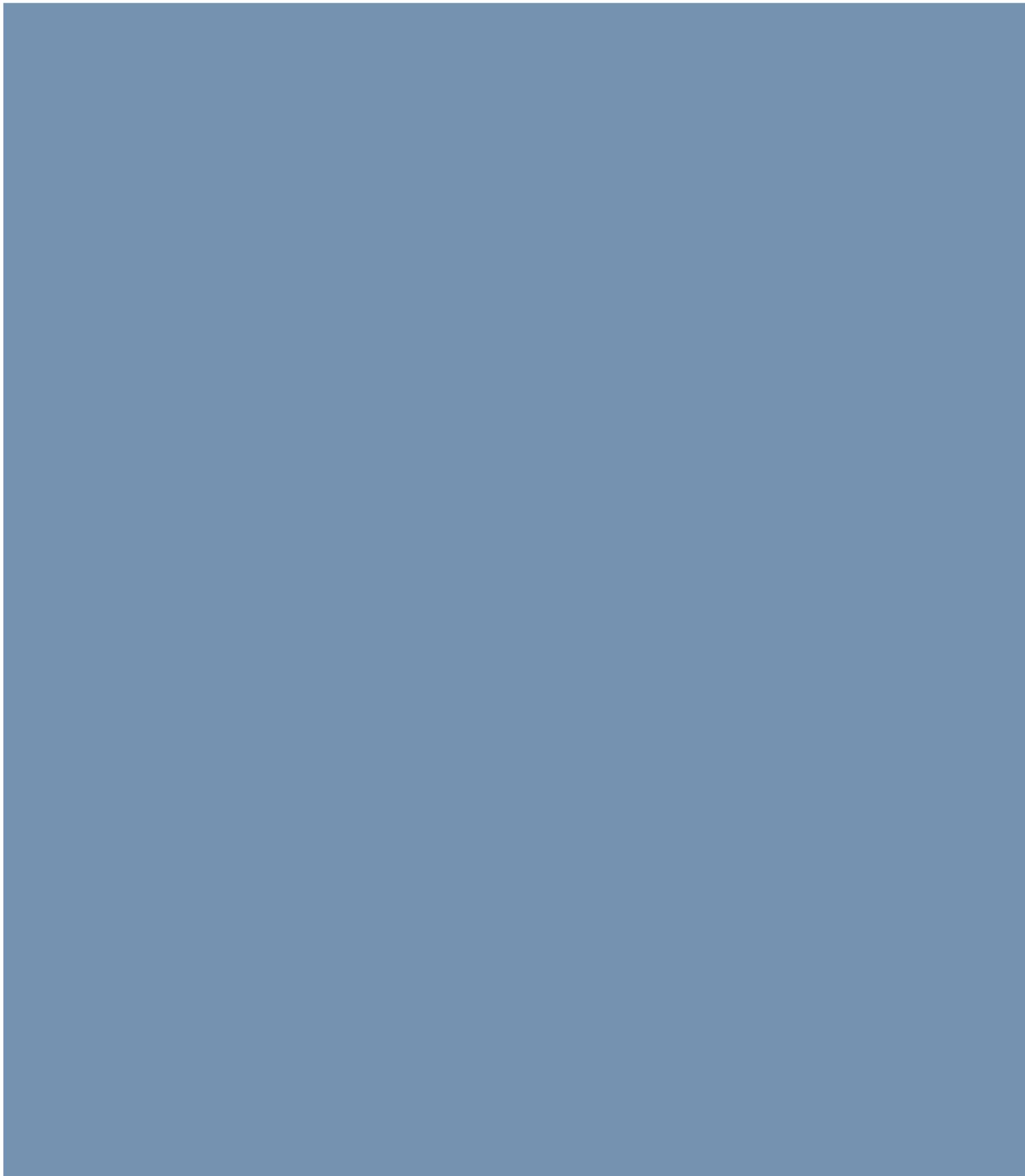


# PORTFOLIO

2020-2022

XUMIN

CHEN



## **COUNTER COLLAPSE**

Maintenance in Public Housing

## **UNDOING CLEANLINESS**

From 'Lever House' to 'Luffa House'

## **SPIDER CITY**

New Orleans 2050: Let's Disentagle from Floods

## **NIGHT MISSION**

Parking Lot As Homeless Shelter

## **EXTERNAL INTERIORITY**

Renovation of Nursing Home Network

## **LISHUISIS**

An Alternative Urbanization Proposal

## **PROFESSIONAL EXPERIENCE**

## **OTHER WORKS**

# COUNTER COLLAPSE

## Maintenance in Public Housing: From Surviving to Thriving

**Summer. 2021**

**Instructor: Ignacio G. Galan**

**Team Work with: Xiangru Zhao, Zheng Yin**

Public housing should be an instrument to fight against systematic inequity. However, due to the lack of adequate funding for maintenance, public housing is becoming a deteriorating environment that breeds social, economic, and racial segregation and a tool that exacerbates inequity.

We are taking as a case study the Manhattanville Houses, in which there are ongoing individual interventions, group action, collective organization, and some government projects being developed.

With such a well-organized community, we can't help to imagine the bright future if the federal government would invest more budget in the maintenance of public housing, building on the ongoing work of its residents.

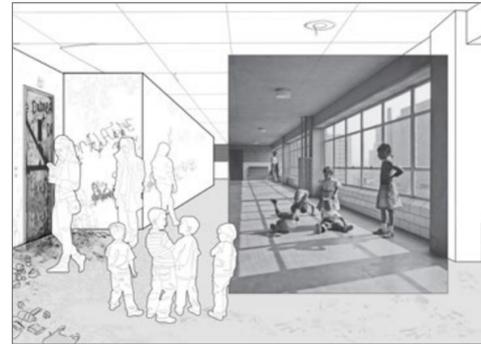
The community will be able to thrive while the buildings are maintained by its residents.

# What Happened in Pruitt-Igoe:

1956-Completion



1960s-Decay



**Defunding**



1971-Demolition



# What is Happening in NYCHA:

**NYCHA has failed to fix nearly 60,000 mold complaints**

Mold: A Trigger for Asthma

EXCLUSIVE: Mold-ridden NYCHA buildings could trigger long-term **asthma** problems, health experts say **Mold Makes Everyone Sick**



NYCHA'S Lead Paint Crisis Explodes as Known Number of Apartments Where Kids Risk Exposure Triples

**Lead Poisoning** is a **Danger** for every baby and child

HOW LEAD PAINT CHIPS & DUST CAUSE BRAIN DAMAGE AMONG CHILDREN



*Accessible Homes? Not Really, Say Disabled Residents*

Nowhere to Go: The Housing Crisis Facing Americans With Disabilities

EXCLUSIVE: Staten Island woman sues NYCHA after waiting eight years for wheelchair-friendly apartment and never receiving it



*Behind the Elevator Doors: The Great Unknown*

Public Housing Building Without Elevator Service For Two Weeks

**A Bronx Grandmother Complained Repeatedly to NYCHA About Elevator Outages. Now She's in a Coma After Falling in the Stairwell**



Older Renters are Increasingly Living Alone  
Senior Housing Shortage is Getting Worse

**This Bronx Grandmother Died Alone in Her NYCHA Apartment.**





WE ACT for Environmental Justice is a Northern Manhattan community based organization whose mission is to build healthy communities by ensuring that people of color and/or low income participate meaningfully in the creation of environmental policies and practices.



WEACT: Solar Panel Program

Nycha itself is also carrying out different projects, such as Lead-Safe Housing Policy, or the Cooling Assistance.

A number of residents are dedicated to transforming the limiting living conditions in the building. Instead of giving up, they are actively seeking help from outside in terms of living environment problems.

Manhattanville Houses also has an active Community Center that is able to continue to serve the community by providing programs for teens, seniors, and services that enrich the lives of those residents.

### MANHATTANVILLE COMMUNITY CENTER NEW MANHATTANVILLE

Through **OUR YEARS OF HARD WORK**, we have finally convinced NYCHA to renovate our community. Let's take a look at the specific **RENOVATION PLAN!**

- #### 1. New Circulation System

1. The original elevators are in disrepair, we will add new elevators at the end of each wing without disturbing the residents to use the old one.  
2. A ramp system will connect each floor! Wheelchair users will now have another way to get around, even if the power goes out, without having to worry.
- #### 2. Balcony Program

To solve the problem of ventilation in summer, we will now add balconies for every home!

Benefits:  
- Better ventilation  
- Increases the area of the house
- #### 3. Inside Pipe Out

Interior adjustments require residents on the same floor to work together to choose an optimal floor plan.
- #### 4. Interior Renovation

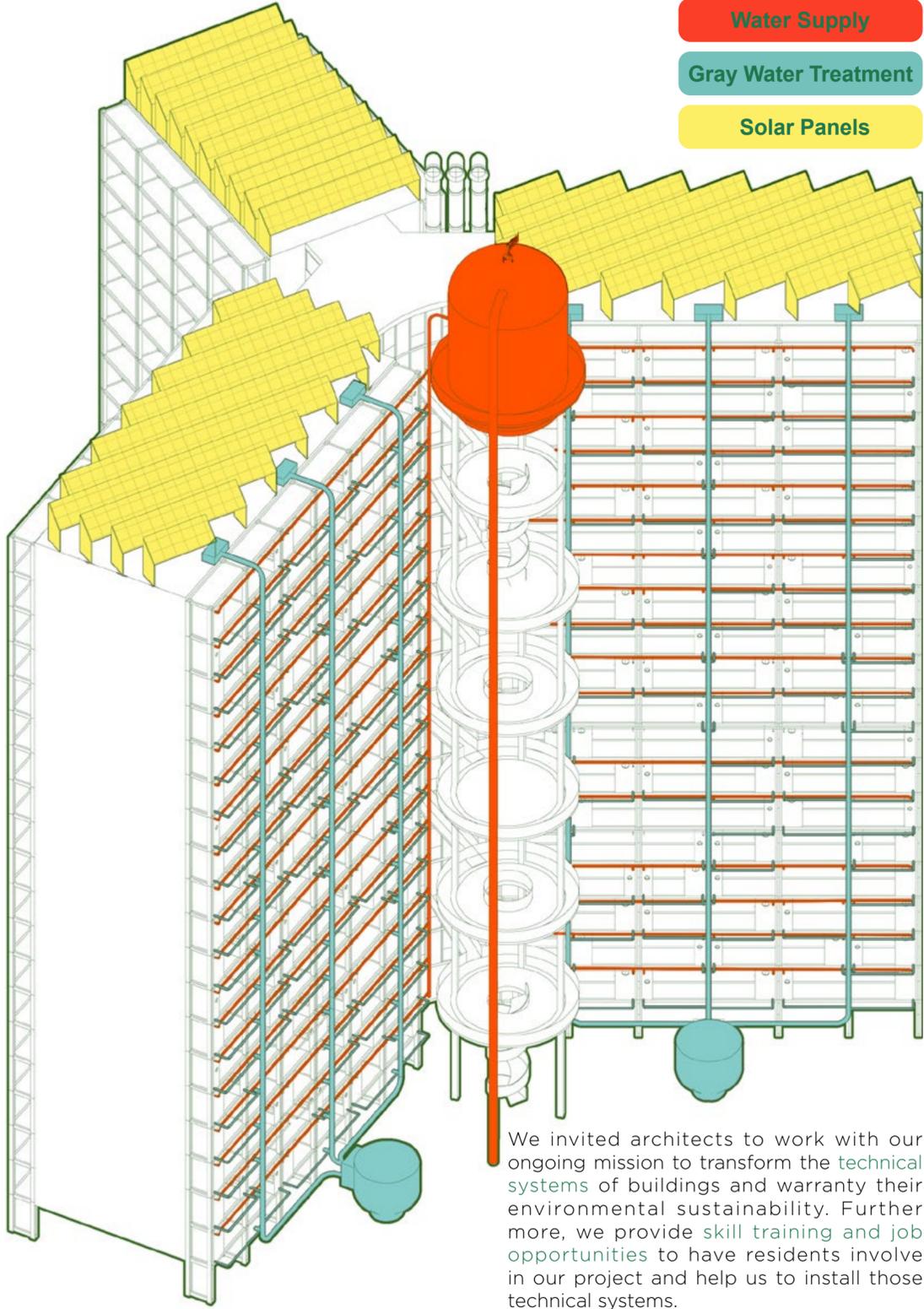
Thanks to the abandonment of the original difficult-to-maintain pipe system, the interior division is more freely remodeled, and can even be described as a completely free plane.

The residents will be temporarily moved into a re-housed apartment, where they can secure their daily lives. They can store their belongings in the converted balcony, and will be able to move back to their new home in about ten days.

In the original staircase location, this will become the new common room because of the new system. Residents of the same floor can still negotiate its layout and usage together.

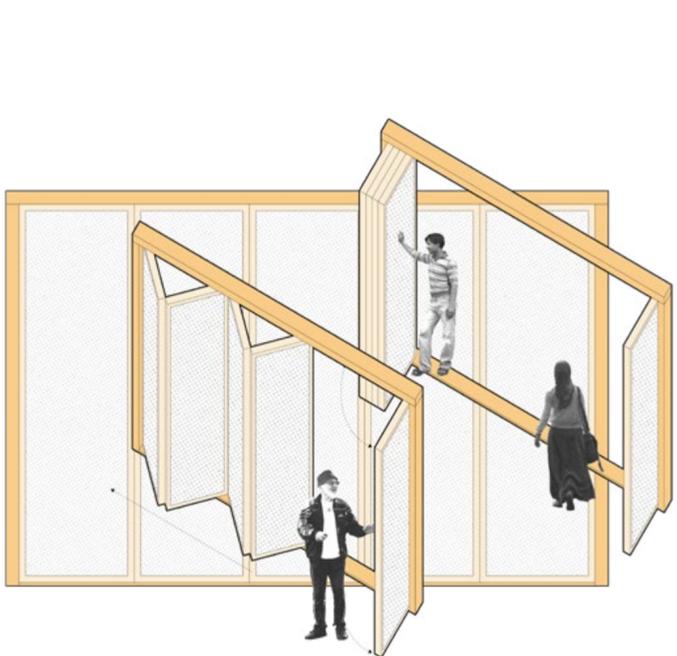
**[ Exterior Plumbing System ]**

After the installation of elevators, staircases, balconies, and exterior plumbing systems, then comes the process of interior renovation. The design substitutes the original walls that are both a technical hazard and define standard types of apartments, which are unable to meet the needs of variable and diverse families.

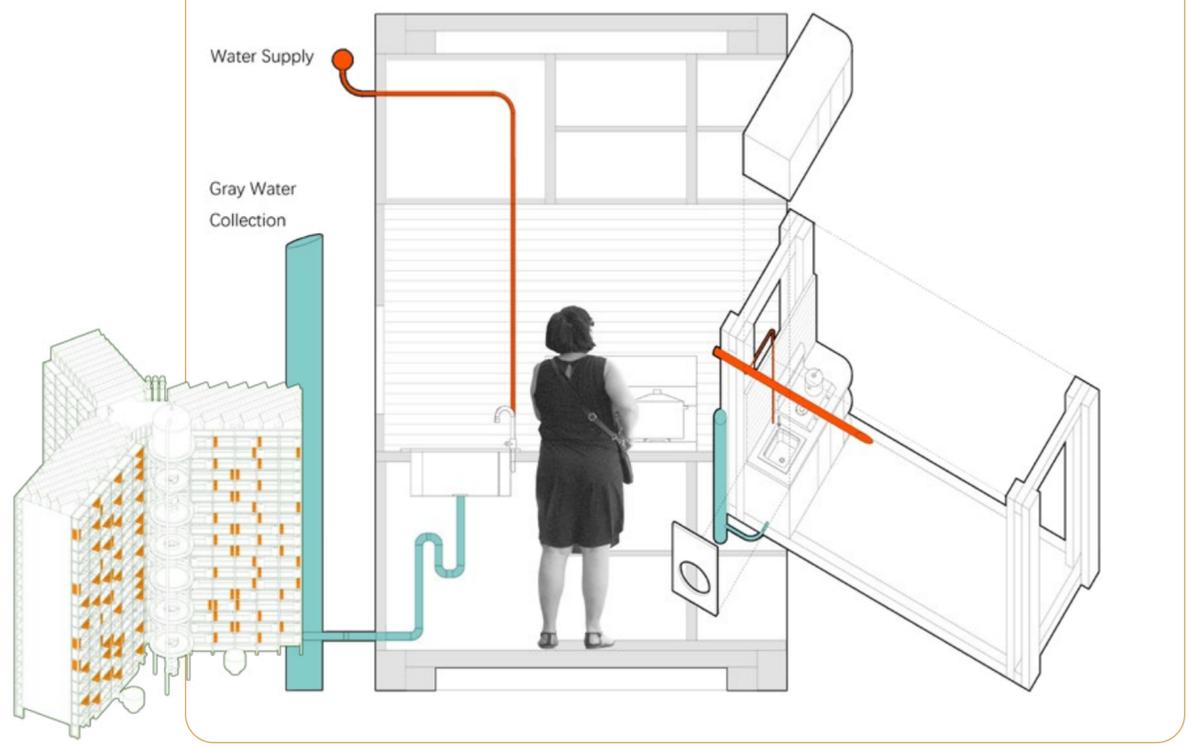


We invited architects to work with our ongoing mission to transform the technical systems of buildings and warranty their environmental sustainability. Further more, we provide skill training and job opportunities to have residents involve in our project and help us to install those technical systems.

