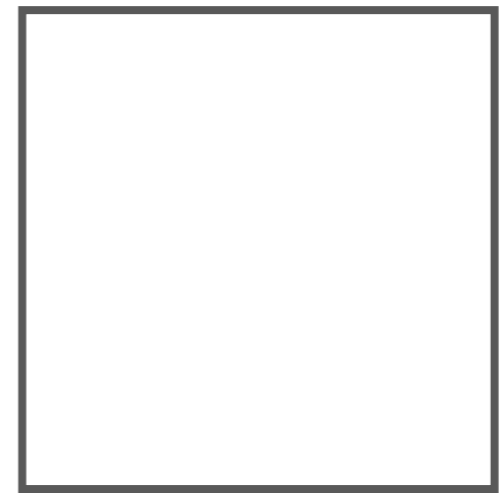
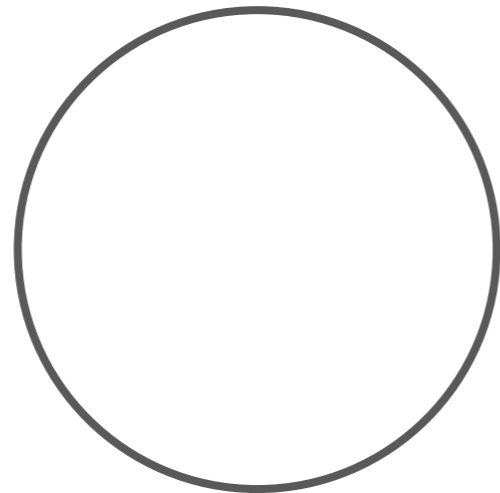
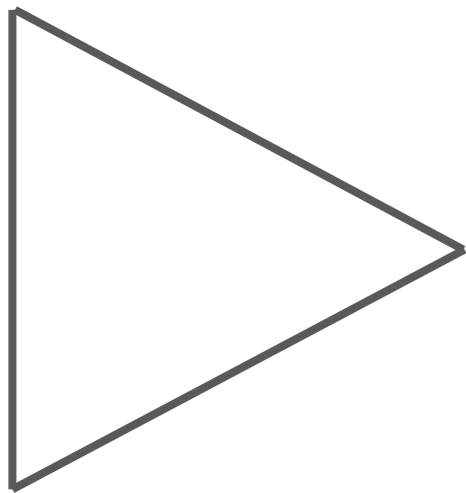


# TRANSIT VILLAGE

**Creating Space for Transition**



**Arnhem.**

**Planning area.**

**“Rail Junction East Arnhem”**



**One million  
homes shortage.**

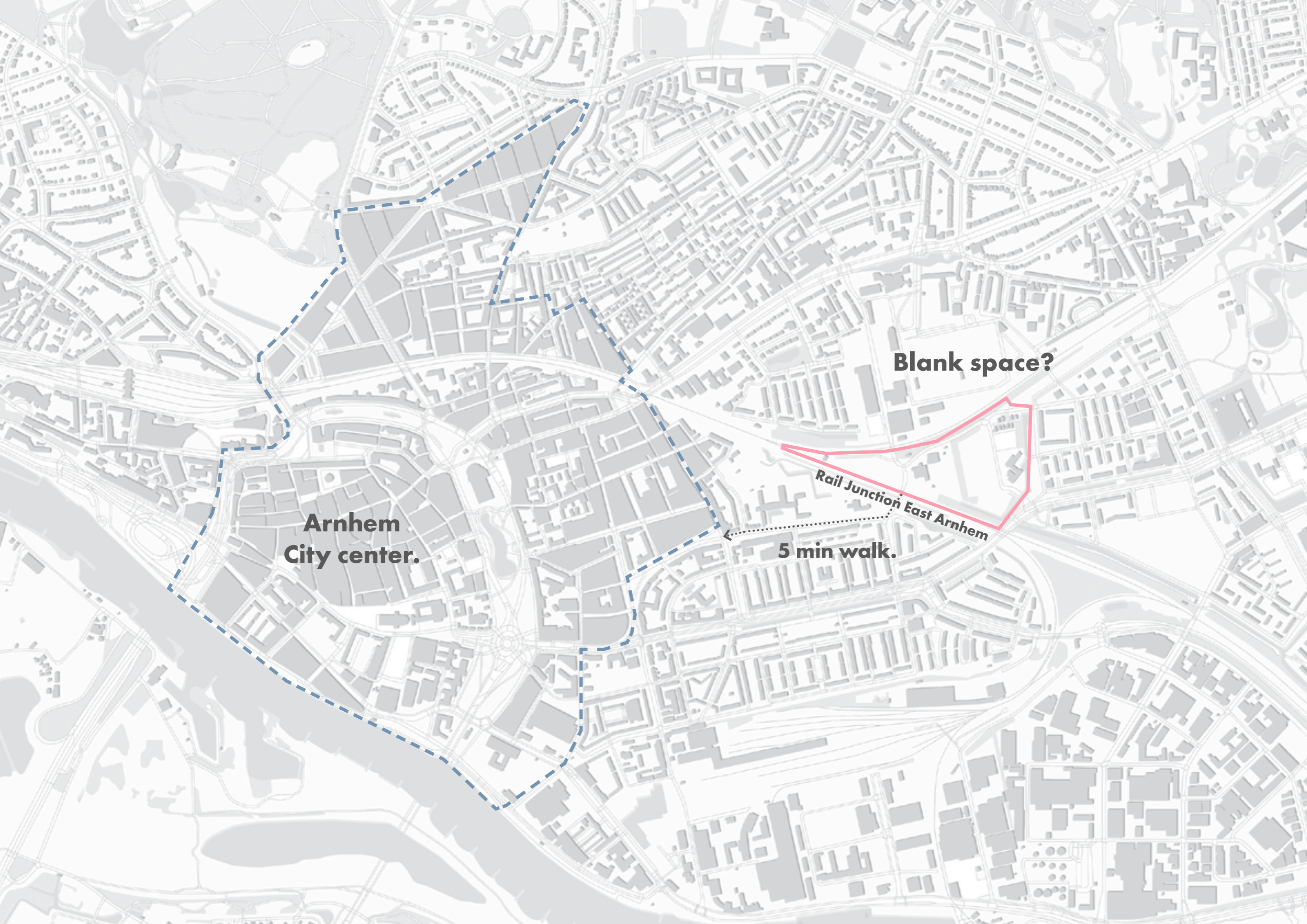


Region Arnhem-  
Nijmegen.

**New  
sustainable  
neighbor-  
hoods.**



**Planning area = development location.**



**Arnhem  
City center.**

**Blank space?**

*Rail Junction East Arnhem*

**5 min walk.**

**Rail Junction East-Arnhem.**

**Mobile home  
settlement.**

**Caravan dwellers.**

**Horse range.**

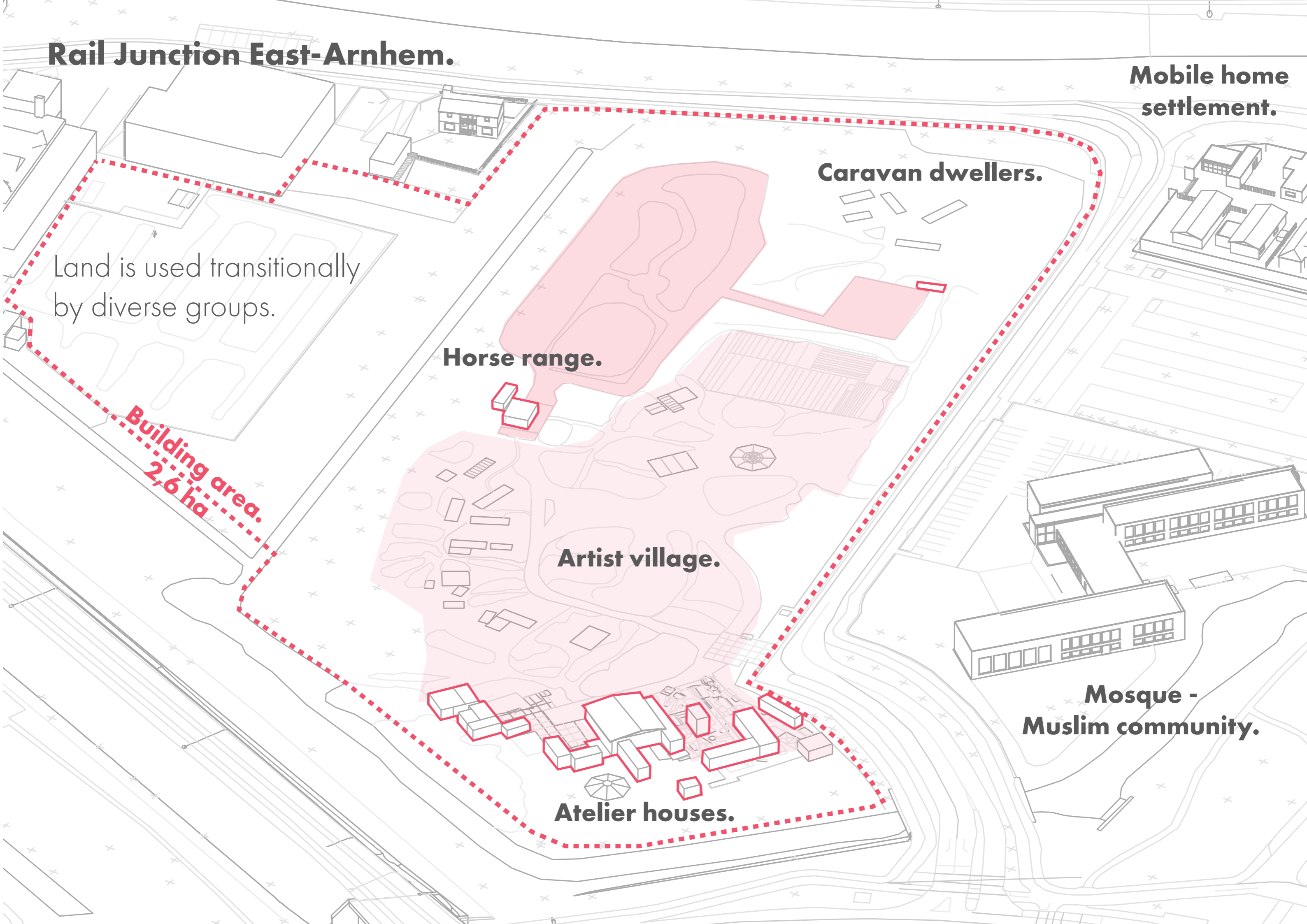
**Artist village.**

**Atelier houses.**

**Mosque -  
Muslim community.**

Land is used transitionally  
by diverse groups.

**Building area.  
2,6 ha**



Buzzing with life.



# How to develop a new neighborhood together with residents and existing communities?



**500  
new residents.**

**2.6 hectar.  
High density  
~150 U/ha.**

## **Methods.**



### **Co-ownership**

empowering  
residents



### **Circular building system.**

enabling  
adaptability



### **Financial model.**

fostering  
circularity

# Development strategy.

Developing land affordably + sustainably for the years to come.

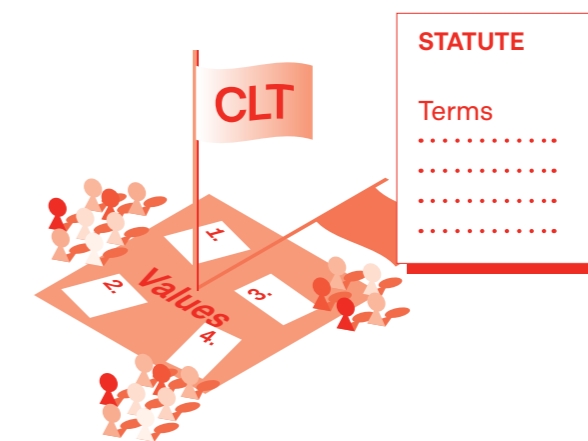


## 1. Municipality forms Community Land Trust (CLT).

Ownership divided between three parties.

## 2. Developing Urban Masterplan

CLT together with urbanists and architects.



## 3. Participative building design

Building communities and architects.

\* CLTs = community-led development on community-owned land.  
Non-profit organization.

# Urban Framework

Shared goals.



Discussions with residents,  
community members,  
public interest groups.



# Connected

Current situation.

City Center  
Arnhem

Eastern  
Residential  
Districts

Low accessibility.

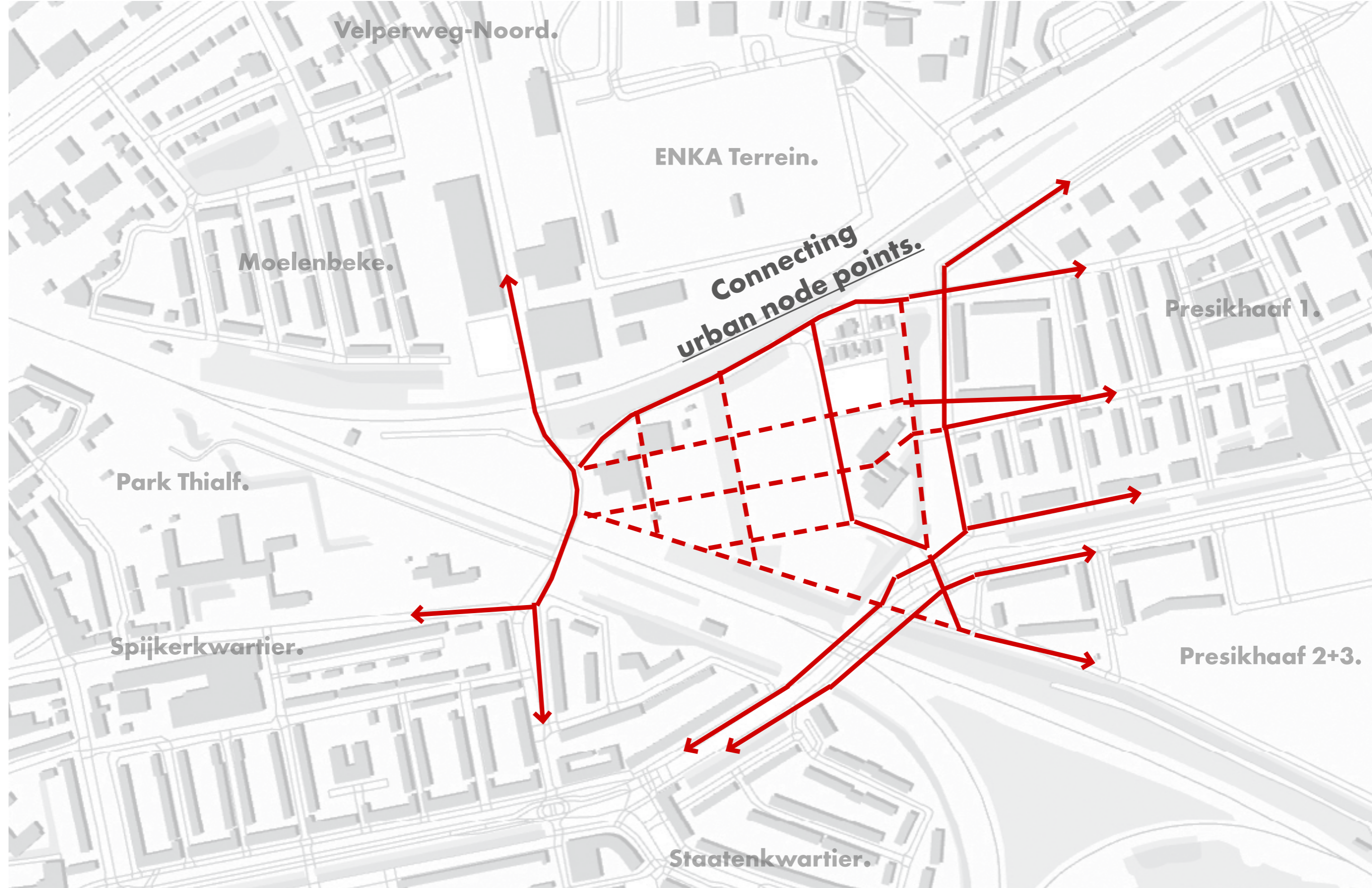
Physical barriers.

Segregation  
in plots.



# Connected

New main axes.



Presikhaaf Station.

Park Presikhaaf.

Rijn-IJssel Delta.

Park Sonsbeek.

City Center.

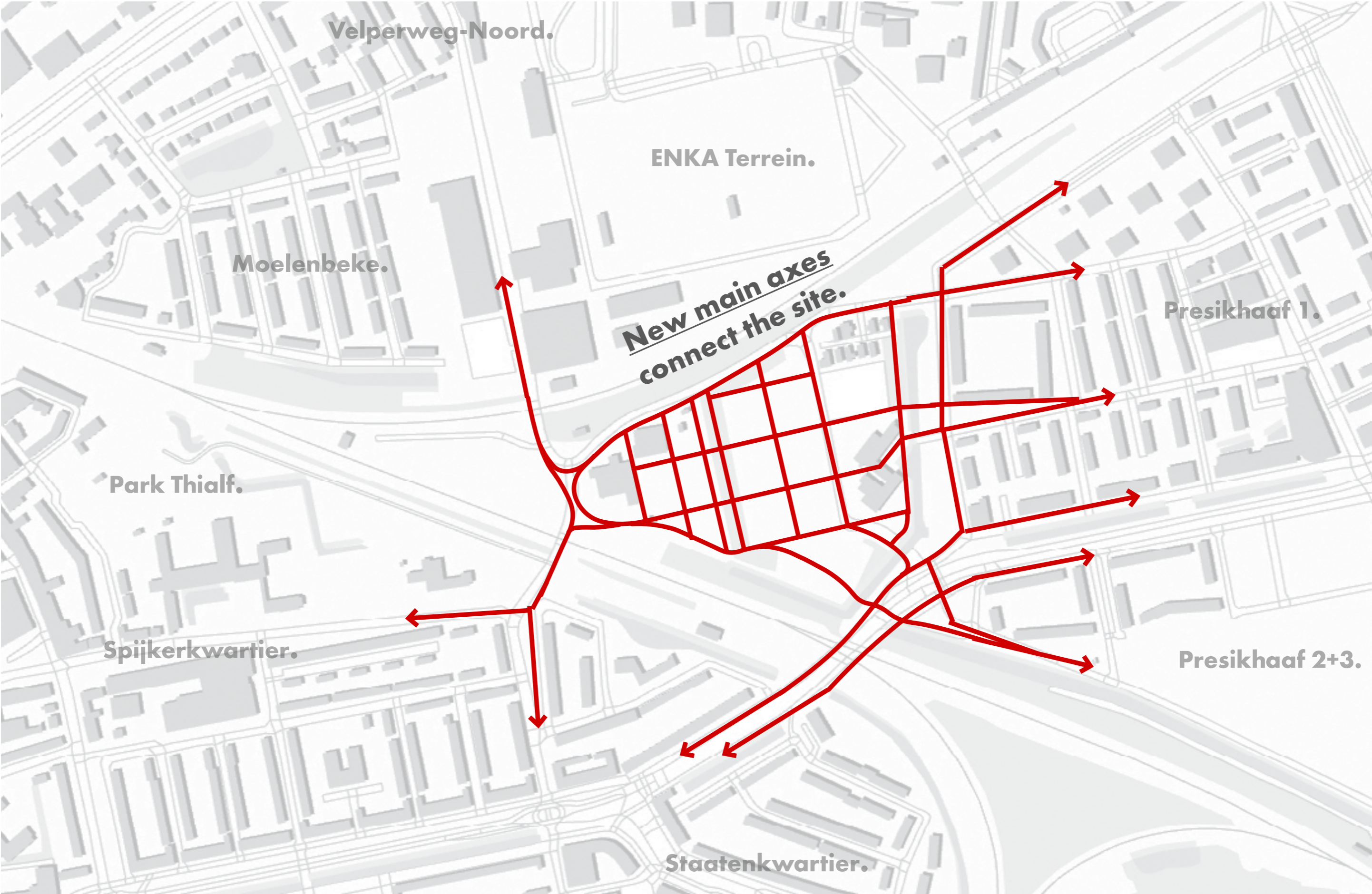
# Connected

New main axes.

