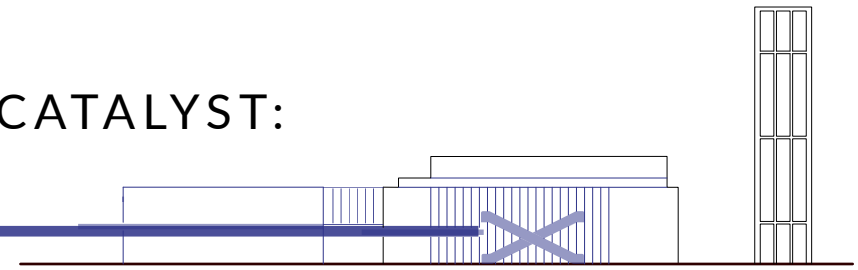


THE SHOPPING MALL AS AN URBAN CATALYST: The case of Leyweg Winkelcentrum



Graduation Studio H&A | P5 Presentation
Adapting 20th century heritage: The modern mall

Spyridonidou T. Pelagia
5612837

DESIGN MENTOR: U. Pottgiesser

BT MENTOR: F. Koopman

RESEARCH MENTOR: L. Spoormans

June 2023

1
Introduction

2
*from
Research*

3
*to
Design*

4
Epilogue

Introduction

- 1 Starting points
- Problem statement
- Research question

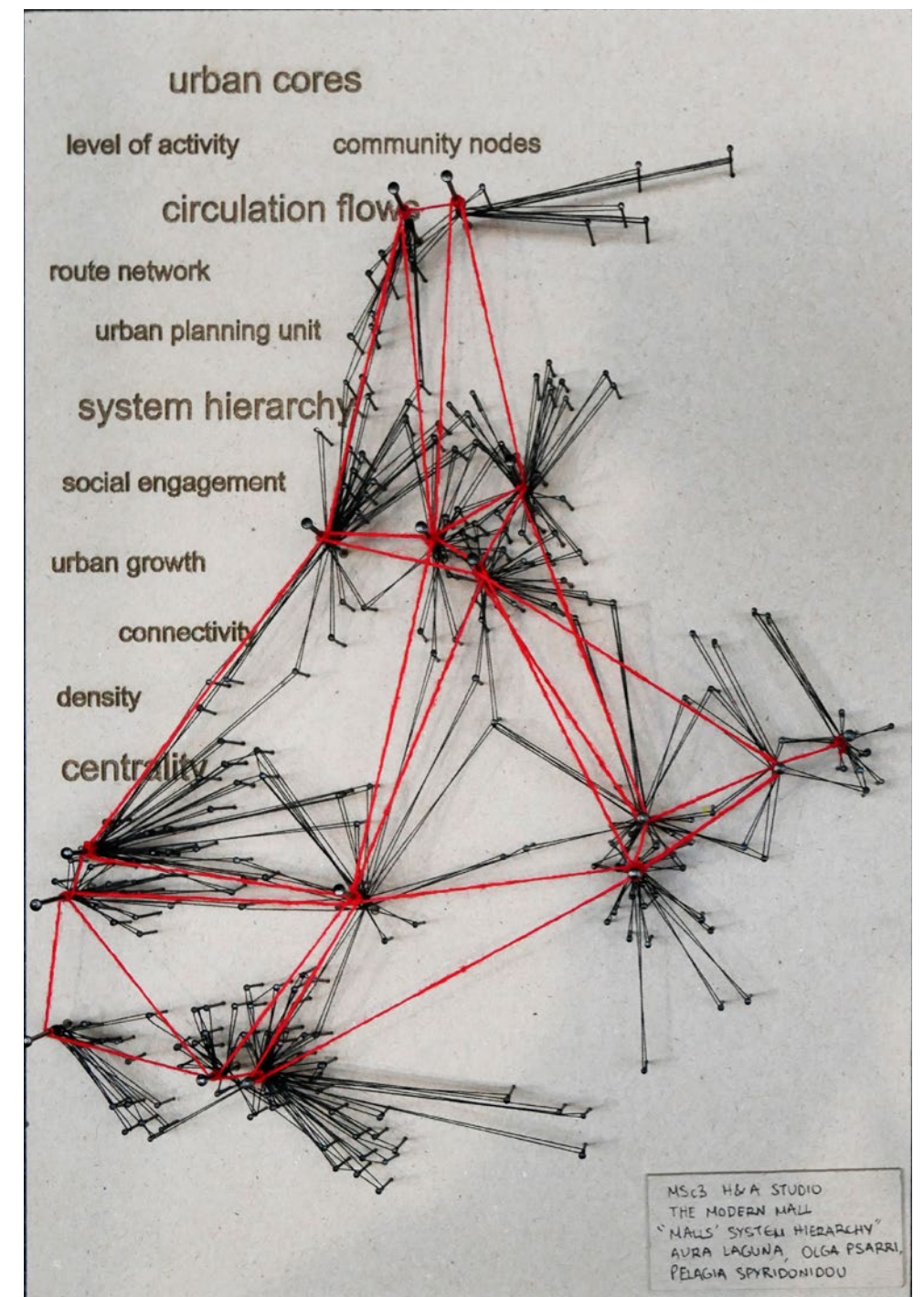
2 from Research

3 to Design

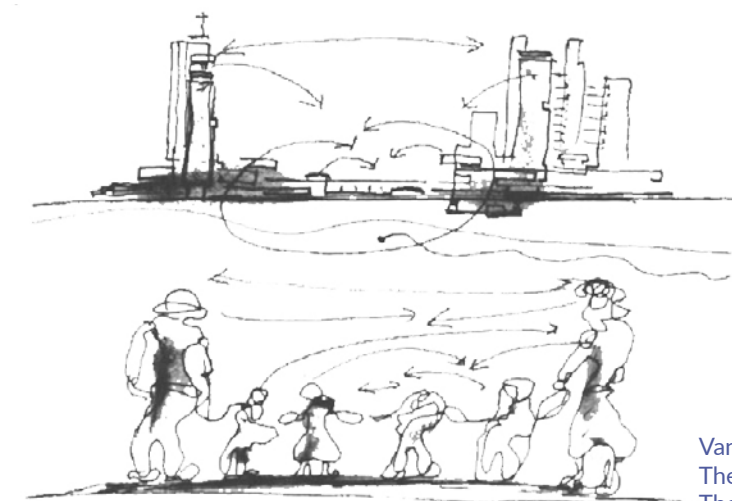
4 Epilogue



Southdale Center, Seventeenth and France, Edina, ca. 1958. (Photo courtesy of the Minnesota Historical Society).
Retrieved from <https://www.mprnews.org/story/2006/10/04/southdale>



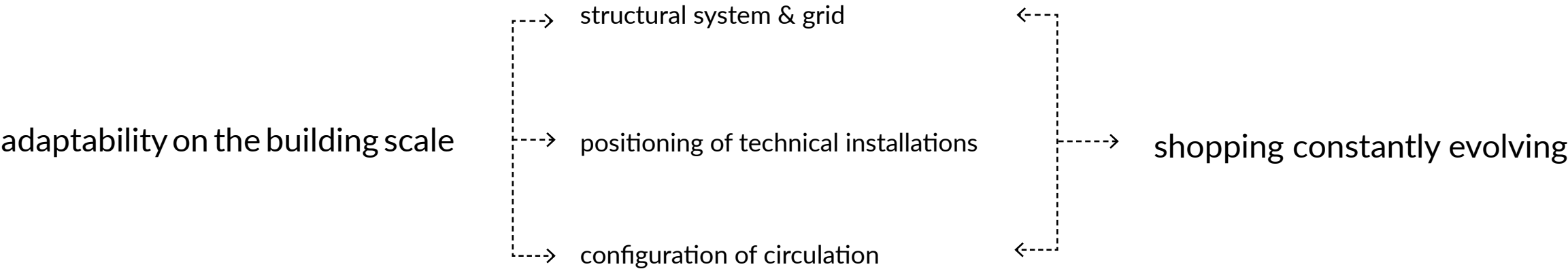
Laguna, A., Psarri, O., Spyridonidou P. (2022). Malls' system hierarchy.



Van der Broek, Bakema.
The friendship diagram.
The shopping center & the city.

...it nevertheless embodies a remarkably consistent urban structure...

Maitland, K. (1985). Shopping malls: planning & design. p. 167



Galena & van Hoogstraten, (2005).



2 MIX IT UP

Drive reinvention by mixing retail spaces with housing, health clinics, entertainment, or schools that will transform single-use malls into integrated, mixed-use communities.

Plenge, A. & Pilgreen, T. (n.d). *Reinventing the mall. Developers are transforming struggling malls into thriving urban lifestyle centers.*



Rowbottom, A. (2019). *Mixed use: The future of shopping centres.* Retrieved from <https://www.foundationrecruitment.com/mixed-use-the-future-of-shopping-centres/>

A shopping centre
must be more than
a place to shop

NRW & IVBN (n.d). *New guidelines for successful shopping centers.*

Trends Shaping the Future of Mixed Use and Retail Centers

December 20, 2021 | By J.F. Finn, III, Beatriz De Paz

Gensler (2021). *Trends shaping the future of mixed use and retail centers.*



Urban Resilience: the capacity of the city to **adapt** and grow over the challenges it may face while maintaining **continuity**.

The Flexible City

1: PILOT

By Lucy Godwin

Resilience through adaptability: creating future-proofed urban development in a rapidly evolving world

THE PROJECT THROUGH THE PRISM OF THE ADAPTABLE CITY

Didier Rebois (FR)

STRATEGIES FOR DEFINING THE 21ST-CENTURY CITY?

Godwin, L. (2022). *The flexible city.*

“...a totally adaptable environment,(...), would be a fairy-tale nightmare...”

&

“...an adaptable place can be a characterless and disorienting one...”

Lynch, K. (1981). A Theory of Good City Form. p. 174

Research Question

What?

How can **heritage values and attributes related to the adaptability of**

Where? When? Who? How?

the Dutch post-war shopping mall as an urban structure be employed

Why?

in potential redesign strategies so as to ensure urban resilience?

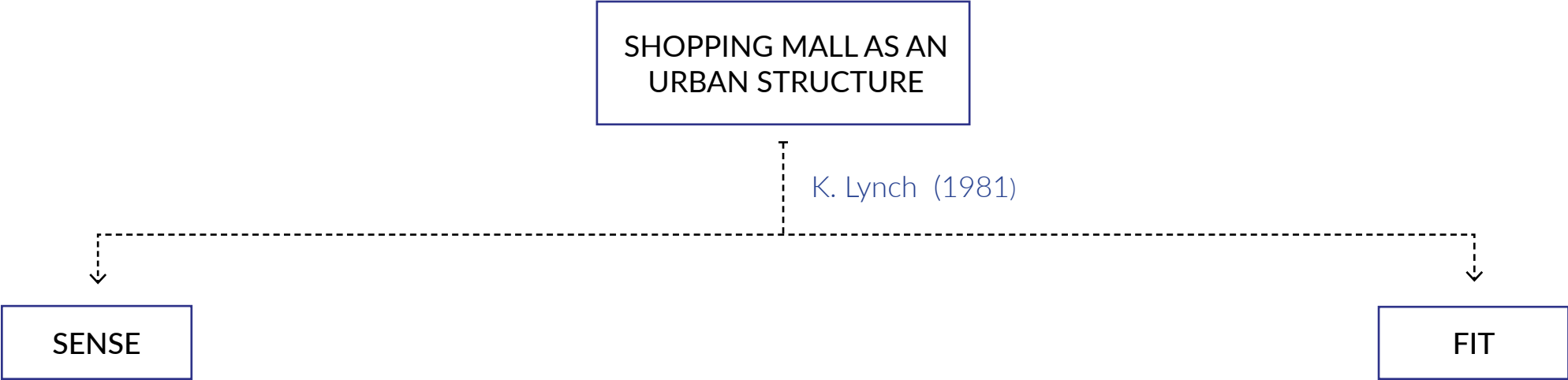
- 1 How can adaptability be spatially defined on the urban scale?
- 2 What are the spatial attributes of the post-war shopping mall related to adaptability & what are the heritage values embedded in them?
- 3 How have different intervention strategies affected the ability of the Dutch post-war shopping mall to accommodate change?

1
Introduction

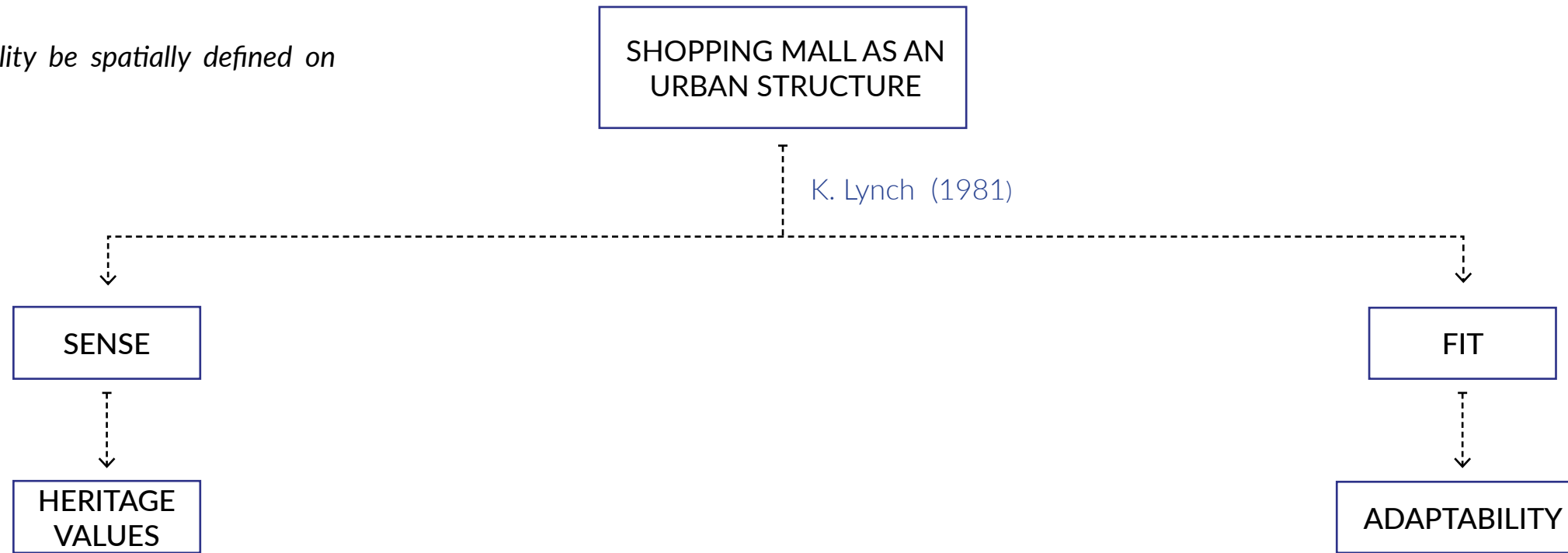
Research
2
Framework & Methodology
Research cases
Findings & Assessment

3
to
Design

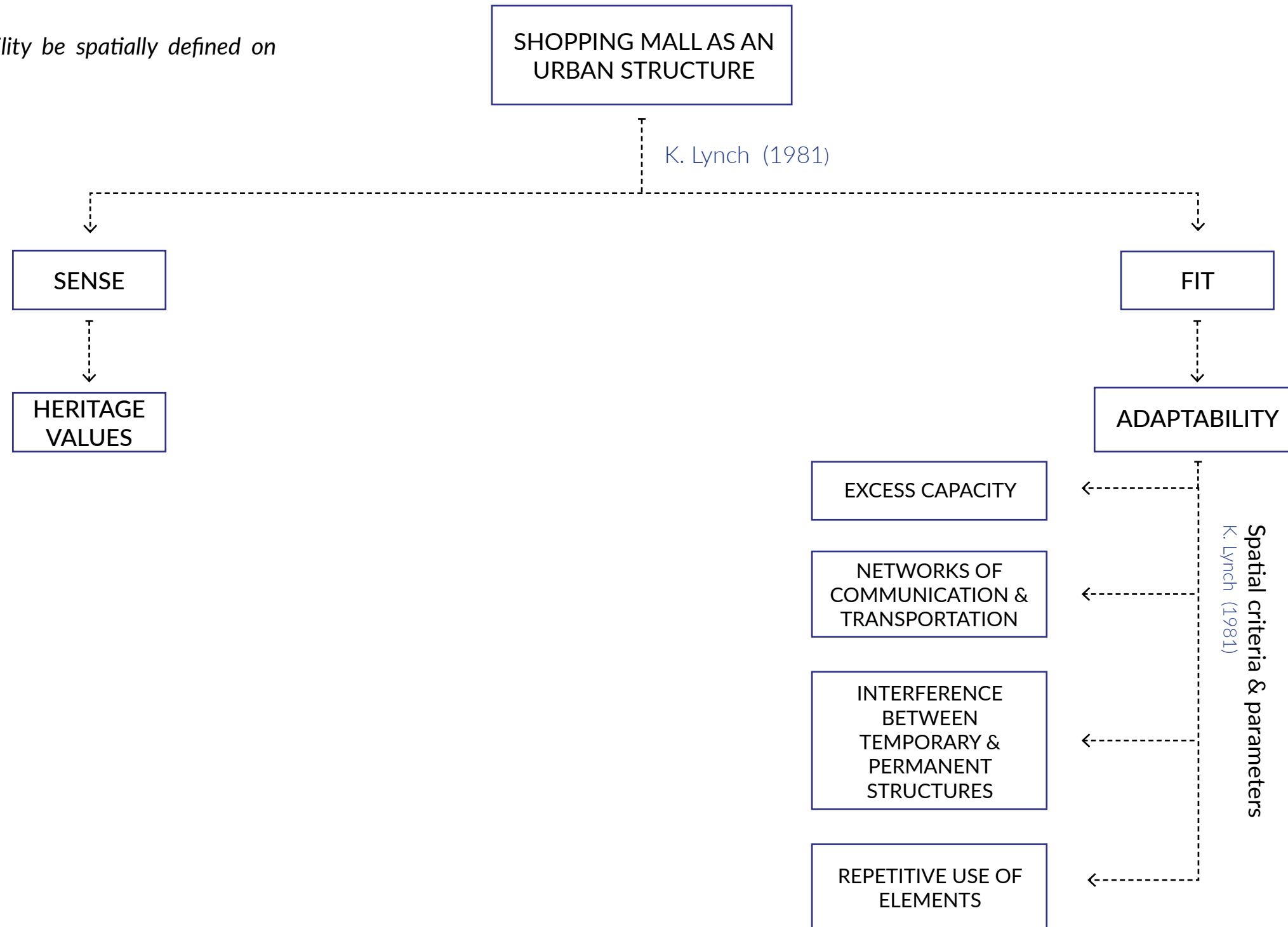
4
Epilogue



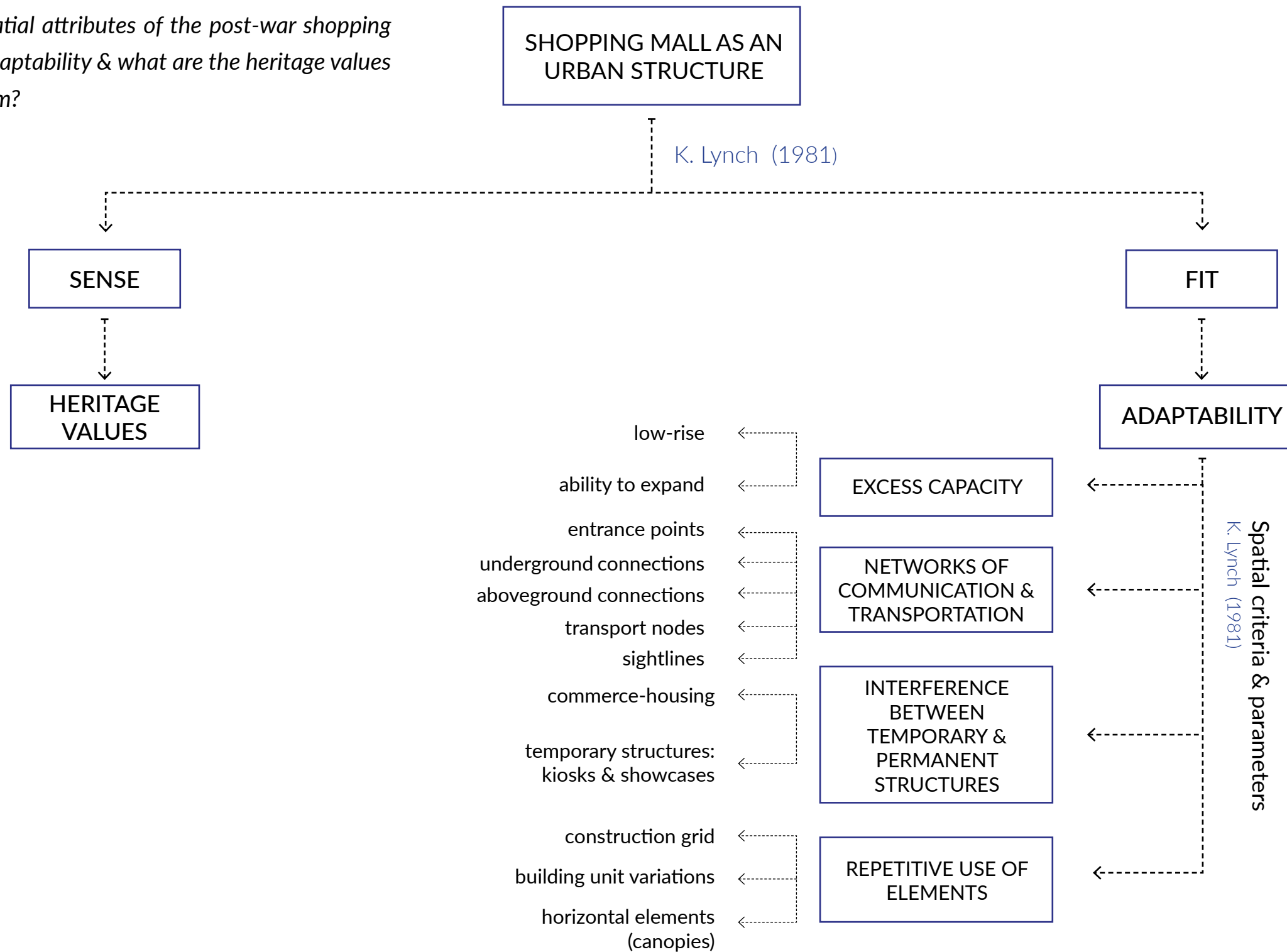
1 How can adaptability be spatially defined on the urban scale?



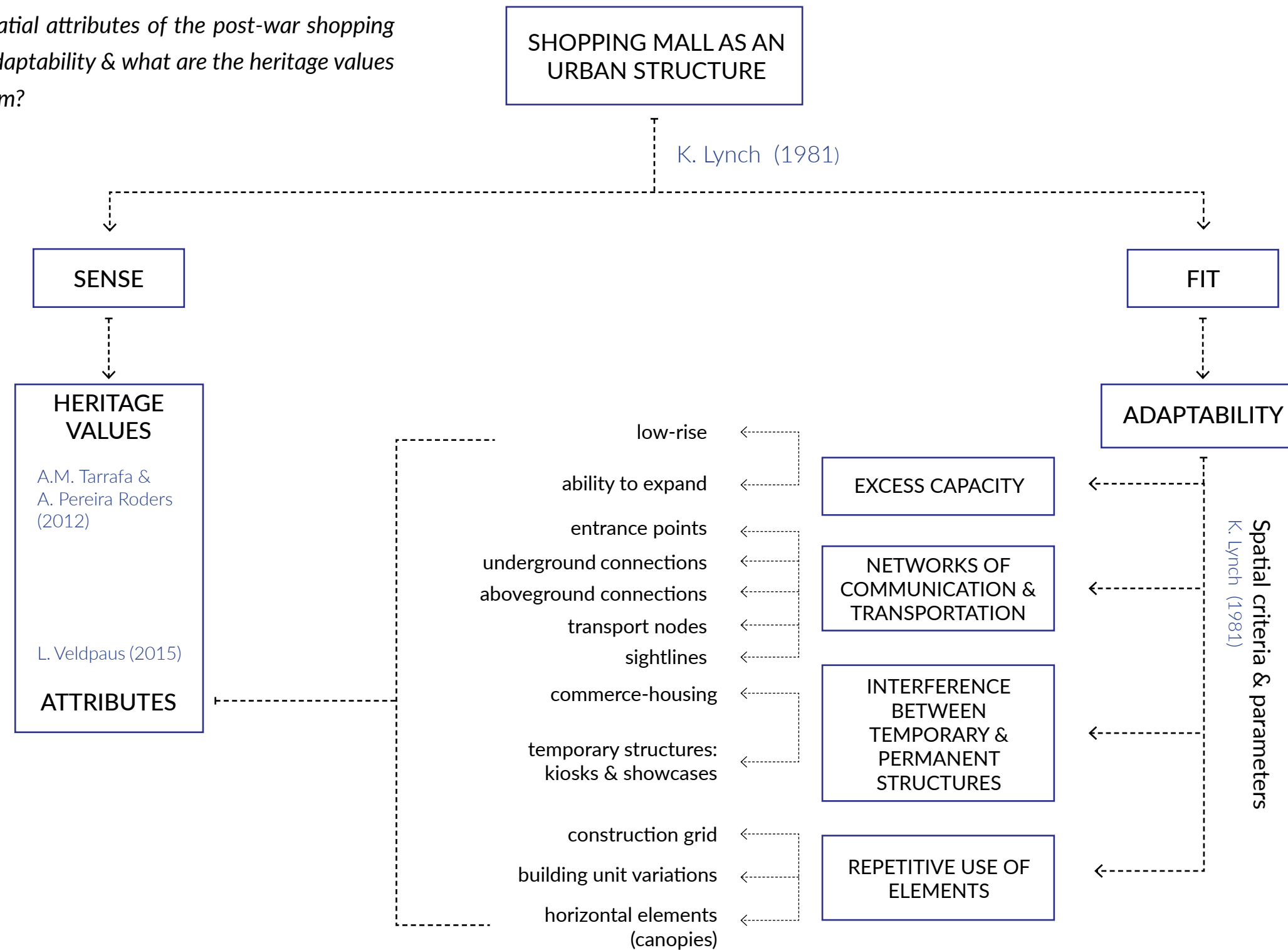
1 How can adaptability be spatially defined on the urban scale?



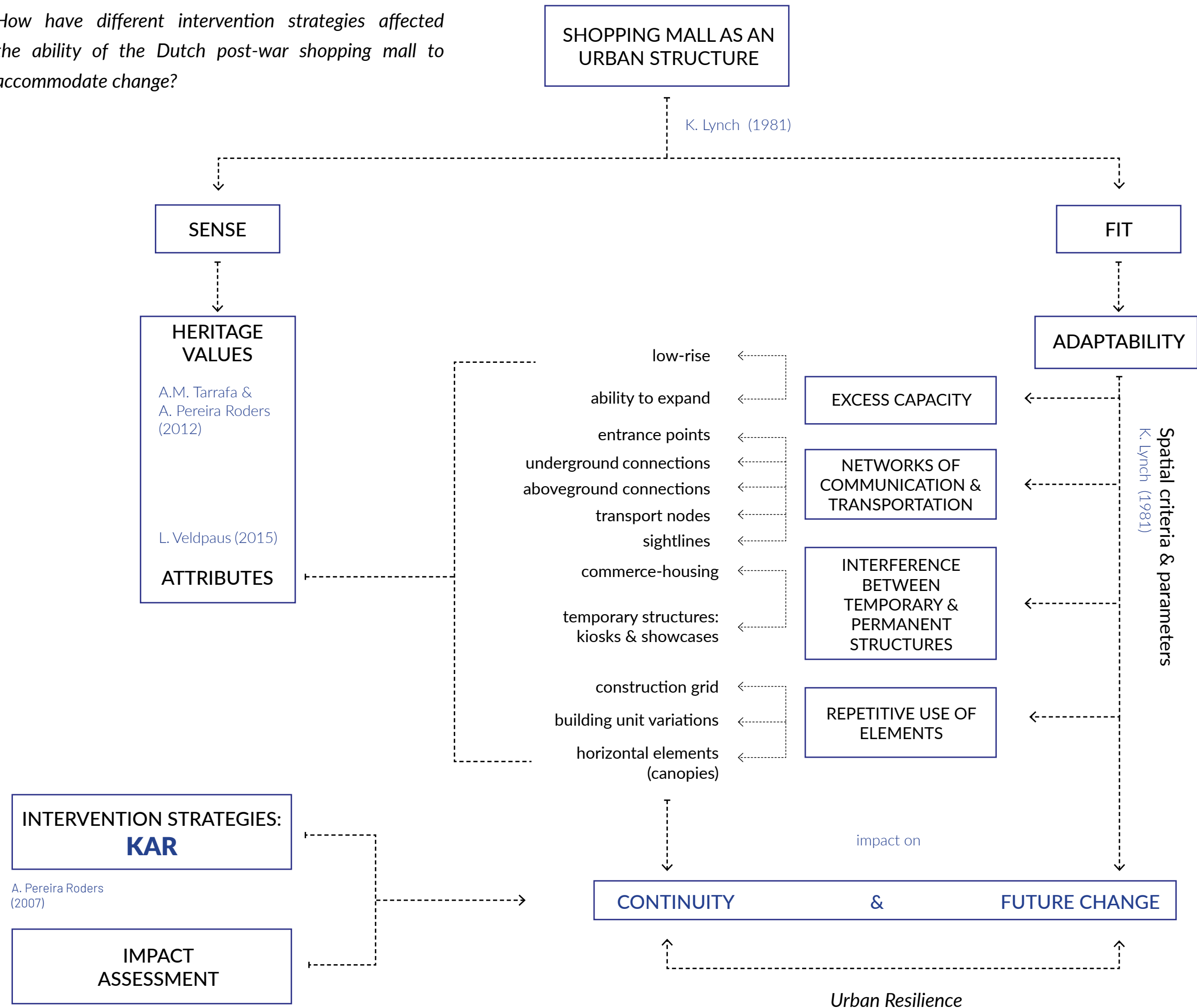
What are the spatial attributes of the post-war shopping mall related to adaptability & what are the heritage values embedded in them?



What are the spatial attributes of the post-war shopping mall related to adaptability & what are the heritage values embedded in them?



3 How have different intervention strategies affected the ability of the Dutch post-war shopping mall to accommodate change?