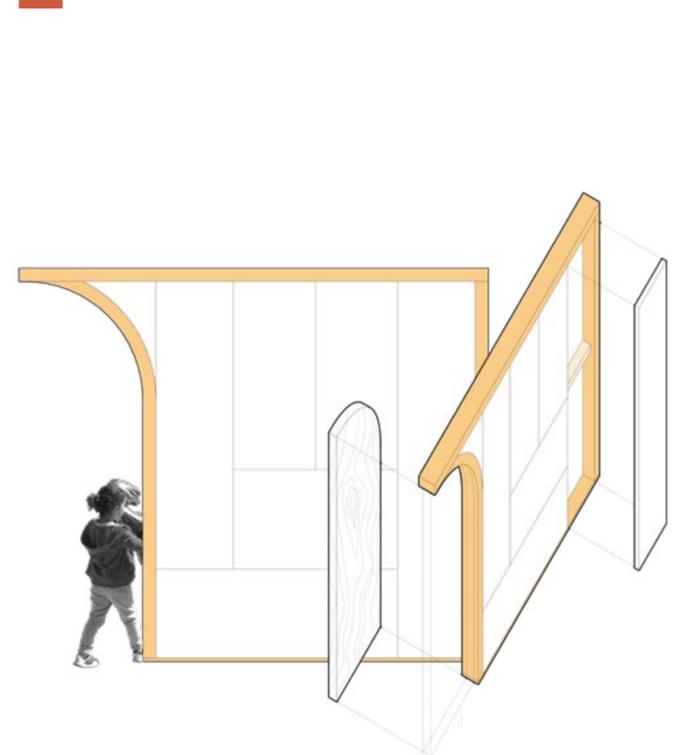
**Front door**



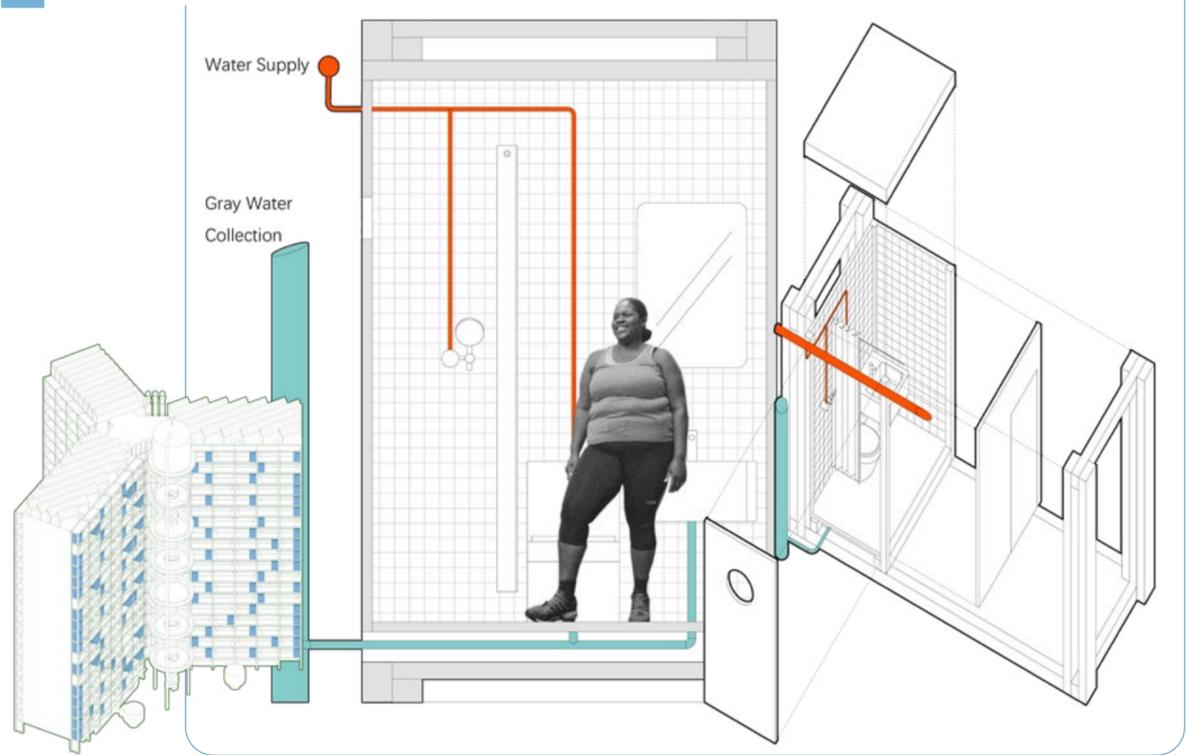
**Kitchen**



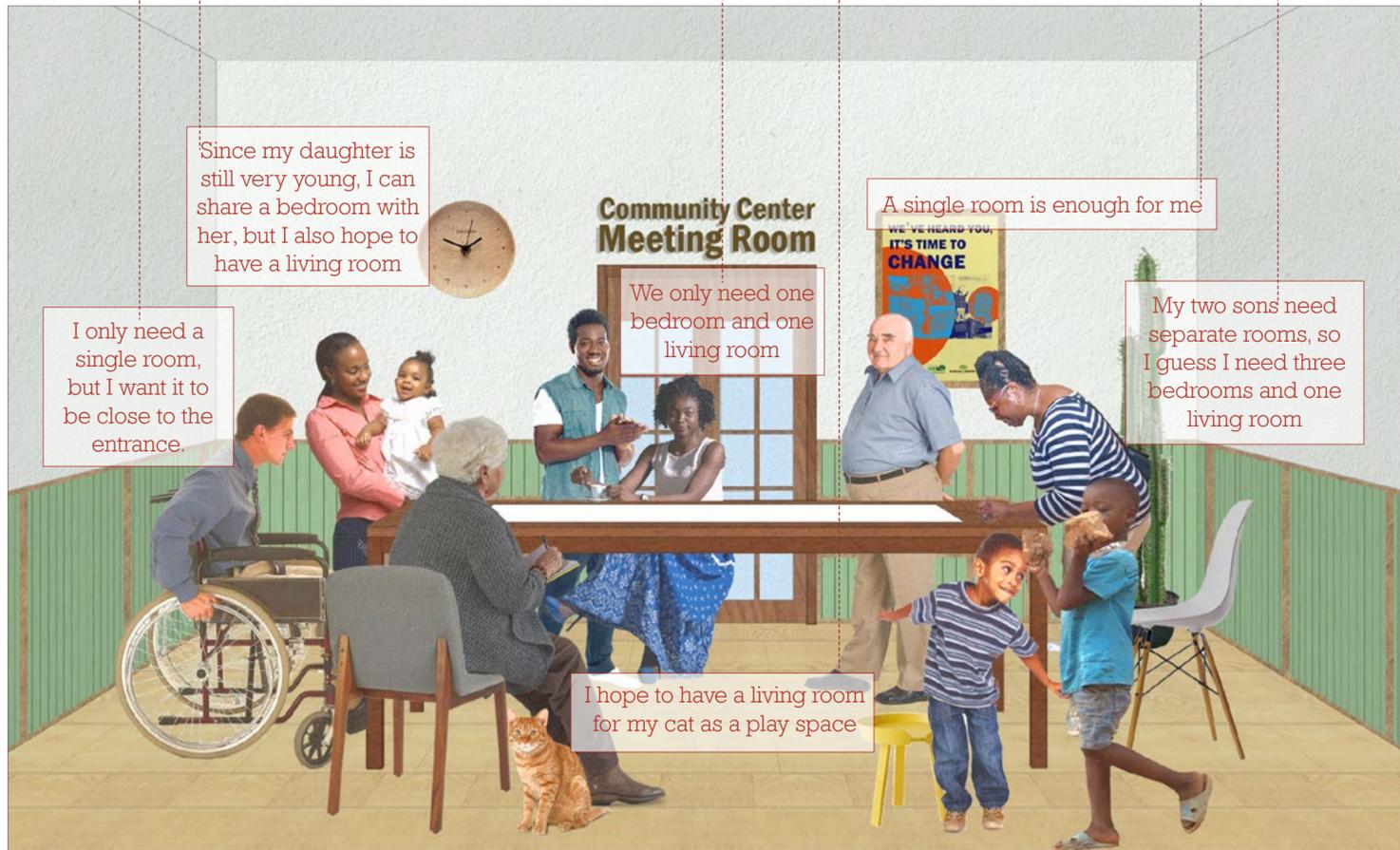
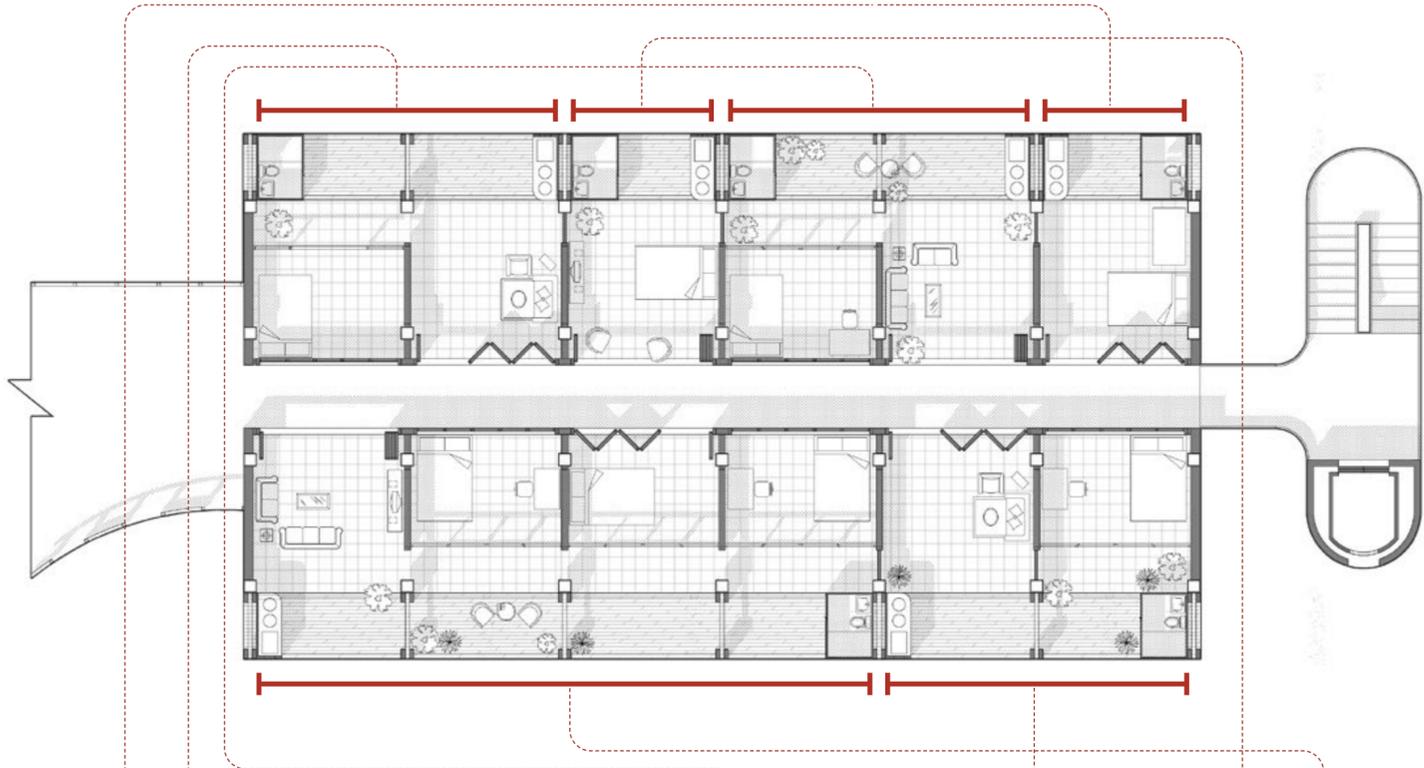
**Partition Wall**



**Washroom**

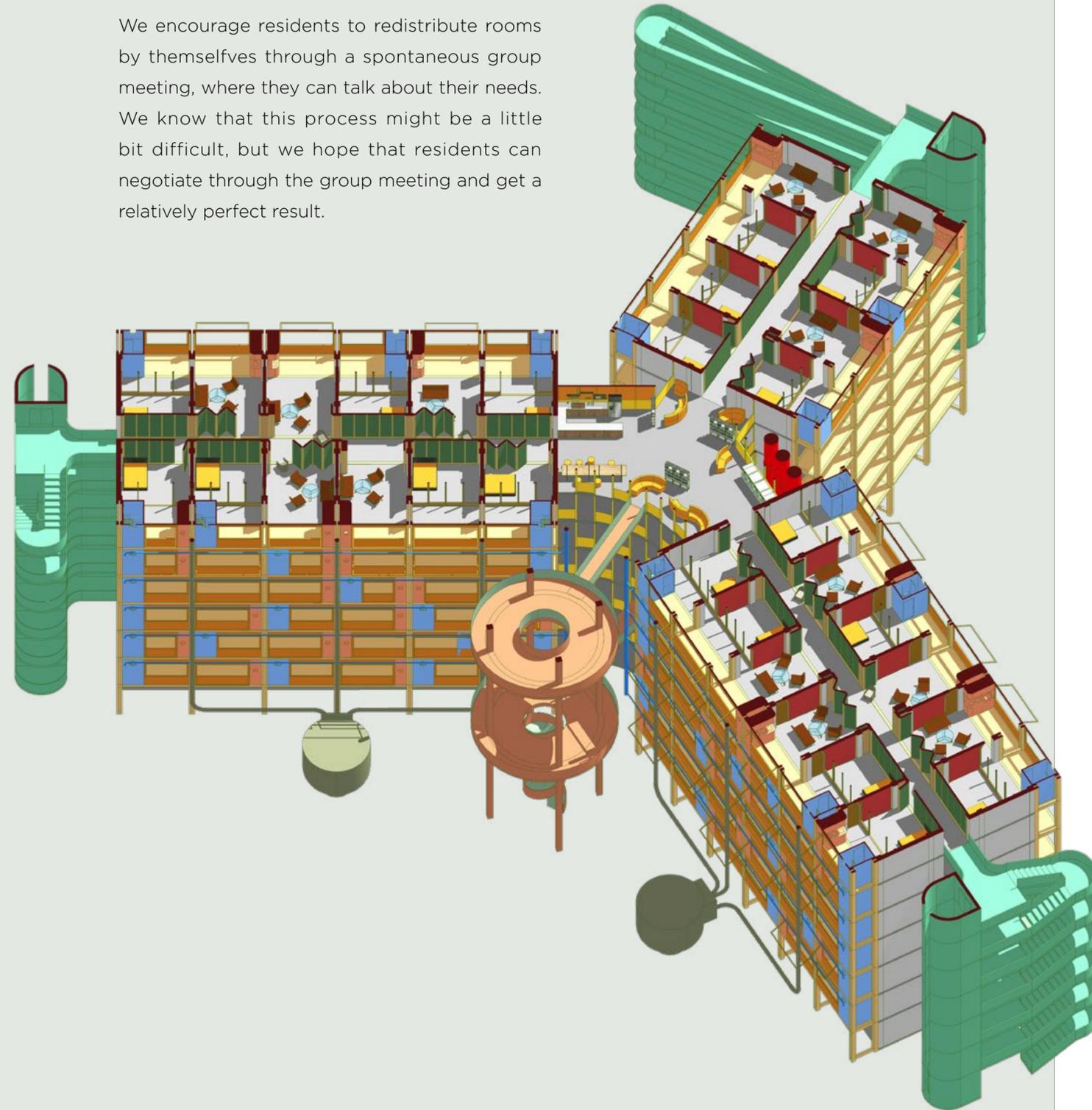


[ Changing Paradigms | Redistribute Domestic Spaces ]



Because of this highly adjustable system, redistributing interior domestic spaces become easier than ever and will be negotiated through participatory processes.

We encourage residents to redistribute rooms by themselves through a spontaneous group meeting, where they can talk about their needs. We know that this process might be a little bit difficult, but we hope that residents can negotiate through the group meeting and get a relatively perfect result.





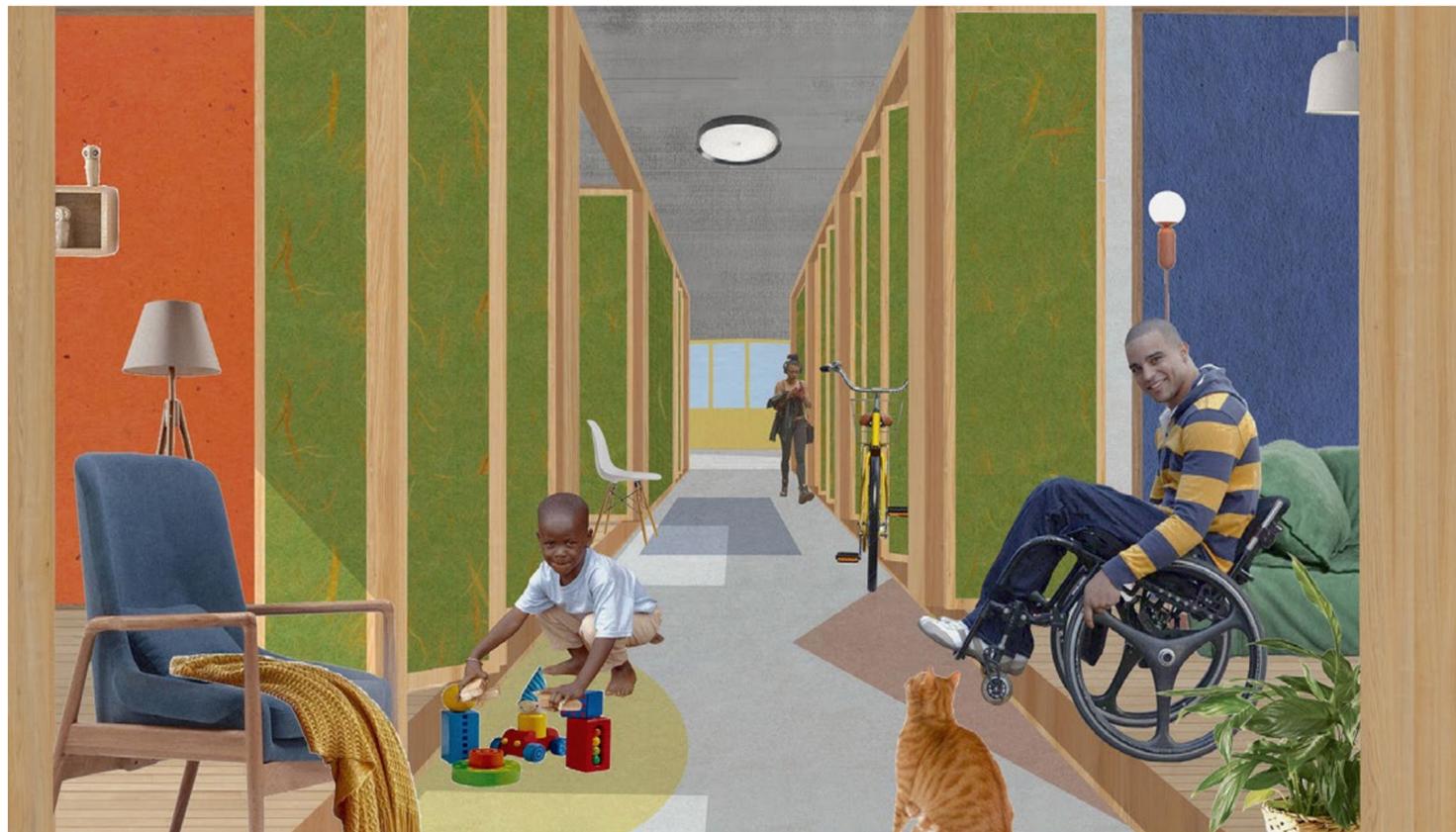
[ Looking Through Living Rooms ]



[ Balcony ]

[ Corridor More Than Corridor ]

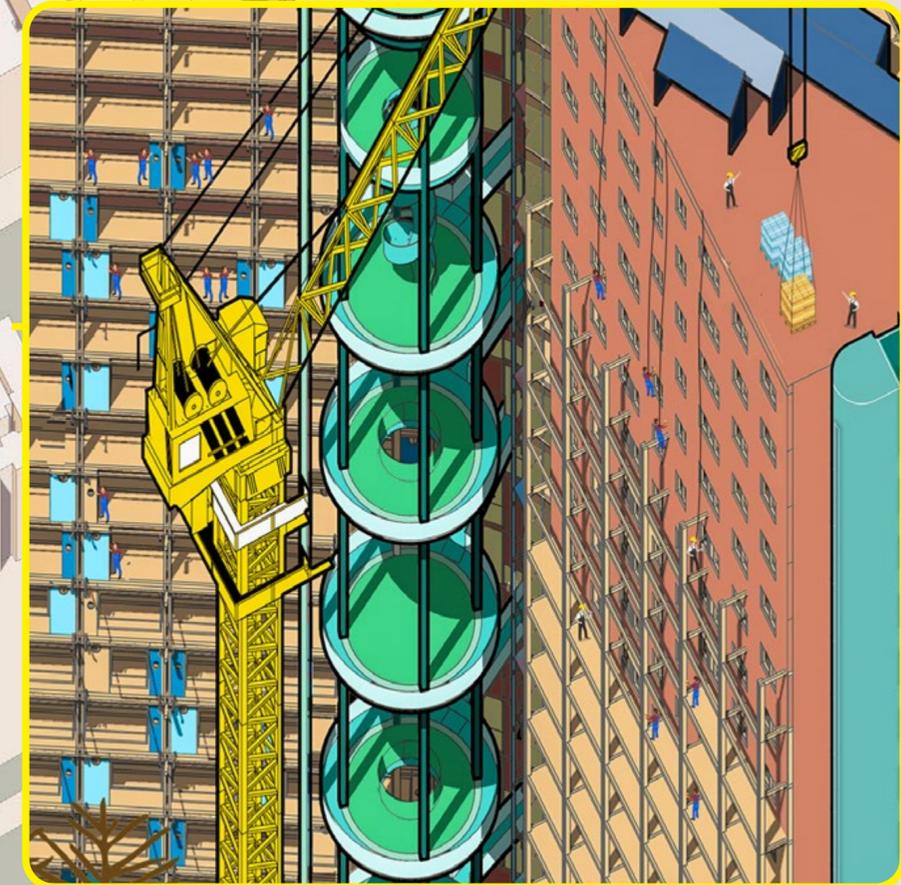
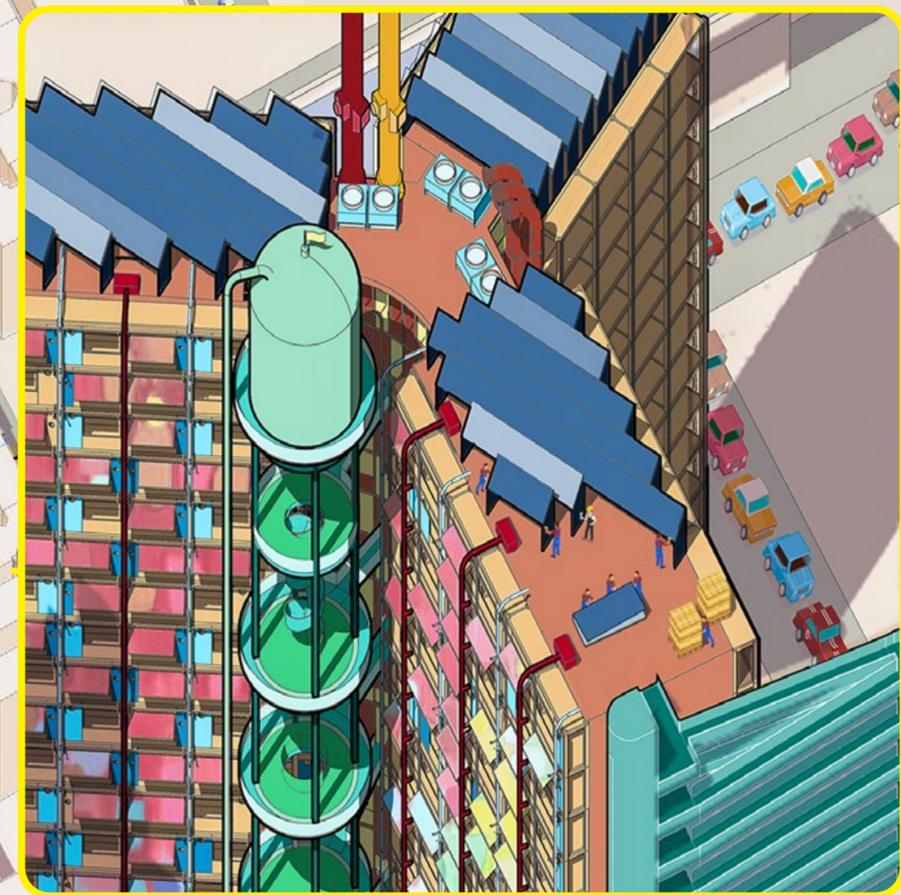
[ Central Communal Space ]



# NEW MANHATTANVILLE

## FLOURISHING

With a collective effort of all residents and organizations



# UNDOING CLEANLINESS

## From 'Lever House' to 'Luffa House'

Fall. 2021

Instructor: Andrés Jaque

Team Work with: Bingyu Xia, Yang Lu

Lever House was the headquarters of the Lever Brothers company, a British cleaning product company. This project did research on the this building, but in a totally unique perspective: details, and how they enact cleanliness.

Through research, the popularity of soap, the history of Britian colonization, and racism soap advertisement together founded the base of the birth of 'cleanliness', which indicates social segregation and environmental injustice inherently.

Instead of solving these problem that created by capitalism, we imagine a future that luffa is taking over this building since luffa is an alternative explanation to 'cleanliness'.

# CLEANLINESS IS NOT ABOUT CLEAN.

## SOAP IS CIVILIZATION



Before we start to talk about Lever House, we need to look at the soap industry started in 1885, when the soap company Lever Brothers Company was just established, in the context of **colonialism**.

To sell more soaps and expand their business, Lever Brothers invented **cleanliness** in 1885. However, **cleanliness is not about clean.**

**It is about imperial colonization**

**It is about corporate expansion.**

**It is about exploitation.**

**It is about racism to Asia, Black, and minorities.**

**They say soap is civilization.**

**It is also about environmental inequality.**

**It's plastifying the world.**

The details of lever house built in 1952, similar to all advertisements we saw above, are crucial enactors of cleanliness. Lever Brother company chose NYC to be the site because "the price one pays for soap is 89 percent advertising [...] and the advertising agencies of America were there." It implies that designers are totally aware of the power of advertisement, publication, and propaganda. **So this building was actually made to "teach the virtue of "cleanliness".**

### How does the details of the Lever House enact cleanliness?

**First, by sealing the curtain-wall.**

Through this action, the inside and the outside of the building are clearly separated. Exterior, representing dust, dirt, and pollution was insulated by this layer of thin glass. While the interior is considered purely clean. The mullion details ensure no moisture can get in. This small edge directs exterior water downward, prevent water from entering the mullion and break the sealants. At the same time, This slot allows condensation from inside to escape, instead of collecting and rusting the steel.

To further cut off the exchange between inside and outside, sealant in the window frame was attached great importance here. These polysulfide sealants deteriorated quickly, and damaged the curtain wall.

**Also, this building created the picture of cleanliness through purifying the air.**

In the background of air pollution in the 1950s. Charles Luckman even claimed, "employees didn't have to breathe the same air as New Yorkers". With no operable windows, Lever House is rigorously obsessed in controlling the supply of clean air inside the building through the HVAC system.

**Window washing is a way of self-promotion.**

This T-shape track is crucial. It made it possible that this hermetic building, which cannot be cleaned from inside, can be cleaned from the outside. This equipment became a wonderful stage for the performance of cleaning in such a bustling city center. As the most essential part of this cleaning show, 2 window washers are hired to wash the facade every 6 days. They are alienated, they are suffering from mental and physical pressure, and their lives are threatened by fatal accidents.

**Cleanliness was expressed through transparency.**

The high-pressure AC system reduced ductwork size, and therefore reduced the floor plates thickness, increased the transparent parts. But this high pressure system produces greater noise. So the architects used fibre-glassacoustic ceiling panels to decrease the sound level and conceal the messiness of ducts and wires. However, the material is toxic in production, and it is plastifying our world.

