

# AN URBAN NARRATIVE

## WINKELCENTRUM LEYWEG AS COMMUNITY EXPERIENCE



INTRODUCTION

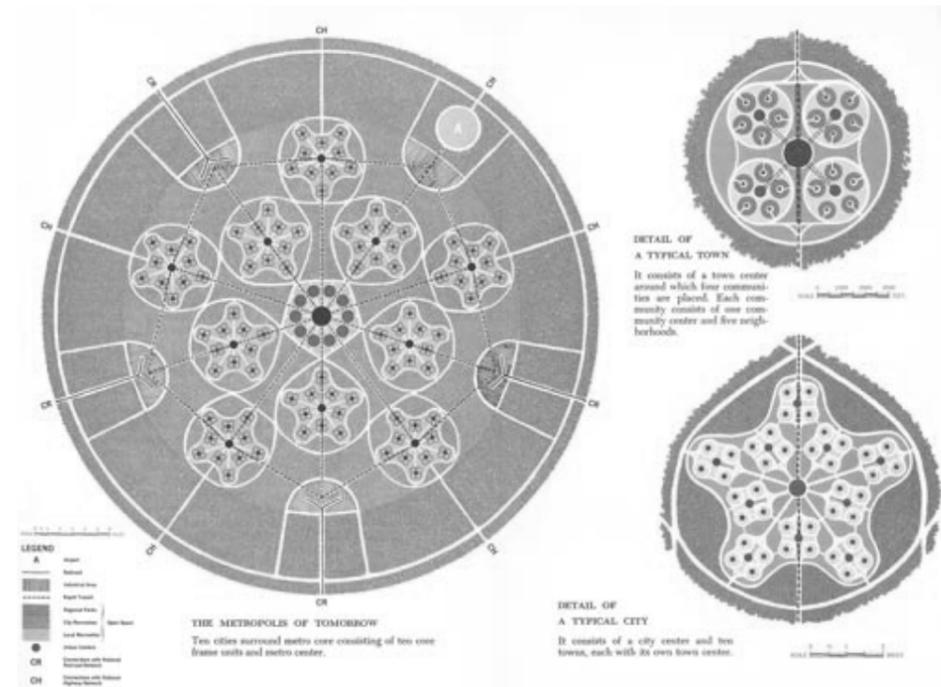
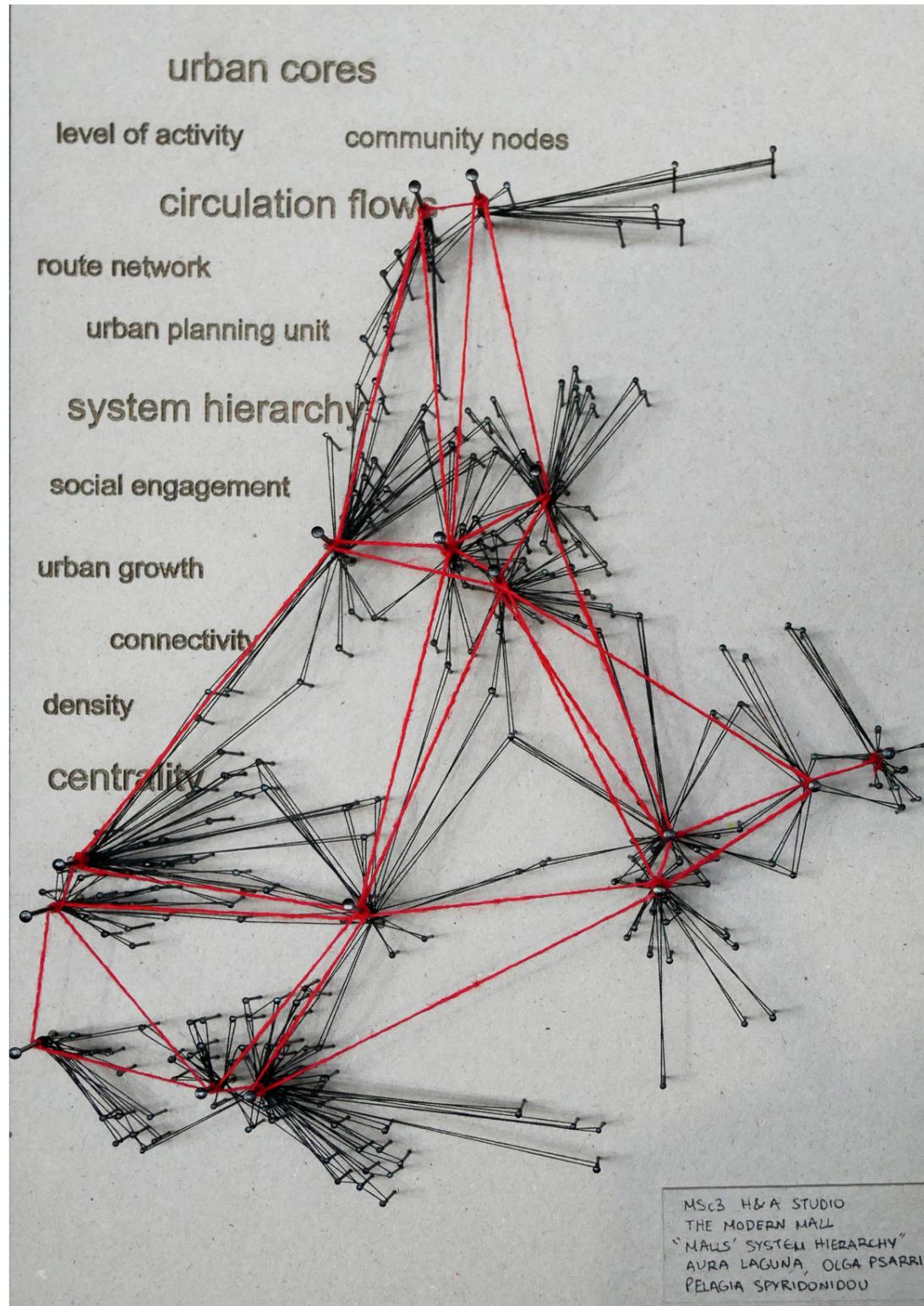
RESEARCH & FINDINGS

FROM RESEARCH TO RE-DESIGN

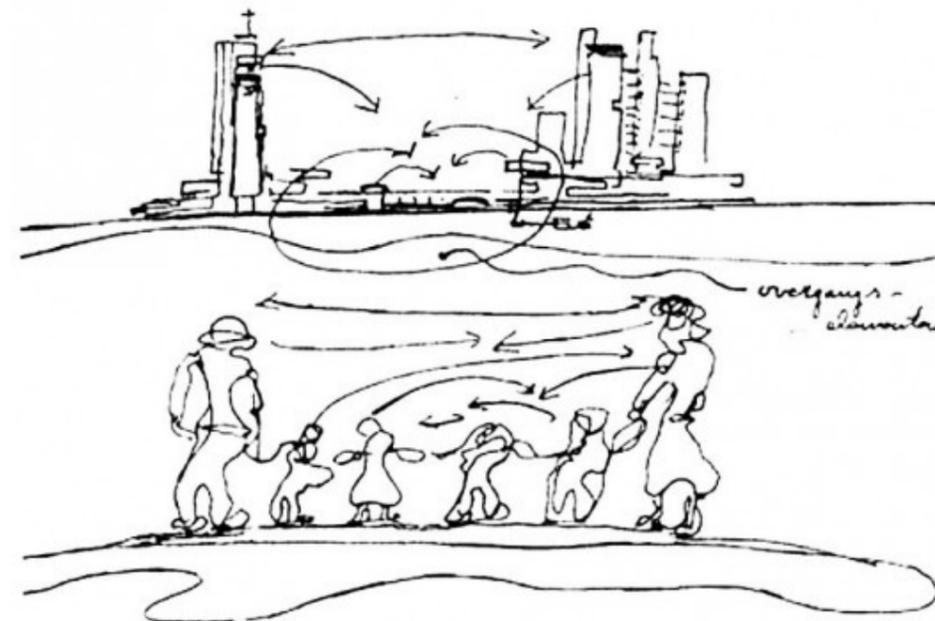
THE PROPOSAL

# INTRODUCTION

# THE ESSENCE OF THE MALL



Gruen's cellular metropolis of tomorrow (Gruen, 1964).



'Vriendschapsmodel' [Friendship model] by J.P. Bakema

*“Certainly, as an architectural problem the shopping mall is highly fluid and contingent, continuously obliged to pursue the subject rather than the object of design [...]”.*

(Maitland, 1984)

# THE PROBLEM



1998 Leidsenhage shopping center



(in de buurt, 2020)



2021 Westfield Mall of the Netherlands



(archello, n.d.)

Rise of e-commerce



Changes in retail market

malls as assets for future  
redevelopment



EXPANSION

?

ENCLOSURE

FRONTAGE INVERSION

RUPTURES

OUT OF SCALE

DISCONNECTED CENTERS

INCOHERENCE

What? [product]      Where? [location]      When? [period]

“How can the **urban spatial identity** of **Dutch post-war**  
Who? [subject] **shopping malls** be employed in their re-design in order  
to **ensure urban spatial continuity?**”  
Why? [aim]

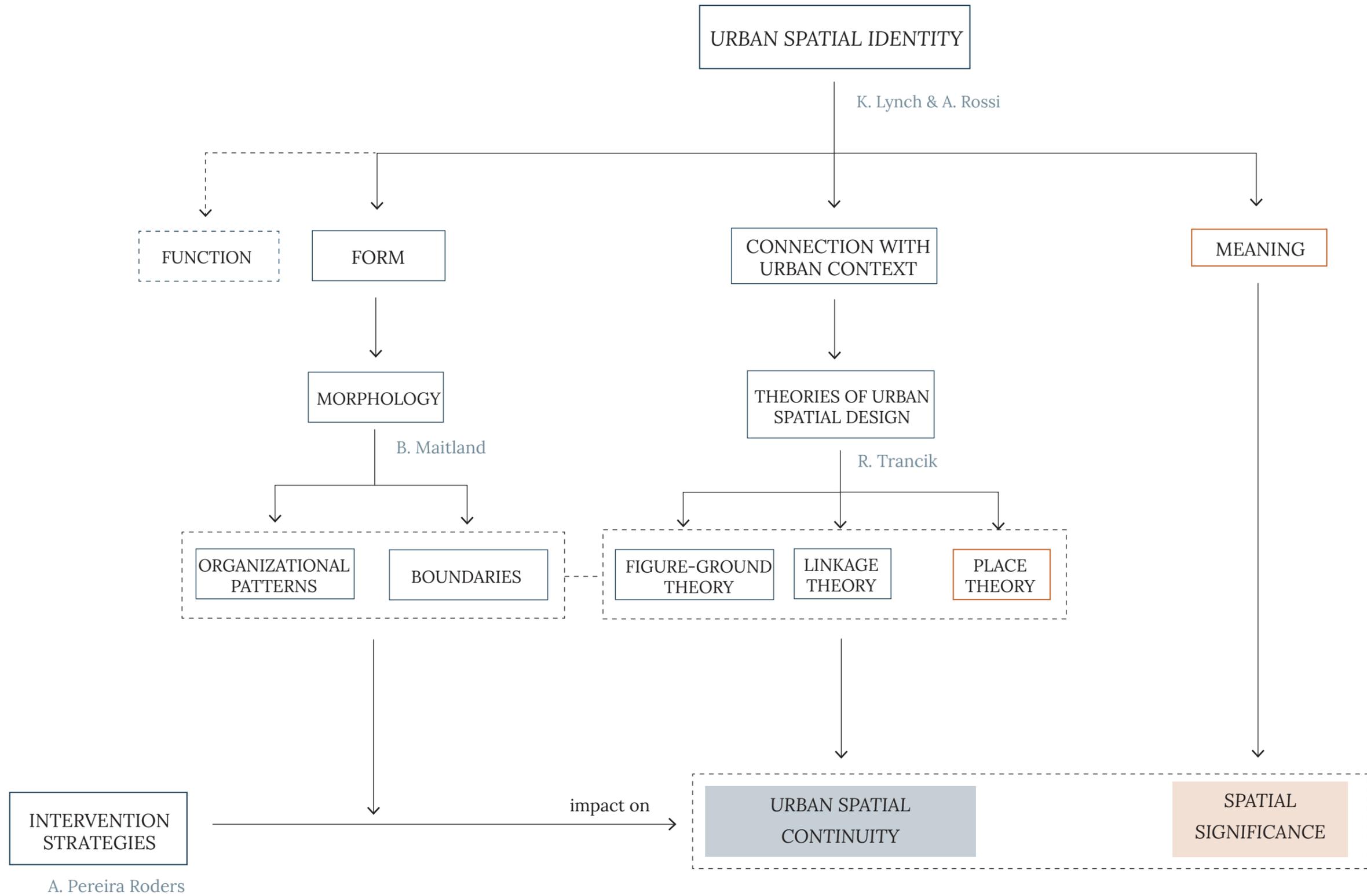
1. What constitutes the **urban spatial identity** of the mall?

2. Which are the **spatial attributes** rendering the shopping mall a consistent urban structure?

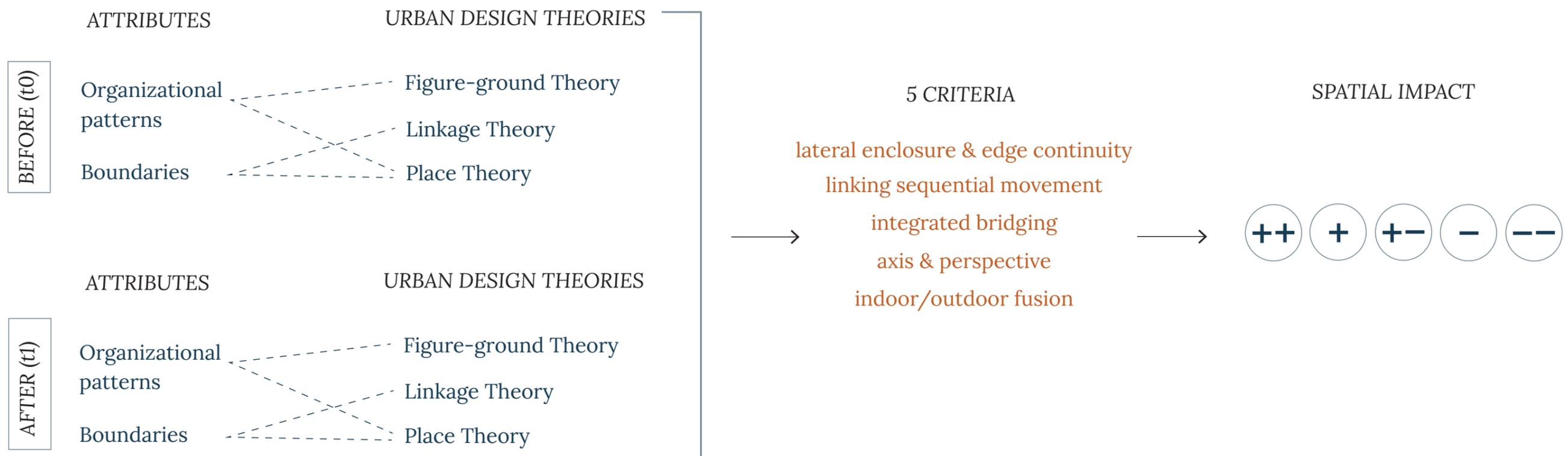
3. How have different **re-design interventions** created spatial continuity or discontinuity in the urban fabric?

## RESEARCH & FINDINGS

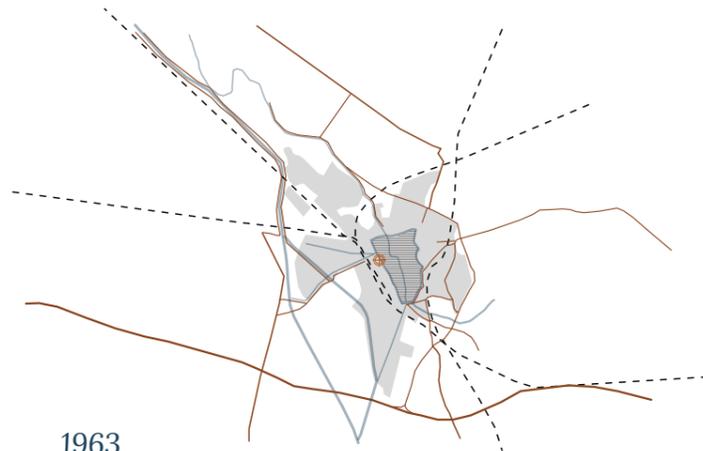
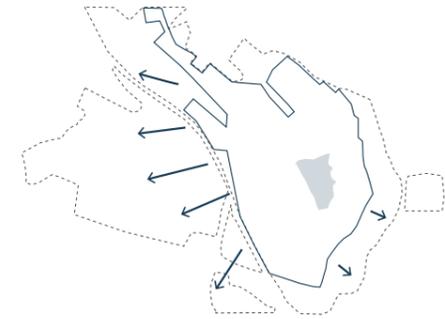
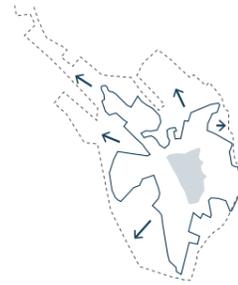
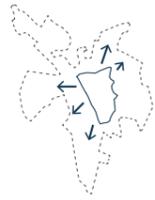
# THE FRAMEWORK



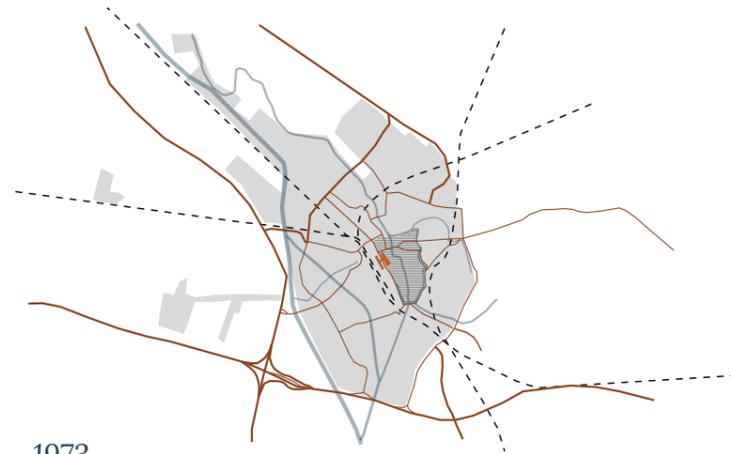
# THE METHOD



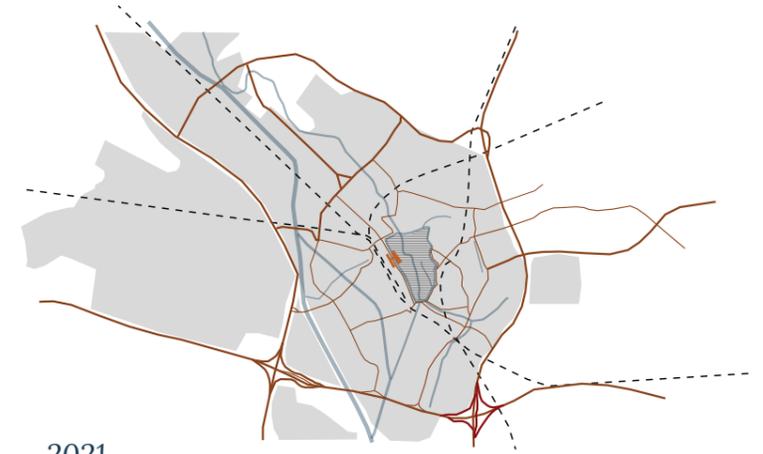
# THE RESEARCH CASE - Hoog Catharijne



1963



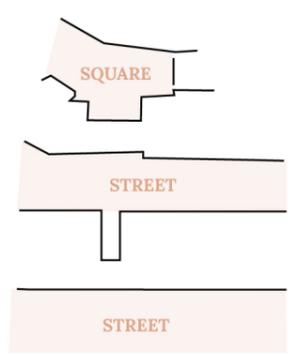
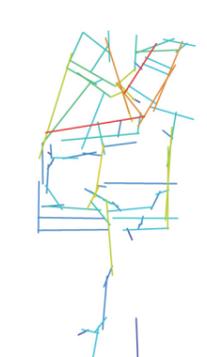
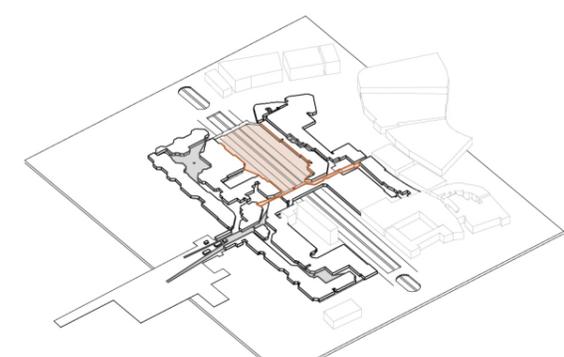
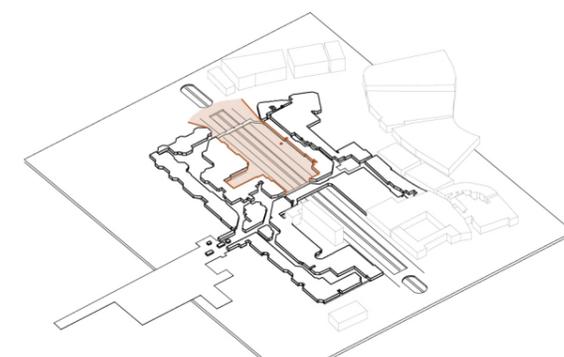
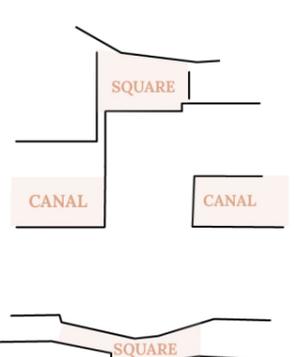
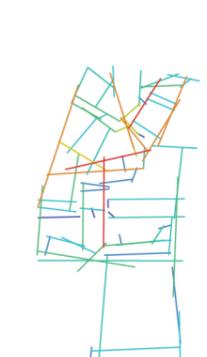
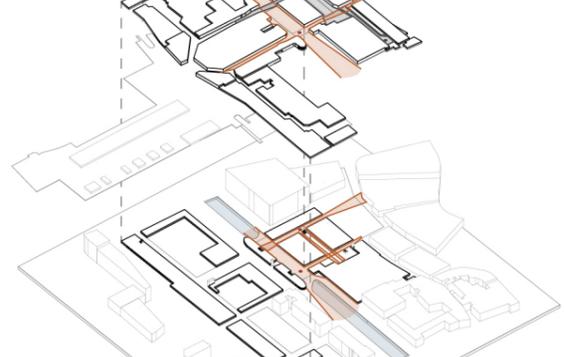
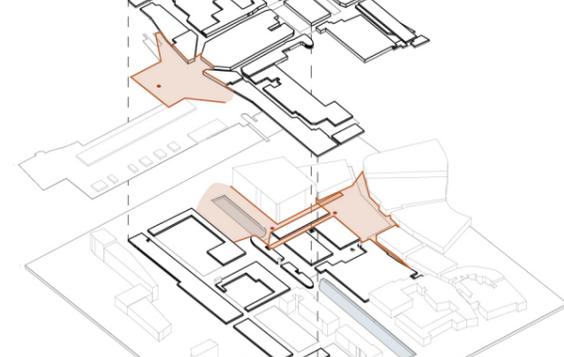
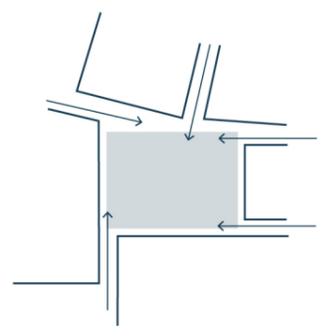
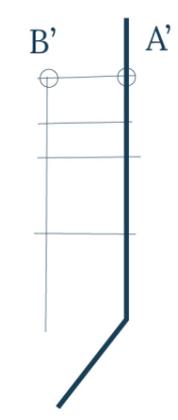
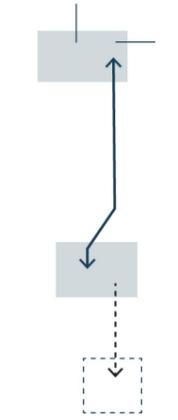
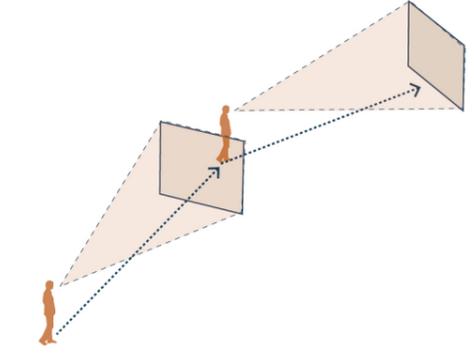
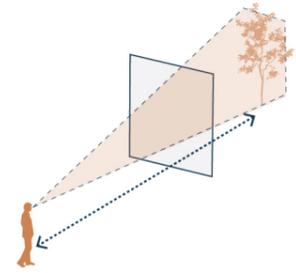
1973



2021



# THE OUTCOME

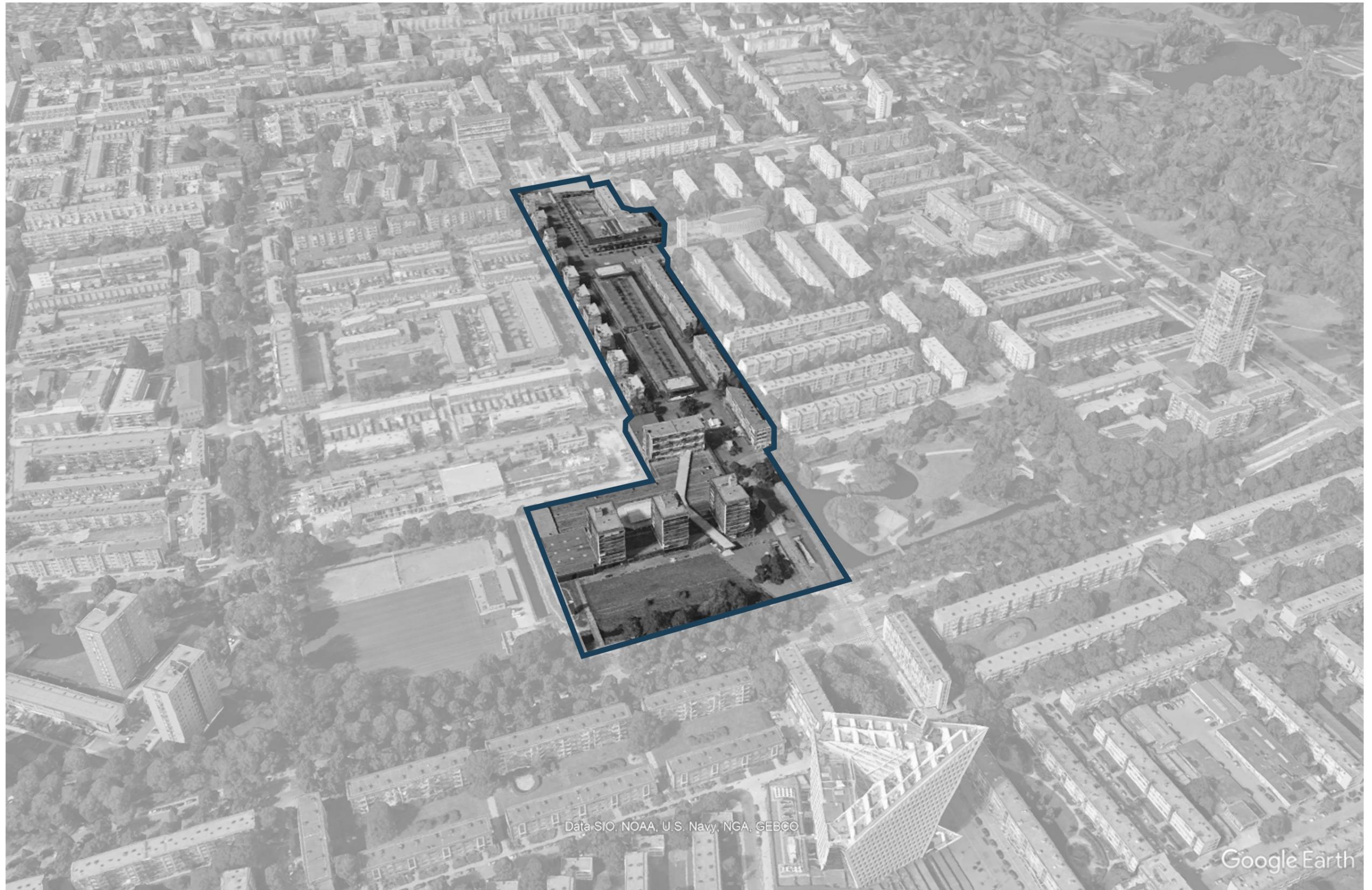
	LATERAL ENCLOSURE & EDGE CONTINUITY	LINKING SEQUENTIAL MOVEMENT	INTEGRATED BRIDGING	AXIS & PERSPECTIVE	INDOOR/OUTDOOR FUSION
BEFORE (t0)					
AFTER (t1)					
IMPACT	+	+	+	++	++
PRINCIPLE	DEFINED URBAN SETTING 	DIRECT LINKS 	FLUID UNINTERRUPTED MOVEMENT & DECOMPRESSION AREAS 	FRAMED ROUTE 	SEAMLESS TRANSITION 

FROM RESEARCH TO RE-DESIGN

*“How we design cities is how we understand them”.*

(Bill Hillier)

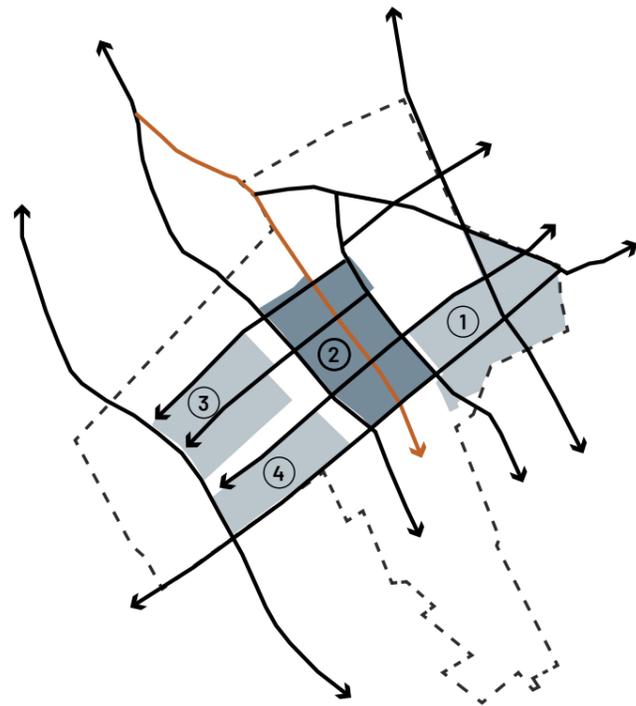
WINKELCENTRUM LEYWEG



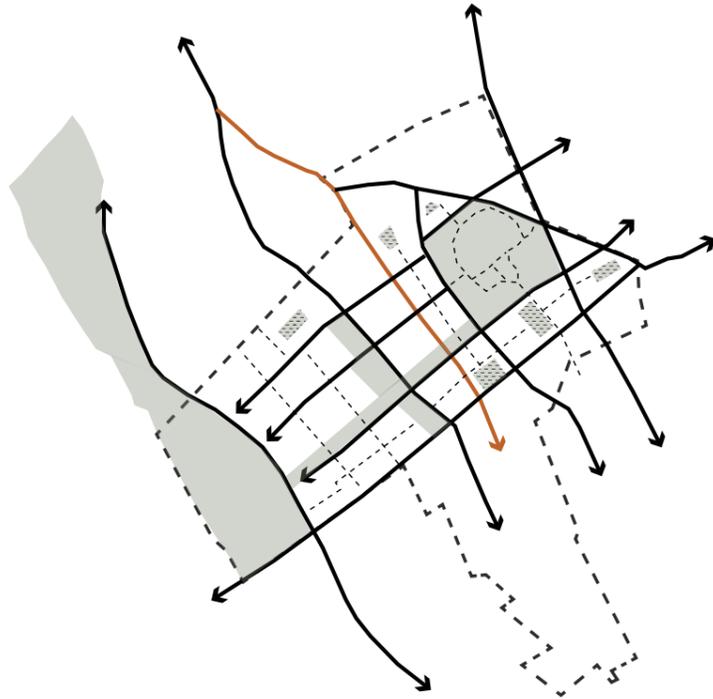
Data SIO, NOAA, U.S. Navy, NGA, GEBCO

Google Earth

# THE URBAN EXPANSION PLAN



The 4 neighborhoods  
(Moerwijk, Morgenstond, Bouwlust-Berestein, Vrederust)