Presikhaaf Station.

Park Sonsbeek.

Park Presikhaaf.



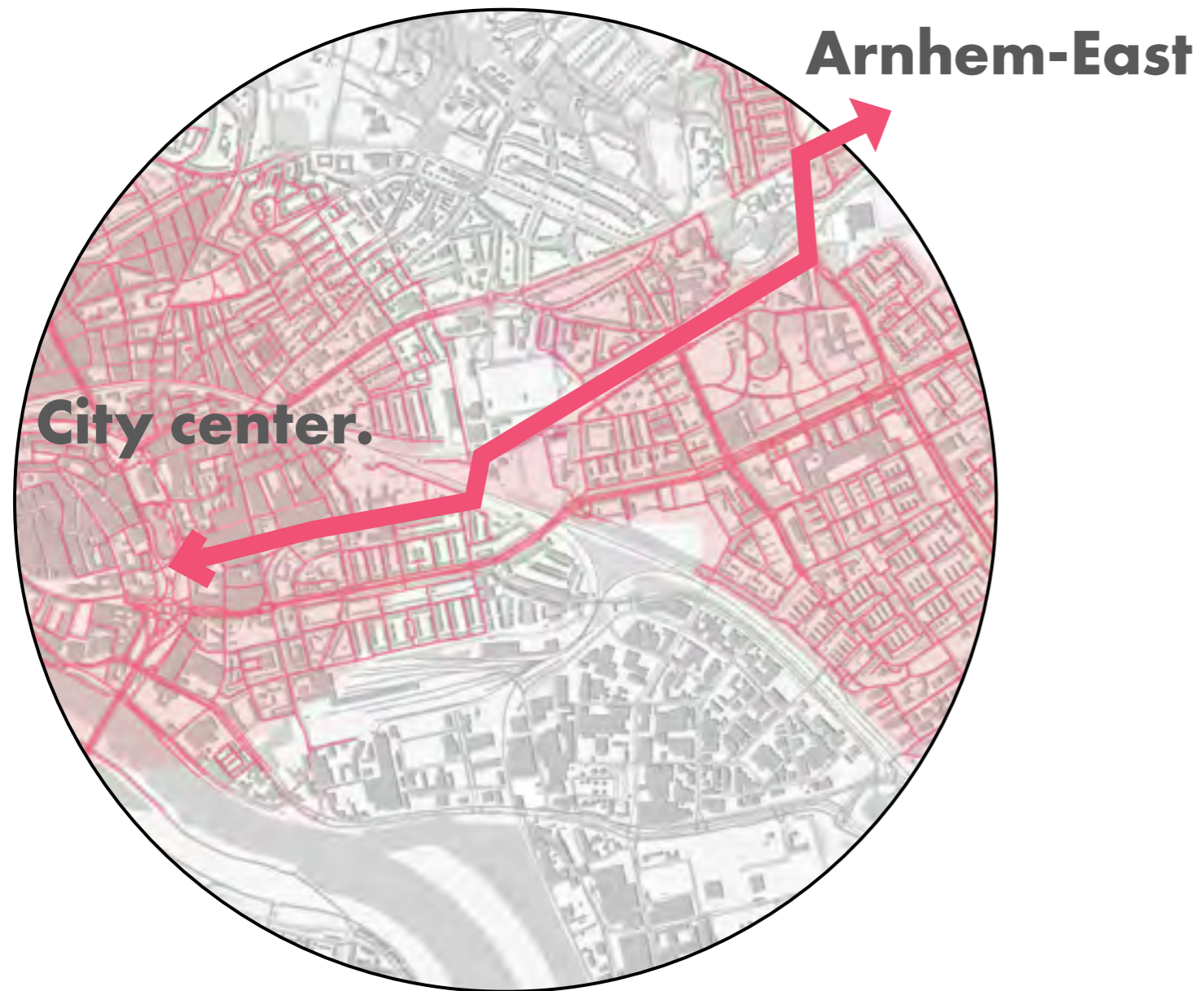
City Center.

Rijn-IJssel Delta.

Het Broek.

# Connected

Bicycle Highway.



**Before.**



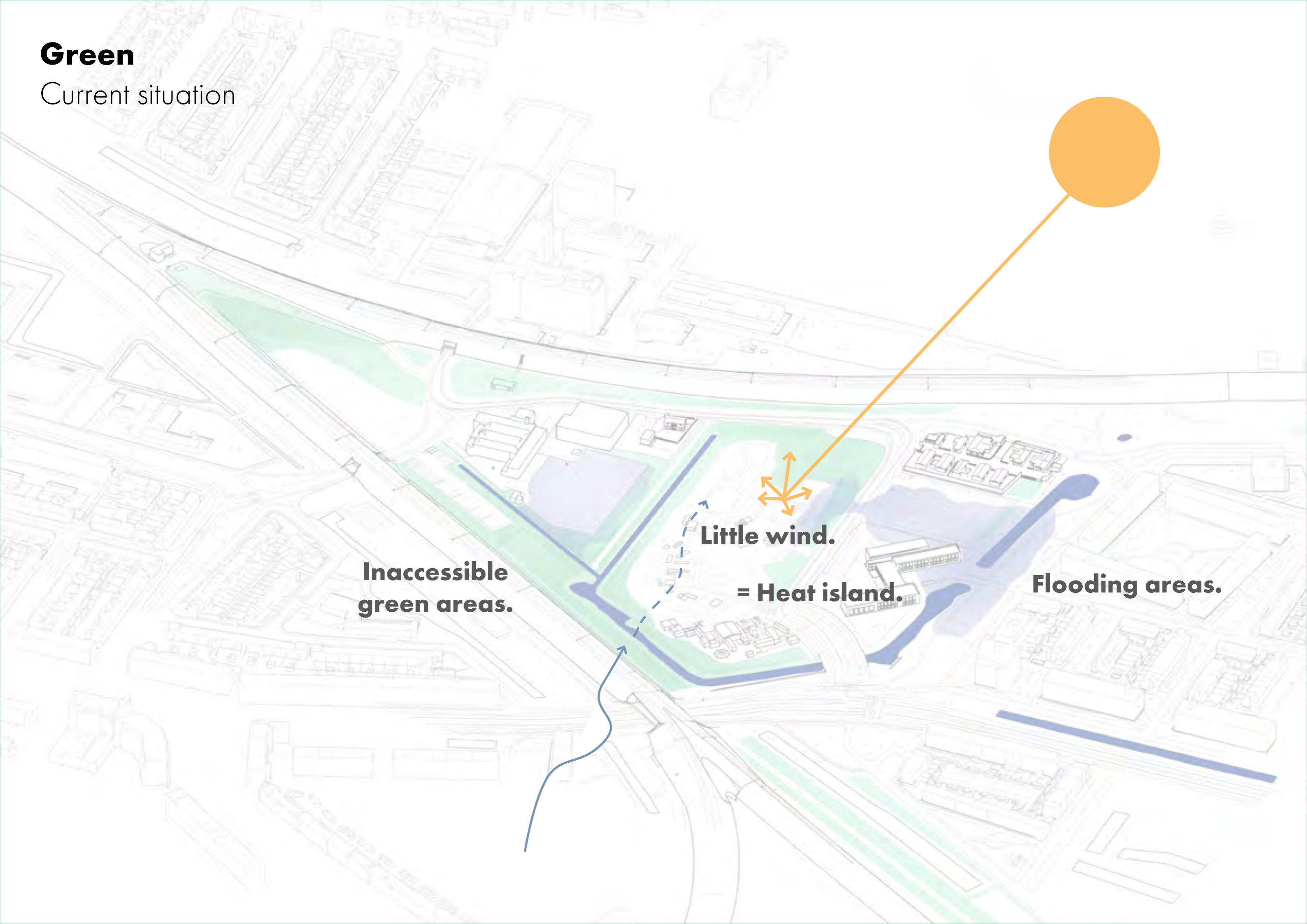
**After.**

# Connected Mobility Hub.



# Green

Current situation



**Inaccessible  
green areas.**

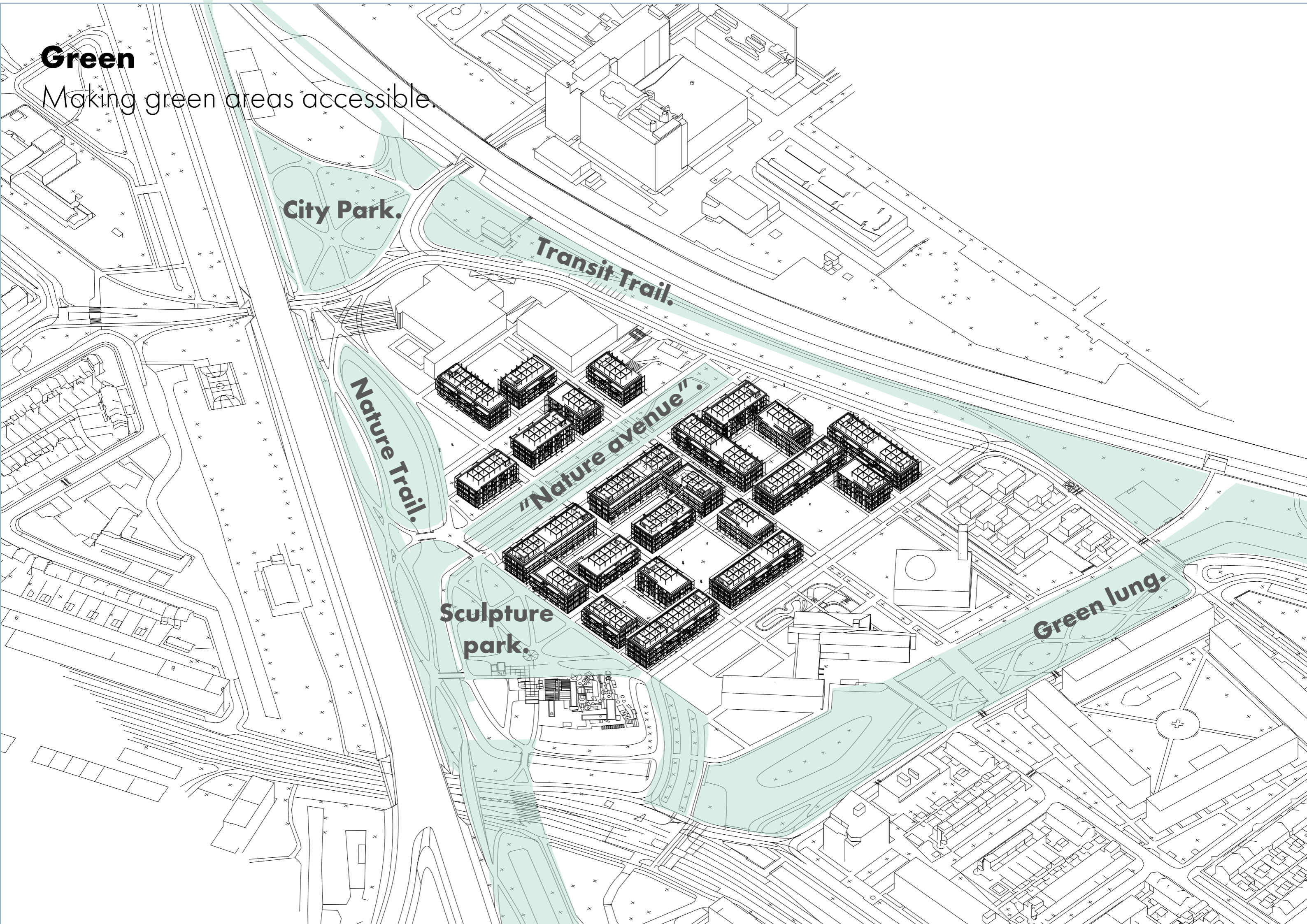
**Little wind.**

**= Heat island.**

**Flooding areas.**

# Green

Making green areas accessible.



City Park.

Transit Trail.

Nature Trail.

"Nature avenue".

Sculpture park.

Green lung.

## **Green** Nature Trail

Connecting Arnhem to  
Rijn-IJssel Trail Network.

**Rijn-IJssel  
Trail Network.**

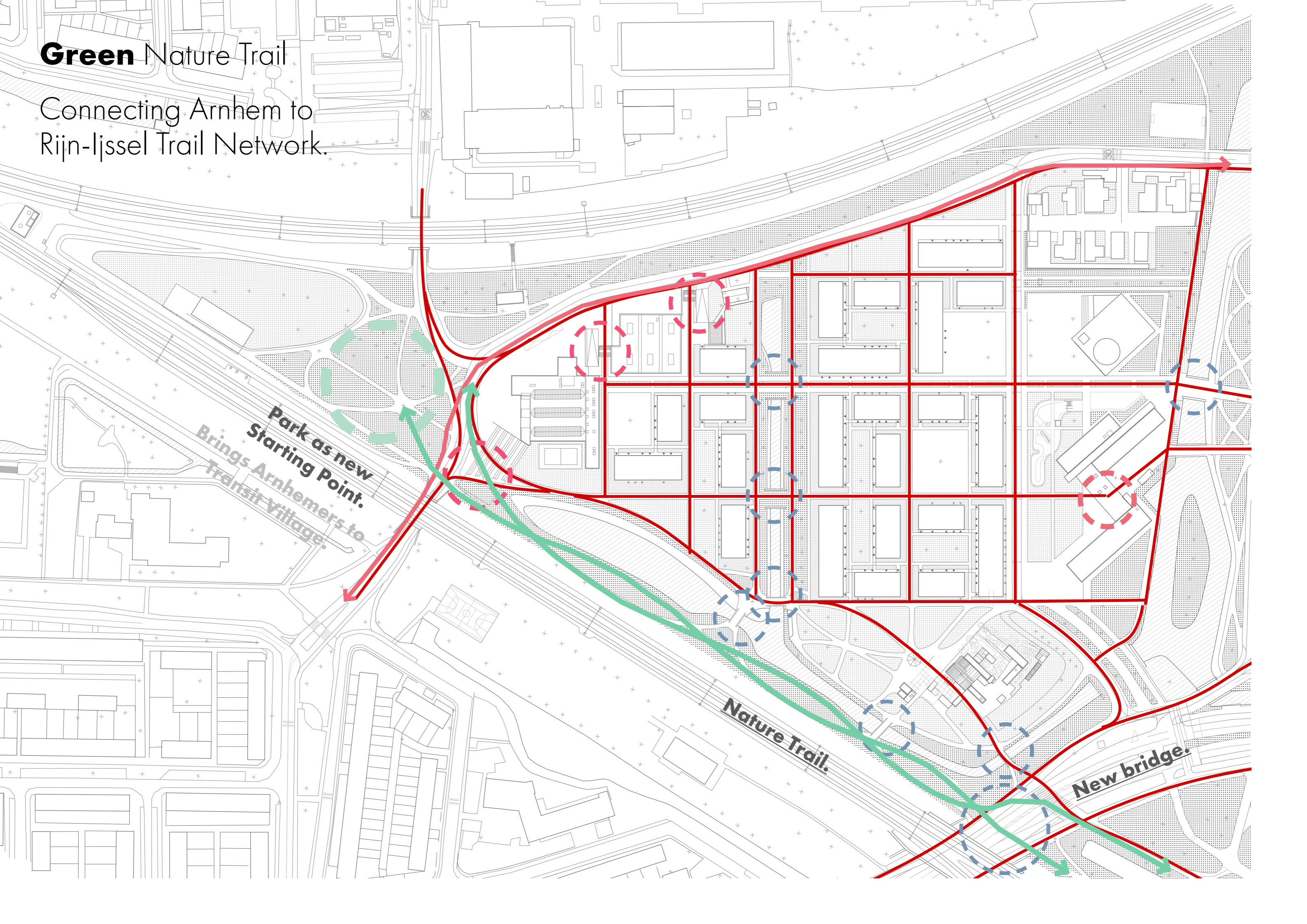
**Starting point currently  
south-east of the site.**

**Rijndelta.**



# Green Nature Trail

Connecting Arnhem to  
Rijn-IJssel Trail Network.



Park as new  
Starting Point.  
Brings Arnhemers to  
Transit Village.

Nature Trail.

New bridge.

# Local

Daily necessities at walking distance.