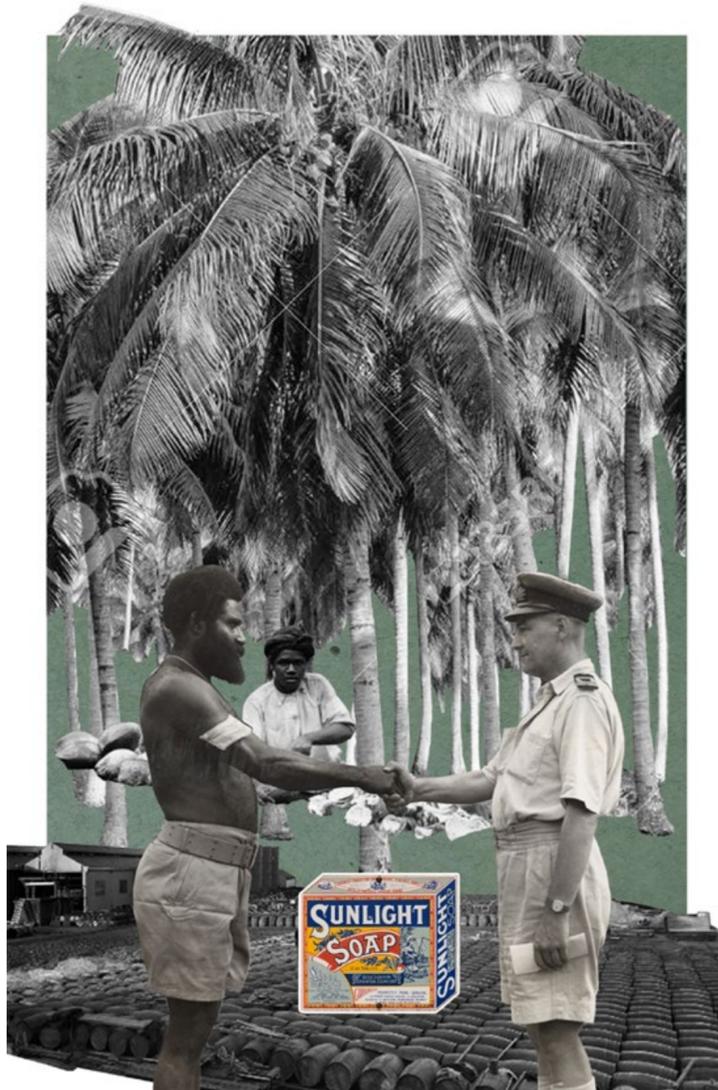
**With the help of cleanliness, colonization, racism, social segregation, environmental injustice, and labour exploitation are either rationalized or concealed.**

***"EMPLOYEES DIDN'T HAVE TO BREATHE THE SAME AIR AS NEW YORKERS."***



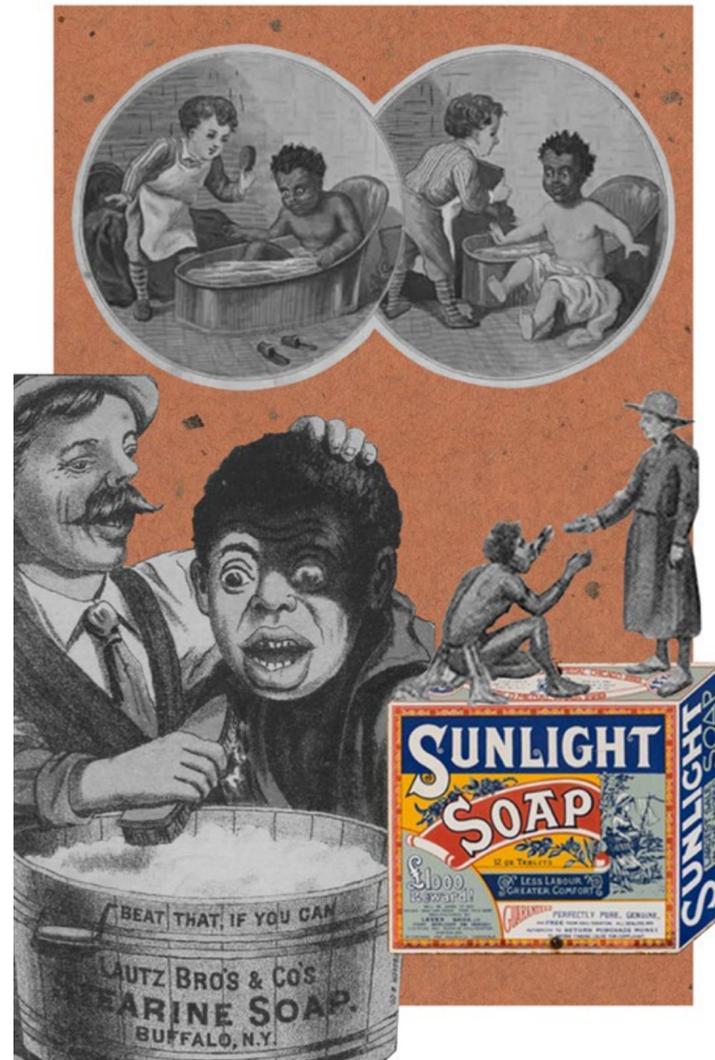
**2 WINDOW WASHERS ARE HIRED TO WASH THE FACADE EVERY 6 DAYS.**

## Colonization



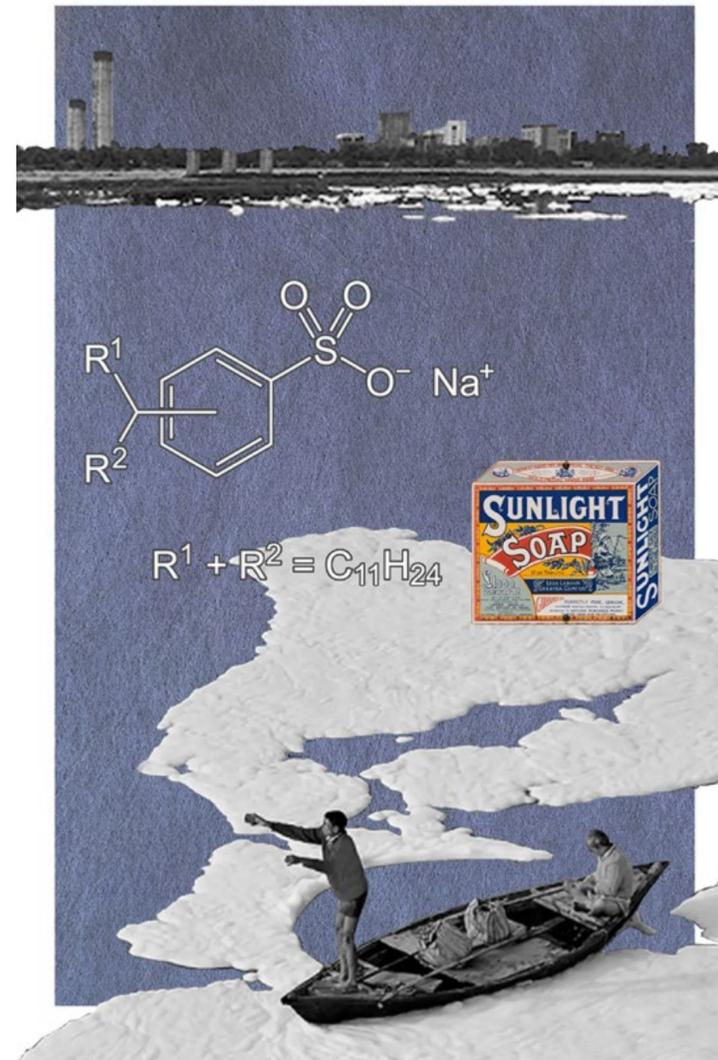
The explosive growth of the soap industry was based on the colonization of tropical regions.

## Racism



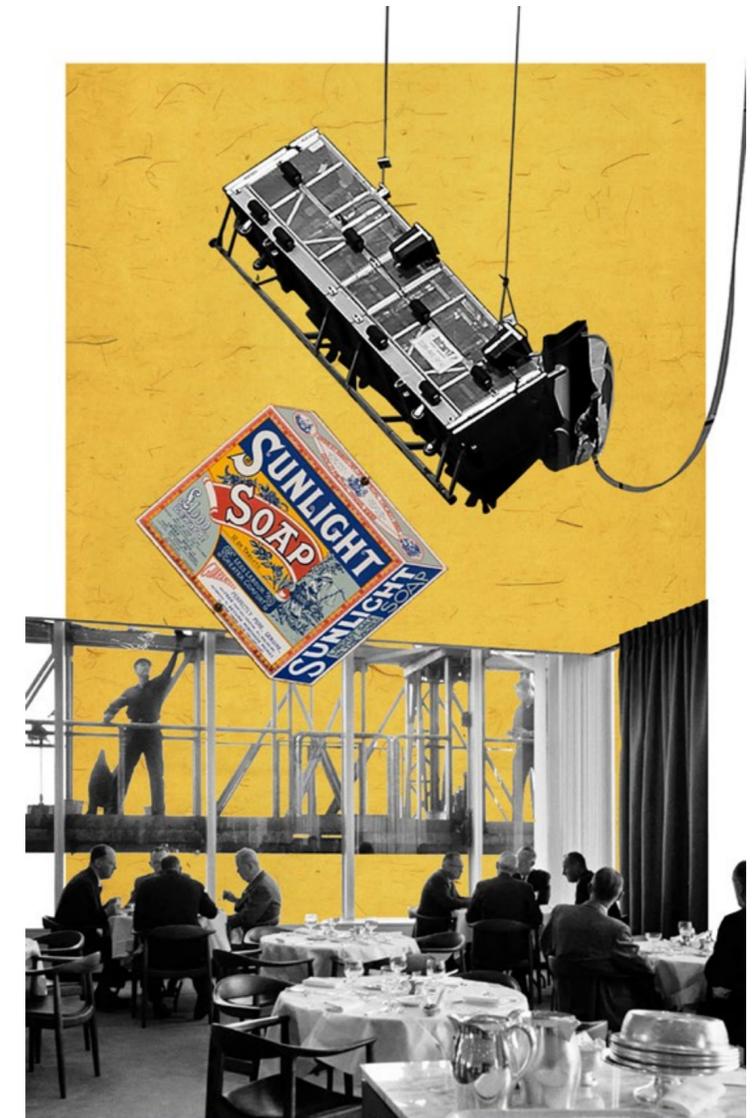
In order to promote the soap to obtain higher sales, a lot of racist elements are used in soap advertising posters.

## Environmental Injustice



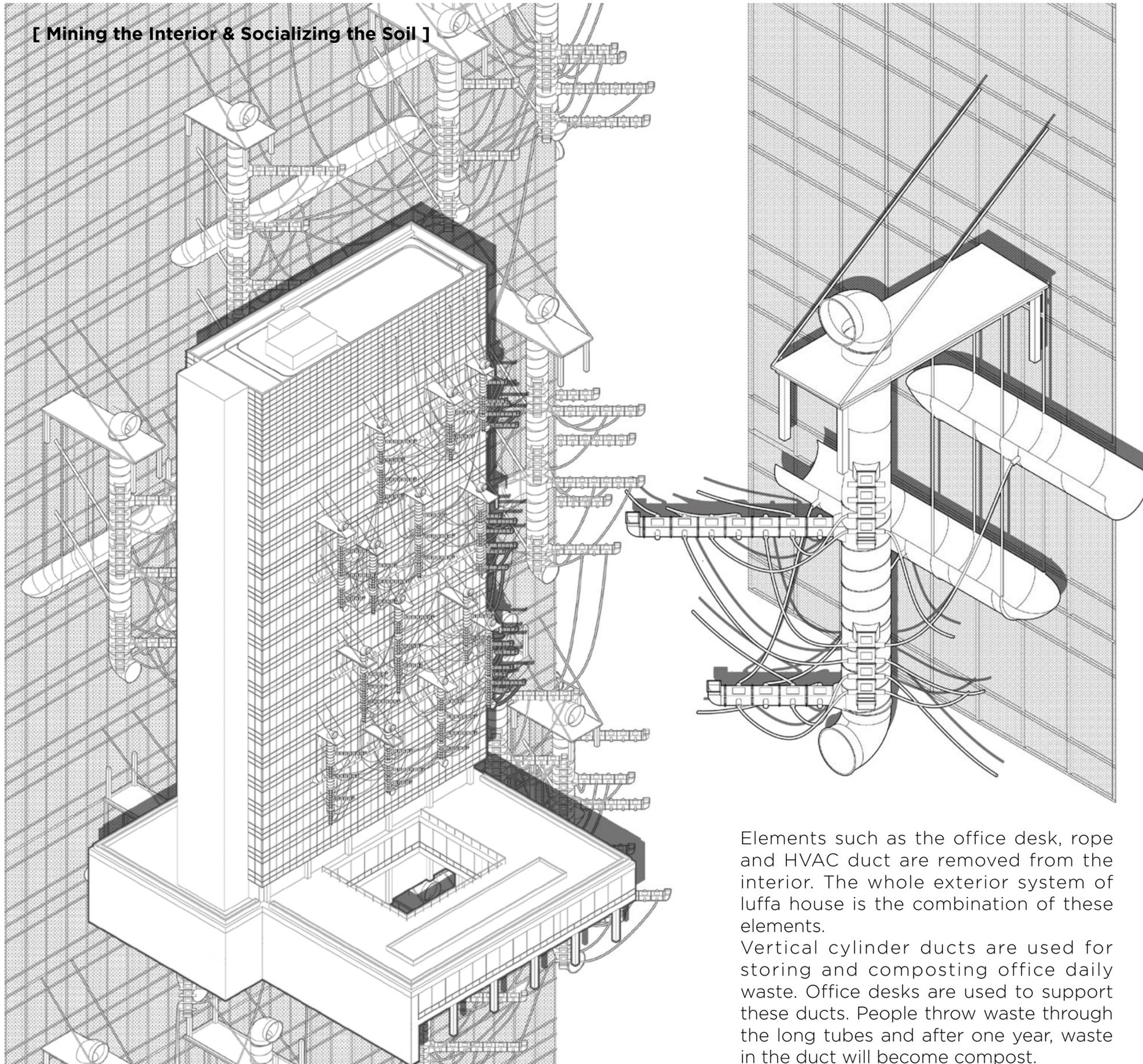
Excessive use of soap causes chemical pollution of water bodies.

## Social Segregation



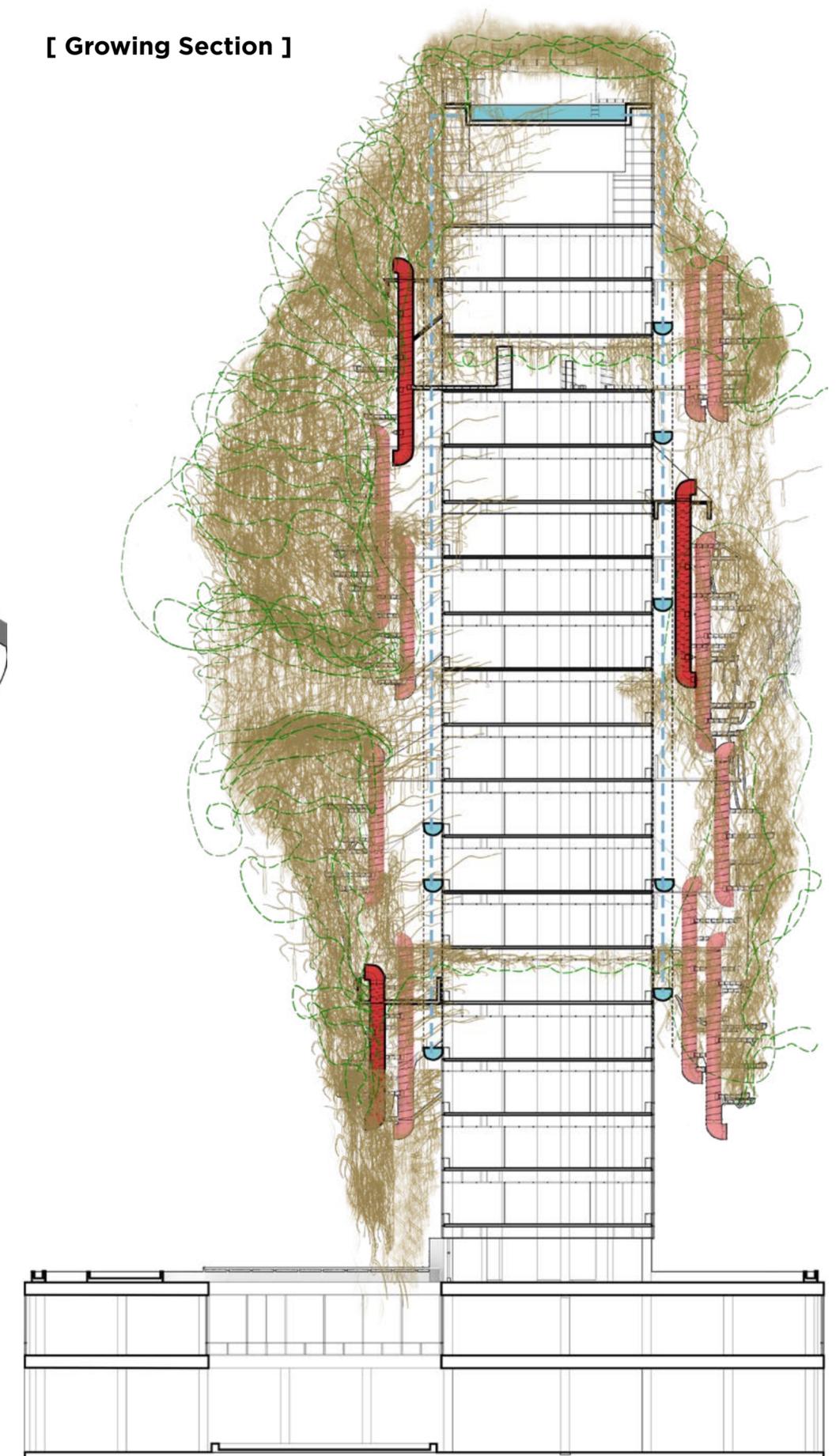
Excessive use of soap causes chemical pollution of water bodies.

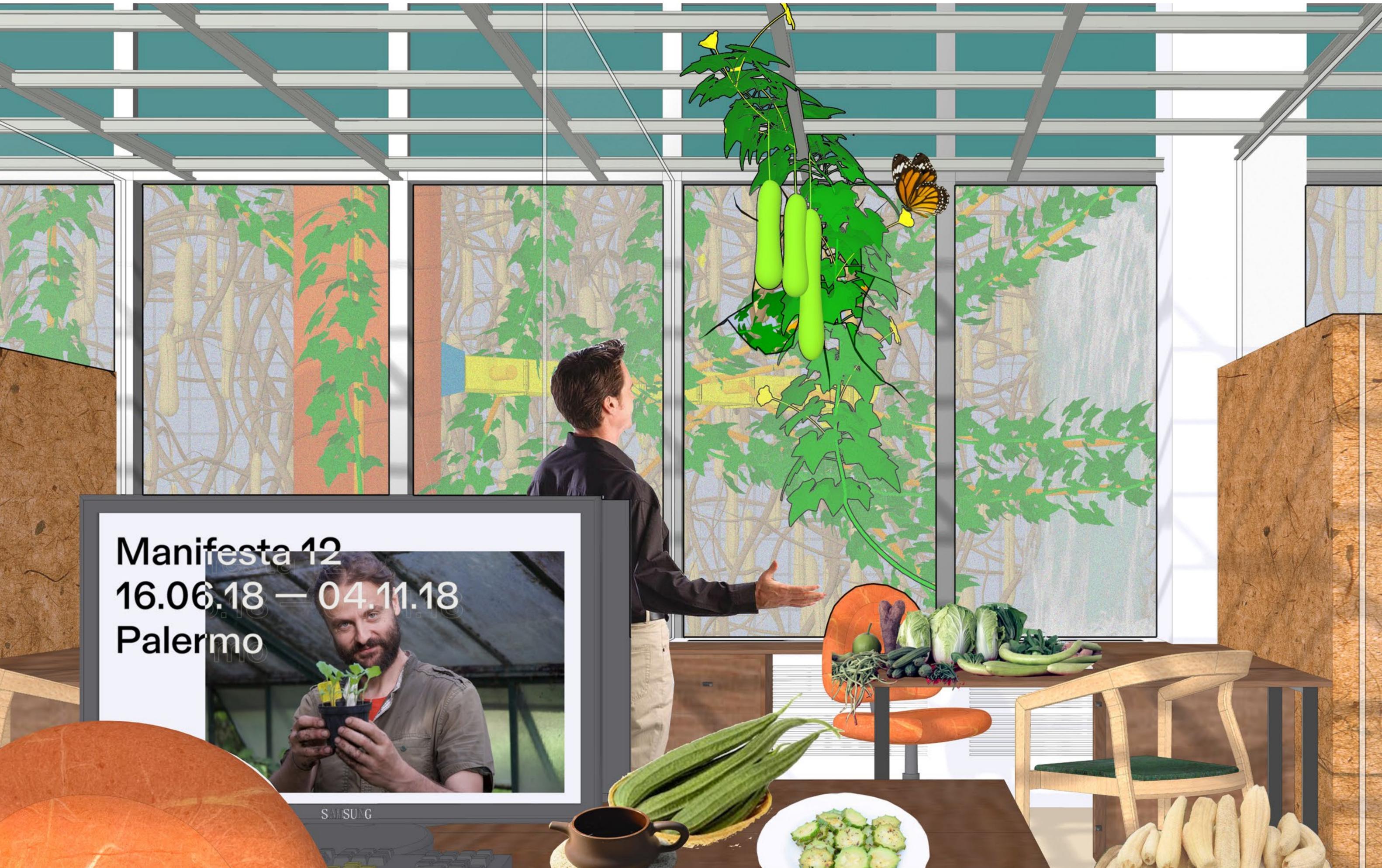
[ Mining the Interior & Socializing the Soil ]



Elements such as the office desk, rope and HVAC duct are removed from the interior. The whole exterior system of luffa house is the combination of these elements. Vertical cylinder ducts are used for storing and composting office daily waste. Office desks are used to support these ducts. People throw waste through the long tubes and after one year, waste in the duct will become compost.

[ Growing Section ]





# Manifesta 12

16.06.18 — 04.11.18

Palermo



SAMSUNG





# SPIDER CITY

## New Orleans 2050: Let's Disentagle from Floods

Spring. 2022

Instructor: David Benjamin

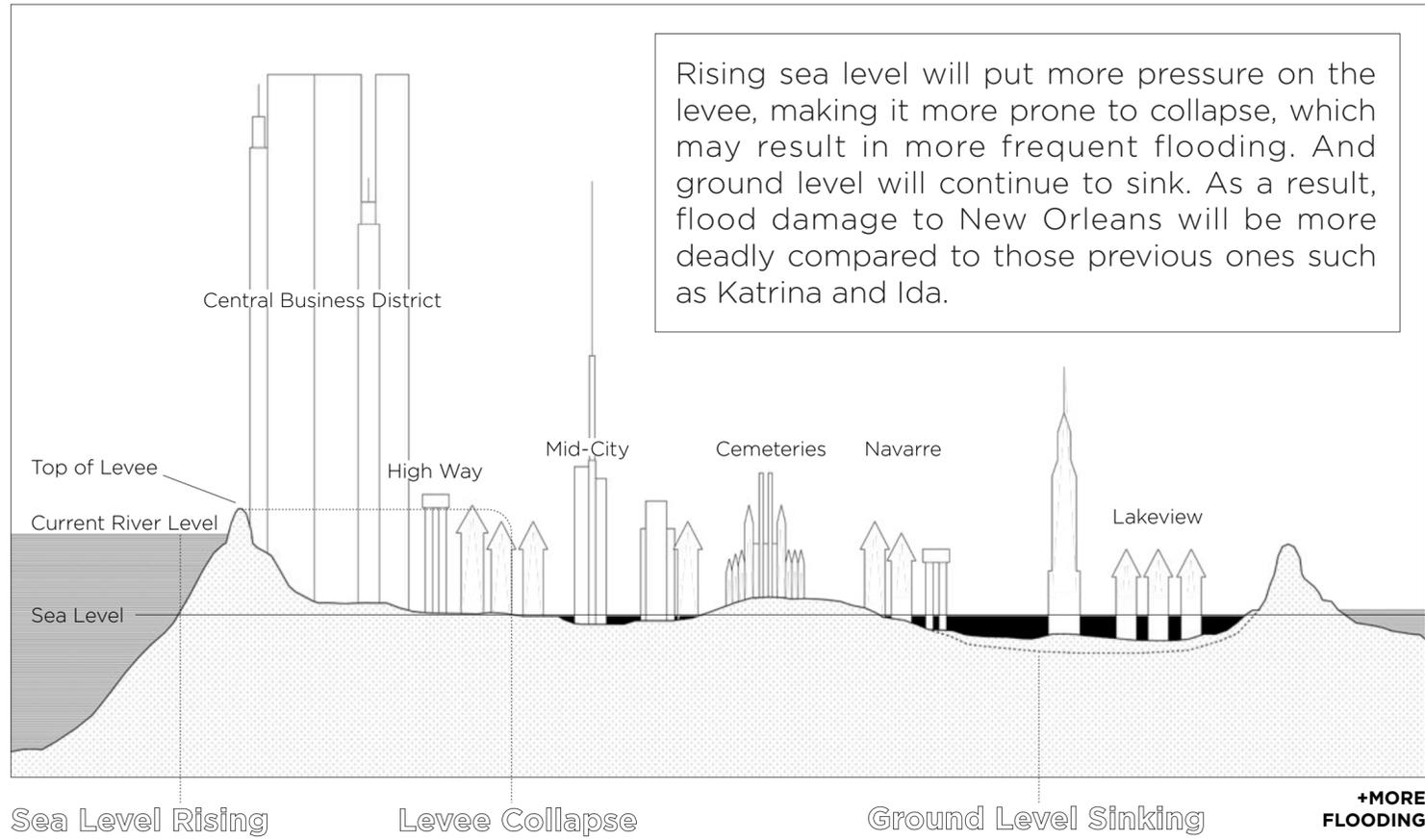
Team Work with: Xin Chen

By 2050, the rising sea levels of New Orleans would pressure on the levee and make it more prone to collapse, which may result in perpetual flooding.