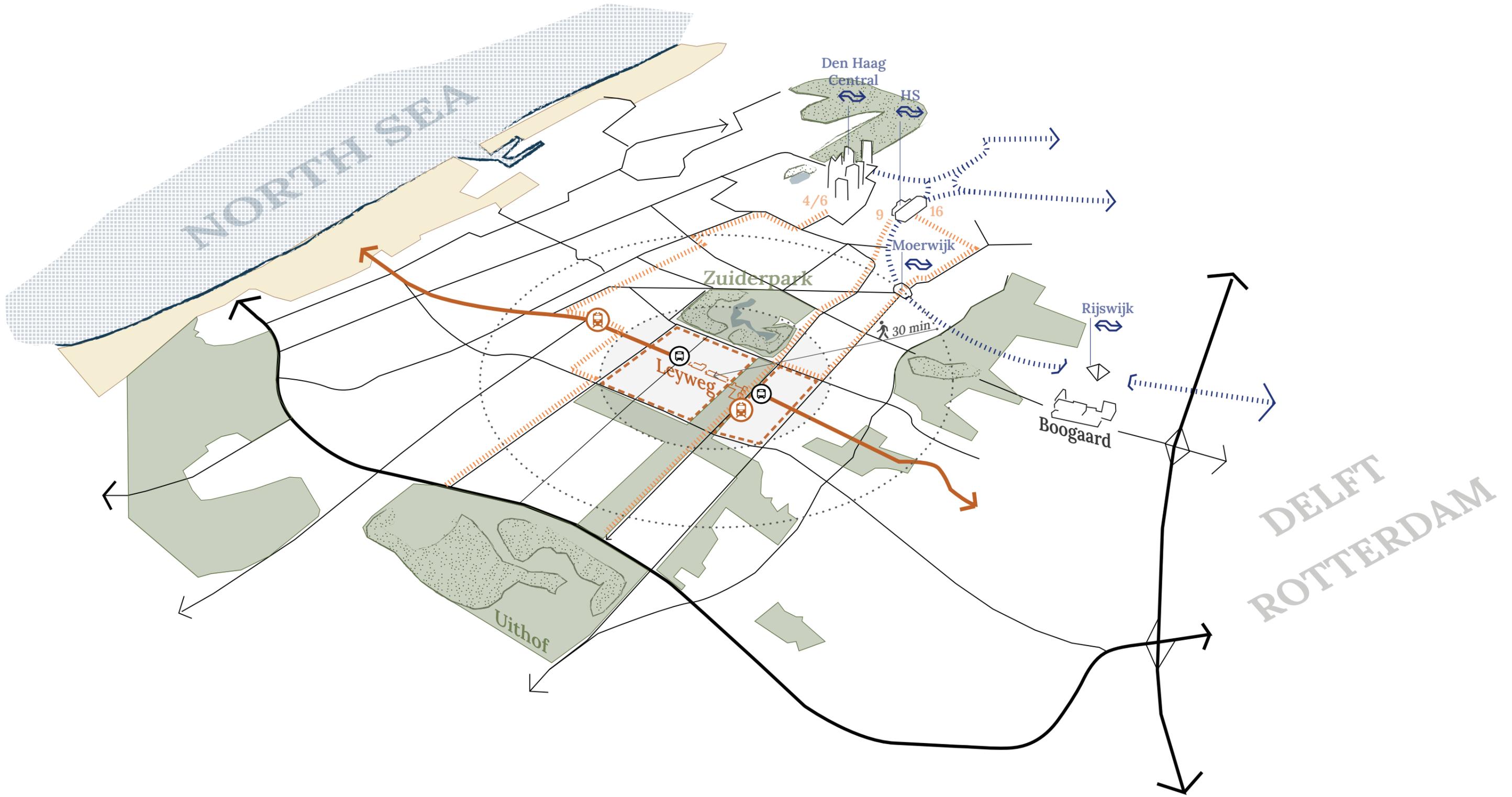
The green structure



Expansion of the Hague in Escampolder

0 150 300 600 1200 m

THE SITE



# ISTORICAL CONTEXT



(Dienst voor de Stadsontwikkeling, 1962)



1964



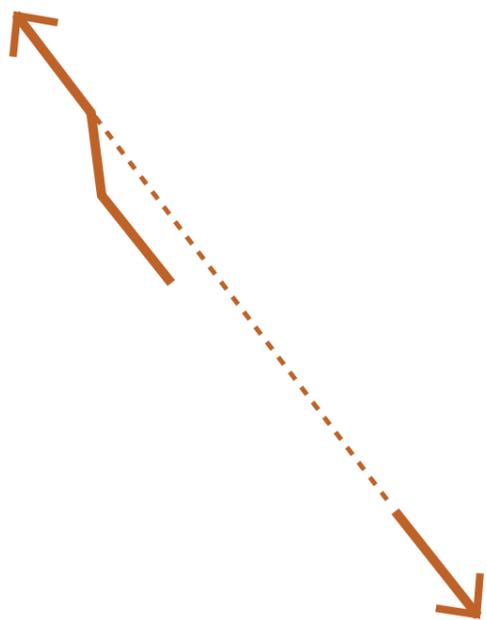
1990



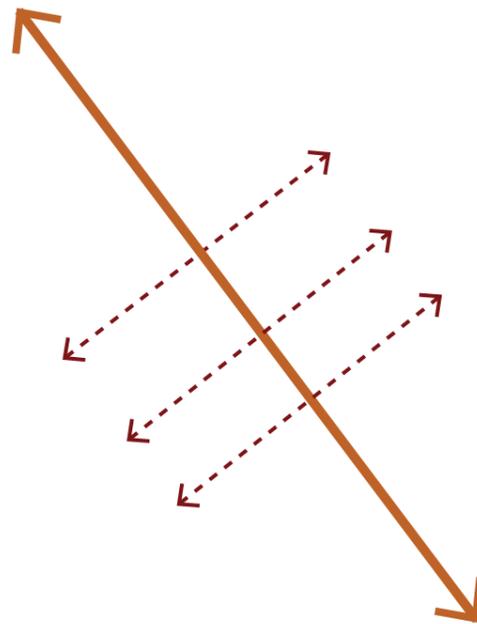
2003



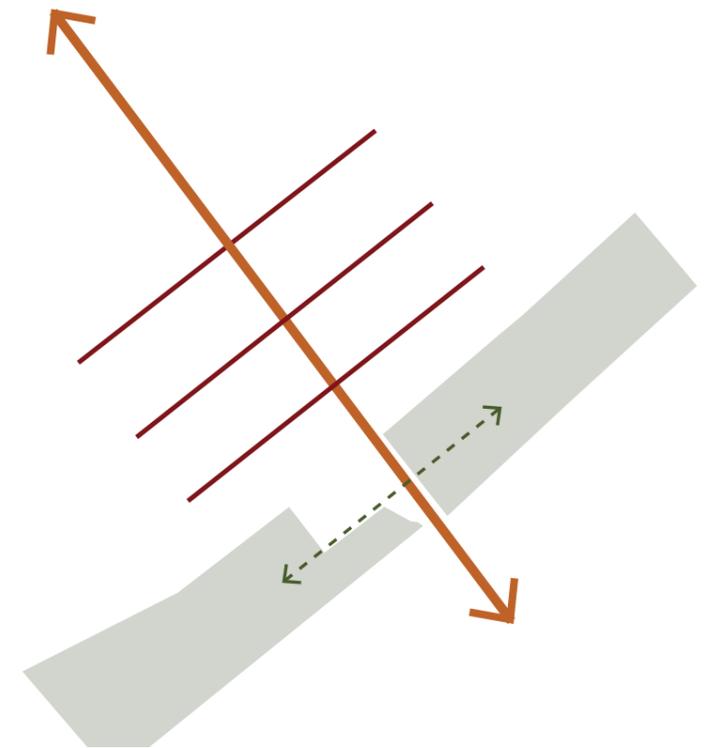
Reinstating continuity of axis



Establishing former connections



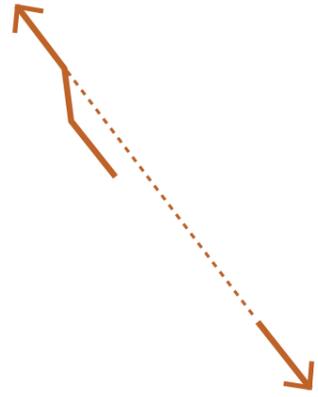
Restoring green structure





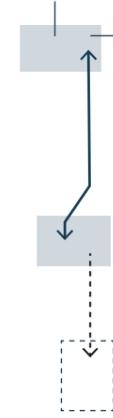
CONCEPT

Reinstating continuity of axis

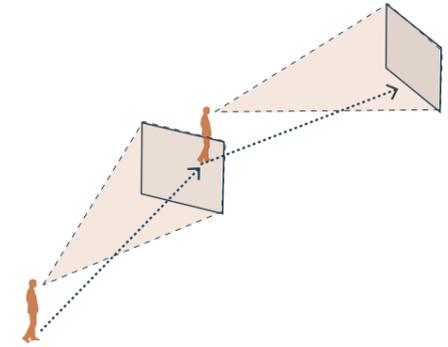


FLUID UNINTERRUPTED MOVEMENT

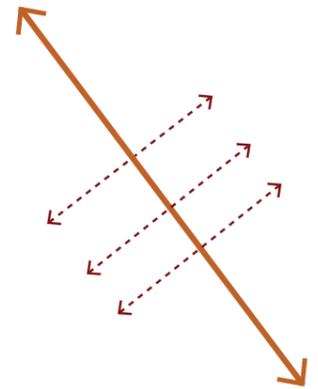
DECOMPRESSION AREAS



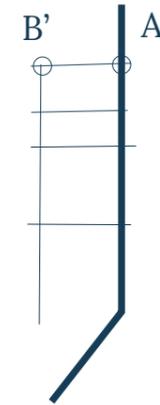
FRAMED ROUTE



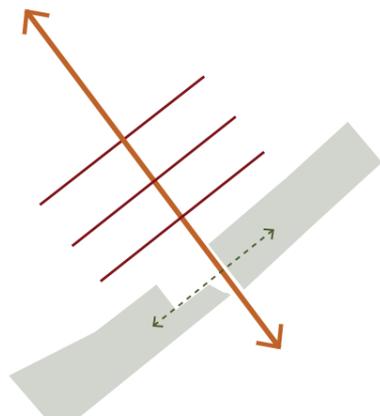
Establishing former connections



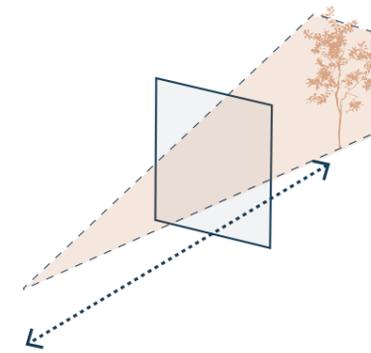
DIRECT LINKS



Restoring green structure



SEAMLESS TRANSITION



CONCEPT

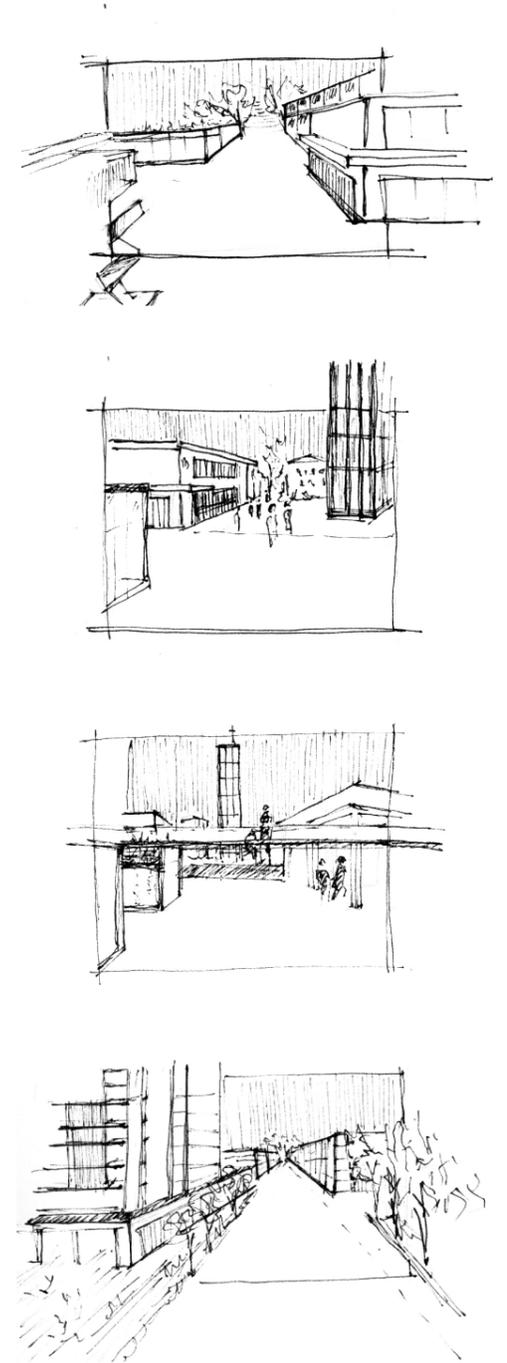
Emmaus Kerk

V&D building

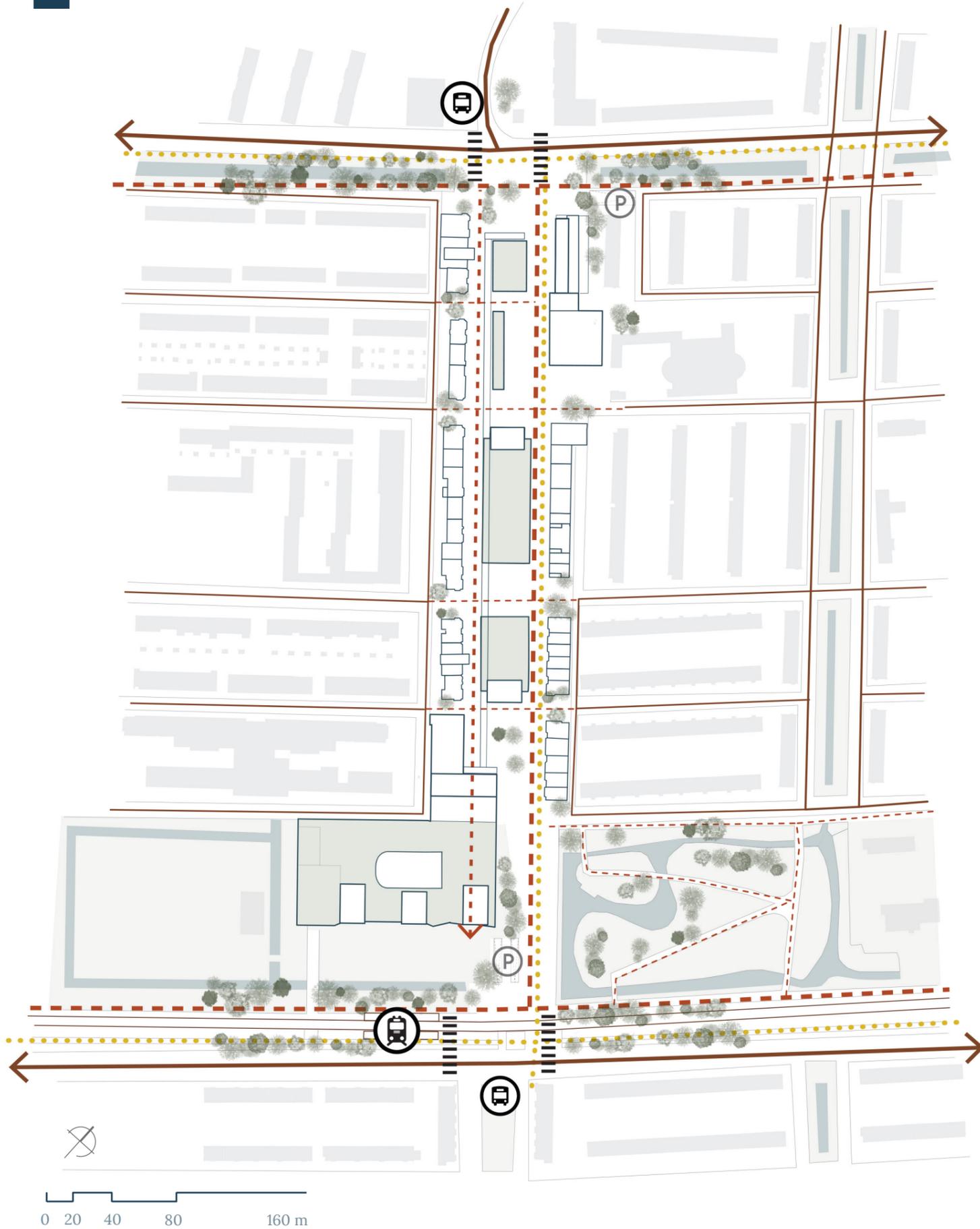
HEMA building

LEYWEG

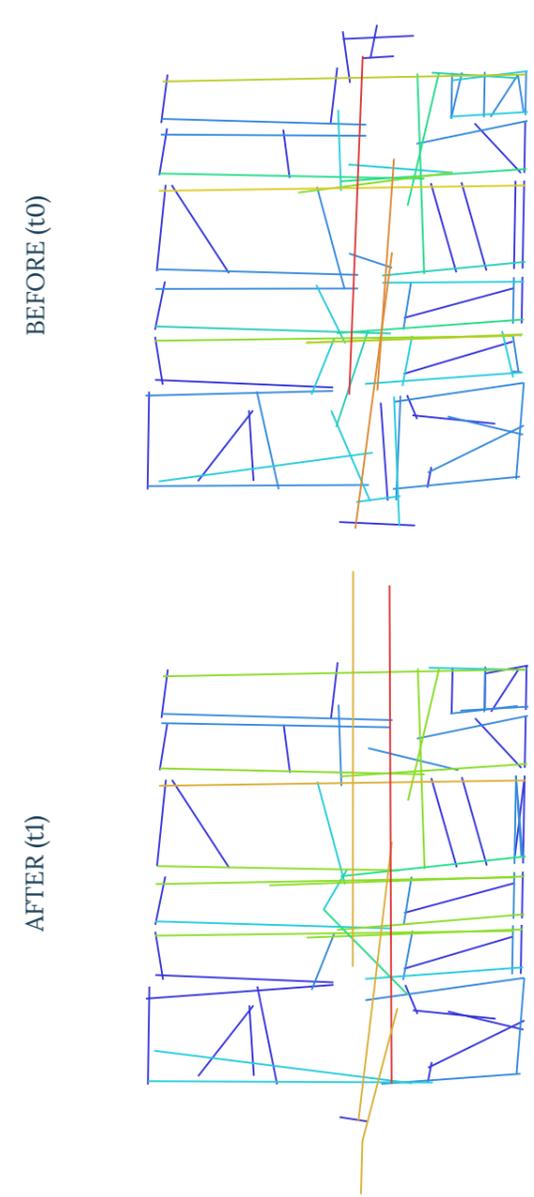
- Keep
- Add
- Remove



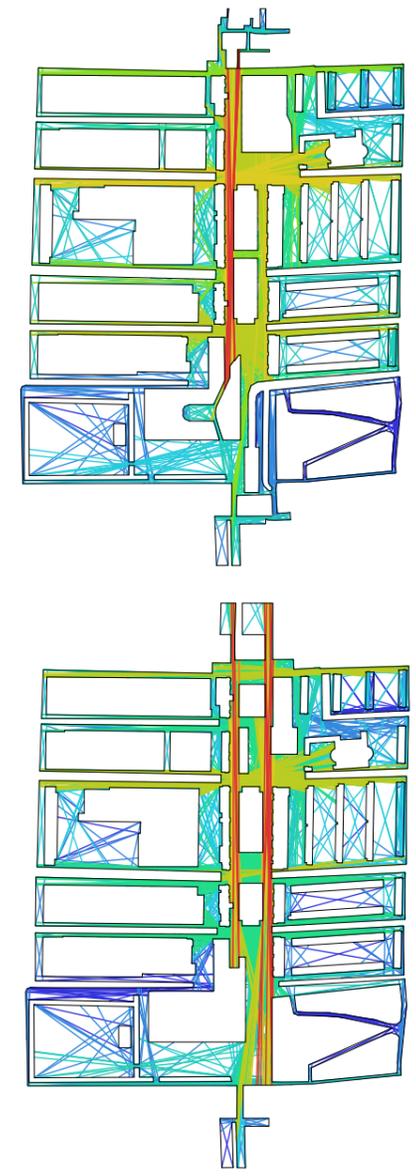
# CONCEPT & EVALUATION



LINKING SEQUENTIAL MOVEMENT



INTEGRATED BRIDGING



- Main pedestrian axis
- Pedestrian routes
- ... Cycling routes
- Main roads
- Secondary roads