## Ground Floor Program

- Studio Apartments (1P)
- Small Apartments (2P)
- Medium Apartments (3P)
- Large Apartments (4P)
- X Large Apartments (5P)

- Working
- Gathering

- Hospitality

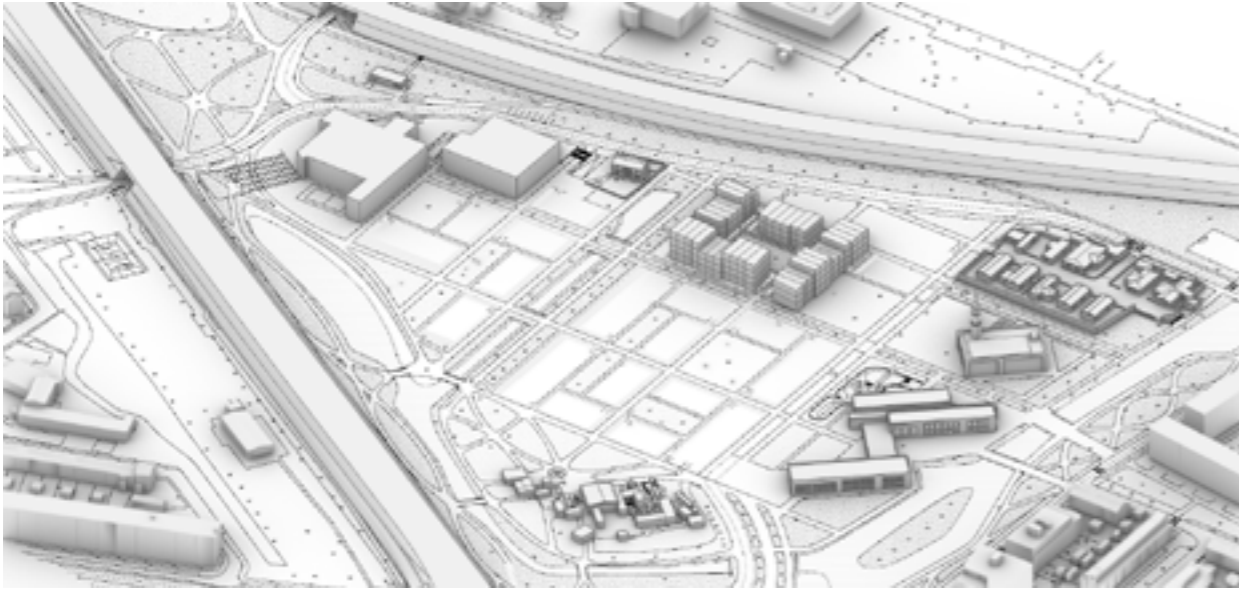
- Neighborhood Economy
- Eating + Drinking
- Culture + Recreation

Scale 1:1000

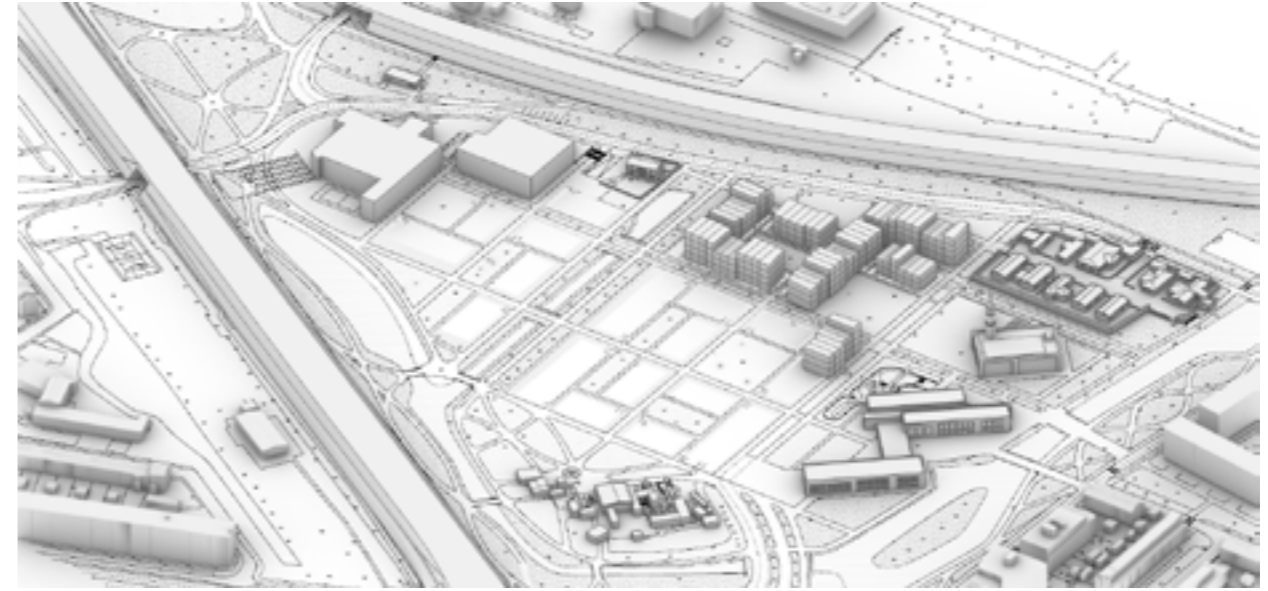


# Gradual development

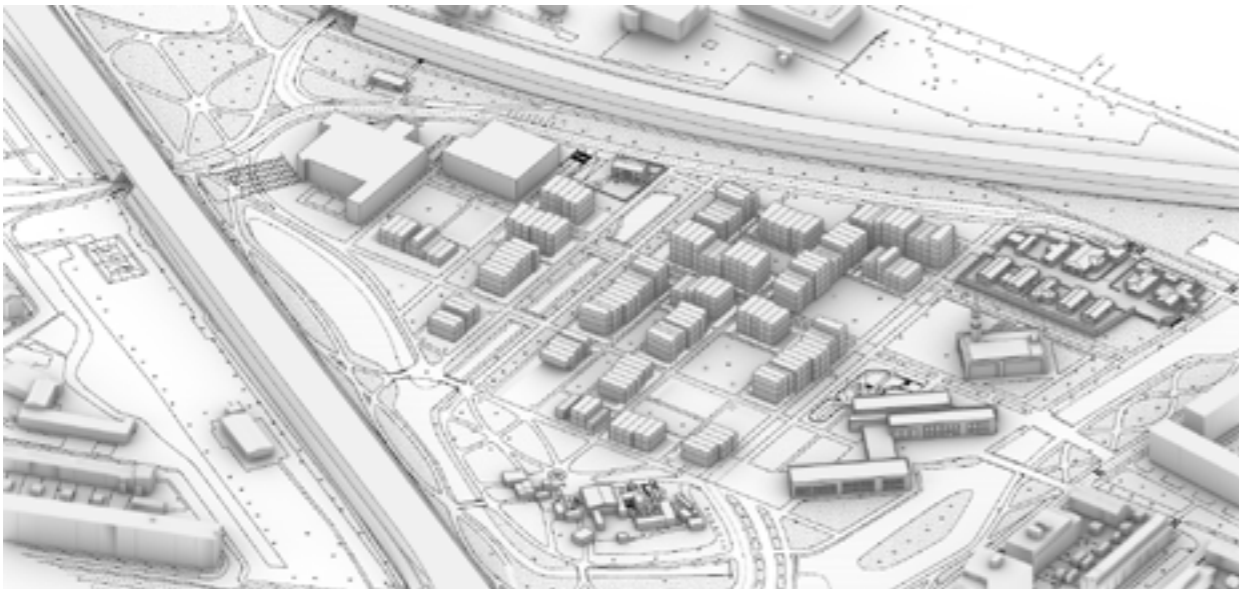
Transit Village is gradually growing to its maximum capacity.



1



2



3

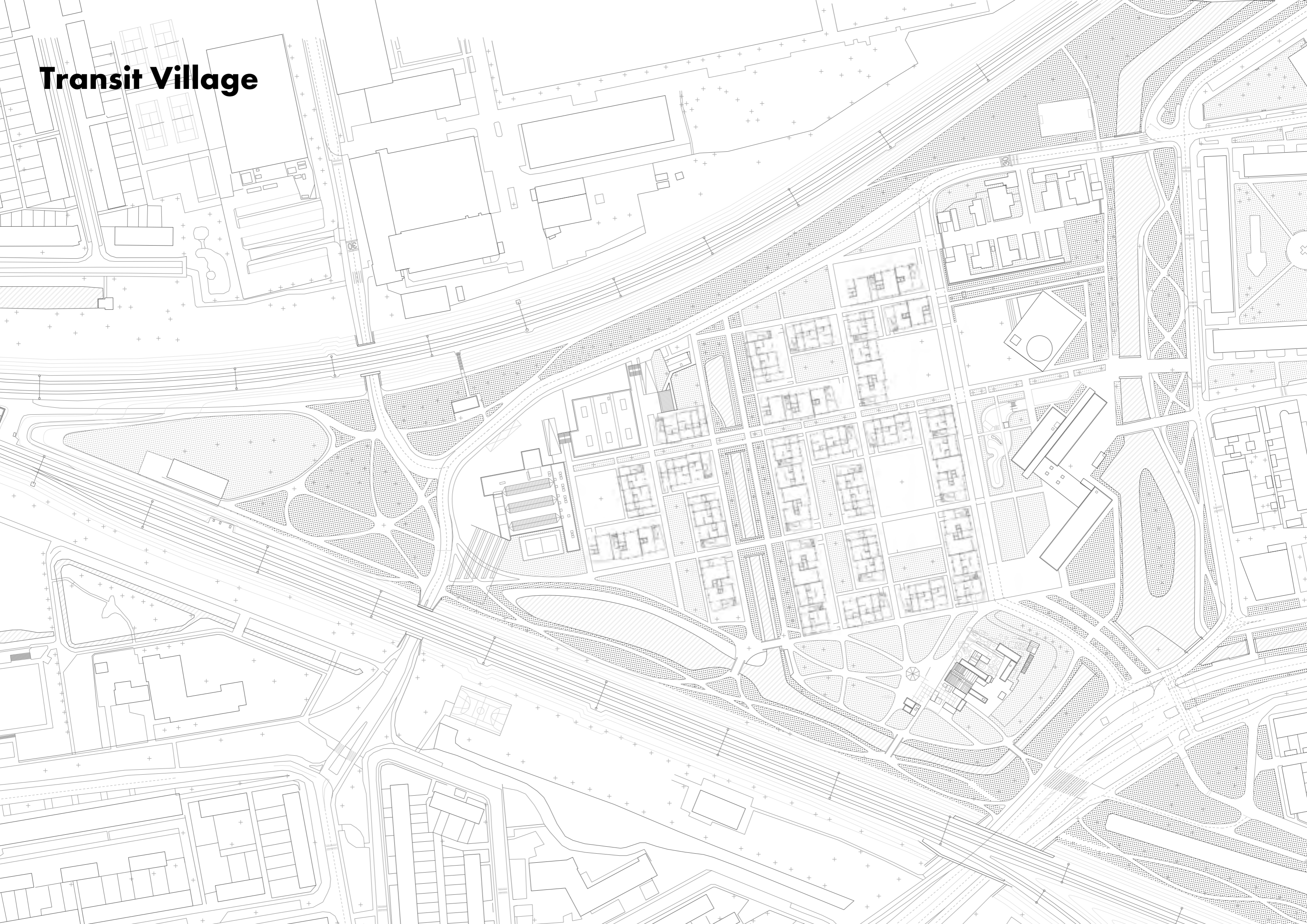


4

# Transit Village



# Transit Village

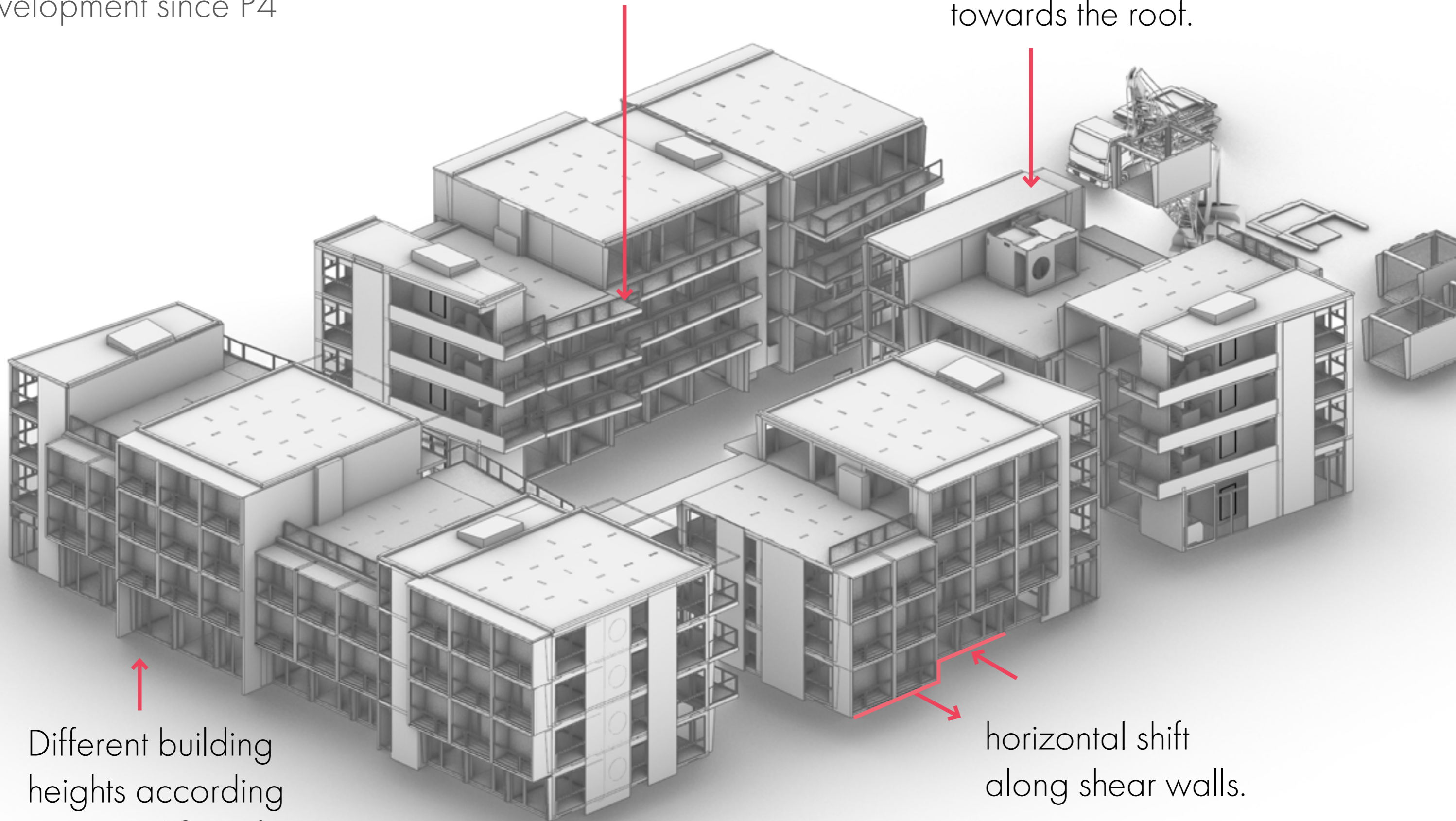


# Transit Village

development since P4

adding angle  
to the arcades.

buildings can grow  
towards the roof.

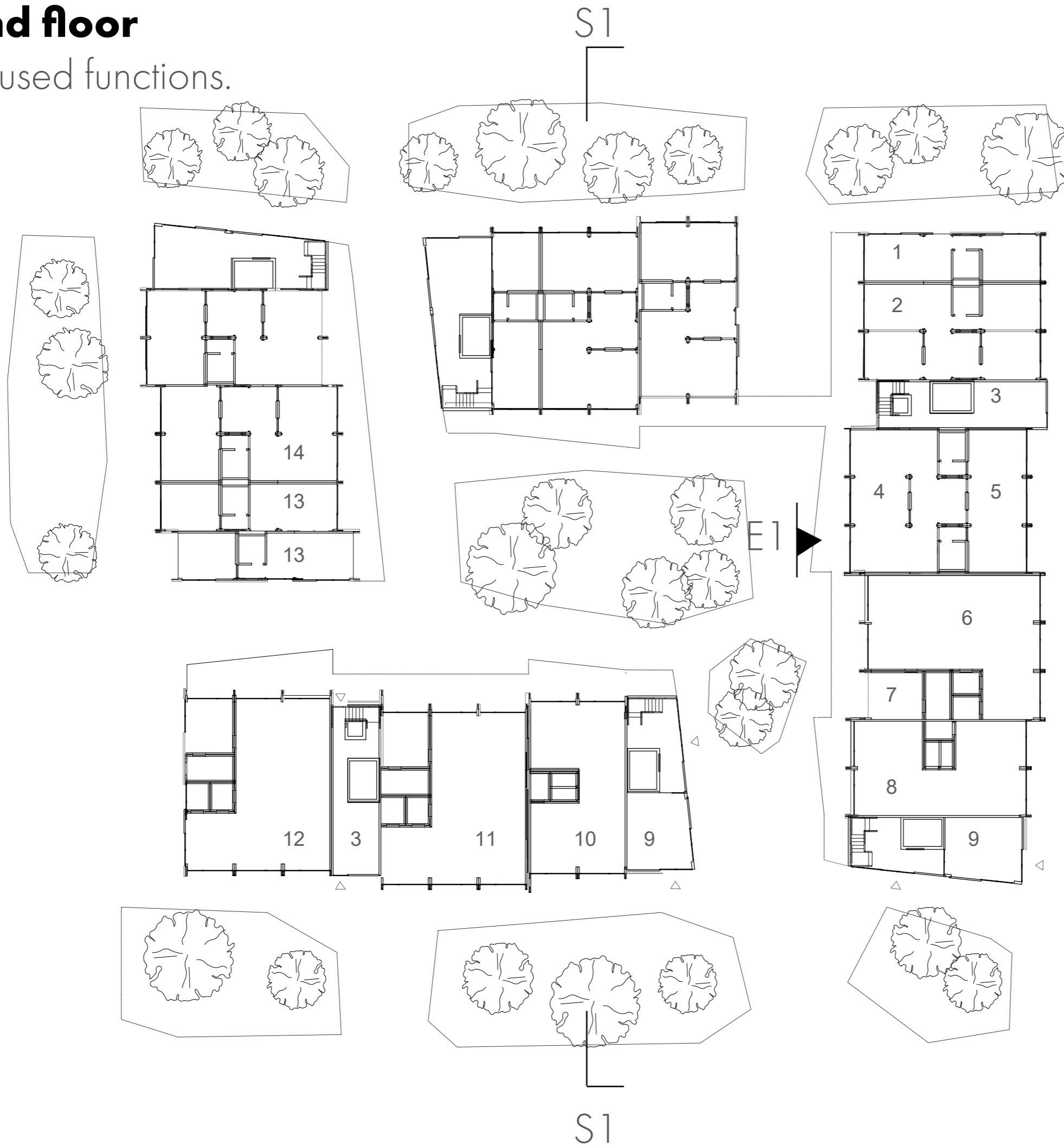


Different building  
heights according  
to ground floor function.

horizontal shift  
along shear walls.

# Ground floor

Mixed-used functions.



