

An architectural rendering of a courtyard. A large tree in a planter is the central focus. People are walking and standing in the courtyard, which is surrounded by modern buildings with large windows. The scene is brightly lit, suggesting a sunny day.

A NEW MINIMUM

**The potential for existenzminimum dwelling
concepts in renovation projects**

“The studio New Heritage concerns **buildings and areas** that are **relatively young** and usually **not regarded as heritage**”

“how could **renovation and densification** strengthen qualities and help solve current problems, **without compromising heritage values and identities?**”

NOS NIEUWS • ECONOMIE • 13-01-2022, 10:02

Huizen alsmaar schaarser en duurder, en steeds minder verkocht

Houses increasingly scarce and expensive, and less and less sold

Strongest rise in house prices in 21 years: nearly 18 percent more expensive than year before

WOONCRISIS

NOS NIEUWS • BINNENLAND • ECONOMIE • 22-09-2021, 08:28

Sterkste stijging huizenprijzen in 21 jaar: bijna 18 procent duurder dan jaar eerder

NOS NIEUWS • BINNENLAND • ECONOMIE • 17-02-2021, 07:50 • AANGEPAST 17-02-2021, 08:10

Grote bouwcoalitie presenteert actieplan voor 1 miljoen woningen in tien jaar

Major building coalition presents action plan for 1 million homes in ten years

www.woonopstand.nl

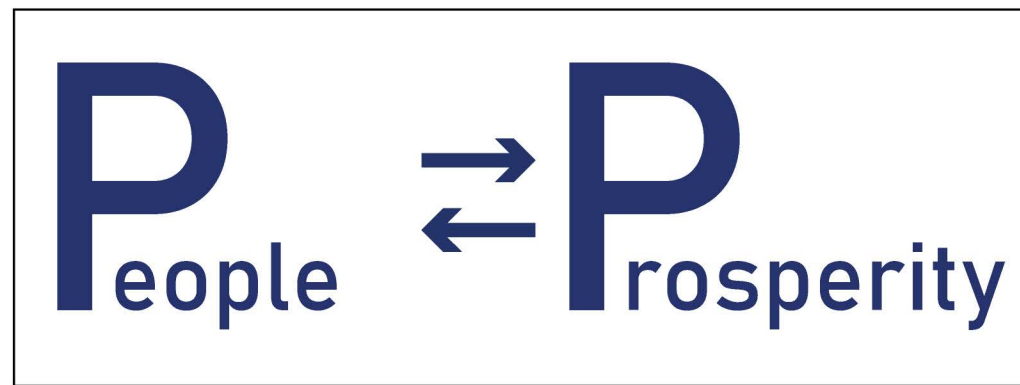
TEGEN DE WONINGNOOD
ZONDAG 15 SEPT. 14:00U
VAN SCHAECK MATHONSINGEL NIJMEGEN



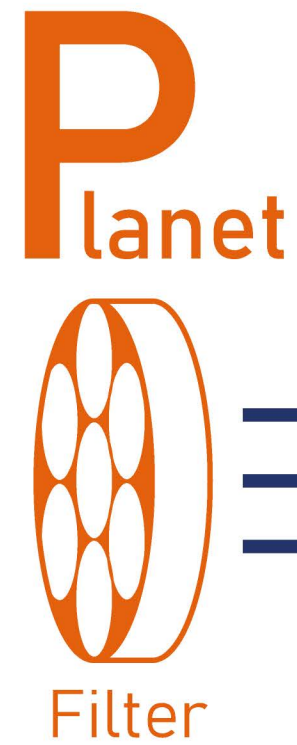
2nd CIAM congress on minimal housing (1929)

Is it feasible to recontextualize and adapt historical examples of minimum dwellings in the renovation design of a relatively young building?

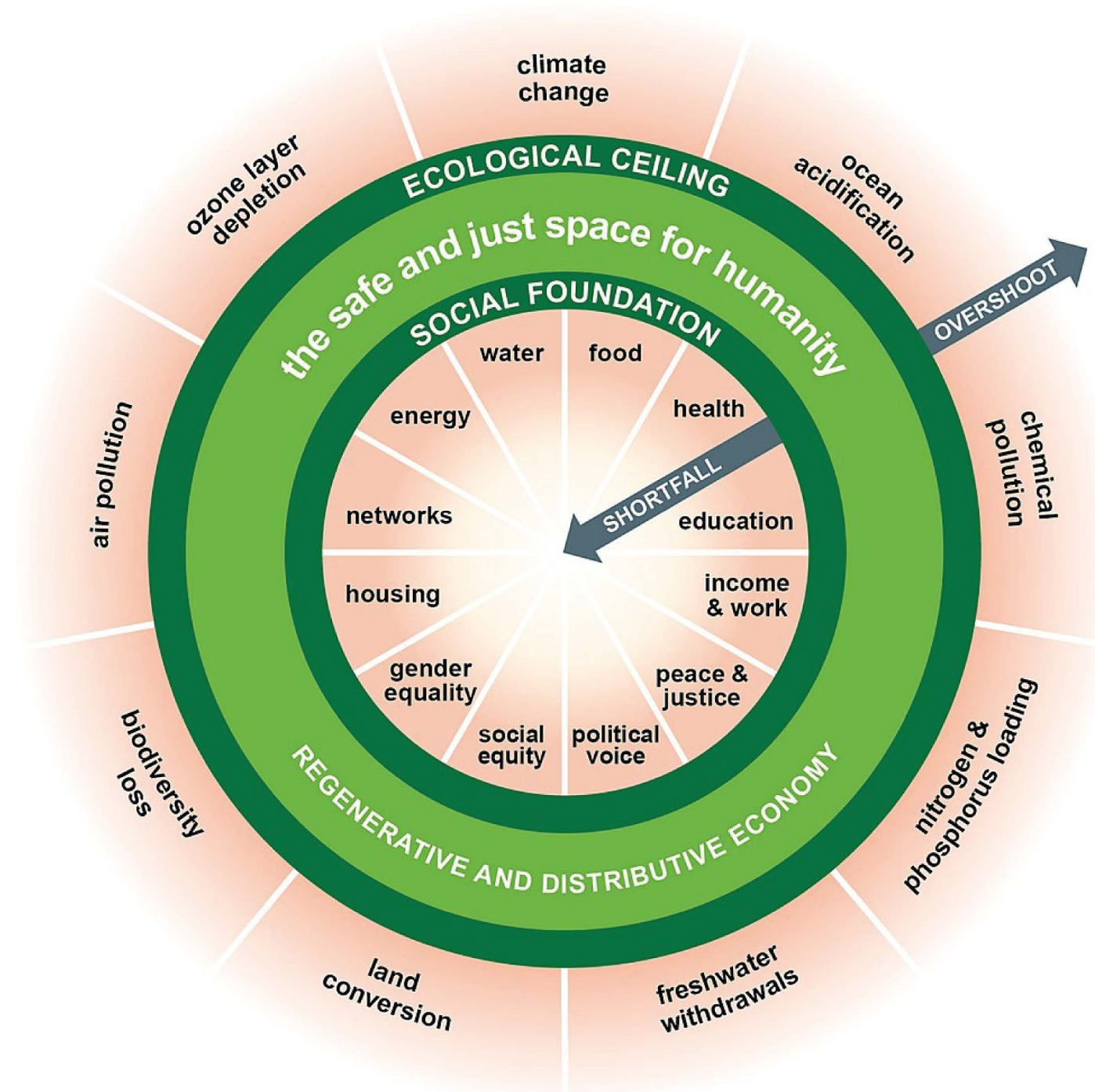
Historic
Examples
of
Efficient
Housing



Reinterpretation



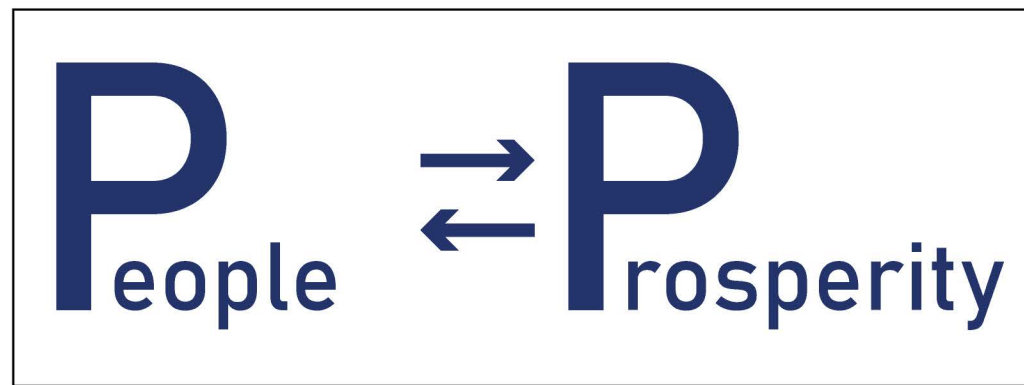
Contemporary
Efficient &
Sustainable
Housing



**A new economic model to find a safe and just space for humanity
between a social floor and an ecological ceiling**

an ambitious future

Historic
Examples
of
Efficient
Housing



Reinterpretation



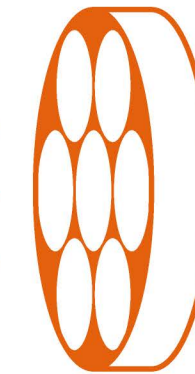
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lanet



Filter



Case
Study



Filter

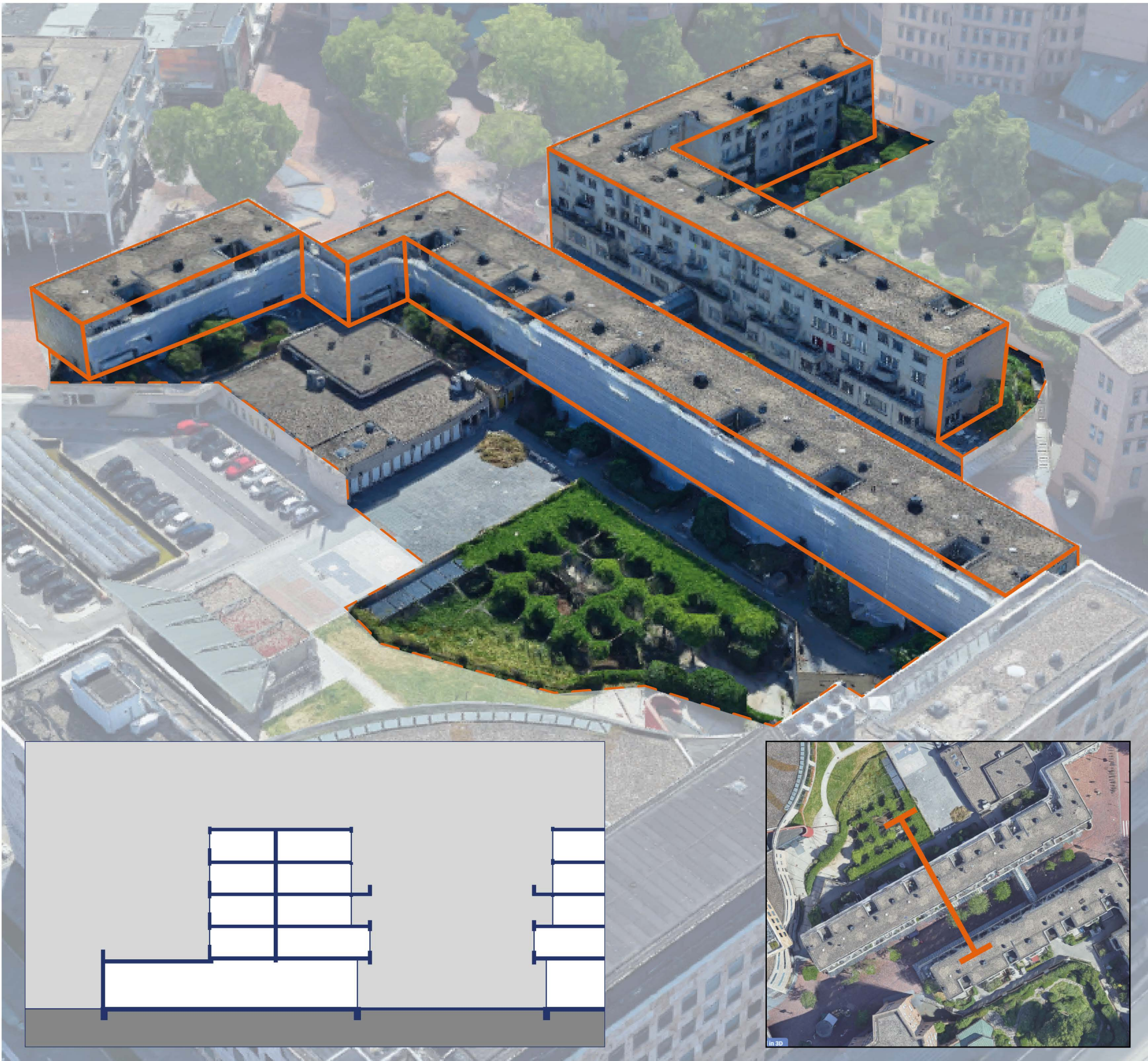


Suitable
Efficient &
Sustainable
Housing

multiple filters

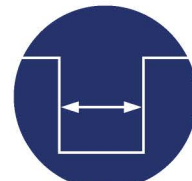
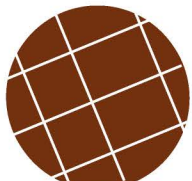



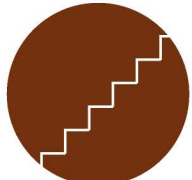

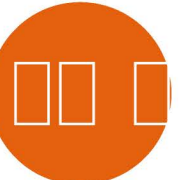

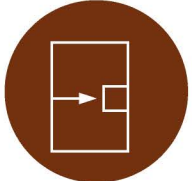










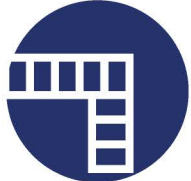


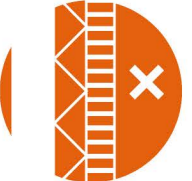

case study

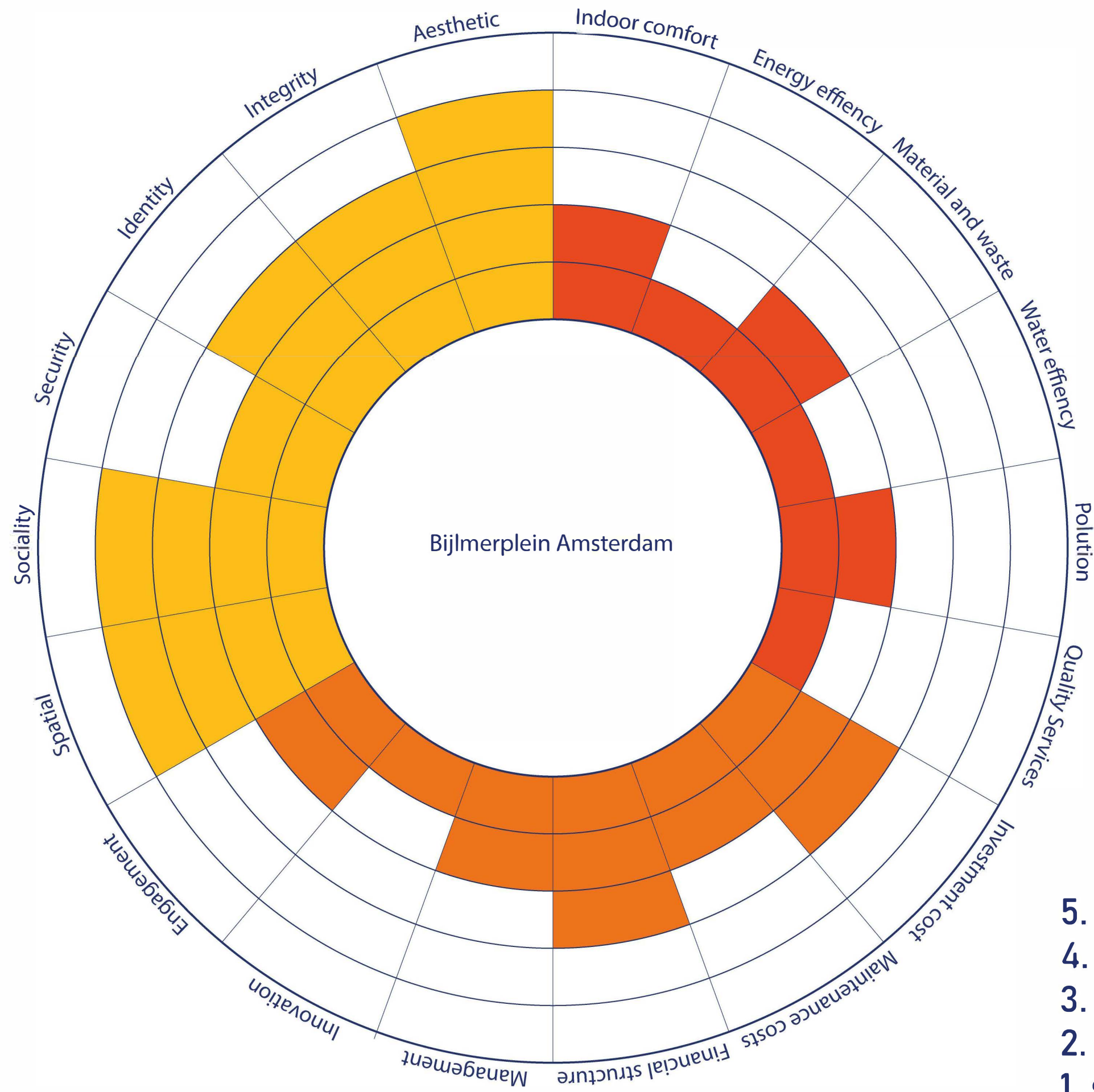


- Clusters 2&3
- Built in 1986
- Designed by Atelier Pro
- 137 dwellings and HAT-units, all social housing
- Commercial space on ground floor
- Original with library now commercial
- Living decks function as primary entrance

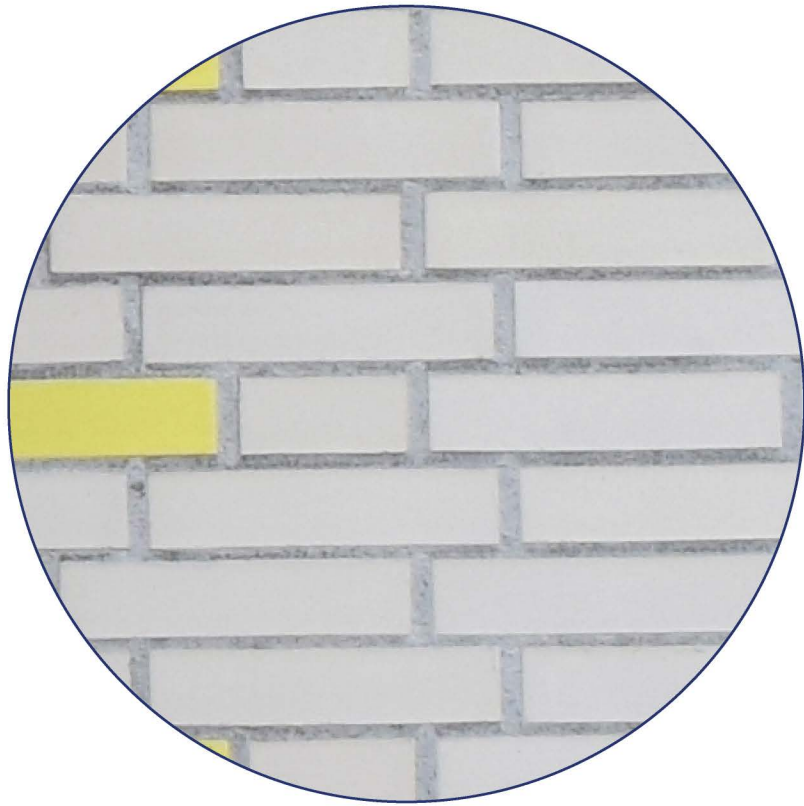
Strengths	Weaknesses	Opportunities	Threats
 Anti-Bijlmer - political gesture becomes identity	 Deteriorated decks	 Potential of social interaction at decks	 Vacancy of shops can decay public space due to consumer focused functions
 Lively identity of public space: functions & people	 Fences and separators on decks: anti-social environment	 Green replacing abundance of stone for climate adaptivity	 Rising amount of crime delicts repels users
 Slow traffic area: car free	 Stony environment: non-climate adaptive	 Densification: housing shortage & eyes on the street	 Unwanted strangers on deck due to accessibility day & night
 Coherence of buildings	 Lack of accessibility of decks	 Social functions to increase social interaction	 Loss of human scale by densification
<ul style="list-style-type: none"> ✓ human scale ✓ recognizability ✓ closed building blocks ✓ plasticity ✓ brick ✓ articulated corners & entrances  Recognizable post-modern architecture: Amsterdam school style	 Entrances and decks dark, publicly accessible and unsafe at night	 Owner-occupied housing can increase resident engagement	 Loneliness by social exclusion: no feeling of belonging

Strengths	Weaknesses	Opportunities	Threats
 Dimensions of the public streets and squares	 No strong physical connection to the rest of the Bijlmer	 Function Bijlmerplein as a meetingpoint in the area	 Decreasing quality of the decks, due to little use
 High quality masonry and facade composition	 Many appartments only accessible with stairs	 Simple and flexible loadbearing structure	 Quality and appreciation of plastic and aluminium window frames
 Differity in apartment types	 Position of the bedrooms makes the floorplan inflexible	 Courtyards and decks offer potential for increasing biodiversity	 Long walkingroutes to services such as wast bins and parking
 Smart stacking of appartments around stairwell		 Cars have a relatively small place in the whole neighbourhood	

Strengths	Weaknesses	Opportunities	Threats
 Strong foundation with a lot of constructional overhead	 Low insulation values	 Topping up (especially in wood)	 Topping up strategy needs to be sufficiently supported to withstand wind forces
 Consistent construction concept applied throughout the building	 A lot of unusable space in the interior square of the building	 Building on existing collective heating	 Even filling the remaining cavity results in non BENG-compliant facades
		 Open plan on the 1st floor creates design possibilities	



- 5. exemplary quality
- 4. best practice
- 3. good practice
- 2. minimum standard
- 1. sub-standard



Light-colored brickwork



Rythmic facade



Courtyards

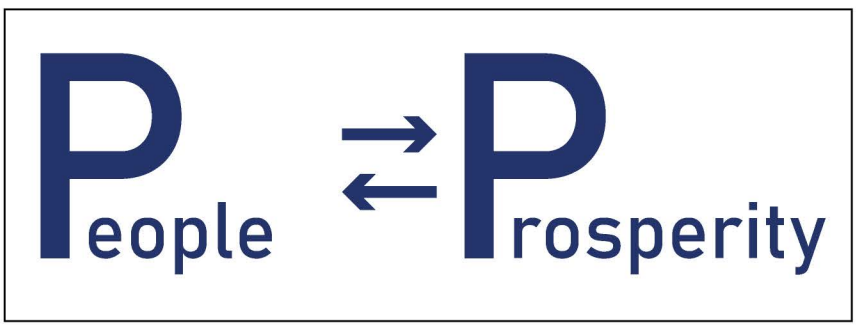


Detailed brickwork

heritage

**Housing
Crisis**

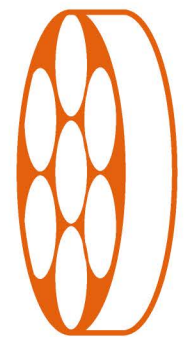
→
Historic
Examples
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Efficient
Housing



Reinterpretation



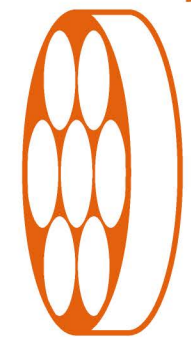
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Filter



