

AE Intecture Graduation Studio



**A compound community terminal to confront the
developmental and flooding crisis**

-----The legacy of the old port area of Xiangtan

CONTENTS

Introduction

- The site basics
- The urban marginalization
- The rising water
- Facing the double crisis: the specific case of the old port area of Xiangtan

Research

- The urban sections
- The vernacular architectural typologies
- The vernacular space pattern
- The local lives
- The programmes of requirement

Design

- Attitude towards the existing
- Vision: Compound and flexible living environment
- Site approach
- Programmatic configuration
- Congregated temporary dwelling approach
- Constructive approach
- Materialization
- Climate approach

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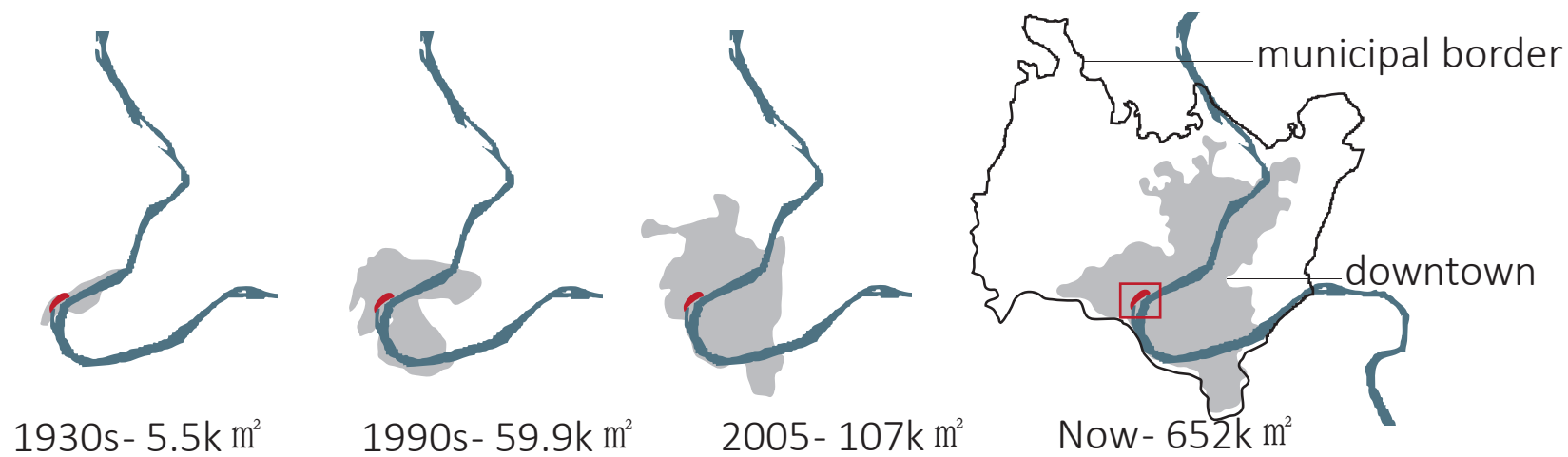
Design

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Site location



Morphology





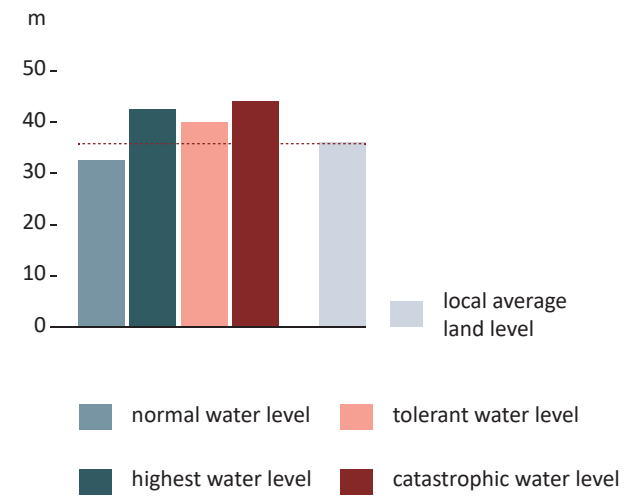
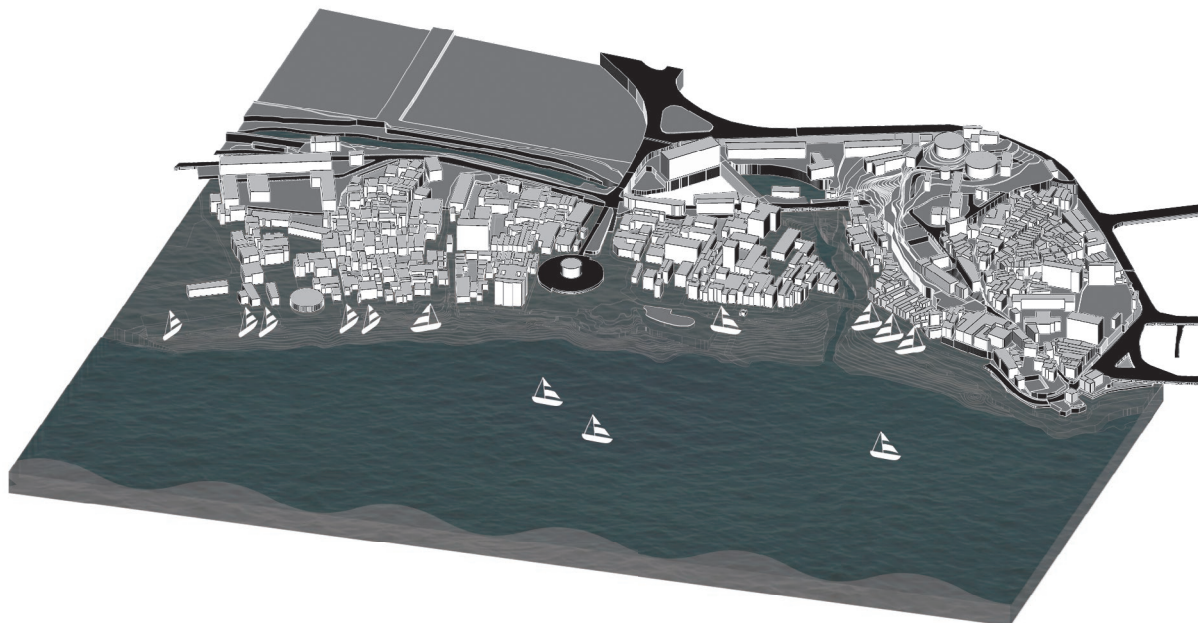
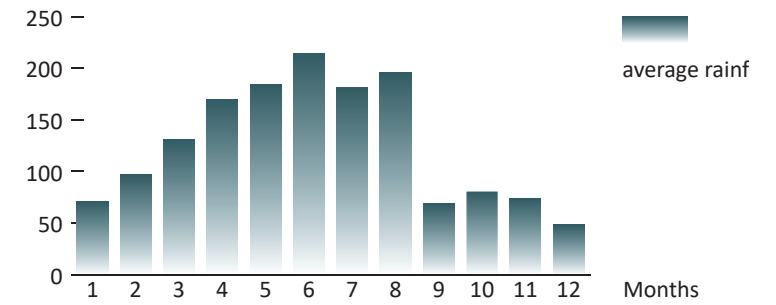
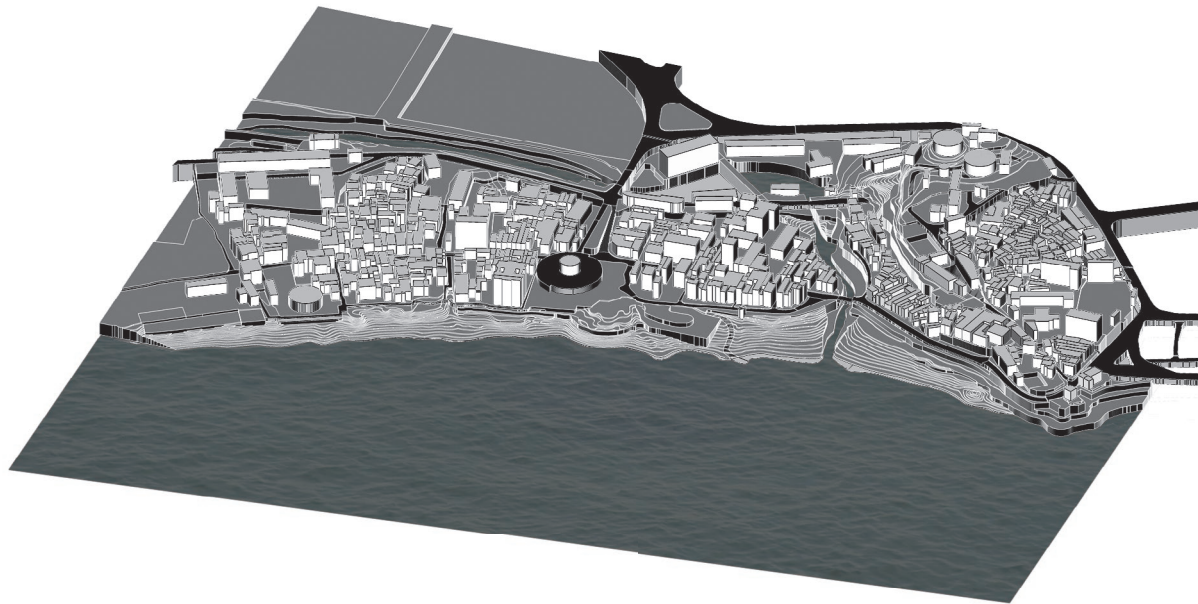




(Check video)

Introduction

The rising water level

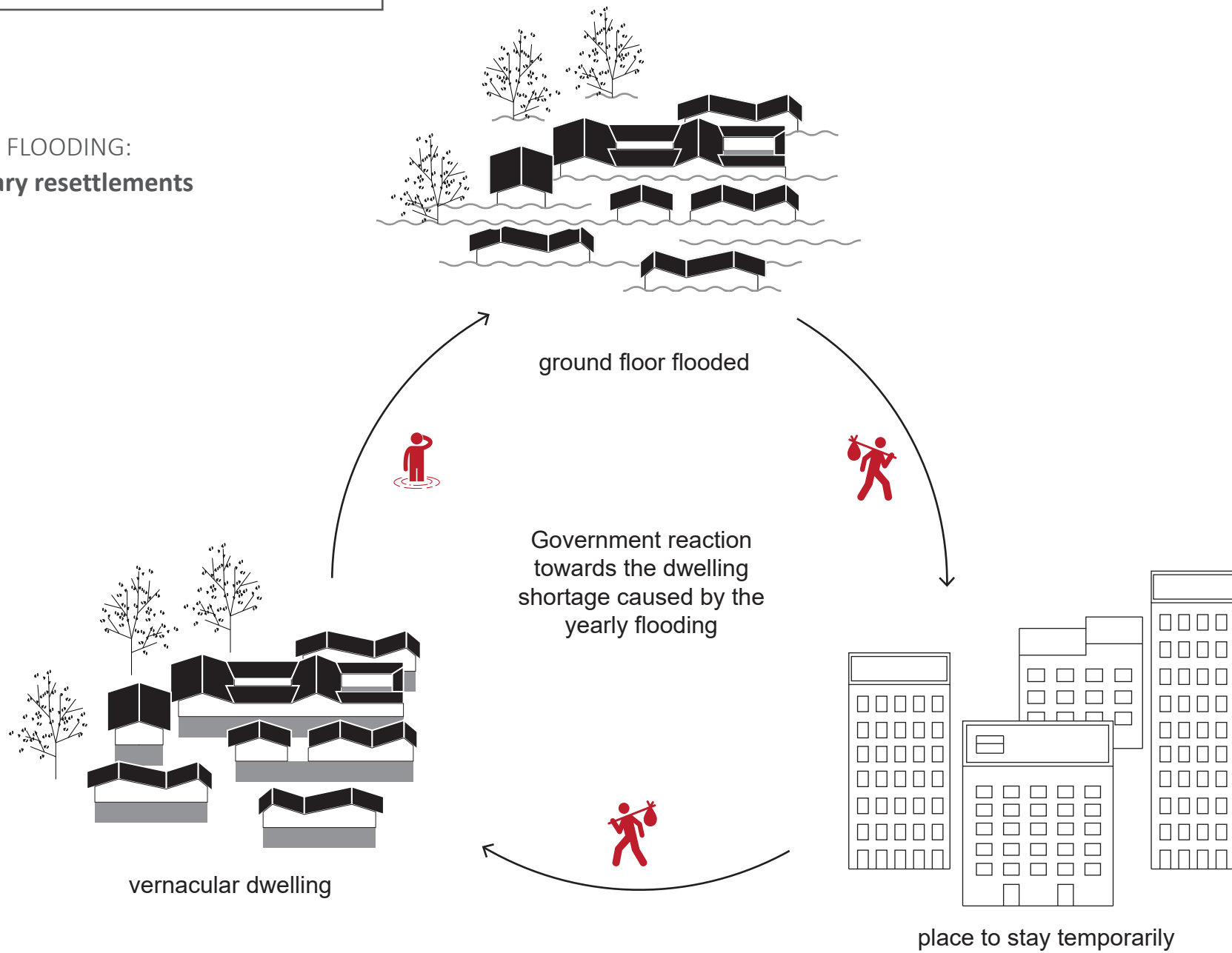


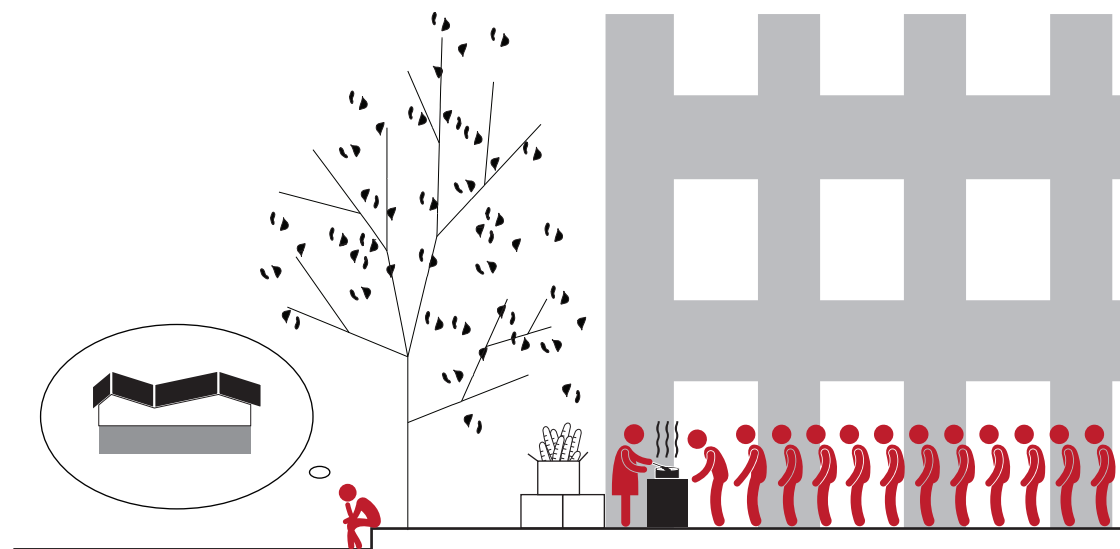


(Check video)

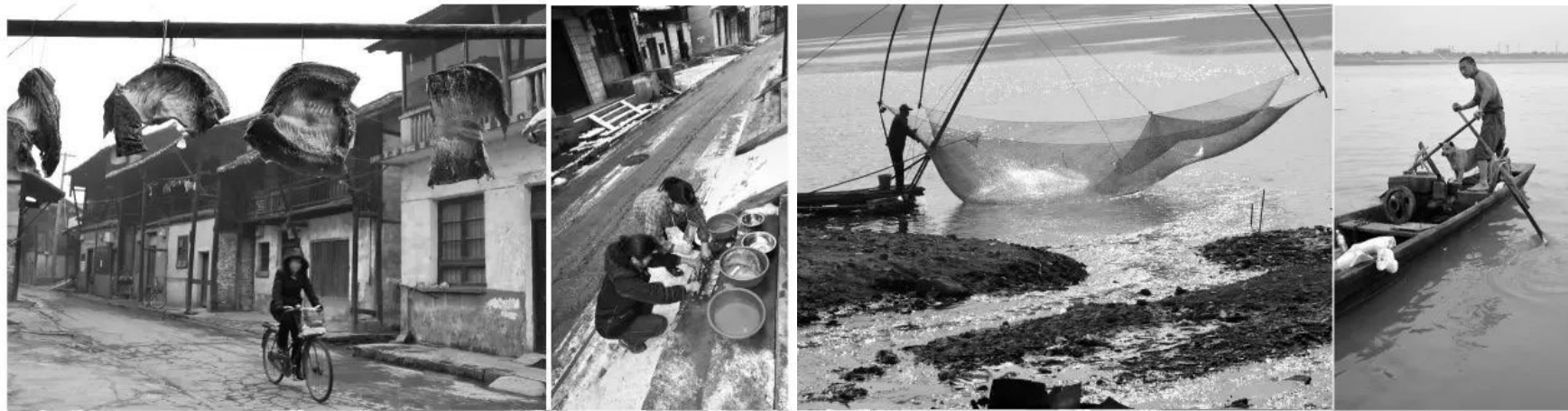


FOR THE FLOODING:
Temporary resettlements



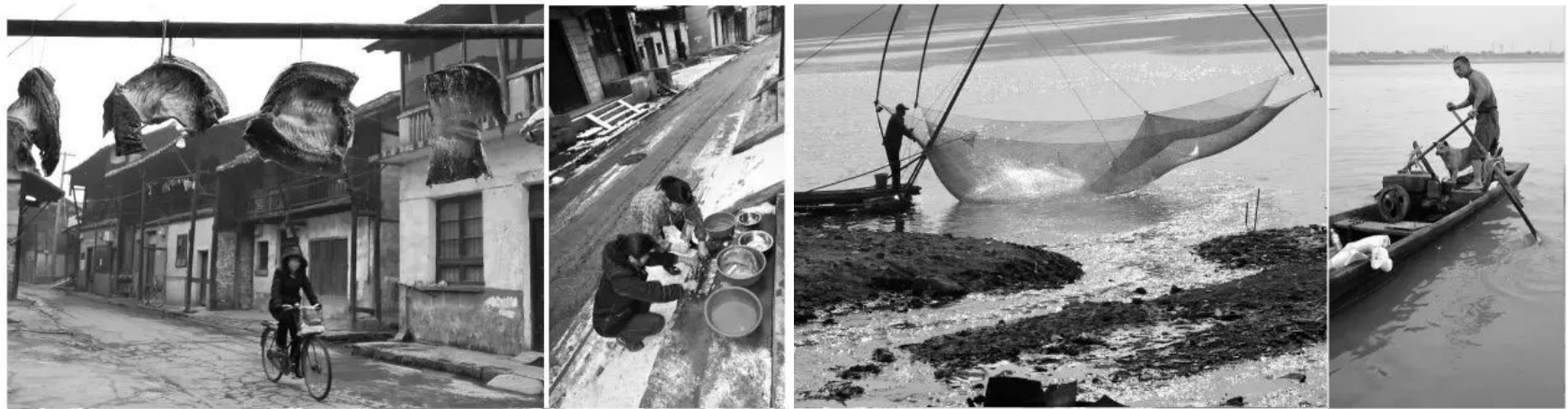


poor living condition and the lose of identity



FOR THE ECONOMIC CRISIS:
Commercial "Antique village"