As ground level will also continue to sink, flood damage to New Orleans will be quite fatal. Under this situation, the government decided to tackle the higher-ranked problems regarding rivers and flood from their perspective and requested a removal for local residents.

Our project is aimed to maintain the habitability of local residents by utilizing our architectural design, which would alter their orthodox lifestyle; however, it would specifically resolve the contradiction between governments decision, natural status quo, and our objectives.

**[ Risks | New Orleans 2050 ]**



**[ Learning from Spider ]**

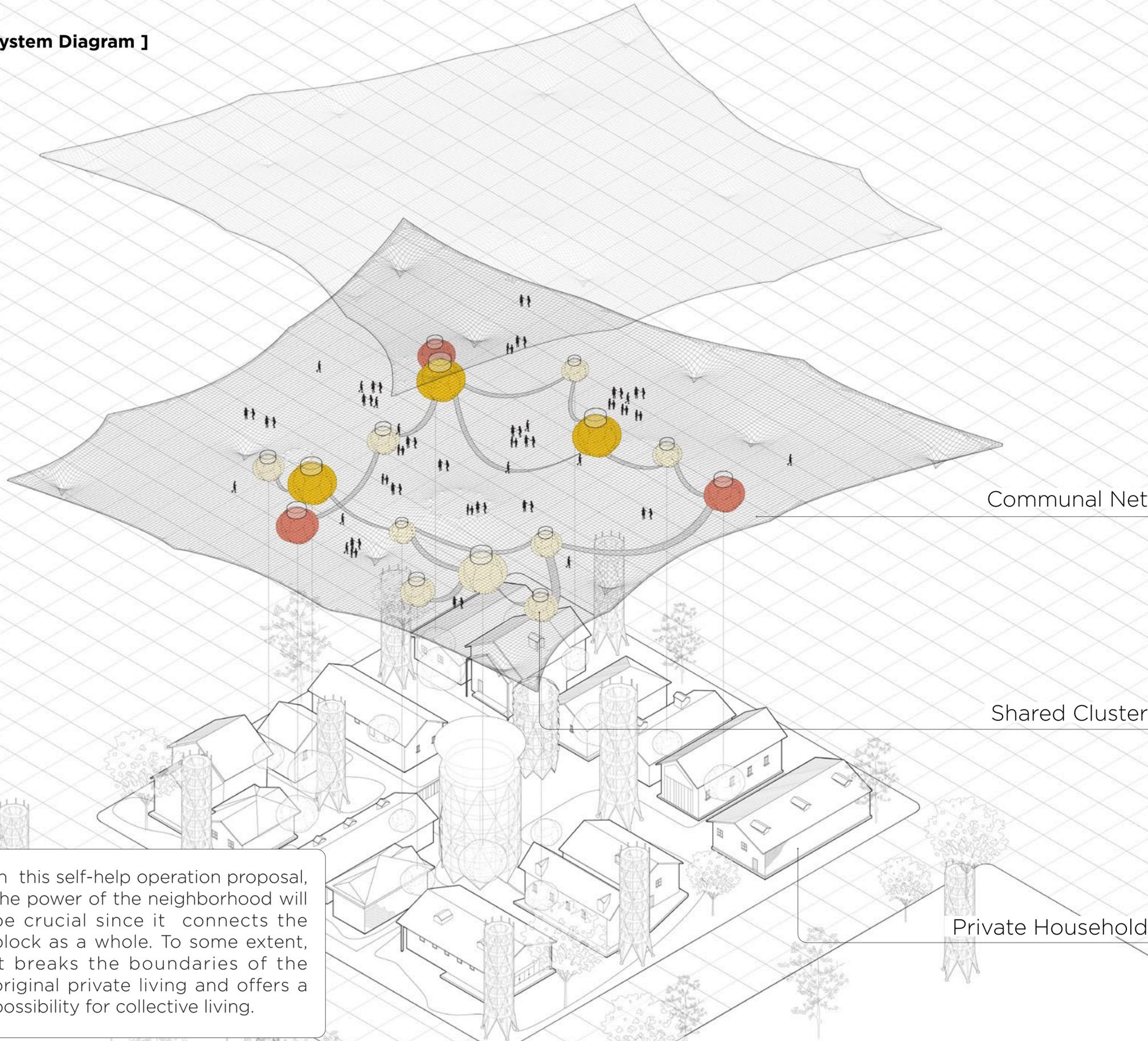
How to deal with floods spiders provide an answer. They build their webs higher to avoid floodwaters; they build their webs bigger to expand their range.



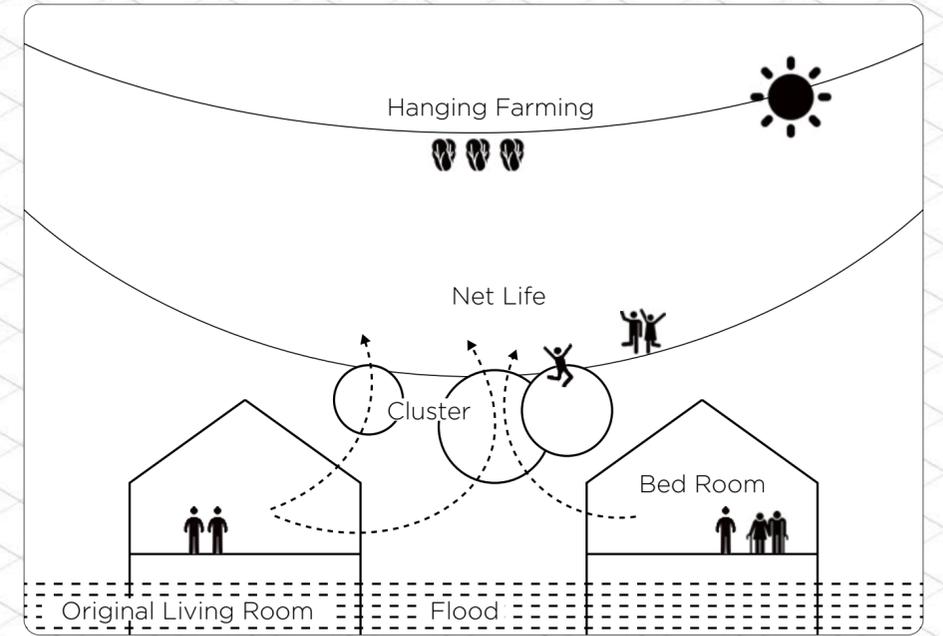
**[ Siteplan ]**



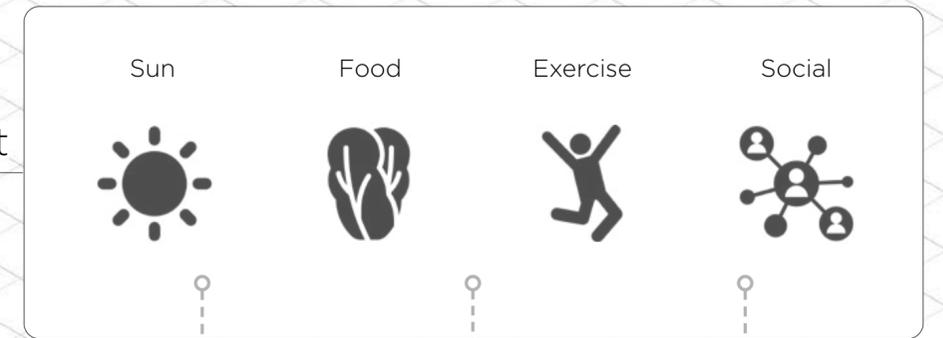
[ System Diagram ]



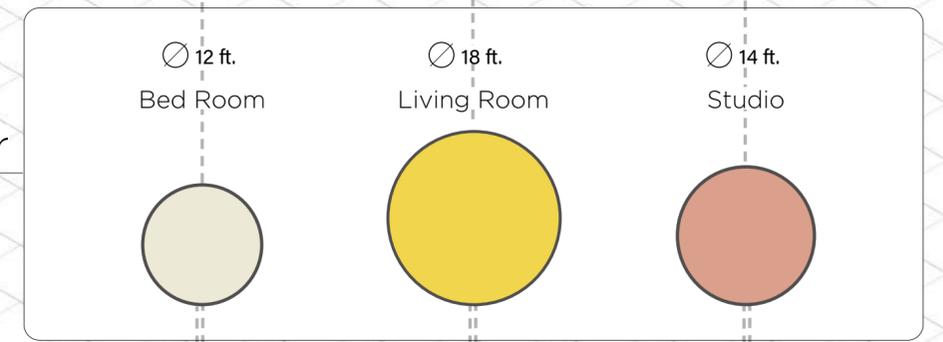
In this self-help operation proposal, the power of the neighborhood will be crucial since it connects the block as a whole. To some extent, it breaks the boundaries of the original private living and offers a possibility for collective living.



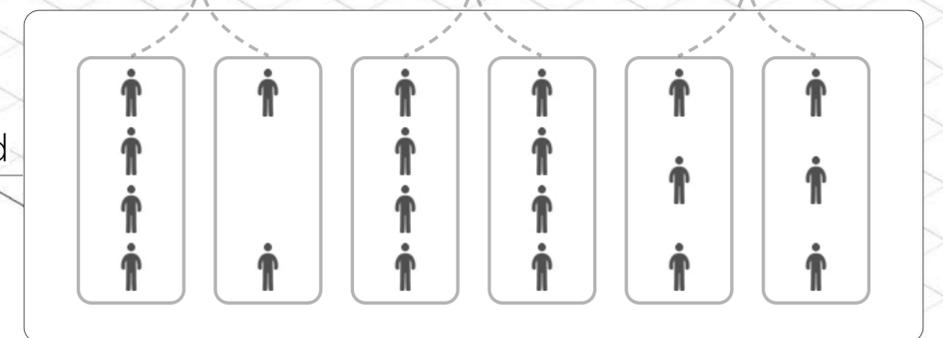
Communal Net



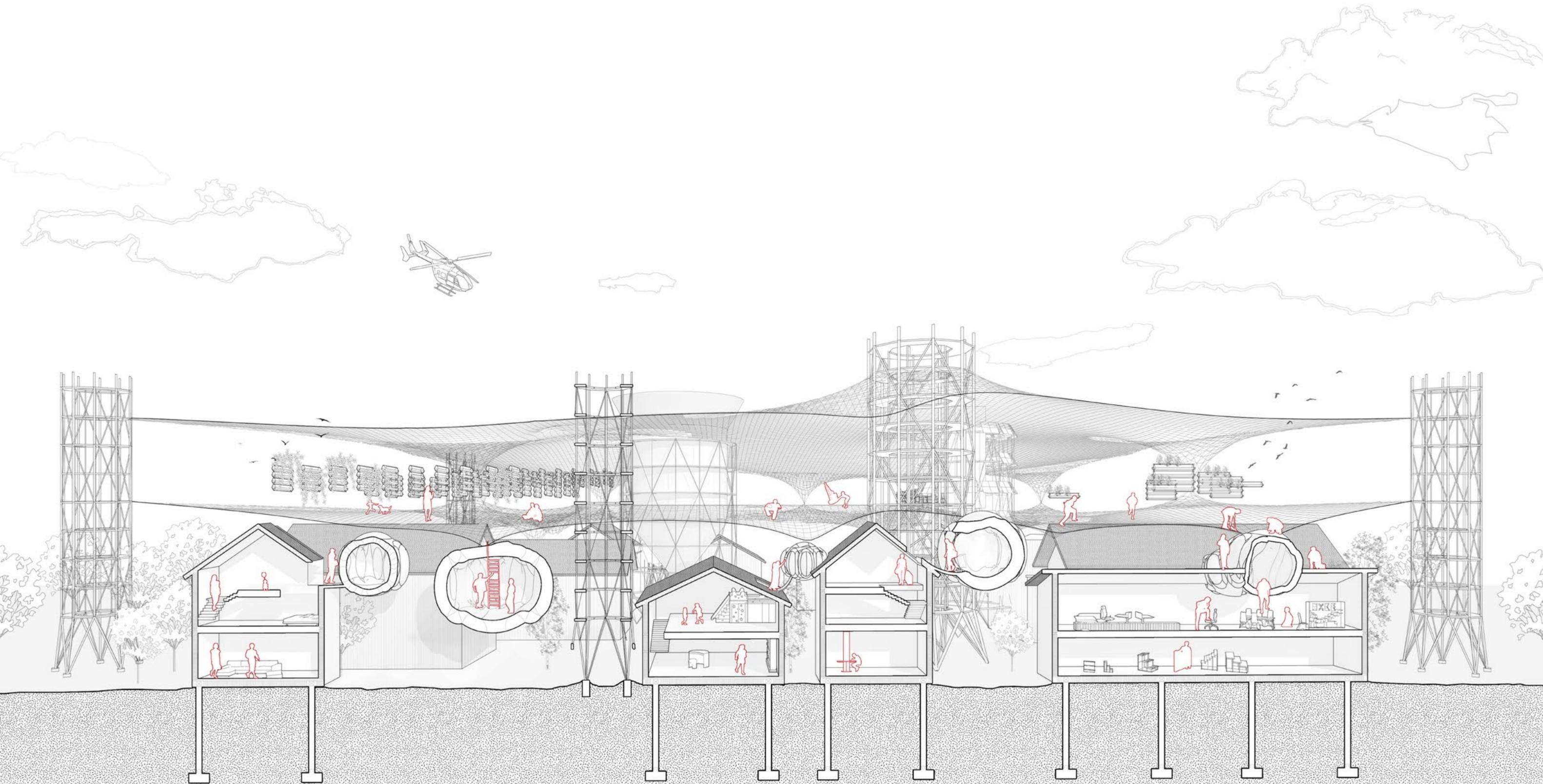
Shared Cluster



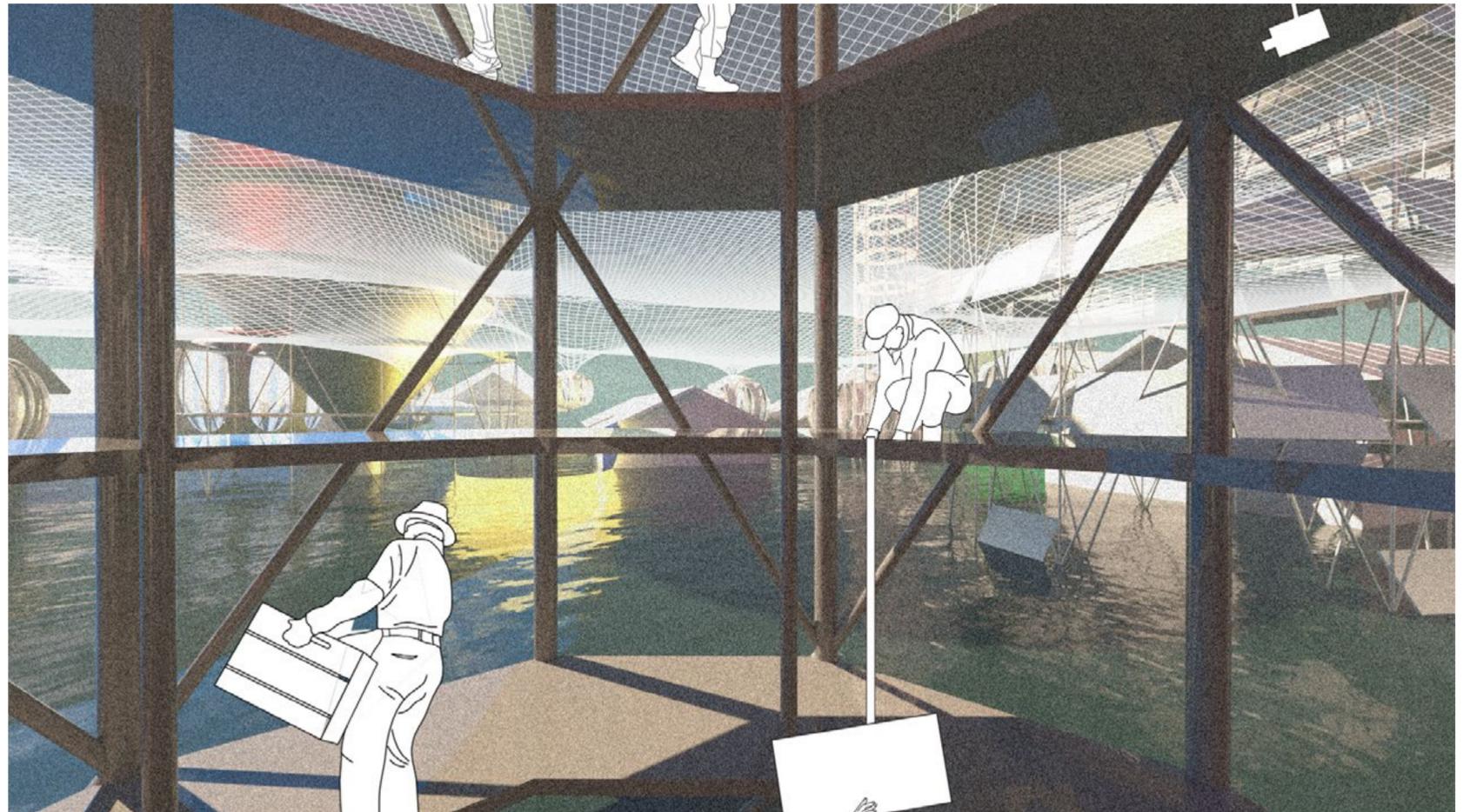
Private Household

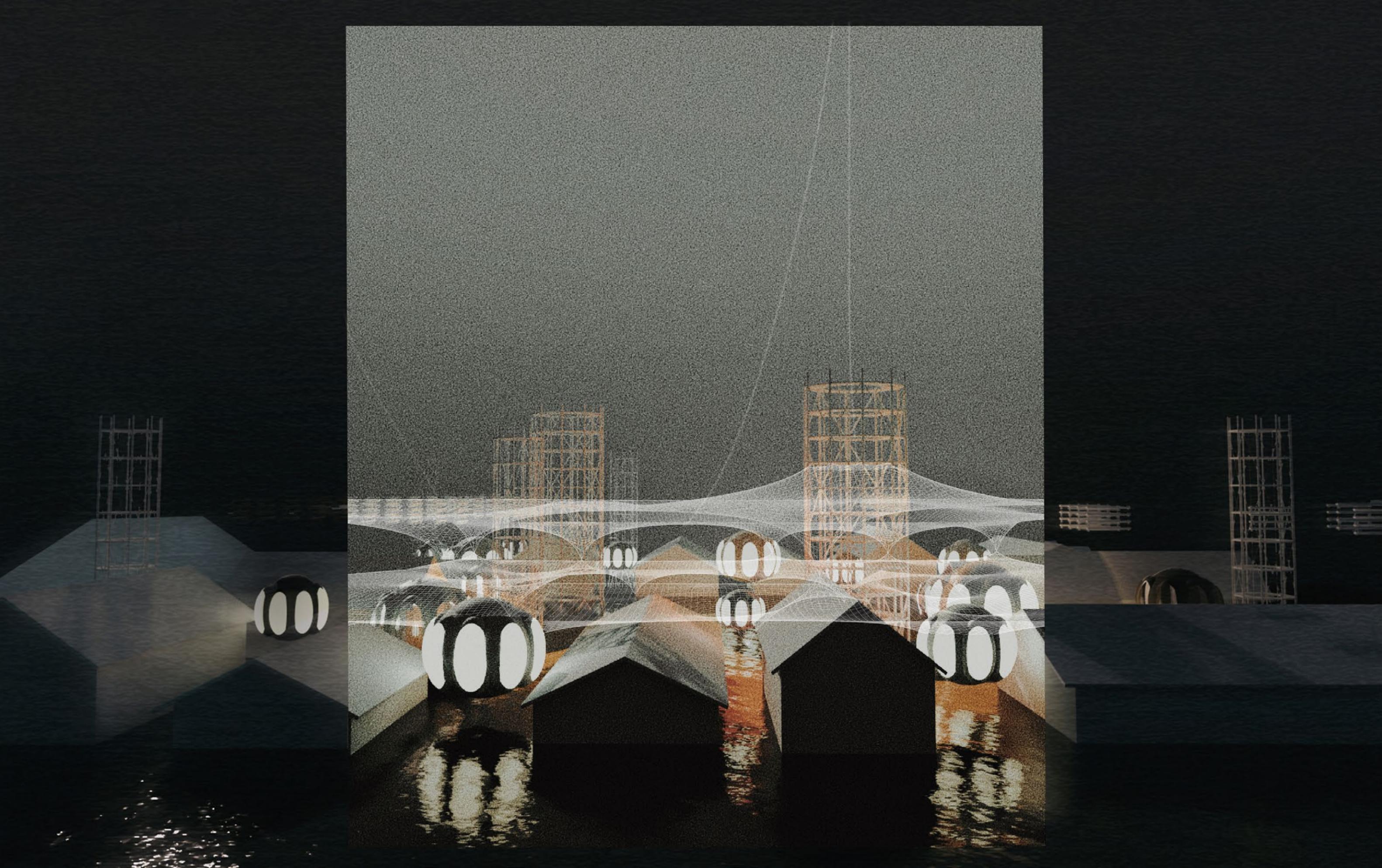


[ Section ]









# NIGHT MISSION

## Parking Lot As Homeless Shelter

Fall, 2020

Instructor: Aidi Su

Los Angeles is not only famous for its large number of cars, but also has an equally large number of homeless people. The two seem to be not directly related. In fact, the number of parking lots is also huge due to the large number of vehicles. The construction of parking lots takes up a lot of land, which leads to higher land prices. As a result, the price of housing also varies. It has become higher, and eventually the number of homeless people continues to rise.

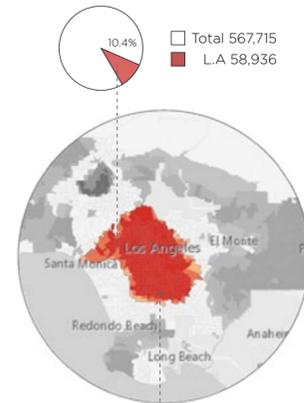
In this design, I tried to find a gentle and effective solution to the contradiction between the parking lot and the homeless. In this self-reinforcing cycle, the extremely unbalanced day and night utilization rate of the parking lot has become a breakthrough point.

My suggestion is making parking spaces at night shelters for homeless people; use a vertical automatic parking system to improve the efficiency of parking and living.

