

CO Dwell
multicultural
community
cohabitation

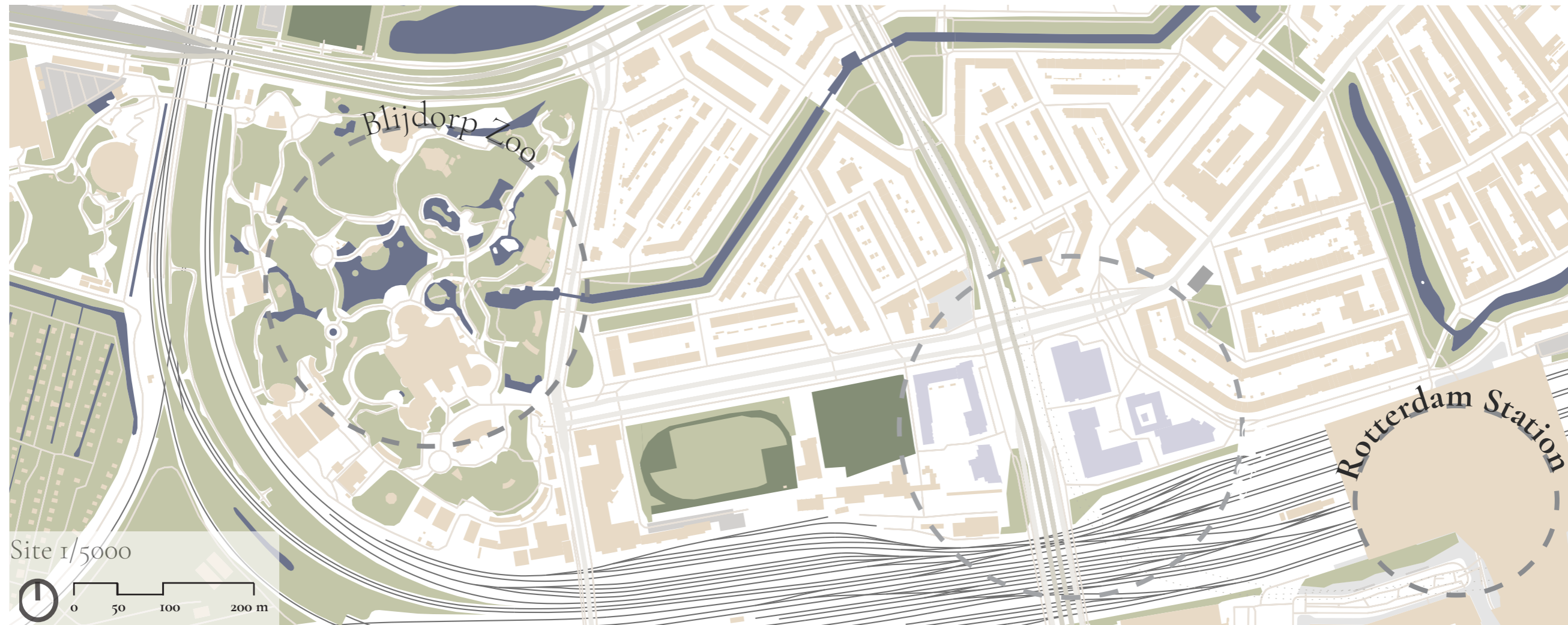
CO Living
CO Working
as means for
cohabitation
between Dutch
starters and
newcomers



P5 presentation of Advanced Housing studio, 21-06-2022
Tutors: Anne Kockelkorn, Olv klijn and Ferry Adema
Student: Basma Shahoud

Site, Walenburghof, Blijdorp, Rotterdam, the Netherlands

Urban analysis of the site



source: group work of Advanced housing design studio TU Delft, 2021-2022

Social context

Diverse population with different background
 Well educated people in the neighbourhood
 Further individuals are living alone.

Climate

Traffic intersection causes air pollution
 Noise pollution because of the train lines
 No sufficient vegetation
 Less species are living the area

Urban typology

Well structured urban typology
 Height gradual from the centre to the city's outskirts
 Hybrid typologies
 Schools significant presence on site

Energy

Needs for sustainable energy model for the site's new design
 Production of energy can be applied on the site.

Healthy living

Lack of open-public spaces
 The importance of greenery
 Assist the biodiversity on site

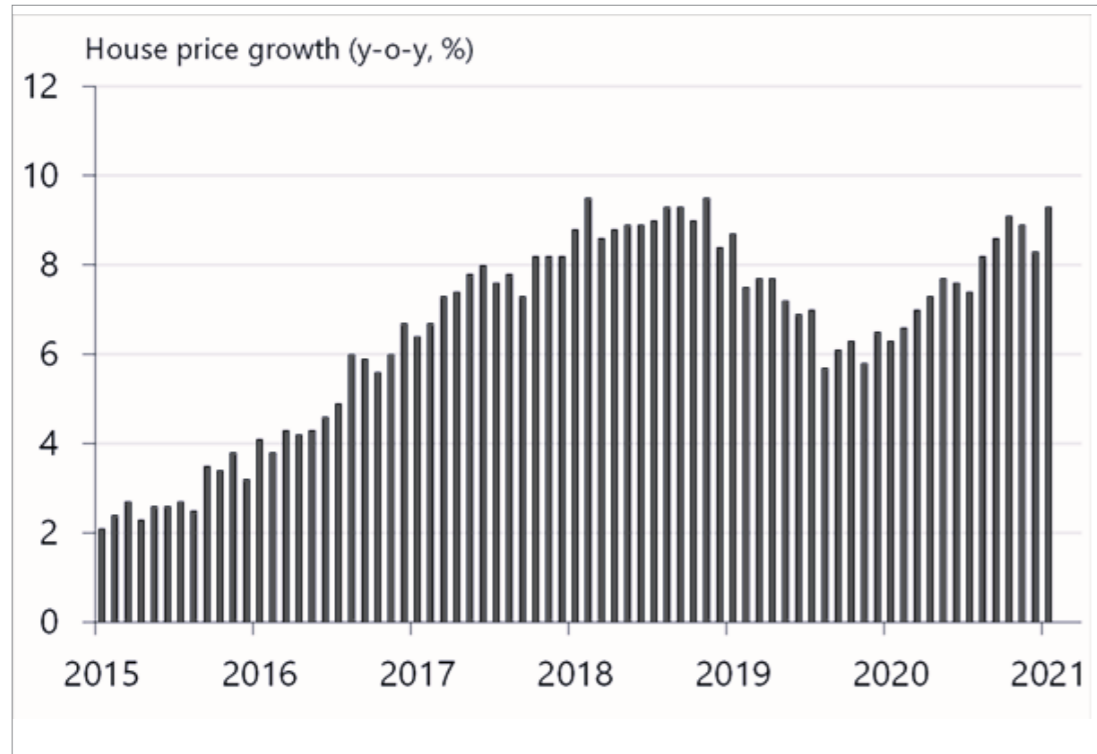
Material cycle

Use as much as possible from existing
 For new material choose the sustainable one

History

Stationsingel street as an vital street
 Homobonus building as an historic important building

Politic economic analysis



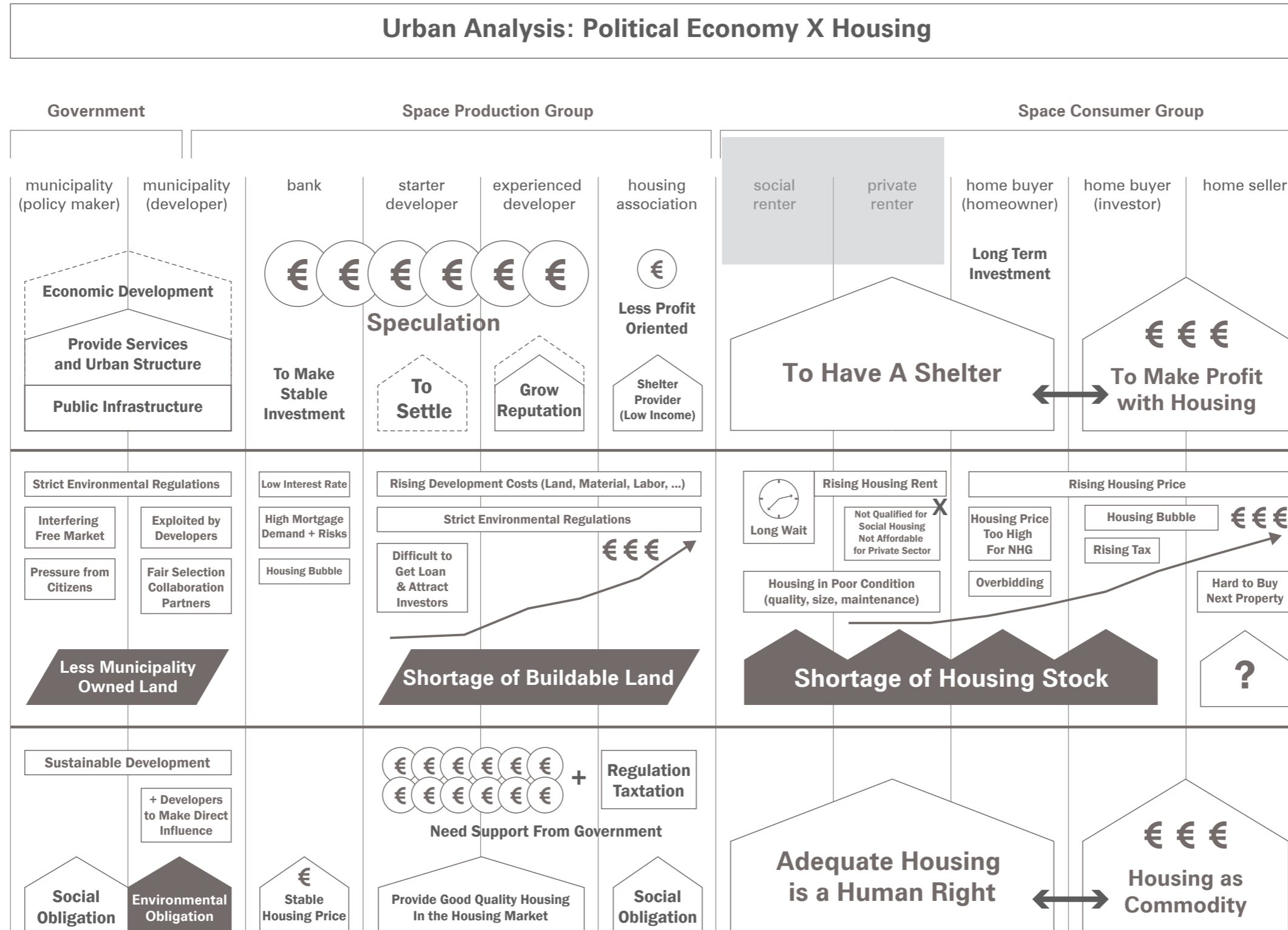
Houses prices, Netherlands
Source: www.pararius.nl



Social housing rent
Source: www.pararius.nl

Politic economic analysis

Conclusion

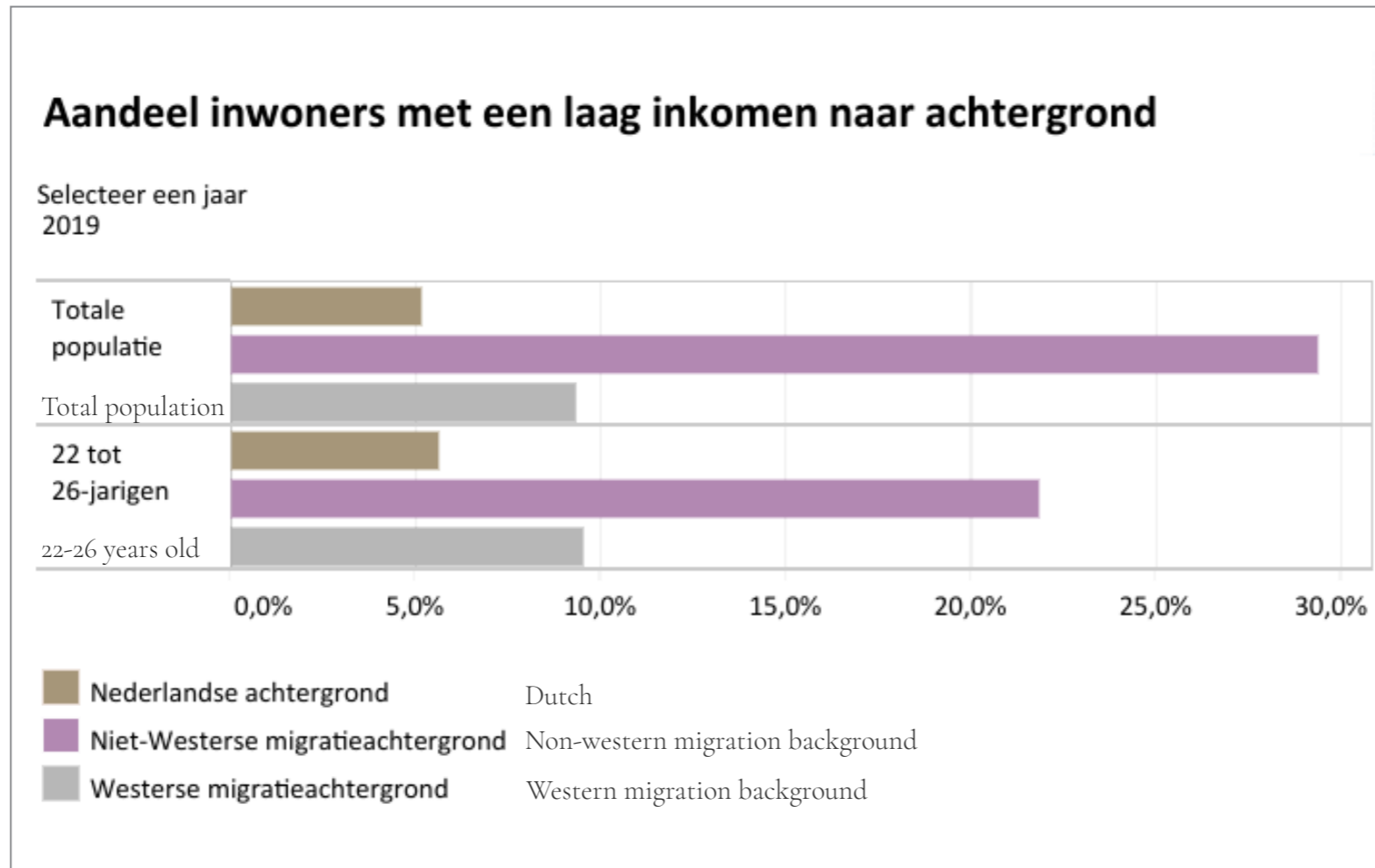


Source: Politic economic urban analysis on Rotterdam
 Analysis in the Advanced Housing Design, TU Delft, 2021

Ali Dağlı, Basma Shahoud, Hsiu-Ju Chang
 AR3AD100 Advanced Housing Design

Politic economic analysis

Who are the low-income group?



Share of Dutch citizen with low-income

Source: Sociaal plan bureau Groningen

P r o b l e m

Young adults problems in affording proper housing

Problem

Low-income group: starters and newcomers
Shelter and labour problems

Dutch Starters

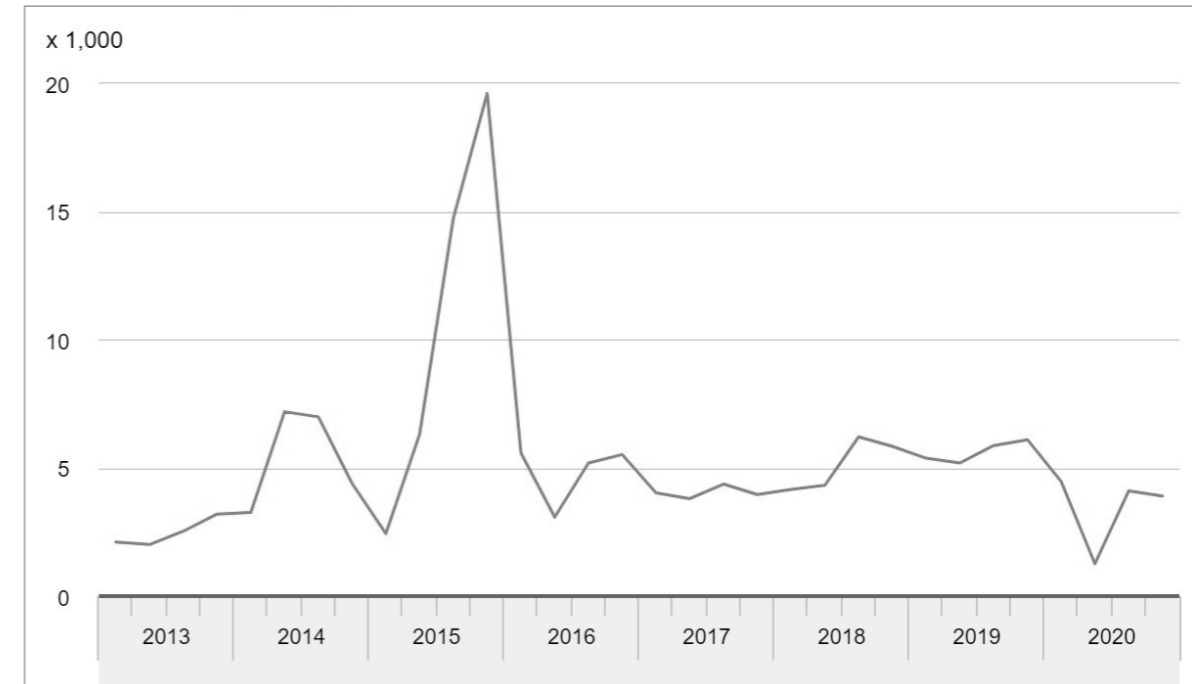
The housing shortage leads to major problems for people with low income, in particular. That construct obstacles for starters to enter the rental market.

(Starters op de woningmarkt:
“Ik kan geen kant op”

Source: (Kassa - BNNVARA, 2020).

Difficulties in entering the rental market

Asylum seekers



Percentage of asylum seekers' first-time application

Source: Central Bureau of Statistics, cbs

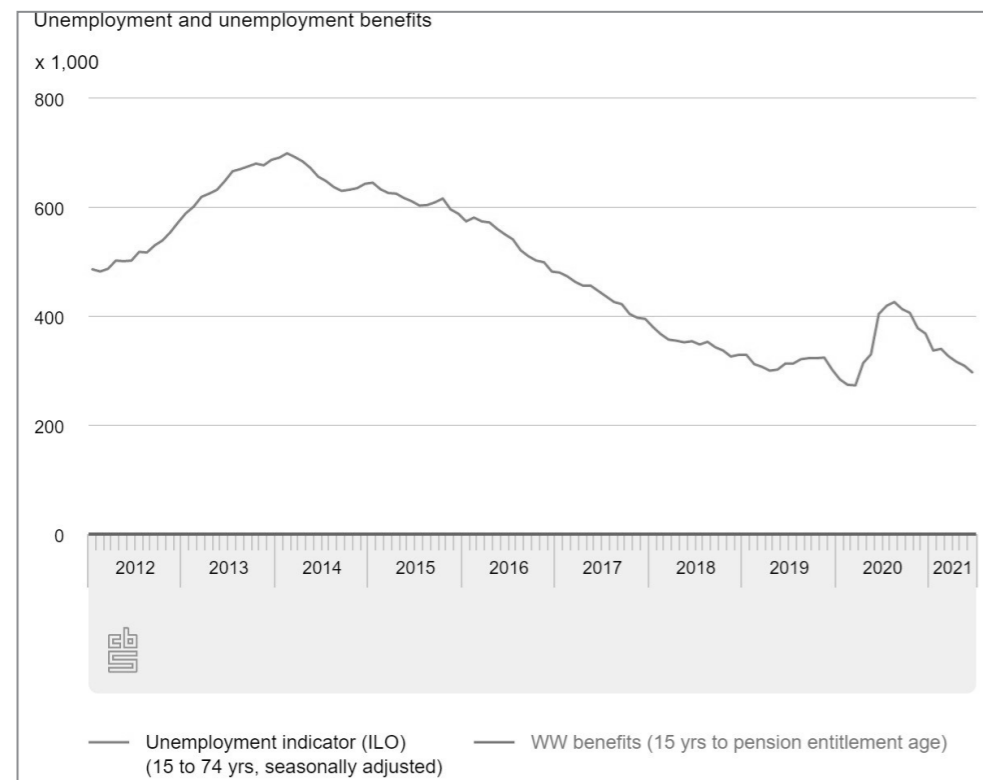
Refugees are allocated randomly to social housing after obtaining residence permit.