FOR THE ECONOMIC CRISIS:
Commercial "Antique village"



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Introduction

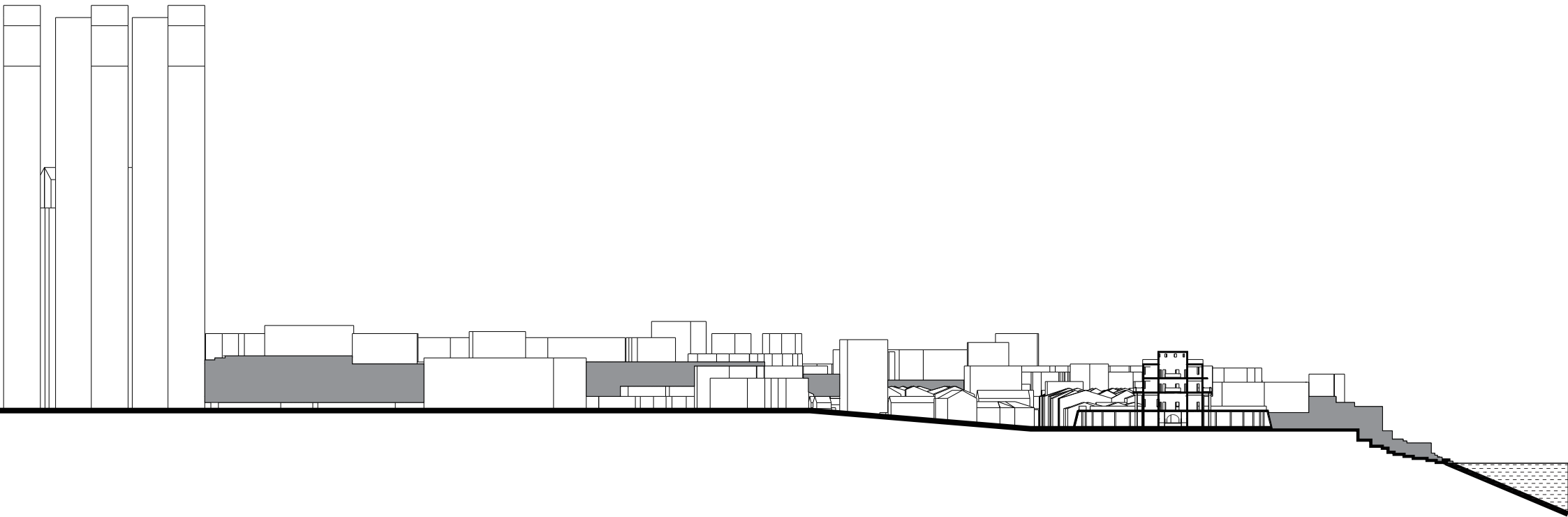
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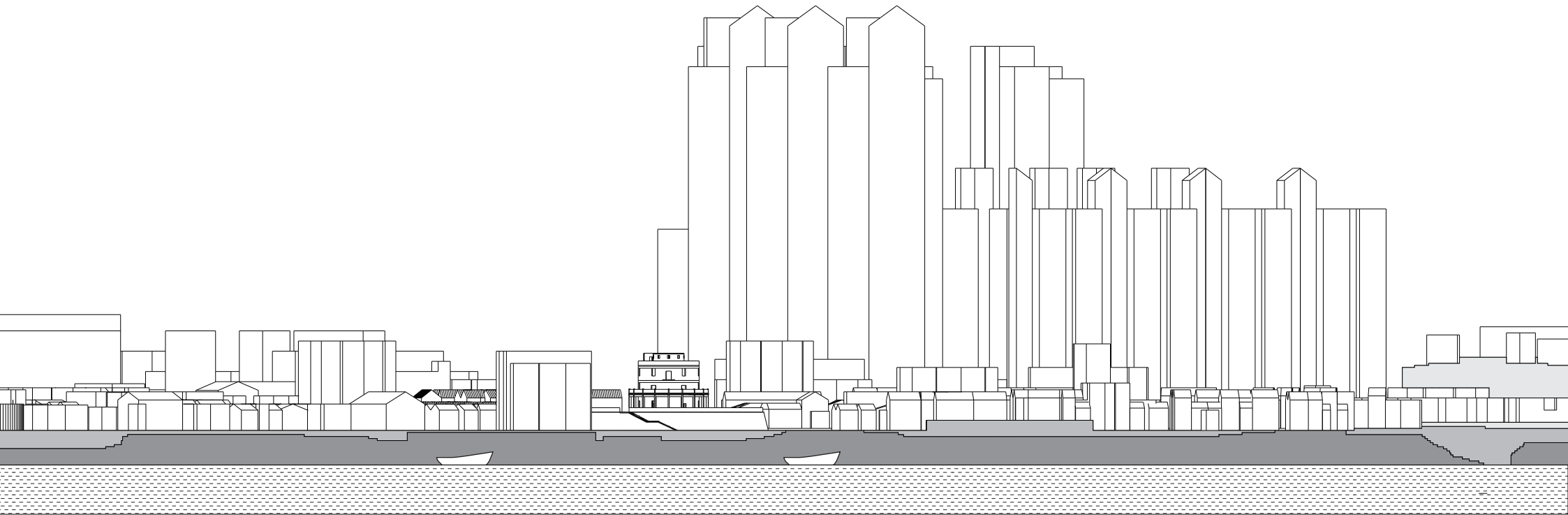
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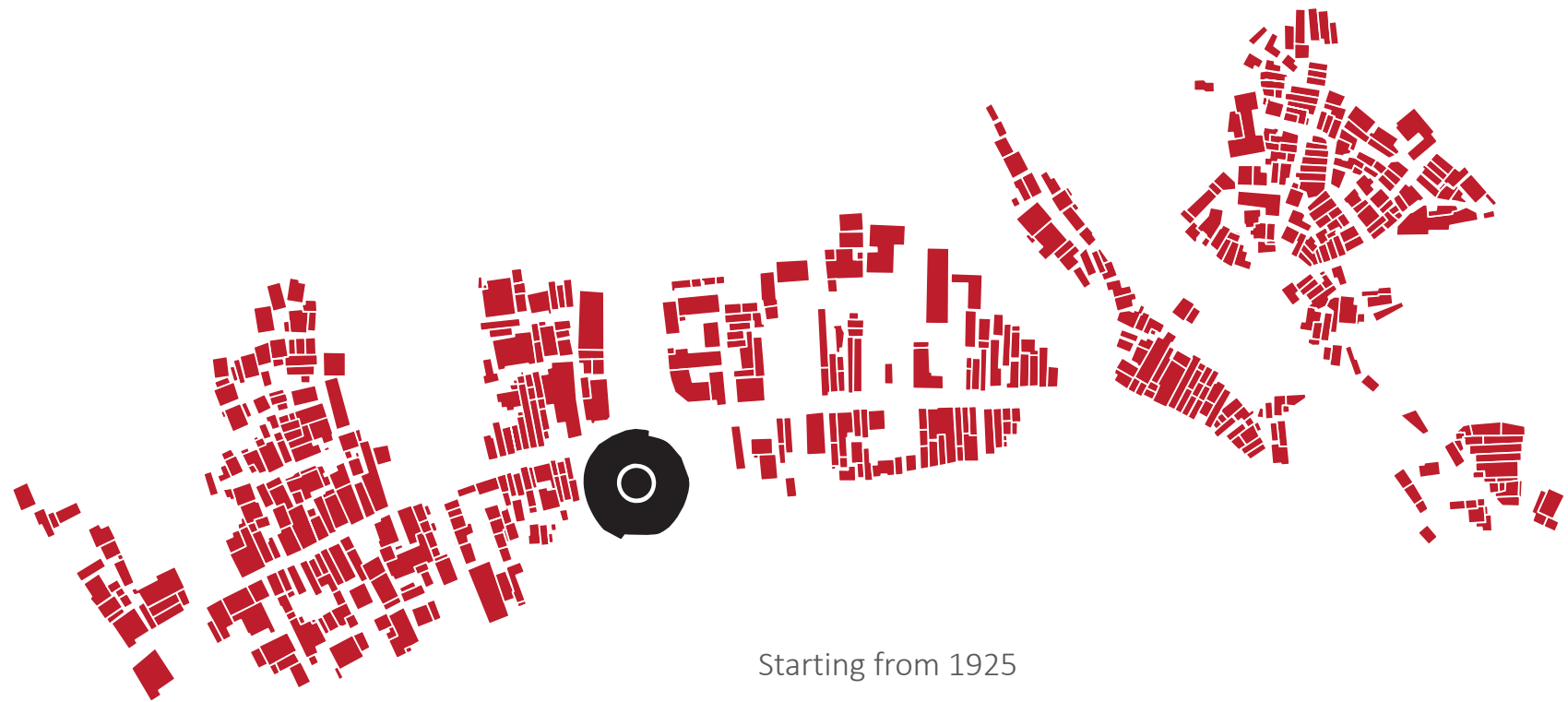
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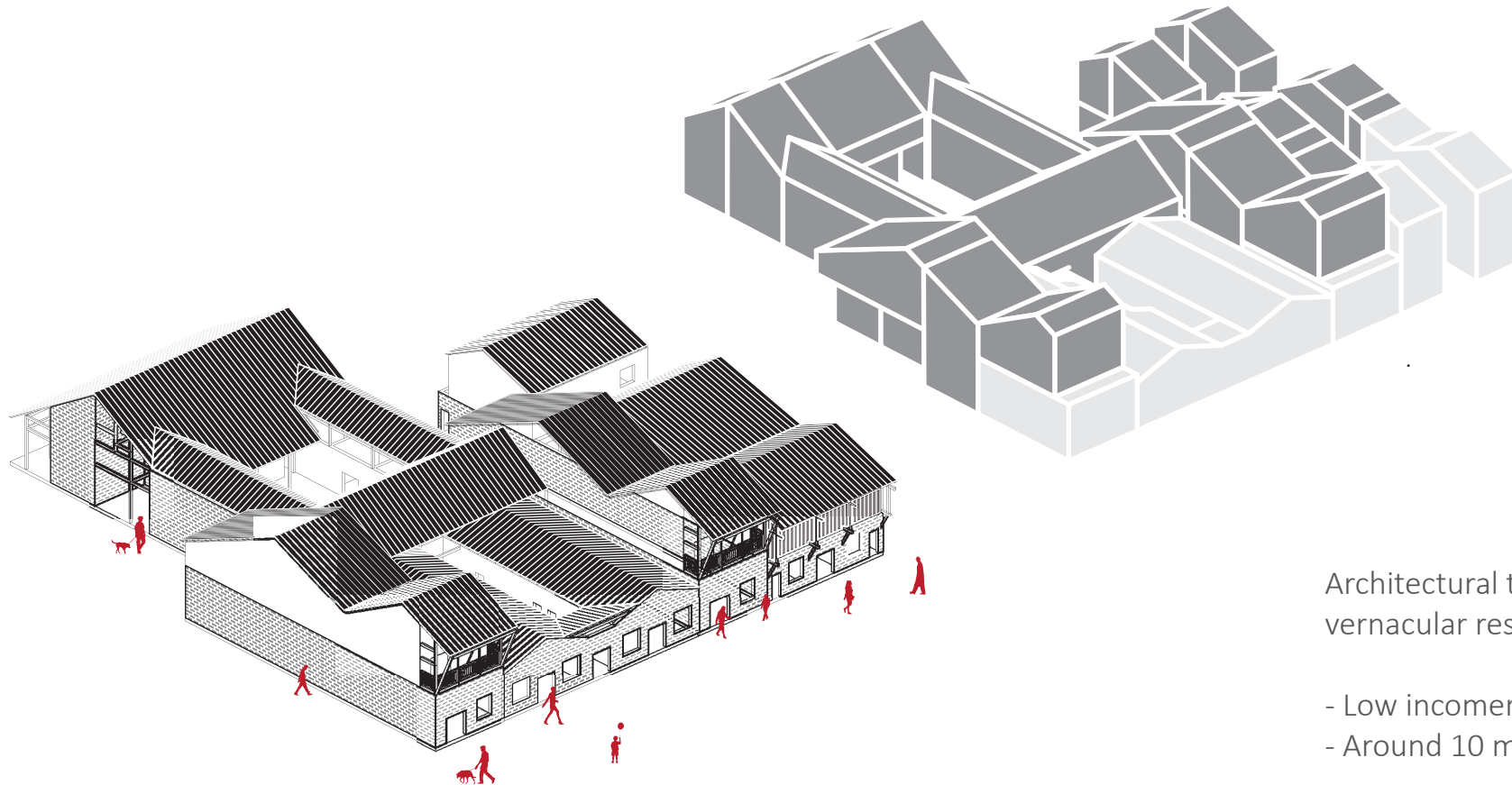


North south urban section 1:1000



West east urban profile 1:1000





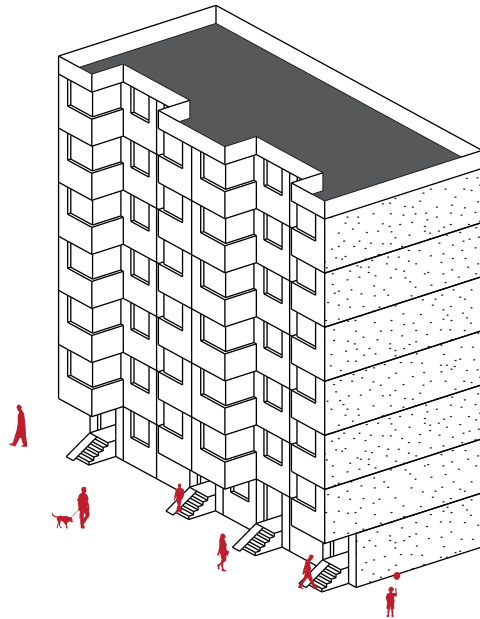
Architectural typologies 1:
vernacular residences

- Low incomers dwelling
- Around 10 m high

Lack of:

- **Maintenance**
- **Density**





Architectural typologies 2:
Multi-level building

- Middle-low class dwelling / commercial uses / public uses
- Around 20m high

Lack of:

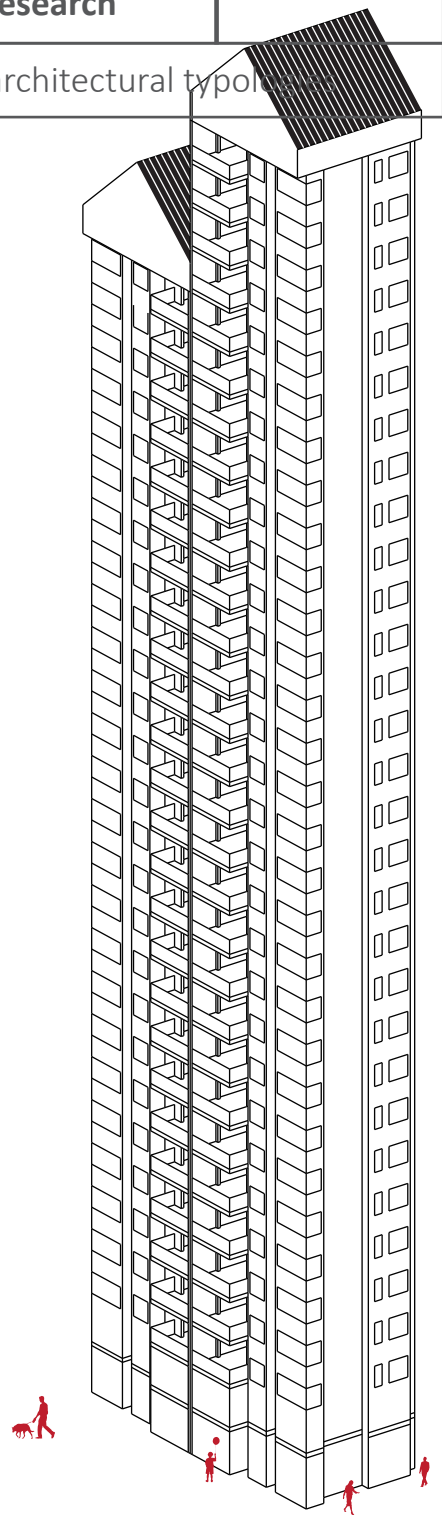
- **Flexibility**
- **Semi-public communal space**



After 2005

Research

The vernacular architectural typology



Architectural typologies 3:
Real estate tower

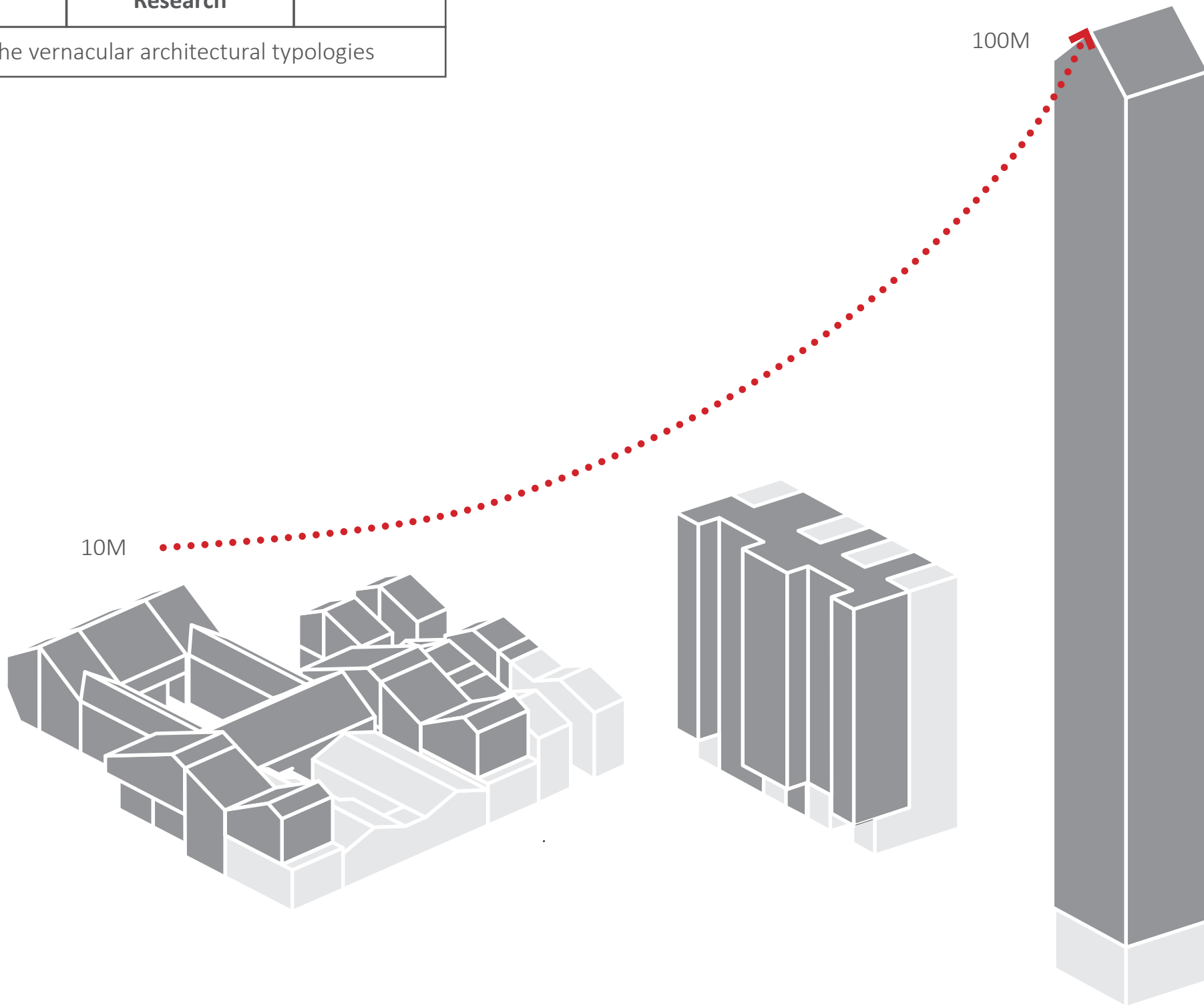
- Middle class dwelling
- Around 100m high

