



# Neighborhood Upgrading Catalyst

A Renovation Academy and Hostel in Luyano Neighbourhood

P4 presentation\_2017.05.19

Complex Projects Studio/Havana Cuba

Jiani You

## WHY?

To solve the contradiction between the serious housing problem and the lack of government's budget for construction.

💰 ...contradiction... 🏠



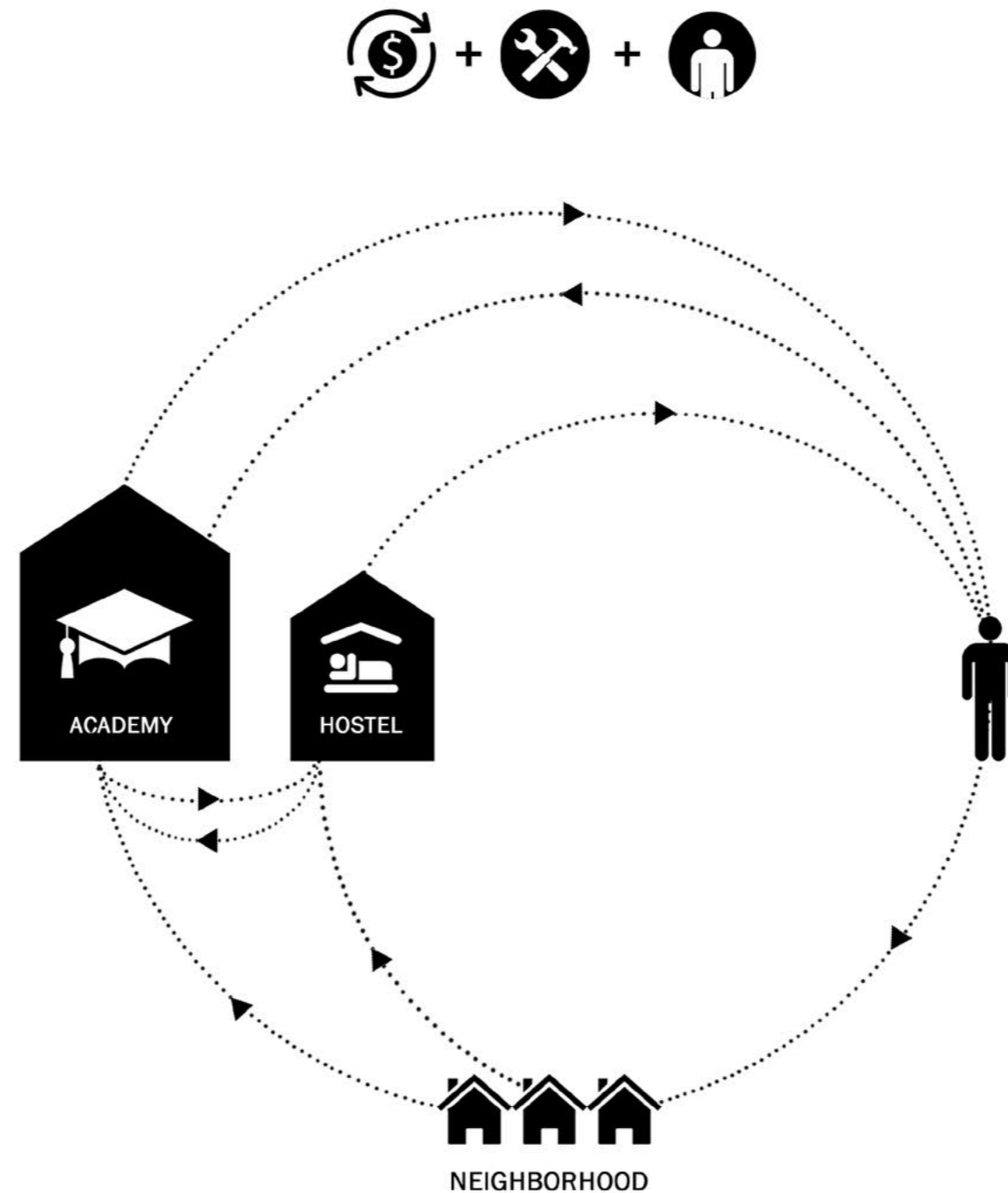
# WHAT?

A training academy in construction trades for neighborhood rehabilitation and a student hostel.



## HOW?

The academy delivers knowledge of housing renovation. The students learn and use the surrounding decayed houses for practice. By the time they learn, they help with the housing rehabilitation in the neighborhood. Meanwhile, the academy is financially supported by hostel programme and by student working outside the neighborhood.



## WHERE?

In Luyano neighbourhood near the junction of two main streets.



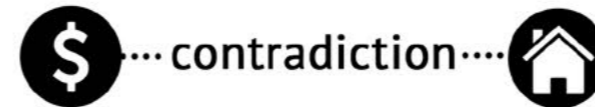


# NEIGHBORHOOD UPGRADING CATALYST

A renovation academy and a student hostel

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# GEOGRAPHICAL POSITION

La Habana Alamar



La Habana Vedado



La Habana Vieja



La Habana Profunda

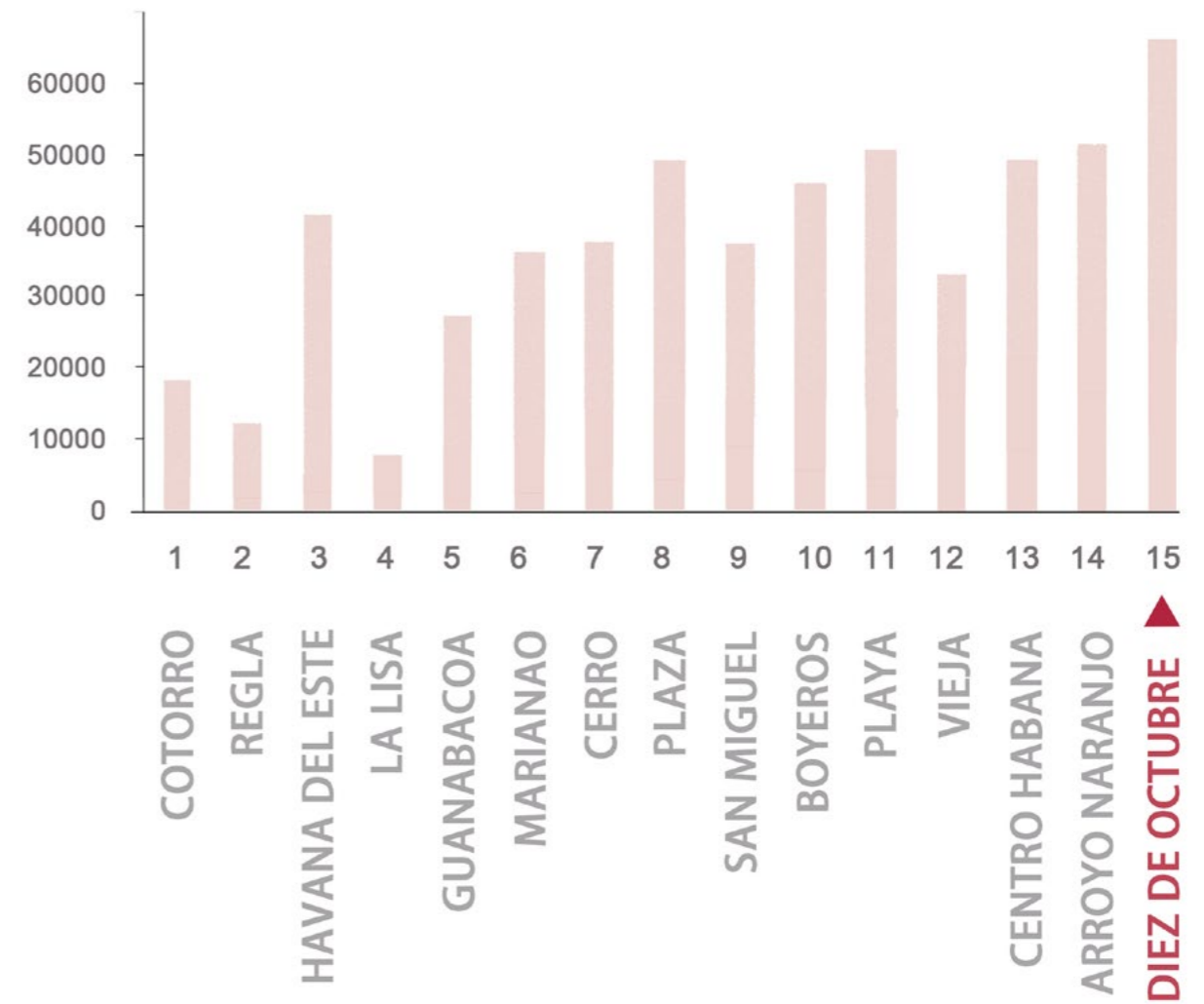




# DIEZ DE OCTUBRE



Municipality of Diez de Octubre



Housing units number

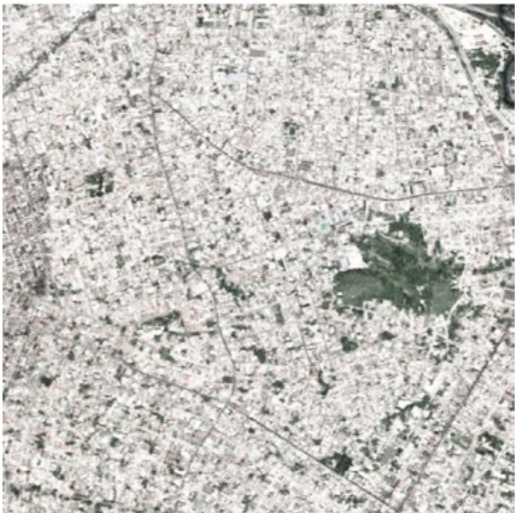
# PROFUNDA AS A RESIDENTIAL AREA



La Habana Vieja



La Habana Vedado

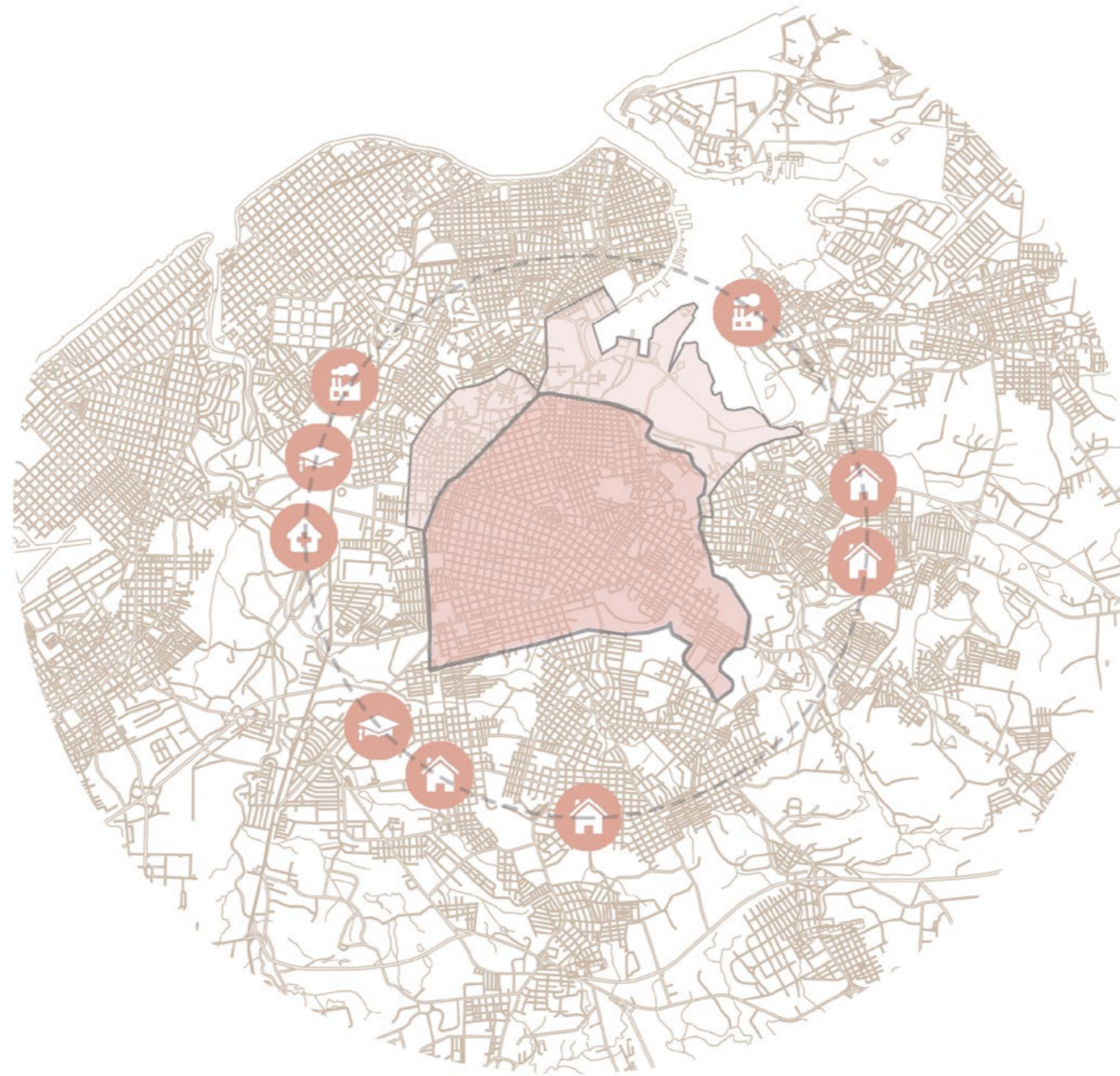


La Habana Profunda



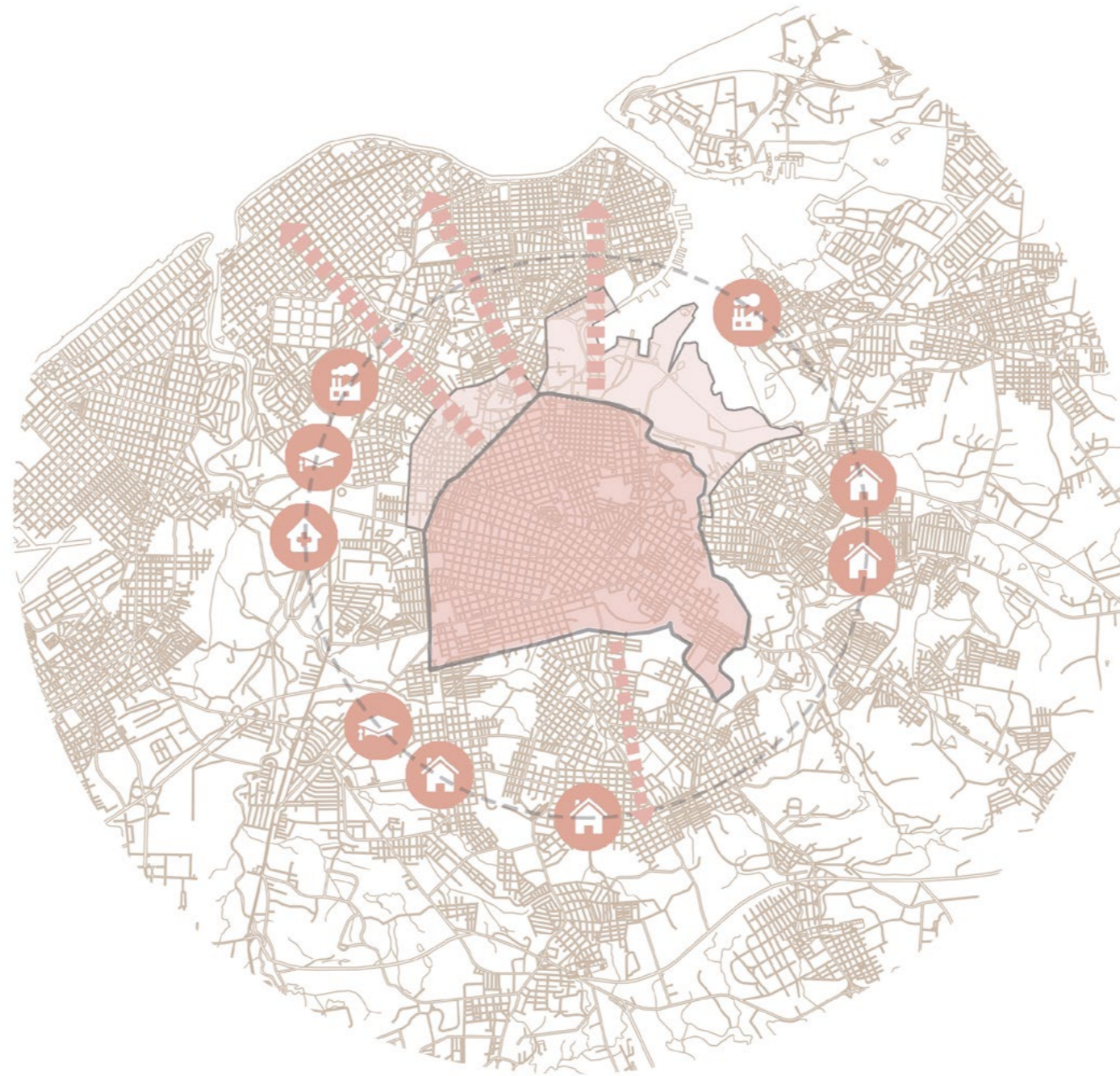
La Habana Alamar

# PROFUNDA AS A BIG HOME



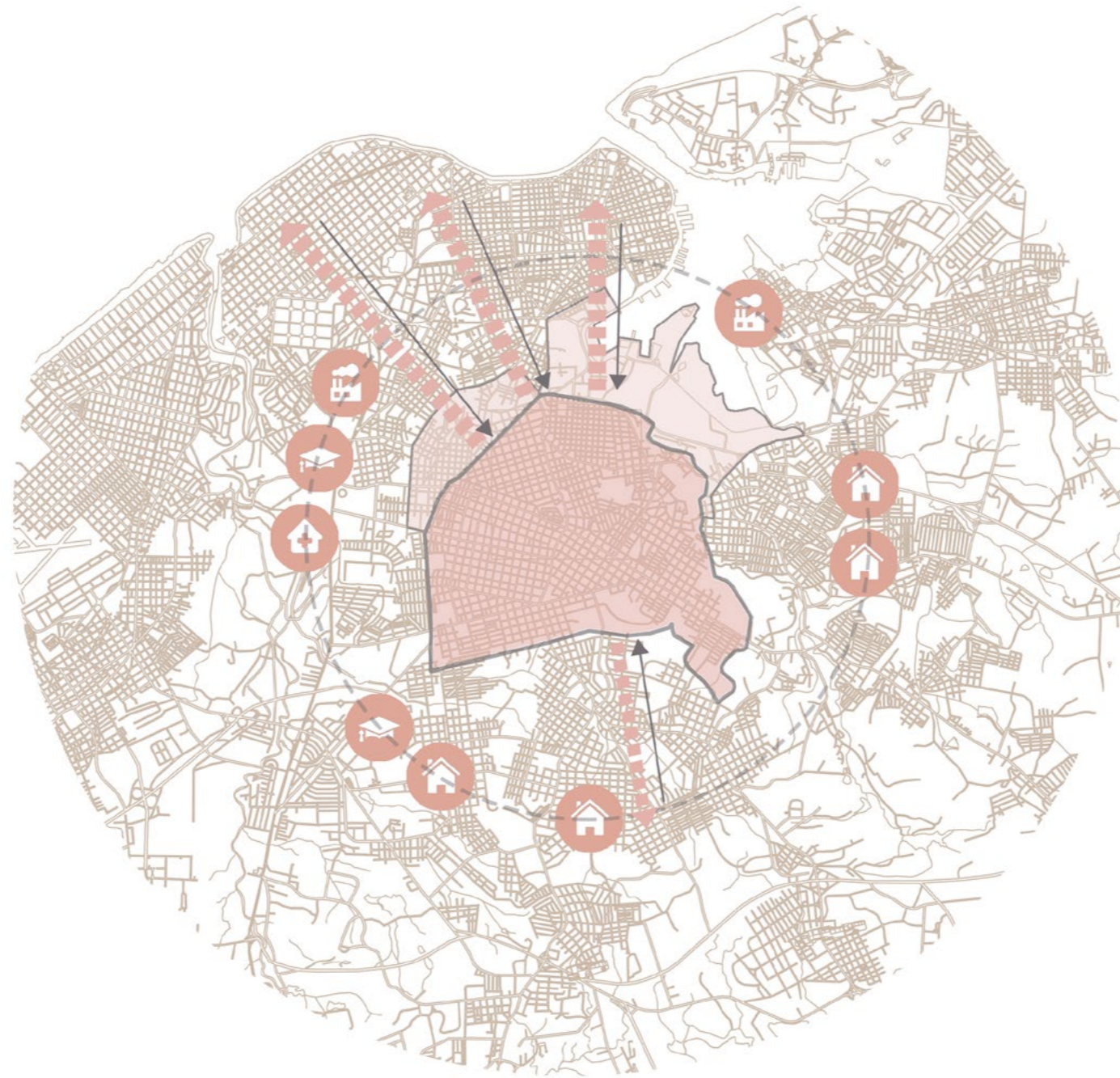
Diez de Octubre at present - working flow

# PROFUNDA AS A BIG HOME



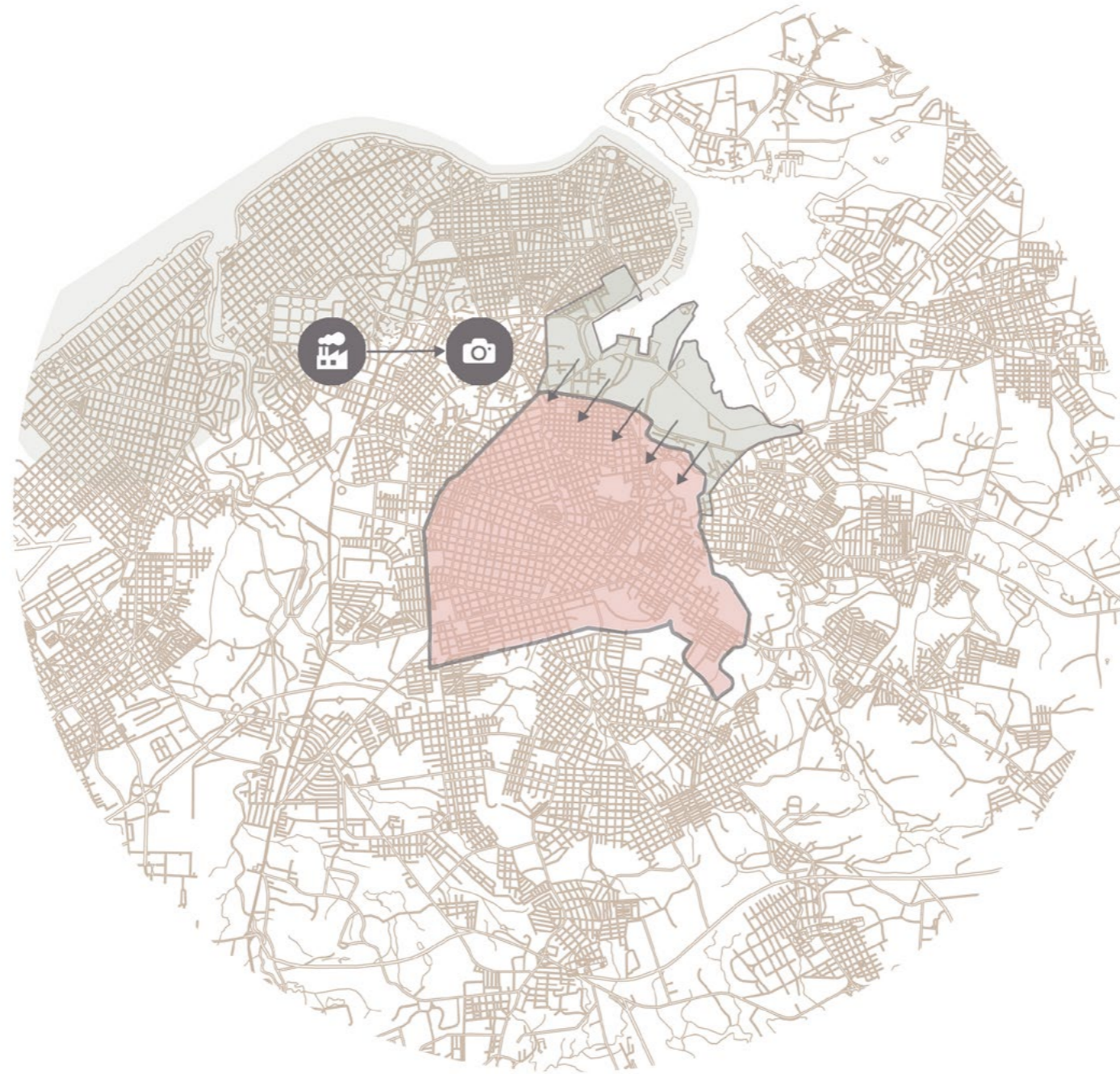
Diez de Octubre at present - working flow

# PROFUNDA AS A BIG HOME



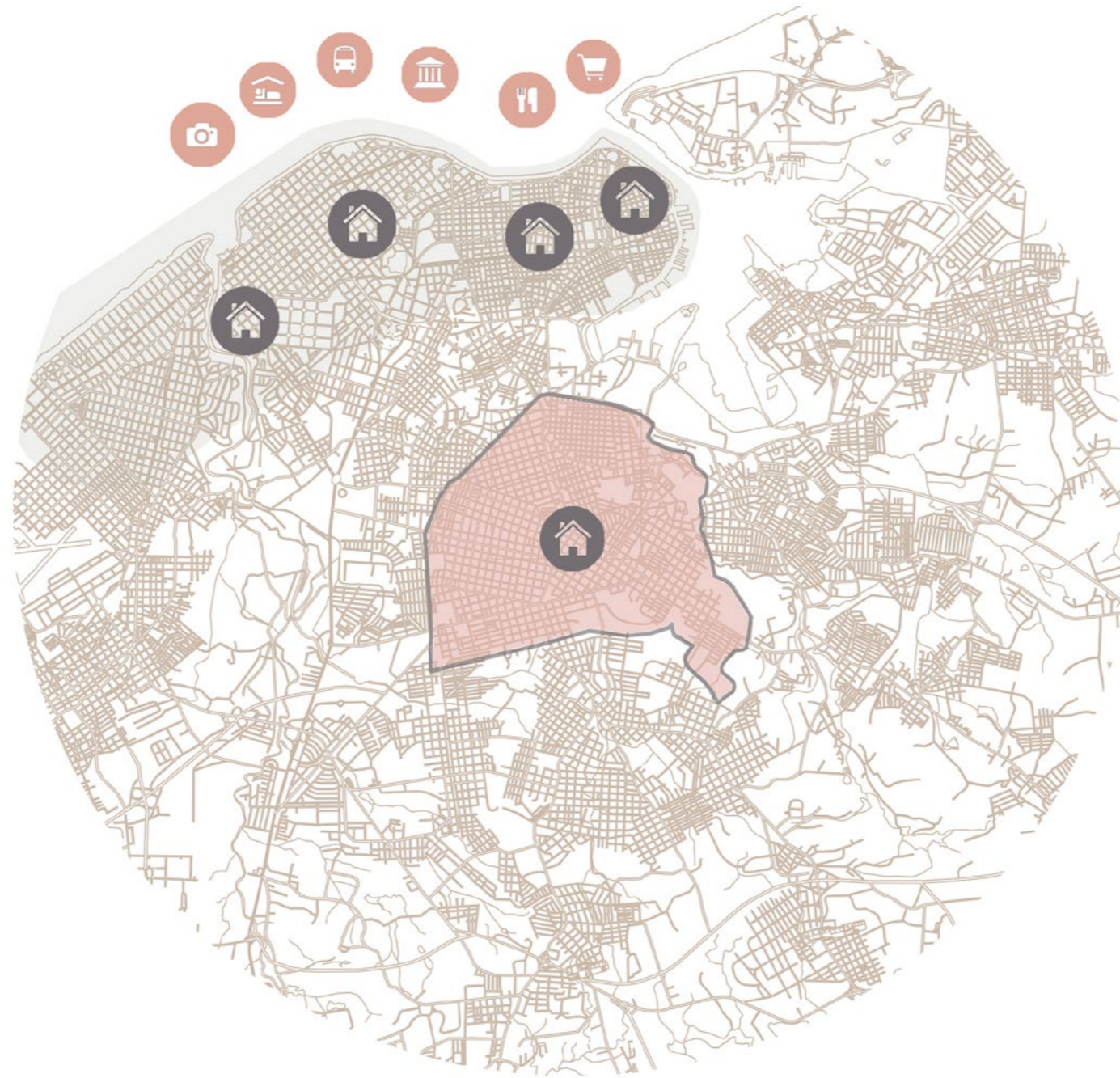
Diez de Octubre at present - living flow

# PROFUNDA AS A BIG HOME



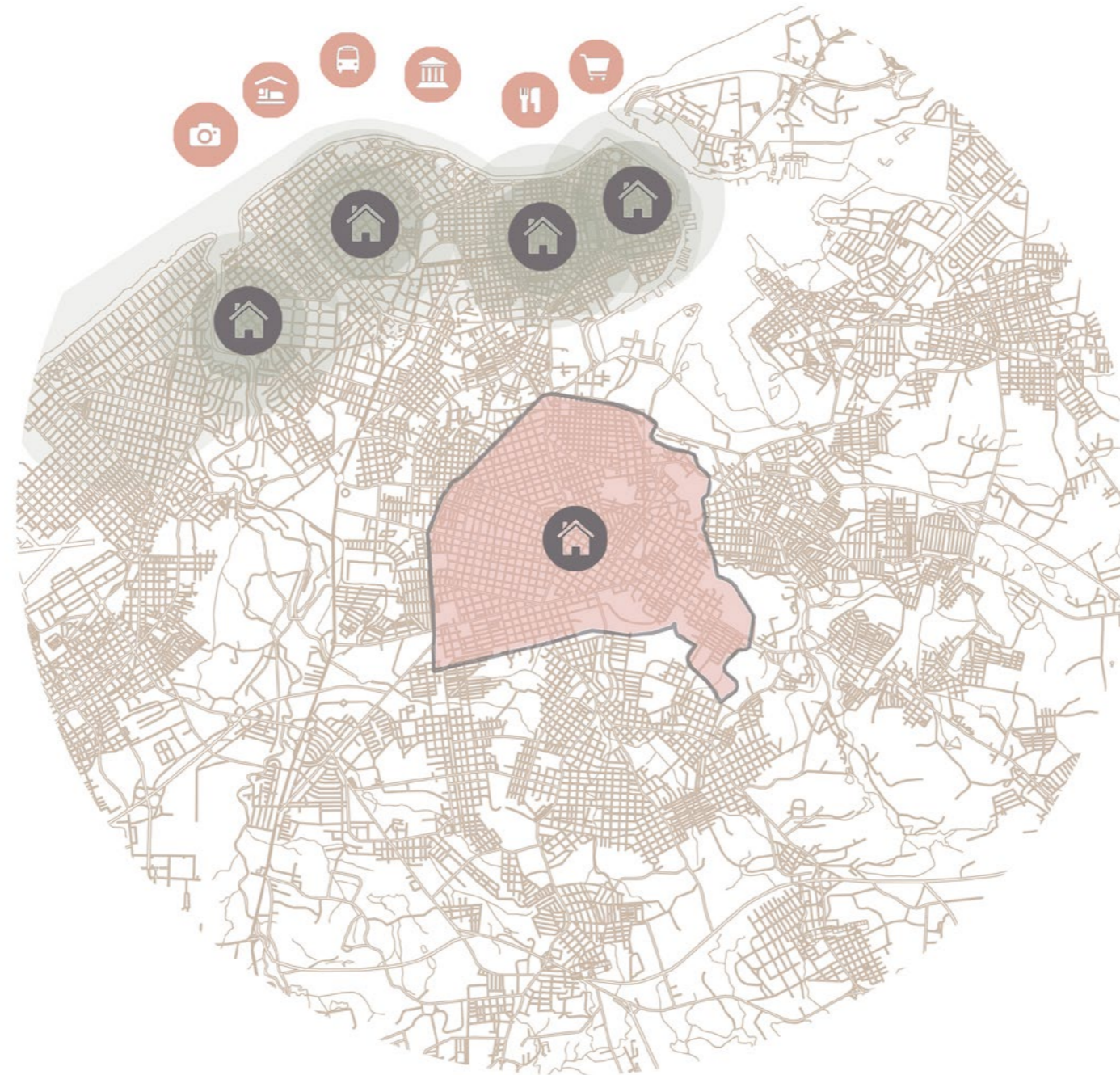
Diez de Octubre in the future - influence of new harbour

# PROFUNDA AS A BIG HOME



Diez de Octubre in the future

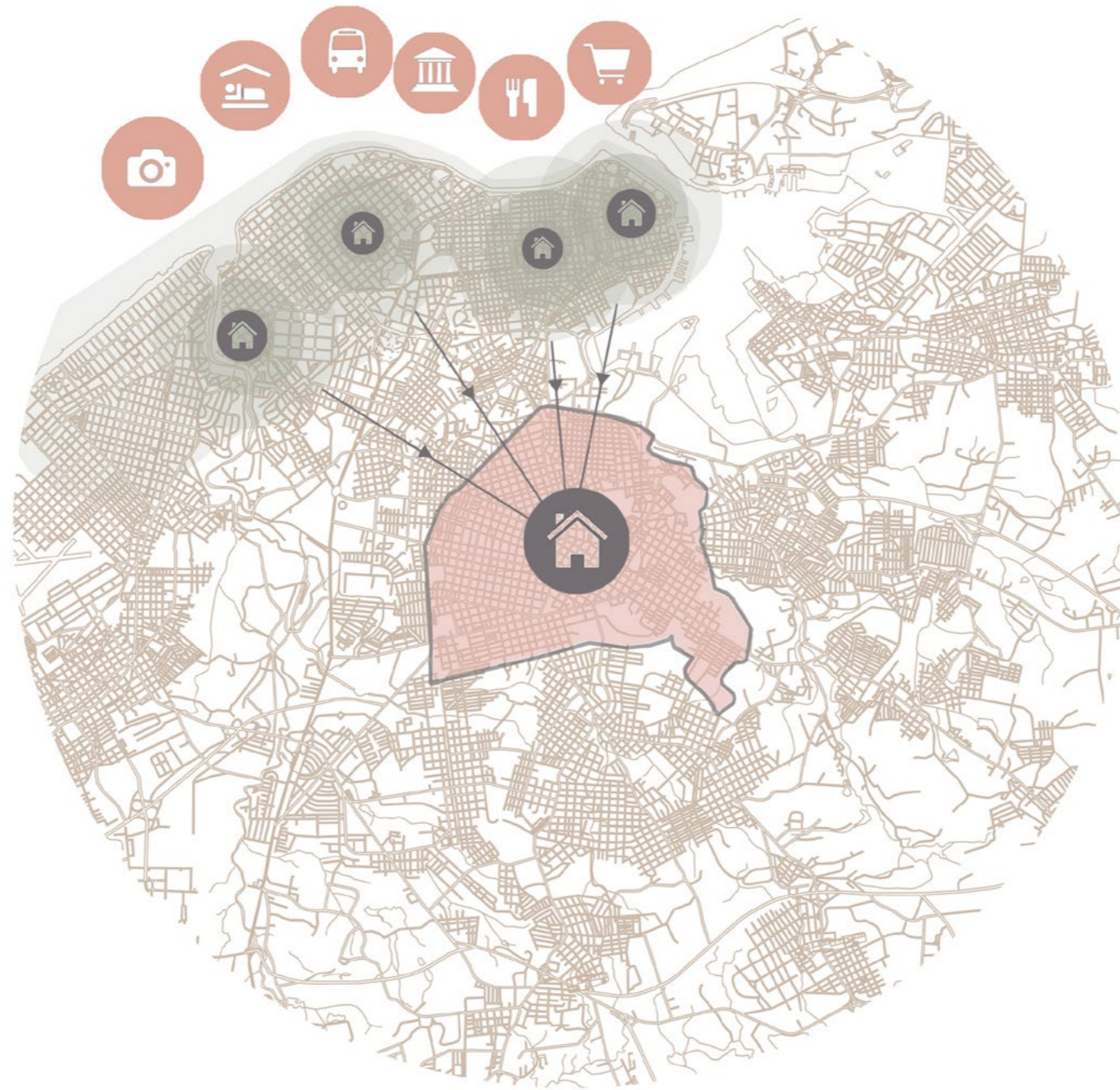
# PROFUNDA AS A BIG HOME



Diez de Octubre in the future - booming tourism



# PROFUNDA AS A BIG HOME



Diez de Octubre in the future - home for more people

# HOMES IN HAVANA









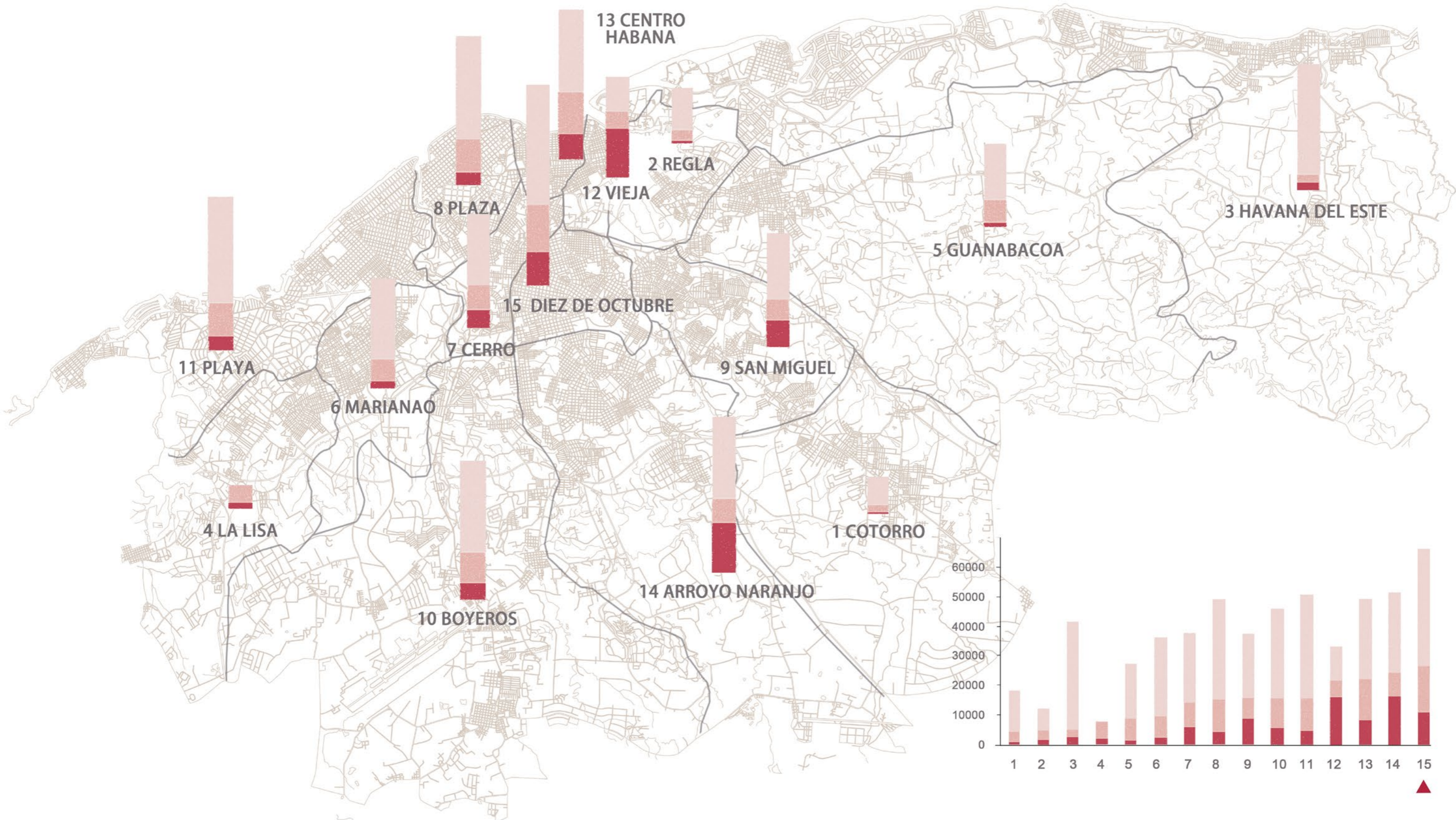
THE  
FORGOTTEN  
HOME

HAVANA  
PROFUNDA

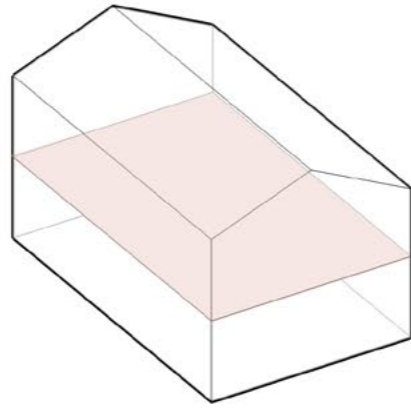
# HOUSING DECAY AS A SERIOUS PROBLEM



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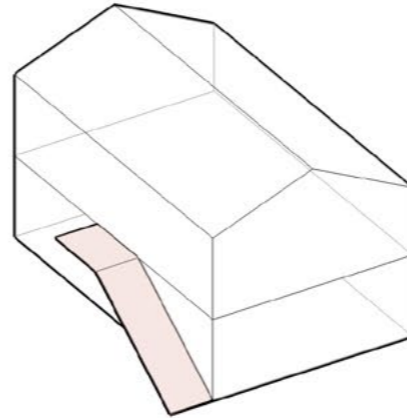


# HOUSING INFORMALLY RENOVATED



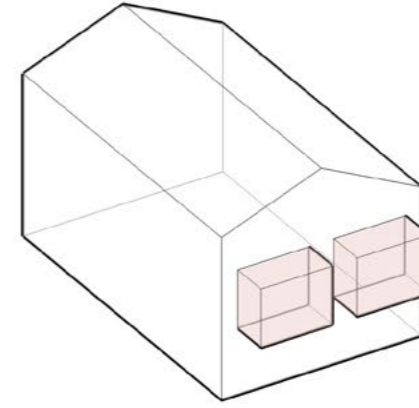
## ● BARBACOA

To accommodate relatives and growing families, the occupants frequently inserted an extra floor into existing rooms.



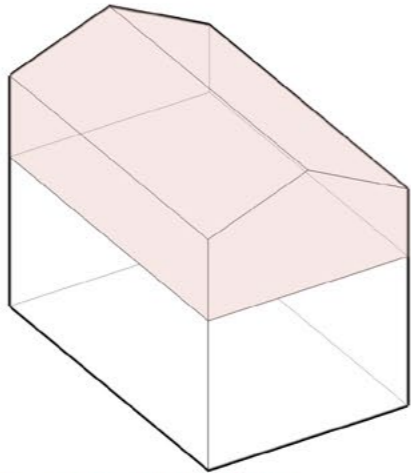
## ● SPLITTED HOUSES

The stairs are shifted from the inside to outside. The results are two individual houses mostly used by different generations of a family.



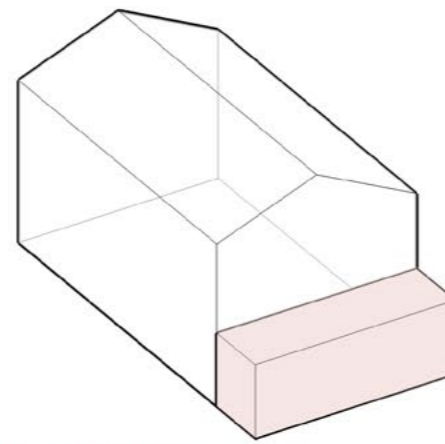
## ● REFRACTUATED FLAT

People sometimes divide their apartments for their growing children when the floor height is not enough to insert a barbacoa or extend.



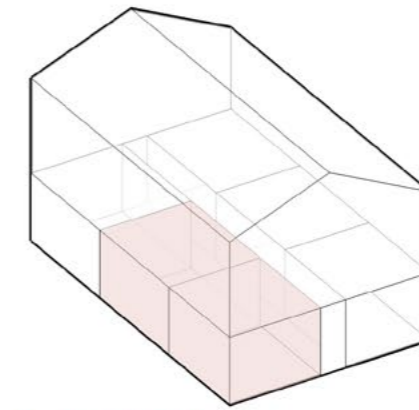
## ● CASETA EN AZOTEA

Sometimes the older multi-story buildings in Havana have flat roofs. And sometimes the upper floors of an old mansion is removed to construct huts on top of existing buildings.



## ● AMPLIACION

To satisfy the need for additional housing, people sometimes turn their balcony into a living space.