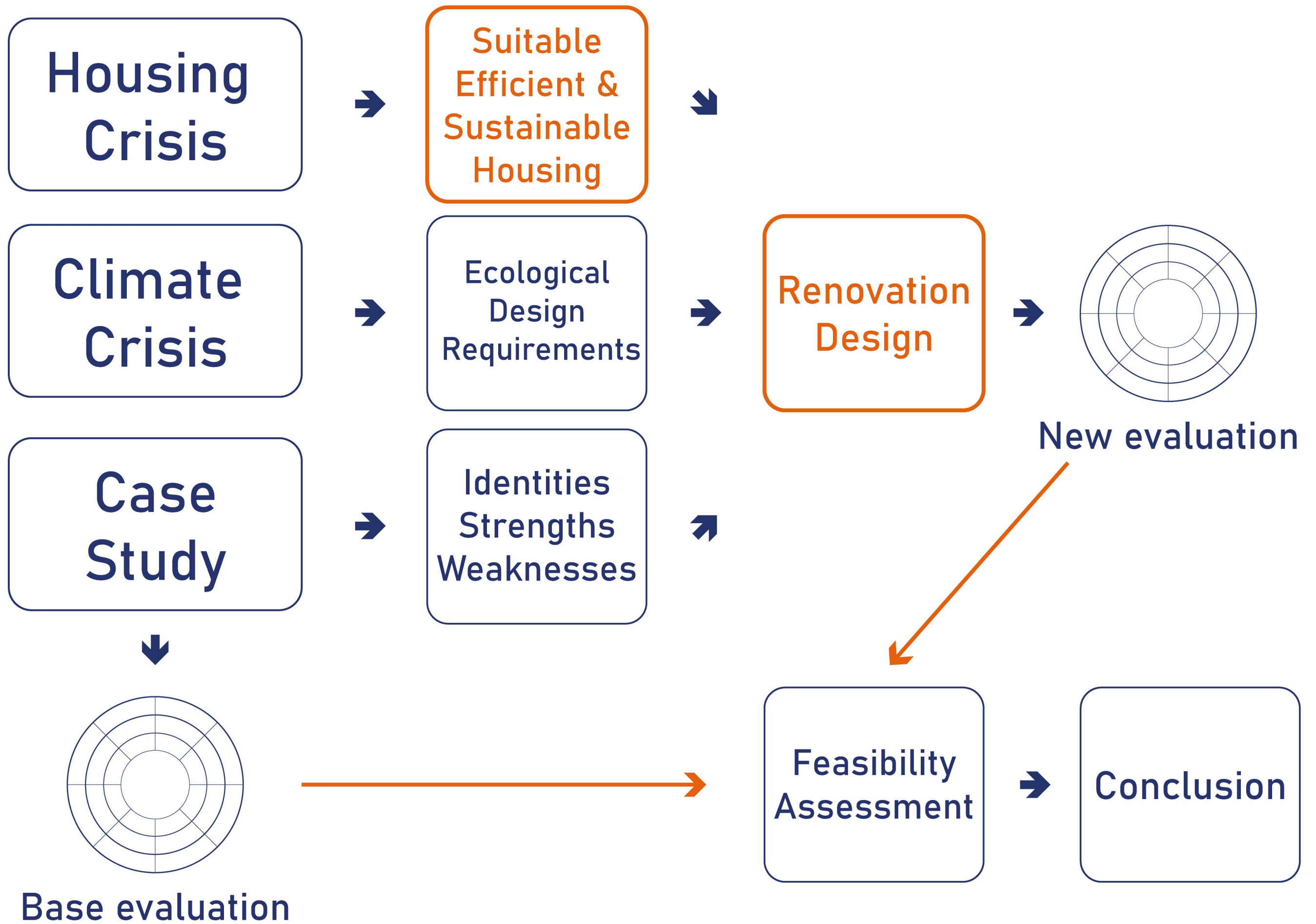
Case
Study



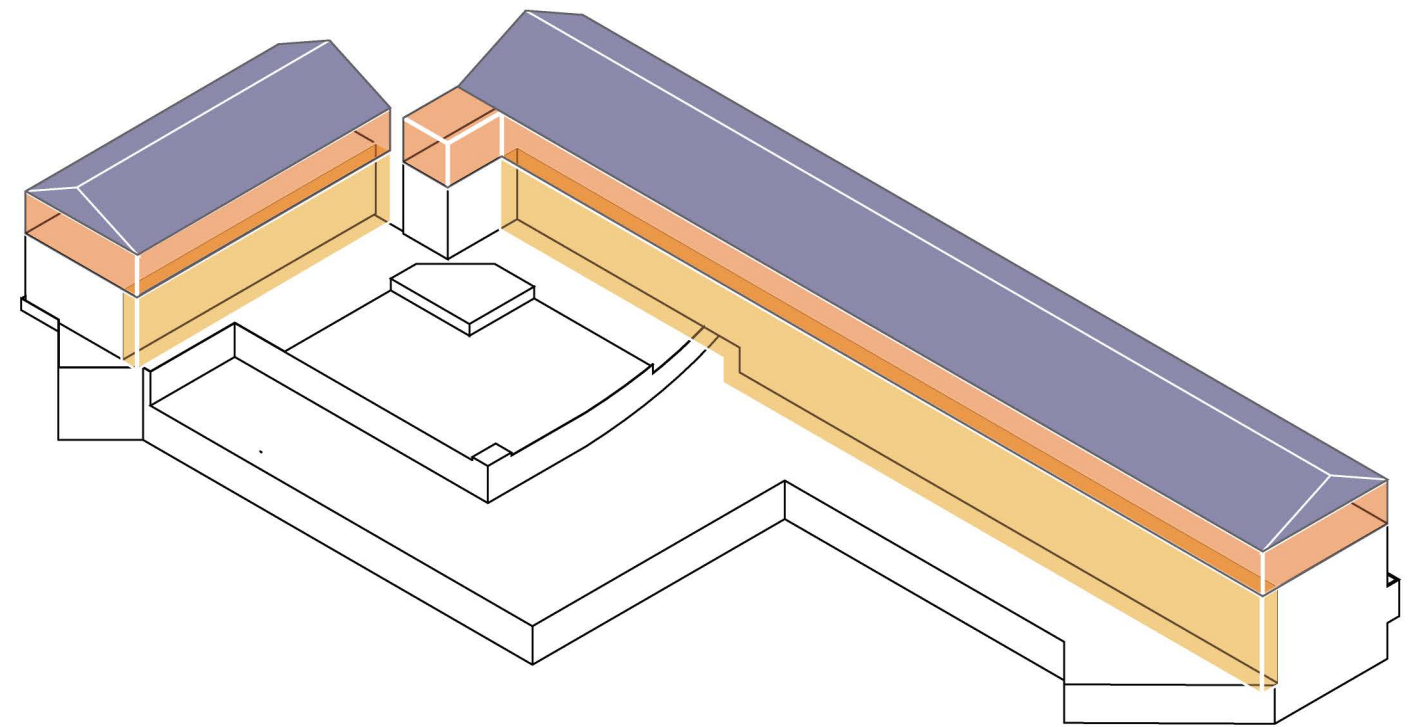
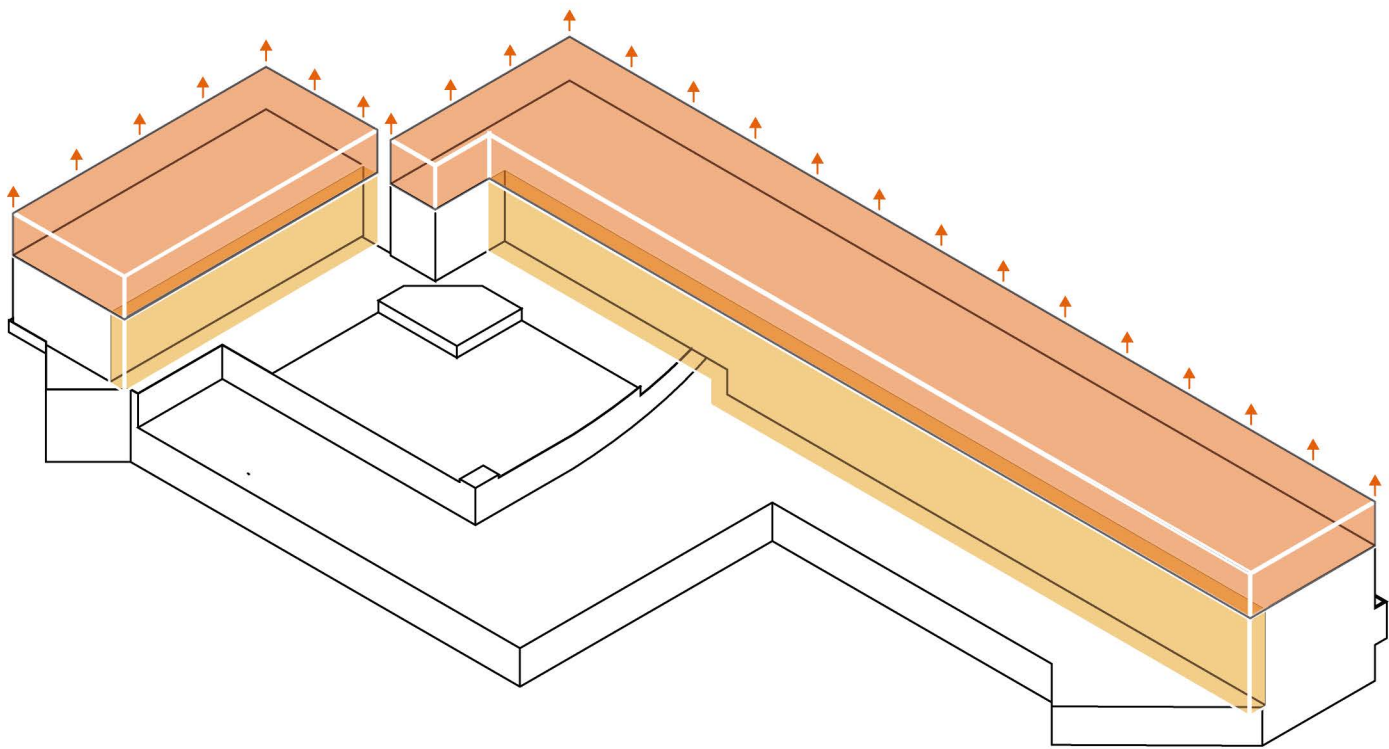
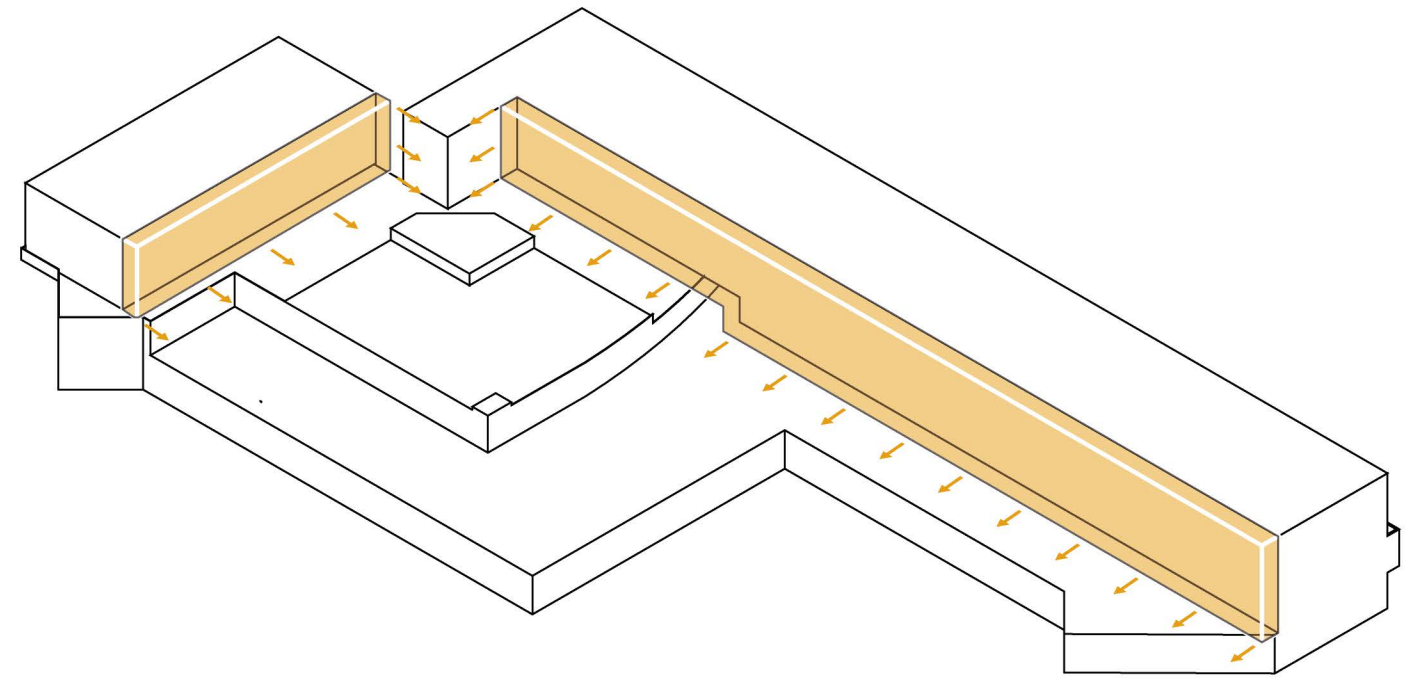
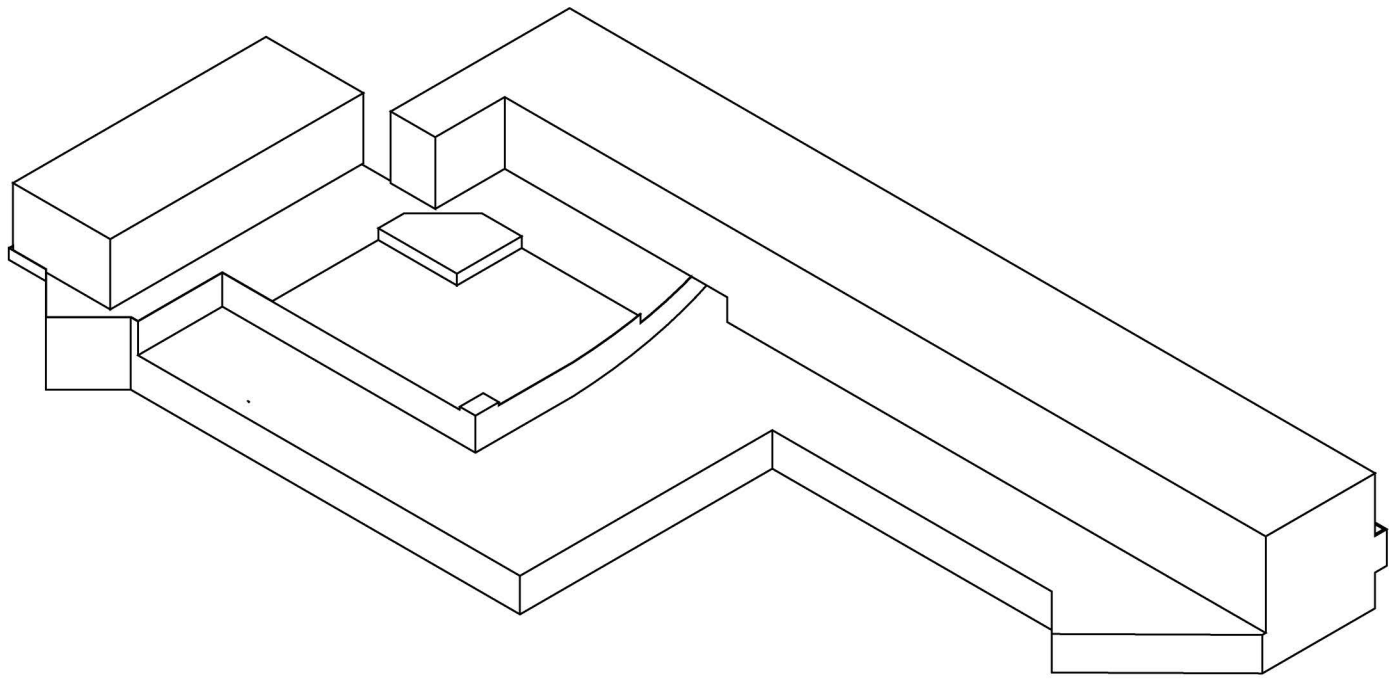
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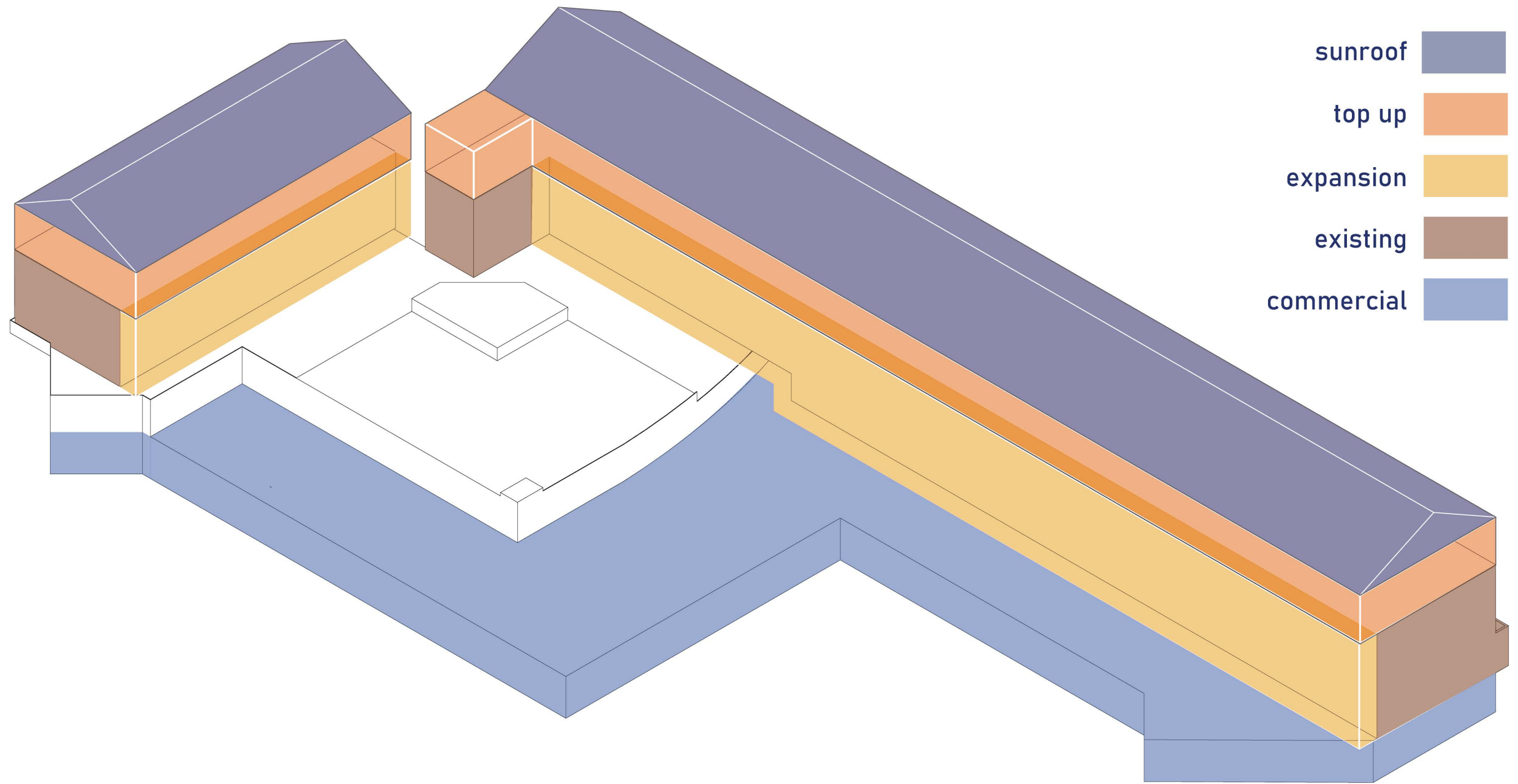
**Suitable
Efficient &
Sustainable
Housing**



housing concepts



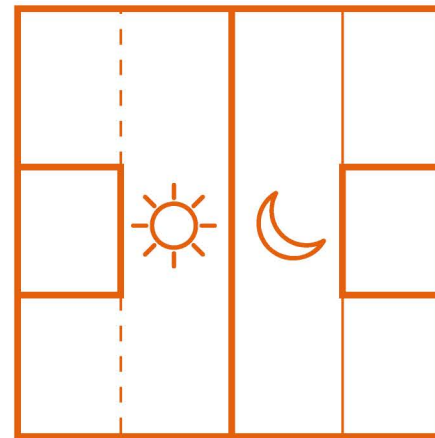
concept



concept



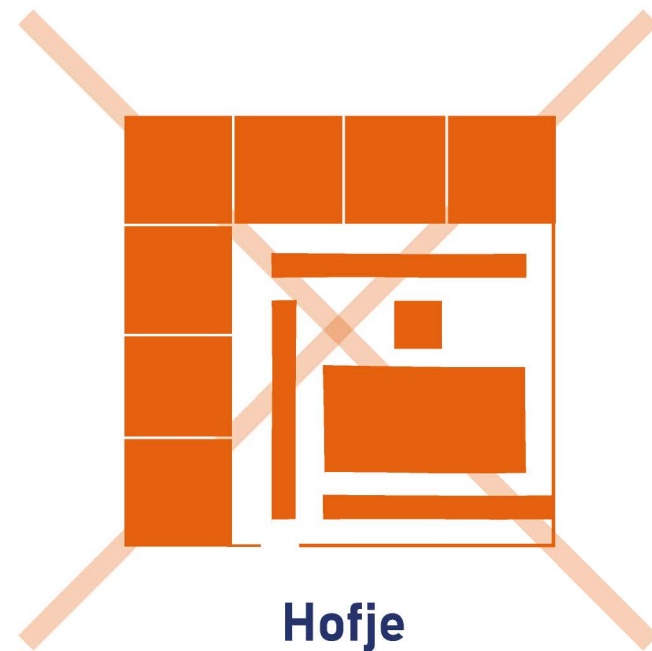
Shared amenities



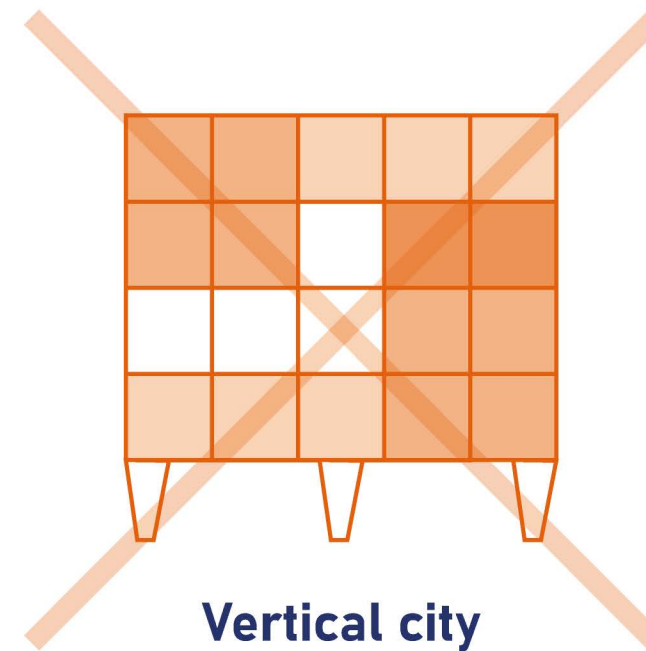
Flexible plans



Communal living



**Hofje
rejected due to density**

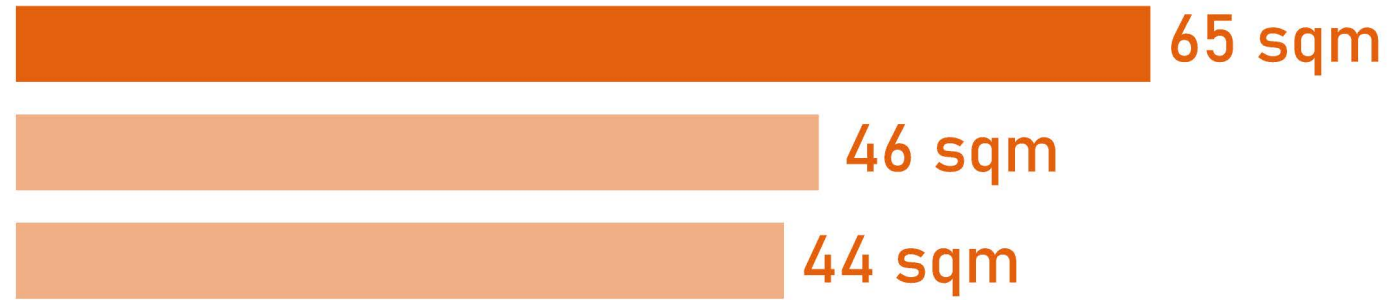


**Vertical city
rejected due to presence
of extra functions**

kitchen	dining	salon = club
house-keeping	bathing	children's space
services	physical culture	individual living cell

