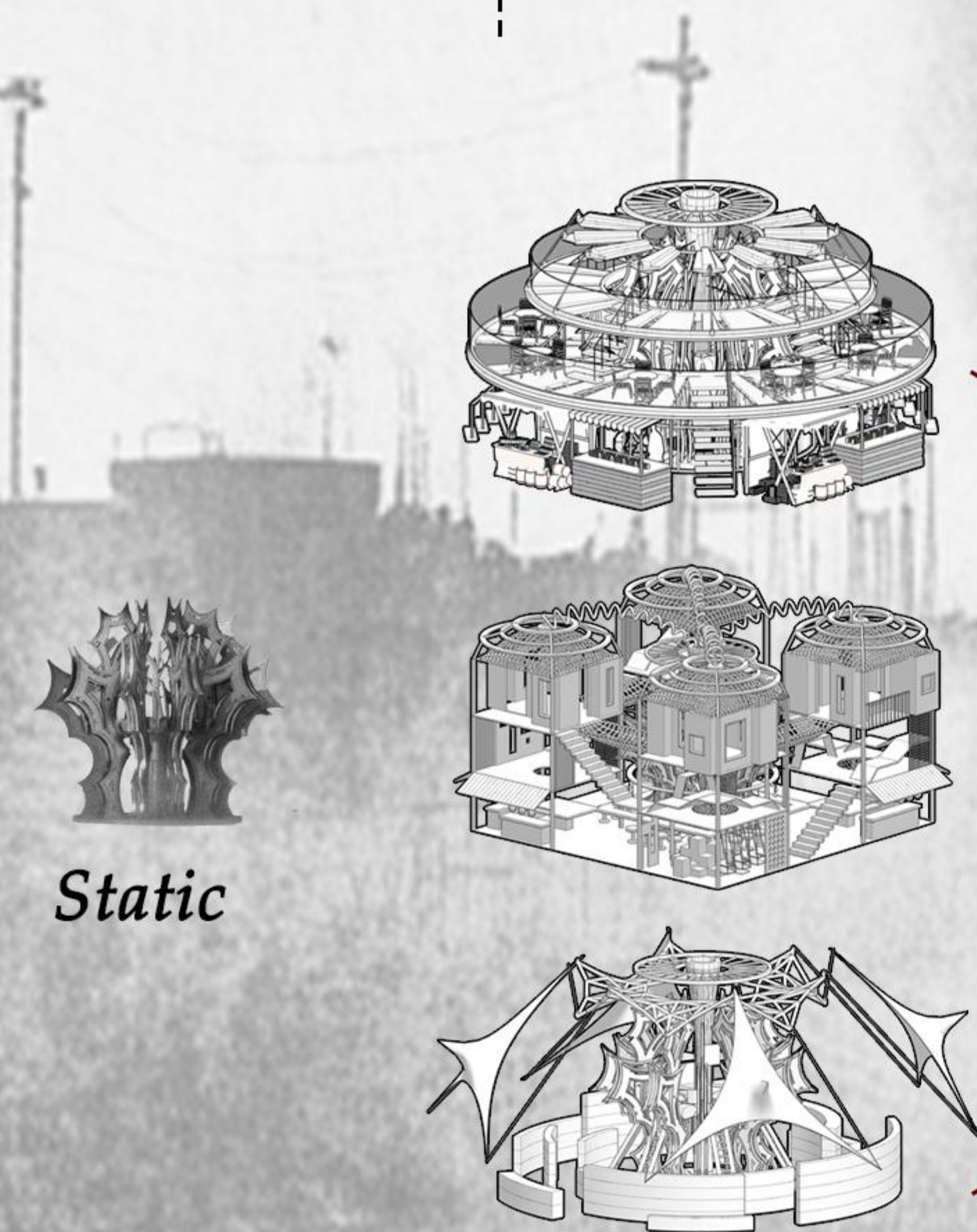
CONCLUSION

This period represents the "Present-day" phase, where the installation is surrounded by modern architectural structures, creating a sense of confinement imposed by man-made forms. It highlights the characteristics of contemporary architecture and sets up a strong contrast for the organic breakthrough that follows.

In this phase, due to extreme weather and frequent wars, the Earth's surface has become uninhabitable. Humanity is forced to migrate to other planets for survival. At this moment, the installation begins to awaken, with mycelium seeds growing upward from within, creating a foundational platform for a future city above the devastated surface.



In this phase, as exploration of the Earth's surface progresses, humans gradually discover that the foundational platform for a future city is already taking shape. This development not only brings renewed hope for the plan to return to Earth but also opens up possibilities for building new surface cities. By combining advanced technology with natural construction principles, humans work together to rebuild a future city.



Static

Awakening

Phase 1

2024-2099

The installation passively conforms to contemporary structural limits.

Phase 2

2099-2199

Man-Made structure
VS
Natural power

Phase 3

2199-

Collaboration between
high-technology and nature

TIME LINE REVIEW
(link to mindmap page)

SHIFTING MONUMENT

Conclusion & Outlook

The Evolution of Art Installations in Urban Design

This project examines how art installations can shift from being static, commemorative pieces to multifunctional, sustainable urban structures. While many contemporary artworks are visually impactful, they often lack long-term relevance. Drawing inspiration from Olafur Eliasson's *The Weather Project*, which used temporary art to engage with climate issues, my design emphasizes functionality alongside aesthetics.