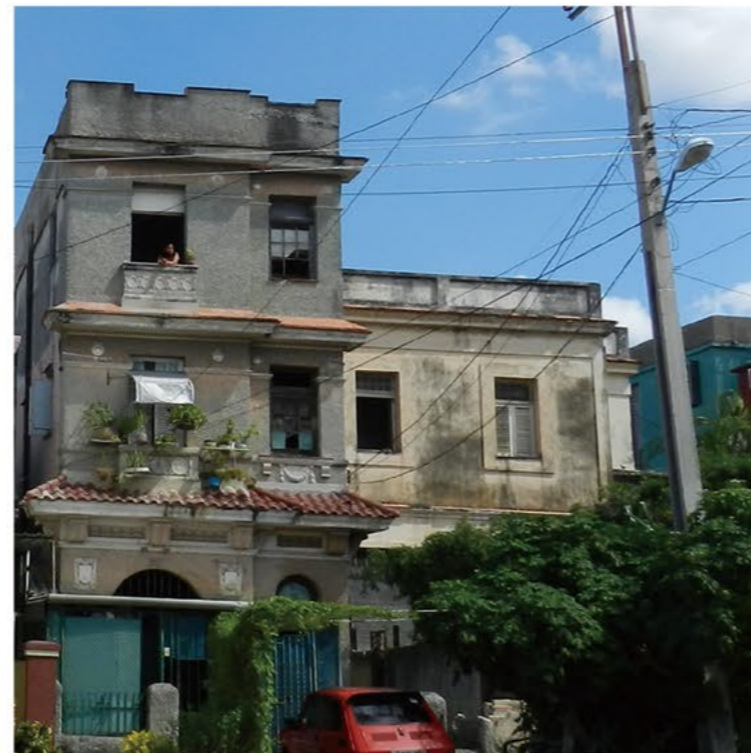


## ● CUARTERIA

Large mansions or older hotels sometimes are subdivided into rooms to accommodate many families.



# HOUSING INFORMALLY RENOVATED



# A New Collapse in Havana

Mario Hechevarría Driggs February 19, 2016 Articles

Campanario Street, almost at its intersection with Estrella, remains obstructing vehicular traffic from a few days ago due to the accumulation of rubble product of the spontaneous collapse of a building that was over one hundred years old.



## Latest News: At Least Five Dead in Building Collapse in Havana Vieja /

The result is that while most homes are in a dangerous degree. The most dire situation ancient buildings expands and breaks apart.

"Last November we had 16 inches of rain reports Miguel. These collapses are called three per day. The sad fact is that this city



## In Pictures: Housing in Old Havana

Many of the capital's historic buildings are in a dangerous state of disrepair.

Alison McCauley | 25 Jan 2014 10:32 GMT

Shares: 619

Since Old Havana was declared a UNESCO World Heritage site in 1982, many buildings have been restored - and though the work continues, critics say the emphasis remains on preserving key buildings rather than improving the lives of the majority of the people who live here.

While certain buildings are fixed to a high standard, the vast majority of homes remain in a dangerous state. Age, decay, neglect, over-crowding and amateur repairs combine with natural factors to threaten the stability of Havana's Baroque, Neoclassical and Art Deco buildings. There are two or three partial or total building collapses in Old and Central Havana every week. And residents have no choice but to continue to live in the rubble.

Seven out of every 10 homes are in need of major repairs, according to official statistics. Some of the main issues faced by Havana's denizens are dangerous, including outdated electrical wiring, basic or even nonexistent plumbing, unstable floors and walls, collapsing ceilings, water damage, mould and unstable stairs.

## Old Havana residential building collapses, killing 4

already weakened



## 2 dead as buildings collapse in Havana amid heavy rains



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# Building Collapse in Havana: One Dead and Serious Injuries / Martha Beatriz Roque Cabello

Translating Cuba February 10, 2014 Martha Beatriz Roque Cabello

Rosario Álvarez, 96, victim of the collapse

Rosario Álvarez, 96, victim of the collapse

Rosario Alvarez, 96, who died in the collapse, had repeatedly complained to the authorities that her home was in the process

of falling down.

HAVANA, Cuba. - At 6:30 in the evening on February 7, the partial collapse of a three-story residential building at No. 5 San Carlos, between Morell and Iznago in the Santos Suarez neighborhood, 10th of October municipality in the city of Havana, caused the death of Mr. Rosario Alvarez Alvarez, age 96, who was sitting in the dining room of her apartment when the incident occurred.

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URBAN SLUMS REPORT: THE CASE OF HAVANA, BY MARIO COYULA - 2003



# Old Havana residential building collapses, killing 4

Neighborhood contains most of city's oldest buildings

By Associated Press, Amanda Batchelor - Senior Digital Editor

Posted: 3:15 PM, July 16, 2015

Updated: 3:15 PM, July 16, 2015

Join the conversation



## Old Havana Building Collapse Kills Four

July 16, 2015 | Print | Email | Share | Tweet | Share

By Fabian Flores (Café Fuerte)

HAVANA TIMES — A building in the historic center of Havana collapsed at dawn on Wednesday leaving four dead, including a three-year-old child, and three other people injured.

The dramatic incident occurred at 7 a.m. when the two-story building located at number 409 Habana St., between Obispo and Obrapia Streets in Old Havana crumbled in seconds in the full view of early morning passersby.



THE MARFA FOUNDATION

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### Death Toll in Cuba Building Collapse Climbs to 4

HAVANA - Three women and a man died and five others were injured when a building collapsed in the densely populated Centro Habana neighborhood of the Cuban capital, official media said.

The media initially reported Wednesday morning that three people had died and six were injured.

The three-story building was declared uninhabitable several years ago, but several families continued to live in the structure, area residents told Efe.

Havana firefighters, the National Police, health services personnel and local authorities participated through Wednesday morning in search-and-rescue efforts at the site, which was cordoned off to passing traffic.

State television said four of the five injured people were still hospitalized and are listed in stable condition.

The building's third floor gave way shortly after 9:30 p.m. Tuesday, one of the residents, 23-year-old Teresa Reve Lopez, told Efe, adding that she barely had time to grab her two young daughters and dash out onto the street.

Authorities have tried several times to clear people from the dilapidated structure, neighbors said.

Cuba, a nation of 11.2 million people, had a housing shortfall of roughly 600,000 units in 2010, partly as a result of the damage caused by three hurricanes that pounded the Communist-ruled island in 2008.

More than half the buildings in Cuba are in disrepair, according to official figures. EFE

0 Comments

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## A New Collapse in Havana

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Campanario Street, almost at its intersection with Estrella, remains obstructing vehicular traffic from a few days ago due to the accumulation of rubble product of the spontaneous collapse of a building that was over one hundred years old.



# three houses collapse everyday

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Neighborhood contains most of city's oldest buildings

By Associated Press, Amanda Batchelor - Senior Digital Editor

Posted: 3:15 PM, July 16, 2015

# 39% families are living in poor conditions



## Old Havana residential building collapses, killing 4

# more than 10,000,000 houses need to be repaired



## 2 dead as buildings collapse in Havana amid heavy rains



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February 10, 2014

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Advertisement for 'LIVING' furniture featuring a minimalist approach and a 'GET INSPIRED' button.

Advertisement for 'THE MARFAN FOUNDATION' promoting a walk for victory to benefit the foundation on January 29th.

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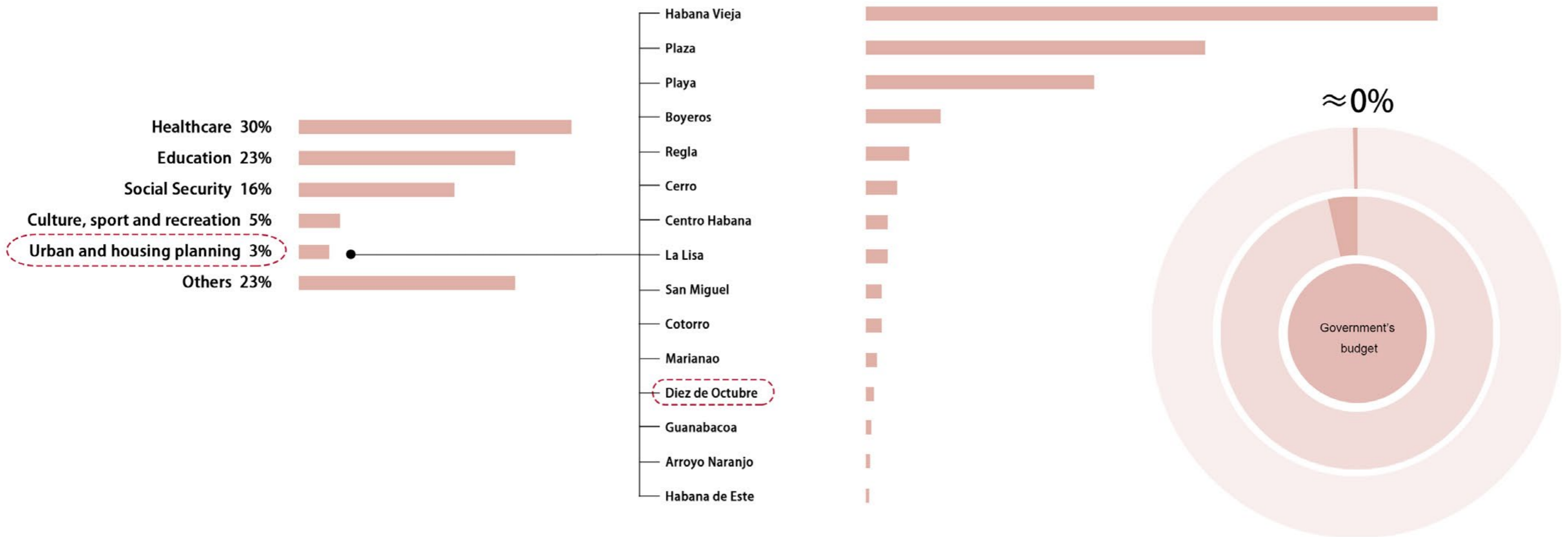
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# GOVERNMENT'S BUDGET FOR CONSTRUCTION



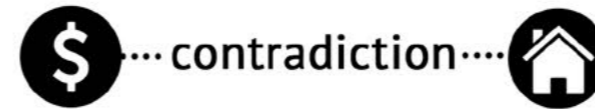


CONTRADICTION

## WHY?

To solve the contradiction between the serious housing problem and the lack of government's budget for construction.

- 1. Housing decay in Havana
- 2. Profunda - big home of Havana
- 3. Profunda - a forgotten area



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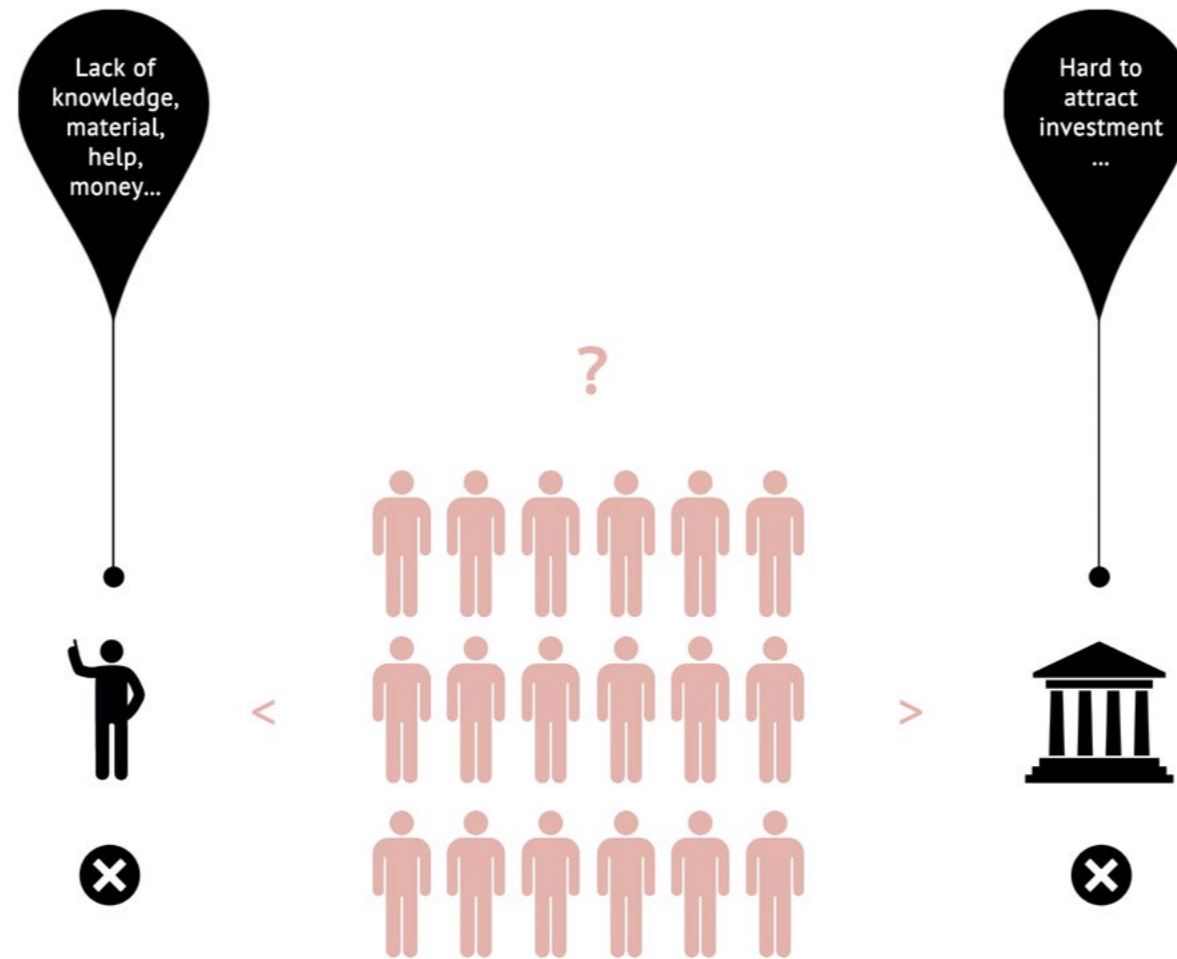


## WHERE?

In Luyano neighbourhood near the junction of two main streets.



# SOLVE IT WITH COLLECTIVE EFFORT



## AS A NEIGHBOURHOOD

- Share
- Work
- Learn
- Rebuilt
- Help
- ...

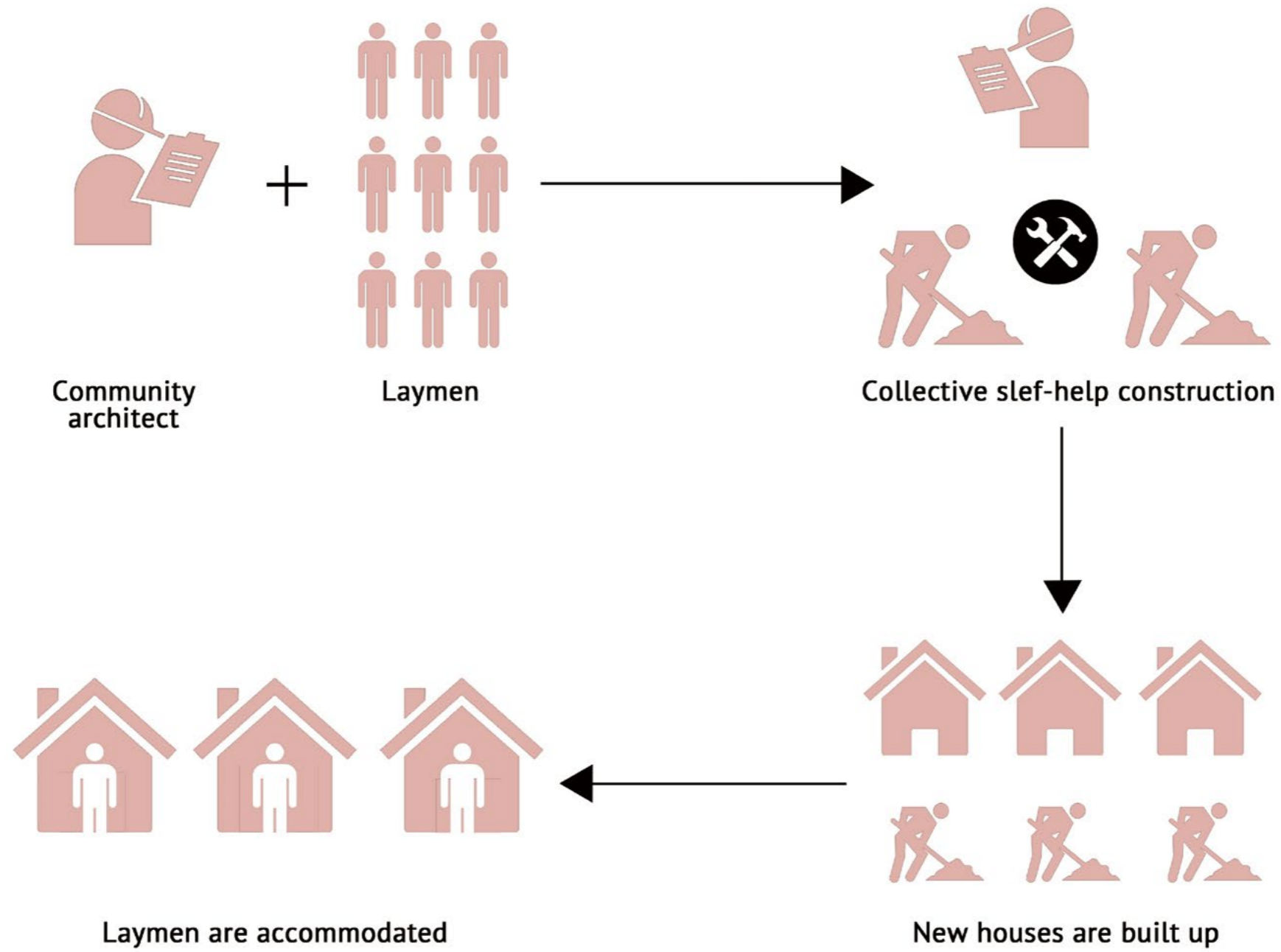
# MICRO-BRIGADAS

a selfhelp & mutual aid strategy





# MICRO-BRIGADAS



## MICRO-BRIGADA



From vacant plot to new building

# MICRO-BRIGADA



From vacant plot to new building

## MY DESIGN



From decayed neighborhood to nice neighborhood

## MY DESIGN



From decayed neighborhood to nice neighborhood

# MY DESIGN

Professional knowledge

Practical apprenticeship



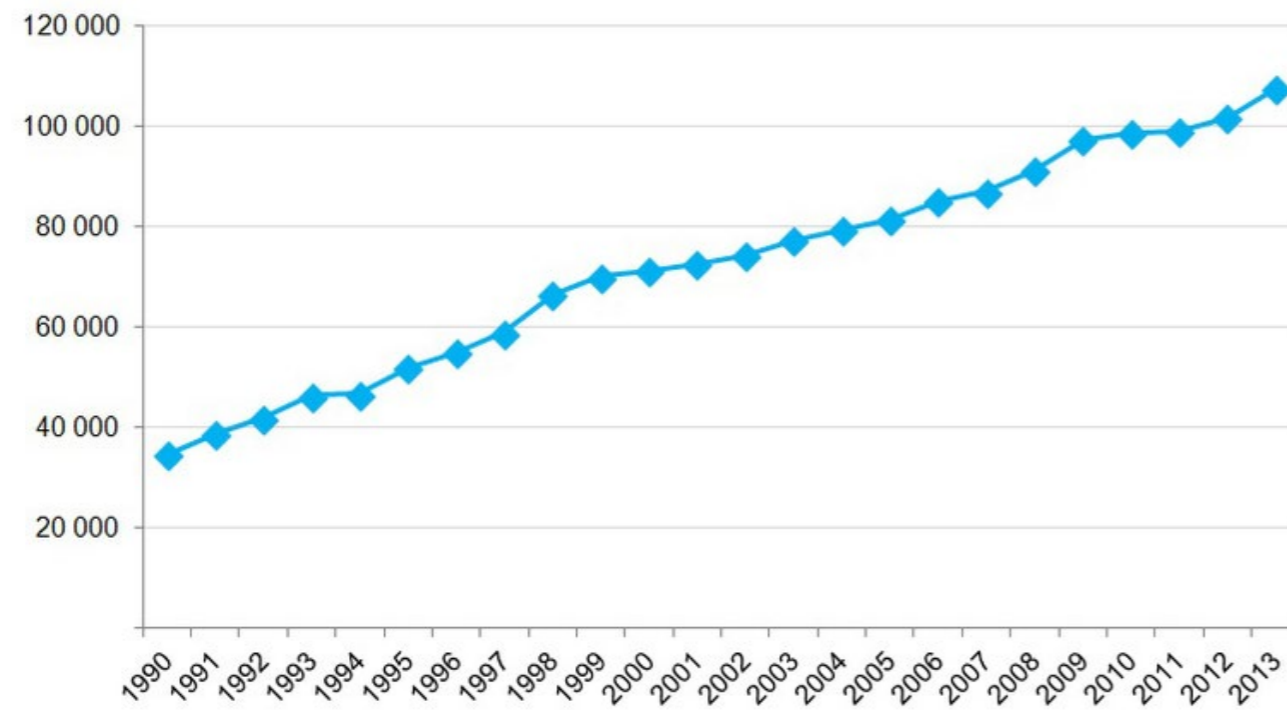
Theoretical + Practical

# TRAINING ACADEMY IN CONSTRUCTION & RENOVATION TRADE

Professional knowledge + Practical apprenticeship



# MORE NEED FOR SKILLED WORKERS



Booming tourism



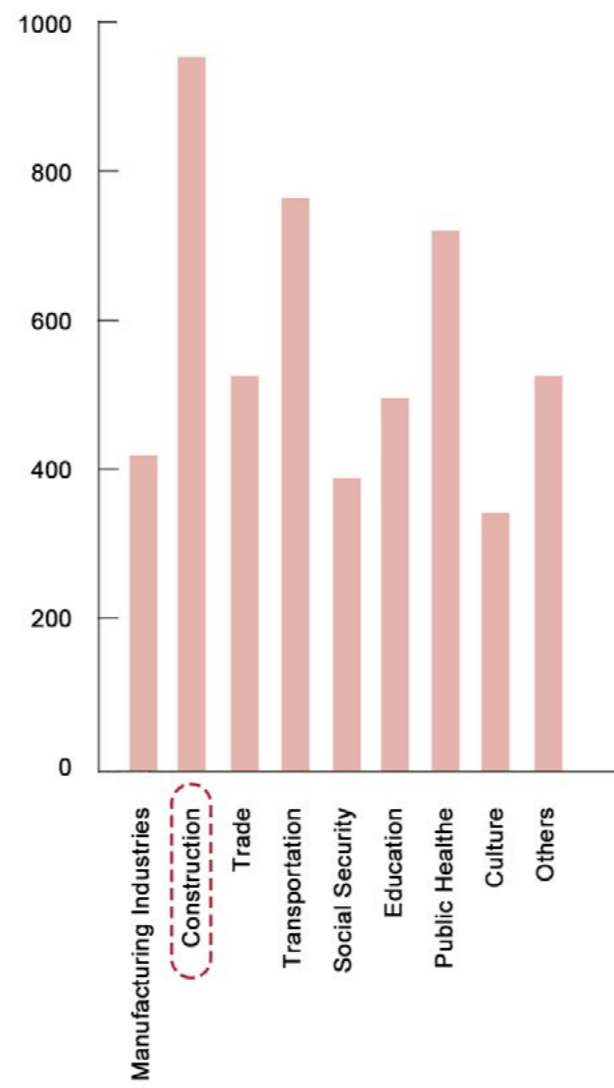
Real estate market



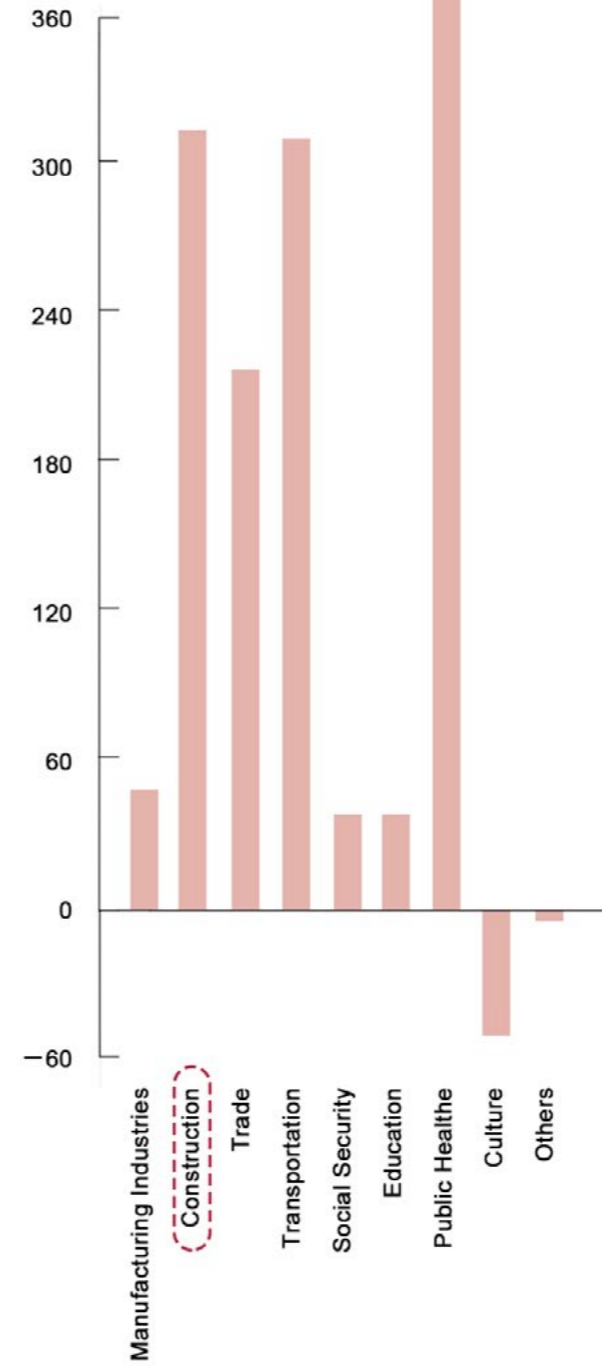
## MORE NEED FOR SKILLED WORKERS



# MORE NEED FOR SKILLED WORKERS

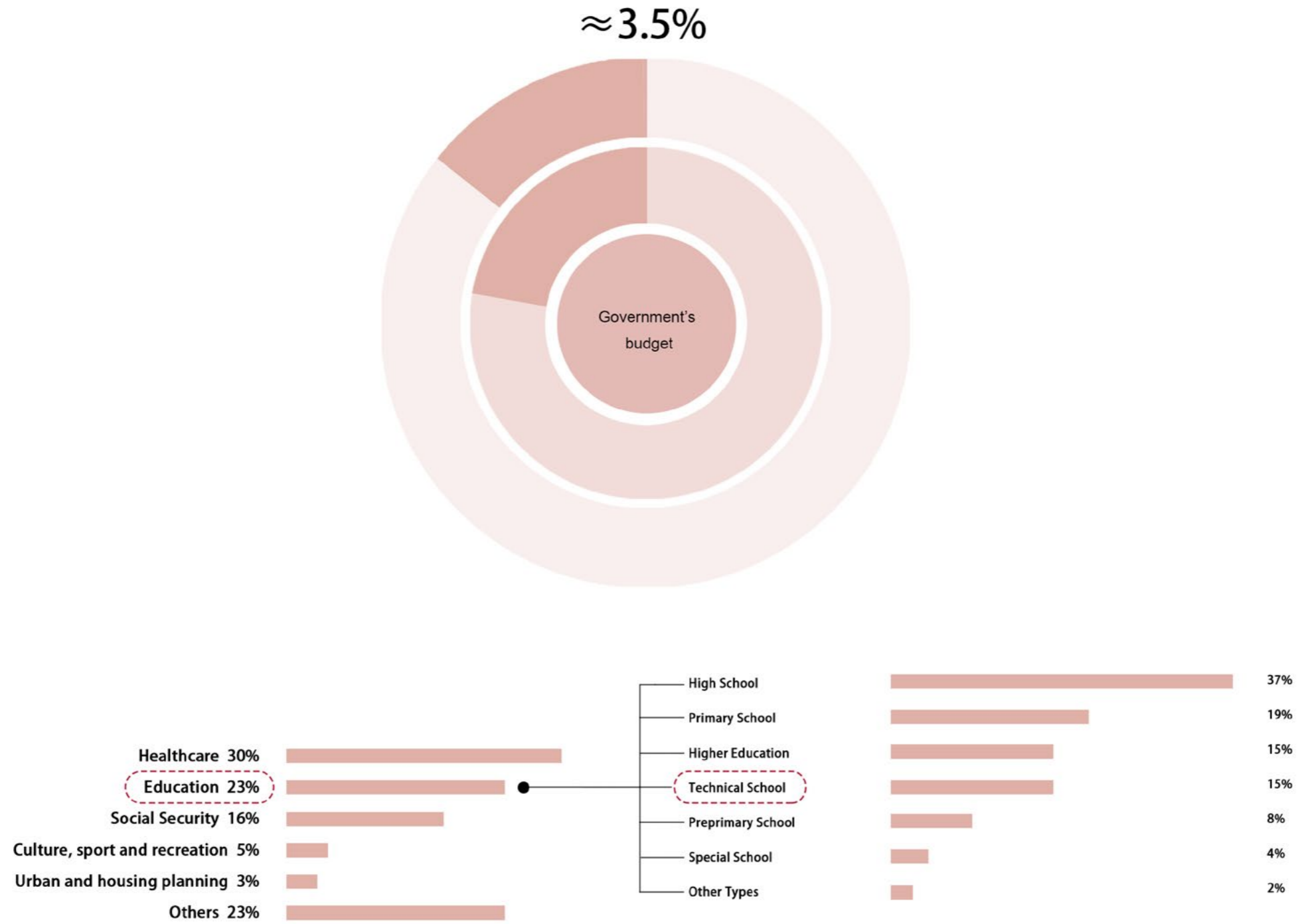


Average salary

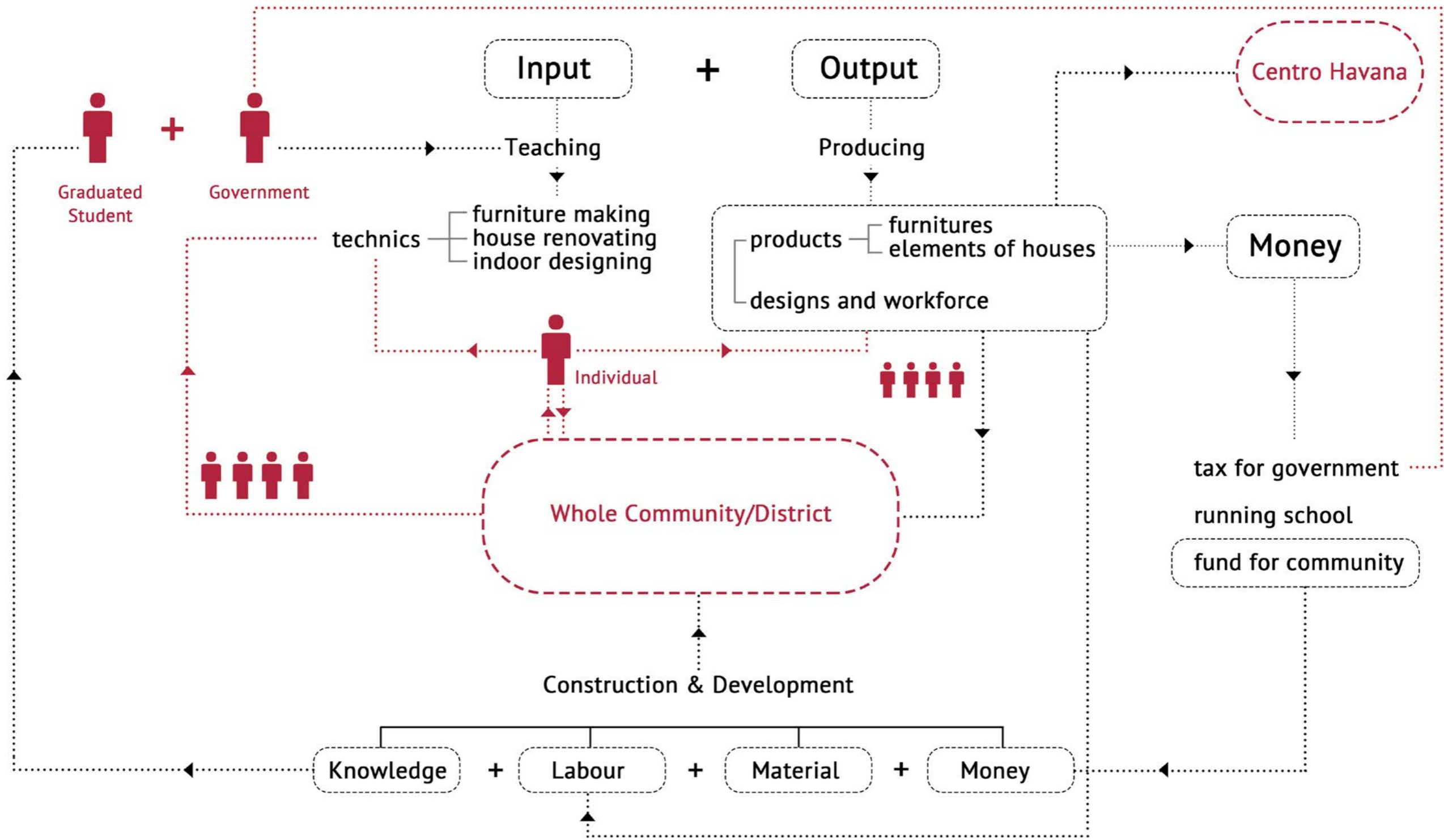


Salary growth in last 5 years

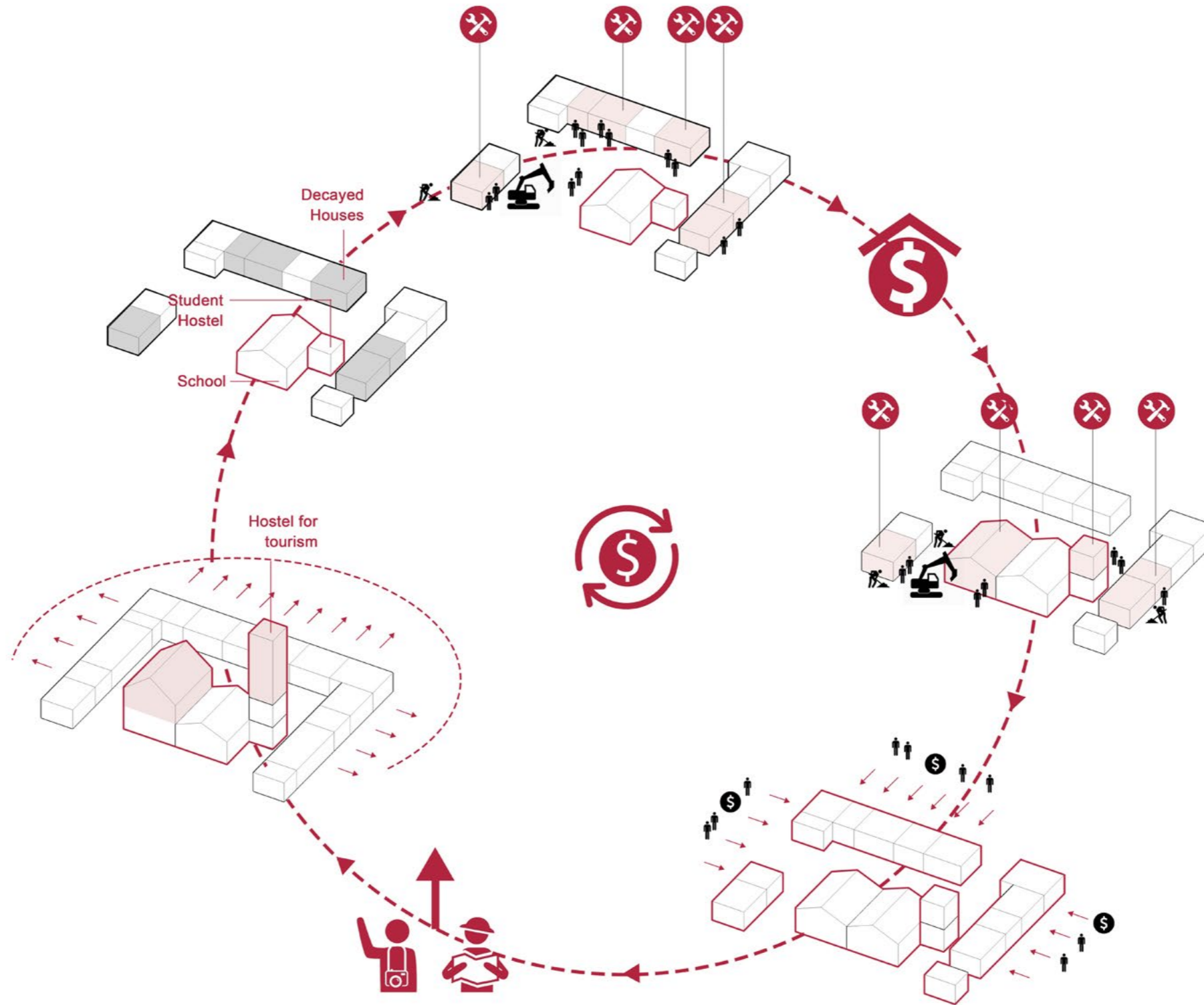
# GOVERNMENT'S BUDGET FOR EDUCATION



# FINANCIAL SUPPORT



# SELF-SUFFICIENT MODE



A street scene with a crane and buildings under renovation. The scene is a wide, cobblestone street lined with multi-story buildings. Some buildings are in various stages of renovation, with scaffolding and exposed brickwork. A large orange crane is positioned on the left side of the street. People are walking and working on the street. The sky is overcast.

# NEIGHBORHOOD UPGRADING CATALYST

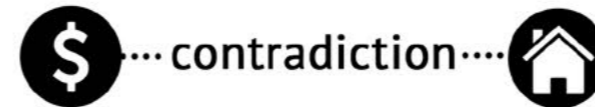
## RENOVATION ACADEMY + HOSTEL

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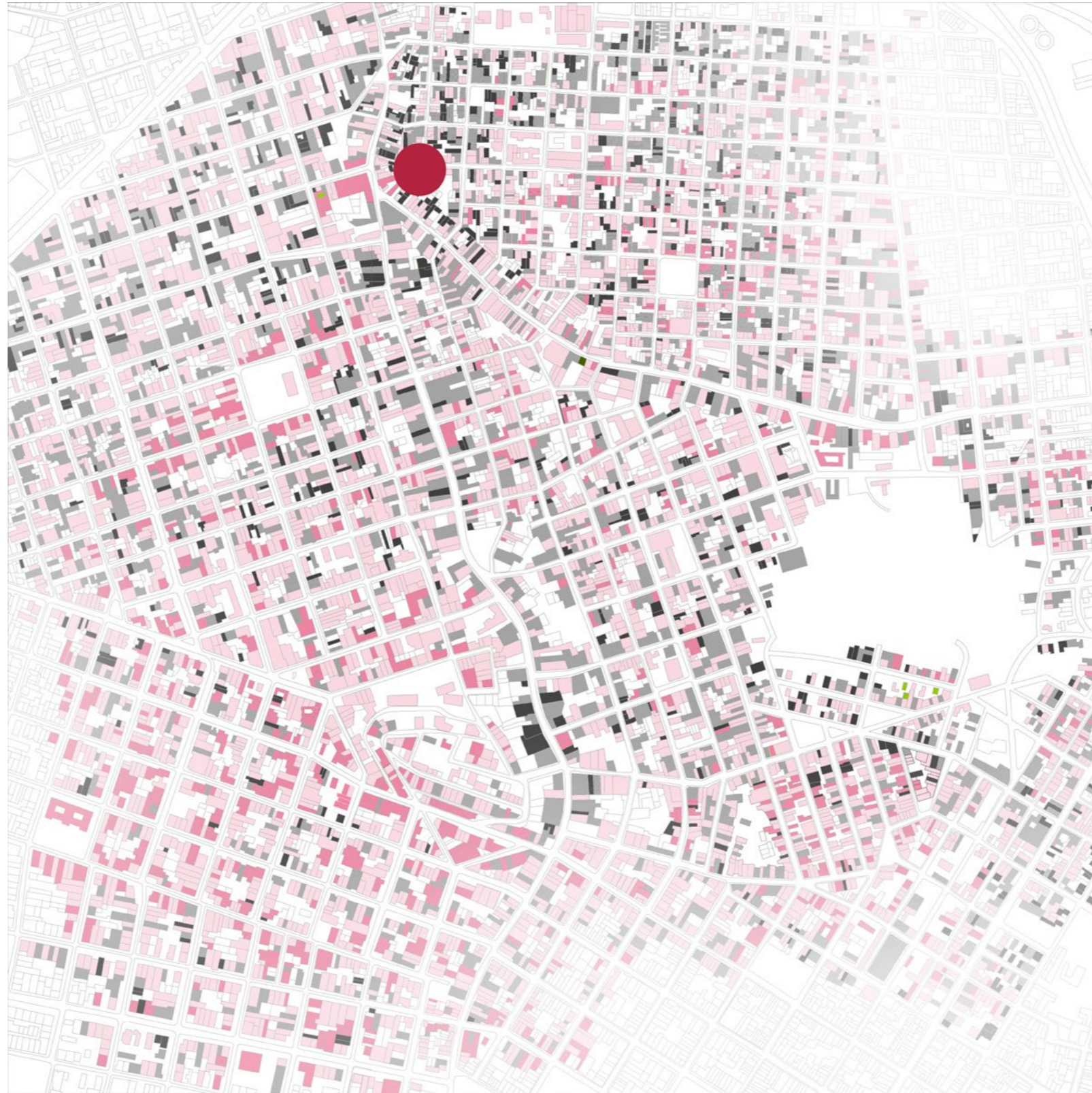