- High
- (Red)
- (Yellow)
- (Green)
- (Blue)
- Low

# THE PROPOSAL

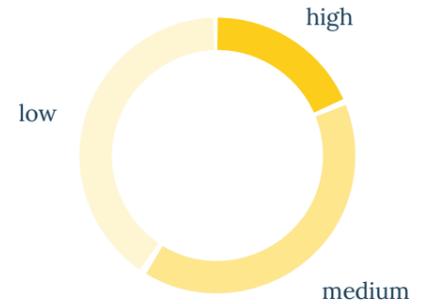
# MASTERPLAN - Introduction of uses



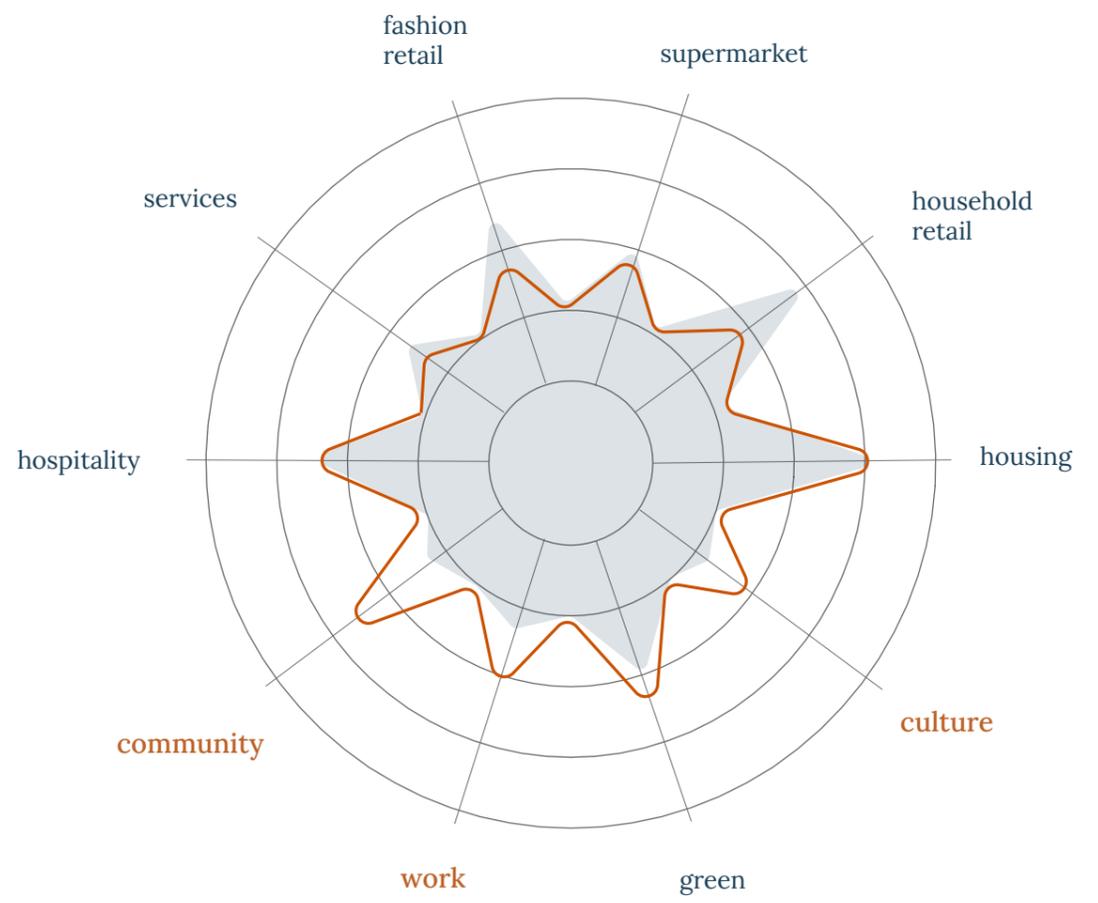
RESIDENTS



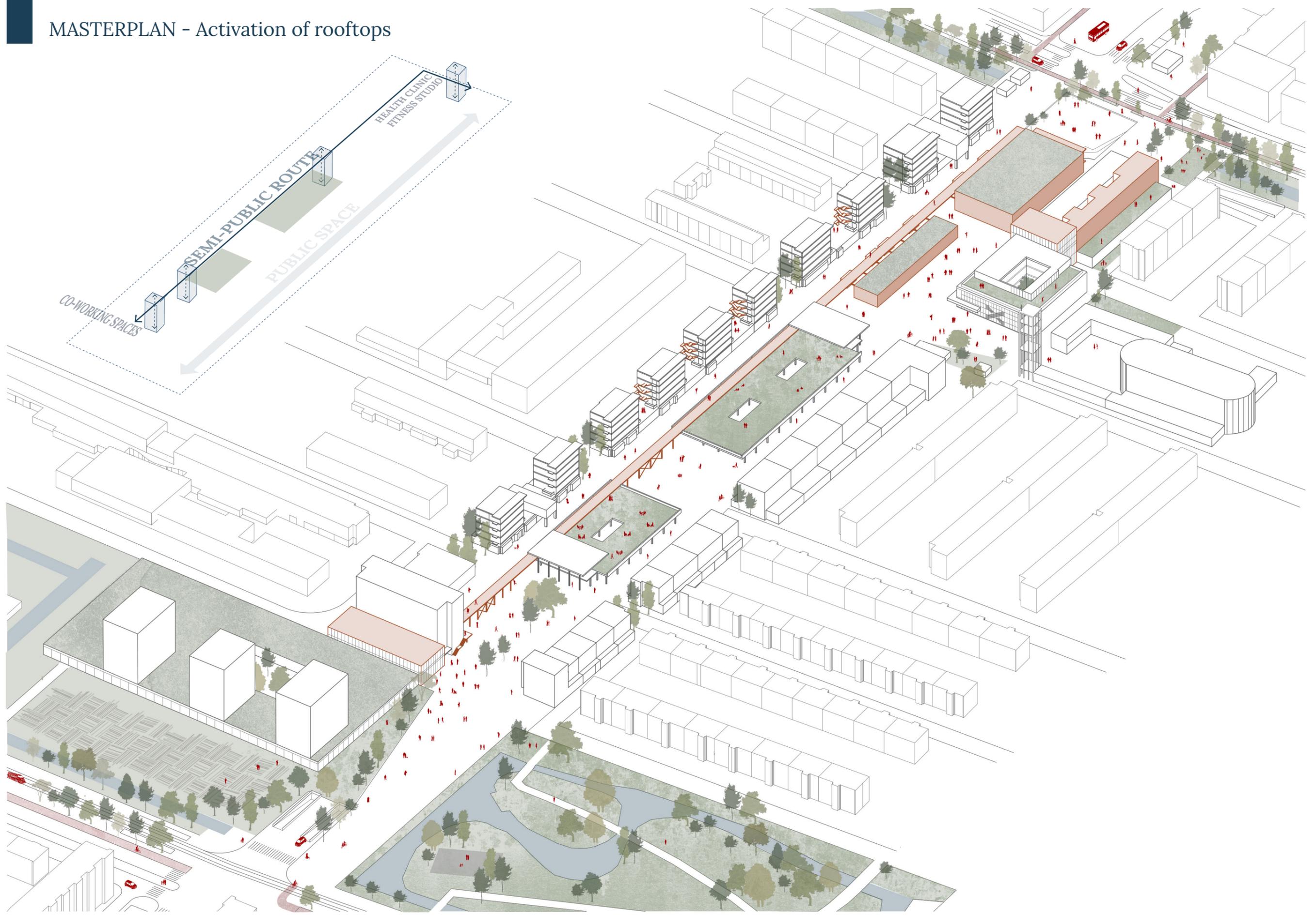
EDUCATION LEVEL



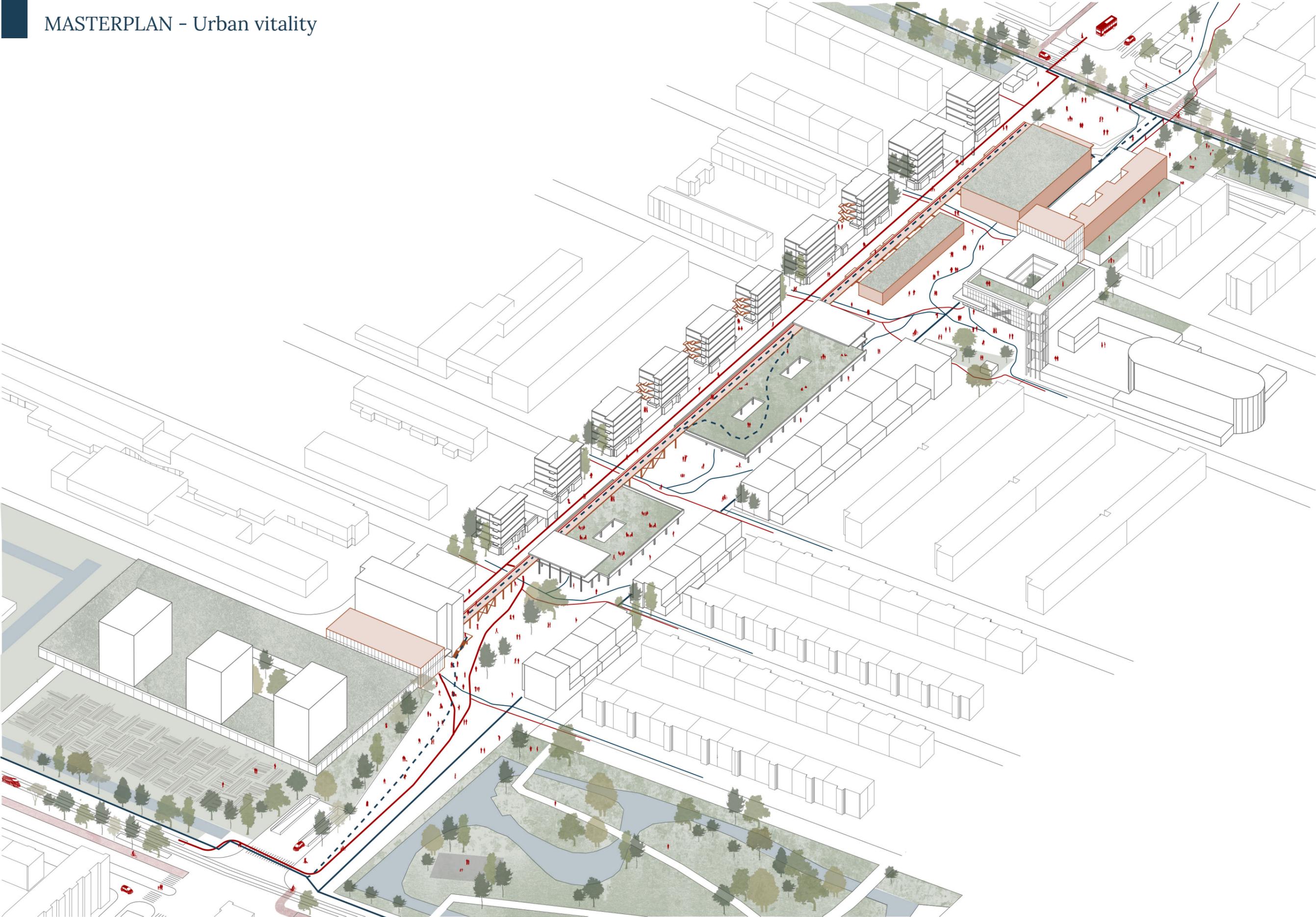
FROM SINGLE-USE TO MIXED-USE



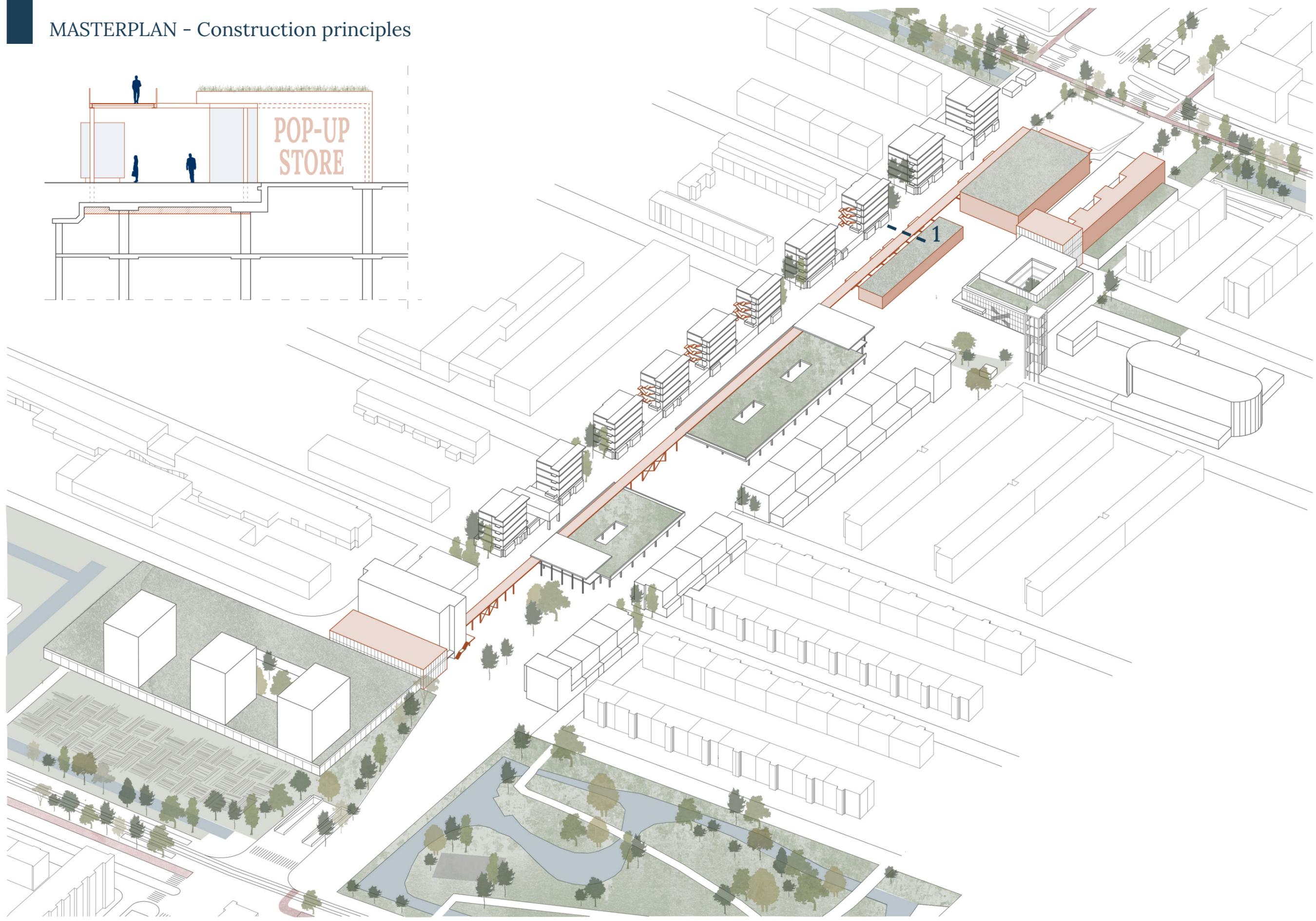
# MASTERPLAN - Activation of rooftops



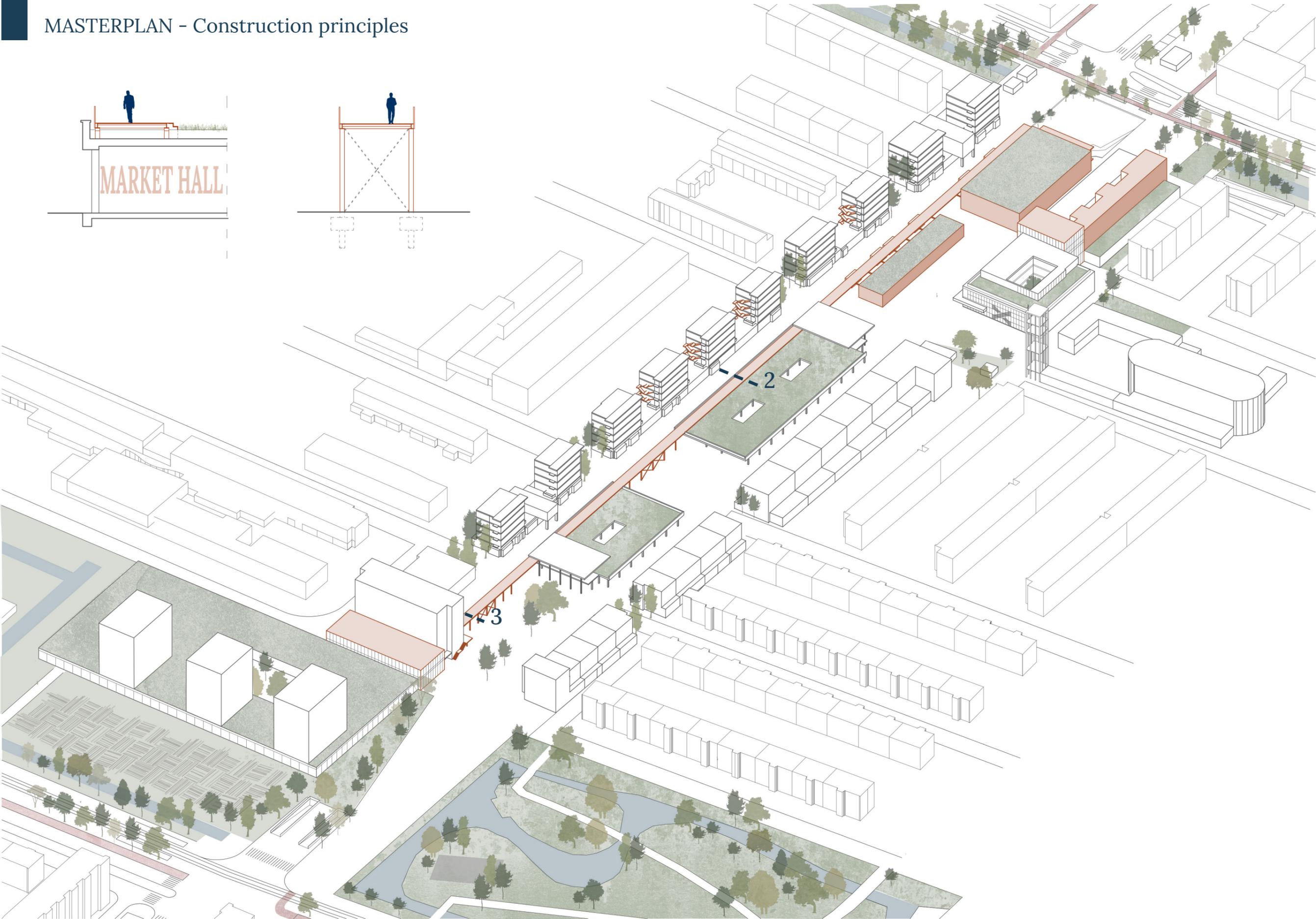
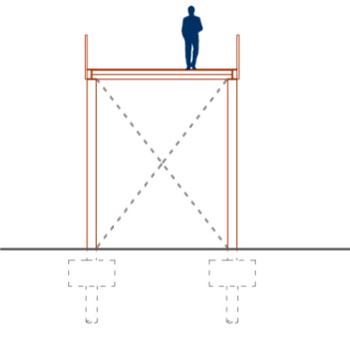
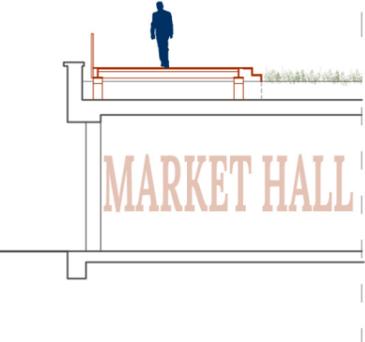
MASTERPLAN - Urban vitality



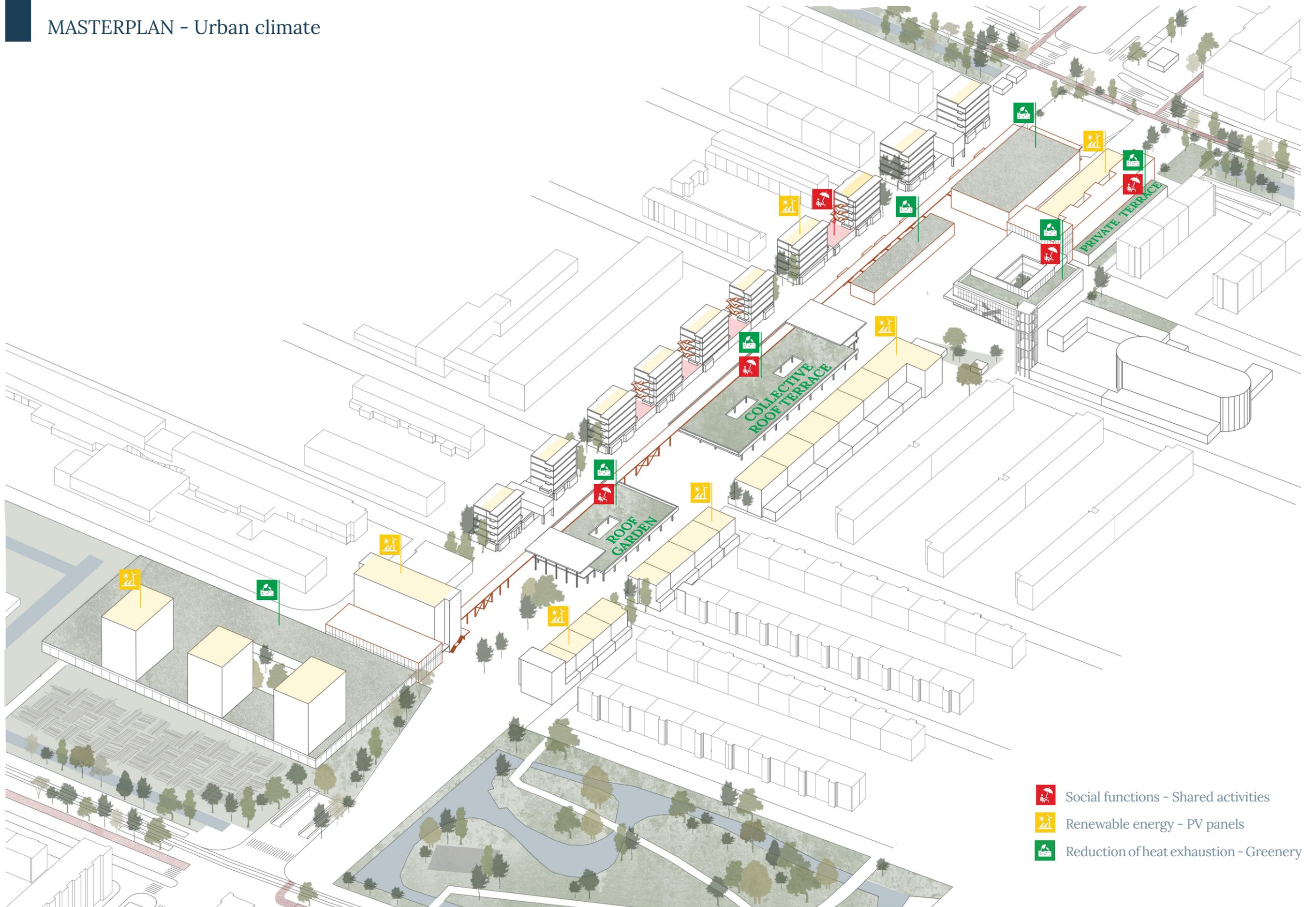
# MASTERPLAN - Construction principles



MASTERPLAN - Construction principles



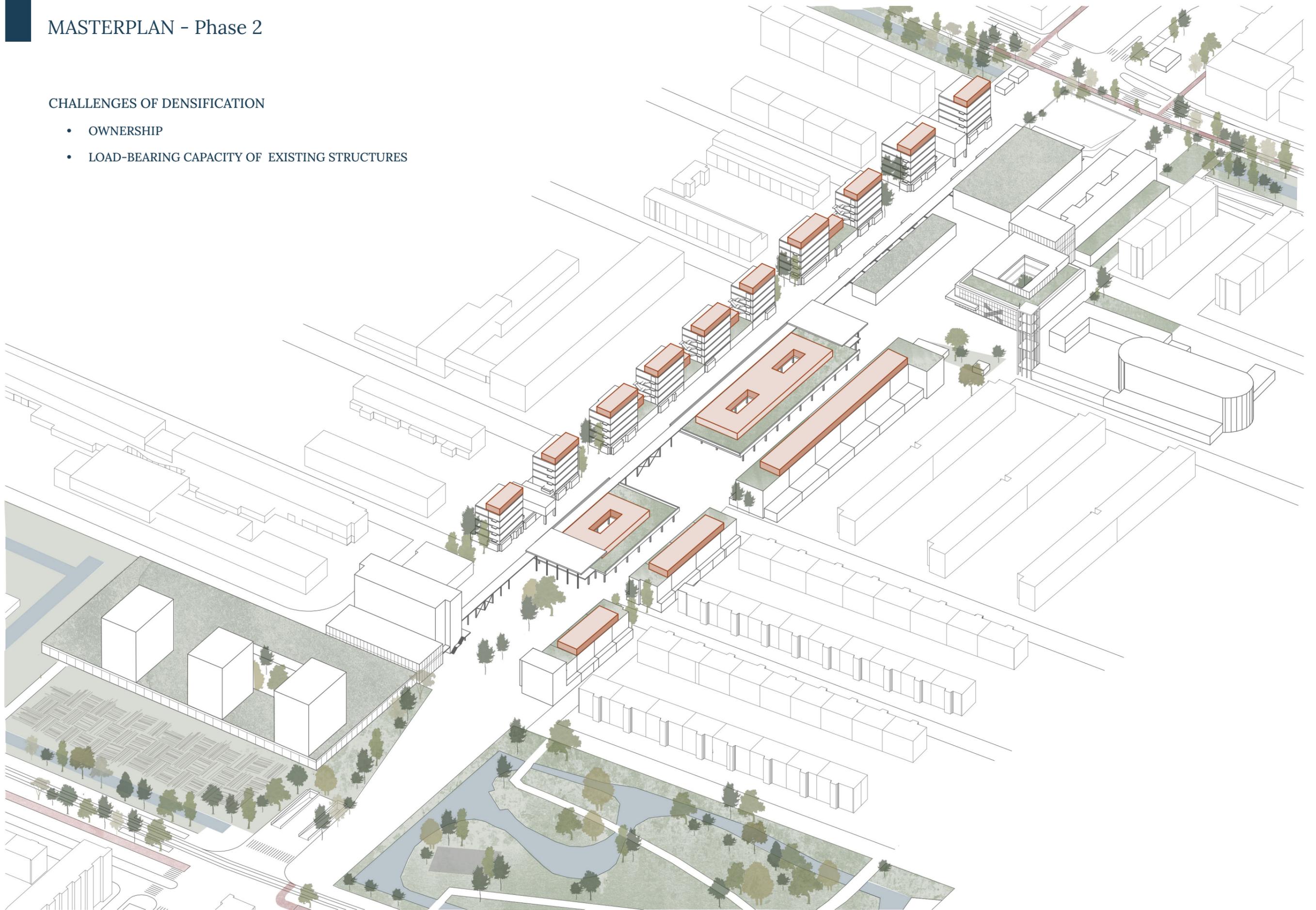
# MASTERPLAN - Urban climate



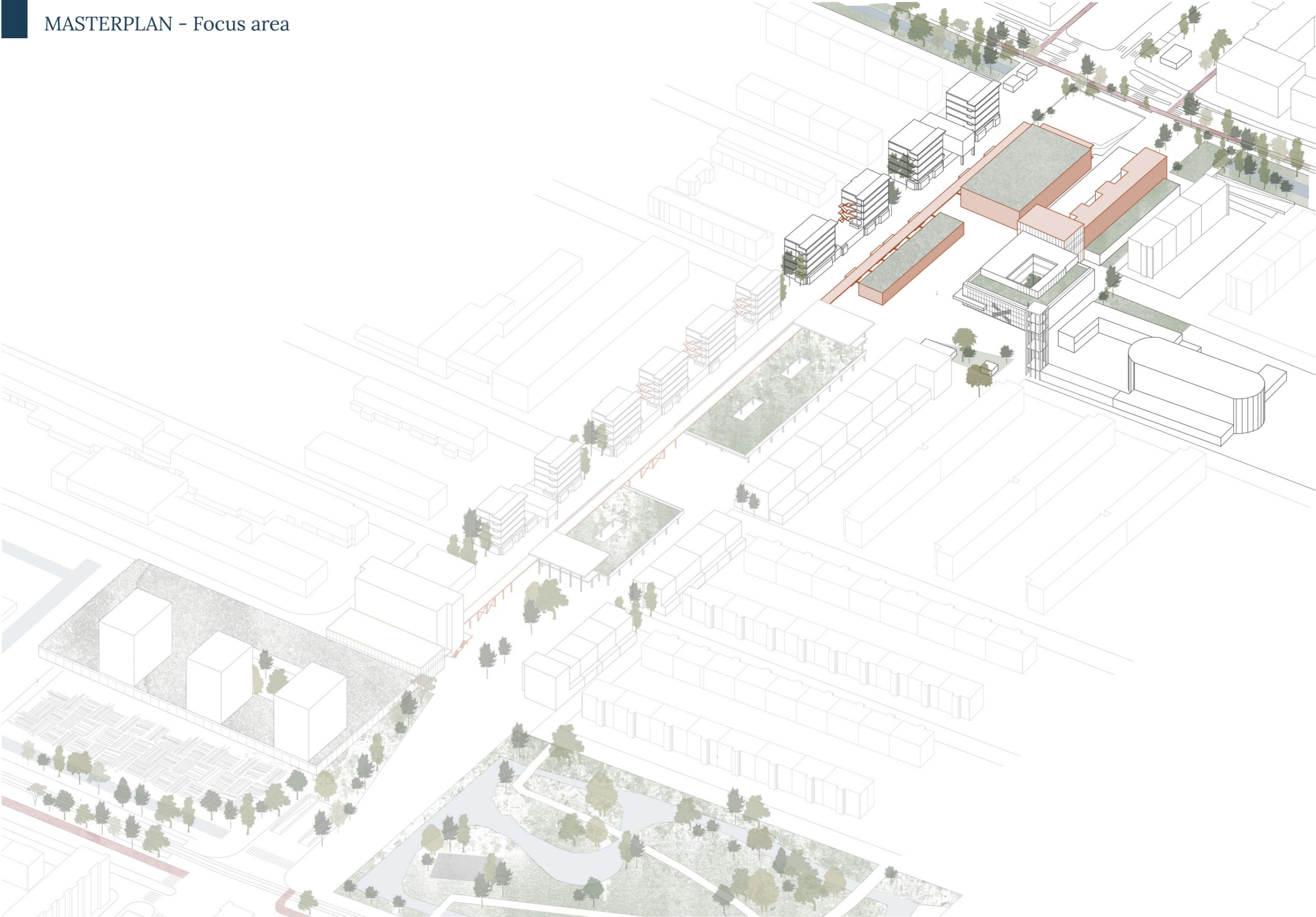
## MASTERPLAN - Phase 2

### CHALLENGES OF DENSIFICATION

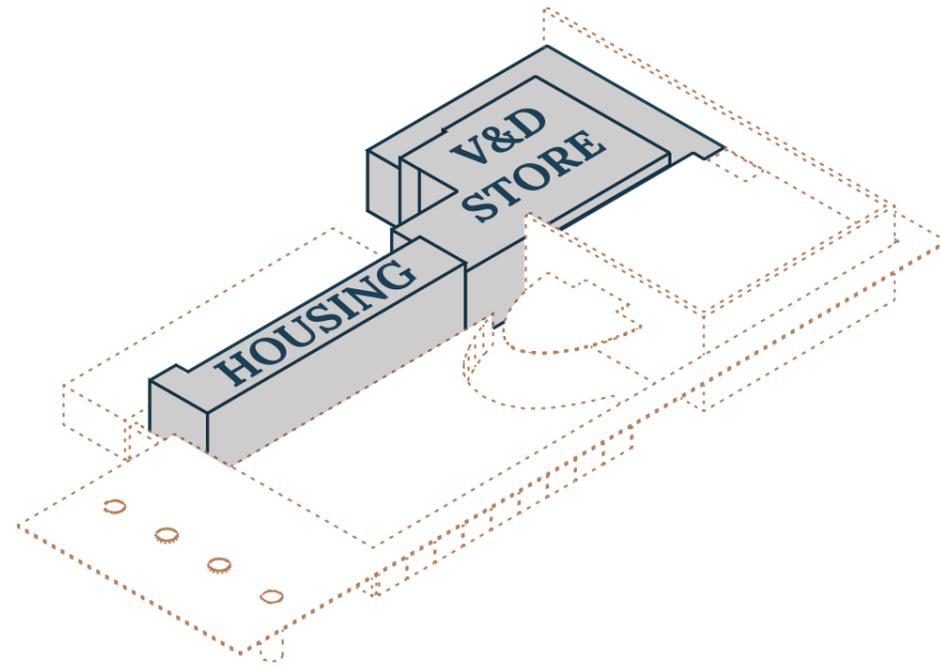
- OWNERSHIP
- LOAD-BEARING CAPACITY OF EXISTING STRUCTURES



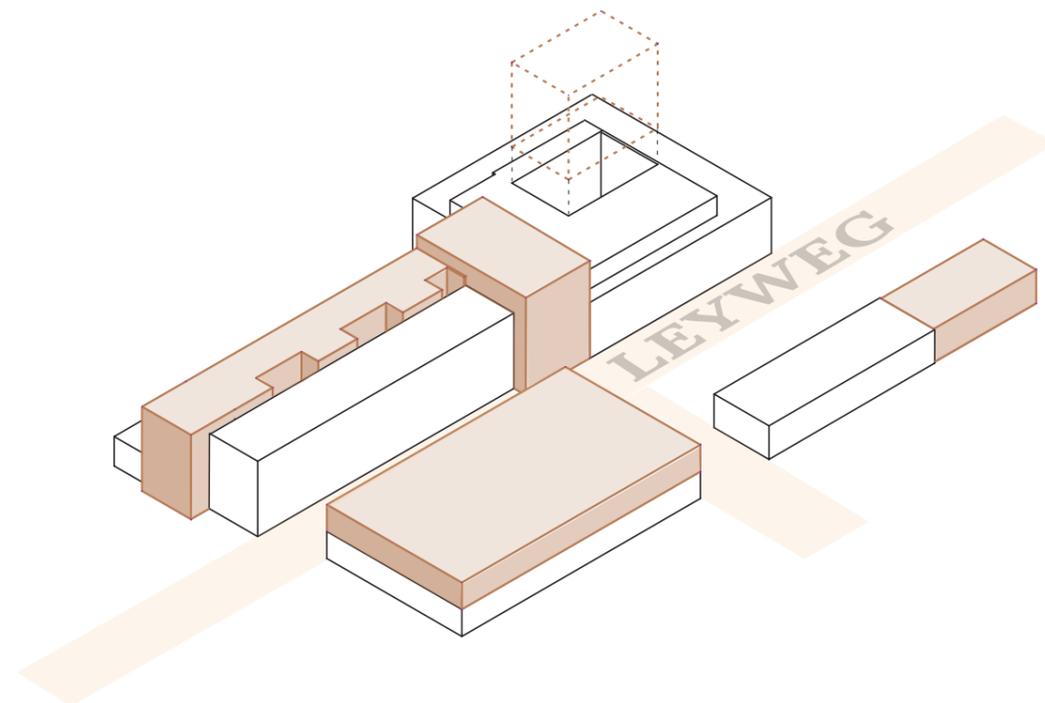
MASTERPLAN - Focus area



FOCUS OF RE-DESIGN



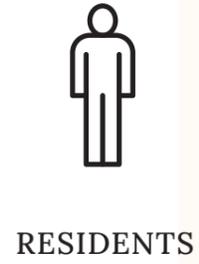
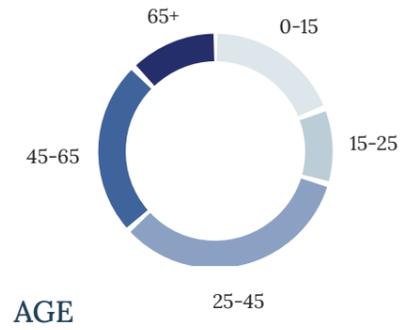
ORIGINAL PART & ADDITIONS