Problem

Low-income group: starters and newcomers.
Labour problems

Dutch Starters

“Labour is a key for shelter”

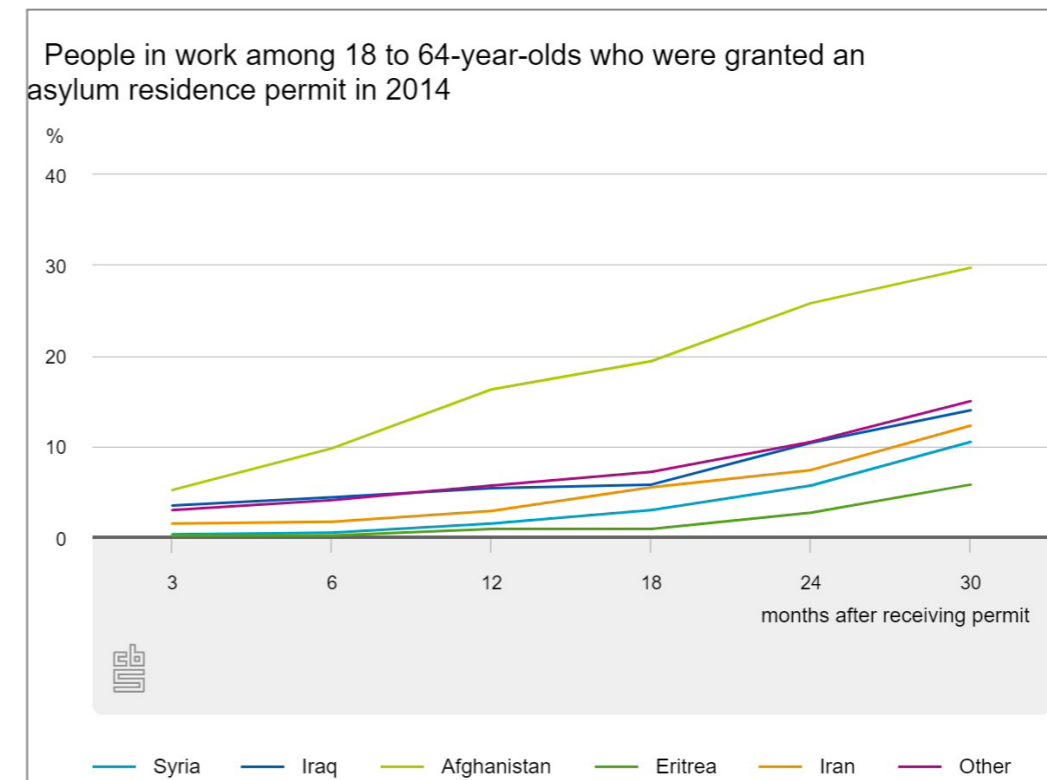


Dutch unemployment percentage of Dutch residents between 15 and 74 years old

Source: Central bureau of Statistics, cbs

Asylum seekers

‘To me integration is work, if we work, we are integrated’ (ECRE 1999a: 42).



Percentage of worked status-holders after receiving permit

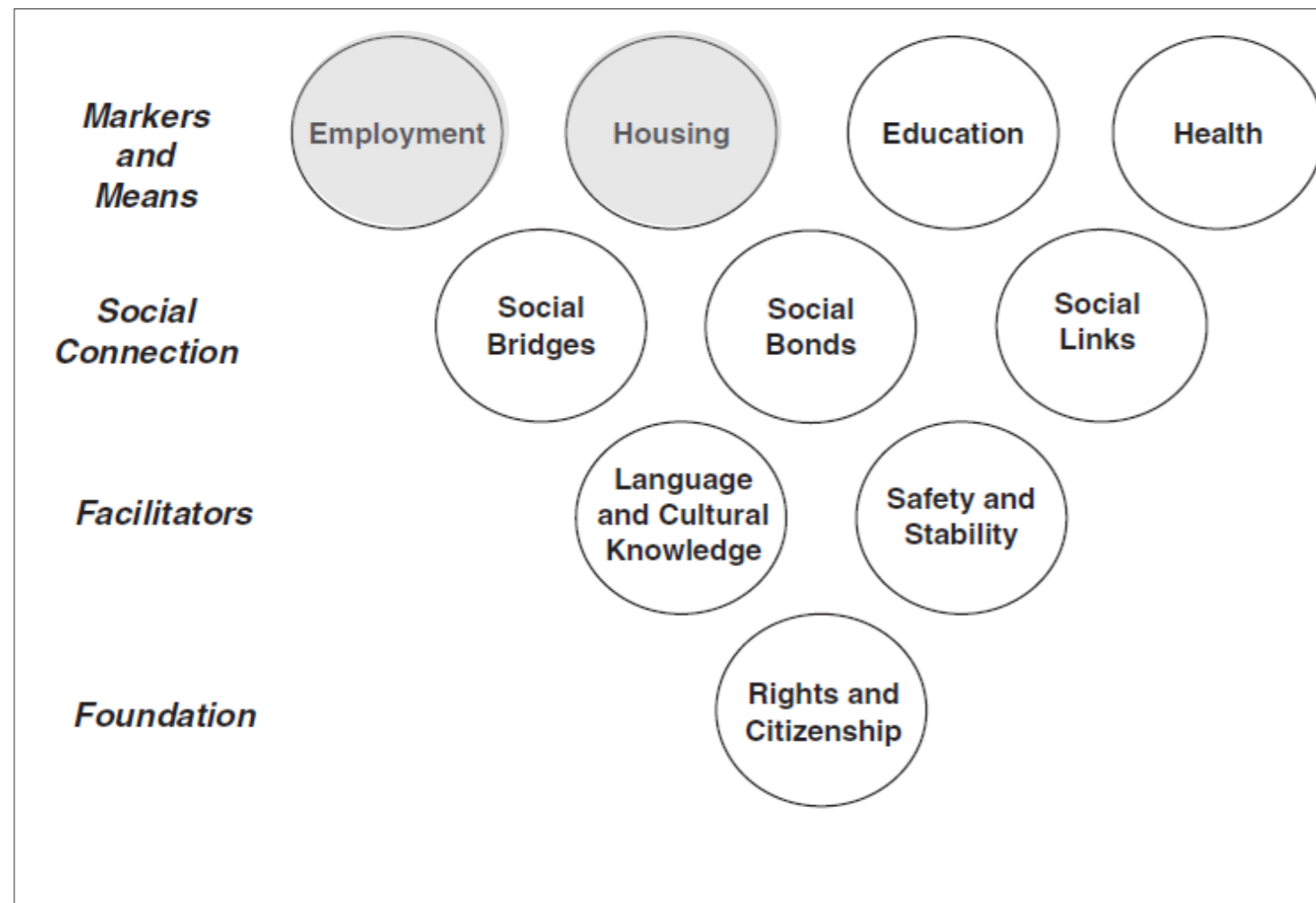
Source: Central bureau of Statistics, cbs

Opportunities

What are the opportunities to embed the newcomers in the new society? And how to solve the housing and working issue for young locals?

Opportunities

Opportunities to cohabit the two groups

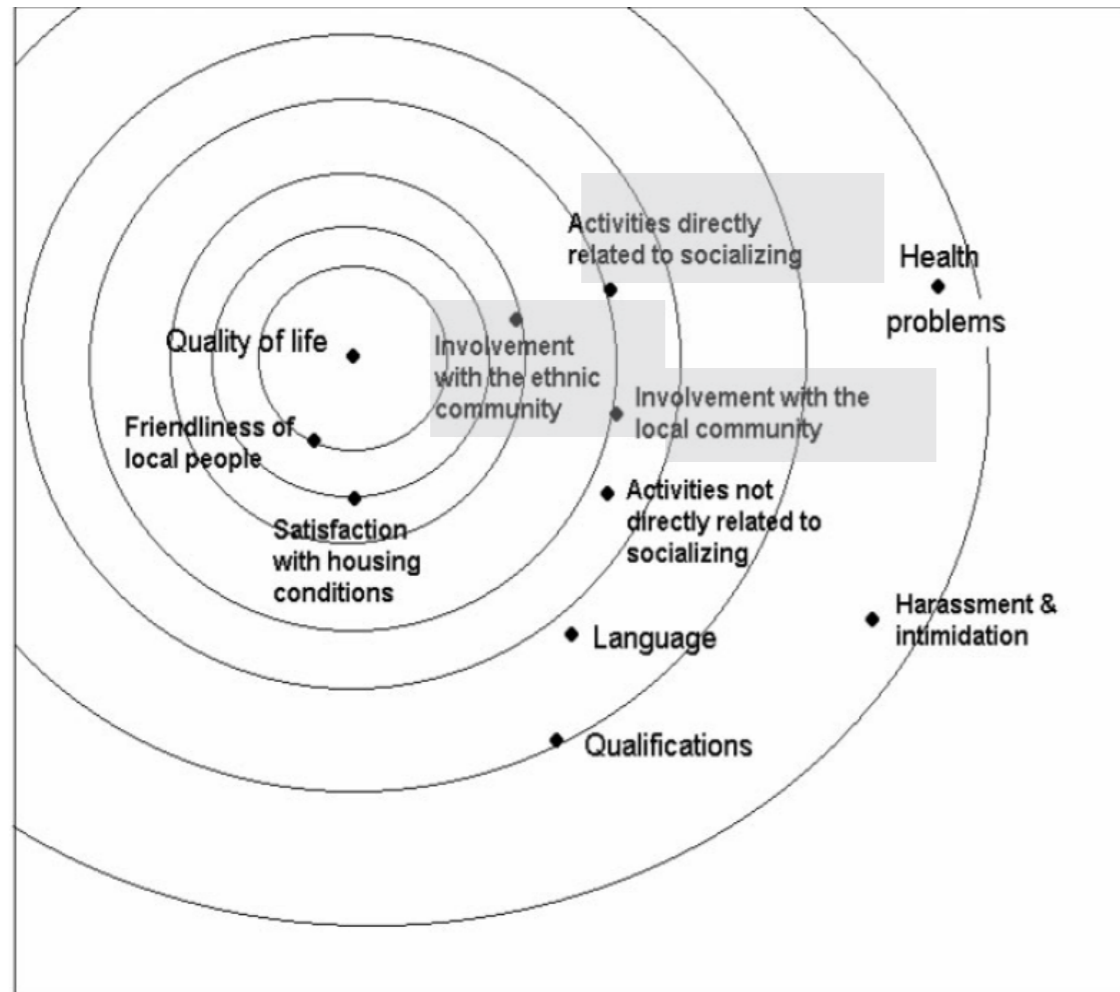


Conceptual Framework defining core domain of integration

Source: Understanding Integration: A Conceptual Framework (Ager & Strang, 2008, P.170)

Opportunities

Opportunities to cohabit the two groups



Relationship between Experiences and Activities of Refugees (referenced to Perceived Quality of Life)

Source: Understanding Integration: A Conceptual Framework (Ager & Strang, 2008, P.179)

Opportunities to increase this group income and afford them accessible housing

Cooperative housing model: opportunities for non-profit housing cooperative which can supply non-profit affordable housings



Main Stakeholders in the creation of the Golden Cohabitation complex

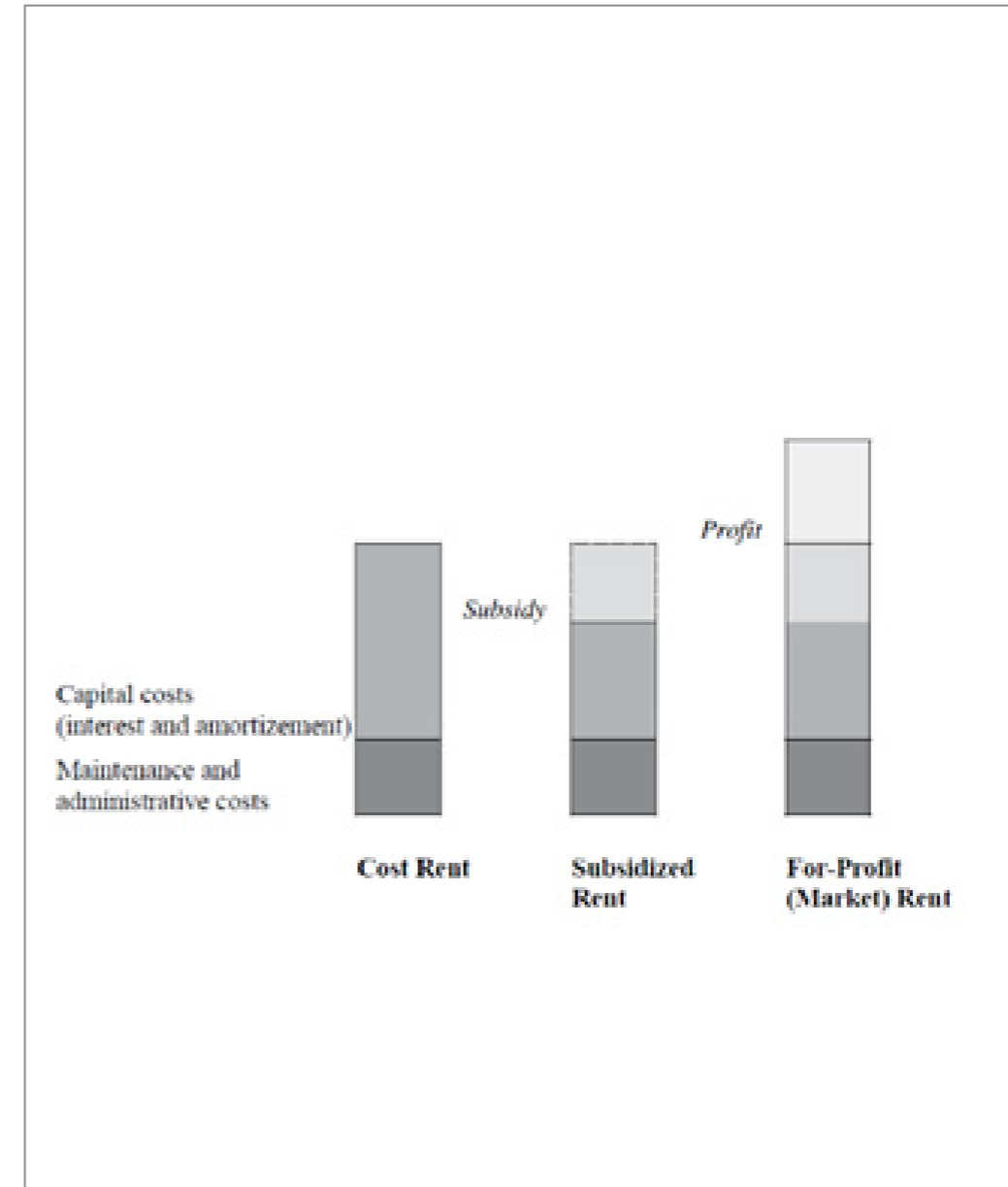
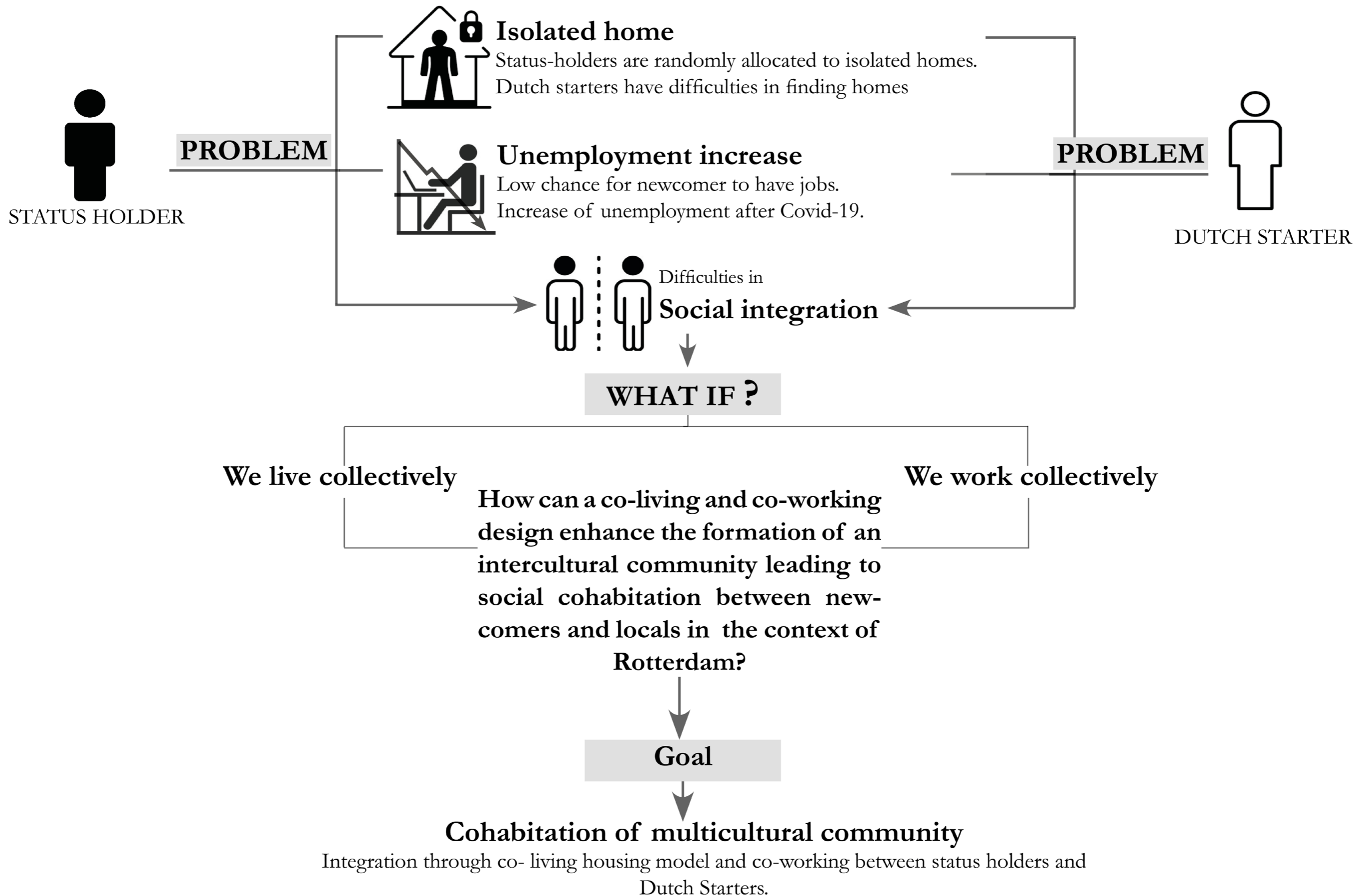


Figure: Composition of rent prices

Source: Urban Commons: Moving Beyond State and Market, 2015. Page, 185

V i s i o n

Vision



Research insight | Design principle

Social cohabitation- Co-living-co-working

Social cohabitation between newcomers and locals

Case study the Startblock Riekhaven, Amsterdam



The Startblock Riekhaven, Amsterdam

Source: Startblock website: <https://startblokriekerhaven.nl/>

The main reason for this example's success is the organization. Everything is organized by the tenants themselves. (Czischke & Huisman, 2018).

“The bigger the project is the richer pool of people you can choose from; This will ensure that residents will meet someone with same preferences” Huisman

According to Huisman, Startblock succeed therefore it has been copied by different stakeholders. It ends up by a permanent housing in Amsterdam which is deliberately designed to include refugees and locals by The Key housing corporation. Carla Huisman, 24-, December, 2021.

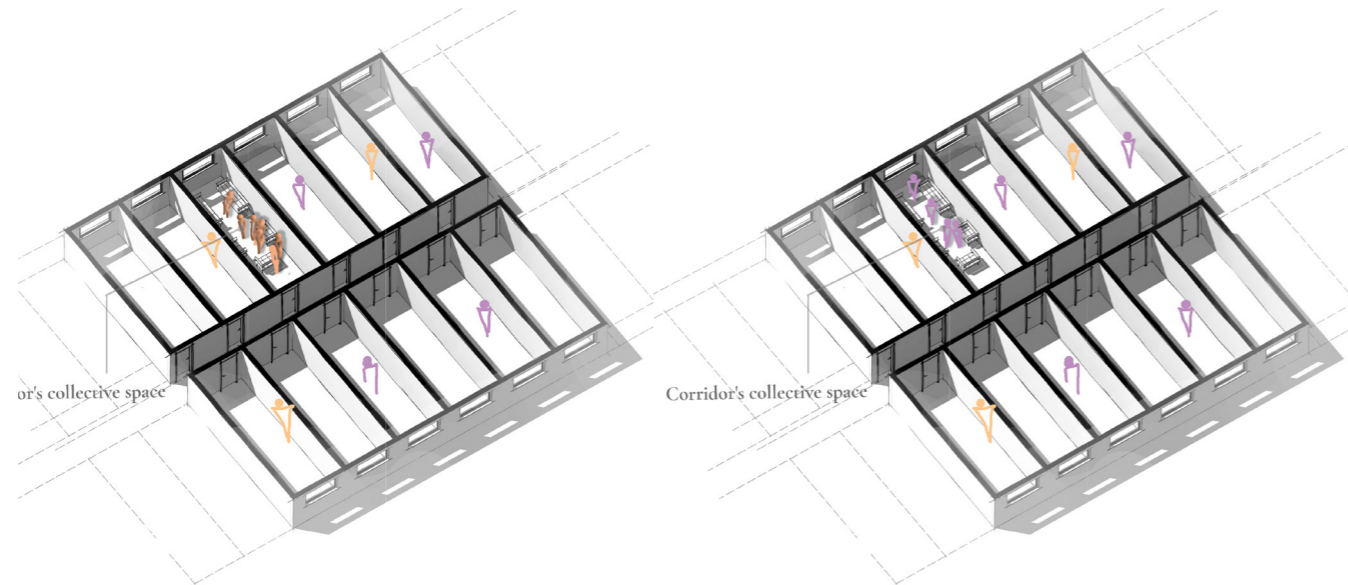
Dr. Carla Huisman



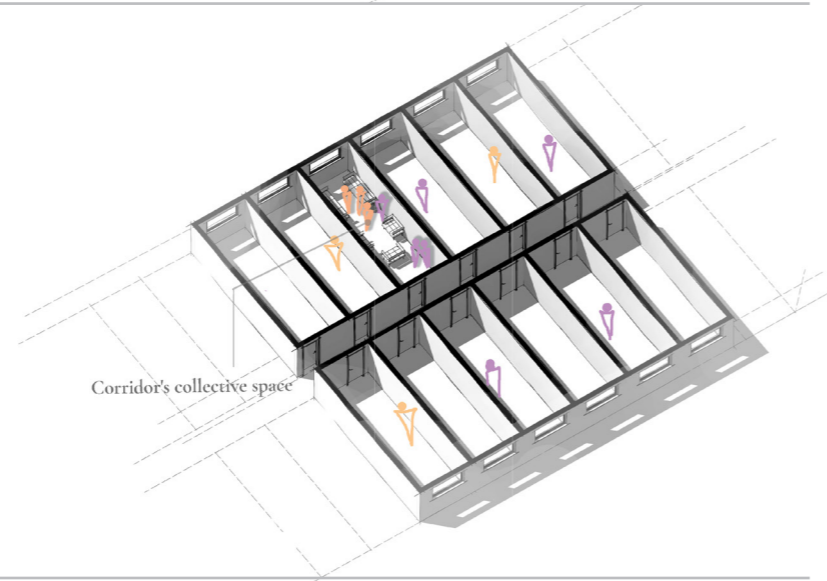
Social cohabitation between newcomers and locals

Collective spaces Case study the Startblok Riekhaven, Amsterdam

Usually

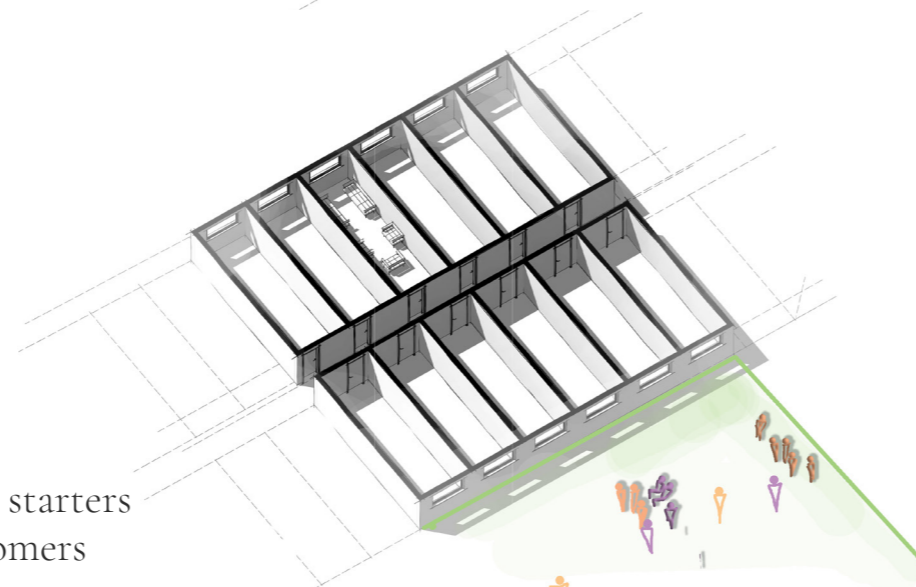


Sometimes



Always

● dutch starters
● newcomers



Too little collective spaces

Gathering of smaller groups.