# SITE LOCATION





# LEVEL OF DECAY IN PROFUNDA

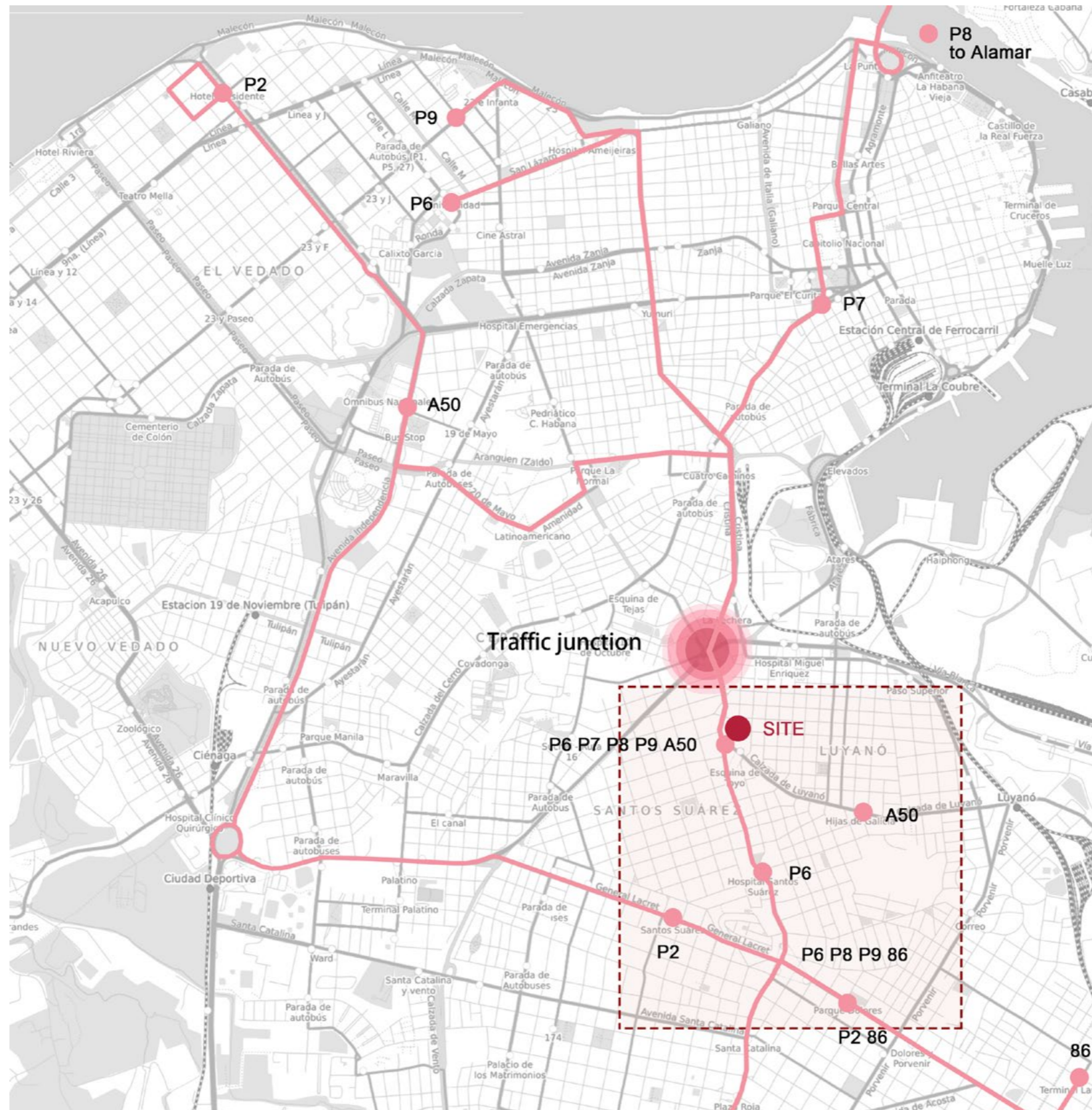


■ Good condition   ■ Decent condition   ■ Livable condition   ■ Bad condition

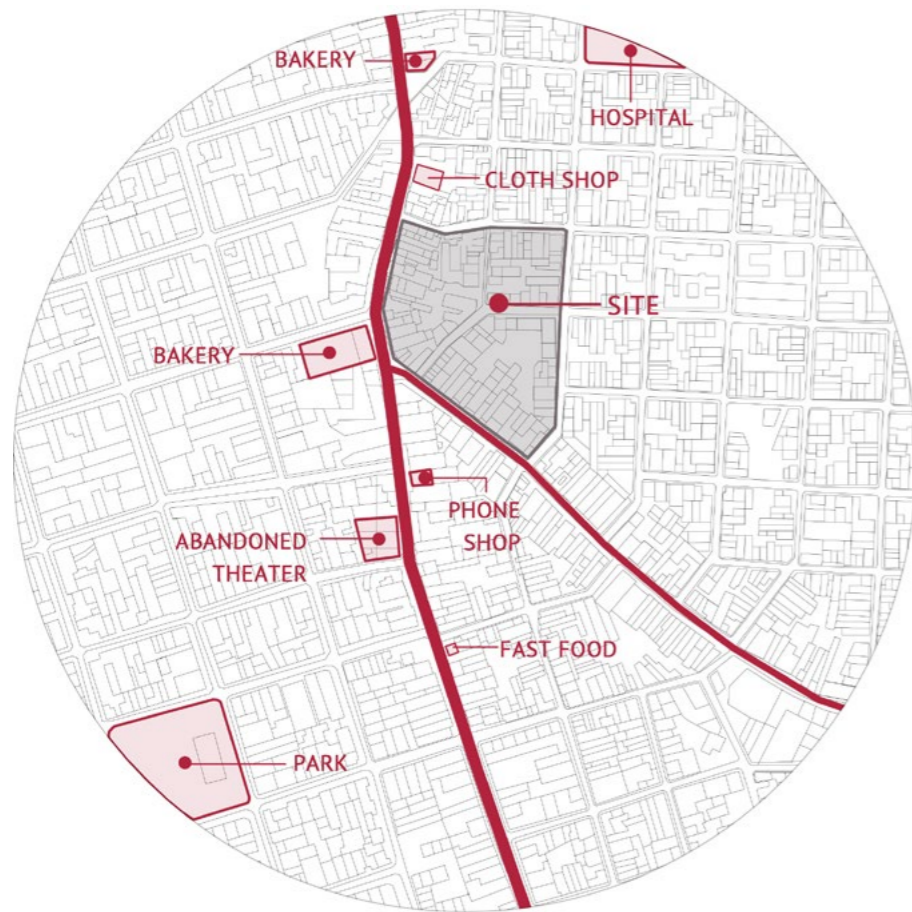
# ORIGIN OF PROFUNDA



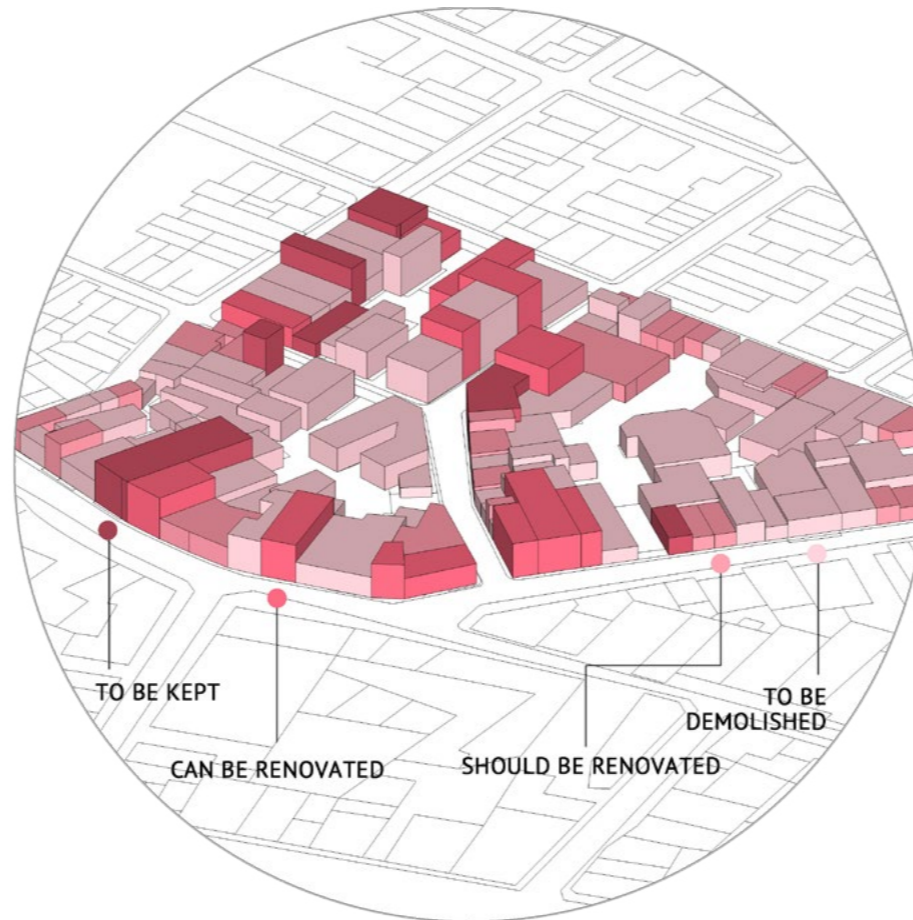
# PUBLIC TRANSPORTATION



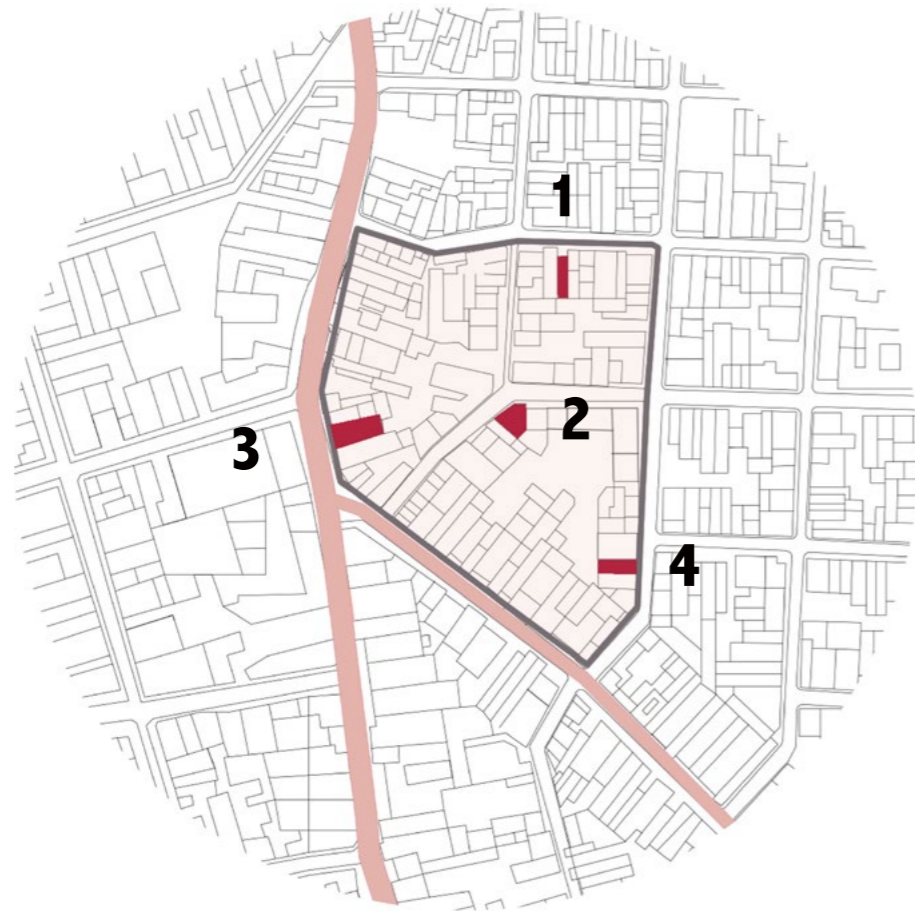
# SITE ANALYSIS



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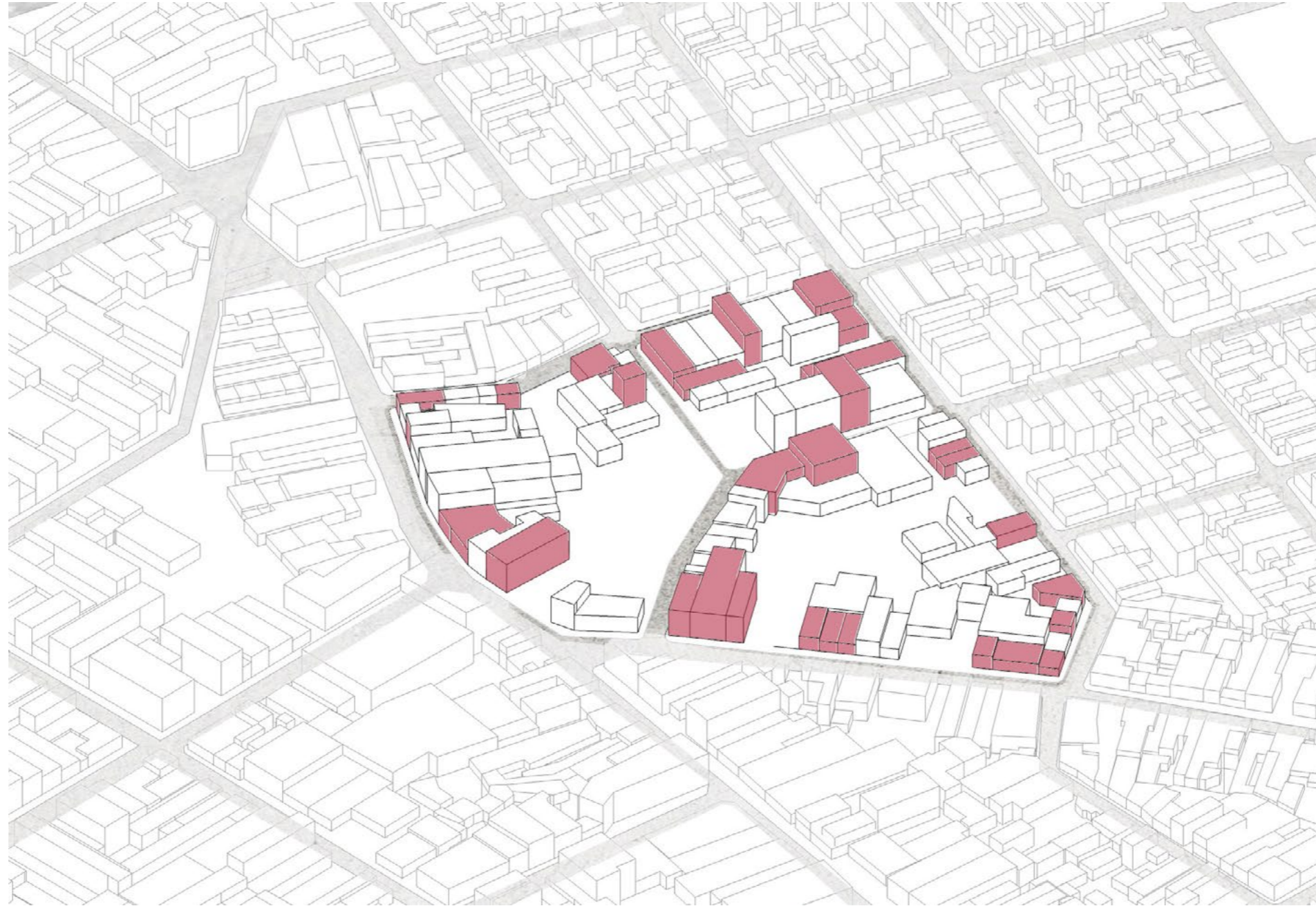
# SITE PHOTOS



# SITE PHOTOS



# HOUSES SHOULD BE KEPT

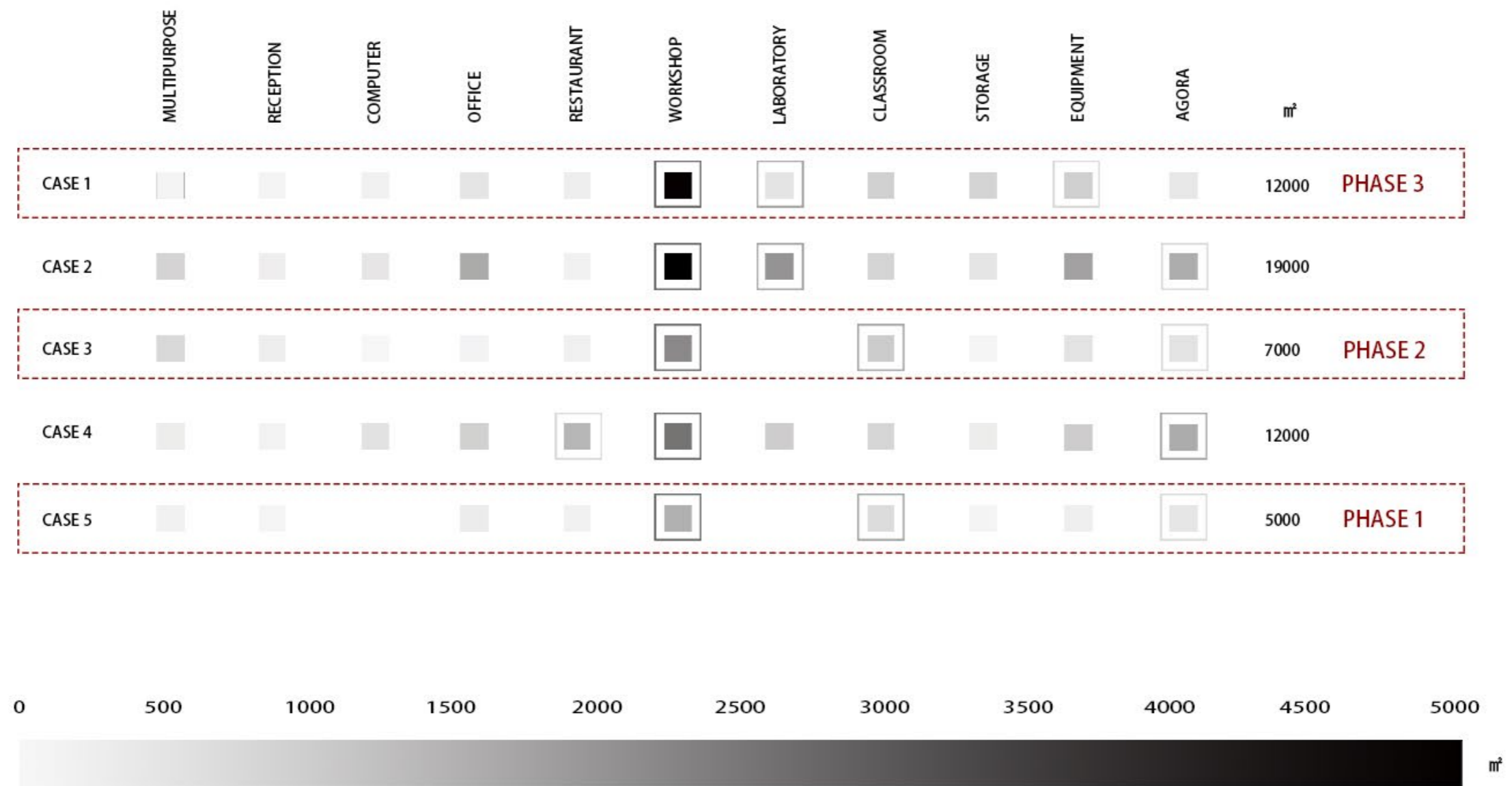


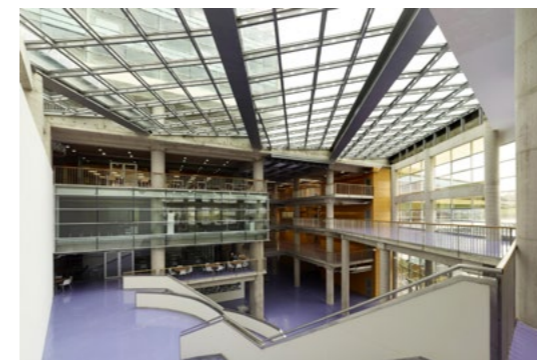
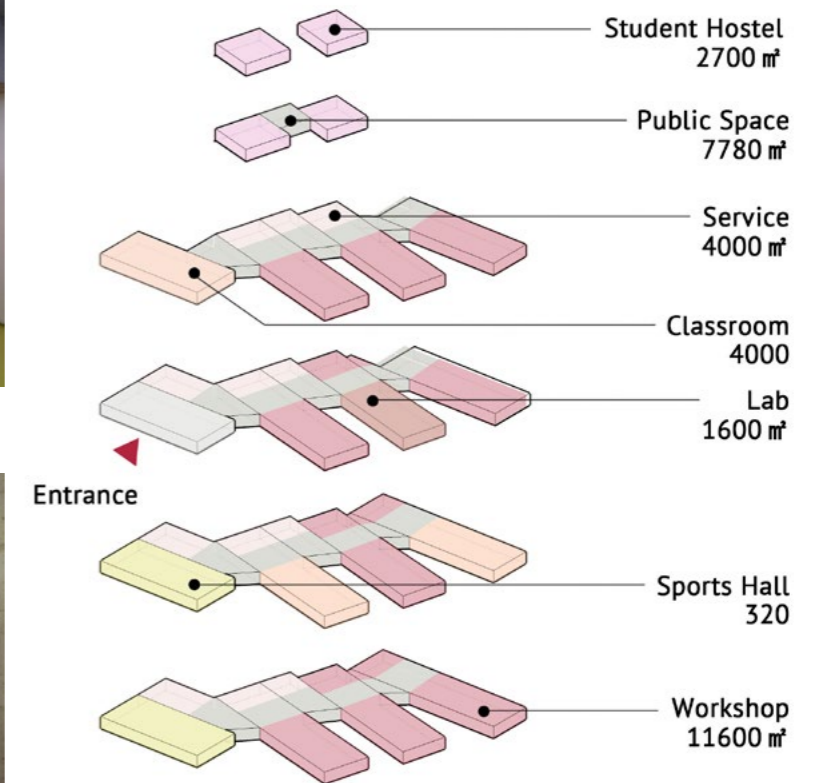
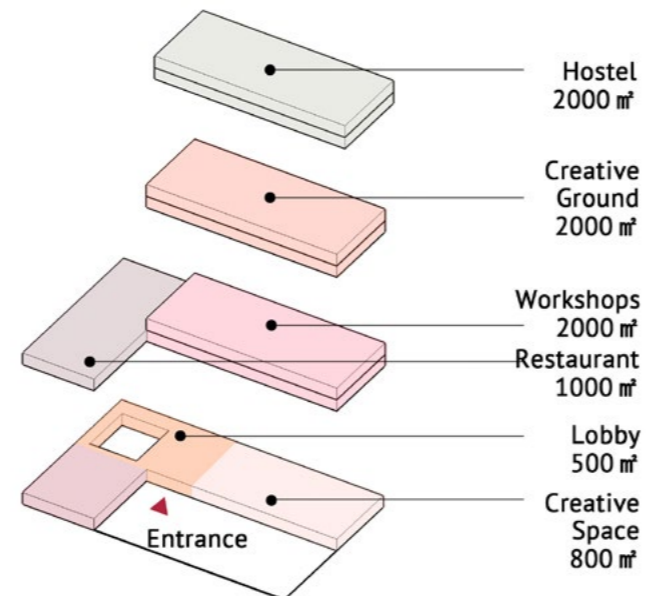
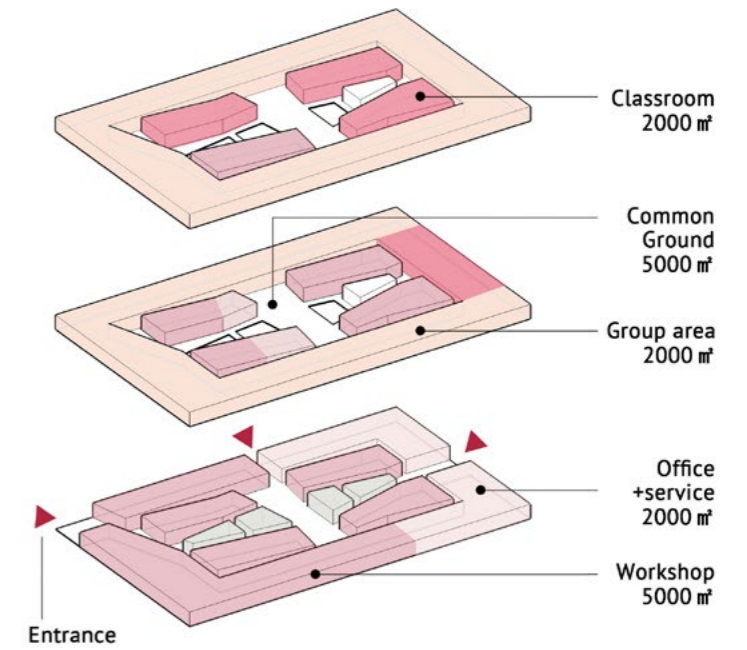
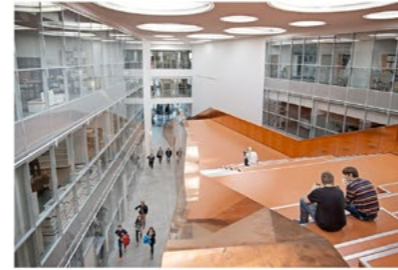
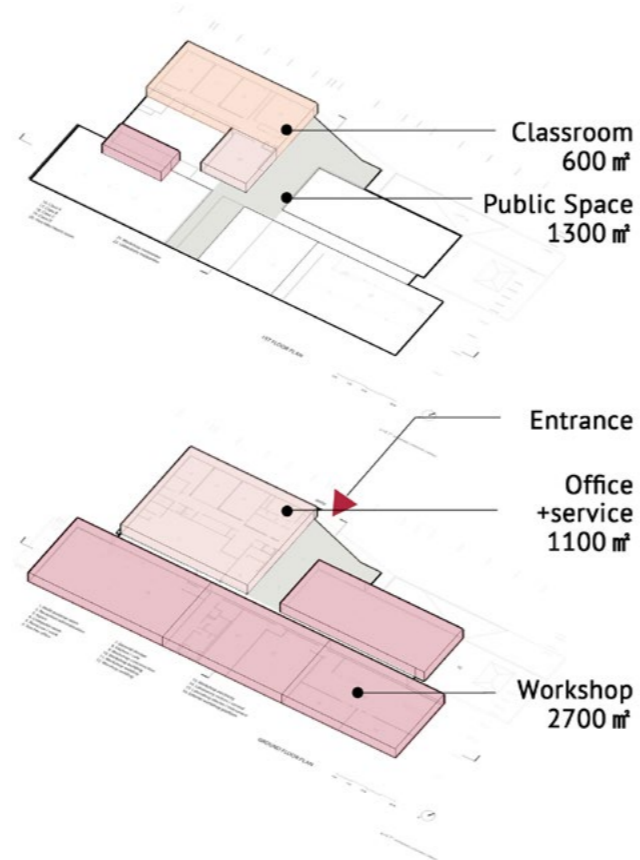
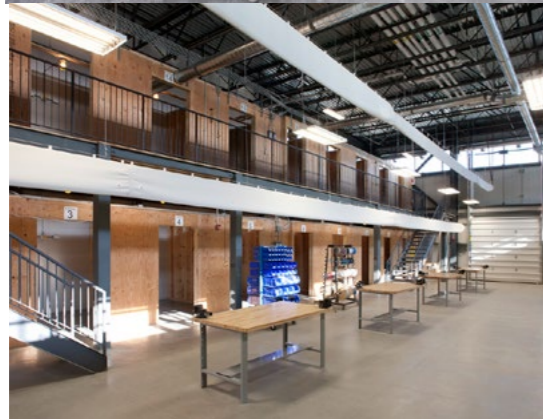




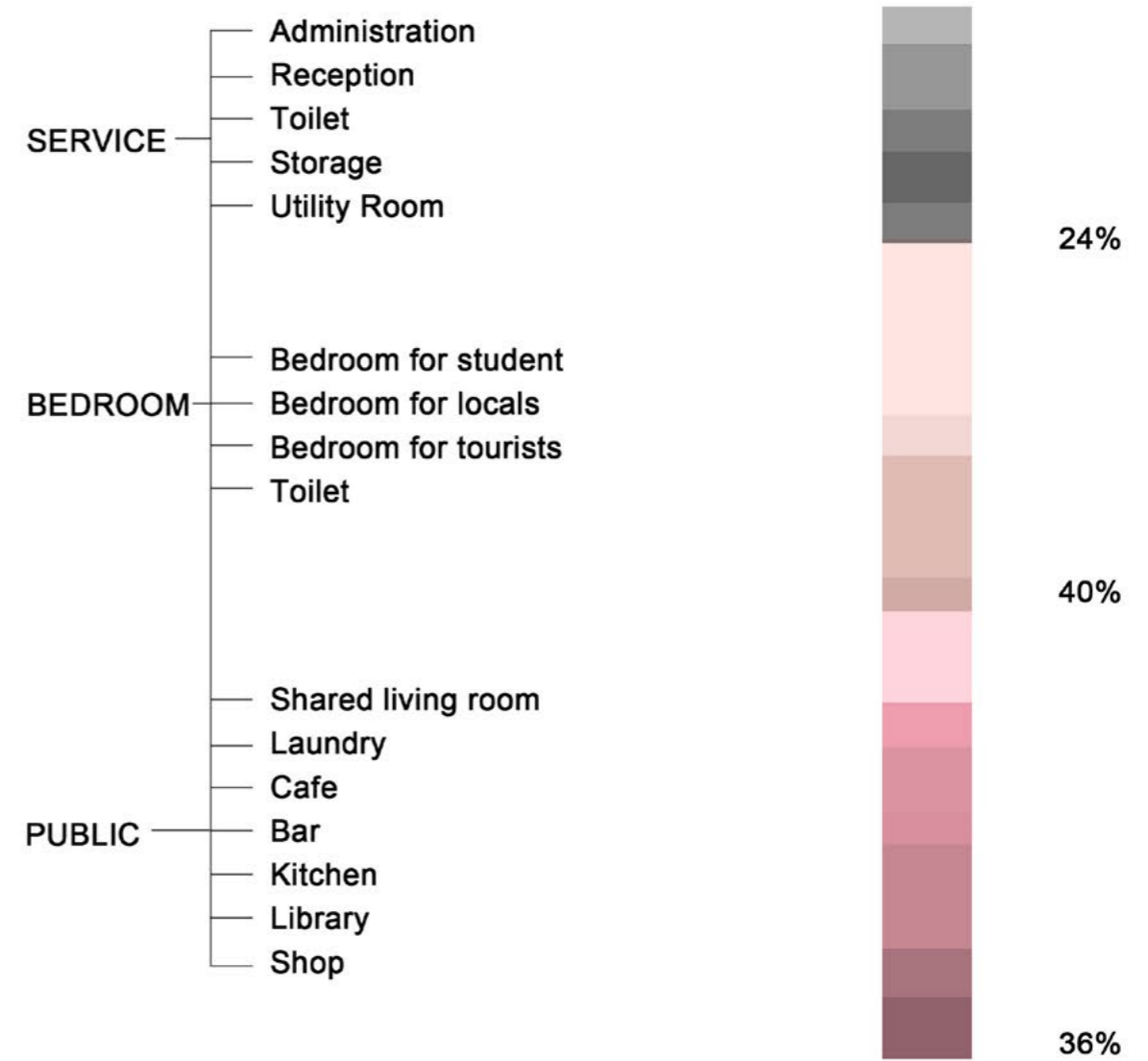
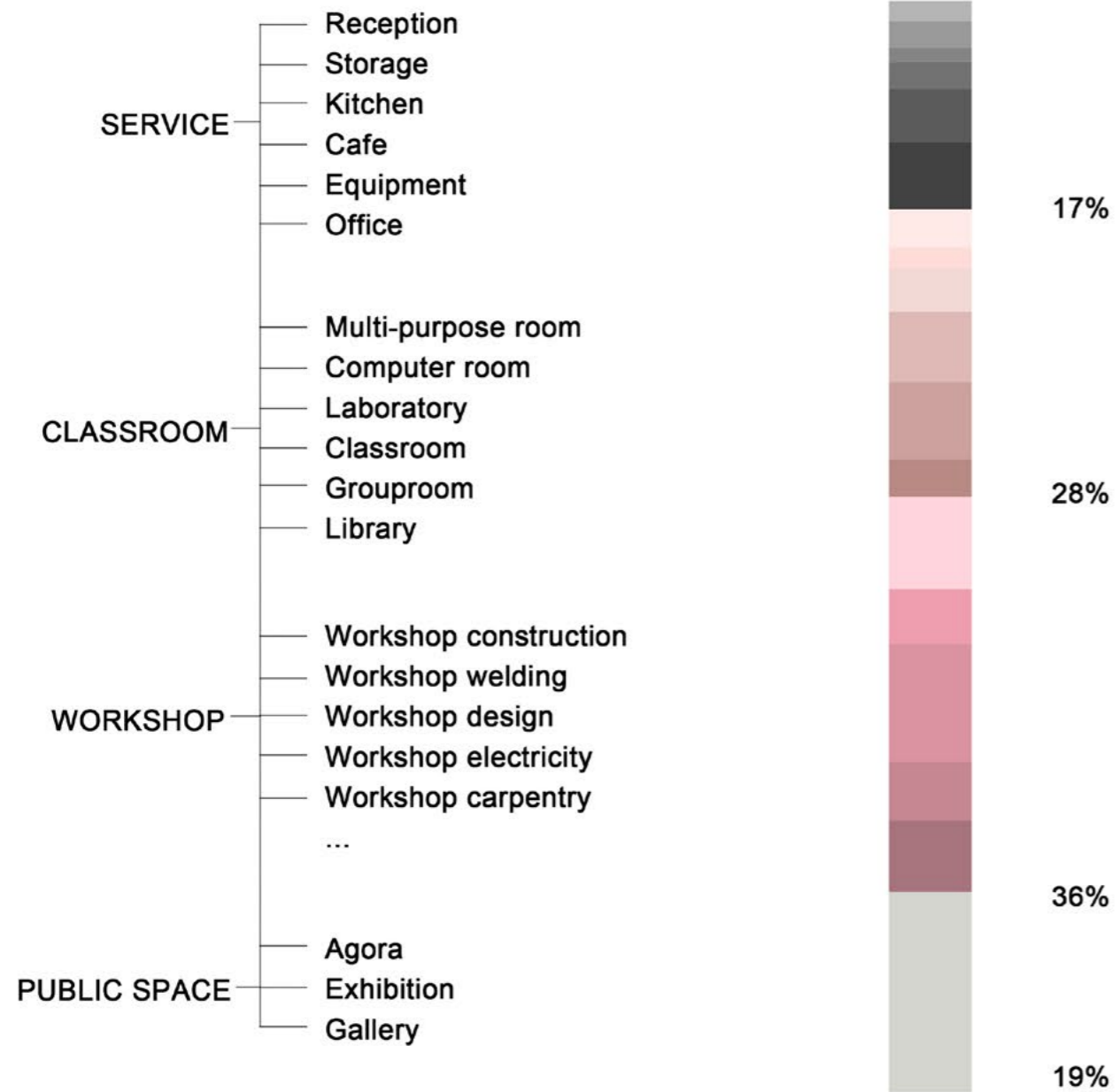
**CASE STUDY  
&  
FORM STUDY**

# PROGRAM ANALYSIS - TECHNICAL ACADEMY





## 2 FUNCTION & MODULES

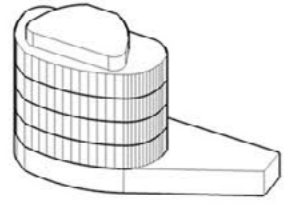


# PROGRAM IN DIFFERENT PHASES

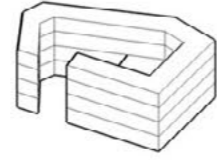
	Reception	Storage	Kitchen	Cafe	Equipment	Office	Multi-purpose room	Computer room	Laboratory	Classroom	Grouproom	Library	Workshop construction	Workshop welding	Workshop design	Workshop electricity	Workshop carpentry	Agora	Exhibition		
PHASE 1	●	●			●	●	●			●	●		●			●		●		4500 m <sup>2</sup>	400 students
PHASE 2	●	●			●	●	●	●		●	●		●	●	●	●		●		6500 m <sup>2</sup>	800 students
PHASE 3	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	9000 m <sup>2</sup>	1200 students

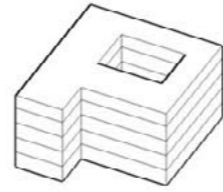
	Administration	Reception	Toilet	Storage	Utility Room	Bedroom for student	Bedroom for locals	Bedroom for tourists	Shared living room	Laundry	Cafe	Bar		
PHASE 1	●	●	●		●	●	●		●	●			1000 m <sup>2</sup>	100 persons
PHASE 2	●	●	●	●	●	●	●		●	●	●		1800 m <sup>2</sup>	200 persons
PHASE 3	●	●	●	●	●	●	●	●	●	●	●	●	2500 m <sup>2</sup>	350 persons



School of Architecture at the Royal Institute of Technology Sweden



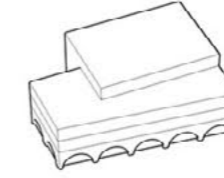
Oslo School of Architecture Norway



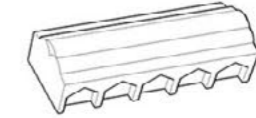
Melbourne School of Design University Australia



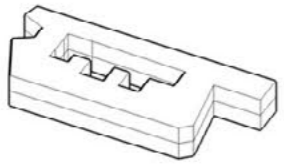
University of Los Andes Public Space and Integrated Care Center Colombia



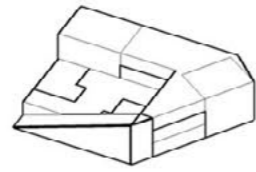
Bonifacius School the Netherlands



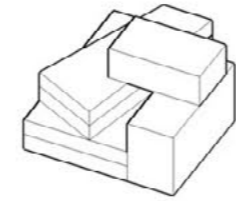
Primary School Tanouan Ibi Mali



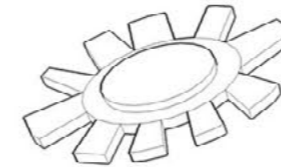
Abedian School of Architecture Australia



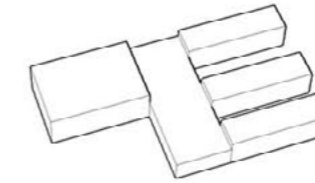
Nantes School of Architecture France



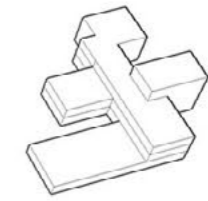
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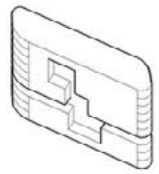
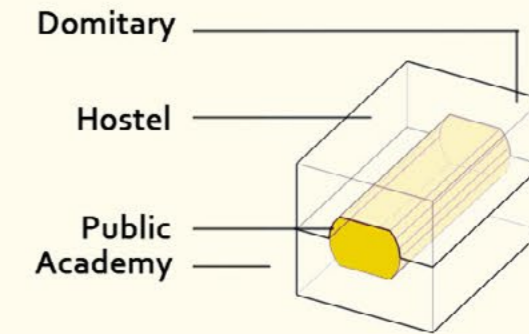
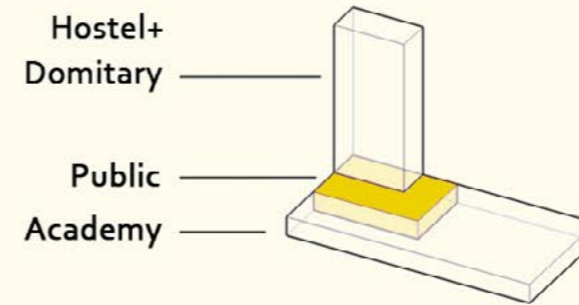
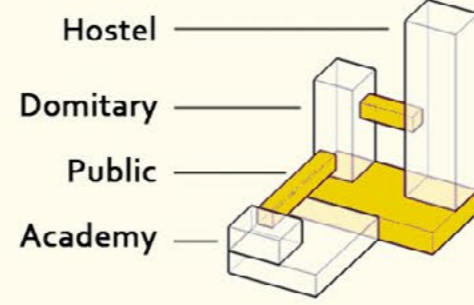
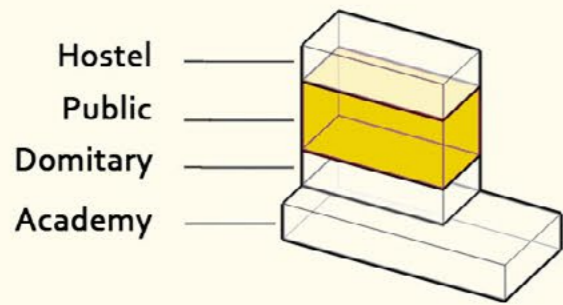
Yotoco Music School Colombia



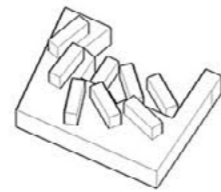
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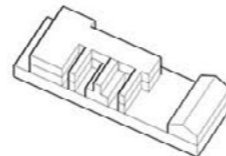
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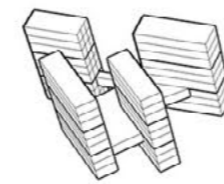
Day-Care And Young Workers Hostel France



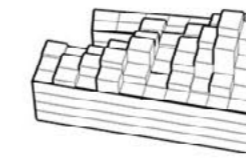
Hostel in Kyonan Japan



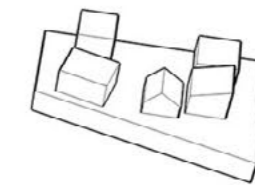
Ccasa Hostel Vietnam



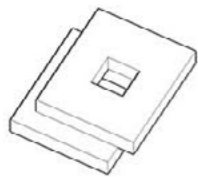
118 Subsidized dwellings, offices, retail spaces and garage Spain



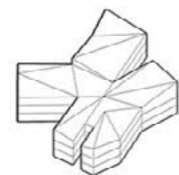
Timmerhuis the Netherlands



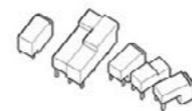
Mixed Use 107 Apartment Units France



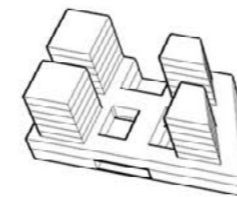
Stayokay Hostel and Natuurpodium the Netherlands



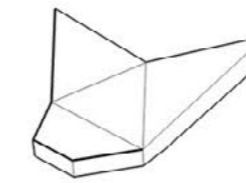
Berchtesgaden Youth Hostel Germany



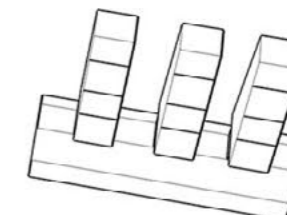
Hostal Ritoque Chile



Maison Stéphane Hessel France



Billboard Japan



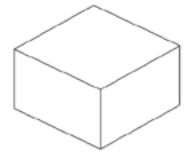
Rotermann Carpenter's Workshop Estonia



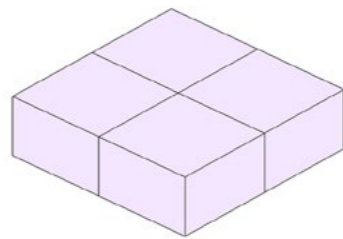
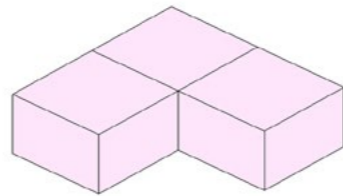
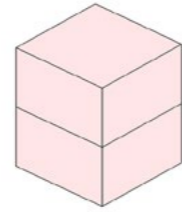
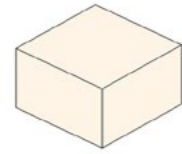
# MODULAR SYSTEM