PROPOSAL

# FOCUS OF RE-DESIGN - Concept

TARGET GROUPS



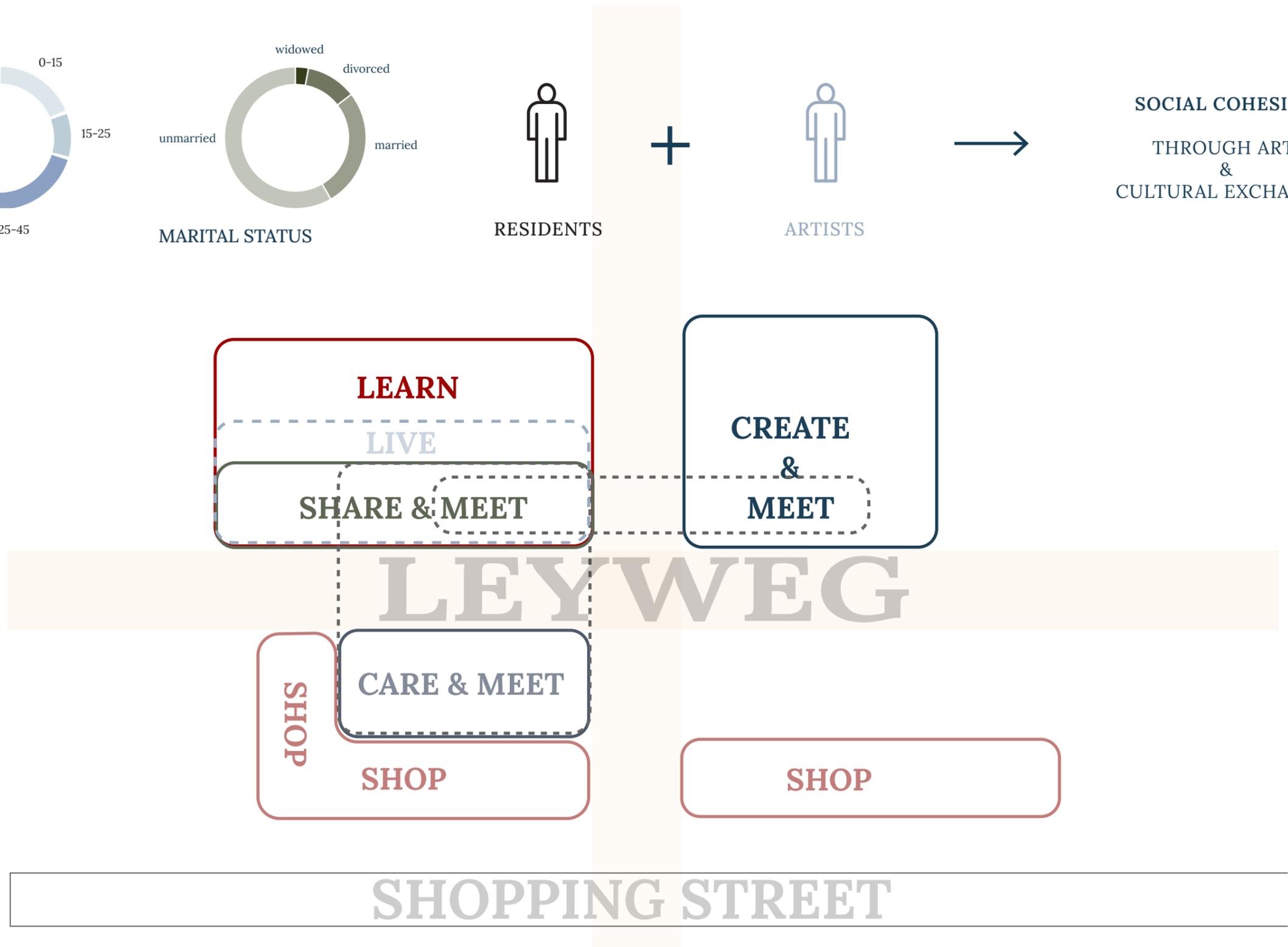
RESIDENTS



ARTISTS

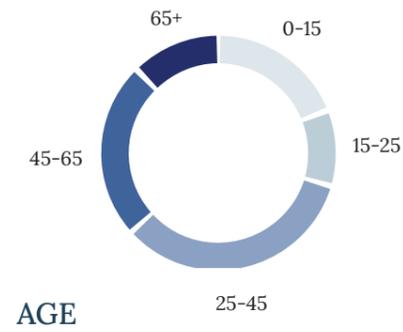


SOCIAL COHESION  
THROUGH ART  
&  
CULTURAL EXCHANGE



# FOCUS OF RE-DESIGN - Concept

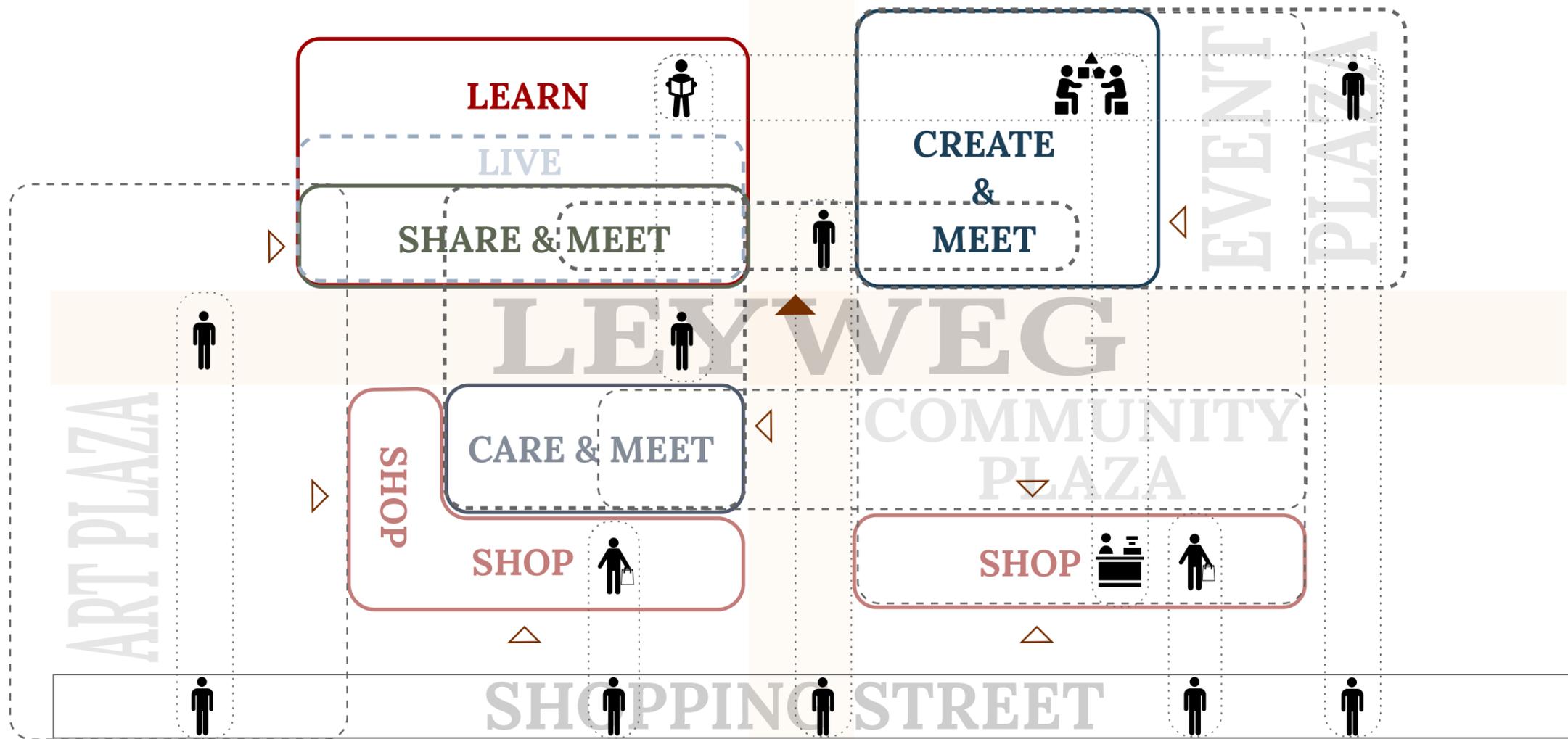
TARGET GROUPS



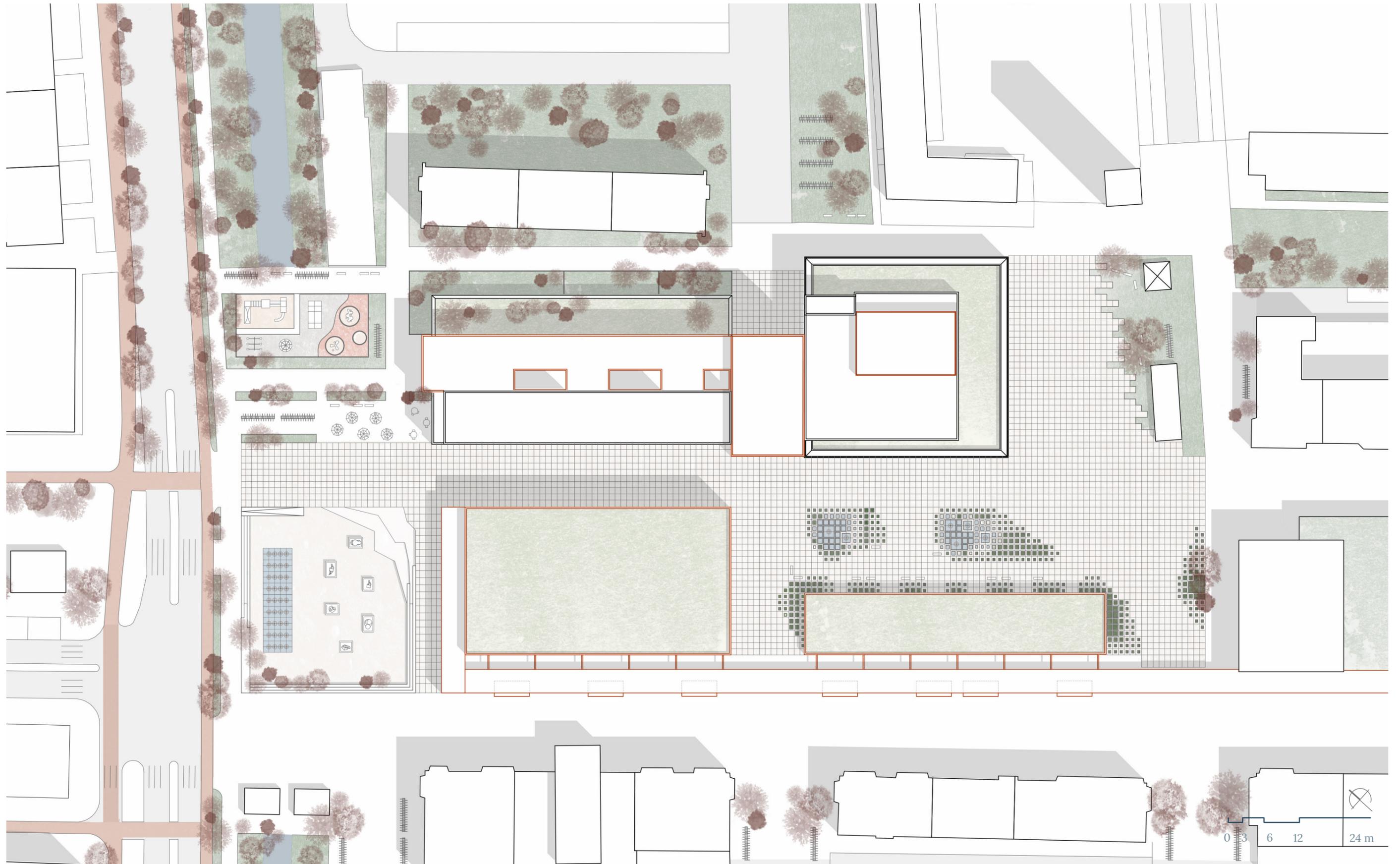
RESIDENTS

ARTISTS

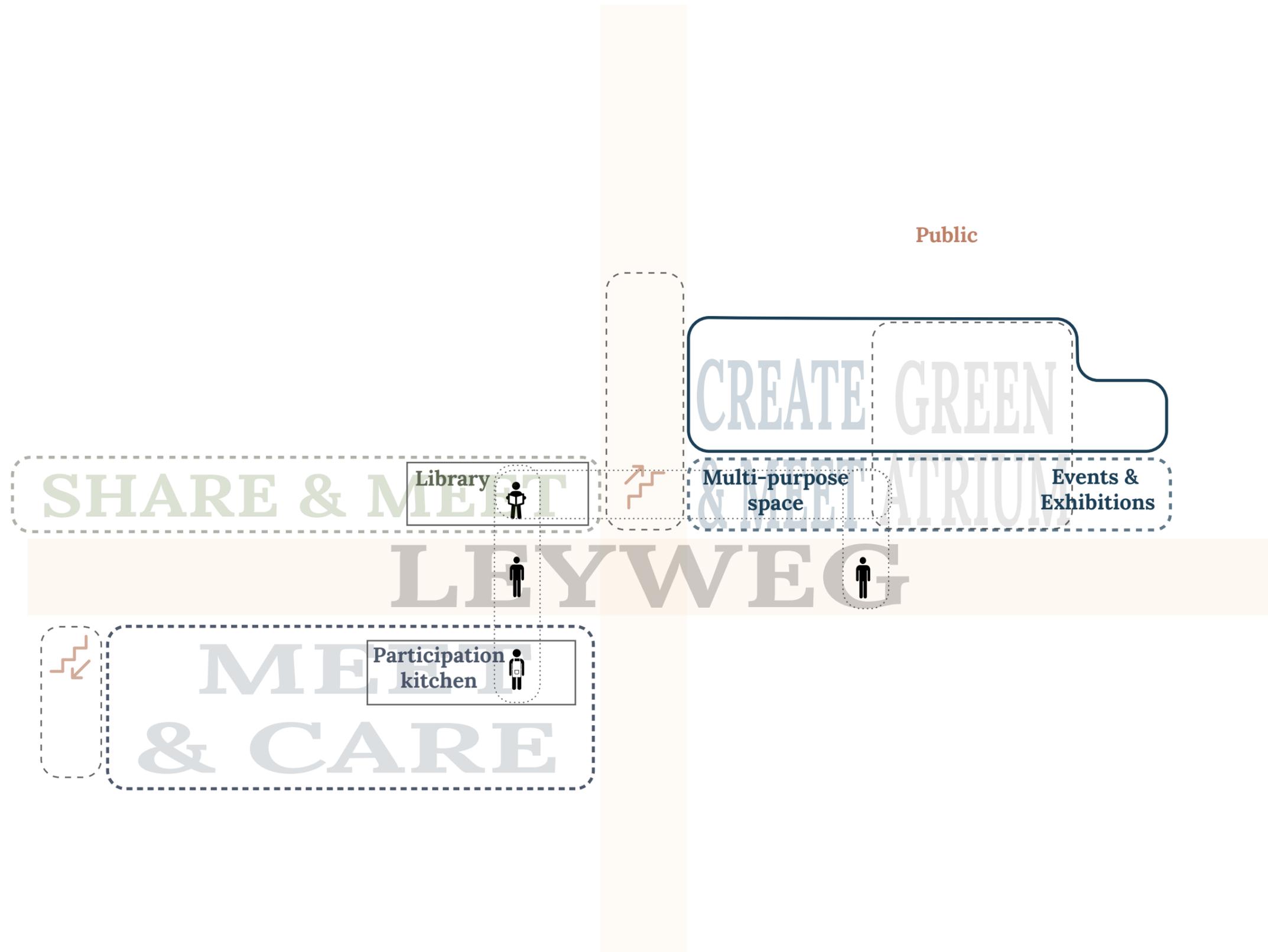
SOCIAL COHESION  
THROUGH ART  
&  
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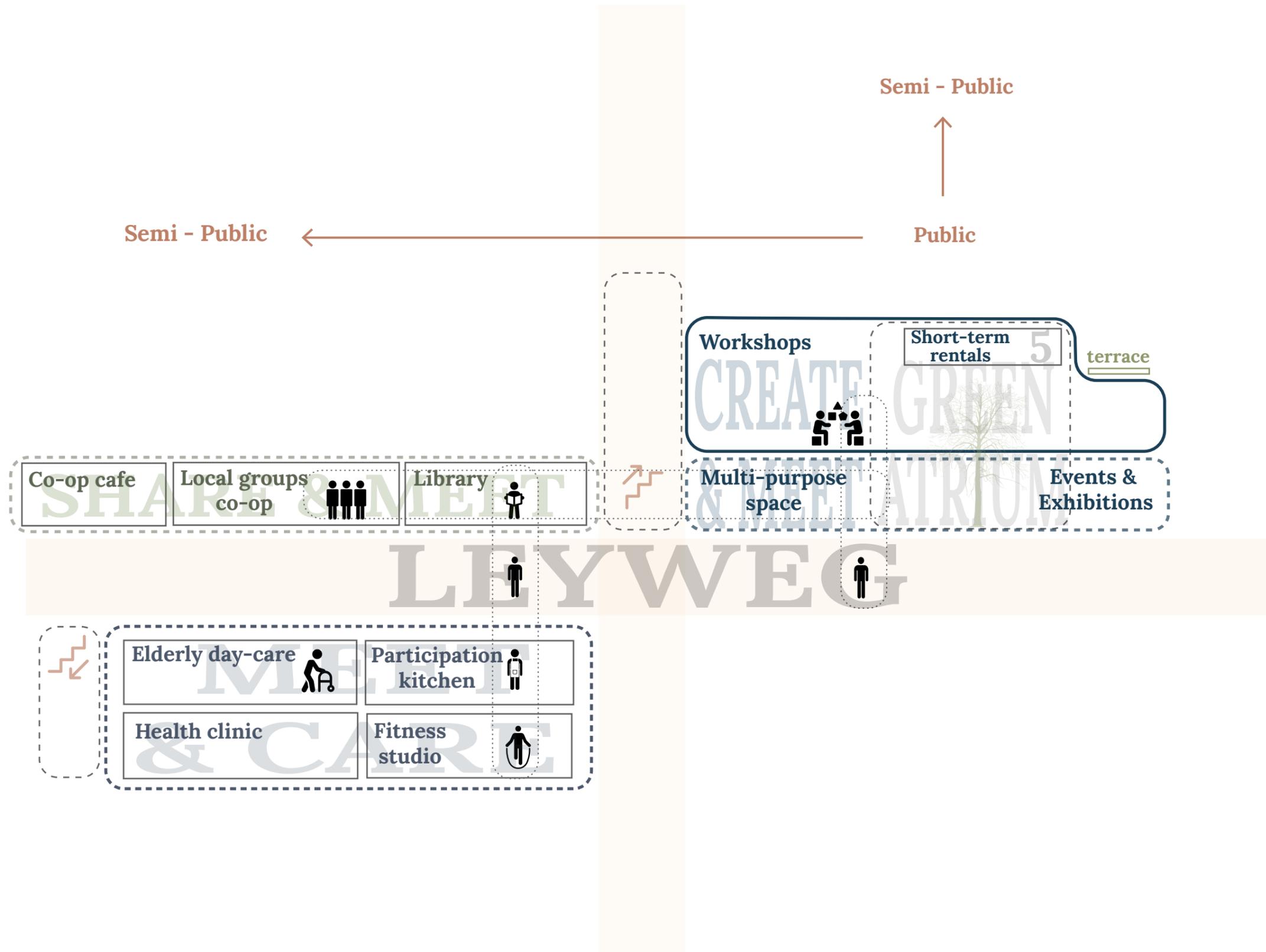
# FOCUS OF RE-DESIGN - Site plan



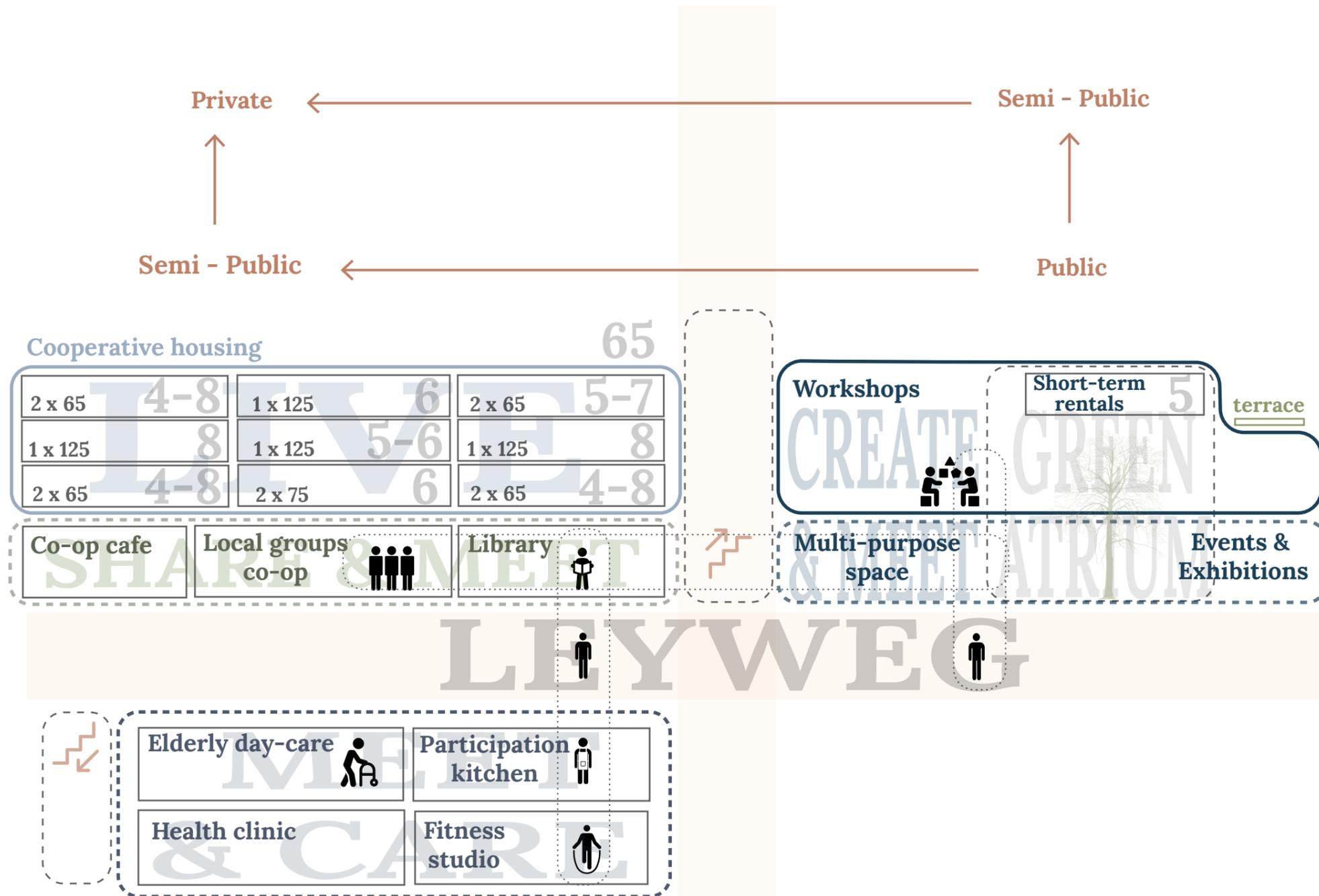
FOCUS OF RE-DESIGN - Functional diagram



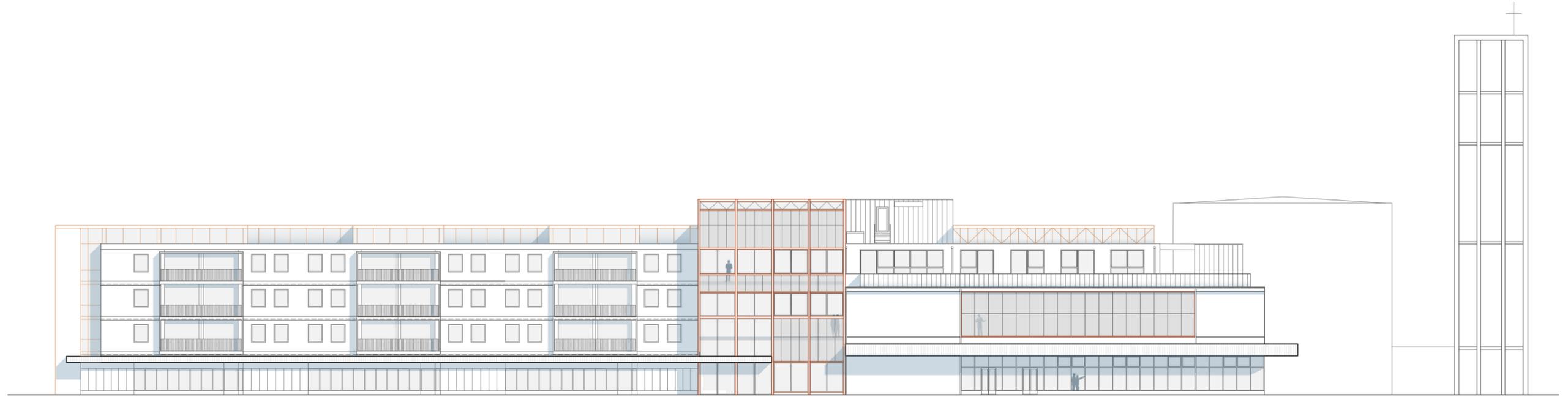
FOCUS OF RE-DESIGN - Functional diagram



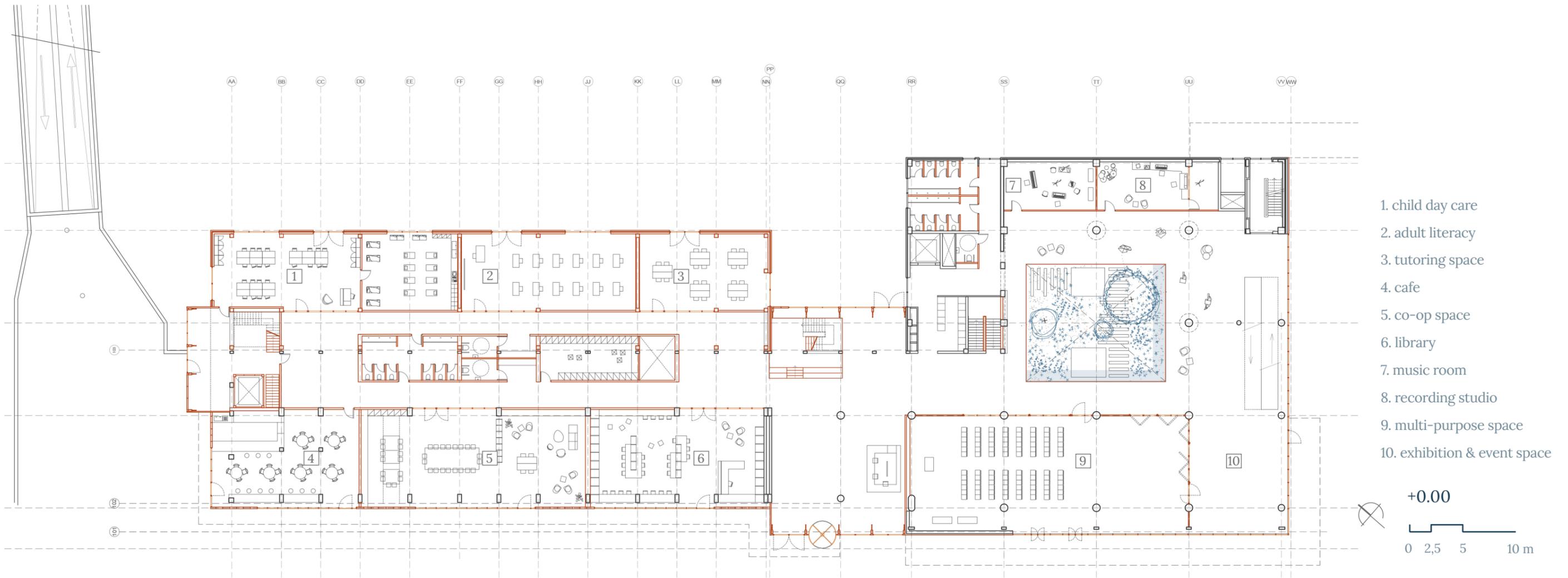
FOCUS OF RE-DESIGN - Functional diagram



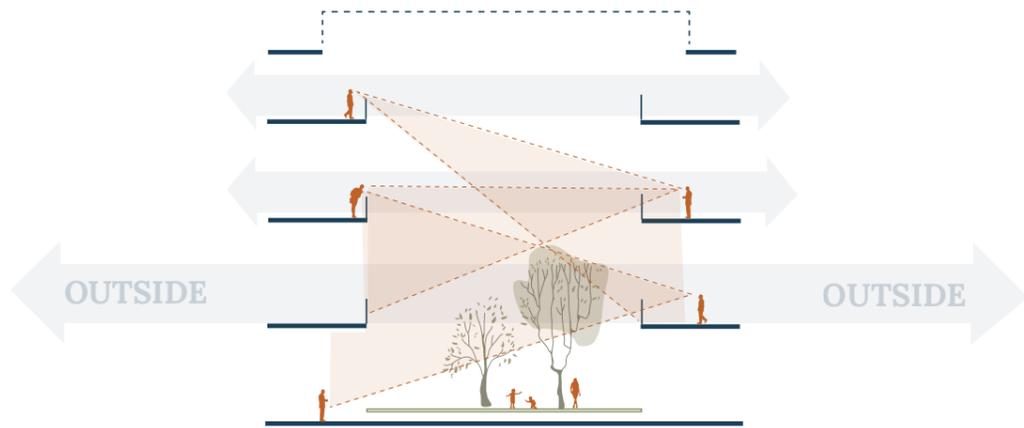
# SPATIAL CONFIGURATION



Southwest facade

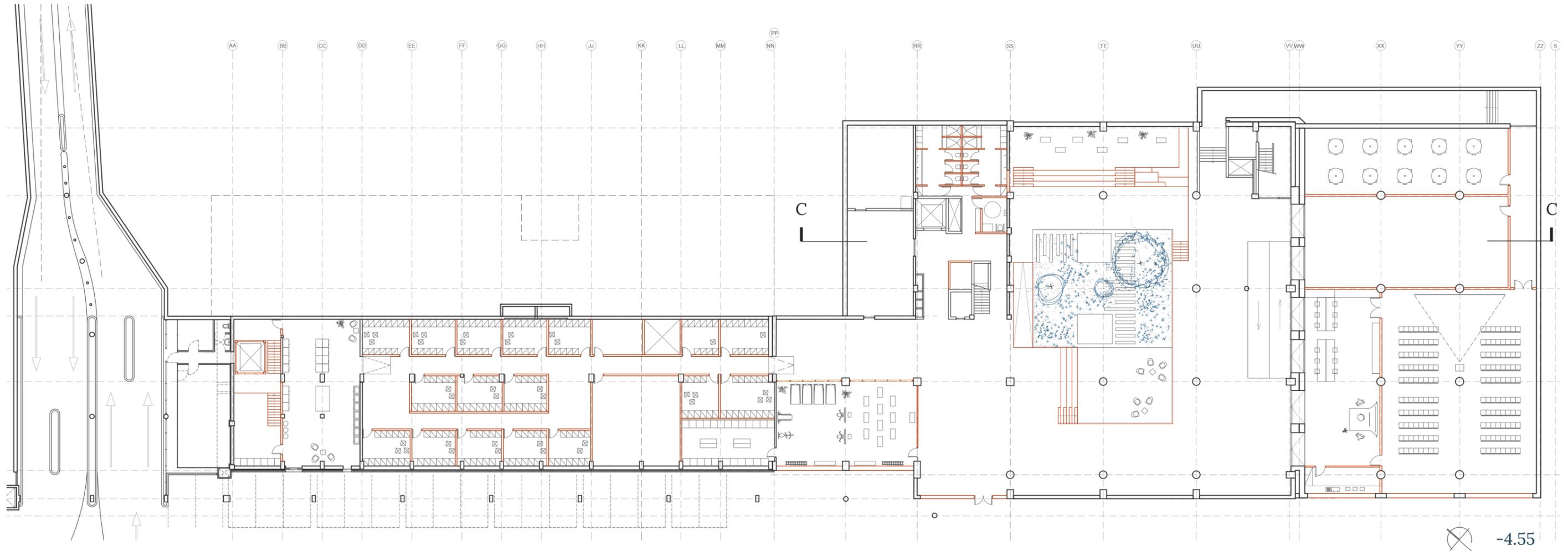


# SPATIAL CONFIGURATION



Section C-C

0 2,5 5 10 m

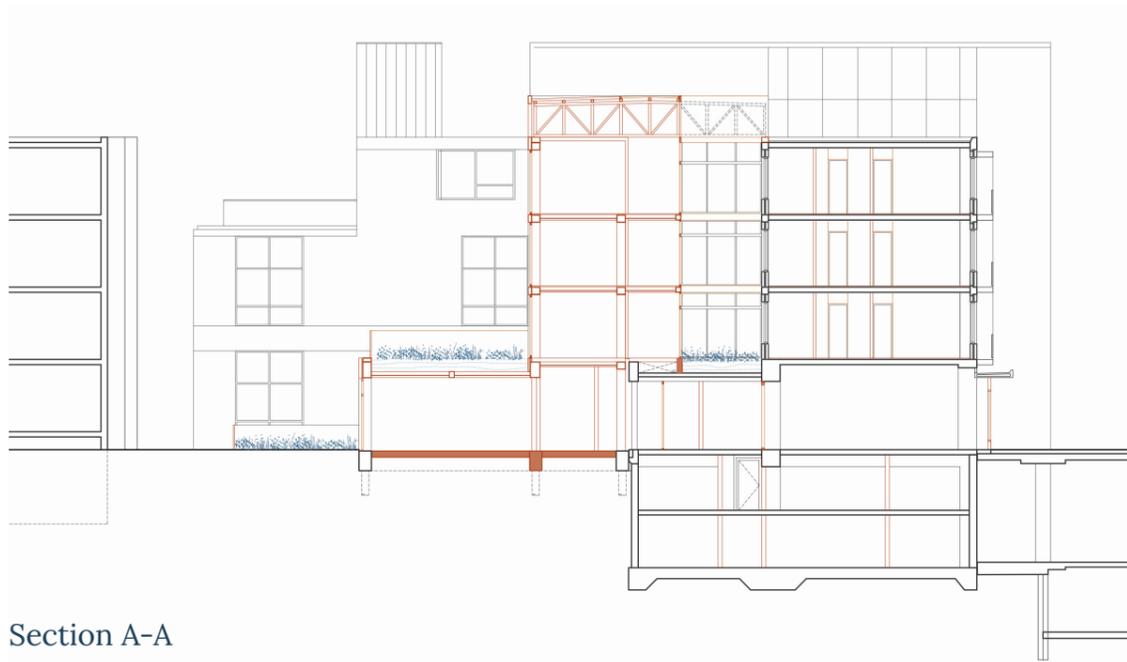


-4.55

ARCHITECTURAL EXPRESSION - Green Atrium

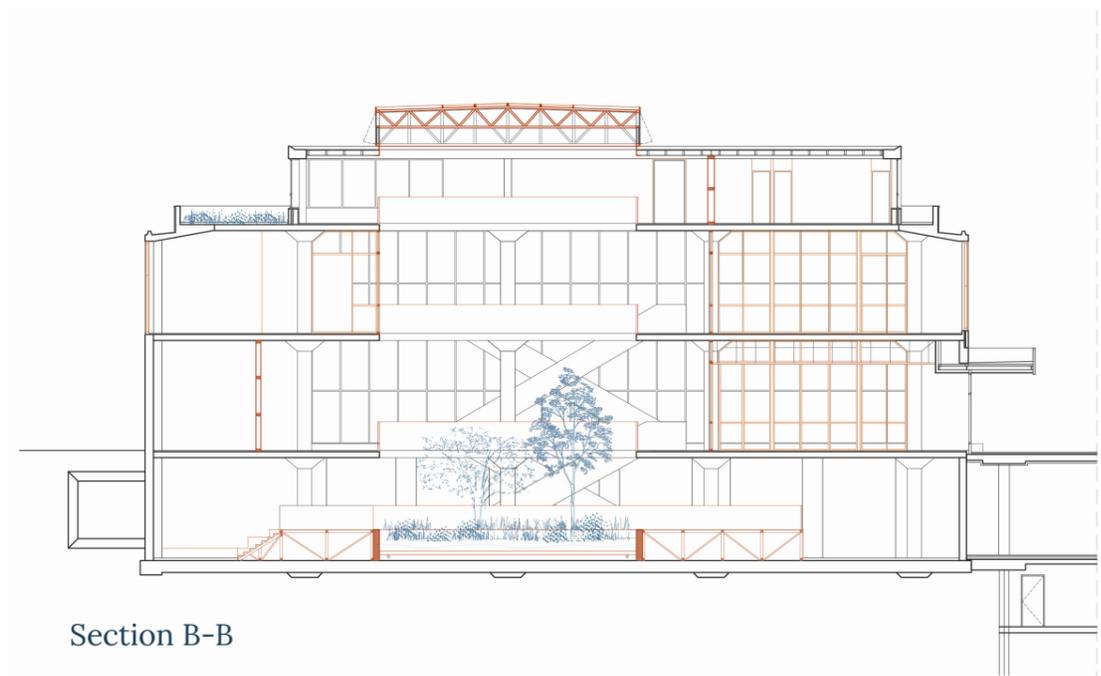


# SPATIAL CONFIGURATION

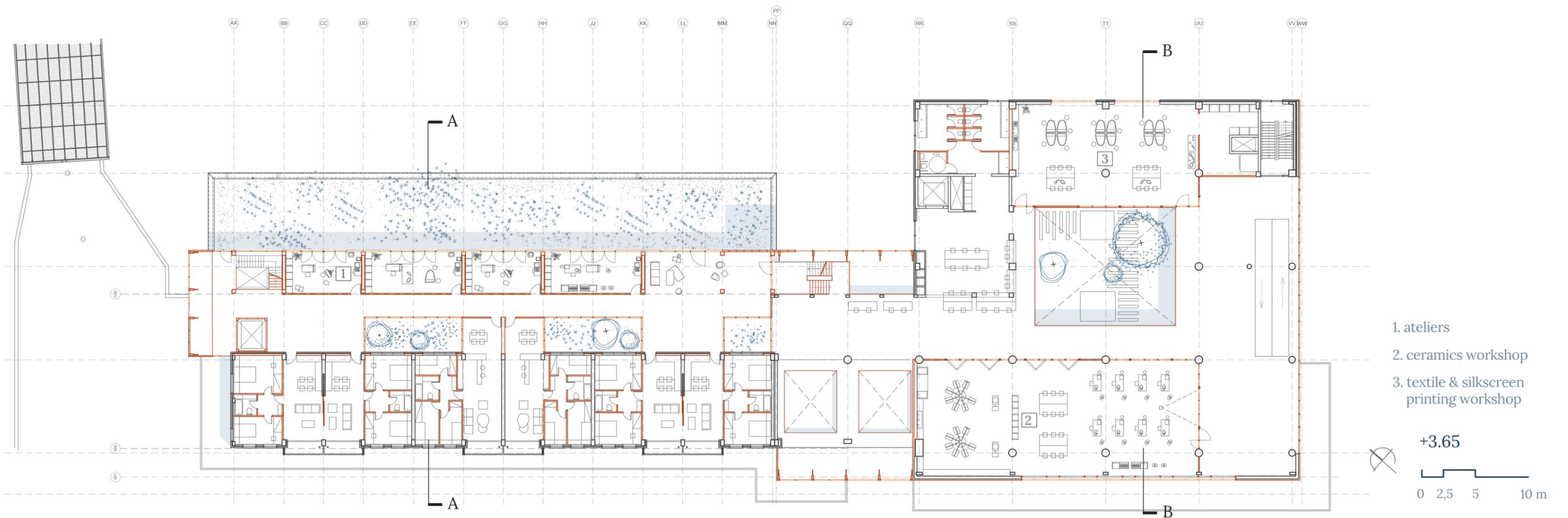


Section A-A

0 2 4 8 m



Section B-B

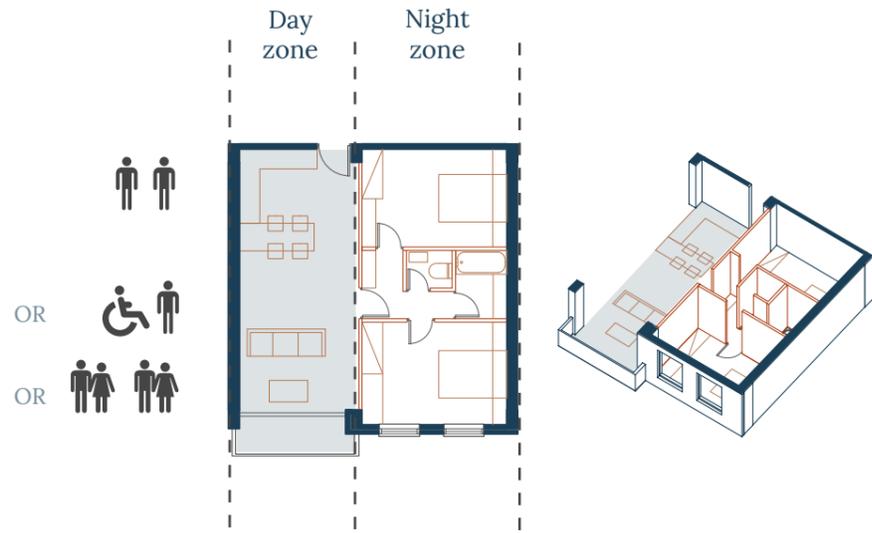


- 1. ateliers
- 2. ceramics workshop
- 3. textile & silkscreen printing workshop

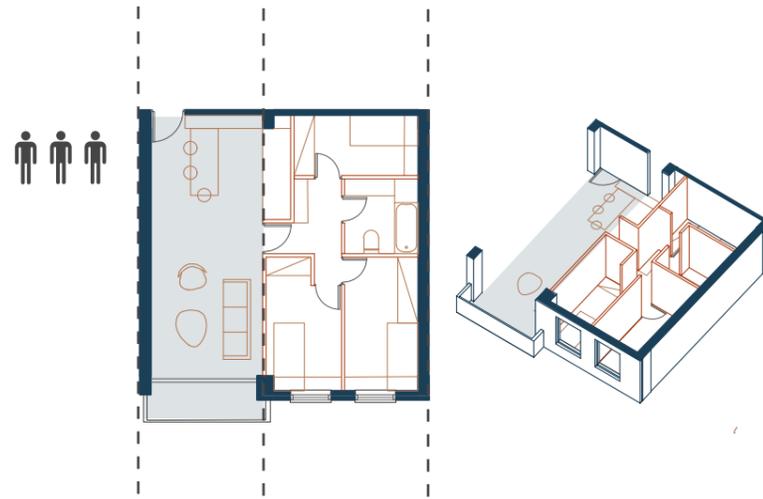
+3.65

0 2,5 5 10 m

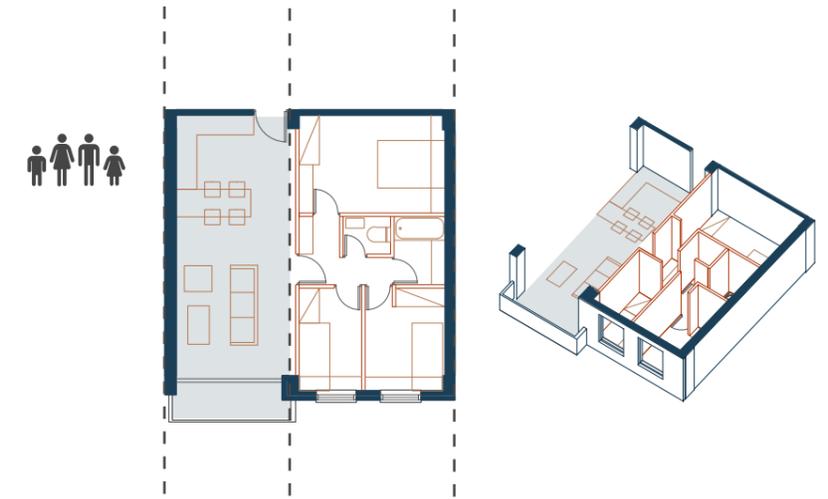
# SPATIAL CONFIGURATION - Residential Units