Tenants claim the necessity of further spacious collective space. The Startblok has only one big event room and the 19 corridors each has just one collective space which is a taking-out dwelling unite. Dwellers say, usually one small can gather of 6 people whereas the corridor is consisted from 20-32 tenants.

A female tenant see “the potential of using the courtyard as a large scale collective space.”

Source: the study is bases on the tenants opinion and who the experiences the spaces as they described to me



Source: <https://www.facebook.com/startblok.riekhaven>

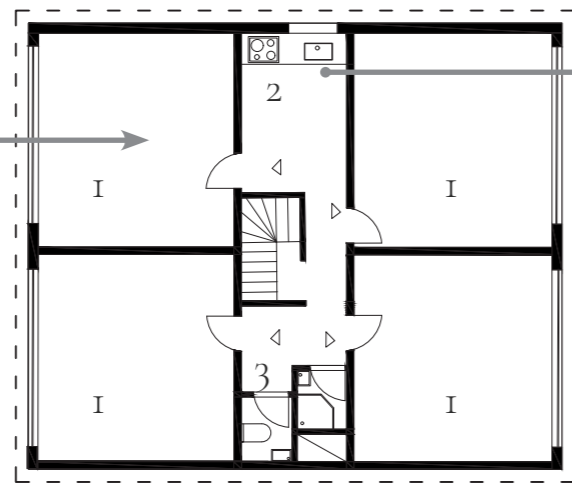
Co-housing research insights

Collective Spaces study: Case study, Tanthof, Delft, NL

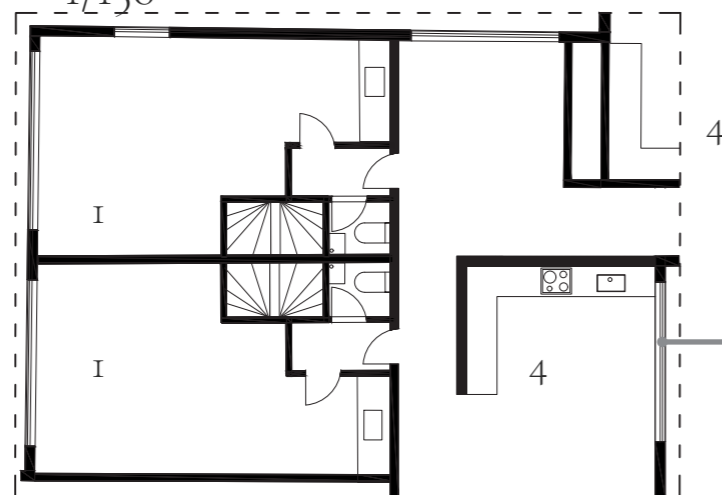
KRABBENDAM

Flip is the designer of Tanthof settlement. He lives with his partner and child in three room on the first floor.

“I almost do not use the collective kitchen on the ground-floor, It’s fine to make use of this small kitchenette, I bought a small oven and every thing is alright”



⊙ Typology 1
I/150



⊙ Typology 2
I/150
Drawn by author based on *Centraal Wonen and history of collective living Book*

Legend

- I Dwelling units (private rooms)
- 2 Shared kitchenette
- 3 Shared (toilet, bath)
- 4 Collective kitchen



2. Shared kitchenette on the first floor is turned into main kitchen



4. Collective kitchen
Tanthof, Delft, NL
© Basma Shahoud, 22-12-2021

Too many collective spaces

Leads to tenant distribution against the notion of interconnecting neighbours in collective spaces

Co-housing research insights

Case study, Tanthof, Delft

“I would emphasize more on the communal space to make sure that pedestrians on street can notice the uniqueness of those space in comparison to the private dwellings.”
Flip Krabbendam, the designer of Tanthof cohousing project, Delft, NL.

The answer of Flip Krabbendam about what he would do if he could redesign the Tanthof settlement



Tanthof, Delft, NL

Ordinary hidden facade layout for the communal spaces

© Basma Shahoud

22-12-2021

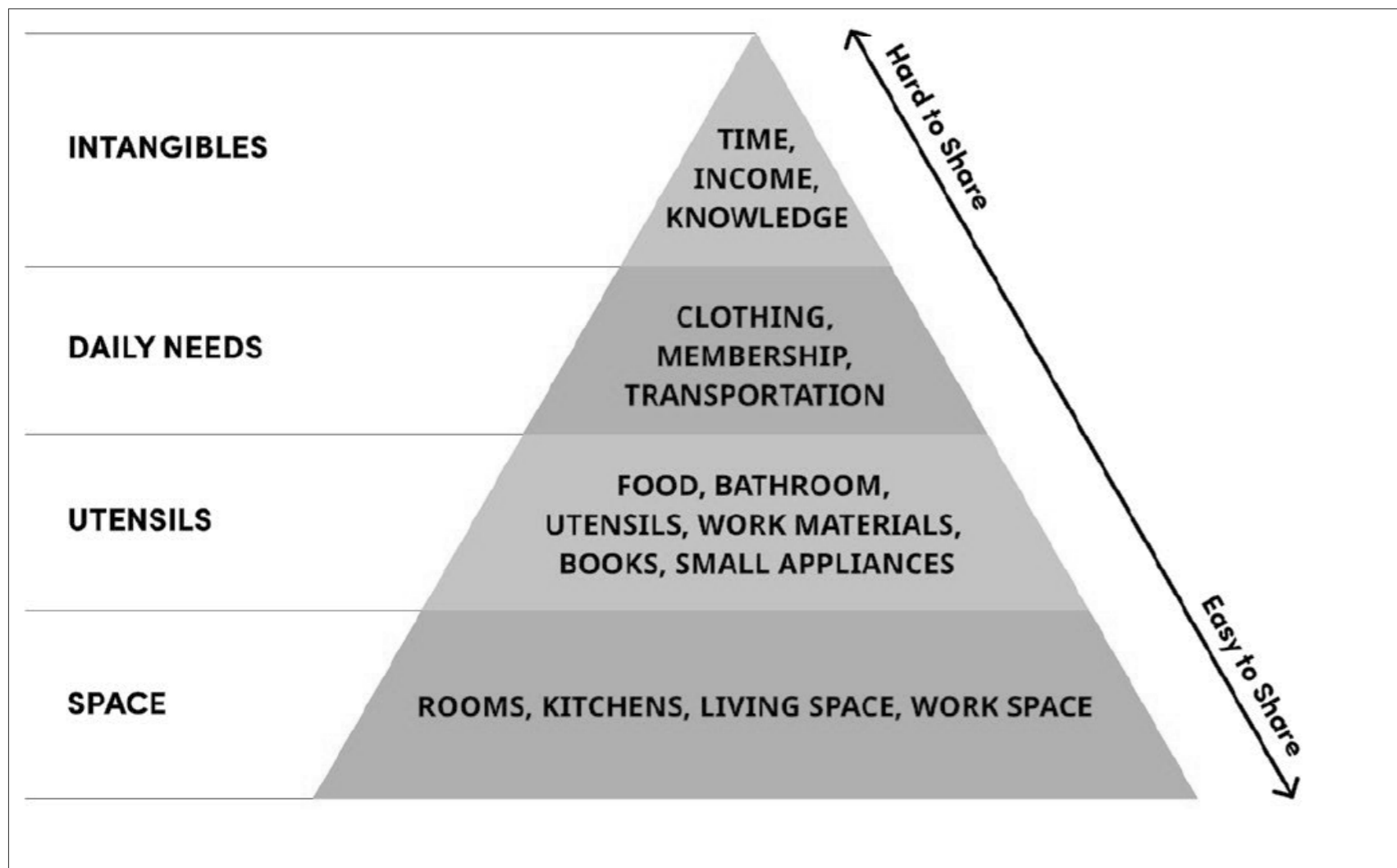
Design principle

Characterize the collective space and emphasize them through the floor plan and facade layout.

Co-housing research insights

enrichment through research

Coliving design is usually perceived by its communal design and spirit. (Co-living insights, 2021, P.12-14)
What to share?



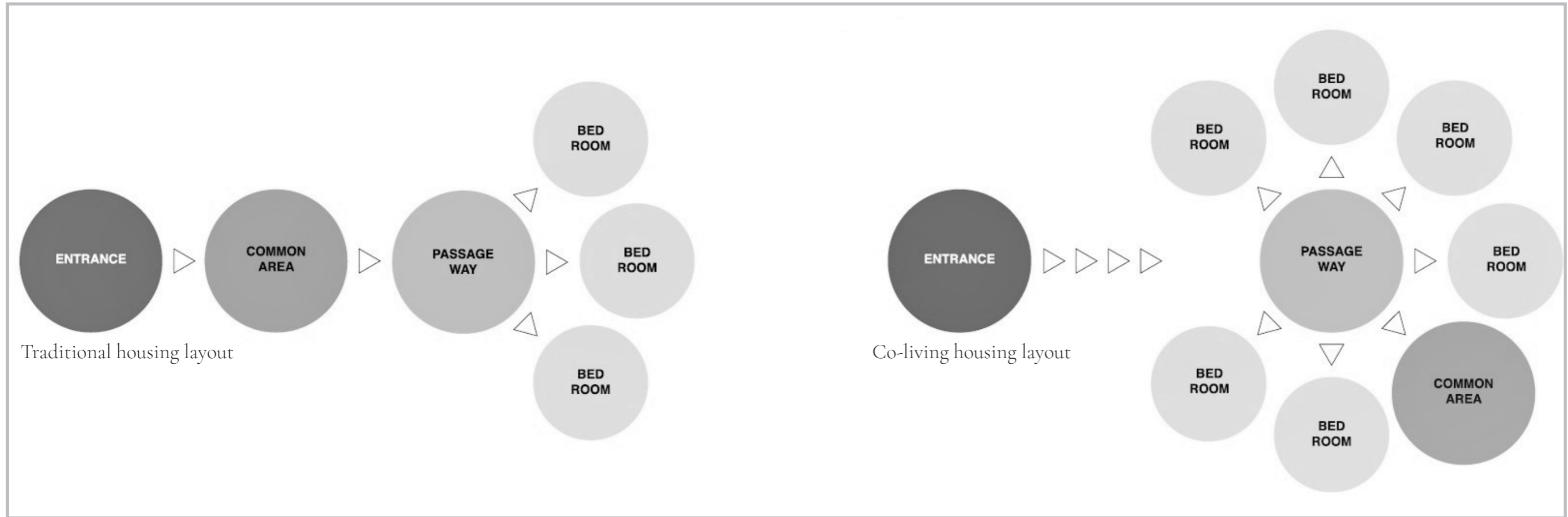
The hierarchy of sharing

Source: Co-living insights, 2021, P.14. Credit: Art of Coliving

Design principle

Sharing kitchen, living rooms, laundry and workspace

Co-living spatial layout

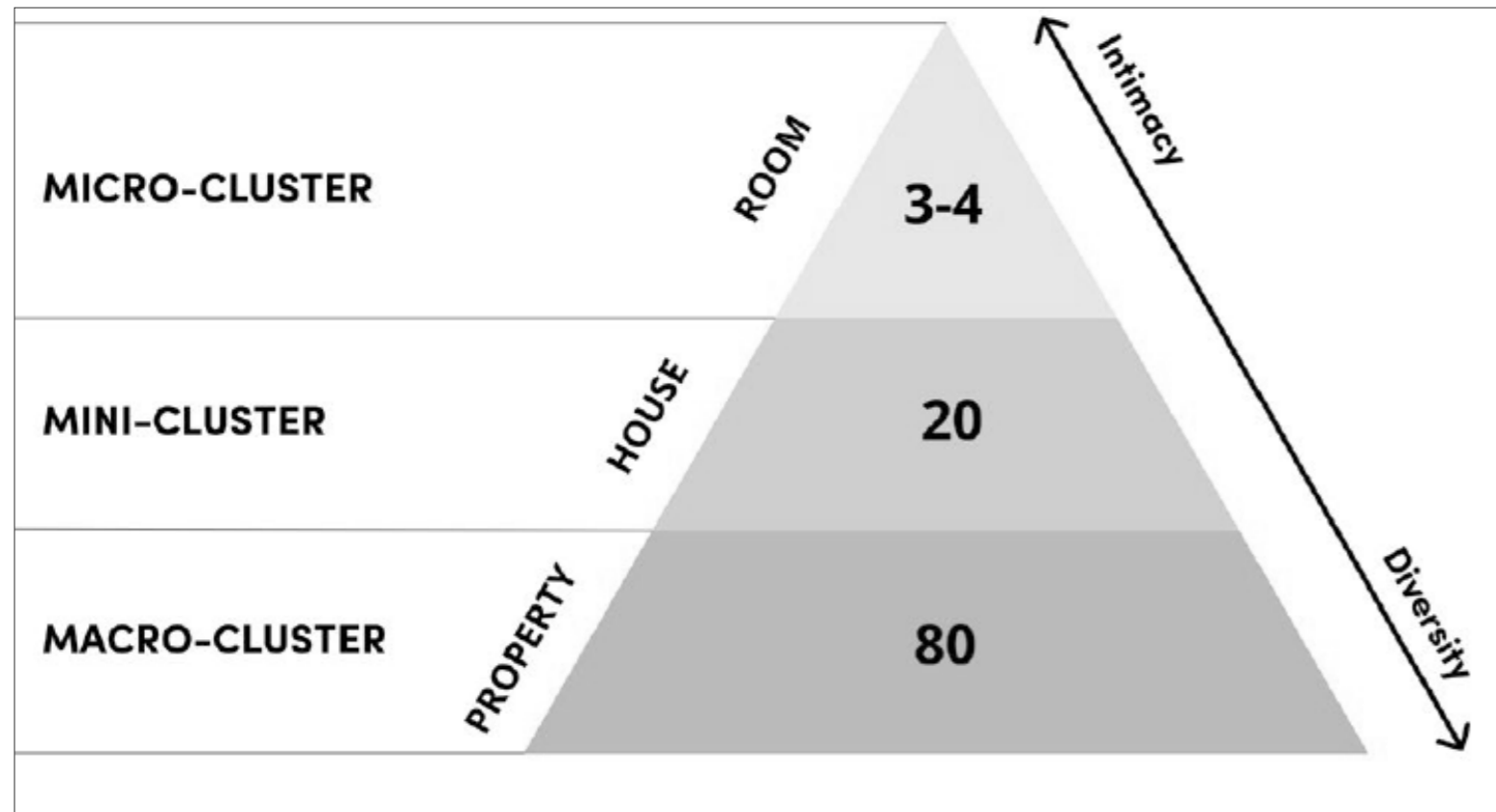


Spatial design hierarchy's difference between conventional home and cohousing

Source: Co-living insights, 2021, P.25. Credit: Conner Moore

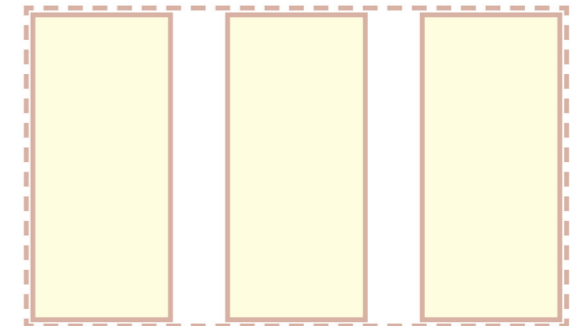
Clusters and groups size

How to stimulate social relationships between residents



Design principle

Divide the complex into multiple clusters



Clusters size illustration according to number of residents

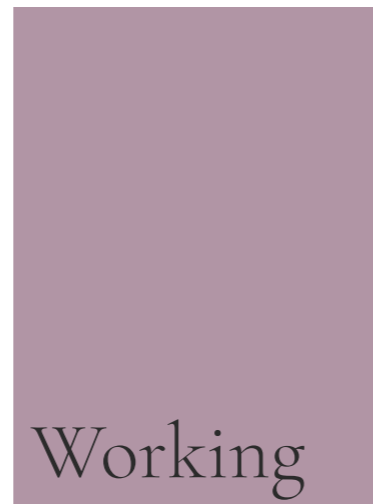
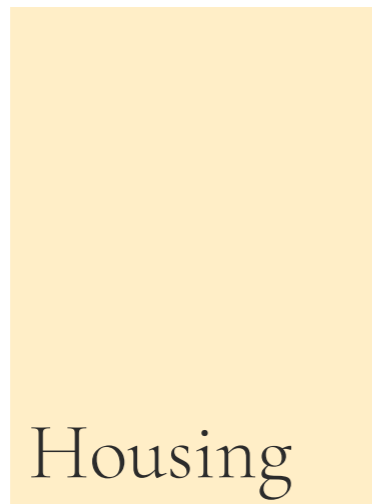
Source: Co-living insights, 2021, P.19. Credit: Art of Coliving

Co-living _Co-wokring

Enrichment through research: Spatial relation between working and housing

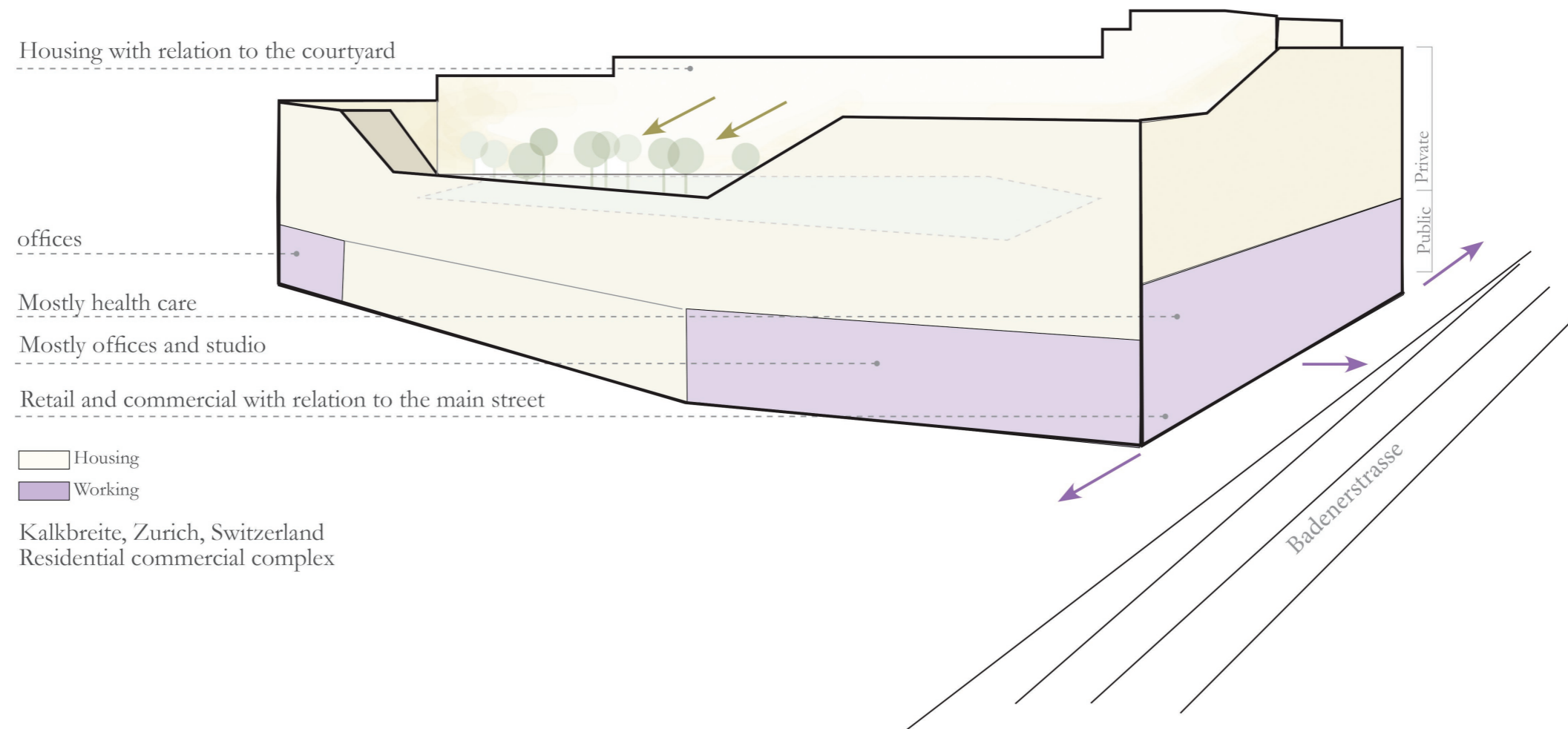
Co-housing model is usually associated with co-working spaces. Consequently, this model is meant for single young professionals and creative workers (Schmid et al., 2019, P.272-274)