FIXED  
&  
FLEXIBILITY

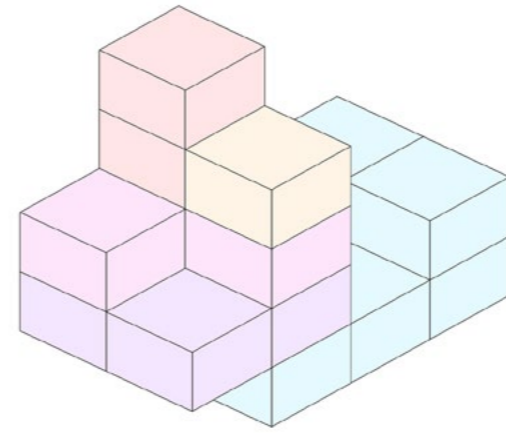
# MODULAR DESIGN



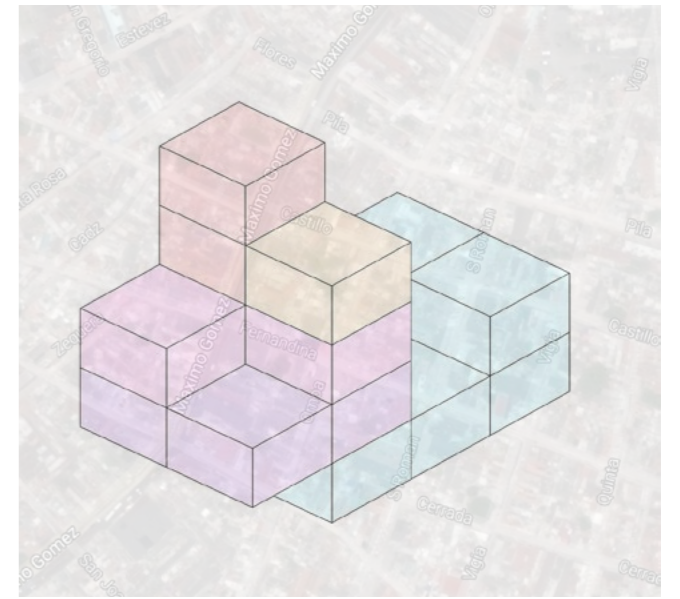
1 Basic module



2 Composition



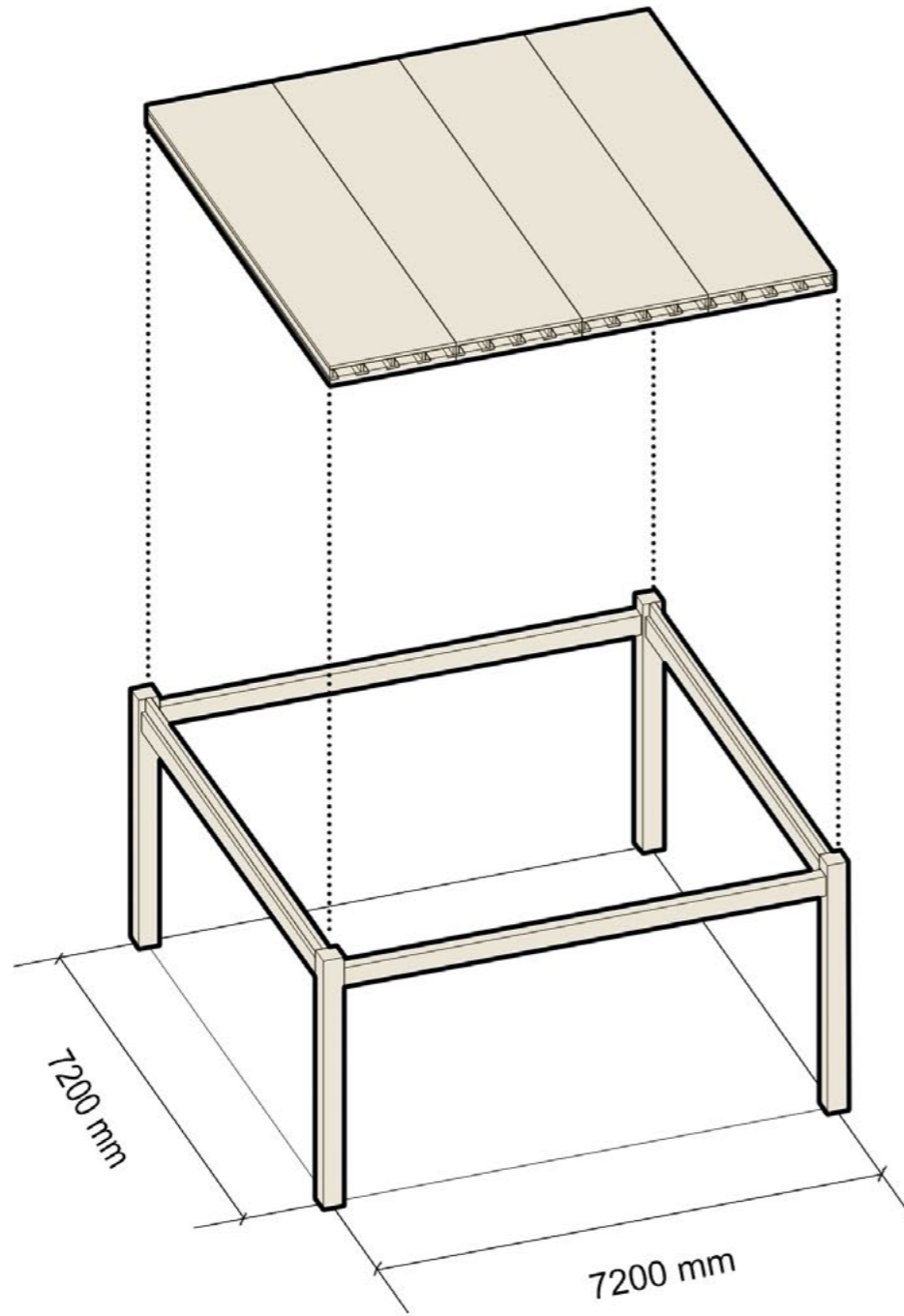
3 Organization



4 Project & Community

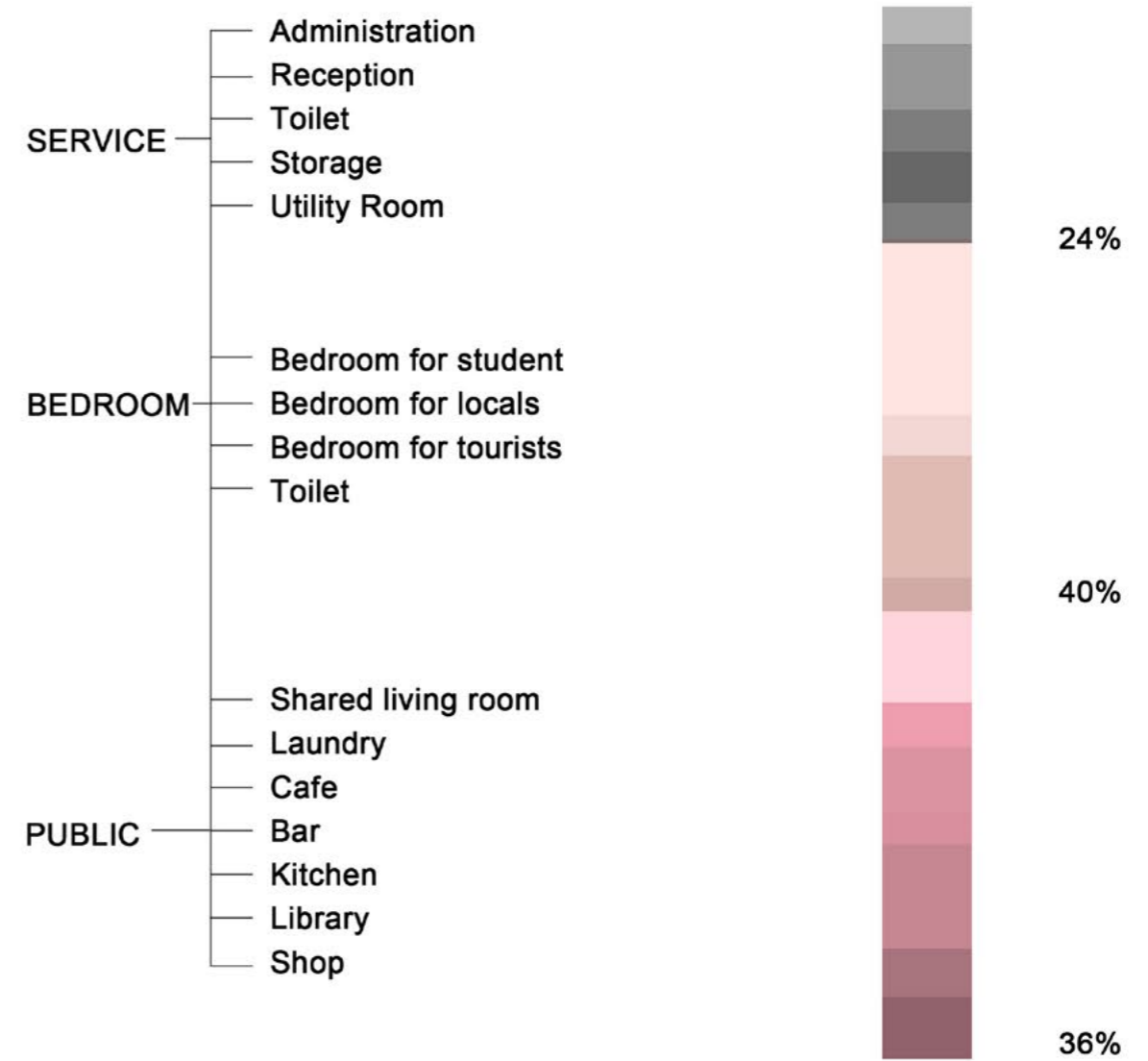
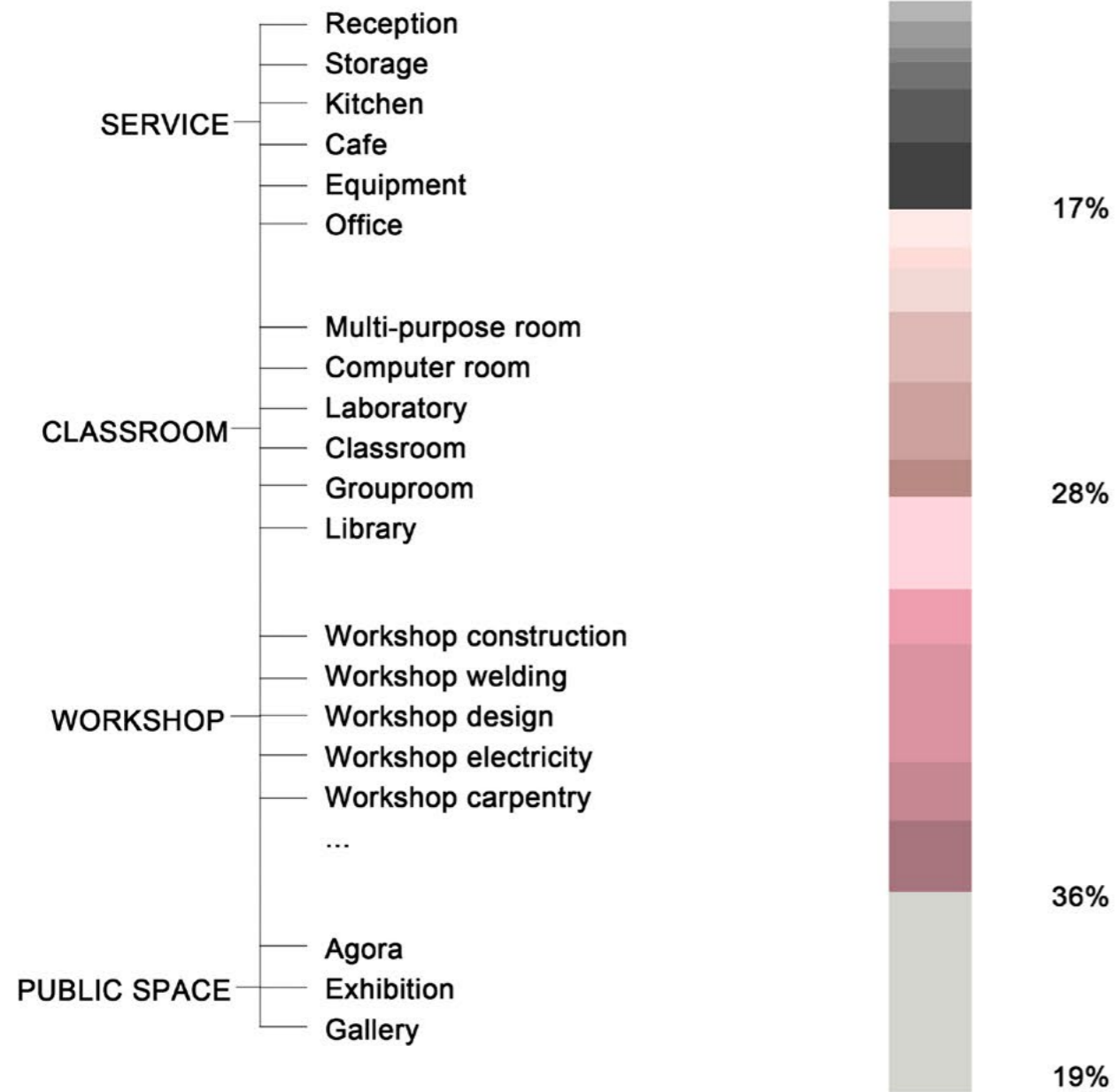


# 1 BASIC UNIT



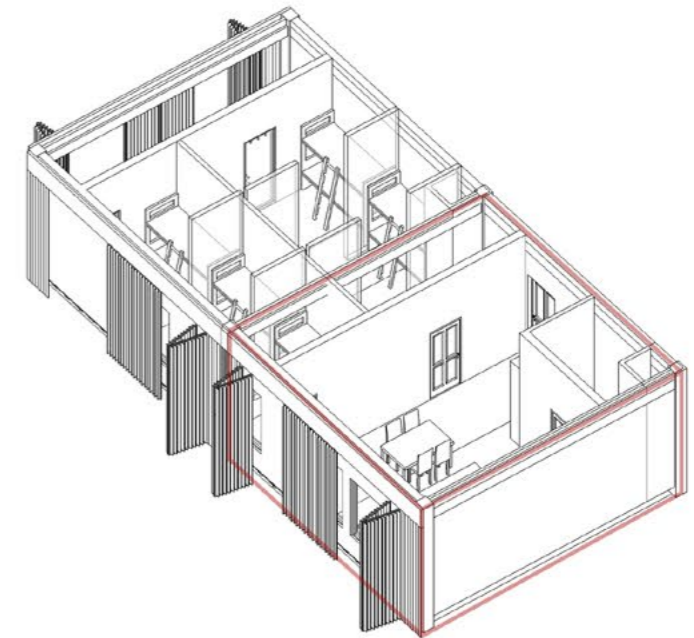
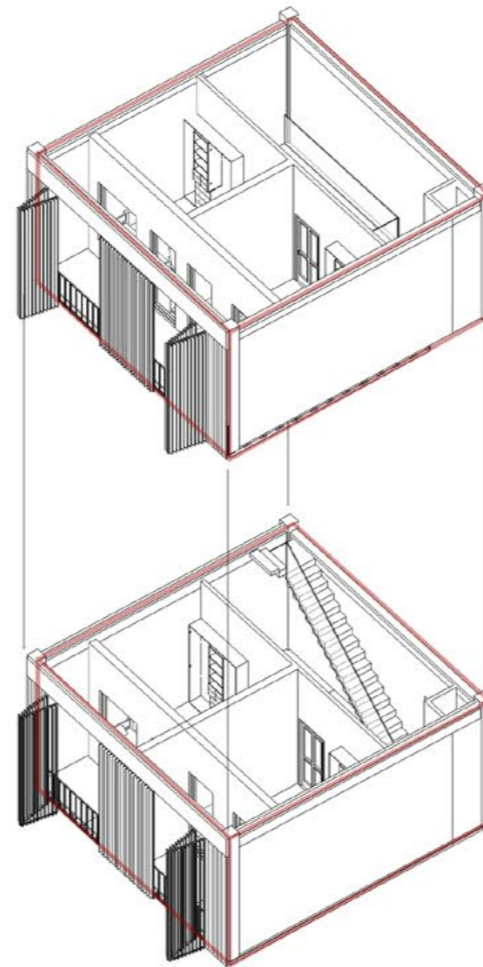
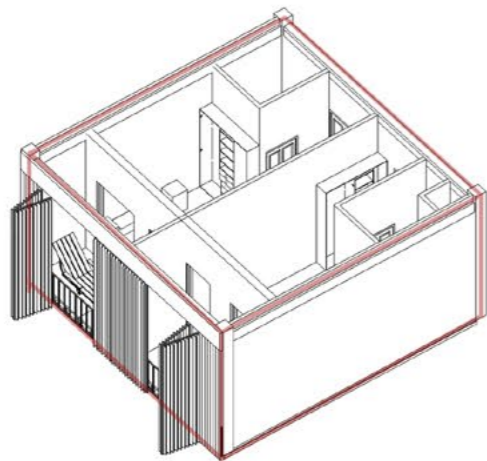
Kerto-riipa floor element

## 2 FUNCTION & MODULES



## 2 FUNCTION & MODULES

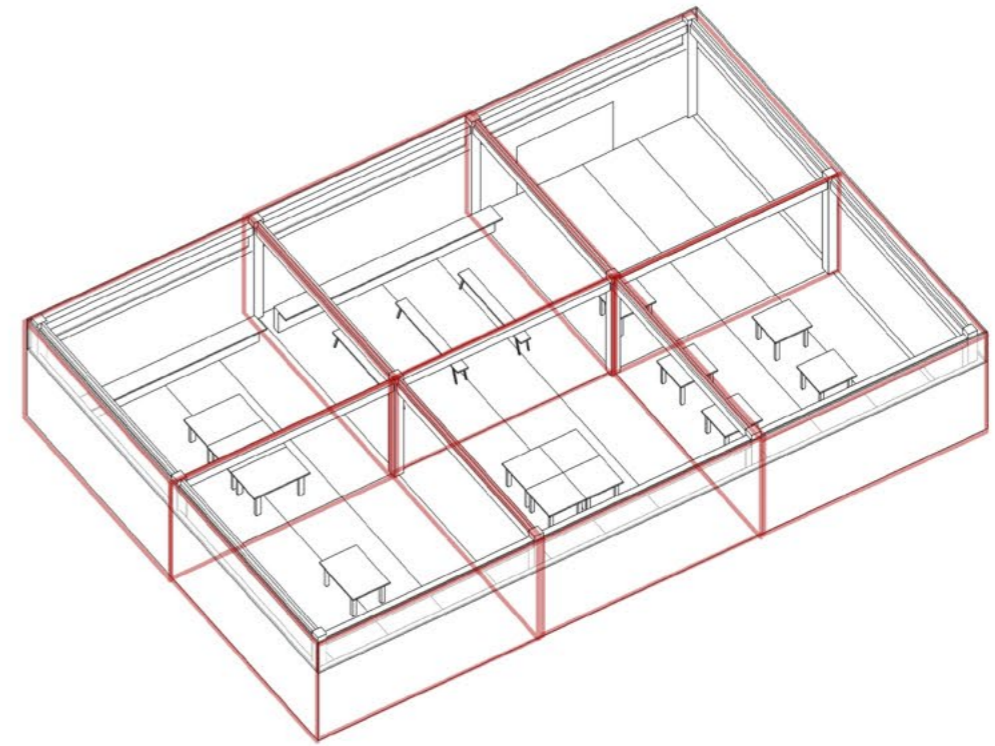
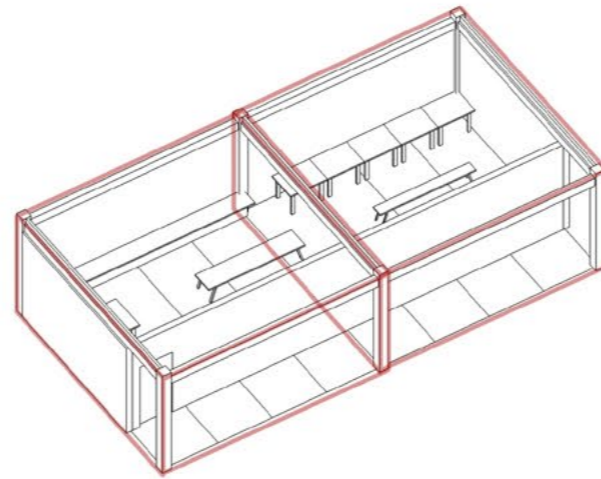
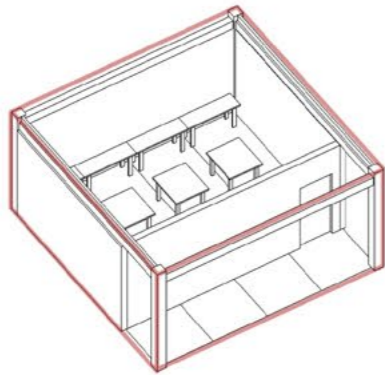
How many modules for each function