LIJNBAAN

Rotterdam, NL



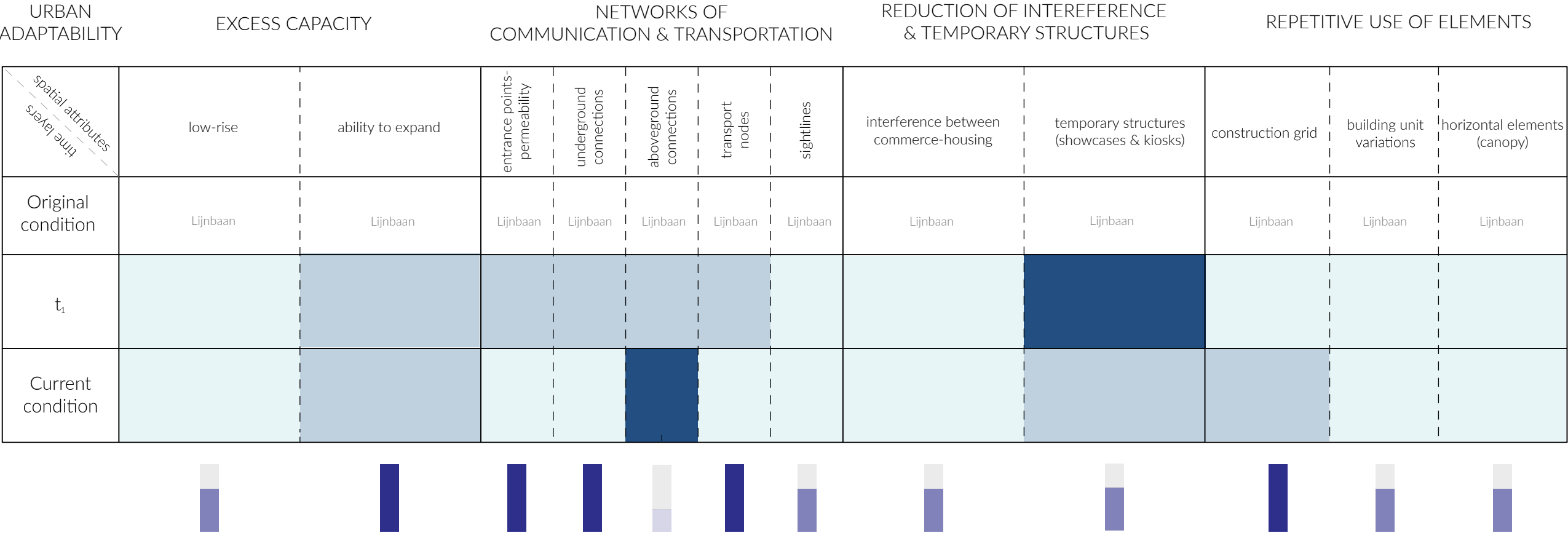
WINKELCENTRUM LEYWEG

The Hague, NL

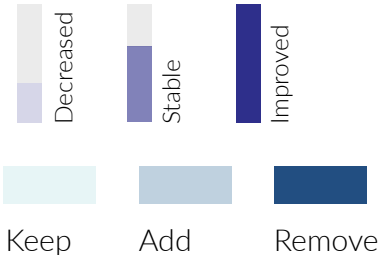
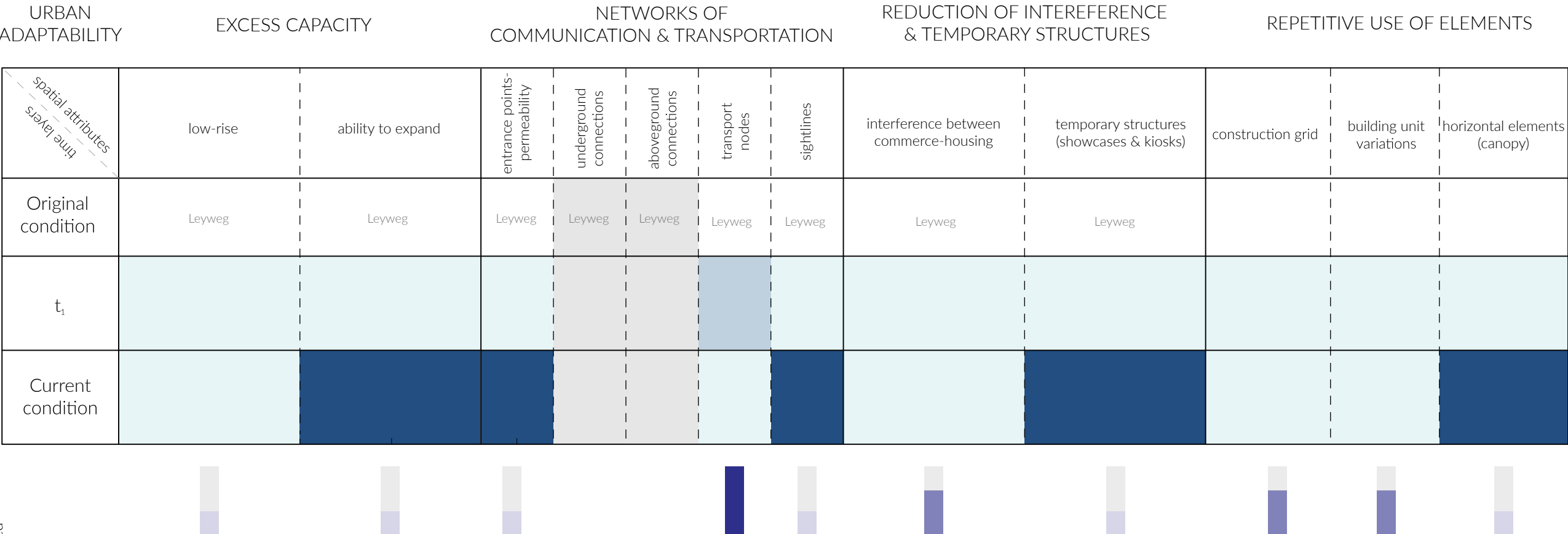
Research Cases

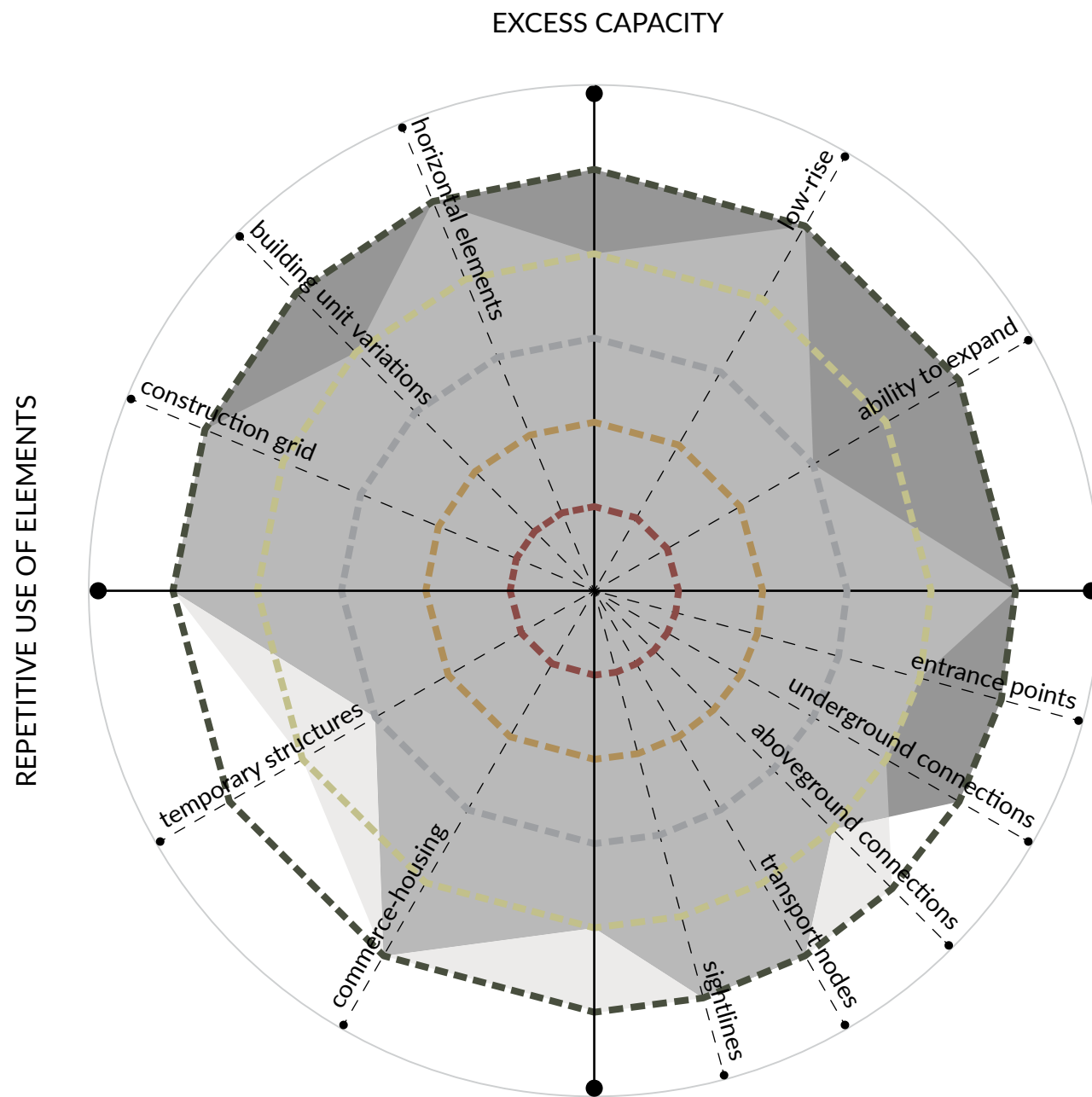
FINDINGS

LIJNBAAN



LEYWEG





INTERFERENCE BETWEEN PERMANENT & TEMPORARY STRUCTURES

LIJNBAAN

Major beneficial	Major beneficial	■■■■■
Moderate beneficial		
Neglegable beneficial	Minor beneficial	■■■■■
Minor beneficial		

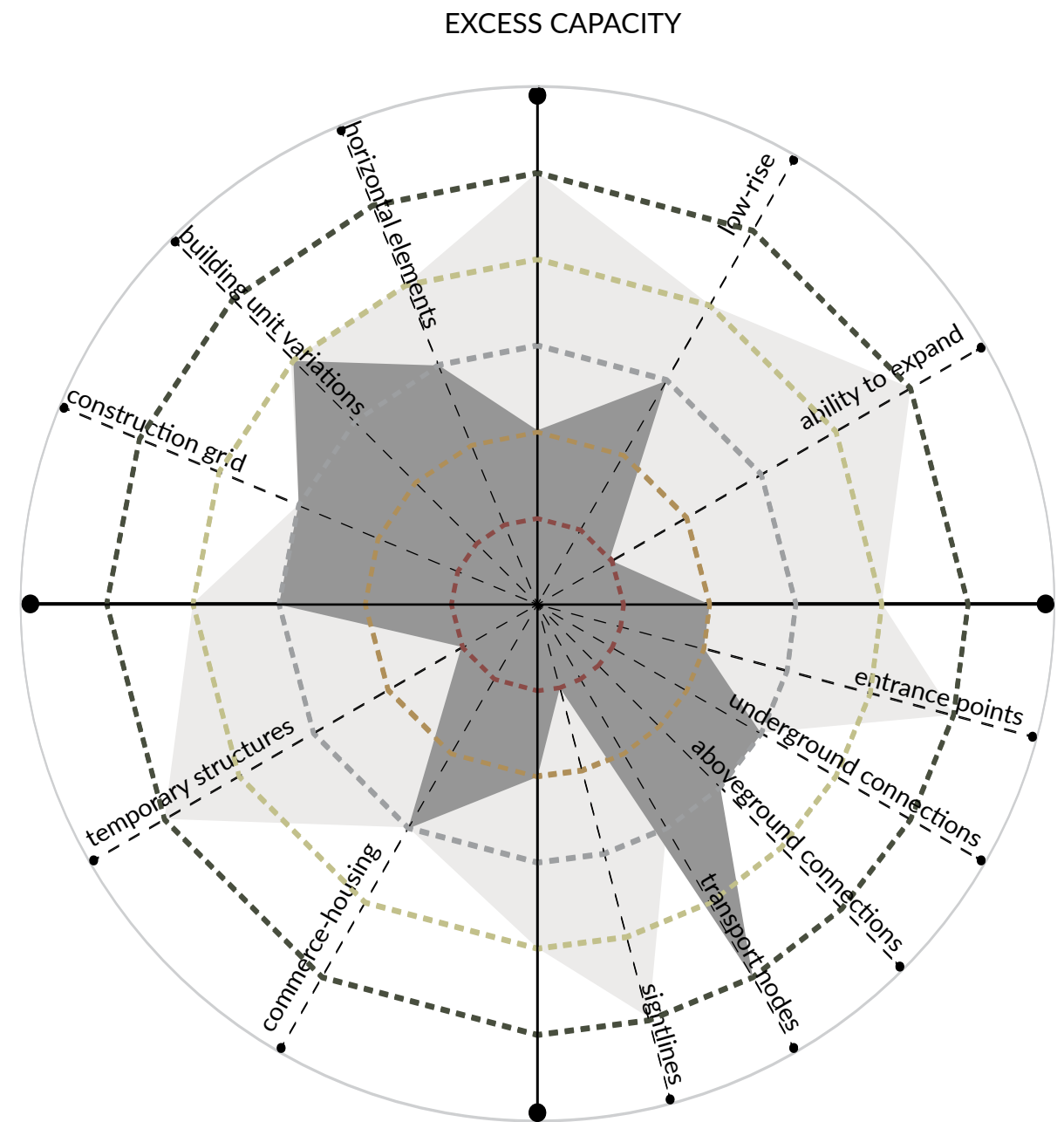
NETWORKS OF COMMUNICATION & TRANSPORTATION

Original condition

Current condition

Neutral	Neutral	■■■■■
---------	---------	-------

REPETITIVE USE OF ELEMENTS

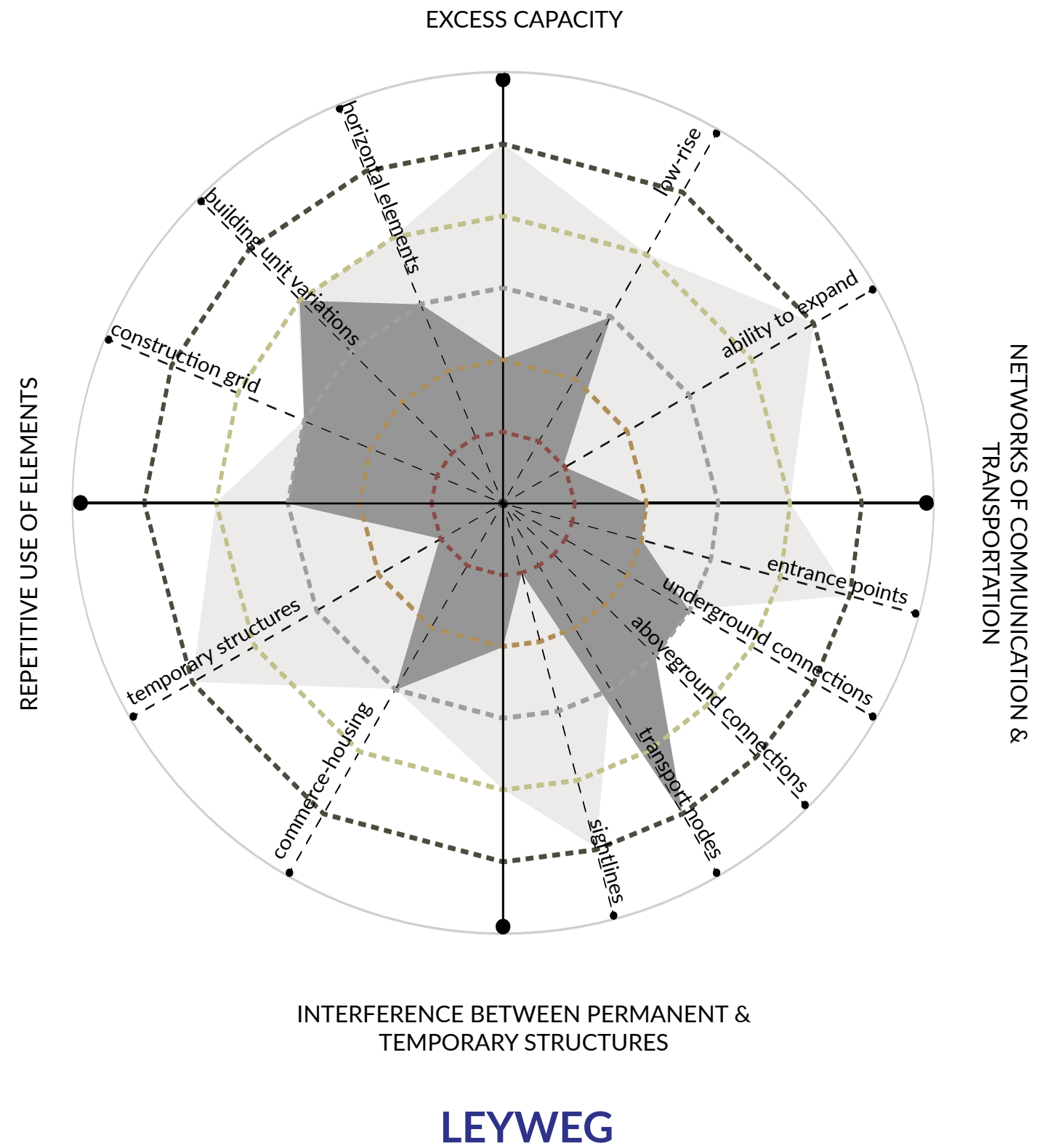
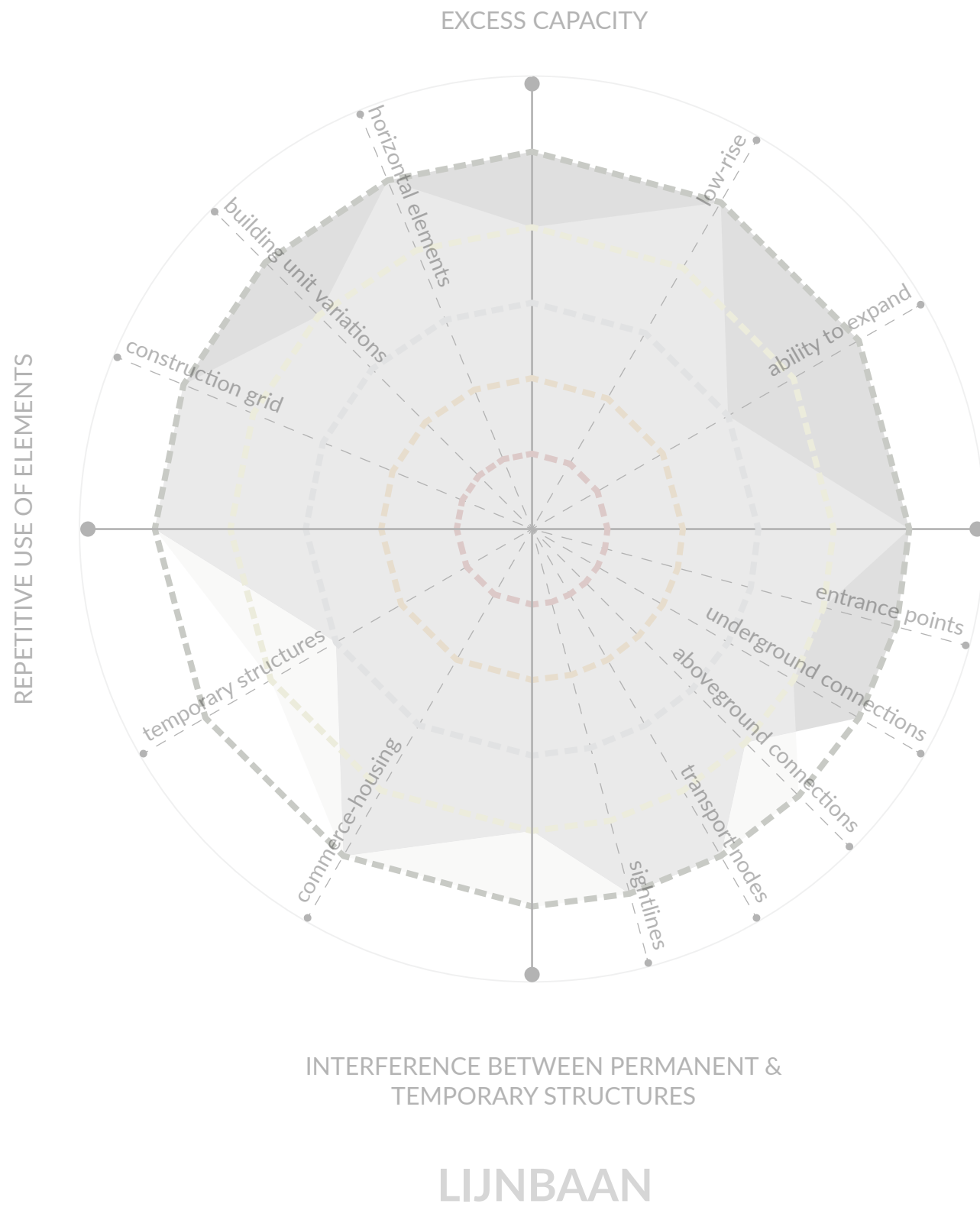


INTERFERENCE BETWEEN PERMANENT & TEMPORARY STRUCTURES

LEYWEG

Neglegable adverse	Minor adverse	■■■■■
Minor adverse		
Moderate adverse	Major adverse	■■■■■
Major adverse		

NETWORKS OF COMMUNICATION & TRANSPORTATION

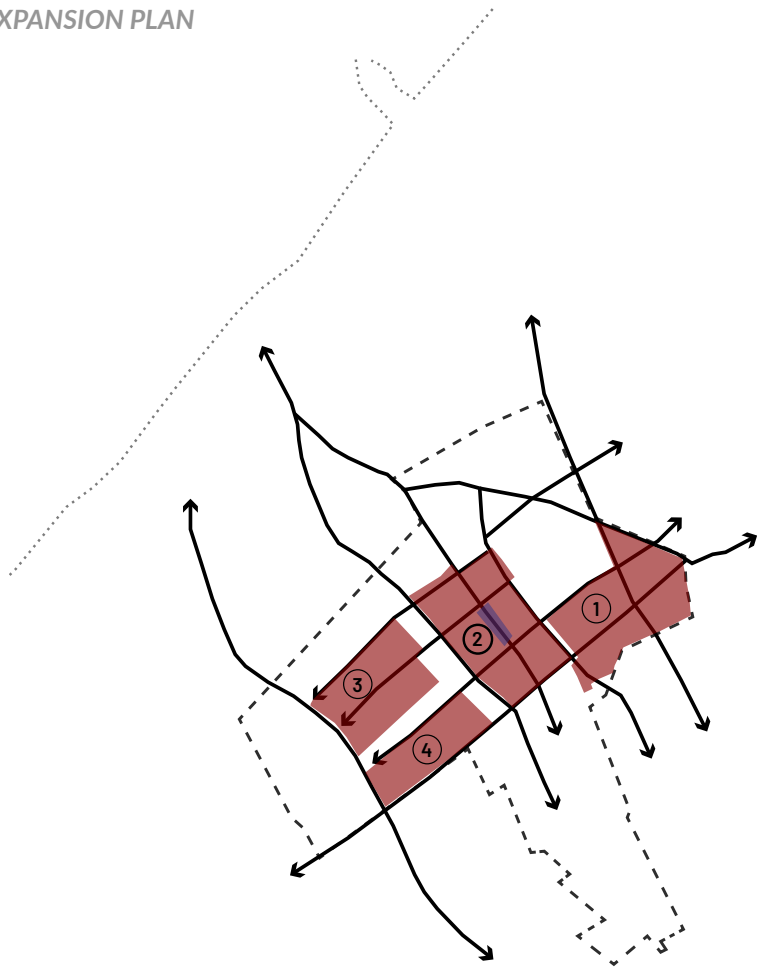


1
Introduction

2
*from
Research*

3
Design
Historic evolution
Program & functional configuration
Design Acts
Details
Climate design

4
Epilogue



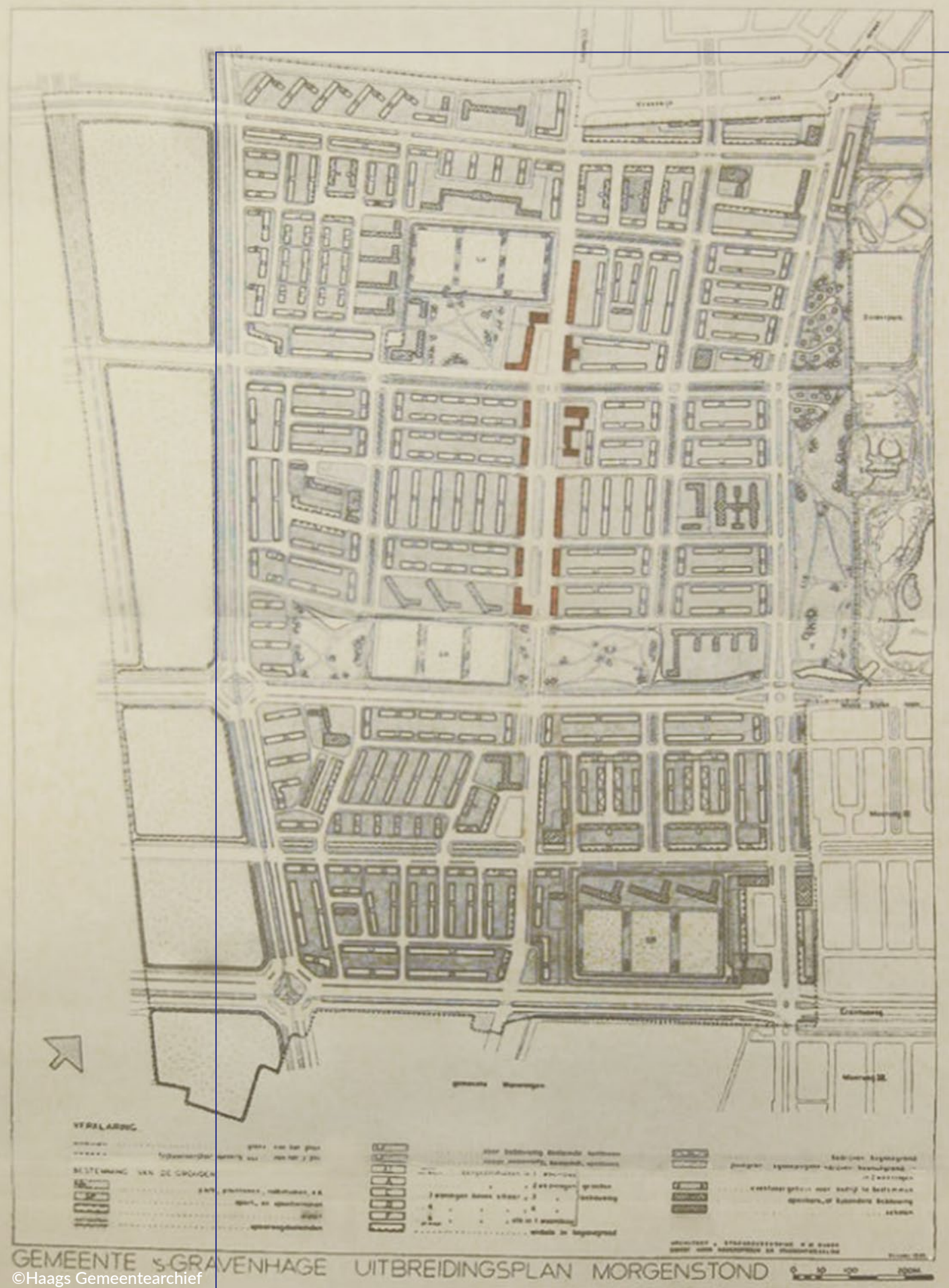
1. Moerwijk 2. Morgenstond 3. Berestein/Bouwlust 4. Vrederust
Morgenstod as part of the system
of four expansion neighborhoods



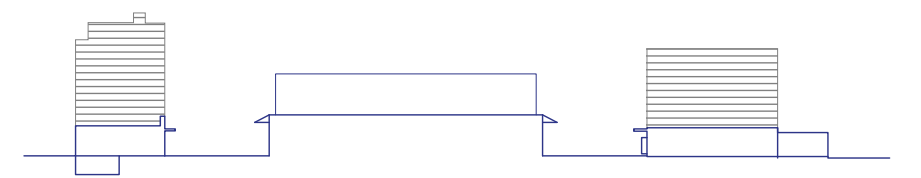
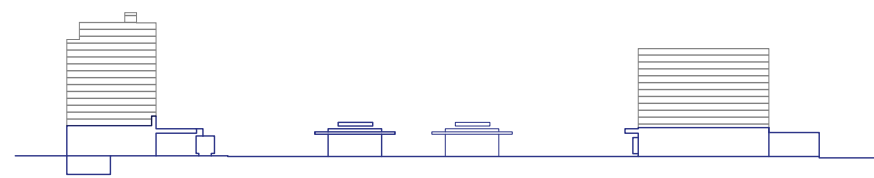
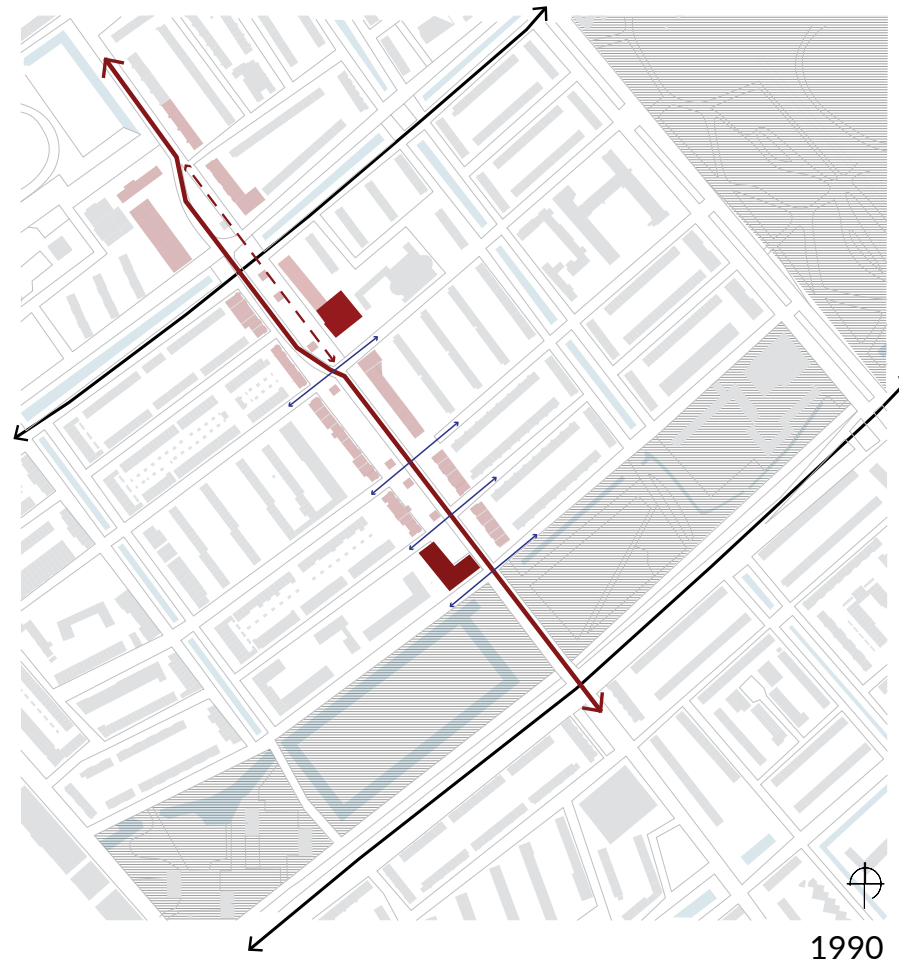
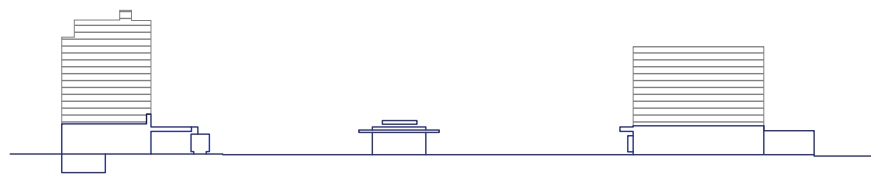
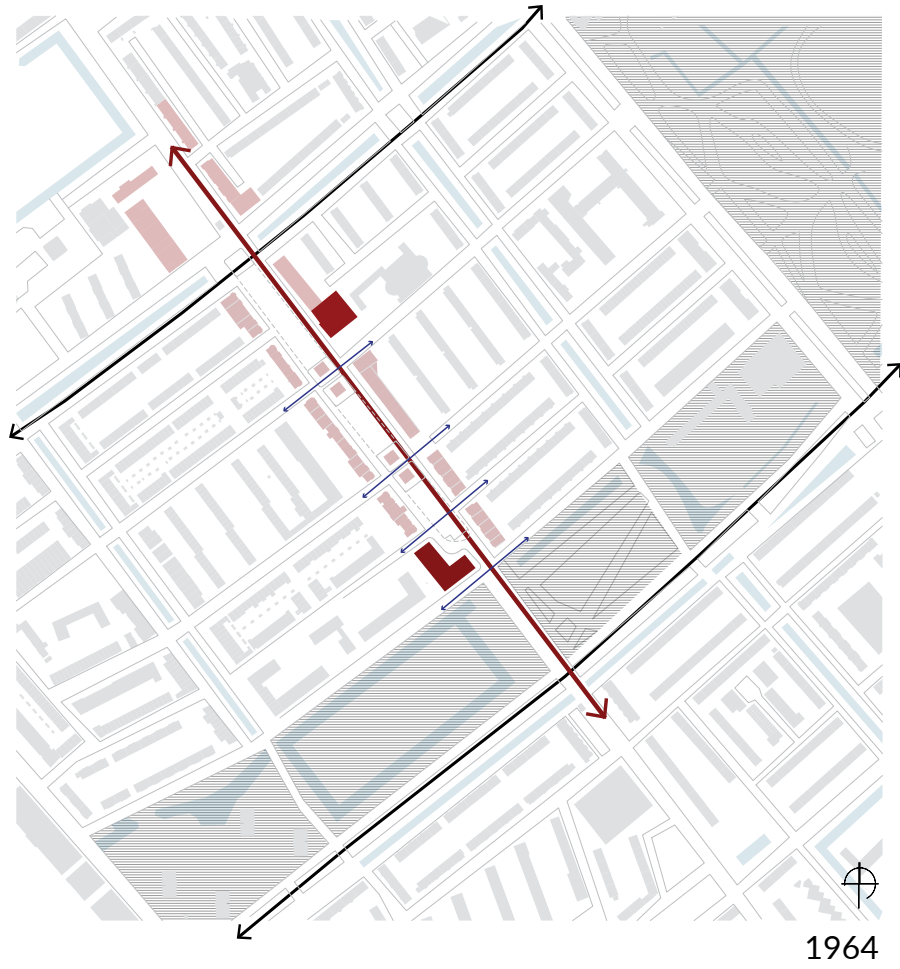
Urban green structure



1930's expansion plan
Connexing axes with the Hague & Scheveningen



The 1949 expansion plan for Morgenstond. In red the intended retail strips along Leyweg.

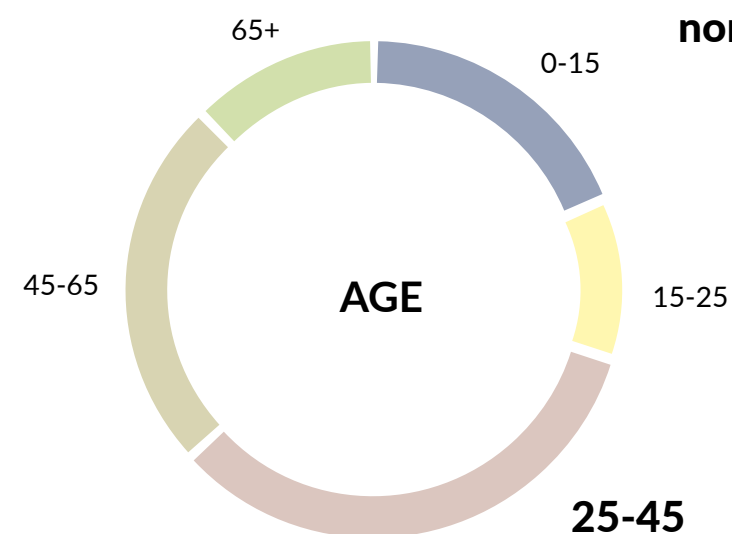
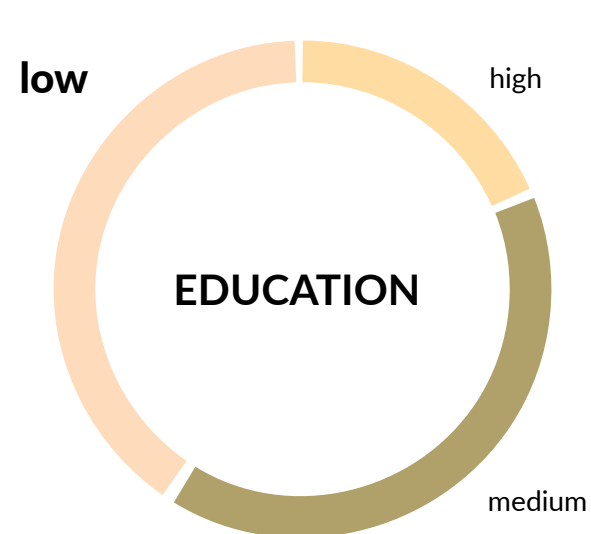
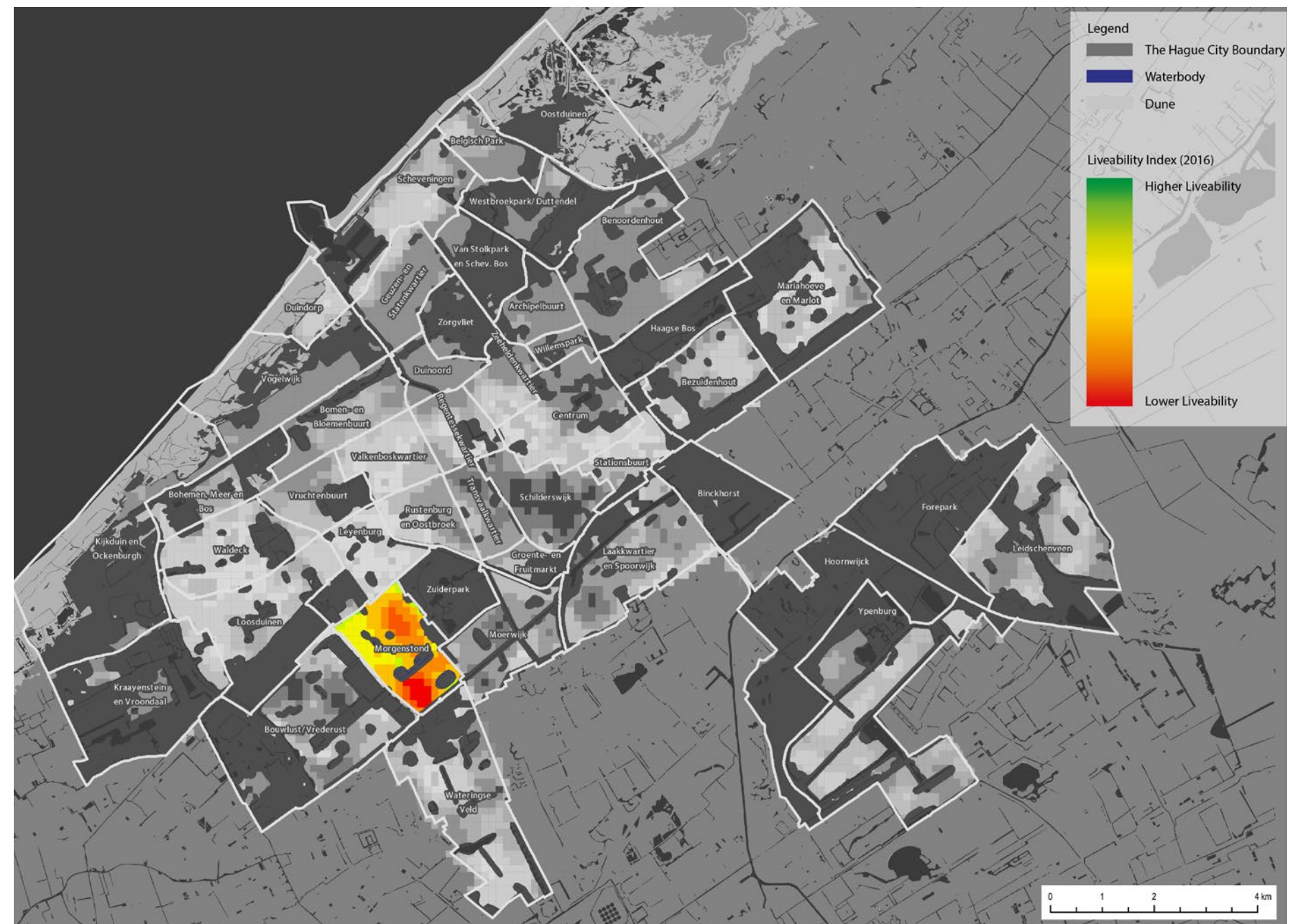




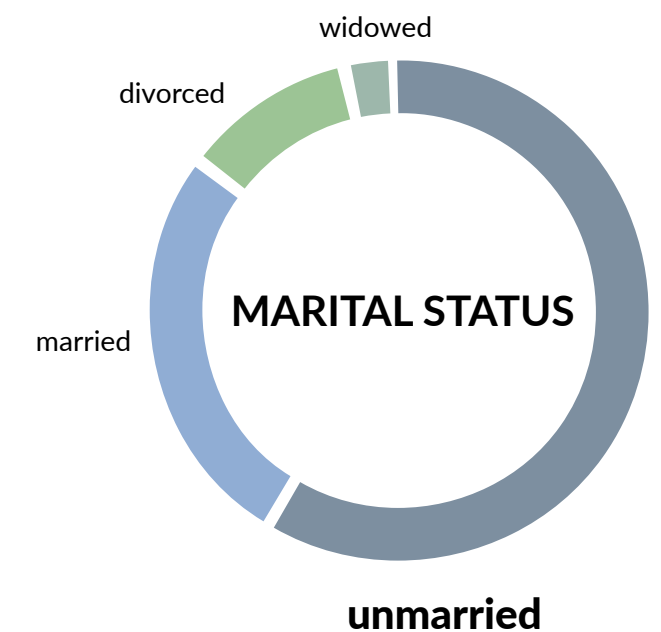
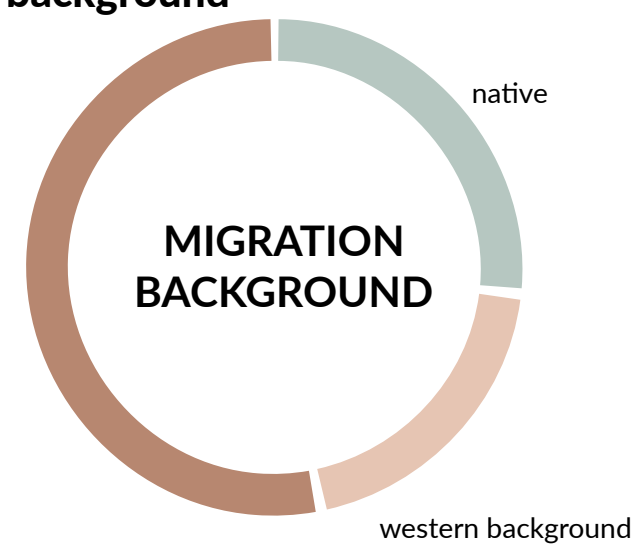


Urban resilience: the capacity of individuals, communities, institutions, businesses, and systems within a city to survive, adapt, and grow no matter what kinds of chronic stresses and acute shocks they experience.