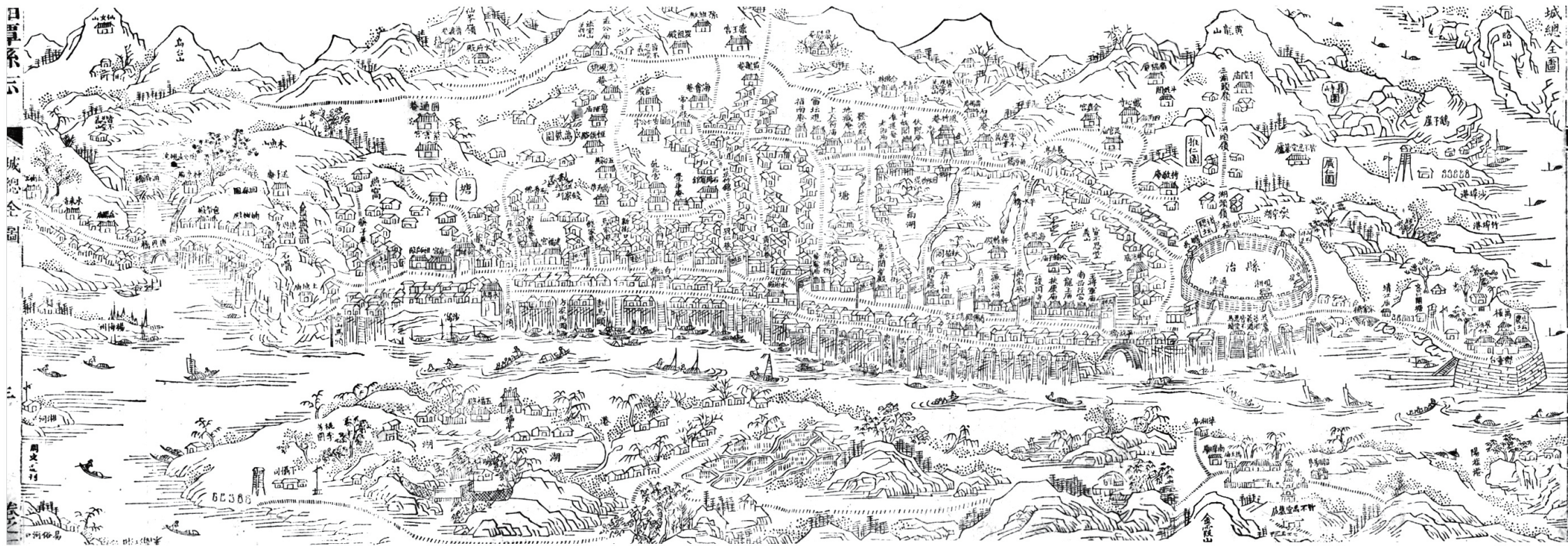
Lack of:

- Flexibility
- Communal space

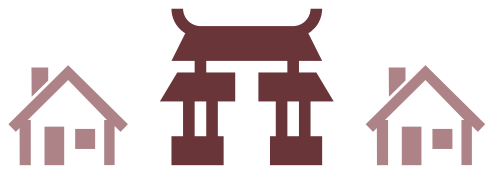
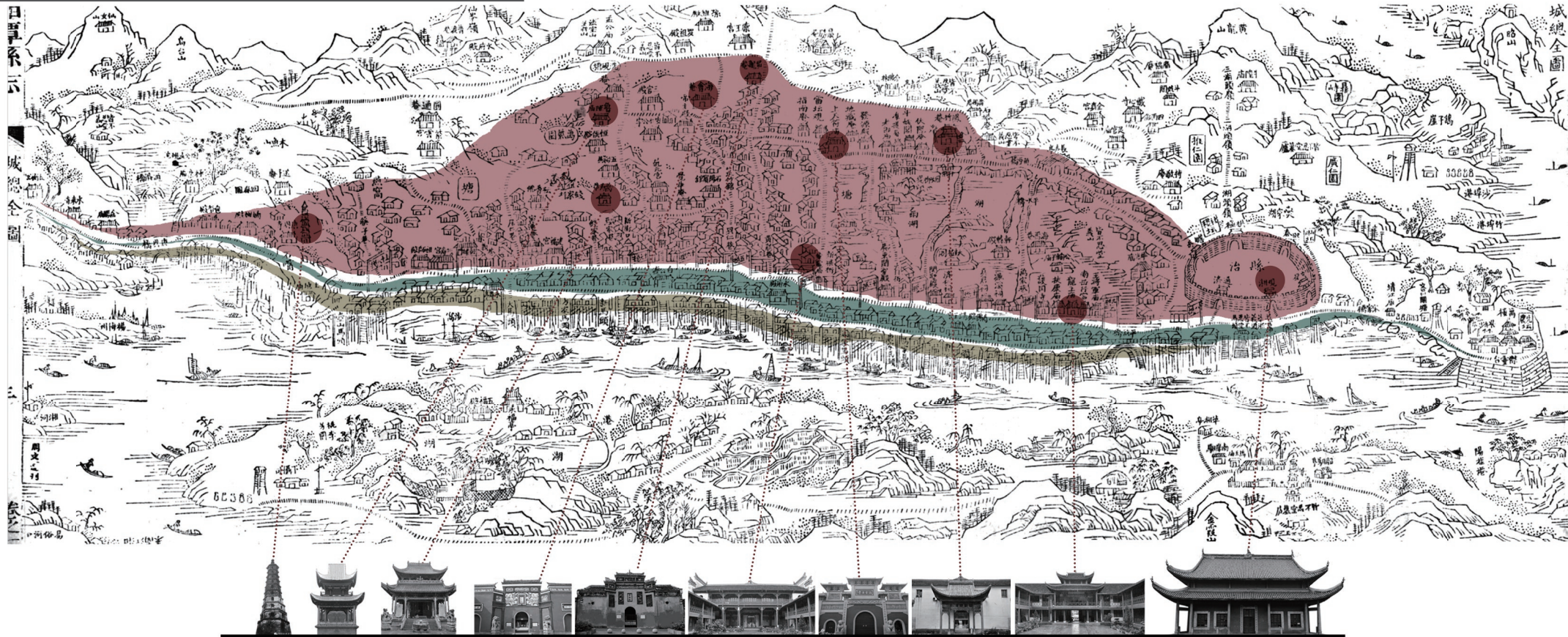
Research