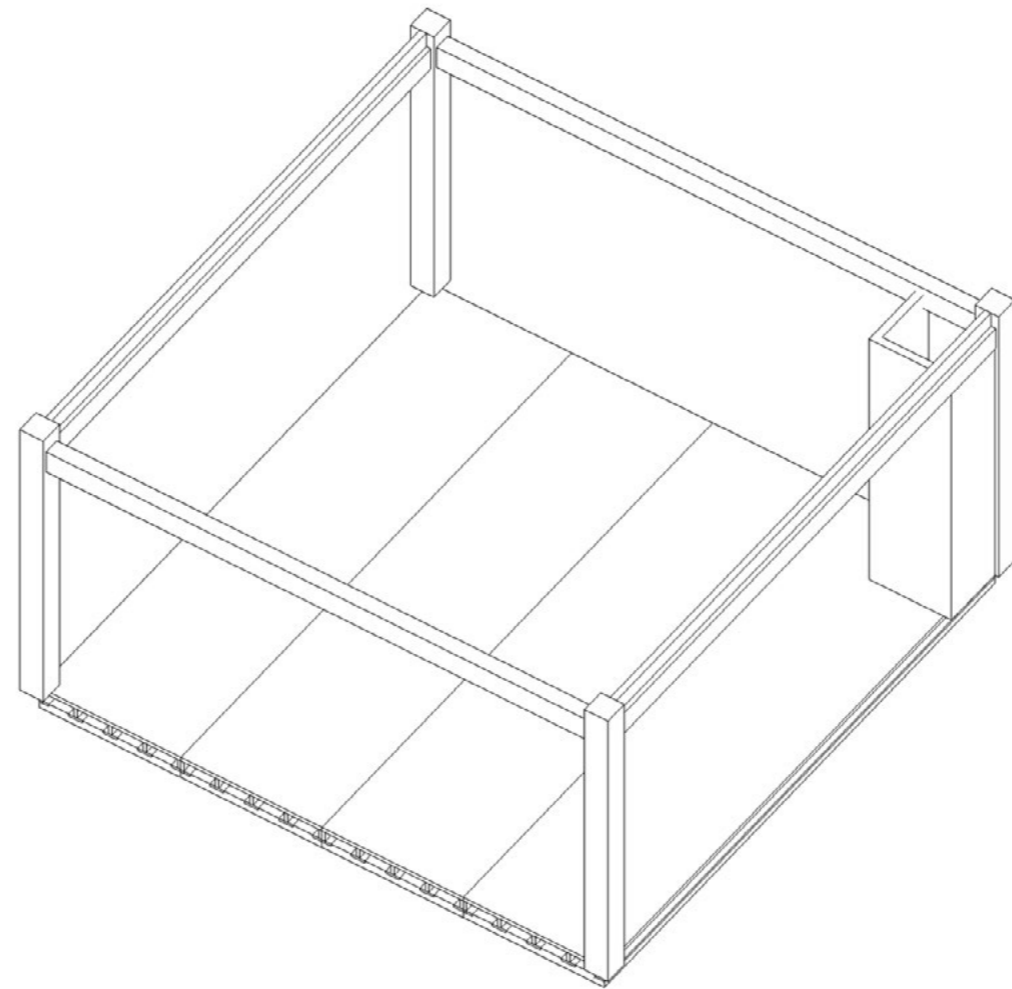
Hostel

## 2 FUNCTION & MODULES

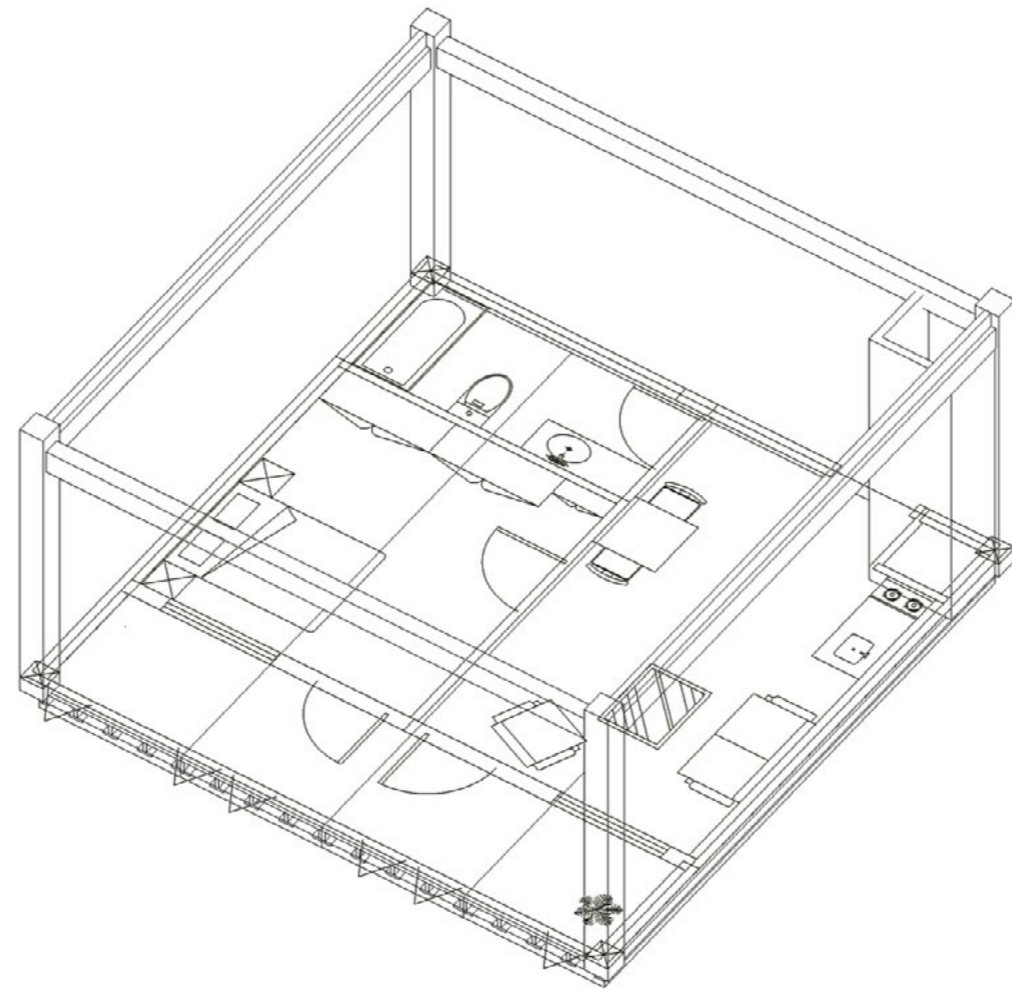
How many modules for each function



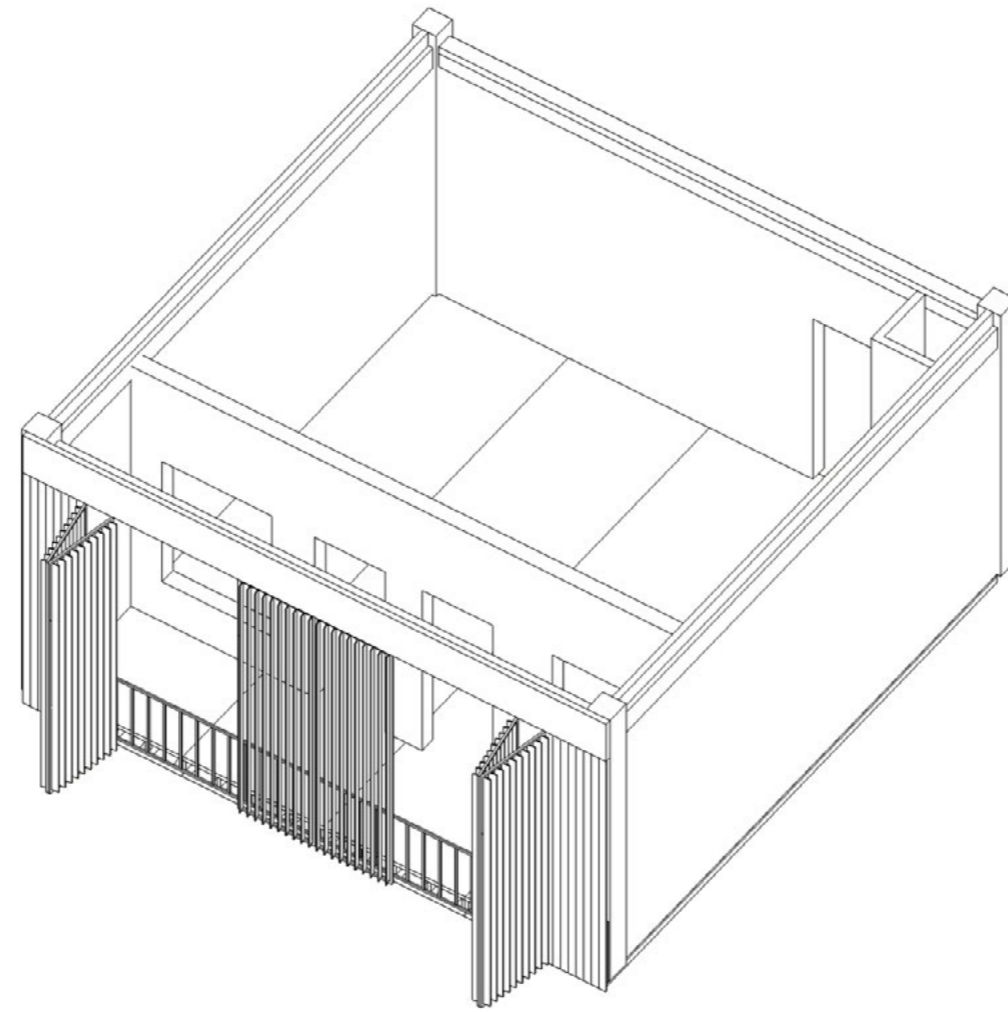
Hostel



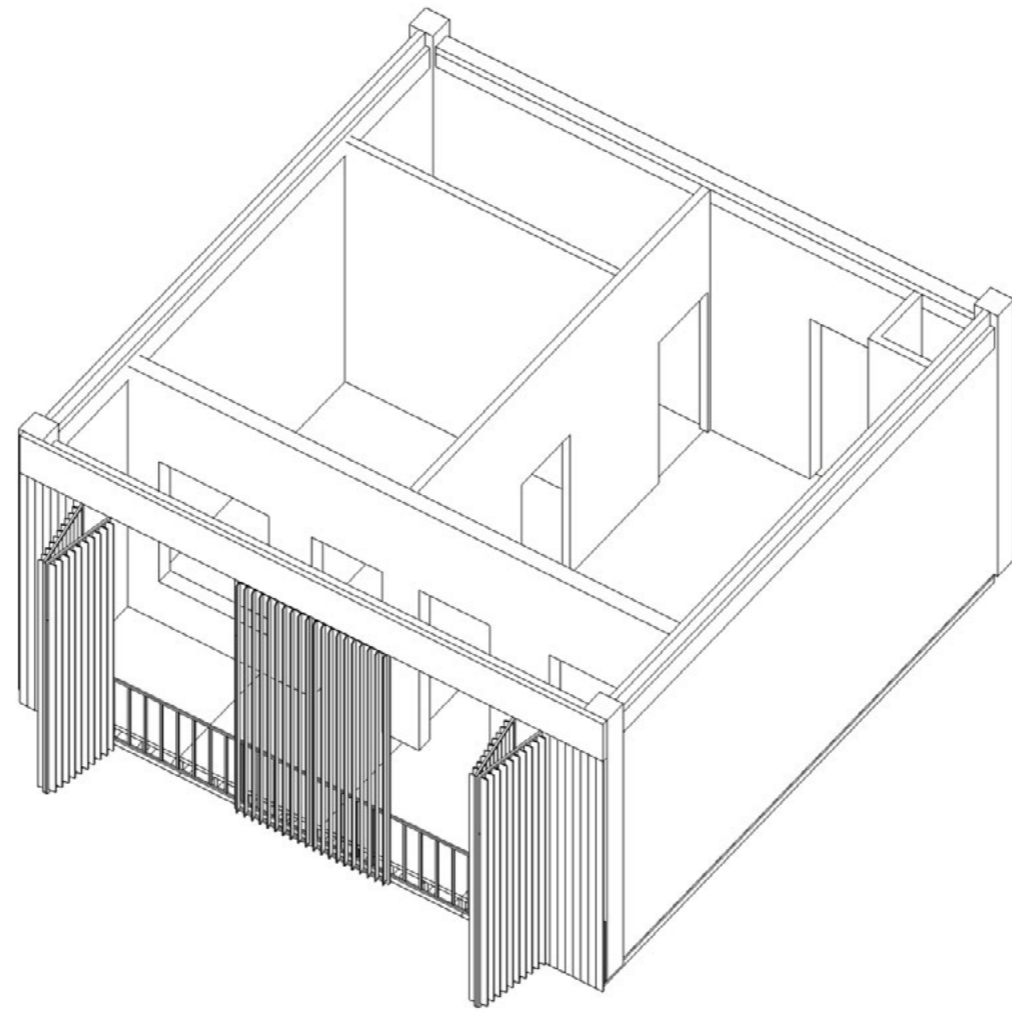
the logic to build one unit



the logic to build one unit

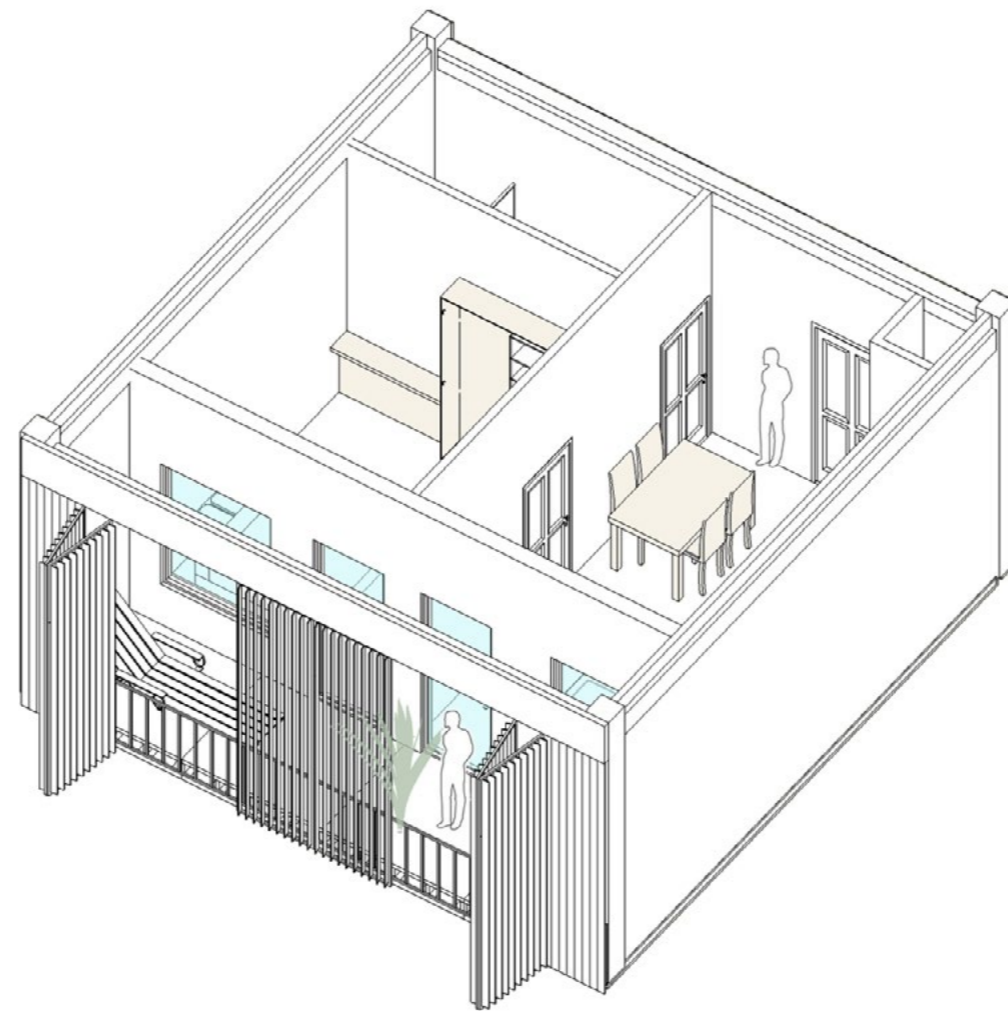


the logic to build one unit

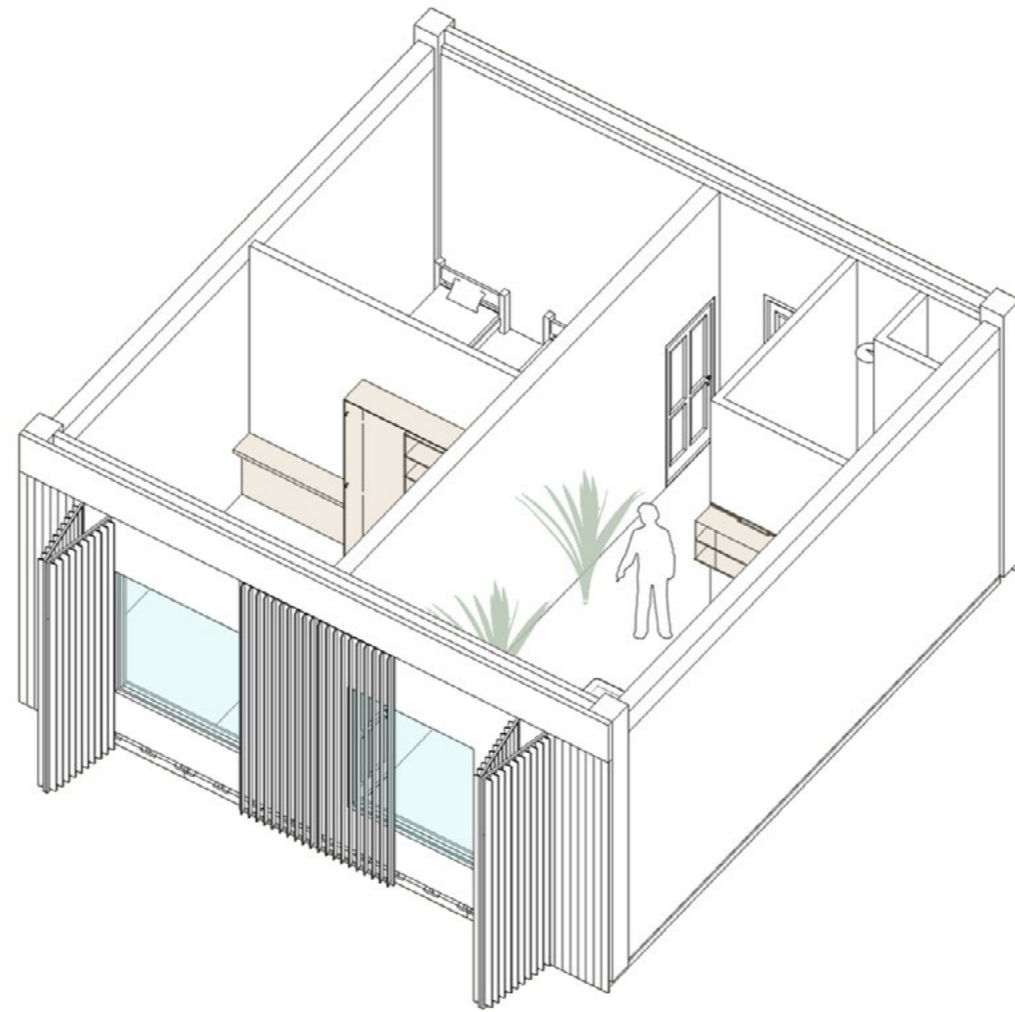


the logic to build one unit

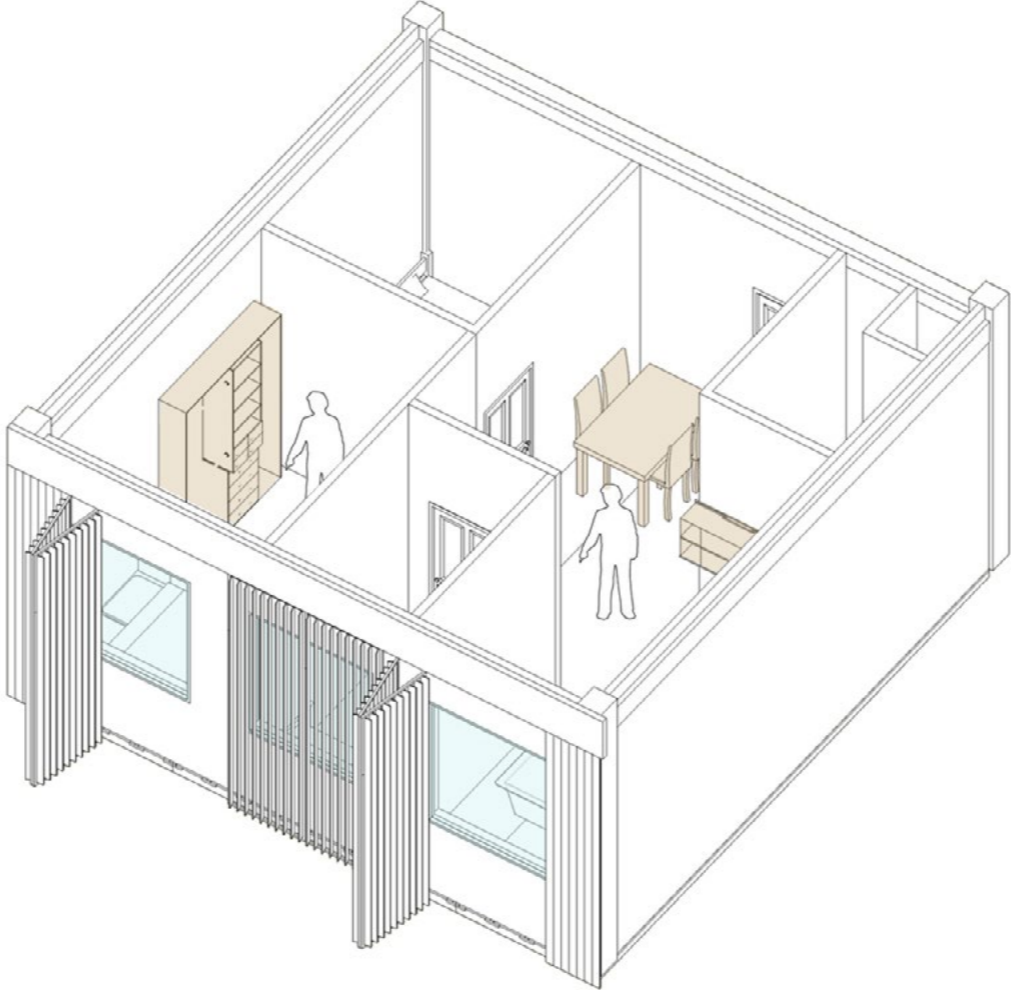




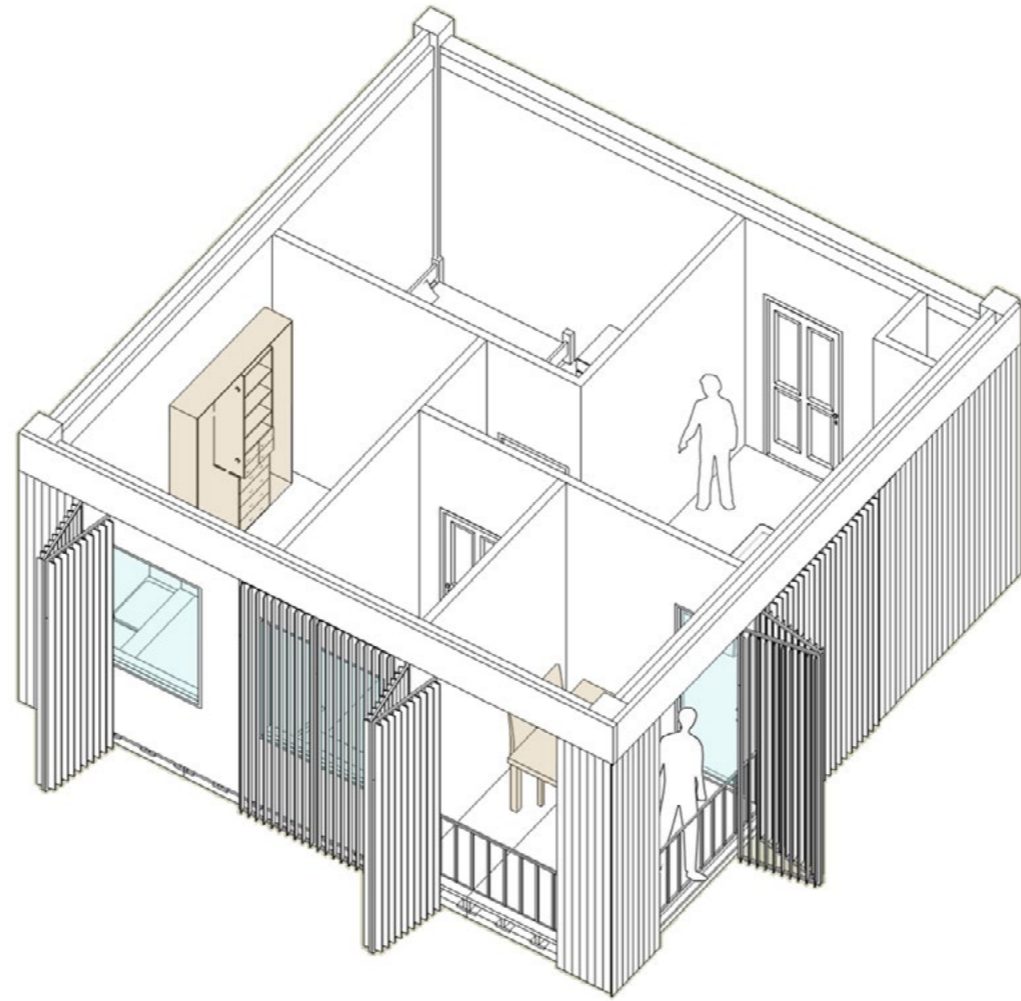
the logic to build one unit



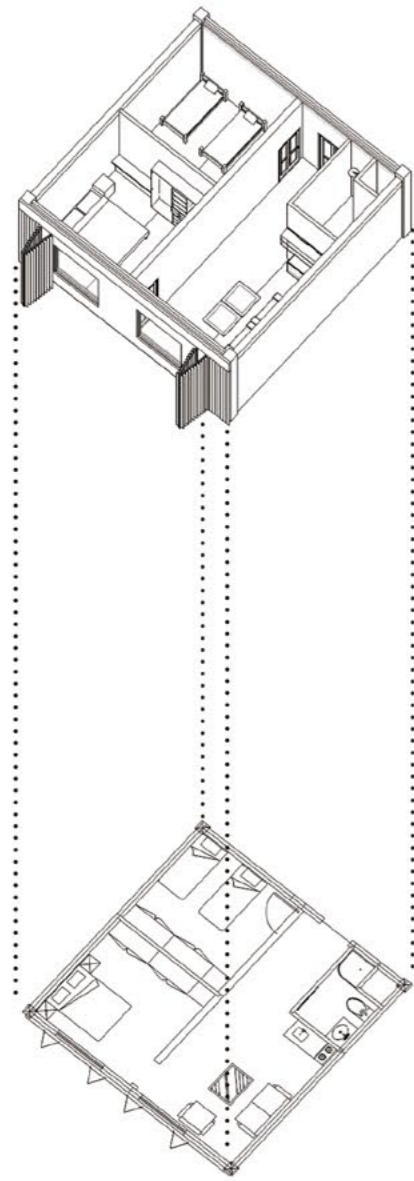
Flexibility



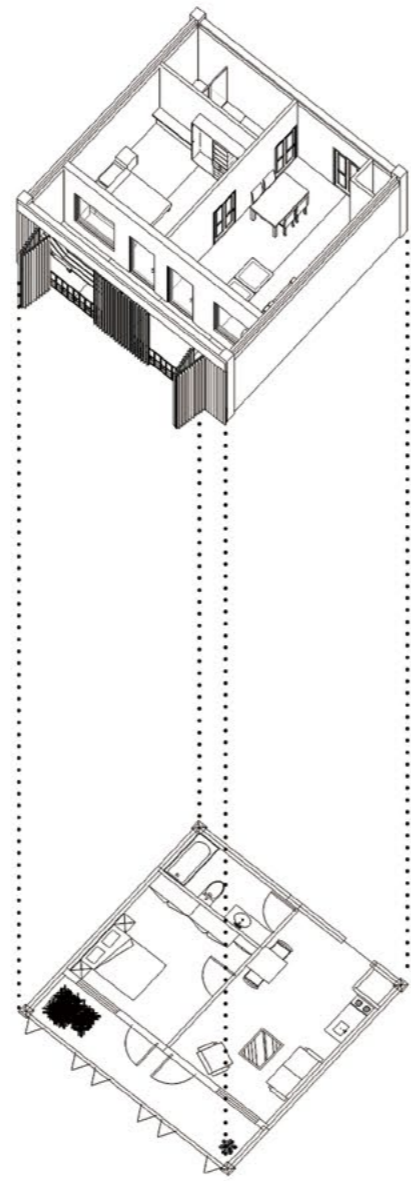
Flexibility



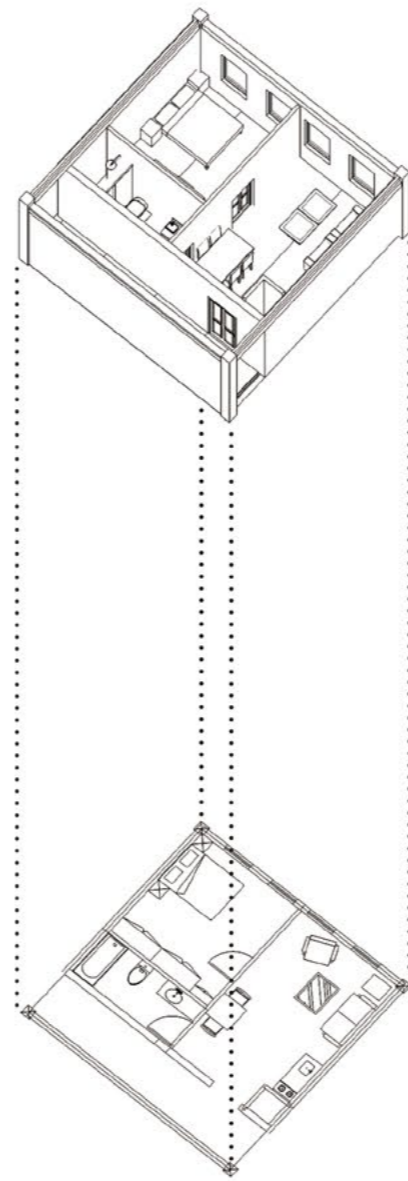
Flexibility



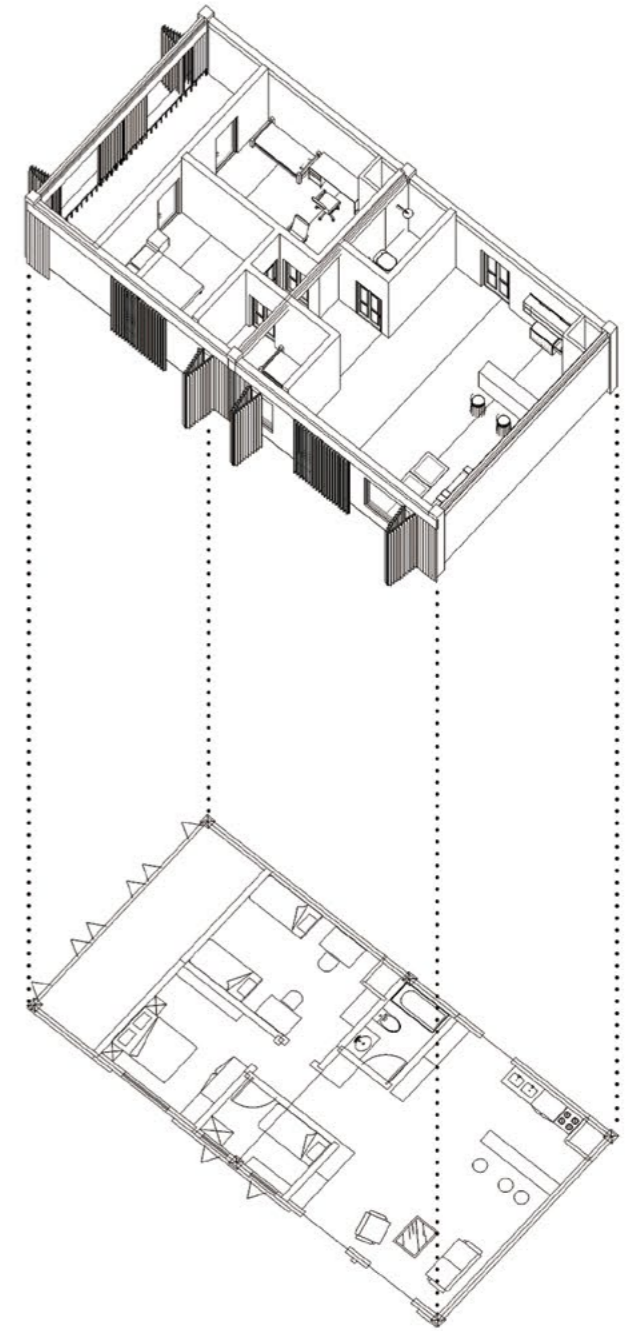
R1



R2

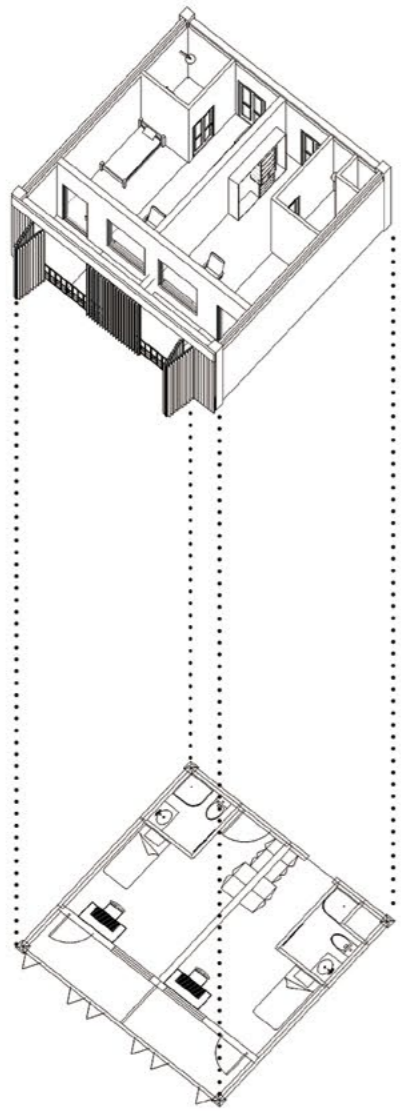


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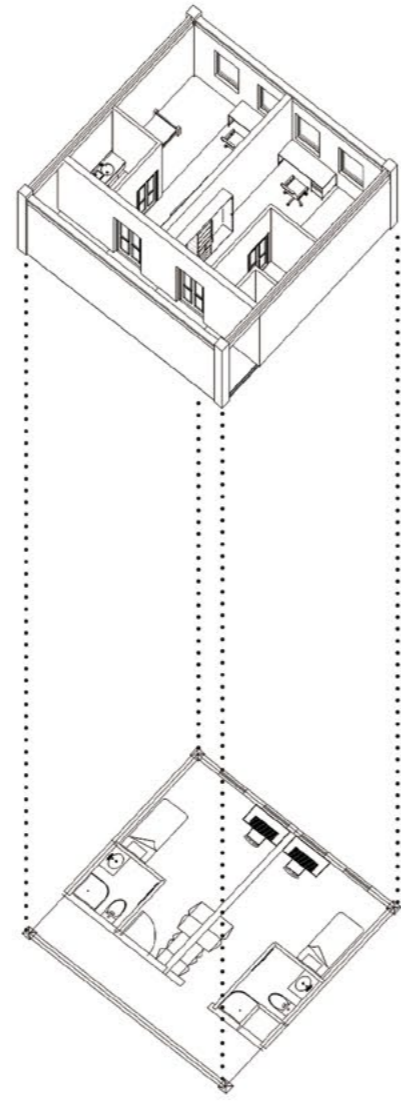


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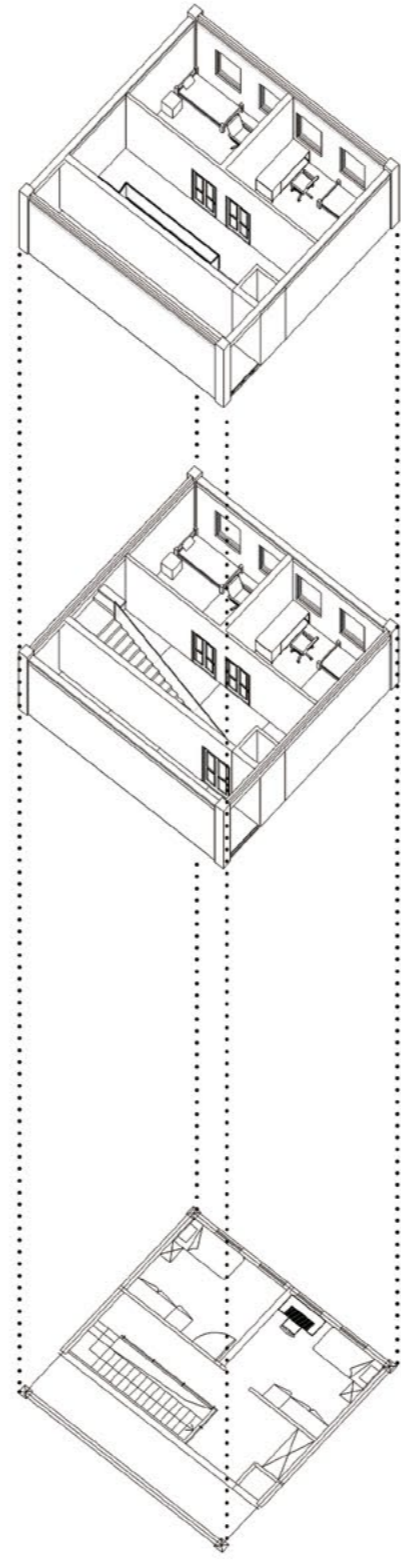
Basic units in my project



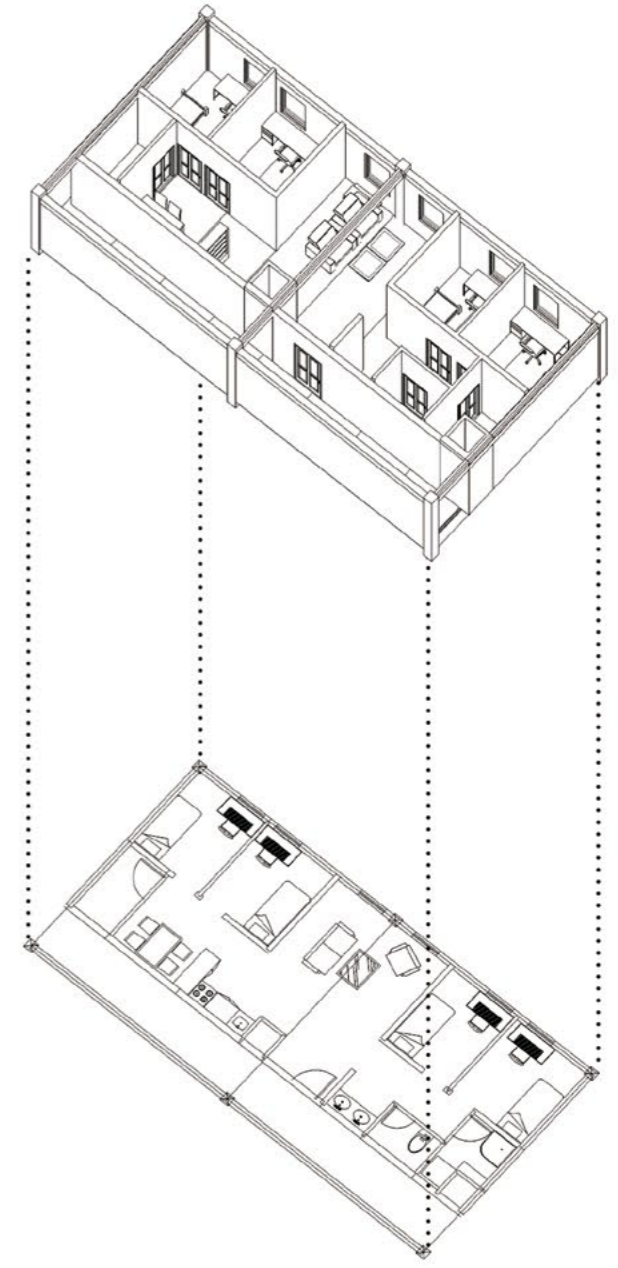
D1



D2

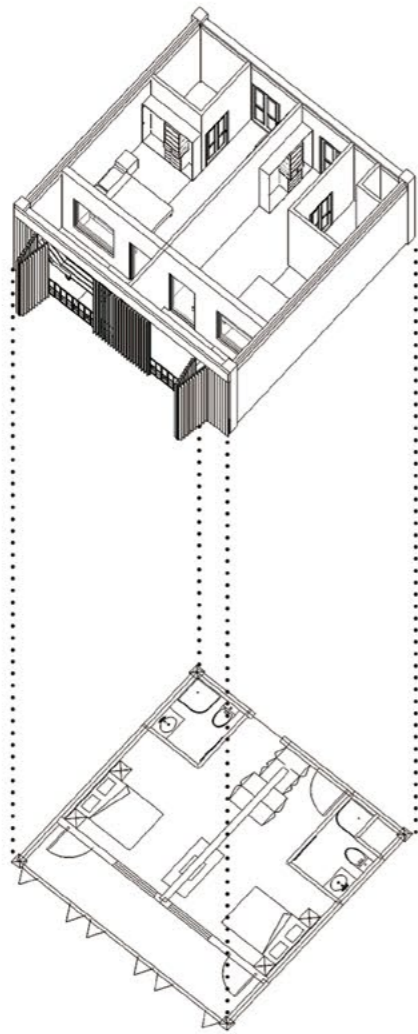


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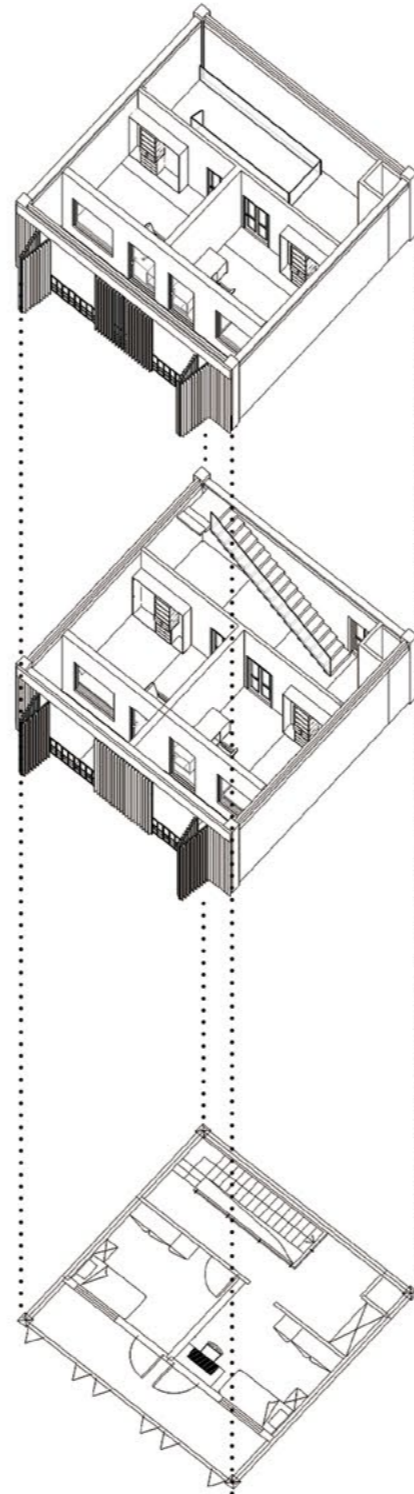


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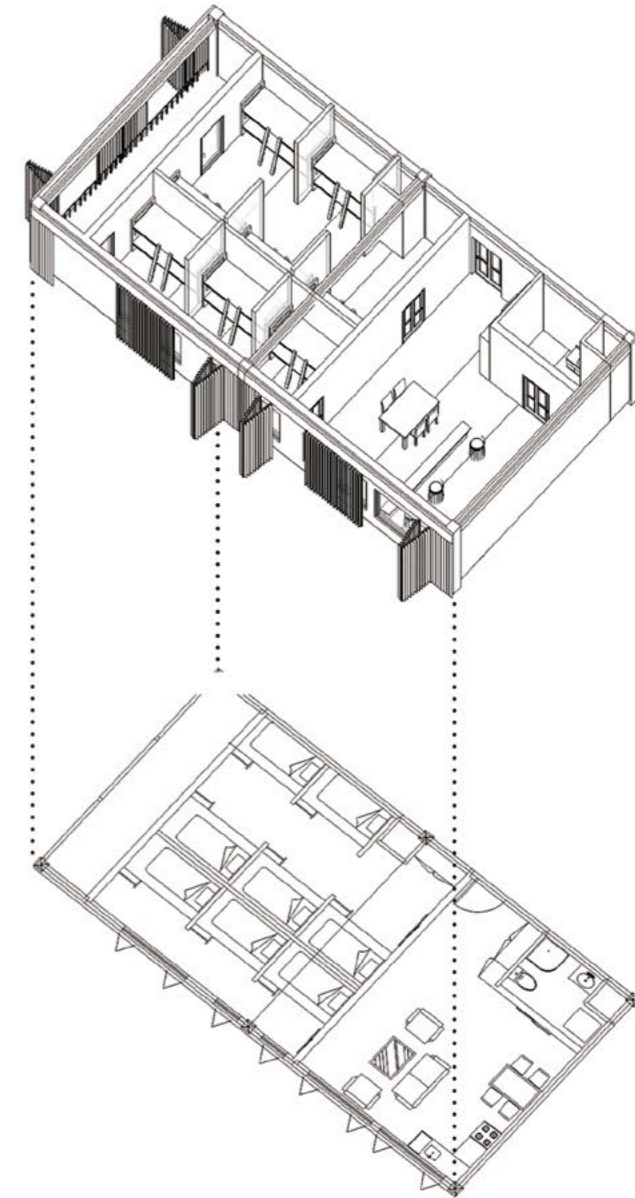
Basic units in my project



H1

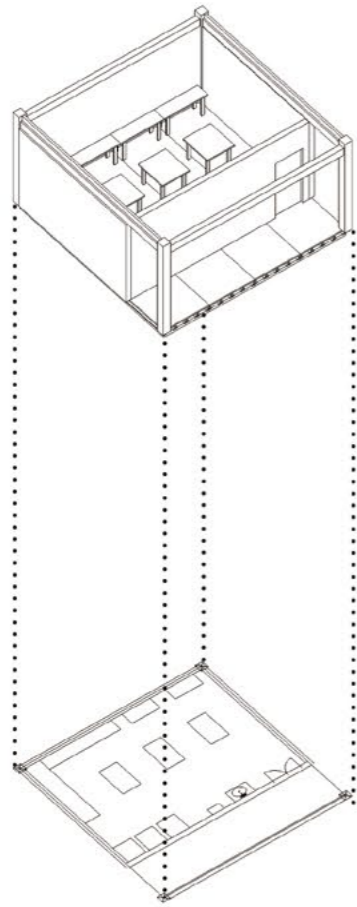


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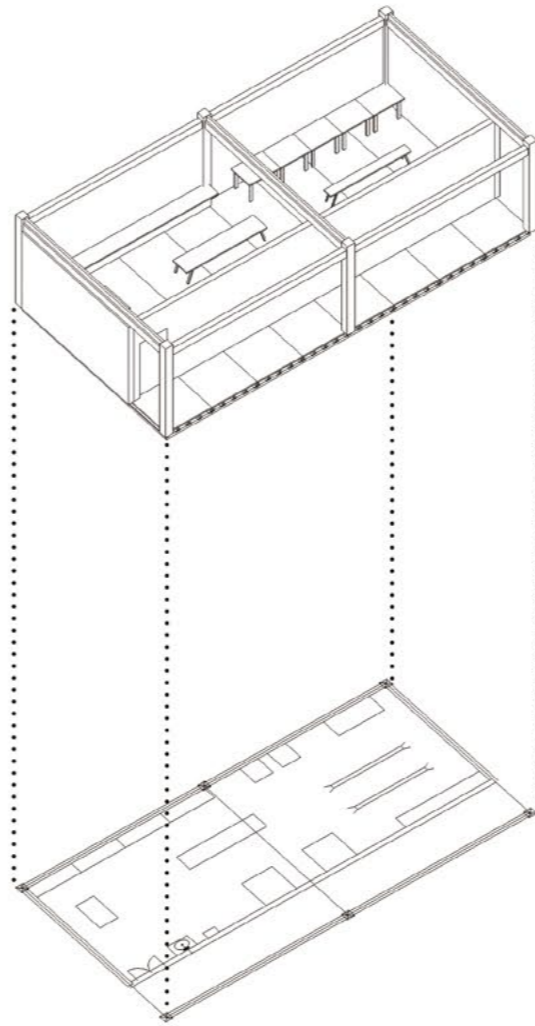


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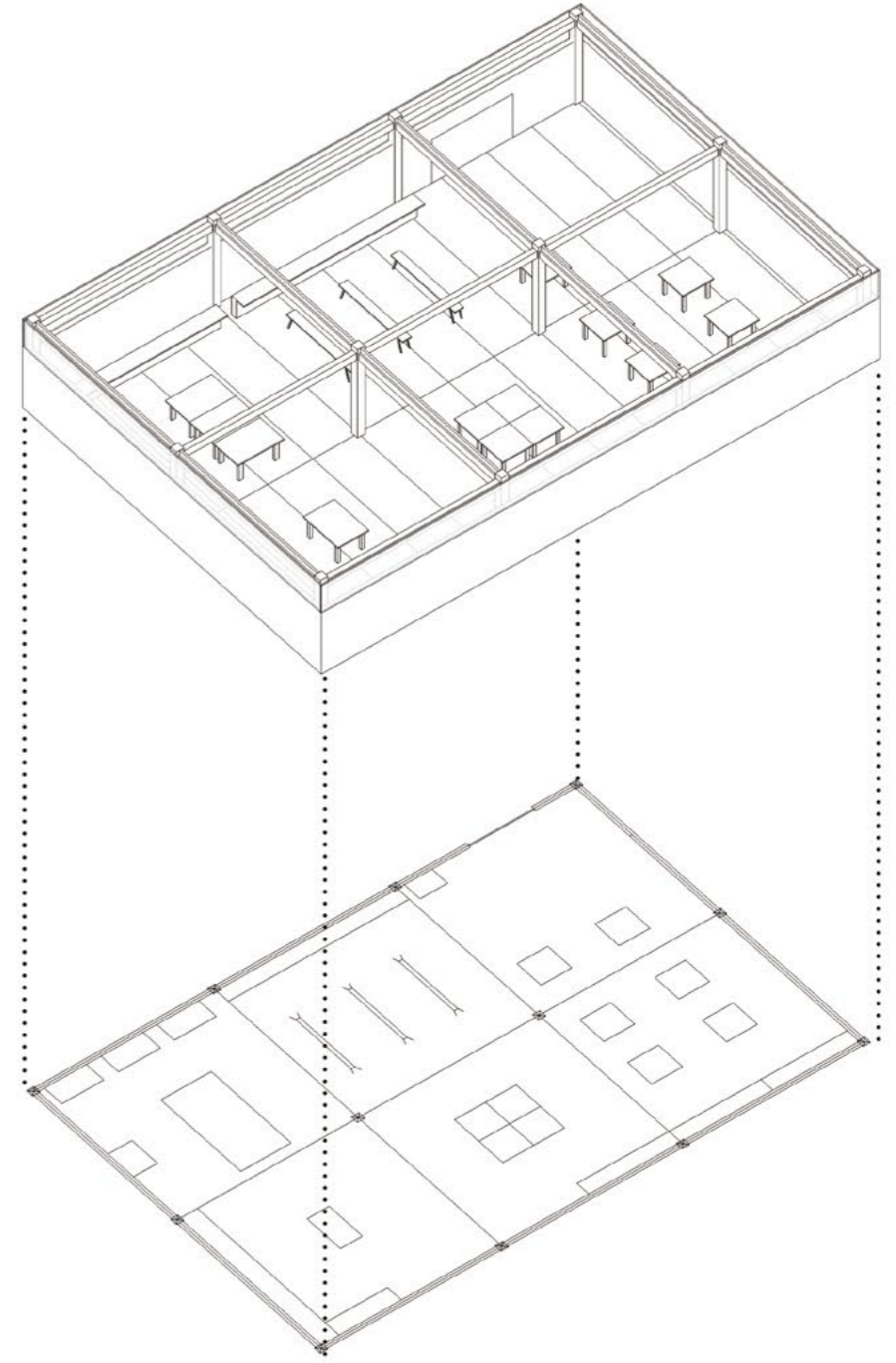
Basic units in my project



**S1**



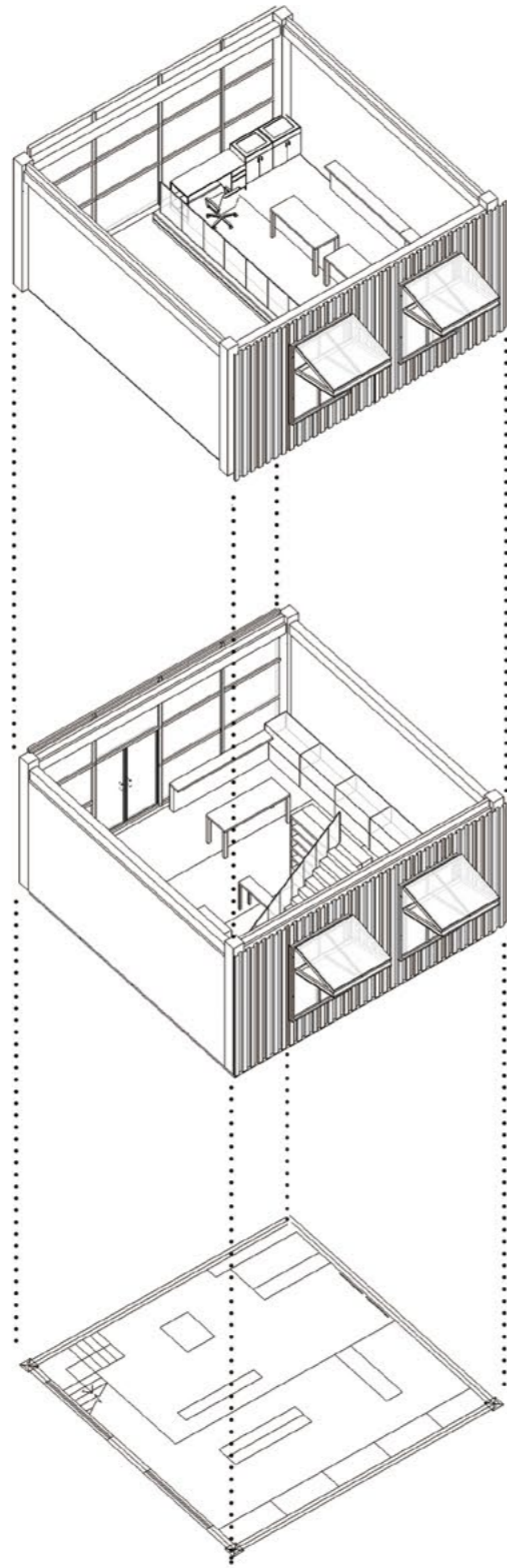
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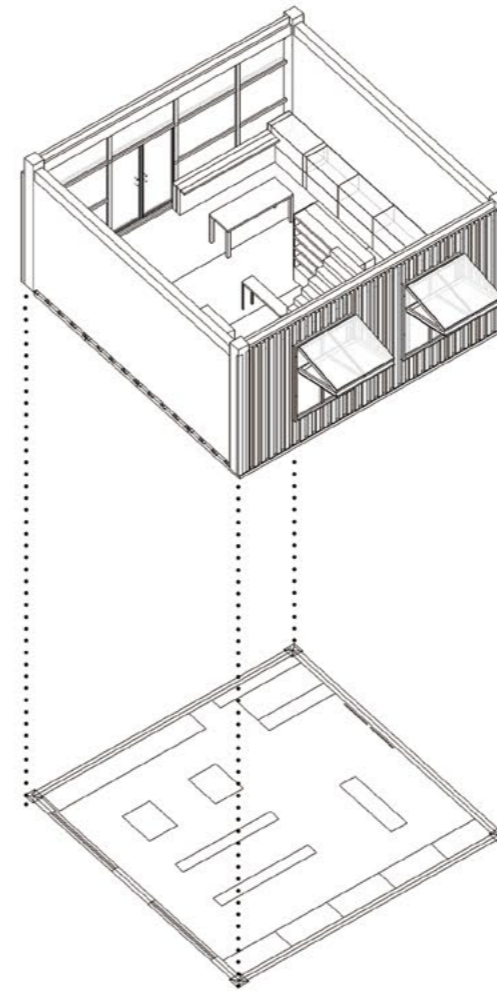
**S3**

Basic units in my project



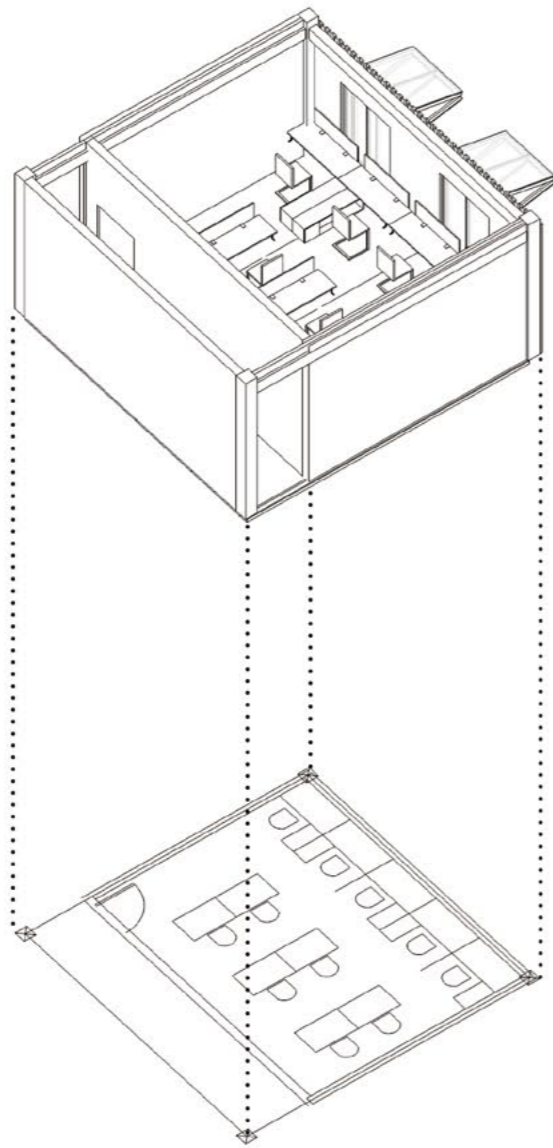


S1

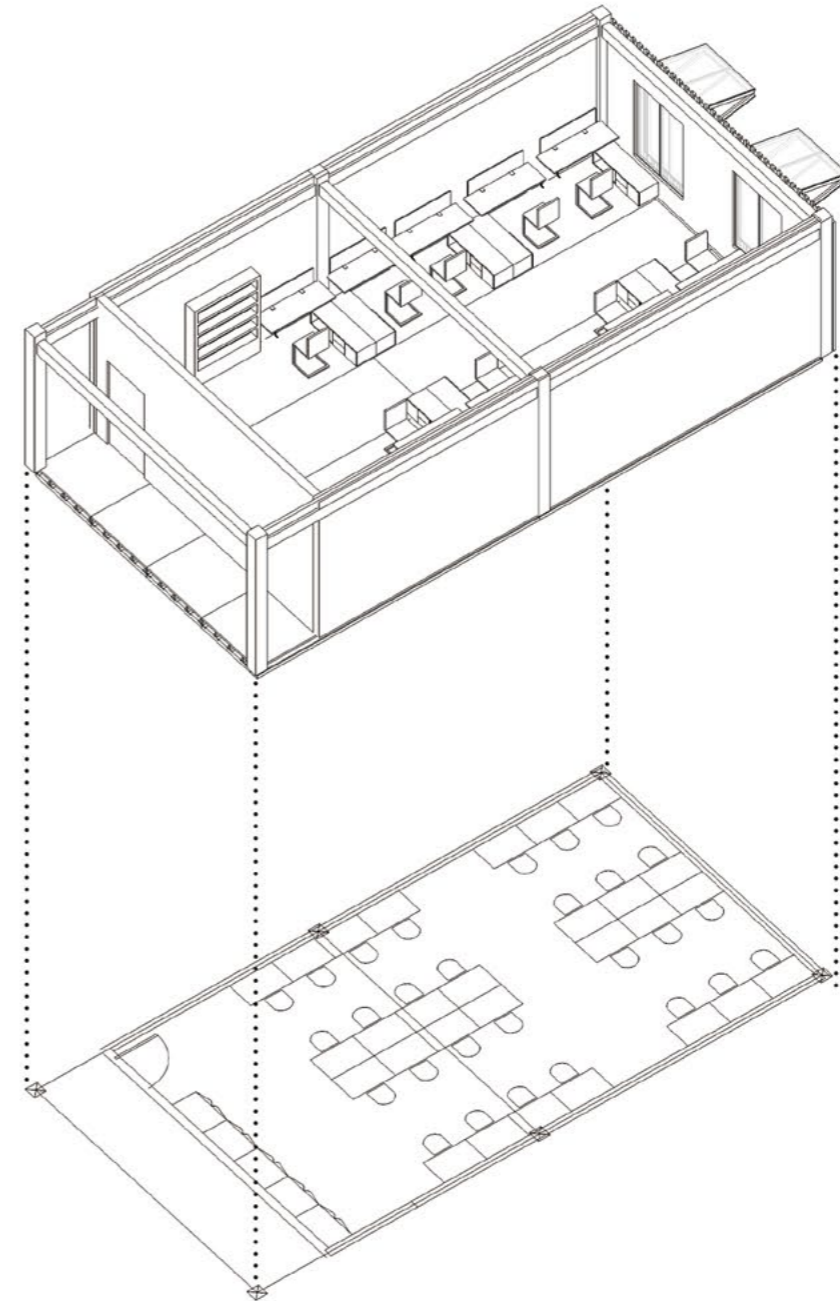


S2

Basic units in my project

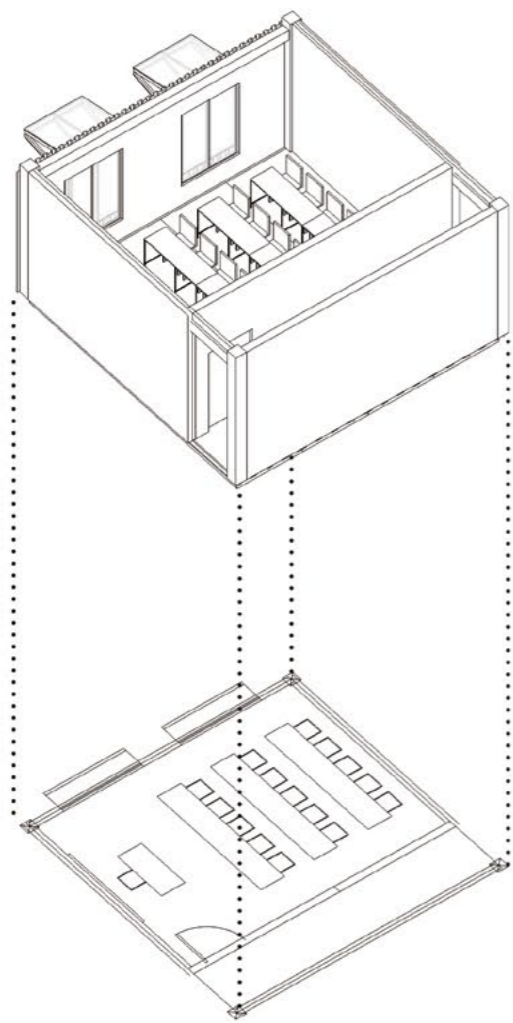


01

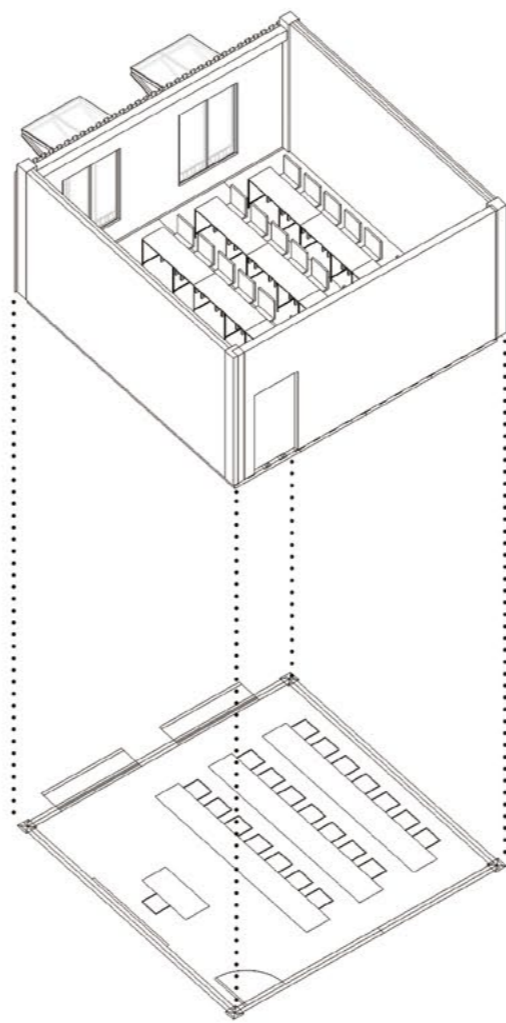


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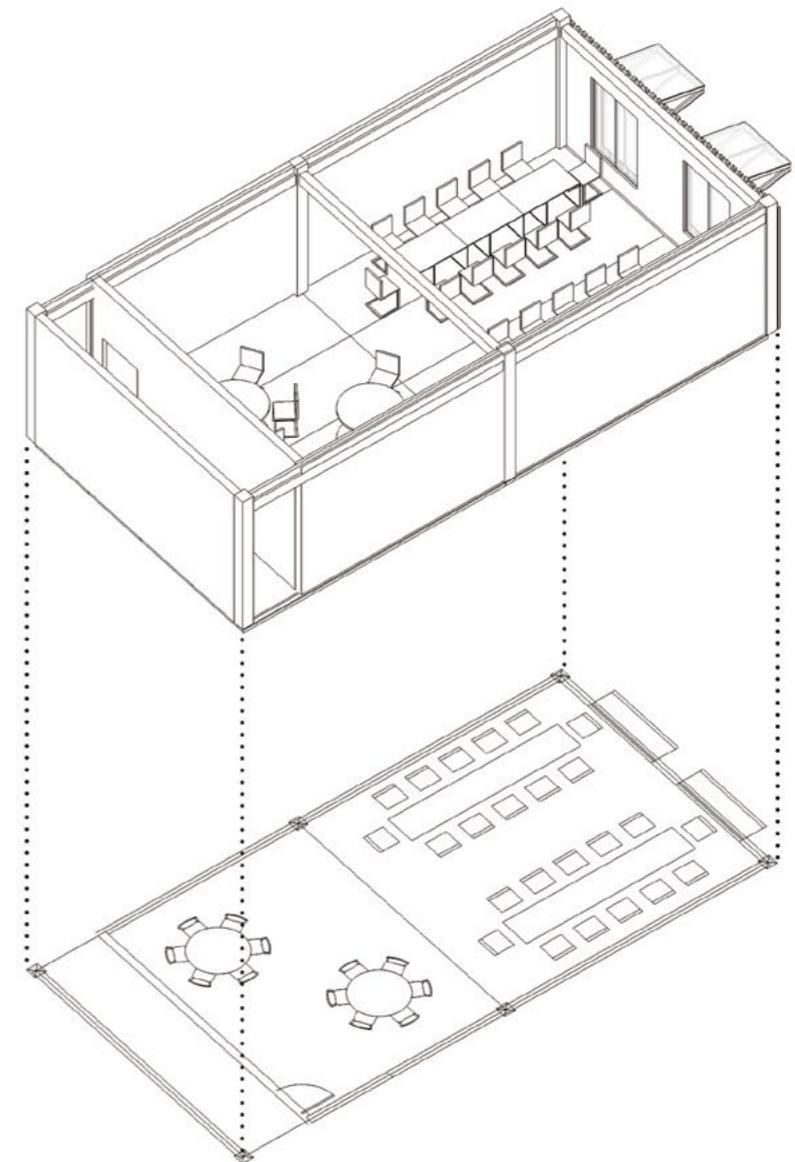
Basic units in my project