1 Single apartment

2 Two person co-living

3 waste room

4 workshop space

5 bicycle storage

6 cafe

7 bakery + storage

8 Bar

9 Waste room

10 drugstore

11 local food restaurant

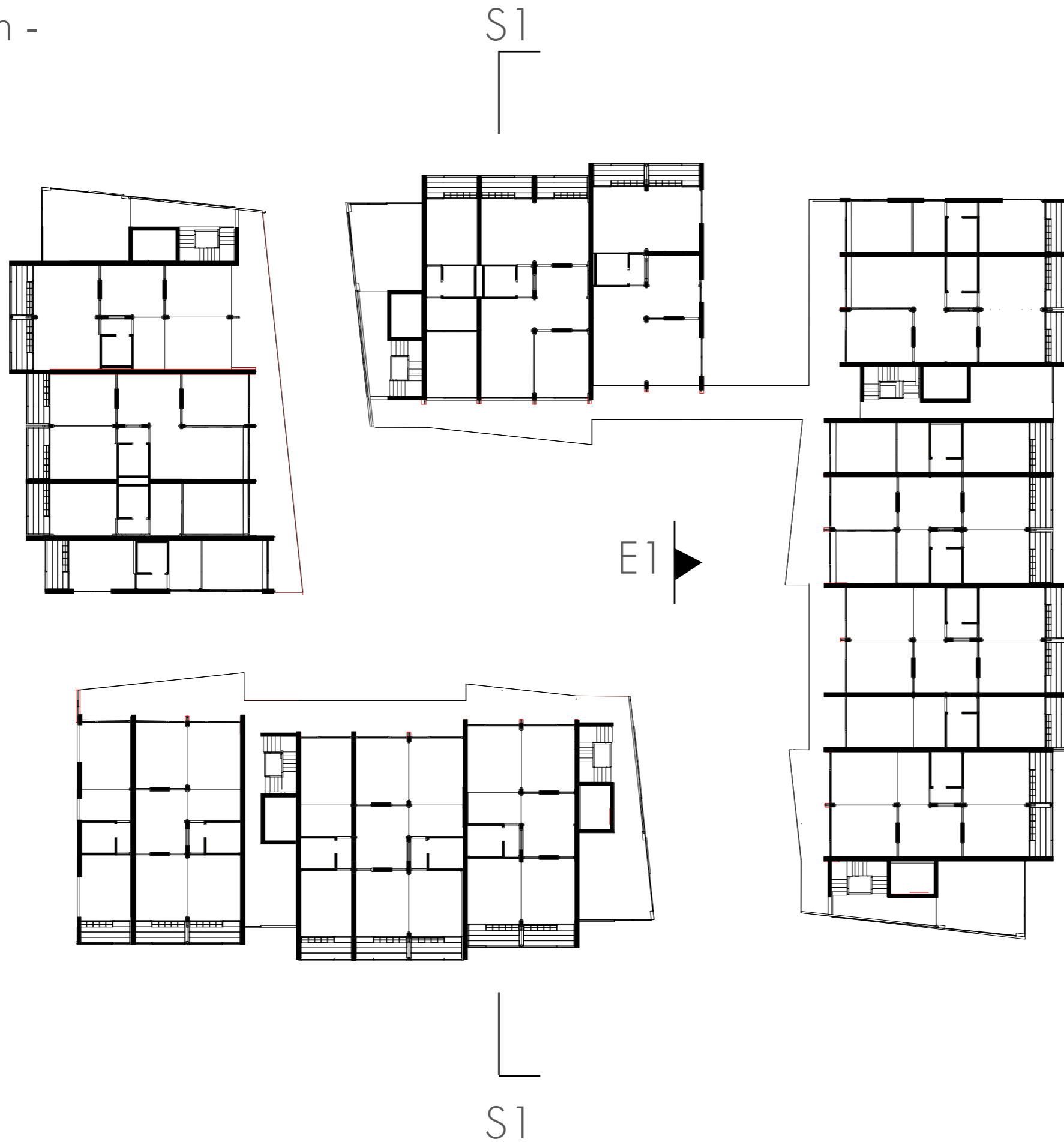
12 household shop

13 single apartment

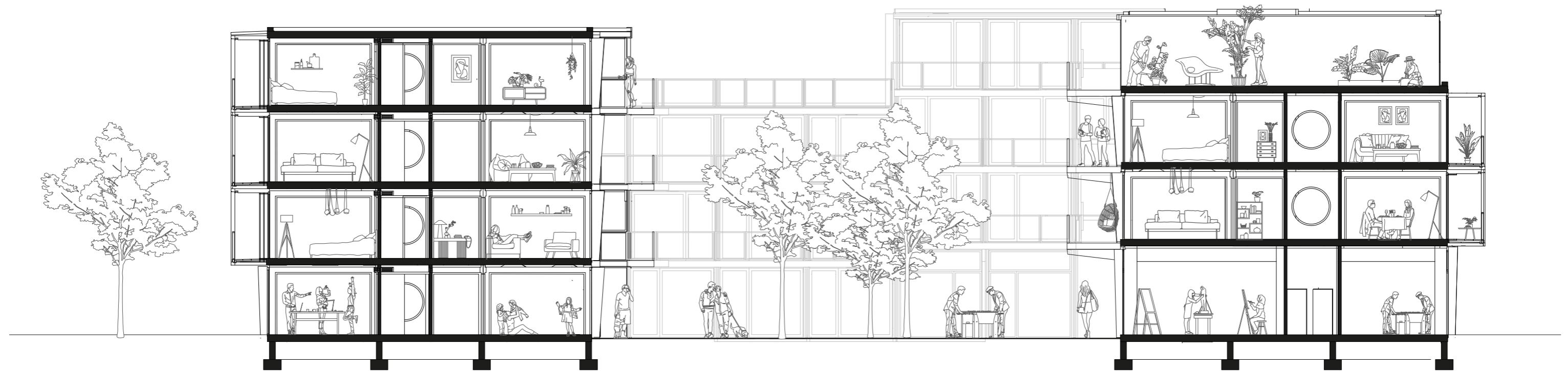
14 3 person family

# 1st - 3rd floor

Typical floorplan -  
apartments.



# Section



Climate  
Summer.



Arcades and balconies  
provide natural shading.

Green roof prevents  
heat island effect

PV panels on the roof

Natural ventilation by  
opening windows

30 °C

24 °C.

24 °C.

CO2 sensor  
regulates  
vent. systems

Adiabatic cooling 24 °C.

24 °C.

Mixed  
ventilation  
Type C/D

24 °C.

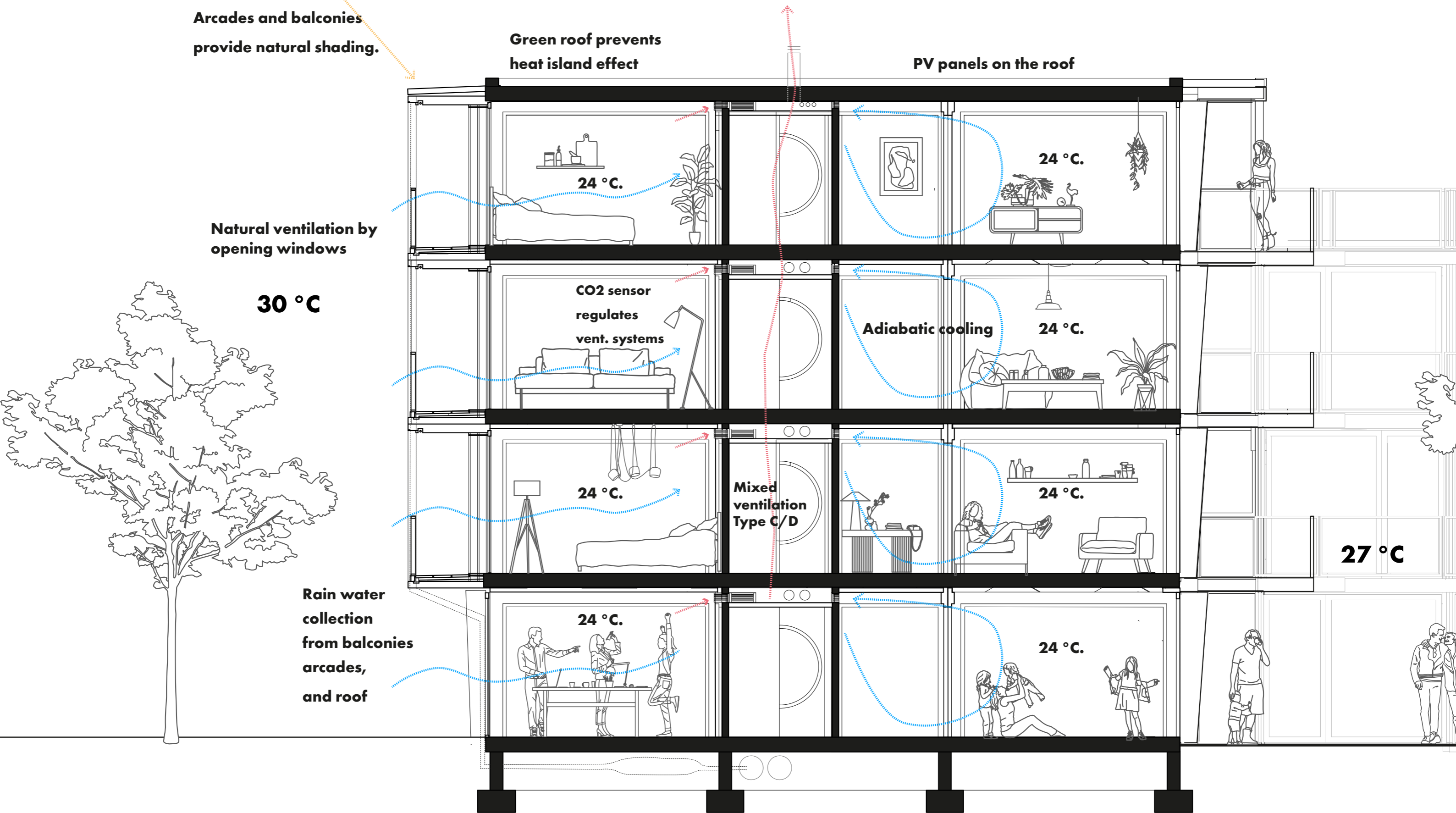
27 °C

Rain water  
collection  
from balconies  
arcades,  
and roof

24 °C.

24 °C.

Grey  
water harvesting.