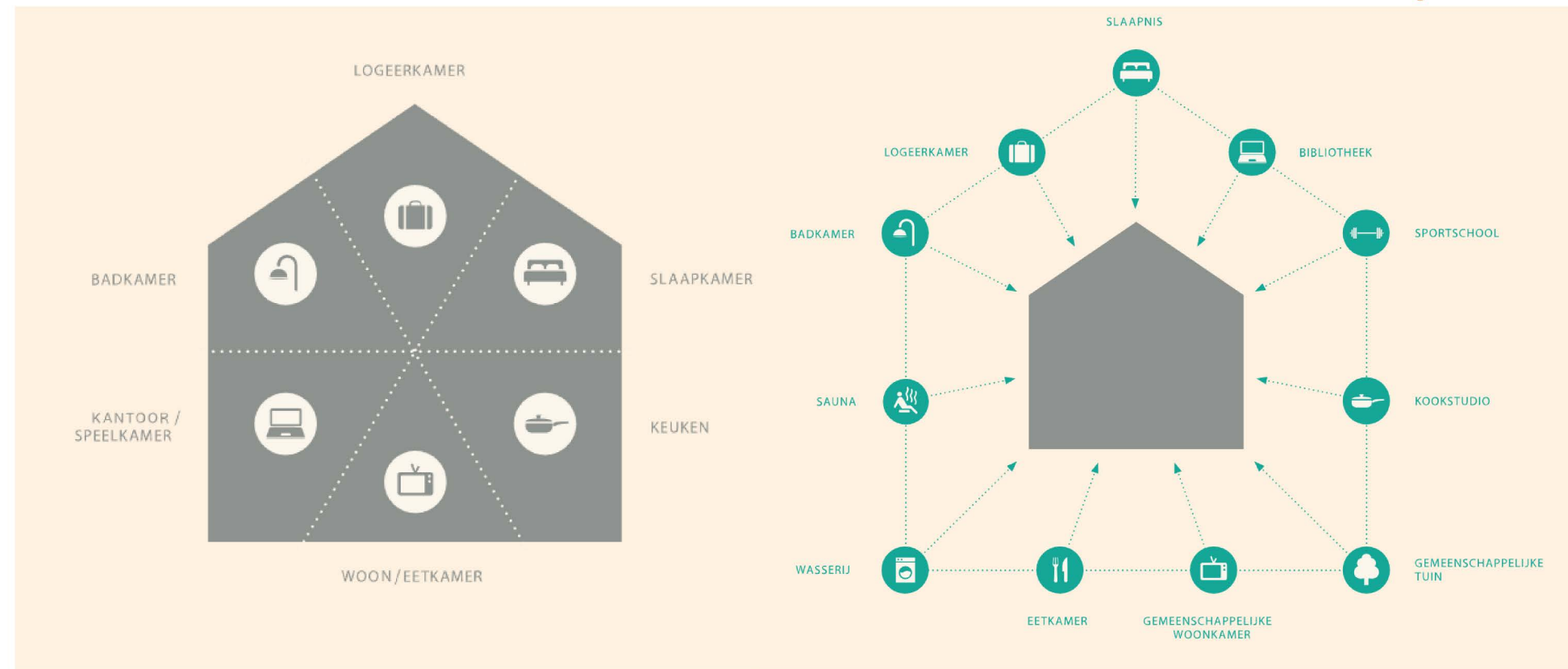
centralized and collectivized

Teige's sharing concept



On average, we have 65 square meters of house per person here. This makes us live a lot more spacious than Germans, who have about 46 square meters per person. A Briton has to make do with 44 square meters on average.

-De Correspondent



Domus living concept

sharing concept

Dom Narkomfin



Jacoba van Beierenlaan student housing



Target: Students, first-time moving out, young professionals

● 1-2 person apartment

● Social rent

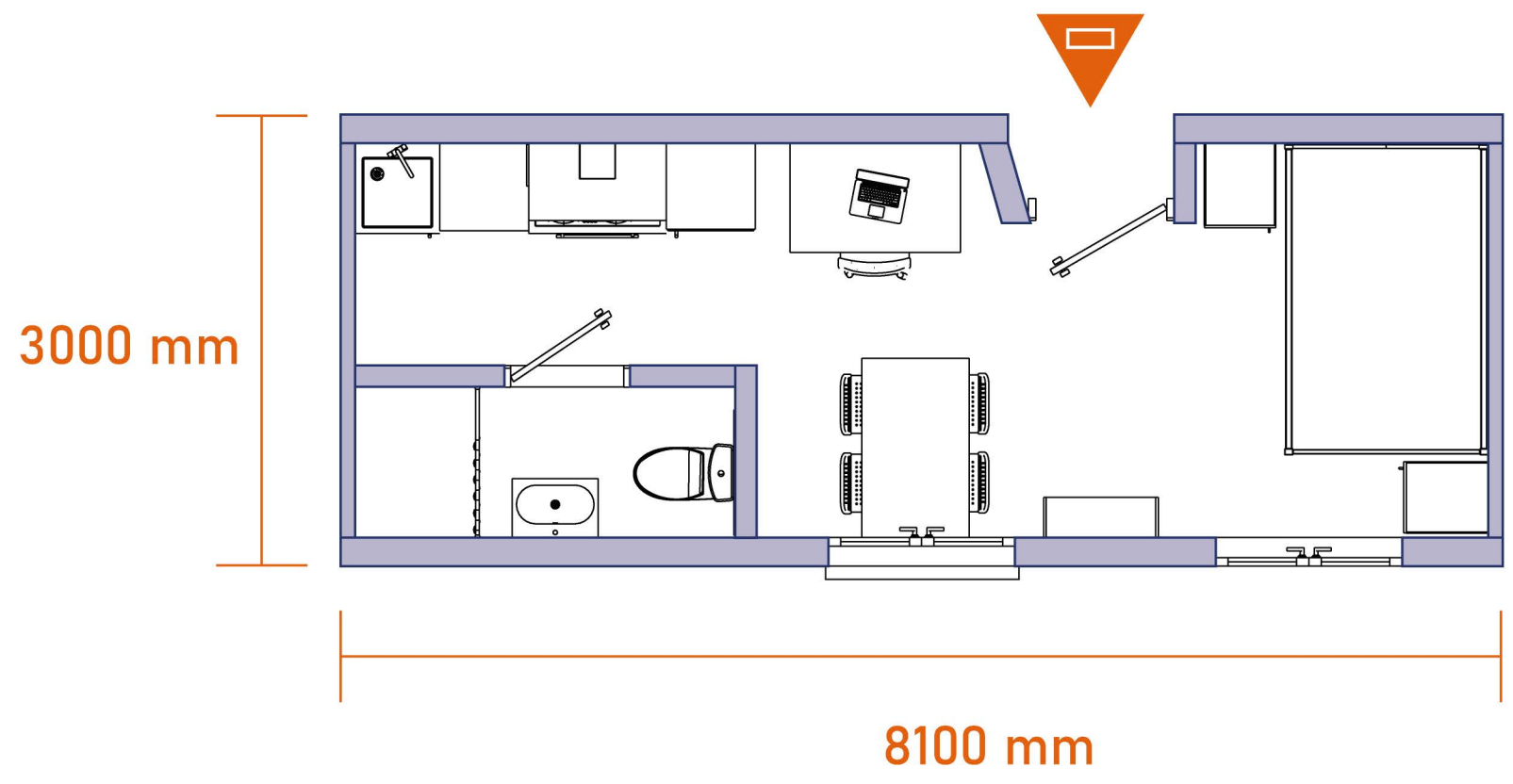
Space for:

- kitchen
- bathroom
- bed
- closet
- desk
- living space

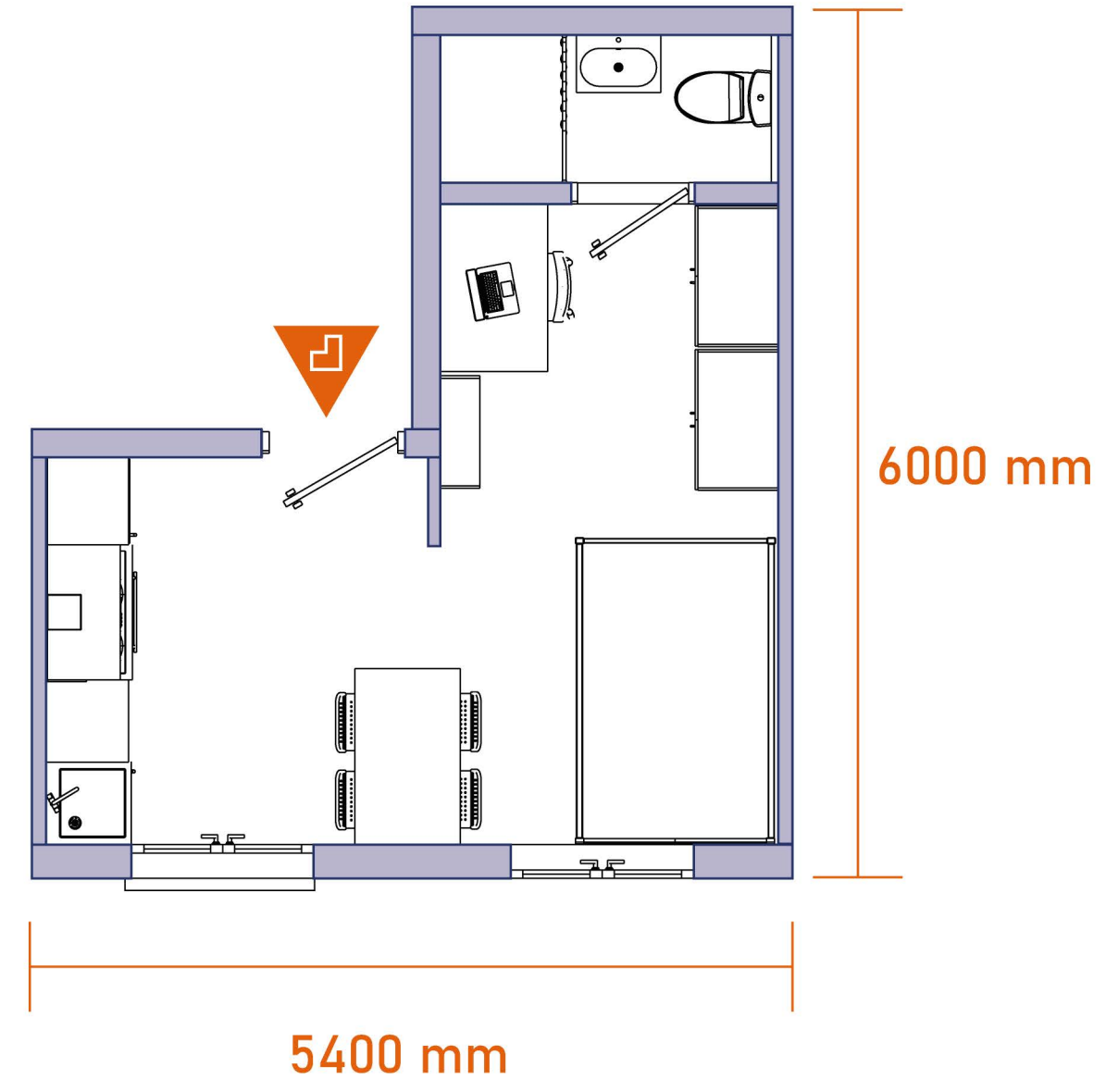
Other functions shared
examples:

- Laundry
- Daycare
- Community center
- Workshop

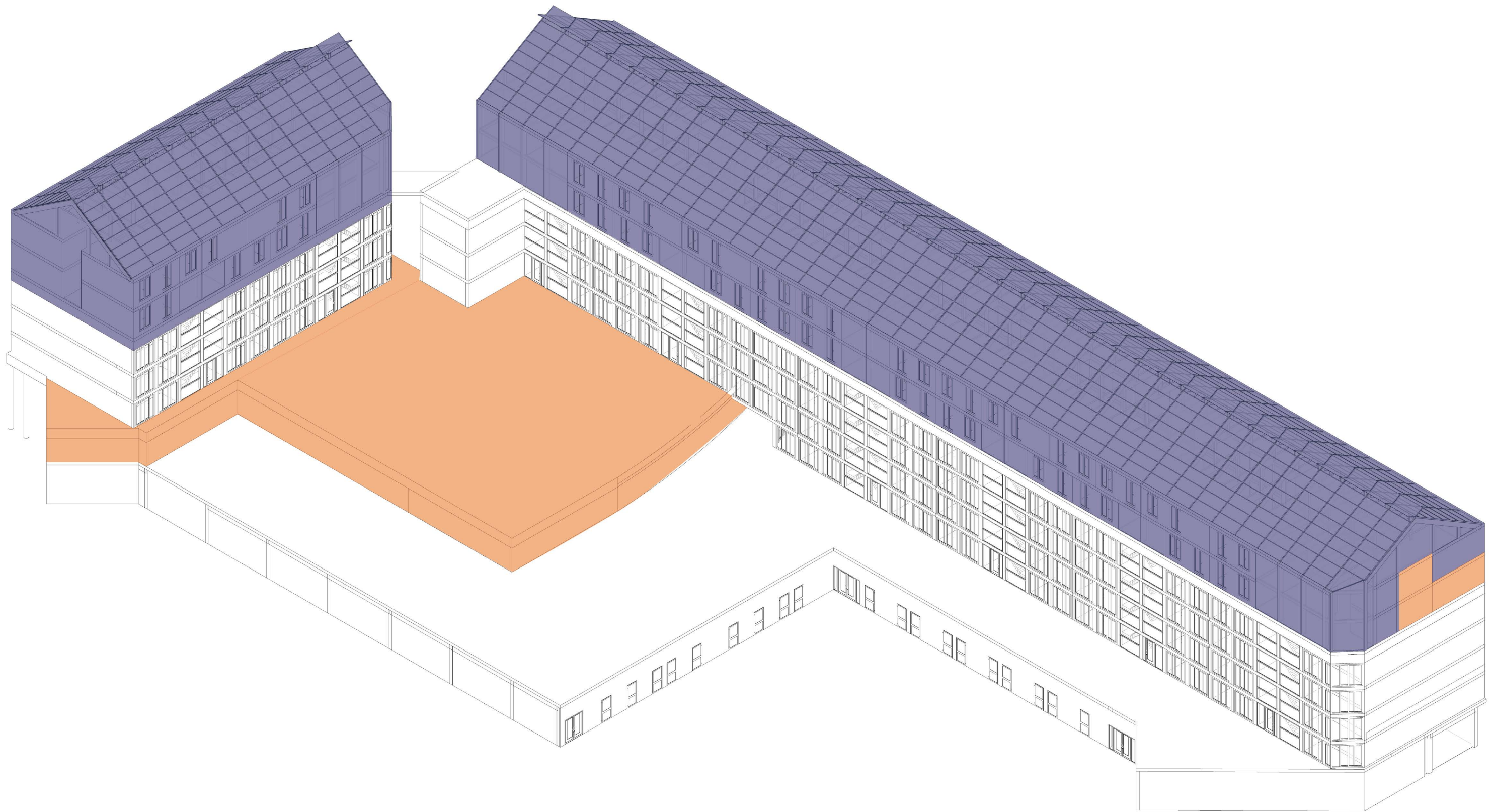




sharing plan



1:50 (A3)

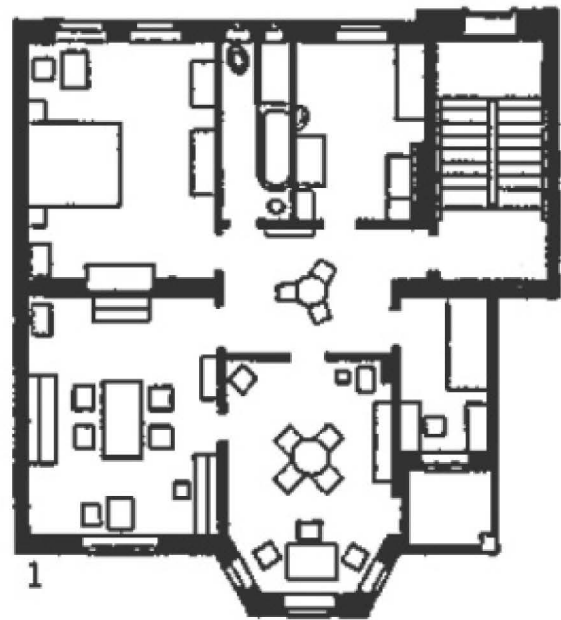


Shared functions



Studio apartments

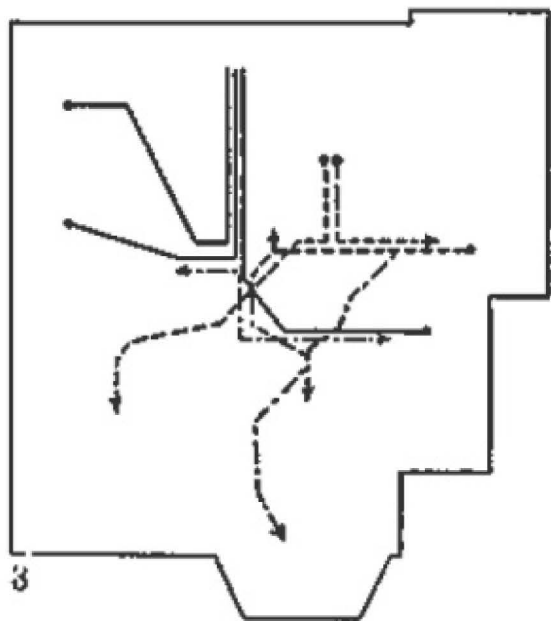
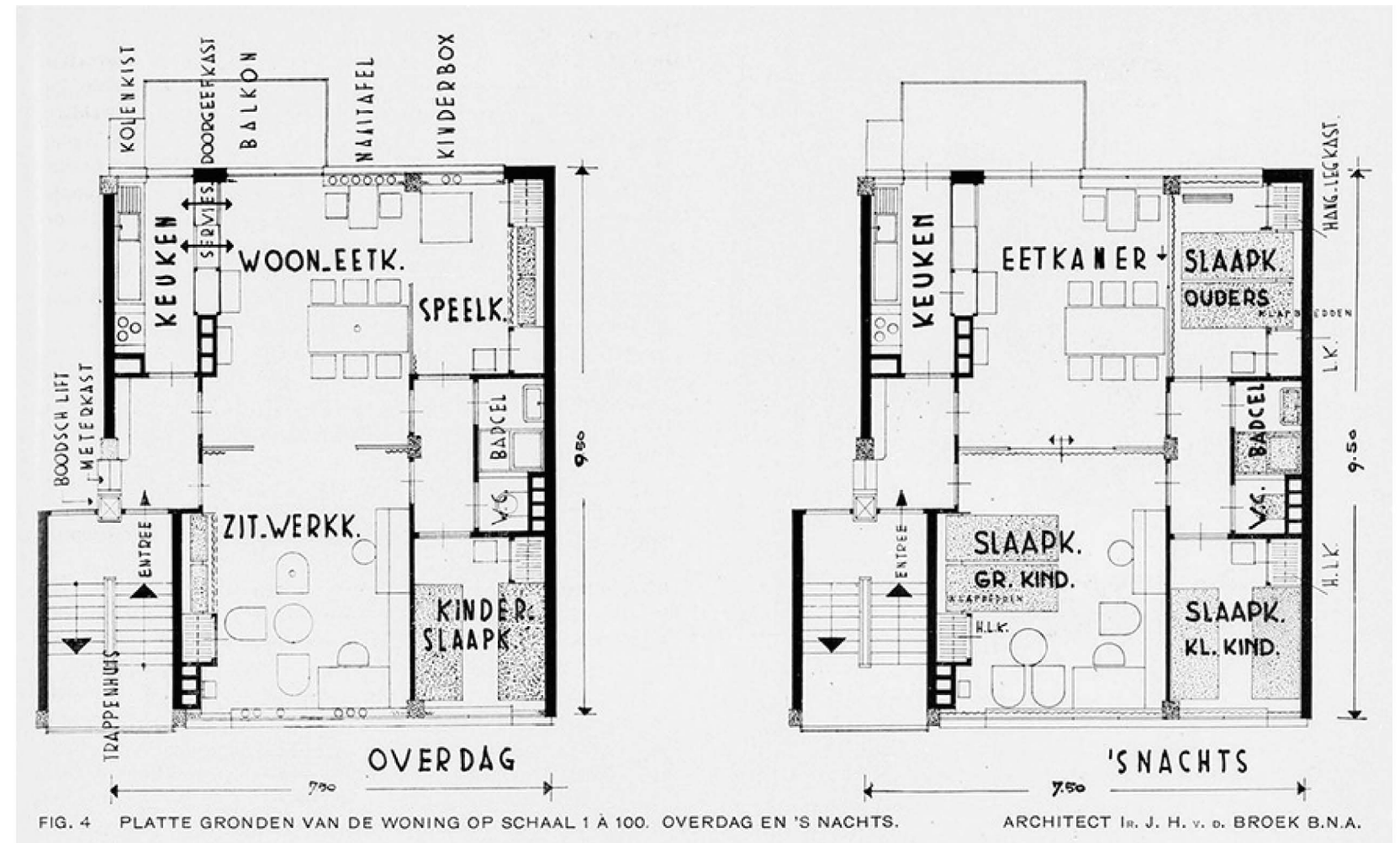
JH van den Broek's Day/Night dwellings in 'de Eendracht'



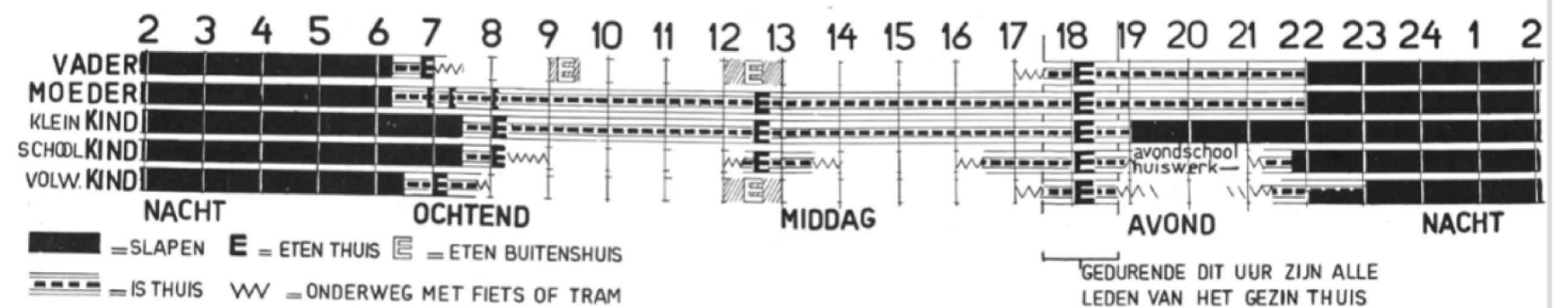
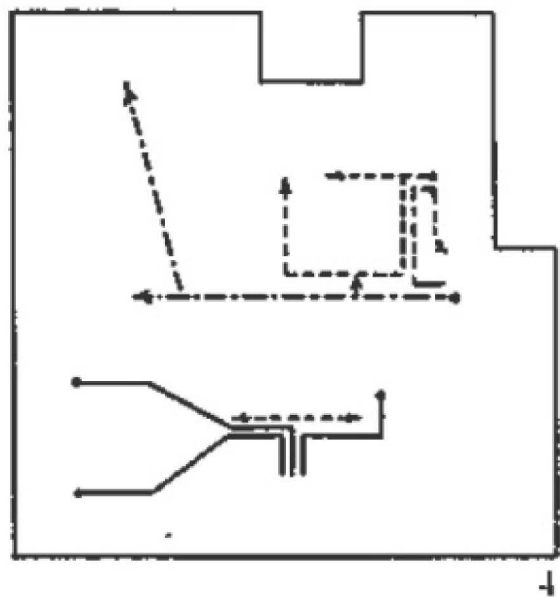
A. Bad Example