Mixed use building



Research

Urban typology Spatial relation between working and housing

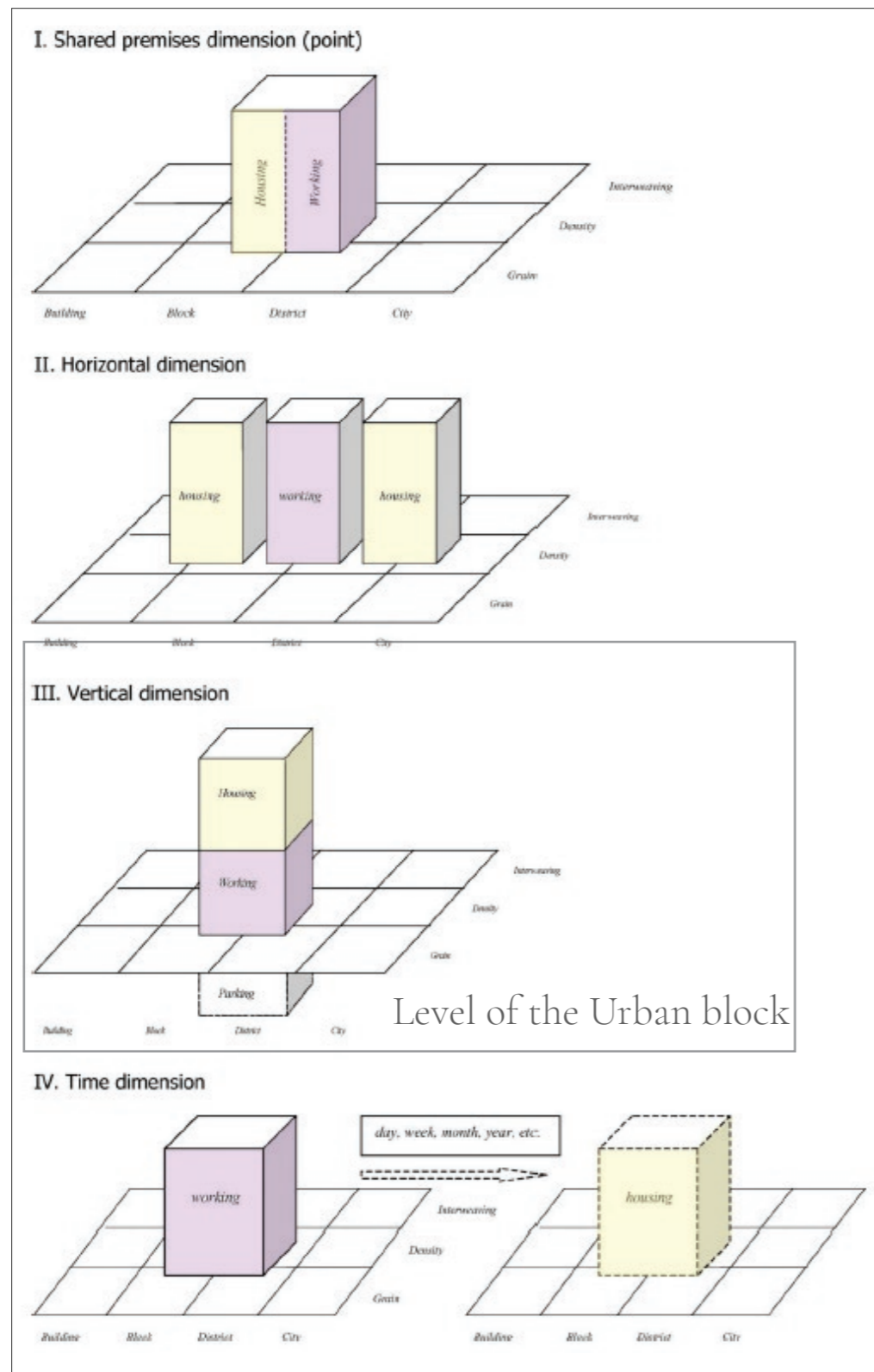


Case study: Kalkbreite, Zurich, Switzerland, 2014

Residential commercial complex which links the site again to the city by providing vigorous commercial plinth and by adding public green courtyard

Research

Urban typology Spatial relation between working and housing

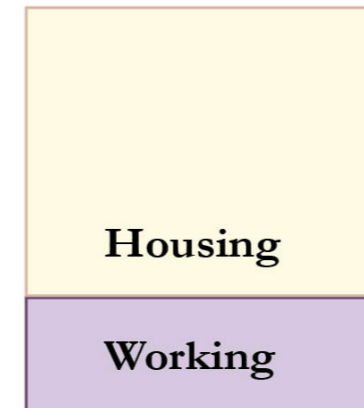


A conceptual model of mixed land use for four dimensions

Source: Mixed-use development: Theory and practice in Amsterdam's Eastern Docklands (Hoppenbrouwer & Louw, 2005, P.973).

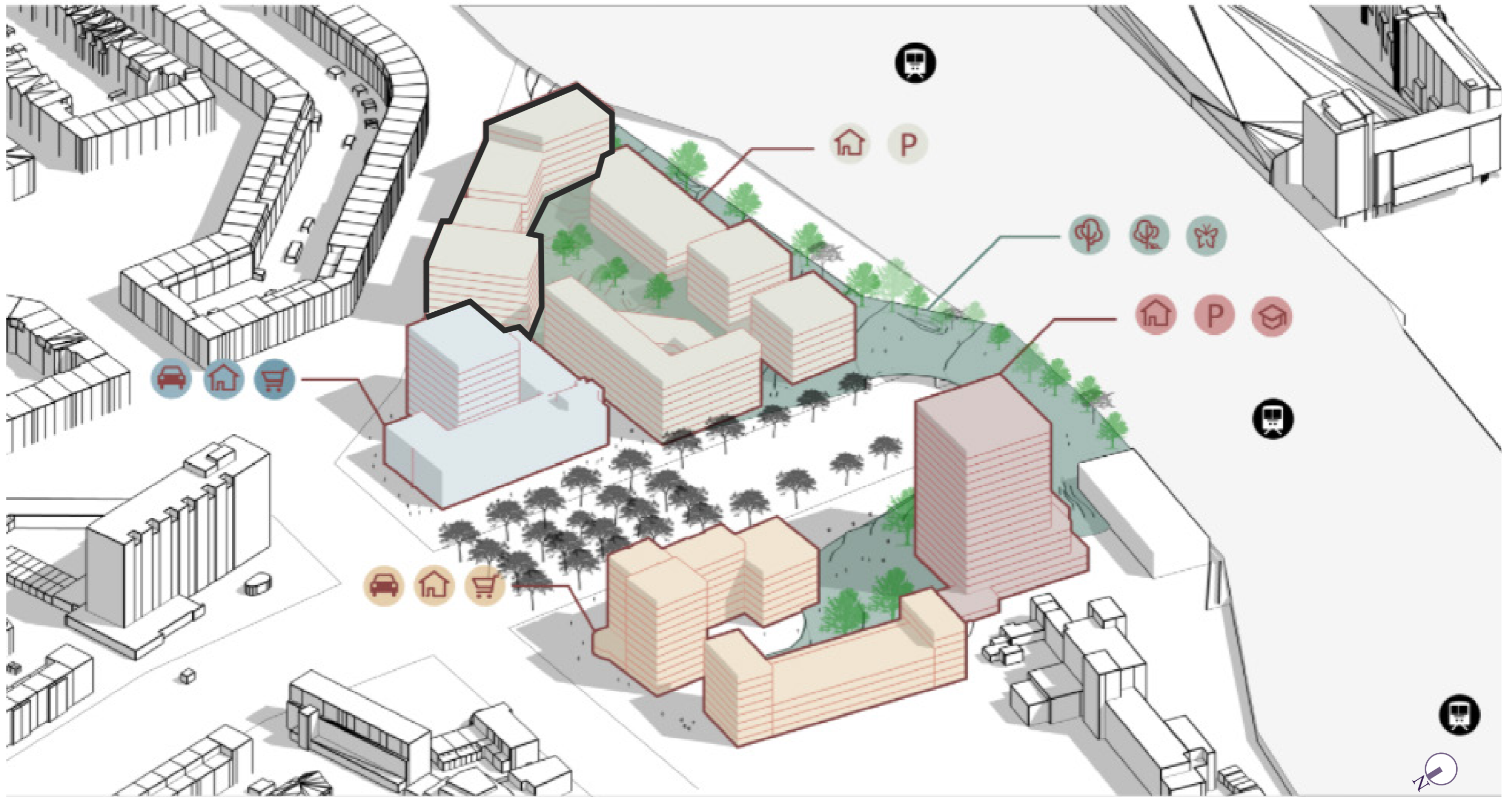
Design principle

Vertical urban typology



Urban study

Urban strategy: The forest edge

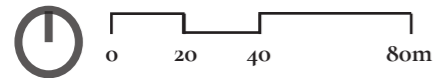


Source: Urban strategy the Ecology group Urban Strategy in the Advanced Housing Design, TU Delft, 2021

Chosen plot and relation to the site



Master plan
(Ecology Group)
1/2000



Urban Study Spatial relation between working and housing.



Urban Study The collective working and commercial program. Relation to The Forest.

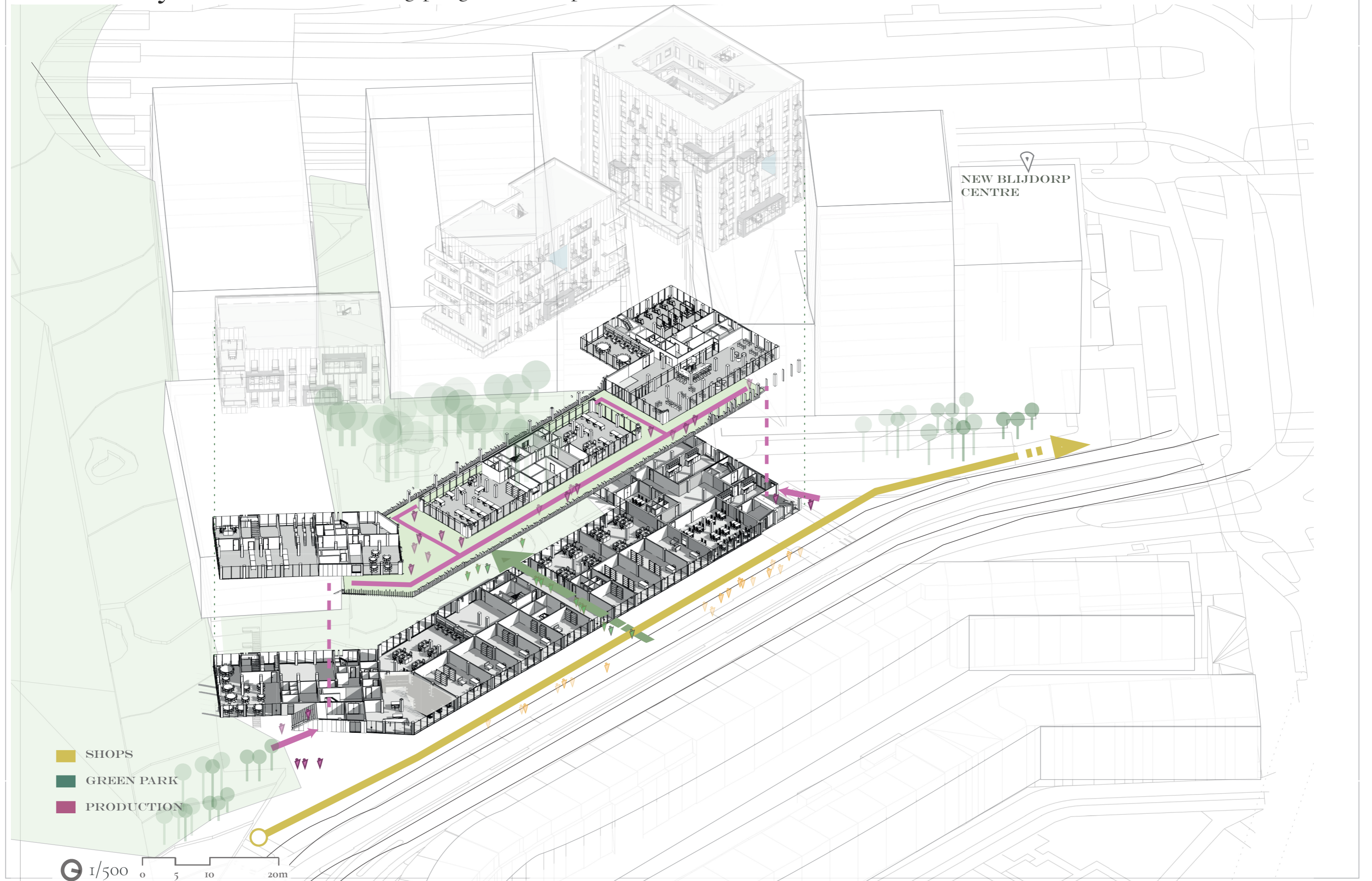


Urban Study The collective production program .



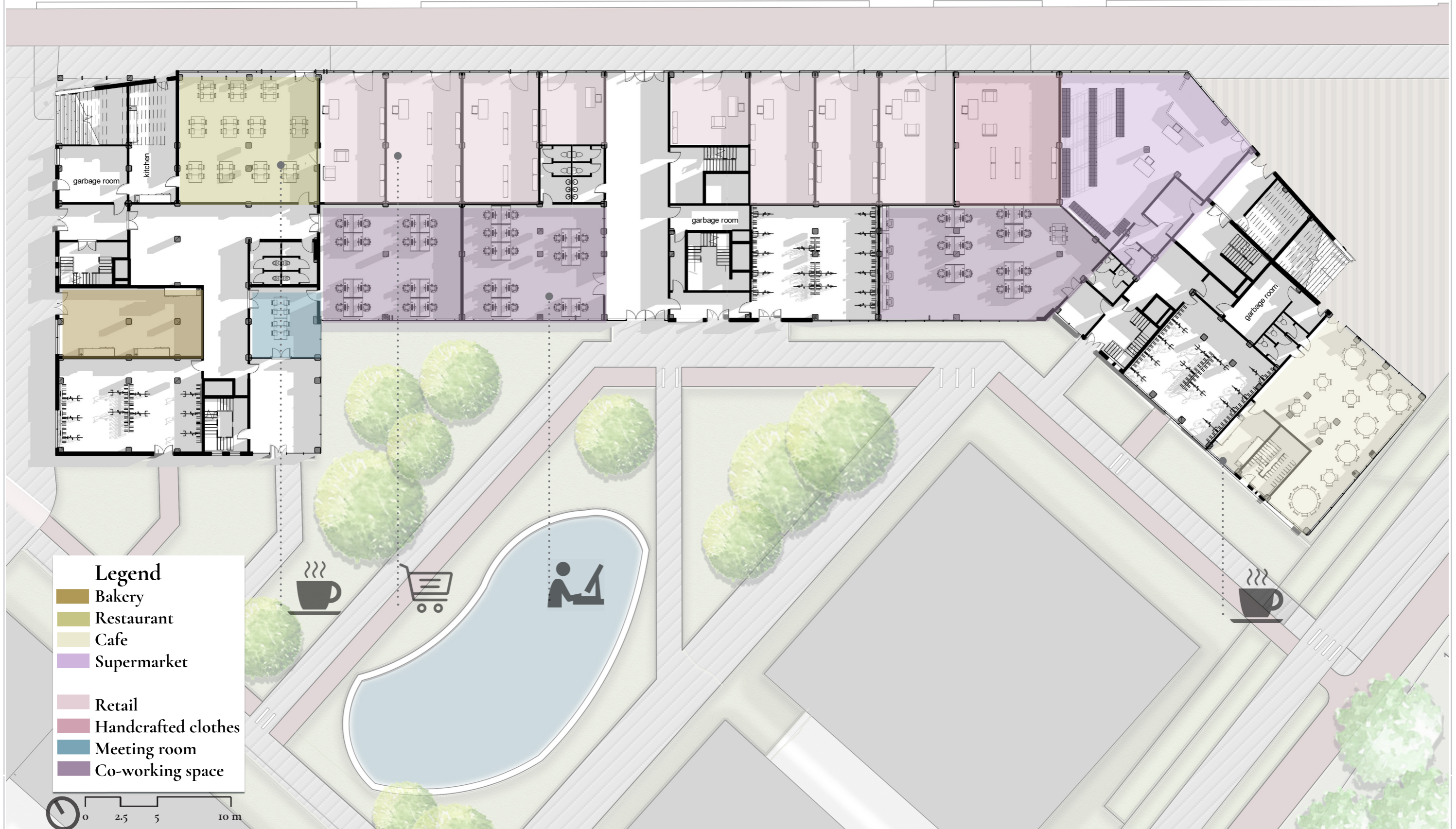
Urban Study

The collective working program and spatial relation to the site.



D e s i g n : C o - w o r k i n g

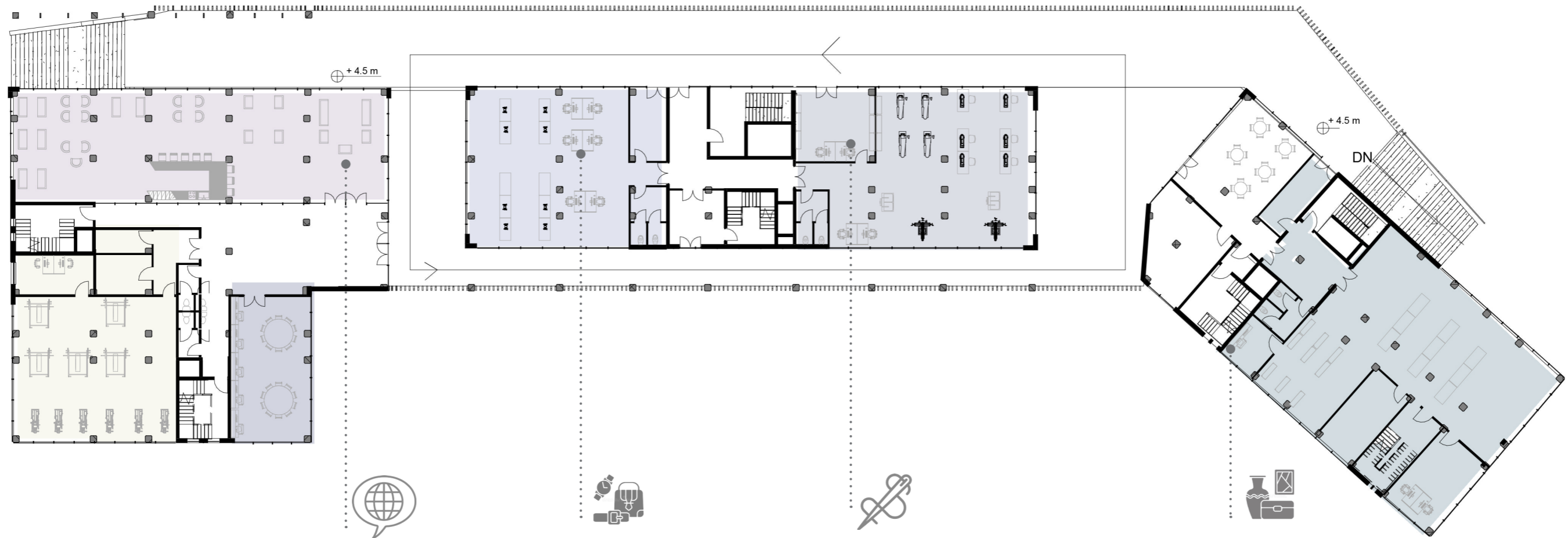
Commercial and co-working groundfloor plan



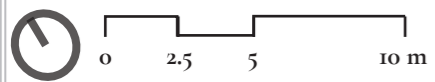
Ground floor 1/250

Public Catering and shopping facilities & collective co-working spaces

Production floorplan



- Legend**
- Louange area
 - Gym
 - Language exchange spot
 - Jewellery workshop
 - Sewing workshop
 - Handcrafted decoration workshop