Elevation



E1

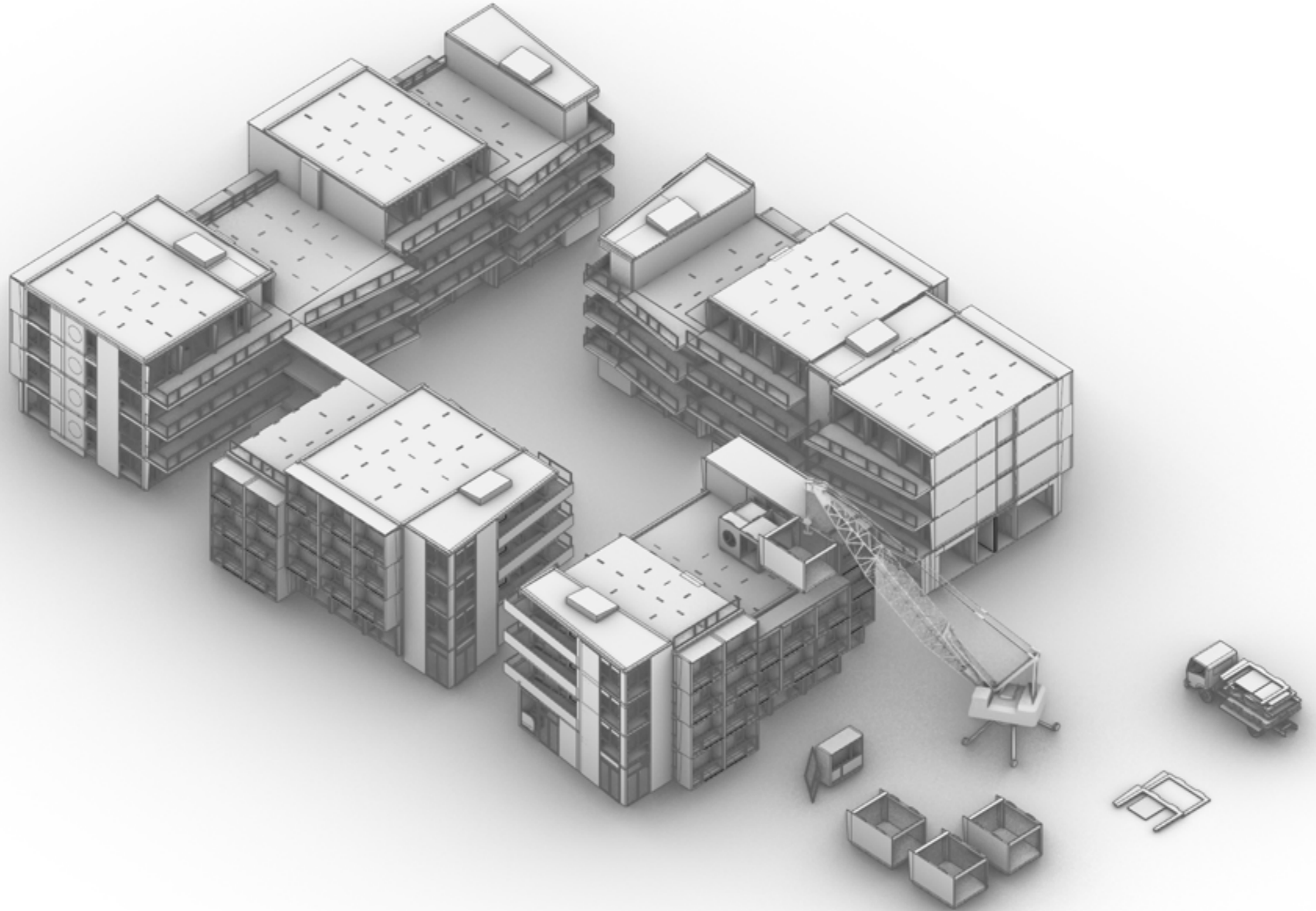
# Circular building system

**Fast.**

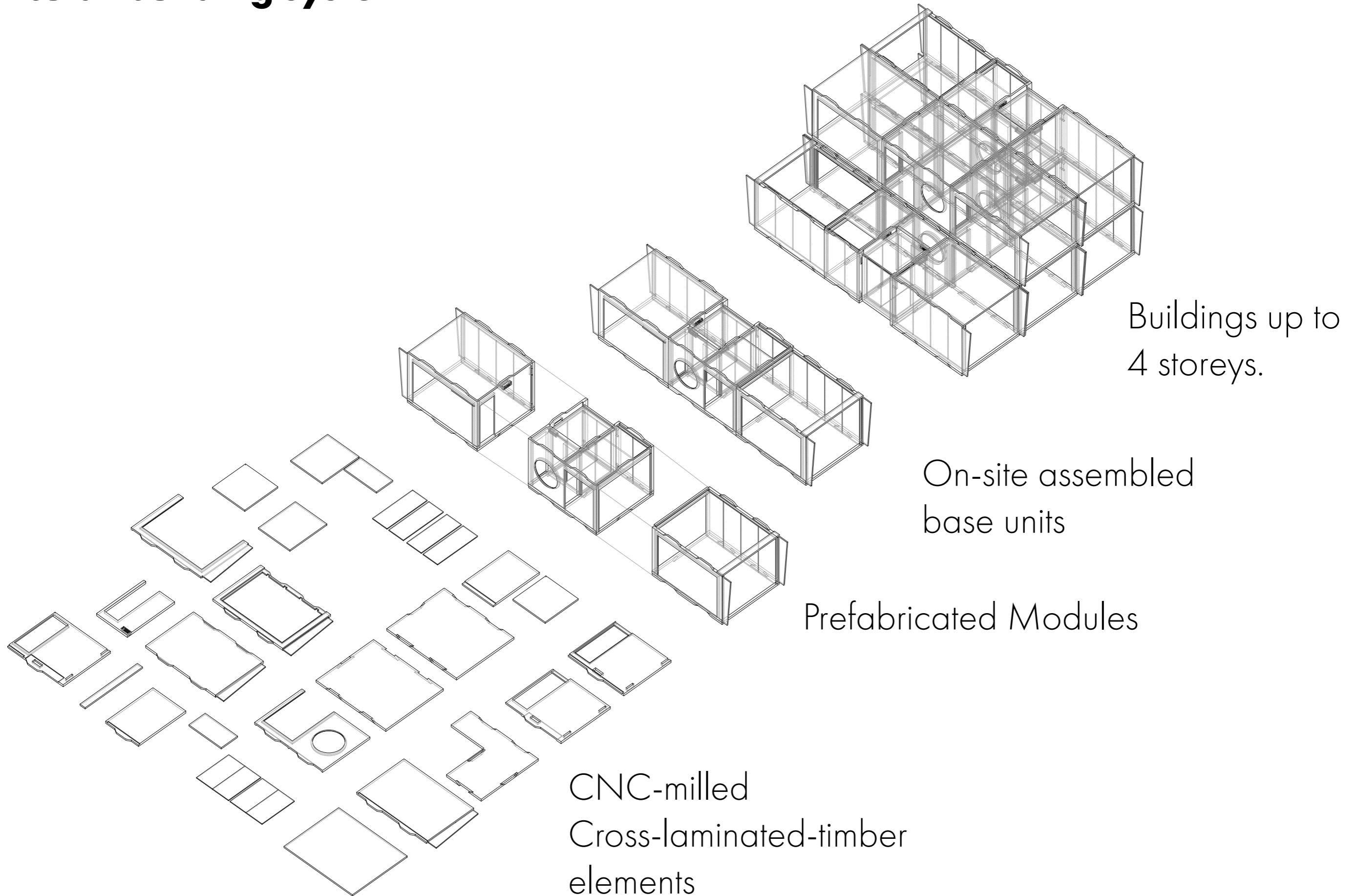
**Scalable.**

**Flexible.**

**Customizable.**

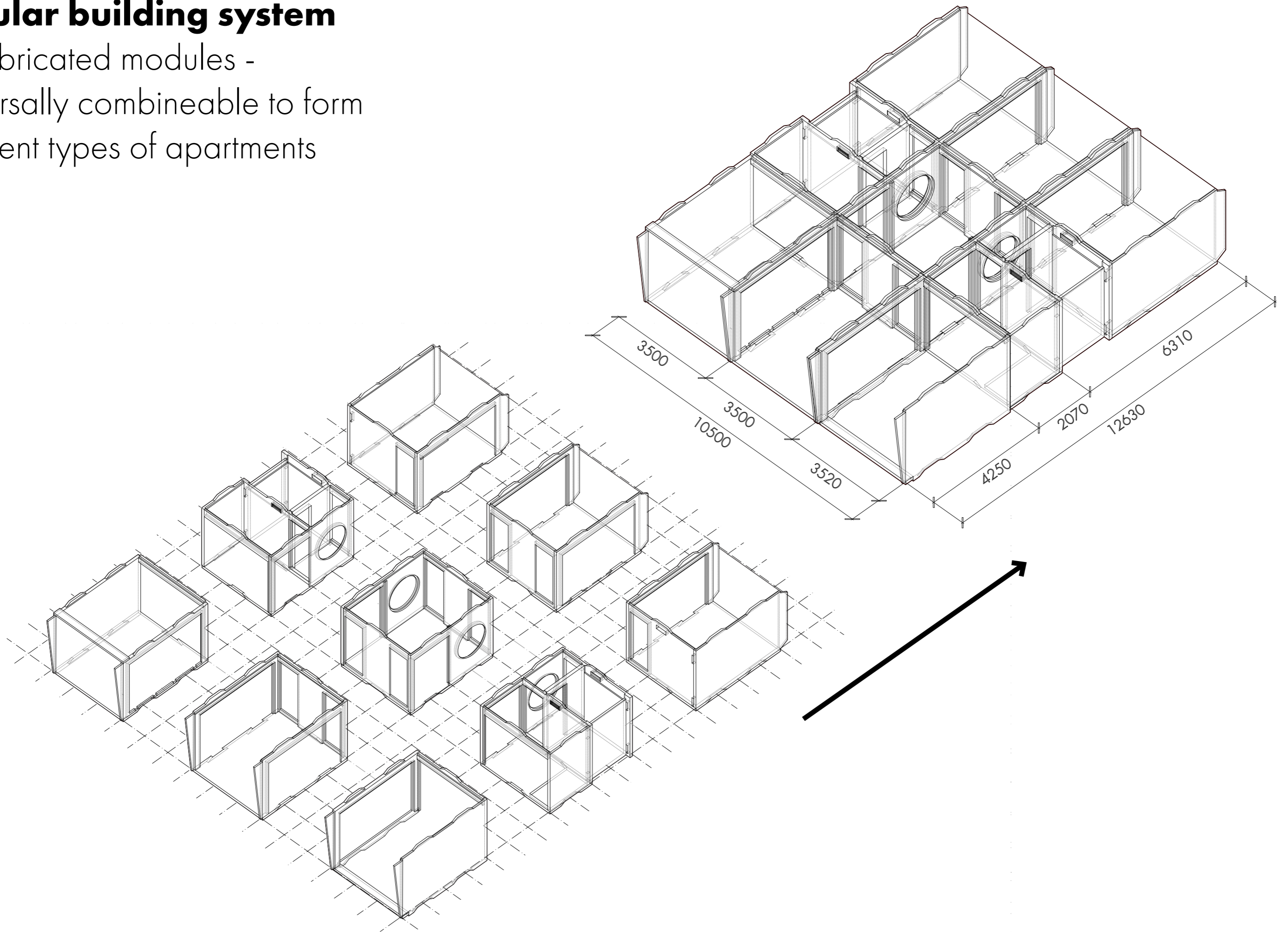


# Circular building system



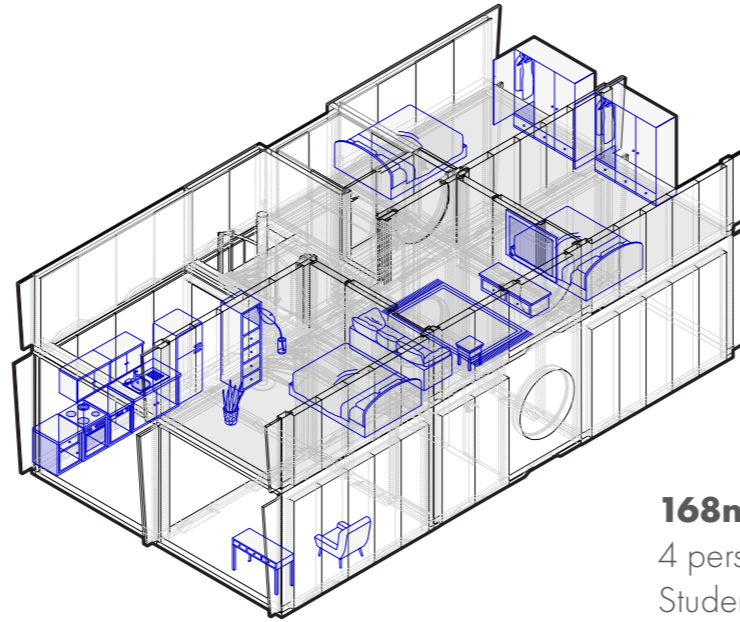
# Circular building system

Prefabricated modules -  
universally combineable to form  
different types of apartments



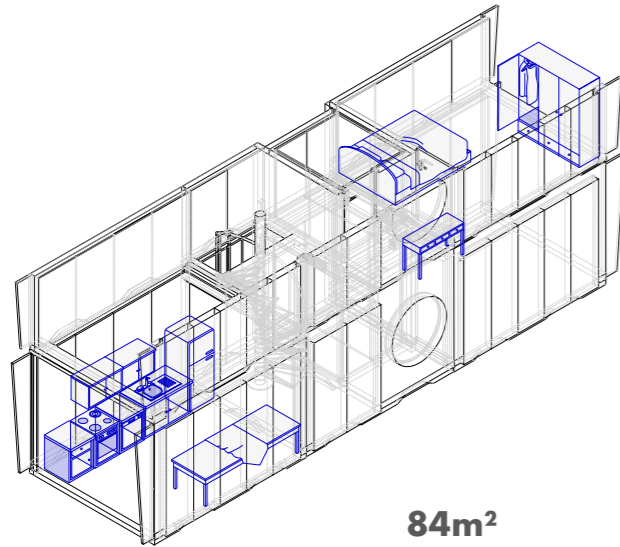
# Flexible

Apartment types.



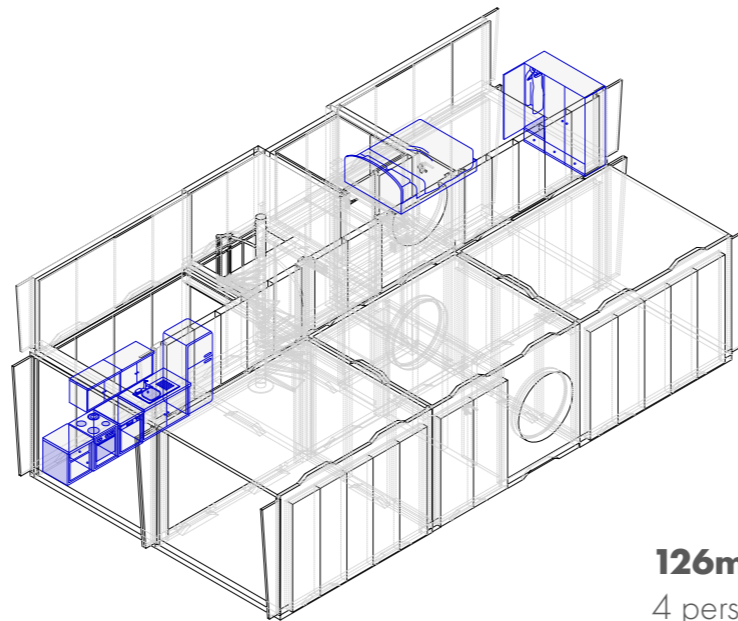
**168m²**

4 person  
Student co-living



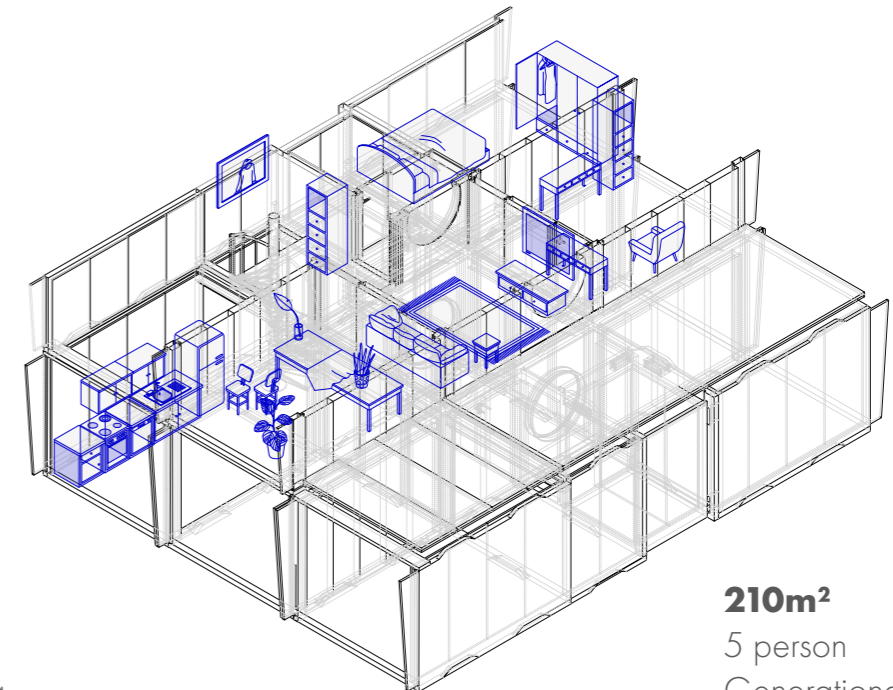
**84m²**

2 person  
Couple



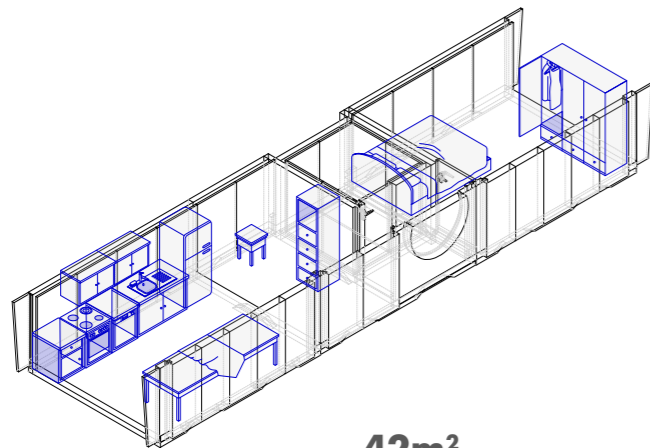
**126m²**

4 person  
Student co-living



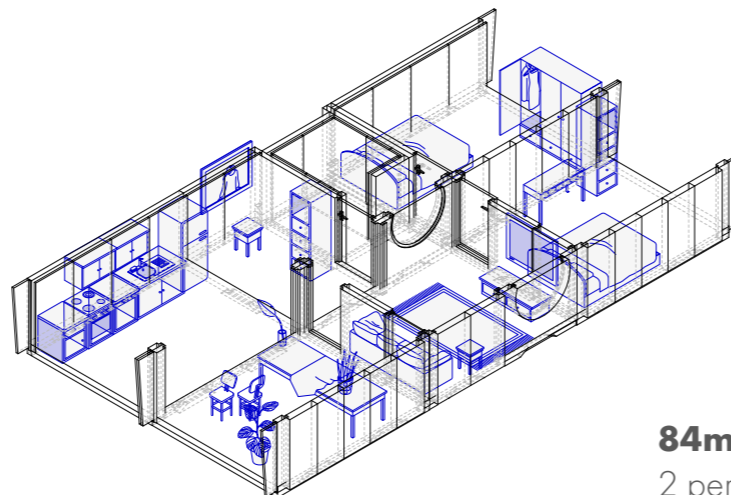
**210m²**

5 person  
Generational living



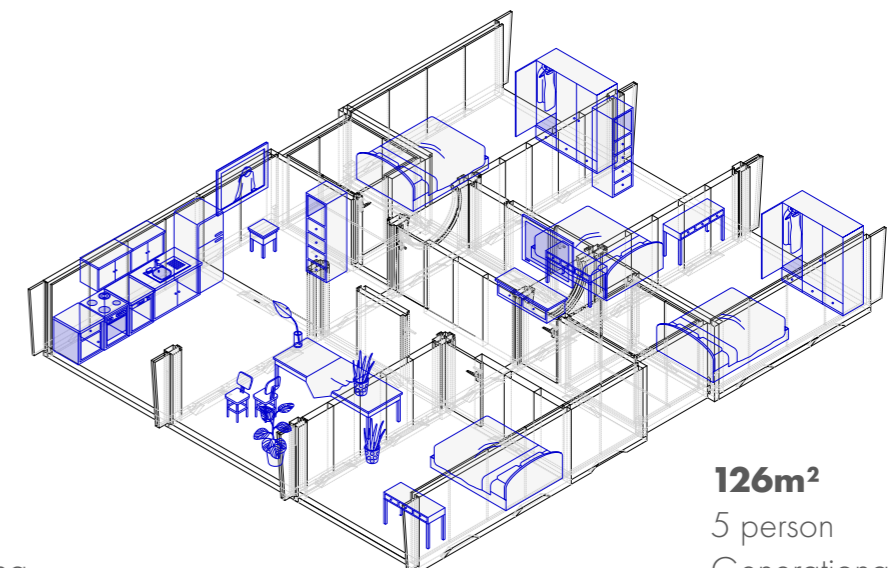
**42m²**

1 person  
Single



**84m²**

2 person  
Generational living

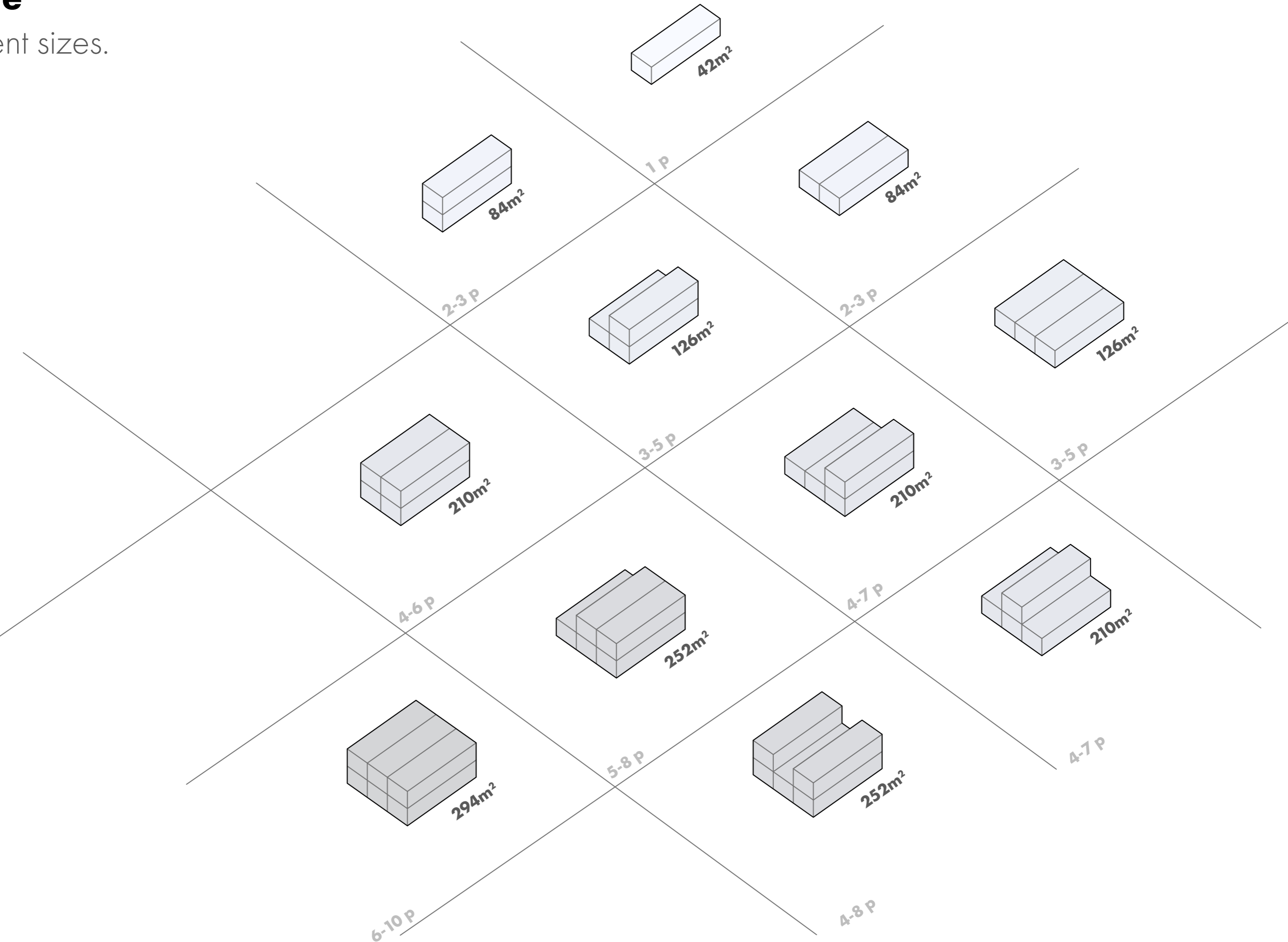


**126m²**

5 person  
Generational living

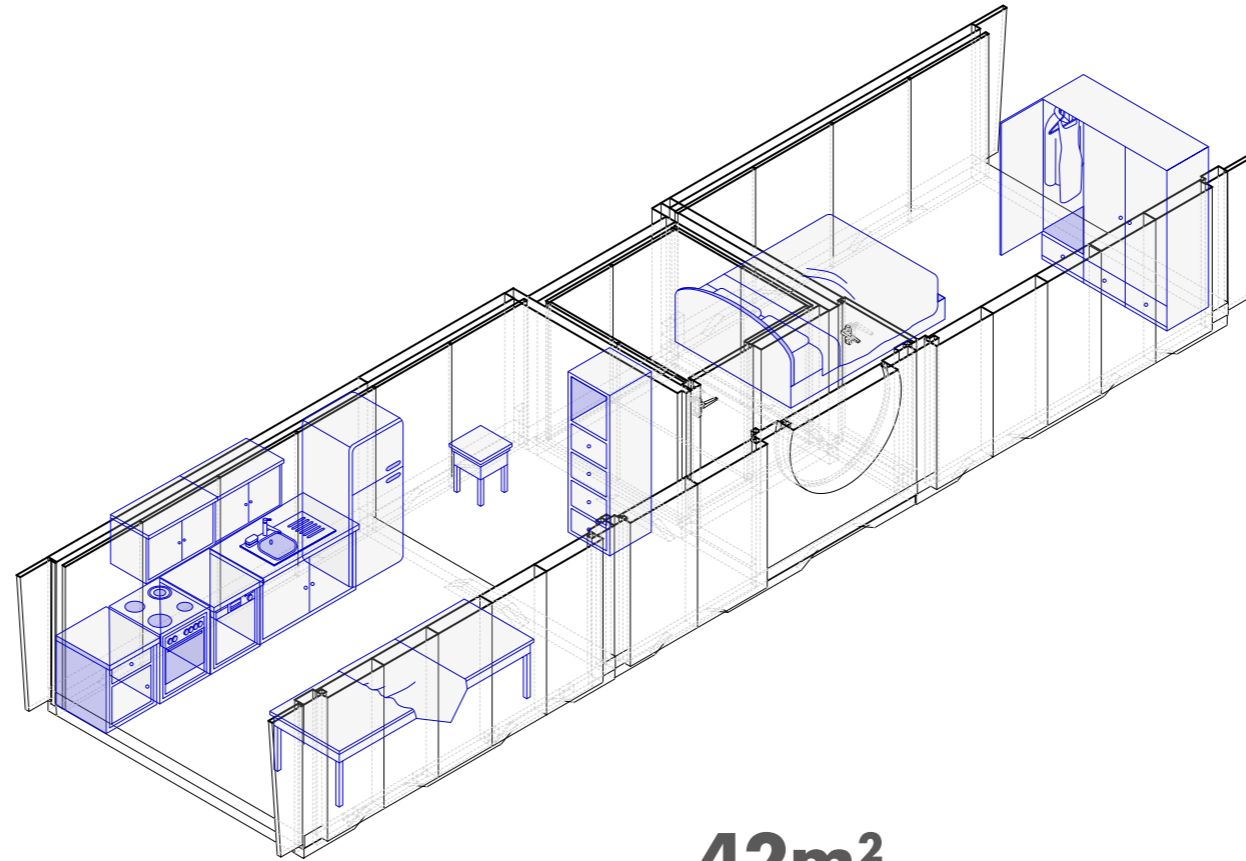
# Flexible

Apartment sizes.