B. Good Example



Klein's frictionless living concept



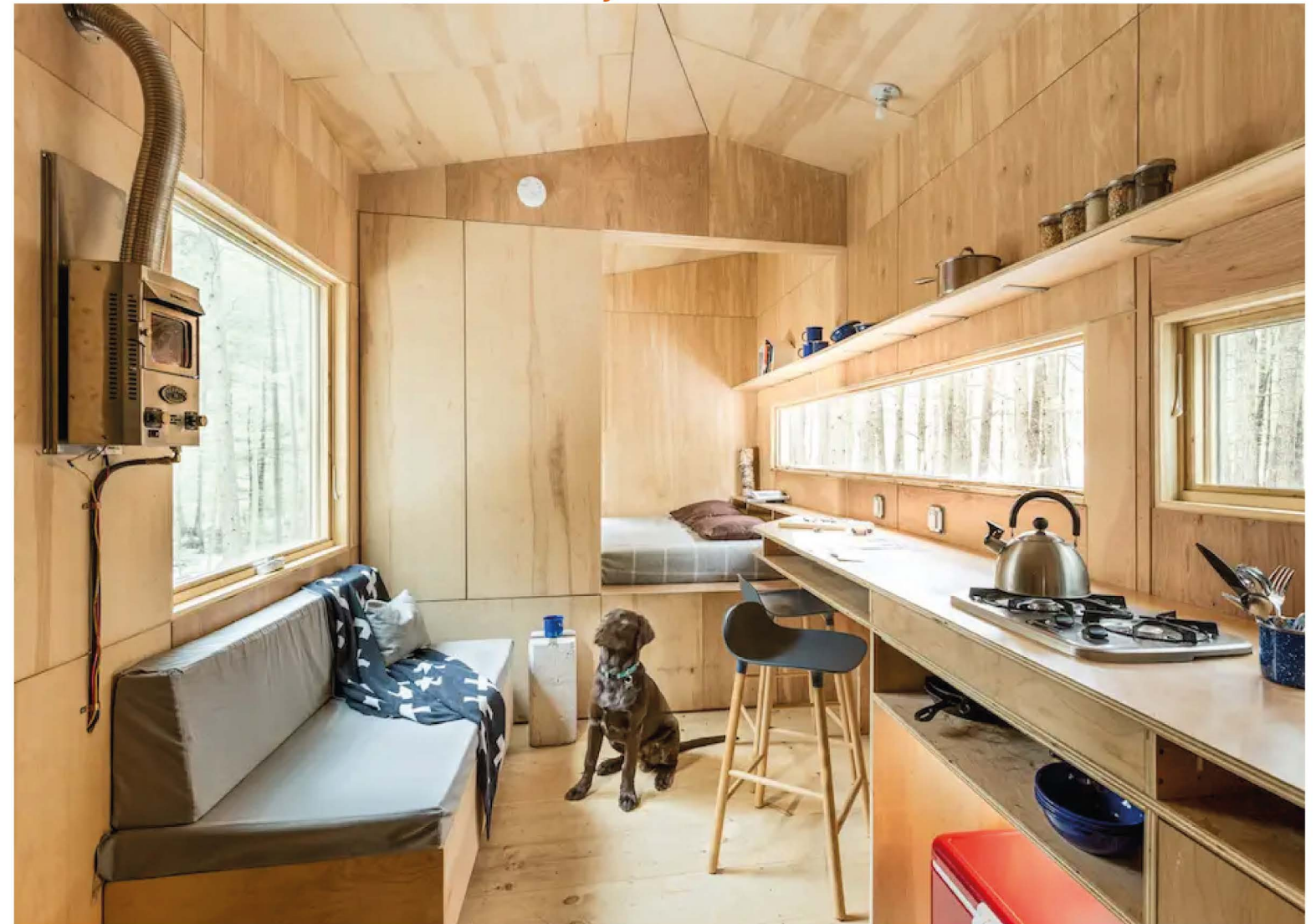
Mart Stam's research into working class family living habits

flexibility concept

Never Too Small

The screenshot shows the YouTube channel page for 'NEVER TOO SMALL', which has 2.09 million subscribers. The channel is categorized under 'HOME', 'VIDEO'S', 'PLAYLISTS', 'COMMUNITY', 'KANALEN', and 'OVER'. The 'Uploads' section displays a grid of 24 video thumbnails, each with a title, view count, and upload date. The videos feature various small-scale architectural projects, including apartments, studios, and tiny homes. The titles include 'Architect's Live/Work Home...', 'Japanese Style Small...', 'Scandi Style Small Apartment...', 'Singapore Graphic Designer...', 'Paris Architect's Small Family Lof...', 'Architect's Blue Mountains...', 'Multigenerational Basemen...', 'Shaker Style Compact Apartment...', 'Architect's Converted Miner...', 'Our Smallest London Tiny Home...', 'Paris Small Fami...', 'Kyiv Compact Designer Apartme...', 'Furniture Designer's Small Barcelona...', 'Vibrant Small Athens Apartment...', 'London Heritage Loft Apartment...', 'Tiny Mediterranean Villa With Po...', 'New York Designer Studio...', 'Our NTS Space Studio', 'Retro Chic Athens Small Apartme...', 'Patreon Launch', 'Small Zen family Hong Kong...', 'Boho...', 'Scandi Style Paris Small Apartment...', and 'Building Happier Cities - SMALL FOOTPRINT - Ep 6'.

Tiny houses



Target: Existing inhabitants, starters on the housing market, young families

flexibility examples

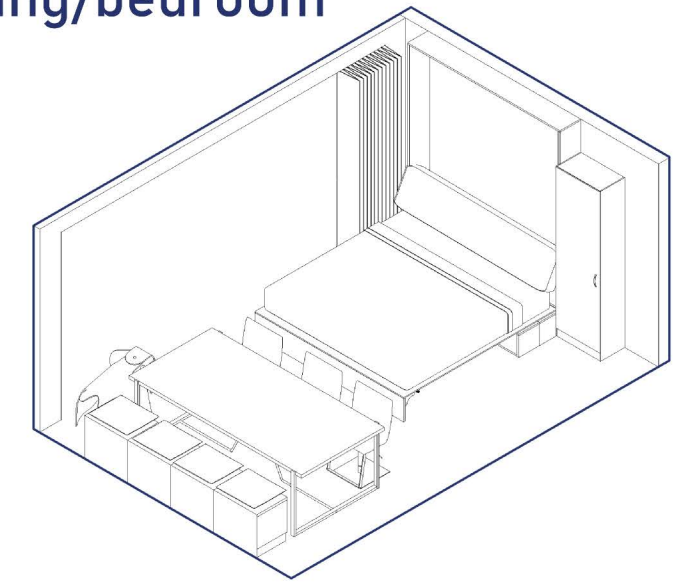
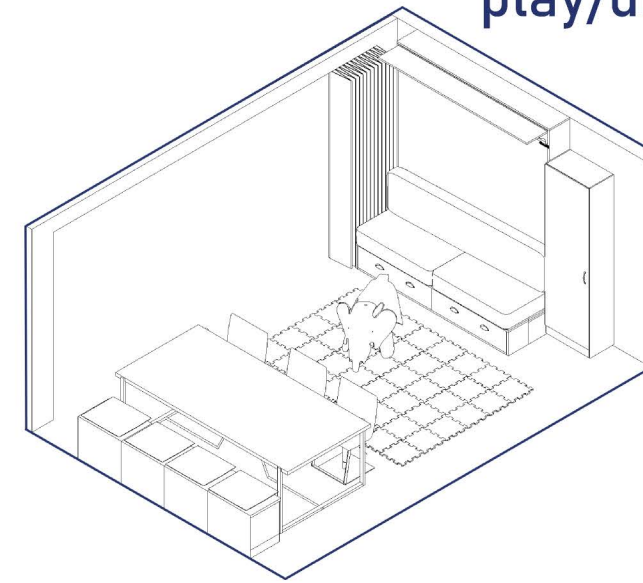
- Family apartment

- Sold from social sector to market
current inhabitants have priority

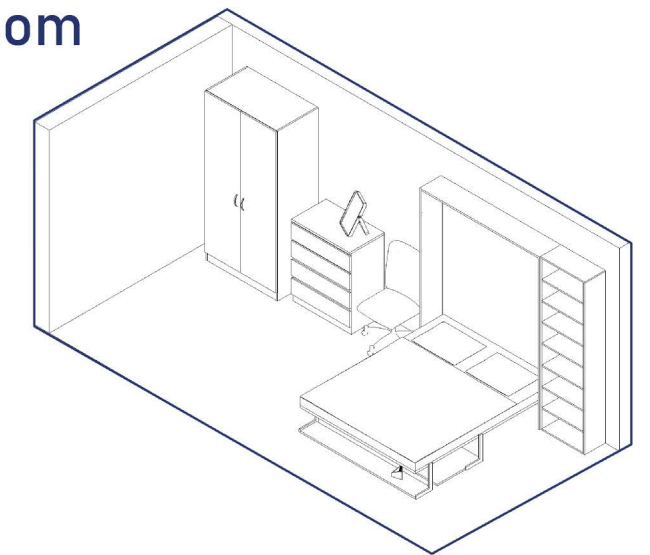
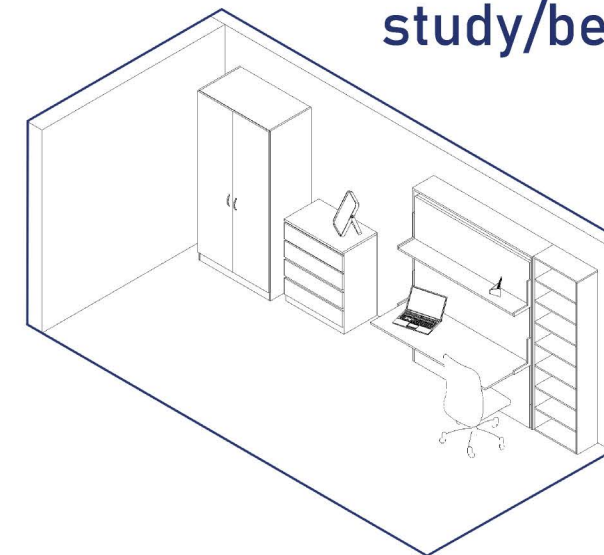
- Day & Night plans designed
by inhabitants in model
apartment

- Existing floorspace redistributed
according to WiMRA 2021 research:
 - 30% ~50 sqm
 - 45% 76 sqm
 - 25% 108 sqm

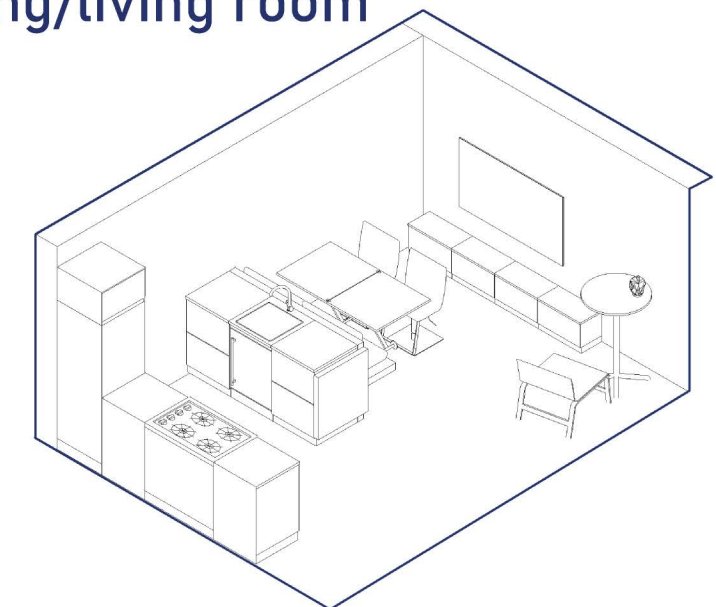
play/dining/bedroom



study/bedroom

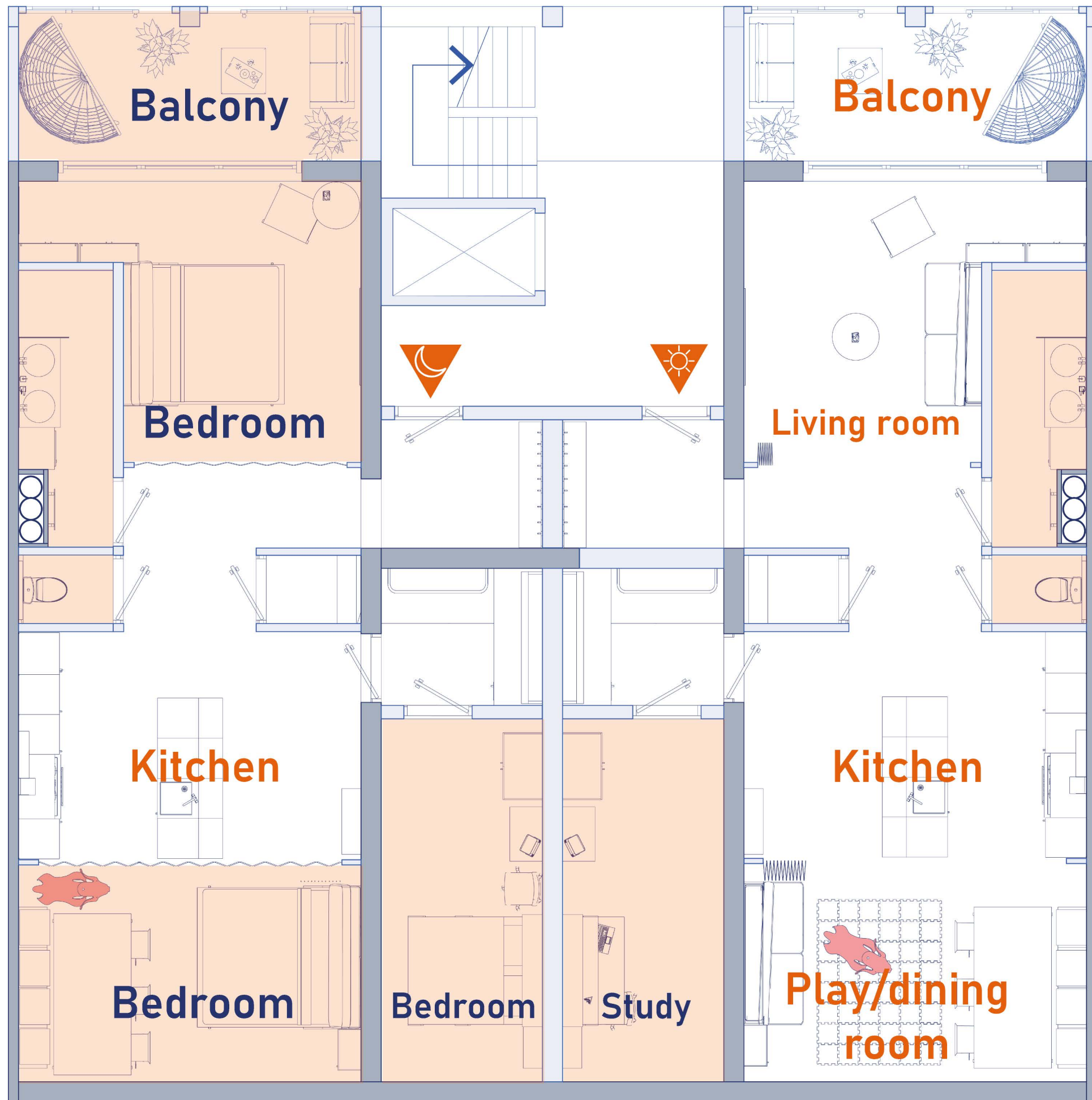


kitchen/dining/living room

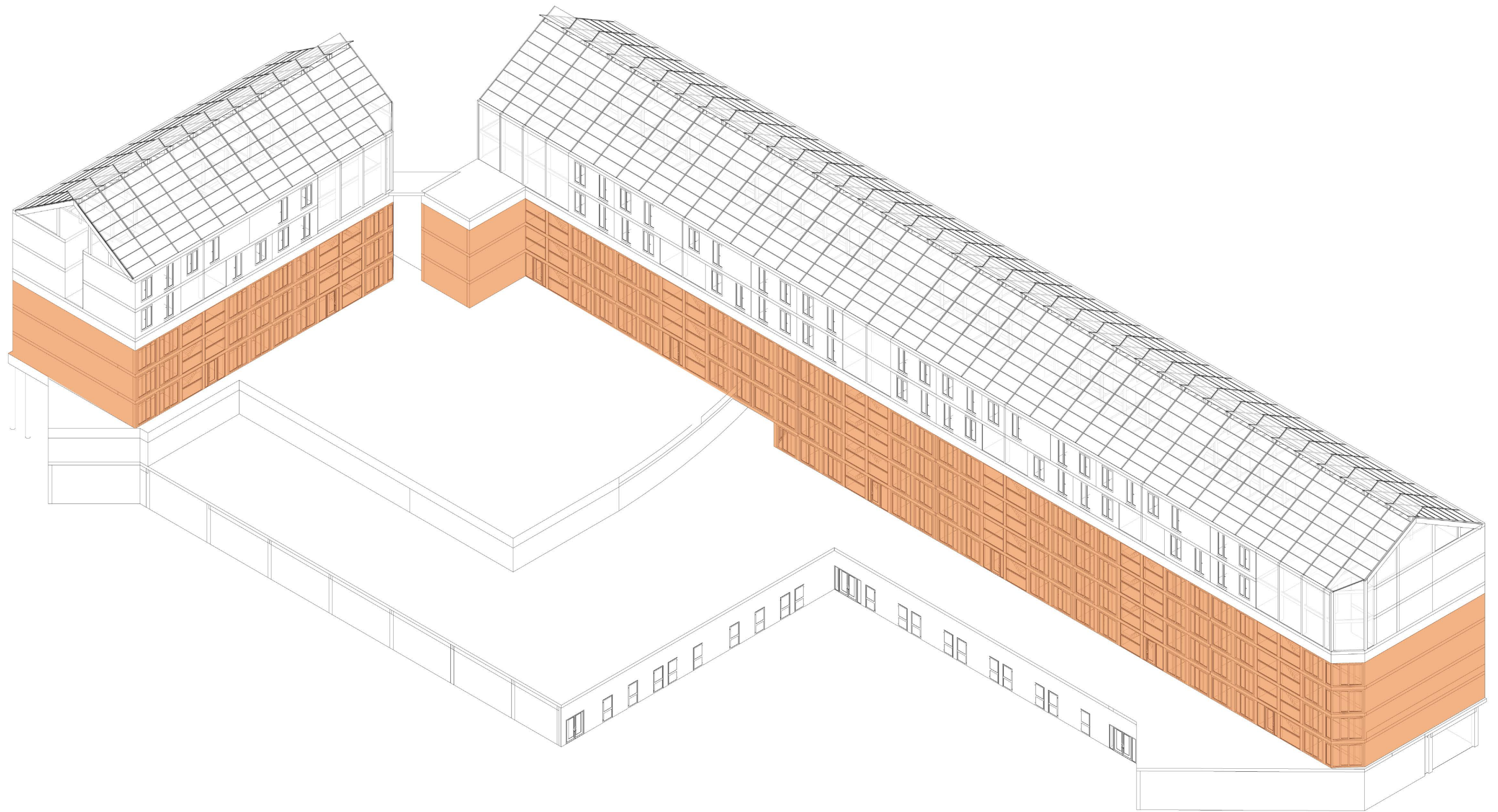




day/night dwelling



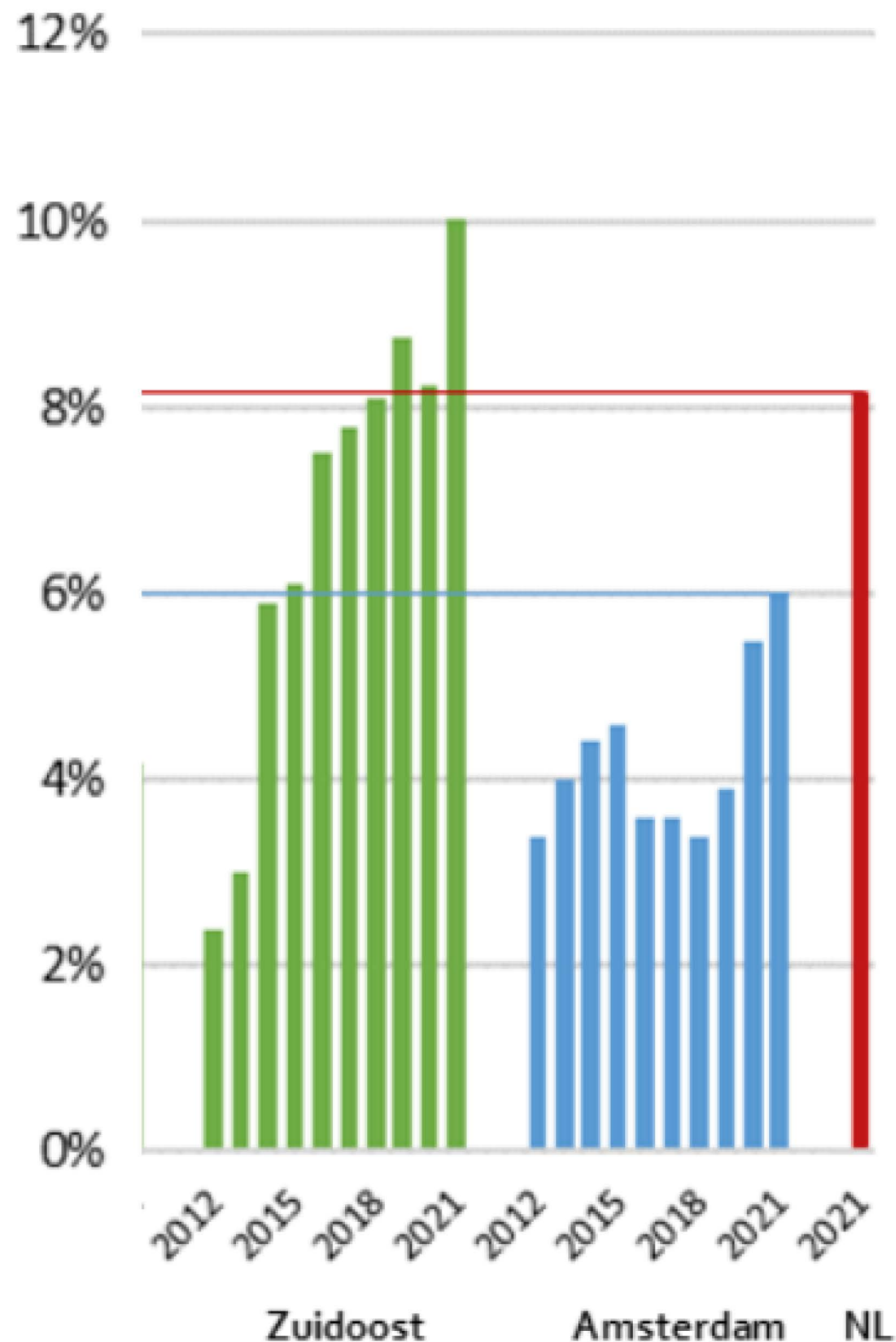
day/night dwelling



Flexible homes

'Vacancy rate of retail premises will increase rapidly in the coming years'

-NOS (2021)



Squatting offers the possibility to get space for all kinds of activities without having to have a lot of money and without the risk of getting stuck in bureaucracy

-H. Pruijt, Kraken in Europa (2009)

Young creatives need cheap large ateliers and an inspiring setting to be able to come up with something new, something extreme. Squats [...] offer that.