The vernacular architectural typologies





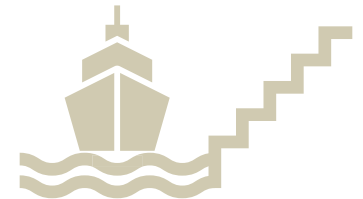
The vernacular space pattern



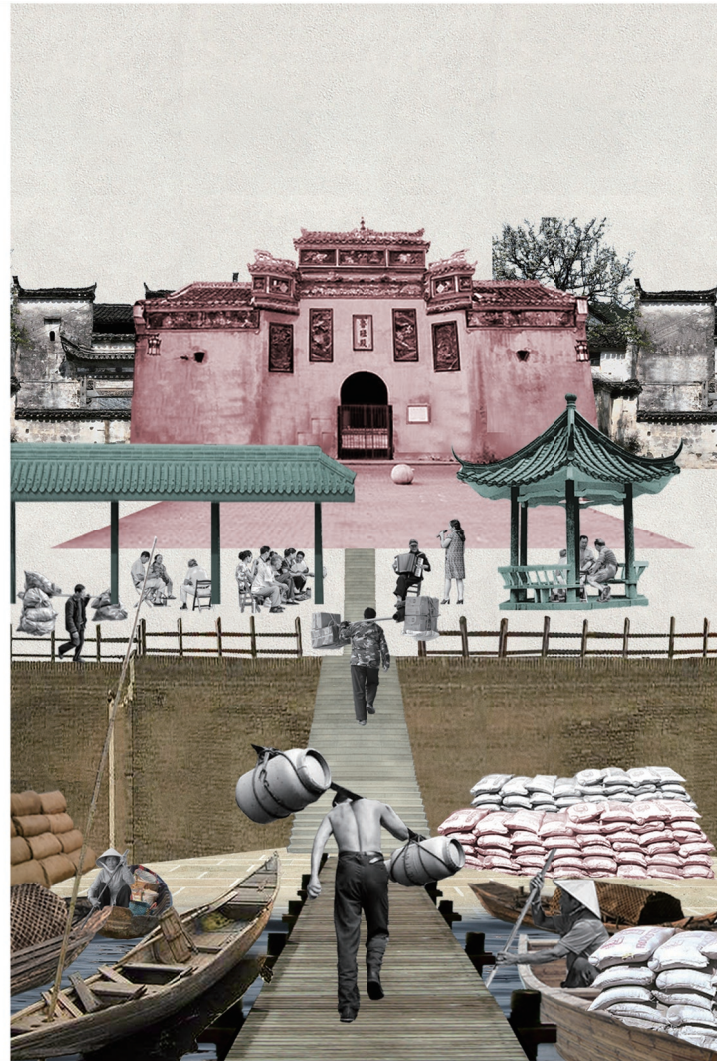
Landmarks embraces by dwelling

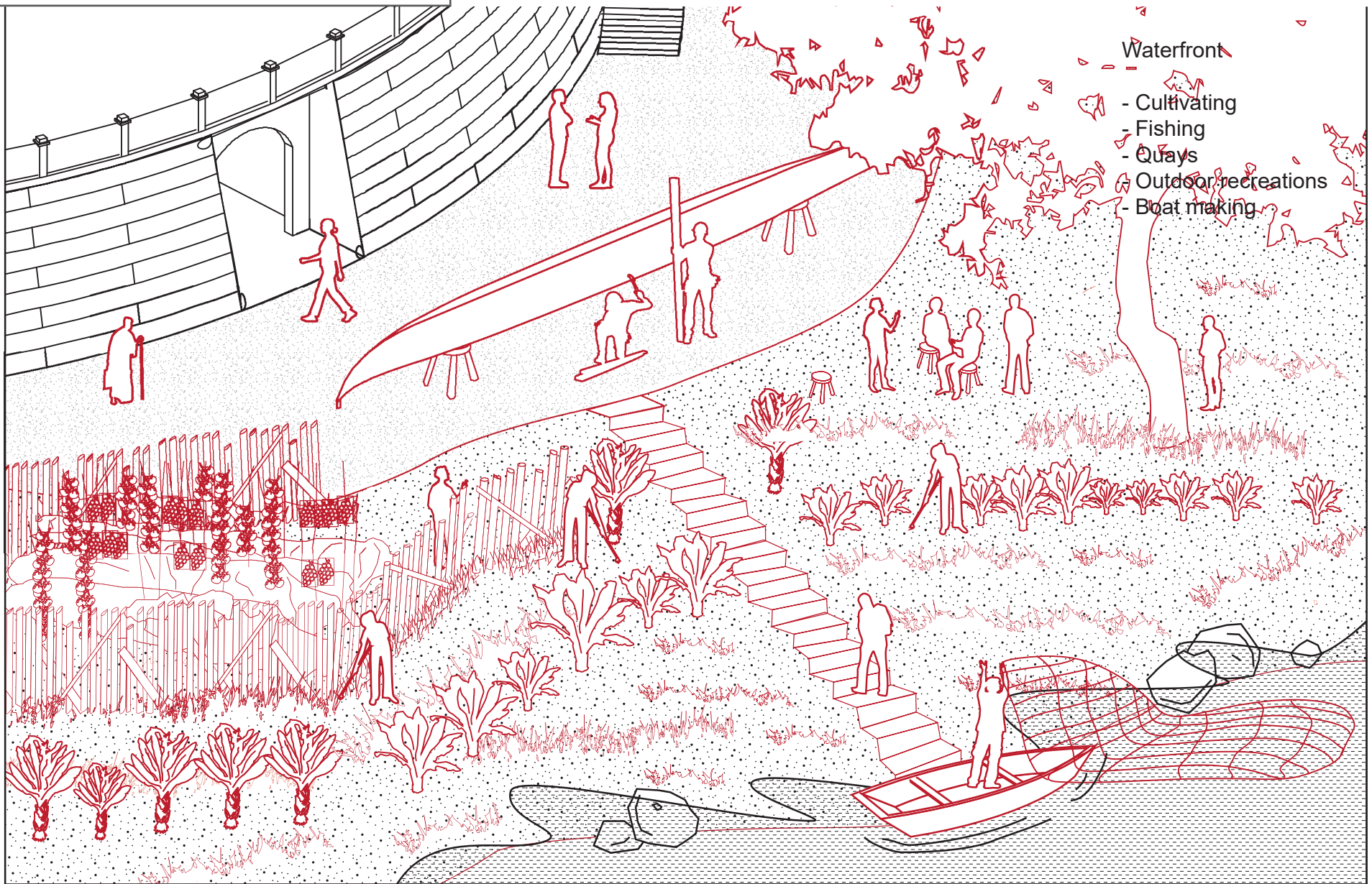


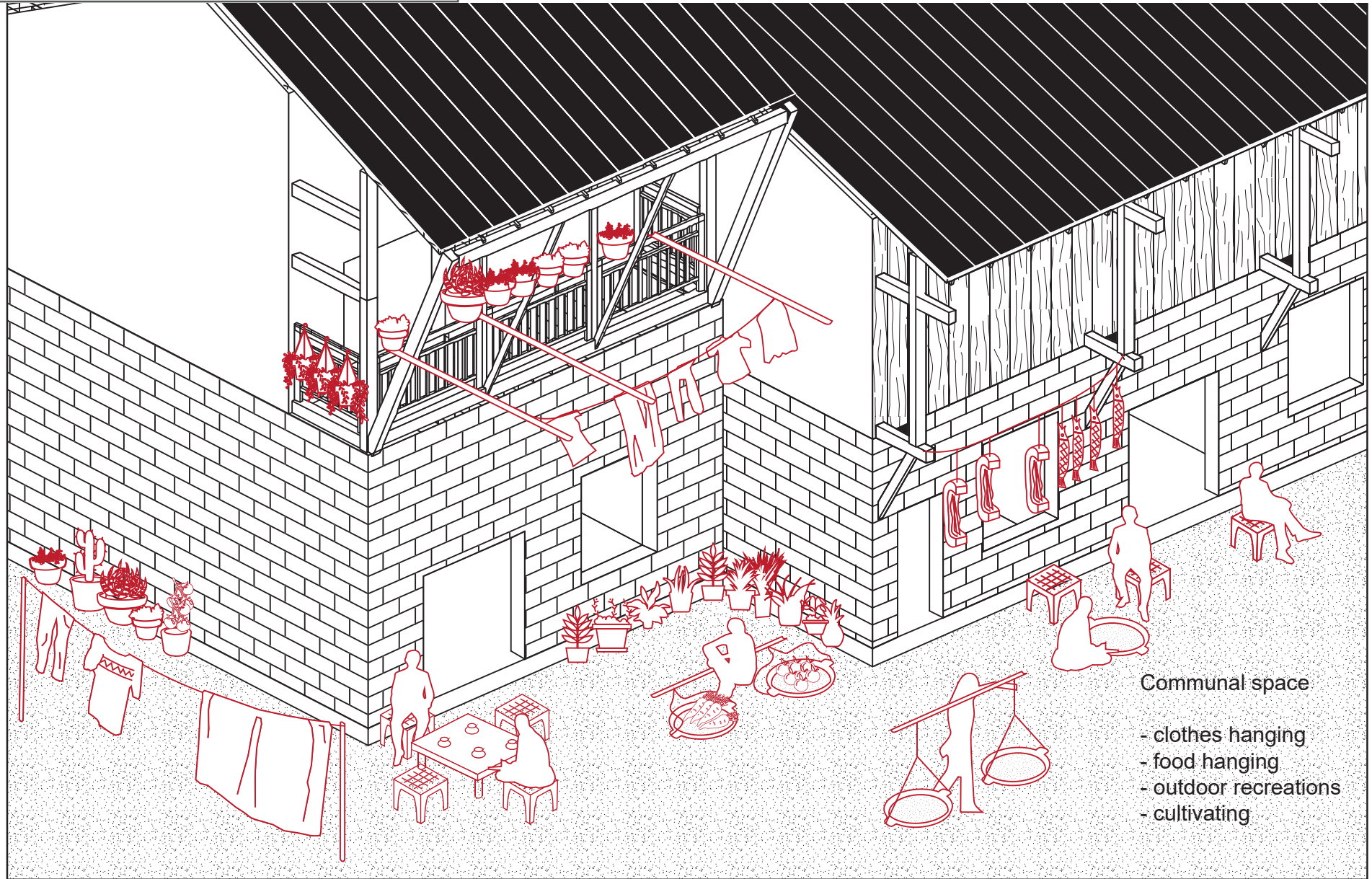
Service space



Quays







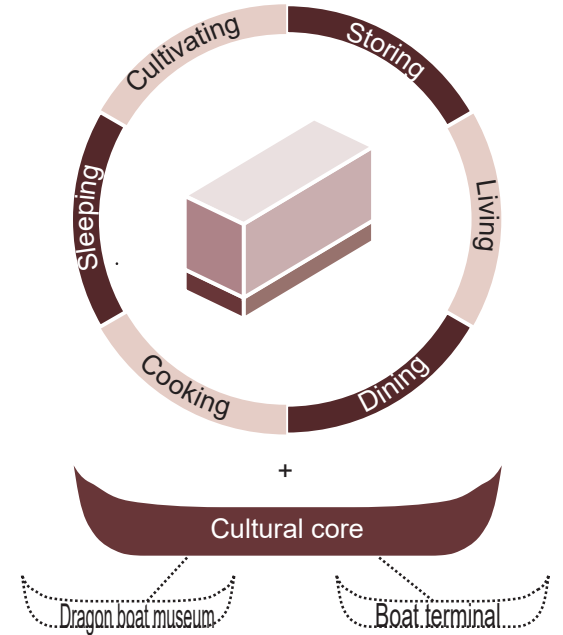
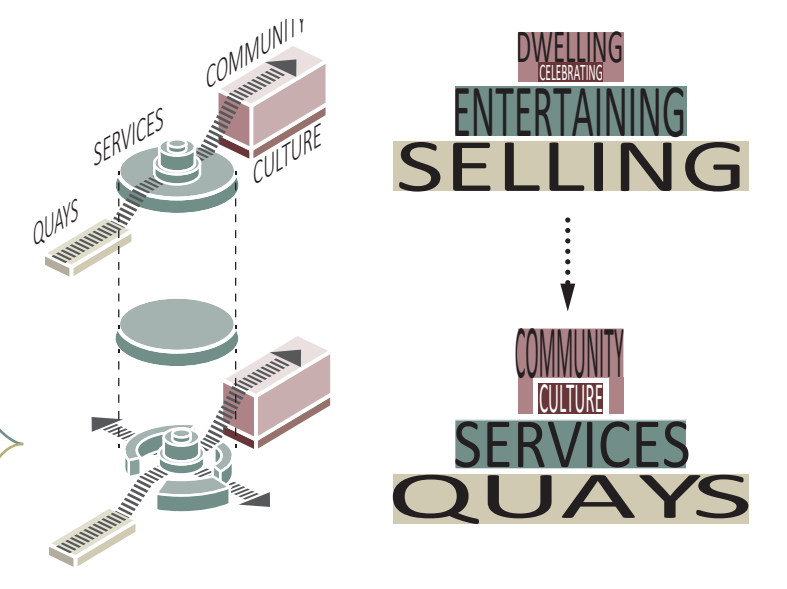
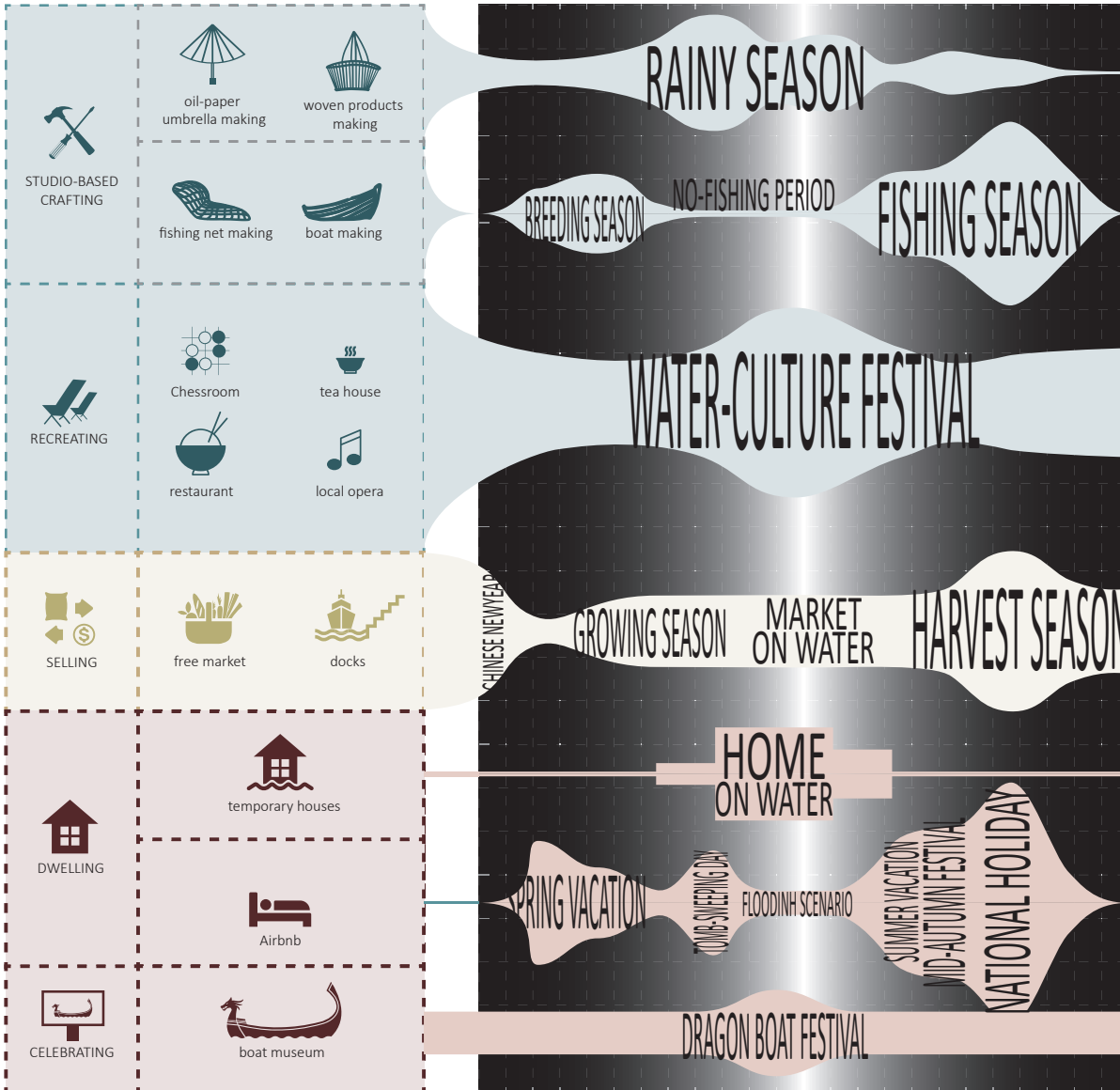
Communal space

- clothes hanging
- food hanging
- outdoor recreations
- cultivating

Research

Programmes of requirement

01 02 03 04 05 06 07 08 09 10 11 12 months



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PROBLEM?

1. "tough nut" of modern urbanization



POTENTIAL...

1. Architectural heritage embedded with local history and culture



		Design
Attitude		

PROBLEM?

2. Agricultural civilization which lacks of convenience and efficiency



		Design
Attitude		

POTENTIAL...

2. Self-sufficient lifestyle which could be a priceless cultural and touristic asset



PROBLEM?

3. flooding disaster



		Design
Attitude		

POTENTIAL...

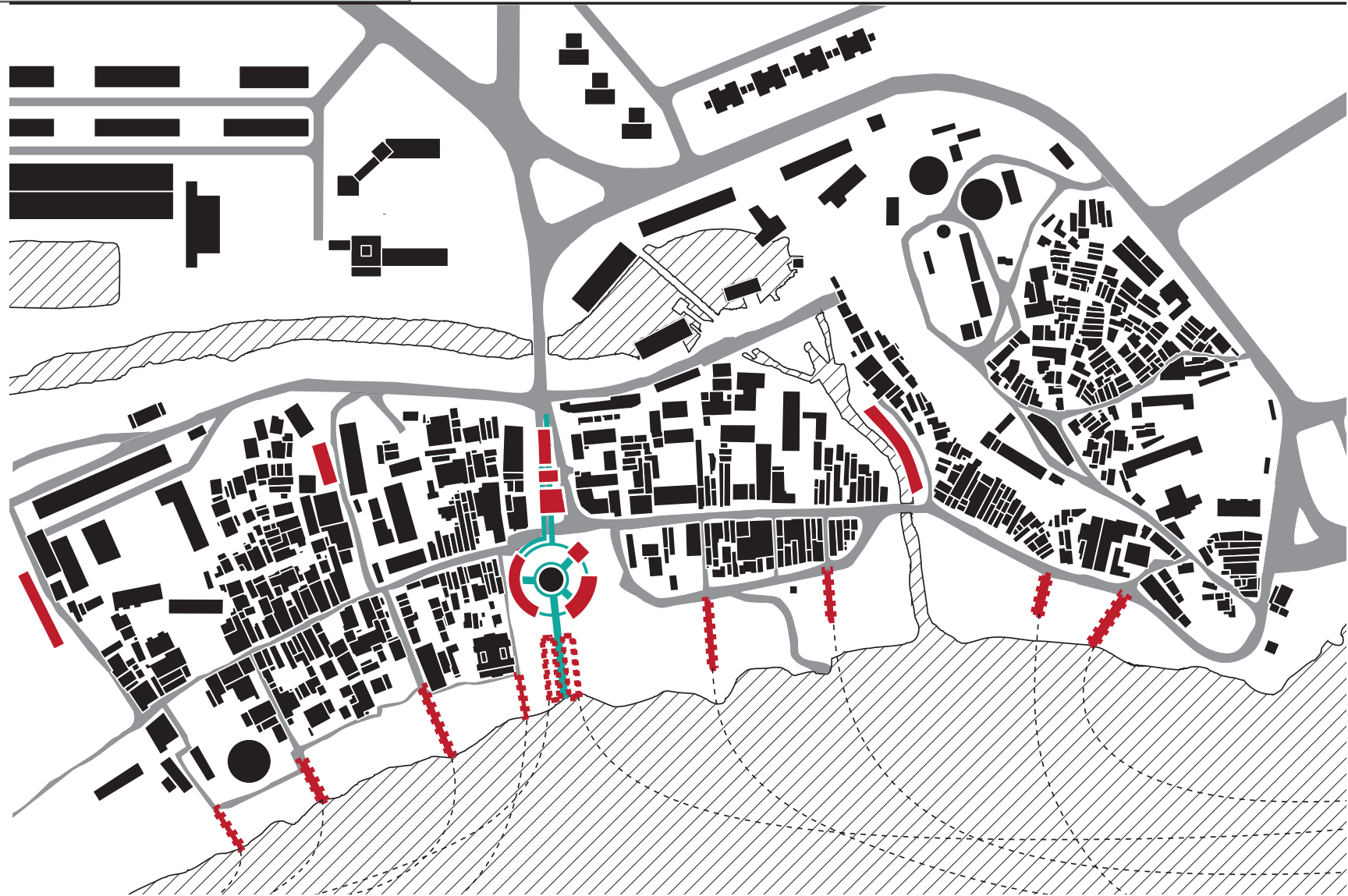
3. the access to the changing water level which provides totally different urban experiences





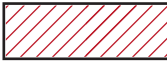





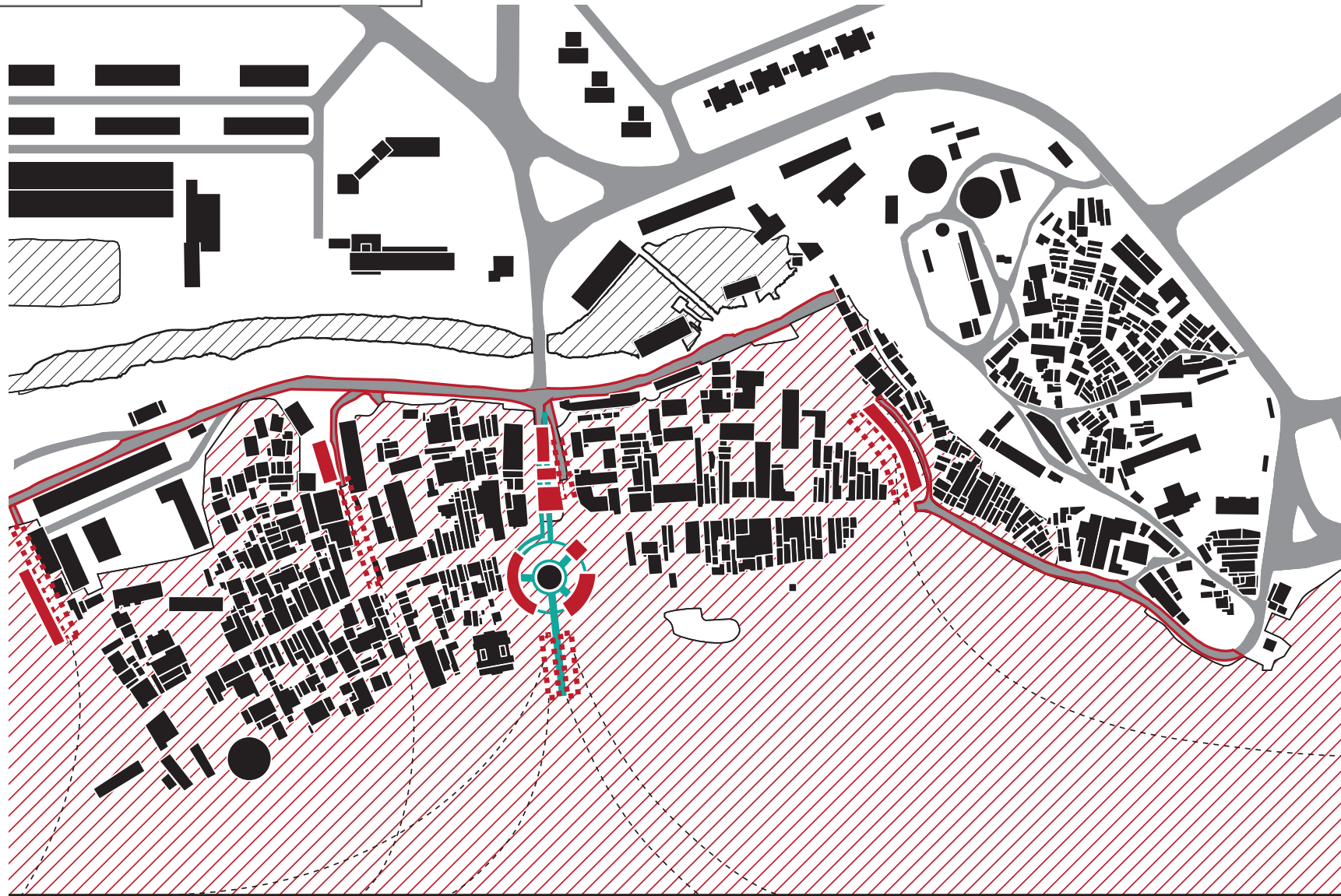
		Design
Vision		









A compound built environment echoes to the **local lifestyle**, while capitalizing on the opportunities brought by the **changing water level**.





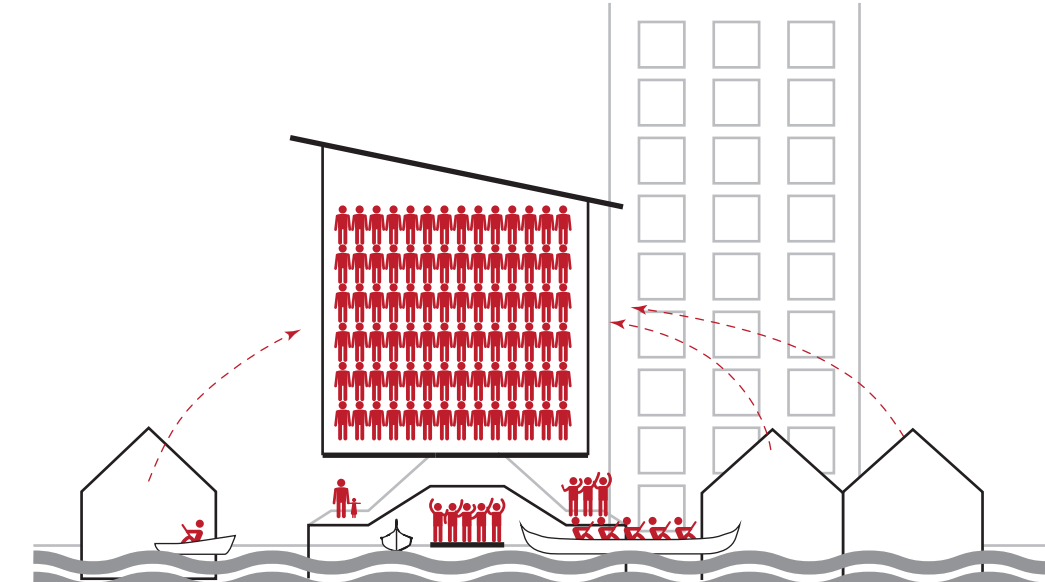
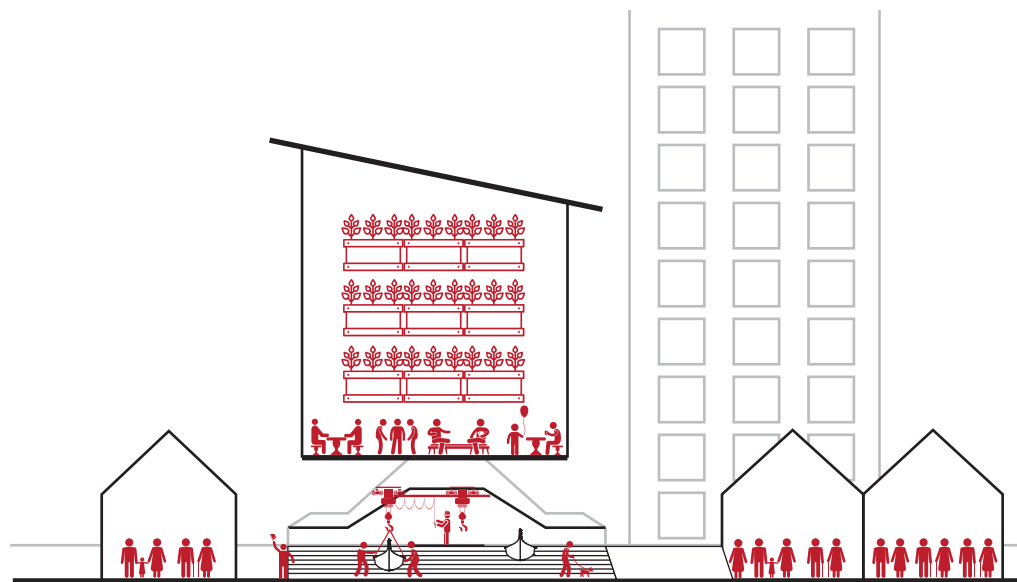
- | | | | | | | | |
|---|----------------------|---|---------------------------------|---|-------------------|---|-------------------|
|  | Urban road structure |  | End of the urban road structure |  | Buildings |  | Normal water area |
|  | Flooding water area |  | Added project massing |  | Added connections |  | Boat docks |

