

Architecture Portfolio

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MSAAD

From 2023-2024

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UNTETHERED _ DRIFTING AMETHYST
VINEYARD SHELL 01

Summer 2023

Instructor: Michael Loverich &
Antonio Torres

Individual Work

A lonely untethered island drifting on a vast ocean with lushly growing vineyards. The island's interior hides untold secrets.

ADAPTIVE CAPACITY _ MODULAR
CONVERTIBLE DRAWER 02

Fall 2023

Instructor: Katharine Shima

Team Work

Team Members: Shunshan Chen, Shumeng Liu

The project aims to address the rental housing crisis in New York by providing a low-carbon solution that can adapt to tenant needs and market fluctuations.

BEYOND MUSEUMS: DE-MONUMENTALIZING
MODERNIST BIG CONTAINERS (of Madrid) 03

Spring 2024

Instructor: Juan Herreros

Team Work

Team Members: Shunshan Chen, Shumeng Liu, Ziyi Zhu

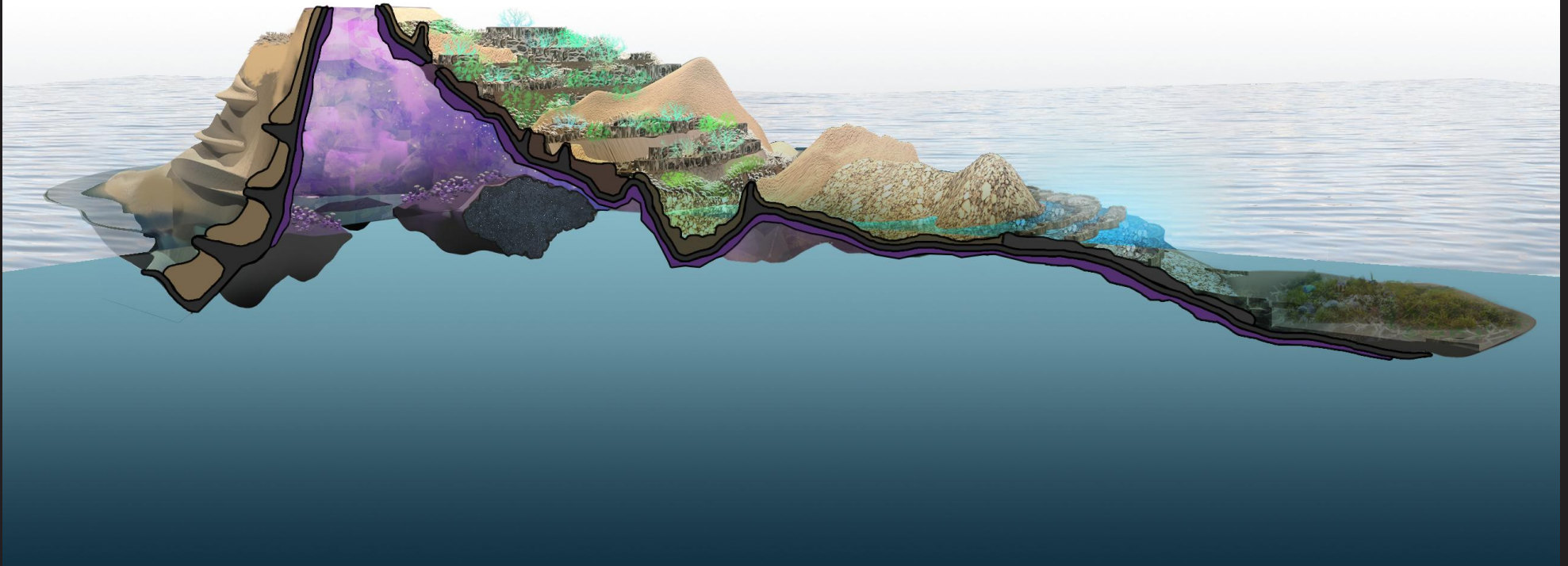
The Crystal Palace has been given a new responsibility in a new era to address social bonding and the climate crisis, becoming more than a royal symbol and a political statement, with an organism capable of growing, evolving, and changing over time.

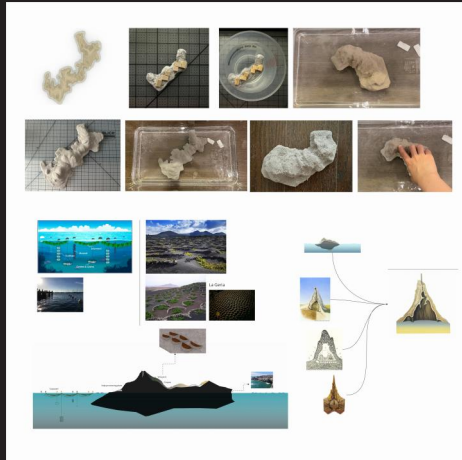
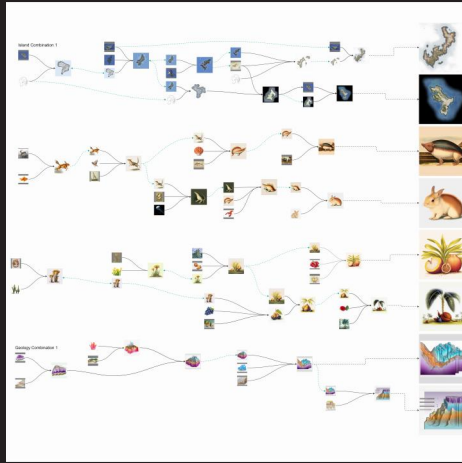
01

UNTETHERED_DRIFTING AMETHYST VINEYARD SHELL

A lonely untethered island drifting on a vast ocean with lushly growing vineyards. The island's interior hides untold secrets.