-De Groene Amsterdammer (2012)

Vacancy of commercial space in Amsterdam

communal concept

Squatting movement



Pension Almonde



Target: **Urban nomads, creatives, squatters**

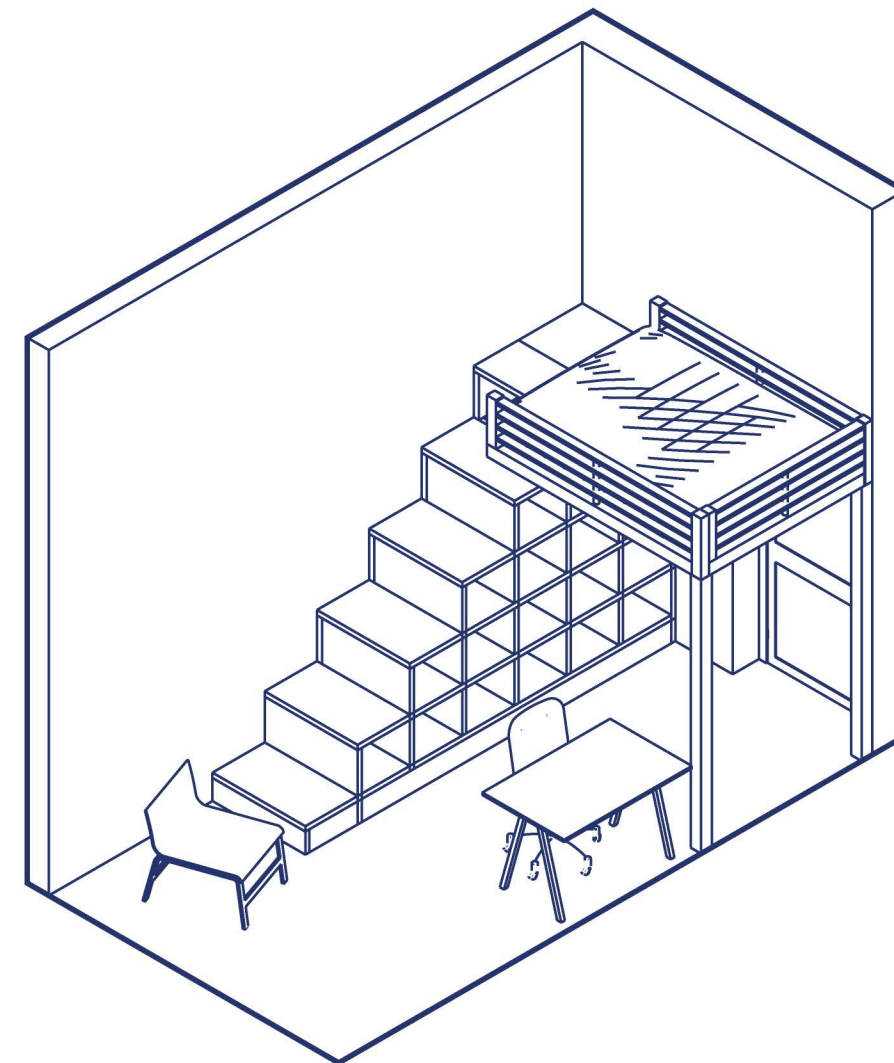
communal examples

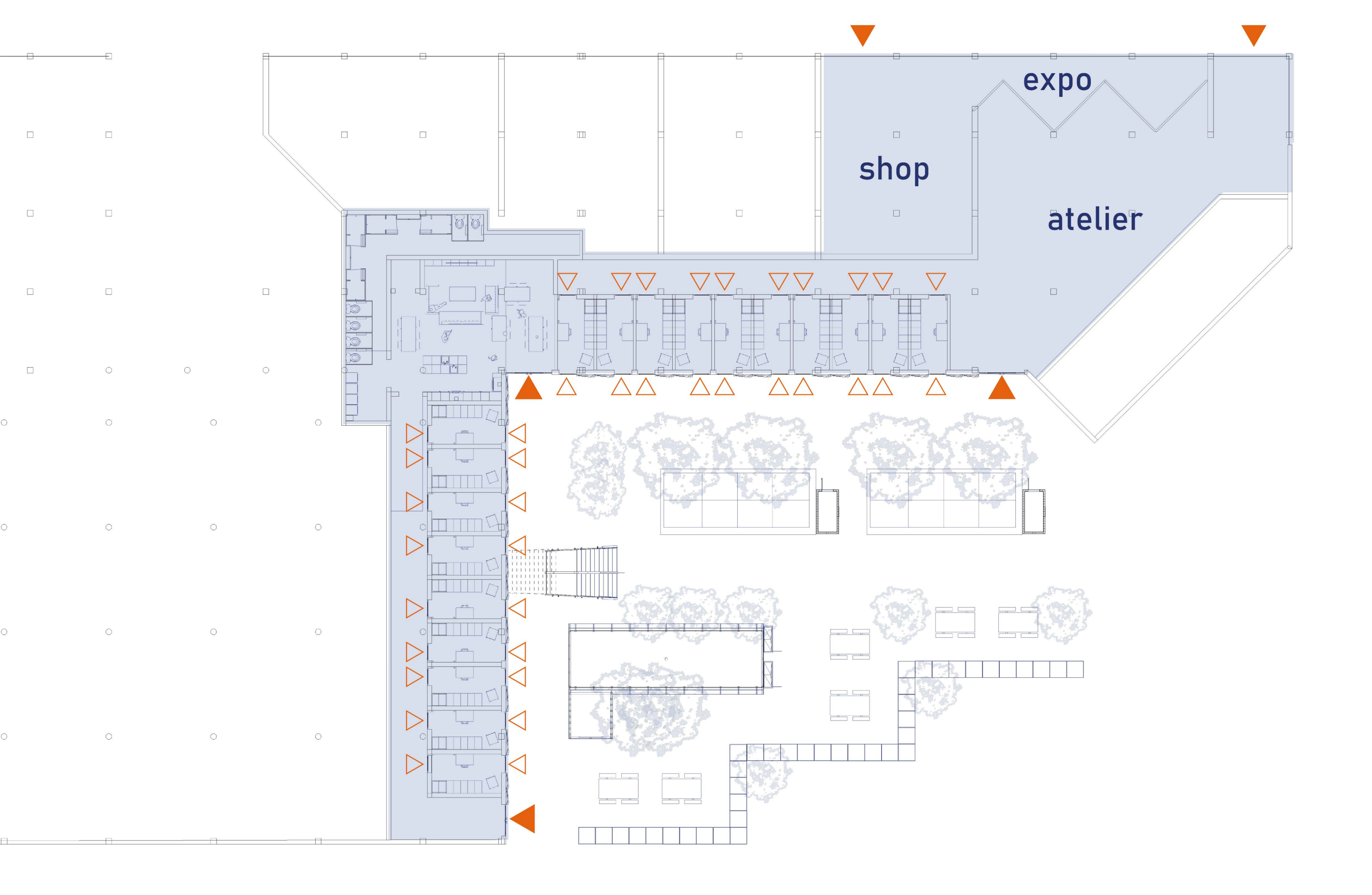
- Single person rooms used as you like

- Shared kitchen, living room & sanitary facilities

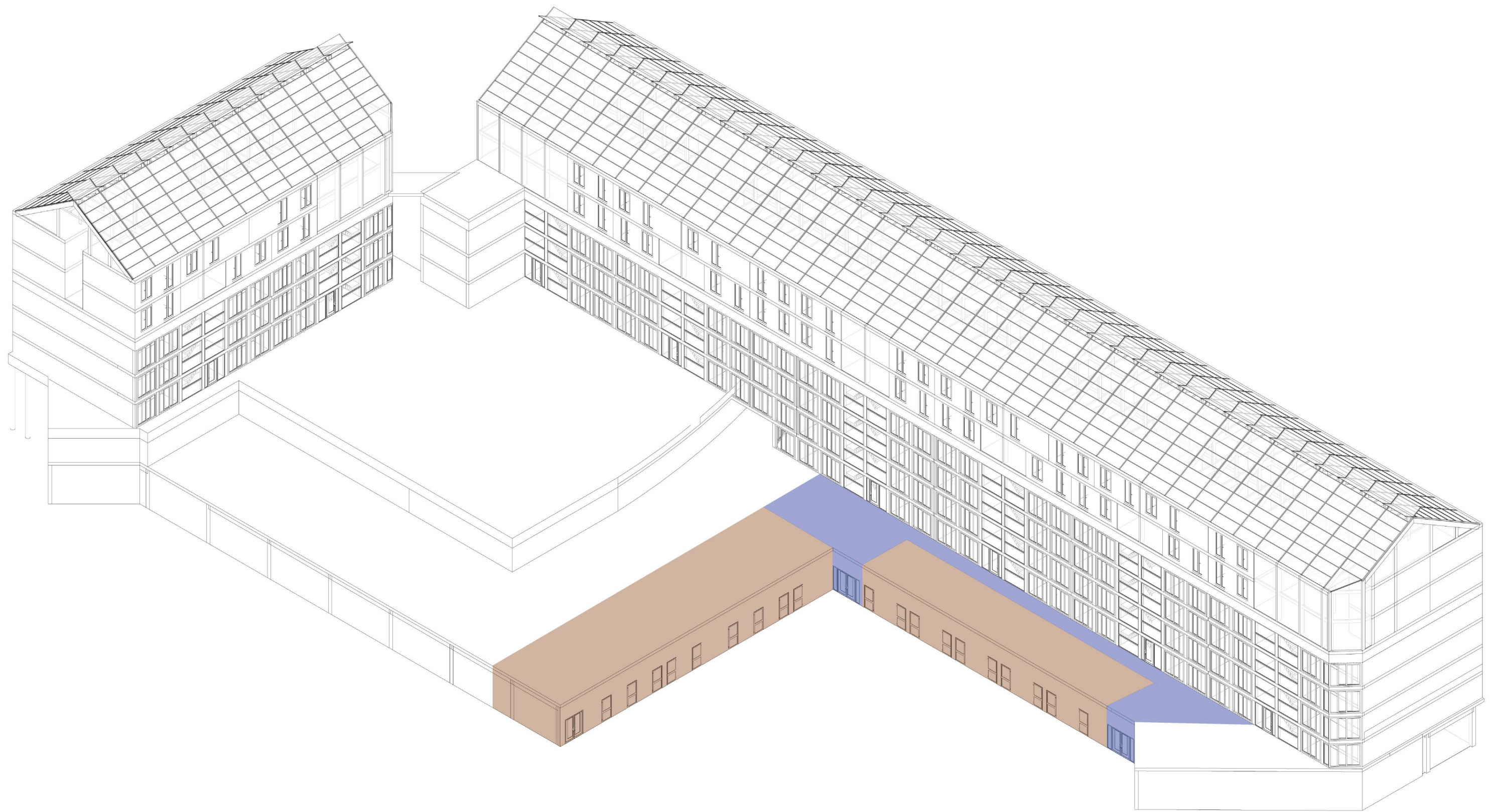
- Providing some form of social credit is part of rental contract (determined with inhabitants of commune)