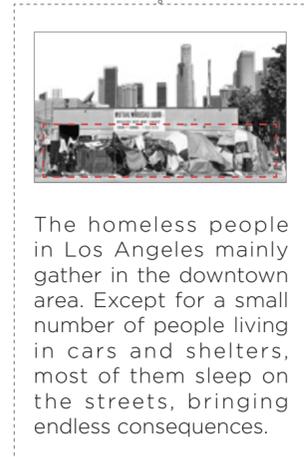
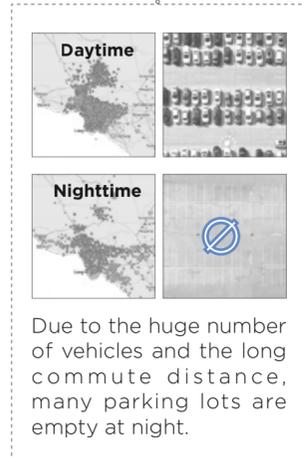
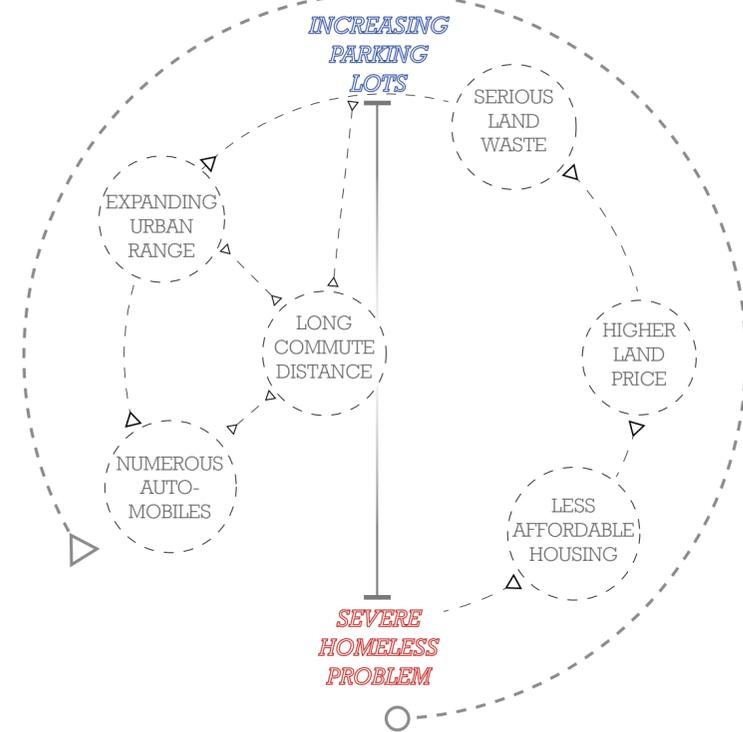
**[ Problem ]**

There are **5,484,606** automobiles in Los Angeles, so Los Angeles also uses a lot of land for **PARKING...**

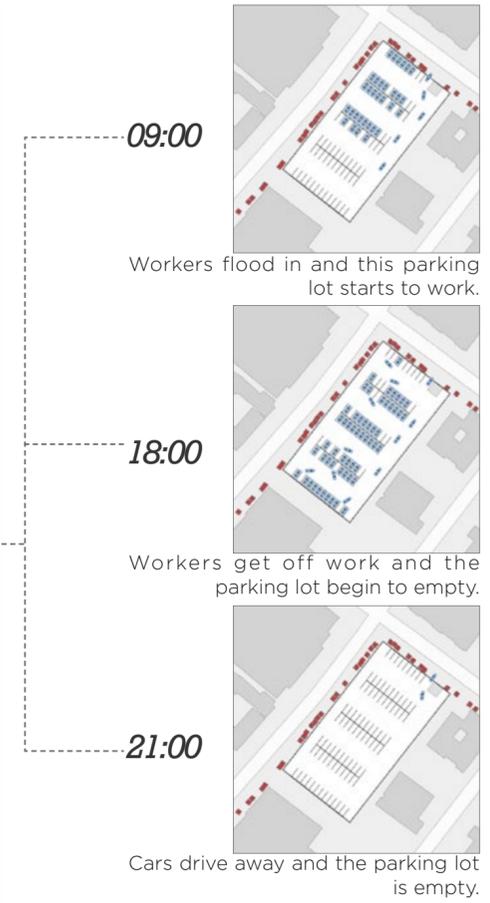
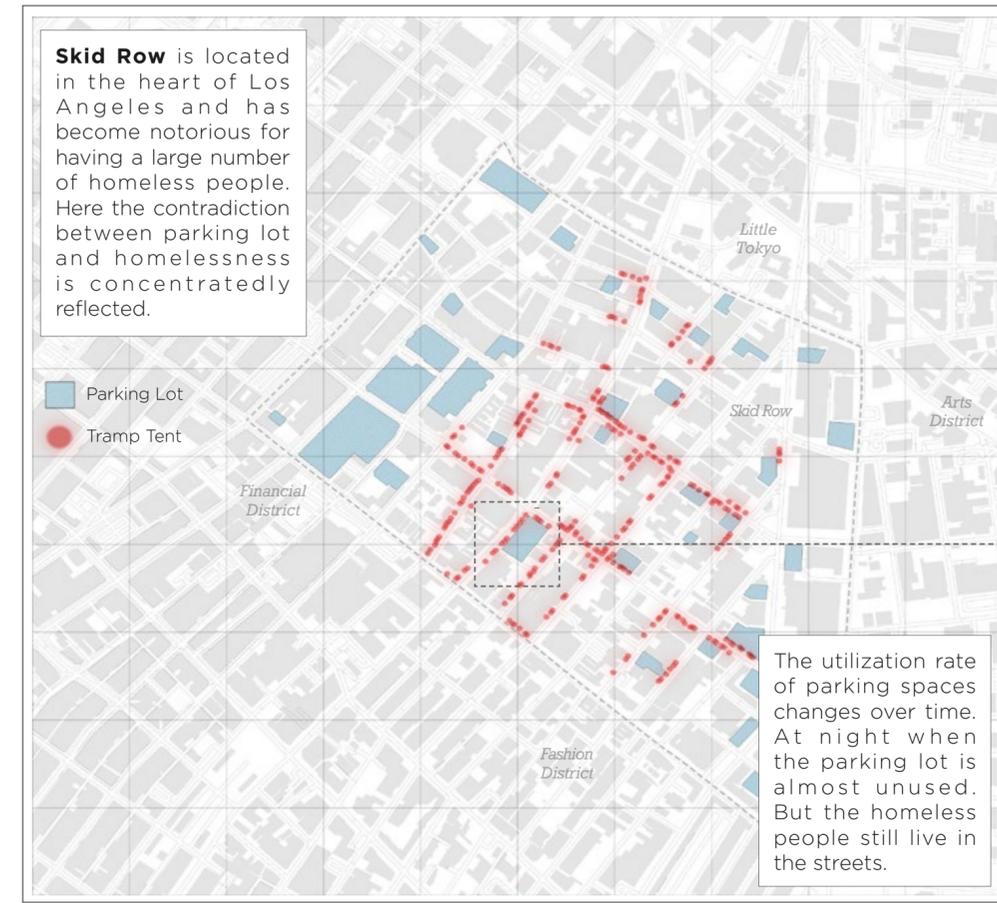
In 2019, there were **567,715** **HOMELESS** people in the U.S., of which Los Angeles had **58,936**.



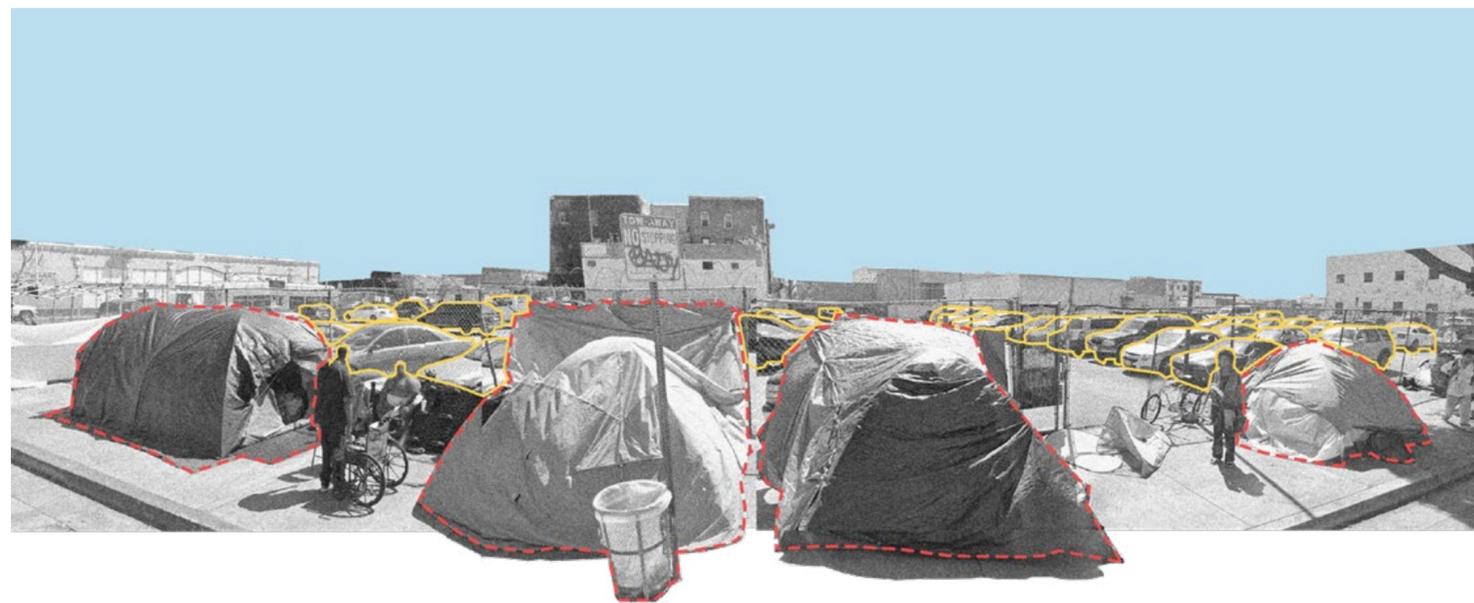
**PARKING and HOMELESSNESS**  
A Self-Reinforcing Contradiction



**[ Site | Skid Row ]**

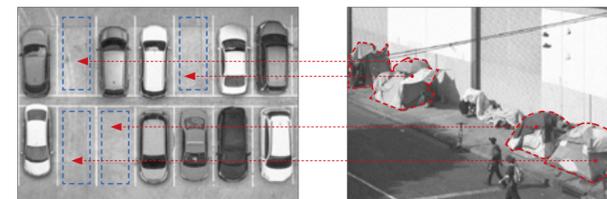


There are many places for cars to park but no place for ( homeless ) people.

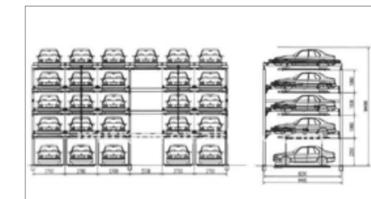


**[ Strategy ]**

**1 Move The Homeless To Empty Parking Spaces**



**2 Adopt Automatic Parking System**



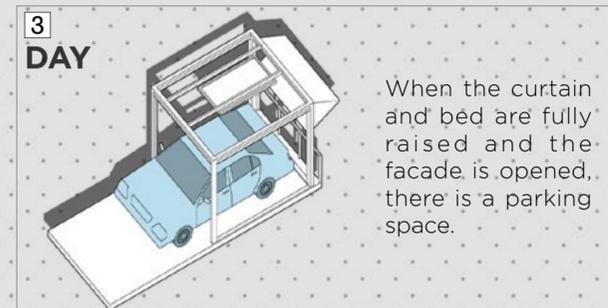
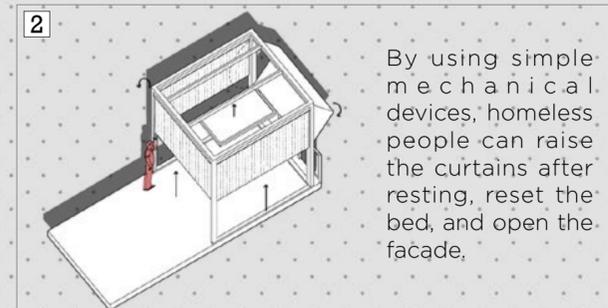
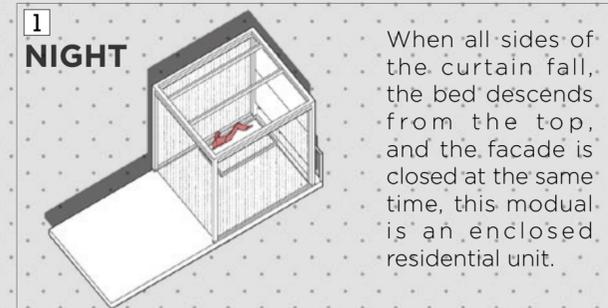
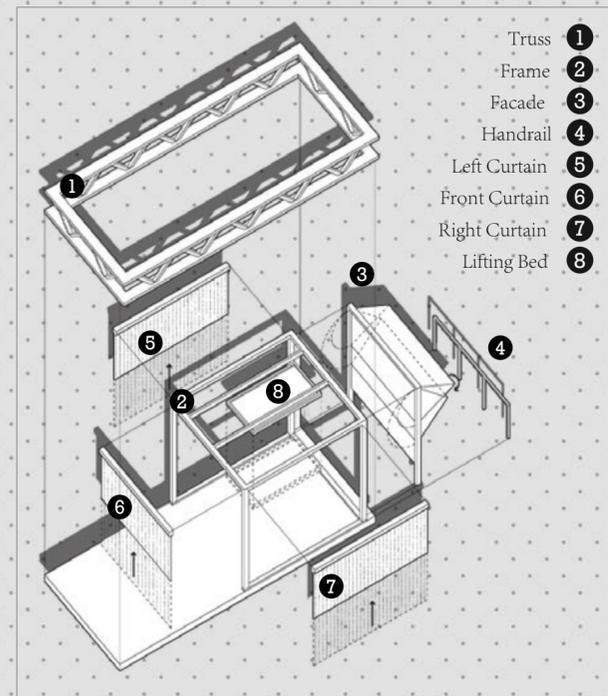
**3 Add Infrastructures For The Homeless**



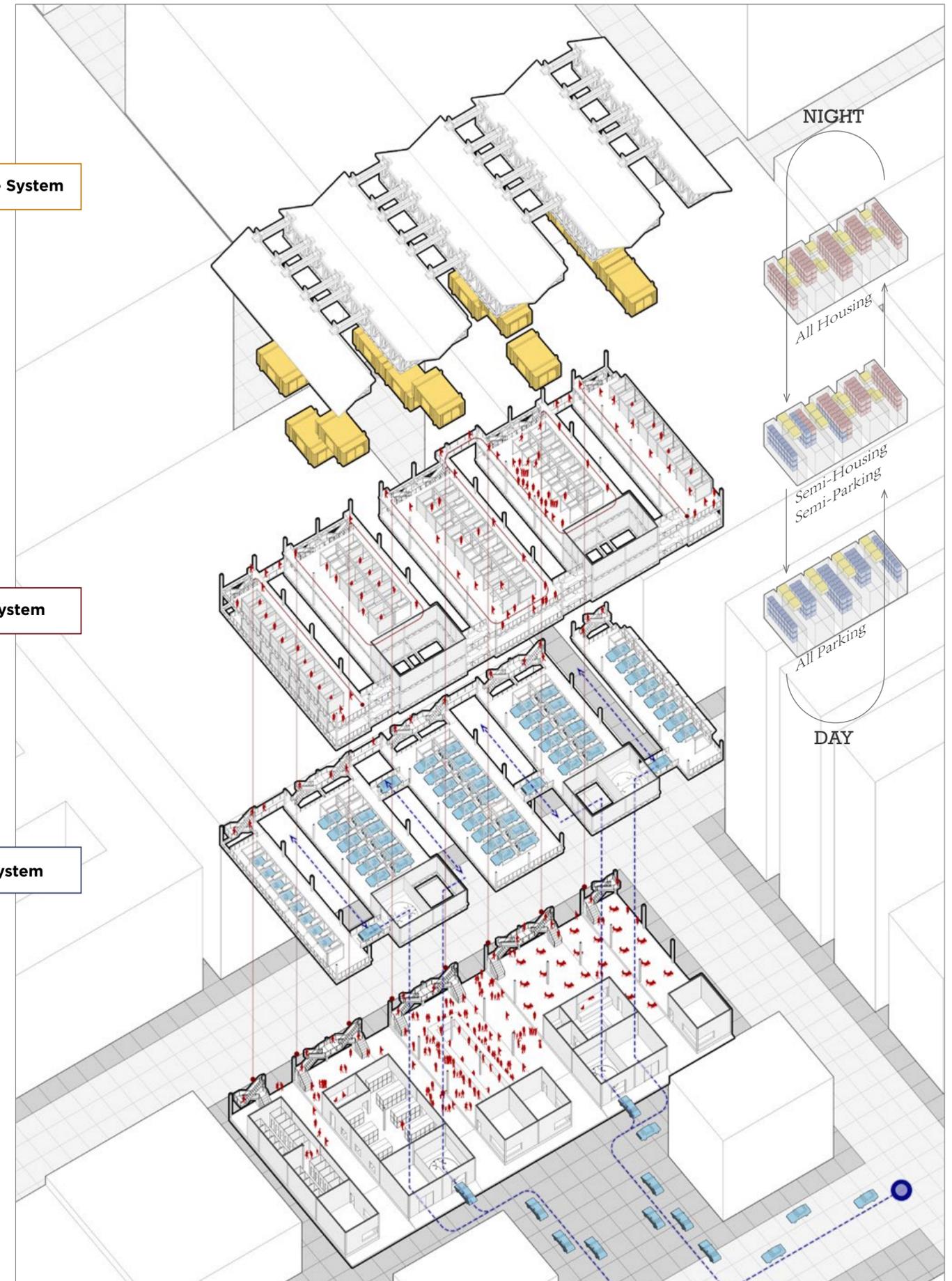
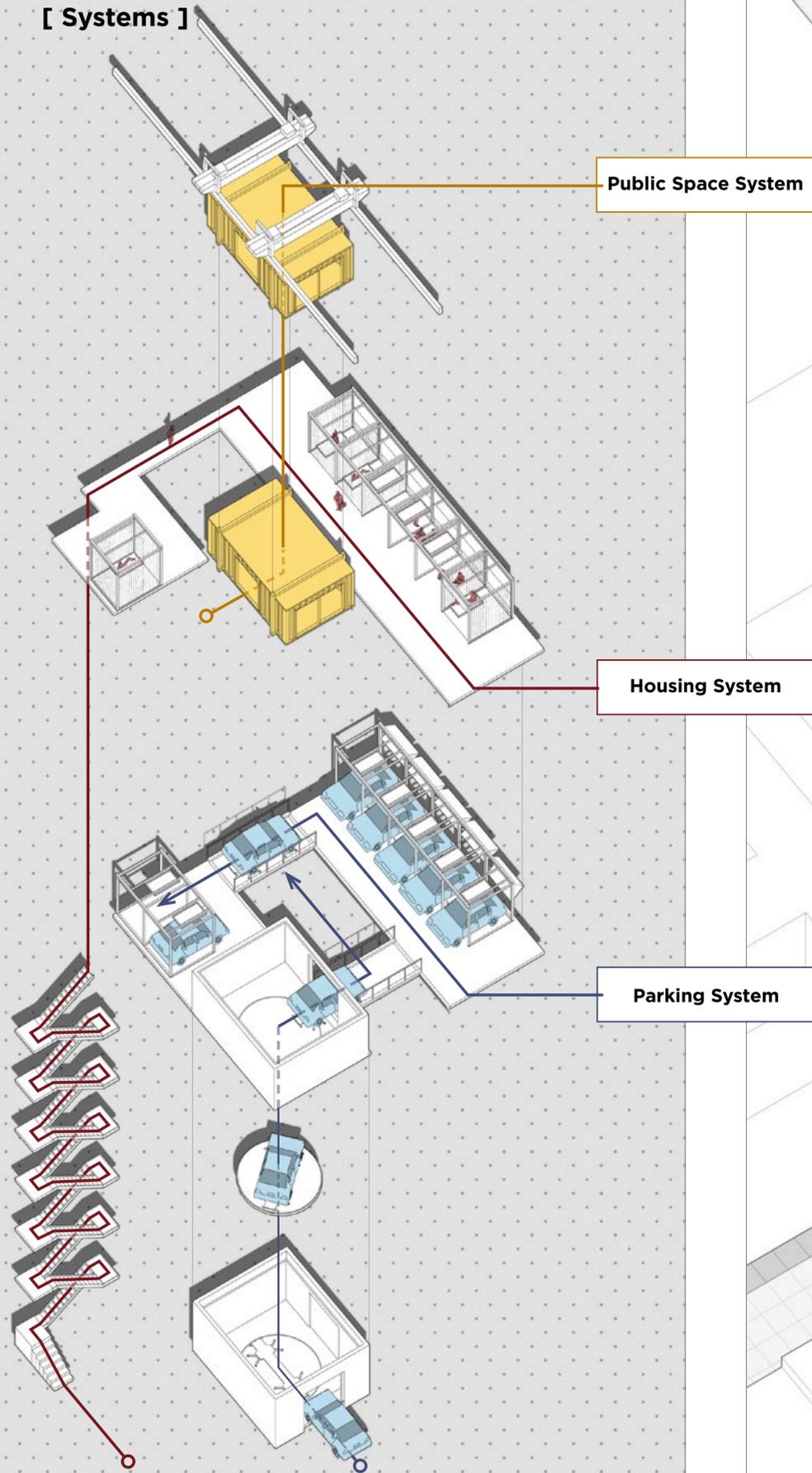
**4 Expand The Public Life Of Homeless People**



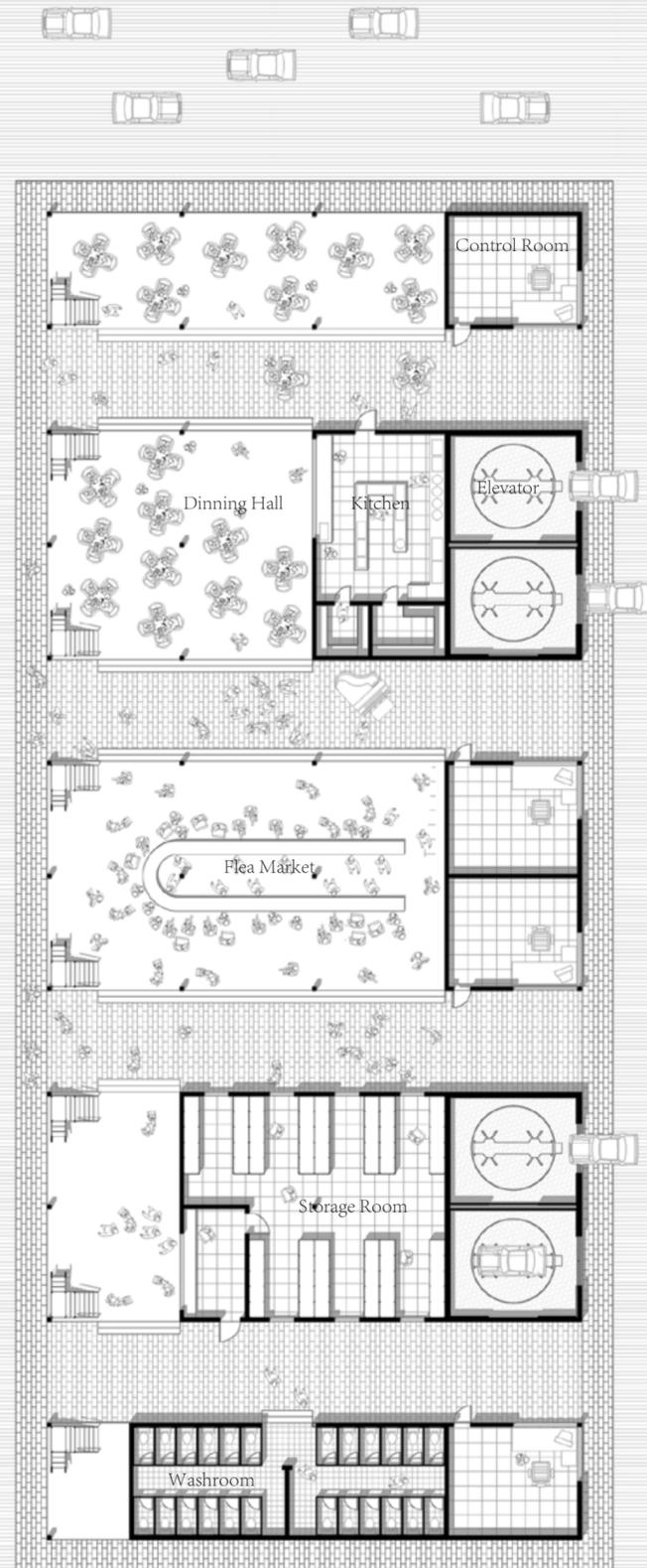
[ Module for Parking and Housing ]