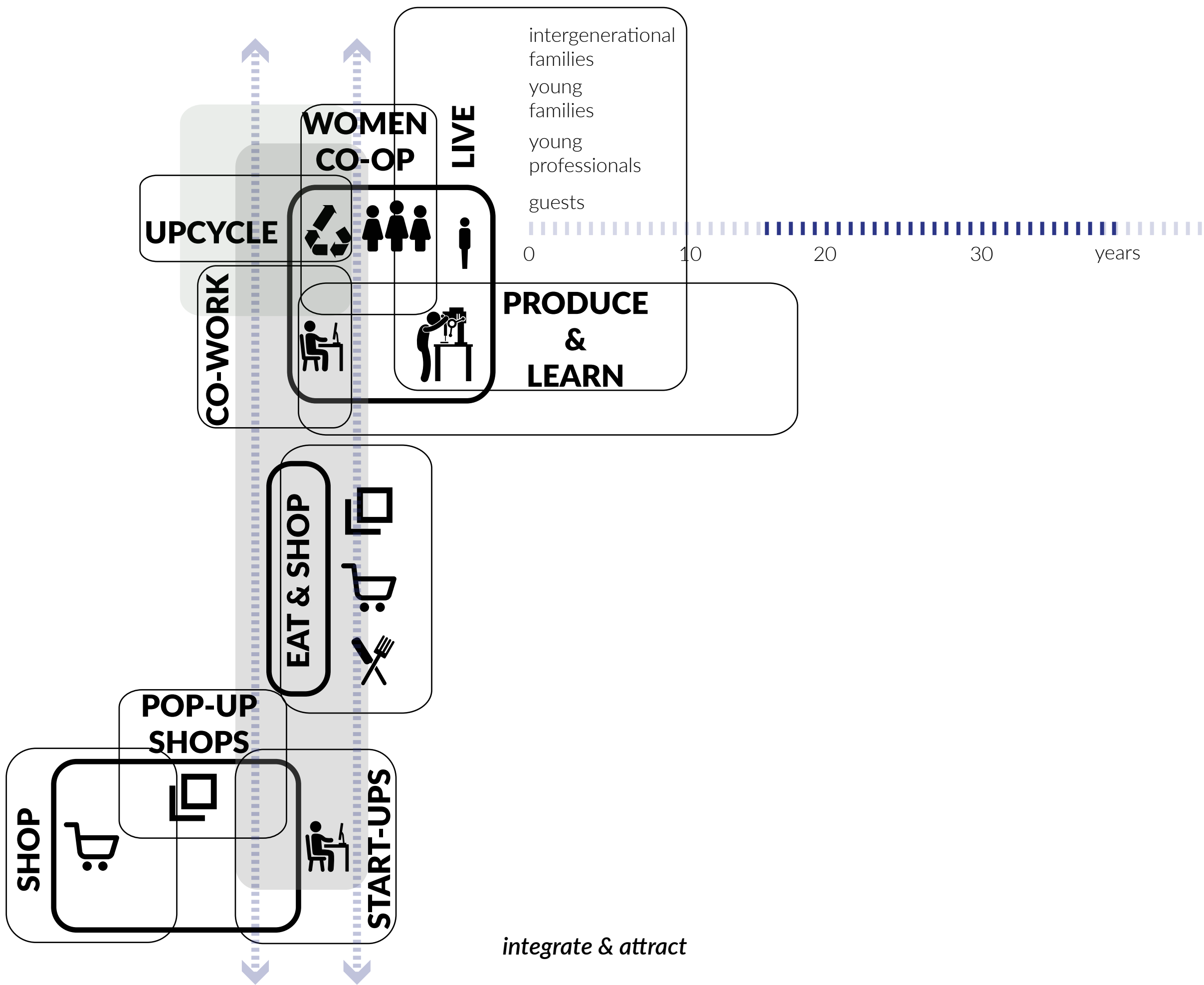
Resilient cities network, (n.d.).

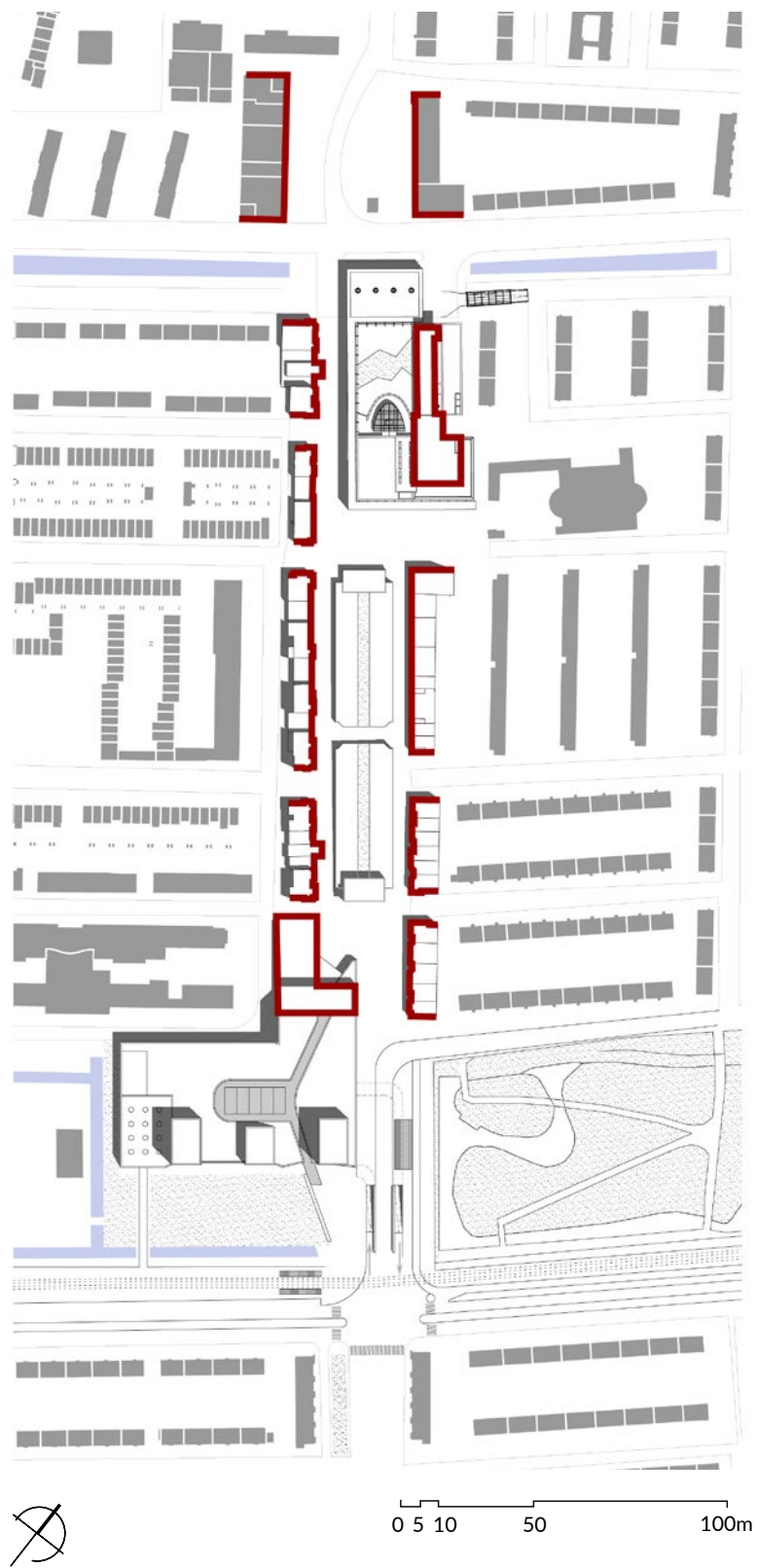


non-western background

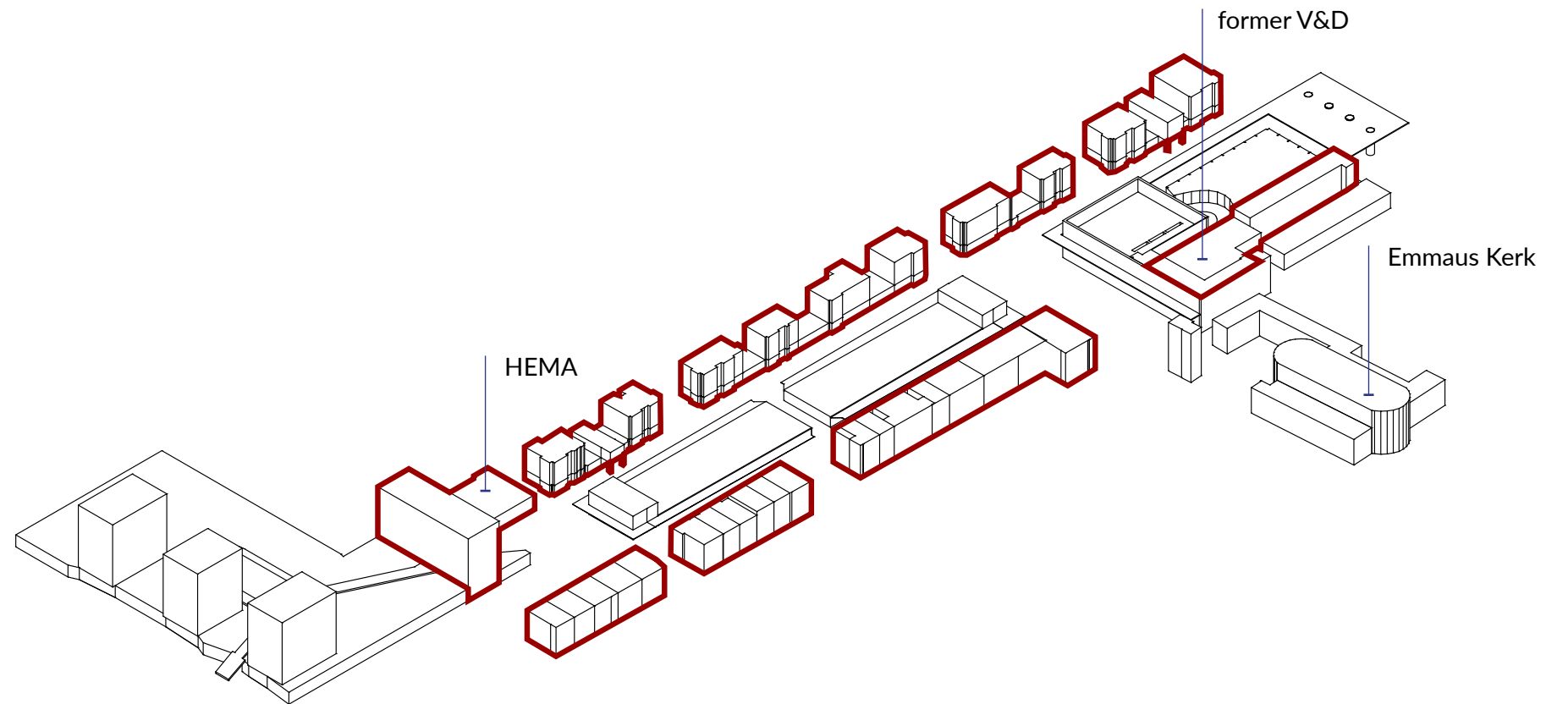


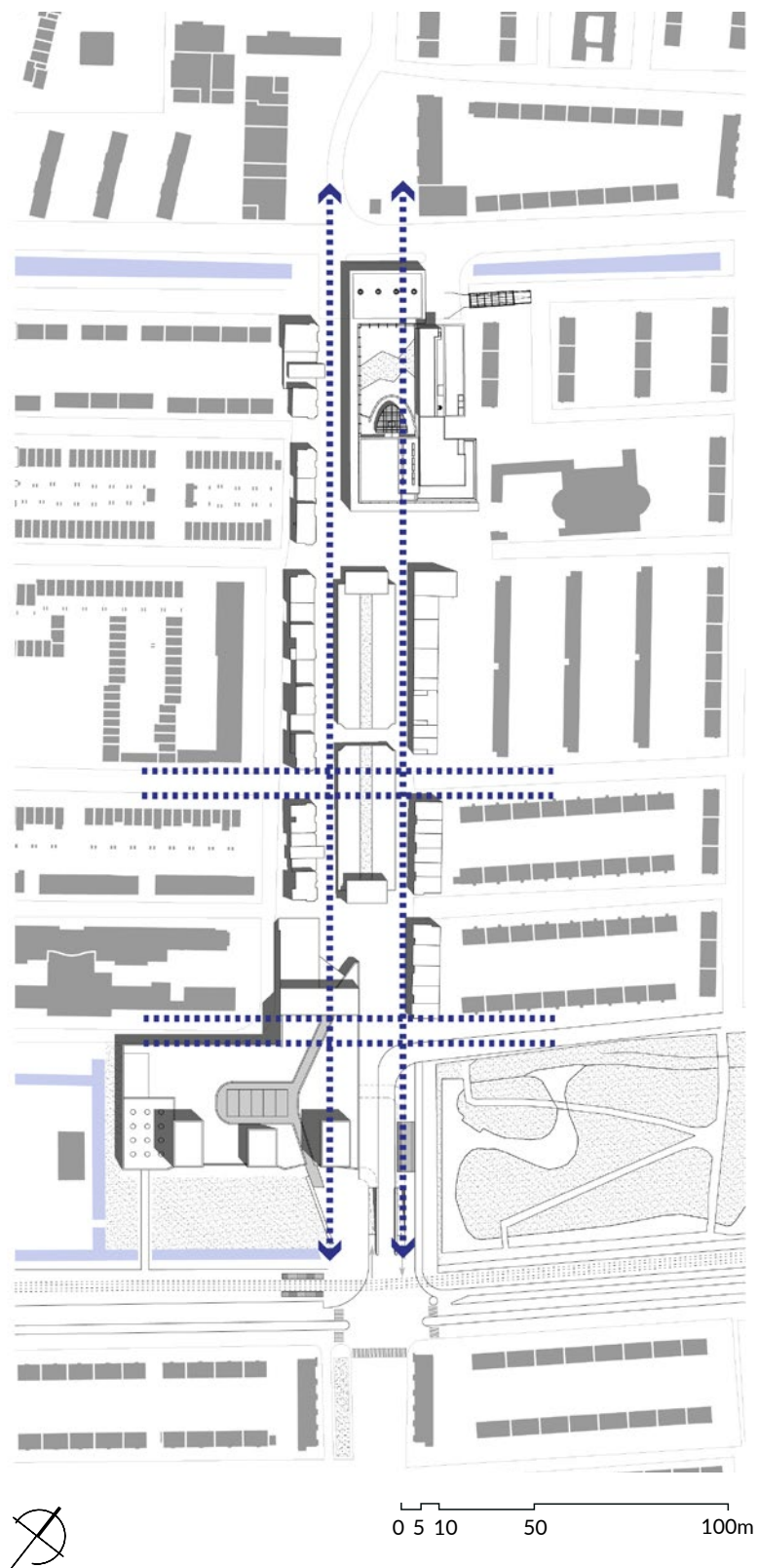






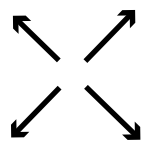
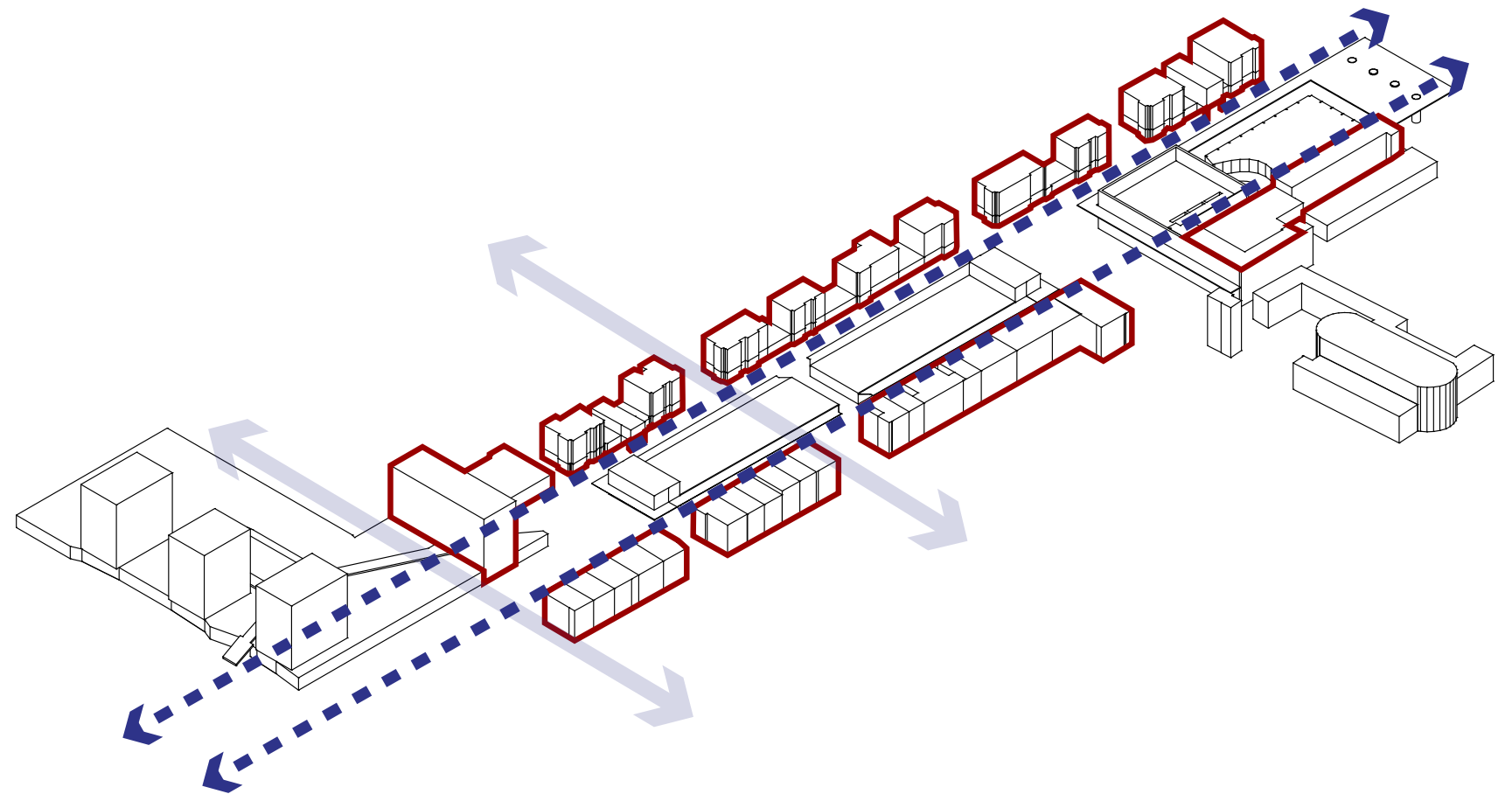
— 1950's Leyweg shopping center



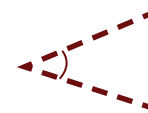


— — — Connections - Axes

ACT I.



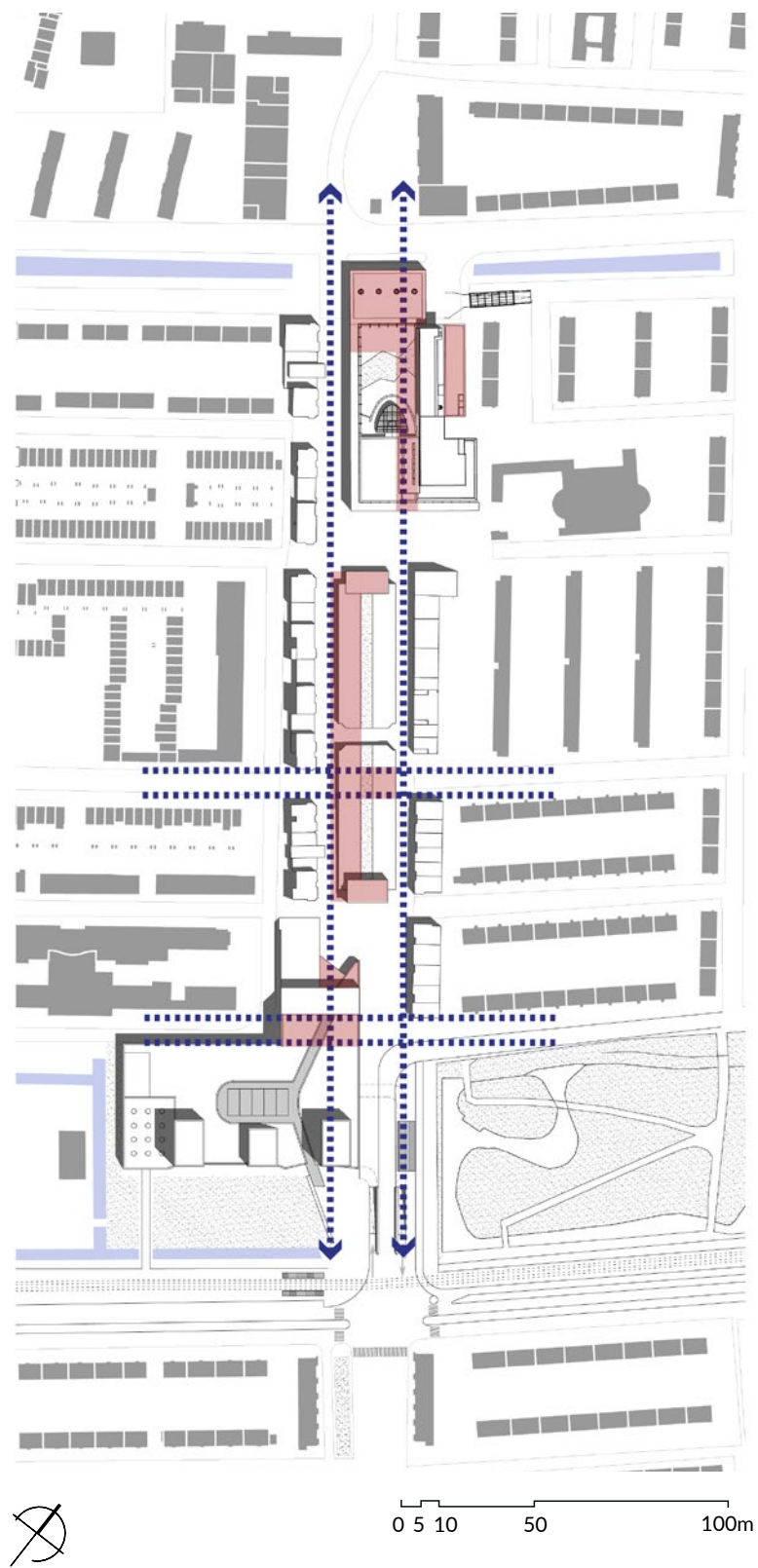
ability to expand



sightlines

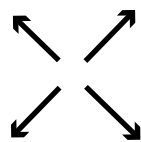
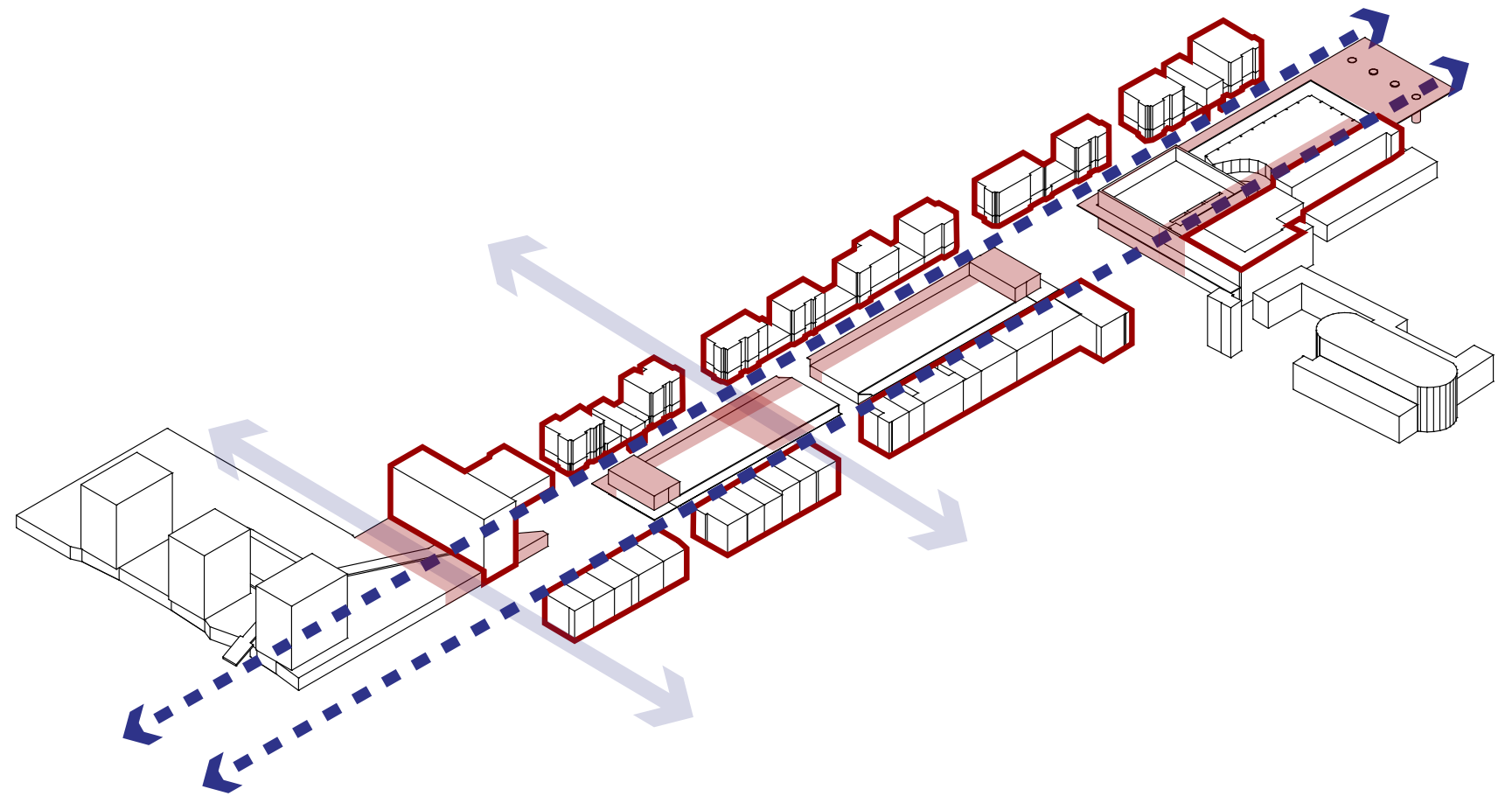


entrances

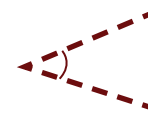


- Connections - Axes
- Remove

ACT II.