- Scalable as commercial functions come and go





communal plan



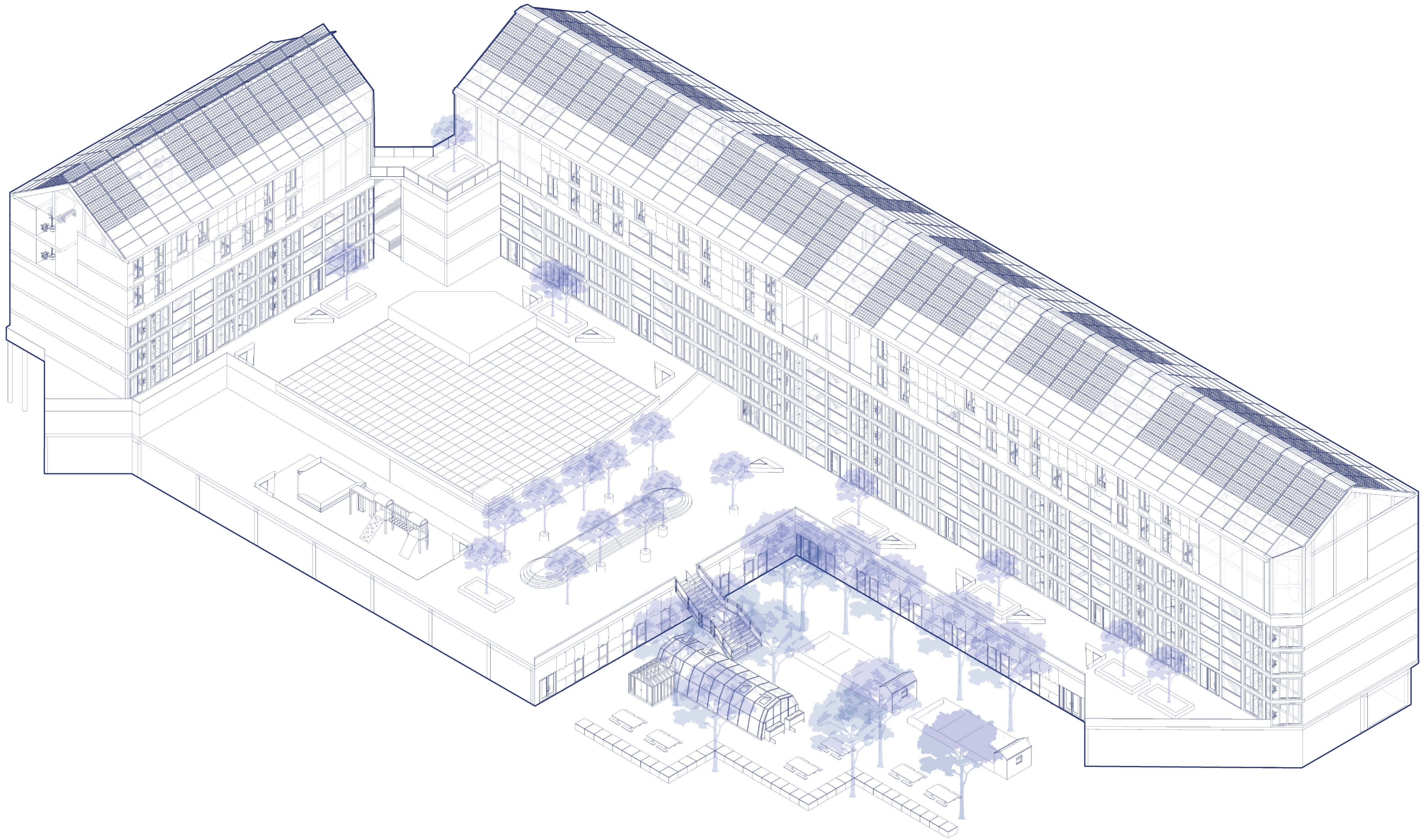
Communal space



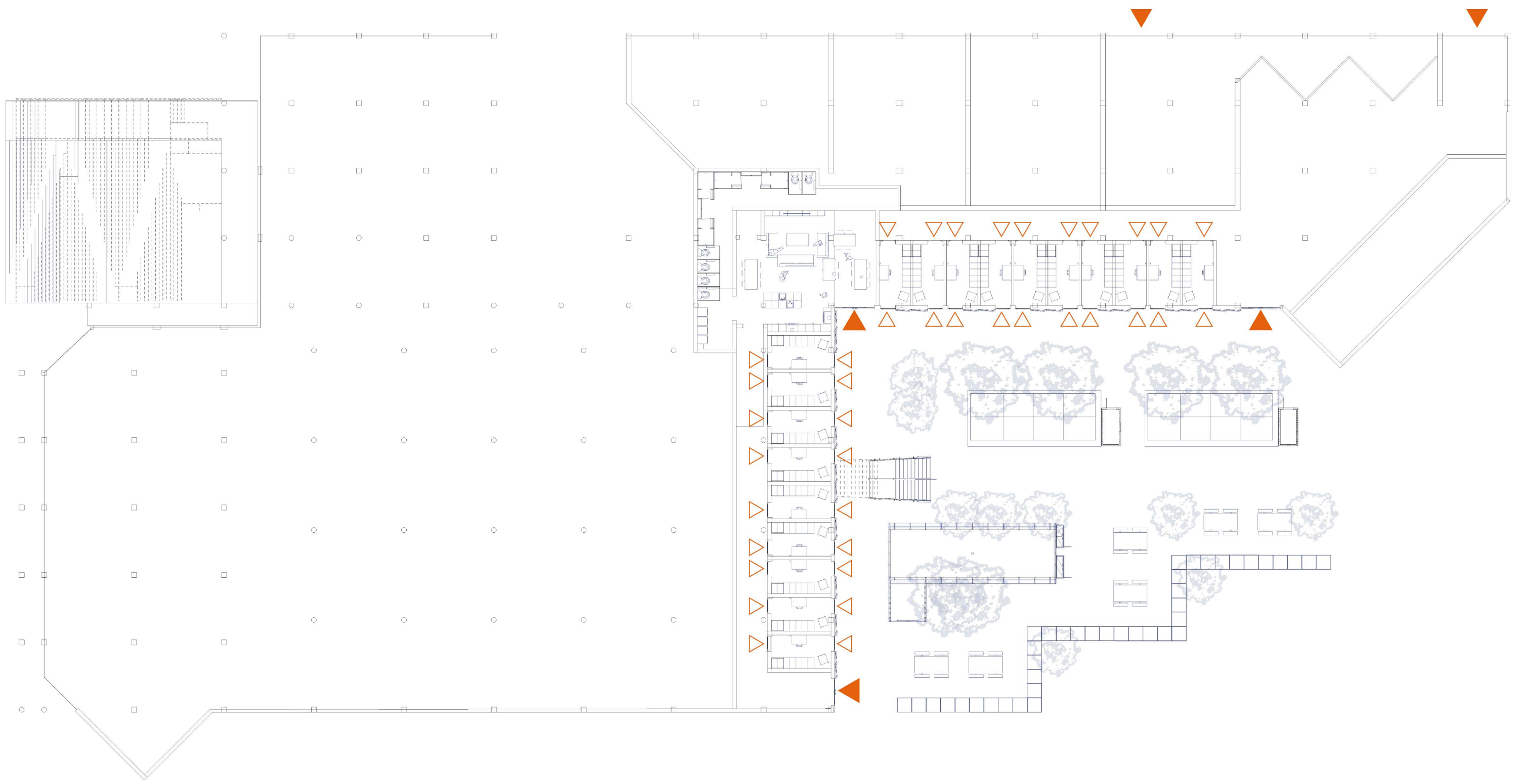
Private space

studio

renovation design







ground floor plan

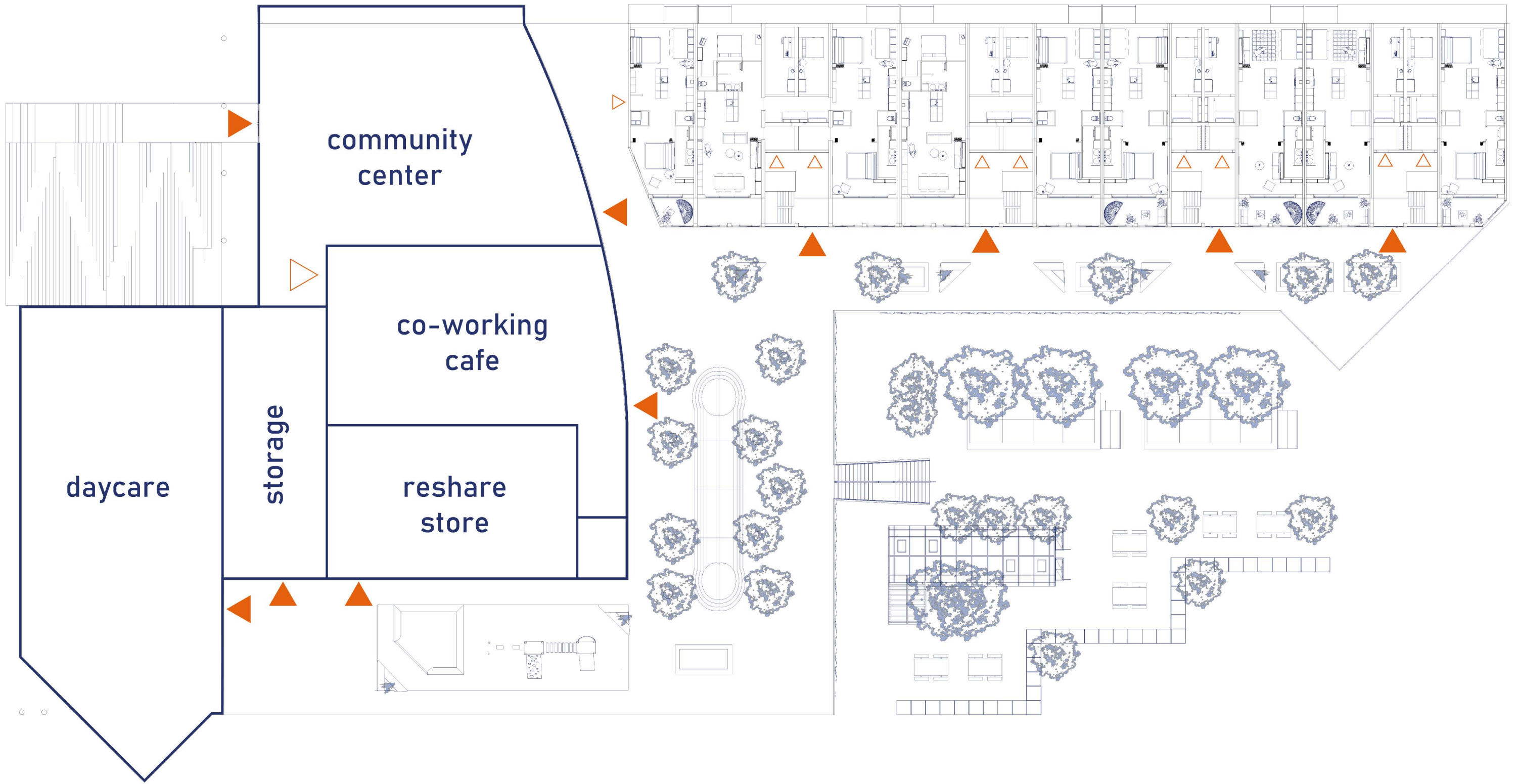




communal garden

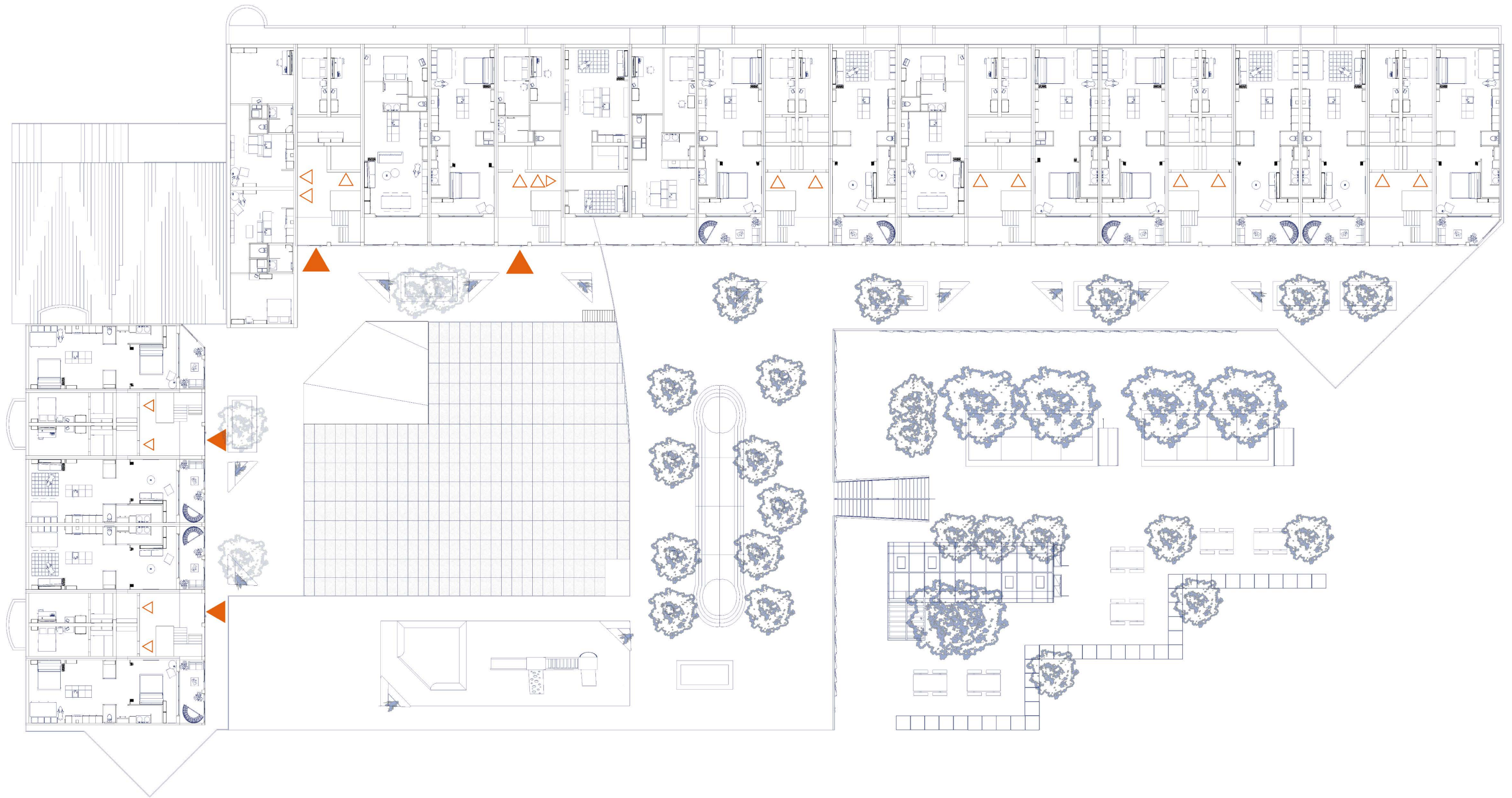


communal space



first floor plan





floor 2-4 plan

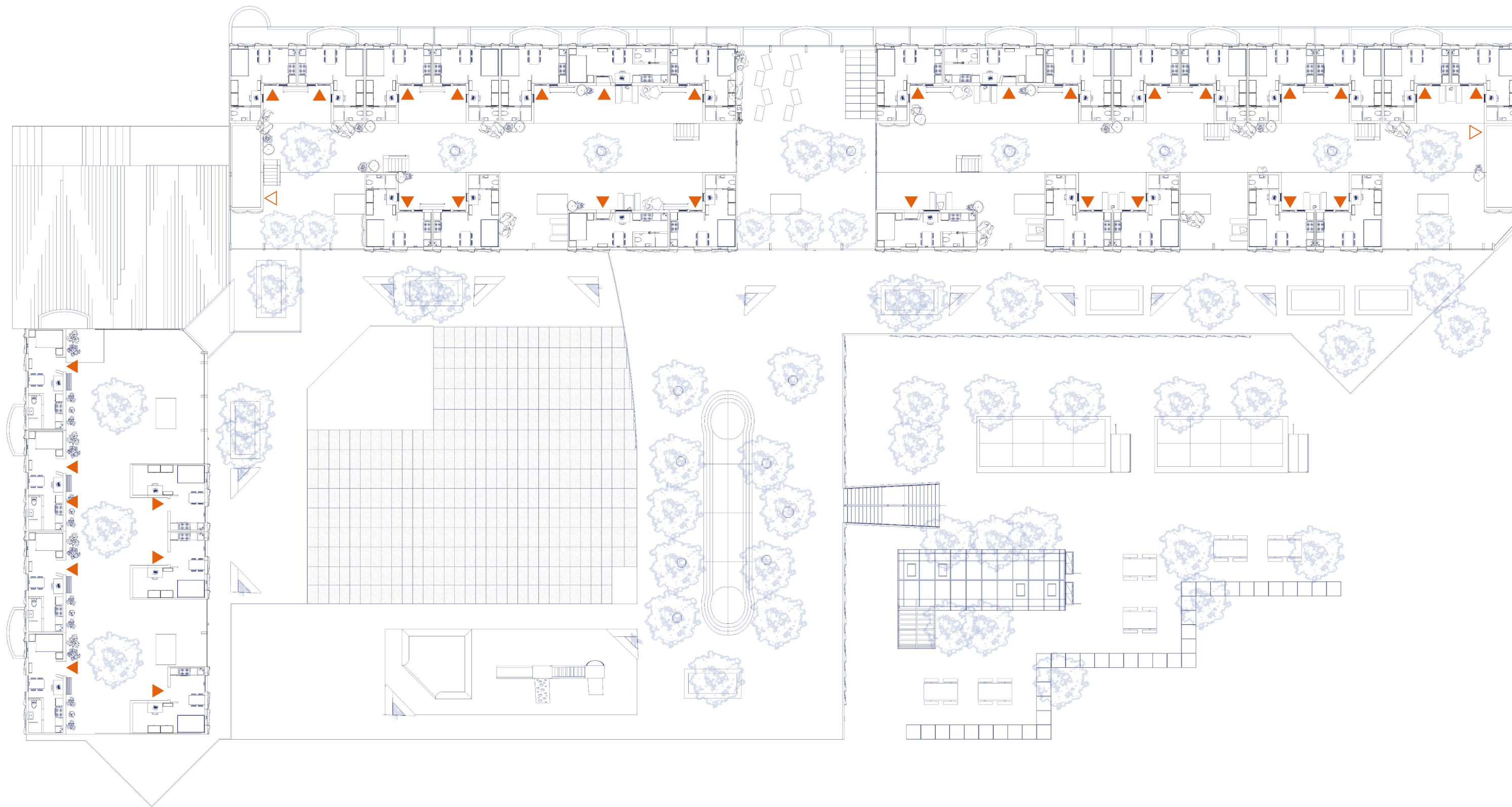




deck



deck



fifth floor plan

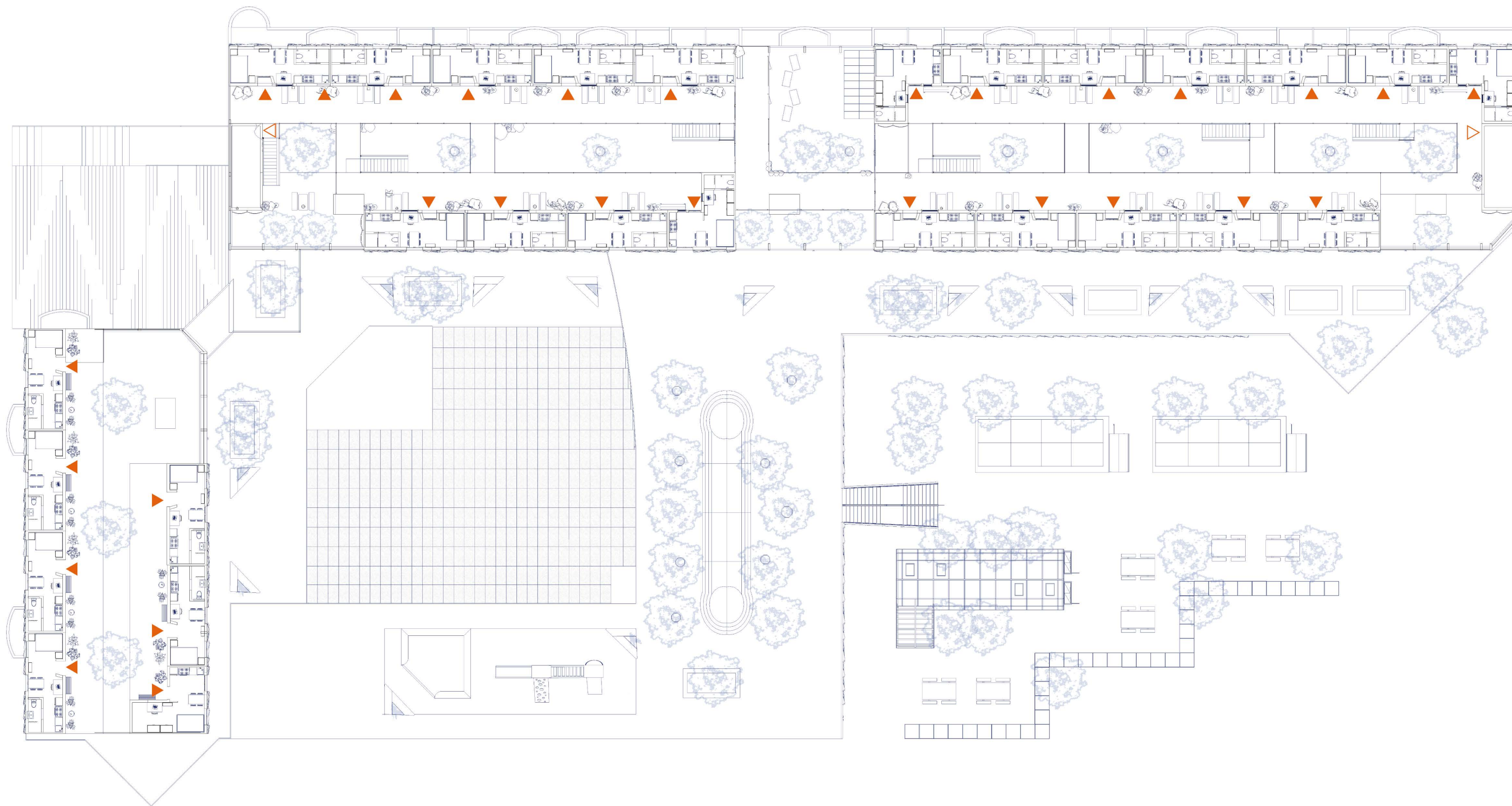




top-up minisquare



top-up meeting