[ Systems ]



[ First Floor Plan ]

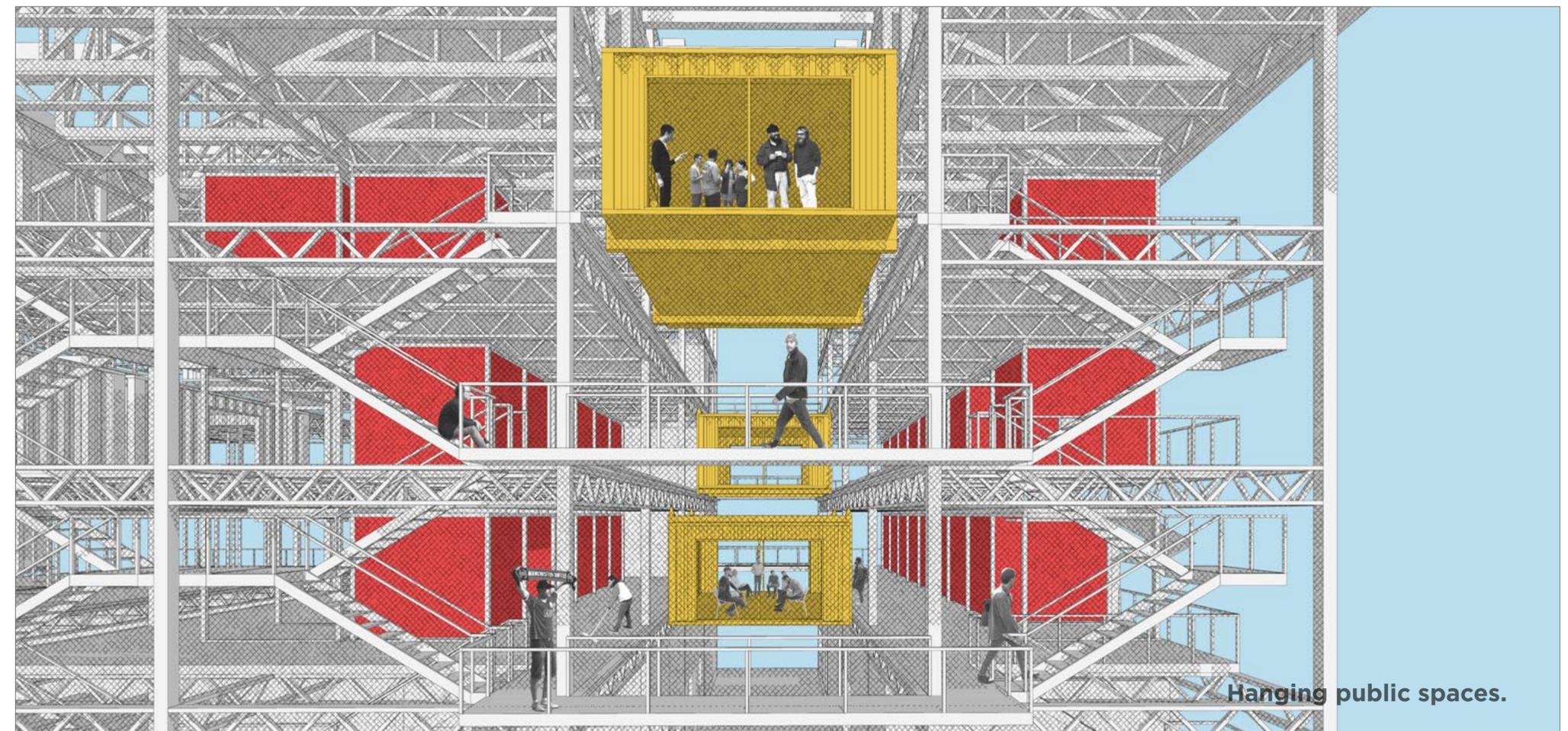
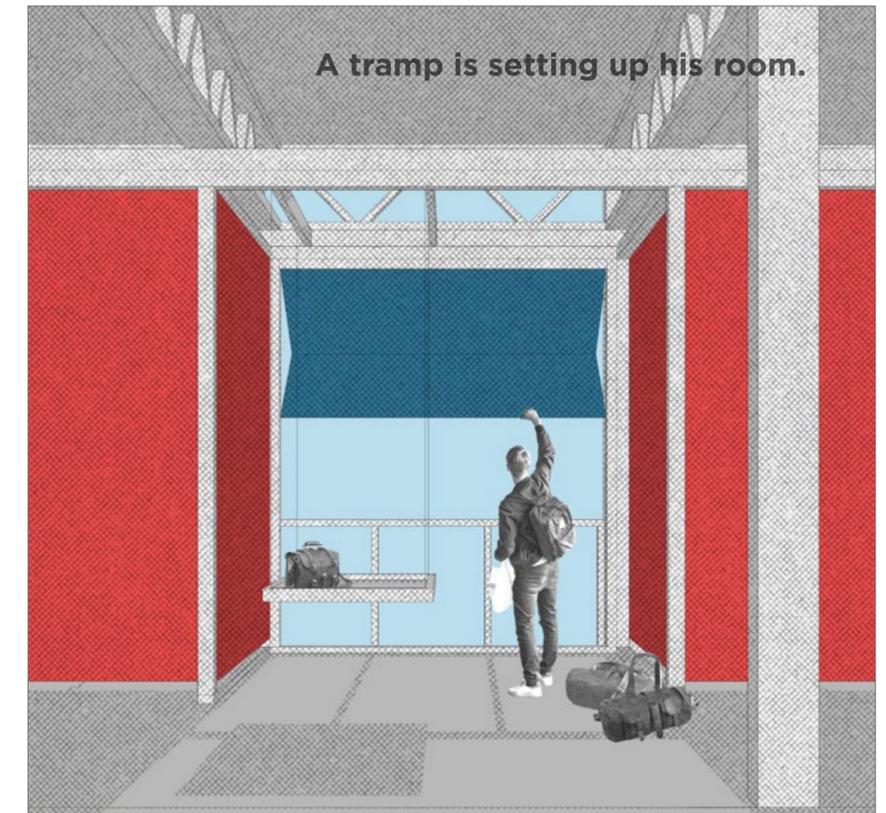
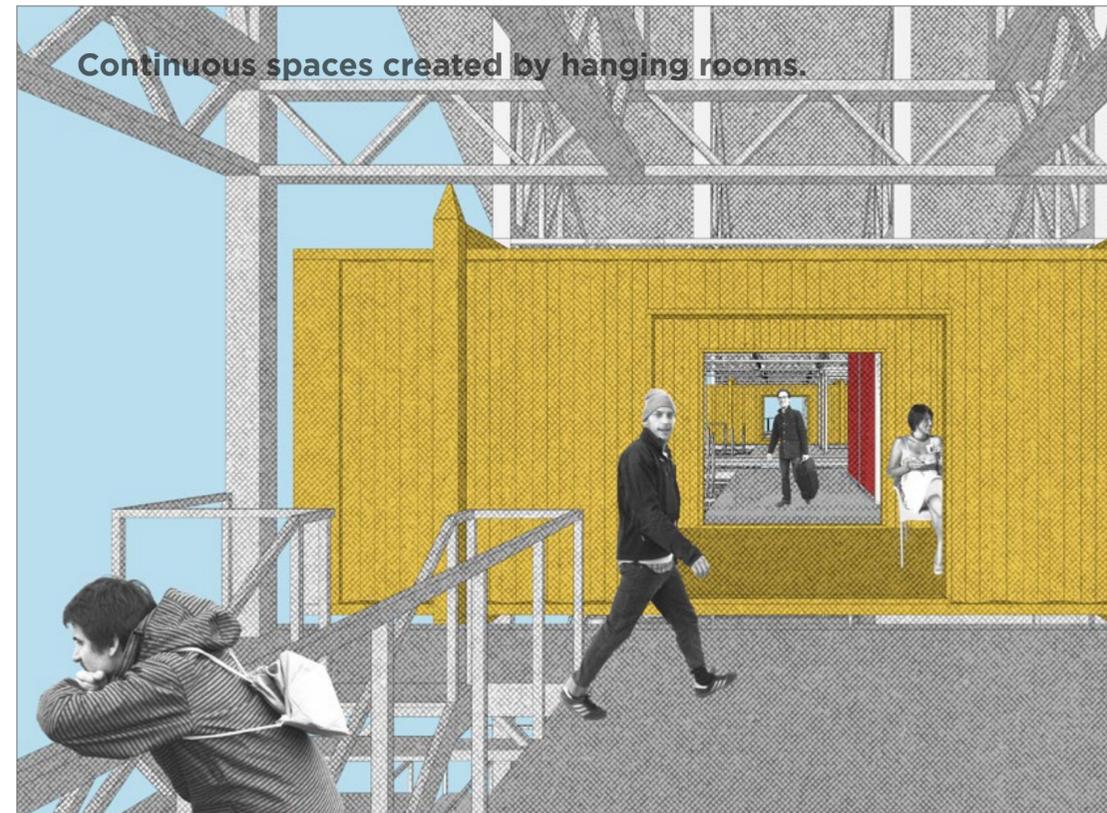
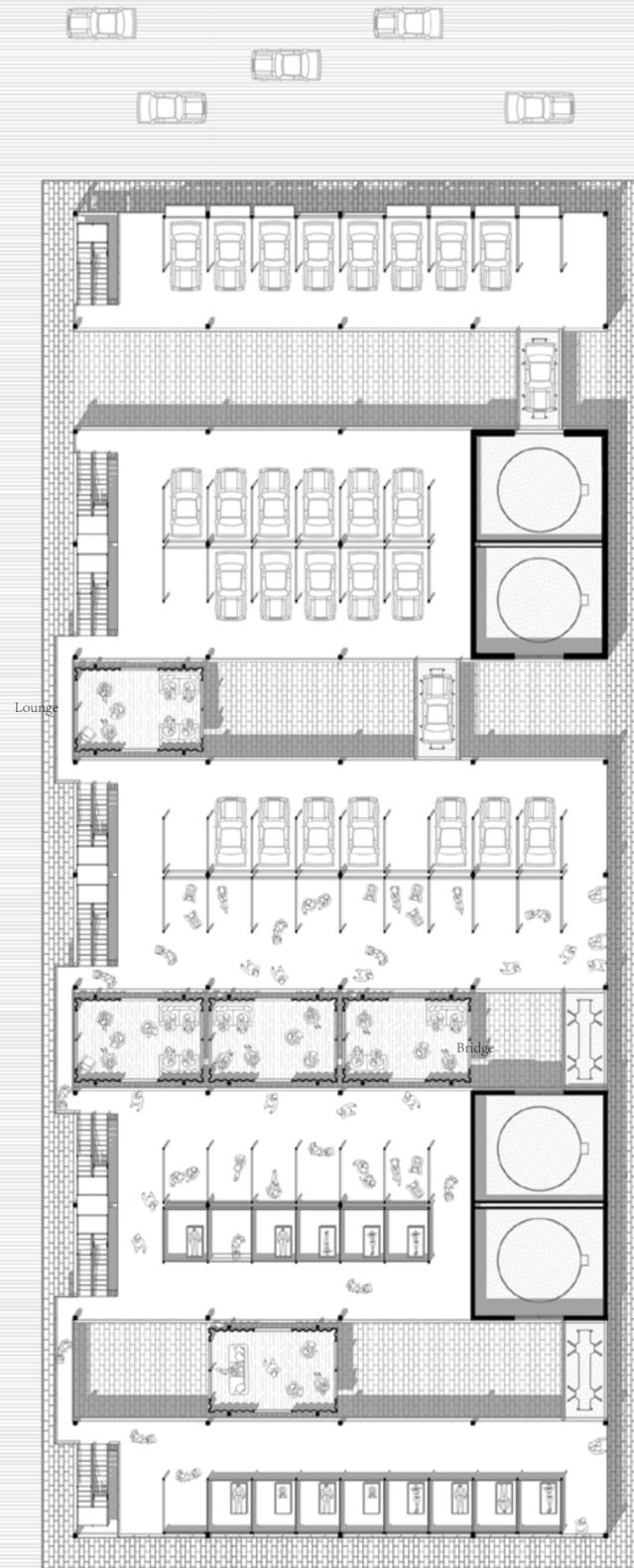


Homeless people wait outside the storage room to pick up their luggage.

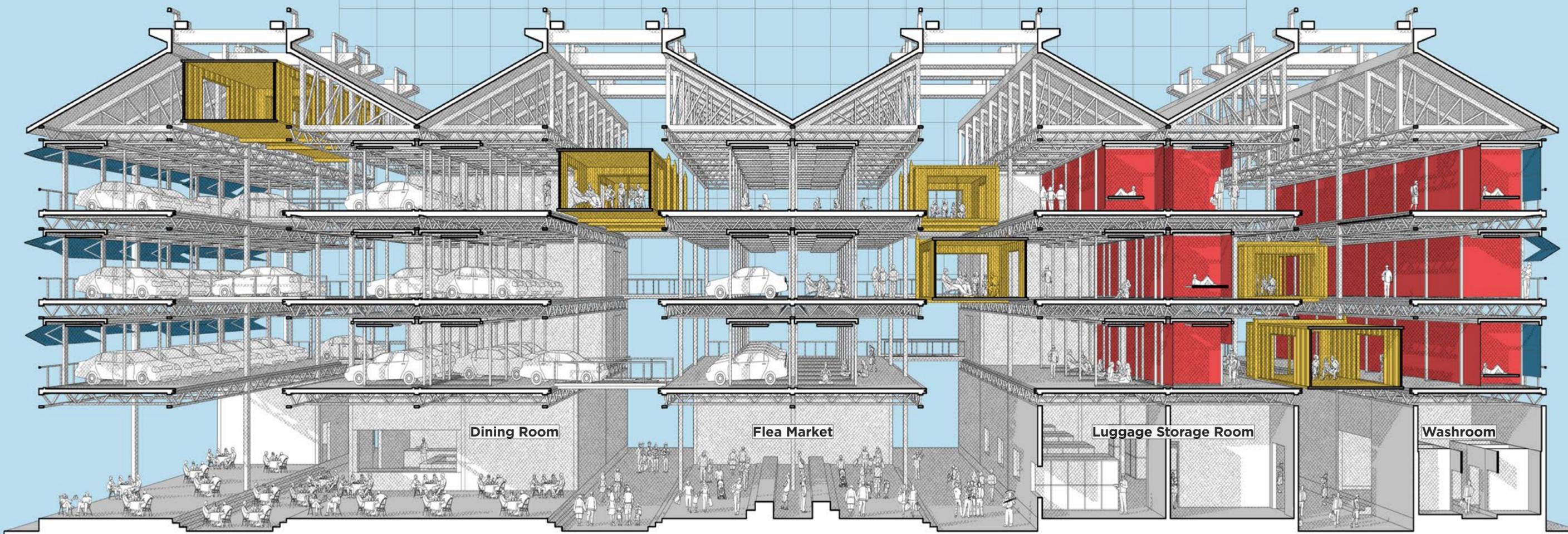


Dinning hall, parking, flea market and atrium performances.

[ Second Floor Plan ]



[ Section ]



DAYTIME

All Parking

Semi-Parking, Semi-Housing

All Housing

NIGHTTIME

# EXTERNAL INTERIORITY

## Renovation of Nursing Home Network

Spring, 2020

**Instructor: Hao Ruan**

Sham Shui Poo District is the area with the most elderly people in Hong Kong, and there are many private nursing homes here.

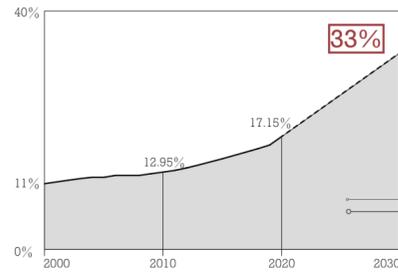
Due to the high urban density of Hong Kong, these private nursing homes are usually small in scale. The lack of public space and outdoor life has caused these elderly people to be trapped indoors. As a result, the elderly in Hong Kong have a high incidence of depression.

Through the statistics of the nursing homes in Sham Shui Po District, I found that they are actually adjacent to each other. Therefore, my proposal is to connect several adjacent nursing homes into a network, and each nursing home undertakes different public functions in this area. The elderly can share these functions.

In the innovation of each nursing home, I adopt the method of rotating and folding, blur the boundary between the indoor and outdoor. The purpose is to guide the elderly to go outdoors, soothe the mood, and reduce the prevalence of depression.

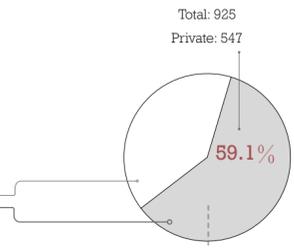
**[ Problem ]**

Proportion of **the Elderly** in HK



The number of the aging will grow from about 900,000 to 2.1 million by 2030.

Proportion of **Private Nursing Homes**



**Life** in Private Nursing Homes



Geriatric **Depression** Rate



**15%**

Among these depressed elderly...

21.1% Living alone

49.1% Dissatisfied with neighborhood

52.9% Dissatisfied with the family

26.1% No group activities

The most common negative self-report among them

**64.6%**  
I feel useless

**62.3%**  
I feel I have no energy

**59.9%**  
I feel very dull

**[ Site | Sham Shui Poo ]**

□ Nursing Home Floor  
□ Entrance



*Goodwise*

*Chung Wah*

*Sing Yan*

*Kam To*



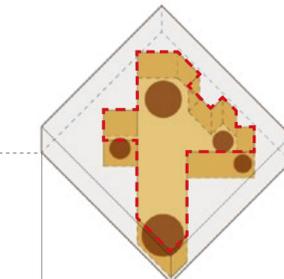
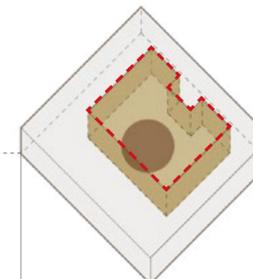
○ Group  
These nursing homes appear in groups, and form a natural network.

**[ Strategy ]**

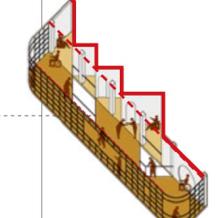
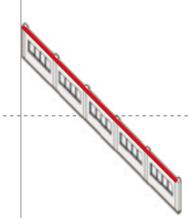
**EXISTED**

**PROPOSED**

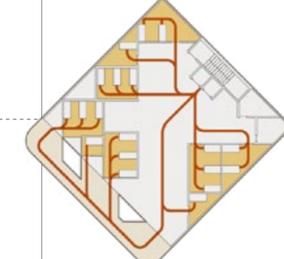
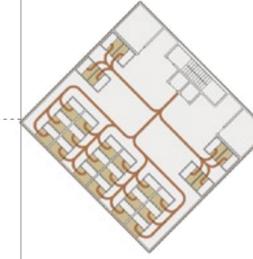
**Interior**



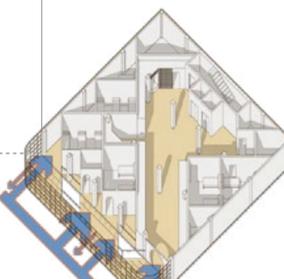
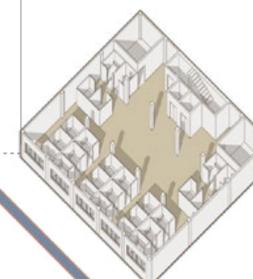
**Exterior**