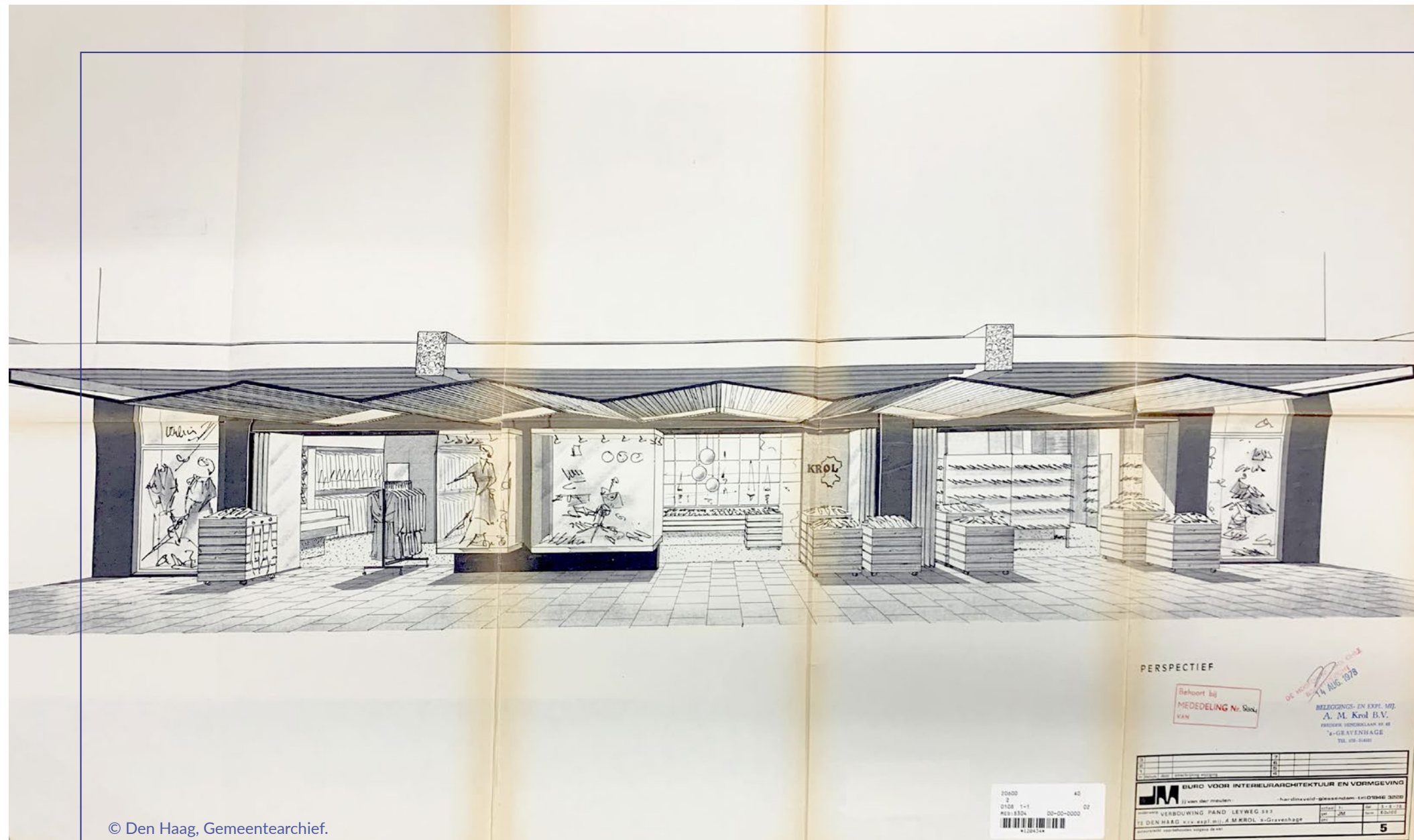
ability to expand



sightlines

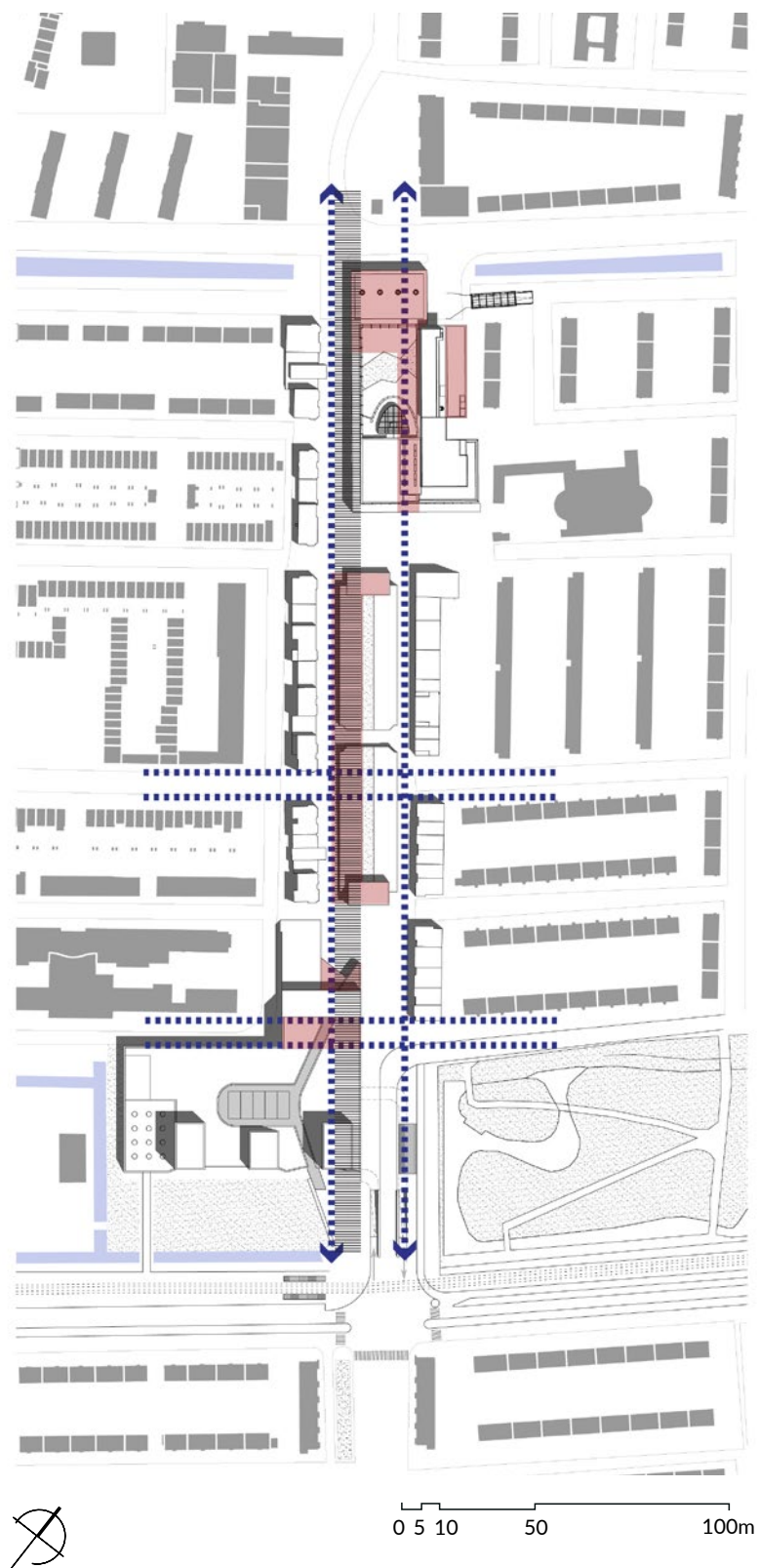


entrances



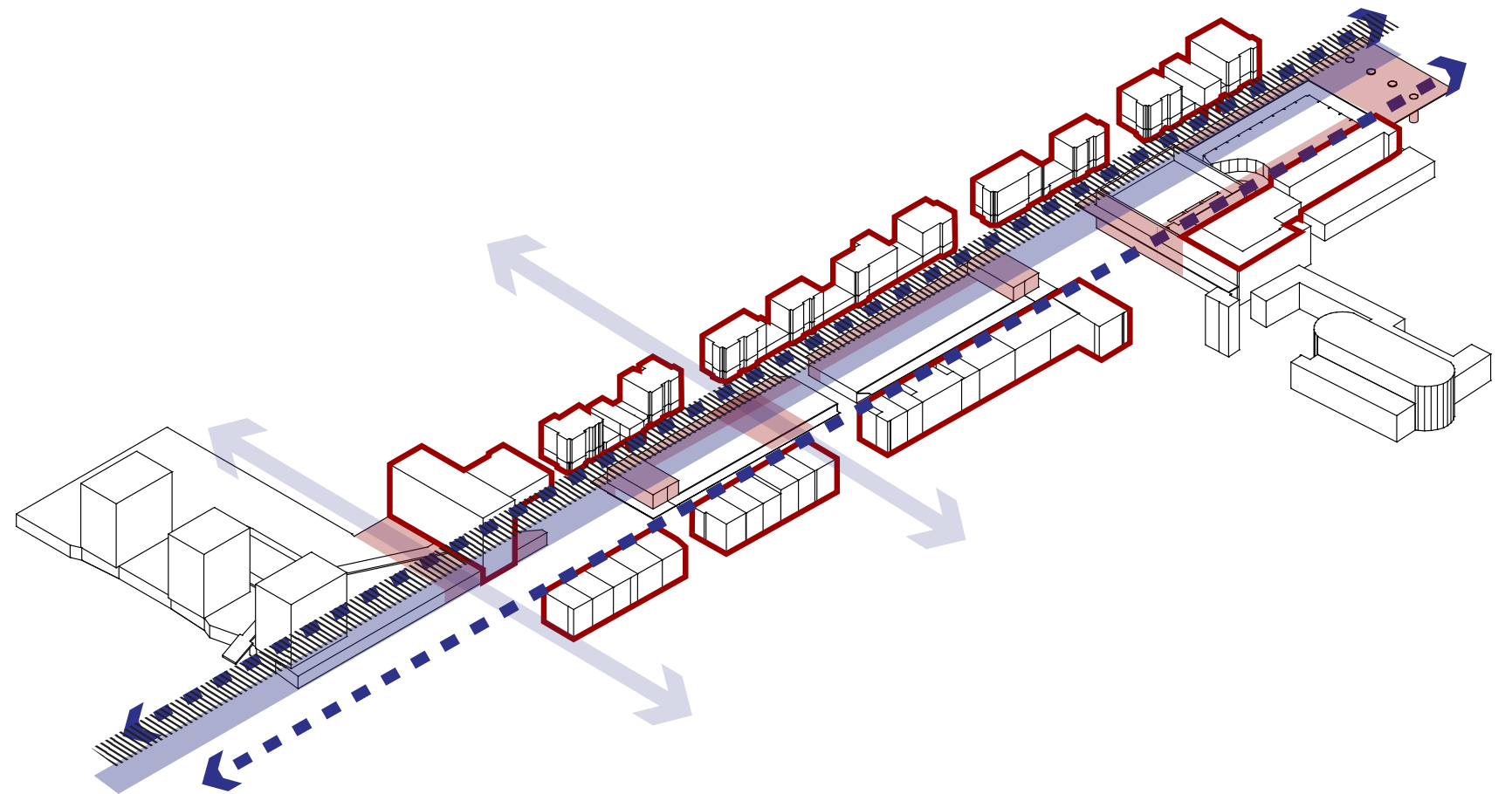
...Leyweg should develop as a watershed for public life...

Valentijn, D. (Ed.) (2002). *De Wederopbouw. Haagse gids voor architectuur en stedenbouw in de periode 1945-1965.*

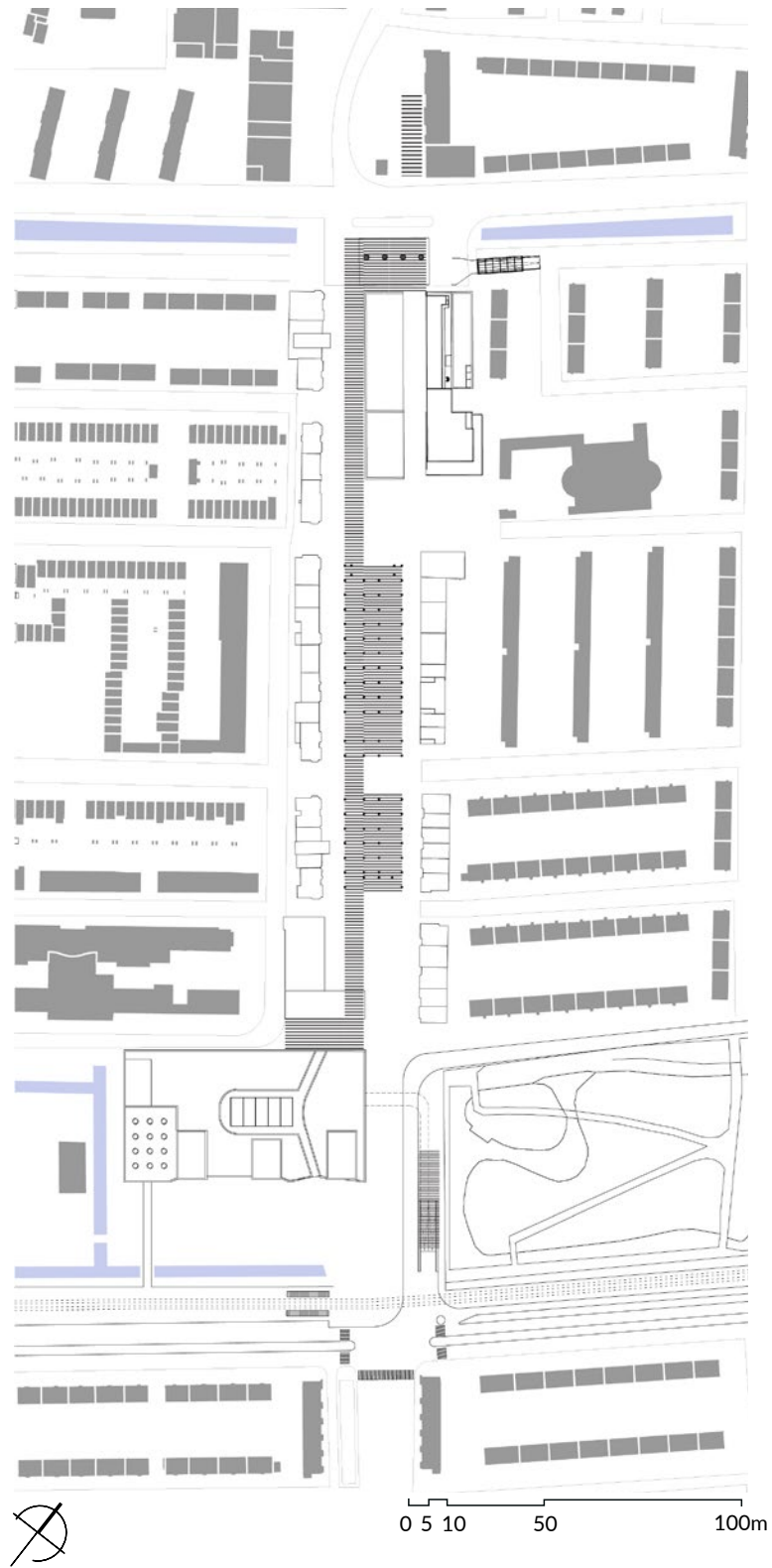


- Connections - Axes
- Remove
- Urban canopy

ACT III.

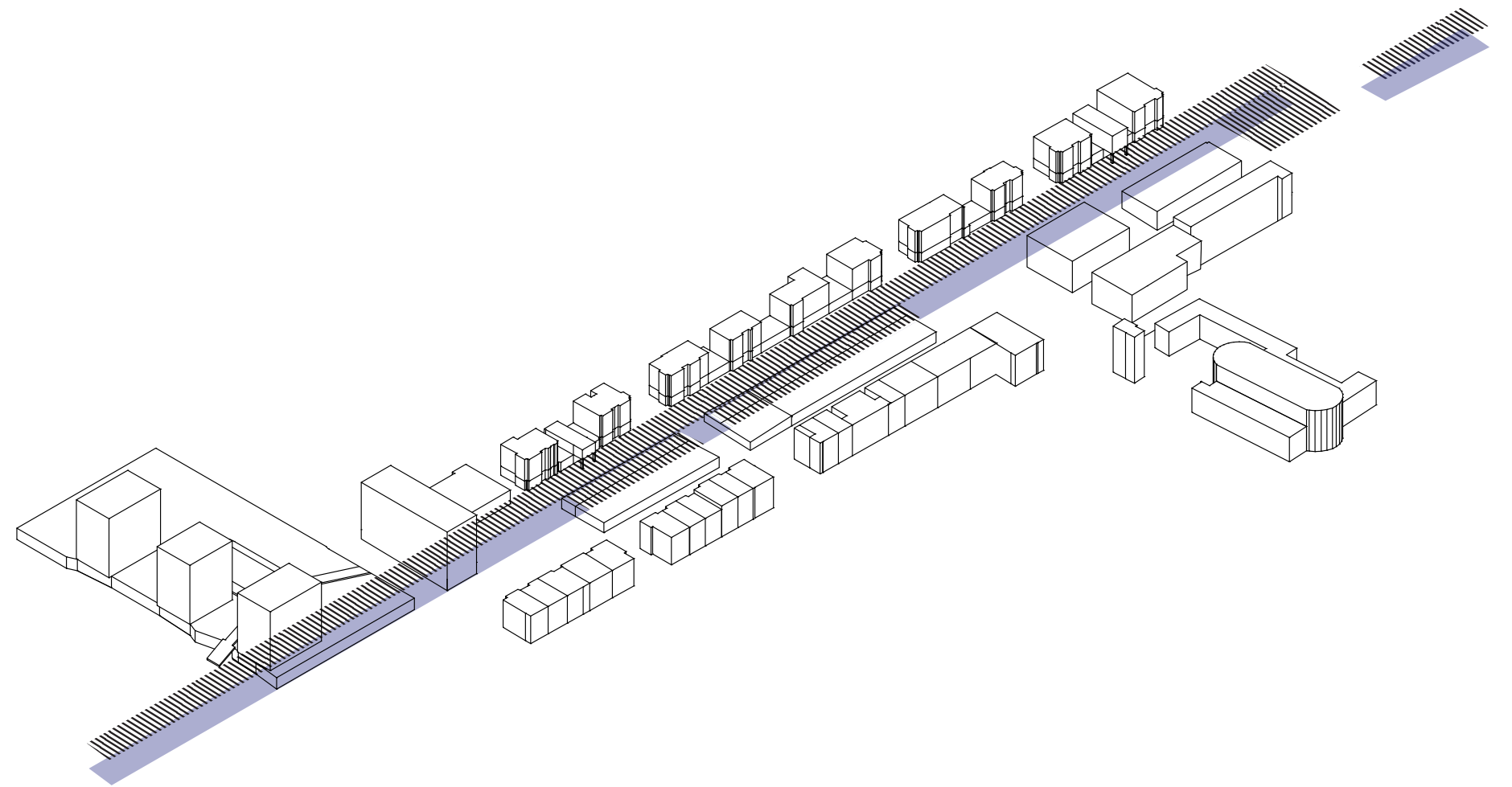


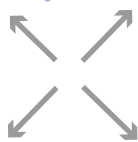
- ability to expand*
- sightlines*
- entrances*
- canopy*
- temporary structures*



 Urban canopy

ACT IV.

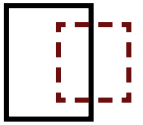


 ability to expand

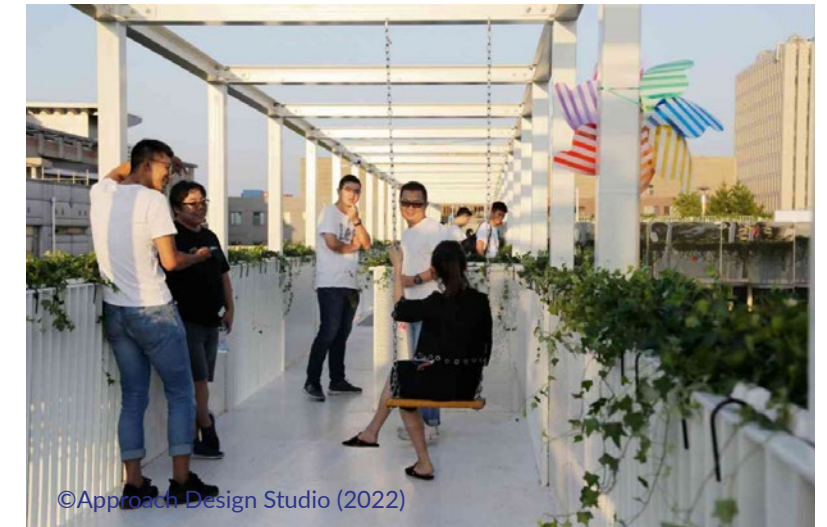
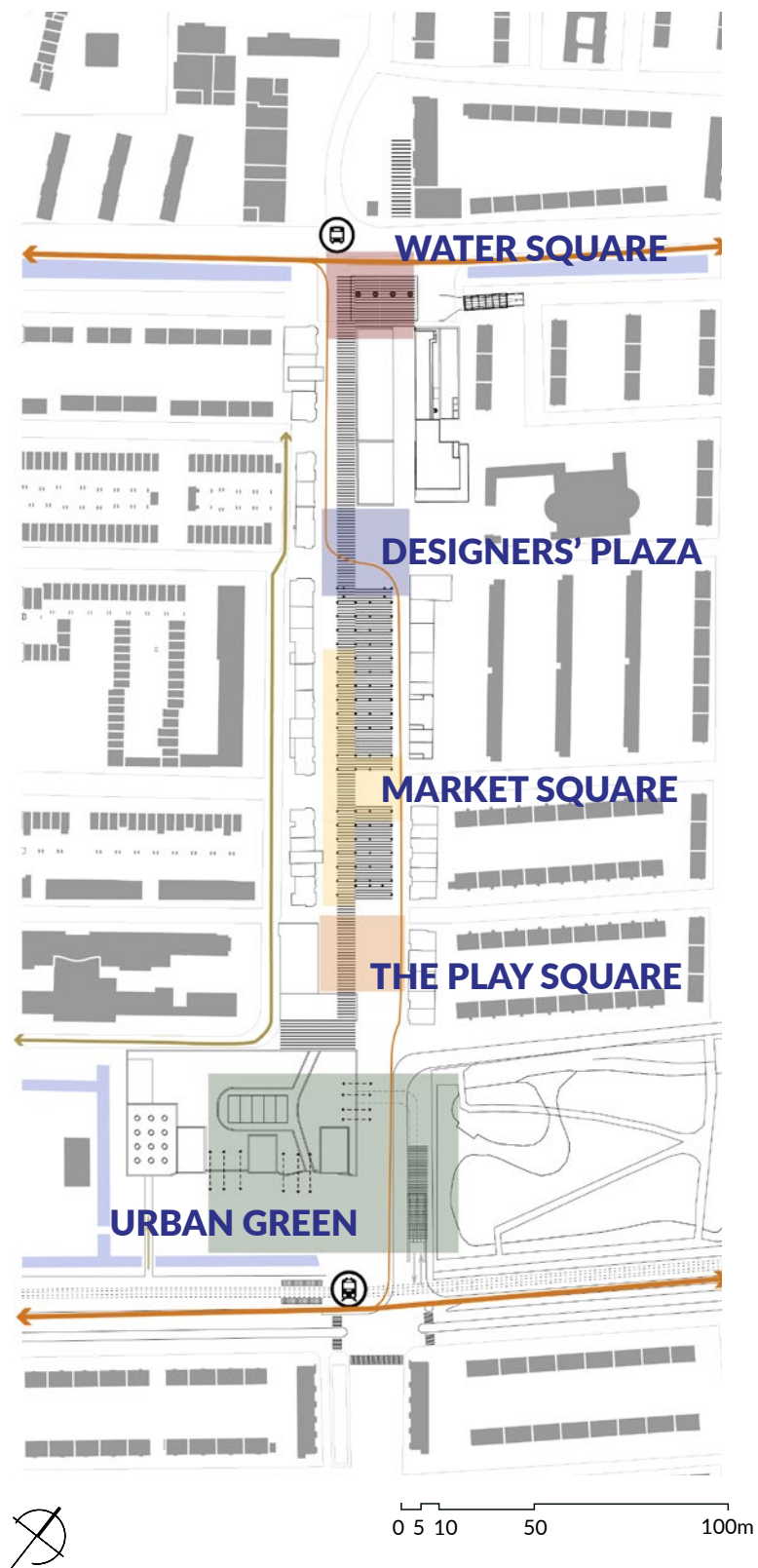
 sightlines