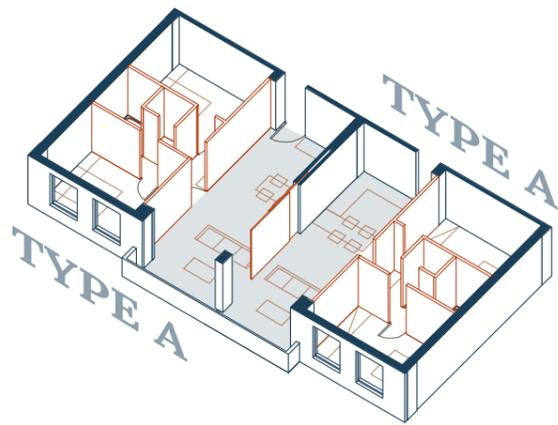
TYPE A  
2-bedroom apartment



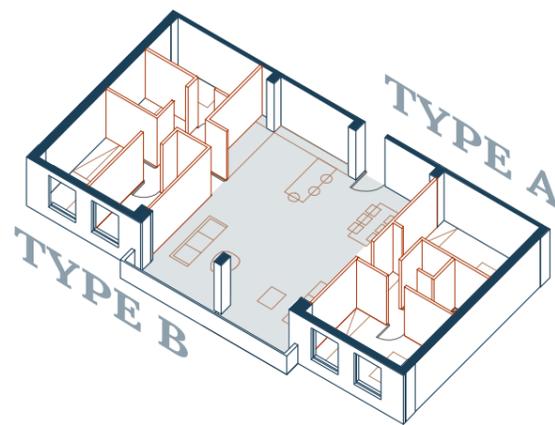
TYPE B  
3-bedroom apartment



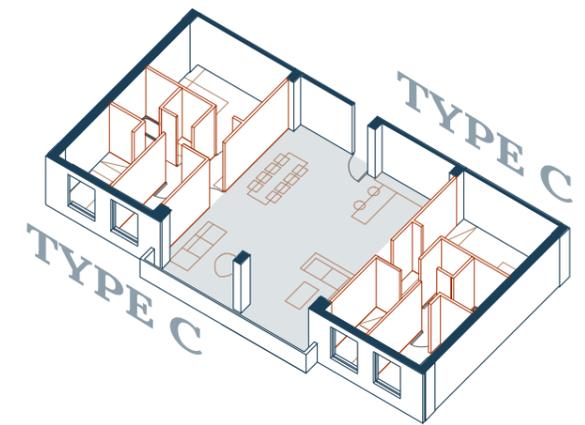
TYPE C  
Family apartment



OPTION 1  
4-bedroom apartment



OPTION 2  
5-bedroom apartment

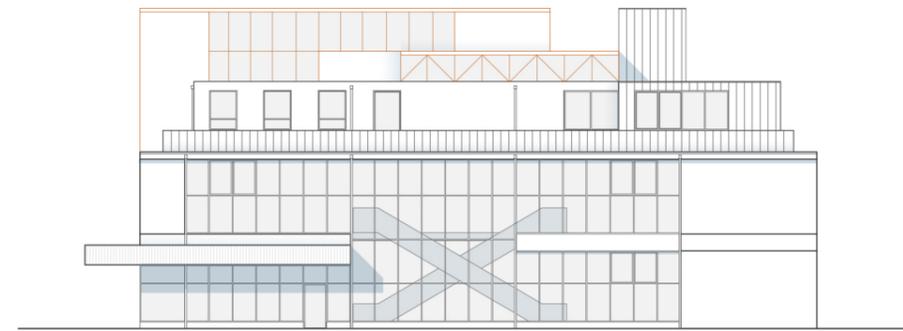


OPTION 3  
Multi-generational family apartment

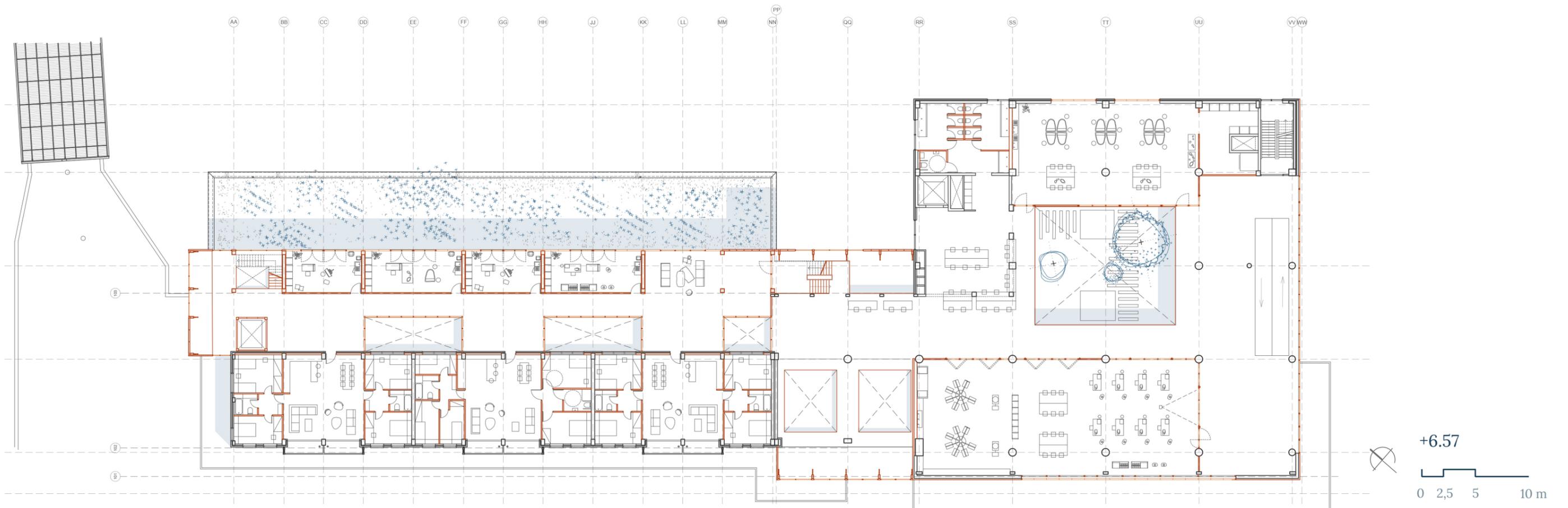
# SPATIAL CONFIGURATION



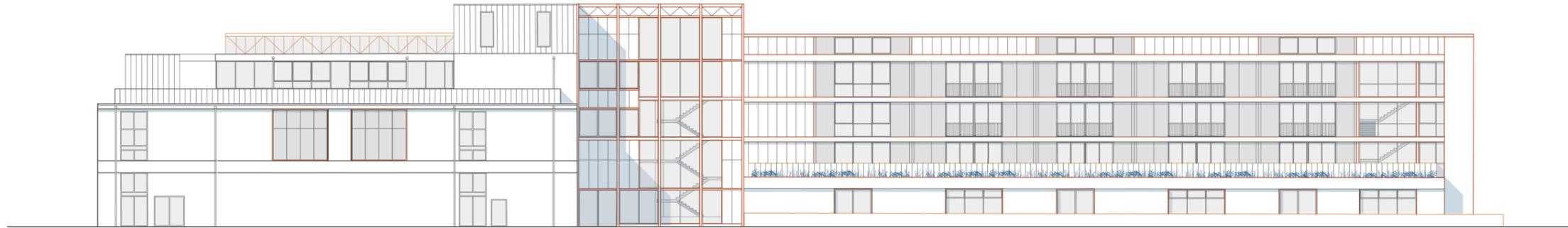
Northwest facade



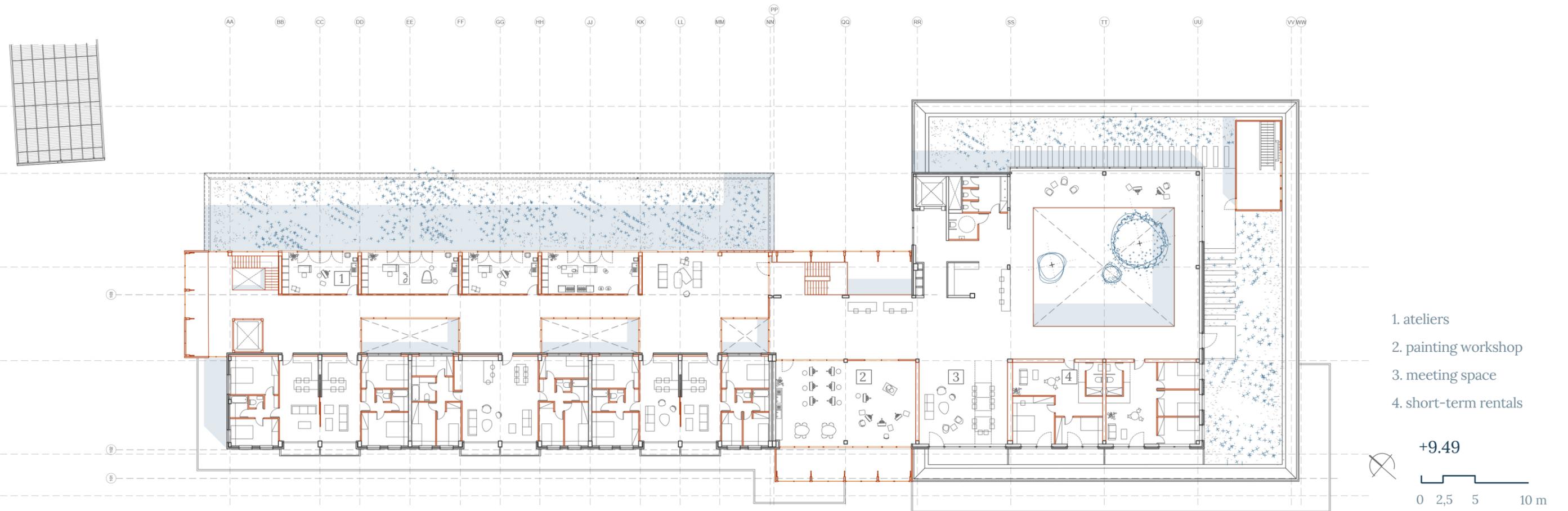
Southeast facade



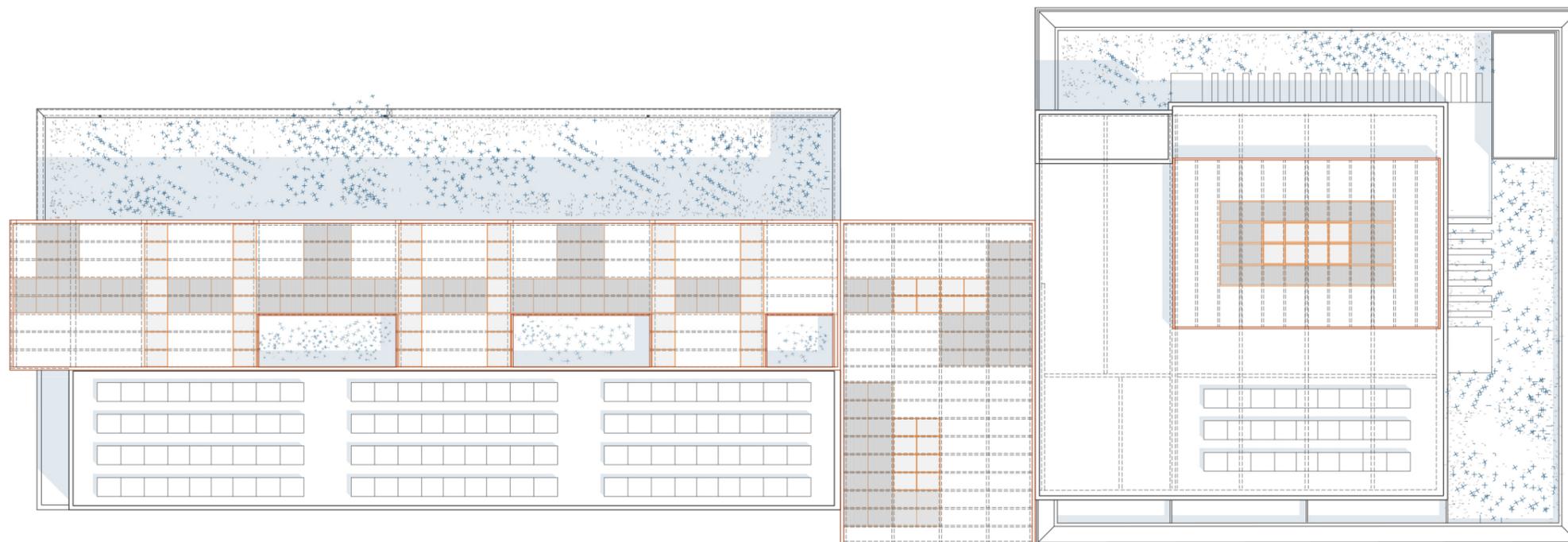
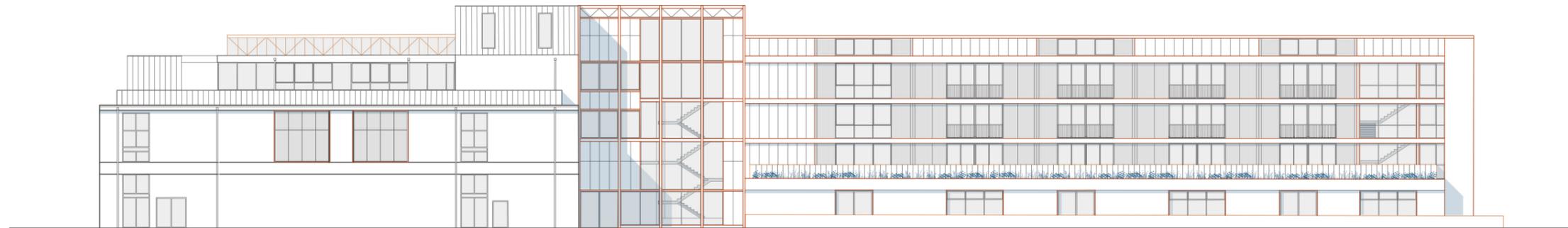
# SPATIAL CONFIGURATION



Northeast facade

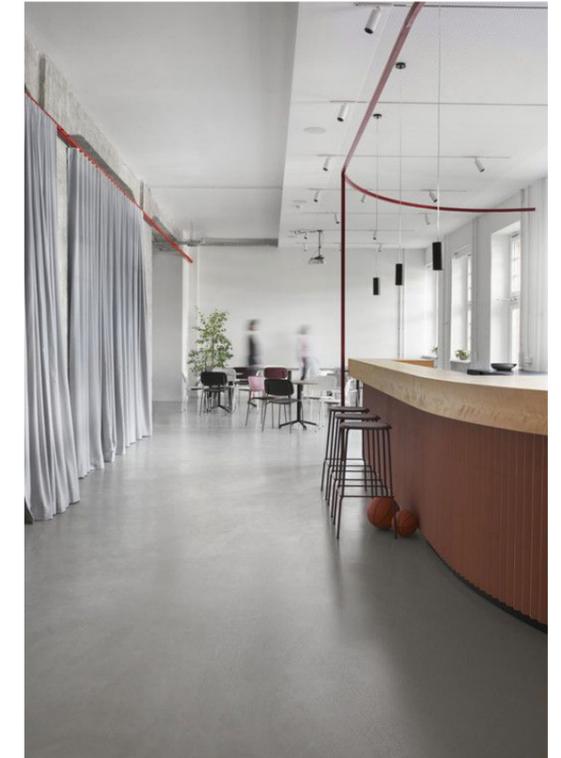


# SPATIAL CONFIGURATION

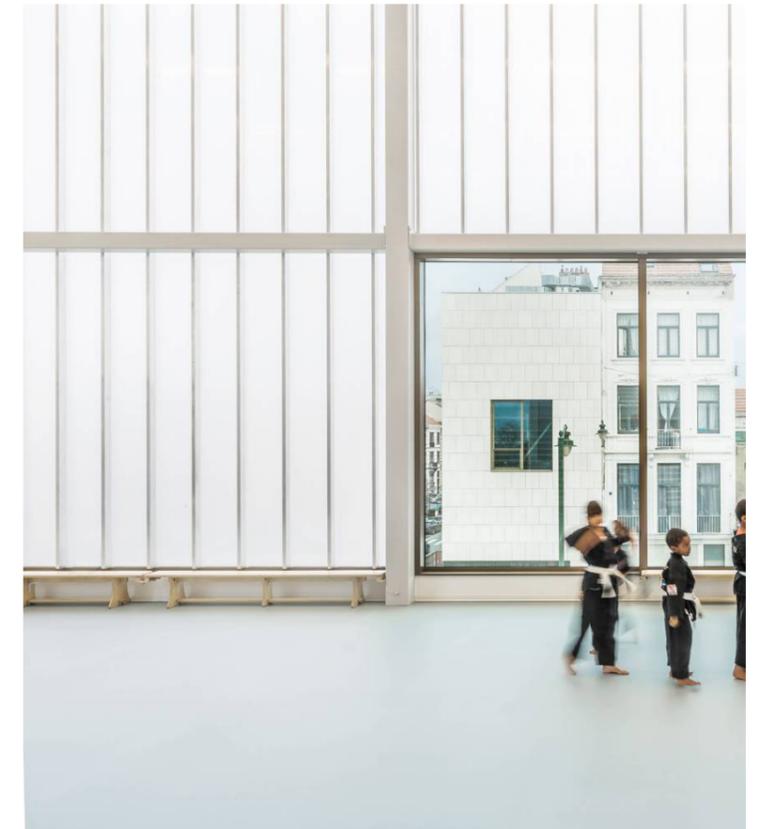
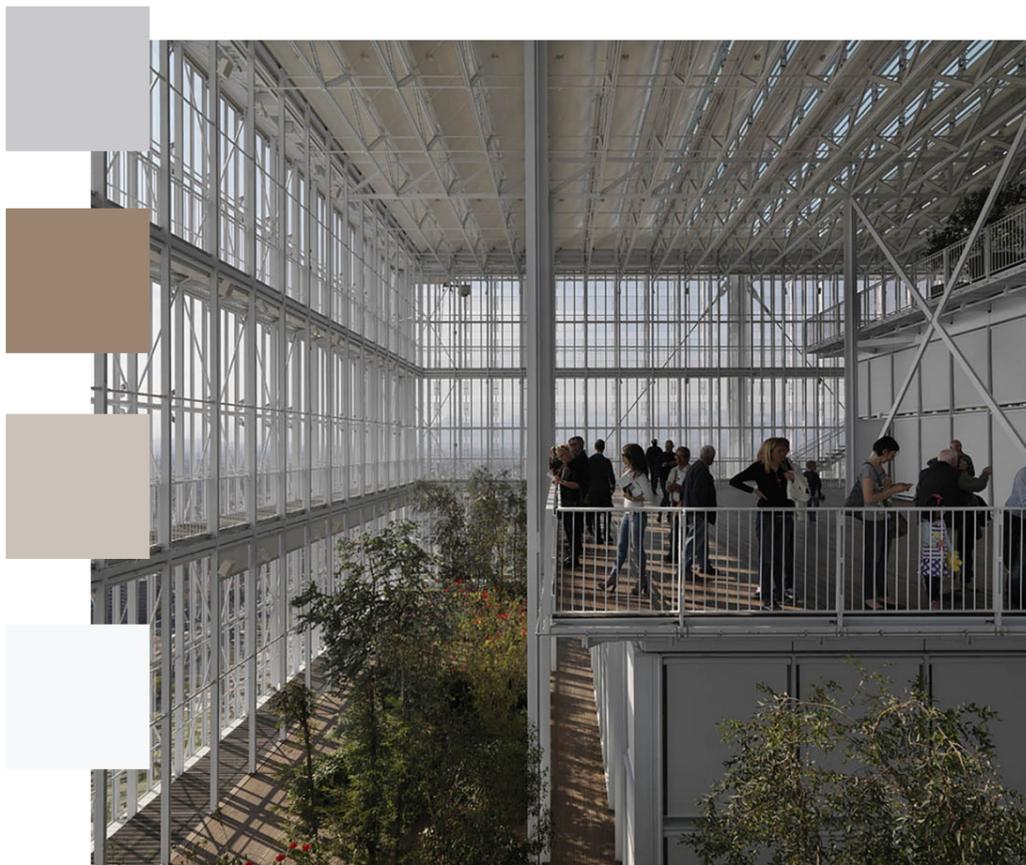


Roof plan  
0 2,5 5 10 m

# ARCHITECTURAL EXPRESSION - Materiality



(MESURA , n.d.; archdaily, 2016; archdaily, 2020)

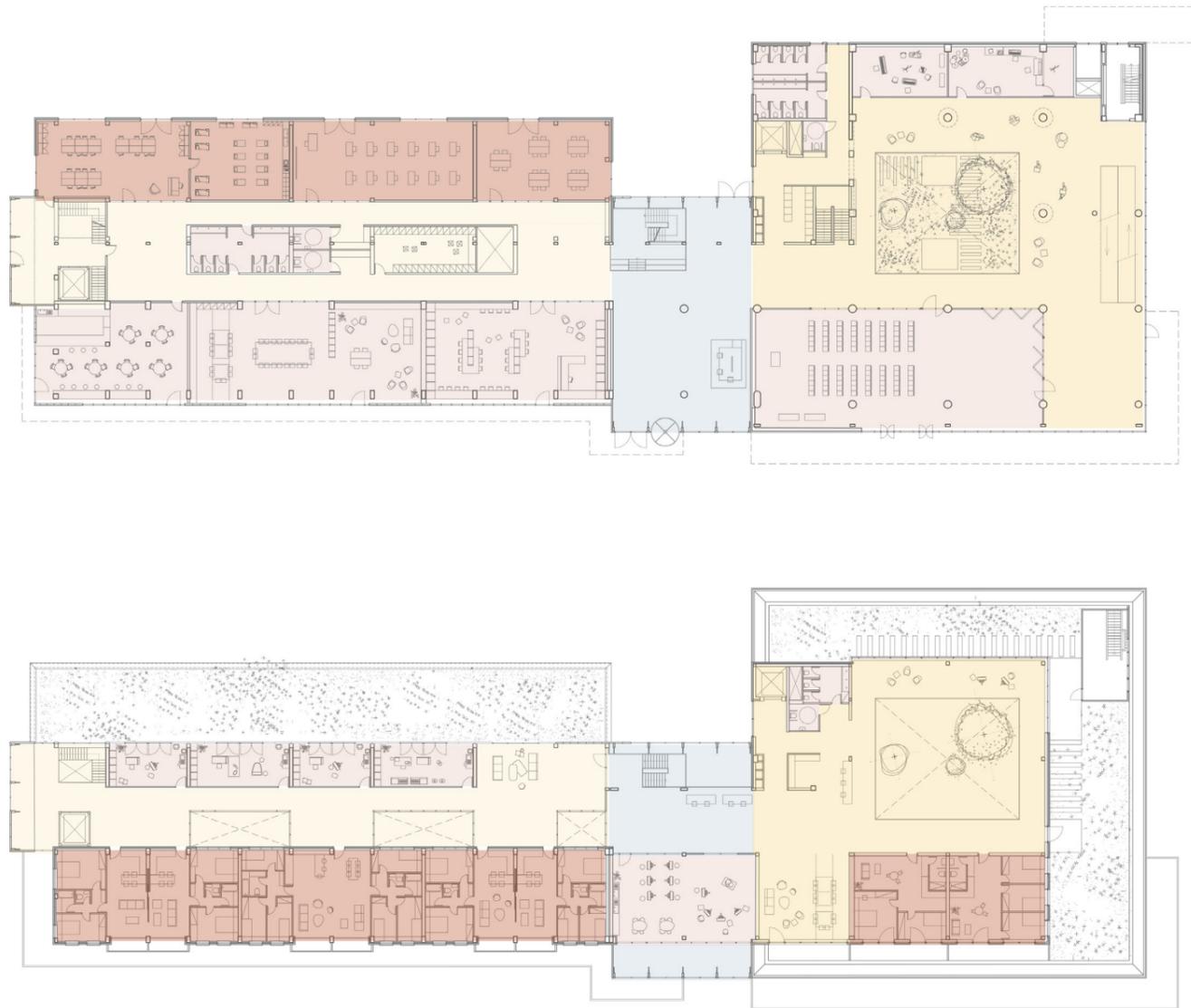


(archdaily, 2015; designboom, 2021; B-architecten, 2020)

ARCHITECTURAL EXPRESSION - Atrium Space

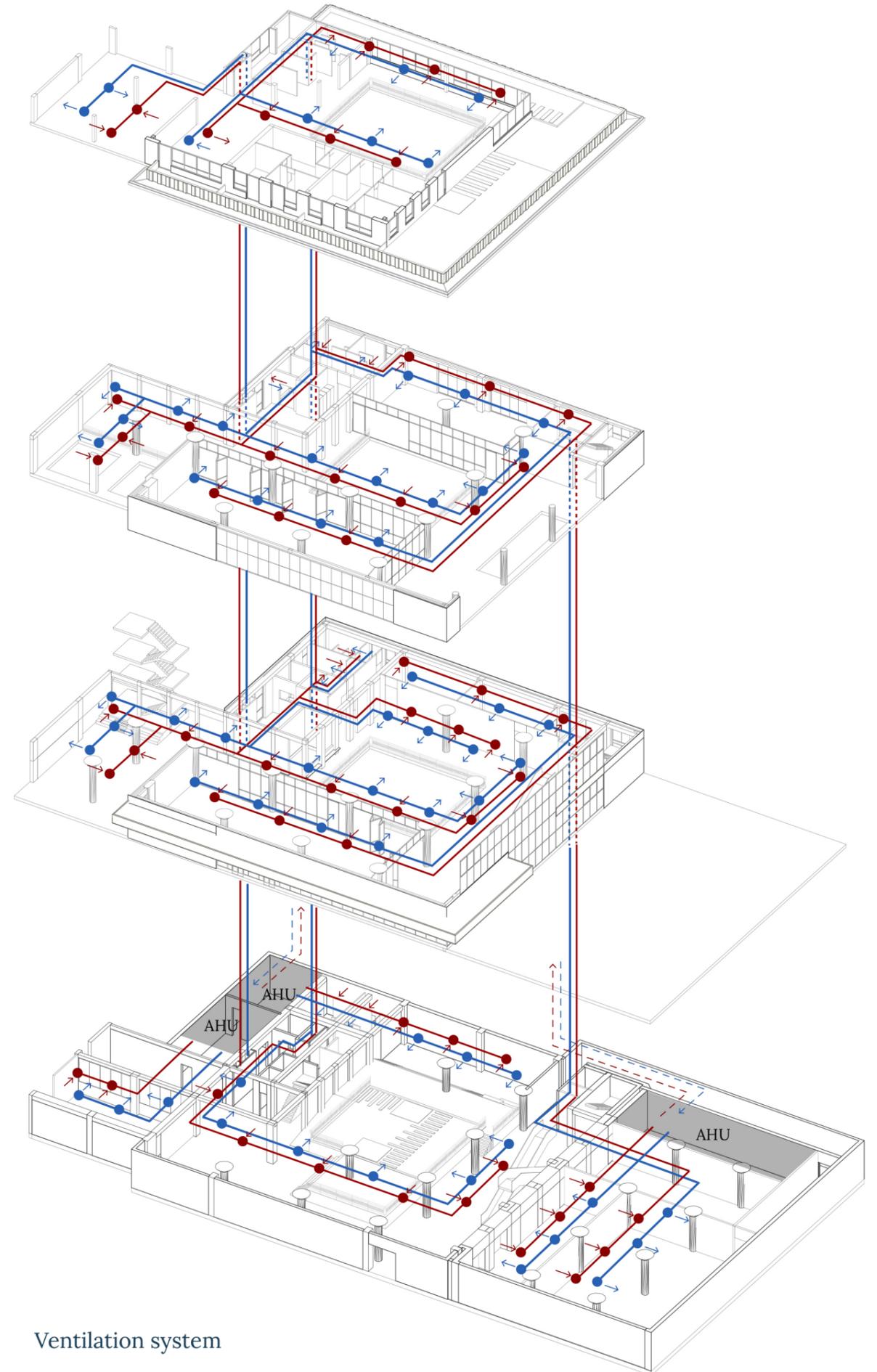


# CLIMATE DESIGN



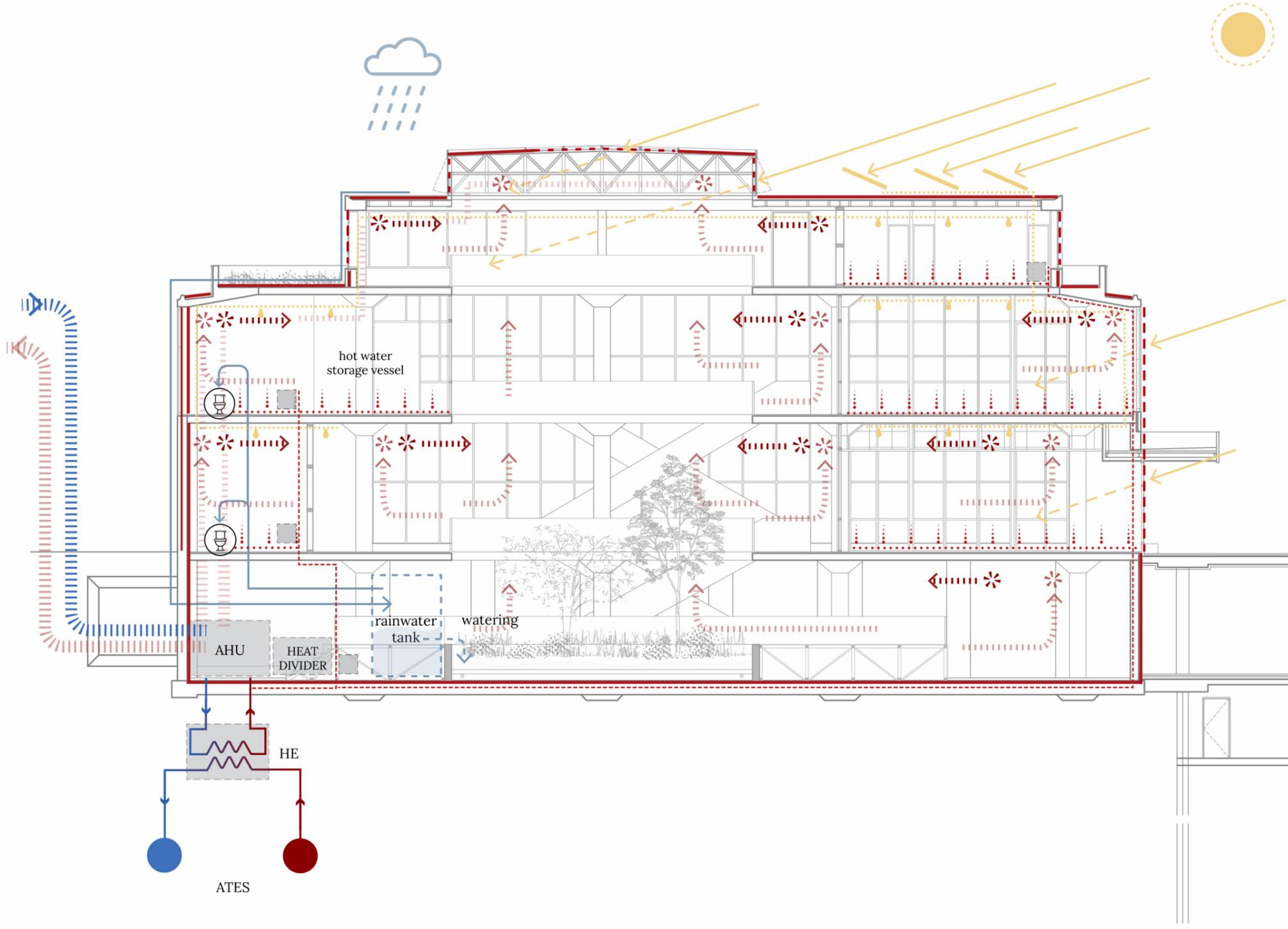
## Temperature demands

- Tmin winter: 22°C - Tmax summer: 24°C
- Tmin winter: 20°C - Tmax summer: 25°C
- Tmin winter: 17°C - Tmax summer: outside temperature +1/2°C
- Tmin winter: 15°C - Tmax summer: 26°C
- Tmin winter: 12°C - Tmax summer: outside temperature +1/2°C