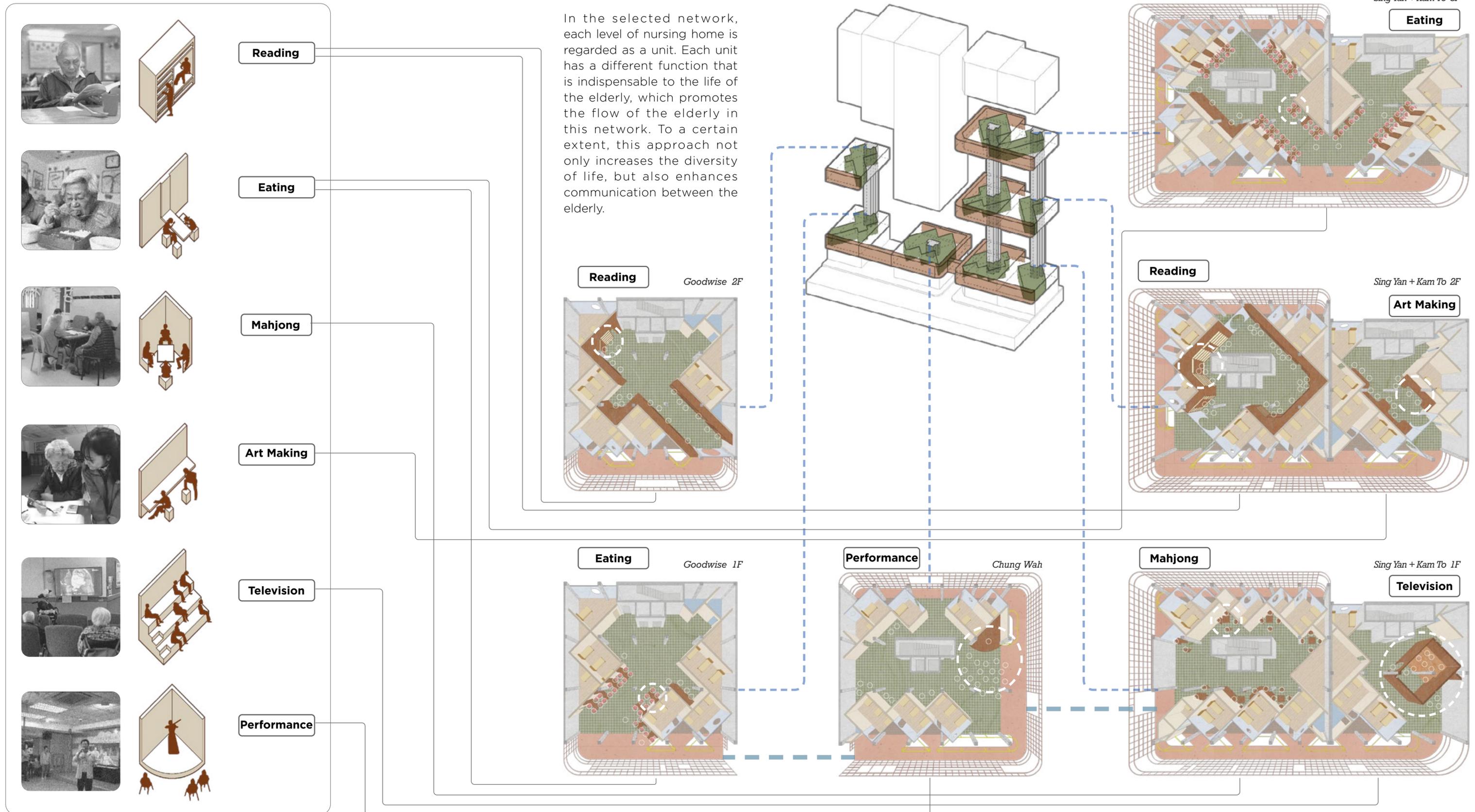
**Movement**

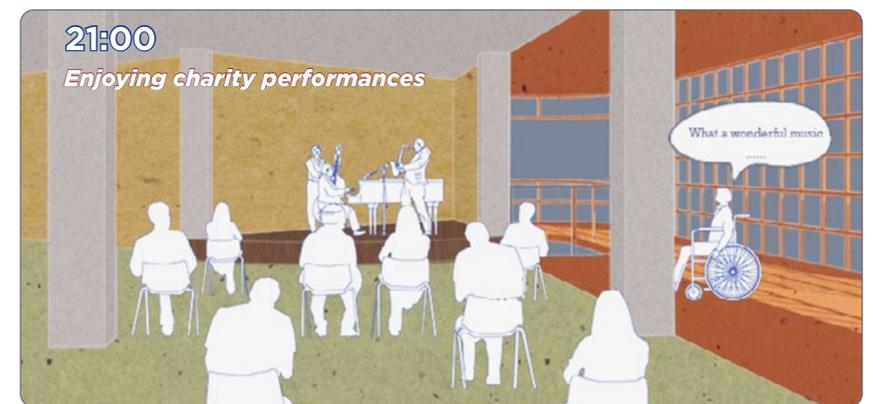
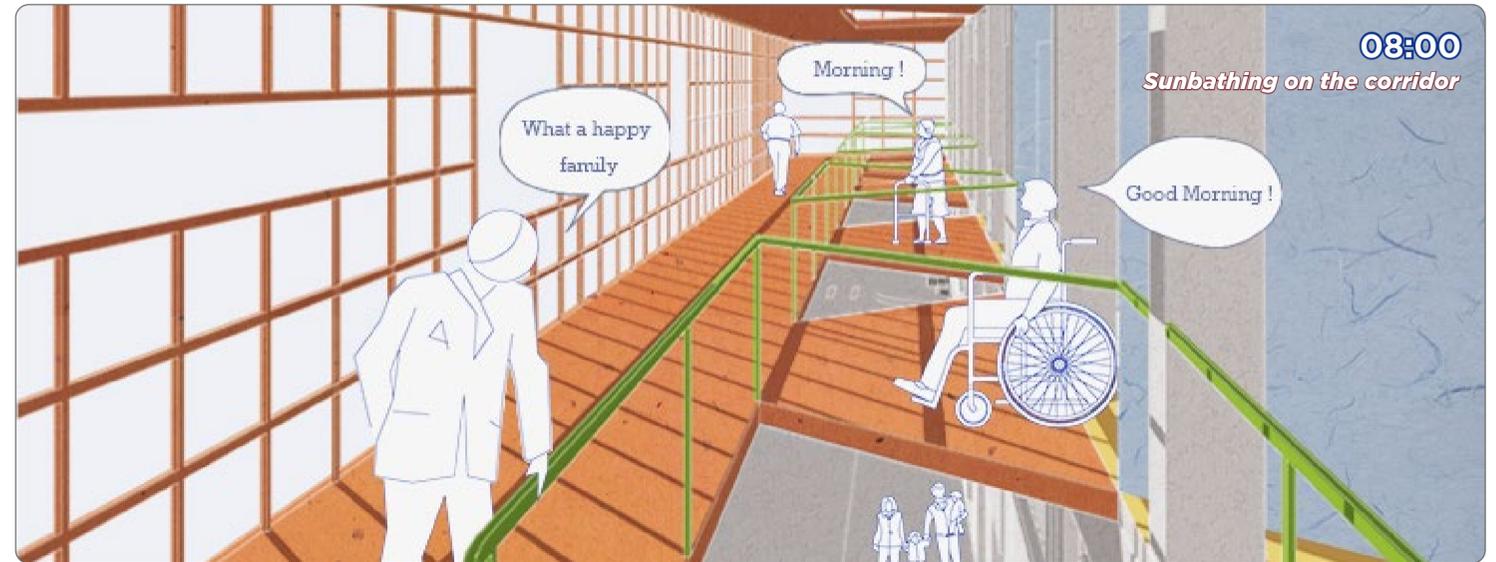
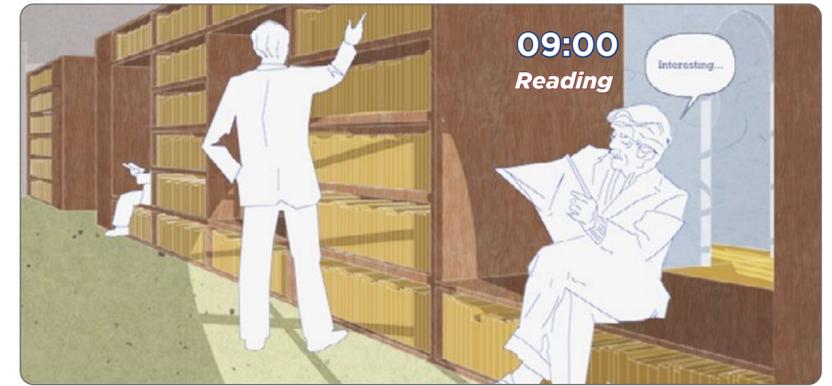


**Outcome**



[ Internal Variability ]





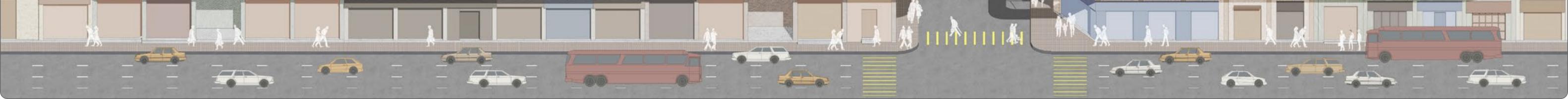
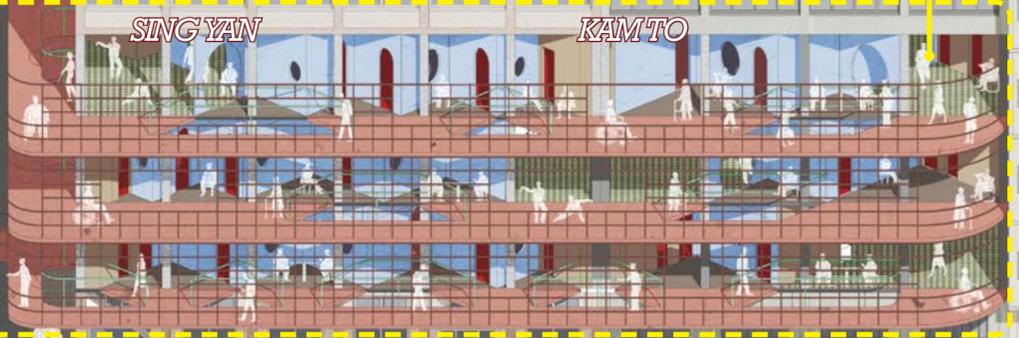
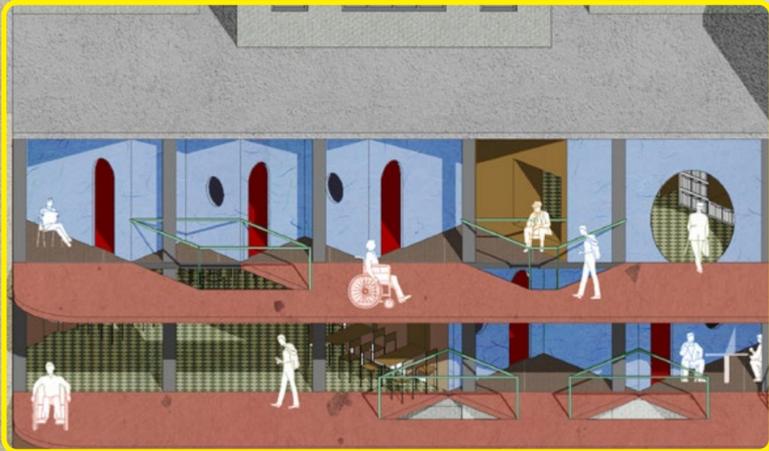
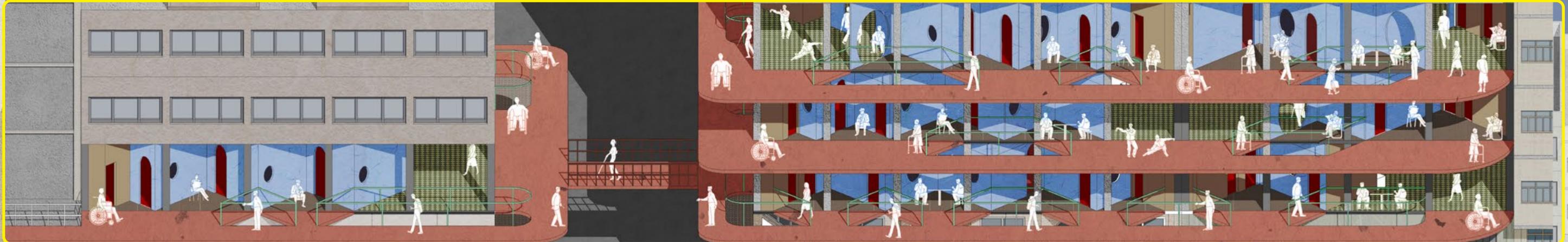
[ External Publicity ]

Outside City

Facade

Corridor

Balcony



# LISHUISIS

## Towards Devolution: An Alternative Adaptive Urbanization Proposal

### The 2nd Prize

'Future ShanShui City International Urban Design Competition'

Fall, 2020

Instructor: Olivier Greder

Team Work with: Jingwen Luo, Jiaxian Peng, Fan Xia

In 1975, Lishui was still a rural society, and now it is fully urbanized territory within a half urbanized society.

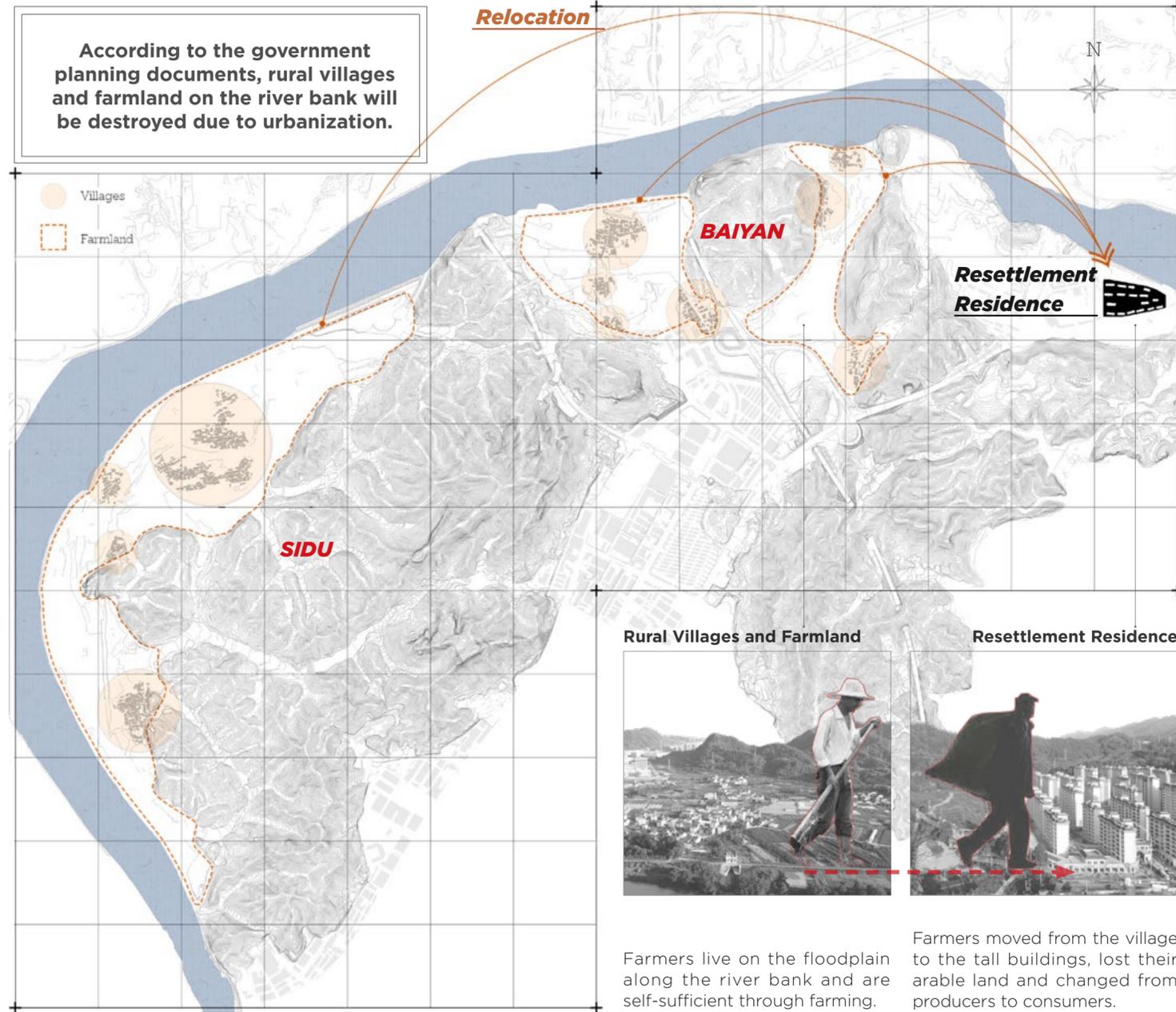
In the last decades interventions were made:

- At the expense of environment
- Colonizing precious alluvial farmland plan
- Destroying the ancient city and villages
- ...

***Urbanization is no longer the solution of our problems but the main cause.*** It's time to reflect on this way of development.

Our proposal is to protect farmland plains and villages. Take a step back and build towns on the hills, abandon the rigid network of undifferentiated urbanization, and explore an urban layout based on a mountain shape.

[ Site - Lishui, China ]



Rural Villages and Farmland

Resettlement Residence



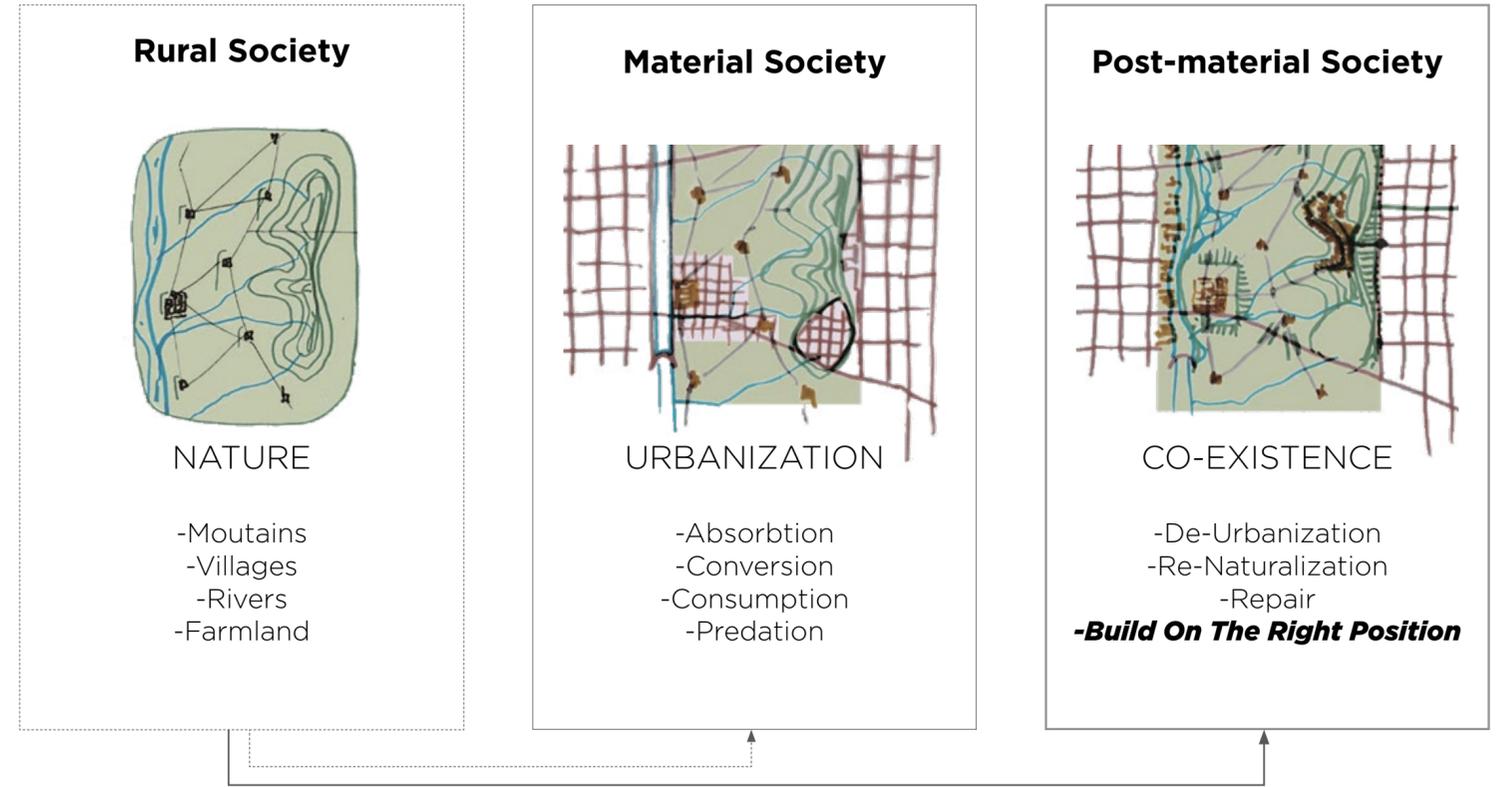
Farmers live on the floodplain along the river bank and are self-sufficient through farming.



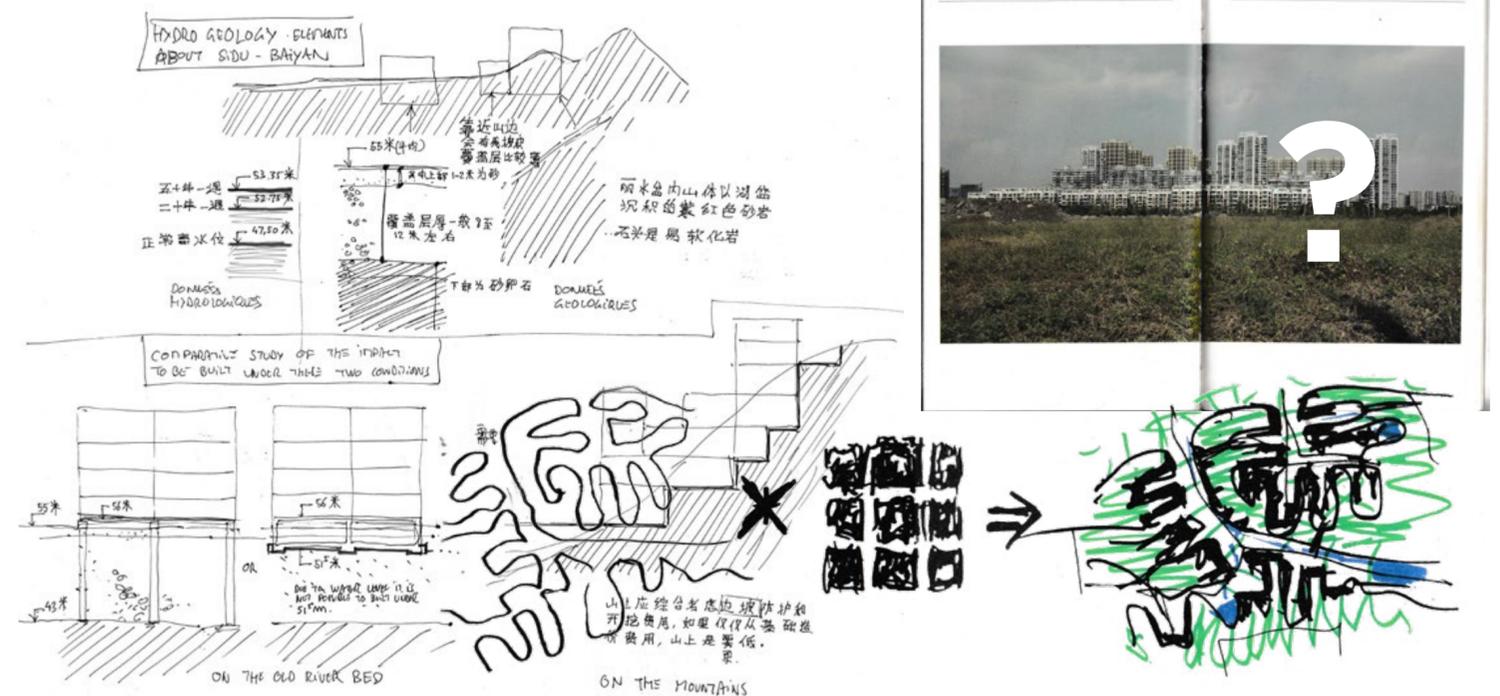
Farmers moved from the village to the tall buildings, lost their arable land and changed from producers to consumers.

[ Result of 'Urbanization' ]

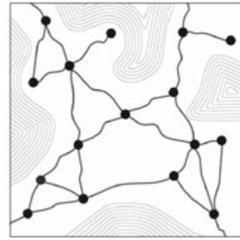
Driven by economic interests, the government and real estate companies sacrifice nature and the diversity of lifestyle. Undifferentiated urbanization will swallow all land.



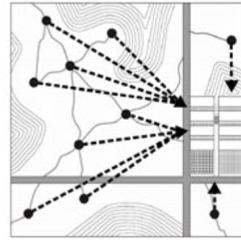
In a mountainous region we need a mountainous territorial strategy. It is time to think developing the territory with its specificities.