 entrances

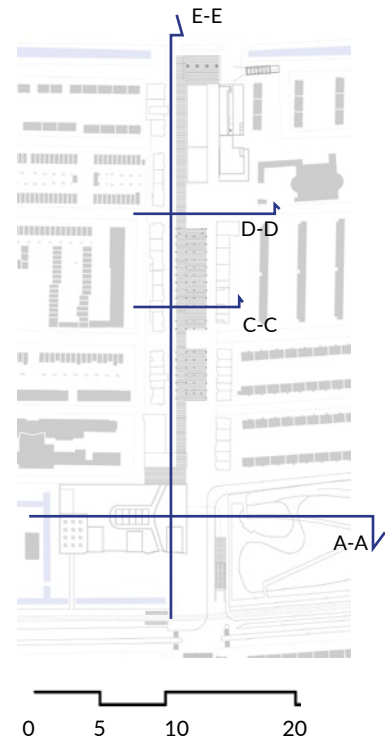
 canopy

 temporary structures

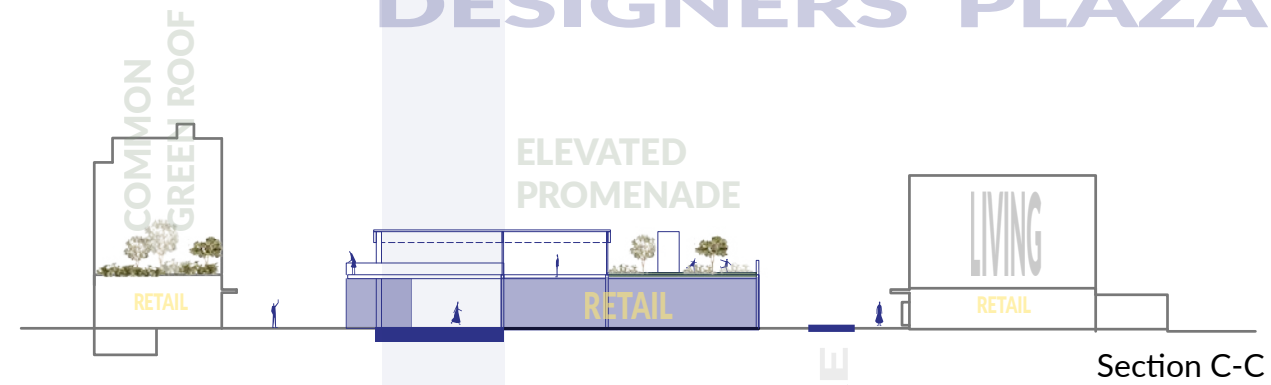
PUBLIC SPACES



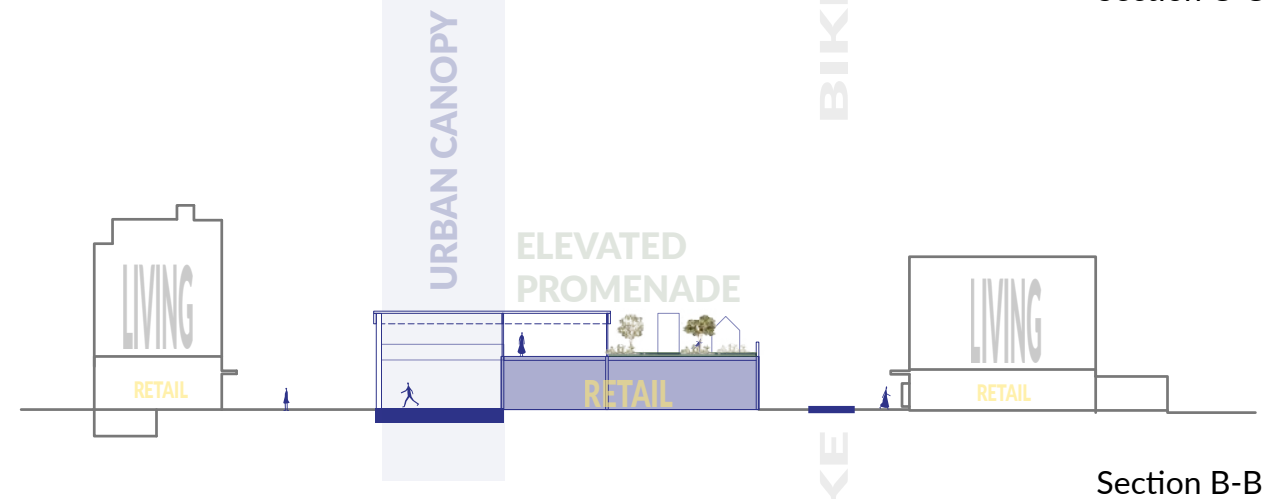
URBAN SECTIONS



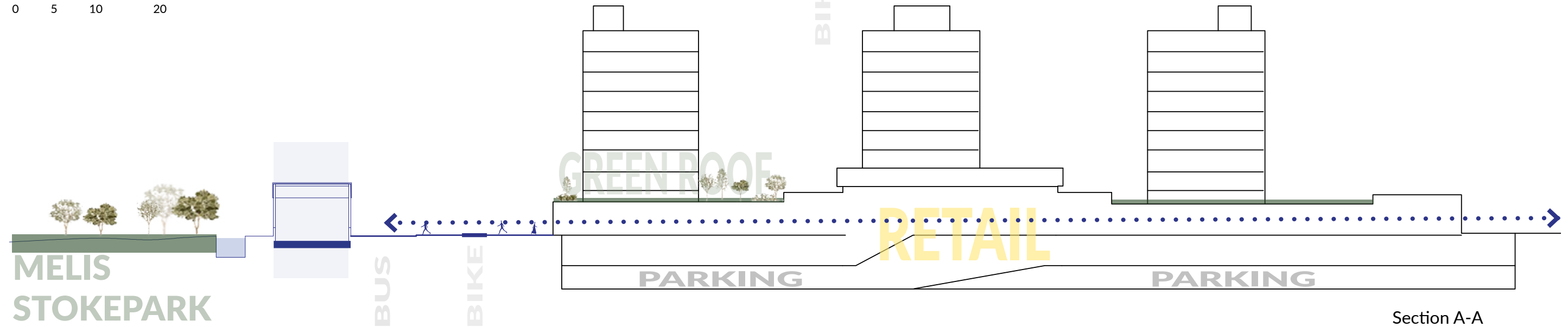
Section D-D



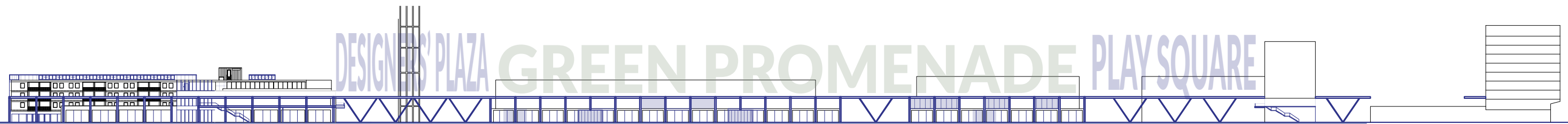
Section C-C



Section B-B

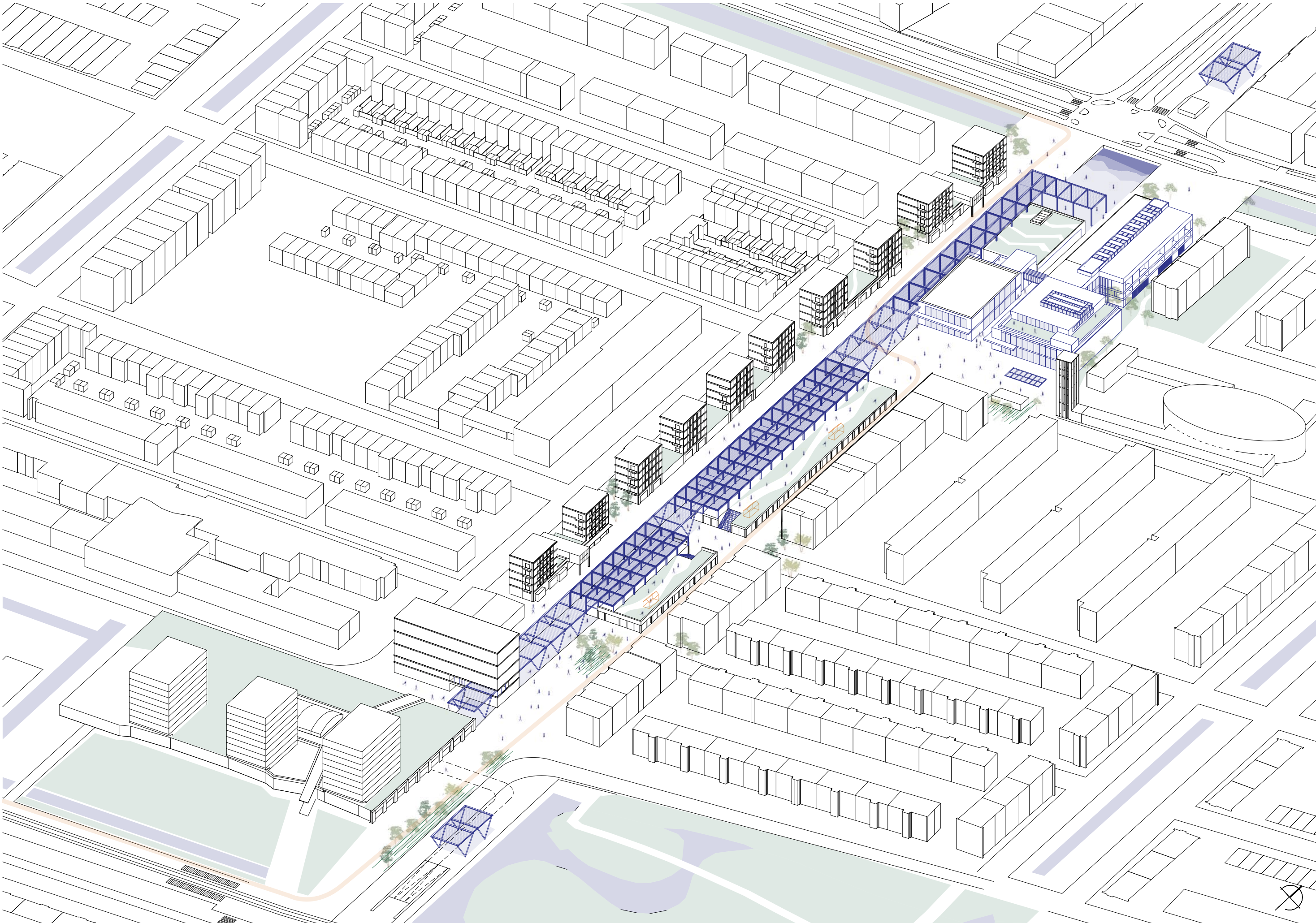


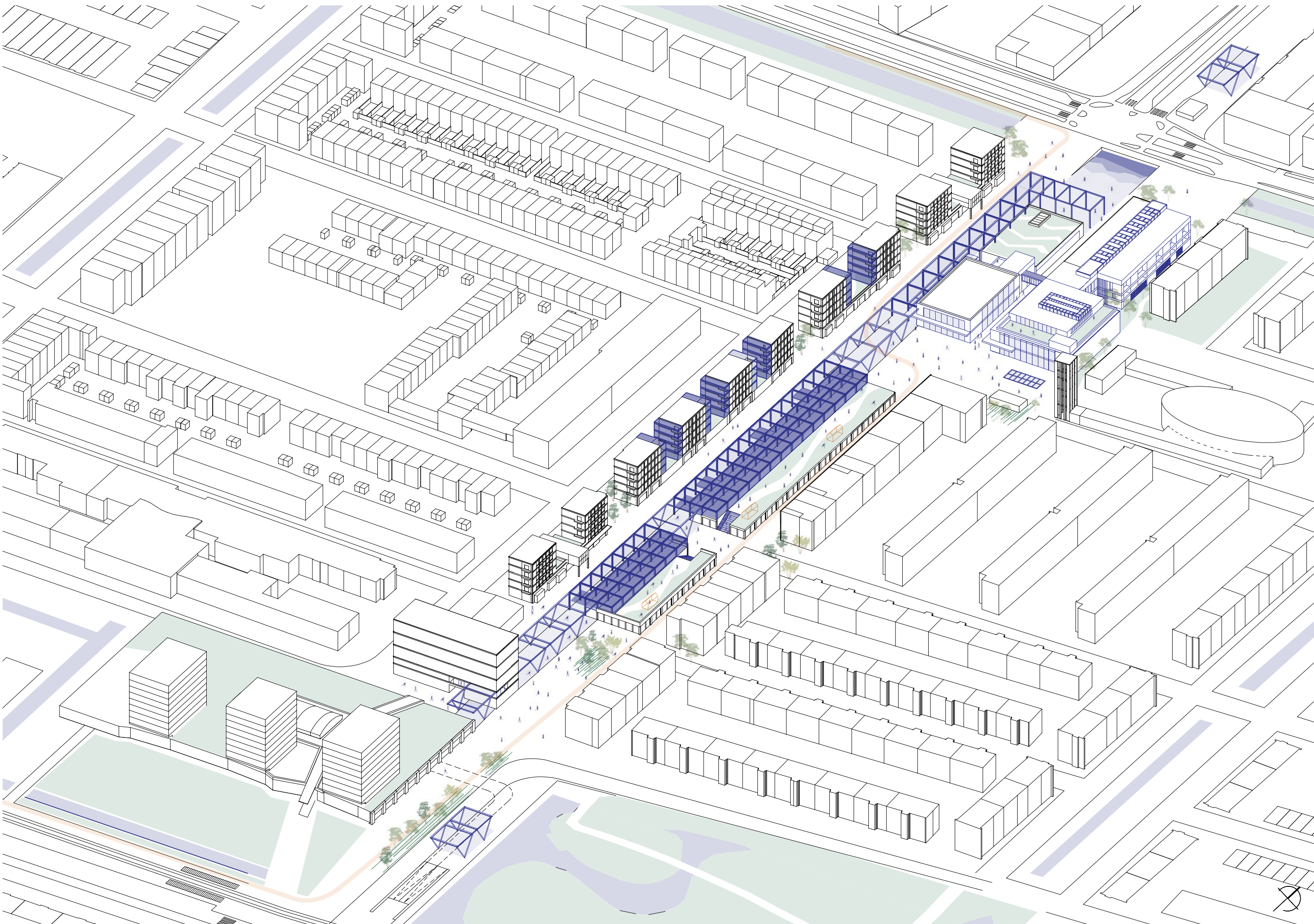
Section A-A



Section E-E





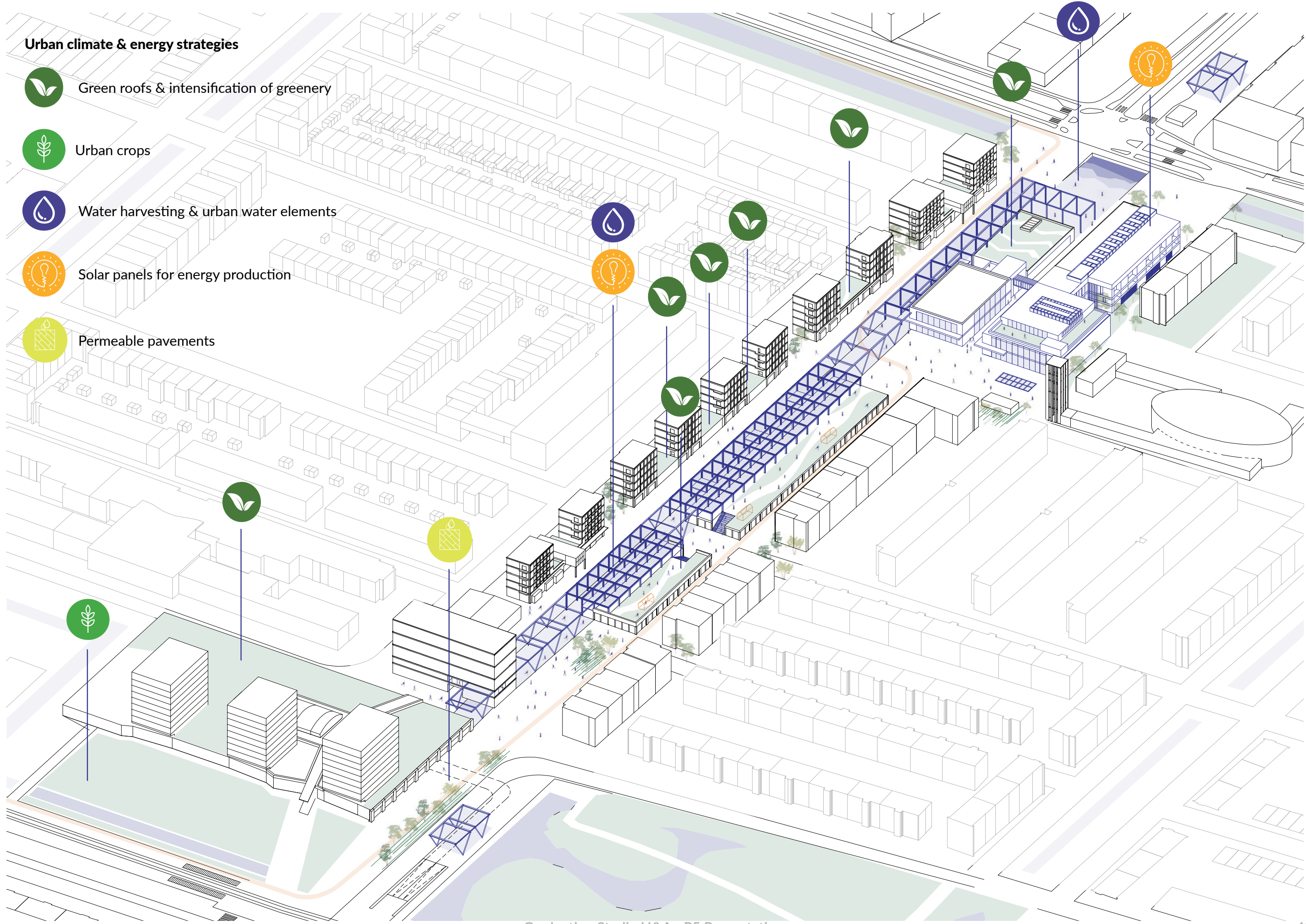


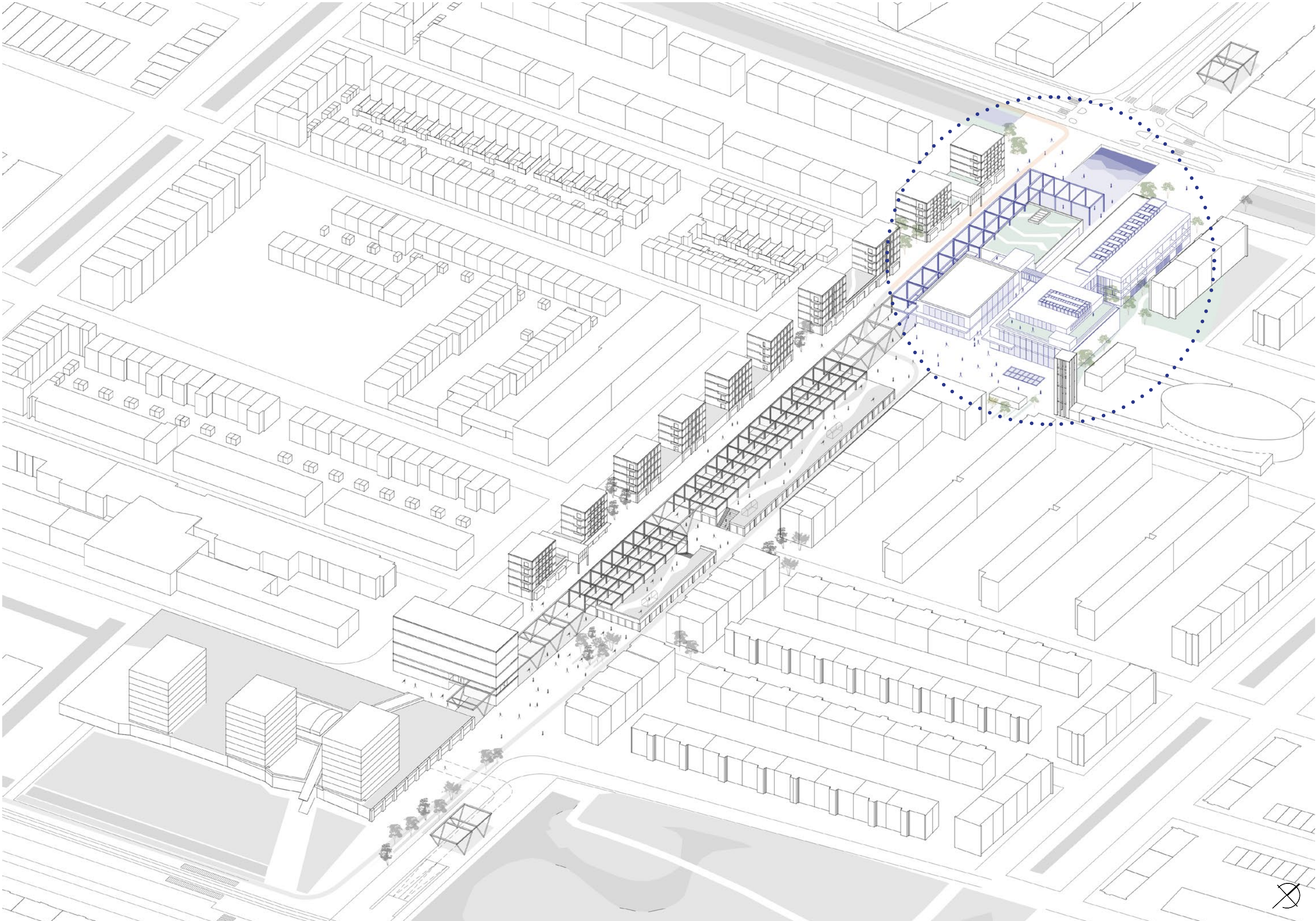


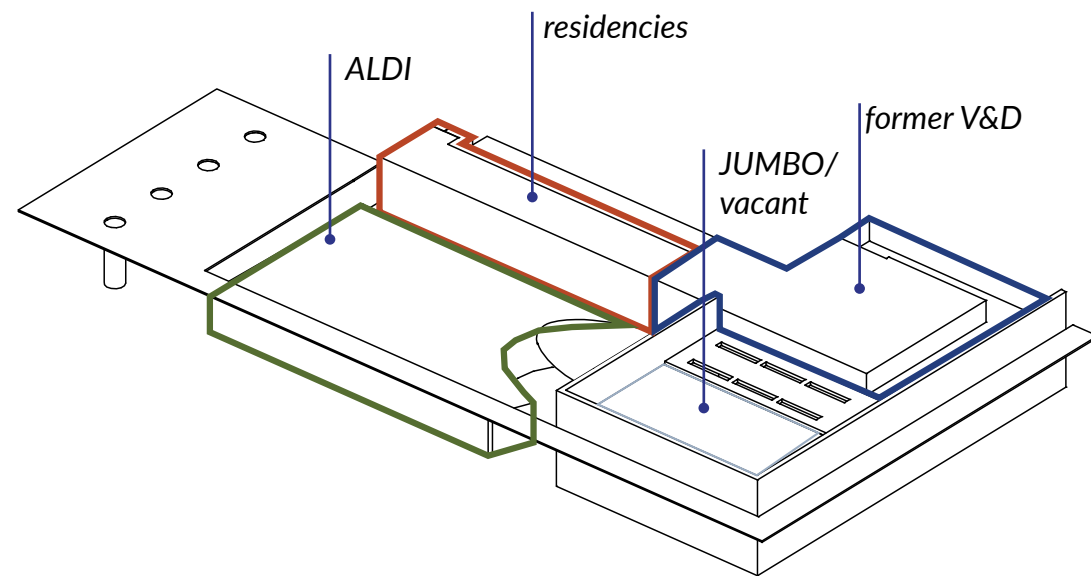
Source: TU Delft

Urban climate & energy strategies

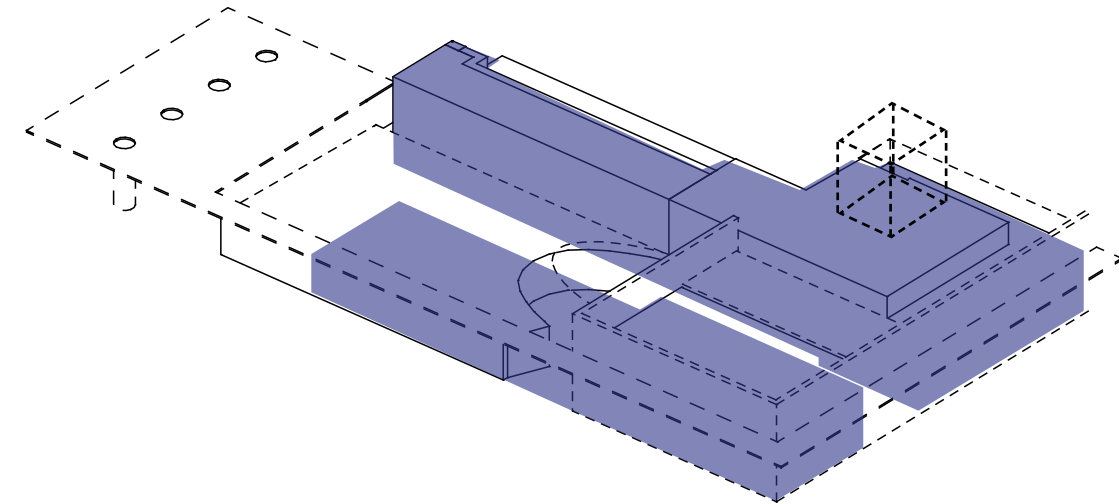
-  Green roofs & intensification of greenery
-  Urban crops
-  Water harvesting & urban water elements
-  Solar panels for energy production
-  Permeable pavements



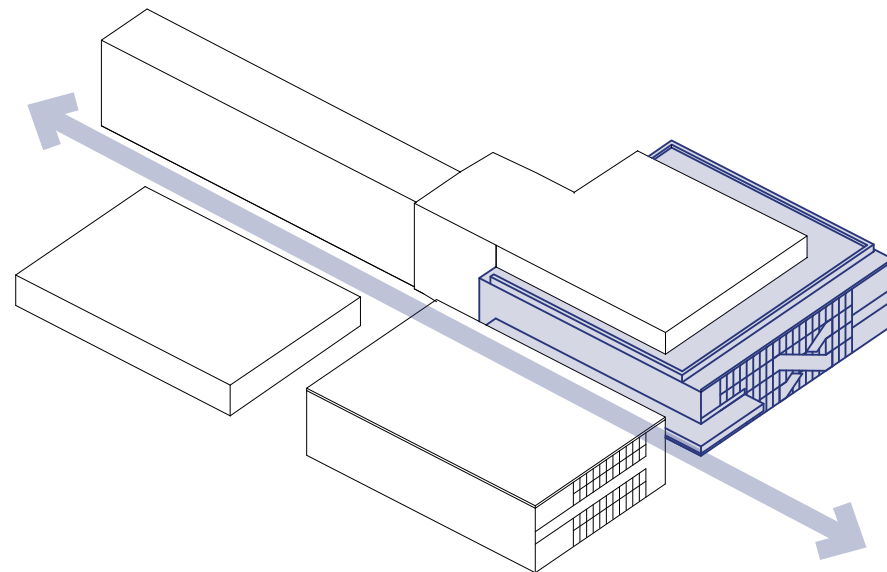




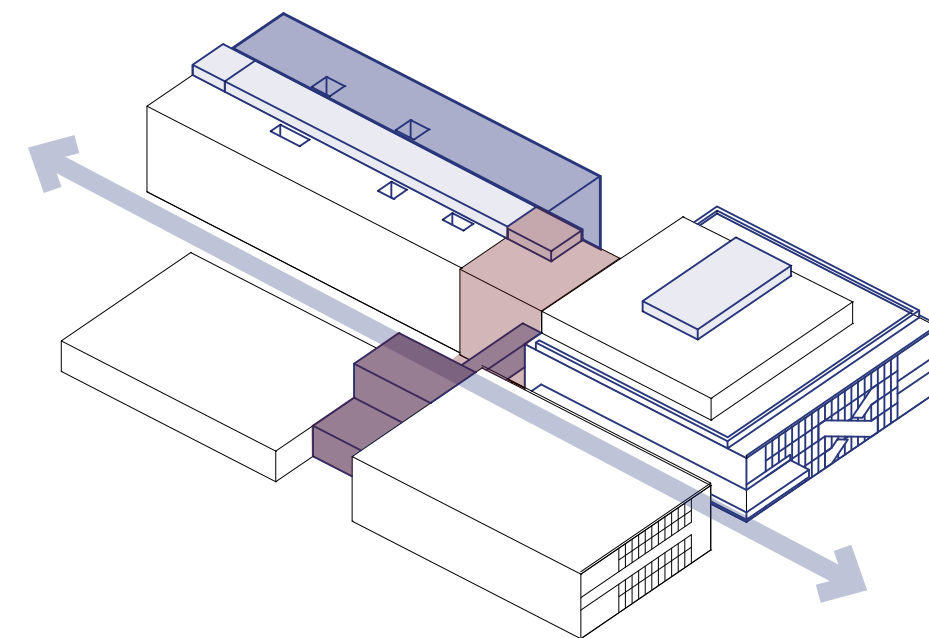
1. The existing condition



2. Keep - Remove

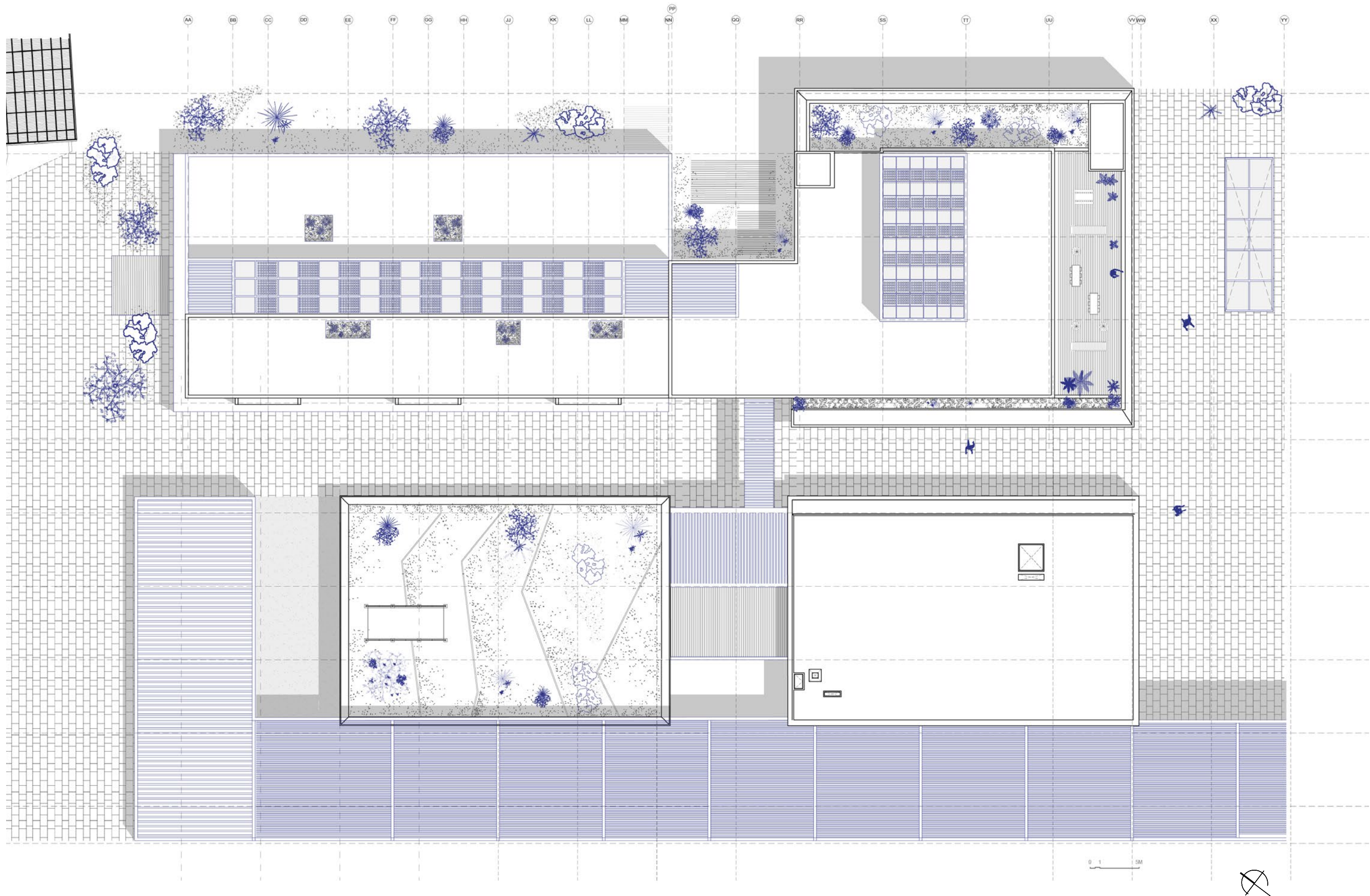


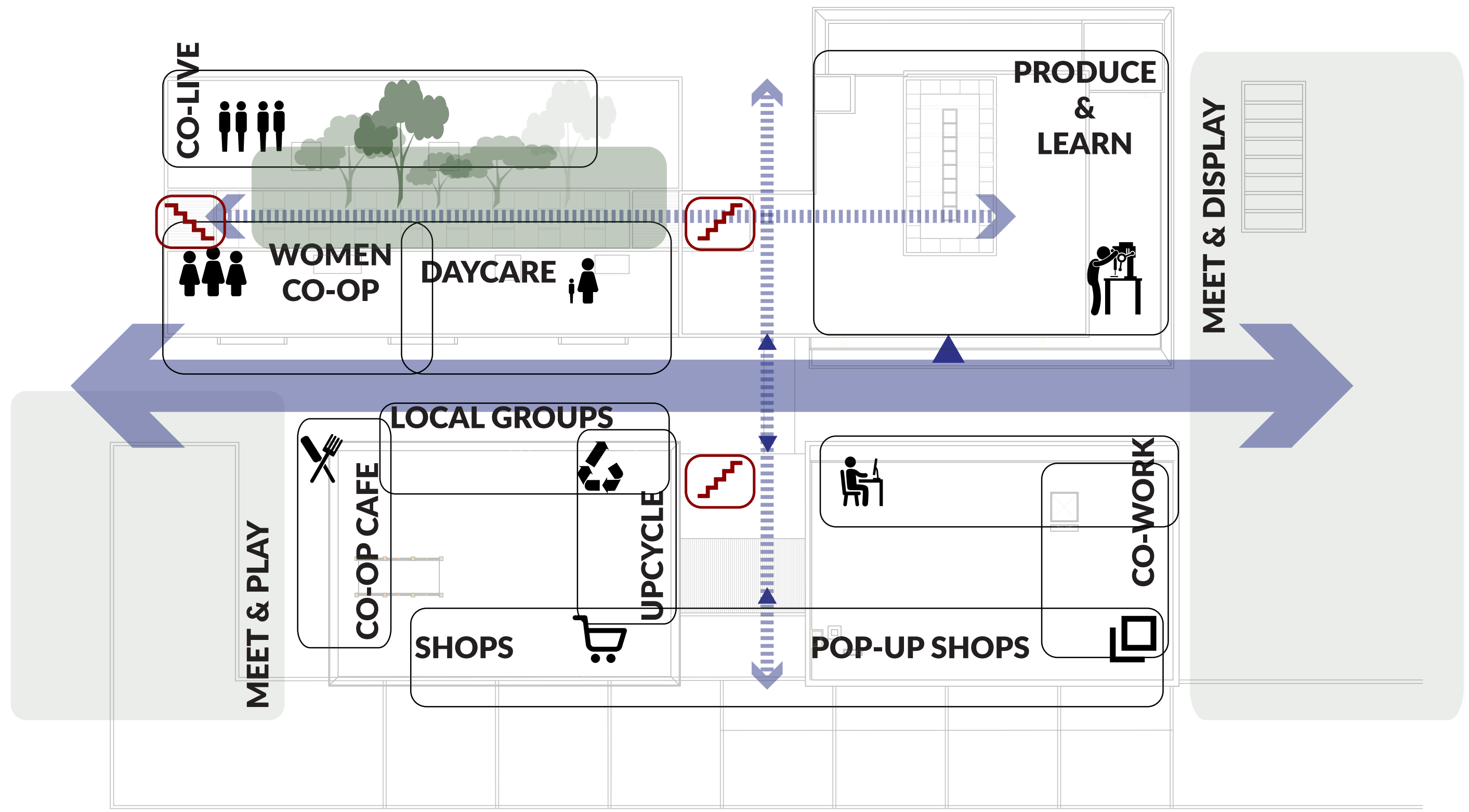
3. Re-instate the main facades

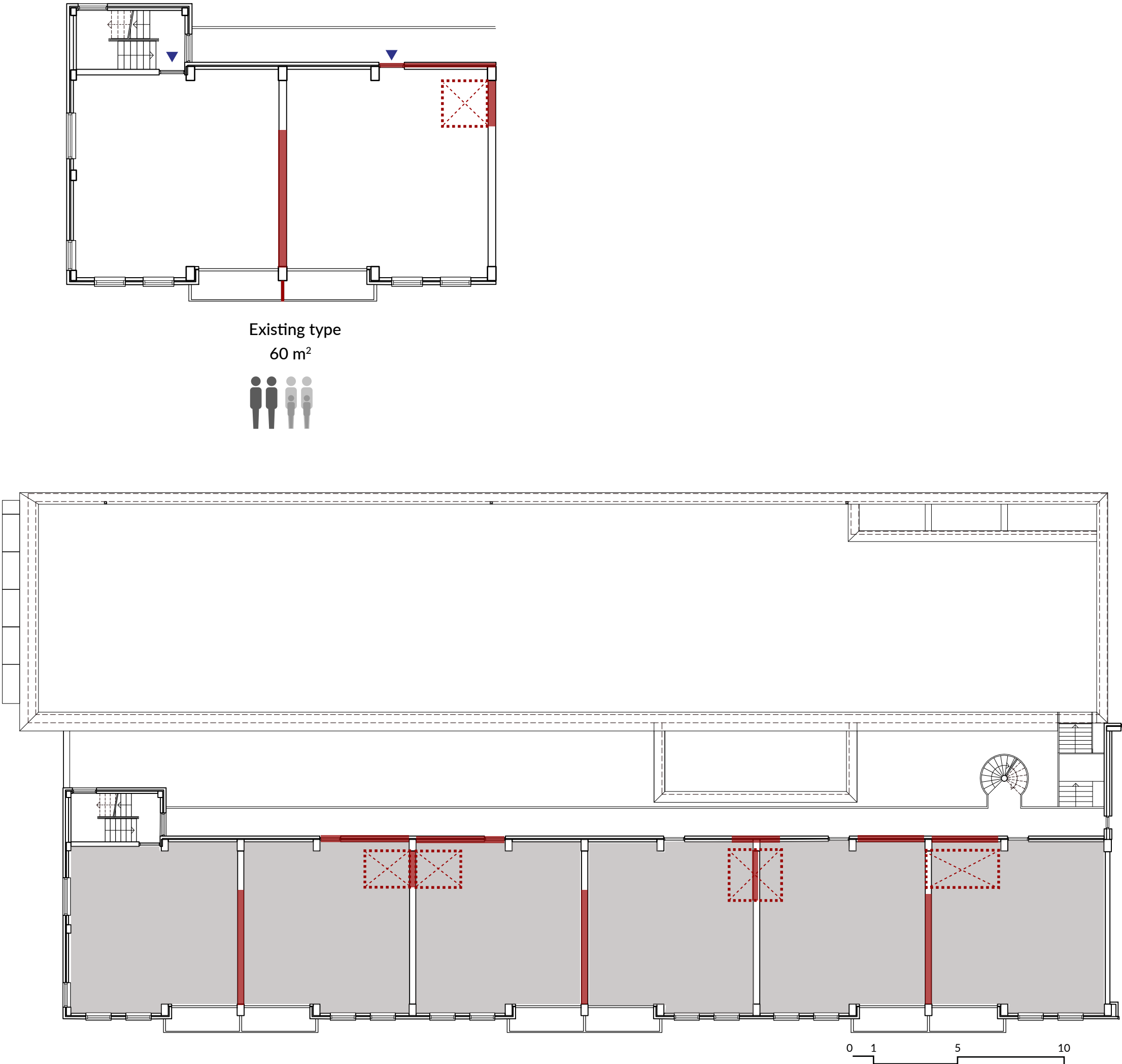


4. Add

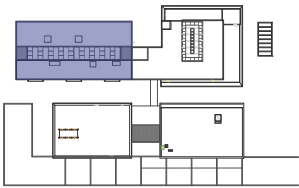
OVERALL CONFIGURATION

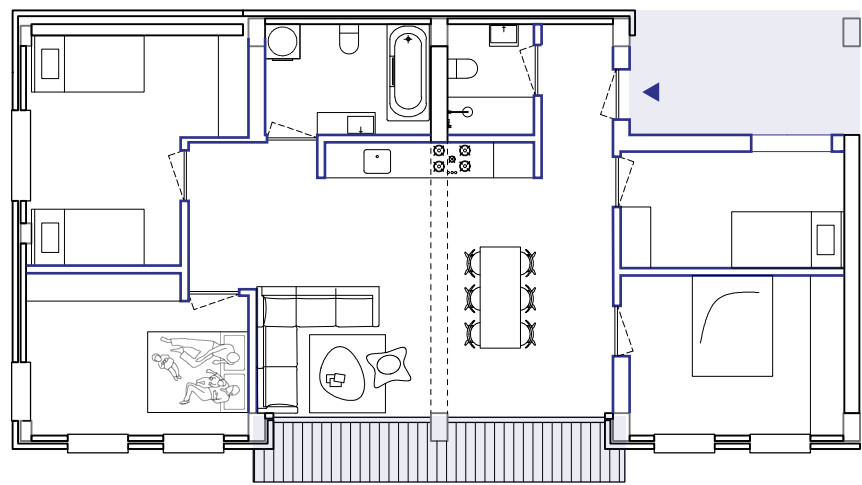




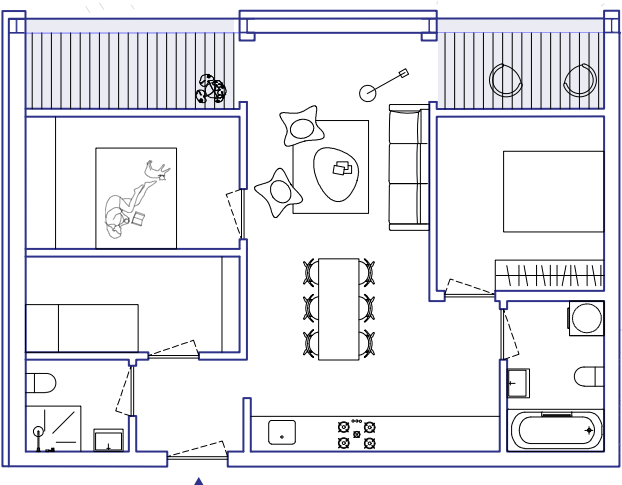


EXISTING HOUSING UNITS

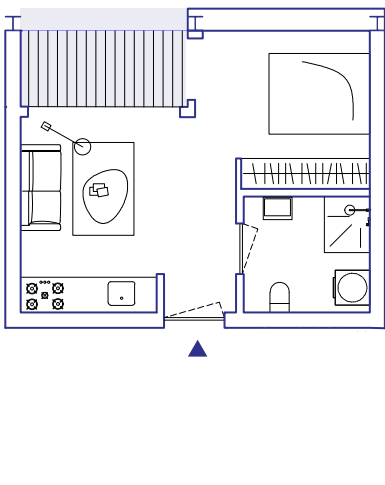




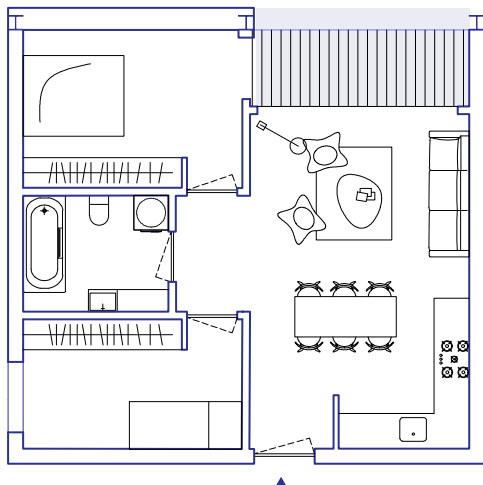
Type I
115 m²



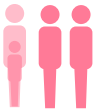
Type II
95 m²



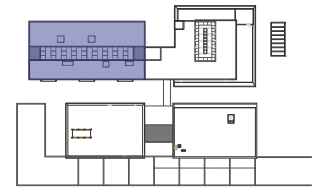
Type III
40 m²



Type IV
75 m²



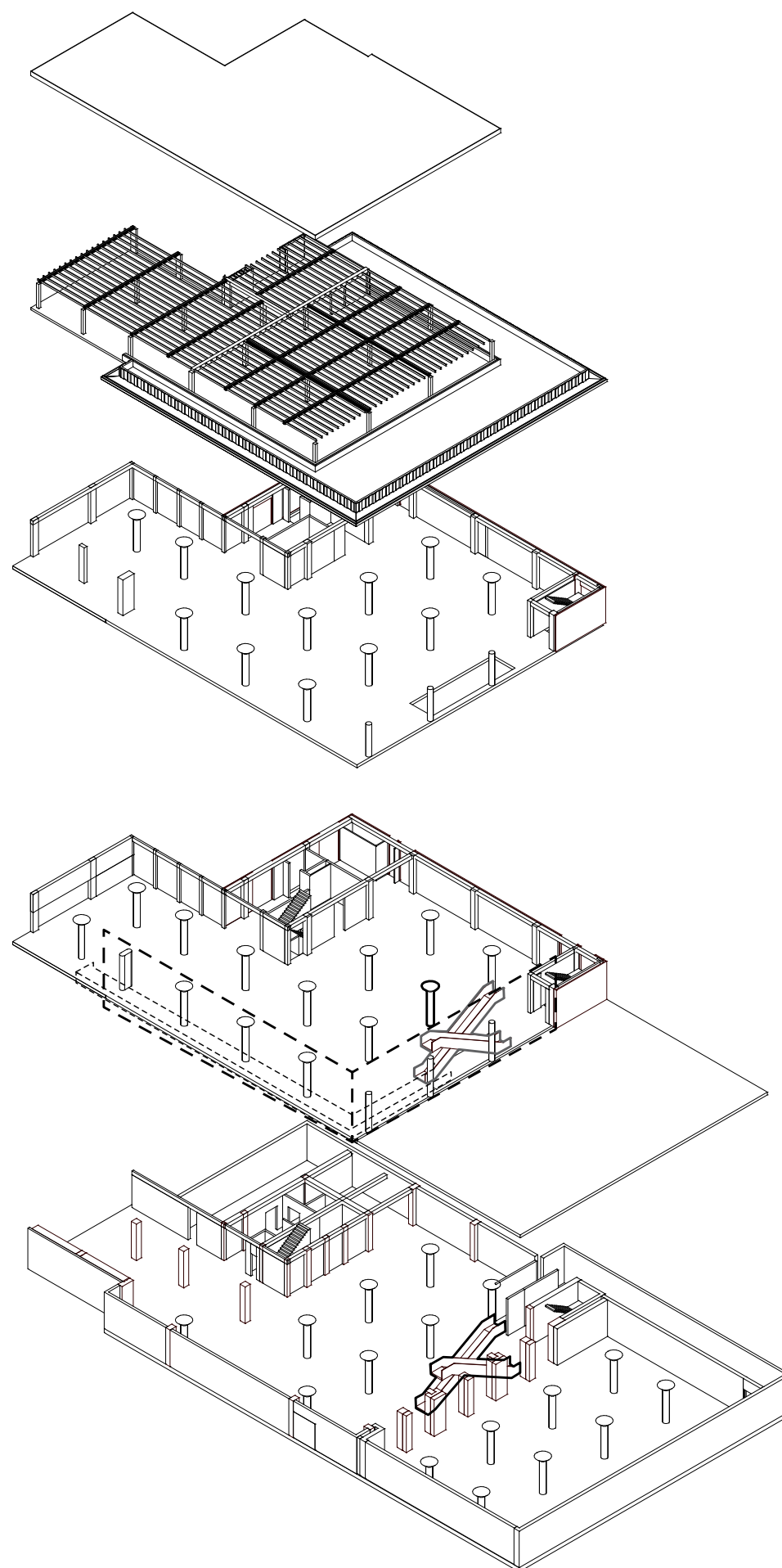
0 1 5 10



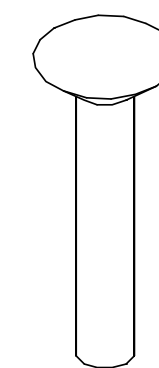
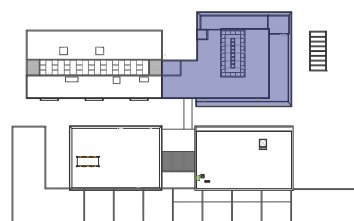
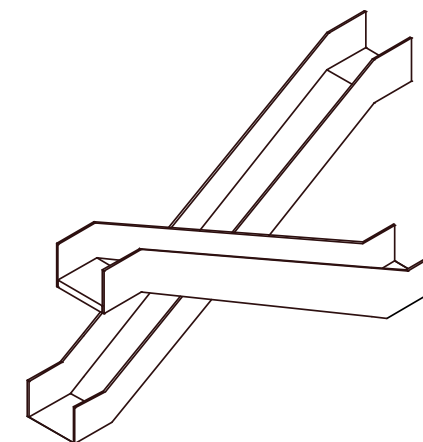
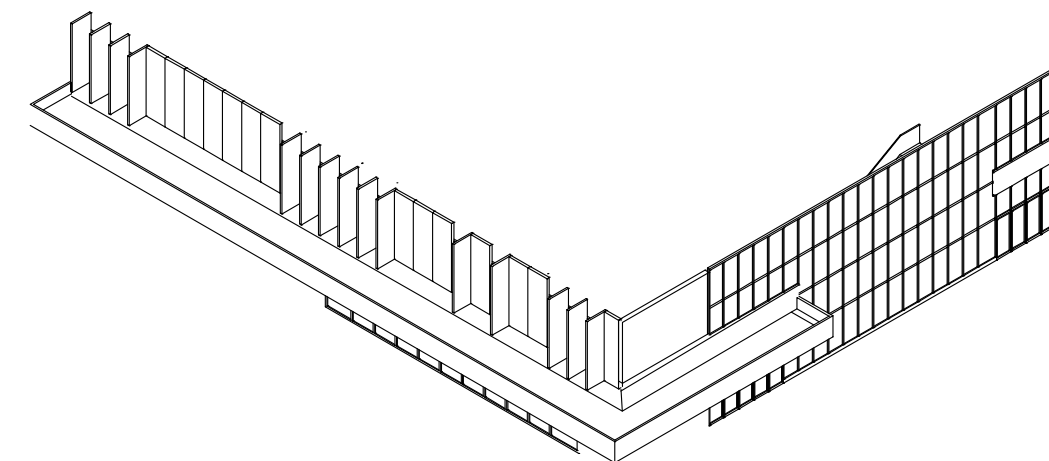
EXISTING HOUSING UNITS