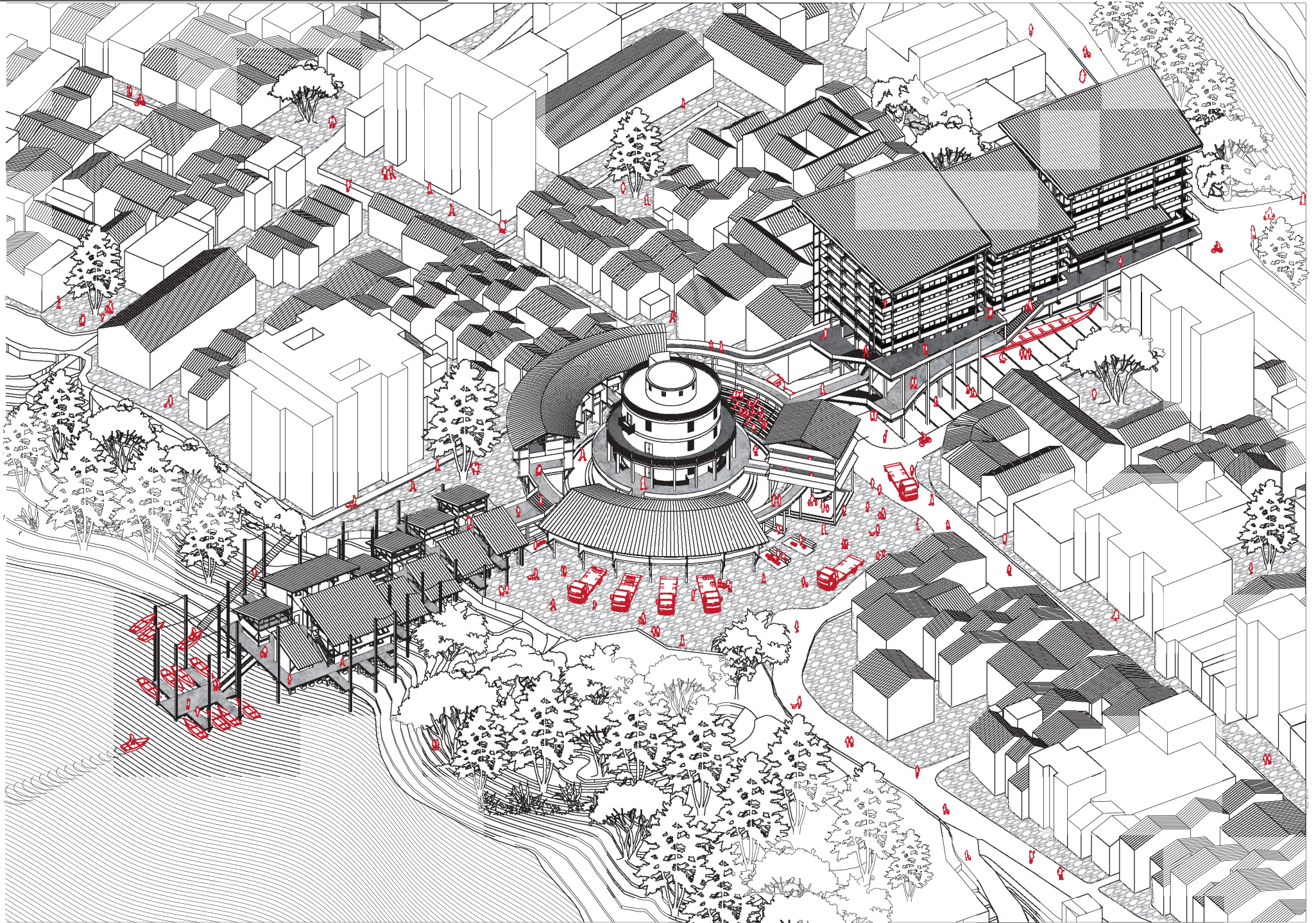


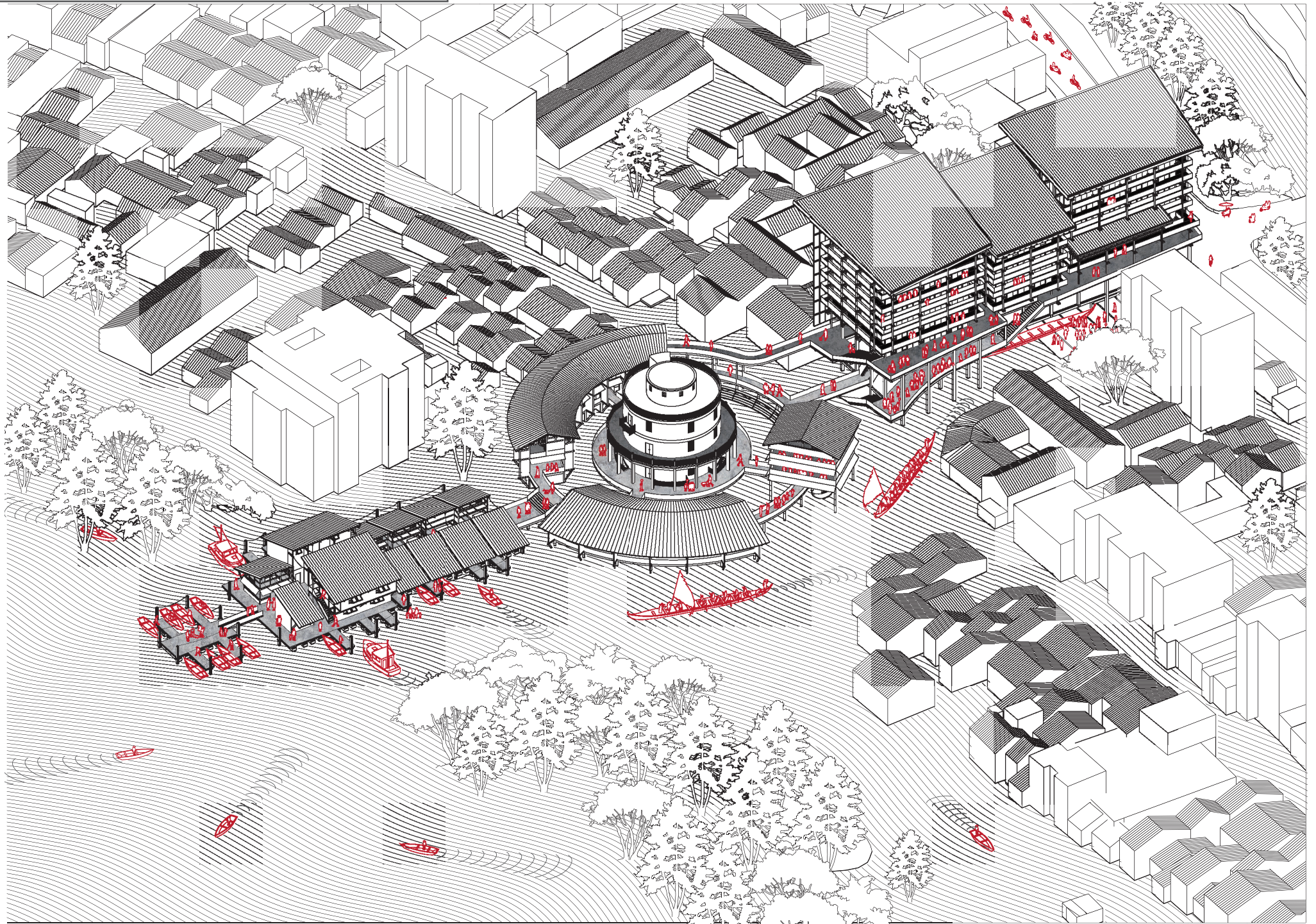
- | | | | |
|--|---|---|---|
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Design

Site approach

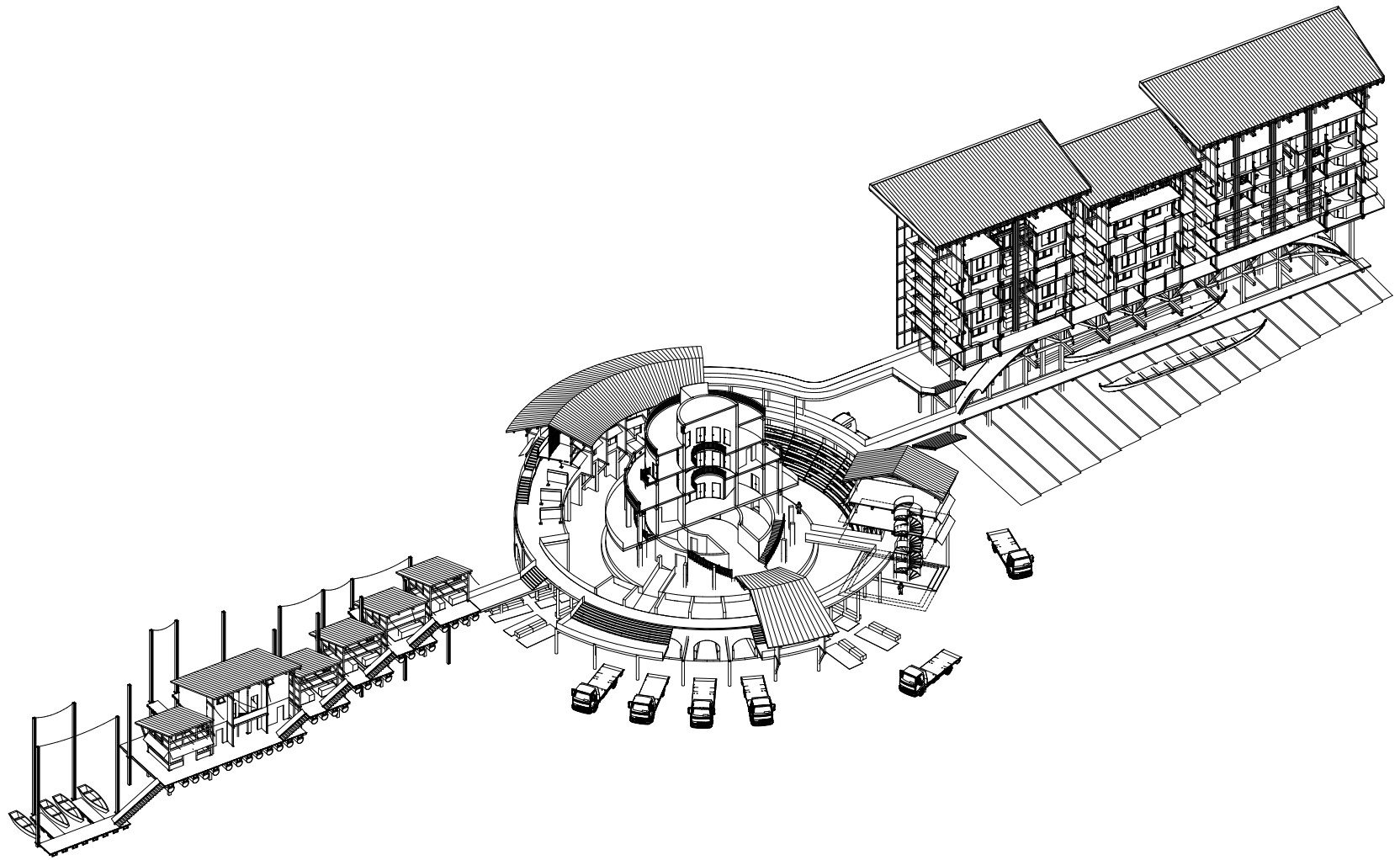




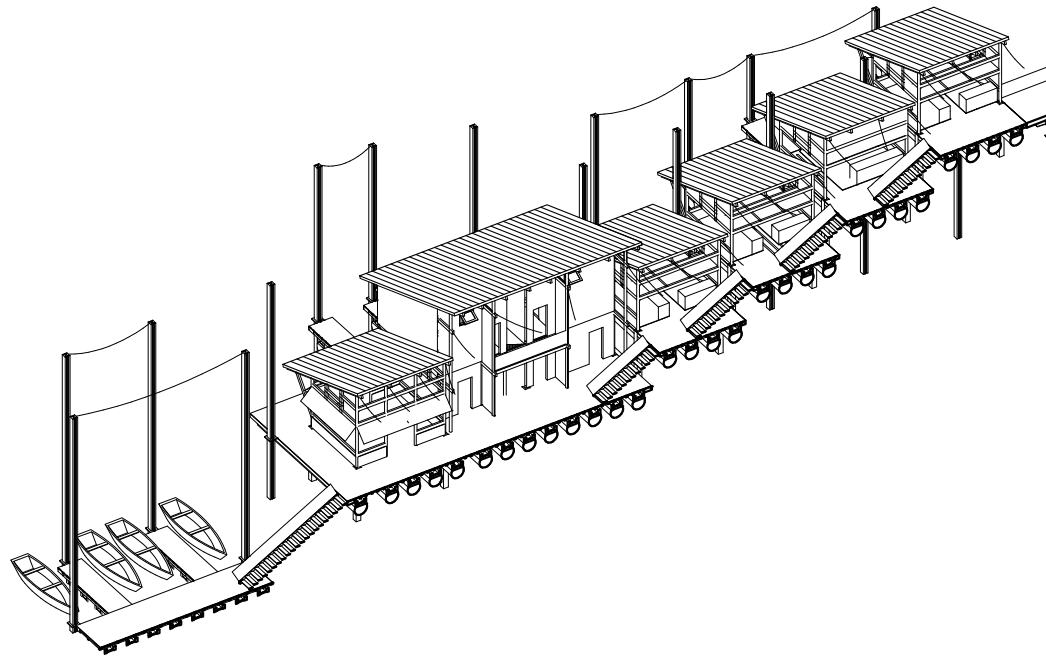








THE QUAY
Section axo



The floating boat city
Scenario

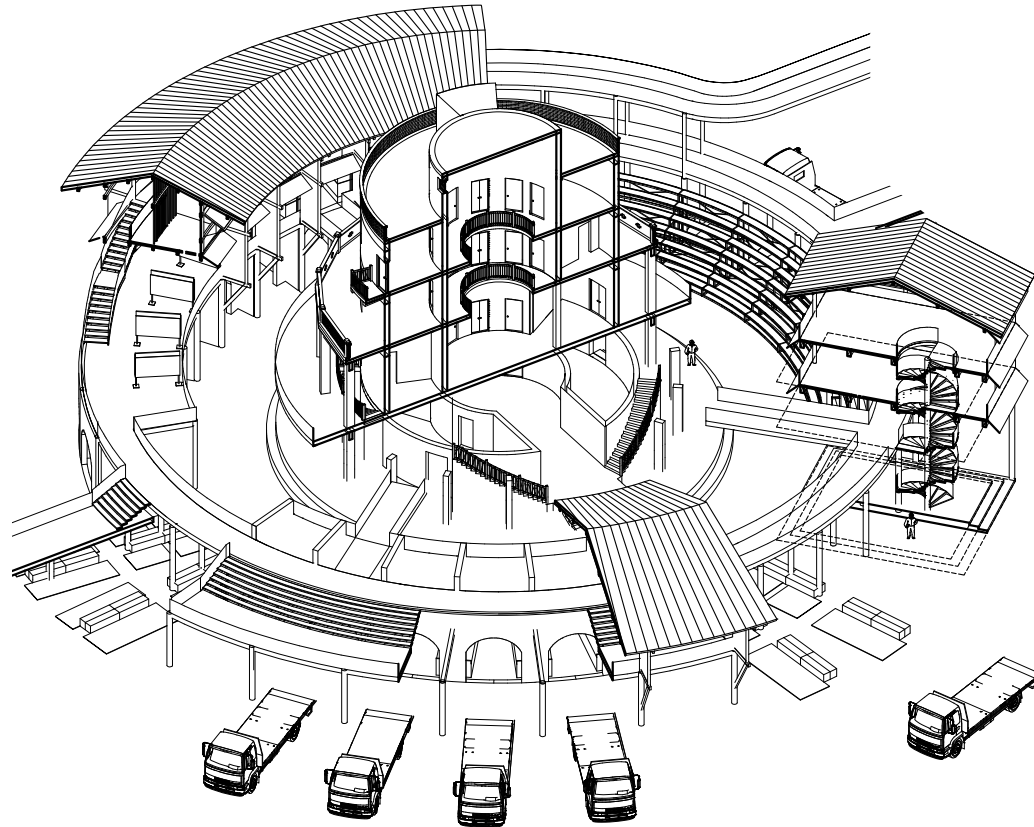


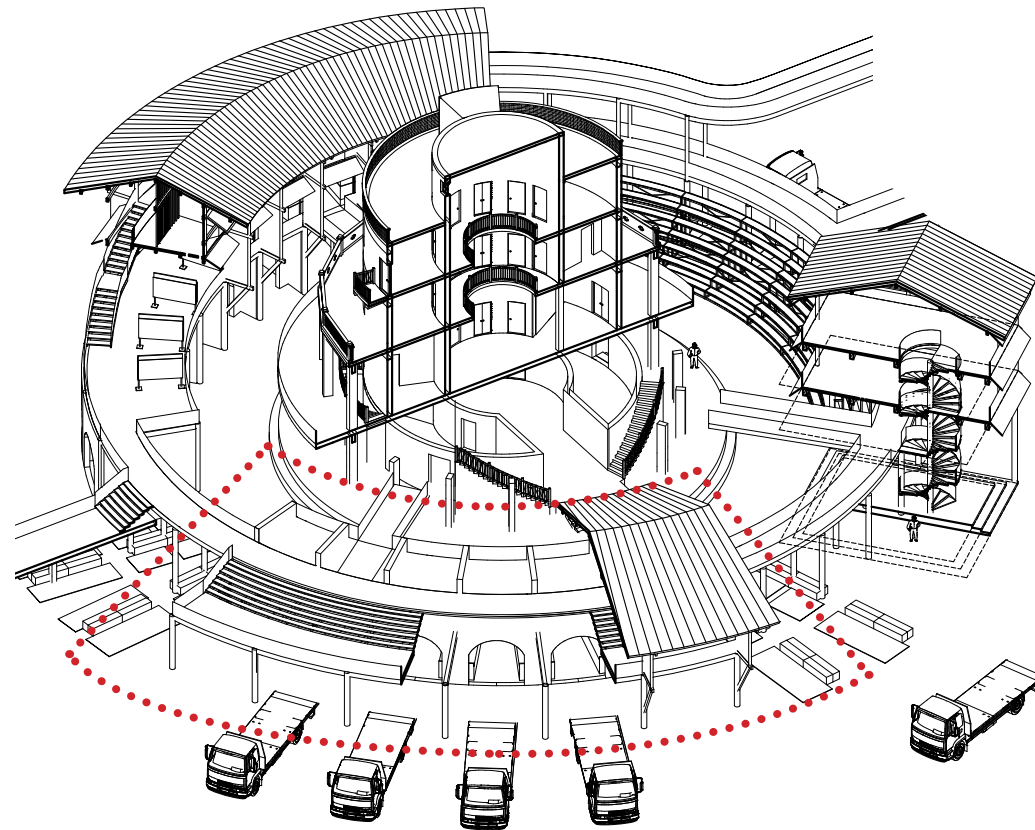
The floating boat city(flooding)
Scenario