# Flexible

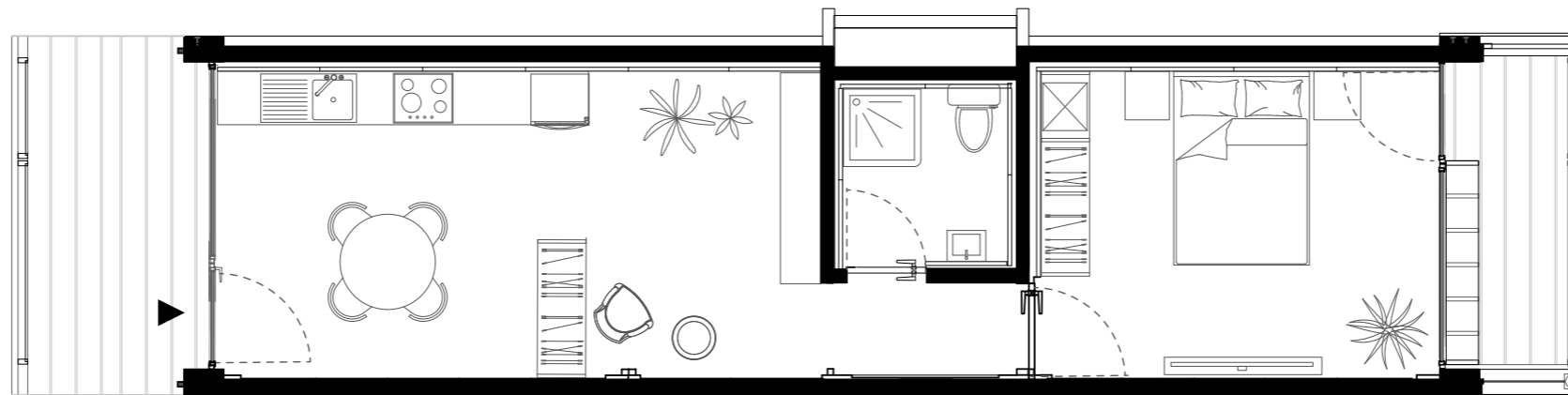
Single unit apartment.



**42m<sup>2</sup>**

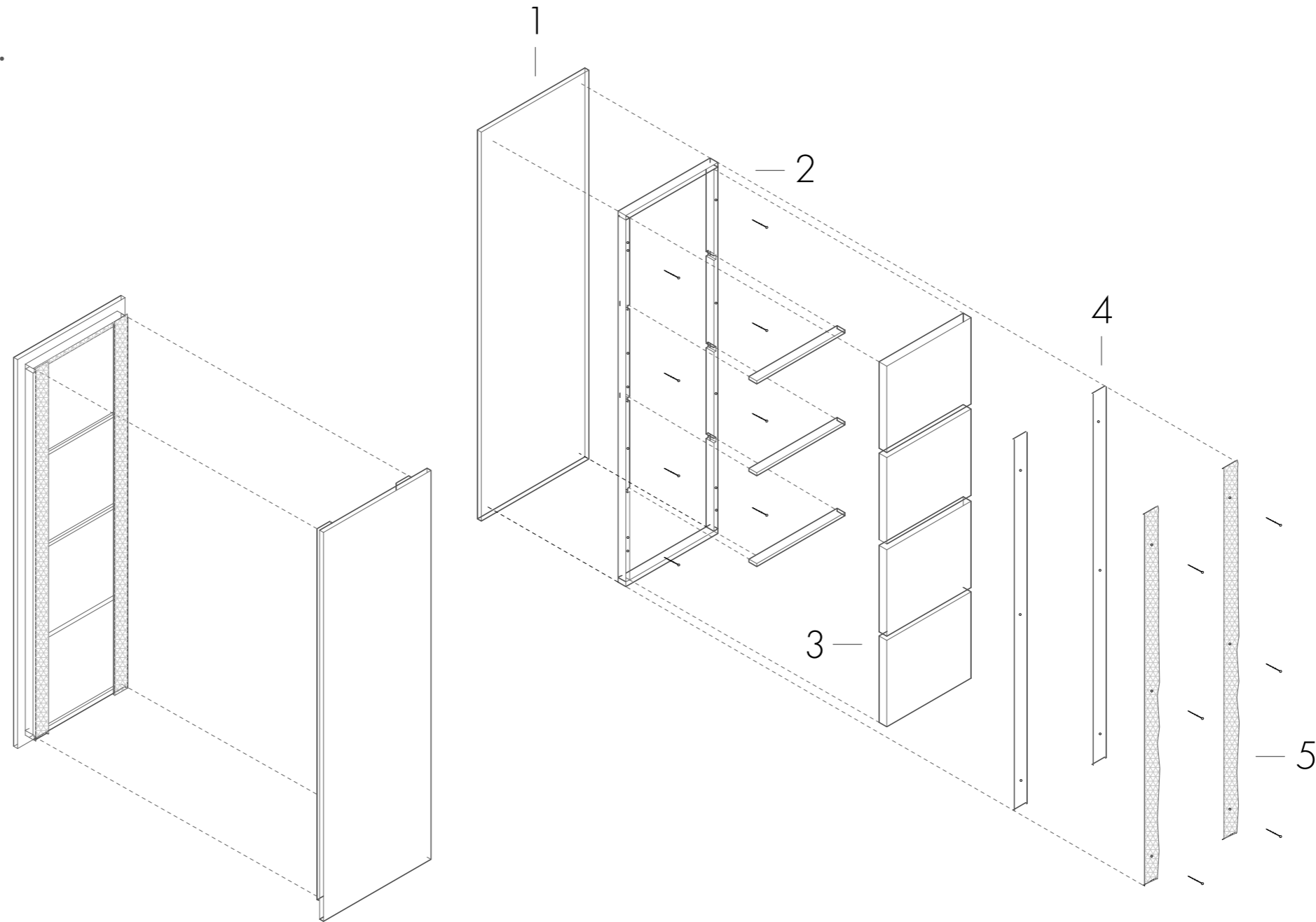
1 person

Single



# Flexible

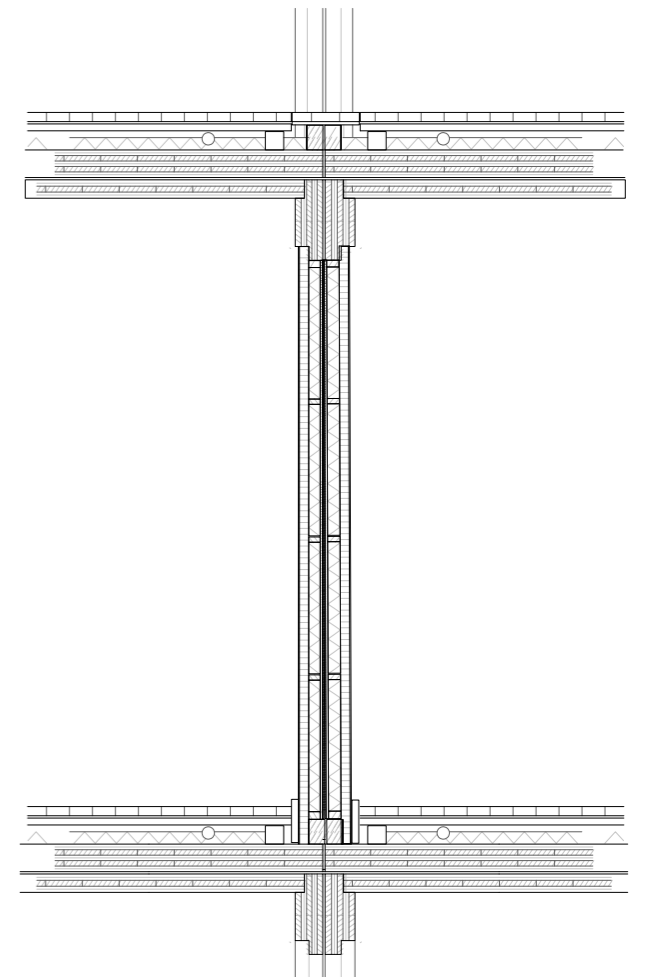
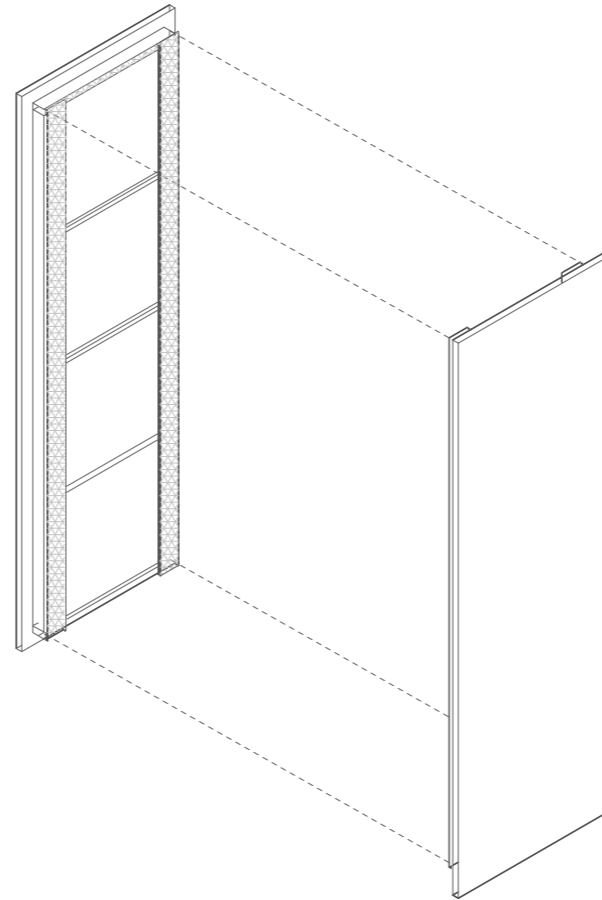
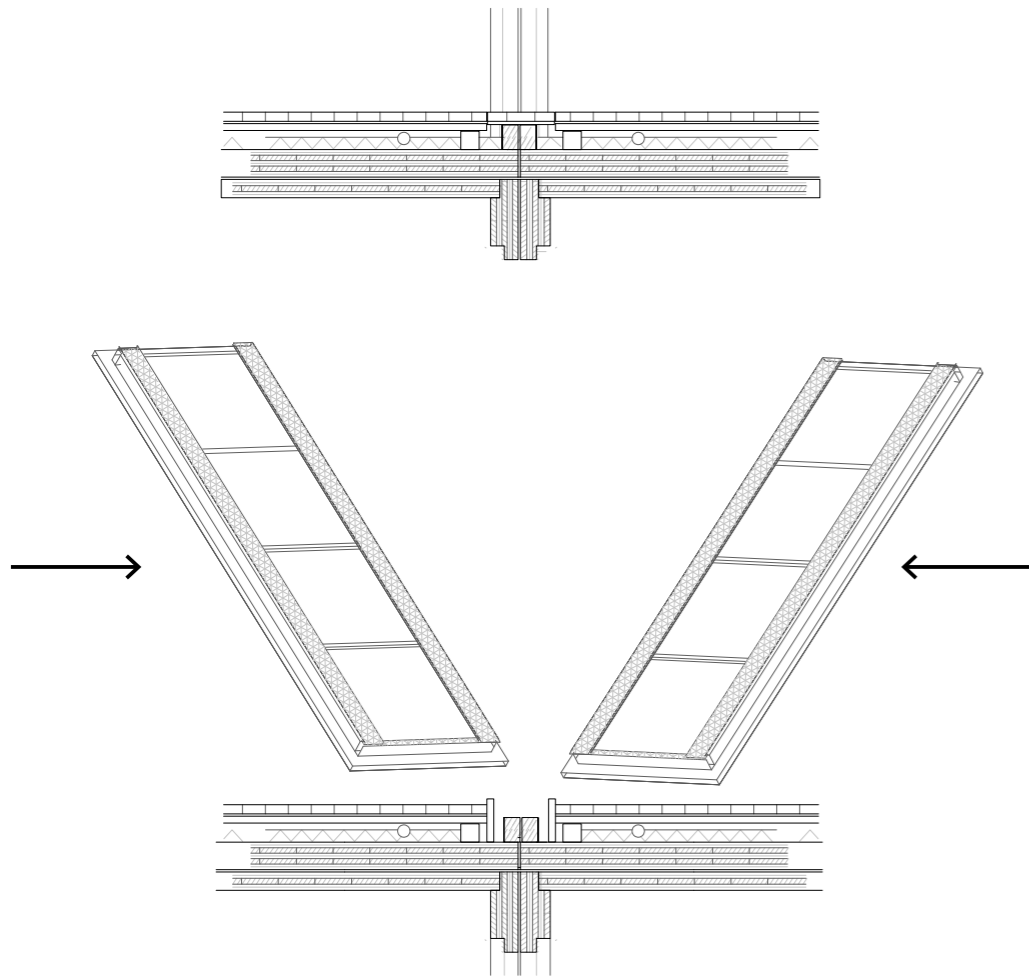
Interior wall assembly.



- 1 painted osb panel 2600x942.5x30mm
- 2 screw-mounted frame, 50x30mm primary battens, 50x20mm secondary battens
- 3 wood-wool insulation boards 650x590x50mm
- 4 fixture boards 10mm
- 5 velcro strips for extra stability + remountability

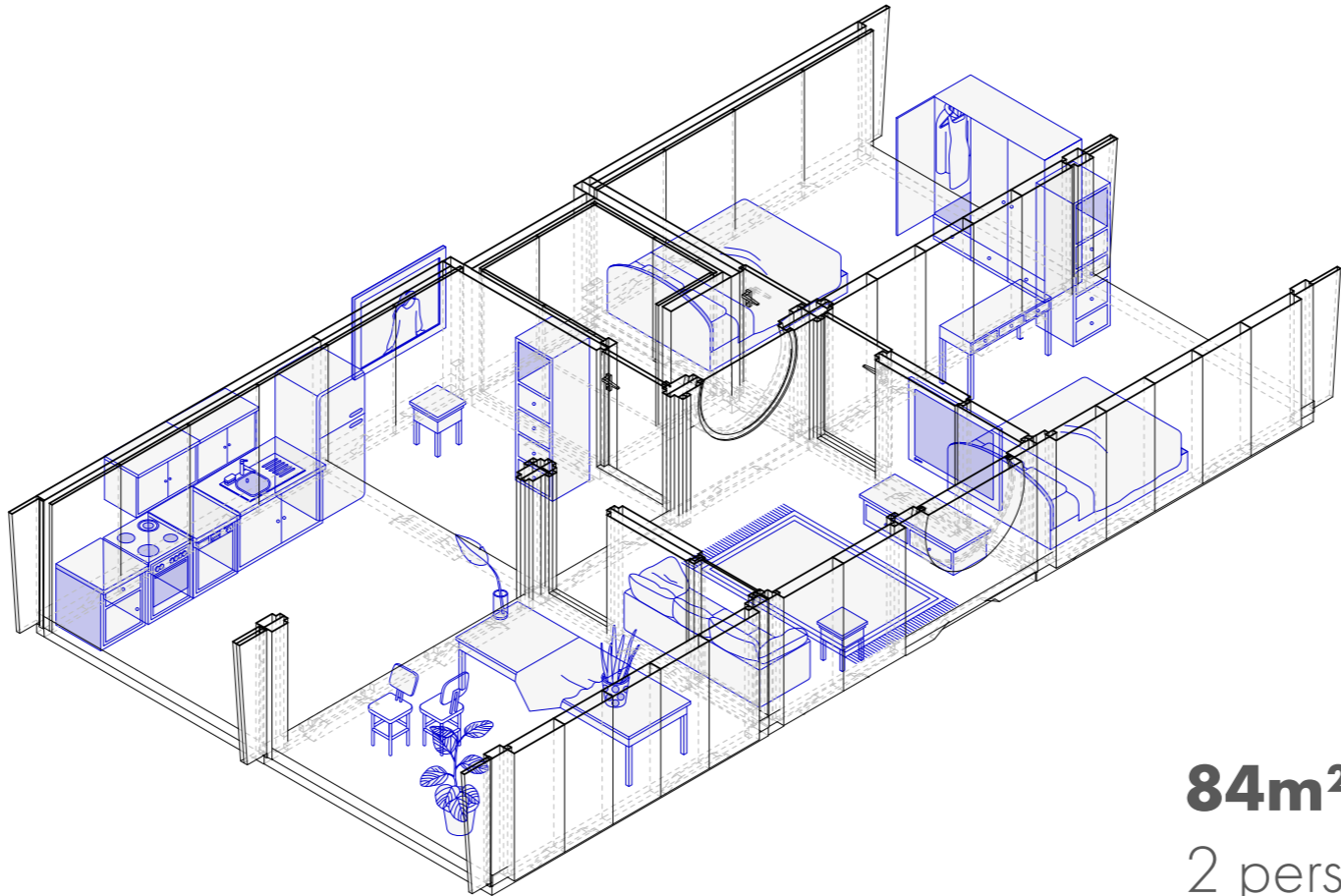
# Flexible

Interior wall assembly.  
Allows residents to flexibly  
re-arrange spaces.