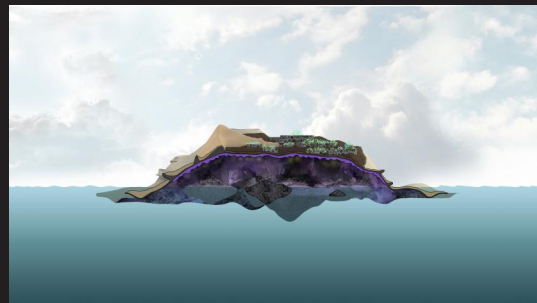
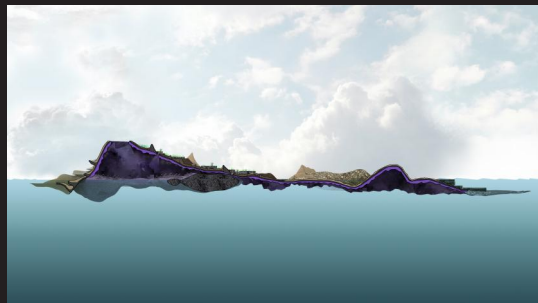
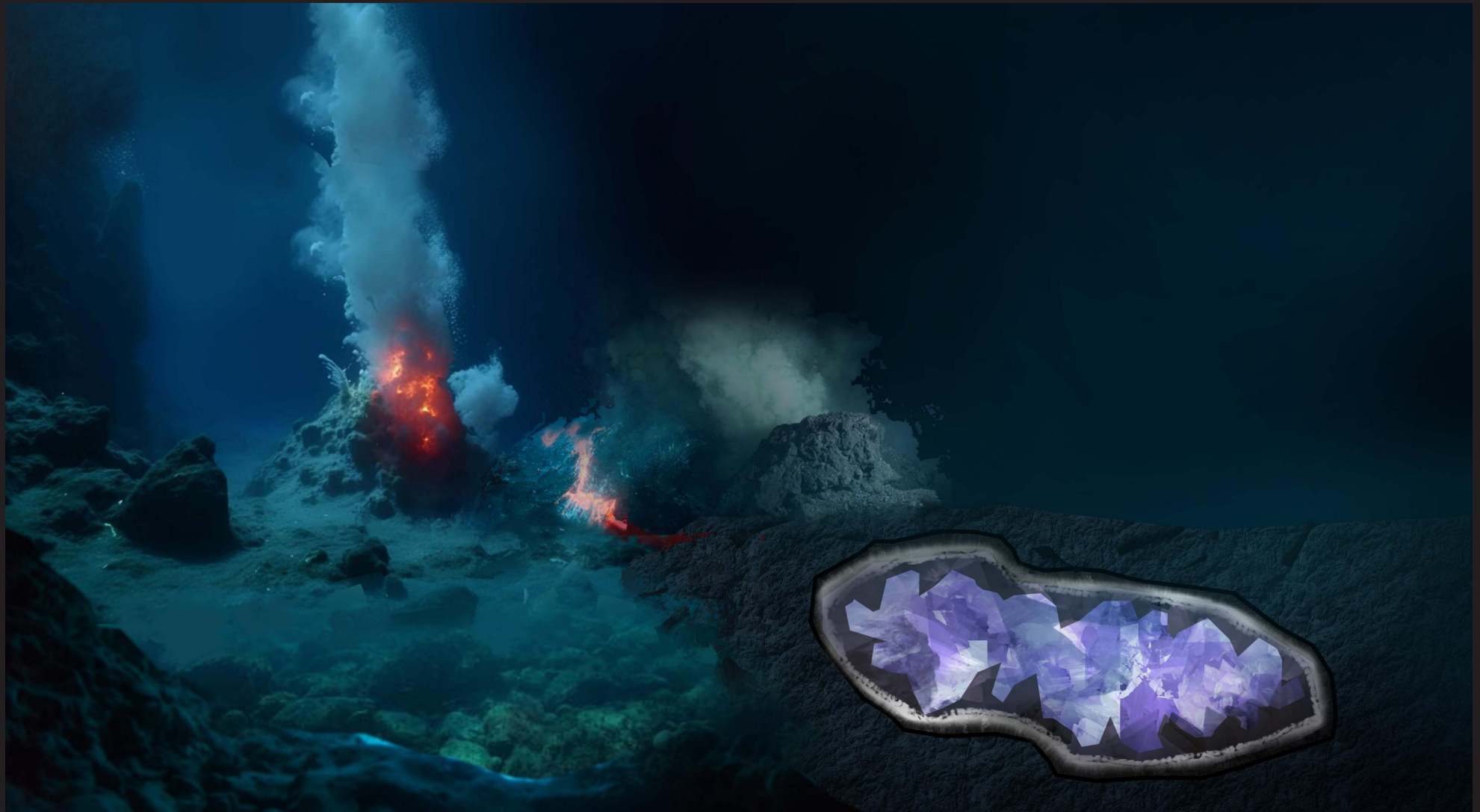
Individual Work
Instructor: Michael Loverich & Antonio Torres
2023 SUMMER





Multiple possibilities are experimented with through AI, blending multiple times to form random island forms modeled after actually existing islands, and creating a scenario for the ecosystem of the island.

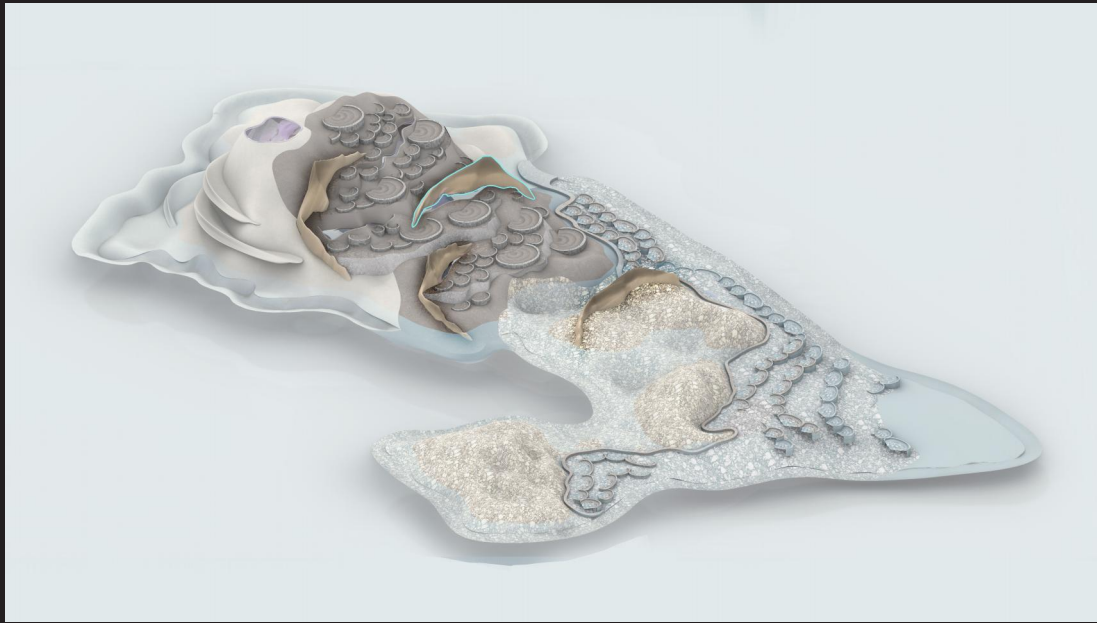




It started with an undersea volcanic eruption, where a geode fragment from the earth drifted to the surface by geological action and over time became a floating island.