C1



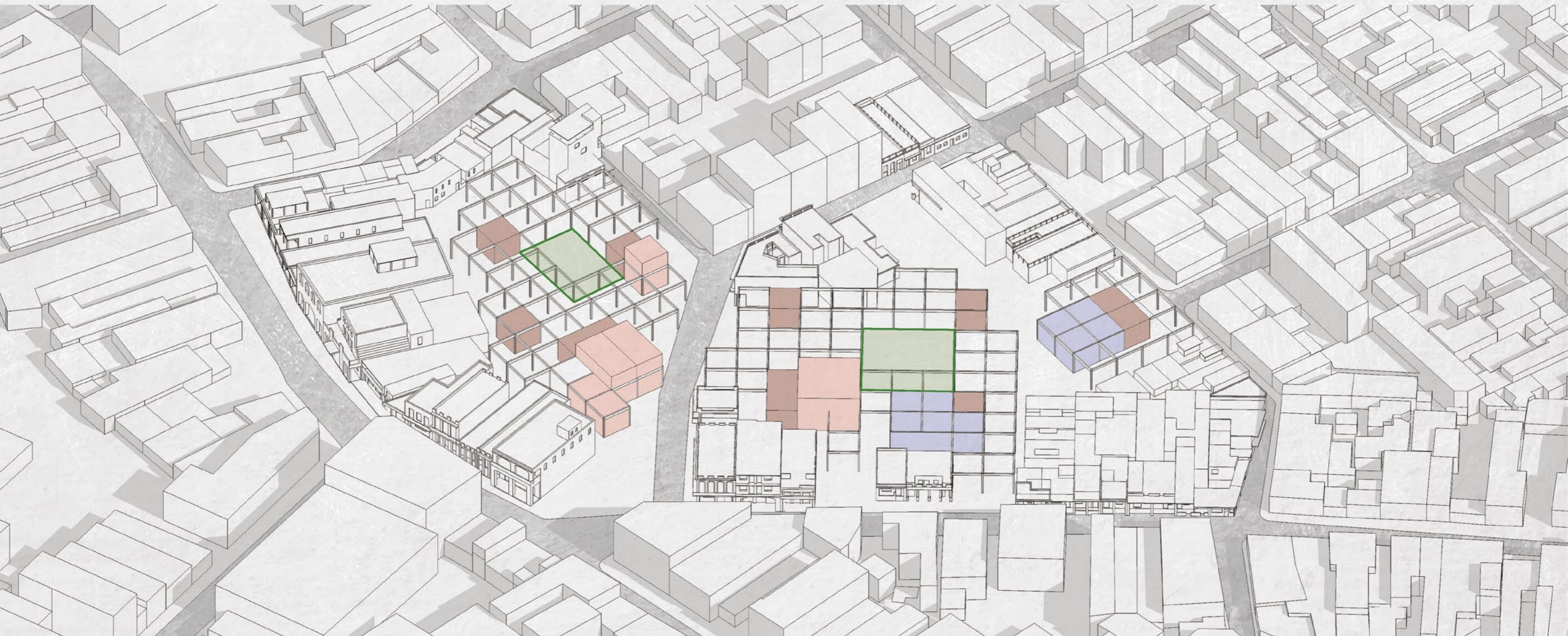
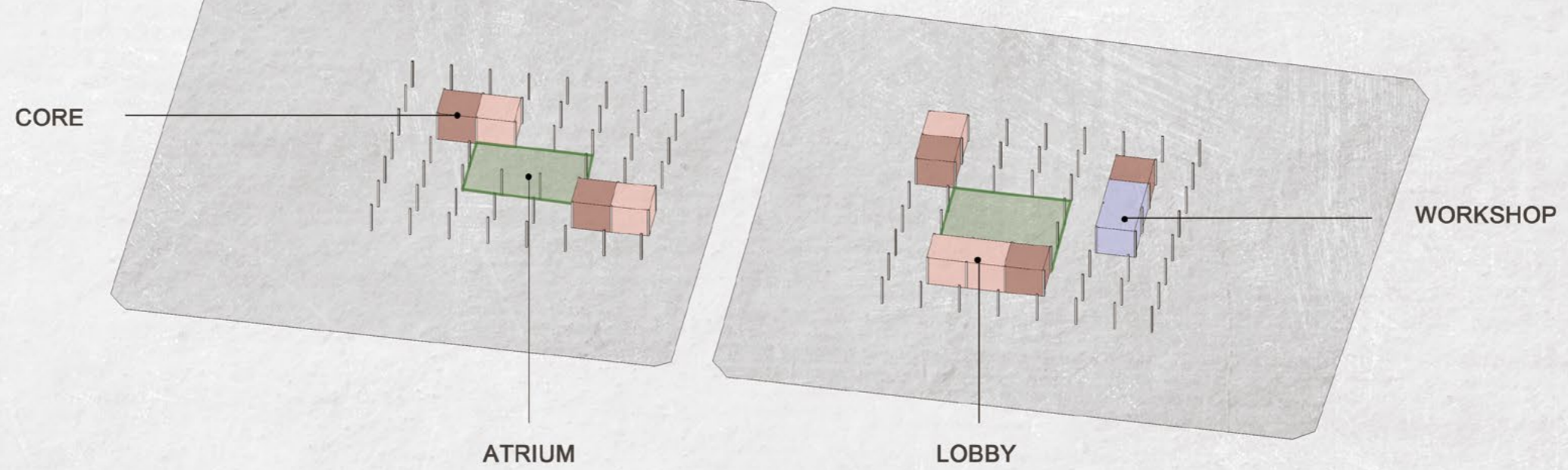
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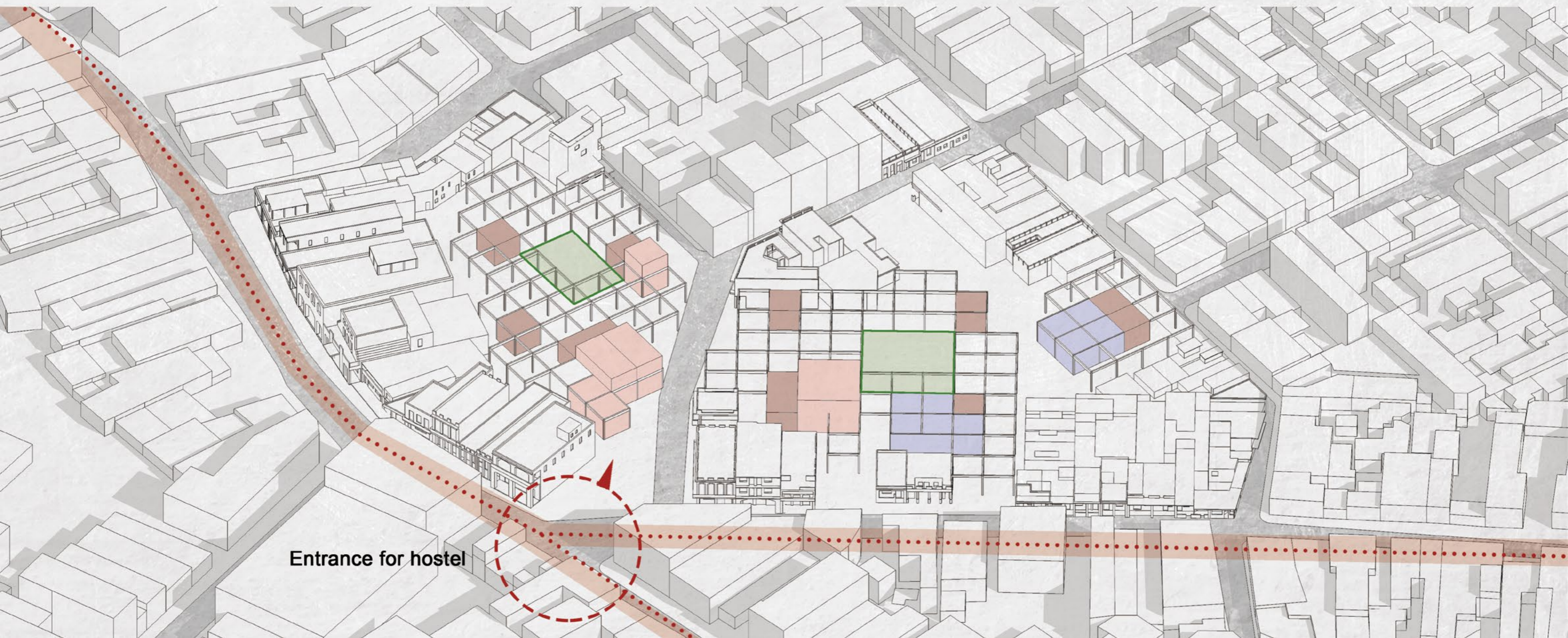
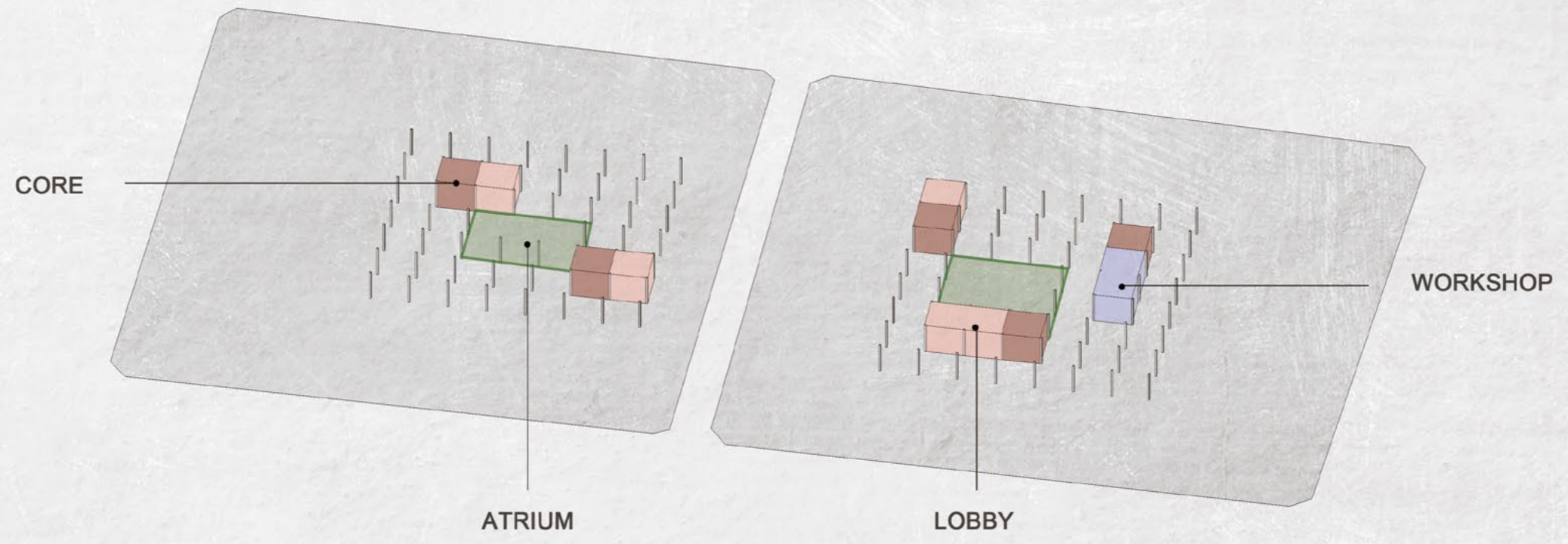


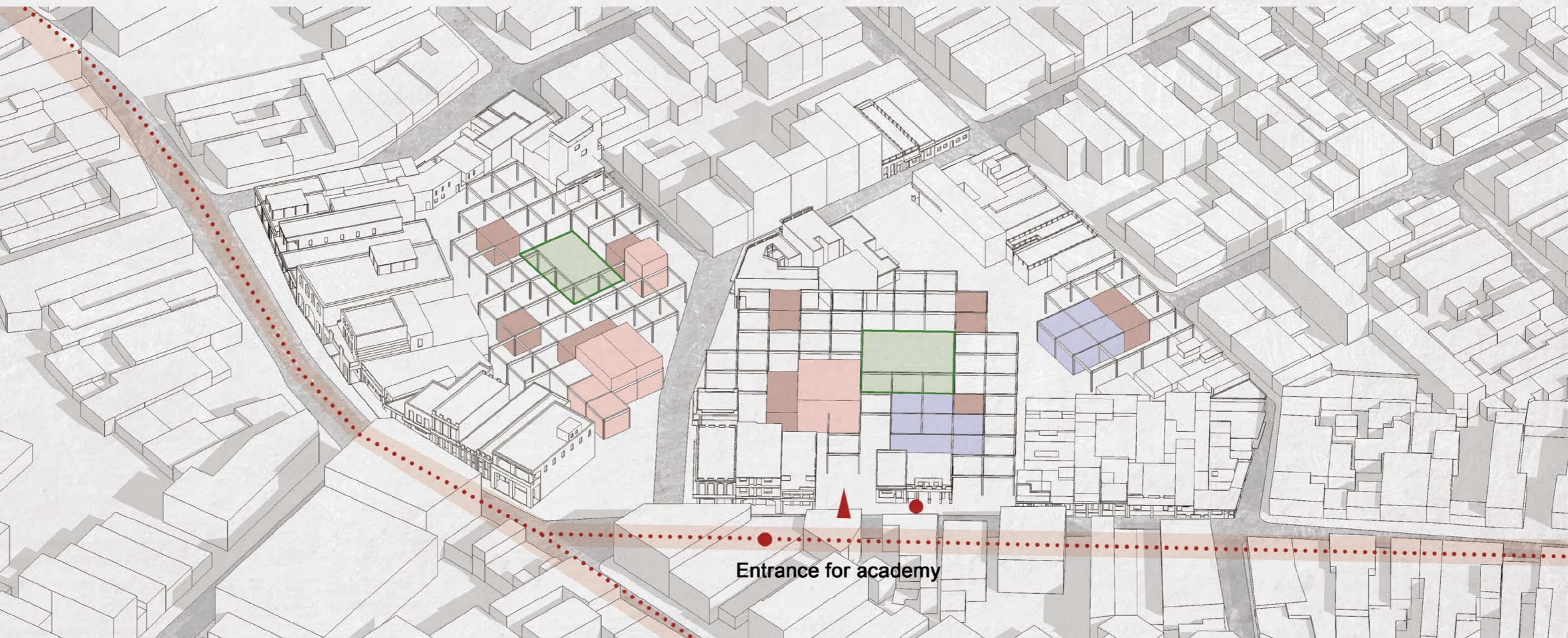
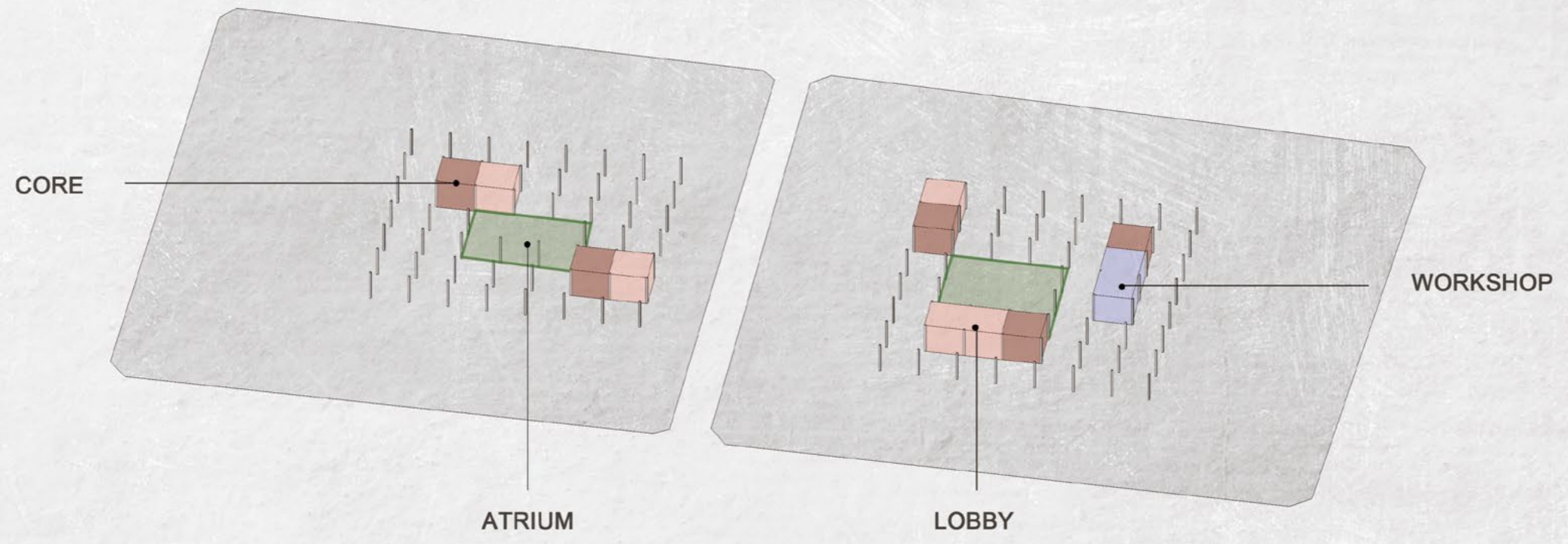
C3

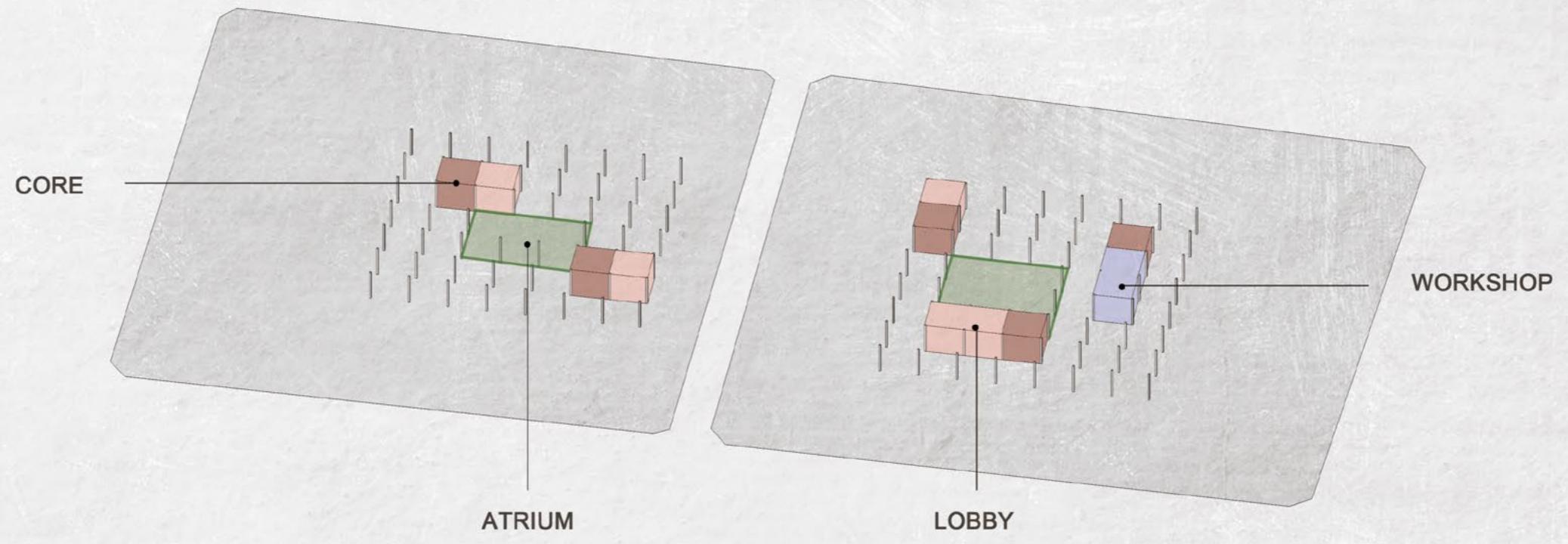
Basic units in my project

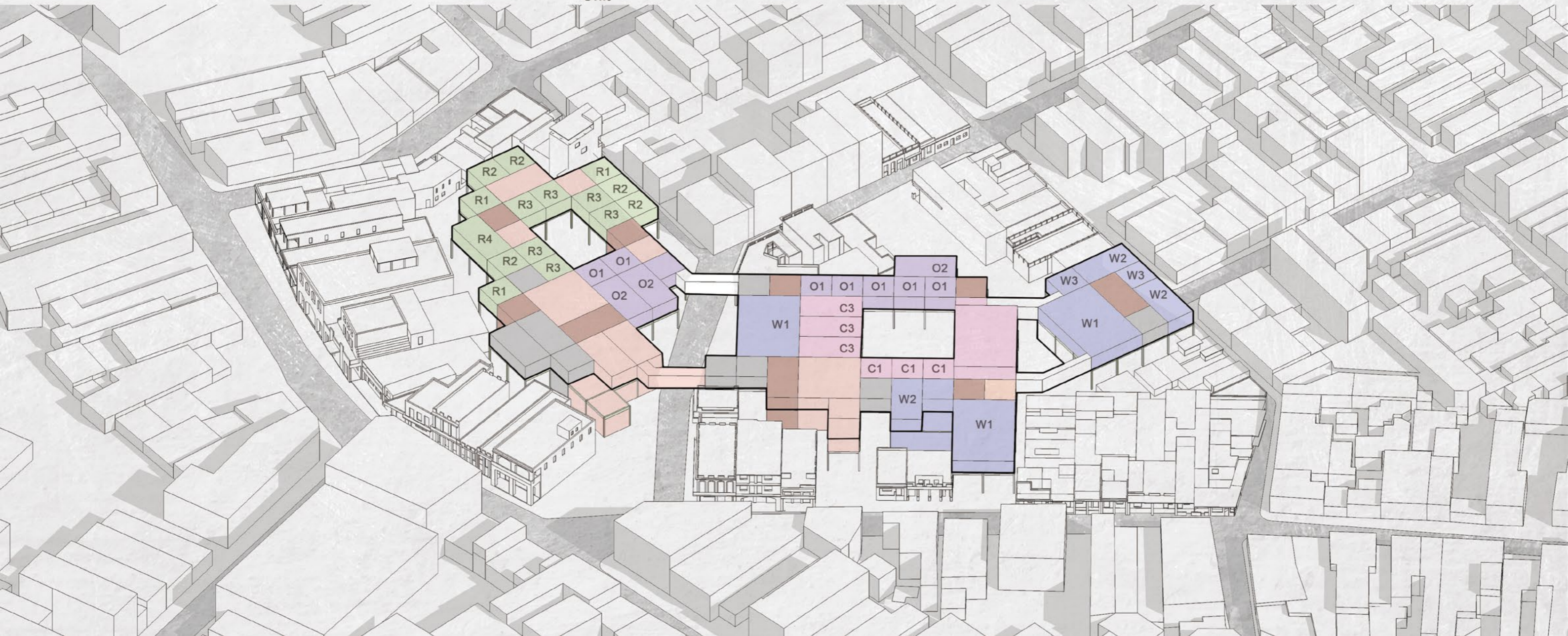
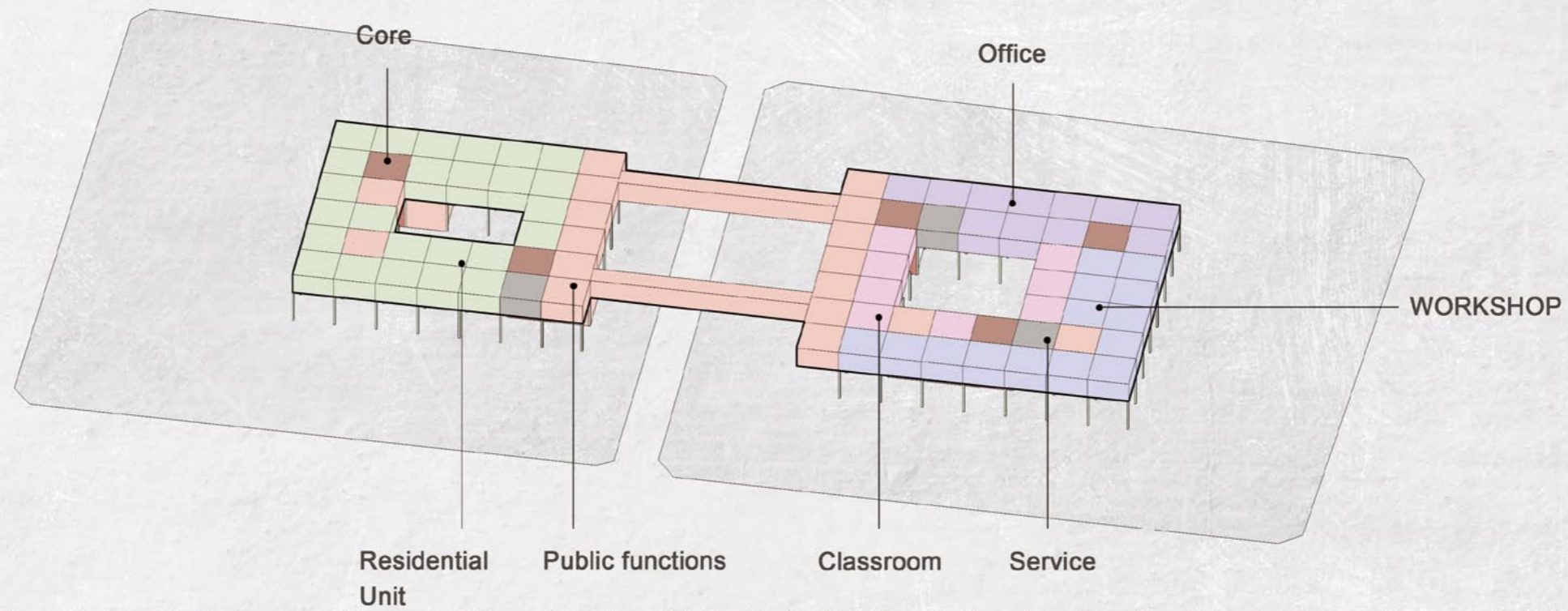
### 3 SPATIAL ORGANIZATION



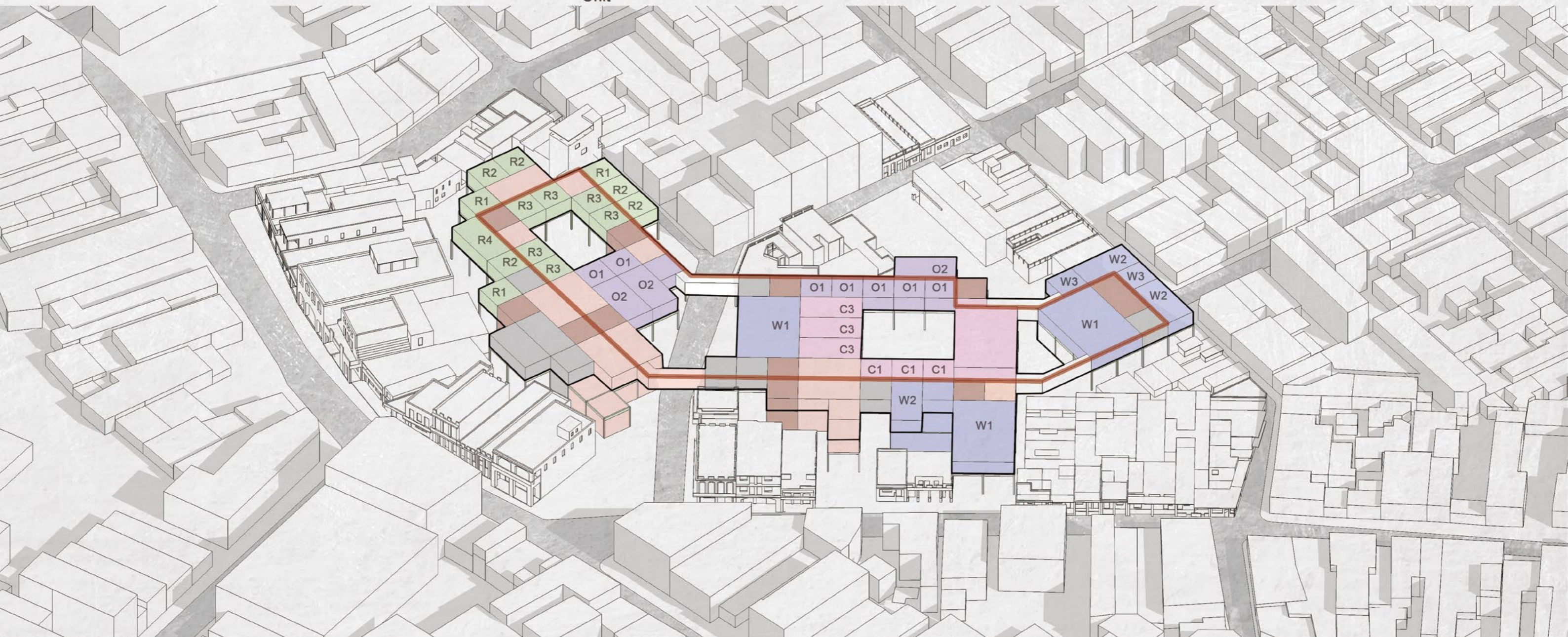
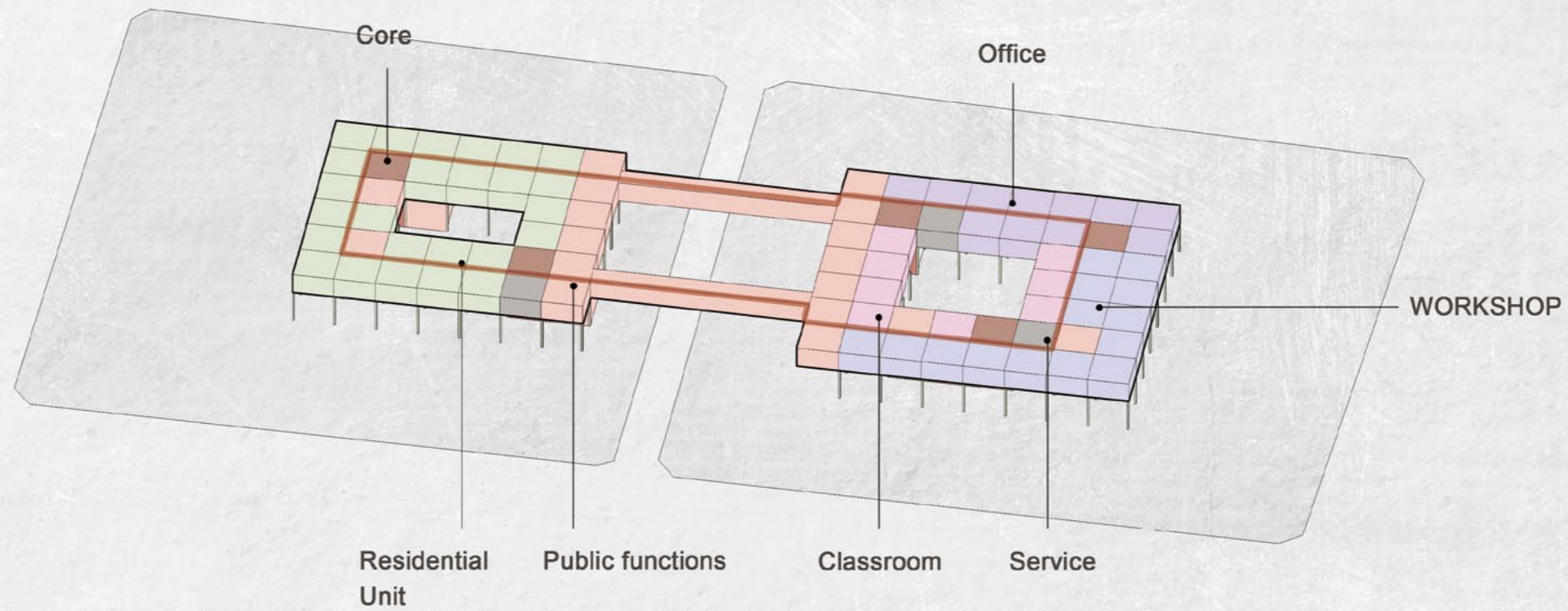


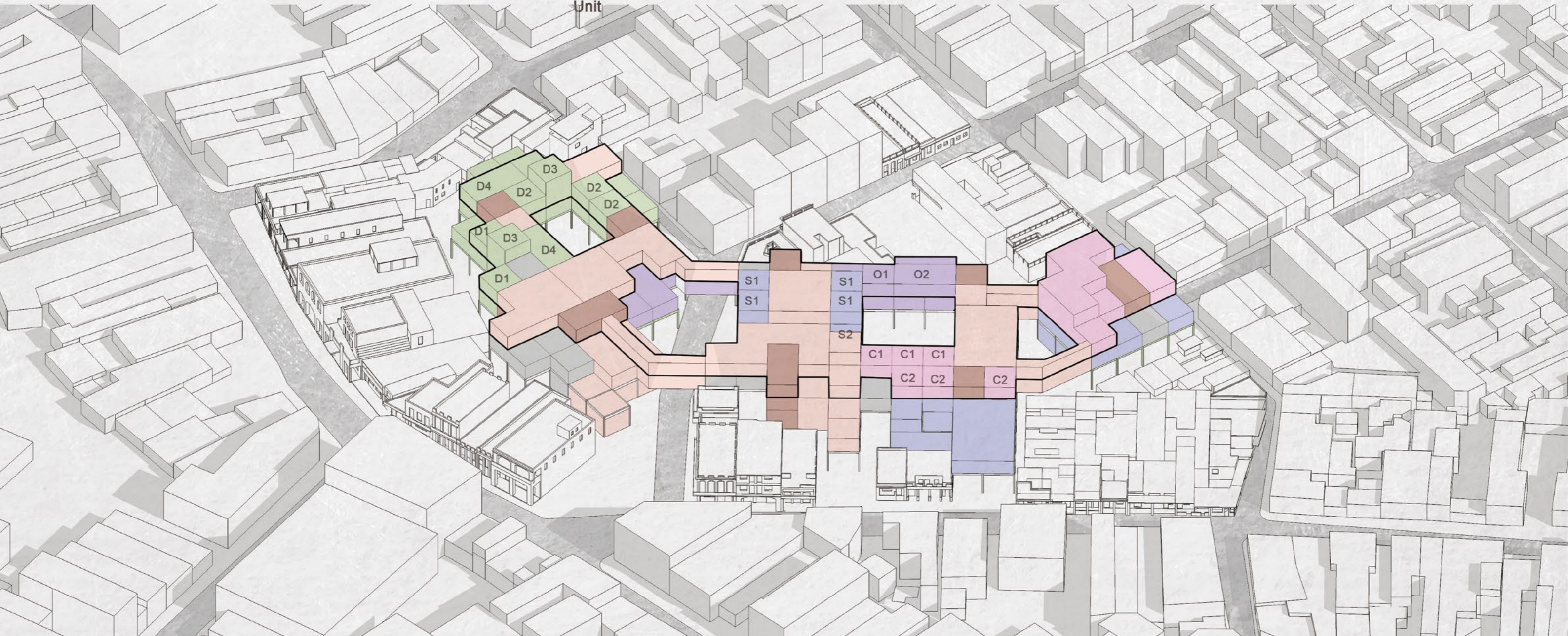
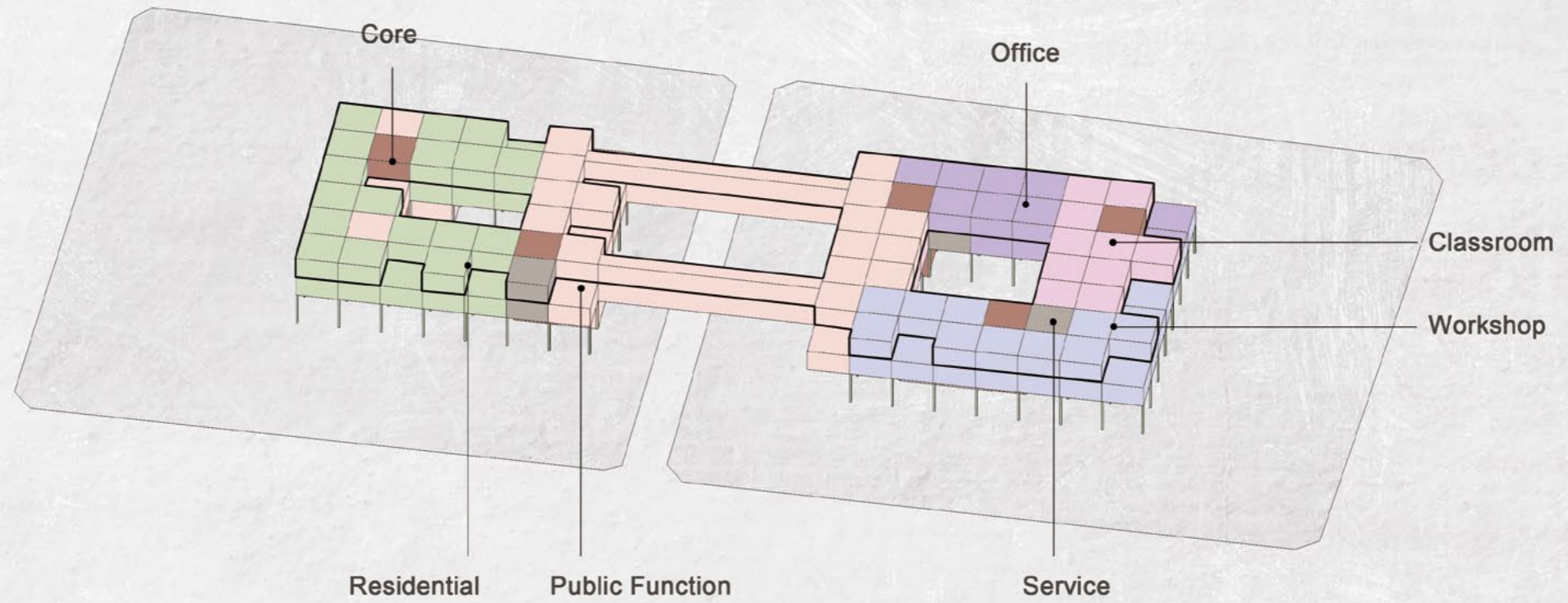


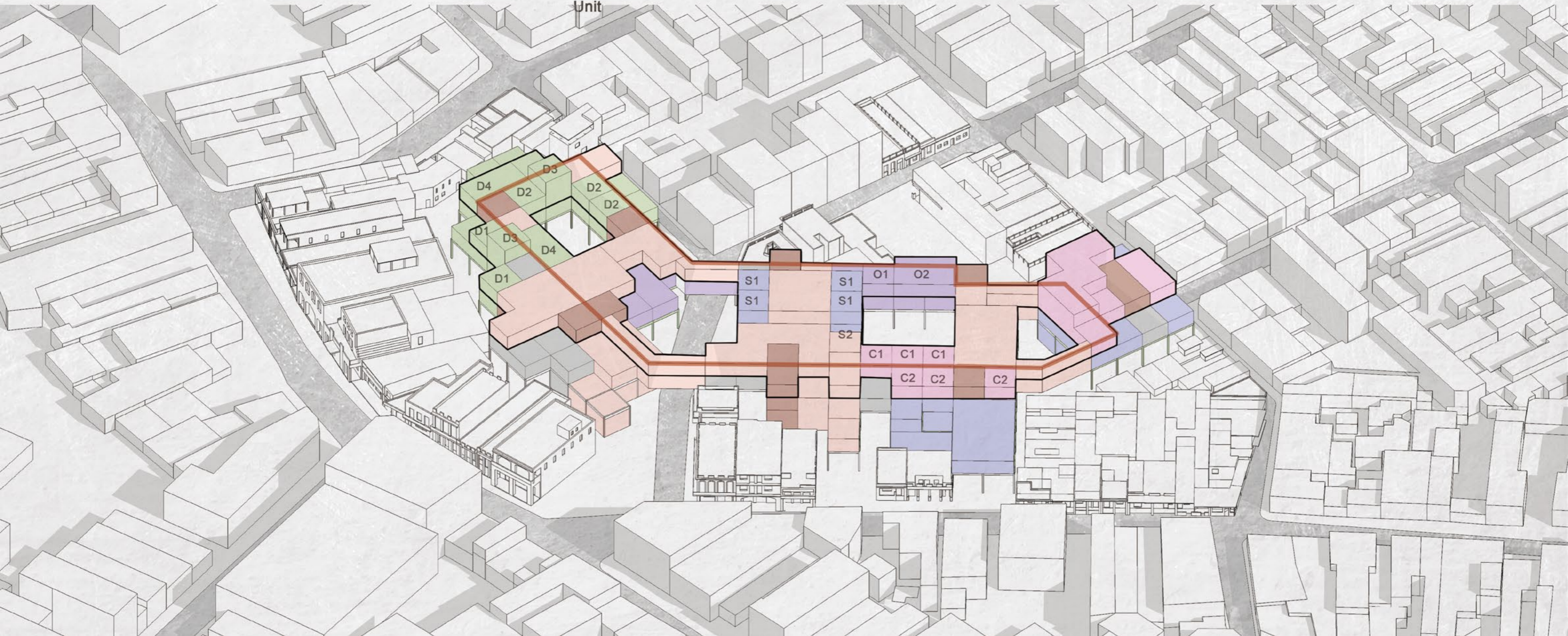
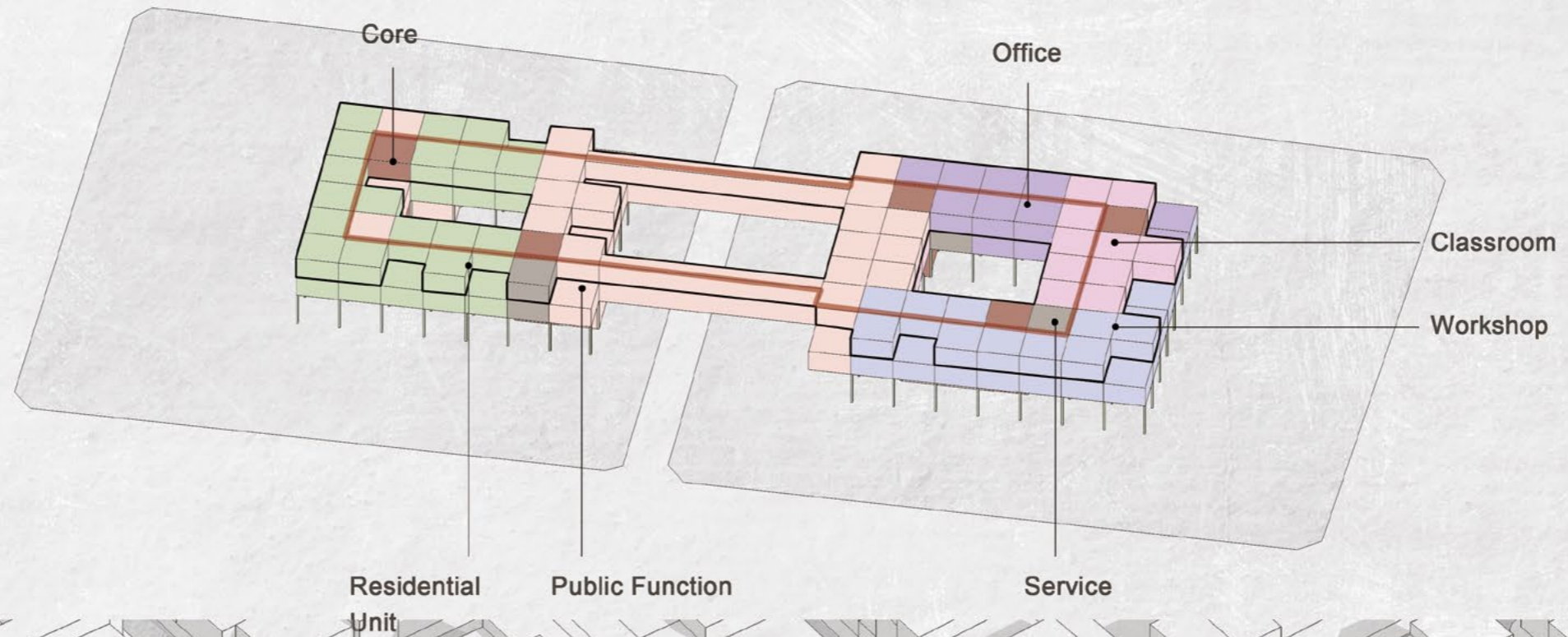