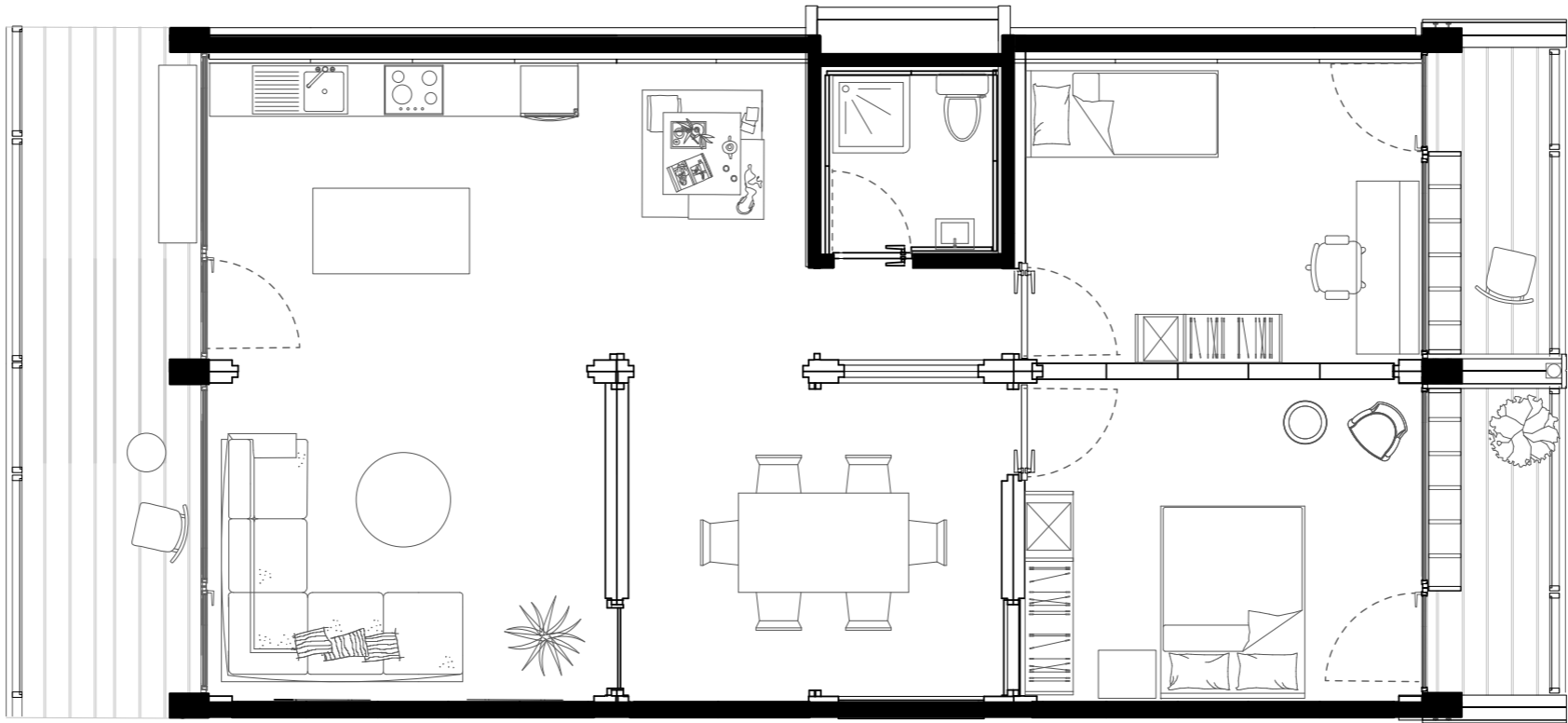


Flexible

Two-unit apartment.

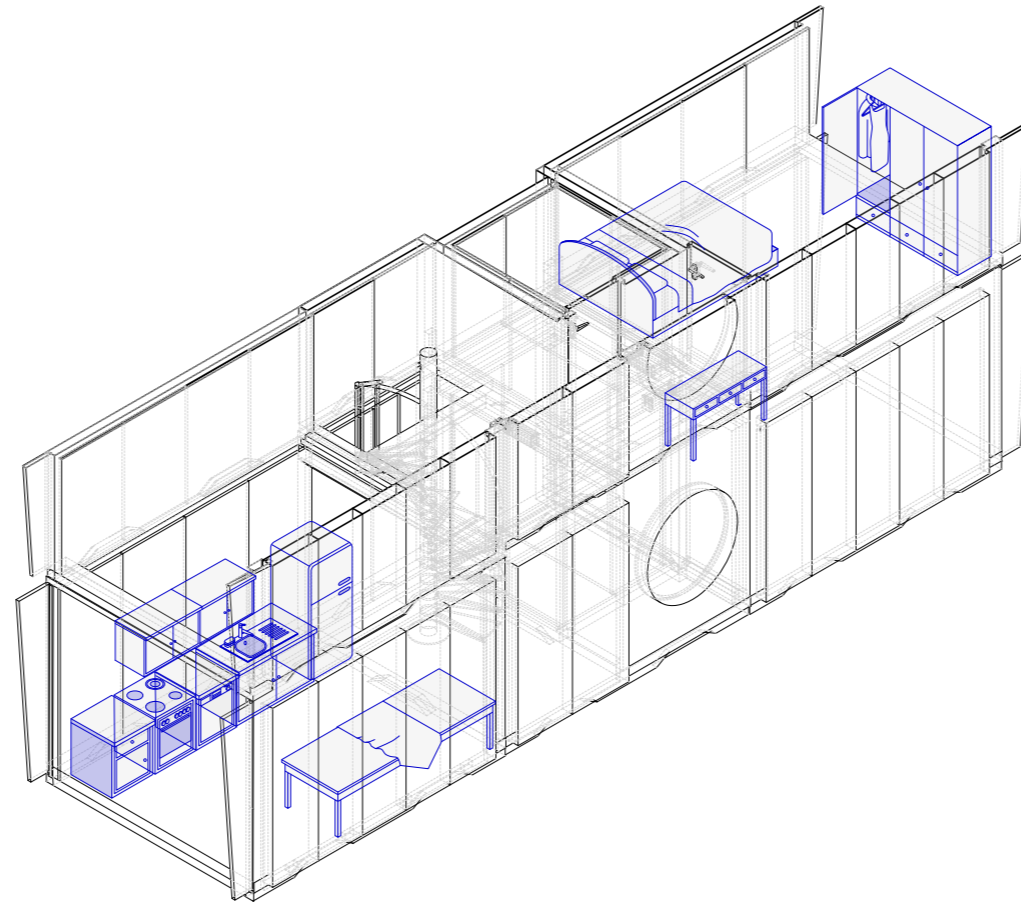


84m<sup>2</sup>  
2 person  
Generational living



# Flexible

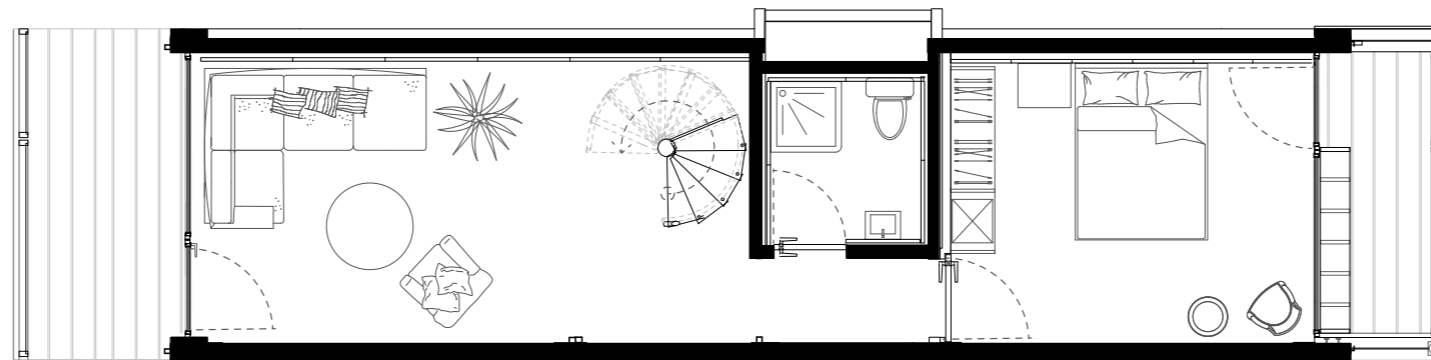
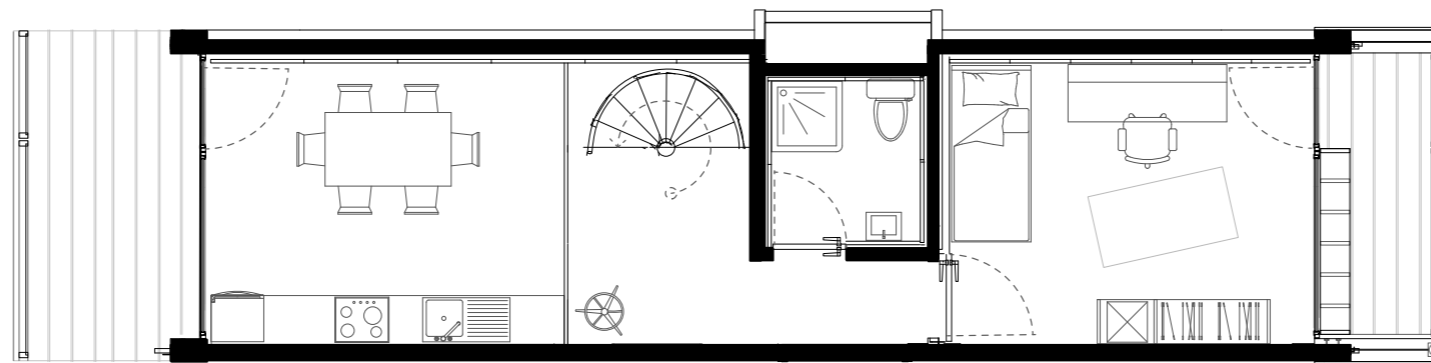
Duplex two-unit apartment.



**84m<sup>2</sup>**

2 person

Couple/ Family



# Impression duplex apartment

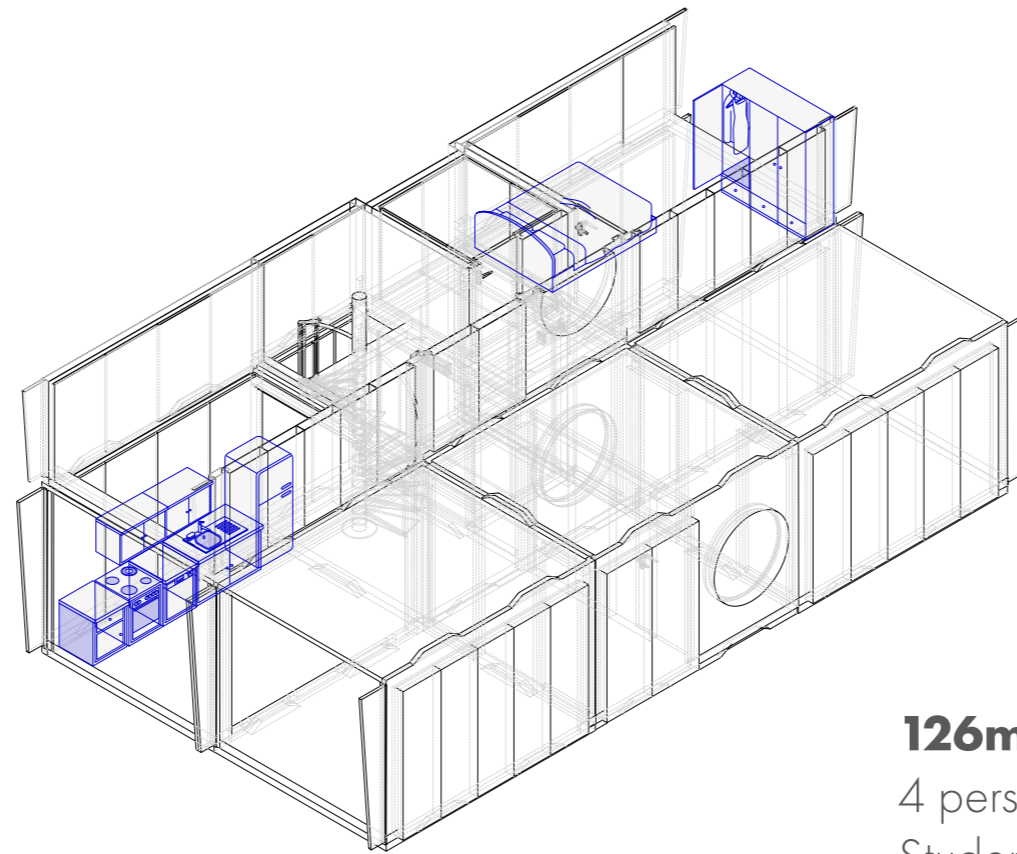


# Impression duplex apartment



# Flexible

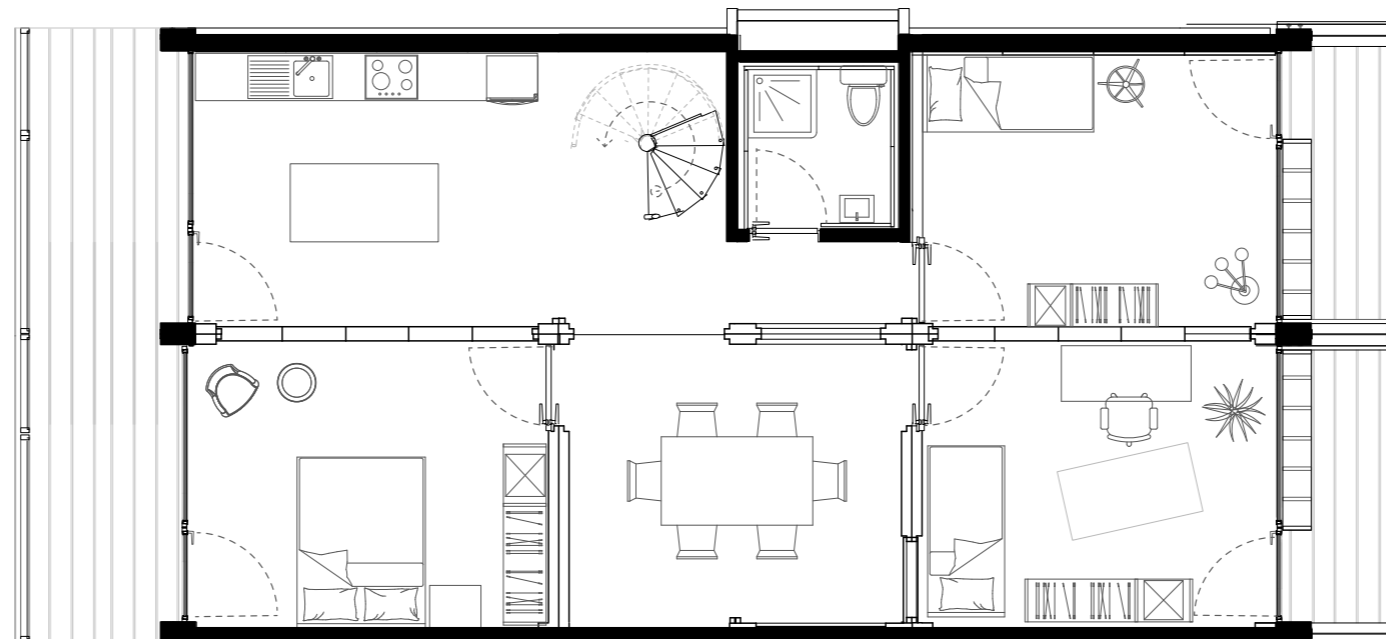
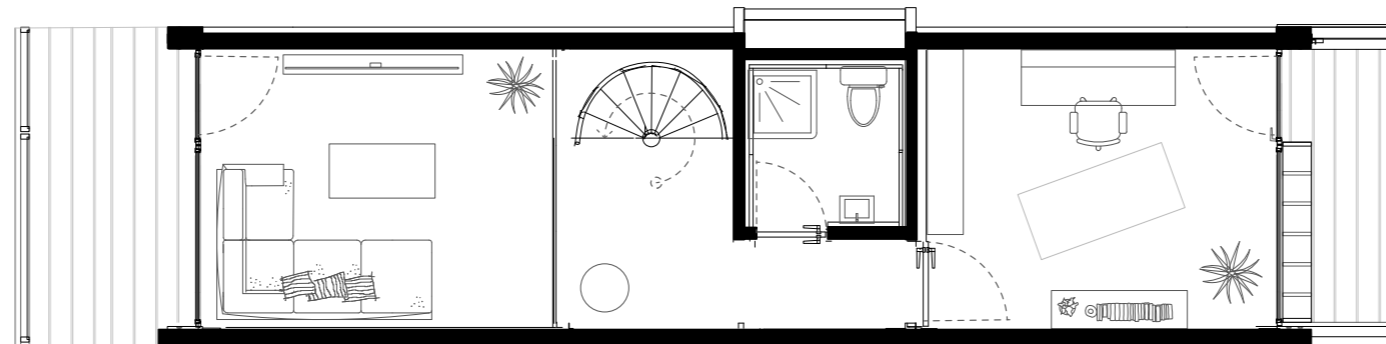
Duplex three-unit apartment.