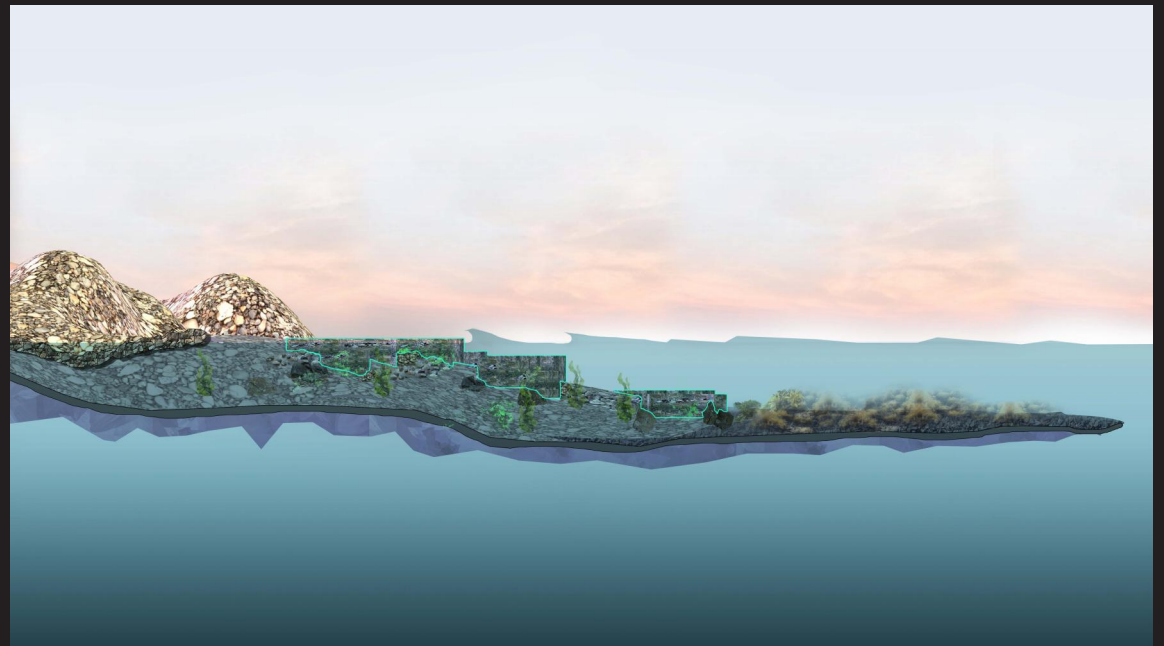
The area was alive with human visits, although people gradually moved away from the area due to the strong winds. The artificial vineyards are flourishing, and walls have been erected in the vineyard pits to protect them from the wind.



Lush seaweed grows on the beach and clams feed on it.



Because of the strong northeasterly winds, many fin-structures have formed on the island to block the wind.





Underneath the shell is an ecosystem very different from the ground; glow worms live in an amethyst cave, their feces fall on baby islands and mushrooms sprout.



NAME: CLARA
 GENDER: FEMALE
 AGE: 24
 OCCUPATION: STUDENT
 PERSONALITY: IMAGINATIVE,
 FLEXIBLE
 LEASE TERM: 2 YEARS



NAME: ALICE
 GENDER: FEMALE
 AGE: 32
 OCCUPATION: FASHION DESIGNER
 PERSONALITY: ENTHUSIASTIC,
 OPEN-MINDED
 LEASE TERM: 6 MONTHS



NAME: JOE
 GENDER: MALE
 AGE: 20
 OCCUPATION: STUDENT
 PERSONALITY: ADAPTABLE,
 SELF-DISCIPLINED
 LEASE TERM: 4 YEARS



NAME: DIANA
 GENDER: FEMALE
 AGE: 27
 OCCUPATION: WRITER
 PERSONALITY: CURIOUS,
 INDEPENDENT
 LEASE TERM: 6 MONTHS



NAME: JUSTIN
 GENDER: MALE
 AGE: 35
 OCCUPATION: ARCHITECT
 PERSONALITY: INNOVATIVE,
 PRACTICAL
 LEASE TERM: 1 YEAR



02
 ADAPTIVE CAPACITY
 MODULAR CONVERTIBLE
 DRAWER

Site: 550 7th Ave, New York
 Team Work
 Team Members: Shunshan Chen,
 Shumeng Liu
 Instructor: Katharine Shima
 2023 Fall

Looking at the rental market in new york city, the number of occupants and demand for rental housing fluctuate significantly on a monthly basis due to economic conditions, seasons, policy changes, and other variables; and there is no obvious pattern, resulting in many of the rentals in New York being vacant at times which is unpredictable for developers.

Through adjusting the number of units in the building like a drawer in response to the fluctuation of the vacancy rate, the vacant units could be converted into public space, thereby substantially diminishing space wastage in the low rental period or providing more rental units during the high rental period.