By incorporating natural systems, postmodern design, and life-cycle thinking, my project adapts to urban changes over time, transforming from a cultural engagement space to essential infrastructure as cities grow.

Adapting to Time and Space

Traditional monuments are fixed in time, while my installation evolves with its environment. Inspired by projects like *The Eden Project* and *Masdar City*, it shifts from a closed structure to an organic system that adapts to urban needs.

Postmodern Flexibility and Social Impact

Using a postmodern approach, the installation adapts to population and commercial demands, especially during the 2099-2199 phase. It serves as a hub for community interaction, addressing housing and service needs.

Resilient Design for Extreme Conditions

The installation can detach and float as an emergency shelter, inspired by projects like *The Big U* in New York. With predictions of rising sea levels in London, this design ensures continued functionality.

Blending Classical and Modern Elements

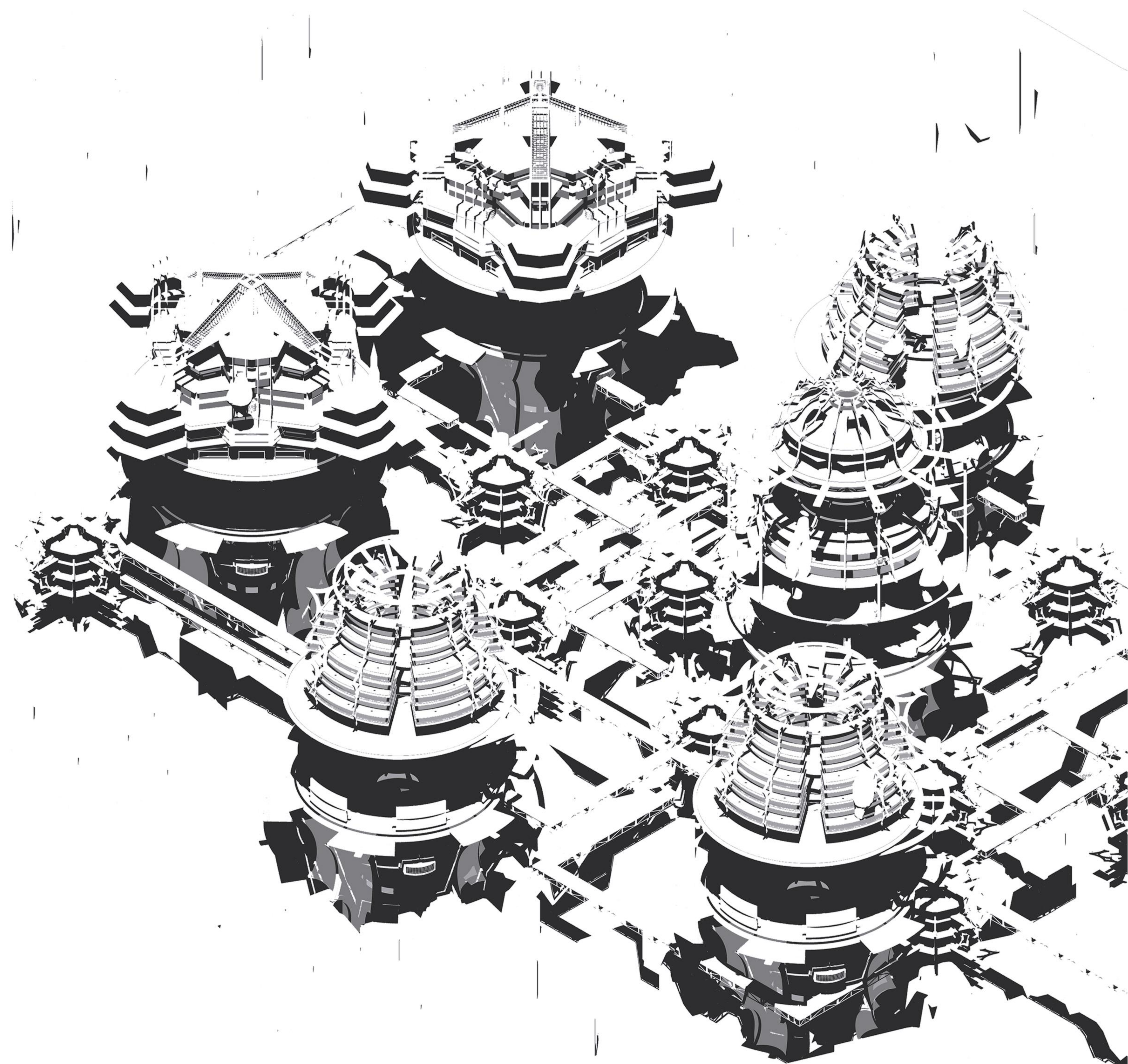
Inspired by the Roman Wall, my design merges historical elements with modern technology to create a protective framework for future cities.

Future Vision: Nature and Technology Integration

The project uses mycelium and organic materials to grow dynamically, symbolizing a synergy between nature and technology. This forward-thinking design sets the stage for sustainable urban development.

Conclusion

This project showcases how art installations can evolve into dynamic infrastructure, adapting to environmental and social needs. It offers a flexible approach that ensures cities remain resilient in the face of future challenges.



SHIFTING MONUMENT

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