First Floor: Production 1/250

Second street: collective production zones within green circulation

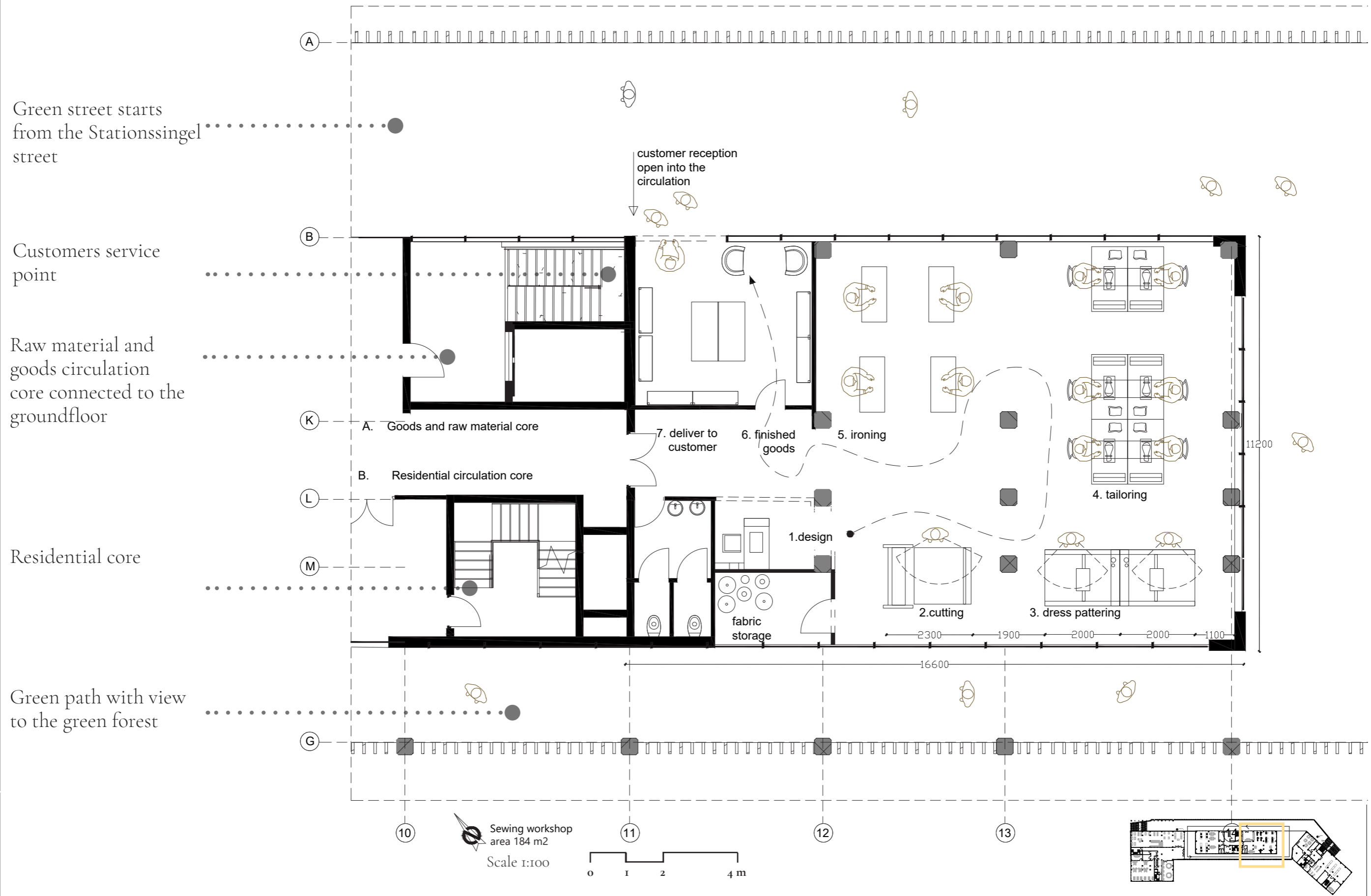


The enter-way to the production street
from the public square impression



Production street impression

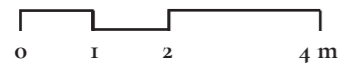
Example of production space: sewing workshop



The production path and co-working space relation with the green forest



Perspective view 1/100

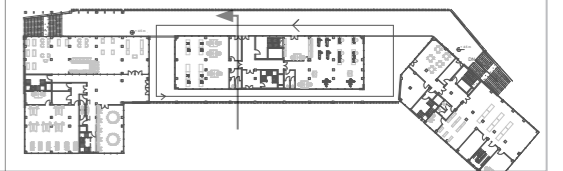


Public circulation around the Production area

Co-working Space with link into the green forest which increases the workers' consternation

Production zone
The jewellery workshop

Urban integration hub: Lounge area



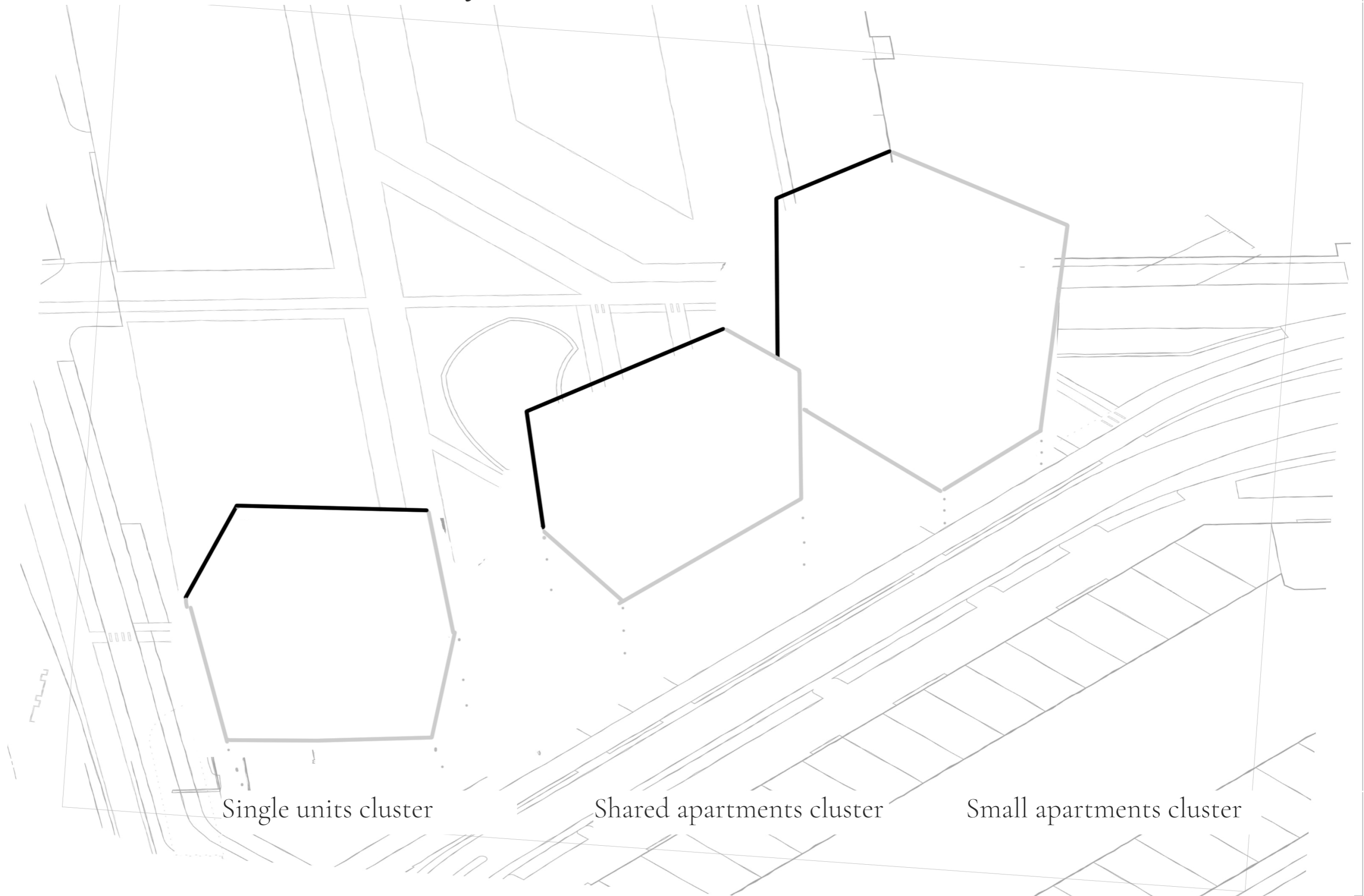
Section: relation production and working environment with the site and the residential environment



D e s i g n : C o - l i v i n g

Residential clusters

Three clusters to increase social intimacy

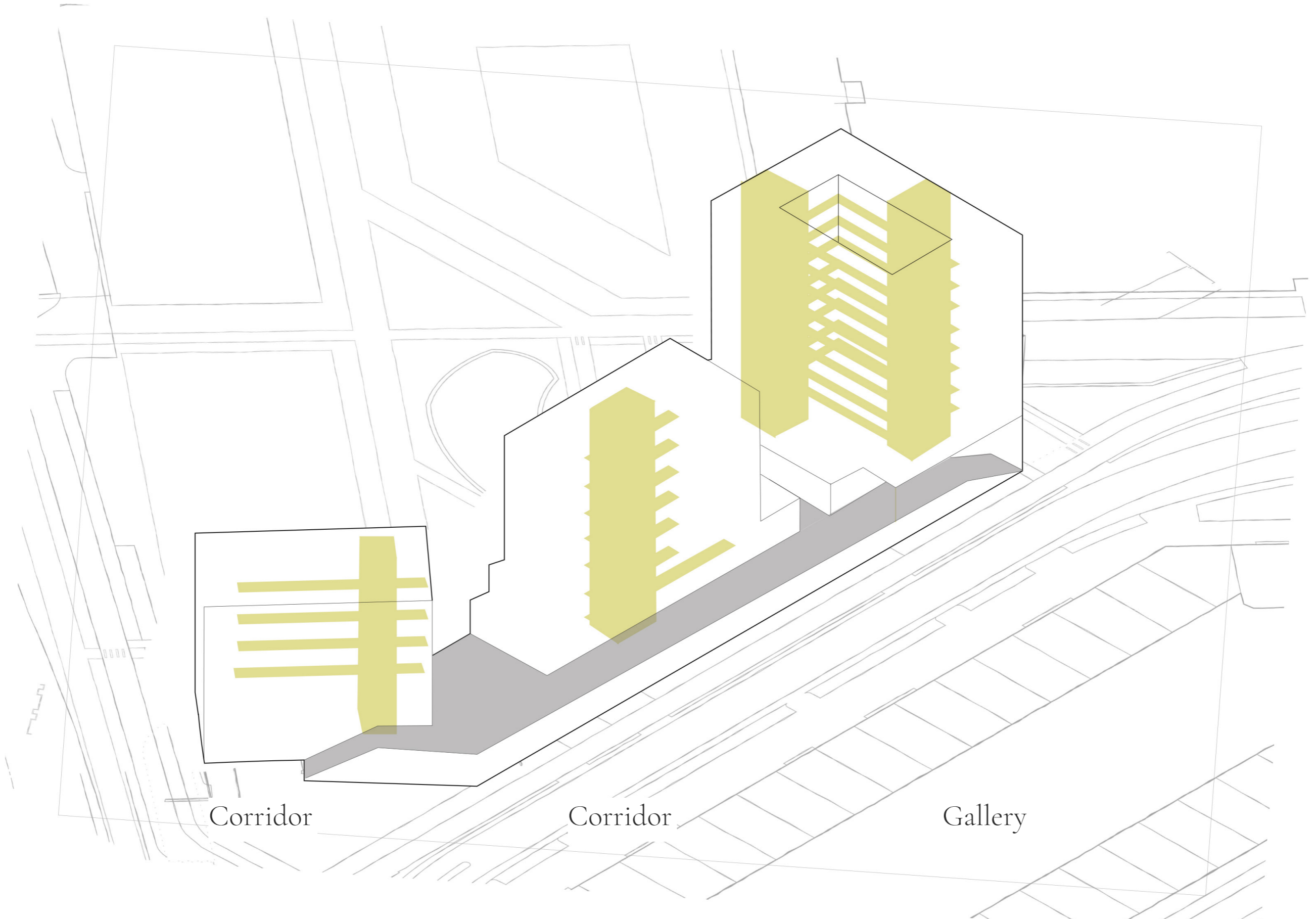


Single units cluster

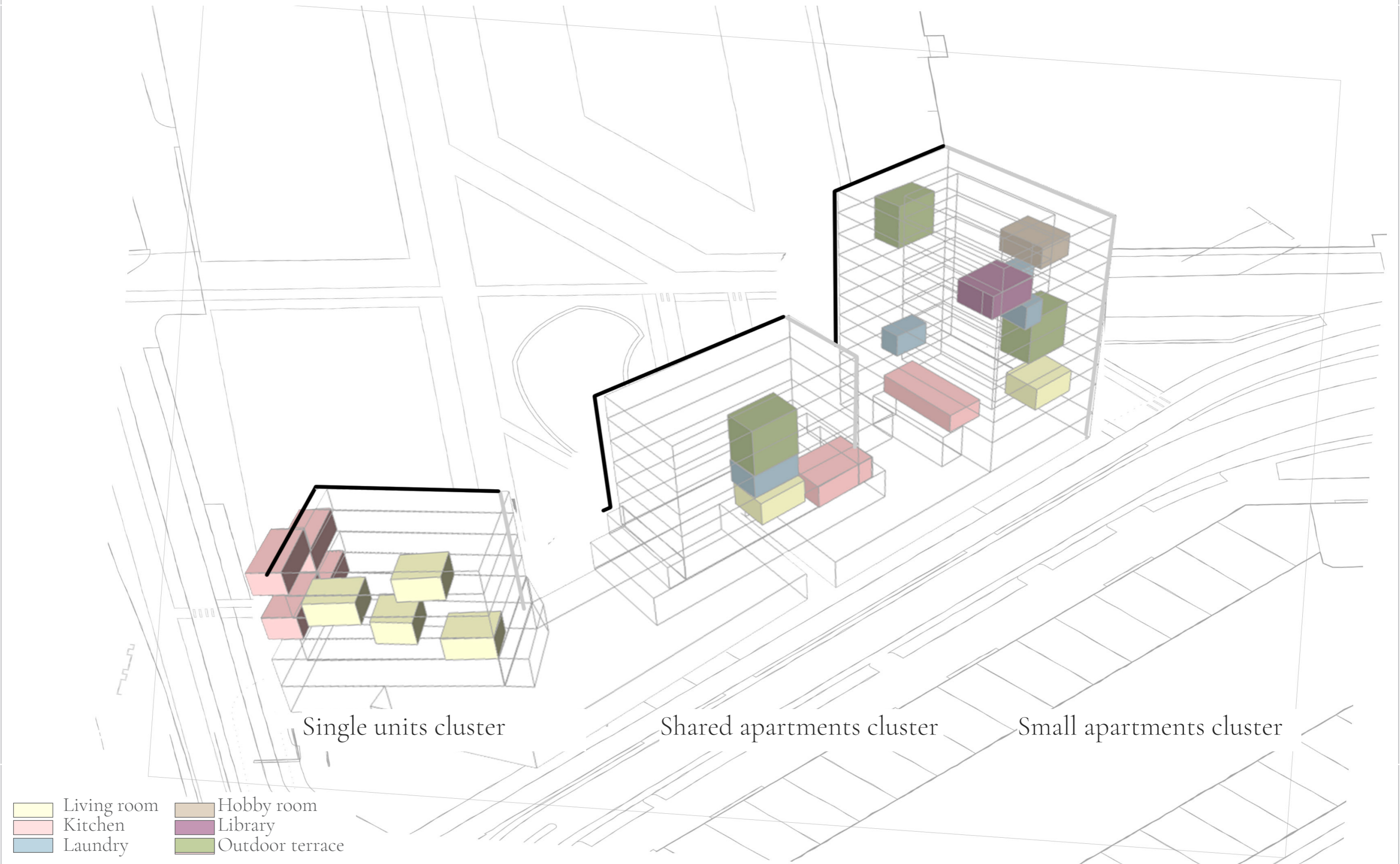
Shared apartments cluster

Small apartments cluster

Circulation typologies



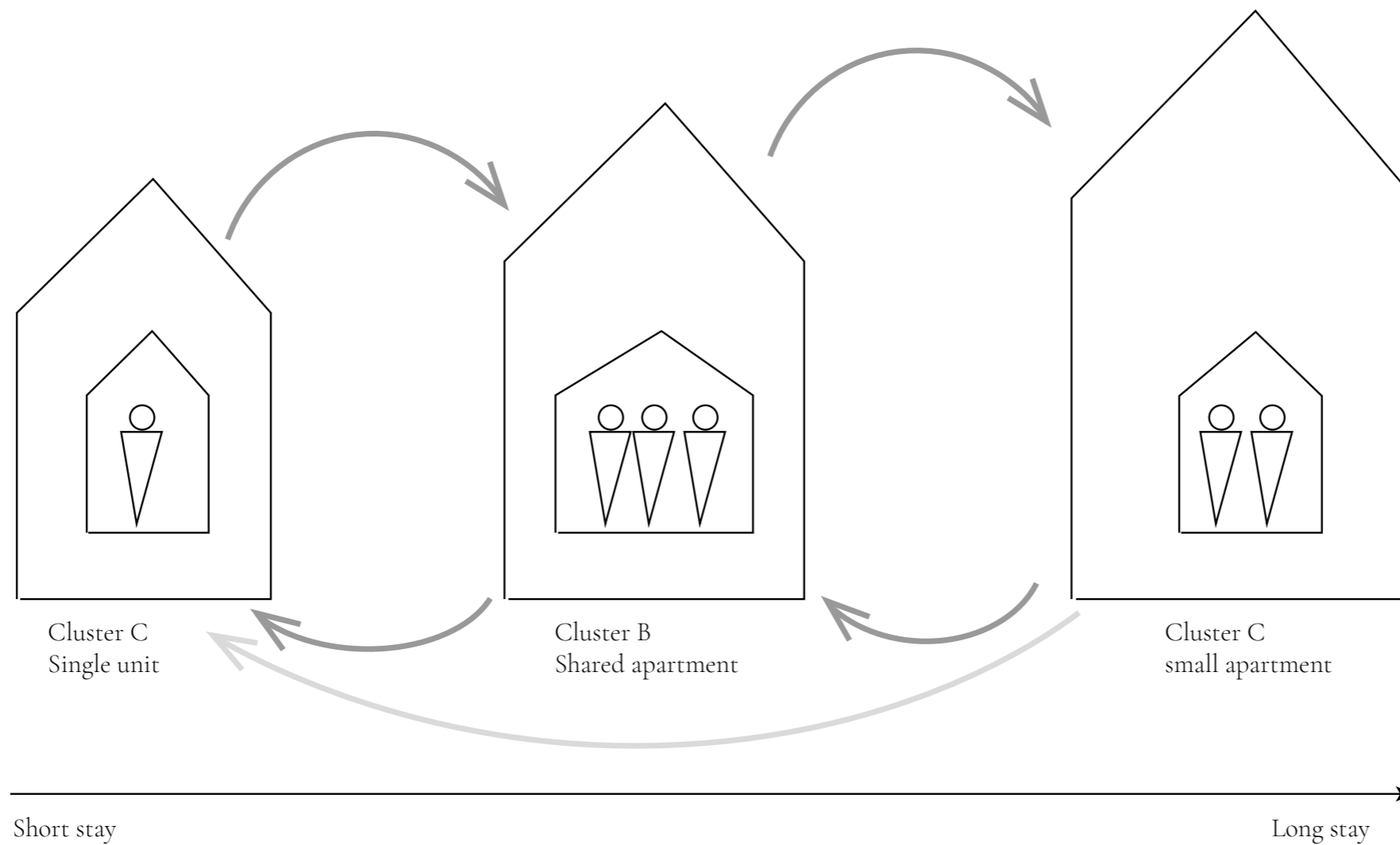
Clusters' collective program



Section: relation to the context, green square, stepped clusters.