THE SERVICE CENTRE

Section axo



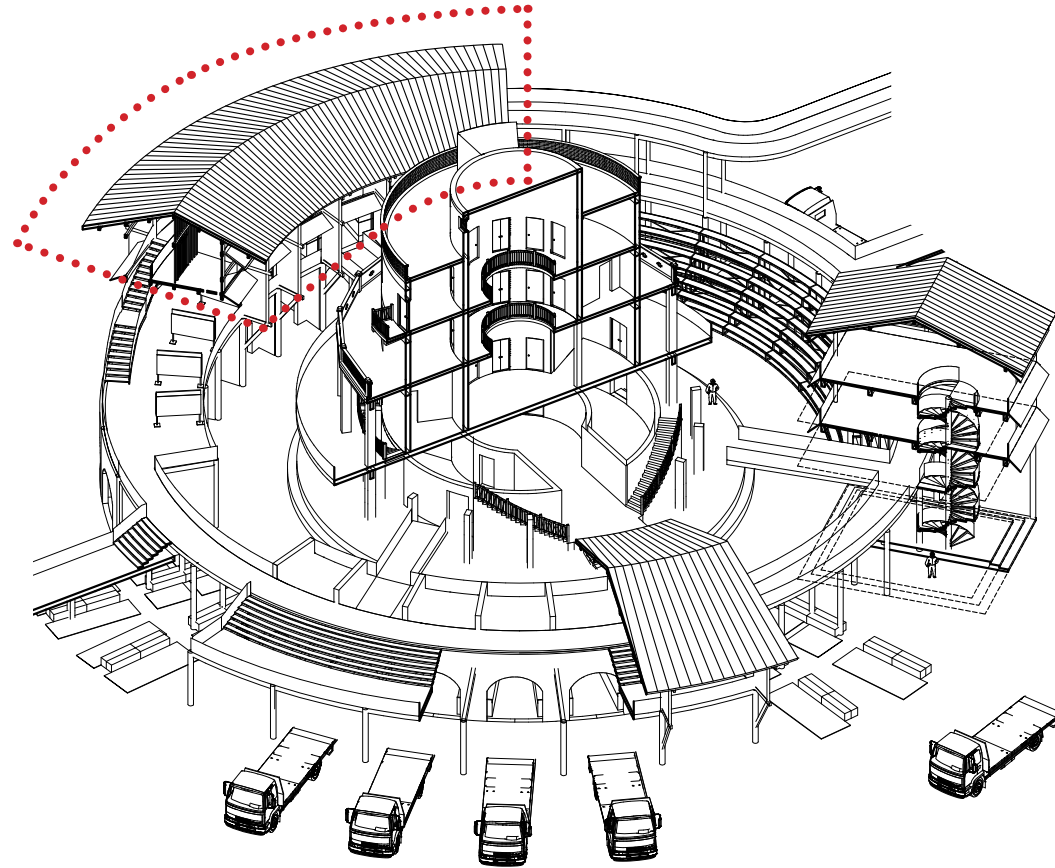


The service centre
Scenario



The service centre(flooding)
Scenario



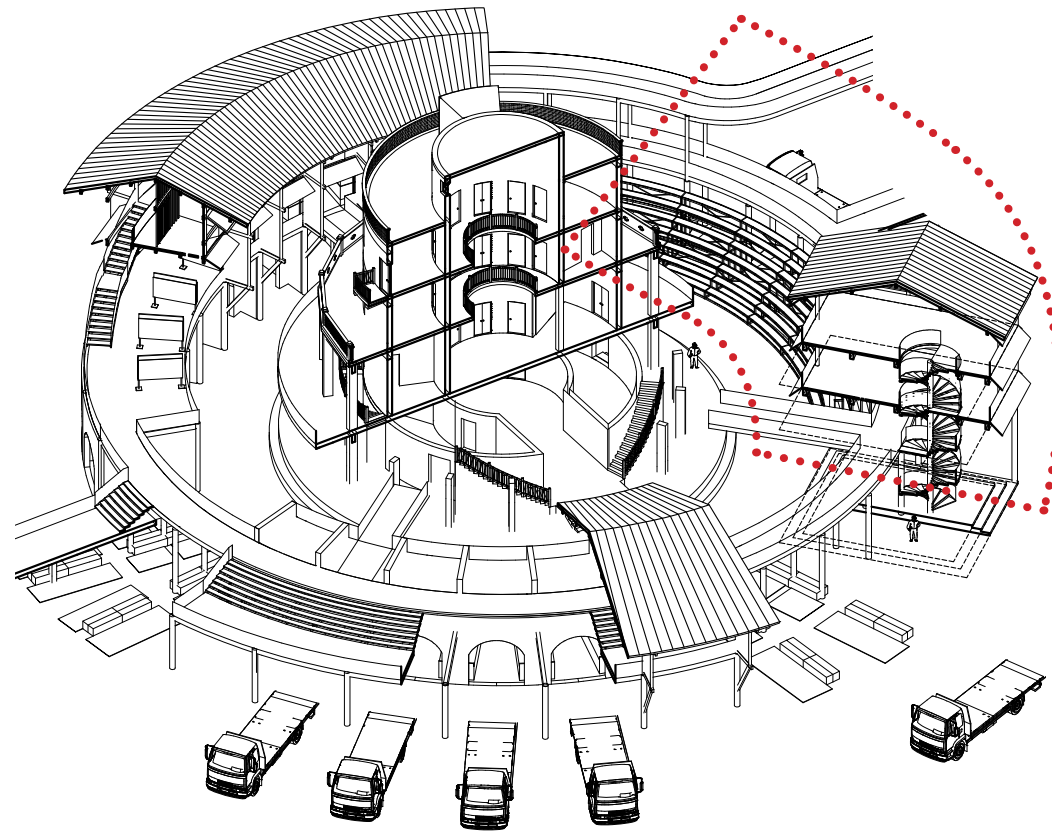


The craftsmanship studios
Scenario



The crafting centre(flooding)
Scenario





The performing space
Scenario

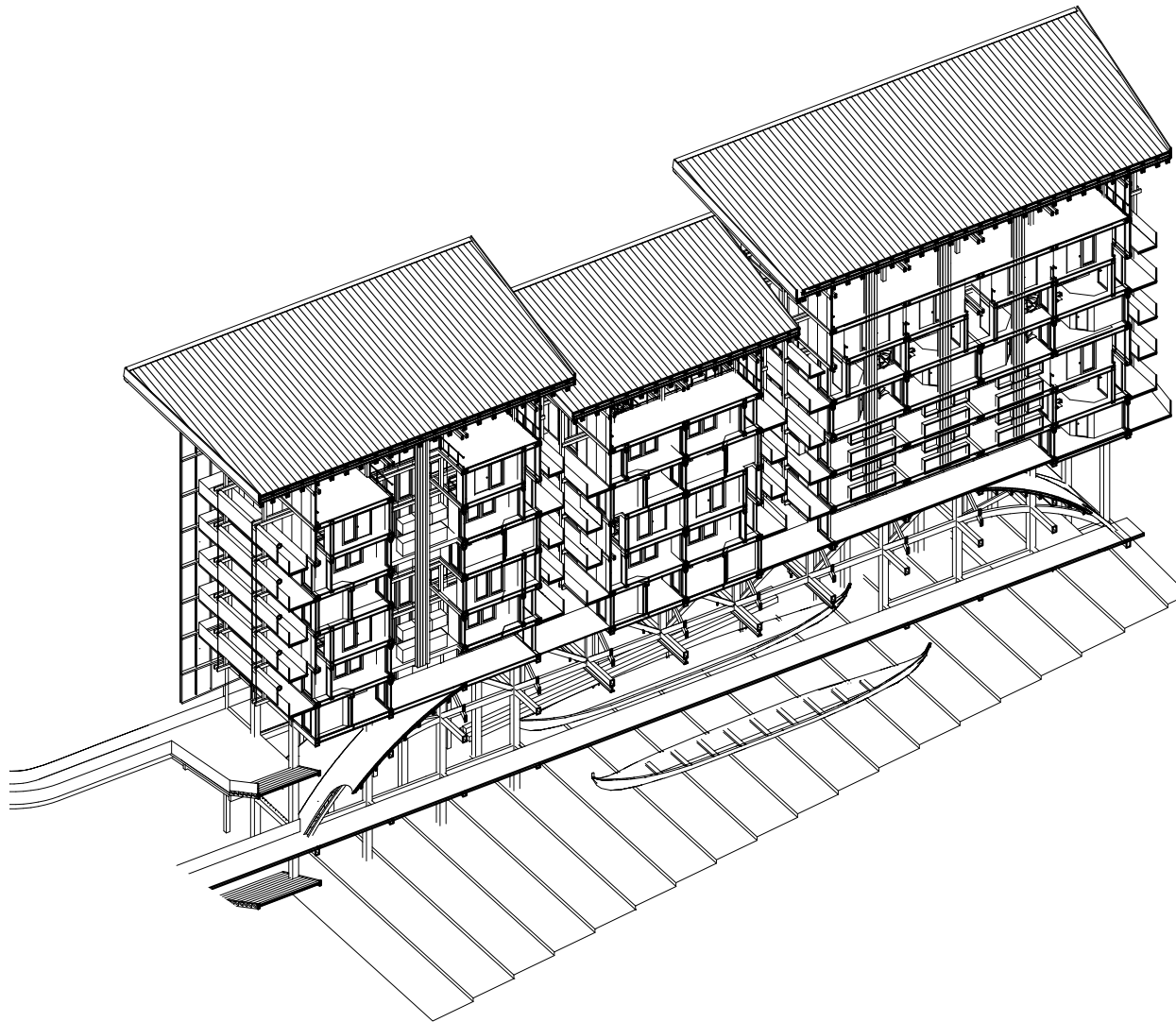


The urban corridors(flooding)
Scenario



THE BOAT MUSEUM & THE DWELLING

Section axo



The boat museum
Scenario



The boat terminal(flooding)
Scenario

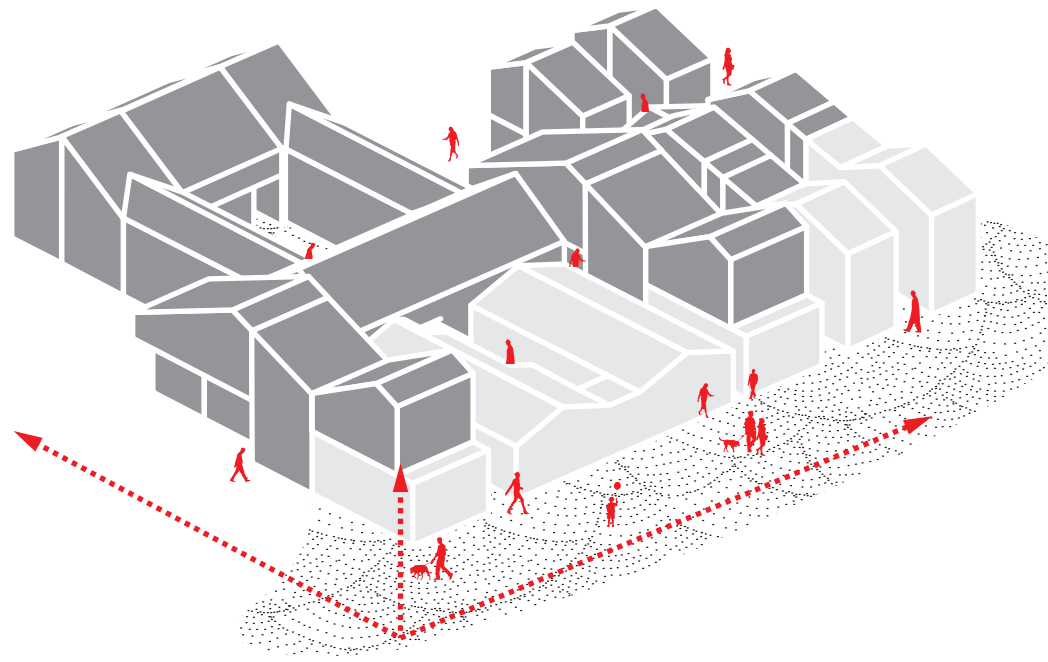


Design

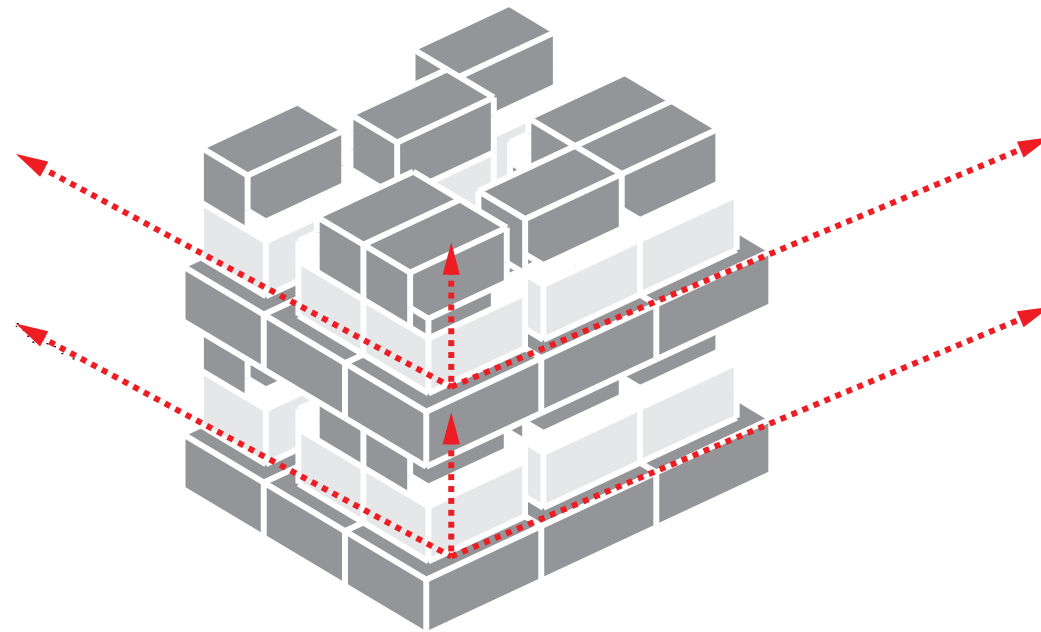
Congregated temporary dwelling approach



		Design
Congregated temporary dwelling approach		

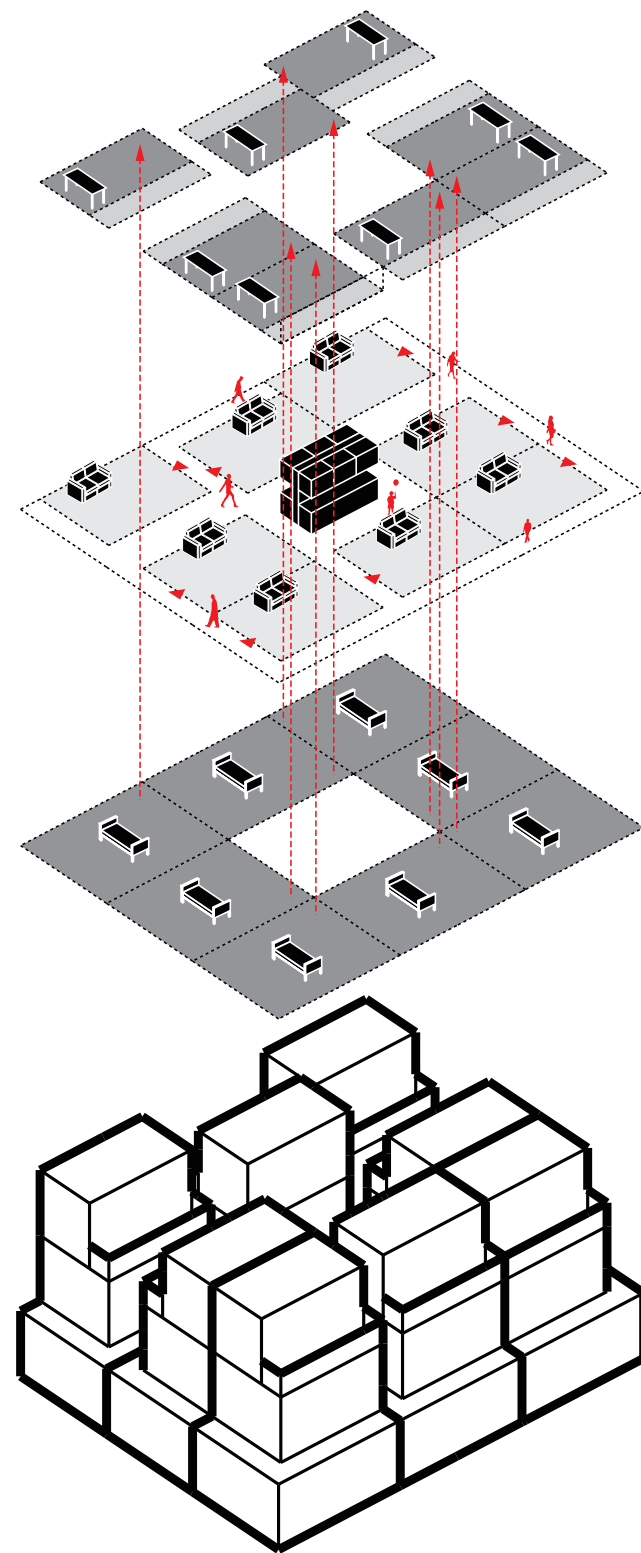
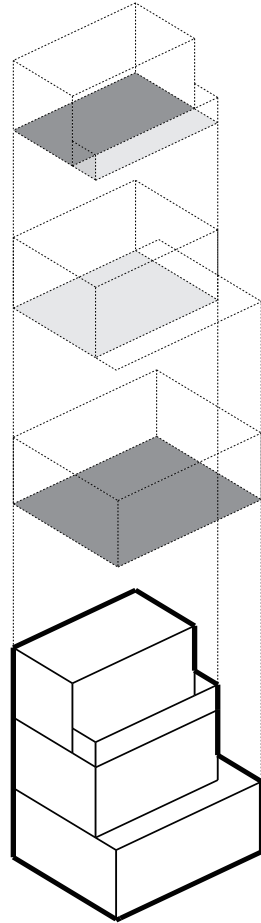