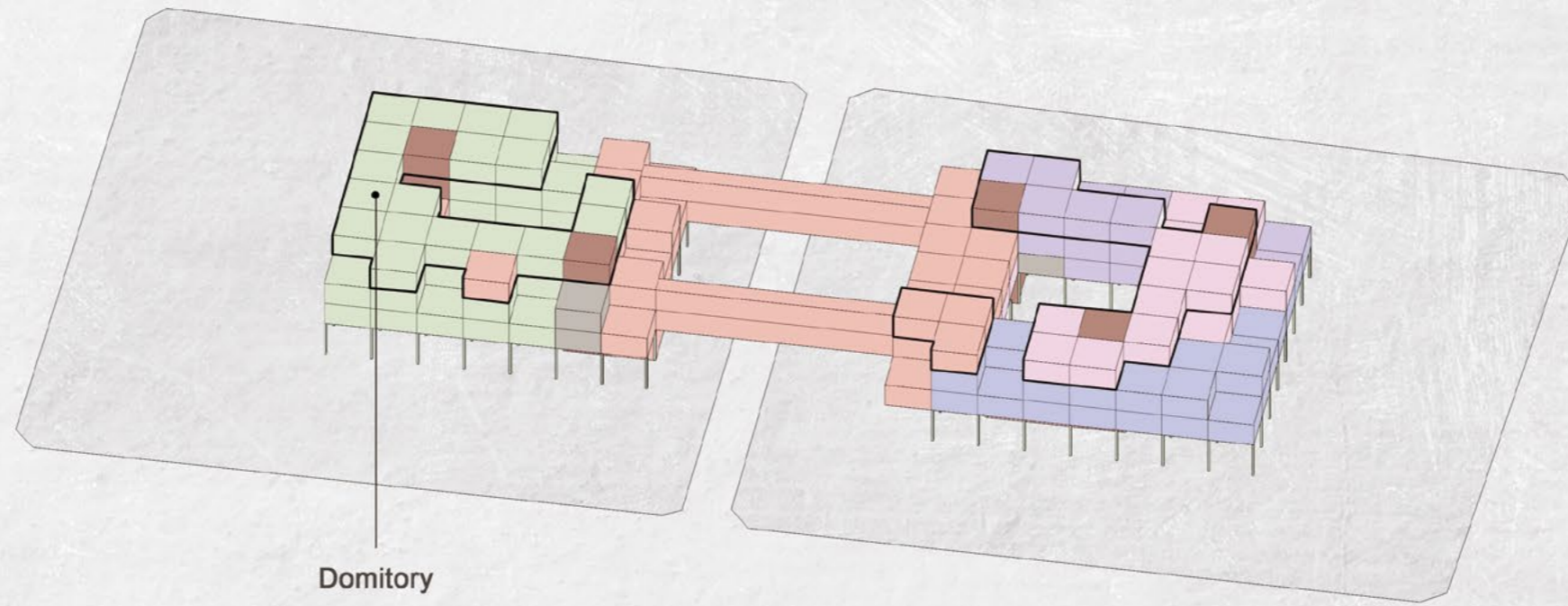




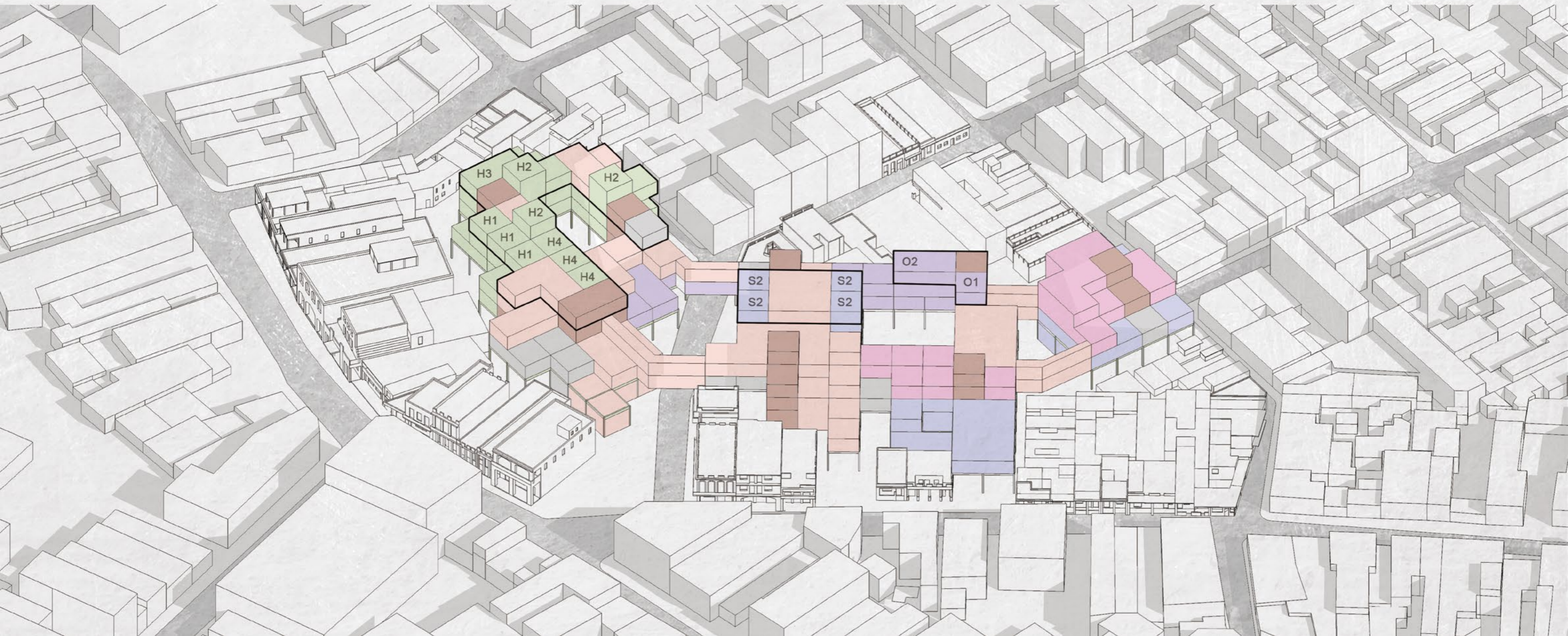


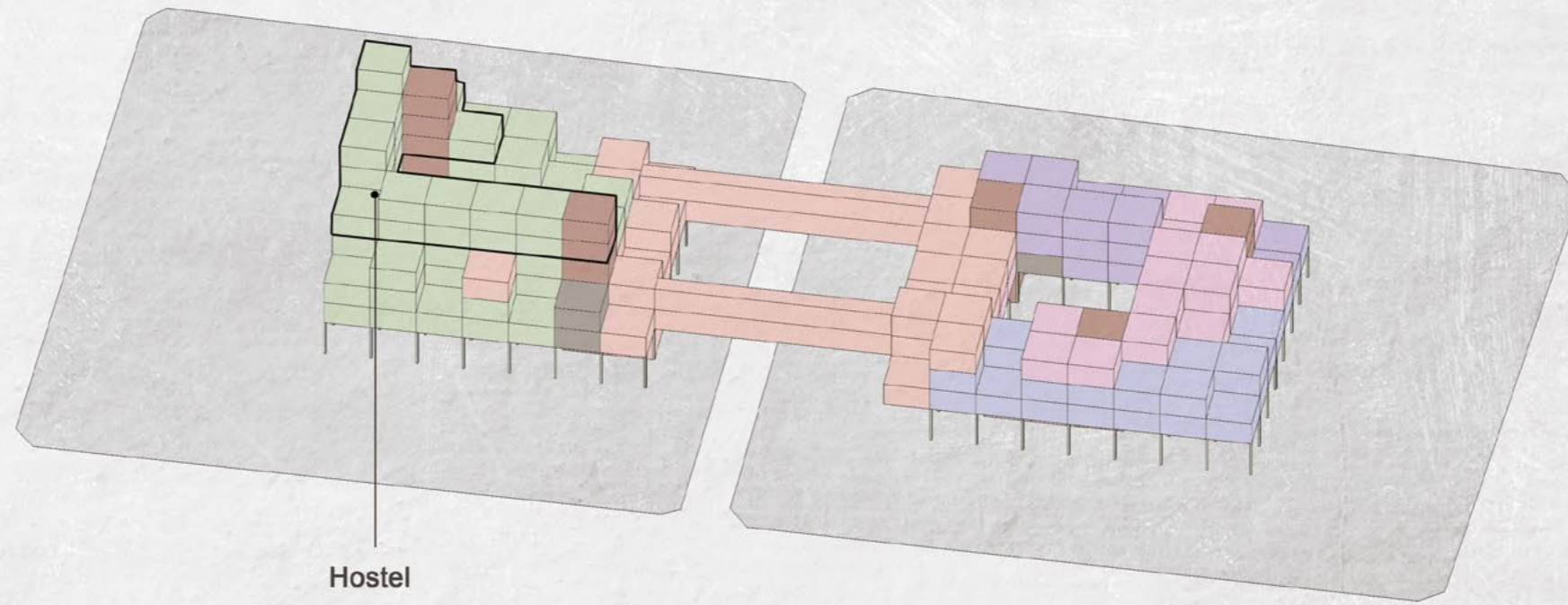




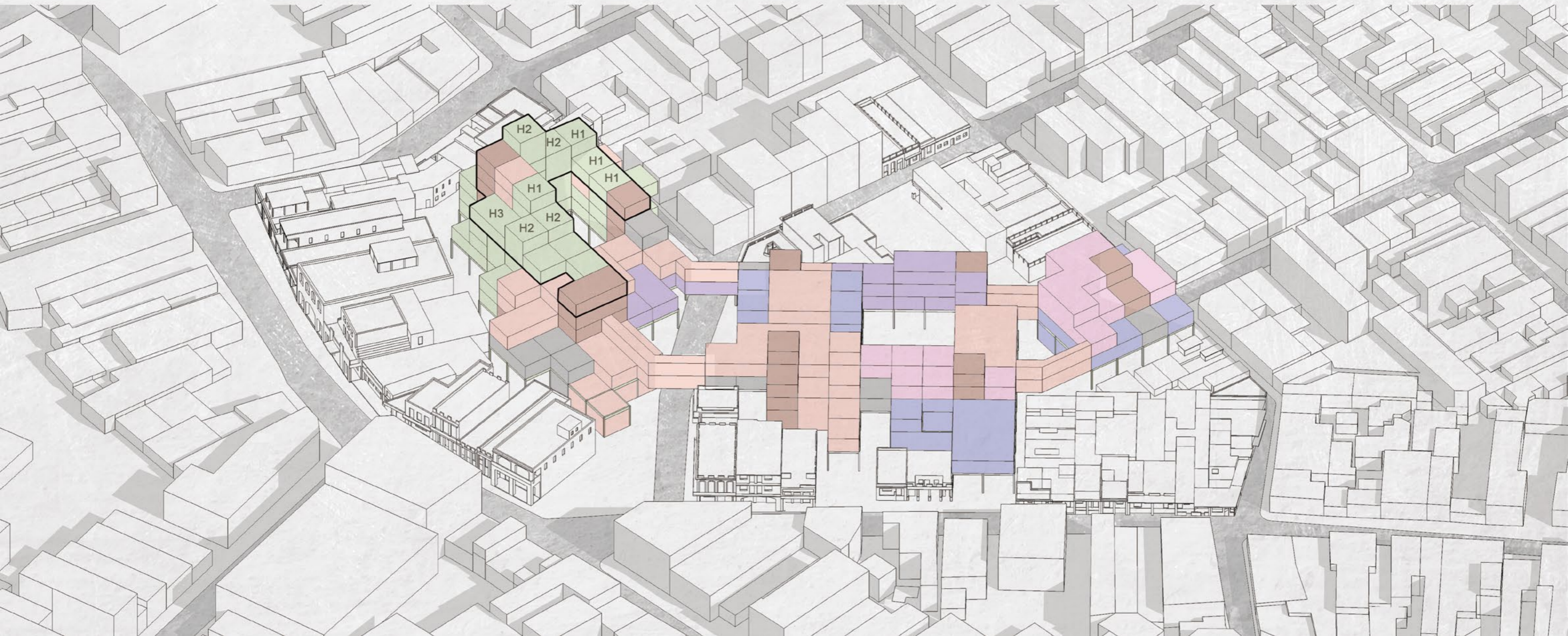


Dormitory

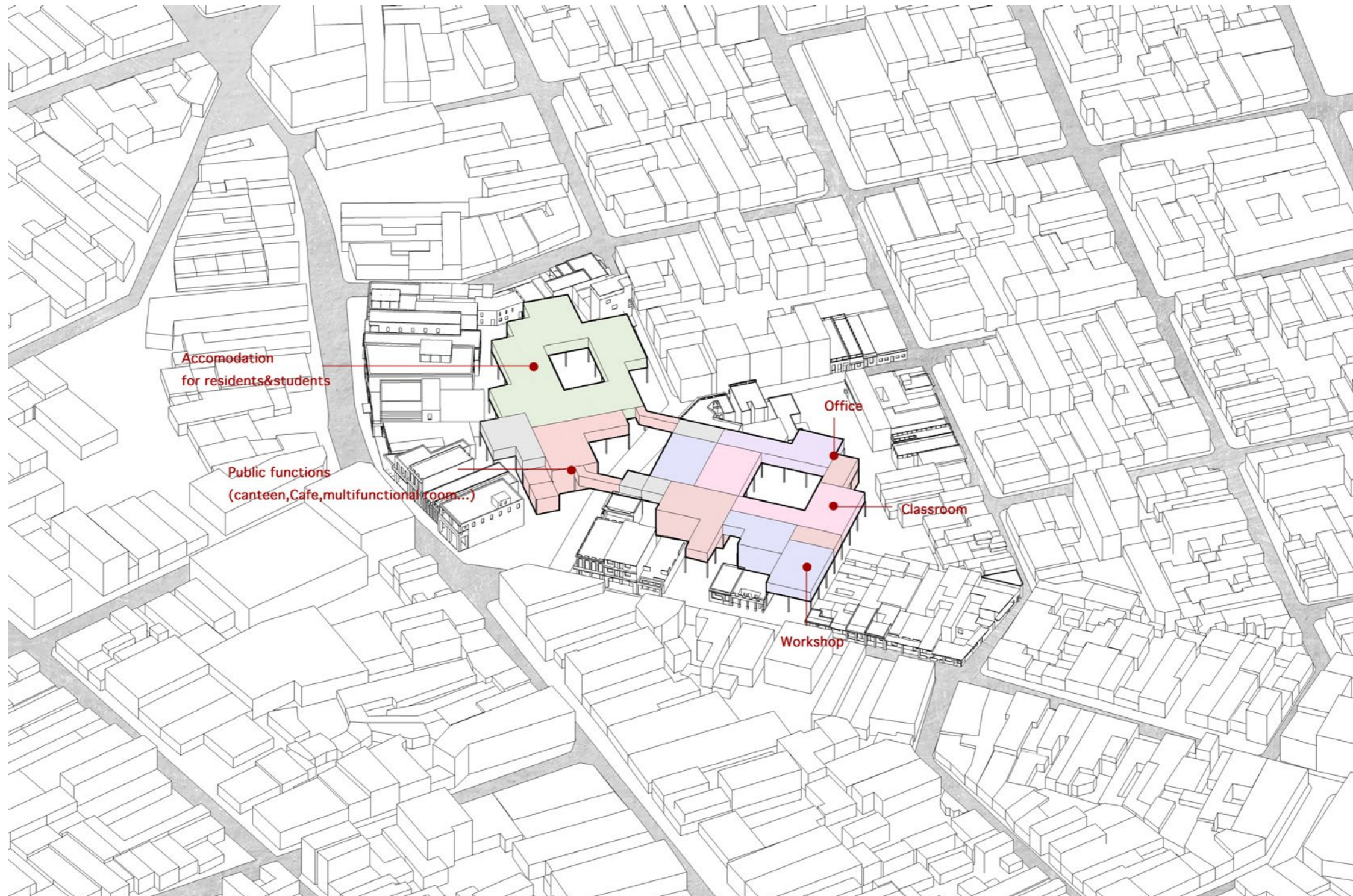




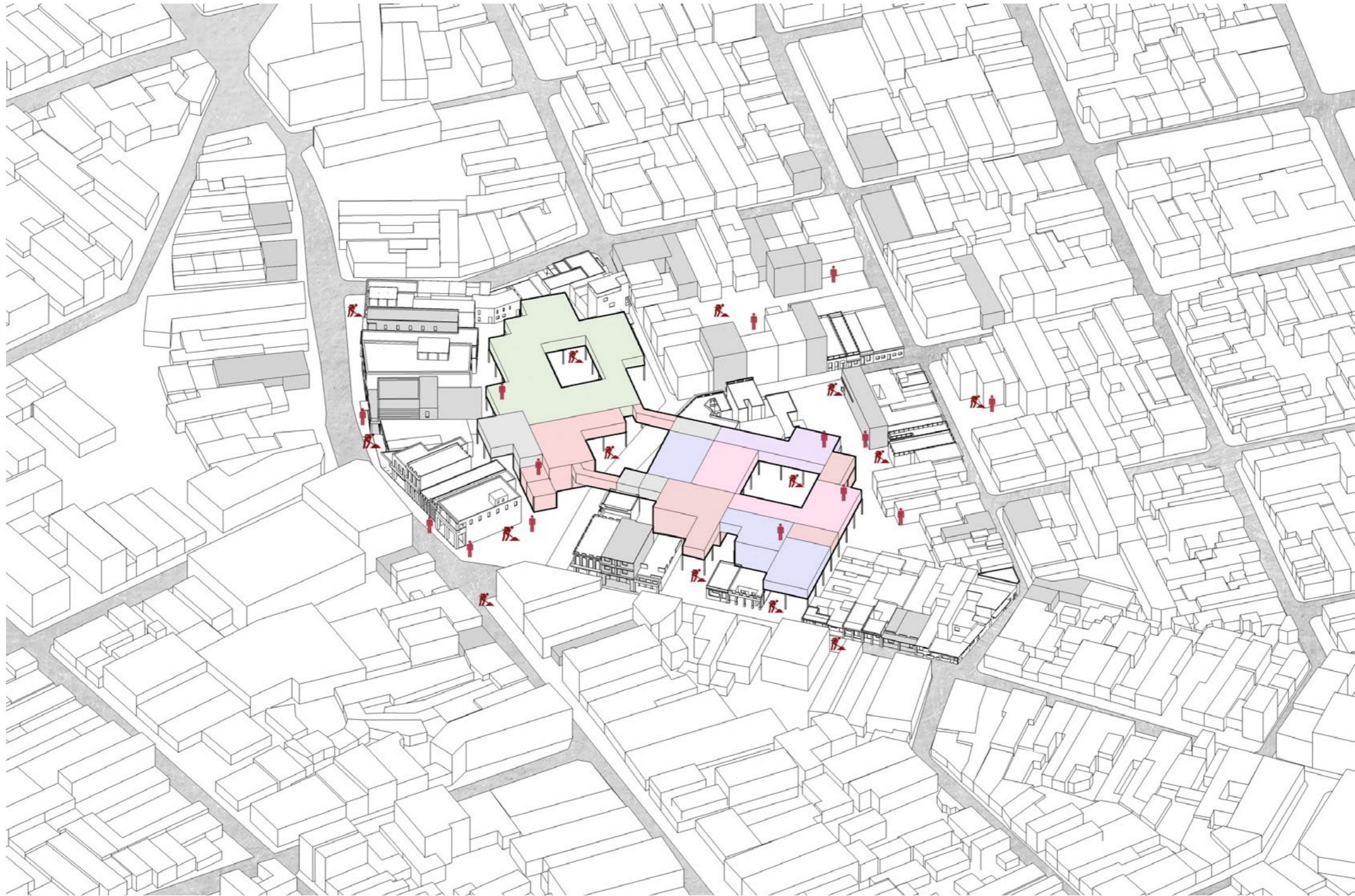
Hostel



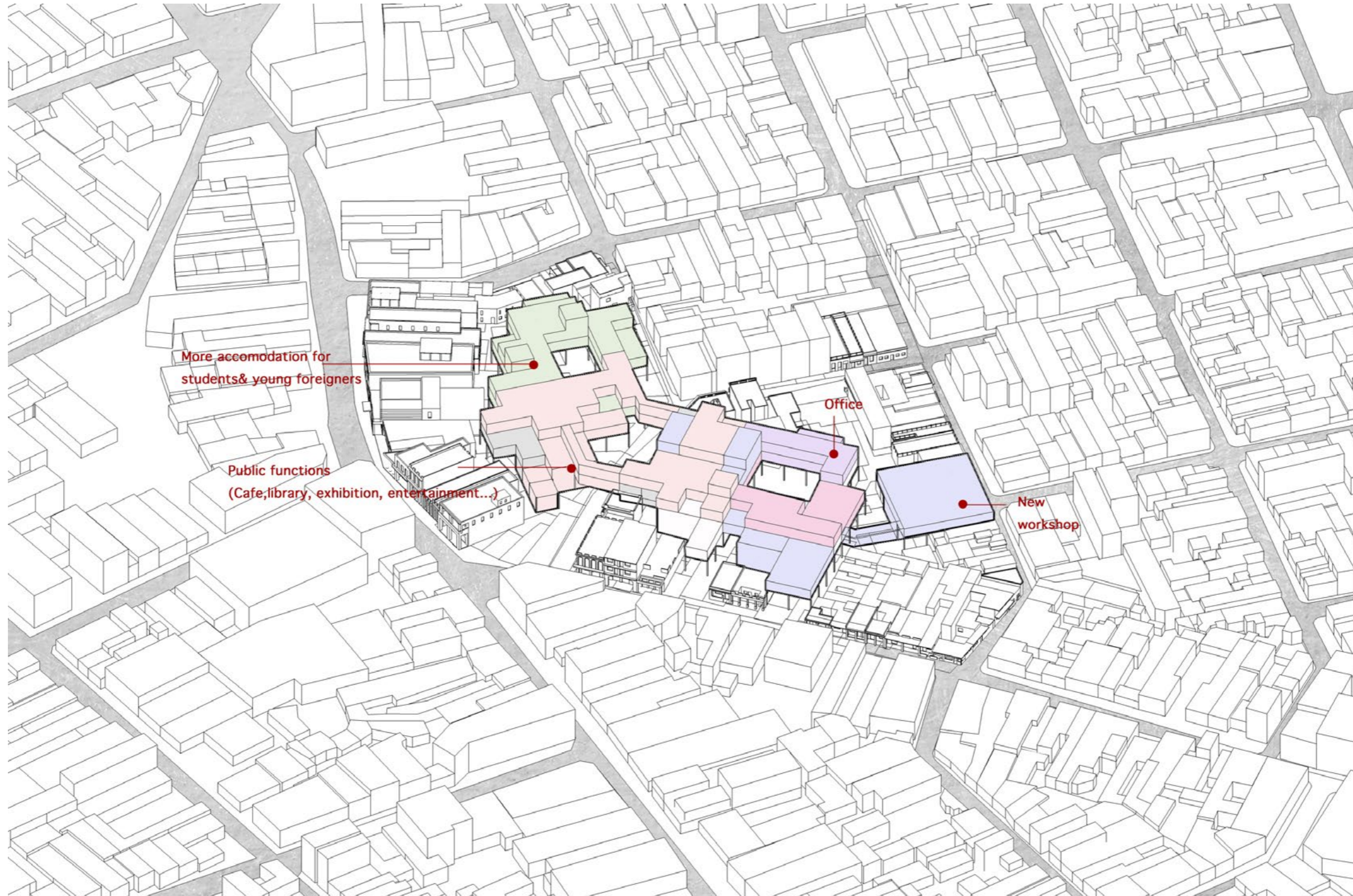
Project in first phase (5 years)



Project in first phase (5 years)

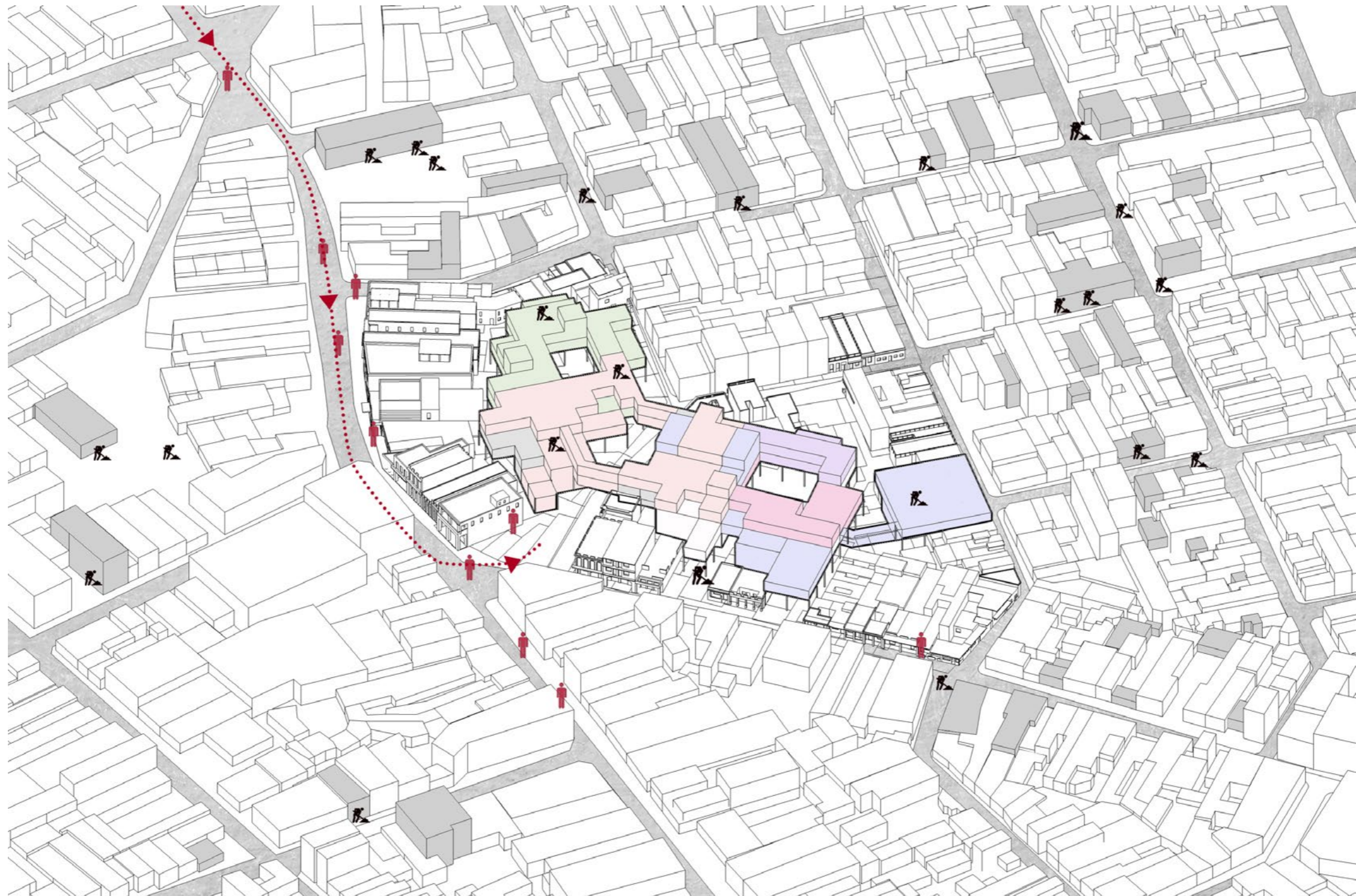


Project in second phase (10 years)





Project in second phase (10 years)



Project in third phase (15 years)



Project in third phase (15 years)



## 4 PROJECT & COMMUNITY

decayed houses in the site



courtyard as negative space



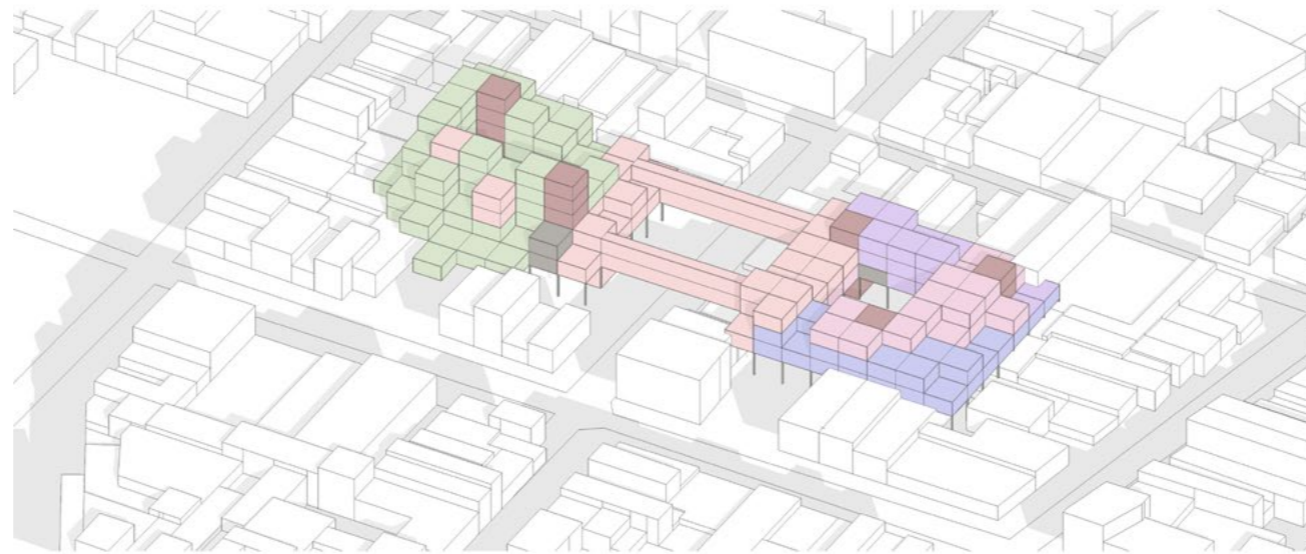
architectural intervention



architectural intervention



## 4 PROJECT & COMMUNITY



projects built on other sites based on the principles



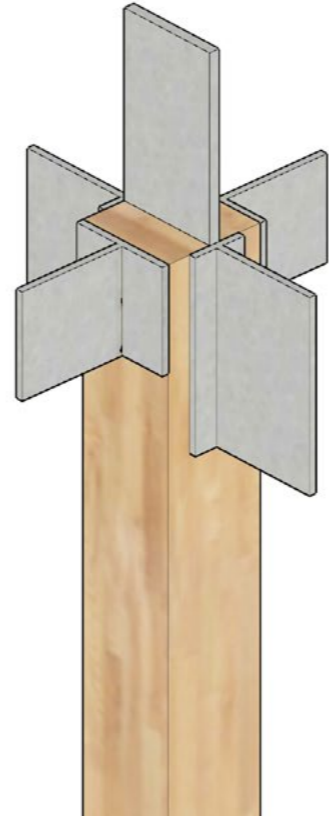
# A PILOT PROJECT



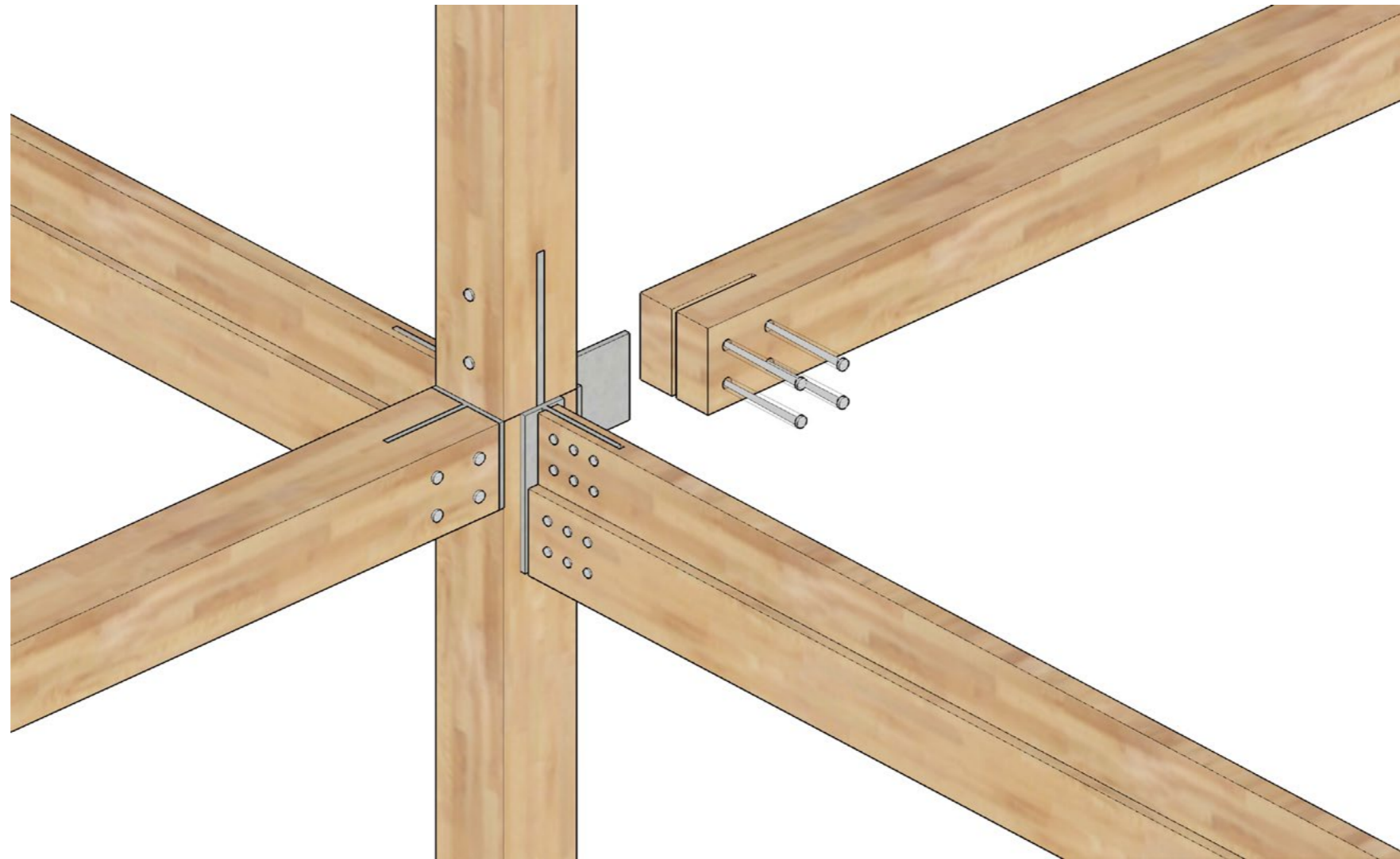


# CONSTRUCTION & MATERIALIZATION

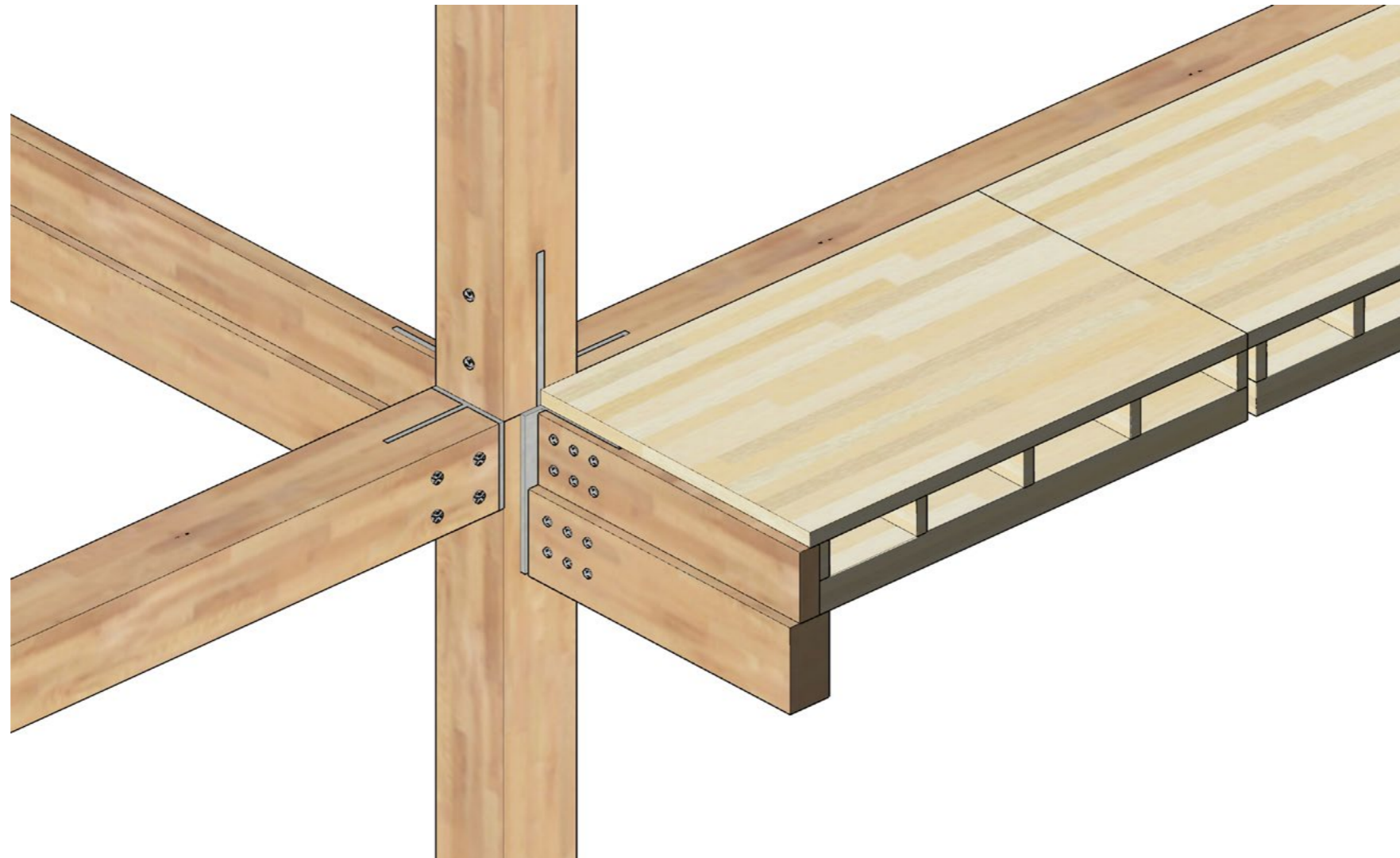
# Basic Construction



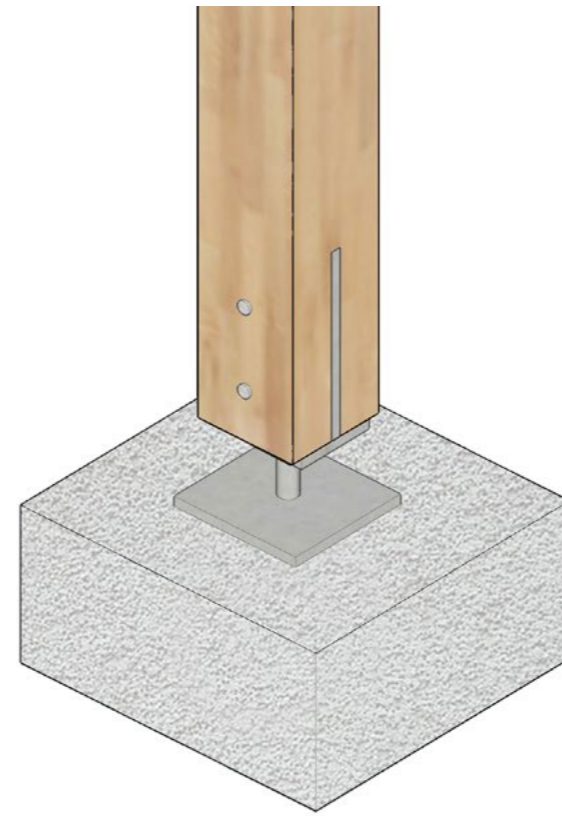
joint of a column



column & beams



kerto-riipa\_ floor elements



column footing-connected to the ground

# Material Concept



wood



acrylic panel



aluminum



glass

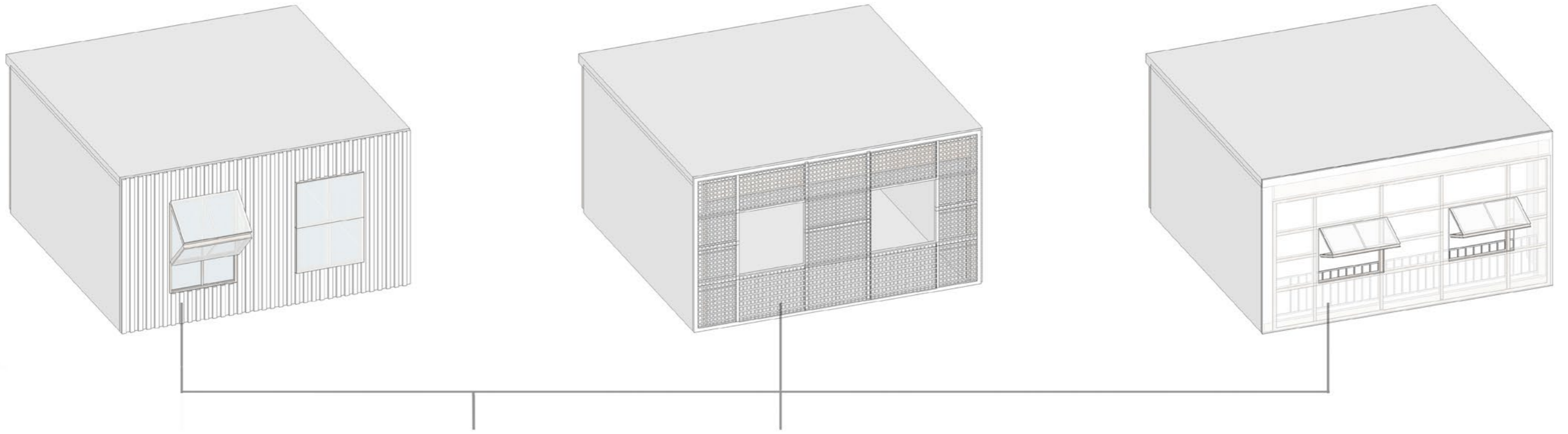


concrete

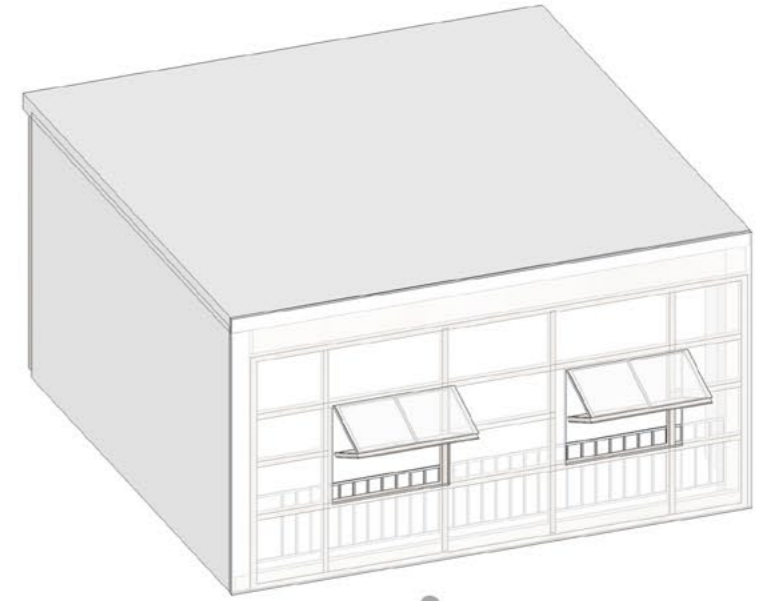
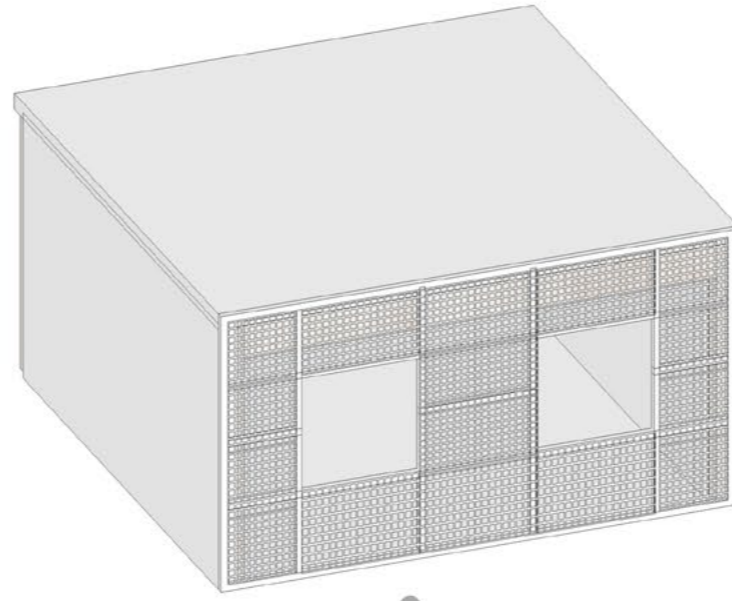
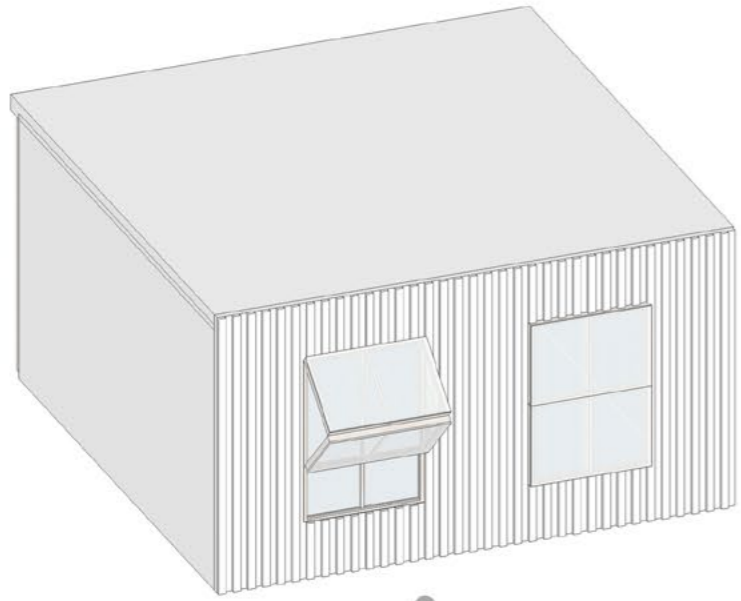
material for hostel