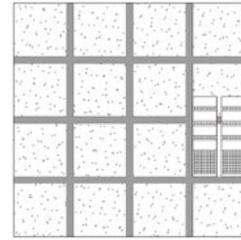
[ Problem | A Typical Relocation and Urbanization Process ]



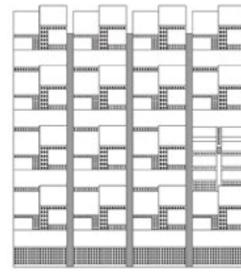
Original network of rural villages.  
**Villagers are self-sufficient in food by farming.**



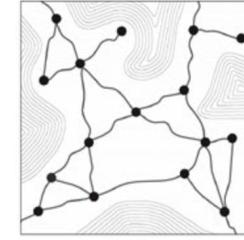
A newly-built residential resettled **all** villagers.  
**Villagers are turned from producers into consumers.**



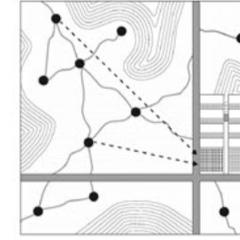
The government earns a lot of money by selling these land, **but the expanding urban grid swallowed all villages and farmlands.**



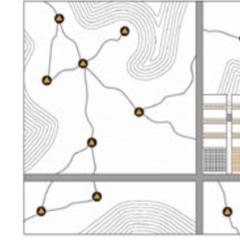
Real estate developers also make big money, **but urbanity and diversity of lifestyle are suffering a huge loss.**



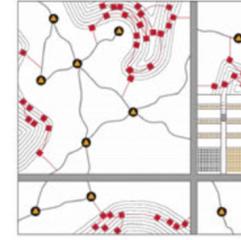
Original network of rural villages.  
**Villagers are self-sufficient in food by farming.**



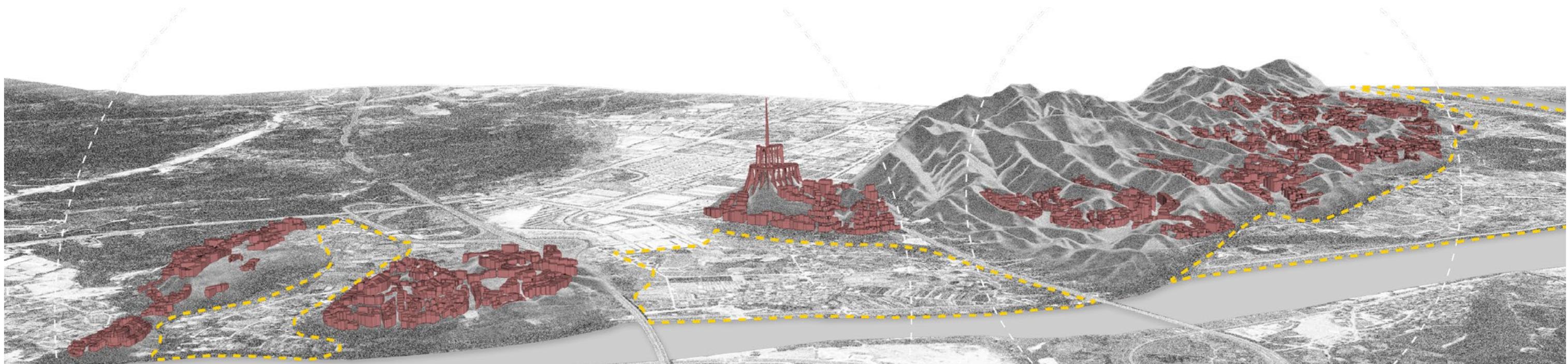
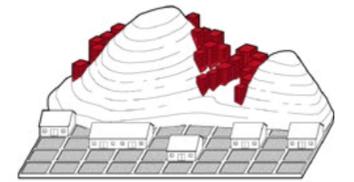
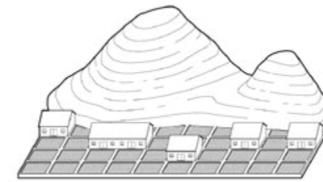
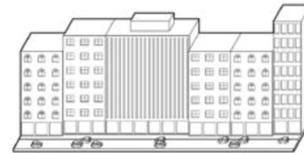
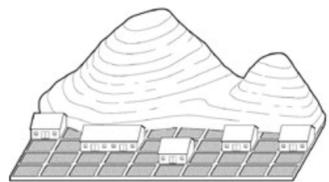
A newly-built residential resettled **voluntary** villagers.  
**Villages won't be demolished, villagers can still live here.**



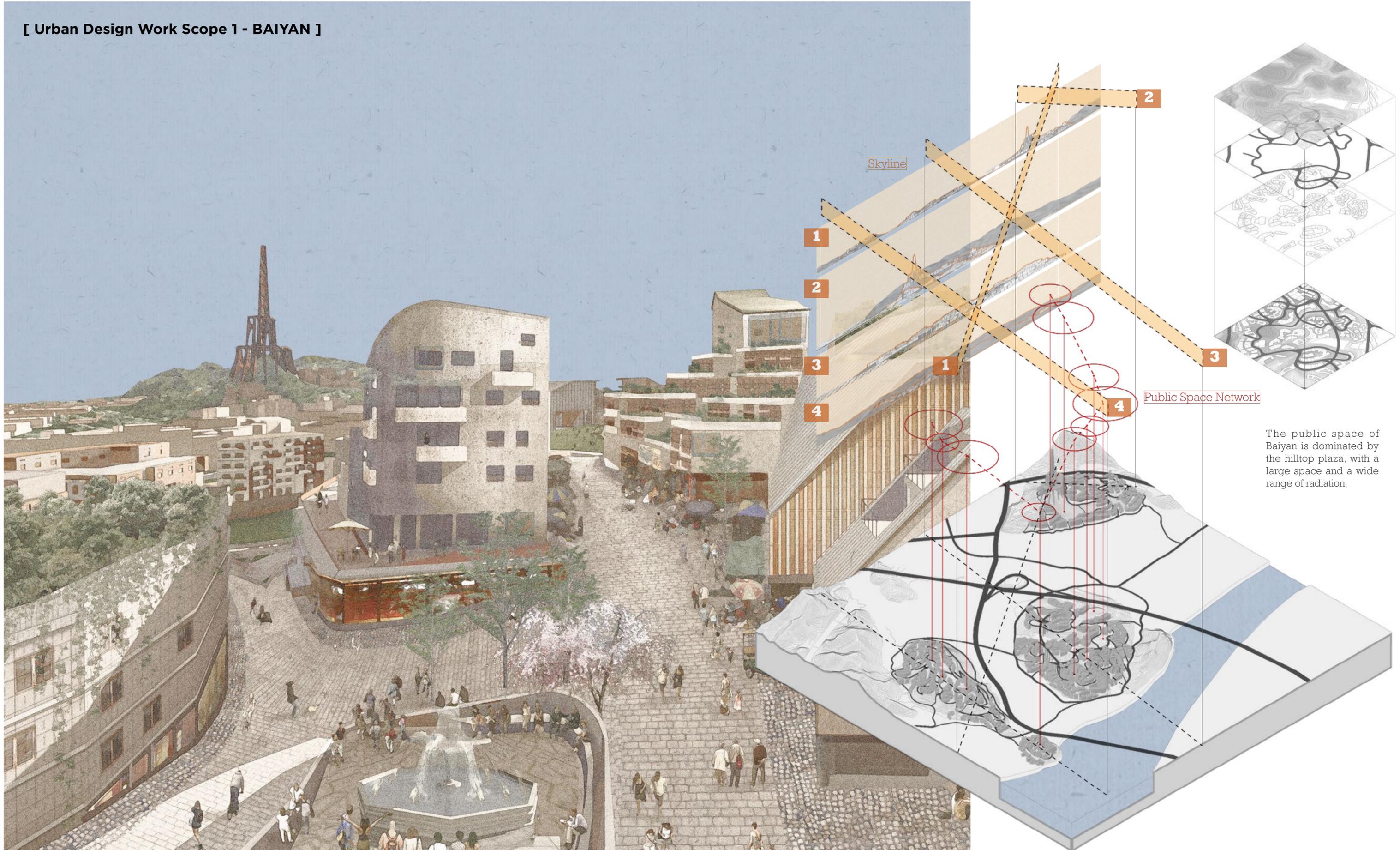
This newly-built residential would be converted into a **mixed-use** community center.



Building towns on the hills to preserve and rejuvenate villages and farmlands, which brings about the **sybiotic relationships of rural nature and urban society.**

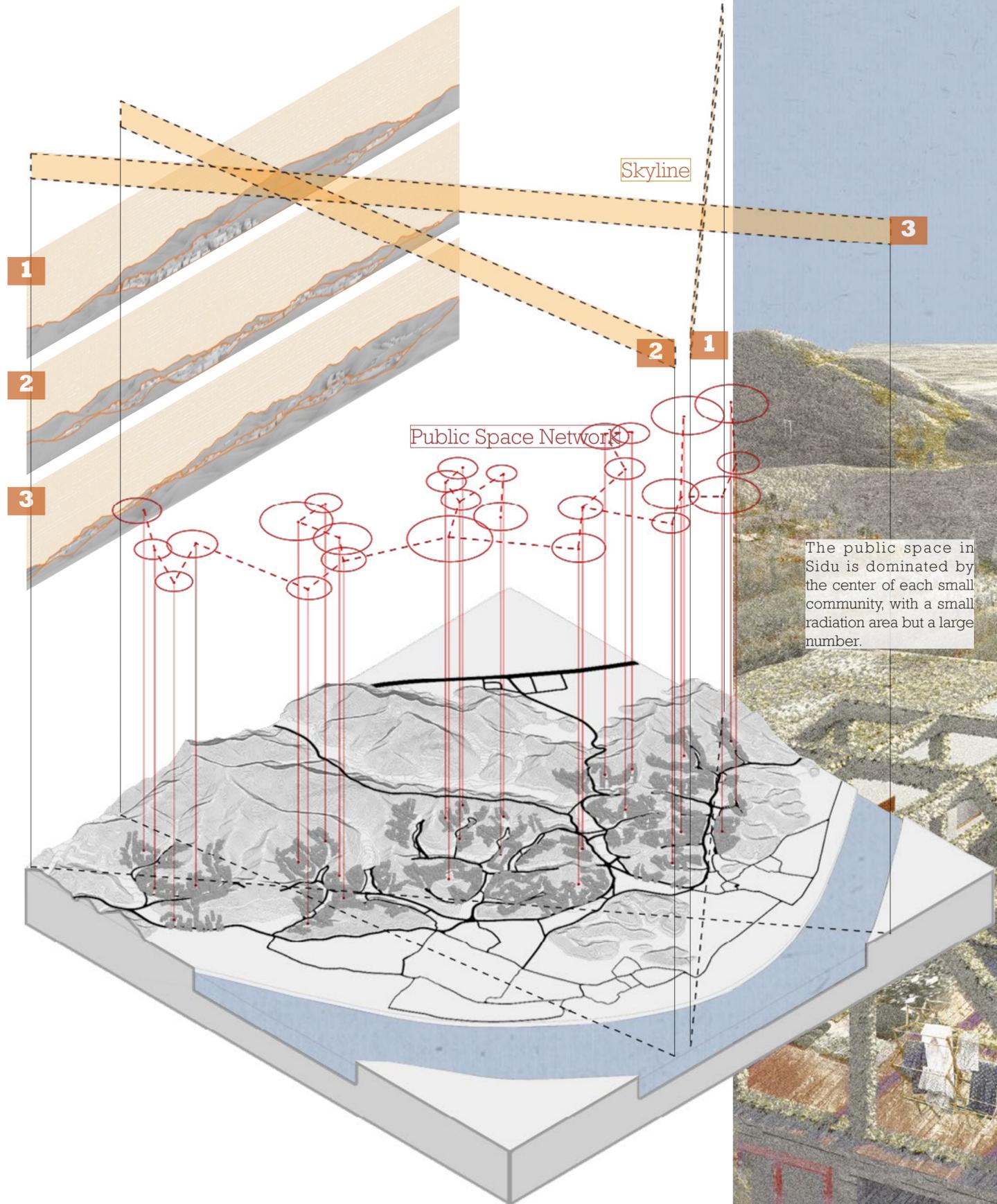


[ Urban Design Work Scope 1 - BAIYAN ]



The public space of Baiyan is dominated by the hilltop plaza, with a large space and a wide range of radiation.

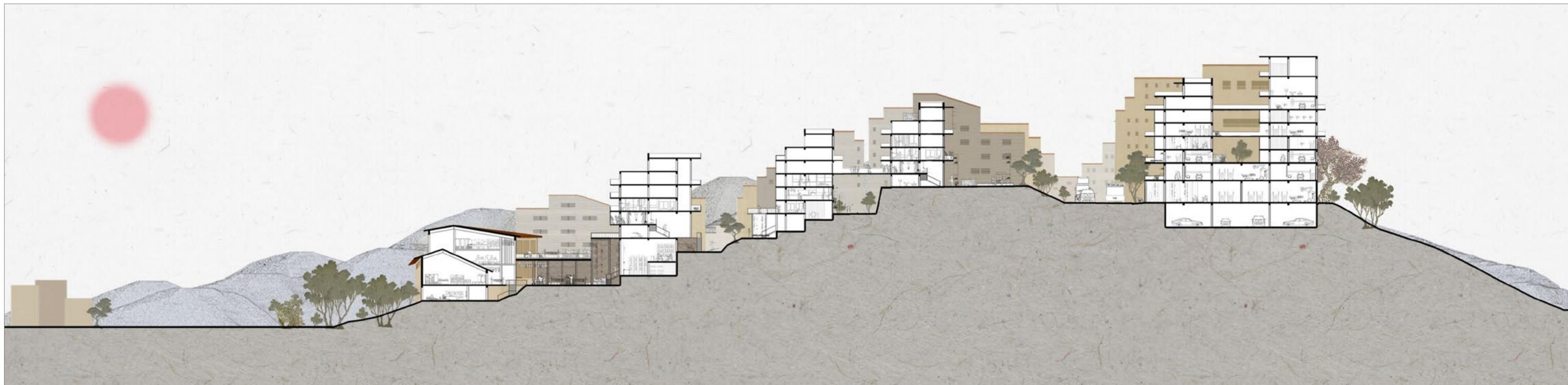
[ Urban Design Work Scope 2 - SIDU ]



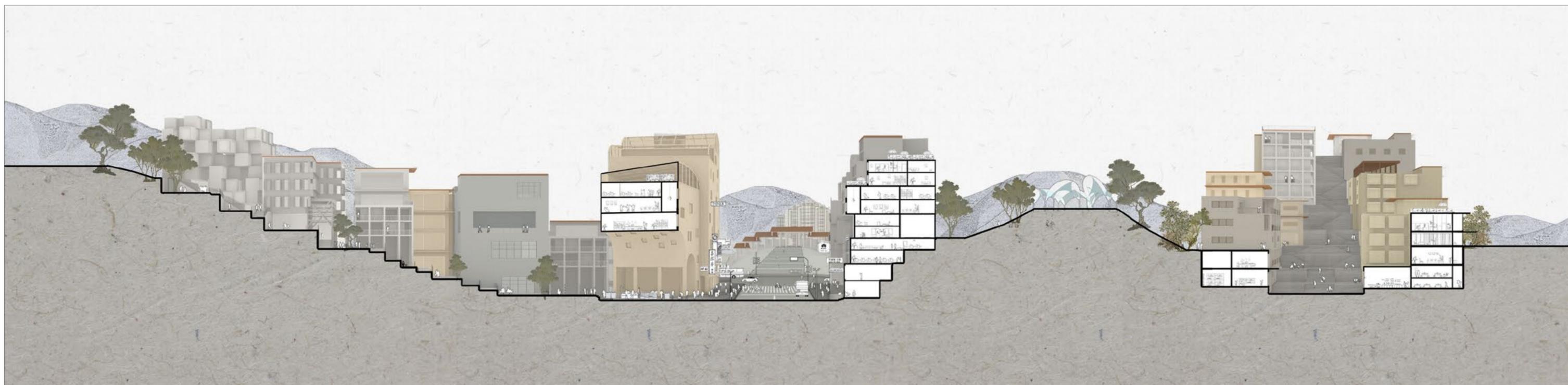
The public space in Sidu is dominated by the center of each small community, with a small radiation area but a large number.



[ Section of BAIYAN ]



[ Section of SIDU ]



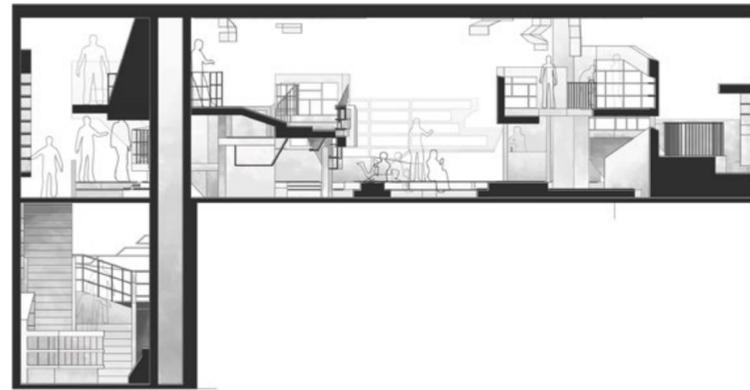
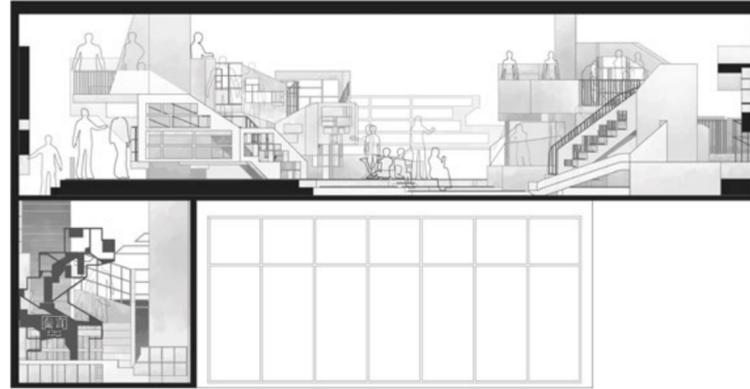


# PROFESSIONAL EXPERIENCE

**San-Yan Bookstore**

**Xiaowei and Dona's House**

[ San-Yan Bookstore ]



**Zai-Zao Architect**

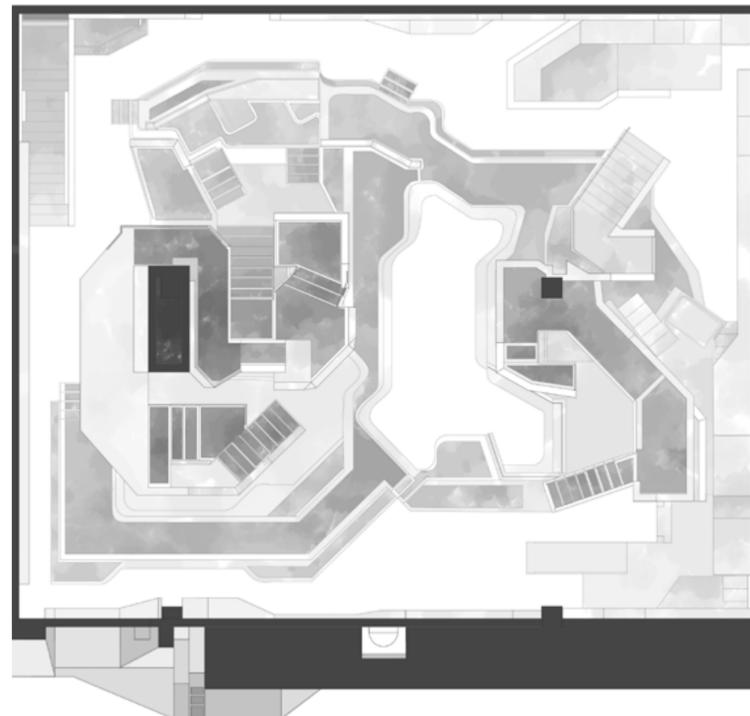
Hangzhou, China 2017

Project Type: Retail Interior

Supervisor: Deli Zhao

Status: Completed

Role: Architectural Assistant



[ Xiaowei and Dona's House ]

**Devolution Architect**  
Xiamen, China 2021

Project Type: Residential Interior  
Supervisor: Jiansong Tang  
Role: Architectural Assistant



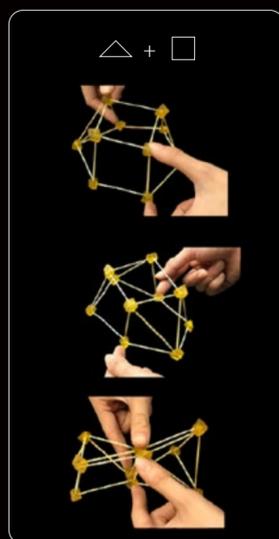
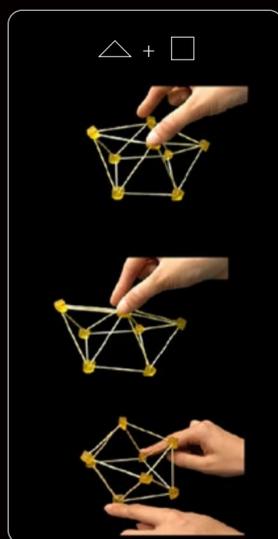
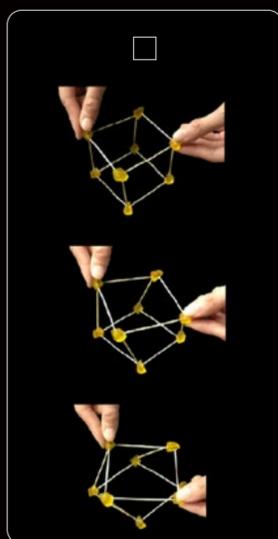
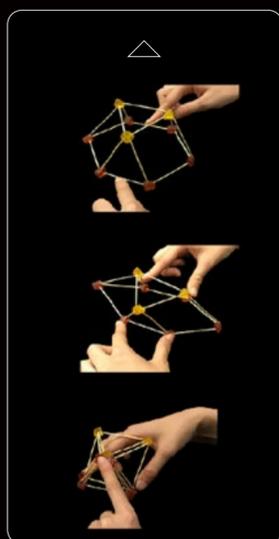
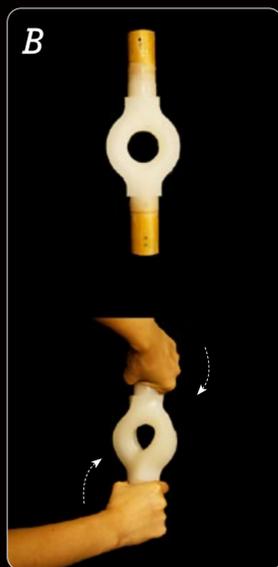
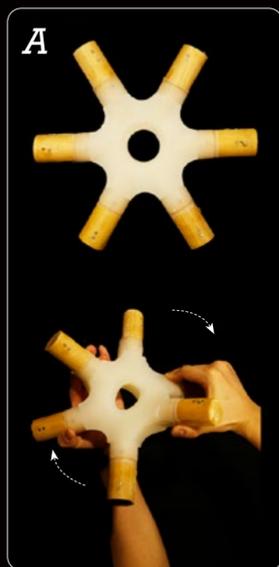
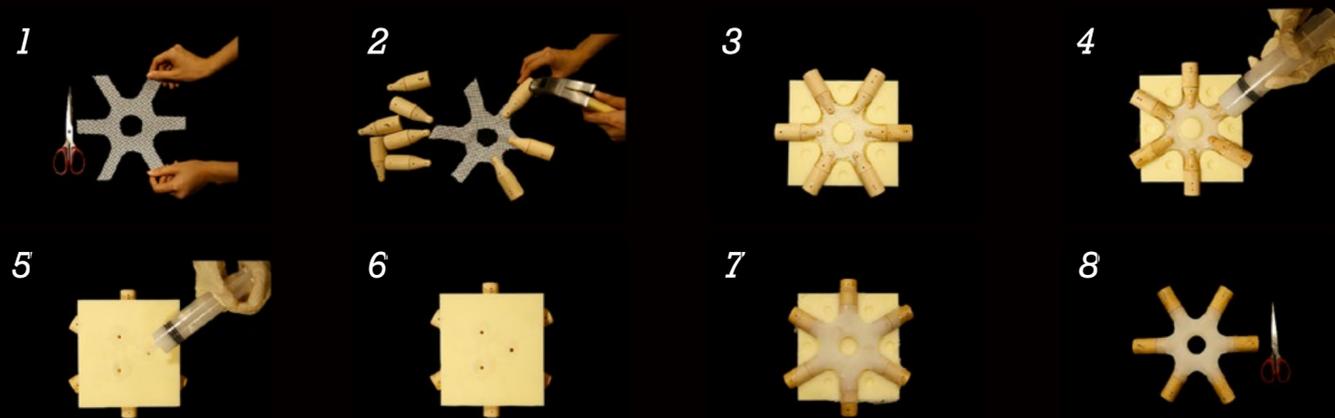
# OTHER WORKS

**Elastic Nodes Pavillion**

**Birdcage**

**Painting**

[ Elastic Nodes Pavillion ]



[ Birdcage ]

The literati in ancient China had an almost fanatical obsession with ShanShui, limited by the distance of the journey, they reproduced the imaginary Shanshui on daily necessities.

Based on this, this design uses the bird cage as the carrier to create an object that condenses the Shanshui.

The traditional round bird cage is divided into four evenly, each of which is designed to be very different but interconnected.

This division also gives this object the possibility of transformation. Each form corresponds to the imagery in traditional Chinese culture.



[ Painting ]