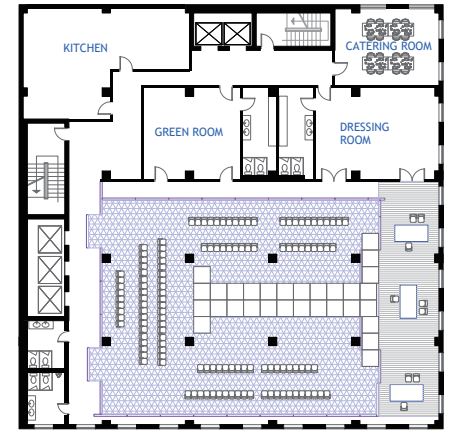
SITE



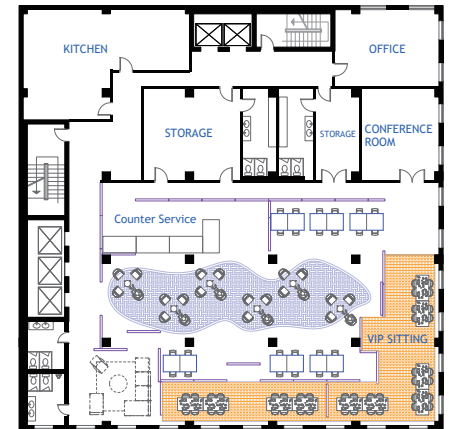
SECTION



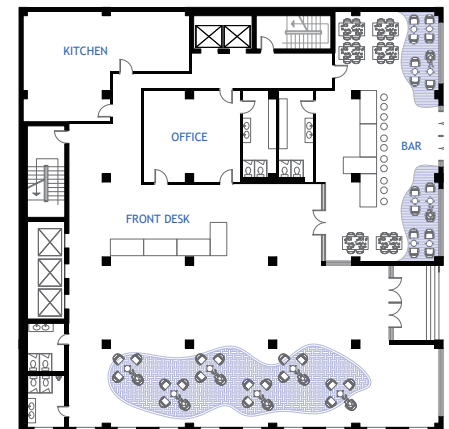
FLOOR PLAN



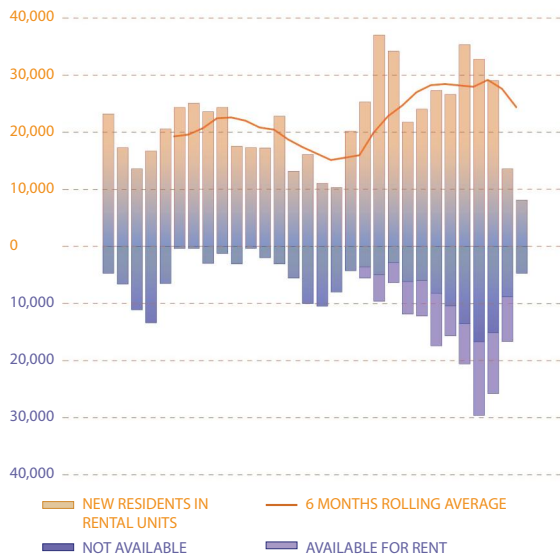
F2- FASHION SHOW



F4- RESTAURANT/BAR



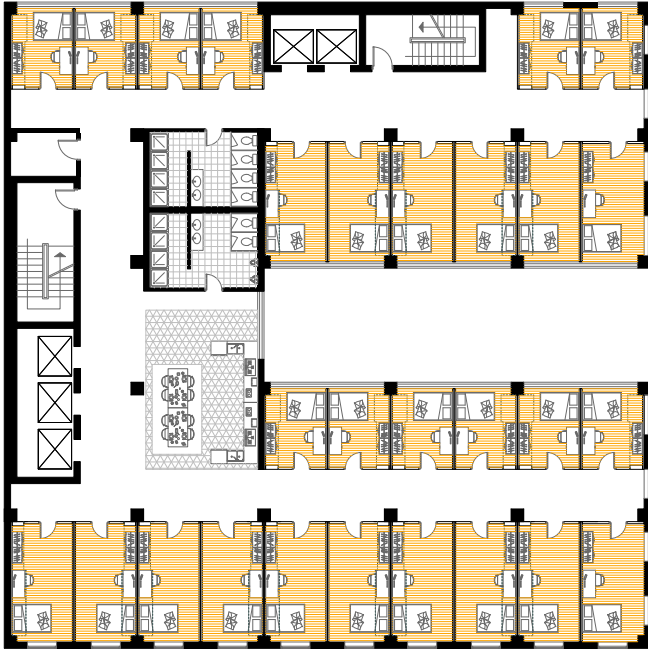
F1- ENTRANCE



RENTAL TURNOVER & TIMING OF VACANCY BY AVAILABILITY

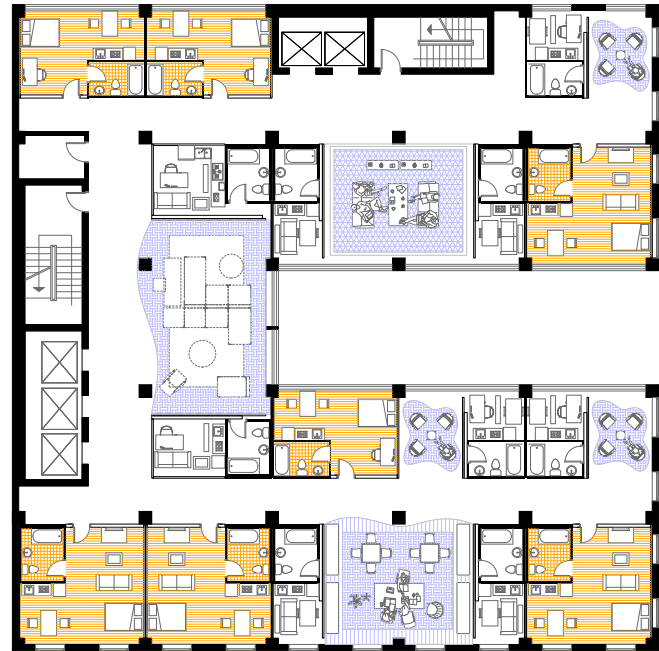
* Source: New York City Housing and Vacancy Survey (NYCHVS), 2021. US Census Bureau / NYC Dept of Housing Preservation and Development.