		Design
Congregated temporary dwelling approach		



Design

Congregated temporary dwelling approach

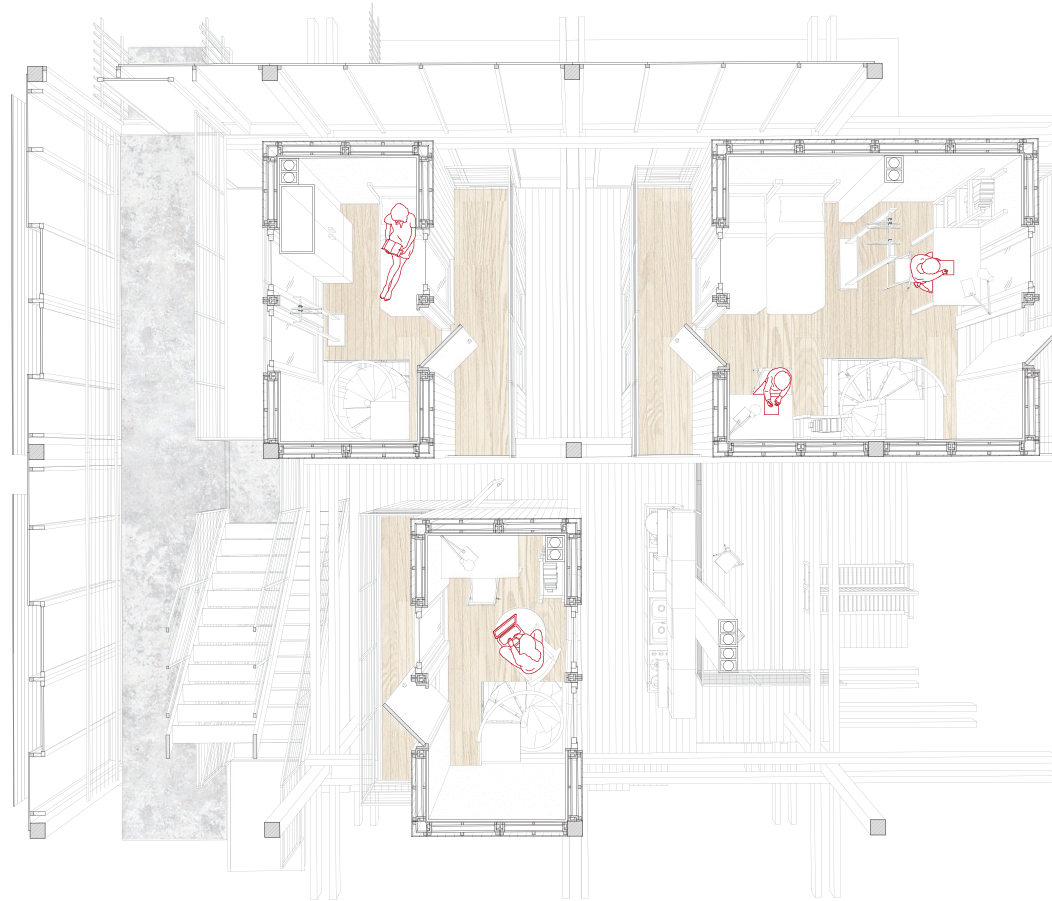




Household G floor Fragment



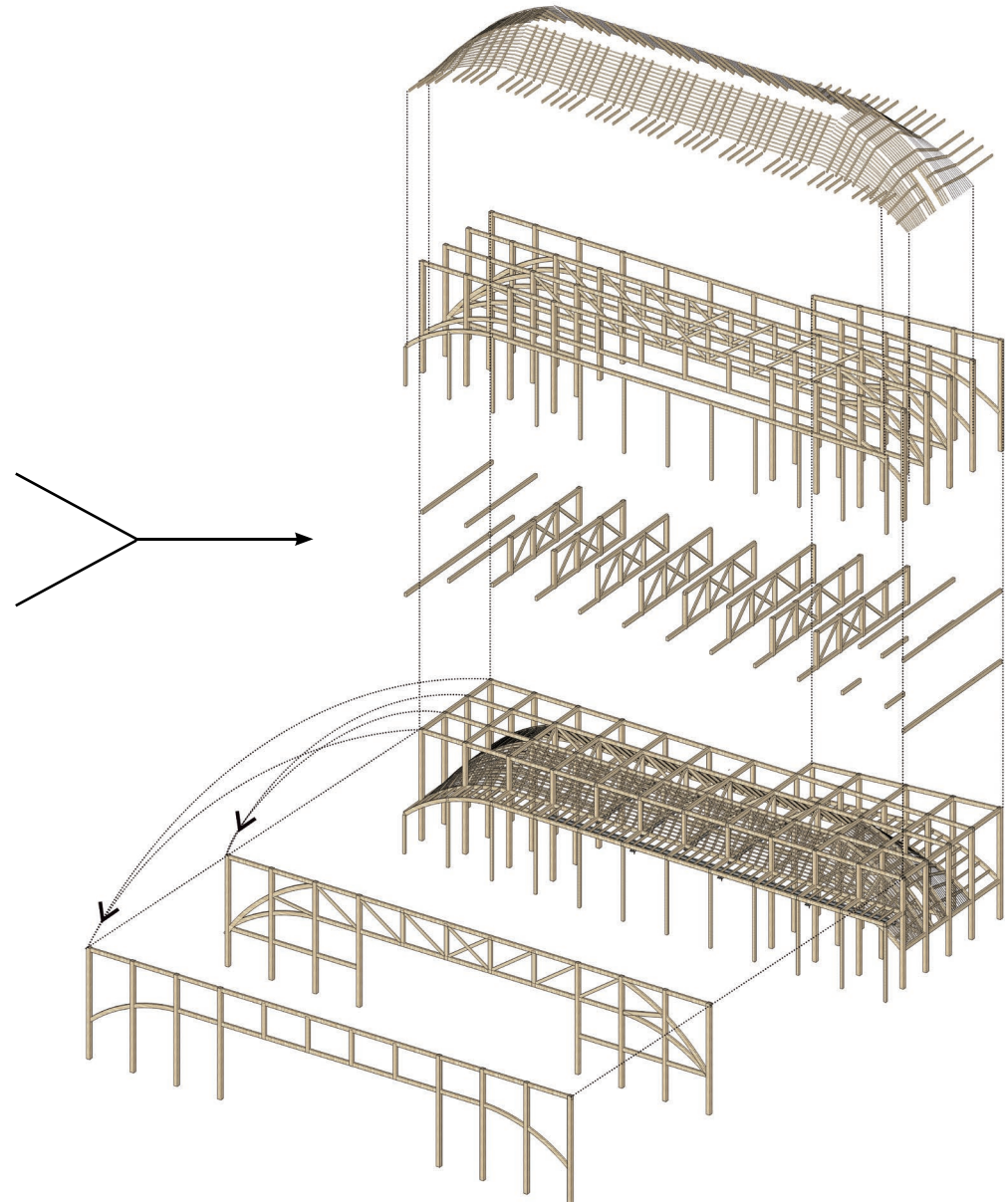
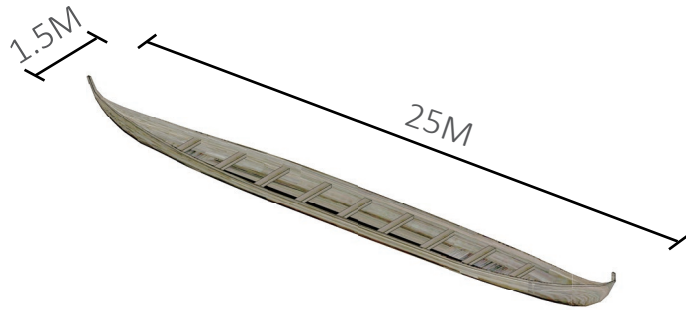
Household G+1 floor Fragment



Household G+2 floor Fragment

THE BOAT MUSEUM

Boat Structure

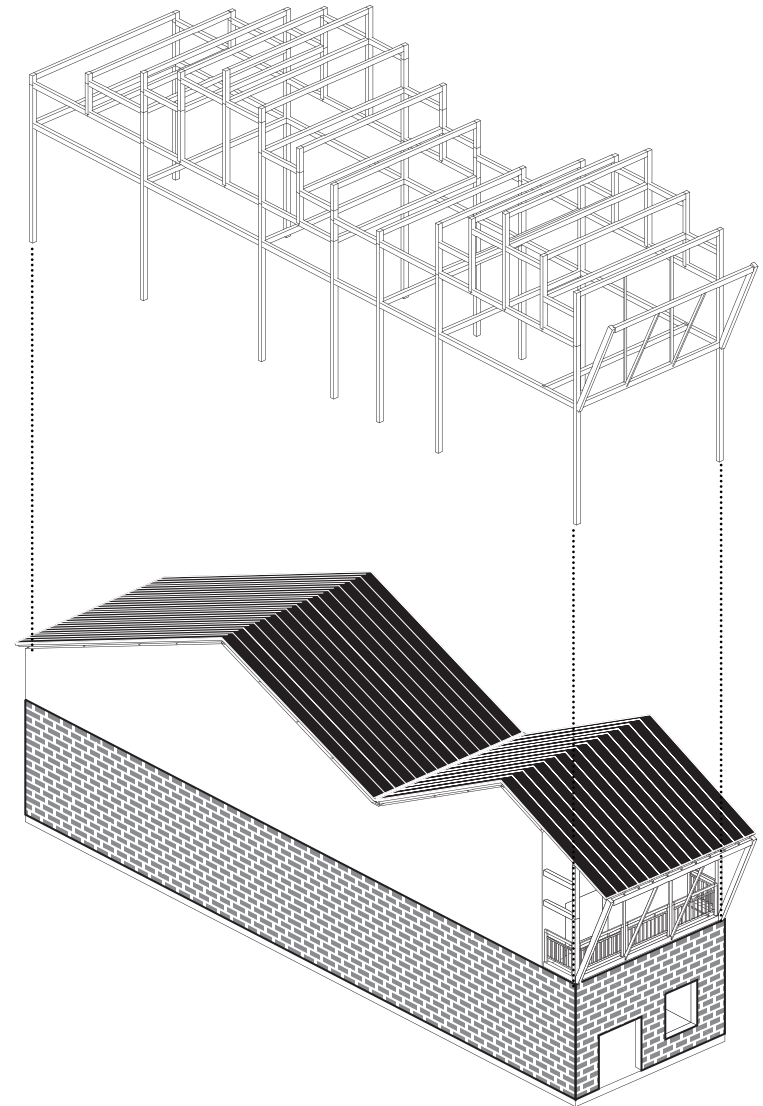


THE DWELLING PROJECT

vernacular beam & column joint



"beams over beams" to help reduce the number of the ground columns

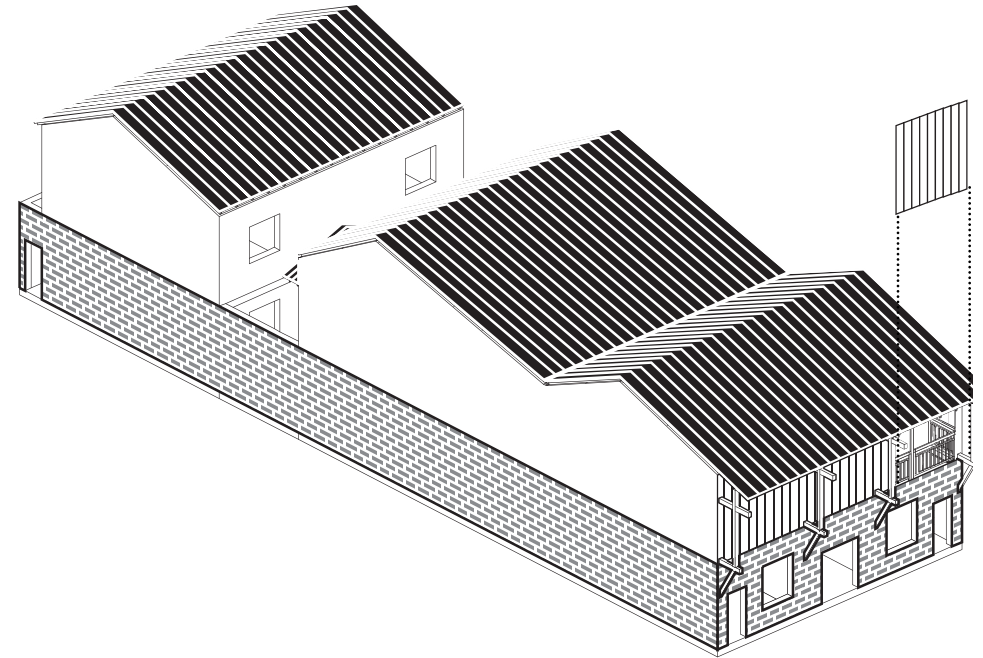


THE DWELLING PROJECT

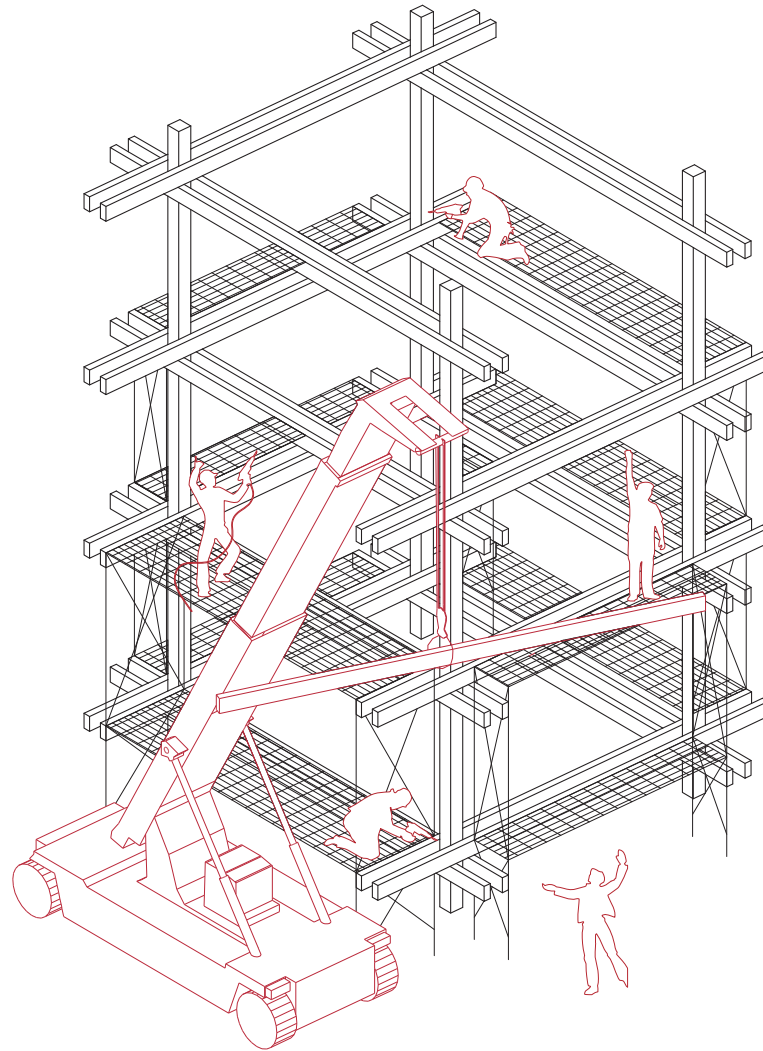
The vernacular demountable walls



Demountable wall panels to help change the openness of the space according to different programmes when needed

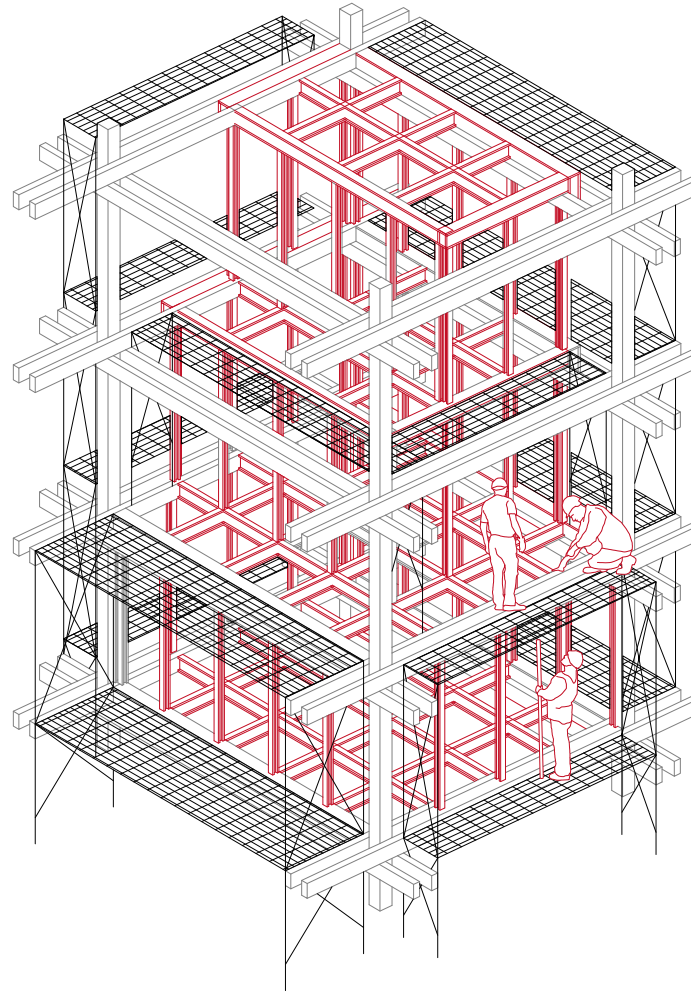


STEP1:
The main timber columns and beams

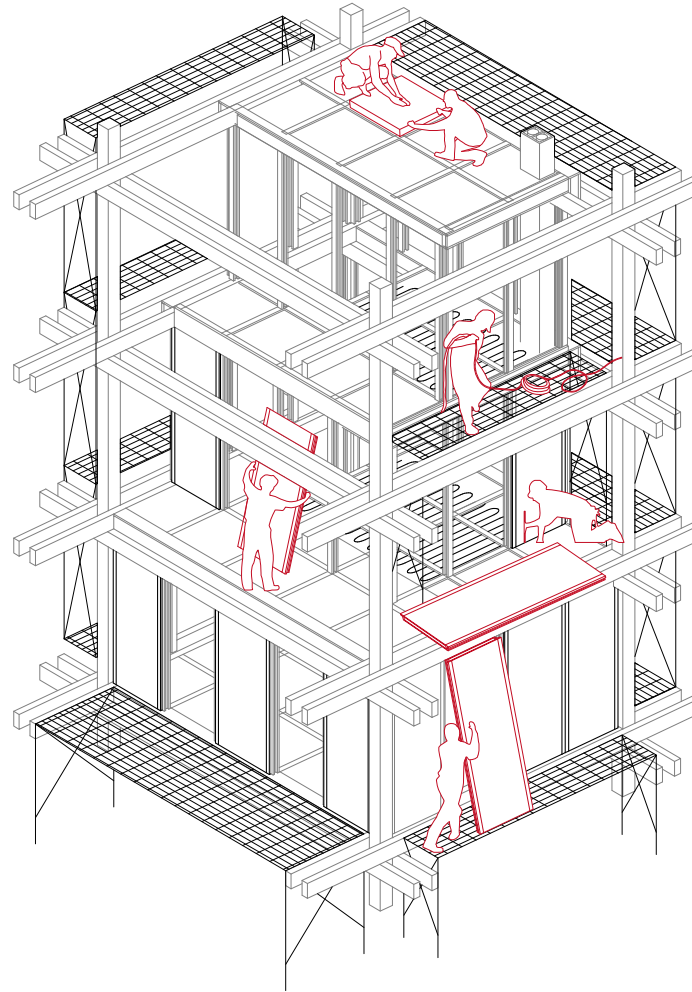


STEP2:

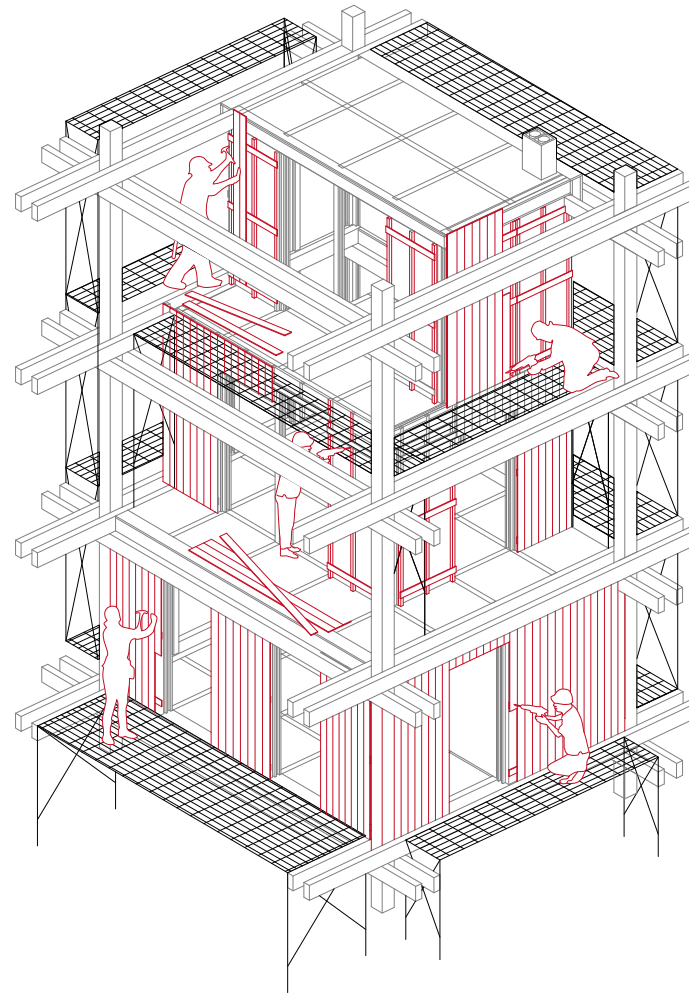
The secondary timber structure(walls & floors)