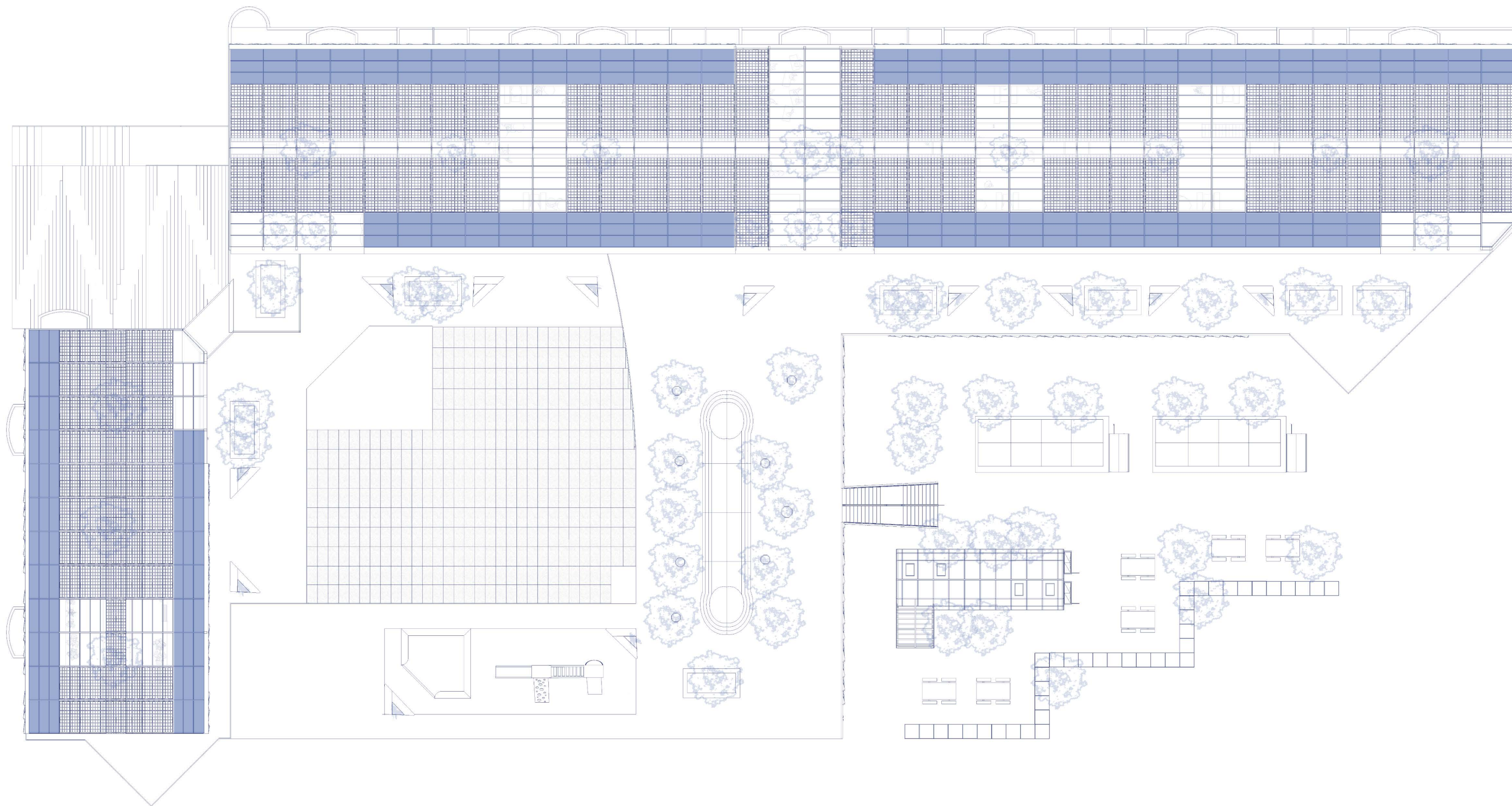


sixth floor plan





top-up gallery

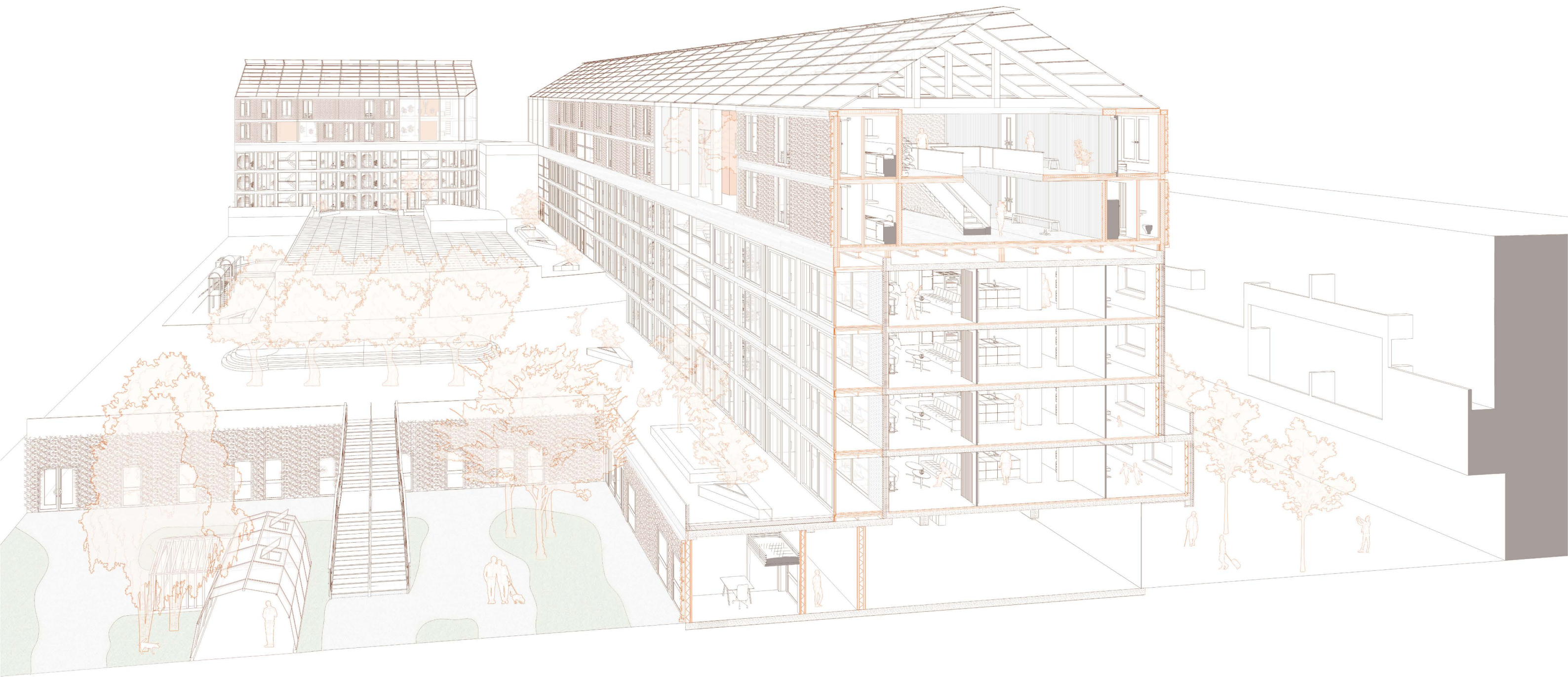


roof plan

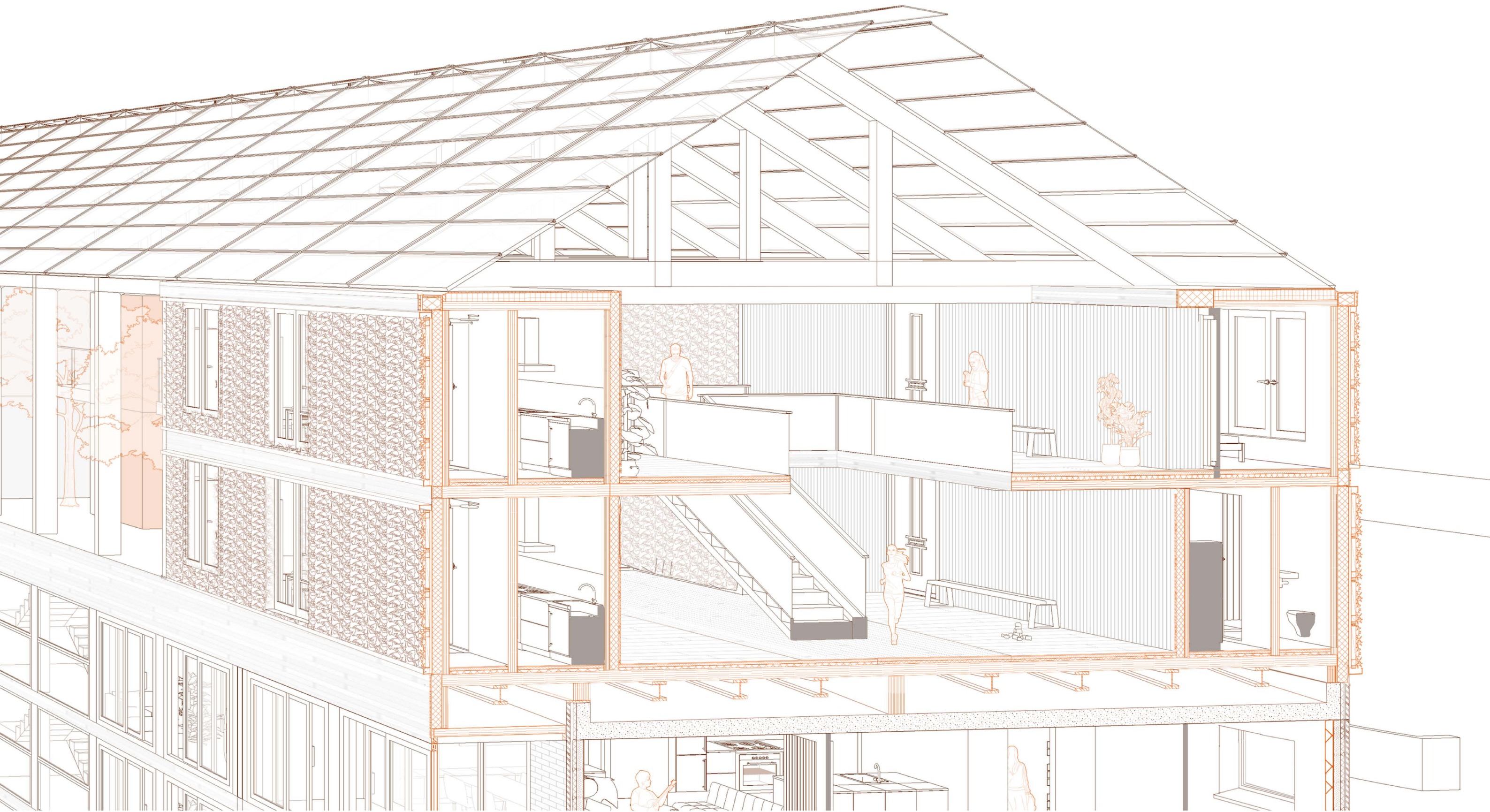




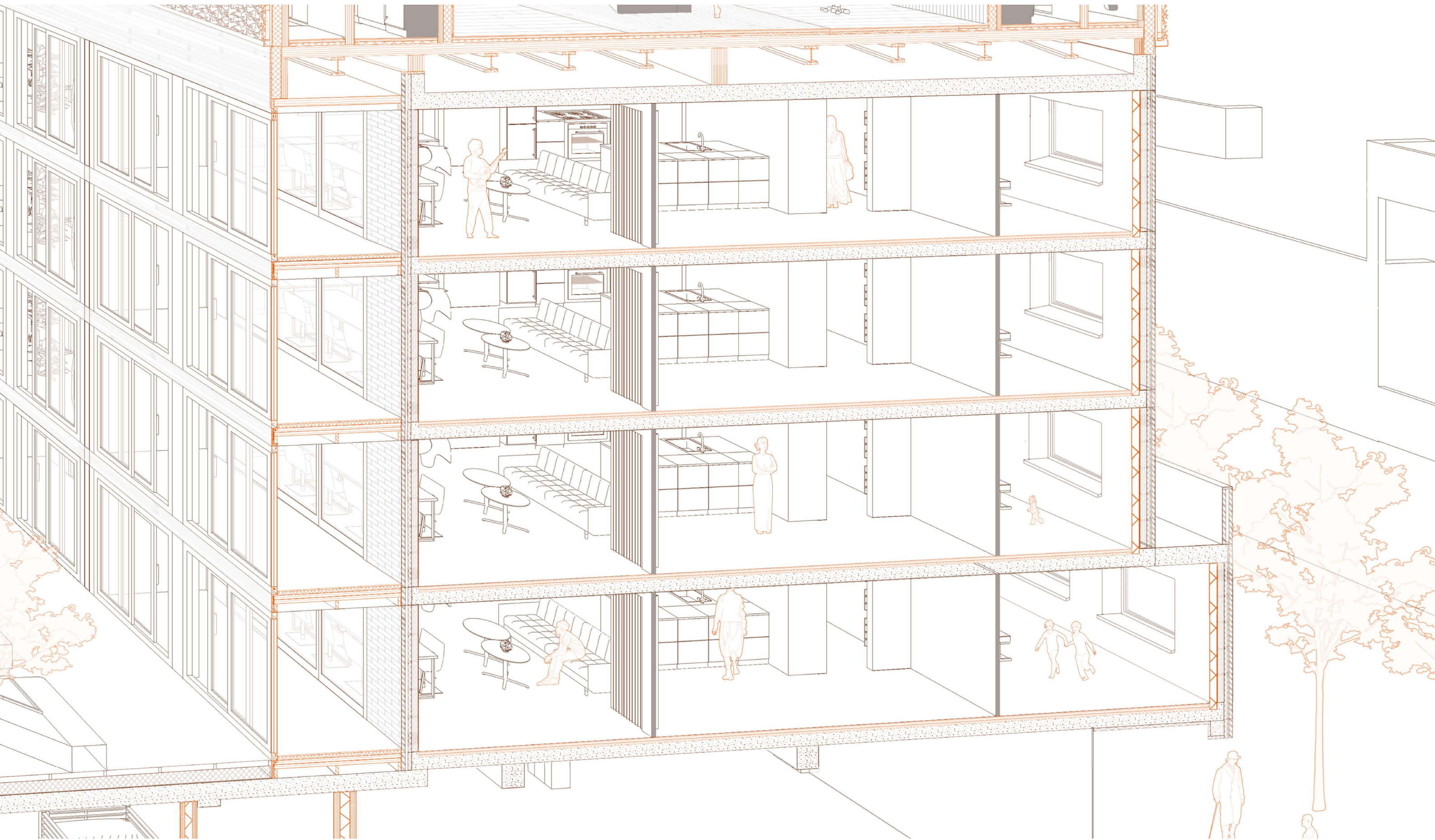
canopy



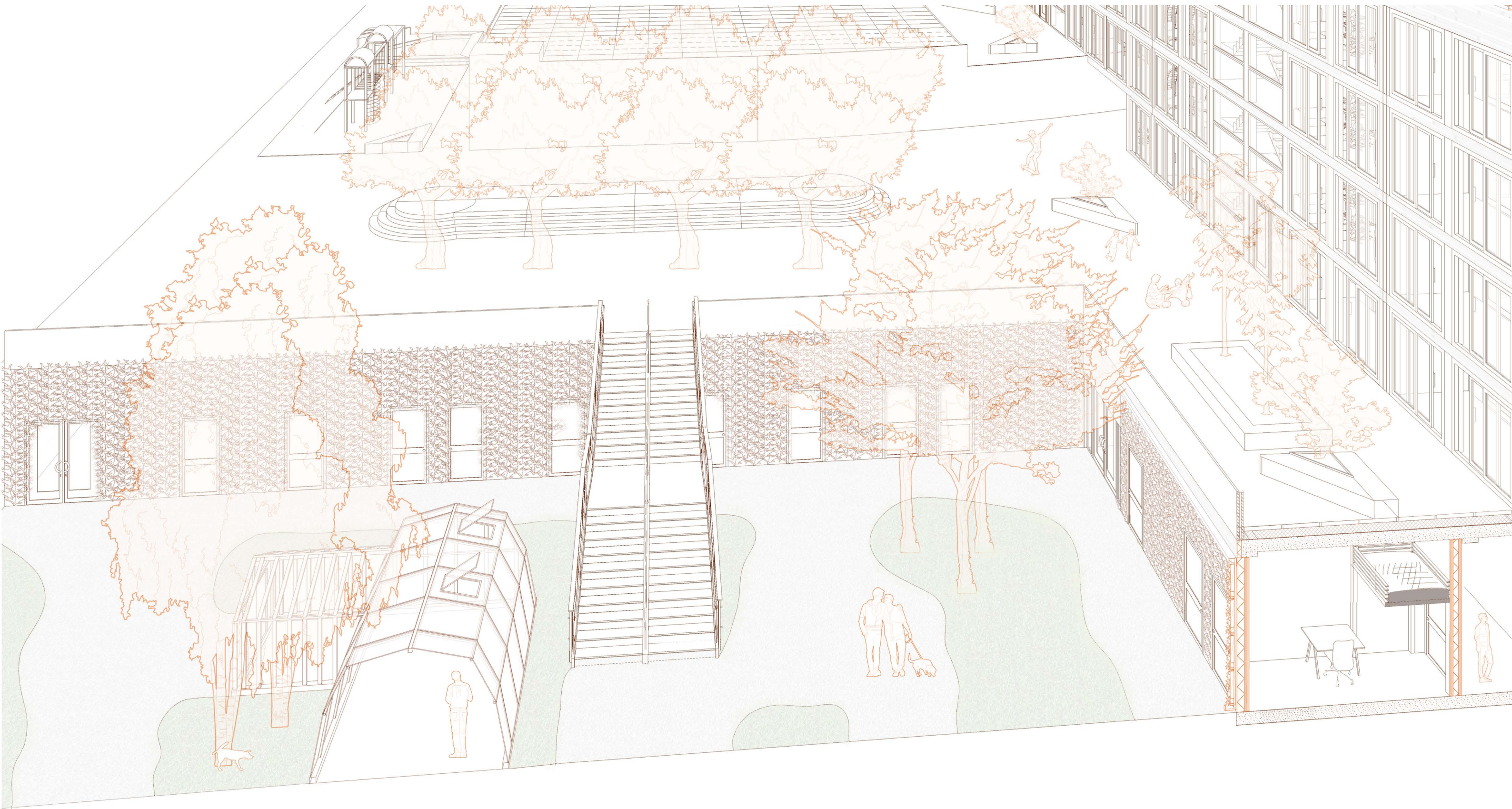
section



top-up section

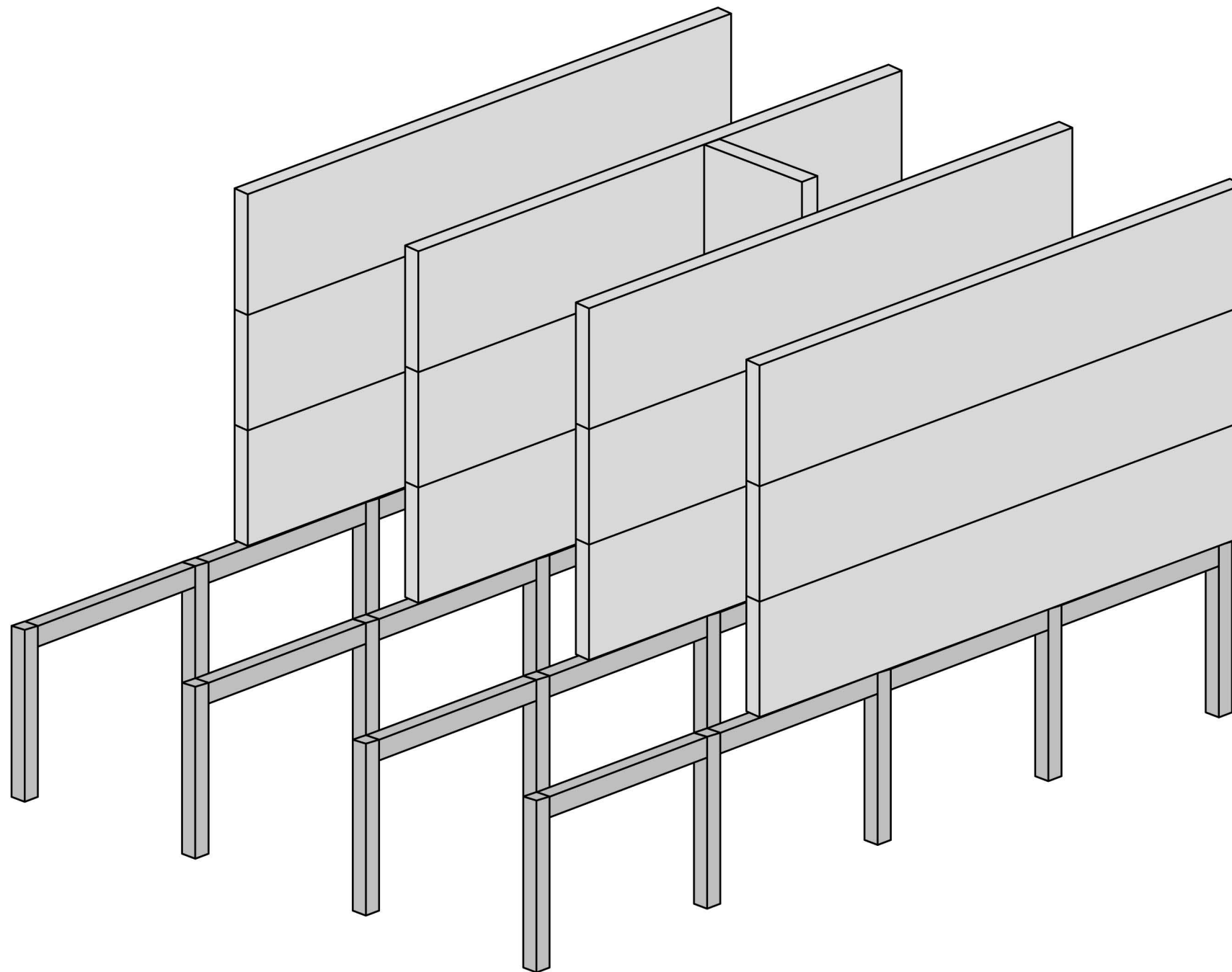


existing section

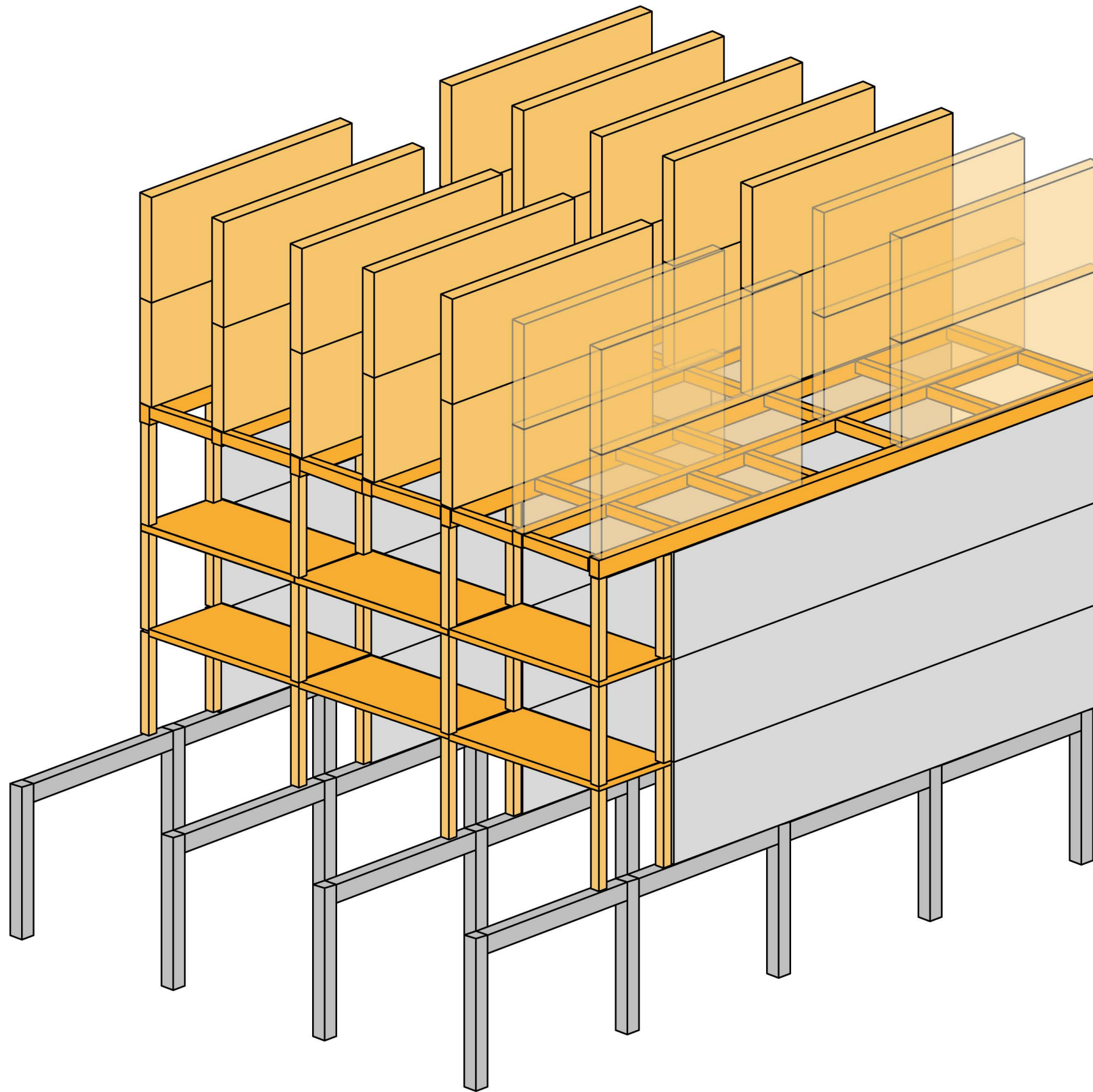


communal section

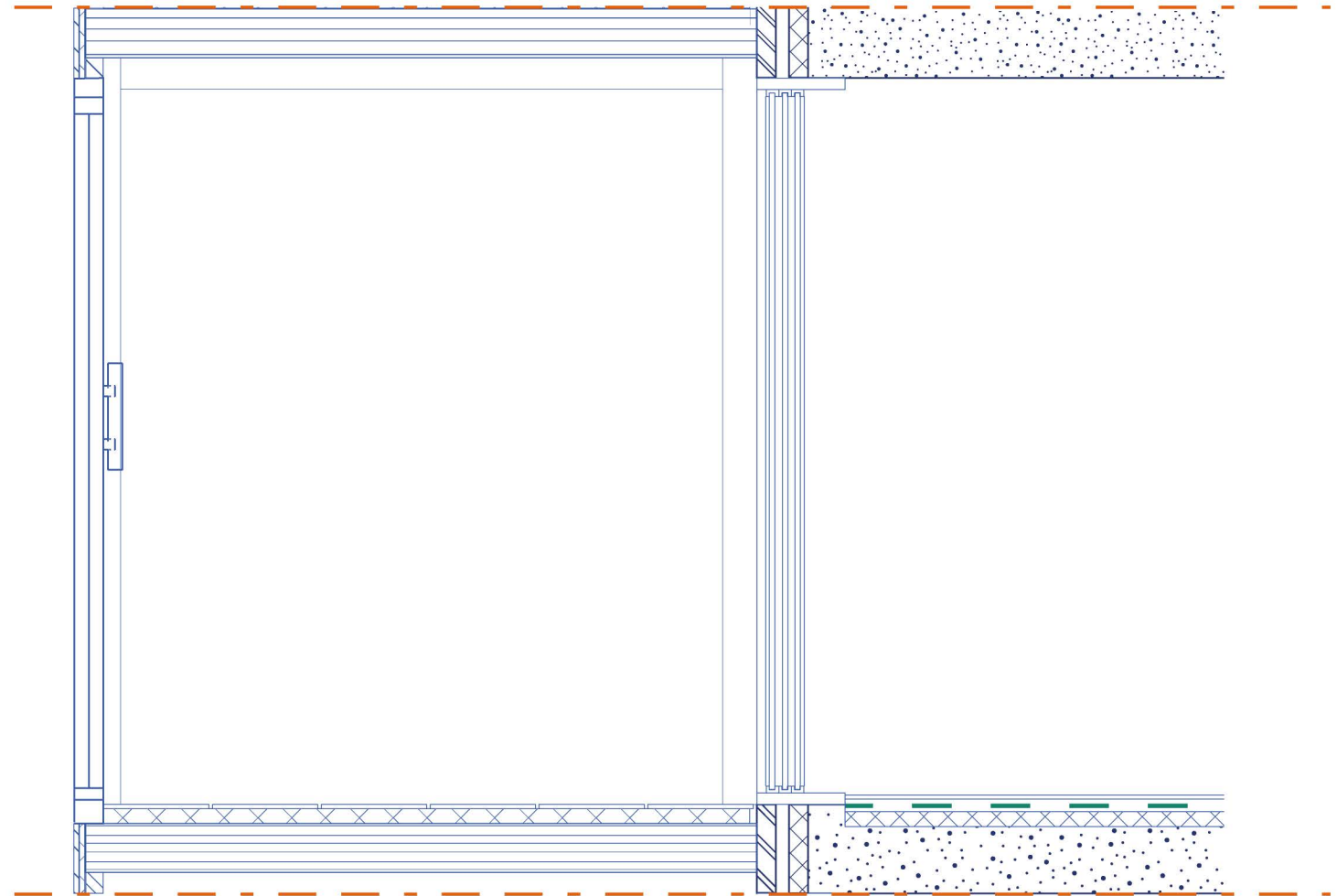
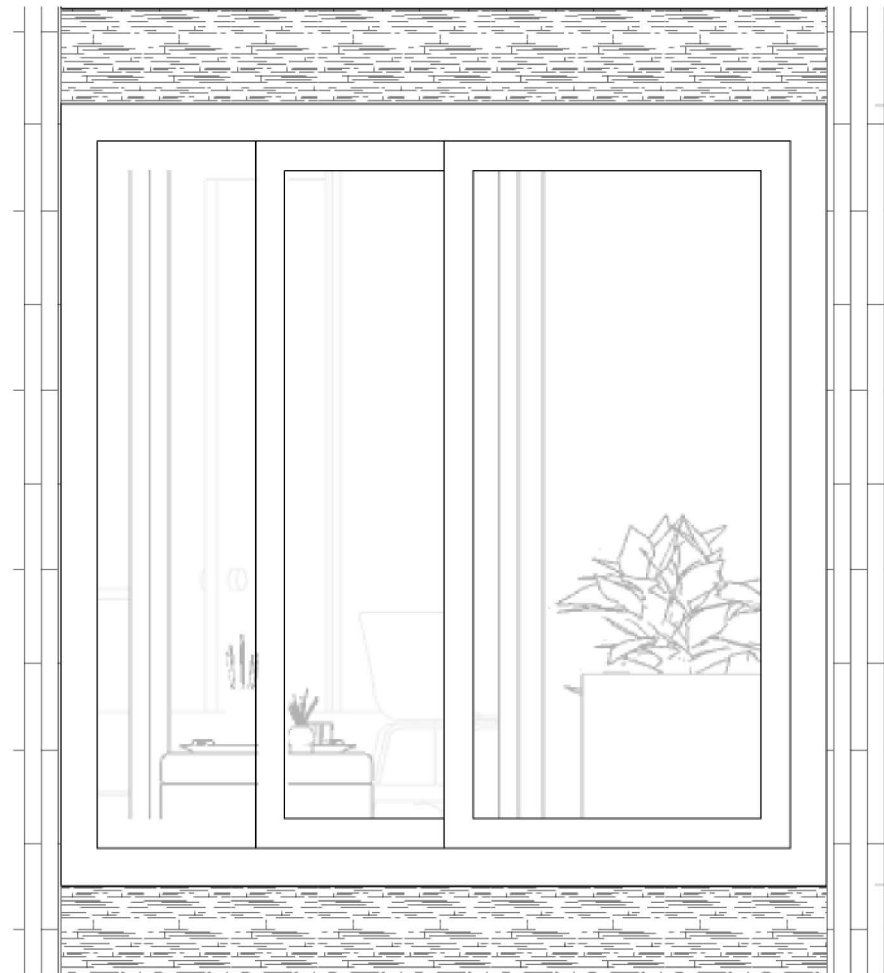
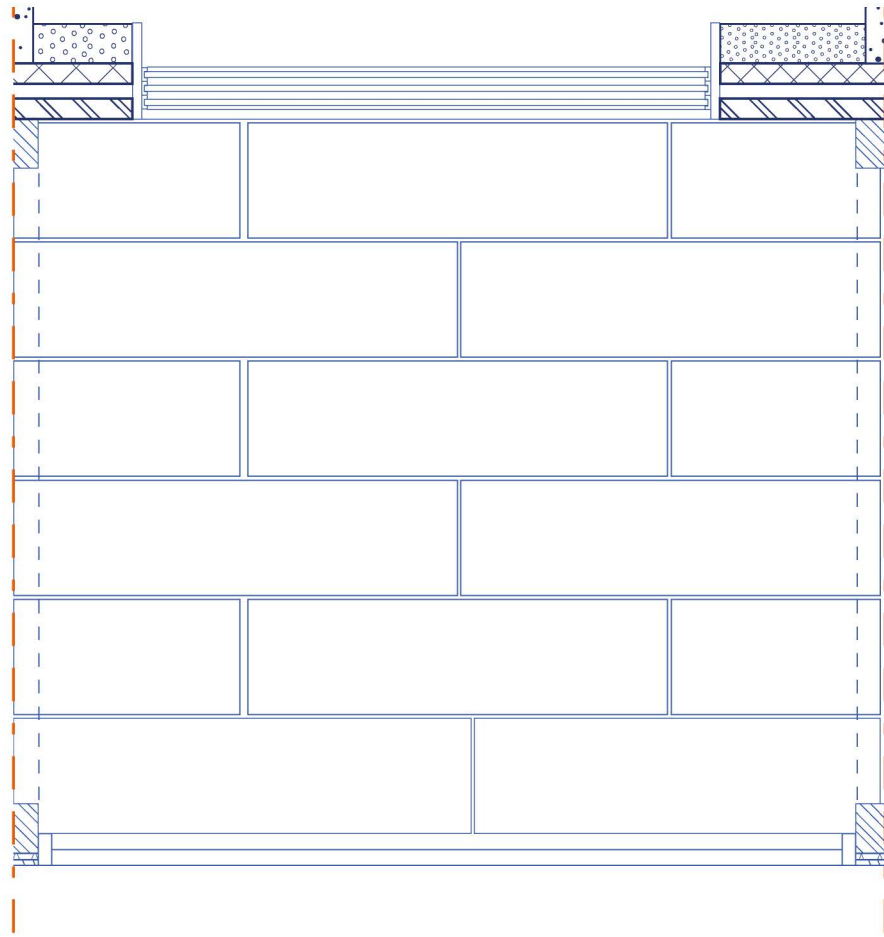
technical