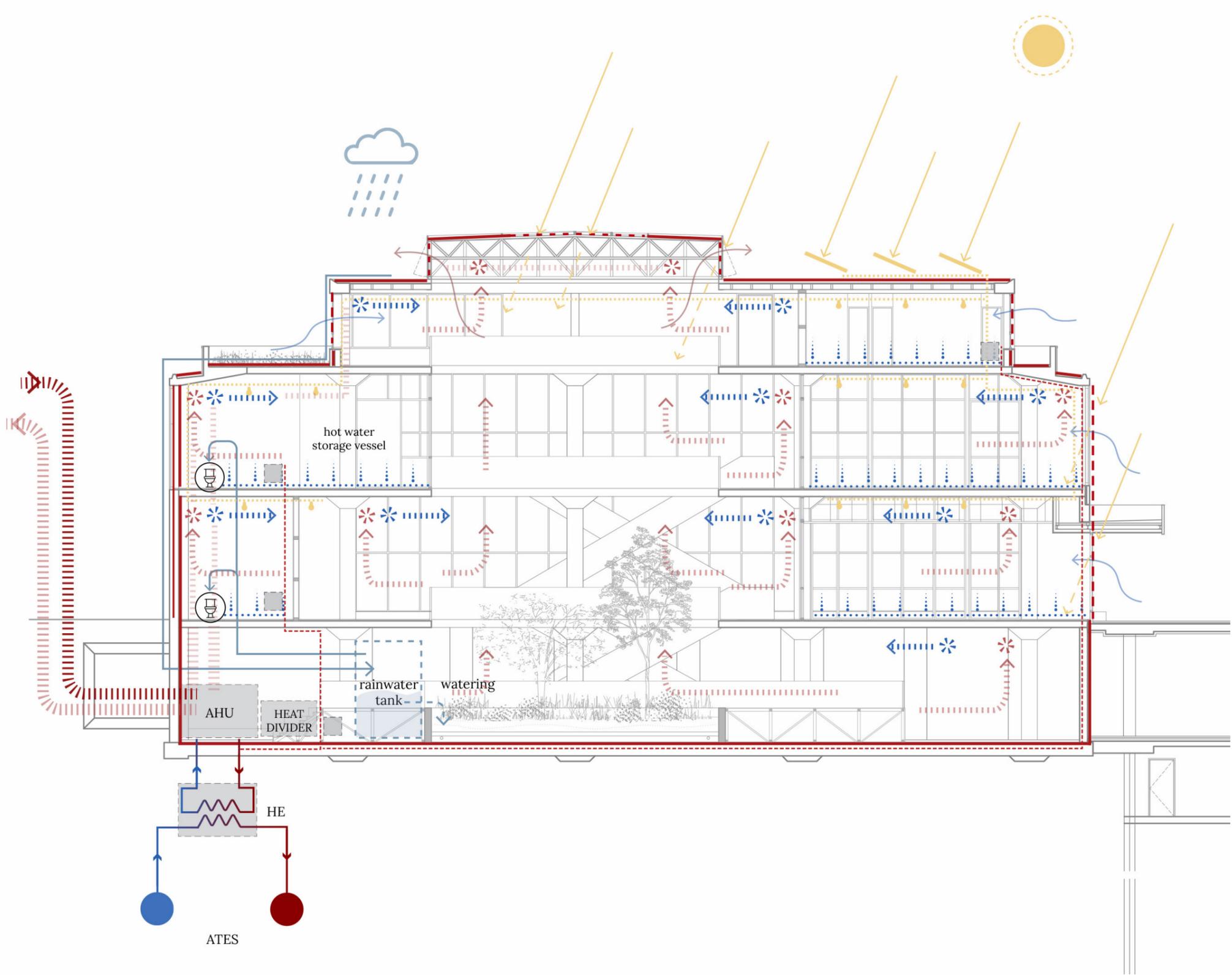


Ventilation system

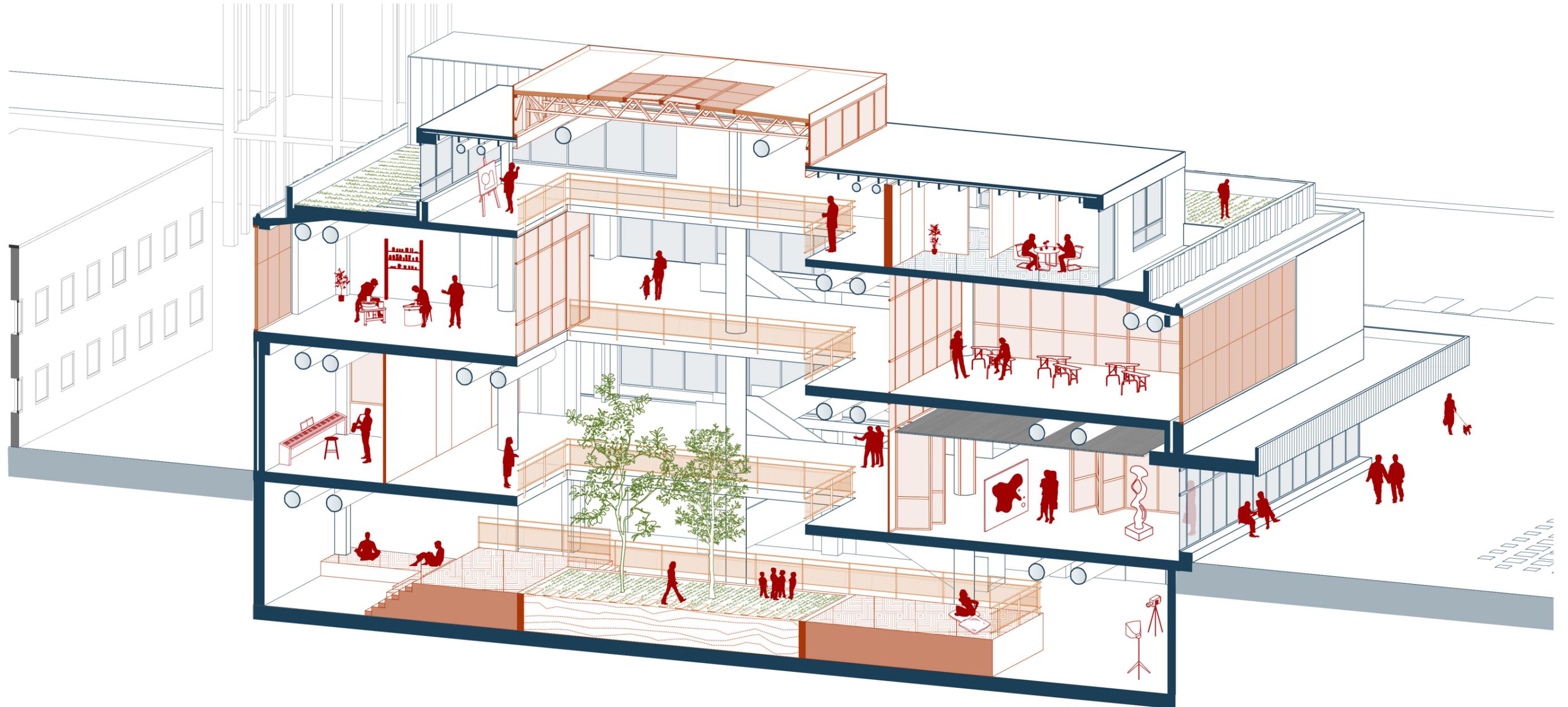
CLIMATE DESIGN - Winter situation



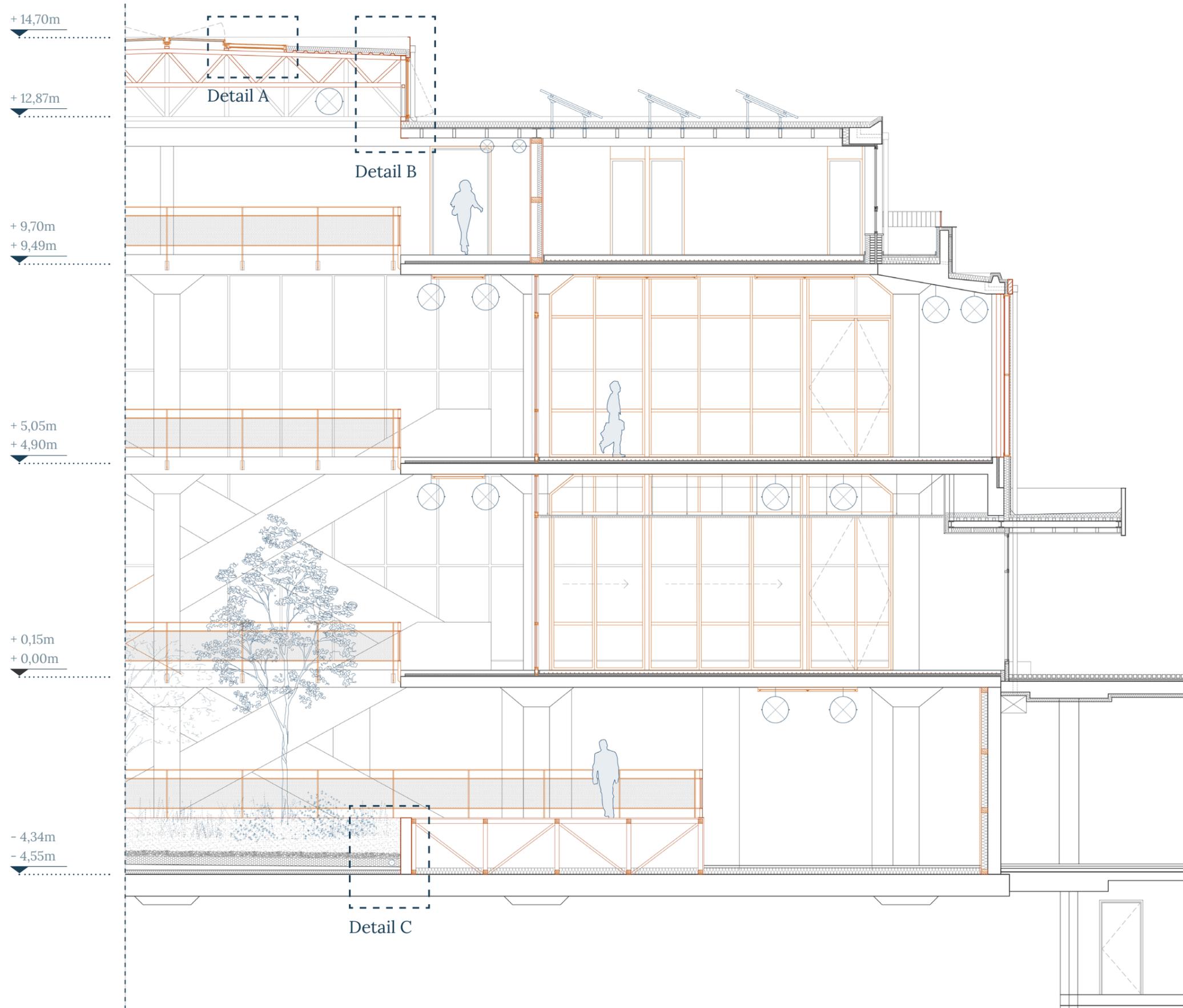
CLIMATE DESIGN - Summer situation



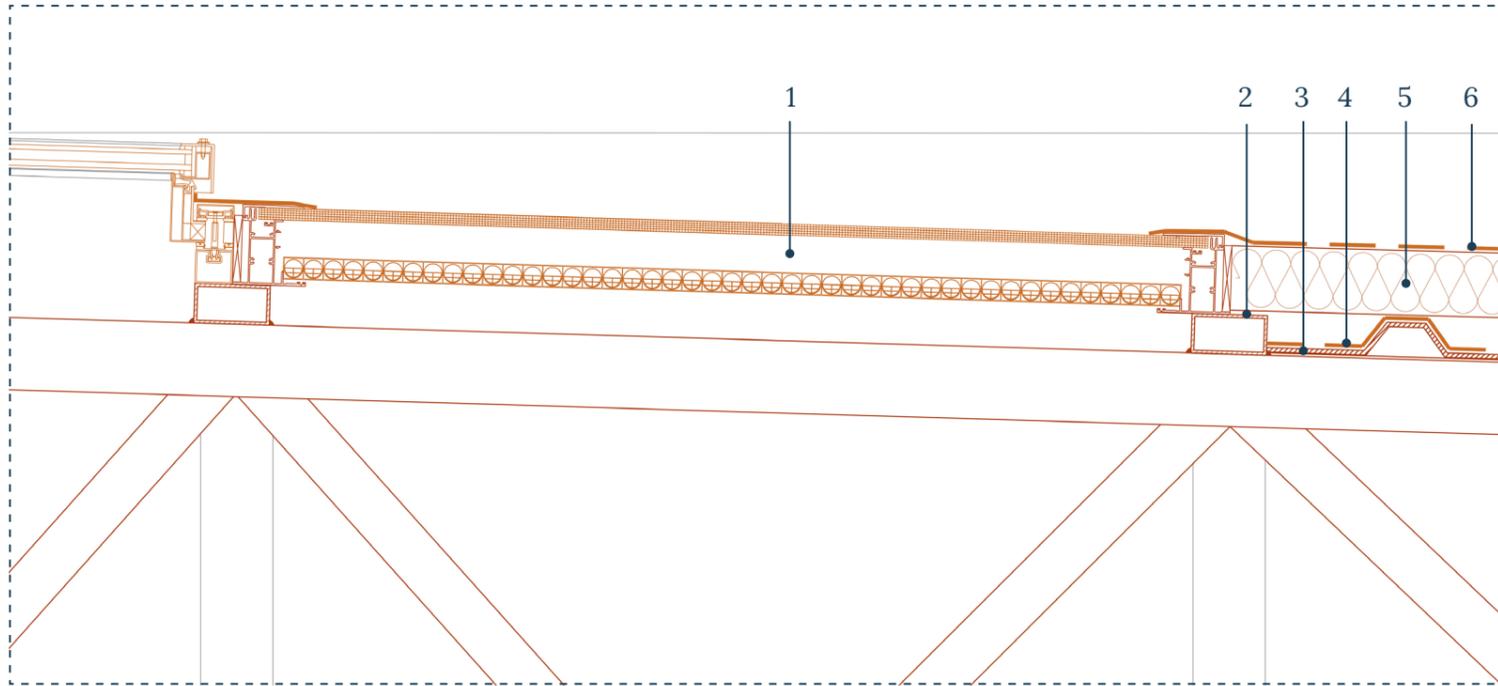
... a place of exchange



# DETAILING - Representative Section

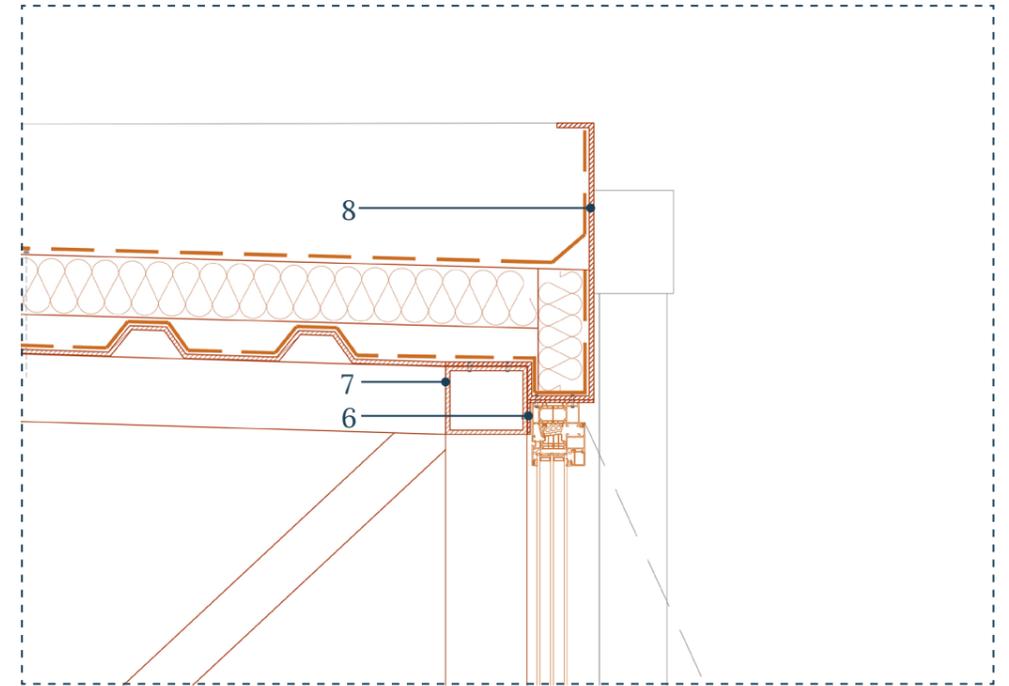


# DETAILING



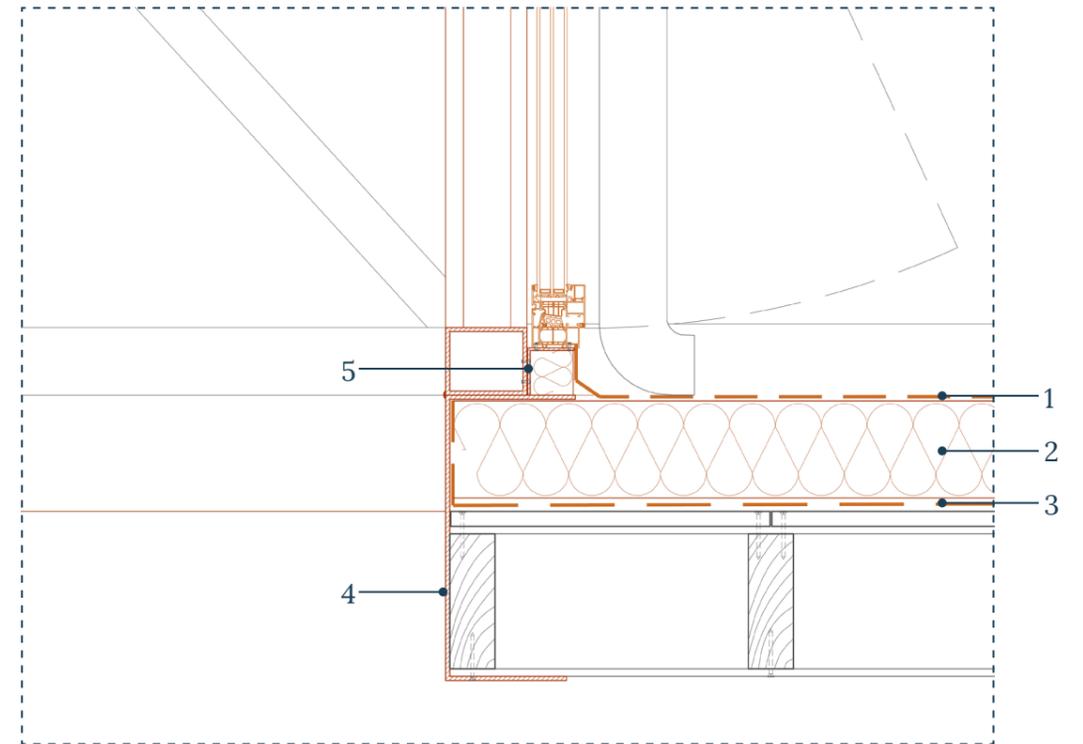
**Detail A - roof construction**

- 1. polycarbonate panel 10cm
- 2. RHS beam 5x10cm
- 3. corrugated metal sheet 0.6cm
- 4. damp proof layer
- 5. insulation XPS 10cm
- 6. waterproof layer - EPDM rubber

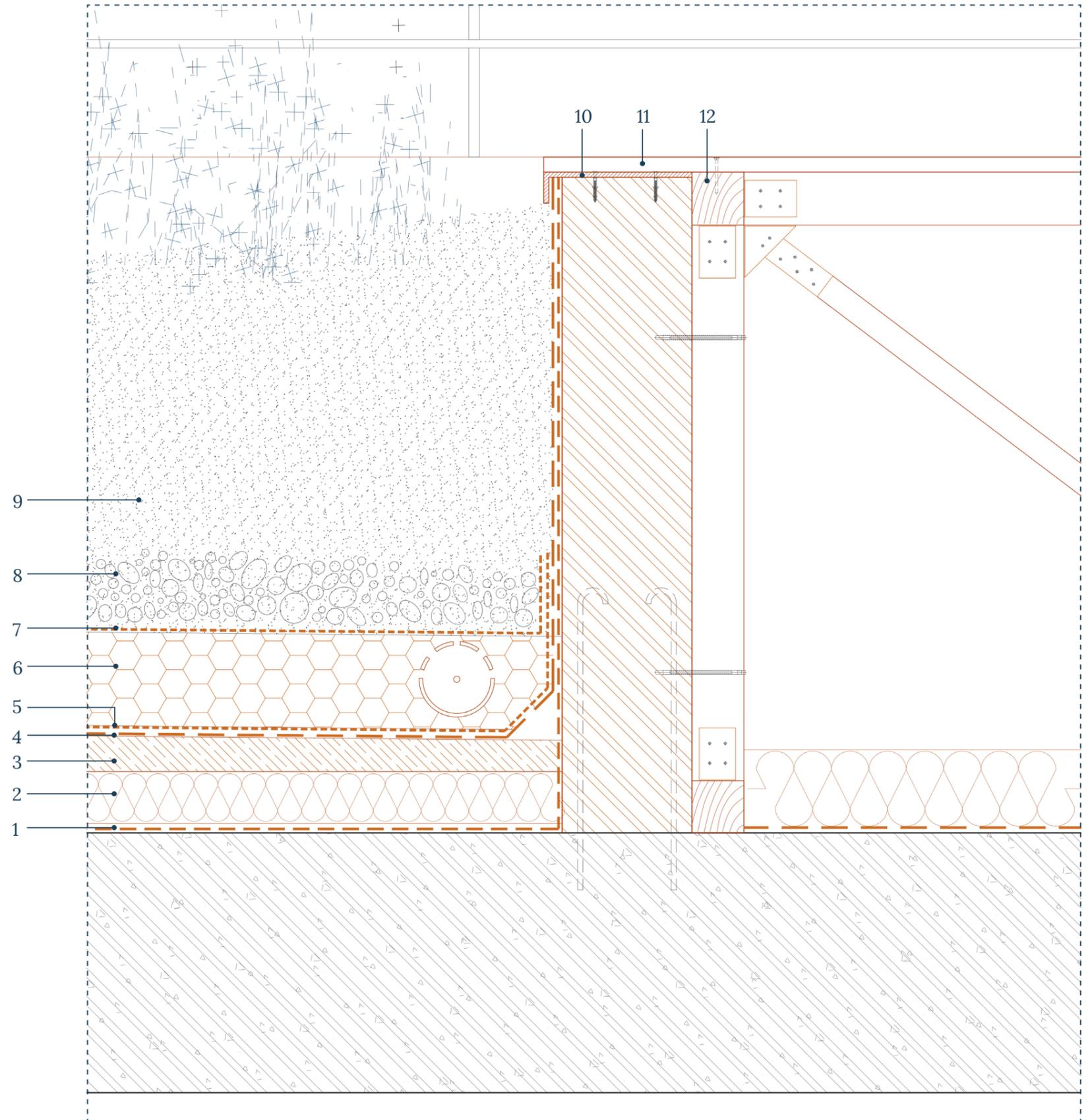


**Detail B - roof construction**

- 1. waterproof layer - EPDM rubber
- 2. insulation XPS 15cm
- 3. damp proof layer
- 4. C-beam 42x19cm
- 5. steel L-profile 7x7cm
- 6. steel L-profile 10x5cm
- 7. RHS beam 10x12cm
- 8. metal sheet 0.7cm



# DETAILING

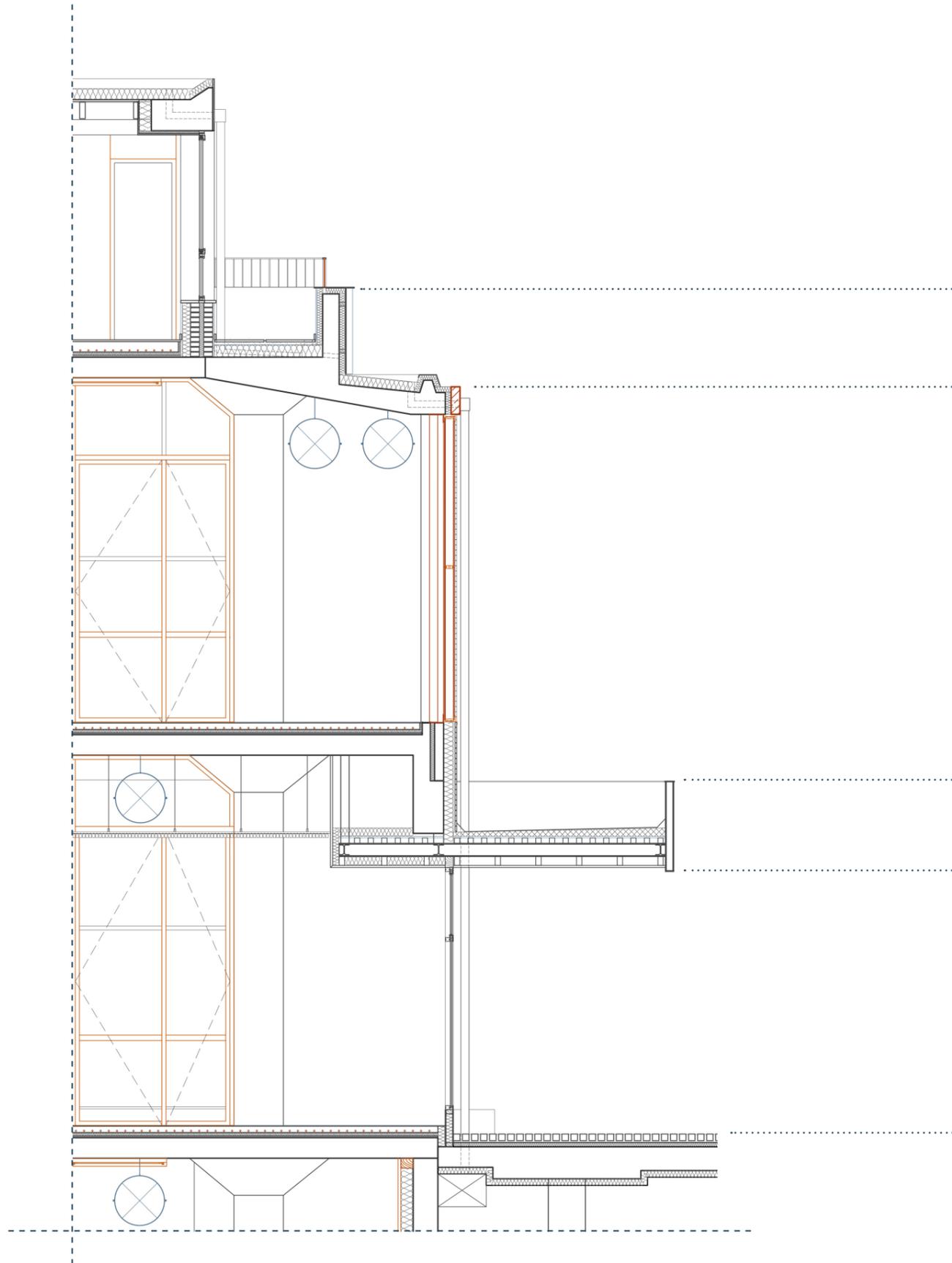


Detail C - green atrium

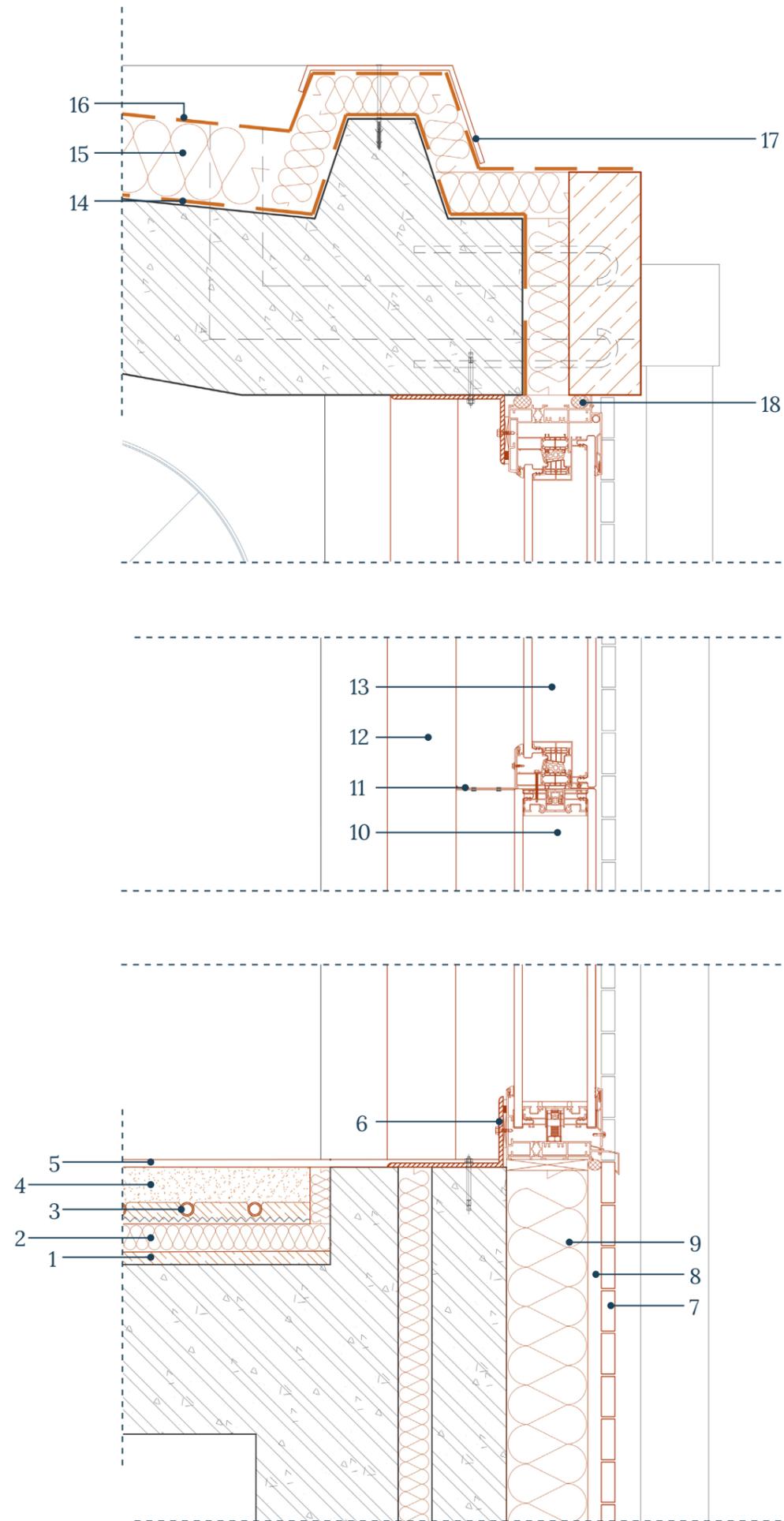
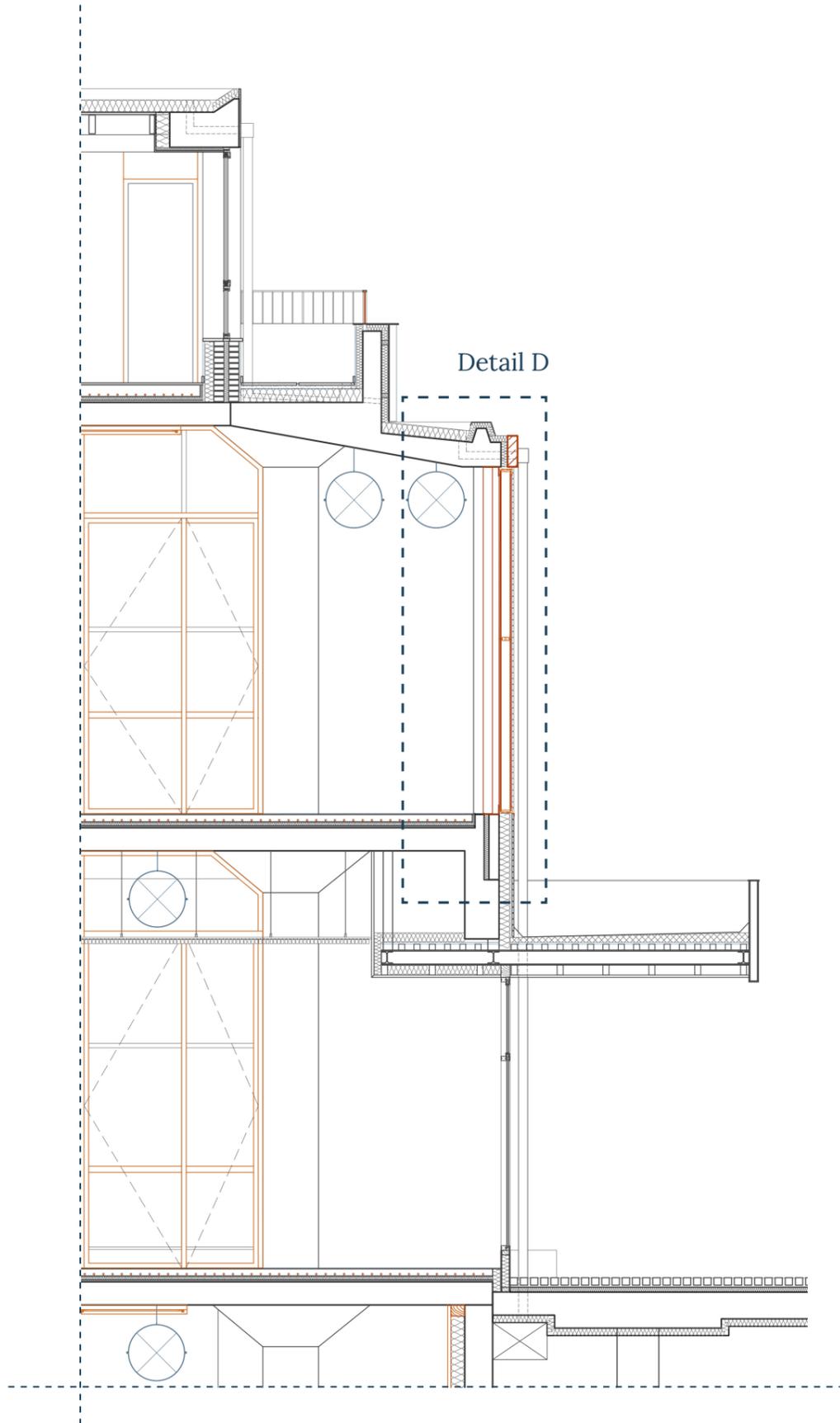
- 1. damp proof layer
- 2. insulation XPS 15cm
- 3. lightweight concrete
- 4. waterproof layer
- 5. root repellent membrane
- 6. drainage 18cm
- 7. filter membrane
- 8. pebbles
- 9. soil 80cm
- 10. metal sheet 1cm
- 11. wooden flooring
- 12. timber beam 10x10cm