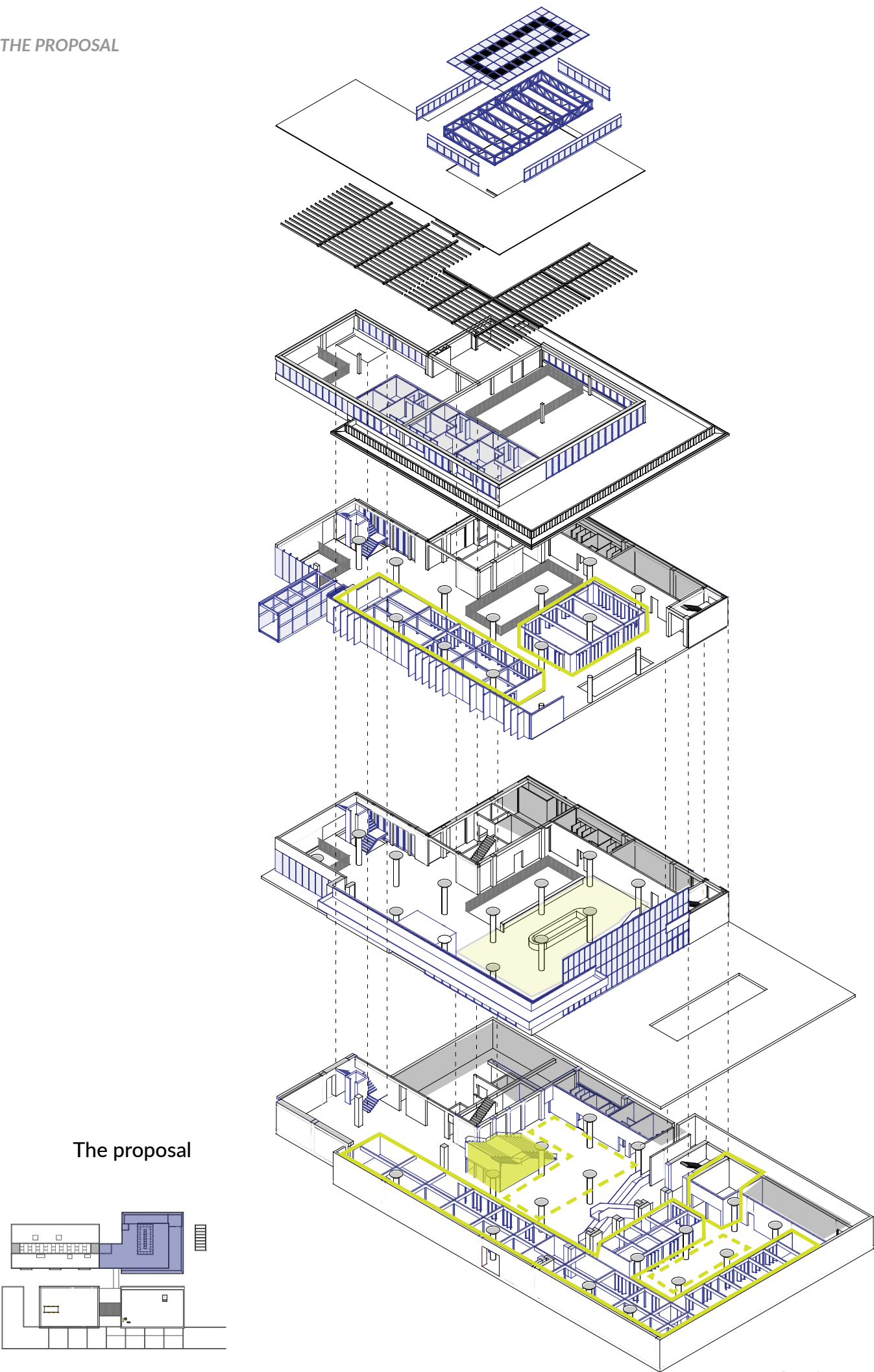
PROPOSED HOUSING UNITS



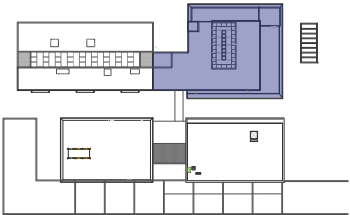
Existing situation

*the mushroom columns**the escalators**the south & east elevation as reference points for the community*

THE PROPOSAL



The proposal



SECOND

FIRST FLOOR

GROUND FLOOR

BASEMENT

COMMON WORKSHOPS

GUESTS' HOUSING
SECONDARY SPACES

TEXTILE
PRINTING
PHOTO/VIDEO

SECONDARY SPACES

RECEPTION

EXHIBITION SPACE

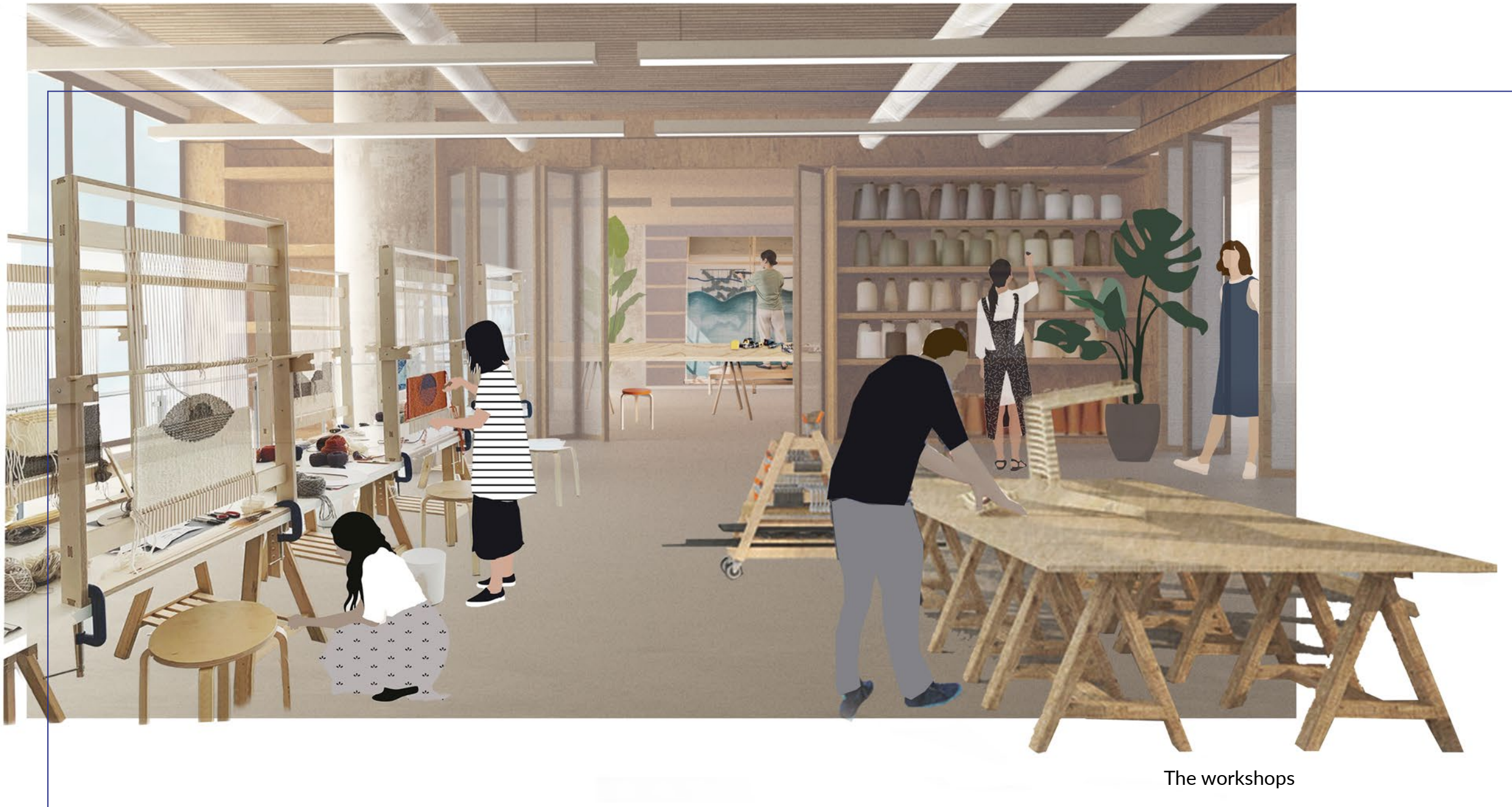
SECONDARY SPACES

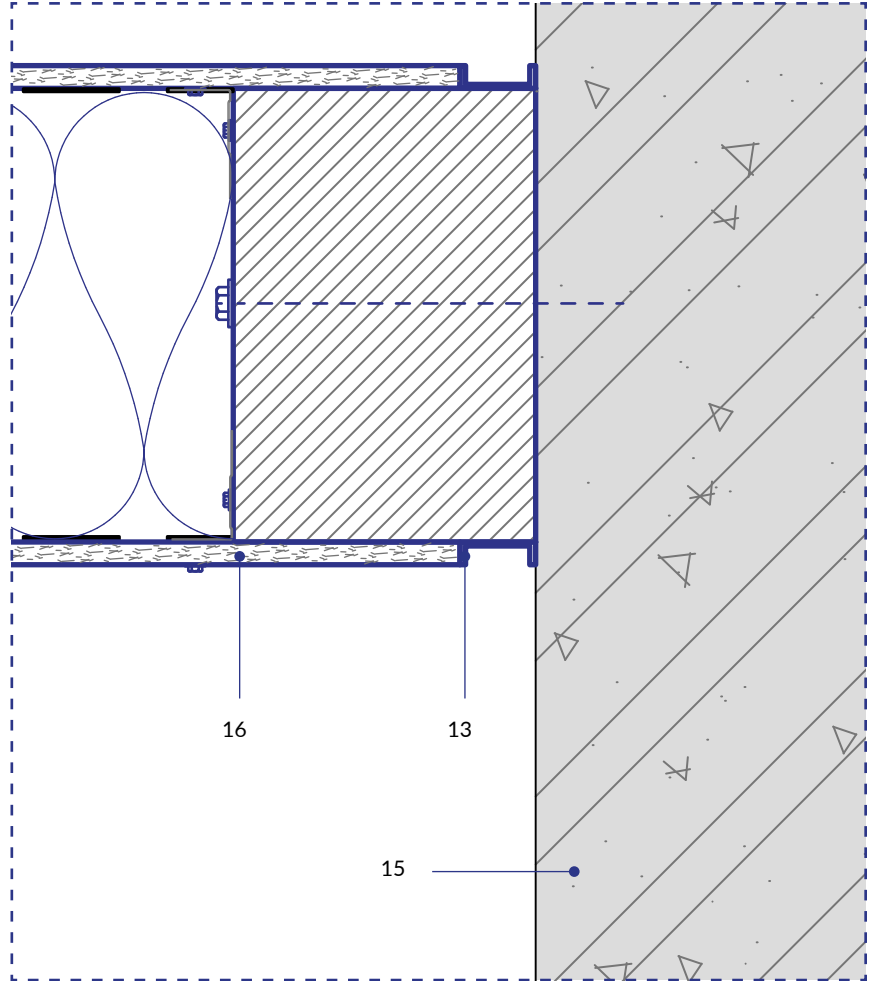
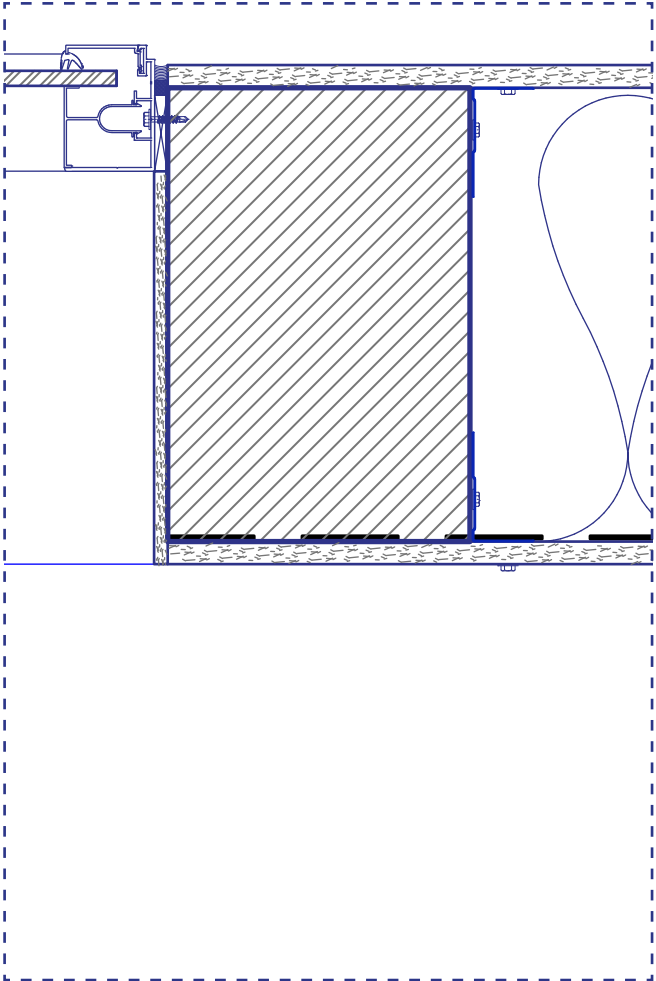
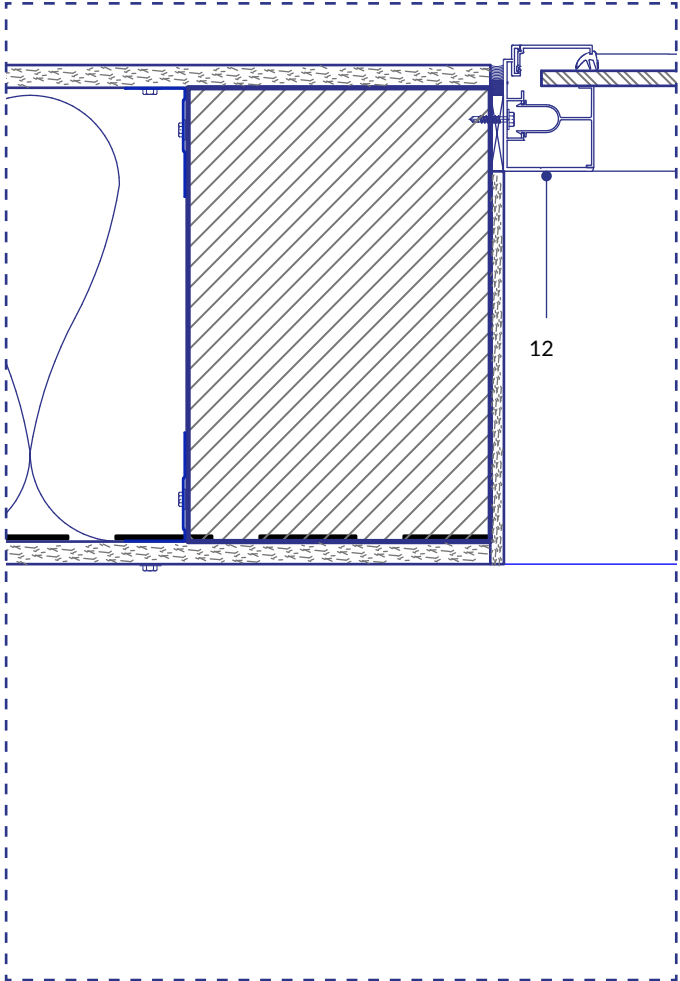
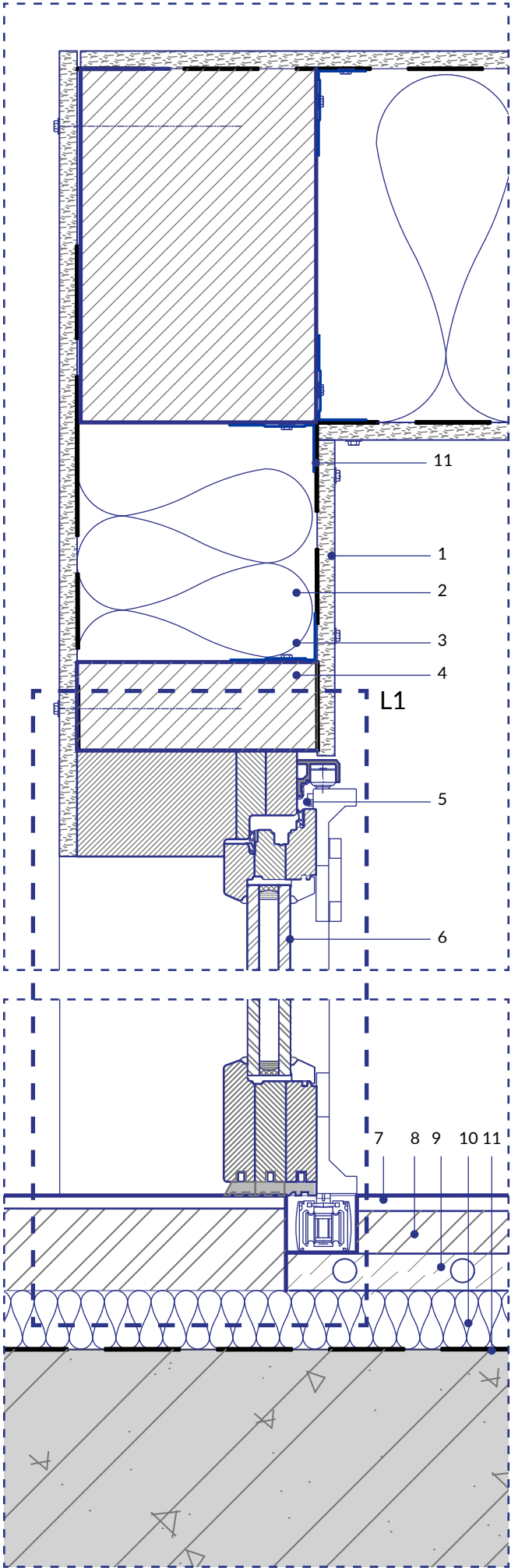
MULTI-PURPOSE SPACE

COMMON WORKSHOPS

SECONDARY SPACES

METAL
TIMBER
CNC/3D PRINTING
CERAMICS

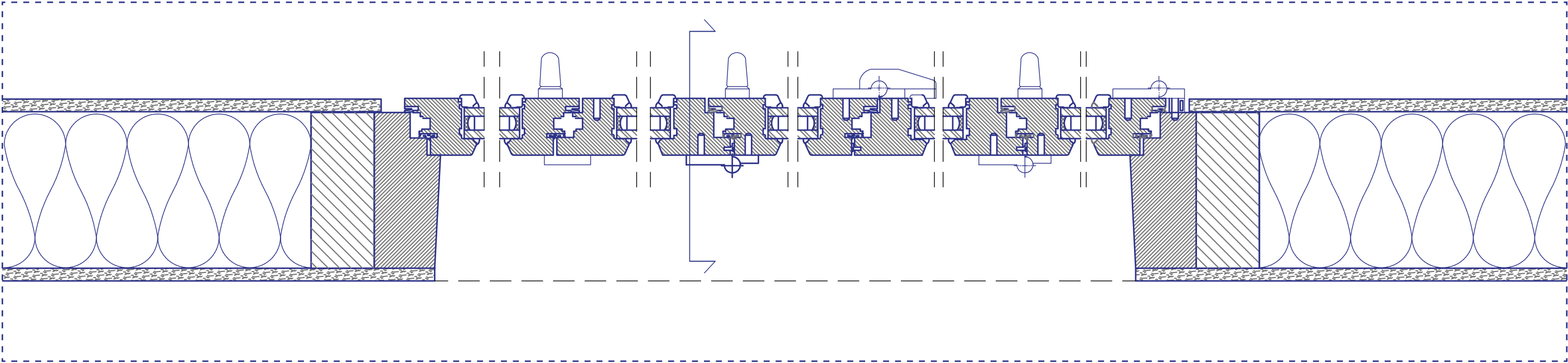




Box-in-box construction for workshops

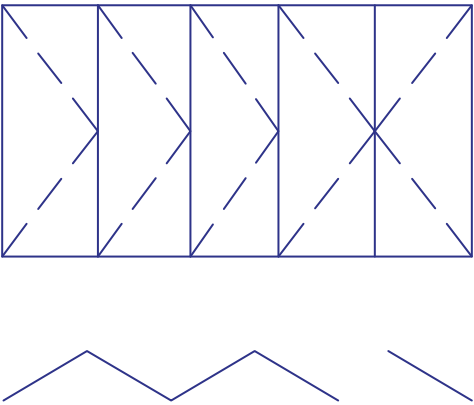
- 1. OSB boards 15mm
- 2. insulation XPS 250mm
- 3. steel stud
- 4. wooden beam 250x300mm
- 5. wooden frame for folding doors
- 6. polycarbonate panels 6mm
- 7. epoxy floor coating 1 cm
- 8. screed 5cm
- 9. heating pipes
- 10. insulation XPS 50mm
- 11. DPM layer
- 12. aluminium frame
- 13. U-shaped metal profile for molding
- 14. existing mushroom column
- 15. existing concrete slab
- 16. perforated acoustic wooden panel

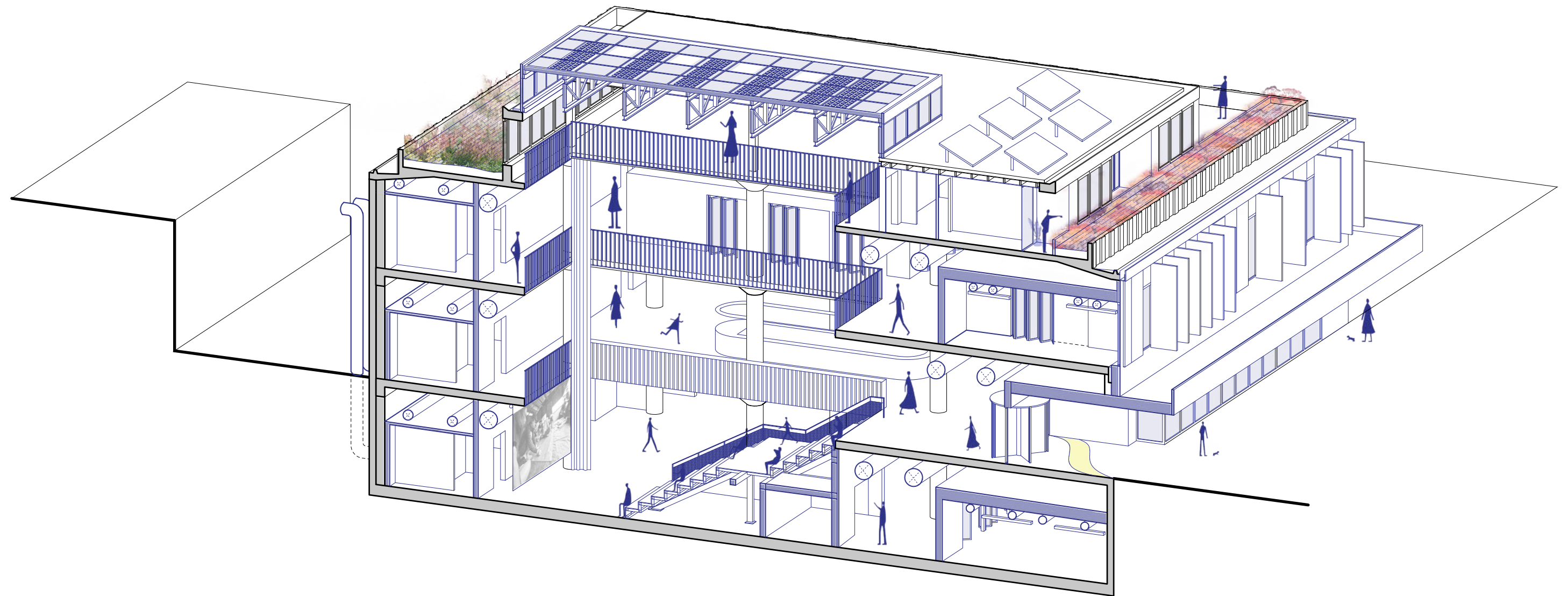
0 10cm 50cm



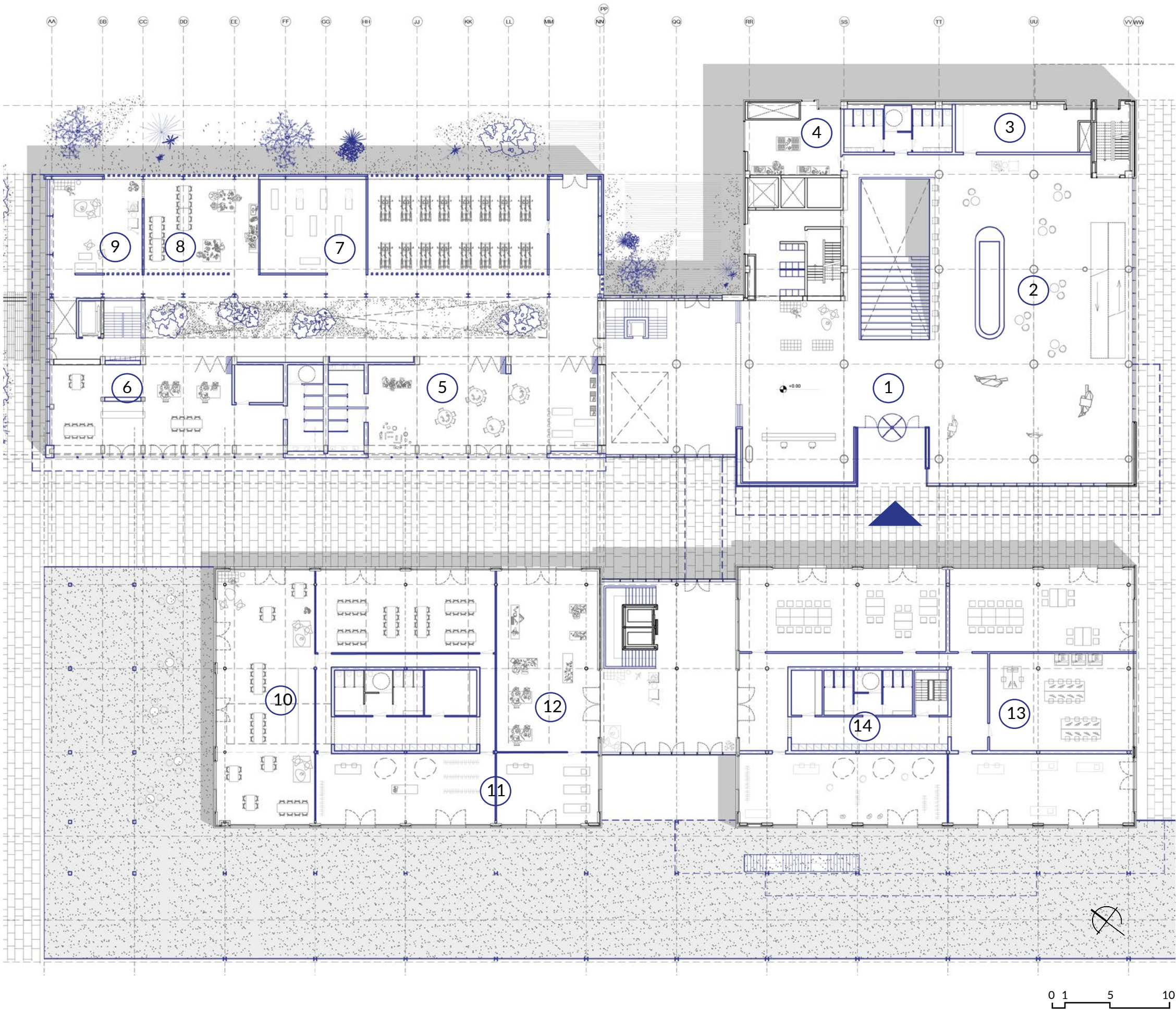
Box-in-box construction for workshops
Folding door detail

- 1. OSB boards 15mm
- 2. insulation XPS 250mm
- 3. wooden profile 250x100mm
- 4. wooden frame for folding door

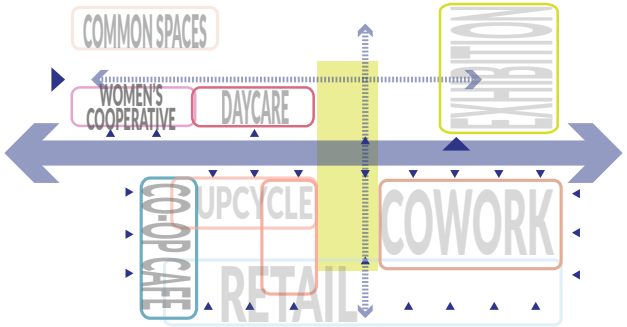




*from a consumption space
to a place of production & exchange*

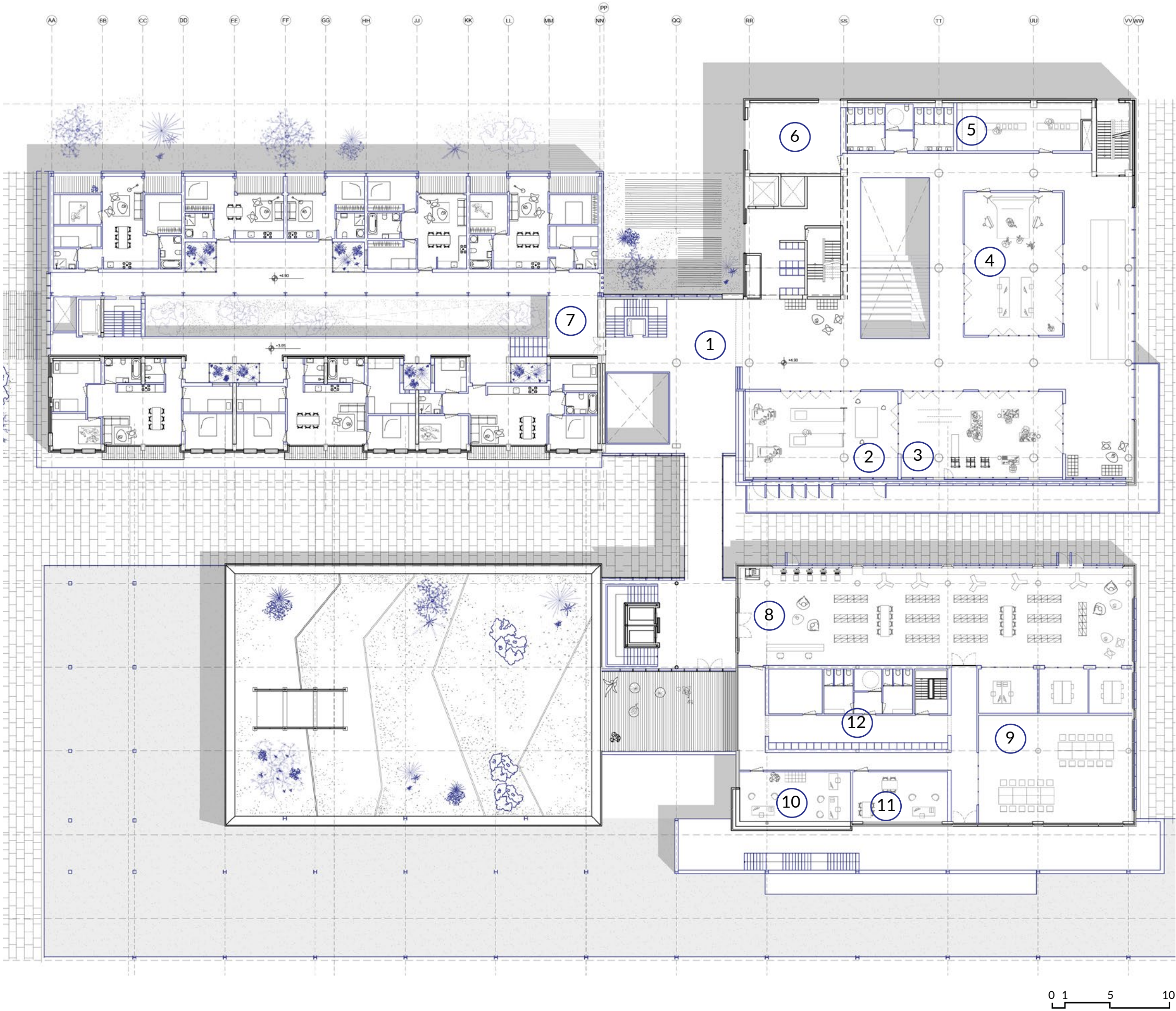


Programmatic configuration

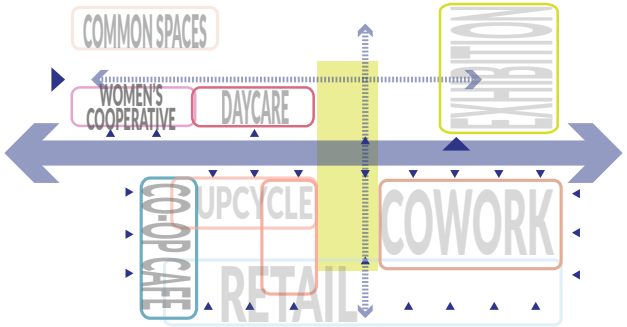


Ground floor

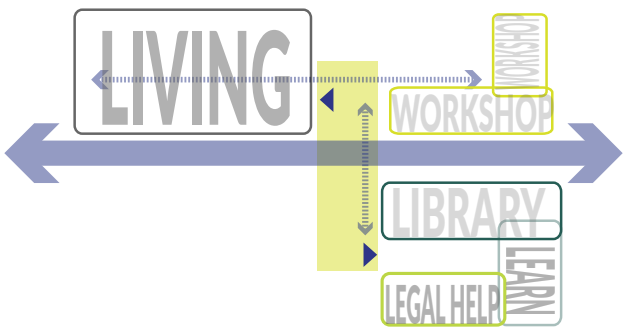
- 00.1. Entrance - Reception
- 00.2. Exhibition space
- 00.3. Storage
- 00.4. Secondary spaces
- 00.5. Daycare
- 00.6. Women's cooperative
- 00.7. Wellness space
- 00.8. Common kitchen
- 00.9. Meeting space
- 00.10. Co-op cafe
- 00.11. Pop-up stores
- 00.12. Upcycle workshops
- 00.13. Co-working spaces
- 00.14. Secondary spaces