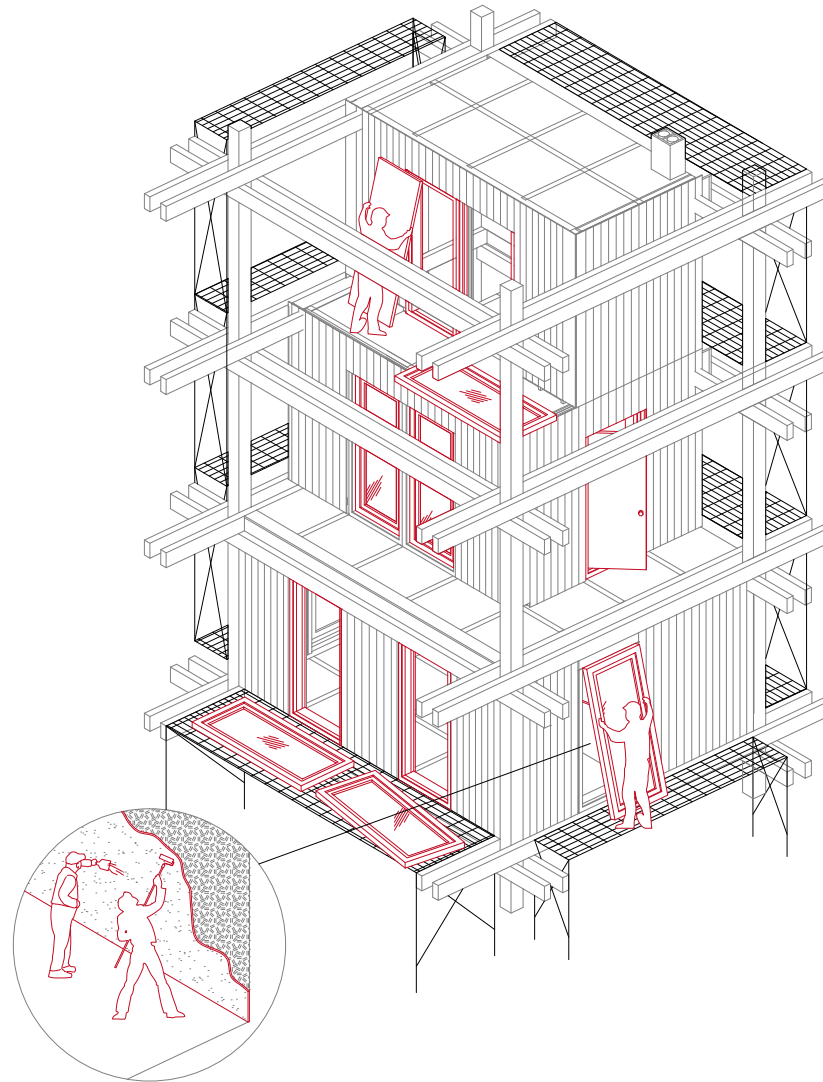
STEP3:
The insulation panel & wiring



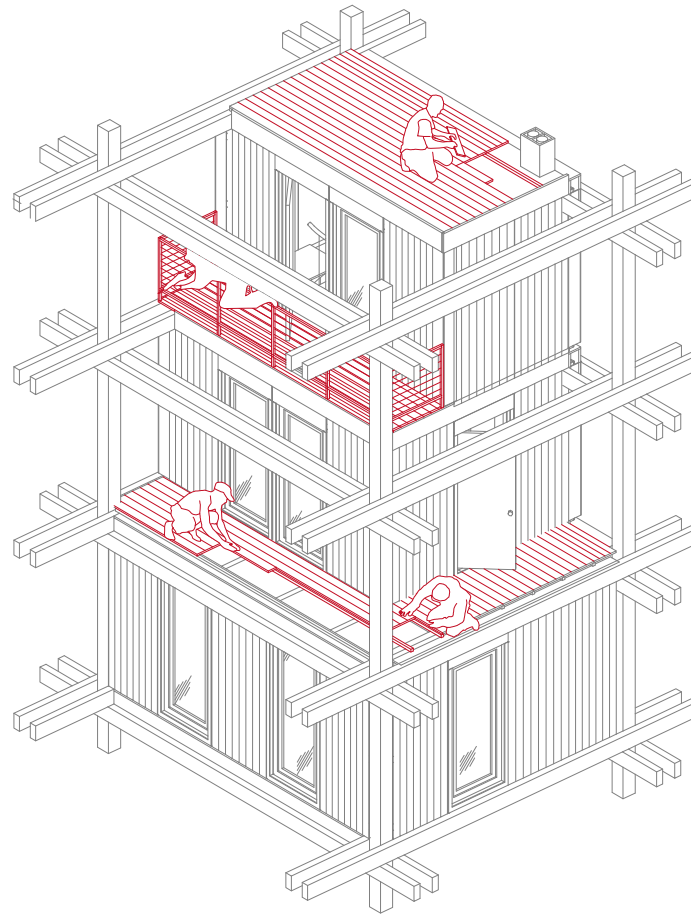
STEP4:
The exterior cavity wall cladding



STEP5:
The interior finishing, the doors and windows



STEP6:
Other finishing & installations



Design

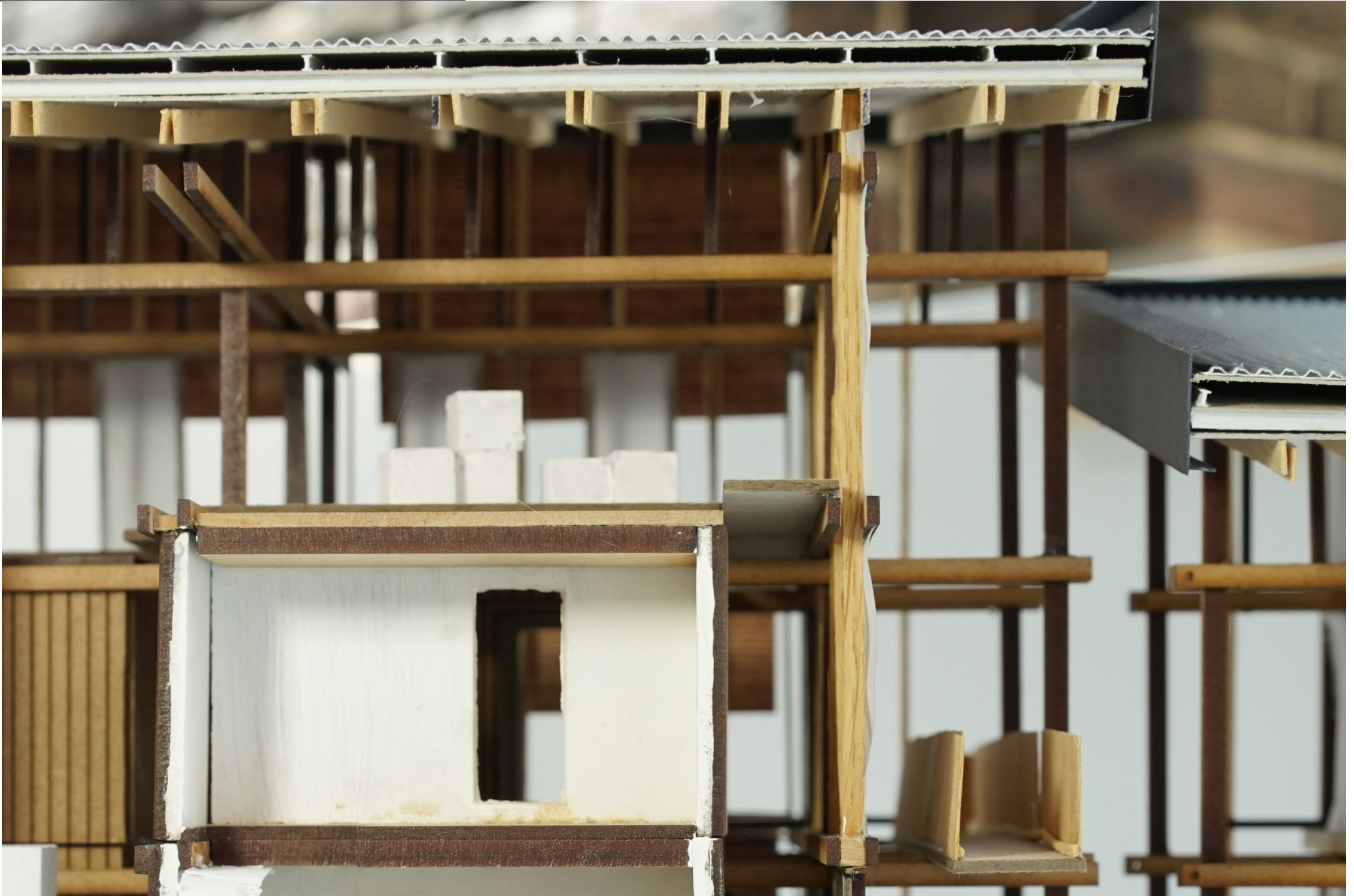
Materialization

The western buffer space
Facade & Section



Design

Materialization



Design

Materialization



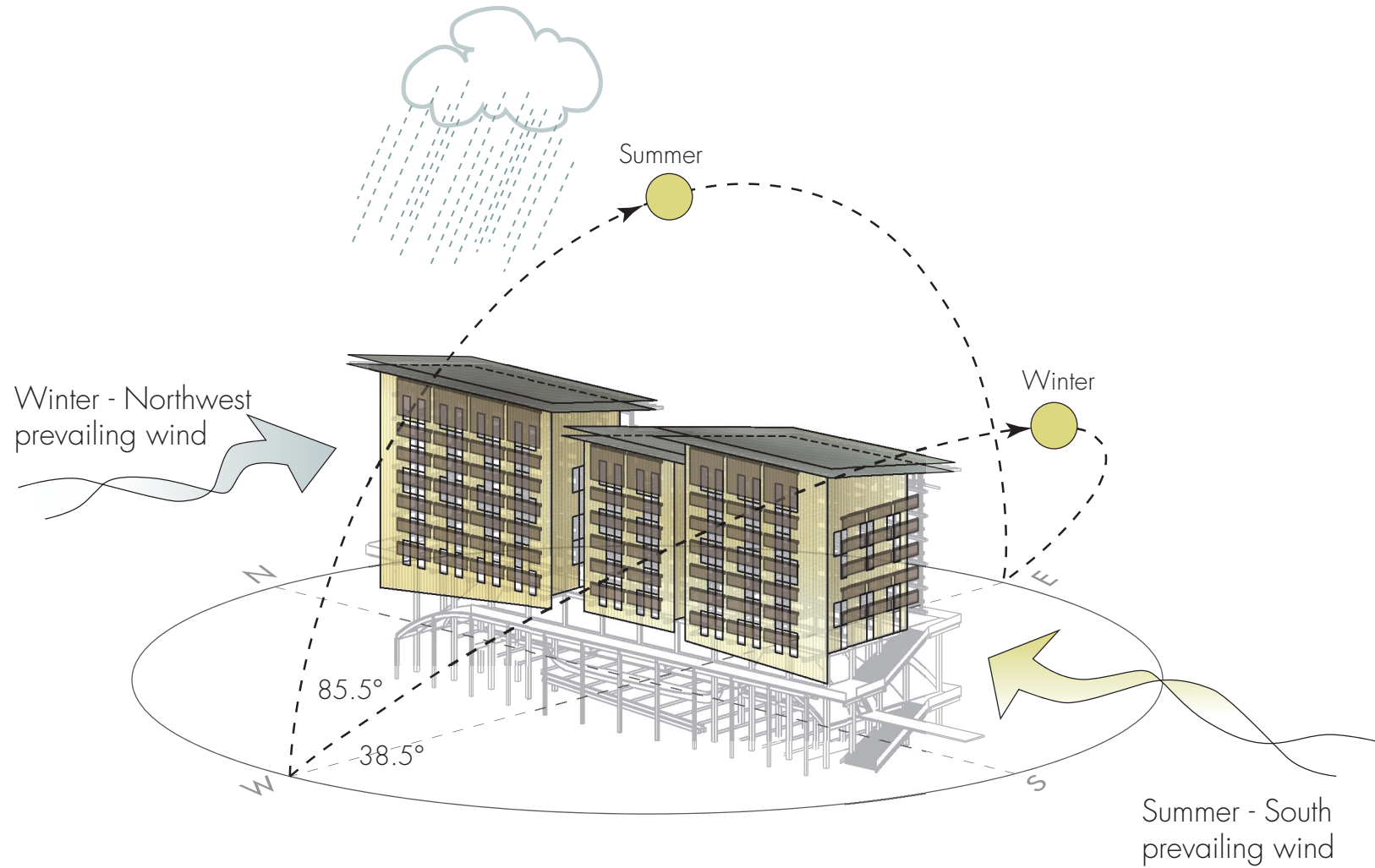
Design

Materialization



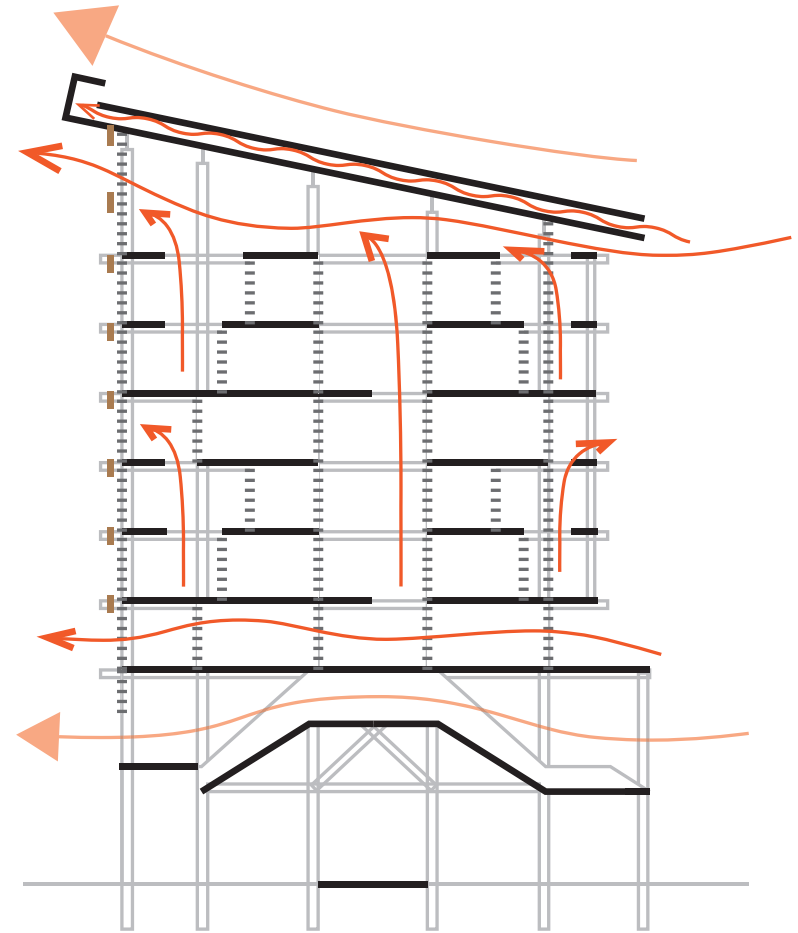
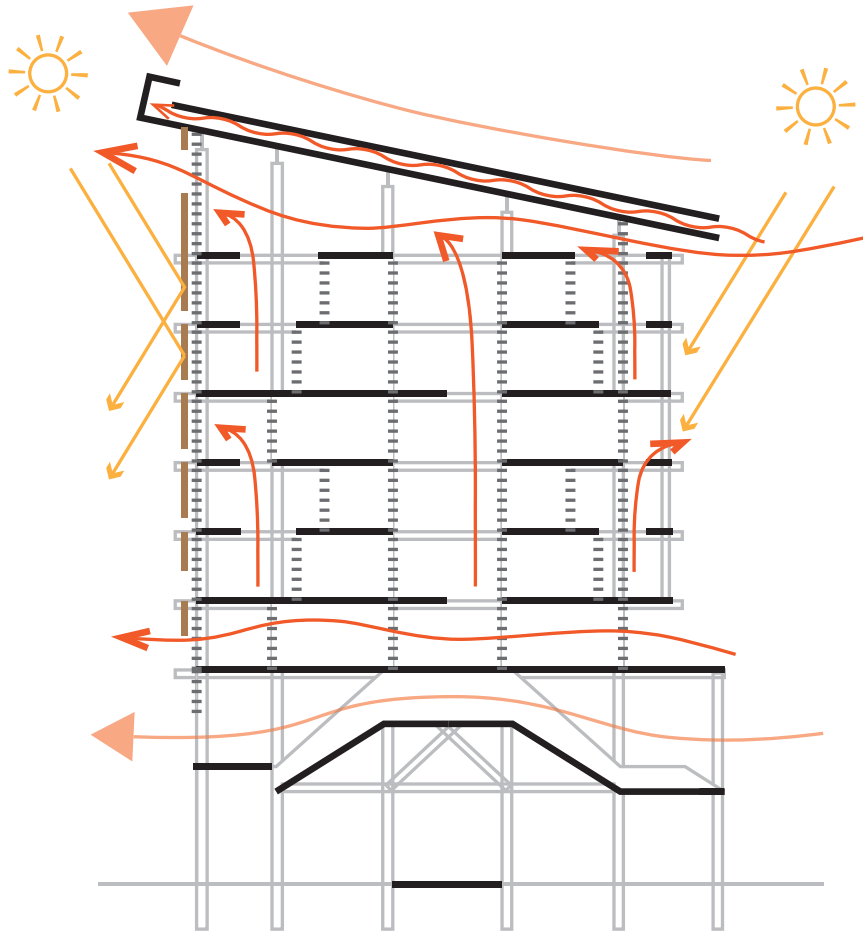
Design

Climatic approach



		Design
Climatic approach		

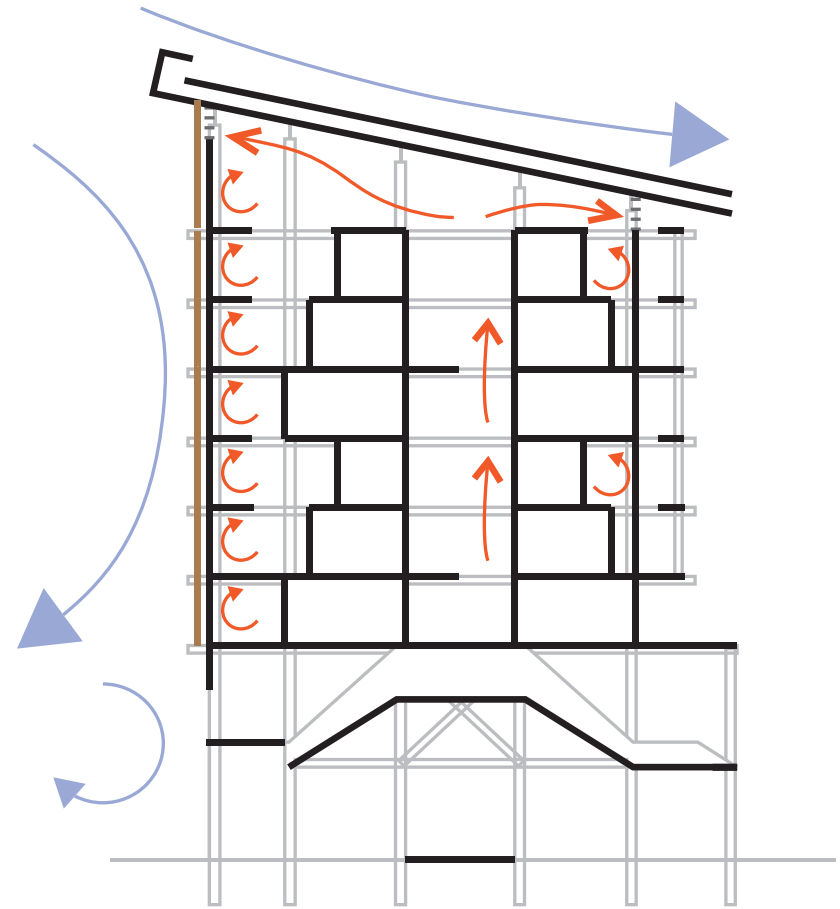
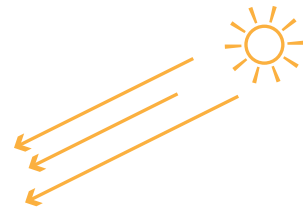
The indoor micro climate
Summer



Design

Climatic approach

The indoor micro climate
Winter





THANK YOU!