DORM ROOM TRANSFORMATION



0

STUDIO TRANSFORMATION



0 4 8 16

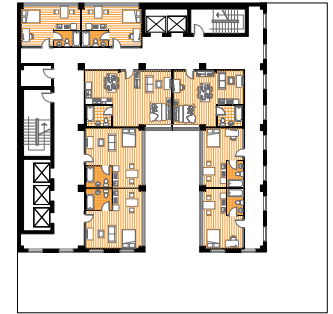
DORM ROOM - OFFICE TRANSFORMATION



FACADE

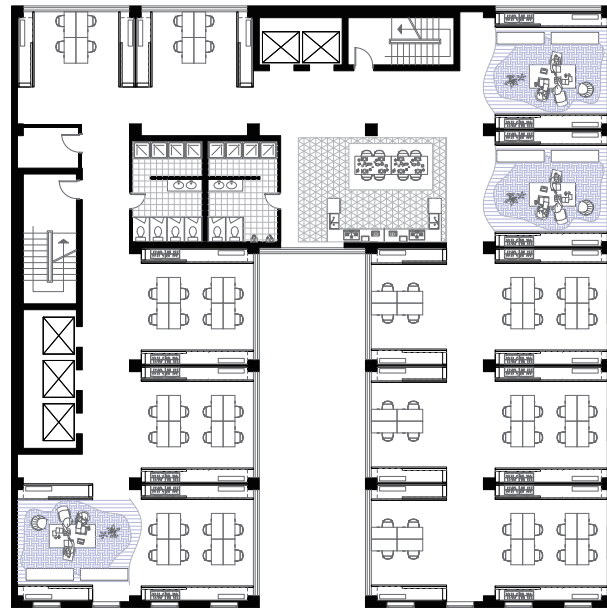


F18-STUDIO

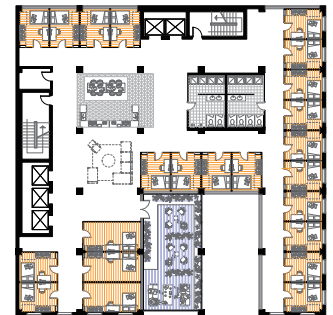


F24-STUDIO

OUTDOOR TERRACE



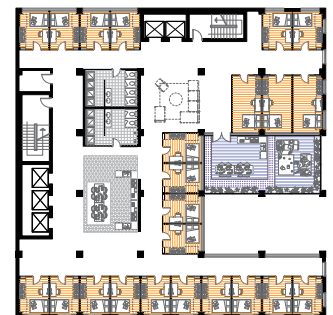
F6- DORM ROOM



F9- DORM ROOM

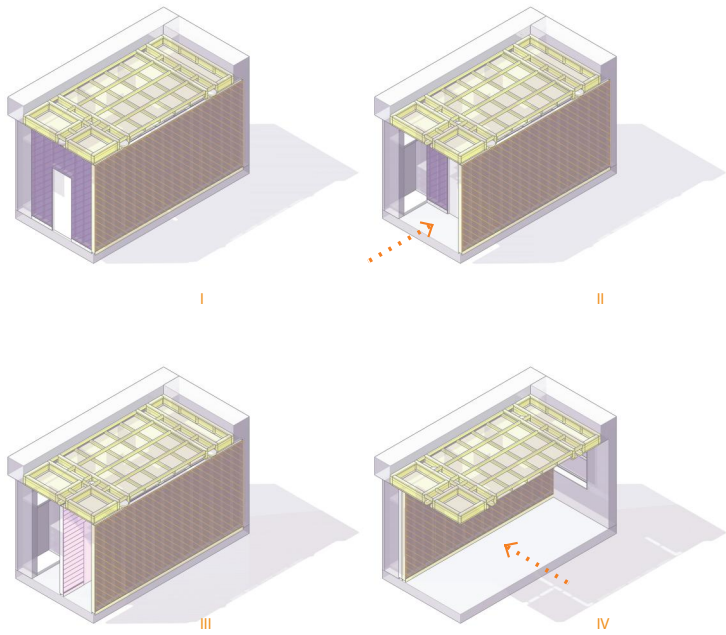


F12- DORM ROOM

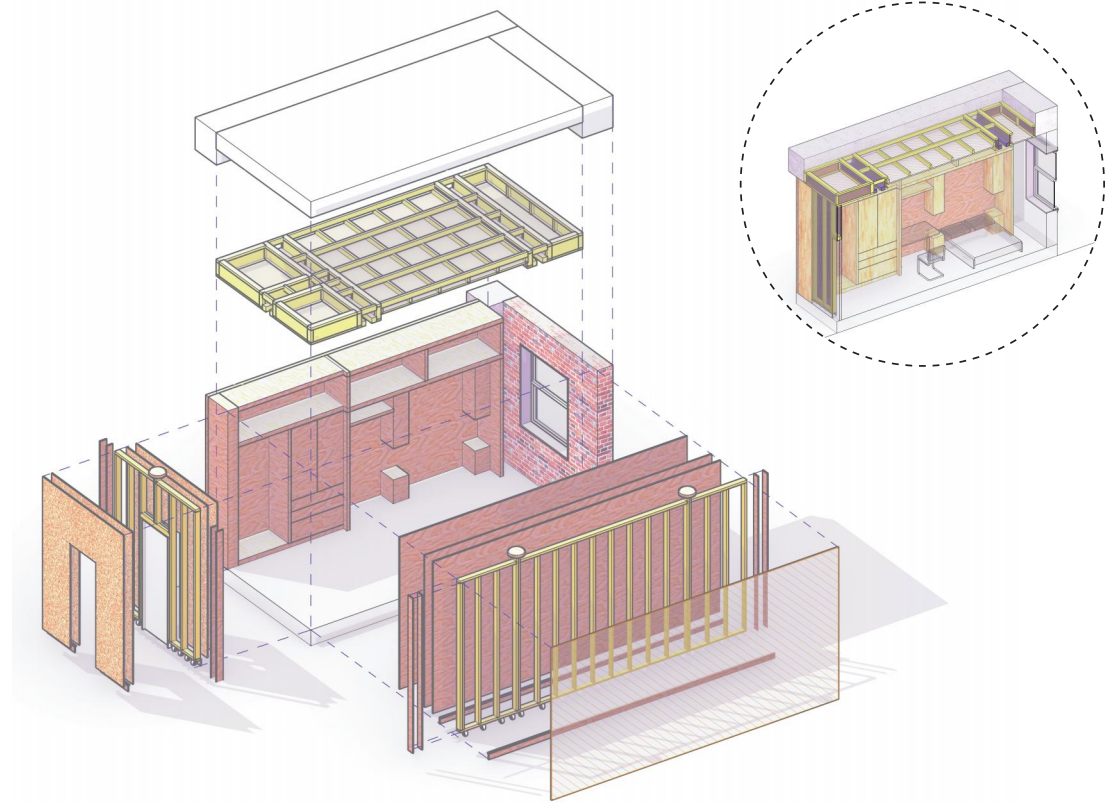


F15- DORM ROOM

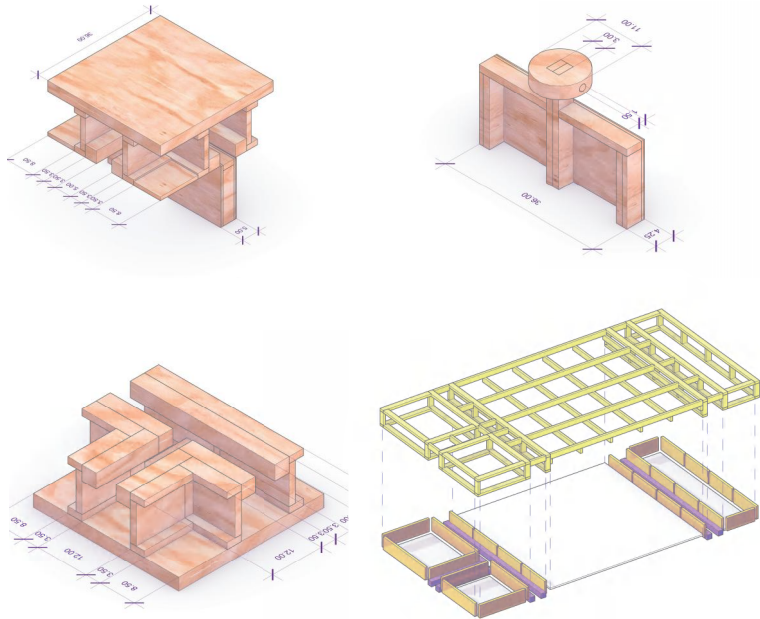
TRANSFORMATION PROCESS



PROTOTYPE