Programmatic configuration

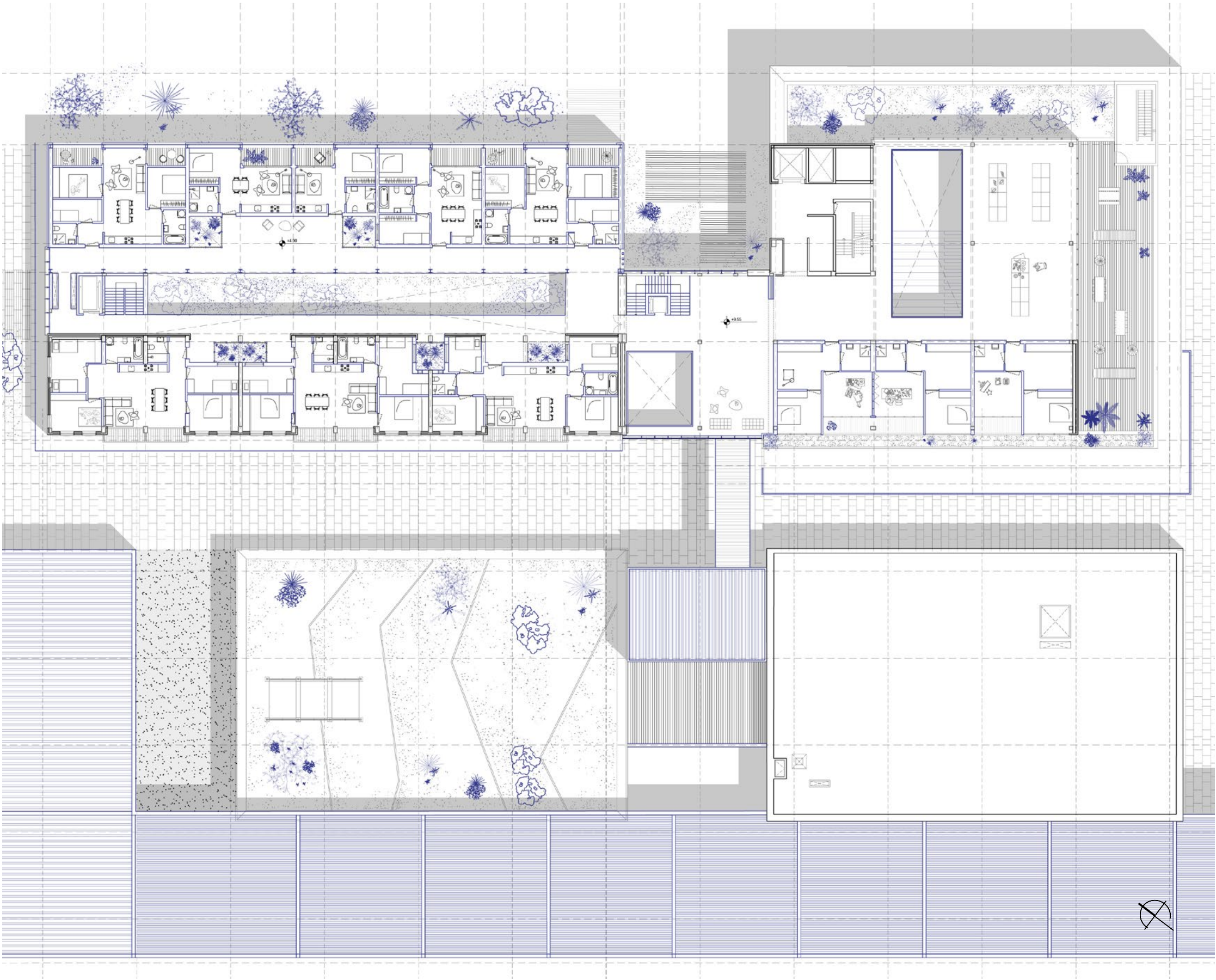


Ground floor

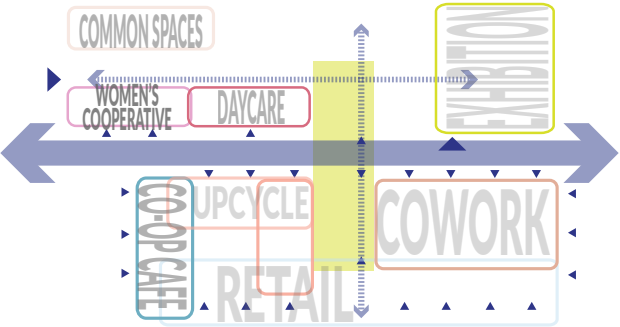


First floor

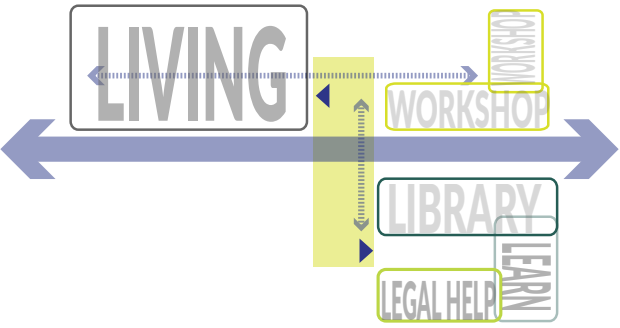
- 01.1. Common space
- 01.2. Printing workshop
- 01.3. Textile workshop
- 01.4. Mixed media workshop
- 01.5. Dark room
- 01.6. Secondary spaces
- 01.7. Residencies
- 01.8. Community library
- 01.9. Education spaces
- 01.10. Digital help
- 01.11. Legal help
- 01.12. Secondary spaces



Programmatic configuration



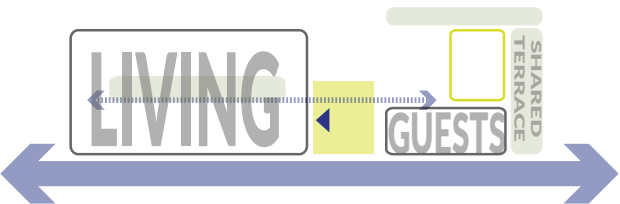
Ground floor



First floor



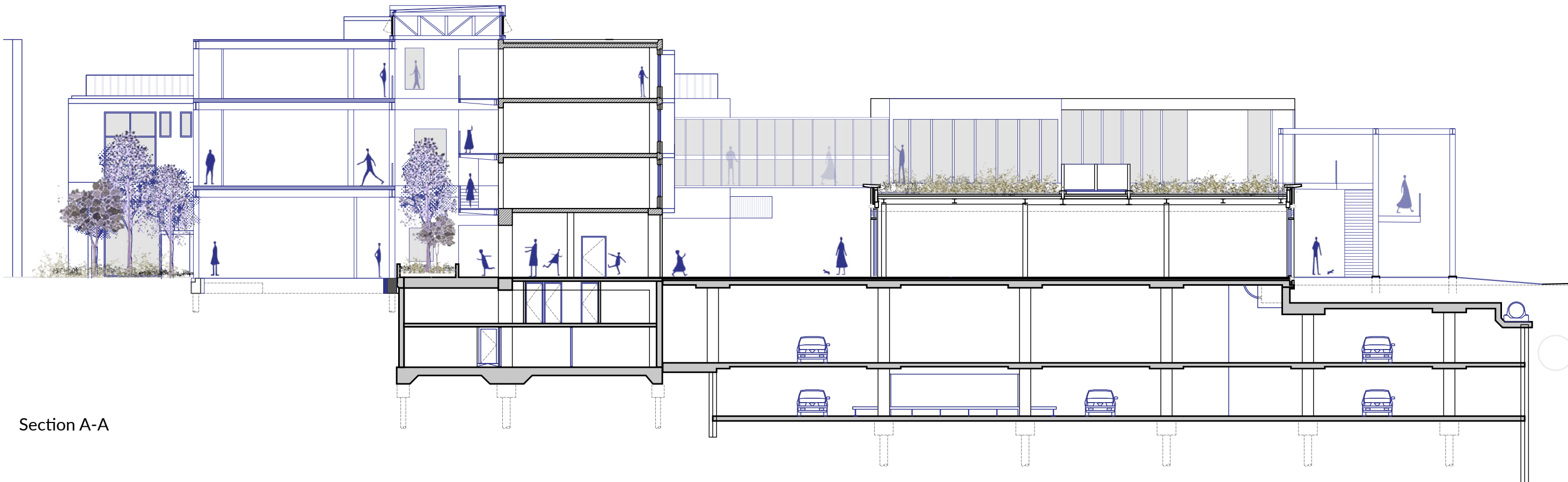
Second floor



Third floor

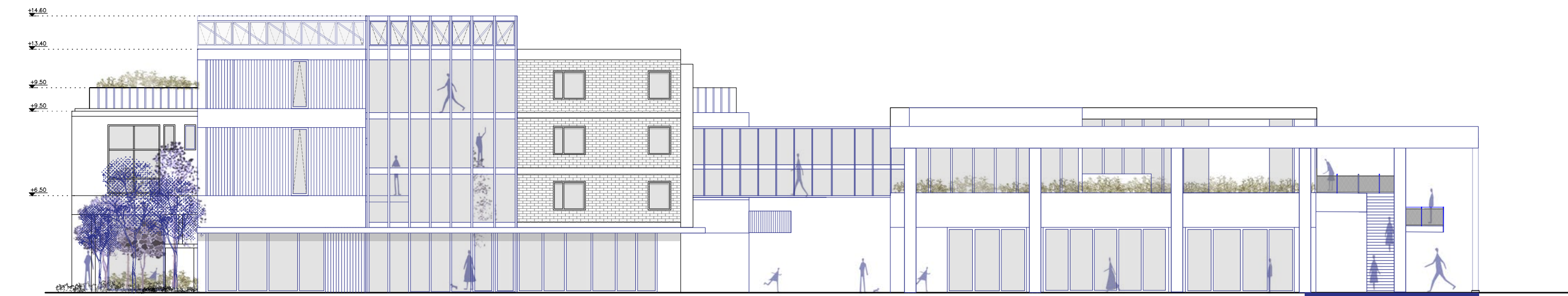


The atrium

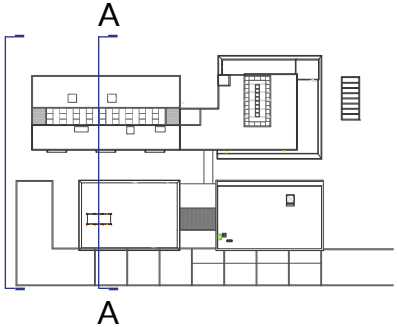
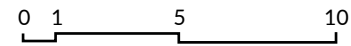


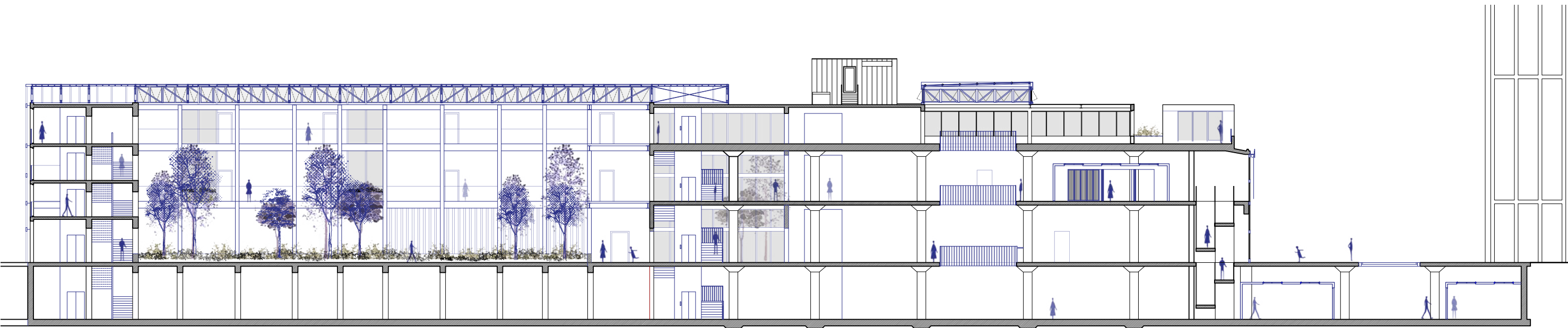
Section A-A

- 1 Solar chimney, water harvesting & natural ventilation
- 2 Reinforce & reuse existing foundation
- 3 Lightweight steel frame & CLT construction



North elevation





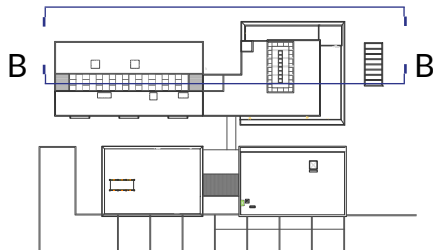
Section B-B

0 1 5 10

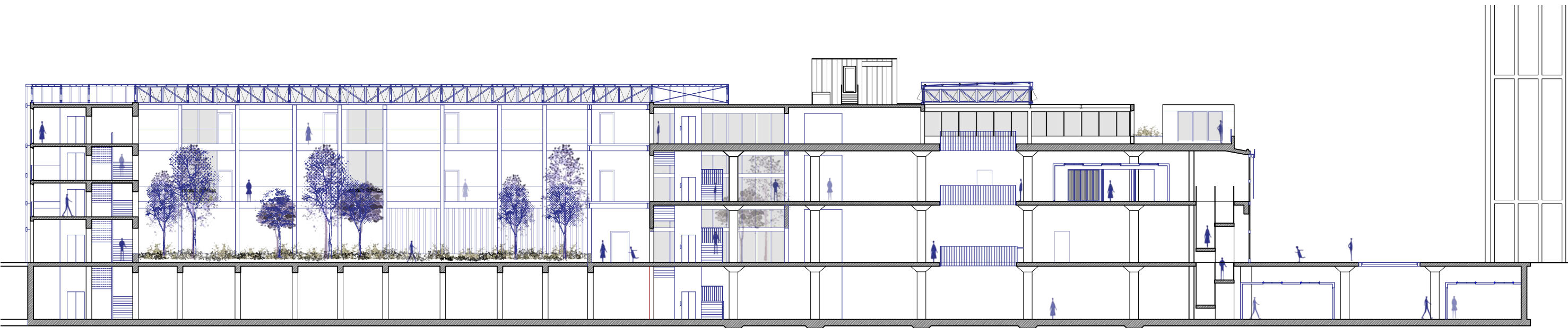
- 1 Timber cladding - double-layered slats
- 2 Atria with same construction principle
- 3 Continuation of horizontality of the facades



East elevation



0 1 5 10



Section B-B

0 1 5 10

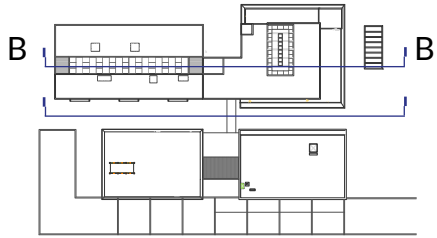
1 Reinstatement of the original facade

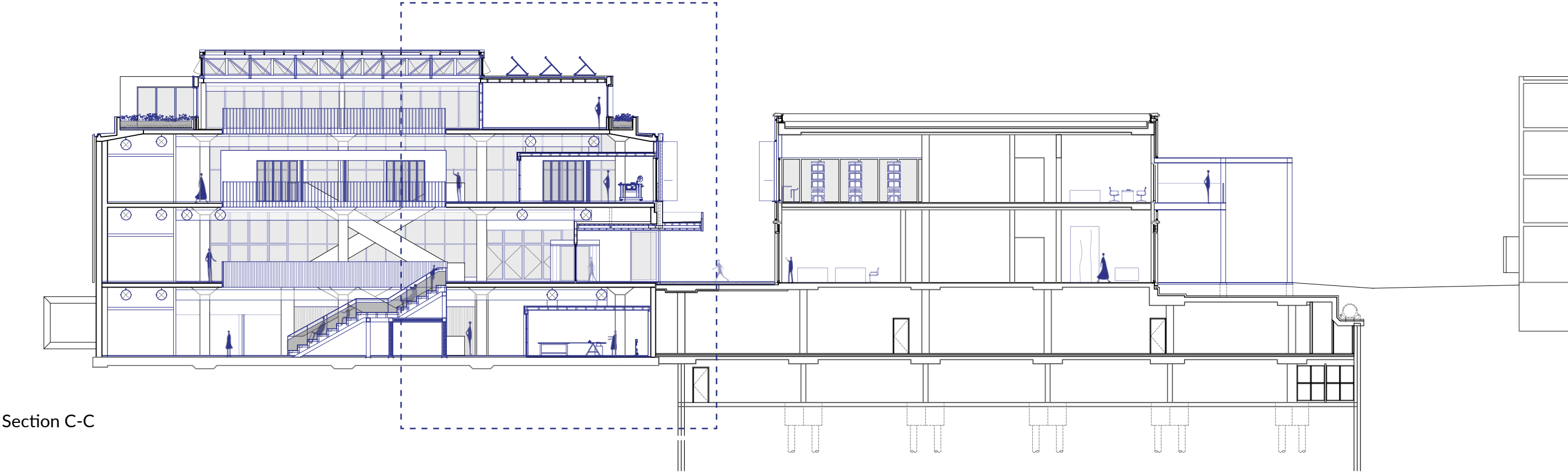
2 Reinstatement of pre-existing canopy

3 Re-instatement of original entrance



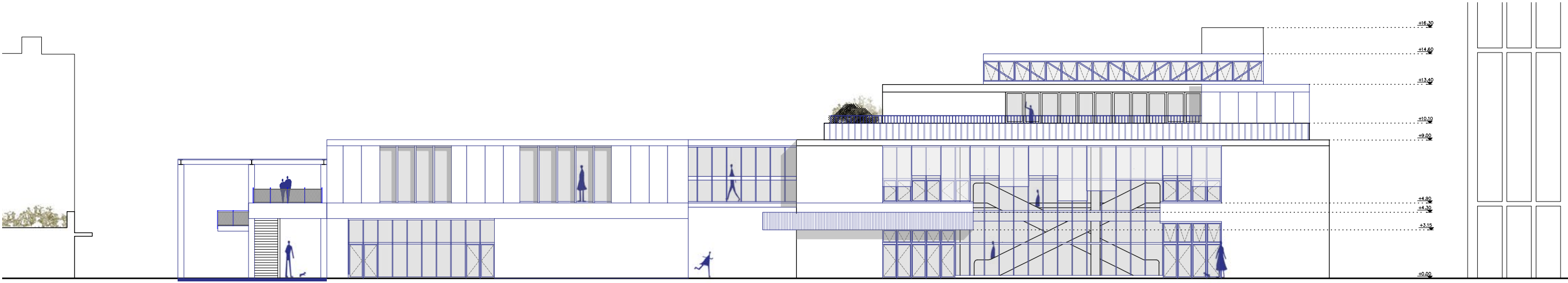
West elevation



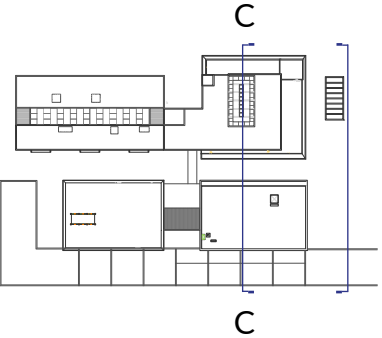


Section C-C

- 1 Box-in box construction
- 2 Visible technical installations on the ceiling
- 3 Implementation of shading system

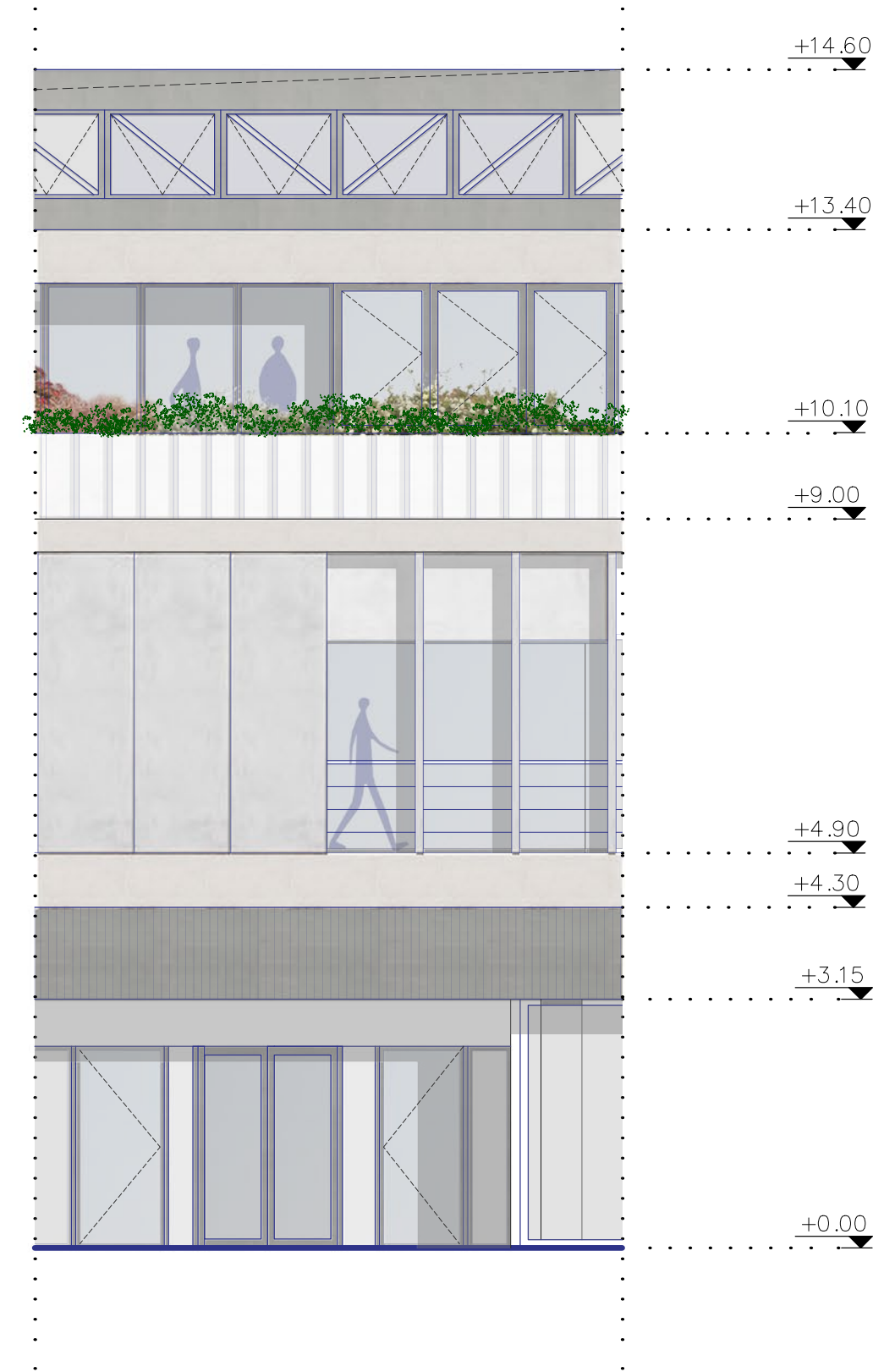


South elevation

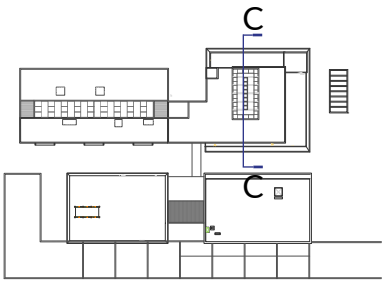


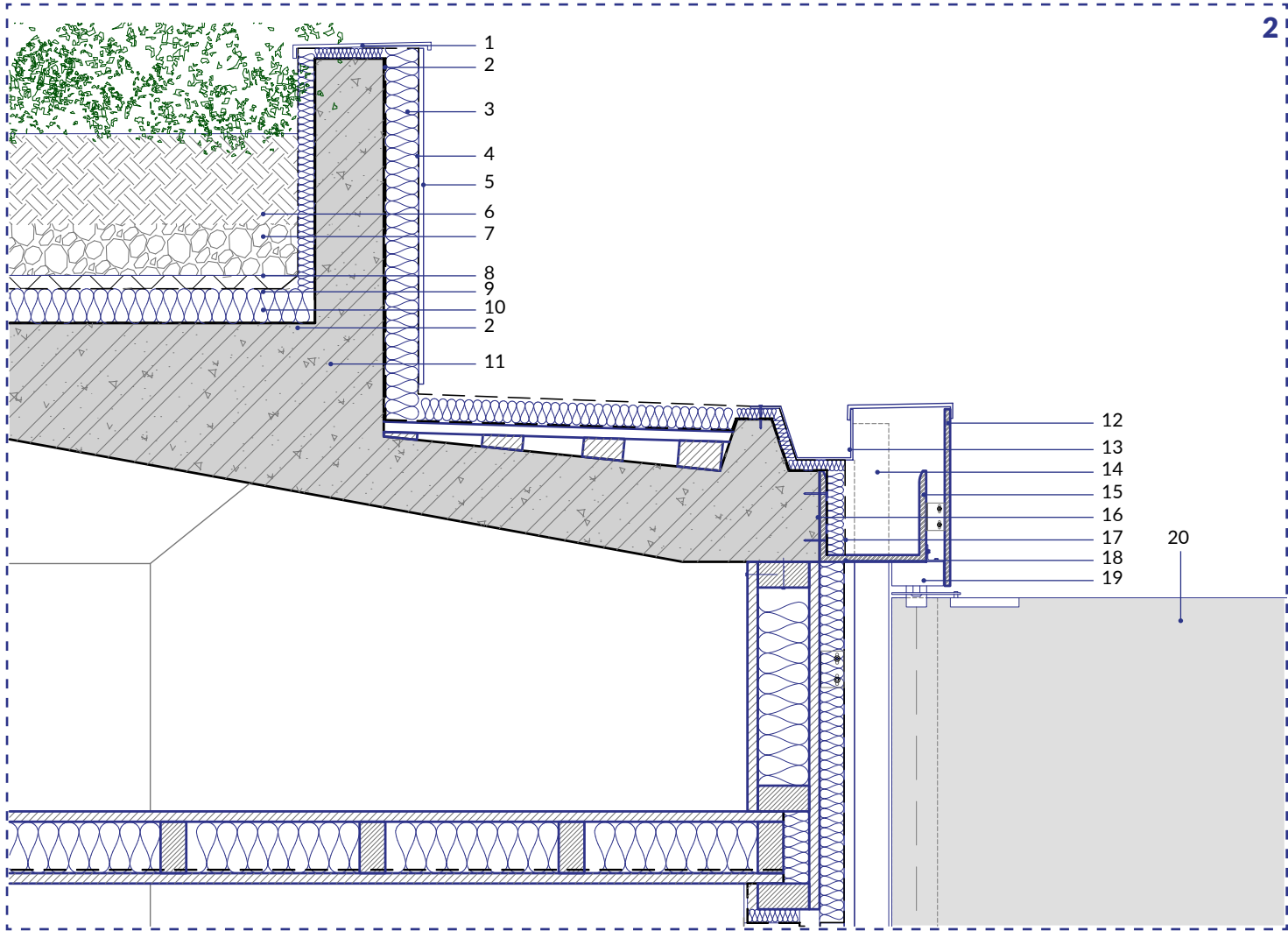


Section C-C Fragment



Representative facade fragment



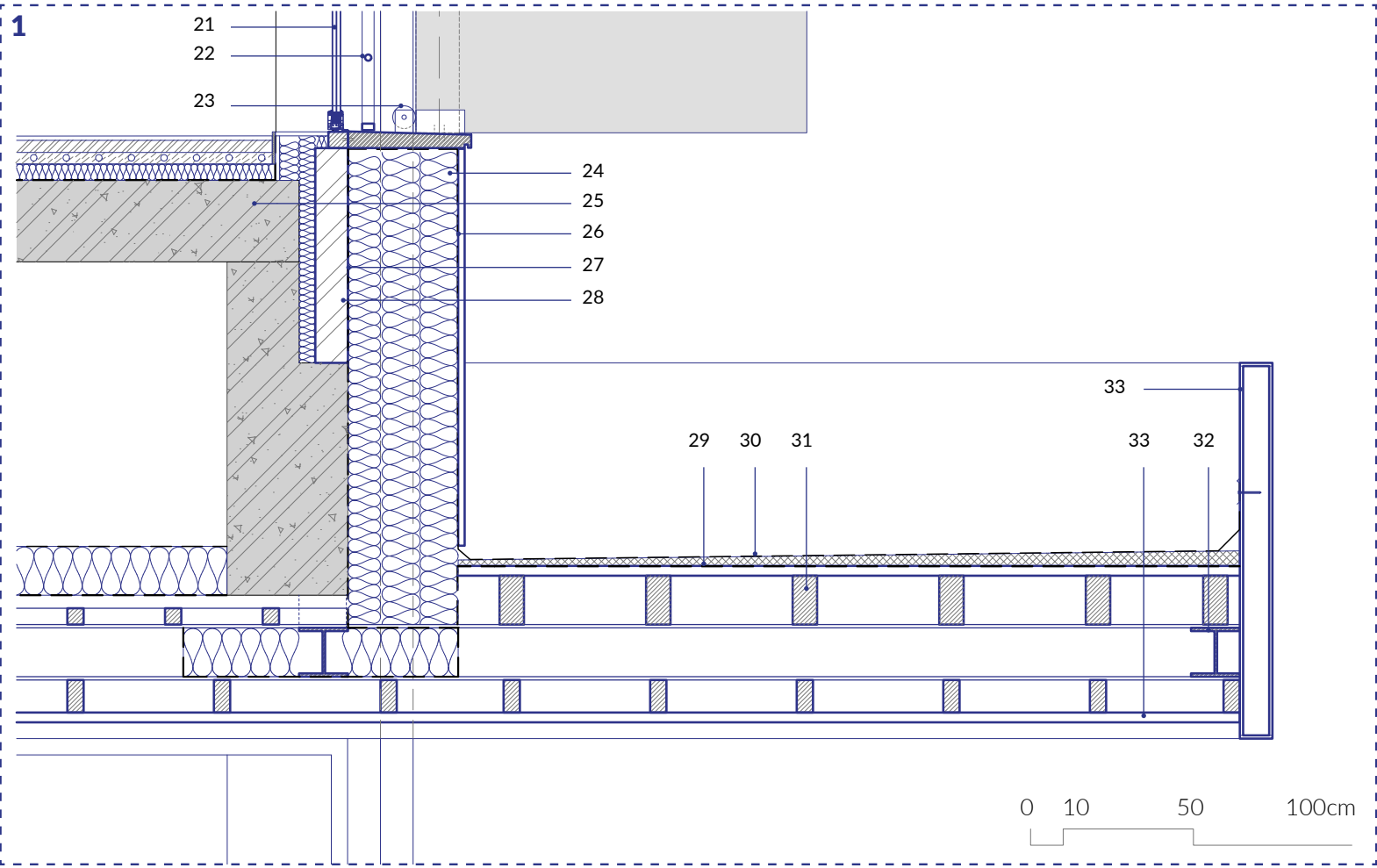


planted terrace

- 1. metal sheet 7mm
- 2. DPM layer
- 3. insulation XPS 100mm
- 4. waterproof layer - EPDM rubber
- 5. metal sheet 7mm
- 6. soil
- 7. pebbles
- 8. drainage
- 9. waterproof layer
- 10. insulation XPS 150mm
- 11. existing concrete construction

re-instatement of the west facade

- 12. fibre cement board 12.5mm
- 13. metal rainwater gutter
- 14. drainage pipe
- 15. DPM layer
- 16. insulation XPS 100mm
- 17. waterproof layer
- 18. UNP metal profile
- 19. hidden rotating mechanism
- 20. prefabricated glass reinforced concrete panels



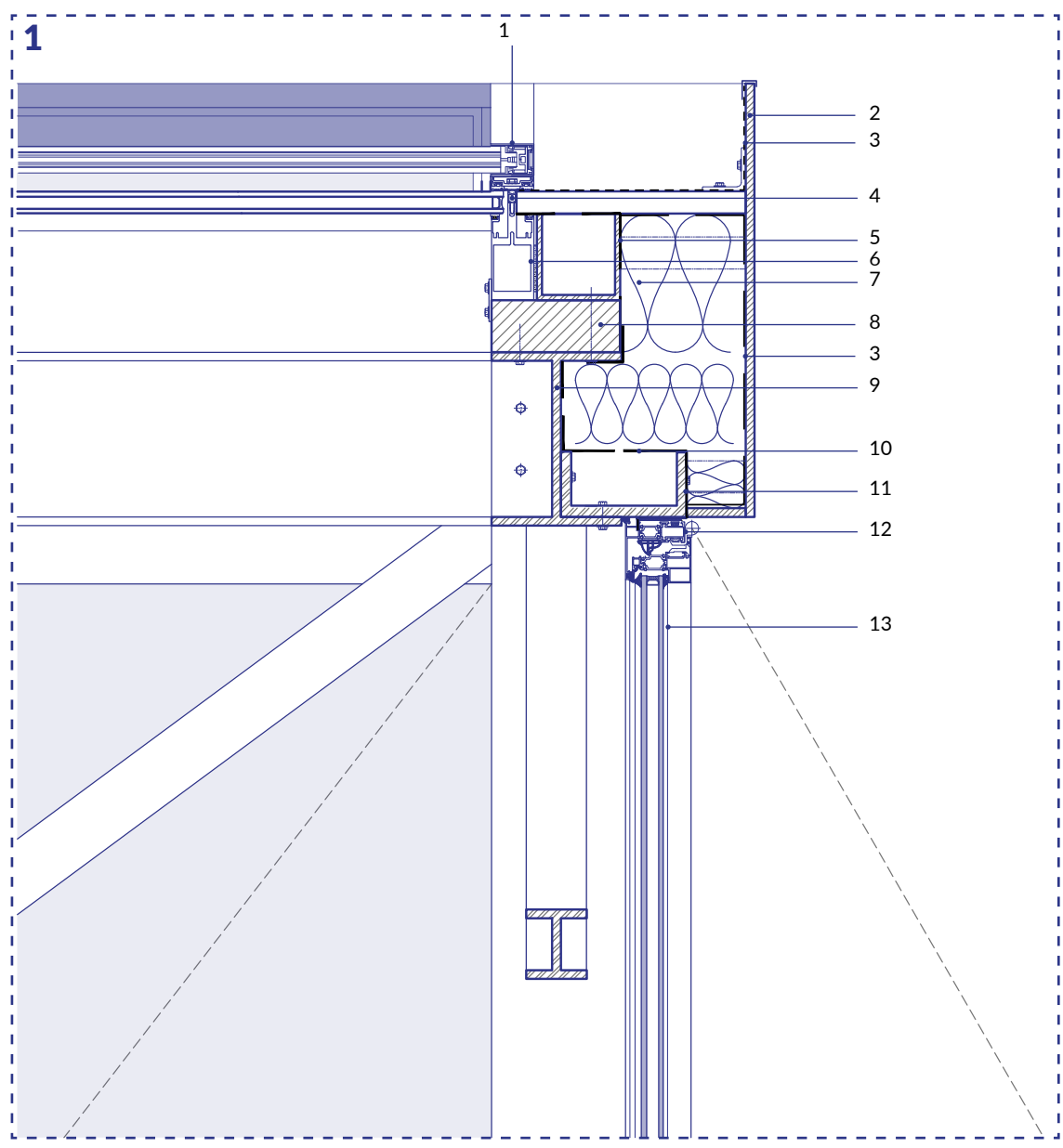
re-instatement of the west facade

- 21. double layered glazing
- 22. railing
- 23. rubber stop for the concrete panels
- 24. insulation XPS
- 25. existing concrete slab
- 26. waterproof layer
- 27. DPM layer
- 28. lightweight concrete

re-instatement of the canopy

- 29. screed
- 30. waterproof layer
- 31. wooden beam 150x75mm
- 32. IPE beam 150x150mm
- 33. wooden plank 30mm