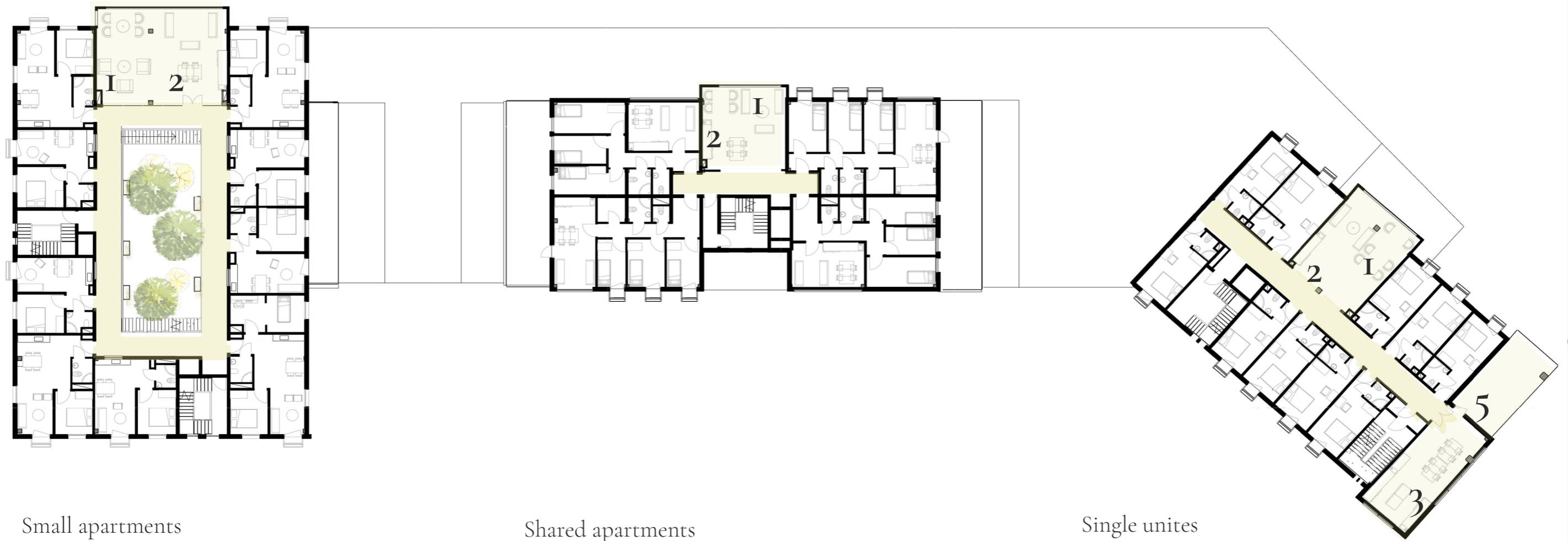


Housing mobility



Housing mobility depending on resident's life-phase
(independent single- with friends- couple- divorced)

Typical floorplan



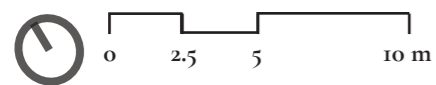
Small apartments

Shared apartments

Single unites

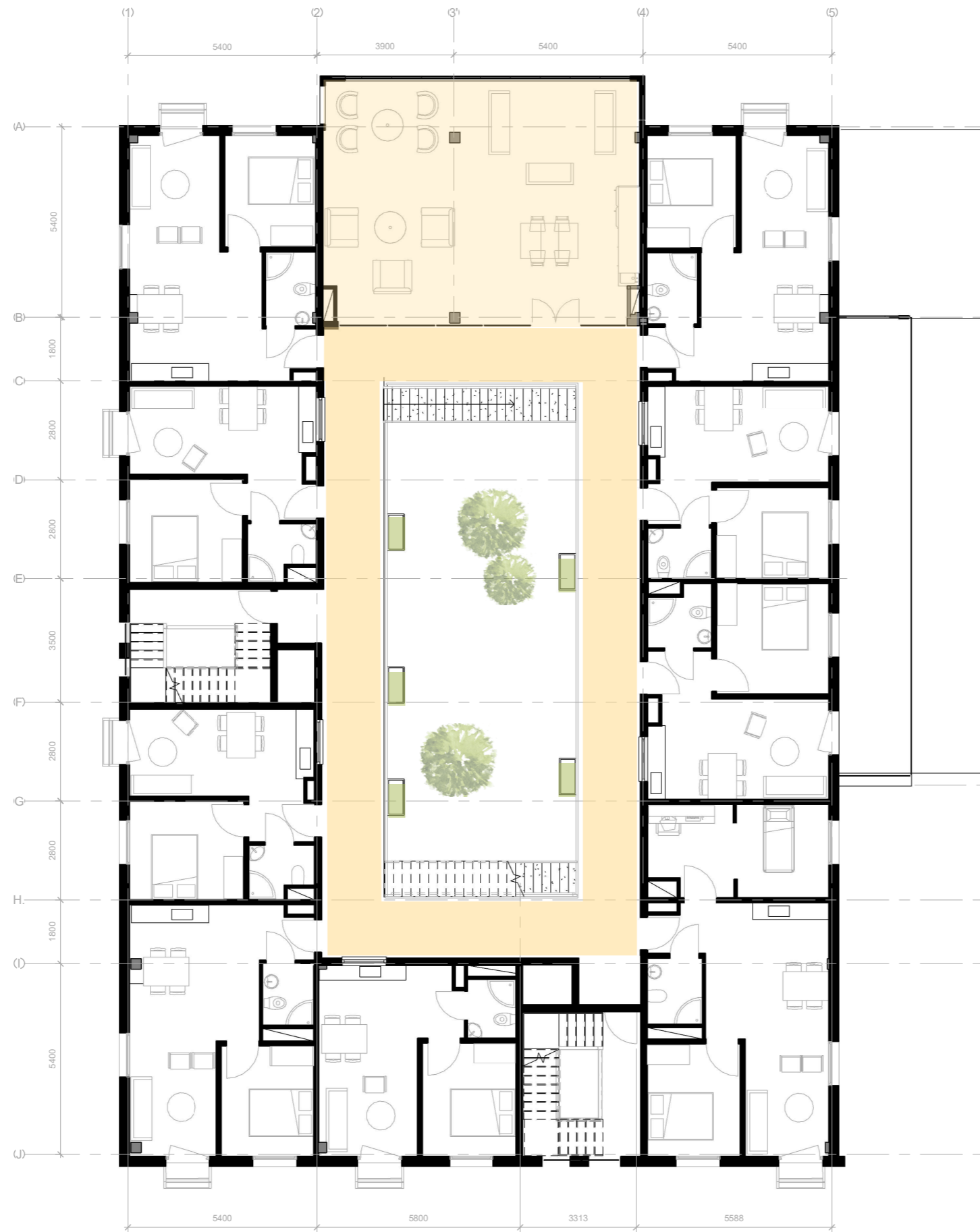
- Shared spaces
- Circulation

Typical Residential Floor 1/250
Third level

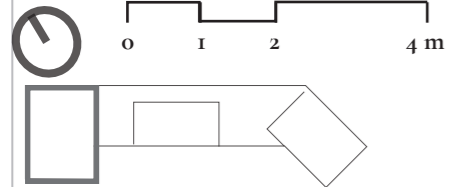


- 1 Collective living room
- 2 Kitchenette
- 3 Co-kitchen
- 4 Co-laundry
- 5 Co-terrace (floor scale)

Small apartment cluster sharing collective spaces on the scale of cluster



Typical Floorplan Cluster A
I/100



Small apartment cluster

Dwellings typologies



1/50



0 0.5 1 2 m

Small apartment cluster

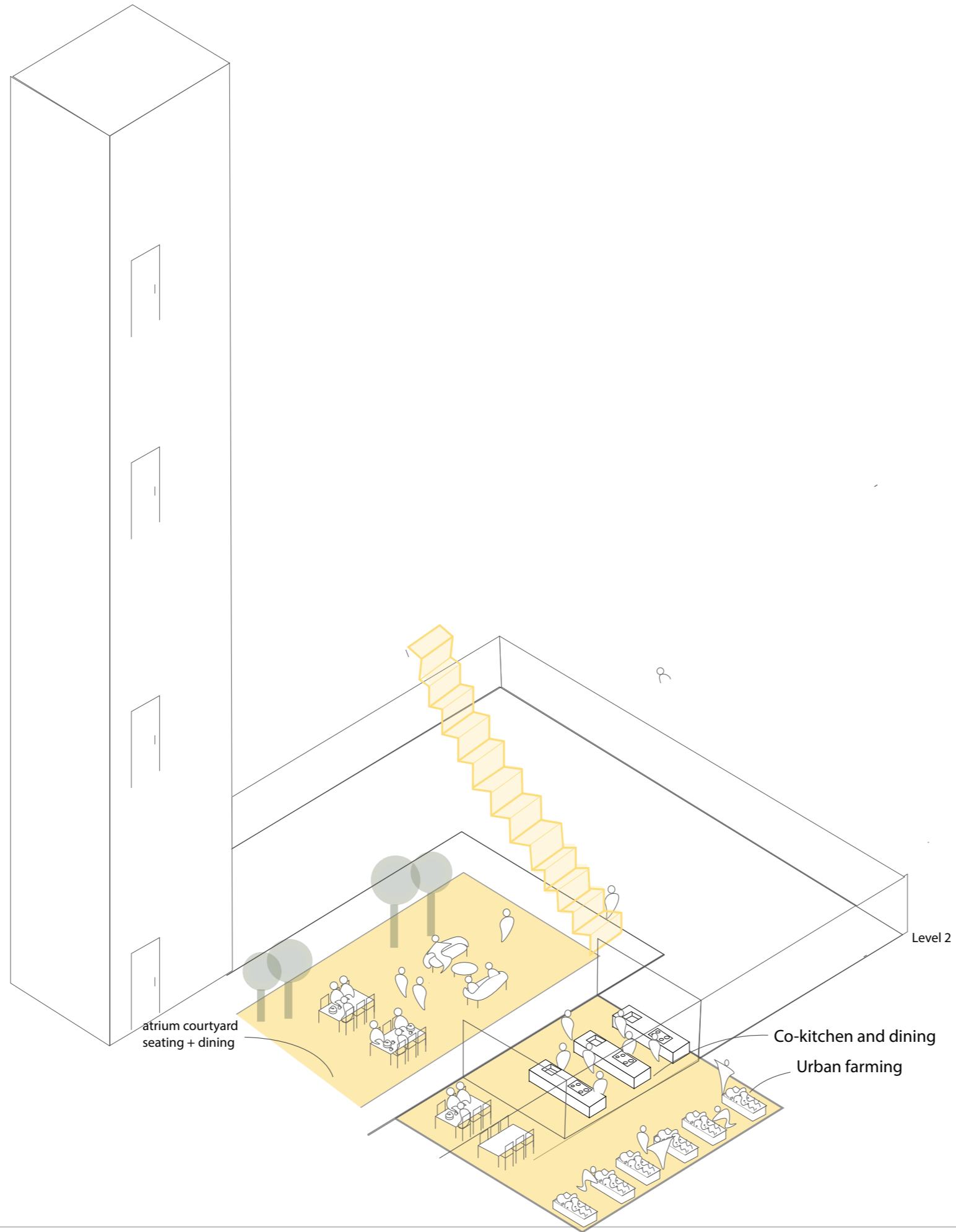
Continuous circulation inside the atrium links all dwelling easily with collective space



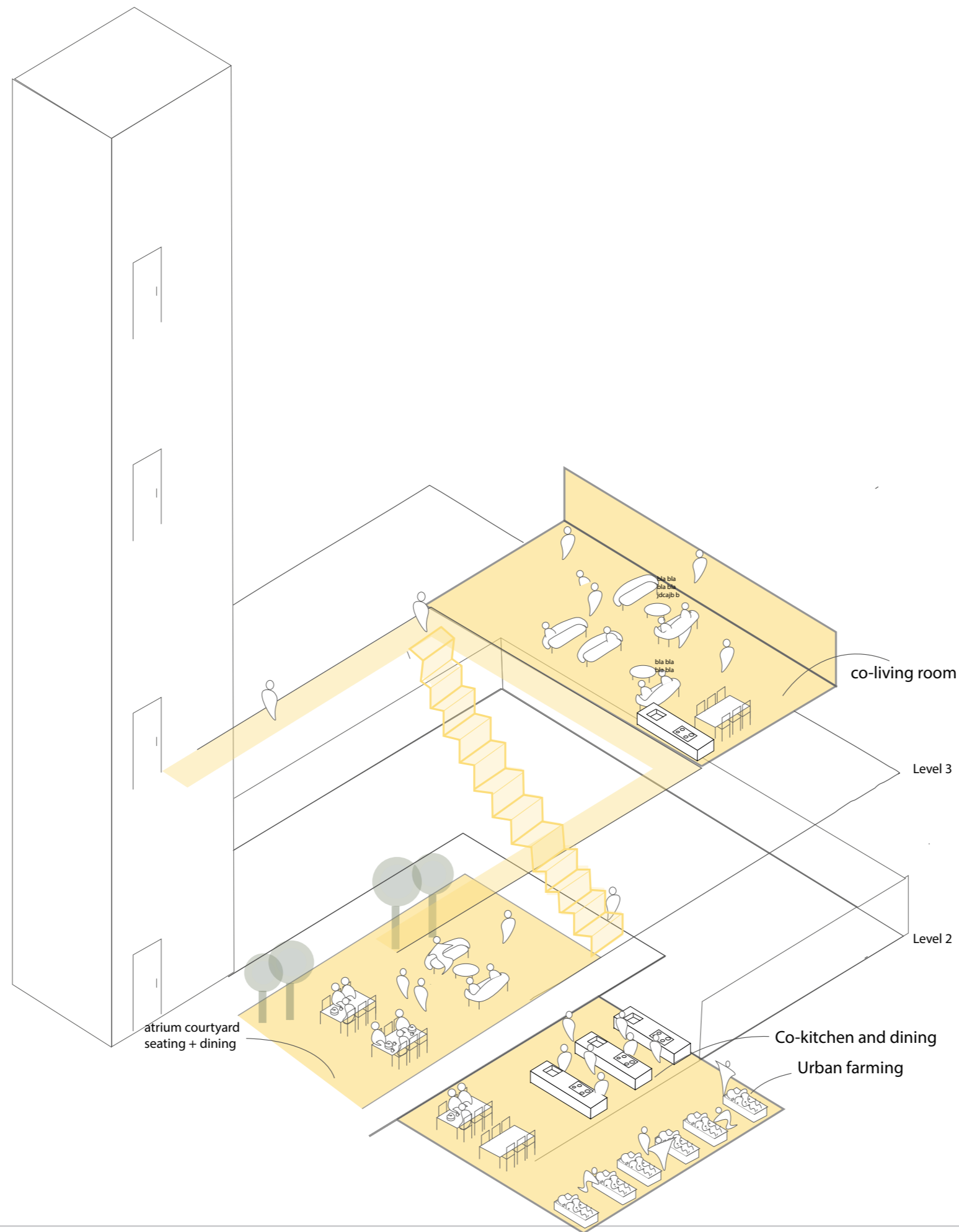
Small apartment cluster

Continuous circulation inside the atrium links all dwelling easily with collective space

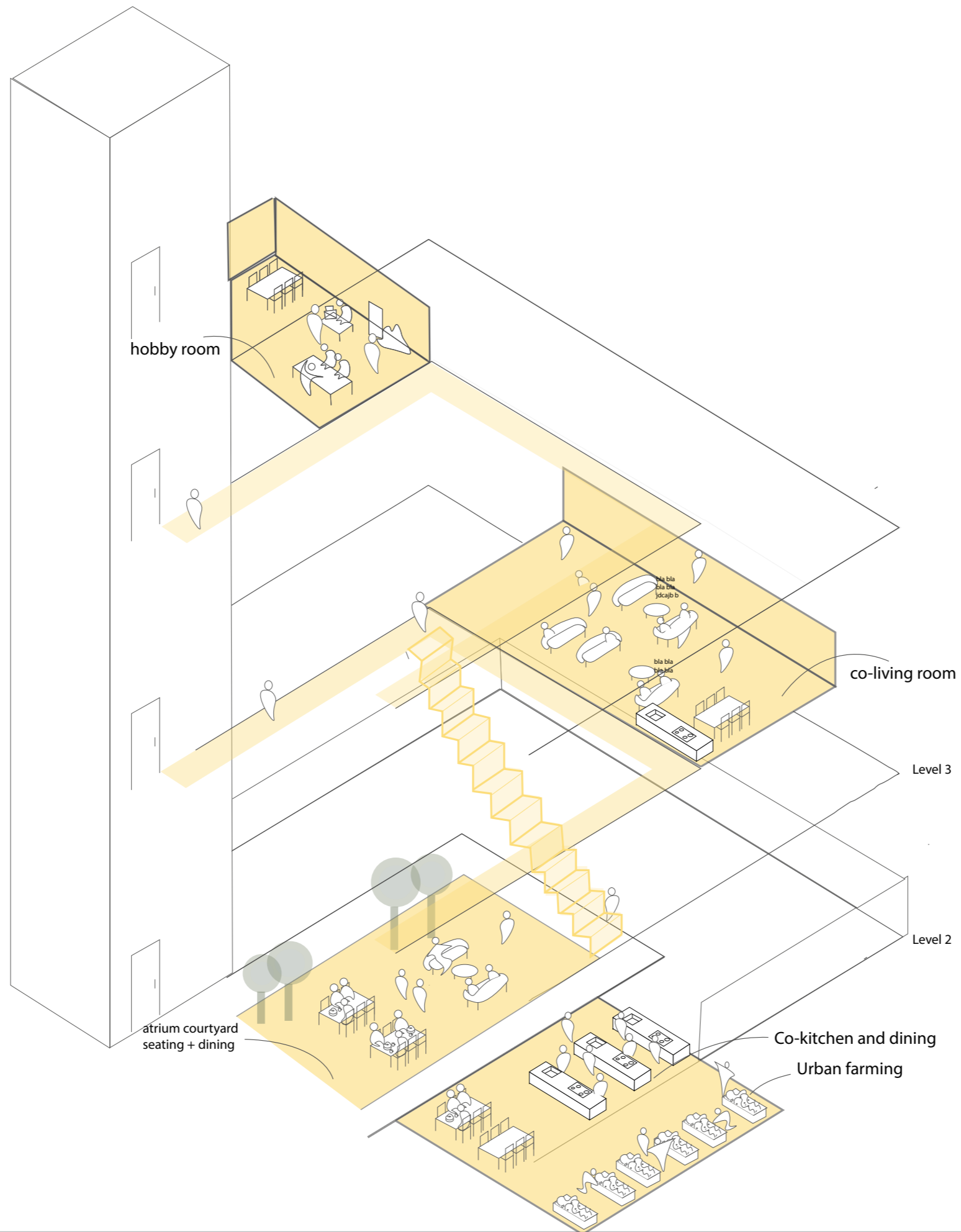




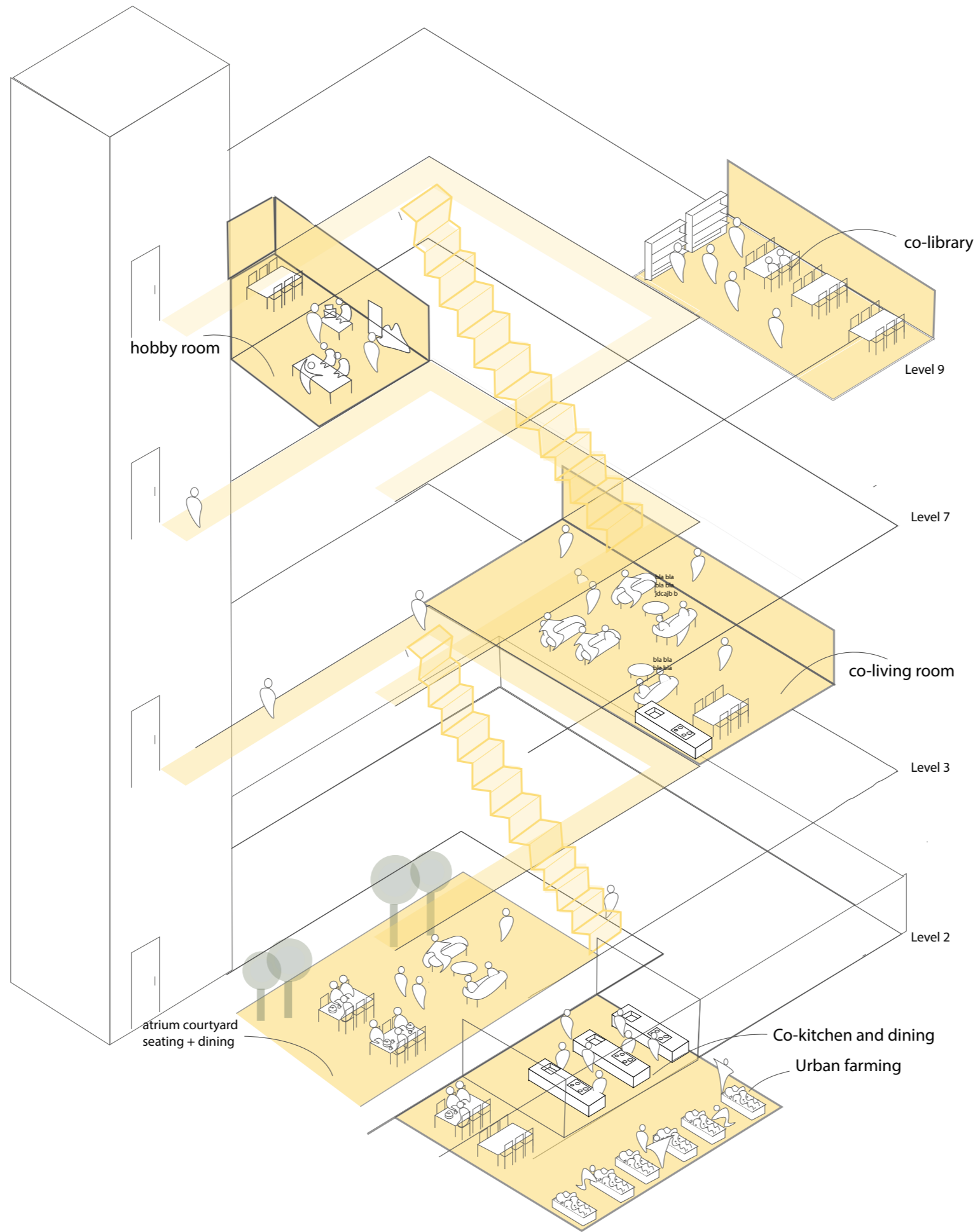
Circulation-collective spaces



Circulation-collective spaces



Circulation-collective spaces



Circulation-collective spaces



Transparent
welcoming
shared spaces

Gallery typology
increases social
encounter

Open kitchen window
towards the atrium to create
more social encounters

Bamboo veneer provides home-
likely sphere and feeling

Atrium impression

F a c a d e d e s i g n

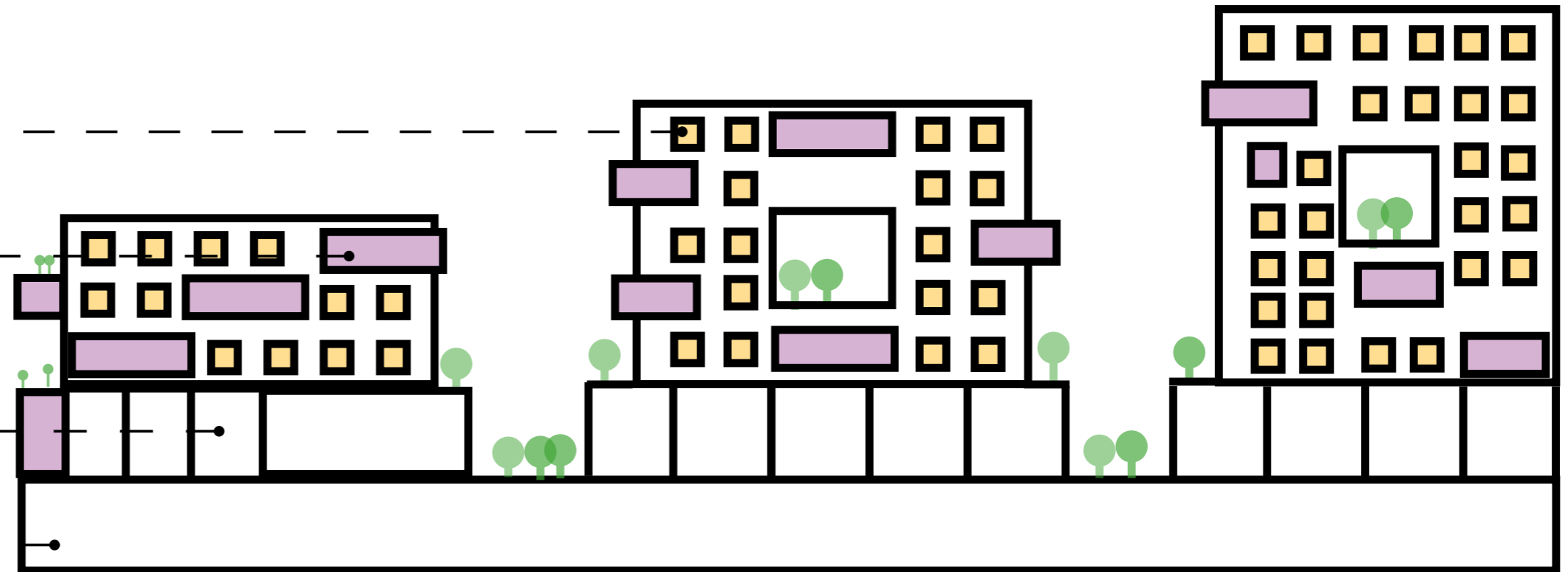
Facade design

Standardized all private unites

Cantilever pattern for collective
space in the clusters

Semi-open Public facade

Open public plinth



All dwellings are patterned in a similar layout and material. This is a symbol of **equality and similarity** between all residents who live behind this façade regardless of their ethnic backgrounds.