0 10 20 40cm

# DETAILING - Facade Fragment



# DETAILING

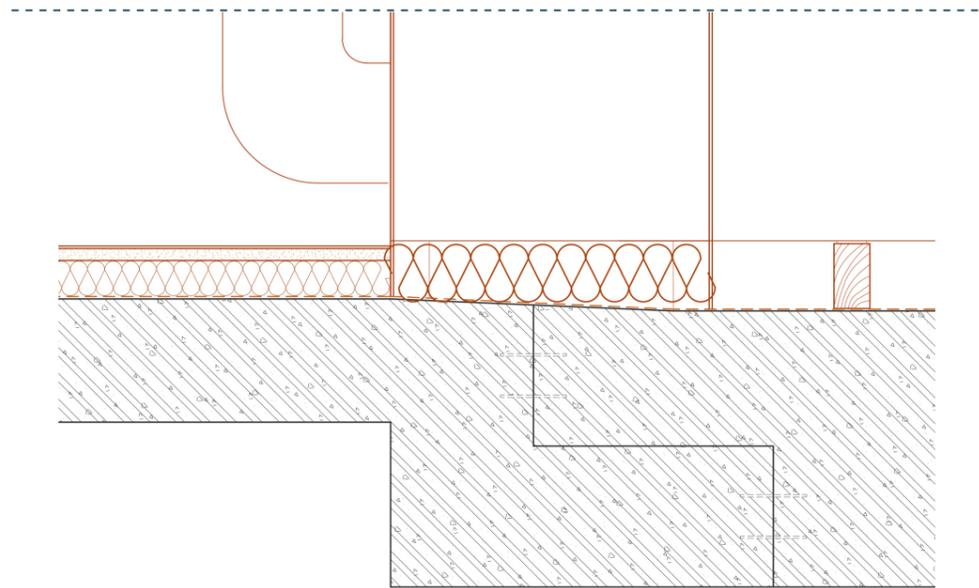
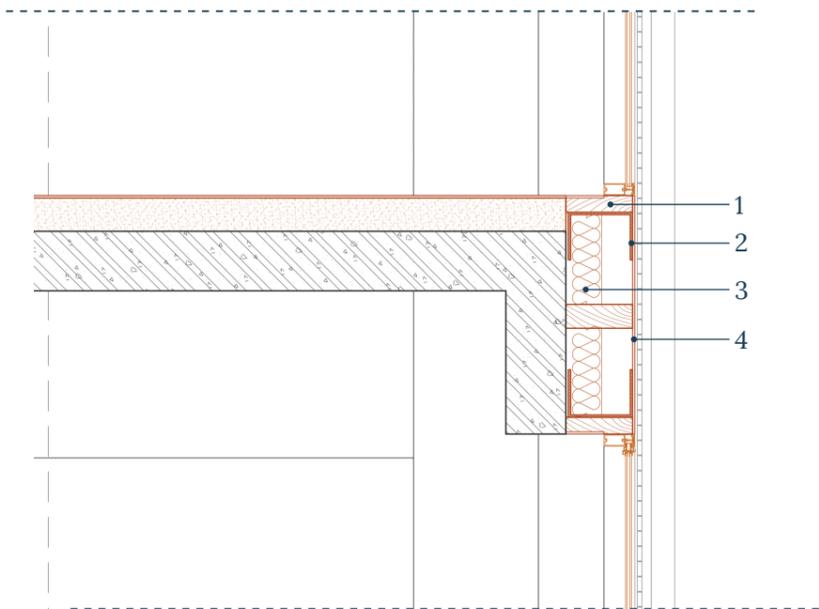
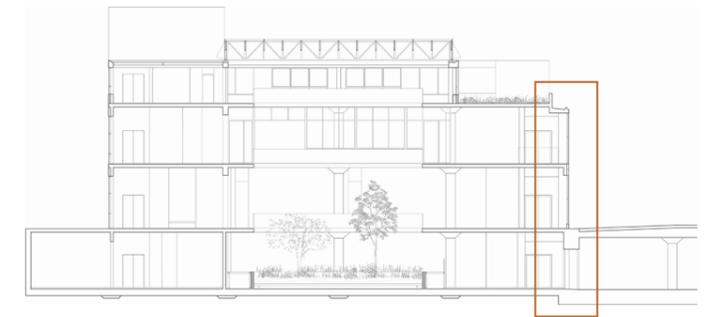
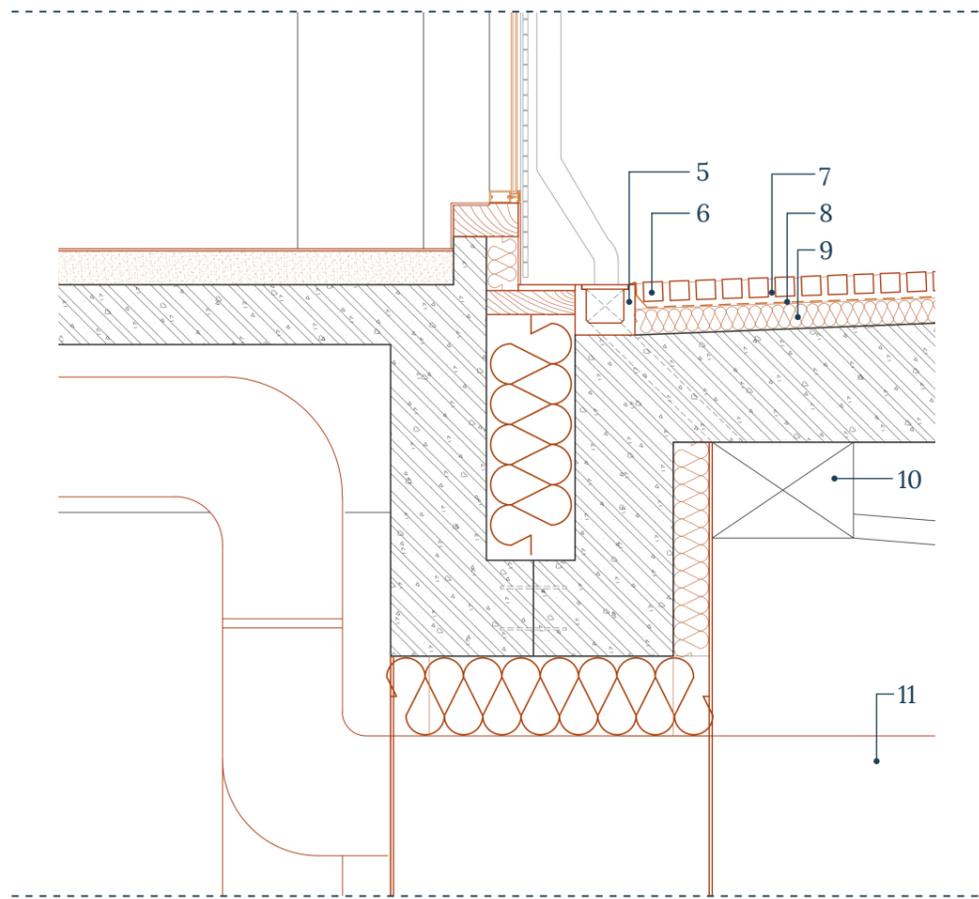
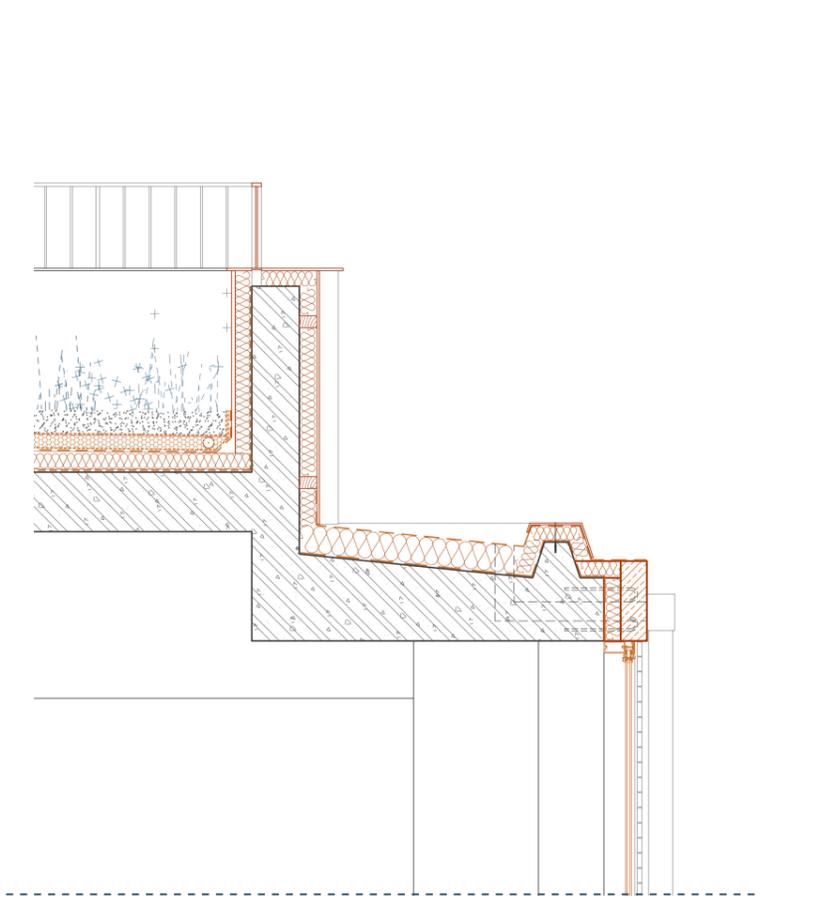


## Polycarbonate operable window

1. lightweight concrete 2cm
2. insulation XPS 4cm
3. heating pipes
4. screed 5.5cm
5. epoxy floor coating 1cm
6. L-beam 10x17cm
7. ceramic tiles 5x15cm
8. mortar 2cm
9. insulation XPS 12cm
10. polycarbonate panel 12cm
11. steel L-profile 9x5cm
12. SHS 10x10cm
13. polycarbonate panel 10cm
14. damp proof layer
15. insulation XPS 15cm
16. waterproof layer
17. metal sheet 0.7cm
18. sealant



# DETAILING - Facade Restoration



- 1. wooden beam 28x7cm
- 2. C-beam 25x20cm
- 3. insulation 13cm wood wool
- 4. metal sheet 1cm
- 5. trench drain 25x20cm
- 6. setts 8x8cm
- 7. mortar 2,5cm
- 8. waterproof layer
- 9. insulation XPS 12cm
- 10. siphon for drainage
- 11. air ducts



... a legible city image



What? [product]  
“How can the **urban spatial identity** of **Dutch post-war**  
Who? [subject]  
**shopping malls** be employed in their re-design in order  
to **ensure urban spatial continuity?**”  
Why? [aim]

REFLECTION

WITHIN SYSTEM

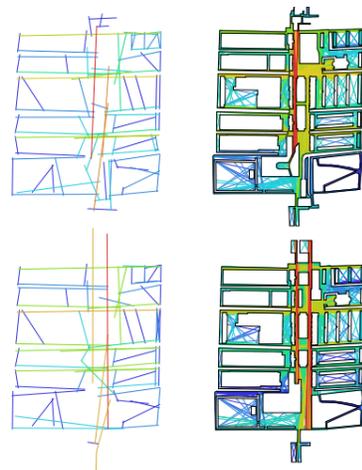
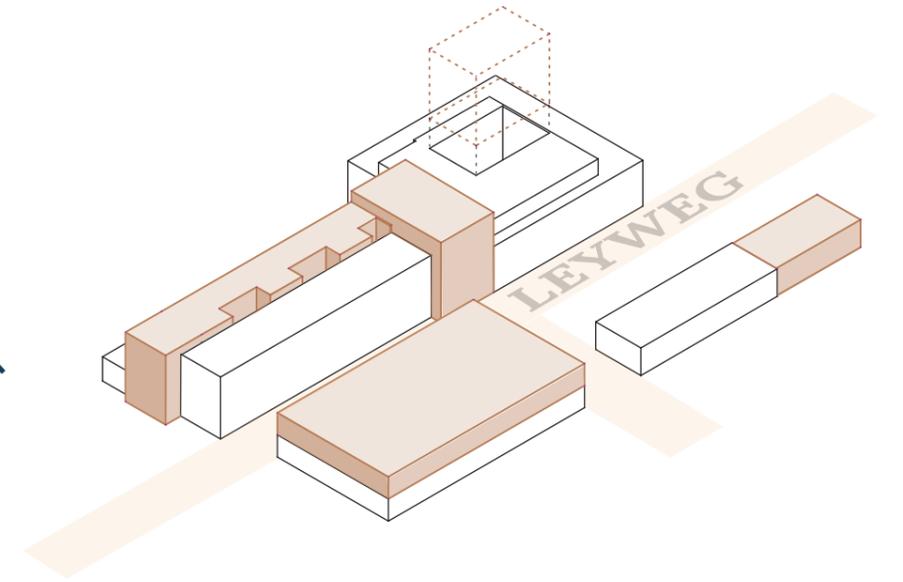
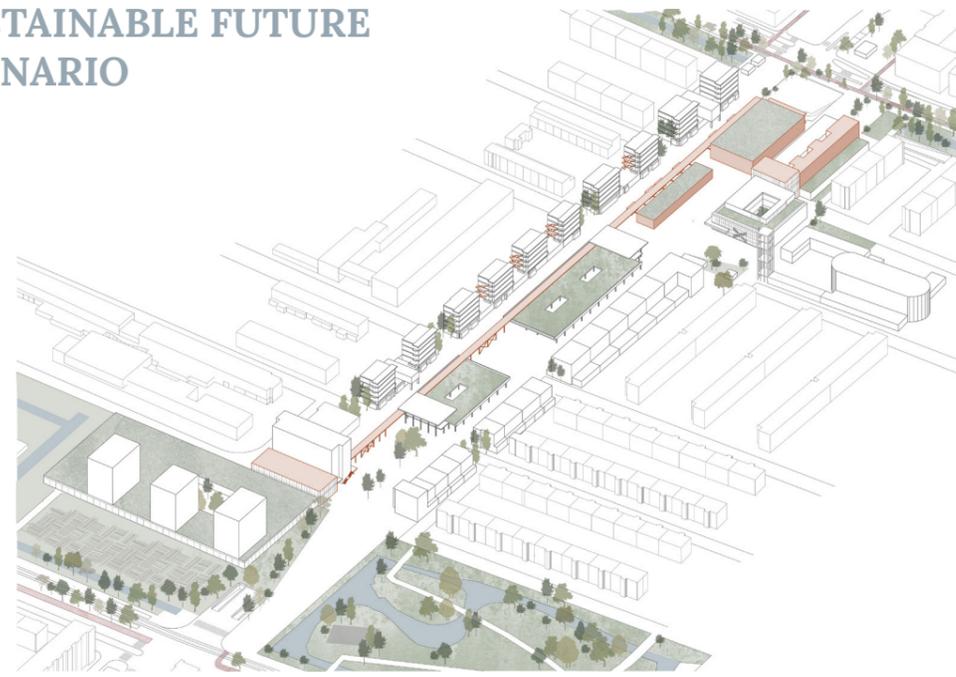
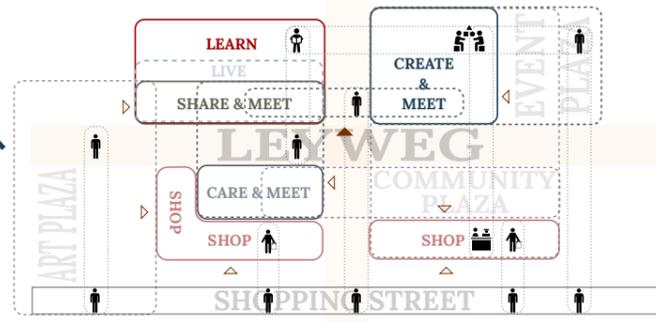
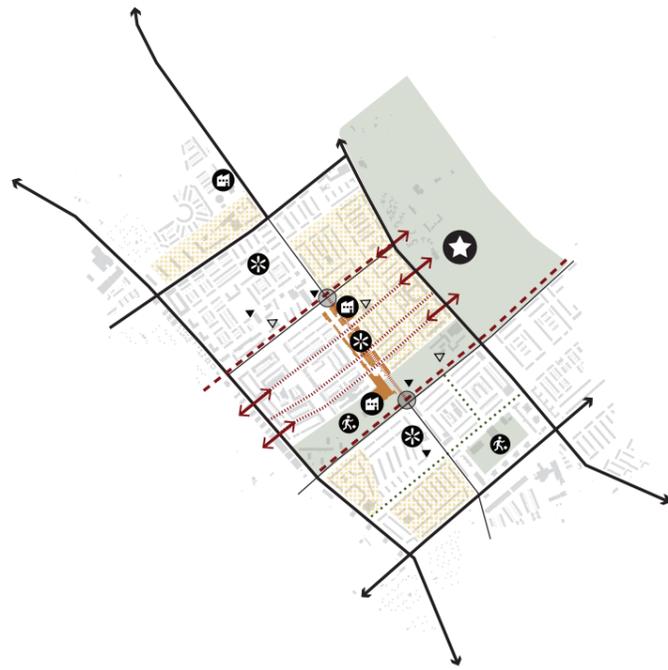
social  
spatial  
environmental  
material  
technical

INTENTION

SUSTAINABLE FUTURE  
SCENARIO

FOCUS

TESTING



*“Architectural solutions however brilliant cannot overcome the limitations of the urban fabric in which they are placed.”*

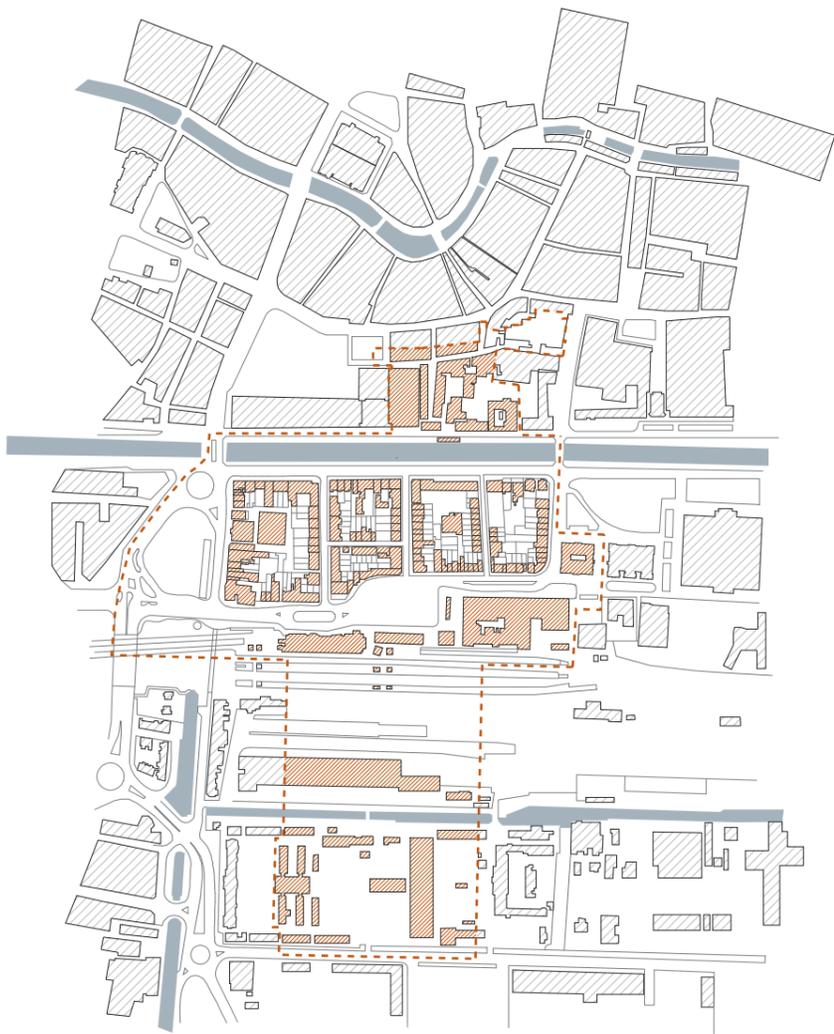
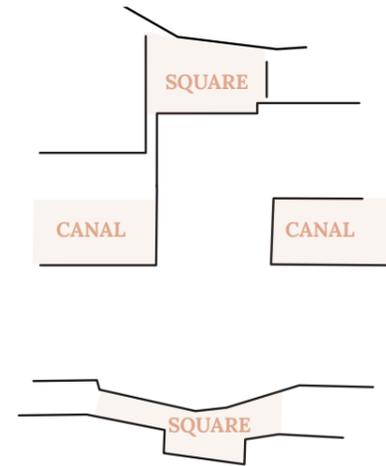
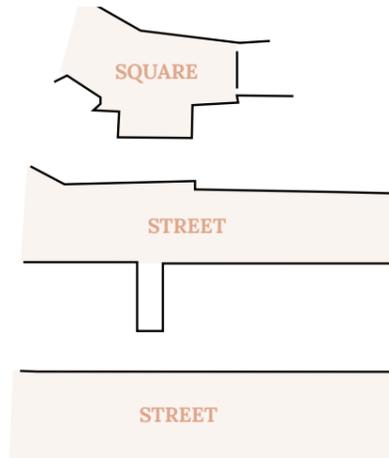
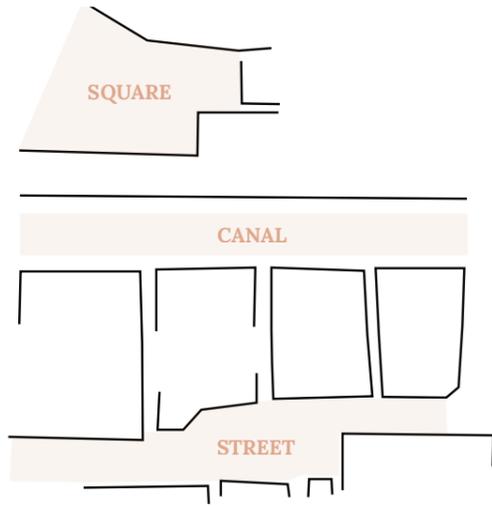
*“Awareness of history allows us to build upon the memory of the city and its constituent elements in a way that can give us the vocabulary for the contemporary language of urban space.”*

(Trancik, 1986)

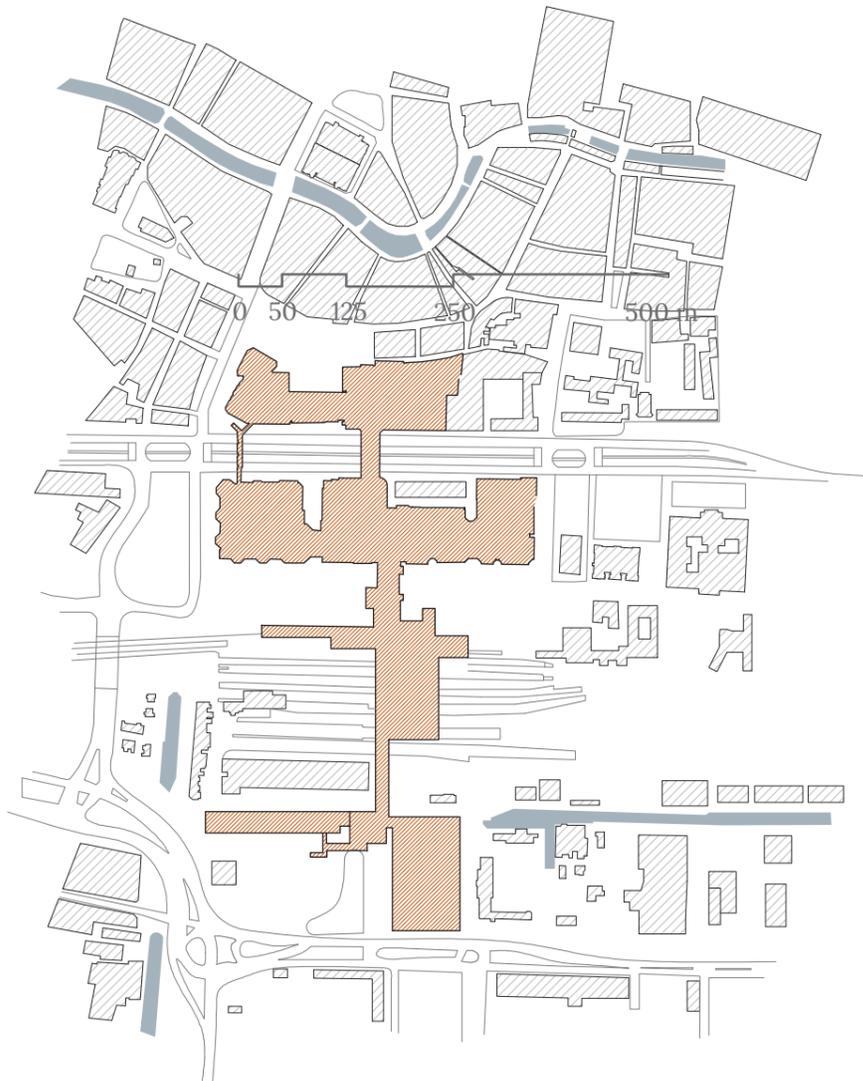
THANK YOU!