material for academy



material for hostel

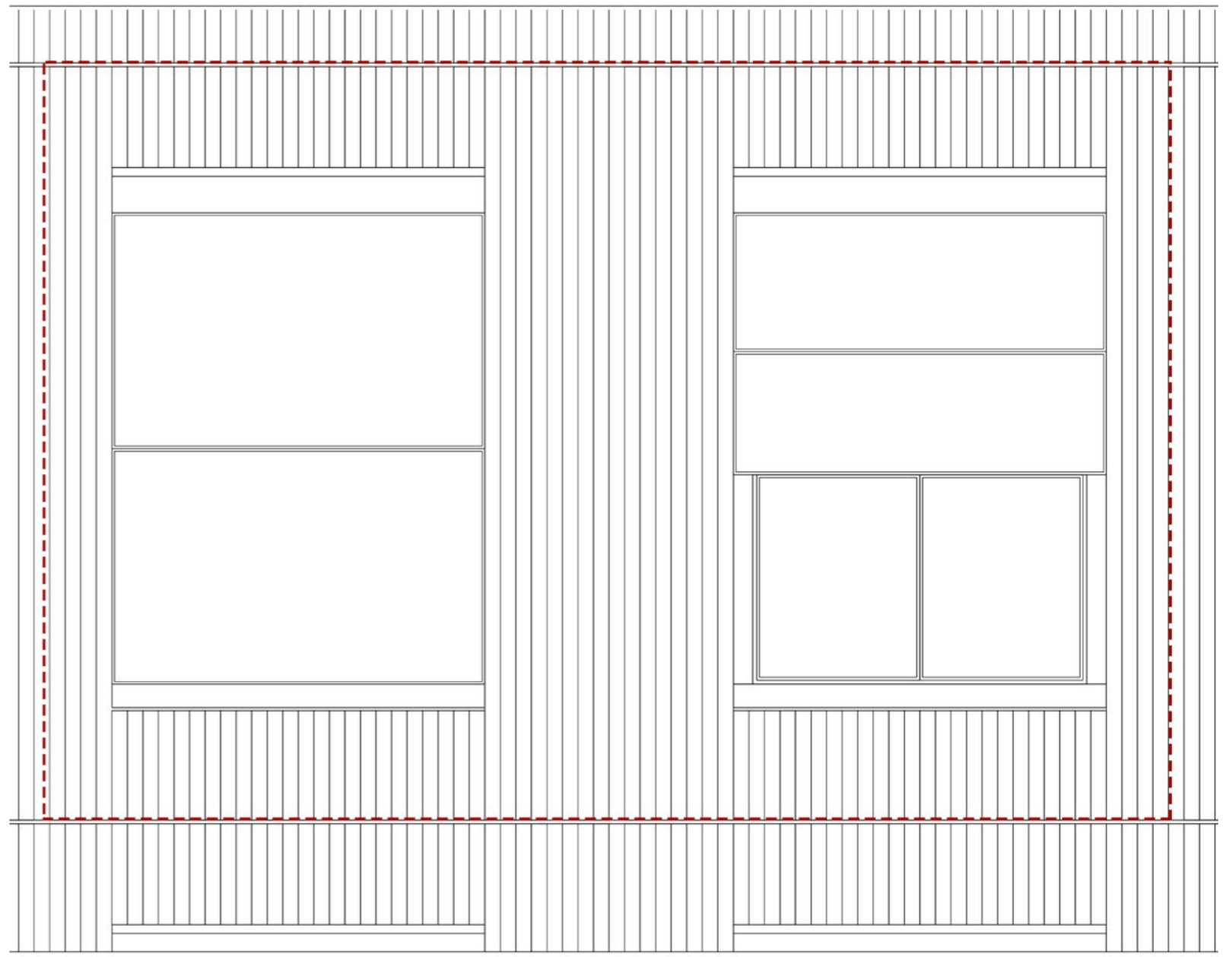
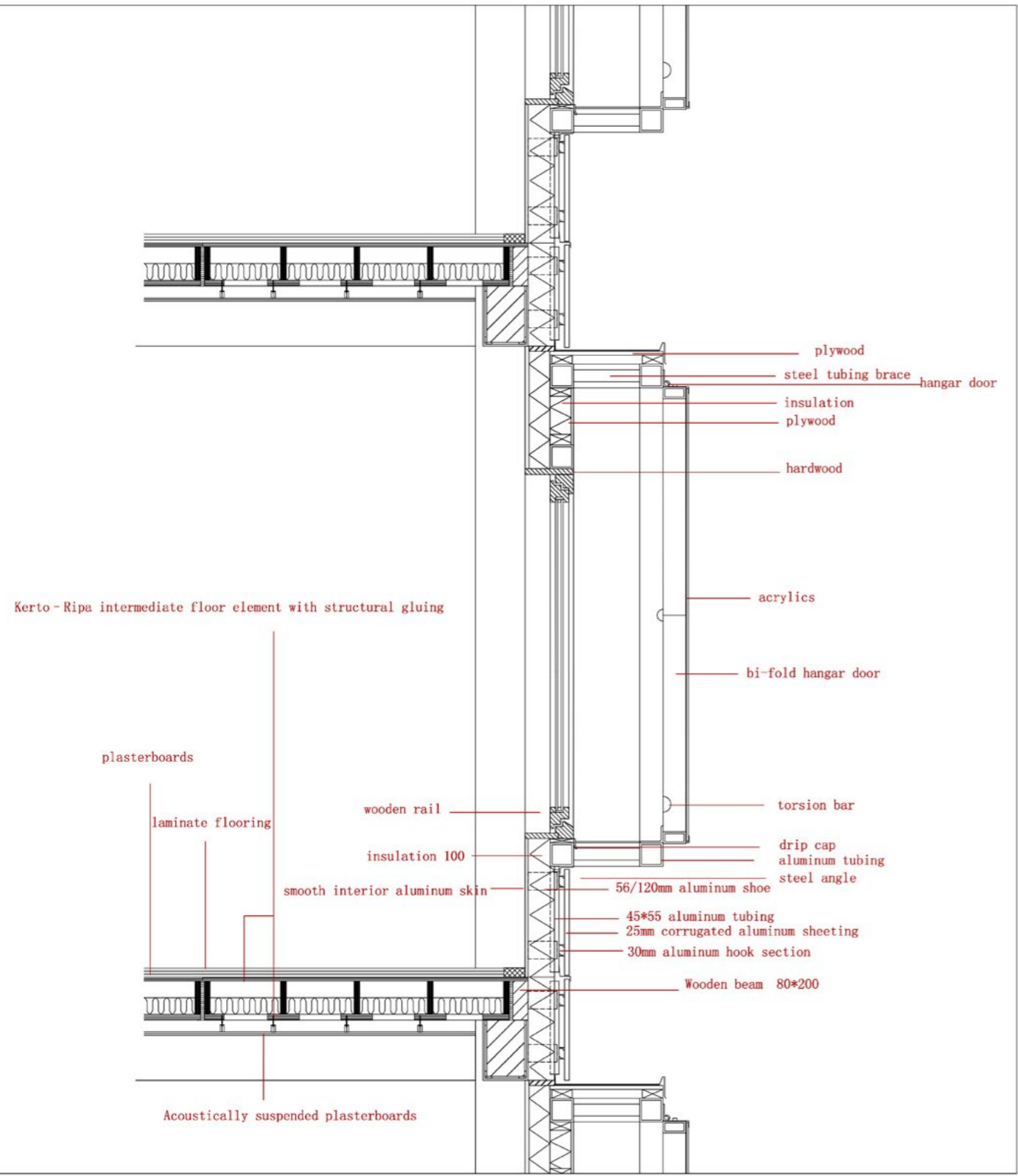


material for academy

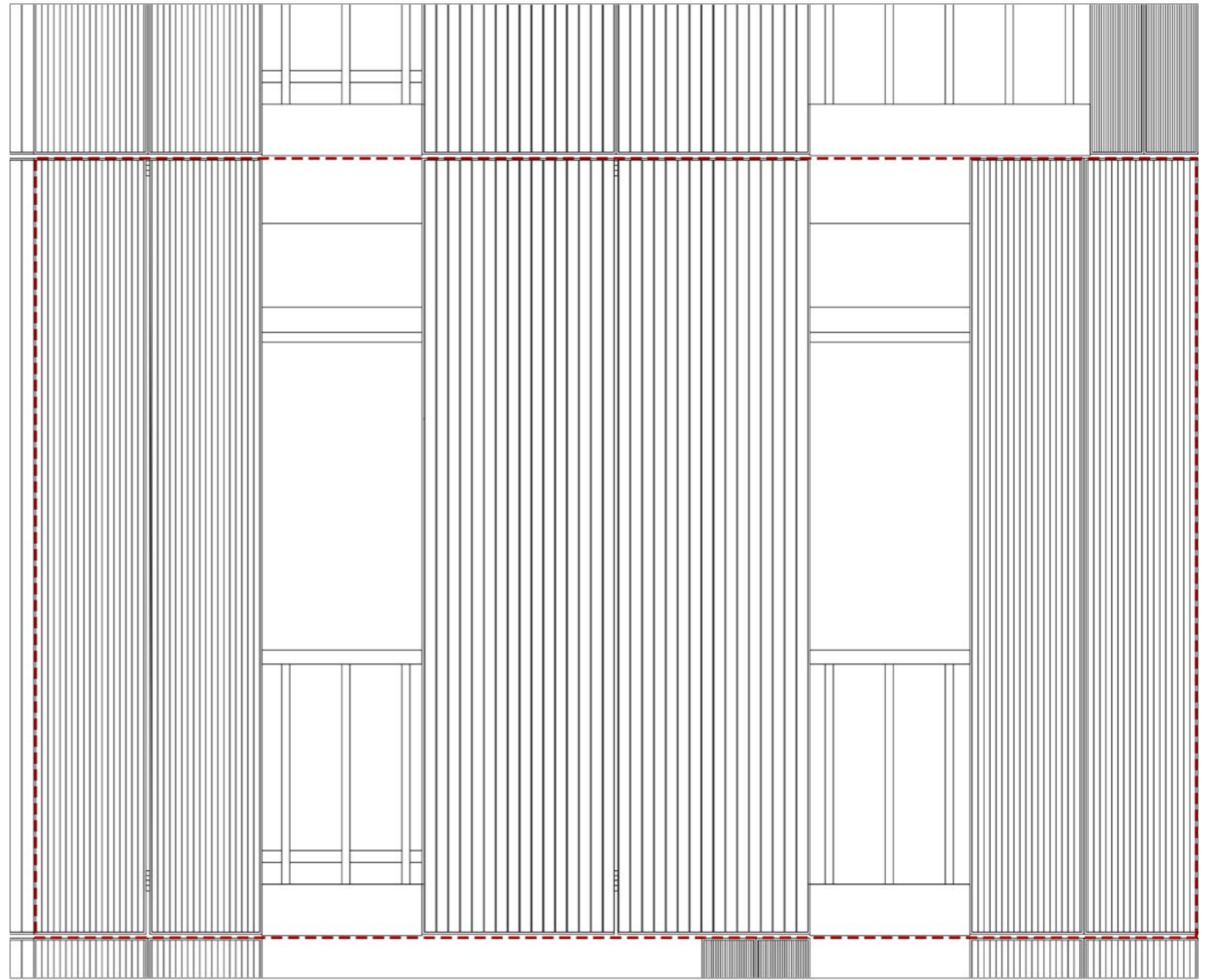
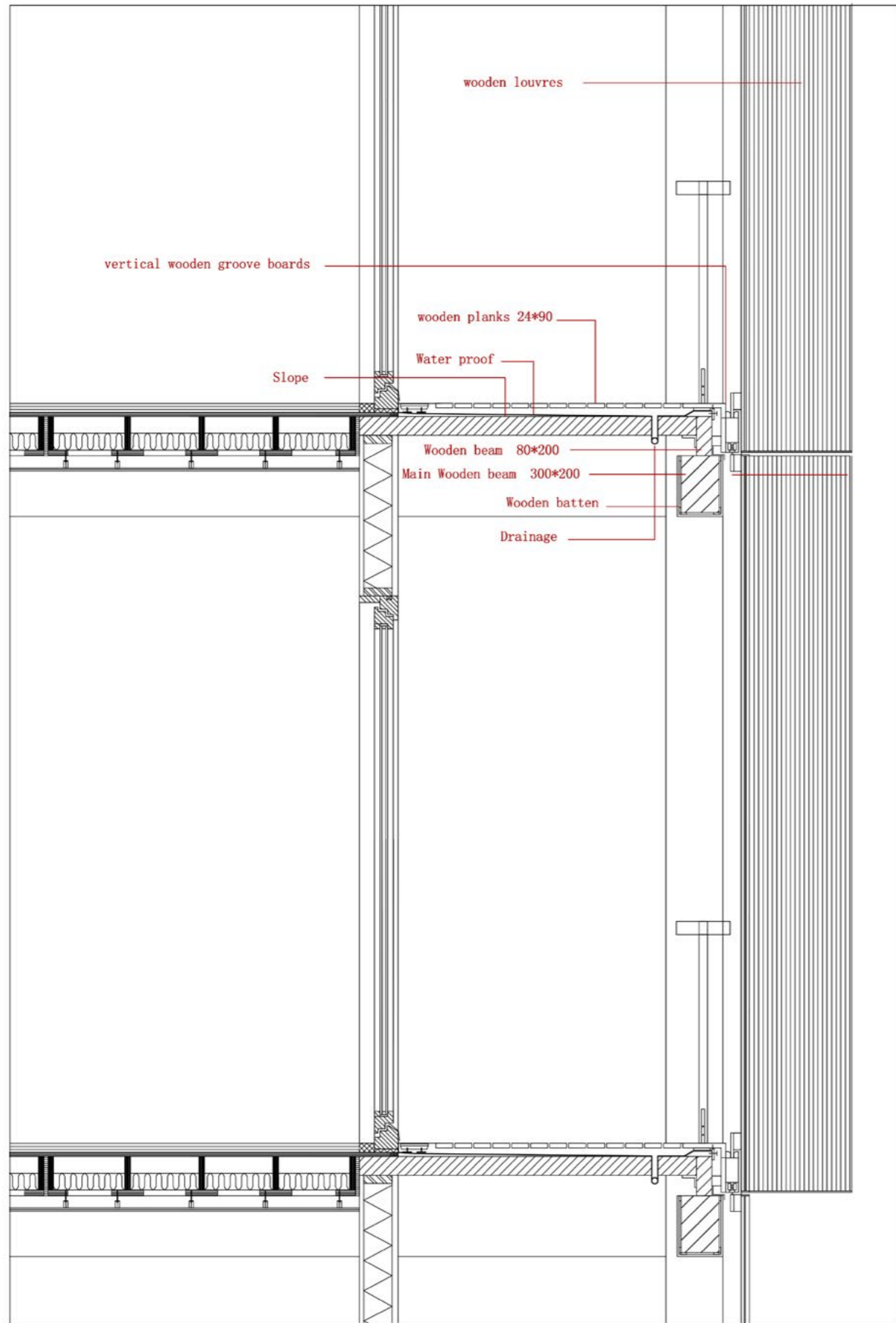


facades





detail drawings of basic units from academy



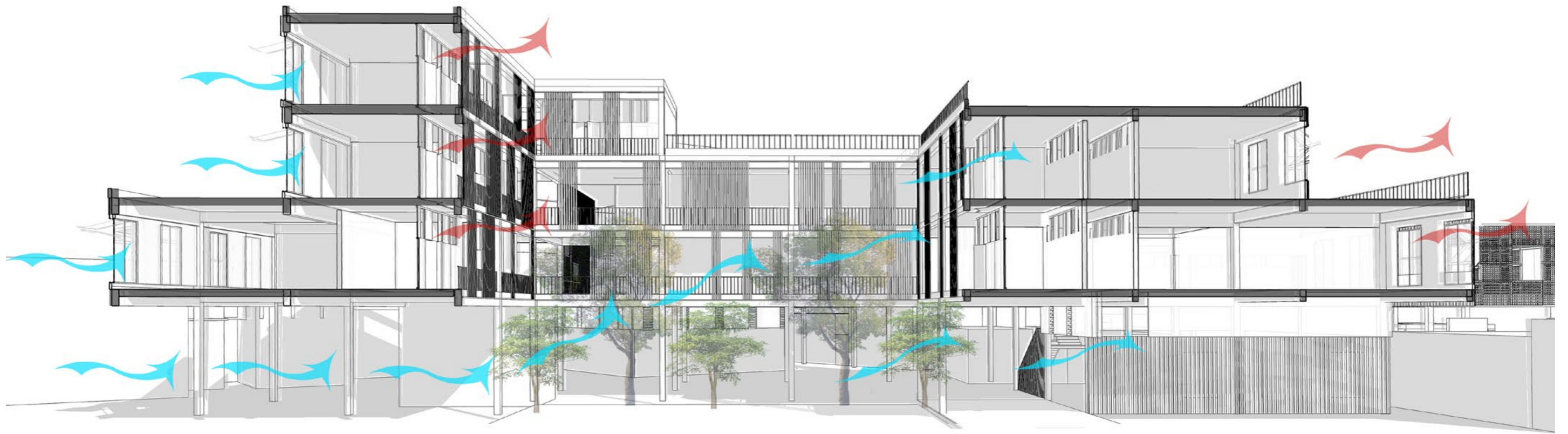
detail drawings of basic units from hostel

# Sustainability



No wind situation



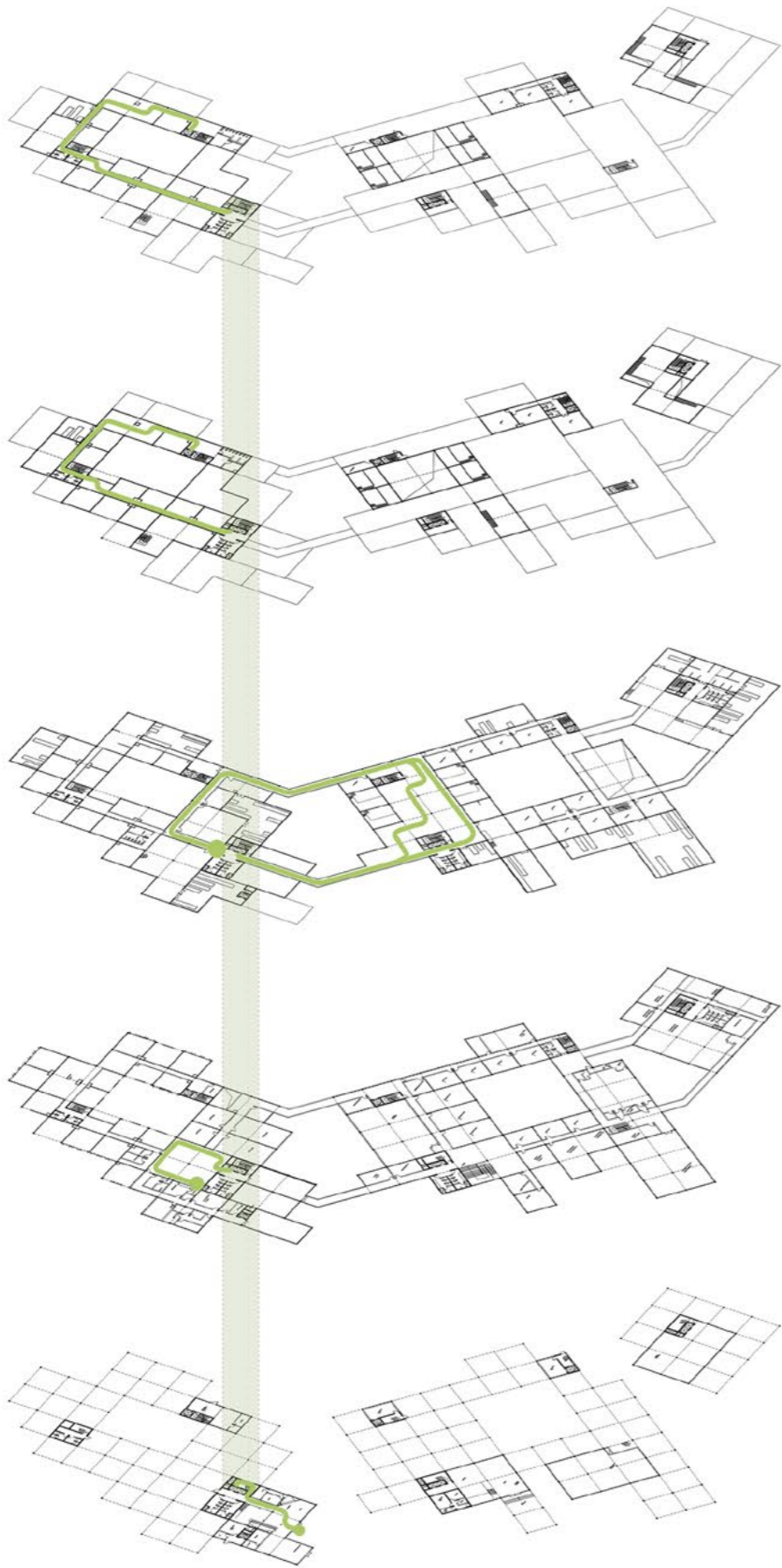


prevailing wind situation

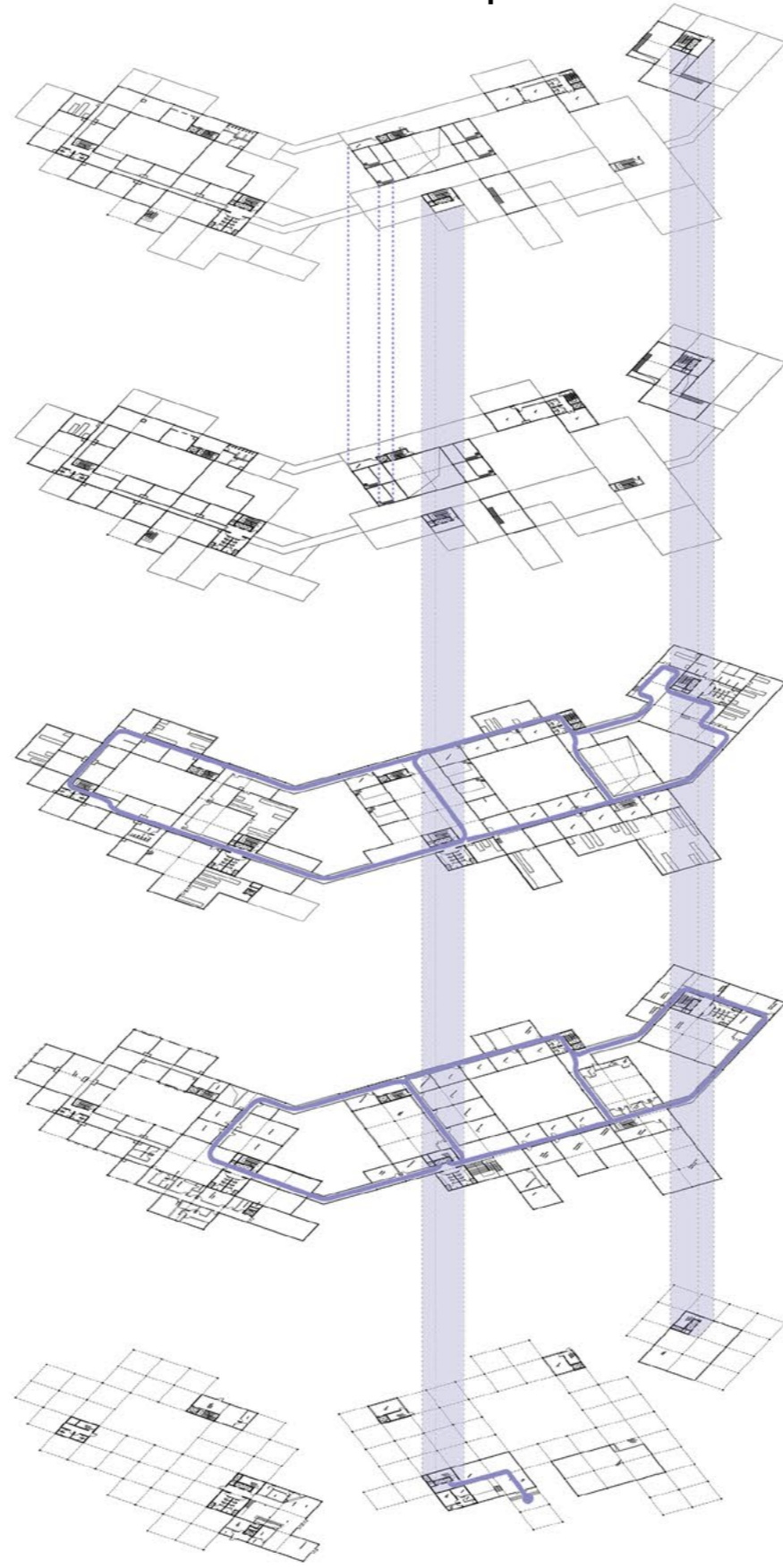


air conditioning situation

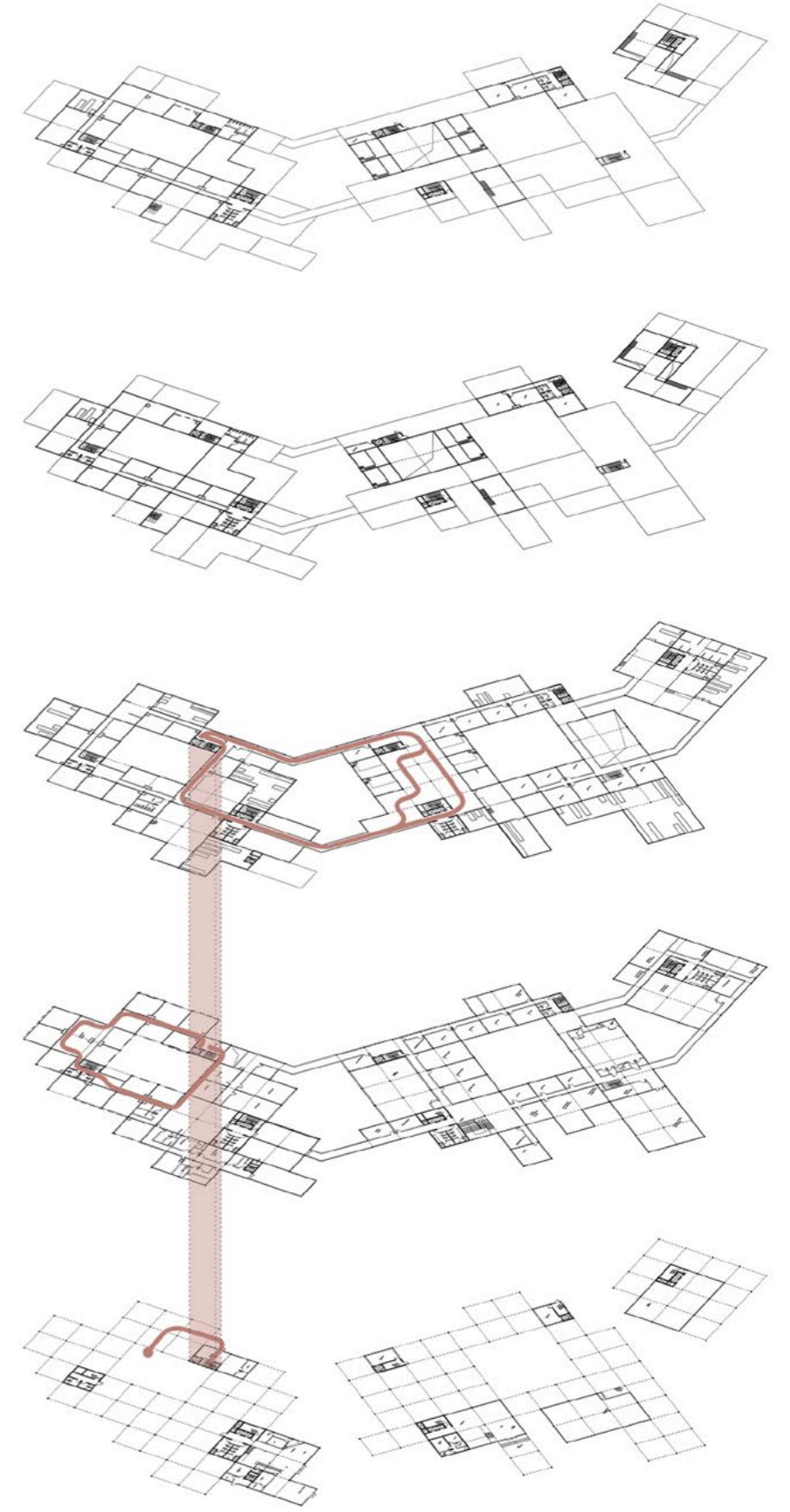
# Circulation & Experience



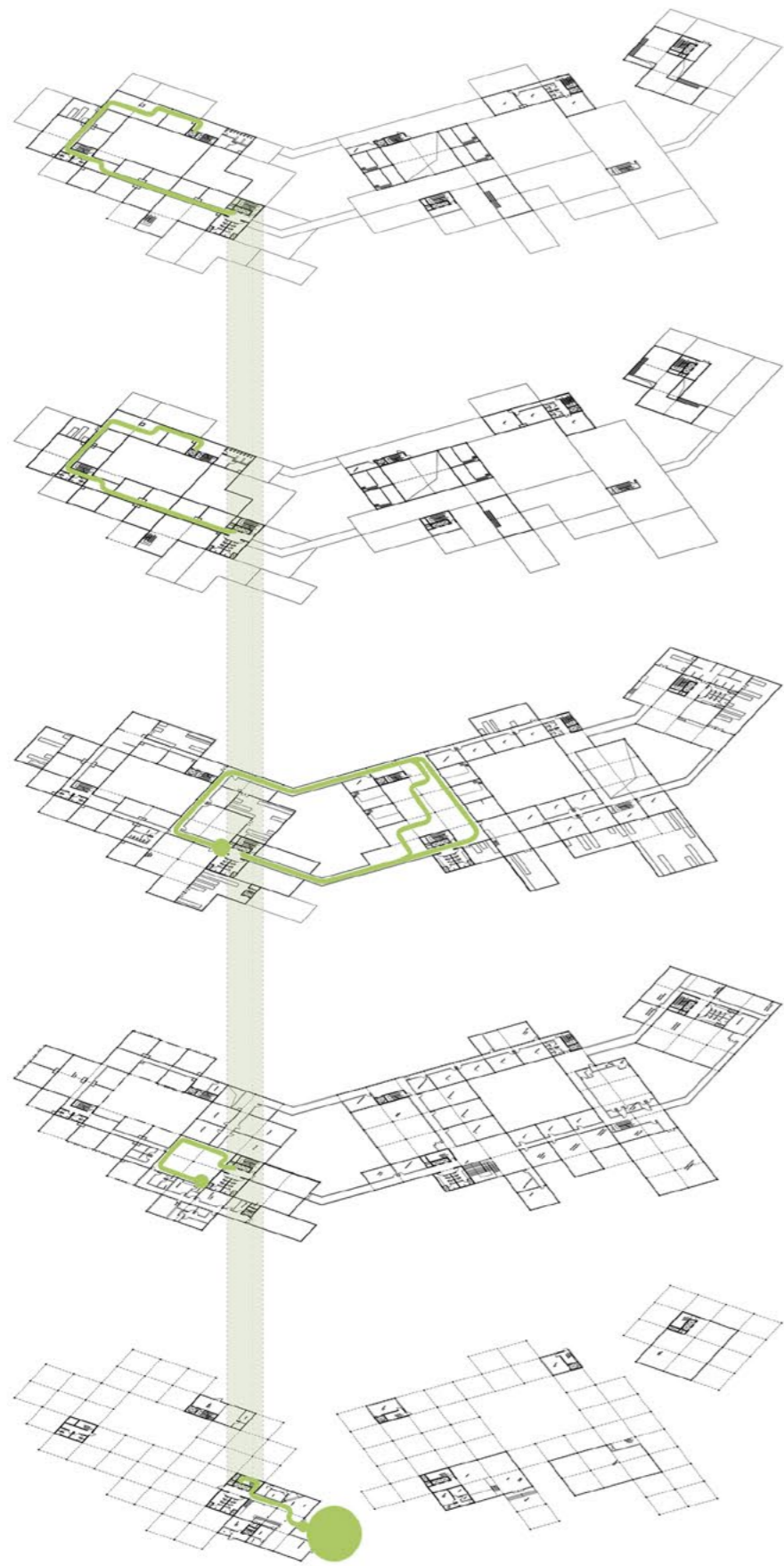
tourists



students/teachers

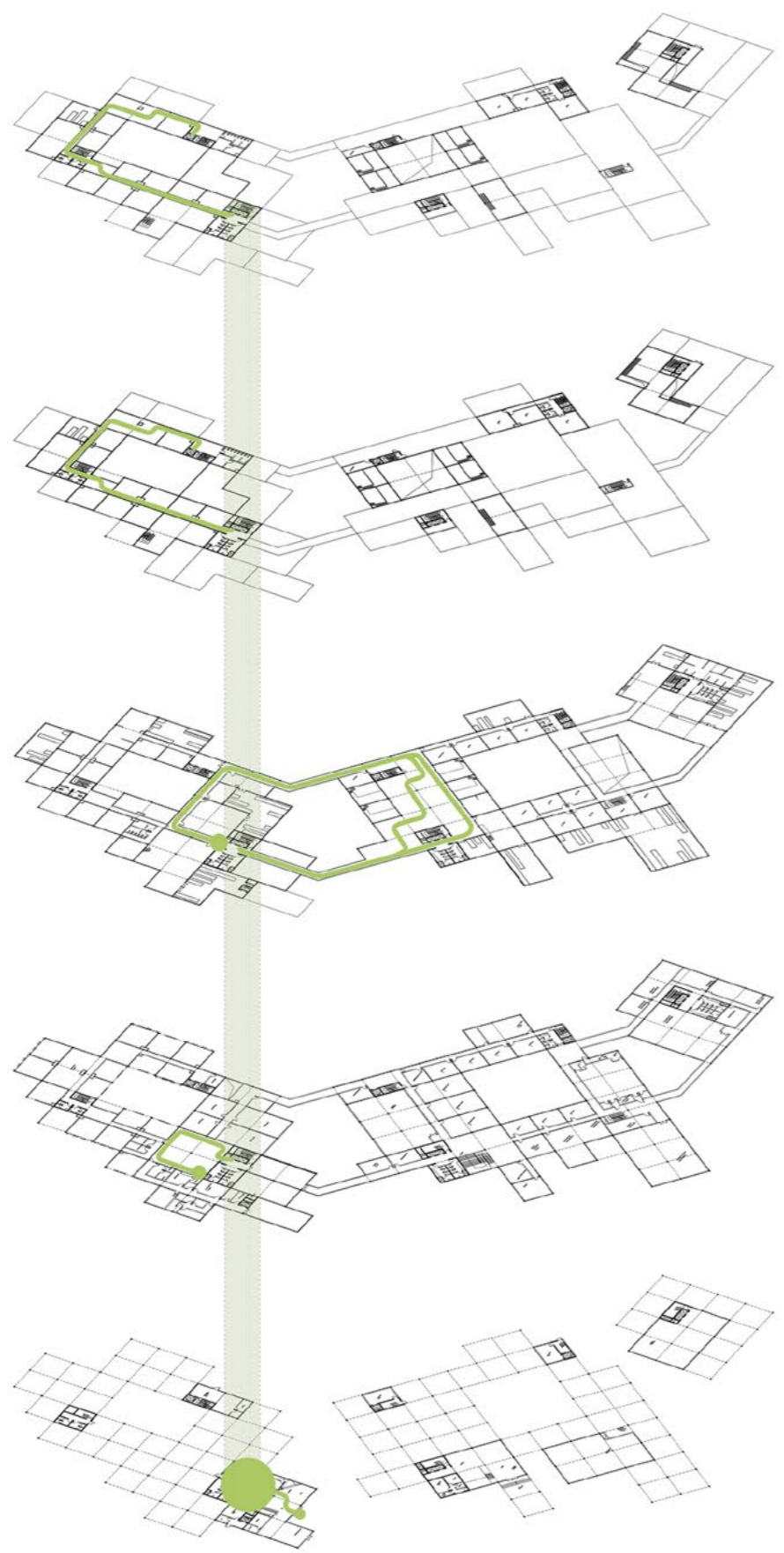


local residents

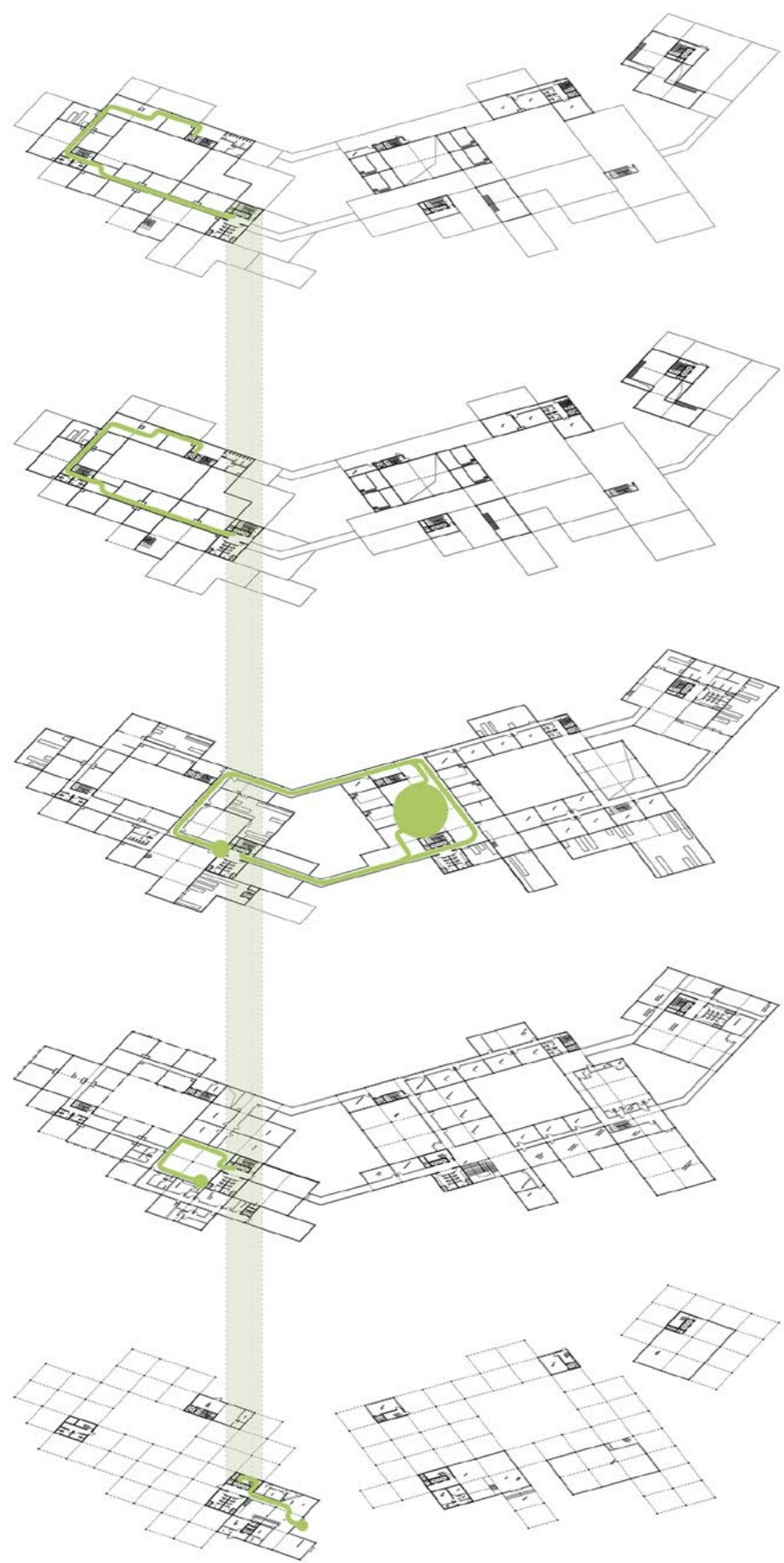


Experience the building as a tourist



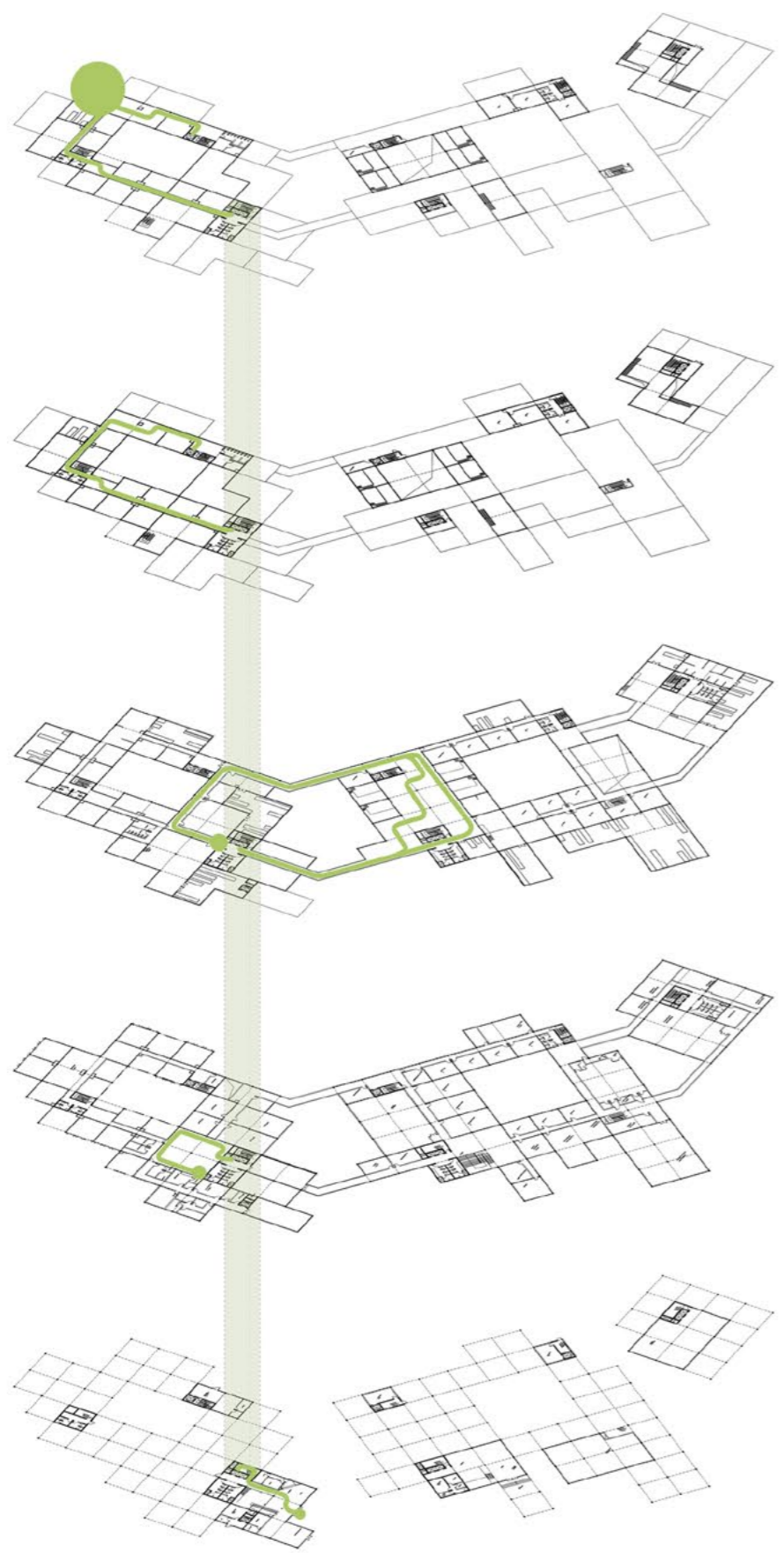


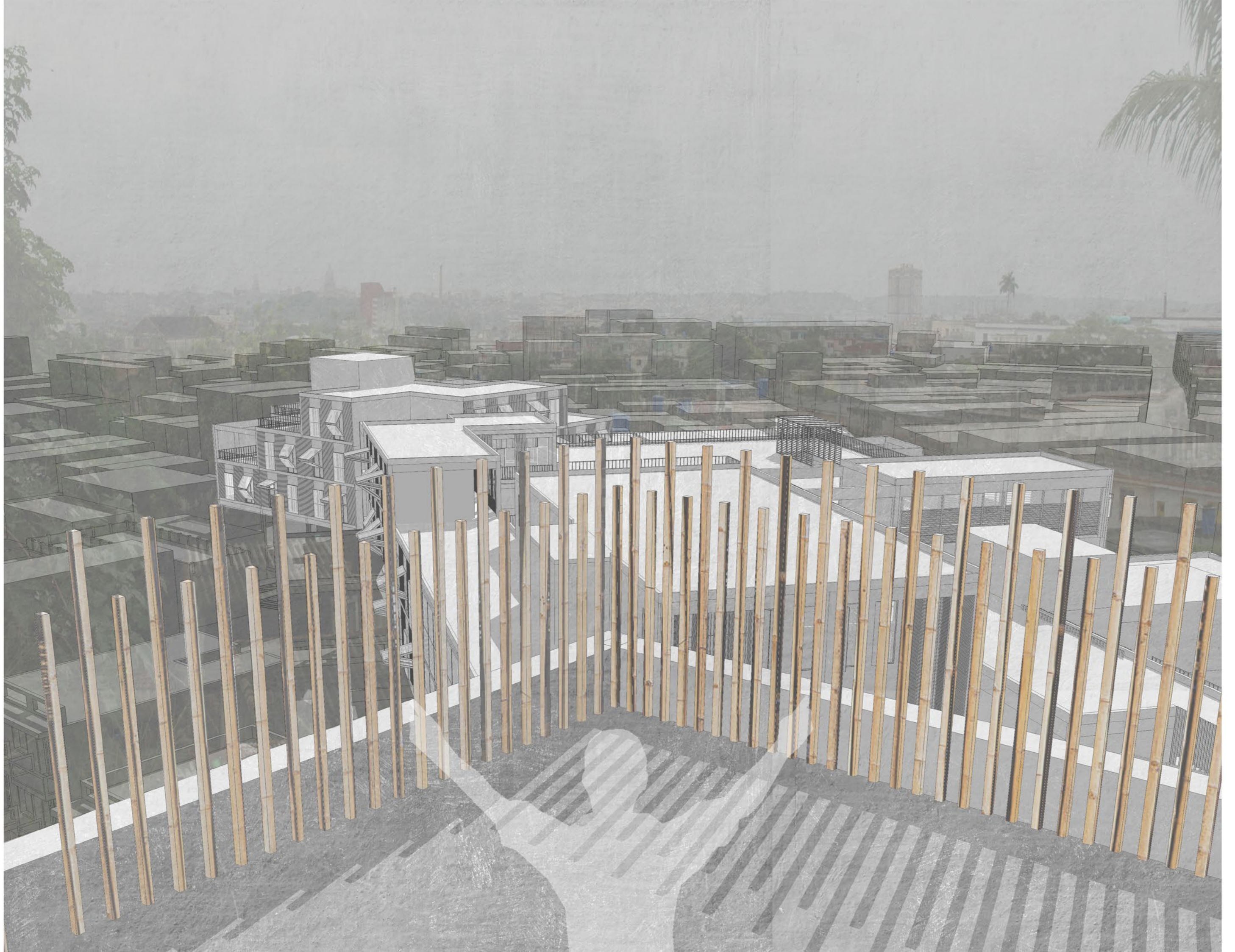














**Thank You!**