**126m<sup>2</sup>**

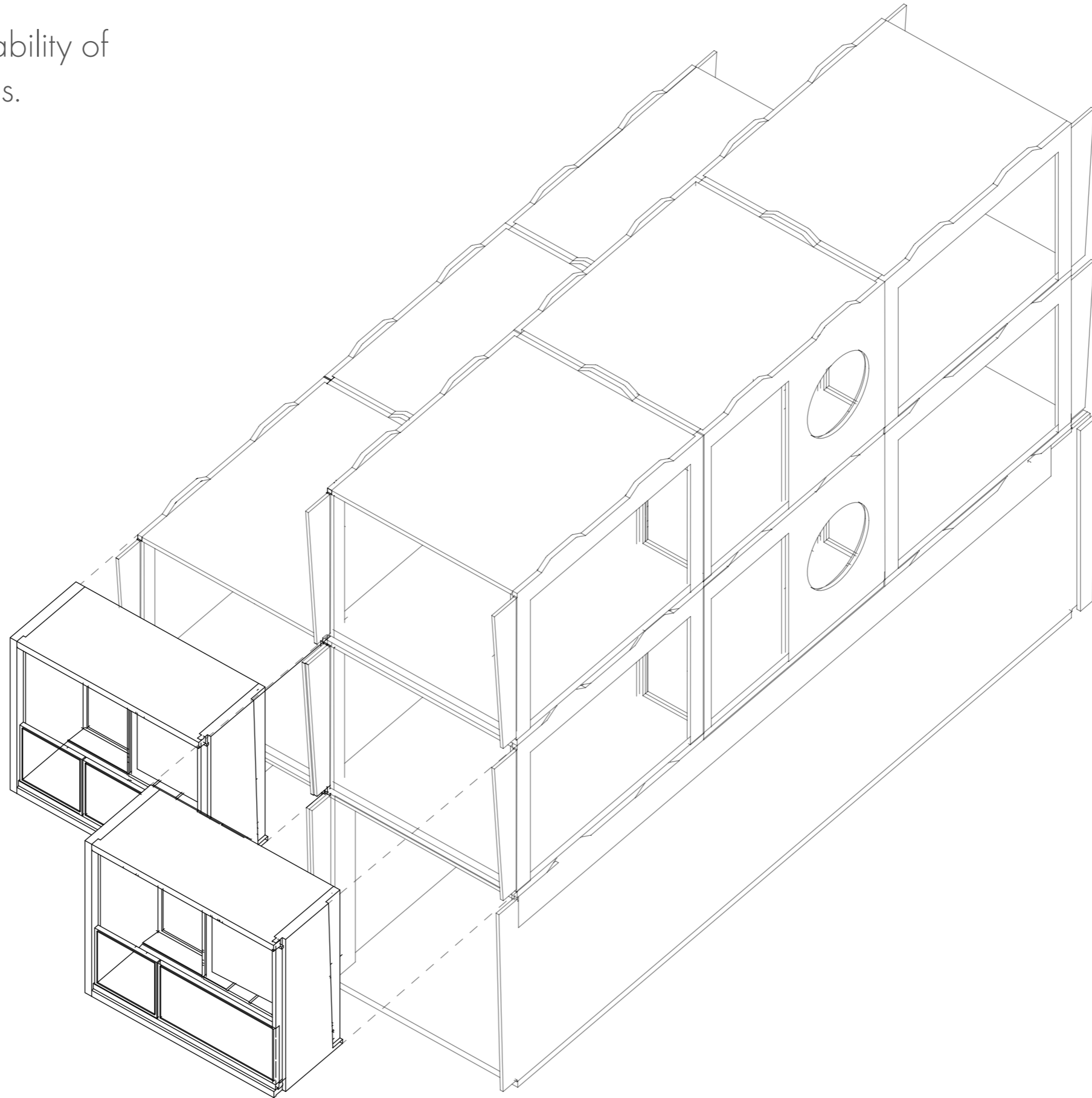
4 person

Student co-living



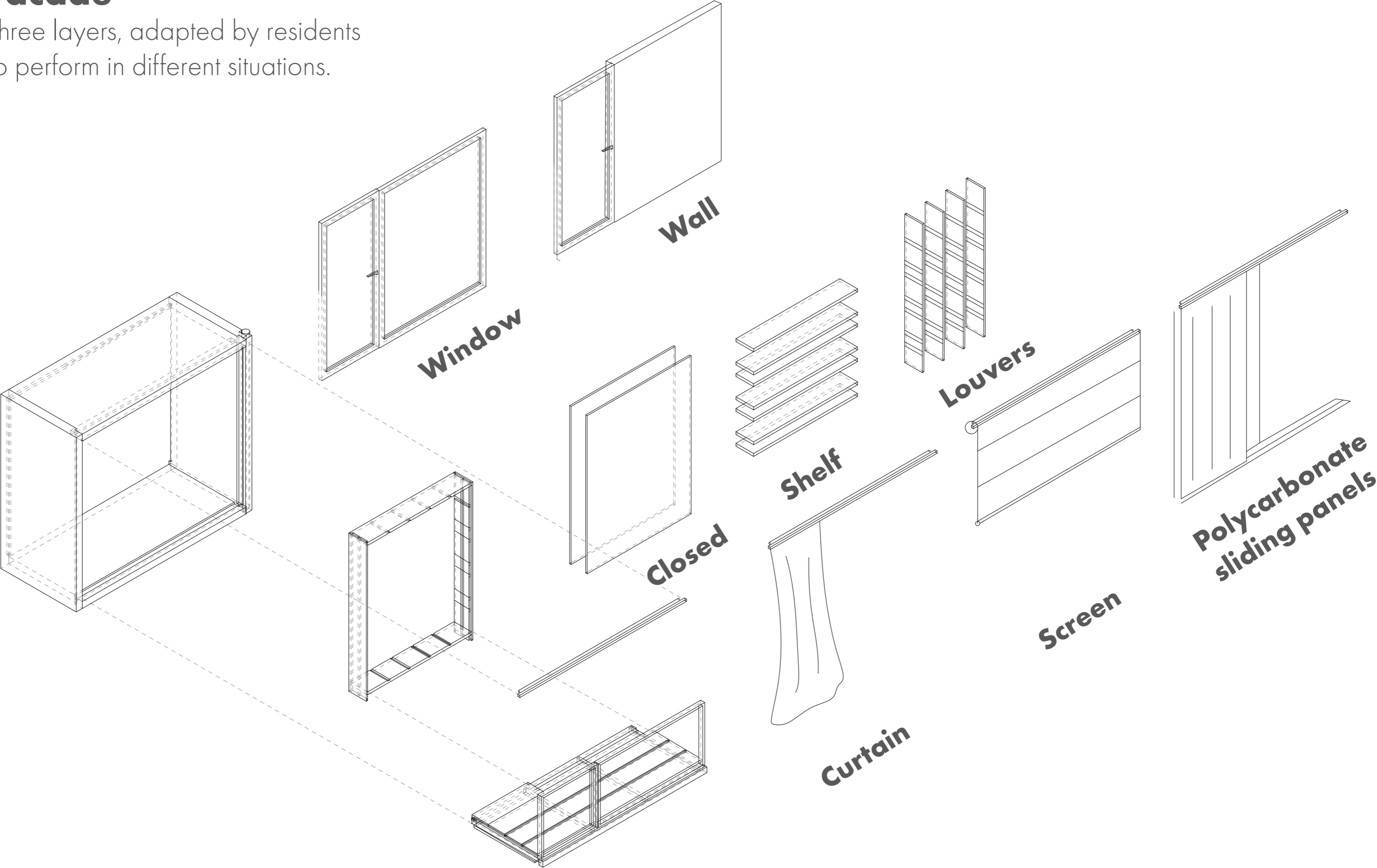
# Facade

Sliding joints enable remountability of prefabricated facade modules.



# Facade

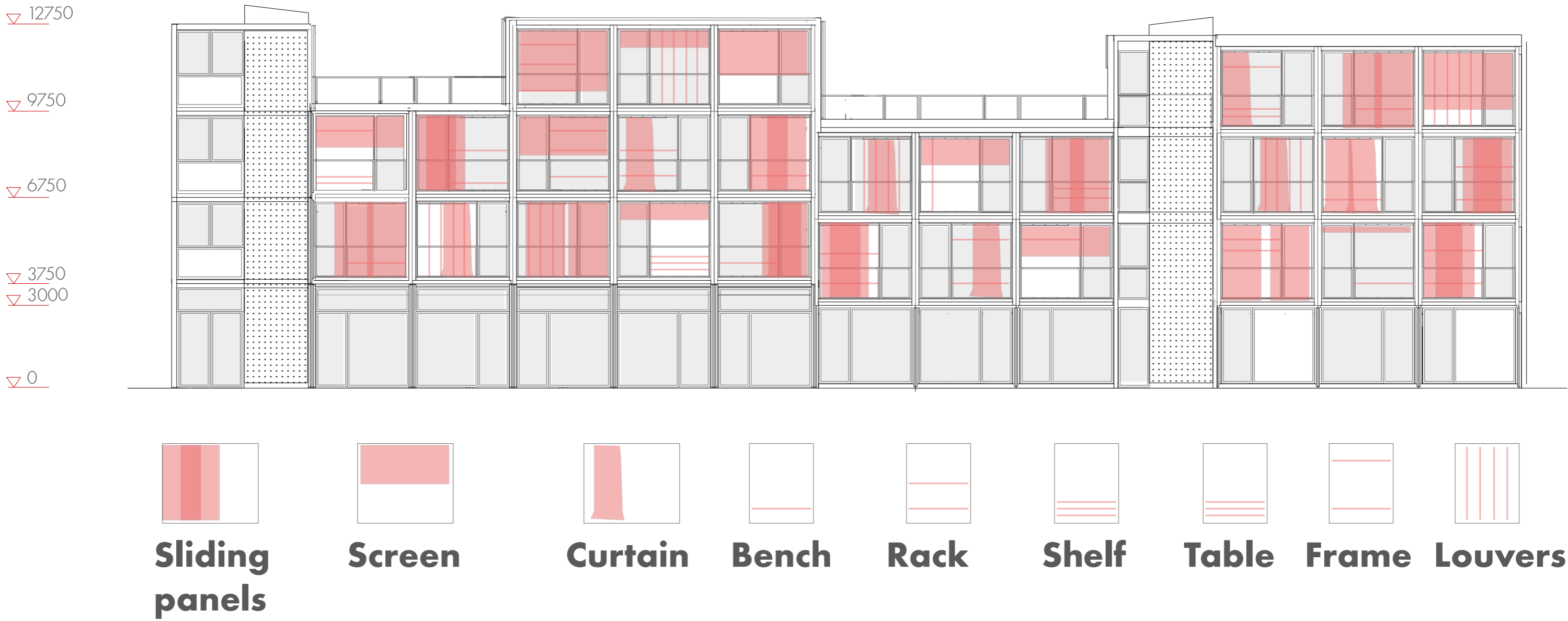
Three layers, adapted by residents to perform in different situations.



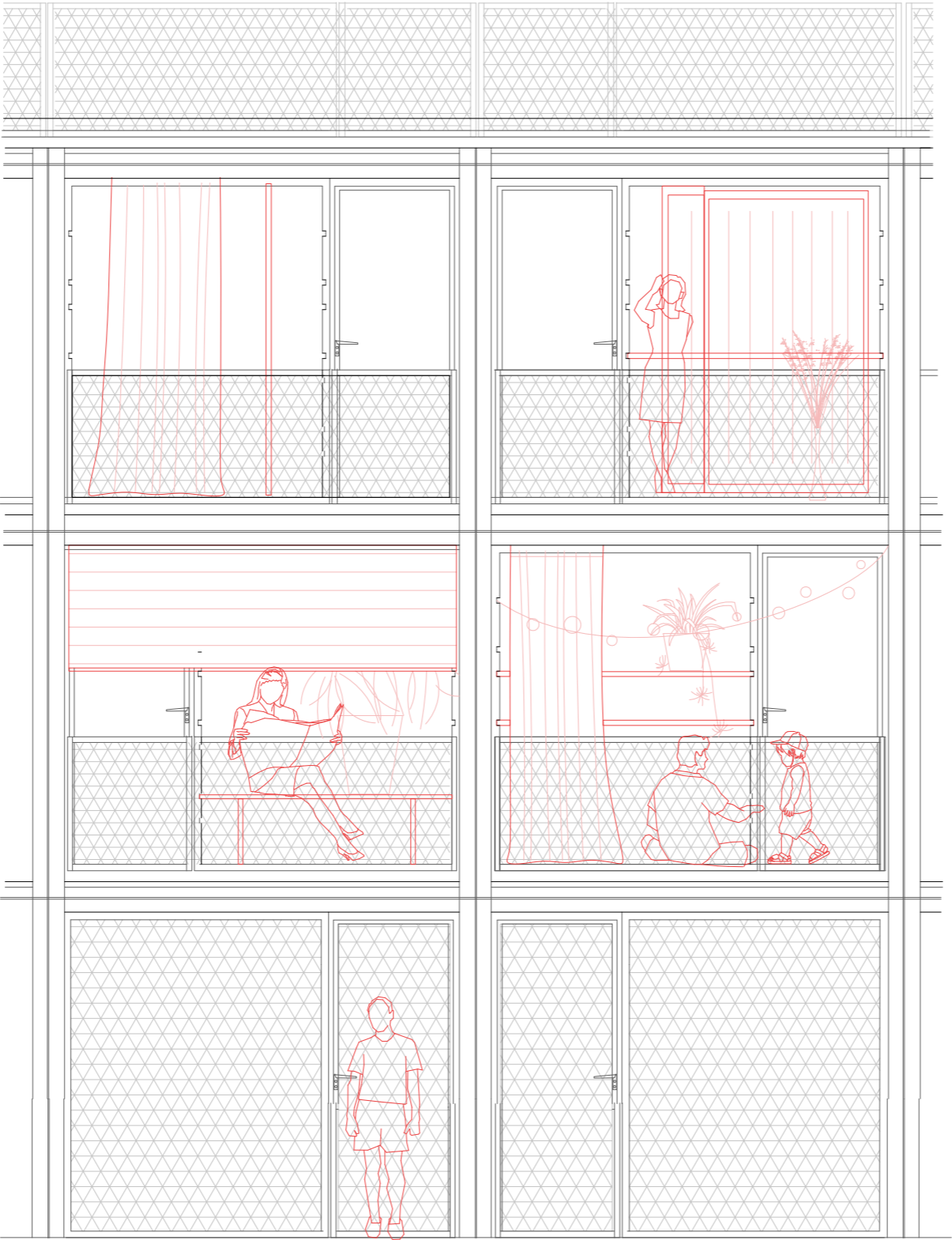
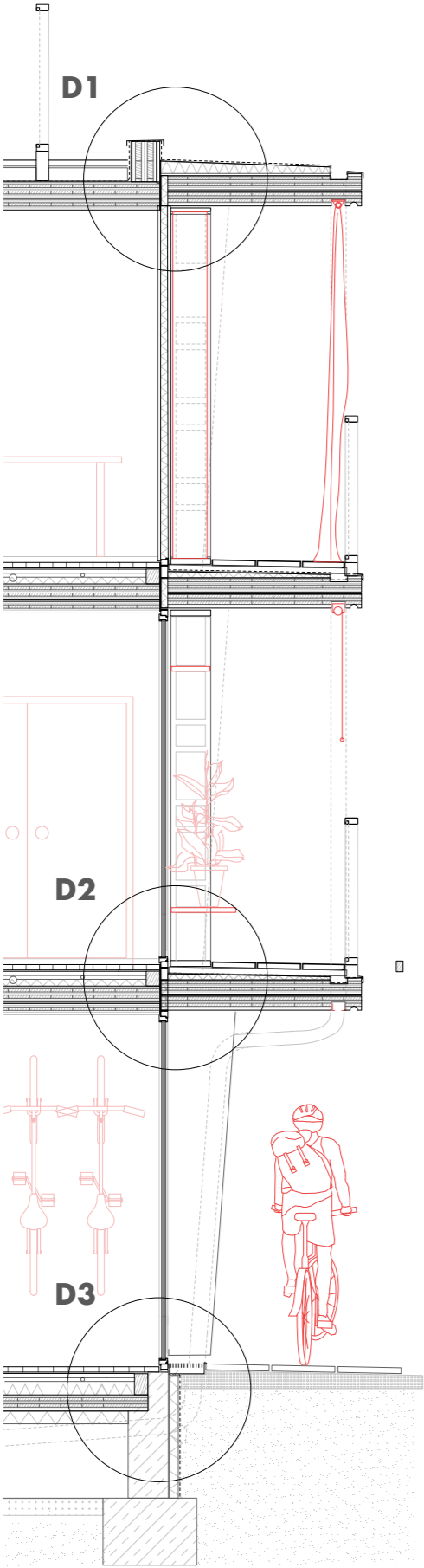


# Facade

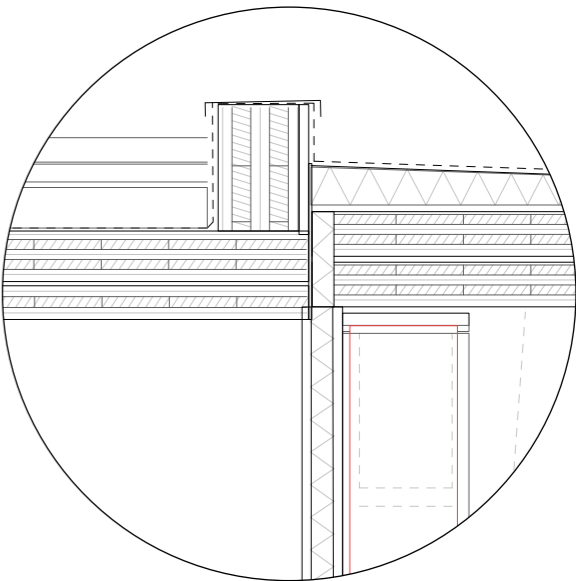
Residents lifestyles are reflected across the facade.



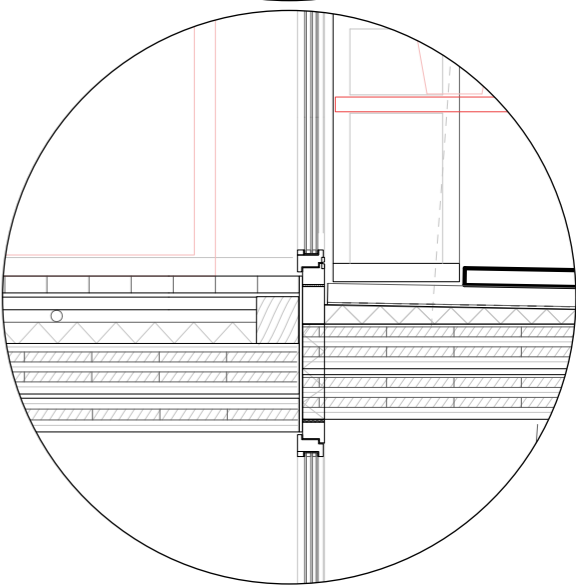
# Details



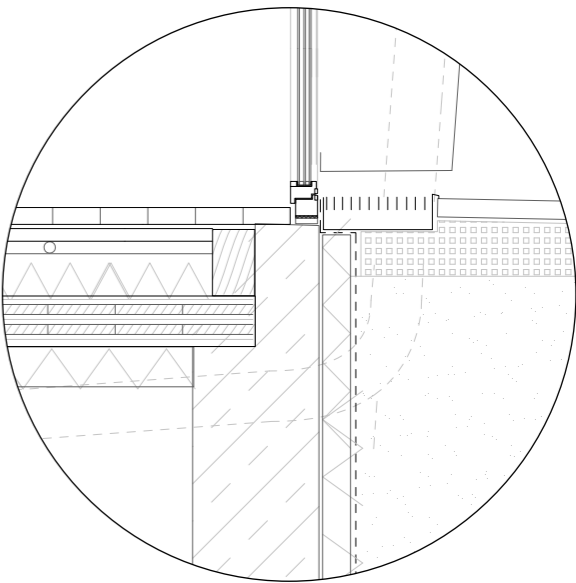
**D1**



**D2**



**D3**



# Building lifecycles