# APPENDIX

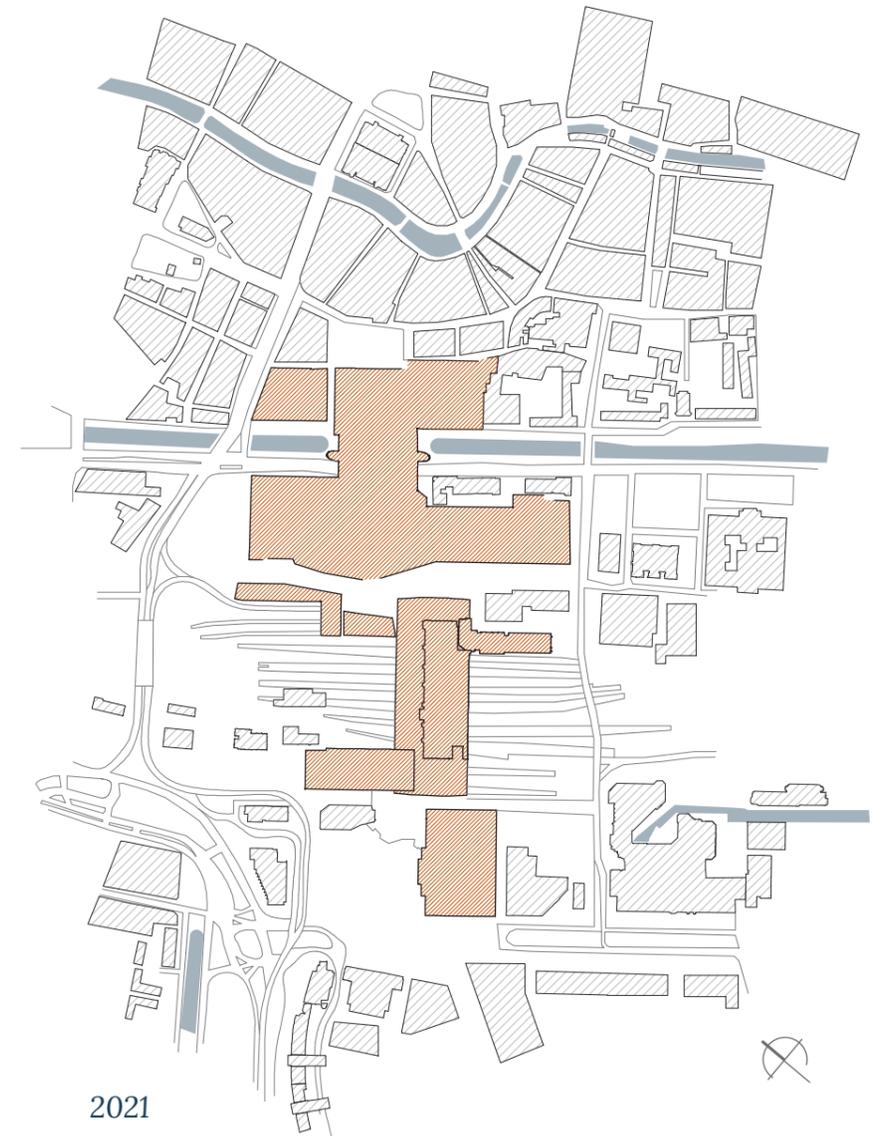
RESEARCH - Urban pattern



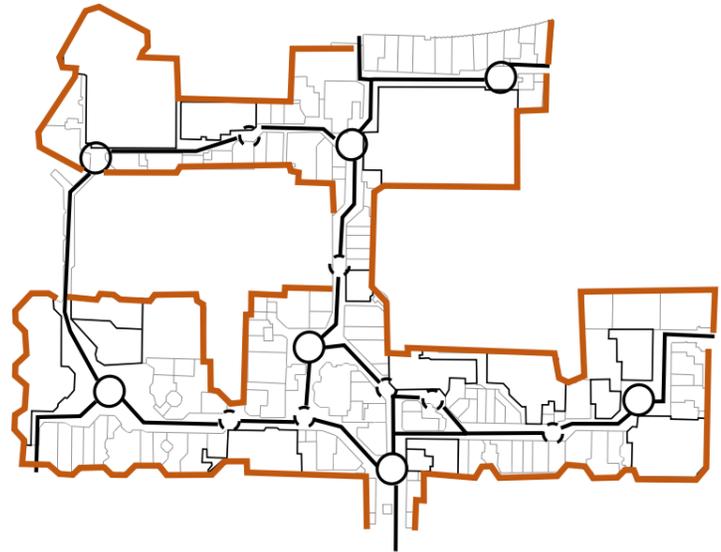
1963



1973

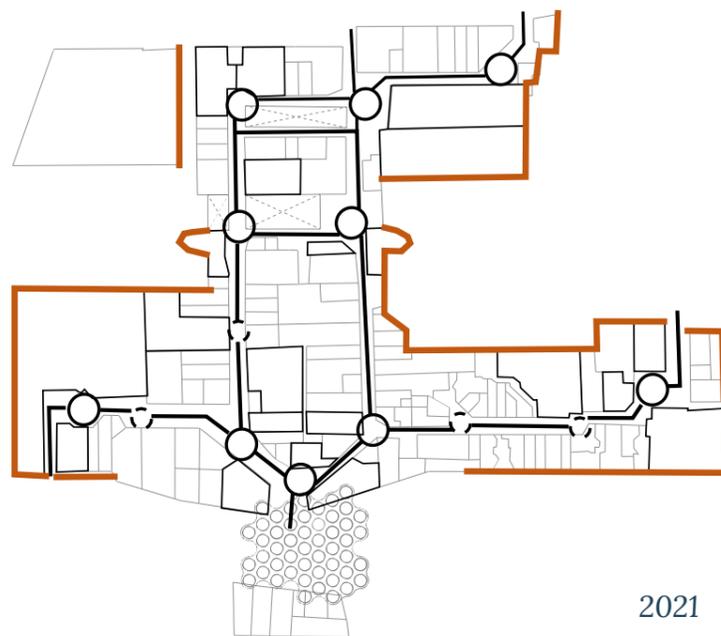


2021



— Boundaries  
— Routes

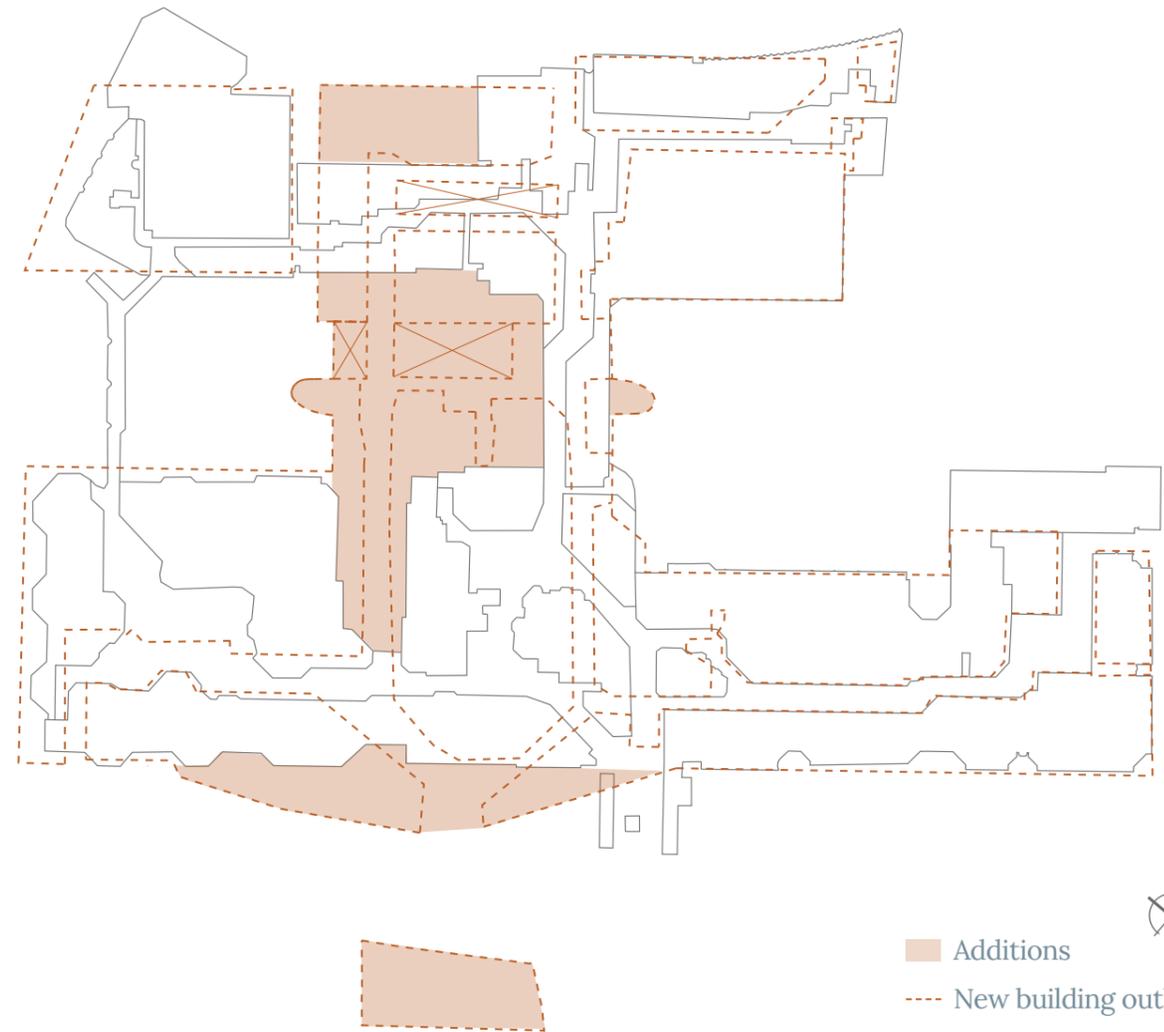
1973



2021

### Rehabilitation > Reuse

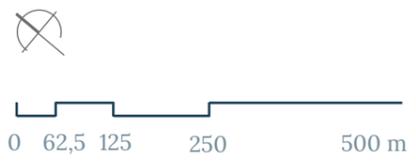
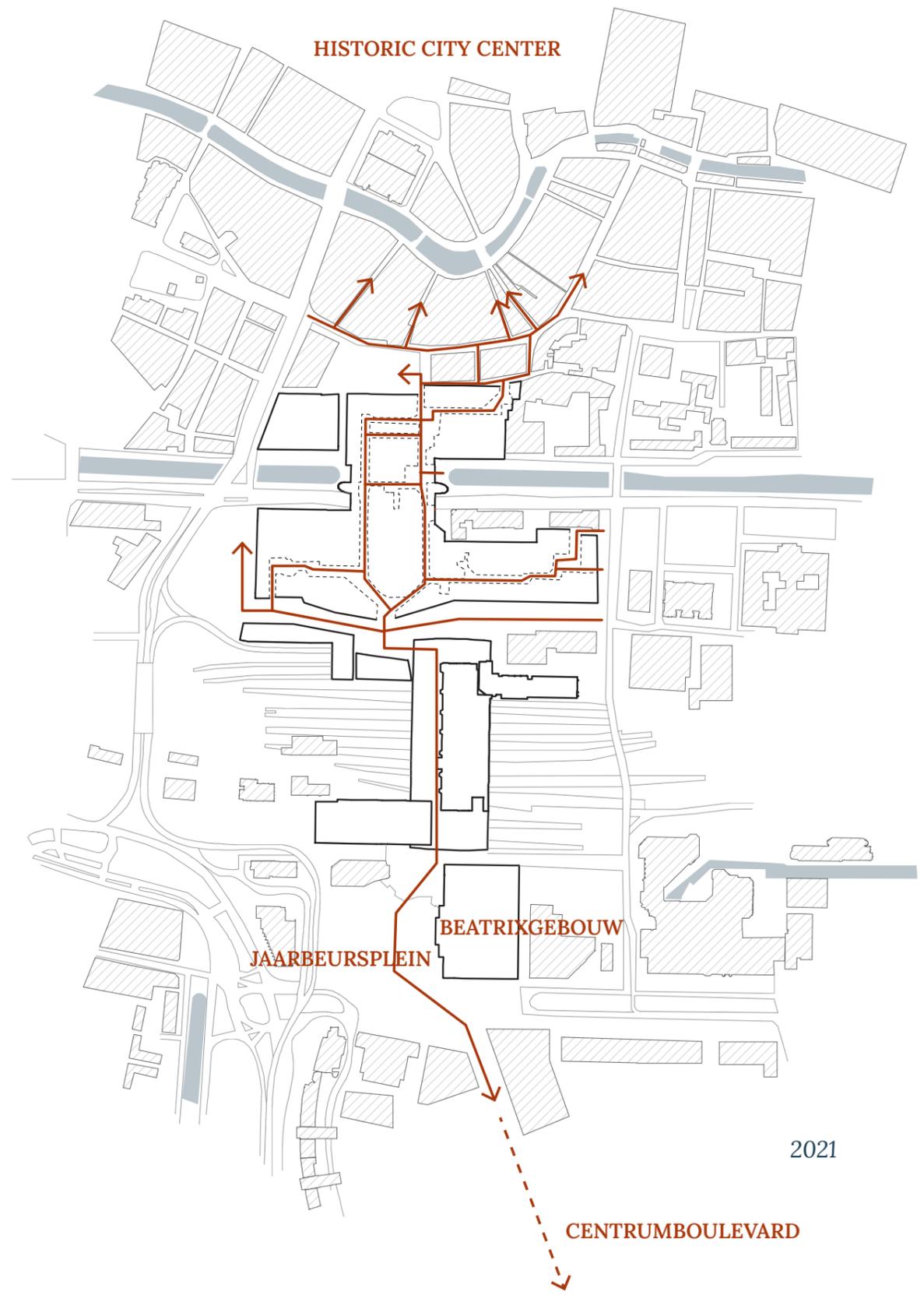
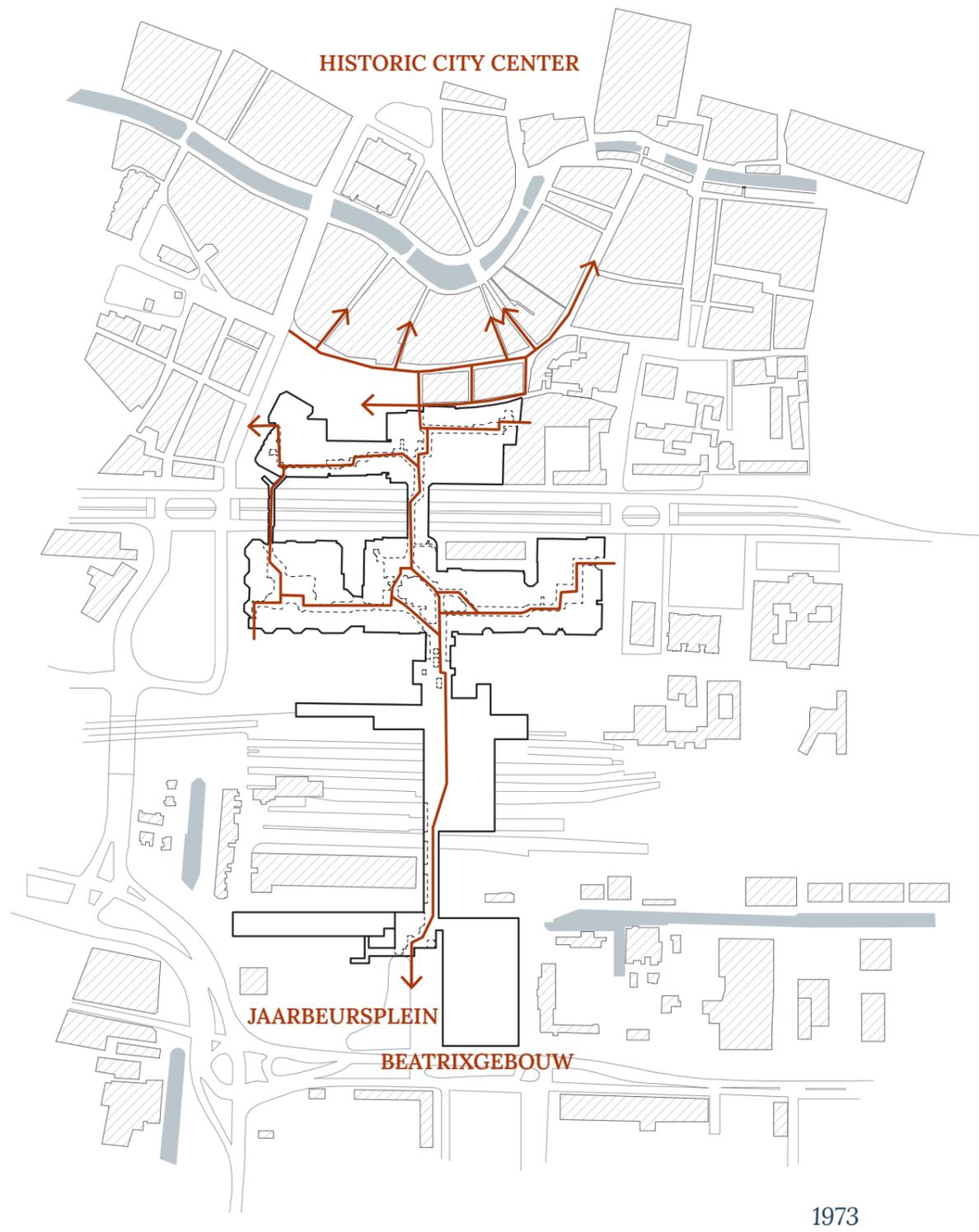
[= combine activities from earlier and later scales of interventions, while retaining the same use with the aim to improve;  
main target of intervention: building subtractions, remainings and additions]



■ Additions  
- - - New building outline

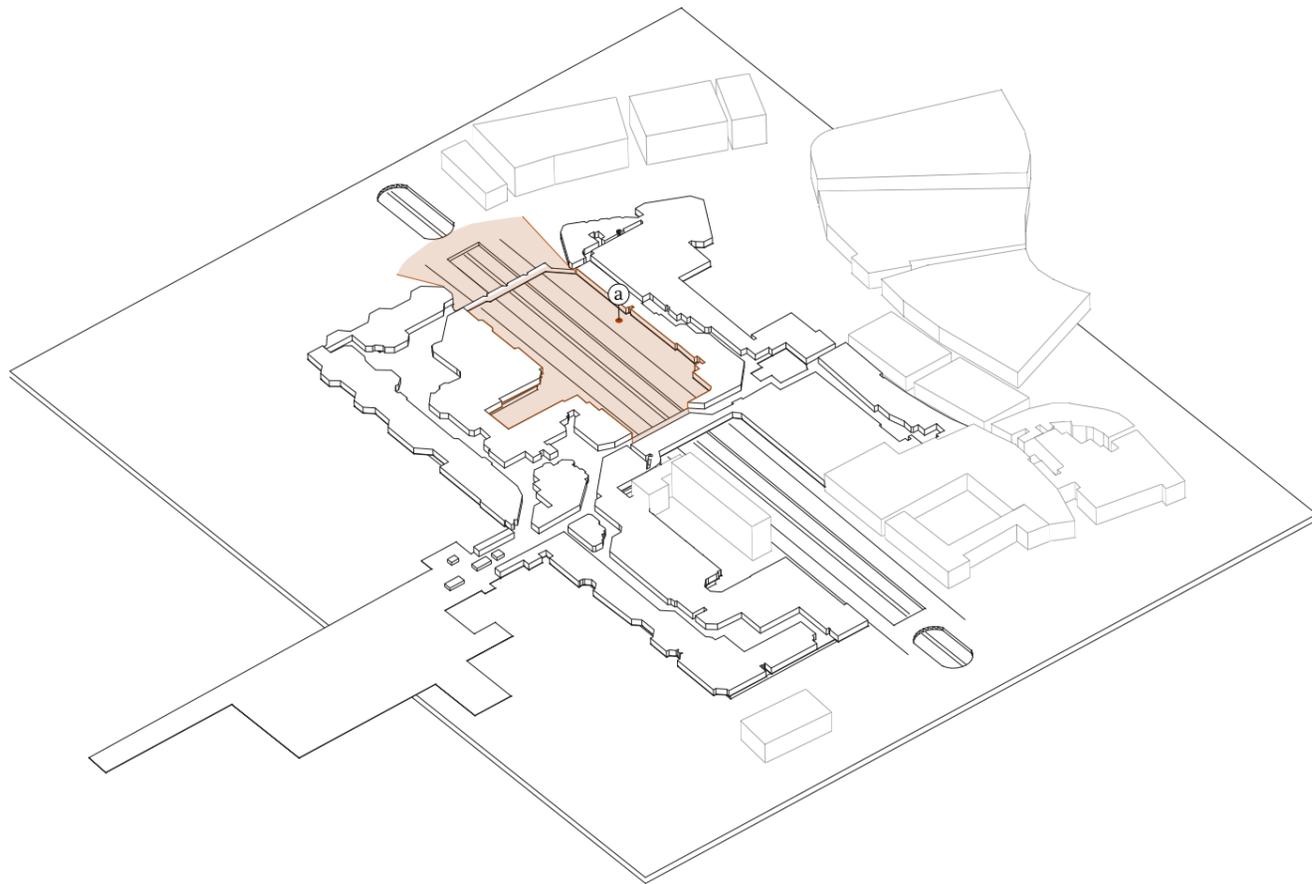
0 25 50 100 200 m

RESEARCH - Urban connections & routes

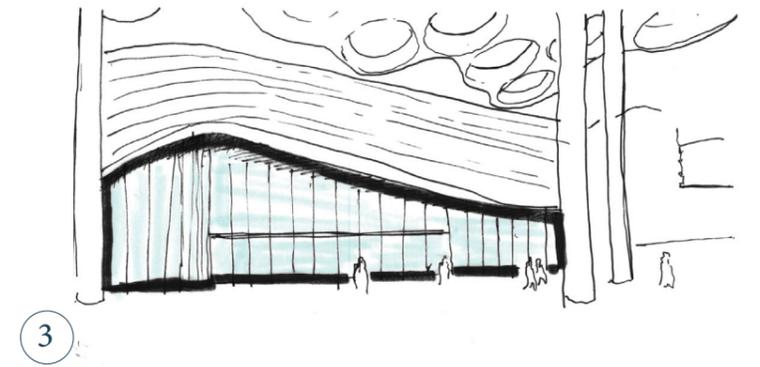
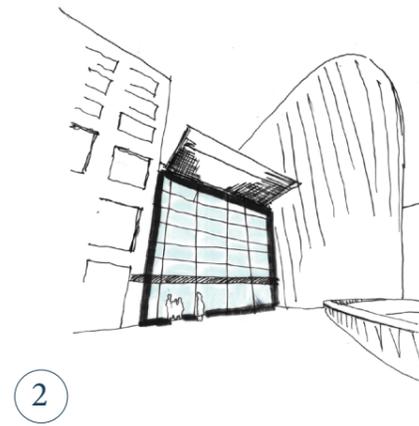
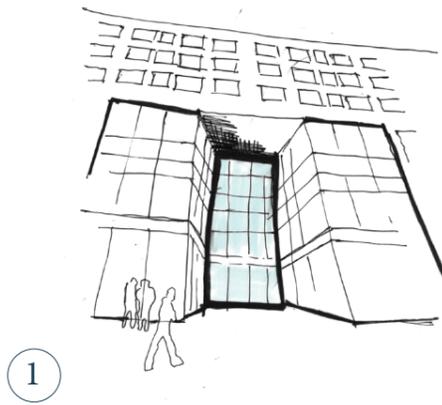
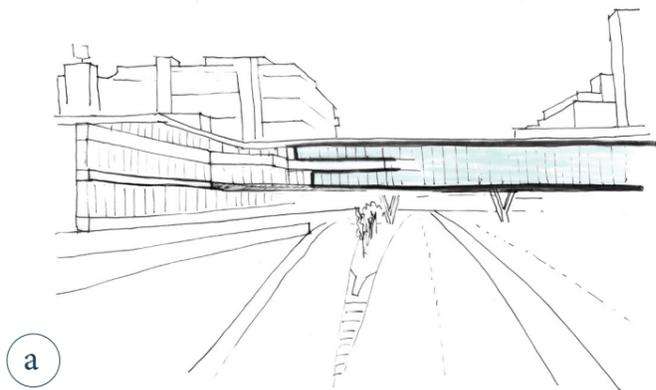
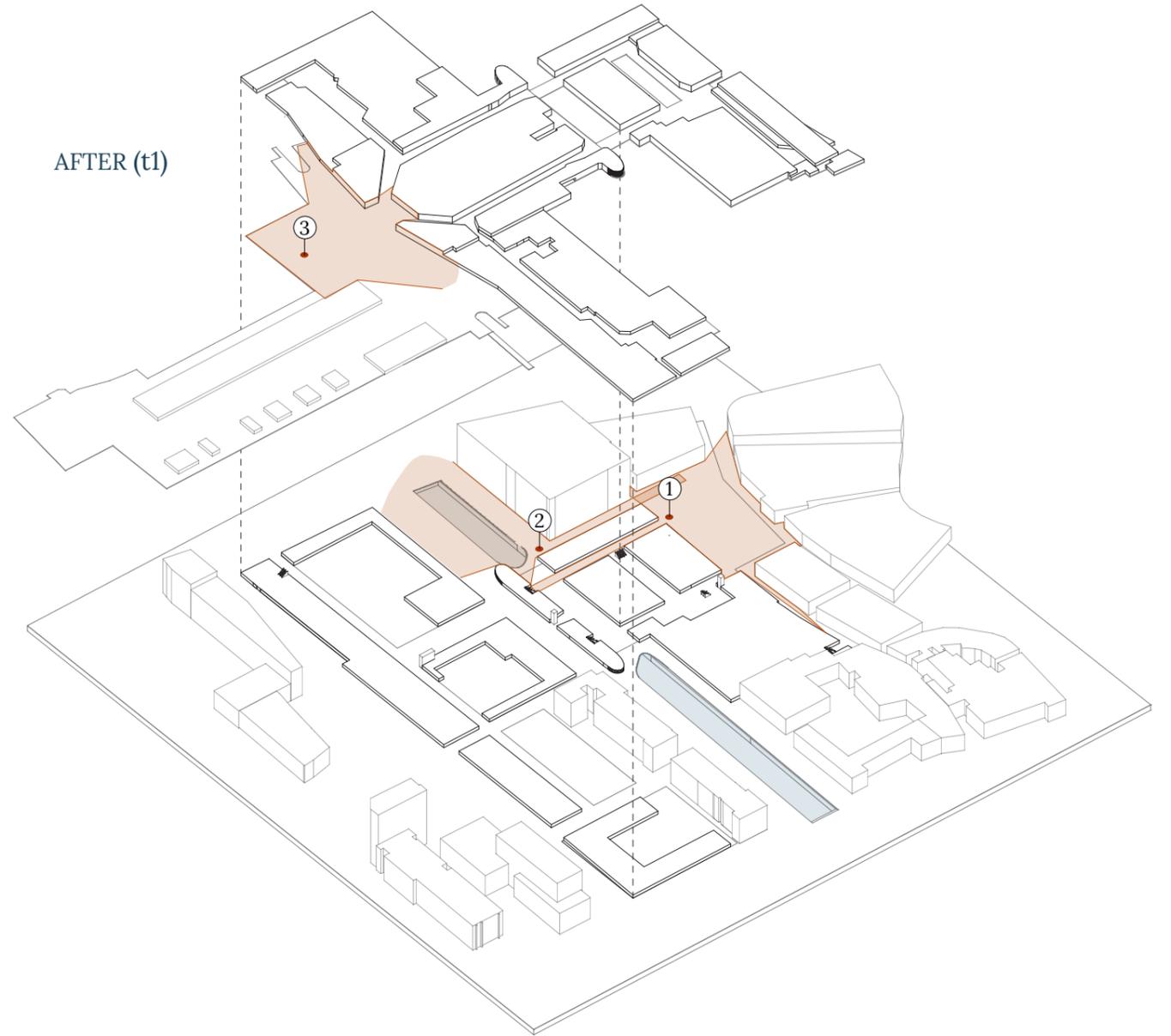


# RESEARCH - Indoor/Outdoor fusion

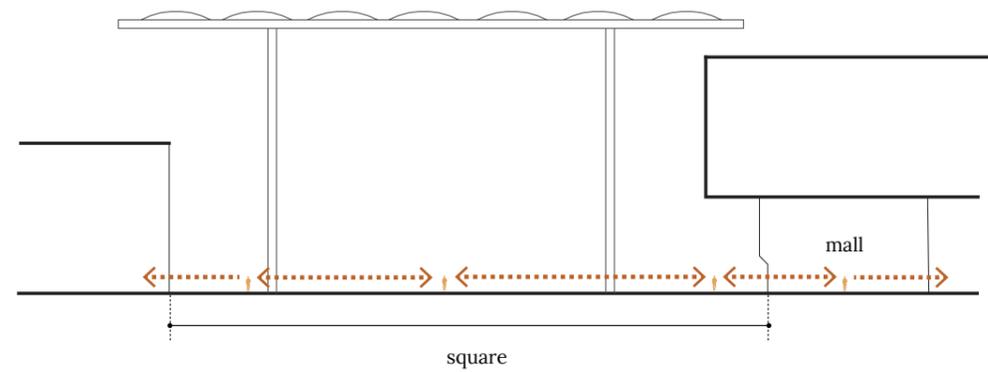
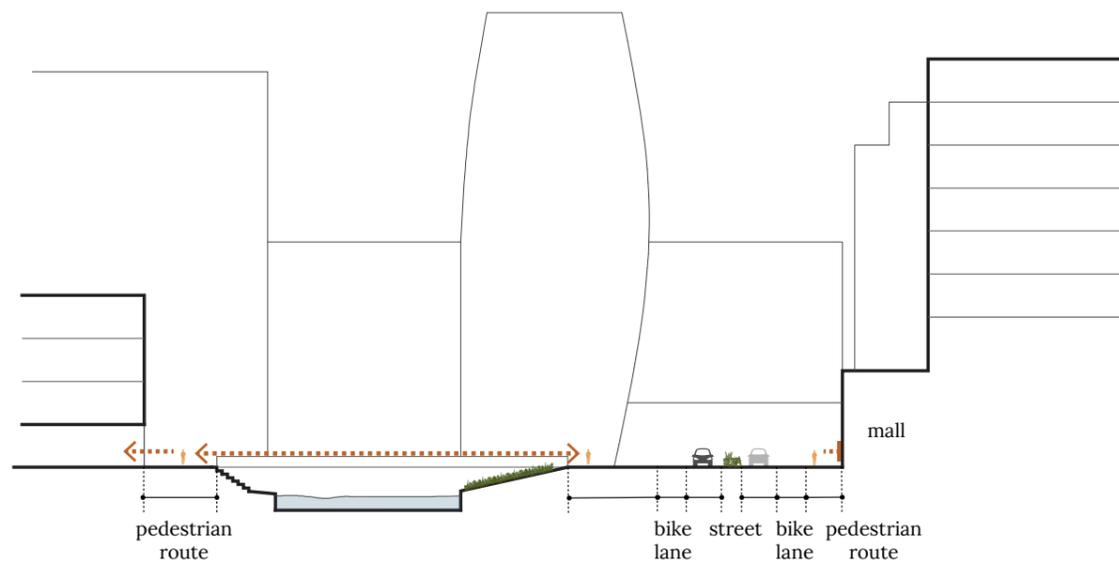
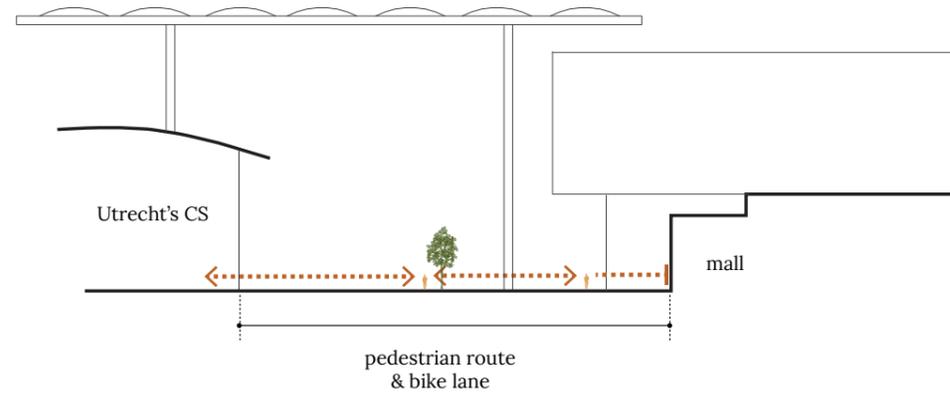
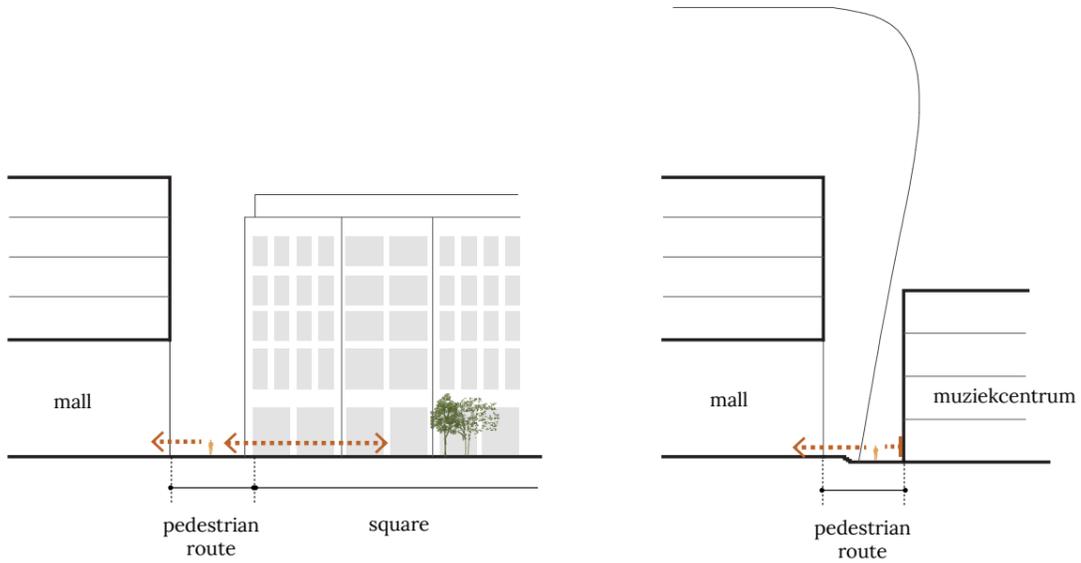
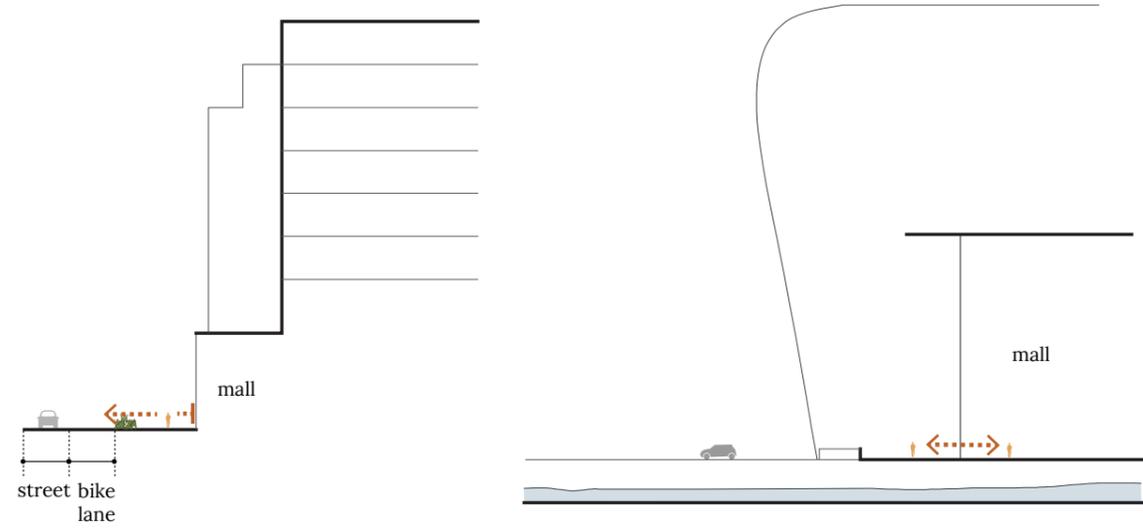
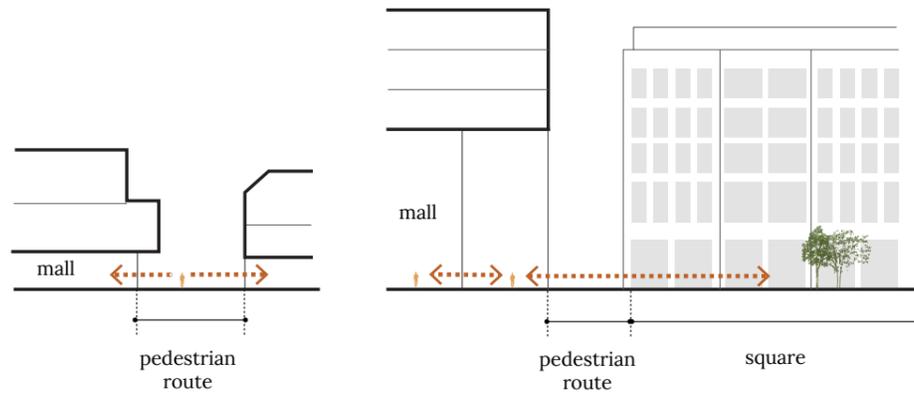
BEFORE (t0)



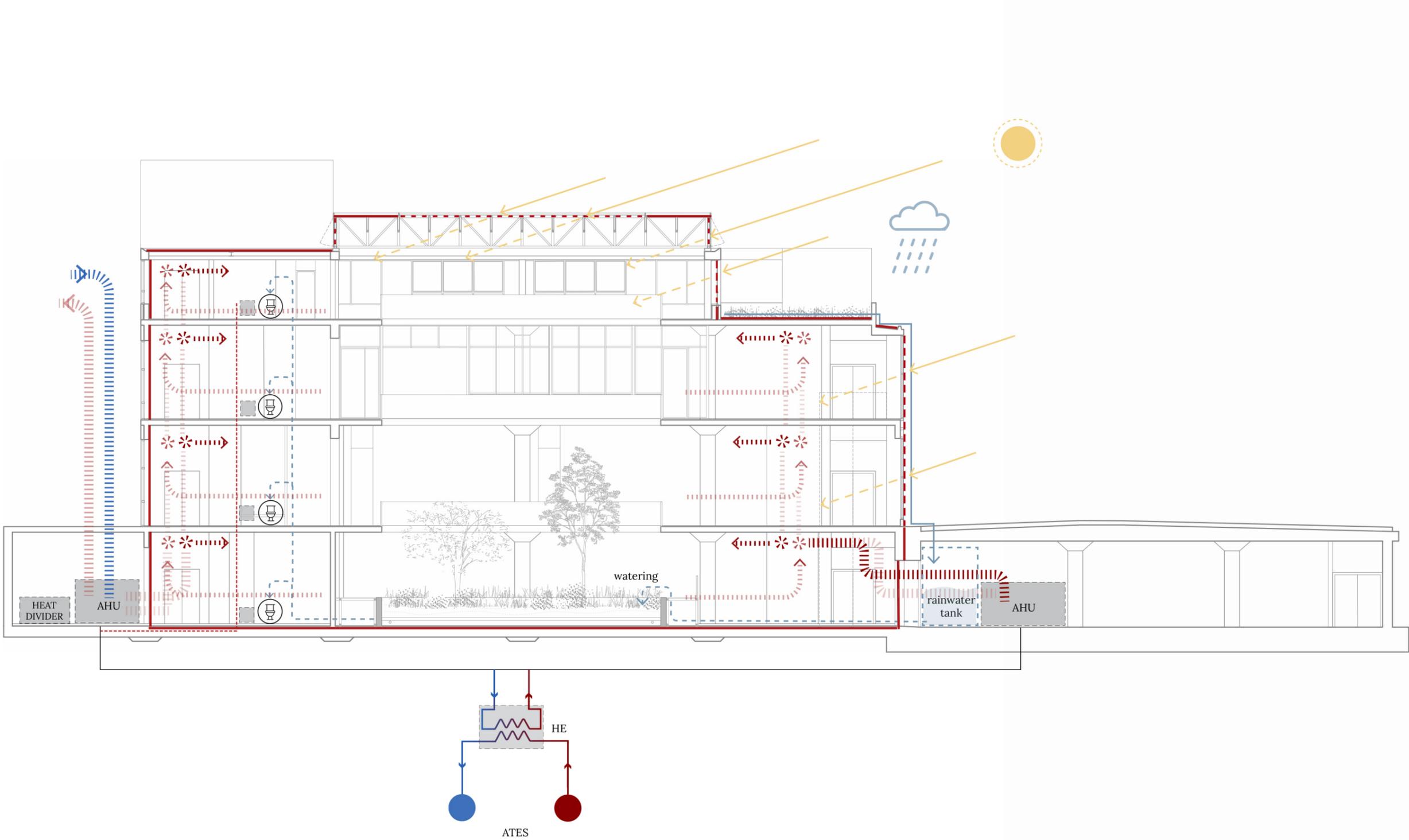
AFTER (t1)



# RESEARCH - Indoor/Outdoor fusion



CLIMATE DESIGN - Winter situation



CLIMATE DESIGN - Summer situation