The communal spaces have another **outstanding** pattern and texture.

Material choice : cultural-sustainable choice

Facade cladding

The black brick as **Dutch** and European material. It is also very sustainable material



Bamboo panels . Wood is natural material and it is **Worldwide** spread .It gives home-feeling



Material choice : cultural-sustainable choice

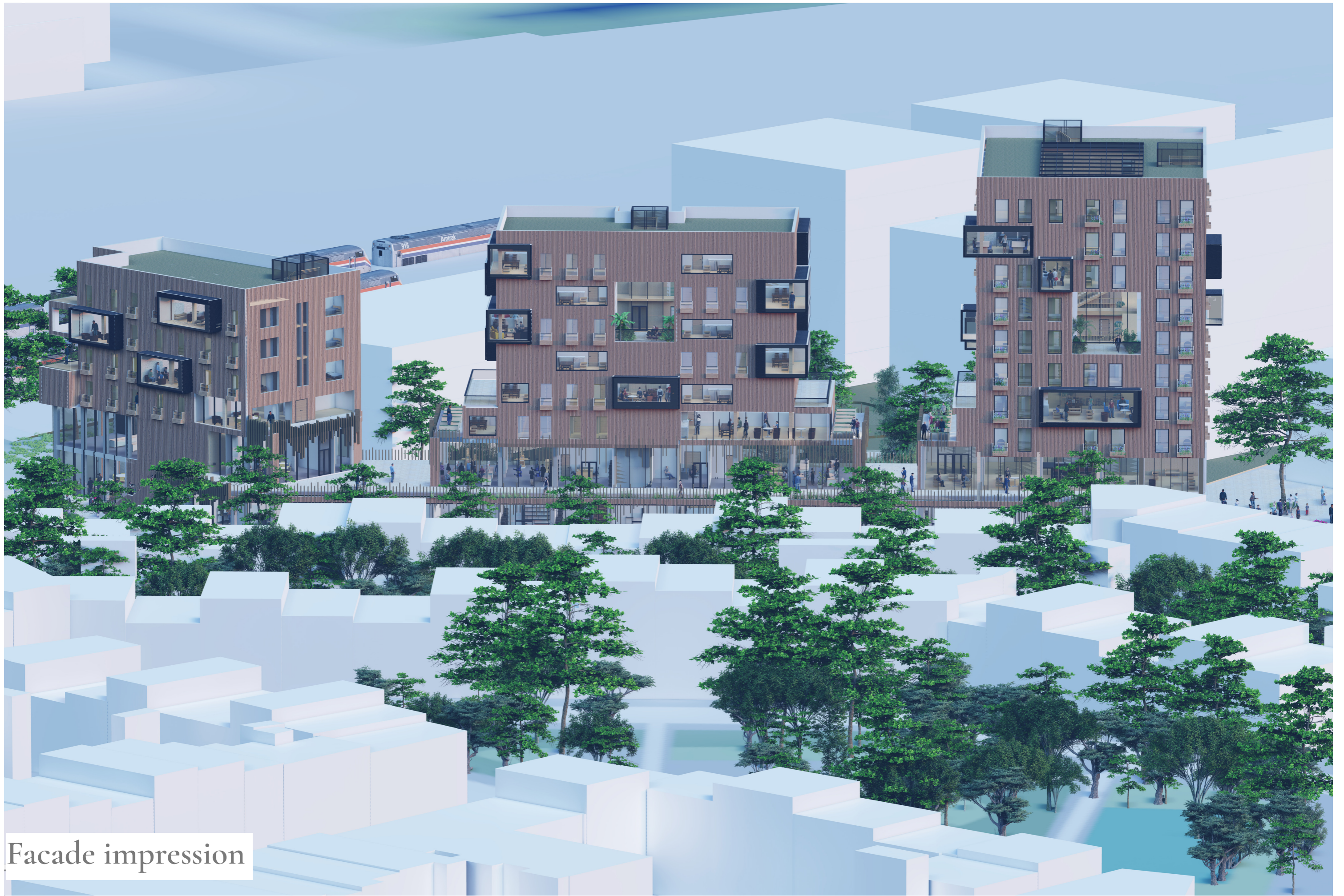
Interior cladding



Middle east. Natural stone application in all indoor shared spaces



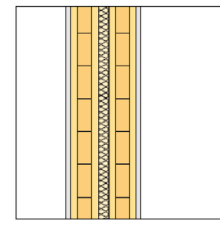
Rammed earth panels widely used in **Africa**. The application in all outdoor shared spaces



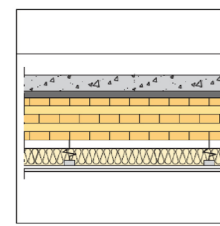
Facade impression

Building technology

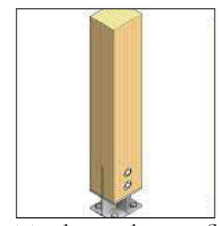
Structure plans



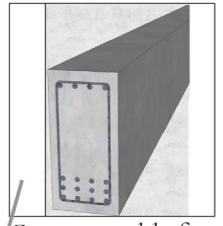
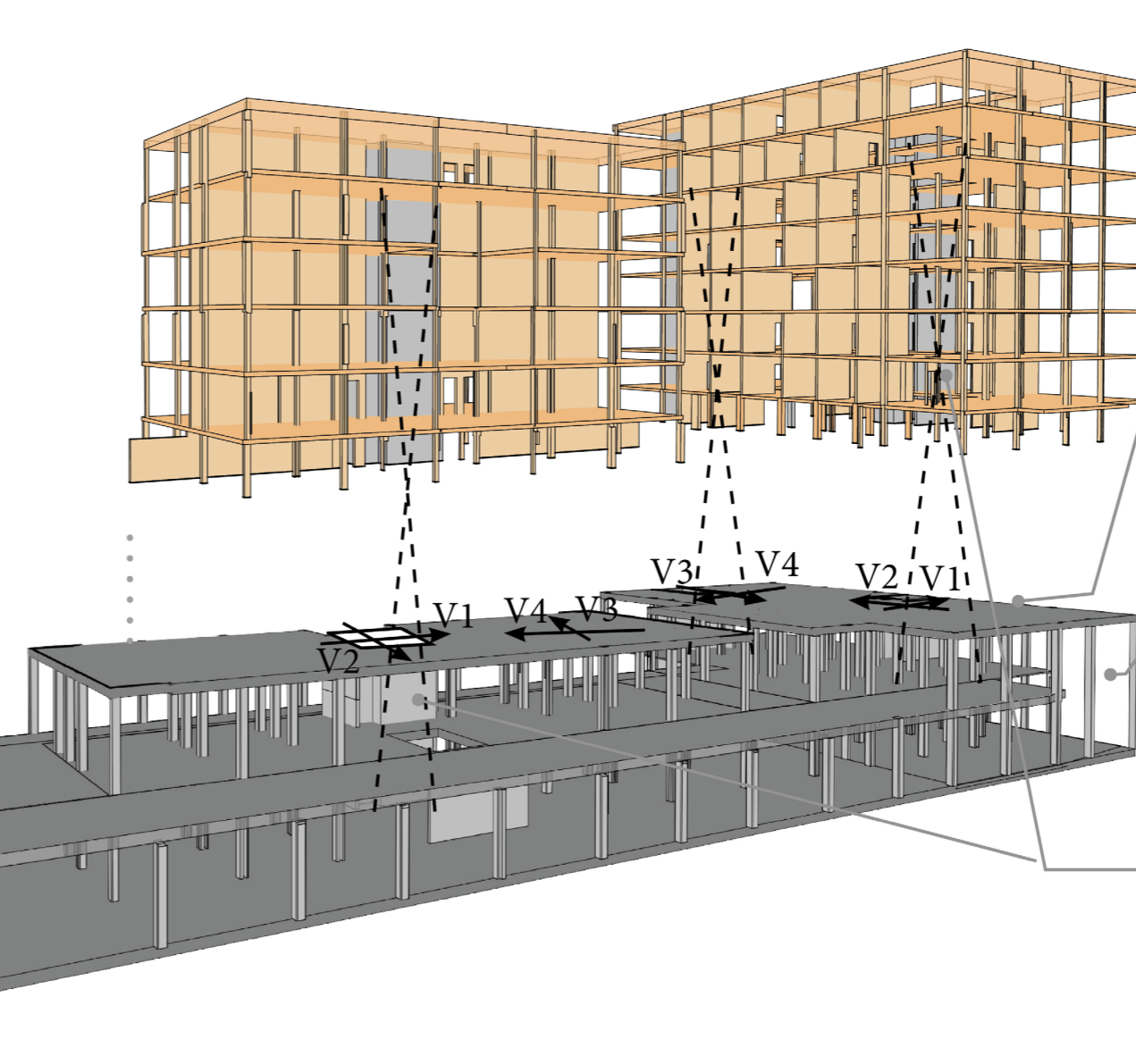
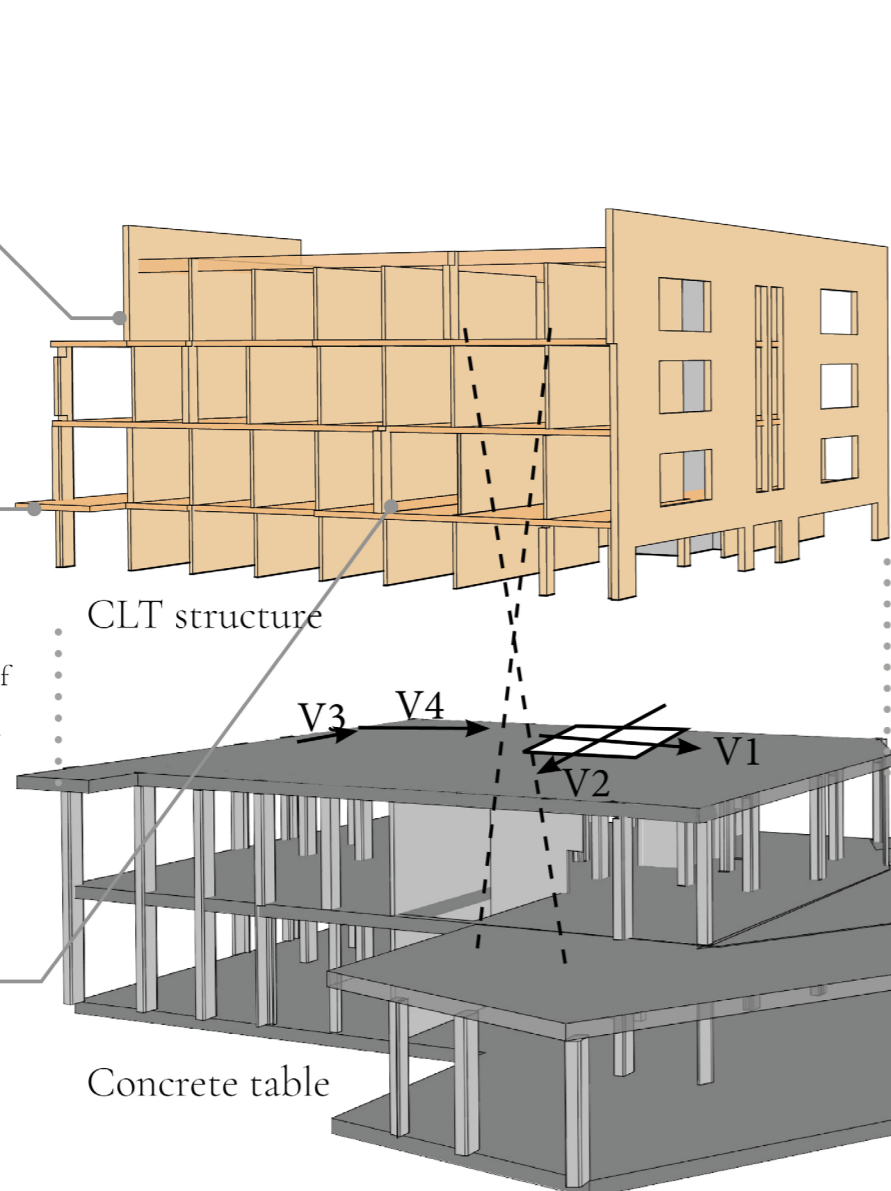
CLT ball-bearing panel of
2 plasterboard
2 CLT panel and
insulation in-between



Load-bearing CLT floor of
concrete coating for heat-
ing system, impact insula-
tion, CLT floors suspended
ceiling with insulation



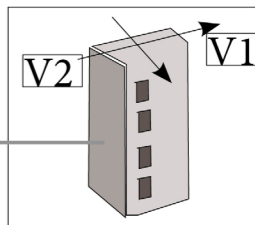
Timber columns for
flexible and big span
in collective space



Concrete table for the
begin of the building.
Concrete beams



Concrete columns which
provides flexibility and
big spans

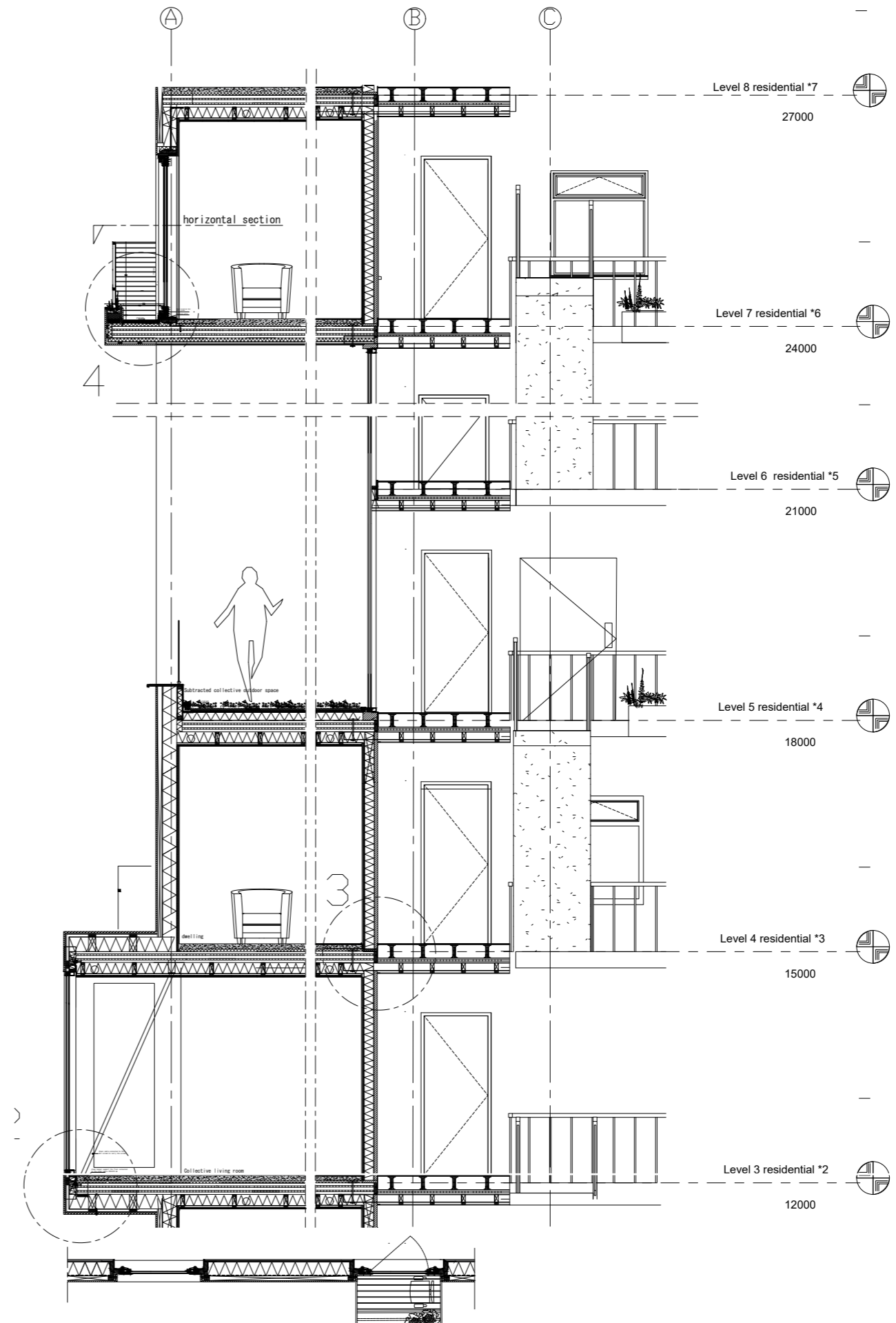


Multiple concrete cores,
in each complex, to
provide vertical stability
in help with the other sta-
bility elements integrated
into the walls