PROTOTYPE DETAIL MODEL



INTERIOR VIEW





03

BEYOND MUSEUMS: DE-MONUMENTALIZING MODERNIST BIG CONTAINERS
(of Madrid)

Site: Pabellón De Cristal, Avenida Principal, 16, Moncloa - Aravaca, 28011 Madrid,
Spain

Team Work

Team Members: Shunshan Chen, Shumeng Liu, Ziyi Zhu

Instructor: Juan Herreros

2024 Spring

COMMUNITY

Media

Technique

Themes

Audience Engagement

Purpose

- Ground ●
- Herbs ●
- Flora ●

- Sculpture ●
- Photography ●
- Mixed Media ●
- Digital Art ●

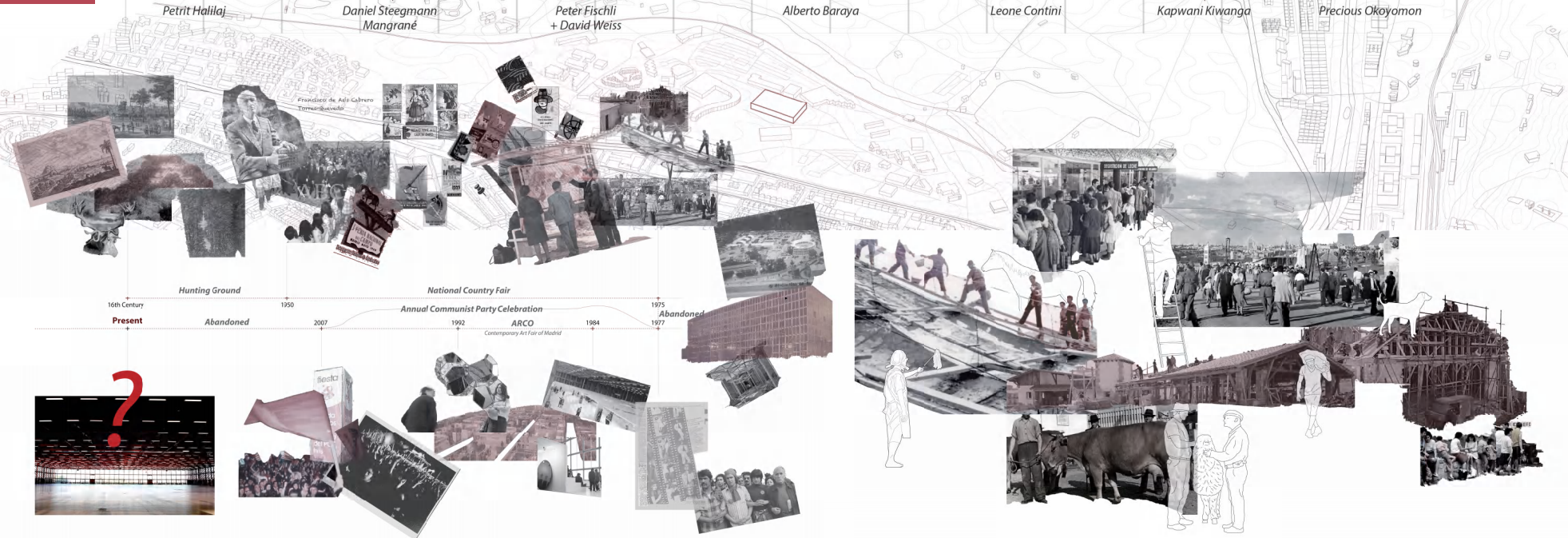
- Nature ●
- Urban ●
- Culture ●
- Politics ●
- Identity ●