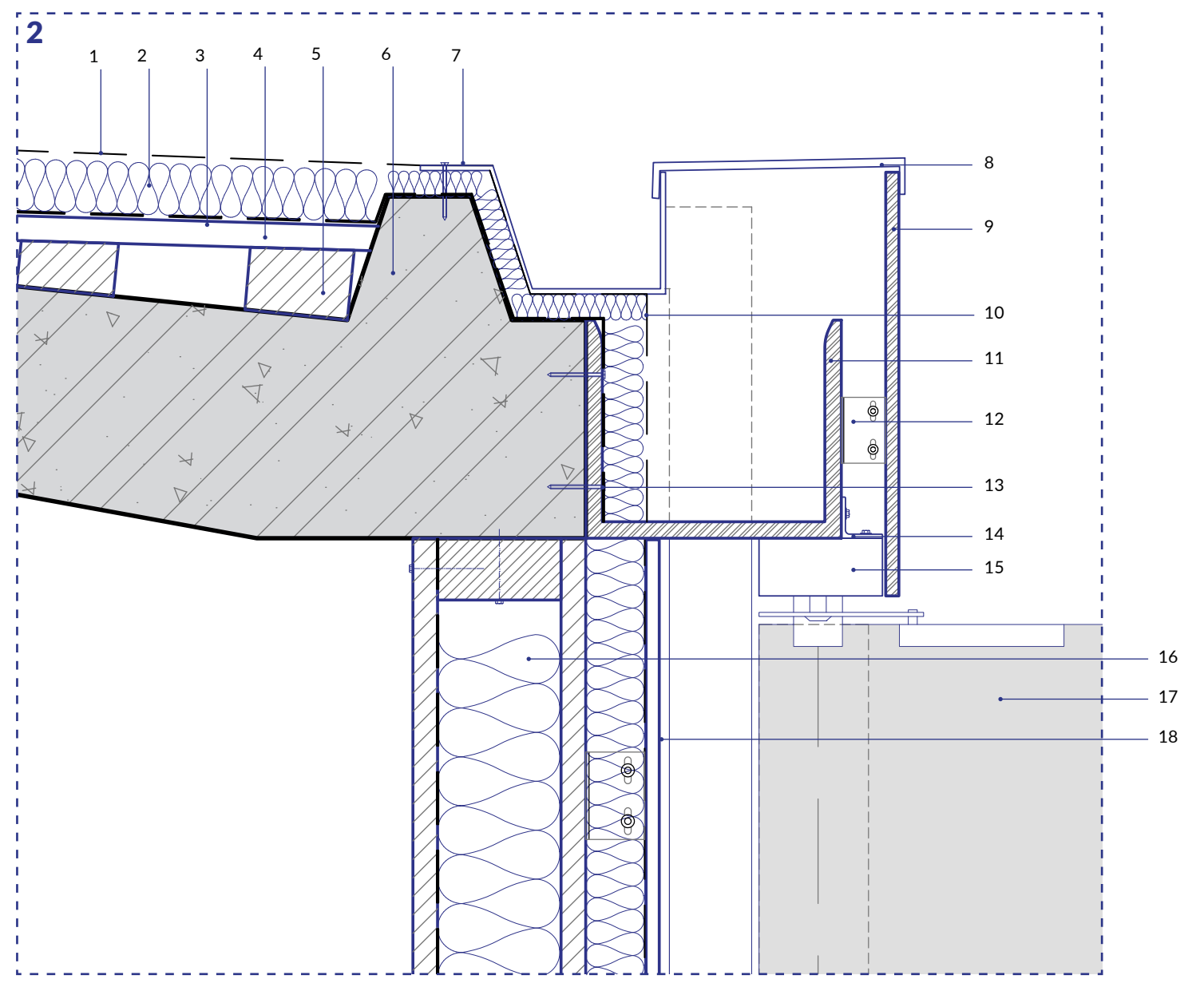
Keep Add



Keep Add

roof construction

1. outside shading system - aluminum guide
2. metal sheet 7mm
3. waterproof layer
4. aluminium window frame
5. U-shaped steel beam 100x100mm
6. self-adhesive butyl tape
7. insulation XPS
8. wooden beam of variable height - guide for the roof slope
9. IPE 200x150mm
10. DPM layer
11. U-shaped steel beam
12. aluminium window frame
13. double glazing

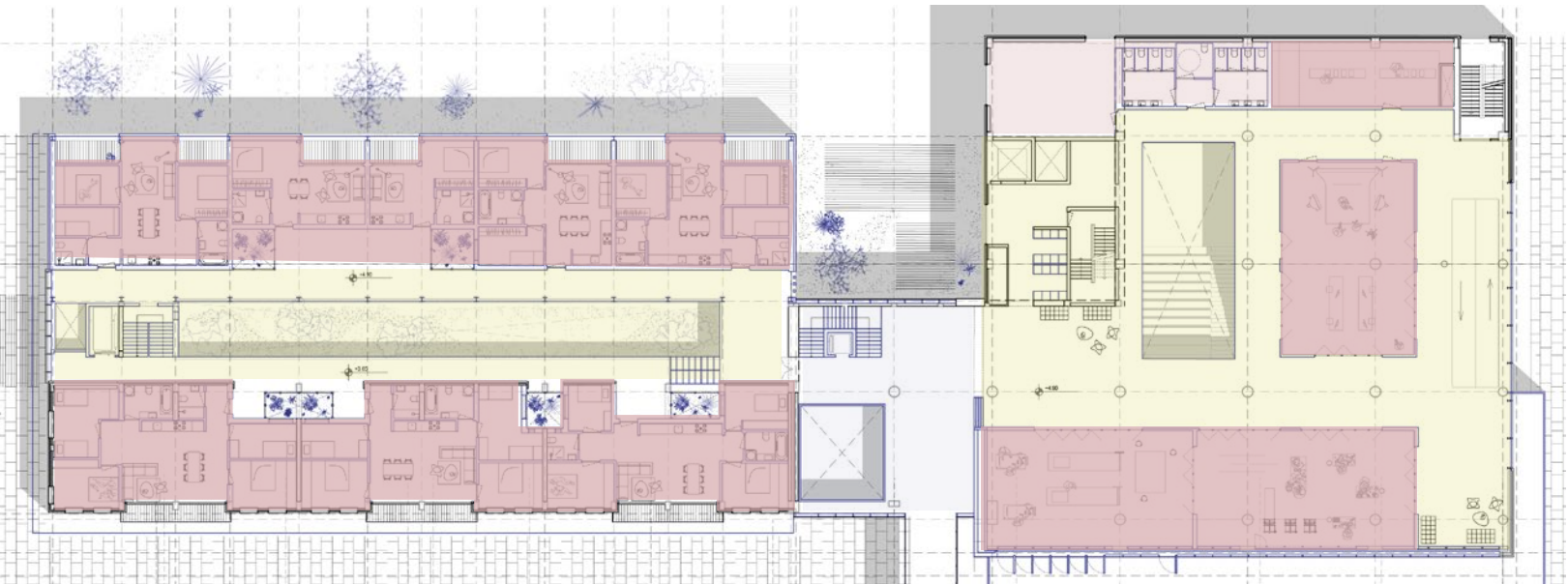
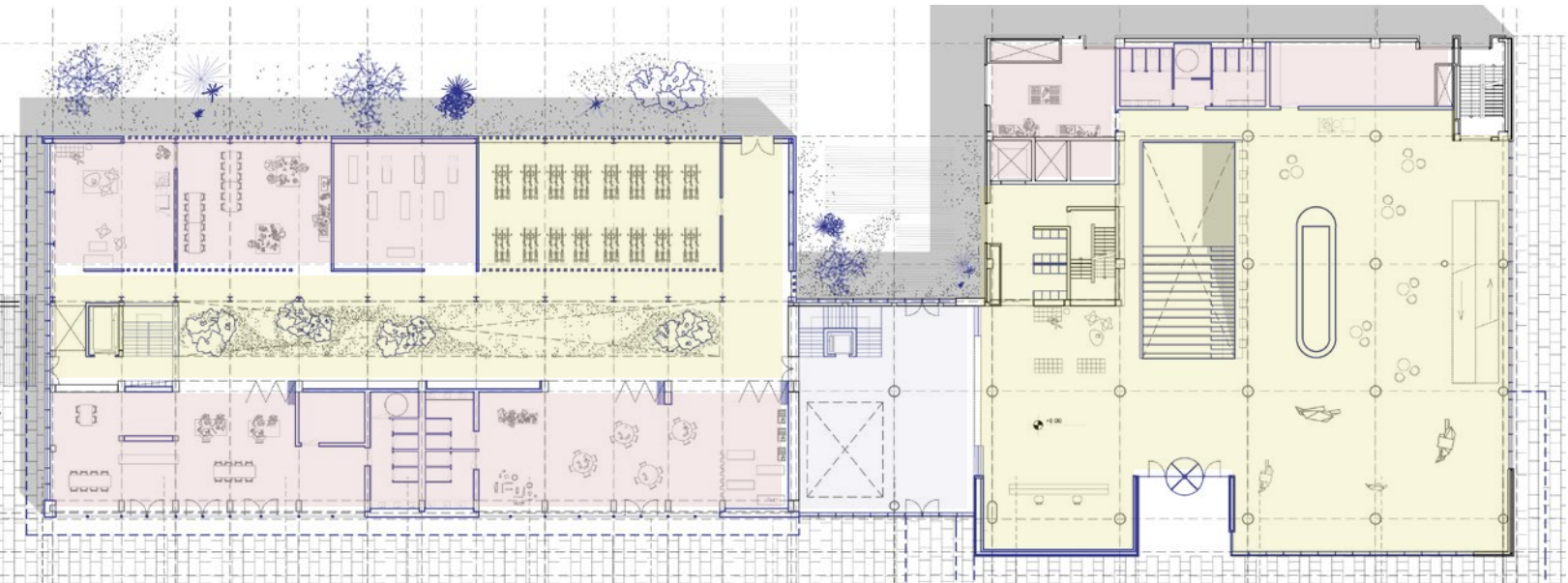


Keep Add

facade detail

- | | |
|--|--|
| <ol style="list-style-type: none">1. waterproof layer2. insulation XPS 70mm3. DPM layer4. wooden beam 30mm5. wooden beam6. existing prefabricated concrete element7. gutter8. metal sheet9. fibre cement board 12mm10. waterproof layer11. UNP steel profile | <ol style="list-style-type: none">12. steel connector13. DPM layer14. steel L-shaped connector15. hidden rotating mechanism16. box slab - construction timber beams 250x300mm integrated insulation XPS 250mm17. prefabricated glass reinforced concrete panel18. fibre cement board 12 mm |
|--|--|

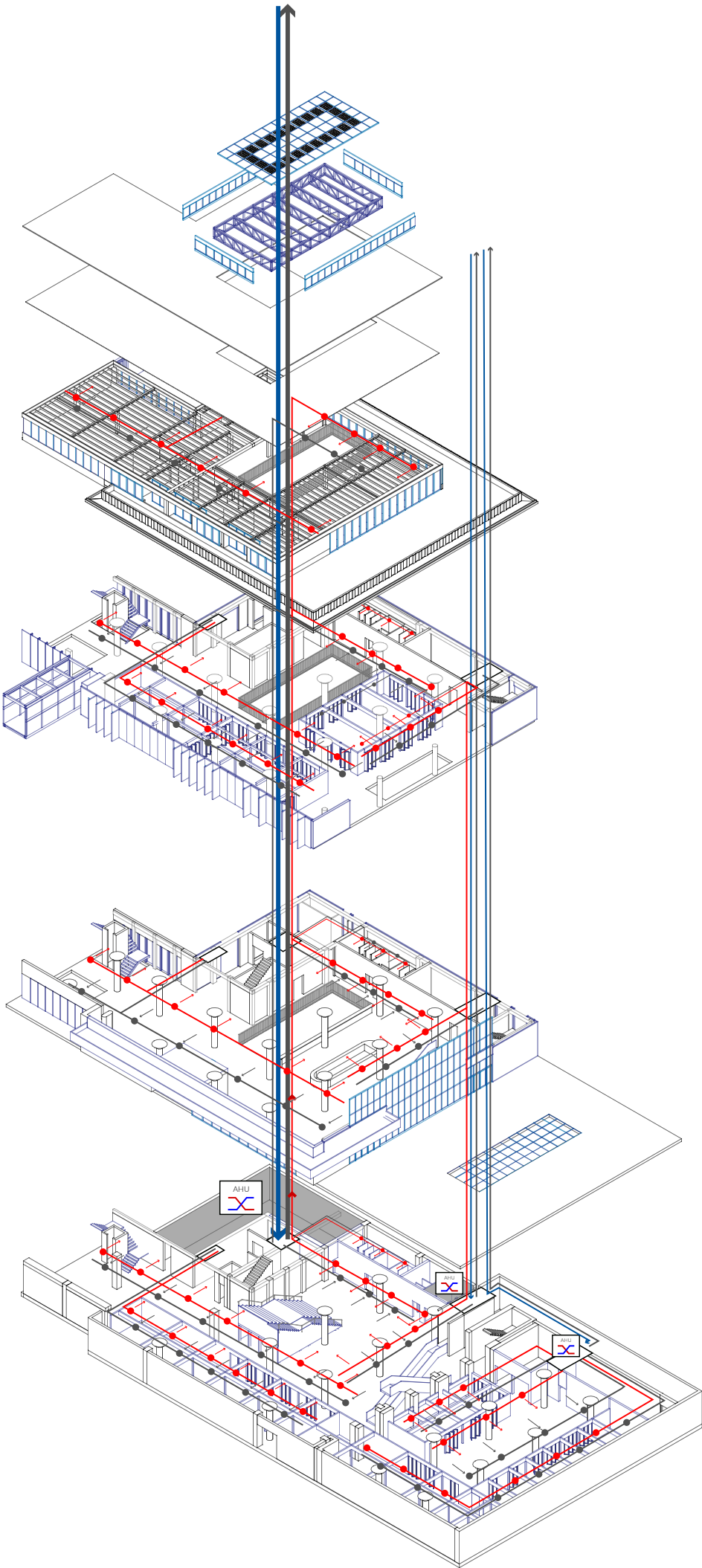
0 10 50 100cm

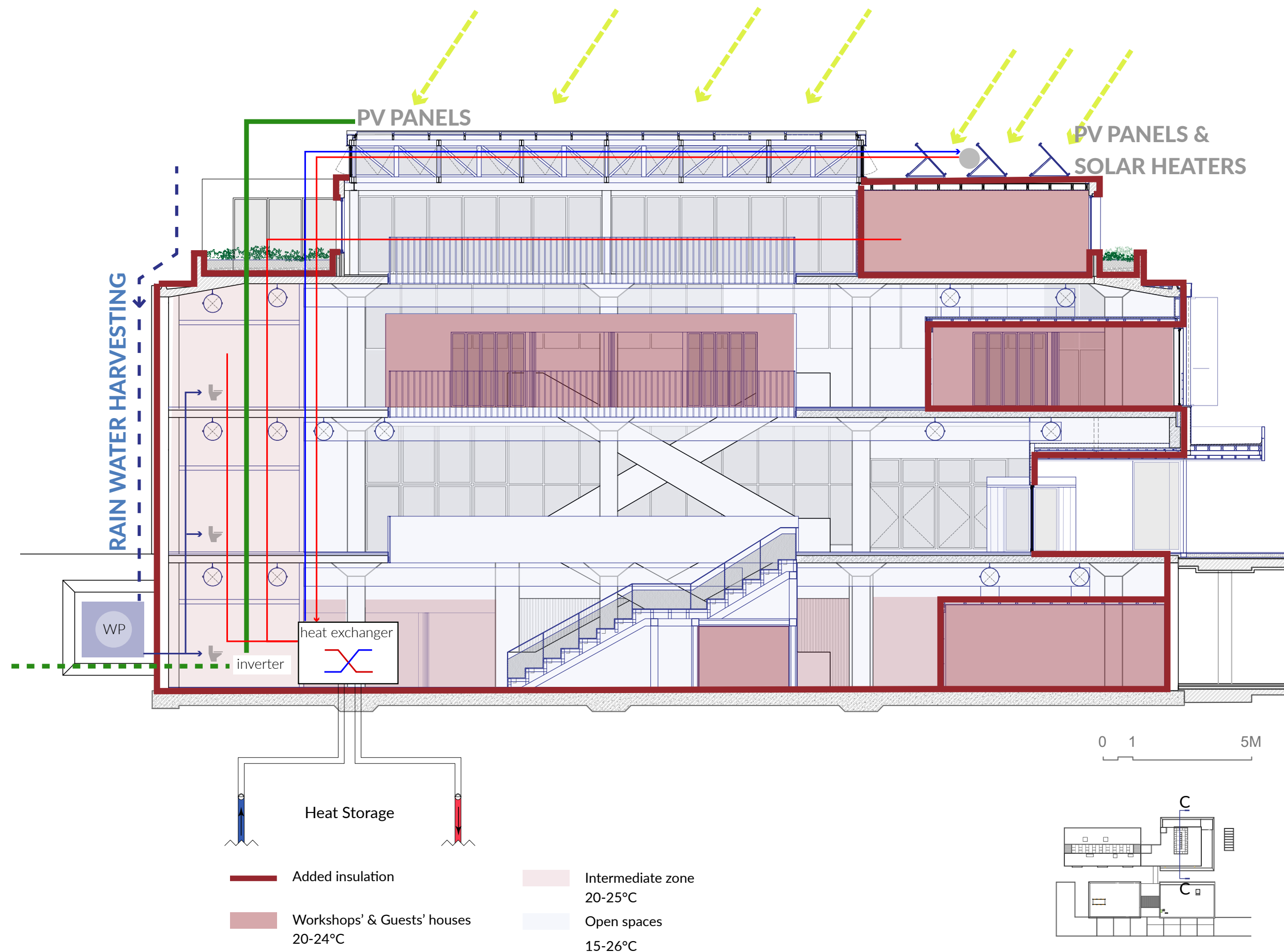


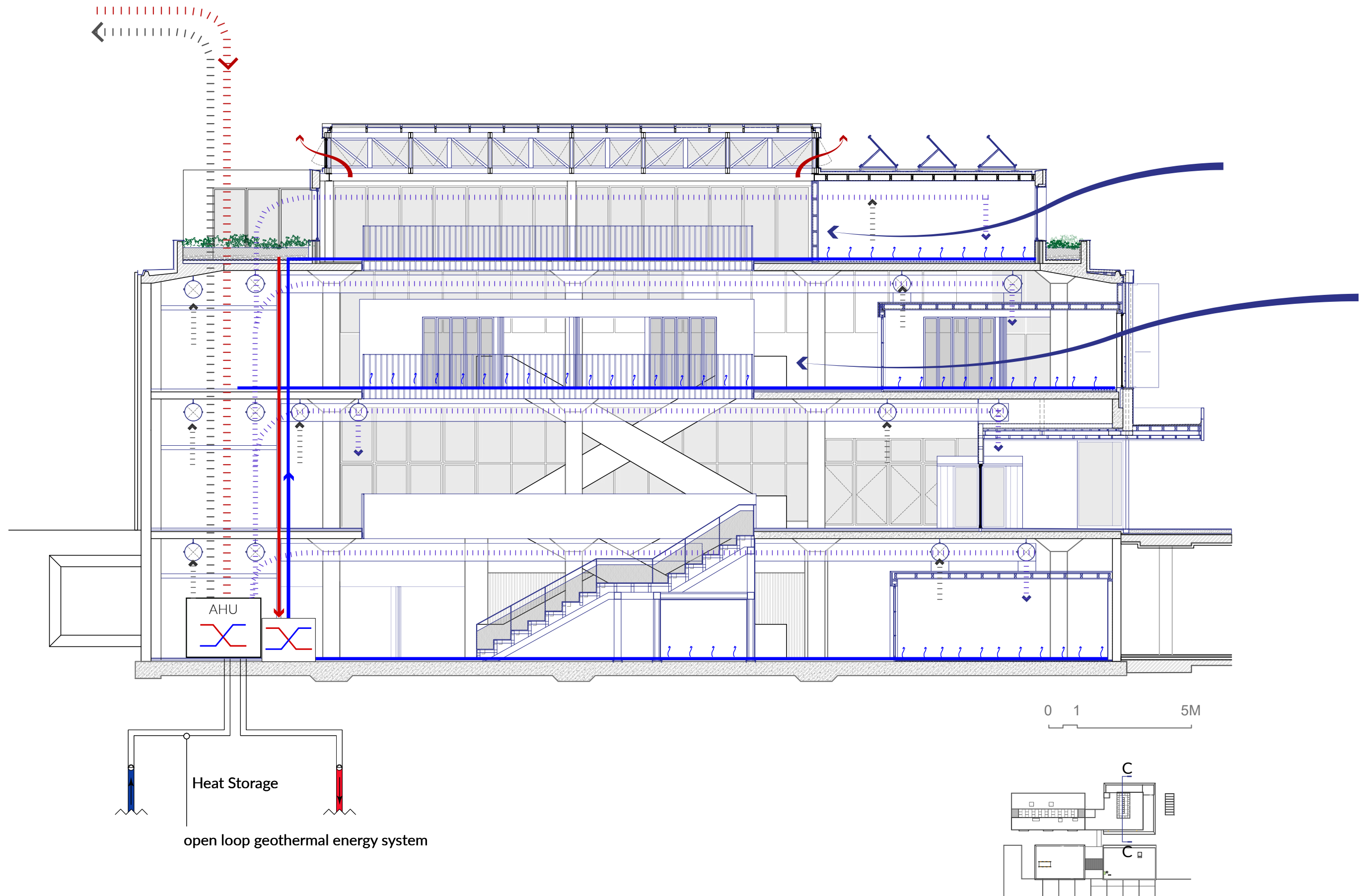
Temperature demands

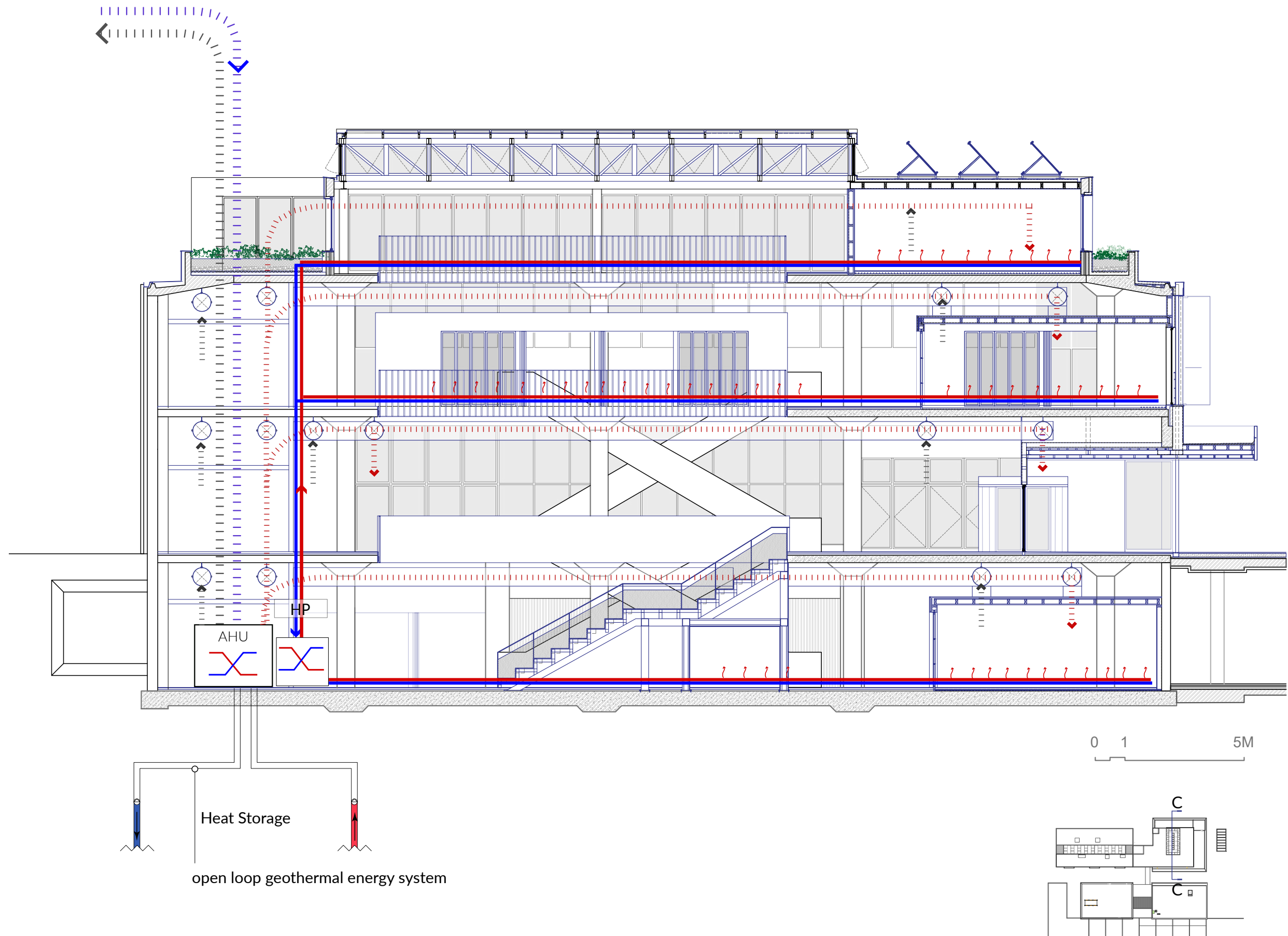
- Tmin winter: 20°C - Tmax summer 24°C
- Tmin winter: 20°C - Tmax summer 25°C
- Tmin winter 15°C - Tmax summer 26°C
- Tmin winter 12°C - Tmax summer: outside temperature +1/2°C

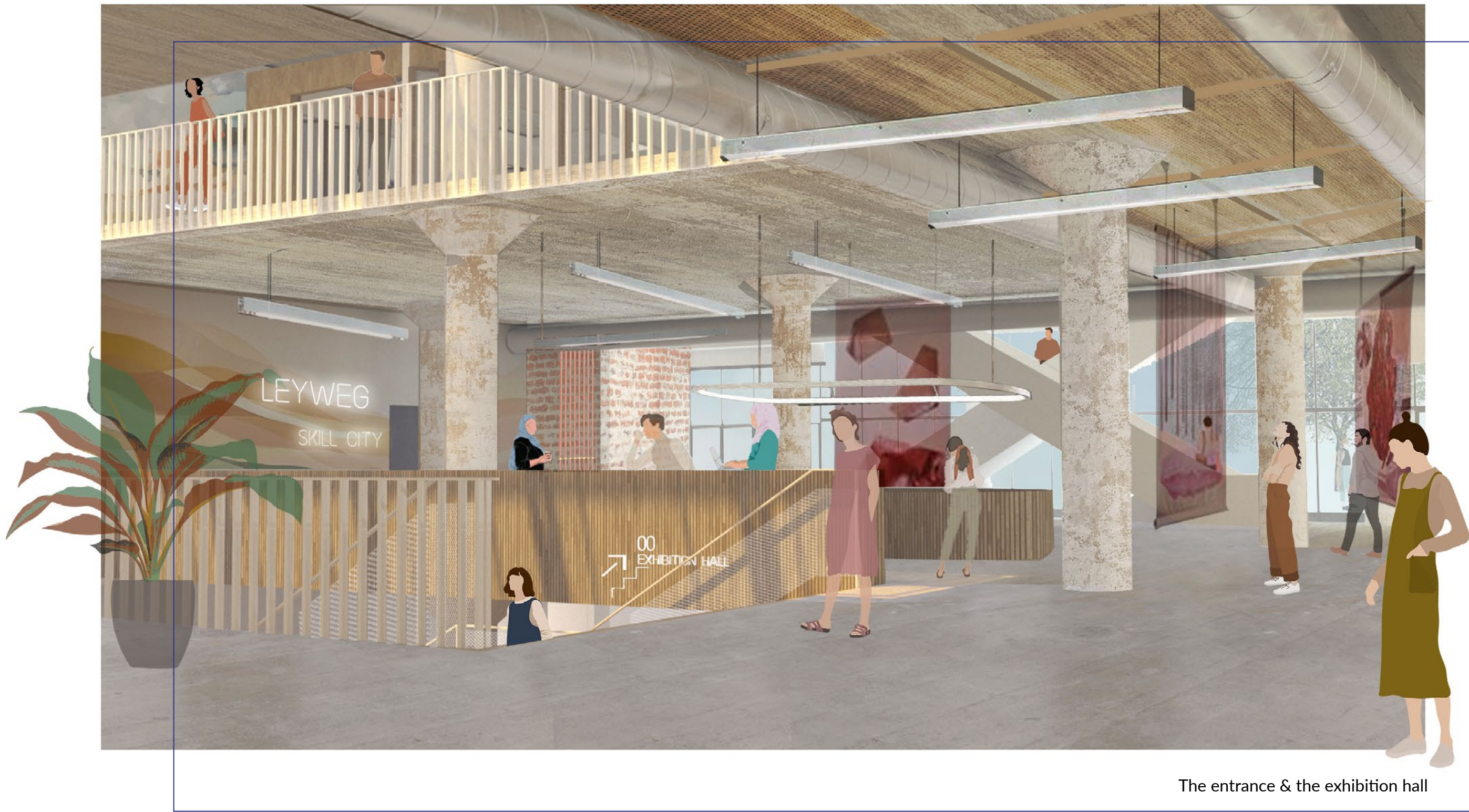
- AHU Air Handling Unit
- Heat exchanger
- Extract
- Intake











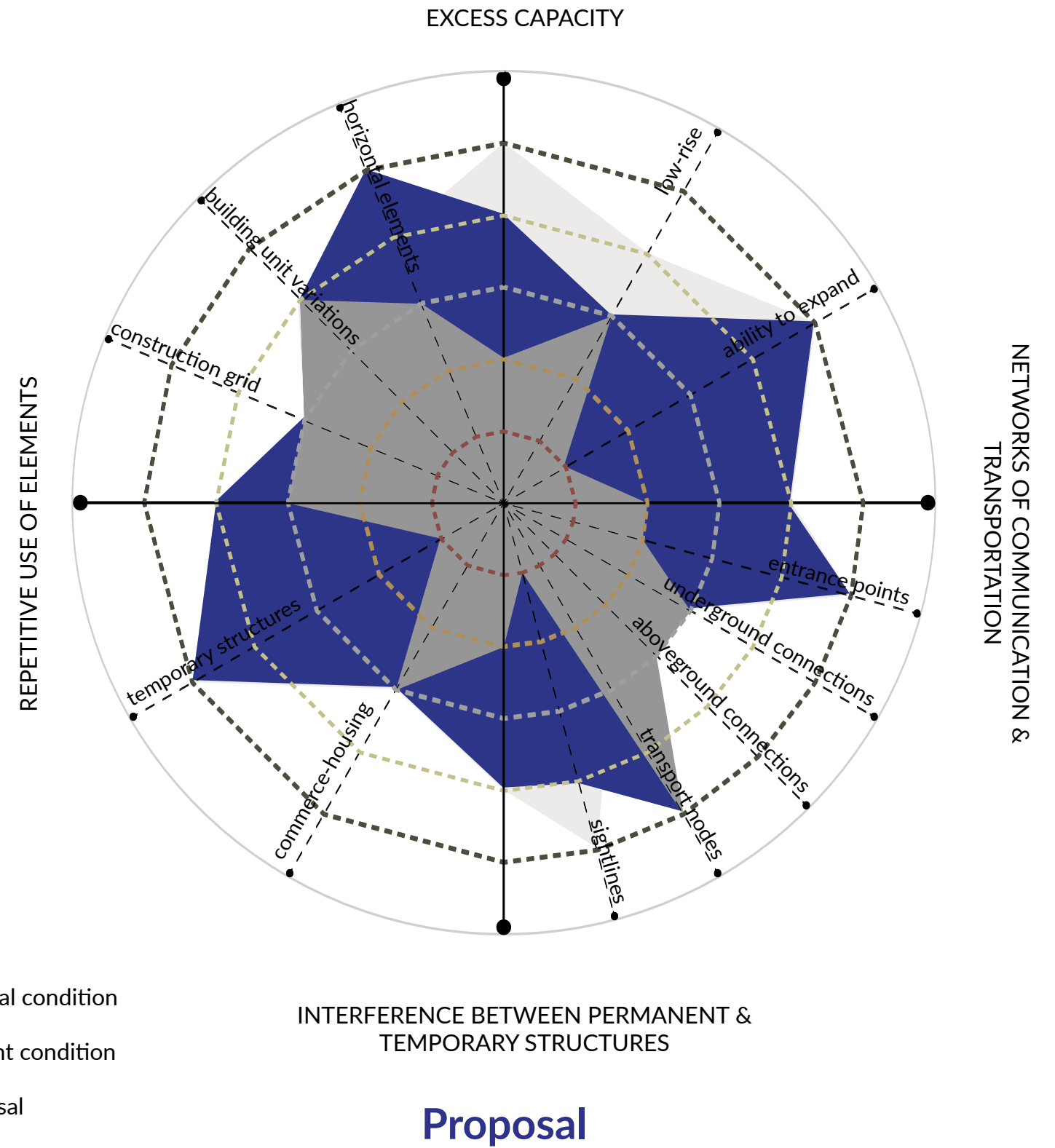
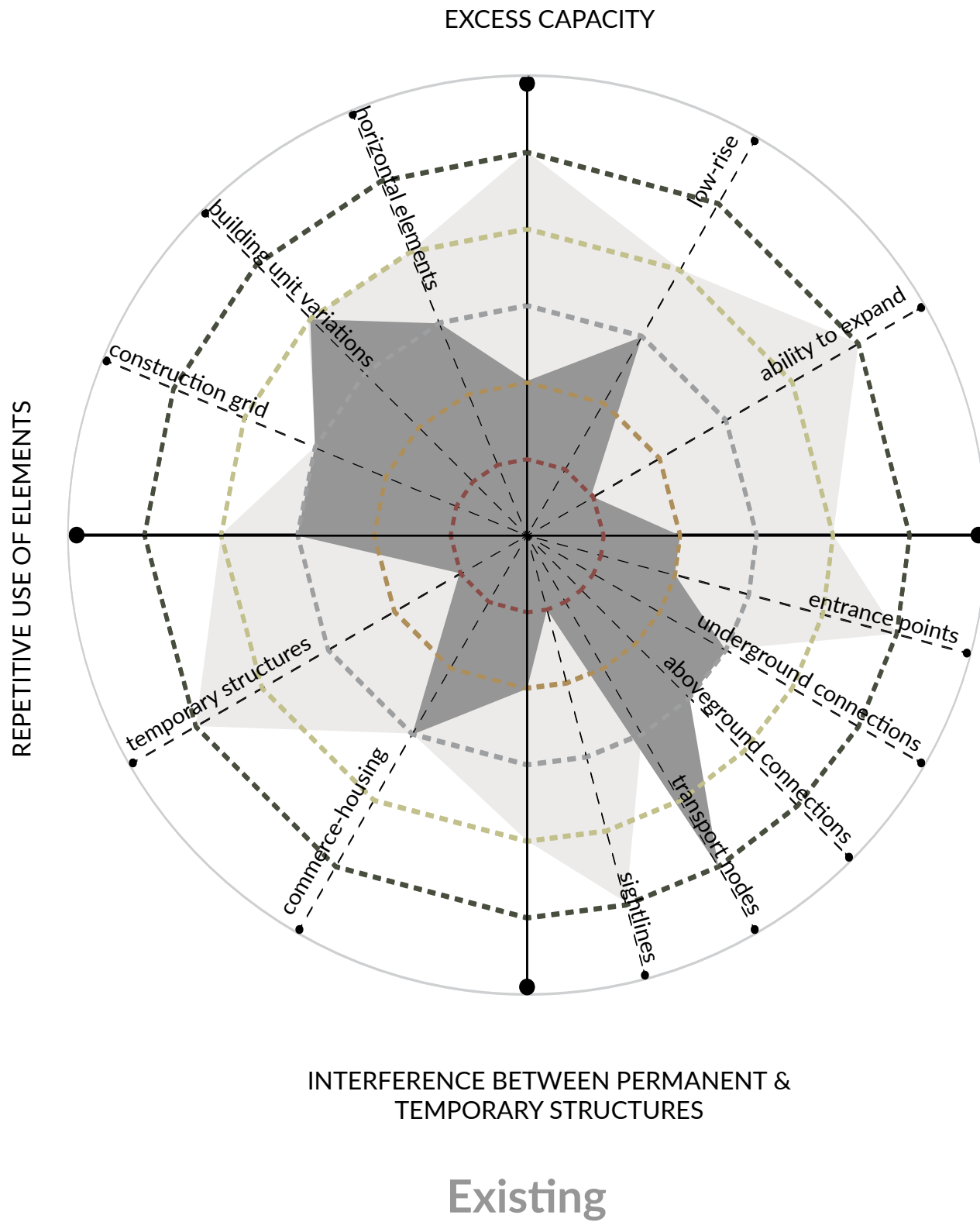
The entrance & the exhibition hall

1
Introduction

from
2
Research

to
3
Design

4
Epilogue



“The best environment is one in which there are both new stimuli and familiar reassurances, the chance to explore and the ability to return.”

Lynch, K. (1972). What time is this place. p. 204



Thank you!