Facade fragment

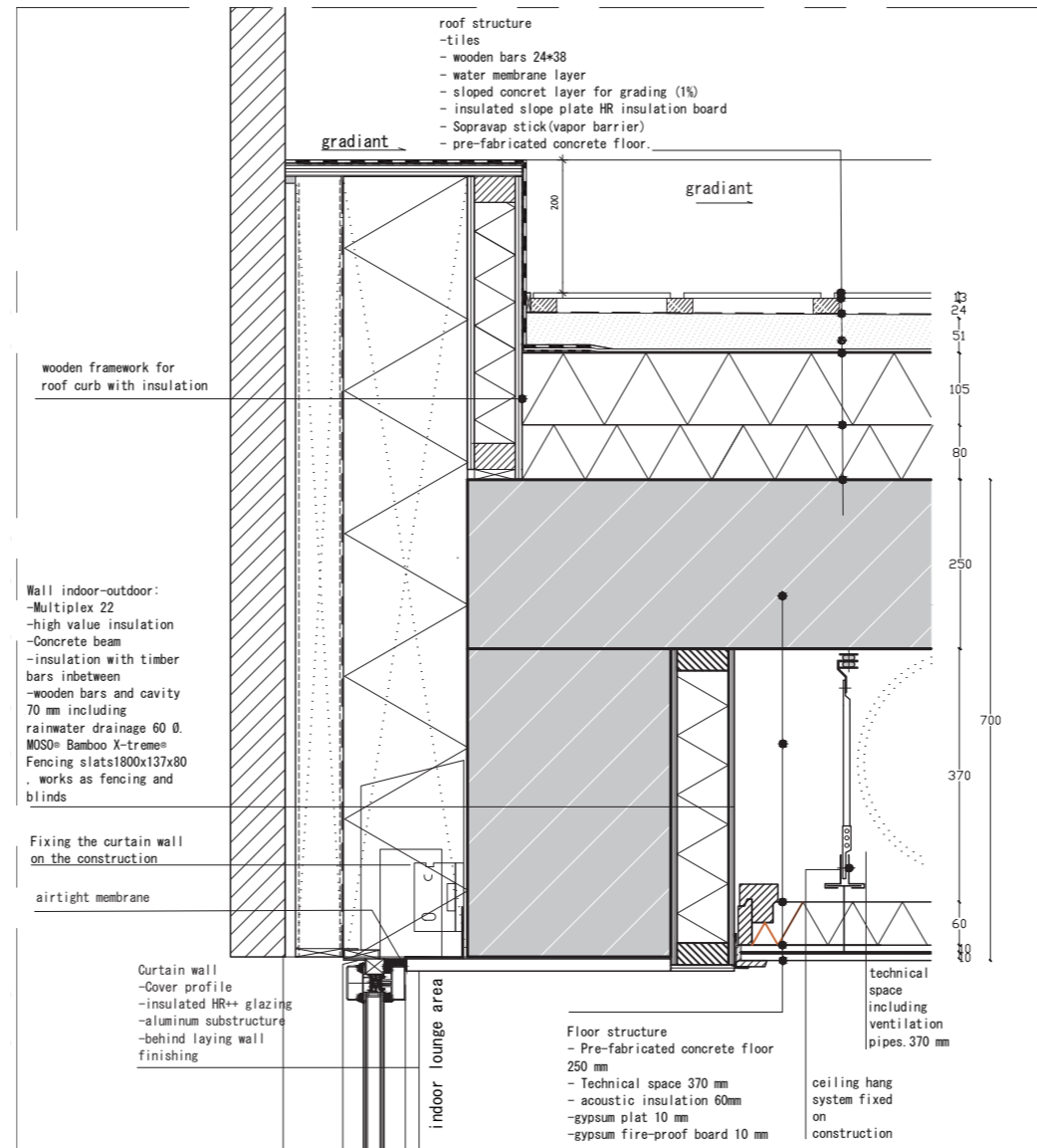


1/50 0 0.5 1 2 m

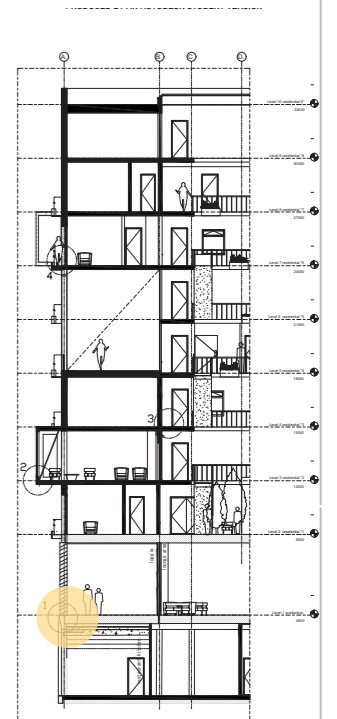


Detail I

Production area roof's acoustic insulation

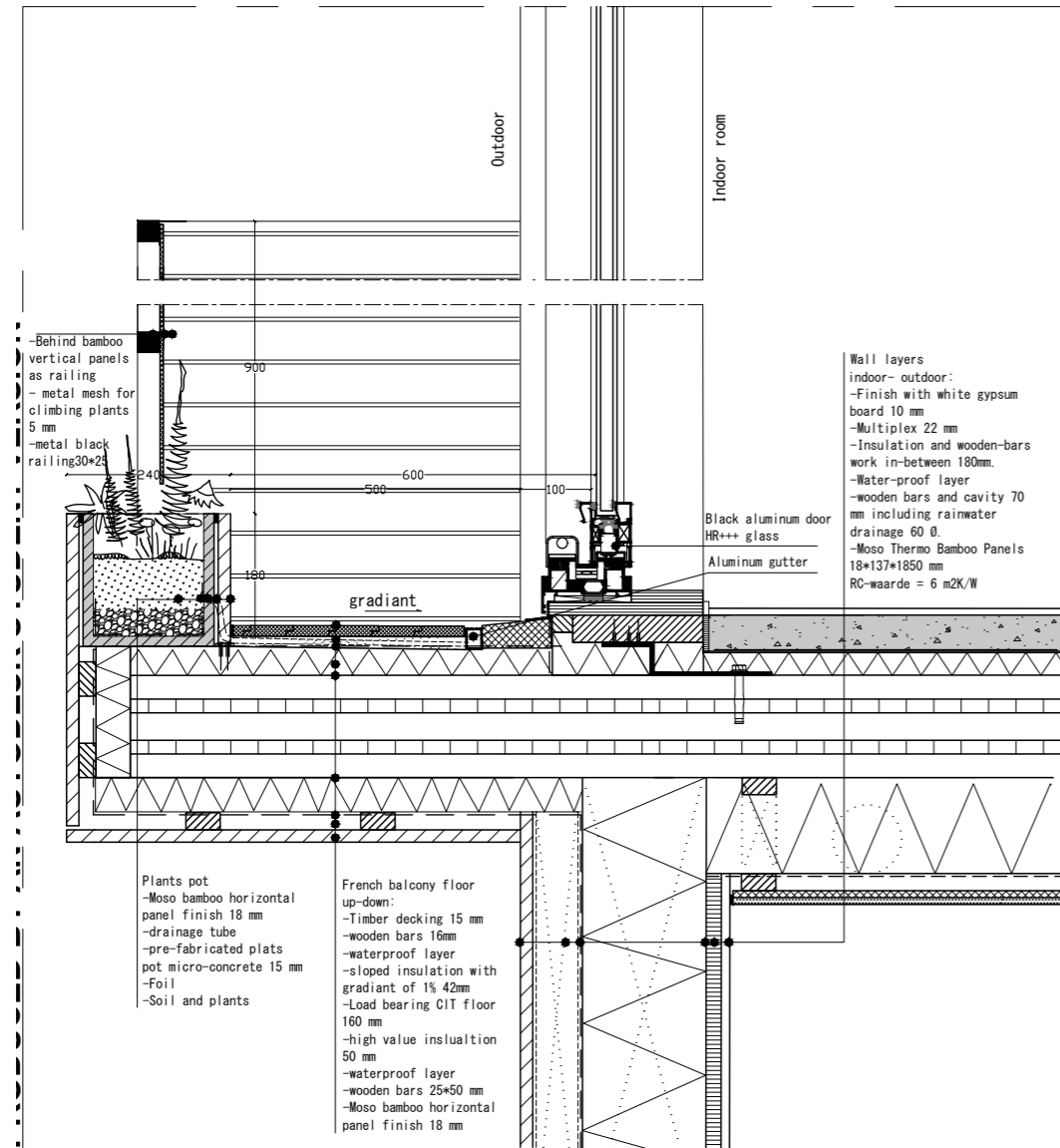


detail 1: loggia and noise insulation of the production space

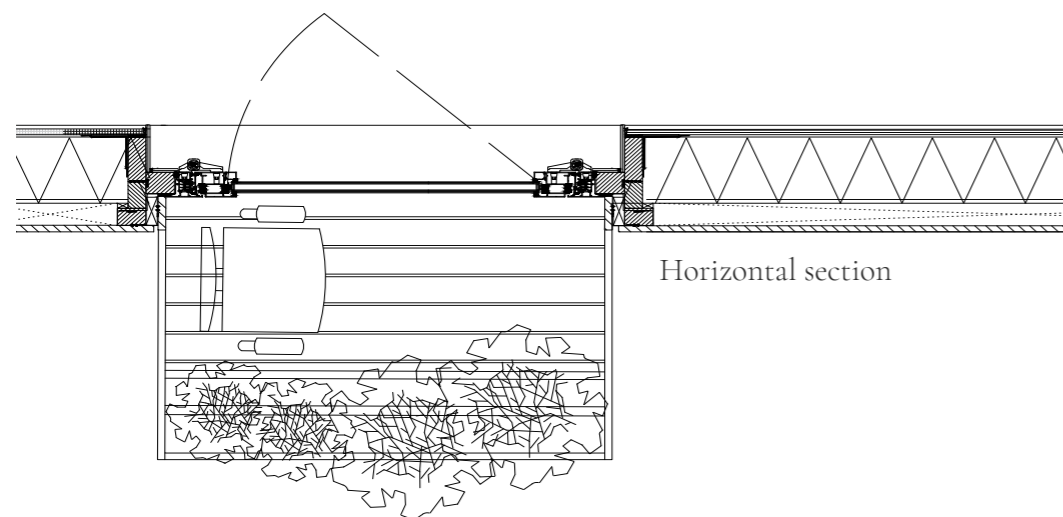


Details 4

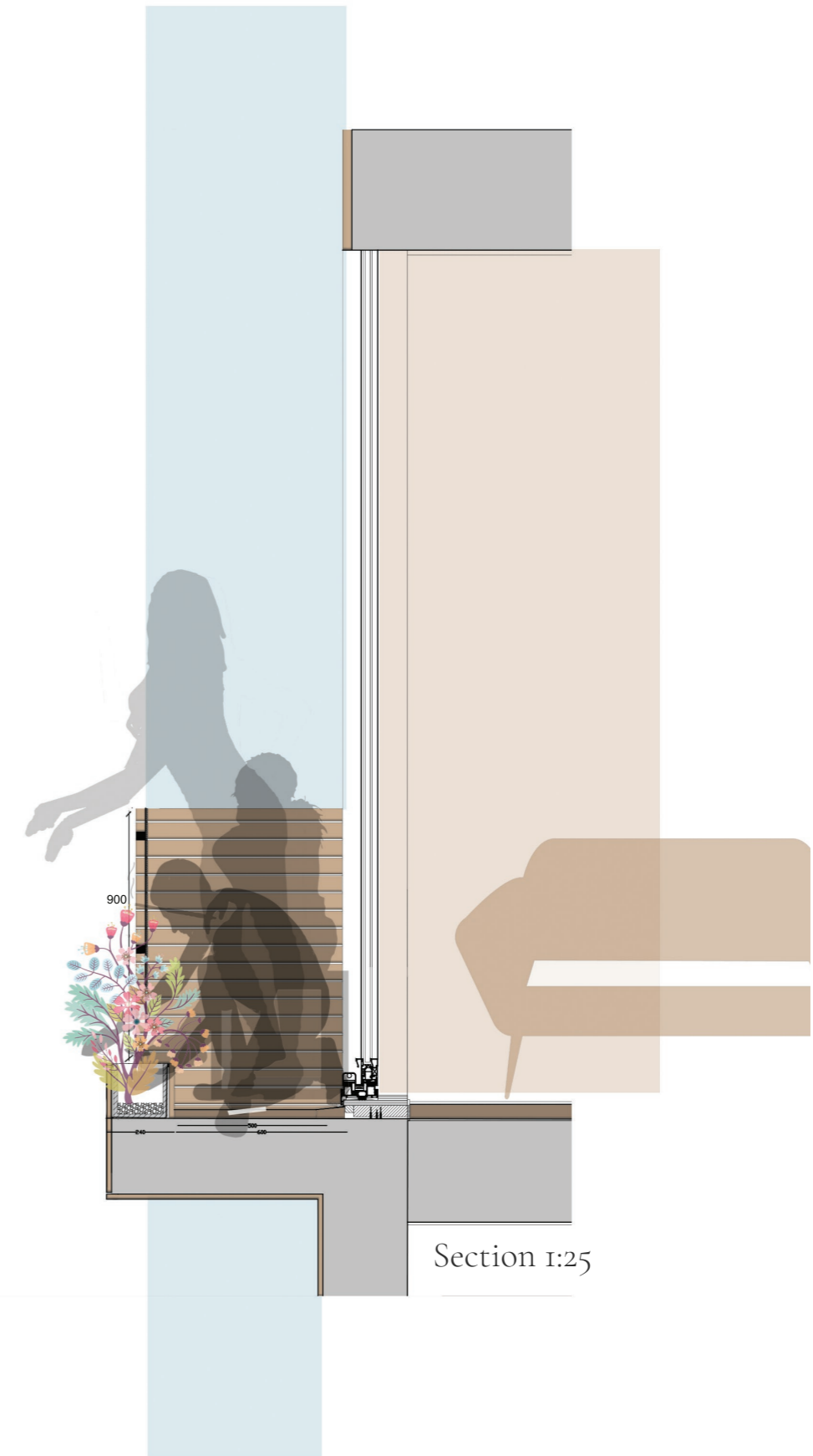
Units' french balcony



Detail 4: French balcony fixing with plants pot

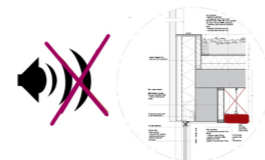


Horizontal section



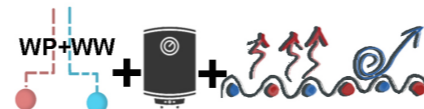
Section 1:25

Climate design



Using high value noise insulation in the first two floors to stop the noise from the production area to the residential, beside using acoustic plafond system

noise insulation from production area



Anhydrite floor for heating and cooling connected with the heat pump and heat exchanger, there are multiple heating pump in the complex located underground, also at the floor, for the case of losing heat, re-warming item is used on each floor in case of collective boiler for collective dwellings

Heating and cooling



System D and Co2 contolled system

System D ventilation system in climate zone 2: using mechanical output and input. System D is connected with Co2 concentration system which will automatically work regarding the CO2 level in the active spaces such as exhibition, restaurants..+ possible natural ventelation in dwellings

Ventelation system D



Openable window for fire smoke ventilation

automatically openable window in the atrium to ventilate the smoke in case of fire



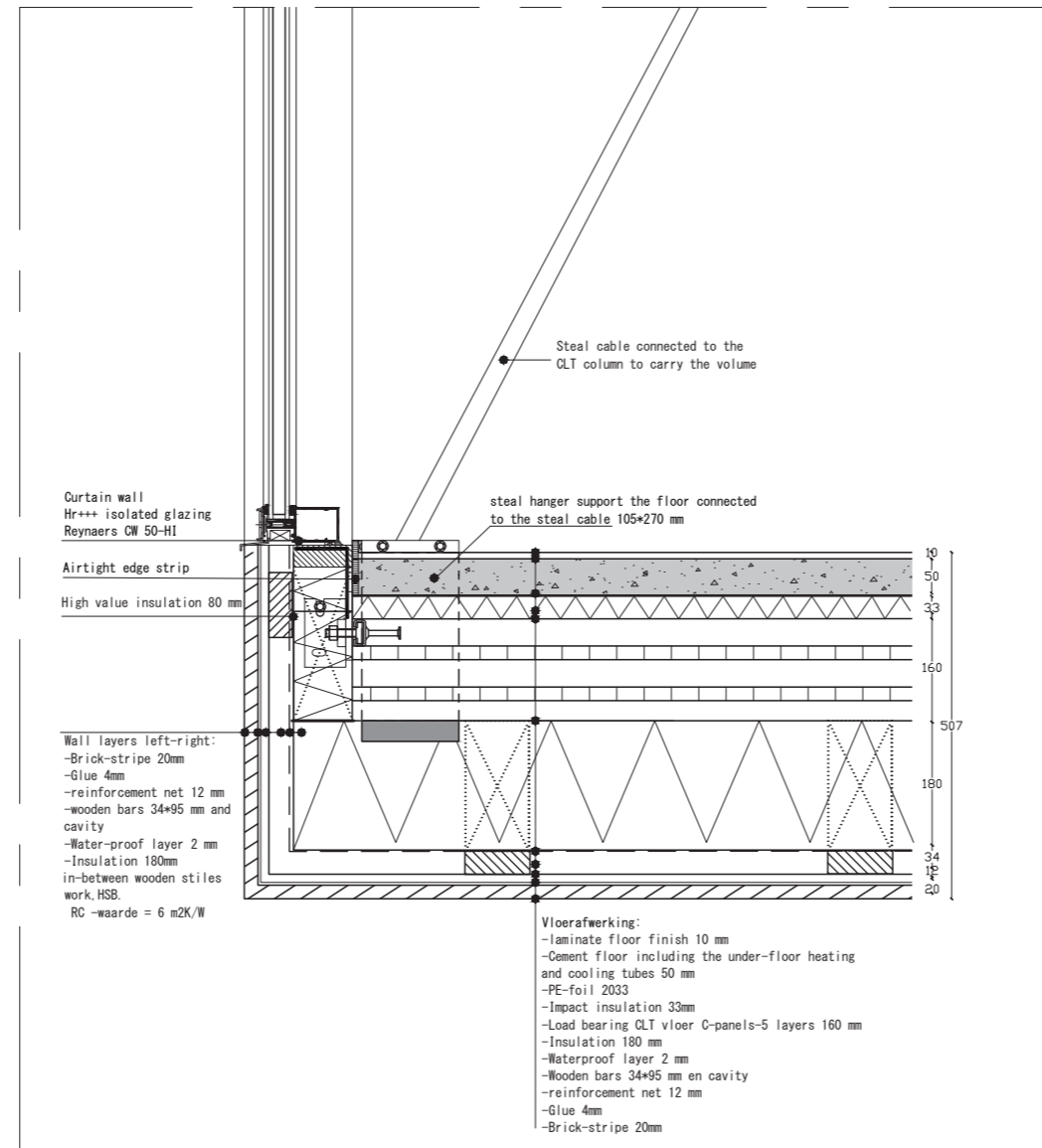
Let's go and visit the Co-dwell complex digitally!
*Spaces description are on the Top-left corner**

Music cover rights: Alan walker and Ahmed Alshaiba

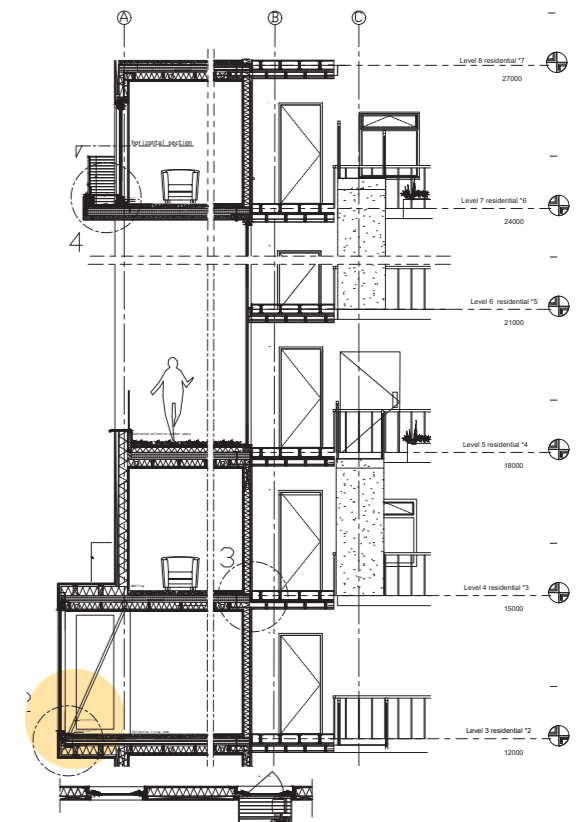
Appendix

Detail 2

Cantilever fixing

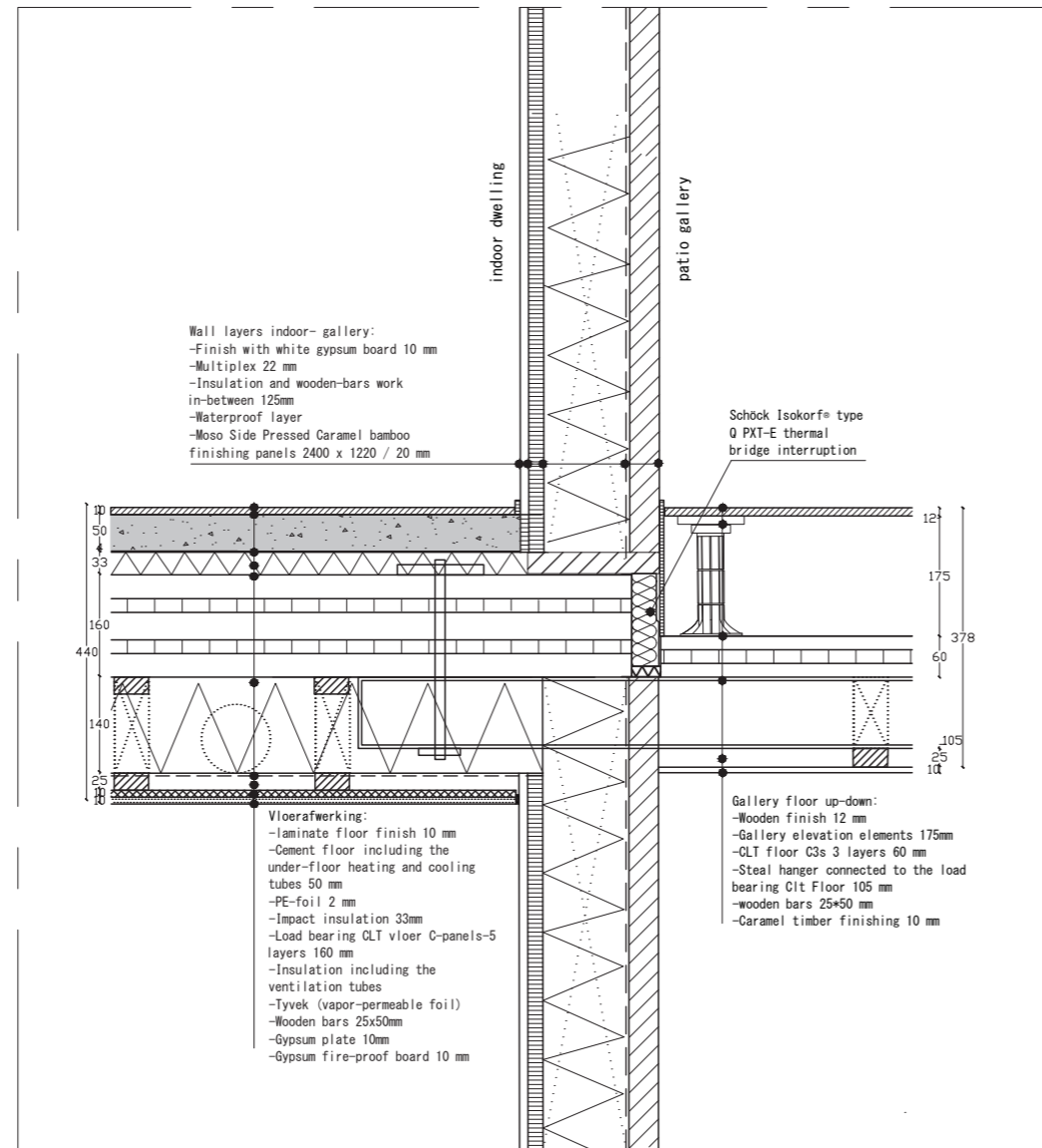


Detail 2: Cantilever fixing



Details 3

Patio's gallery fixing



detail 3: Gallery fixing