- Interactive ●
- Observational ●
- Participatory ●

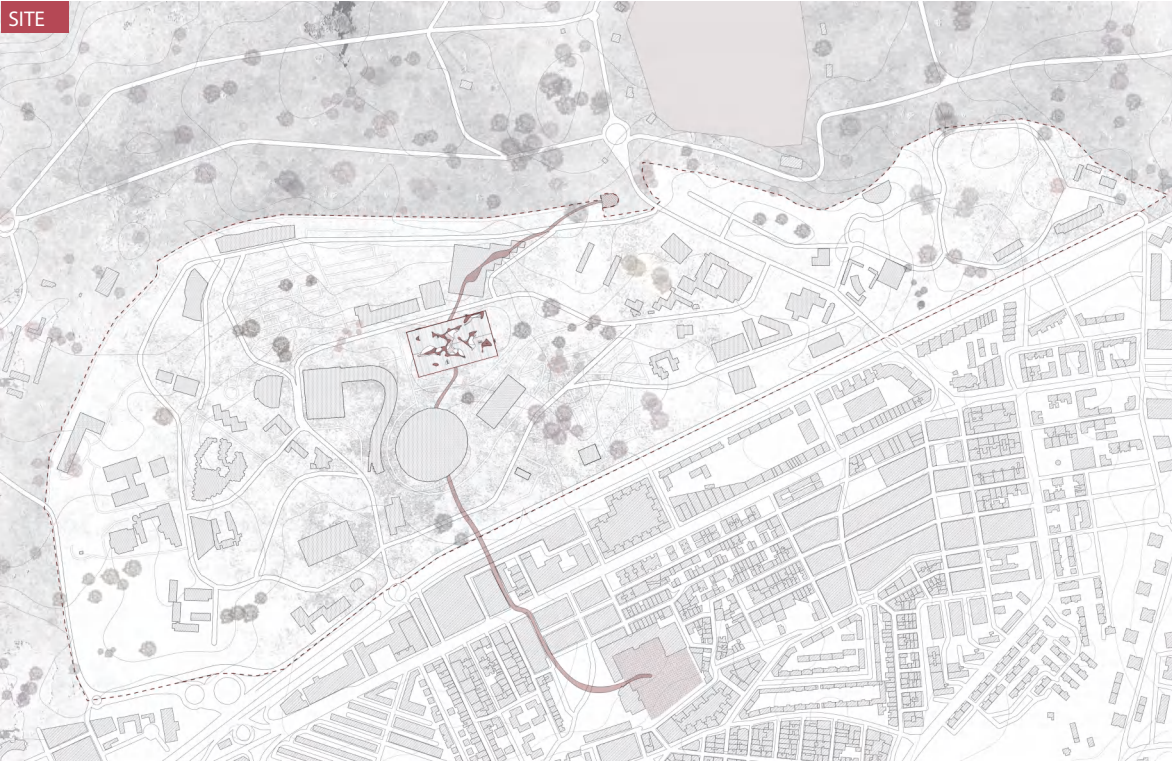
- Decorative ●
- Social Commentary ●



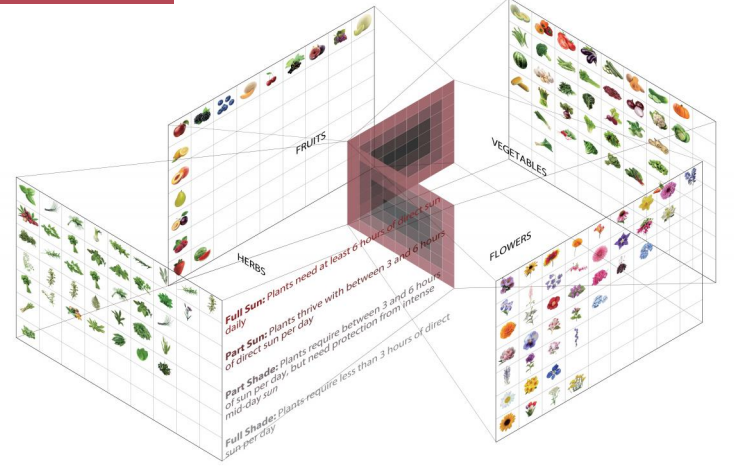
HISTORY



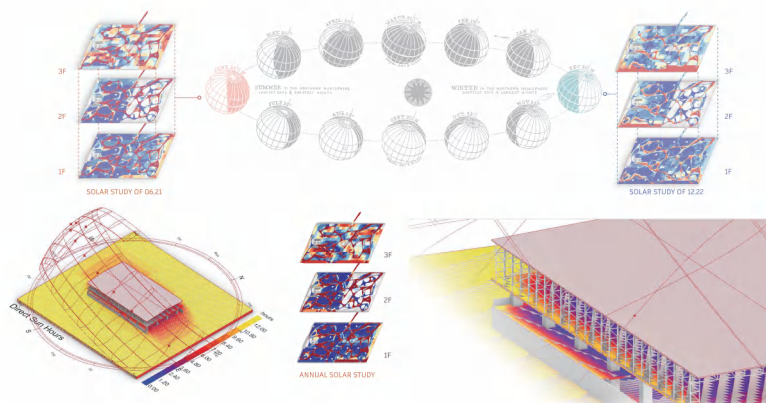
SITE



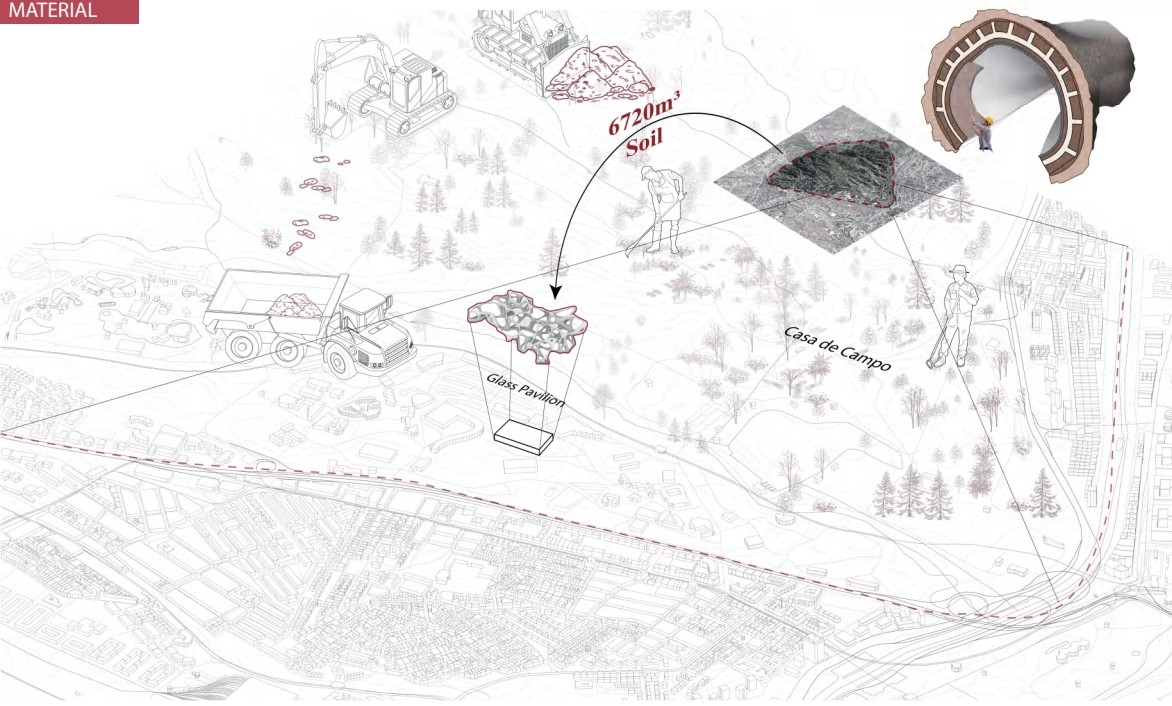
PIXEL FARMING



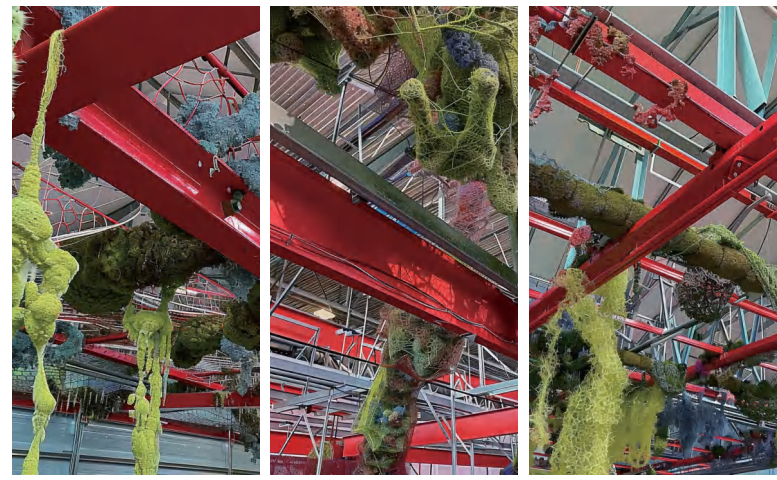
SOLAR STUDY



MATERIAL



CONCEPT



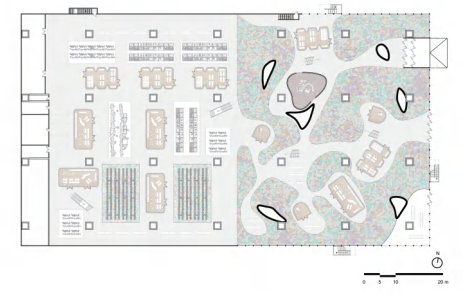