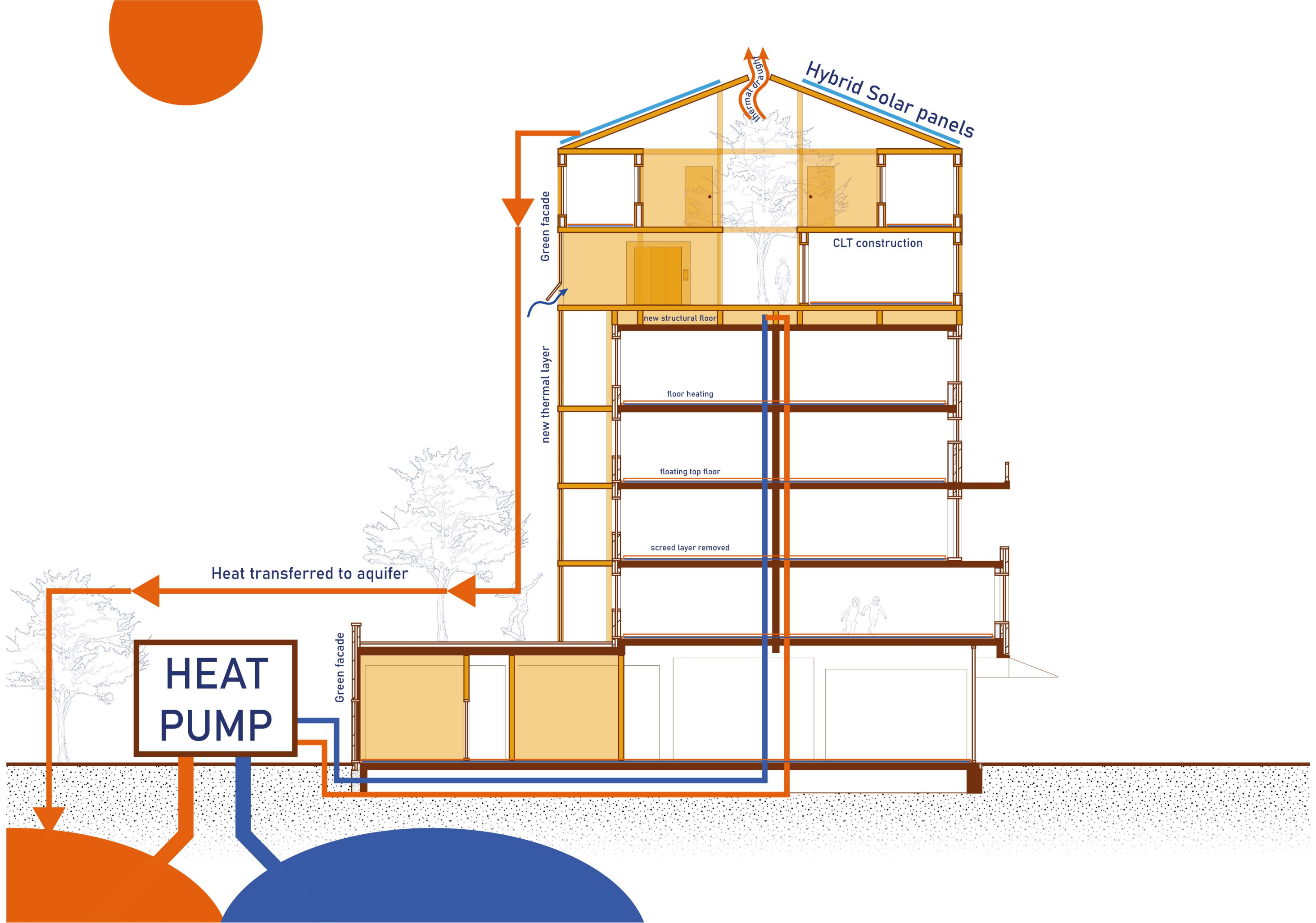
construction



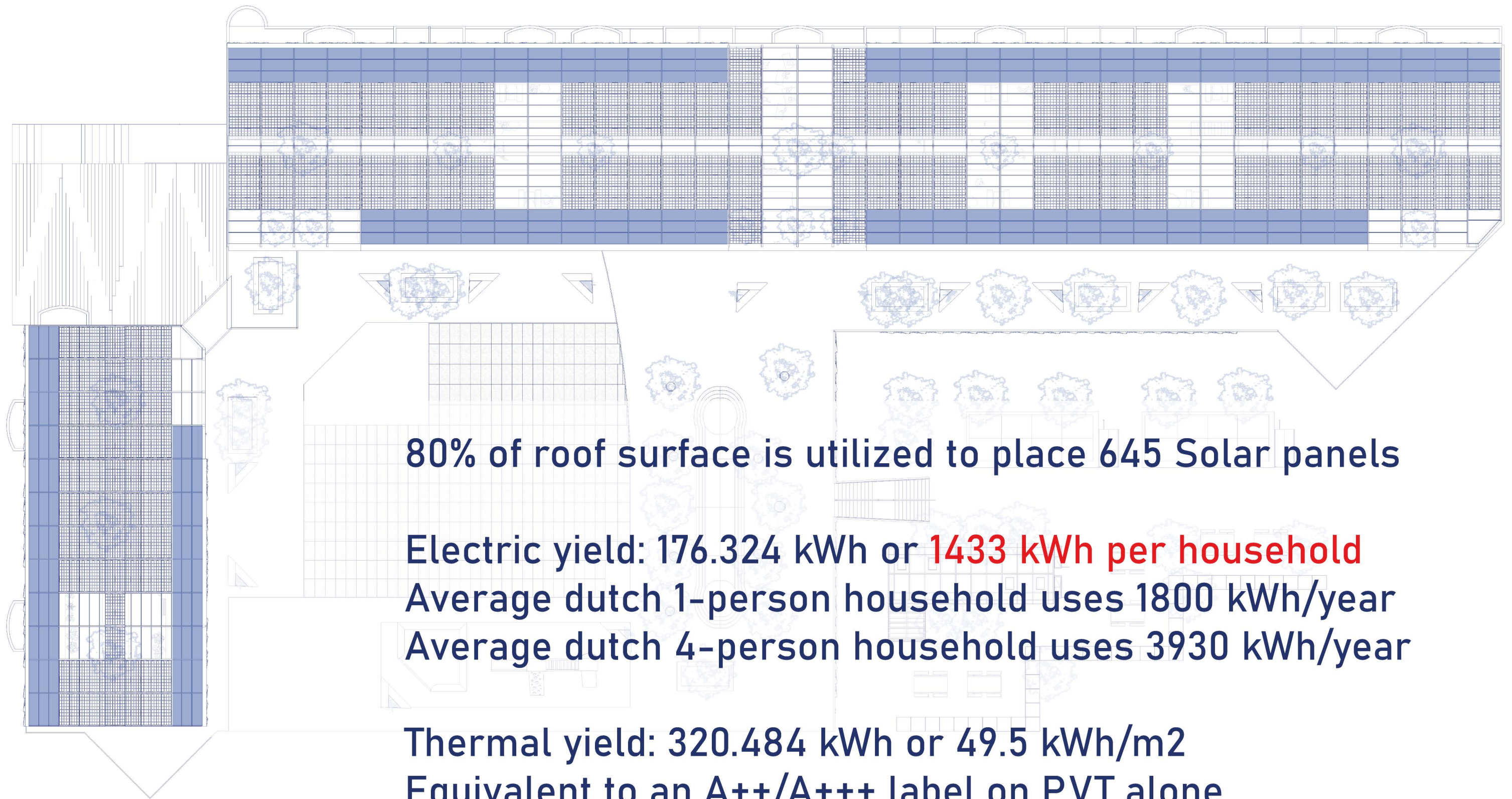
new construction



vertical section



climate section



80% of roof surface is utilized to place 645 Solar panels

Electric yield: 176.324 kWh or **1433 kWh per household**

Average dutch 1-person household uses 1800 kWh/year

Average dutch 4-person household uses 3930 kWh/year

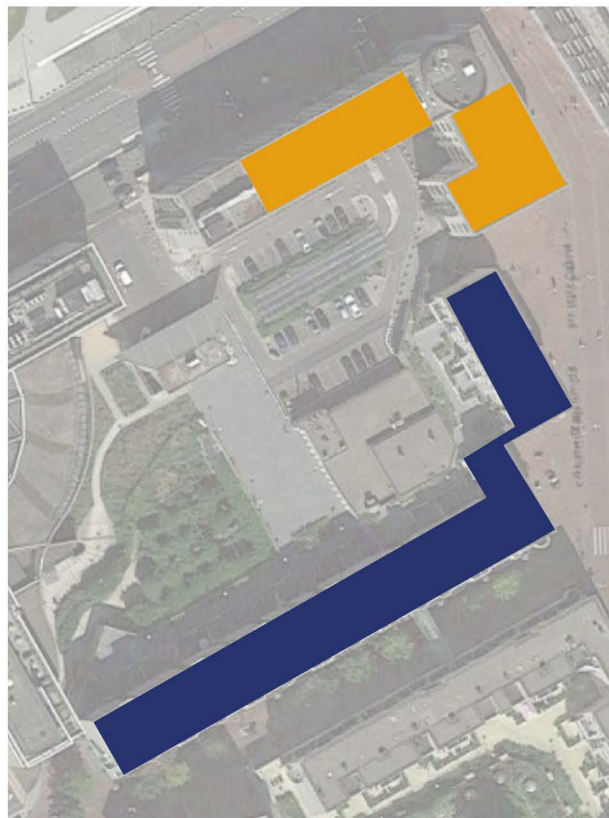
Thermal yield: 320.484 kWh or 49.5 kWh/m²

Equivalent to an A++/A+++ label on PVT alone

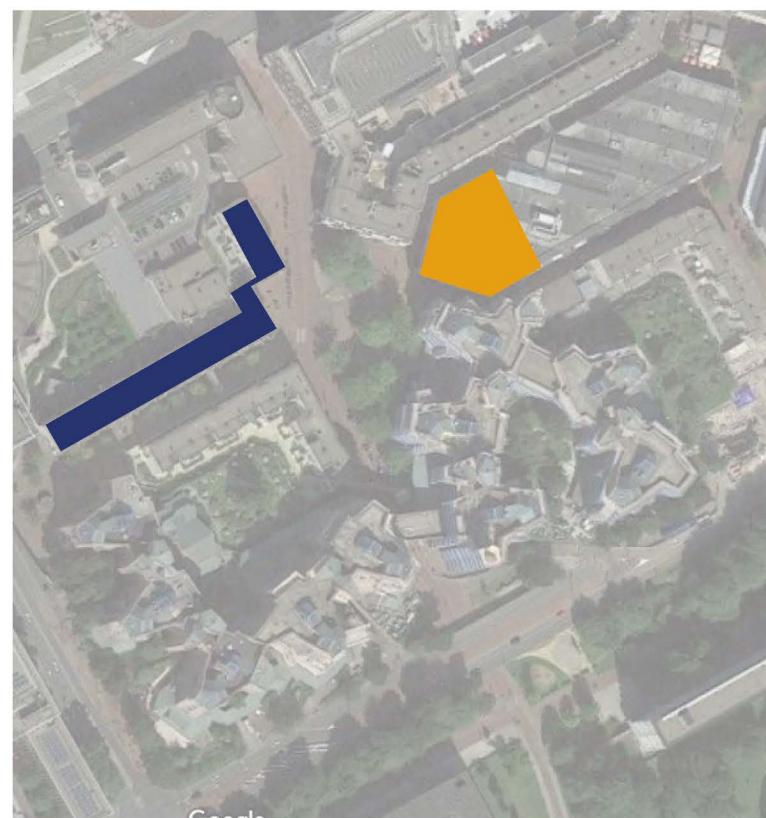
Aquifer as primary heatsource, topped up with thermal yield

155.226 kWh is needed to fully supply the building with carbon neutral energy equivalent to ~500 solar panels or 1250 sqm of PV

options:



Nearby office roof ~930 sqm



1/4 of nearby mall roof ~1500 sqm



1/10 of nearby farm field 1610 sqm

(this area also needs to reduce nitrogen production by 47% by 2030)

1605 m3 of timber

needs

241 hectares of sustainable forest

2040 m2 glazing

6468 m2 EPS

43.848 kg removed concrete

87.480 kg removed brick

4925 m2 metisse panels

73.397,7 kg CO2

12.936 kg CO2

4.384,8 kg CO2

20.120,4 kg CO2

12.084,9 kg CO2

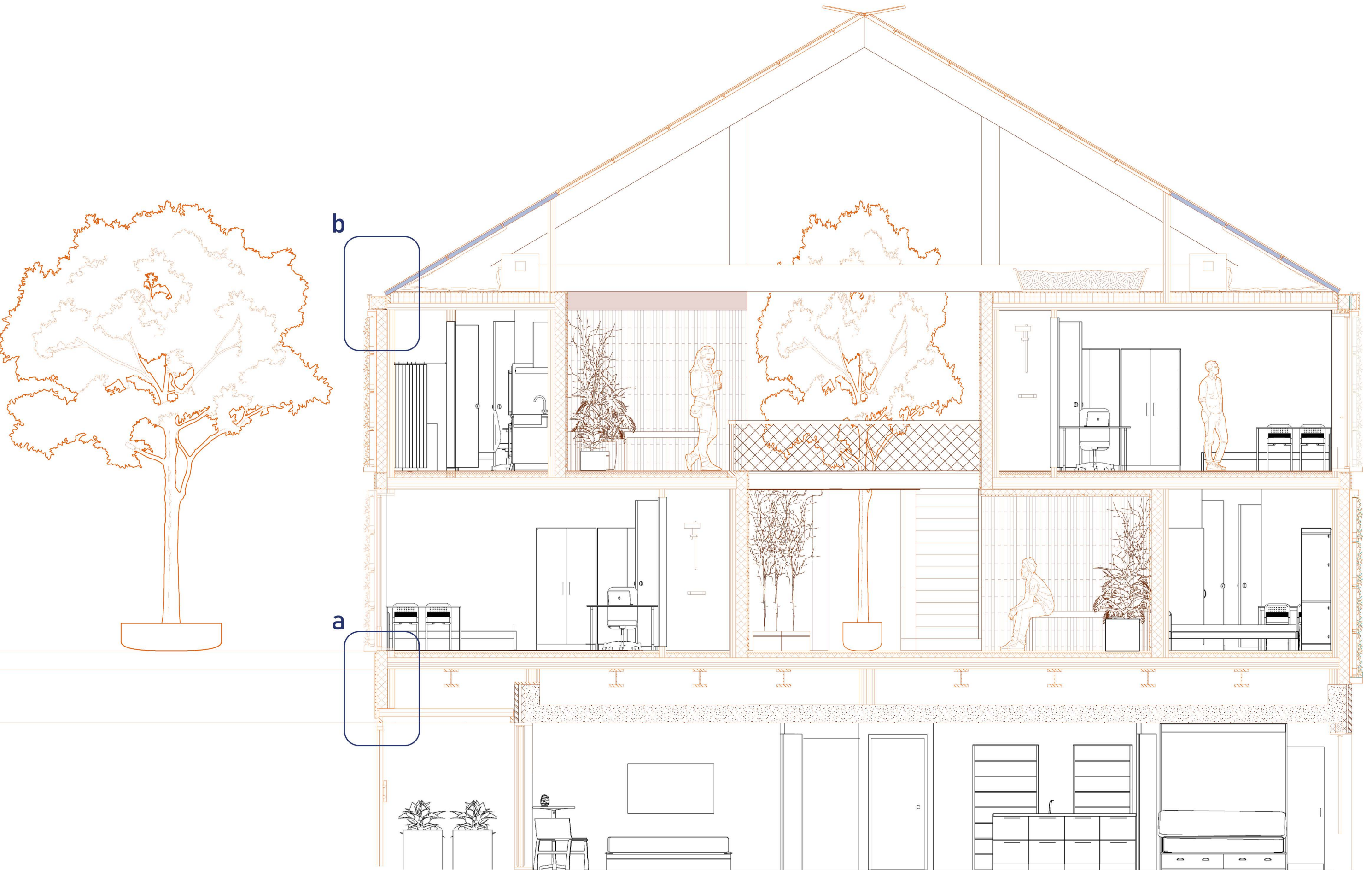
Compensates

21.780 tonnes CO2

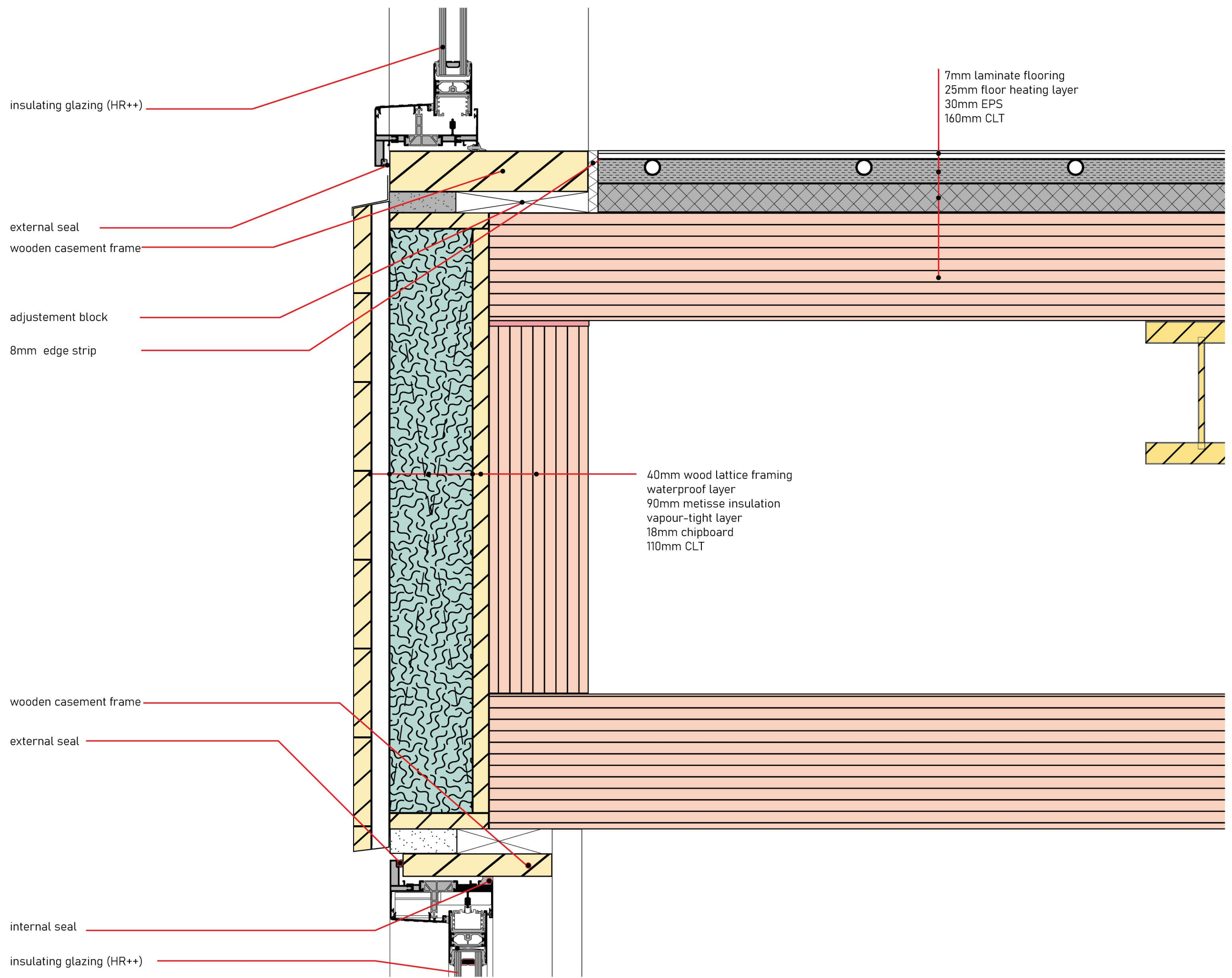
Costs

124,9 tonnes CO2

**21.549,6 tonnes of CO2 net gain
equal to building 430 average homes**



section



insulating glazing (HR++)

external seal

wooden casement frame

adjustment block

8mm edge strip

7mm laminate flooring
 25mm floor heating layer
 30mm EPS
 160mm CLT

40mm wood lattice framing
 waterproof layer
 90mm metisse insulation
 vapour-tight layer
 18mm chipboard
 110mm CLT

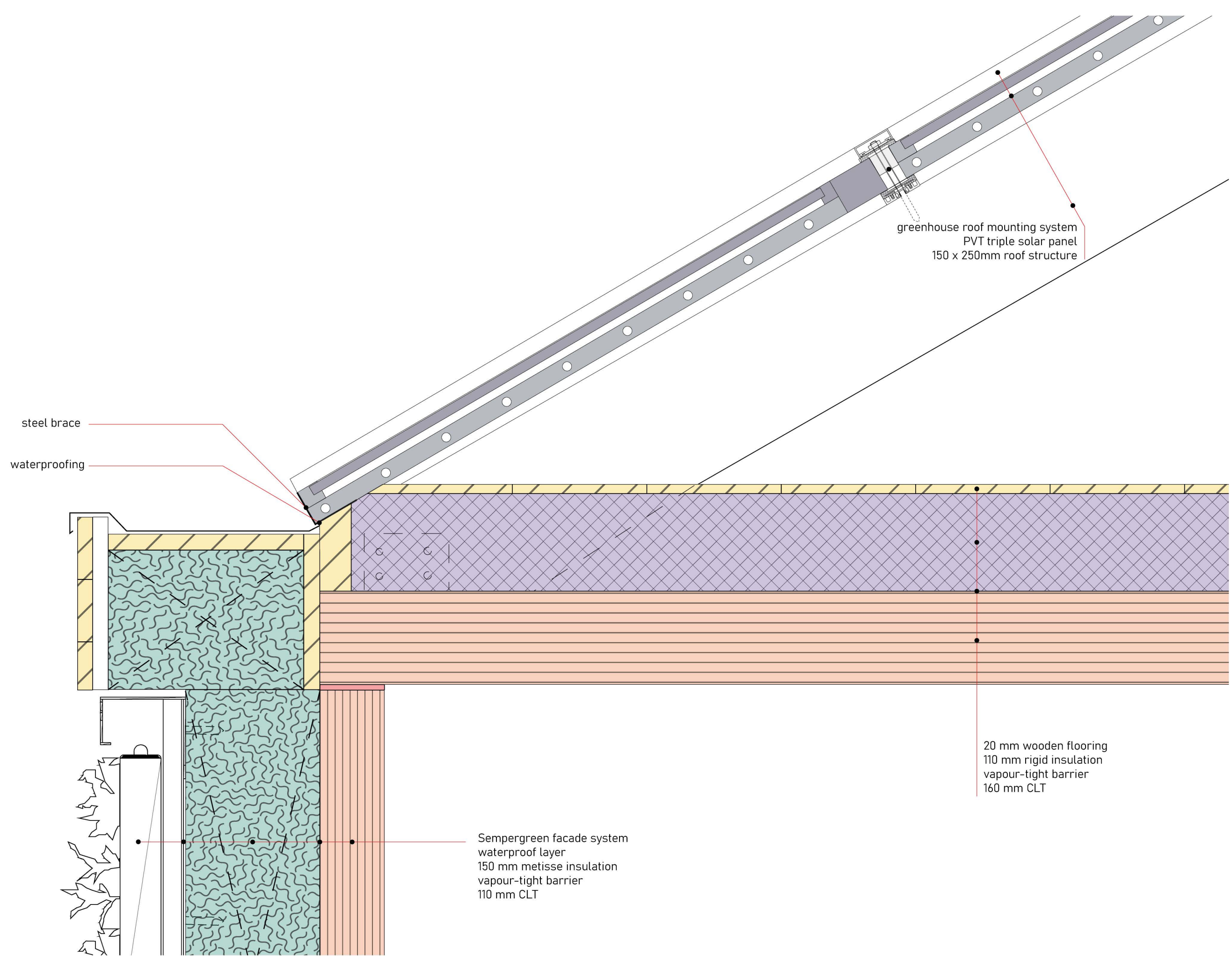
wooden casement frame

external seal

internal seal

insulating glazing (HR++)

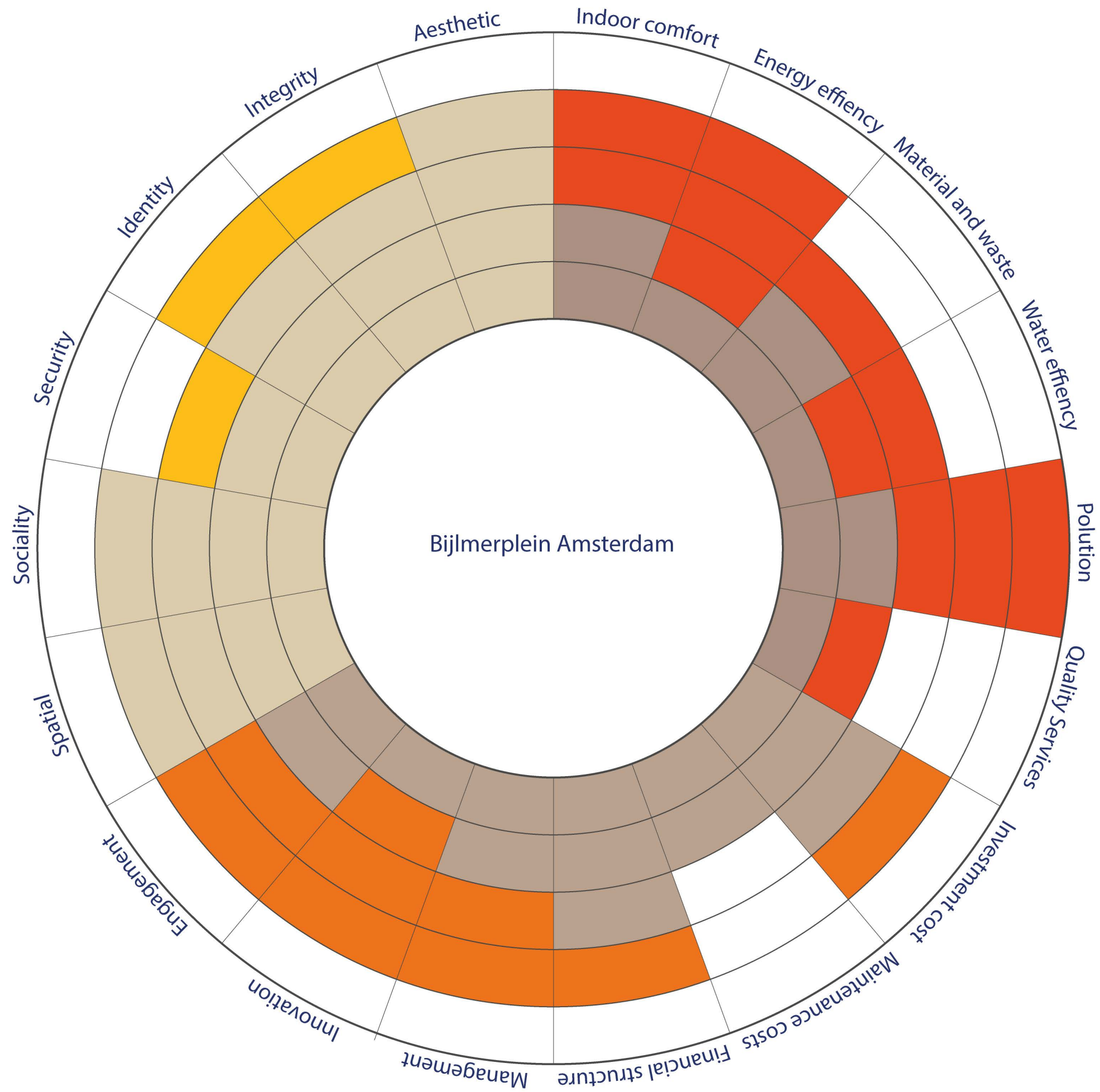
detail a



detail b

conclusion

Is it feasible to recontextualize and adapt historical examples of minimum dwellings in the renovation design of a relatively young building?



It is feasible to recontextualize and adapt historical examples of minimum dwellings to find a renovation design for Bijlmerplein cluster 2

It is feasible to recontextualize and adapt historical examples of minimum dwellings to find a renovation design for Kamerplein cluster 2

YES

A modern, multi-level atrium with a large tree in a planter, people walking, and a 'thank you' text overlay. The space is characterized by warm wood paneling, a central tree in a white and orange planter, and a wooden floor. People are seen walking and sitting on benches, creating a lively atmosphere. The text 'thank you' is overlaid in the center in a bold, blue font.

thank you