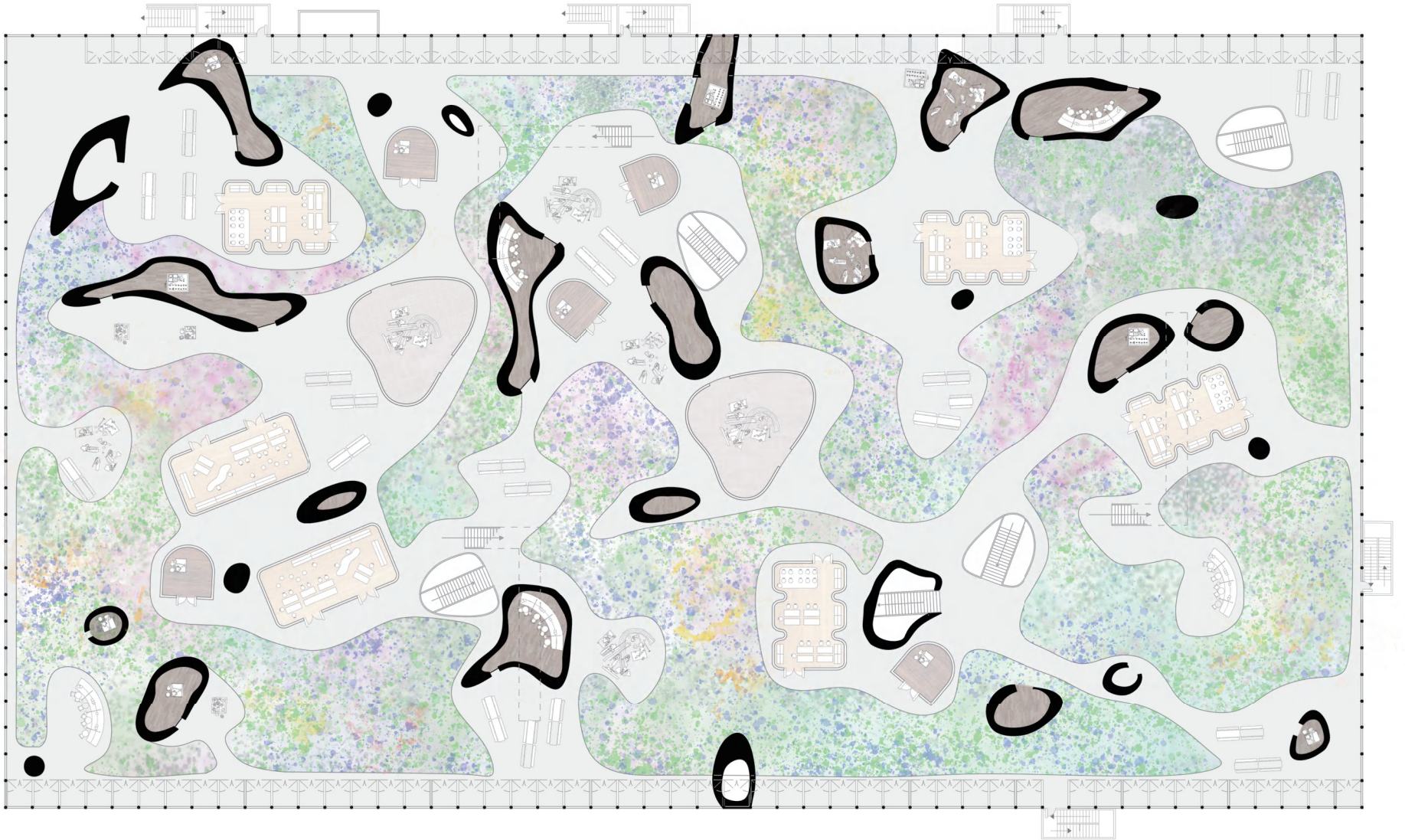
SECTION



CLAY STRUCTURE



PLAN





The Crystal Pavilion evolve from an elitist icon to an inclusive platform for varied communities to participate in societally beneficial activities.

This transformation is more than just physical; it represents a shift toward fostering communication, driving innovation, and cultivating social responsibility collectively.