

6 November 2020 - P5 Presentation - Marcella Wong

A Gentle Neighbourhood

For more equal & enabling ways of living









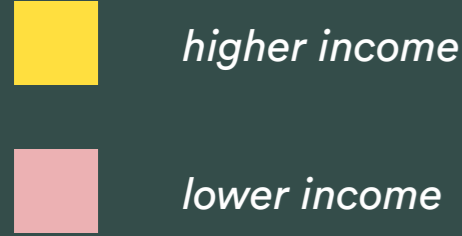






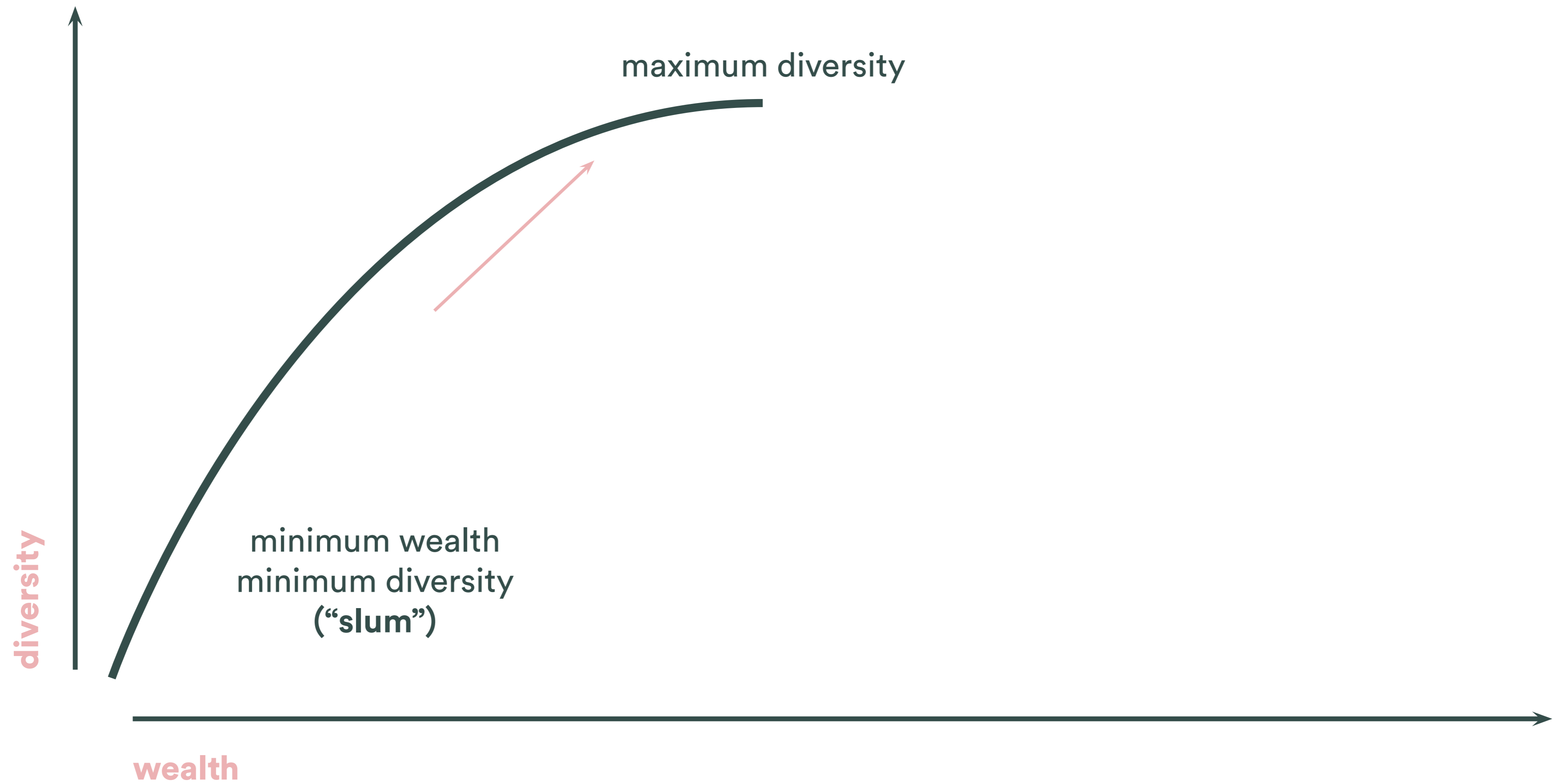
De stad aantrekkelijker maken om in te wonen. Daar werken we in Rotterdam hard aan. Dat doen we voor bewoners, de oud-Rotterdamers die graag terugkeren en toekomstige ontdekkers van de stad. Voor iedereen die zich thuisvoelt in Rotterdam.

(Gemeente Rotterdam, 2020)

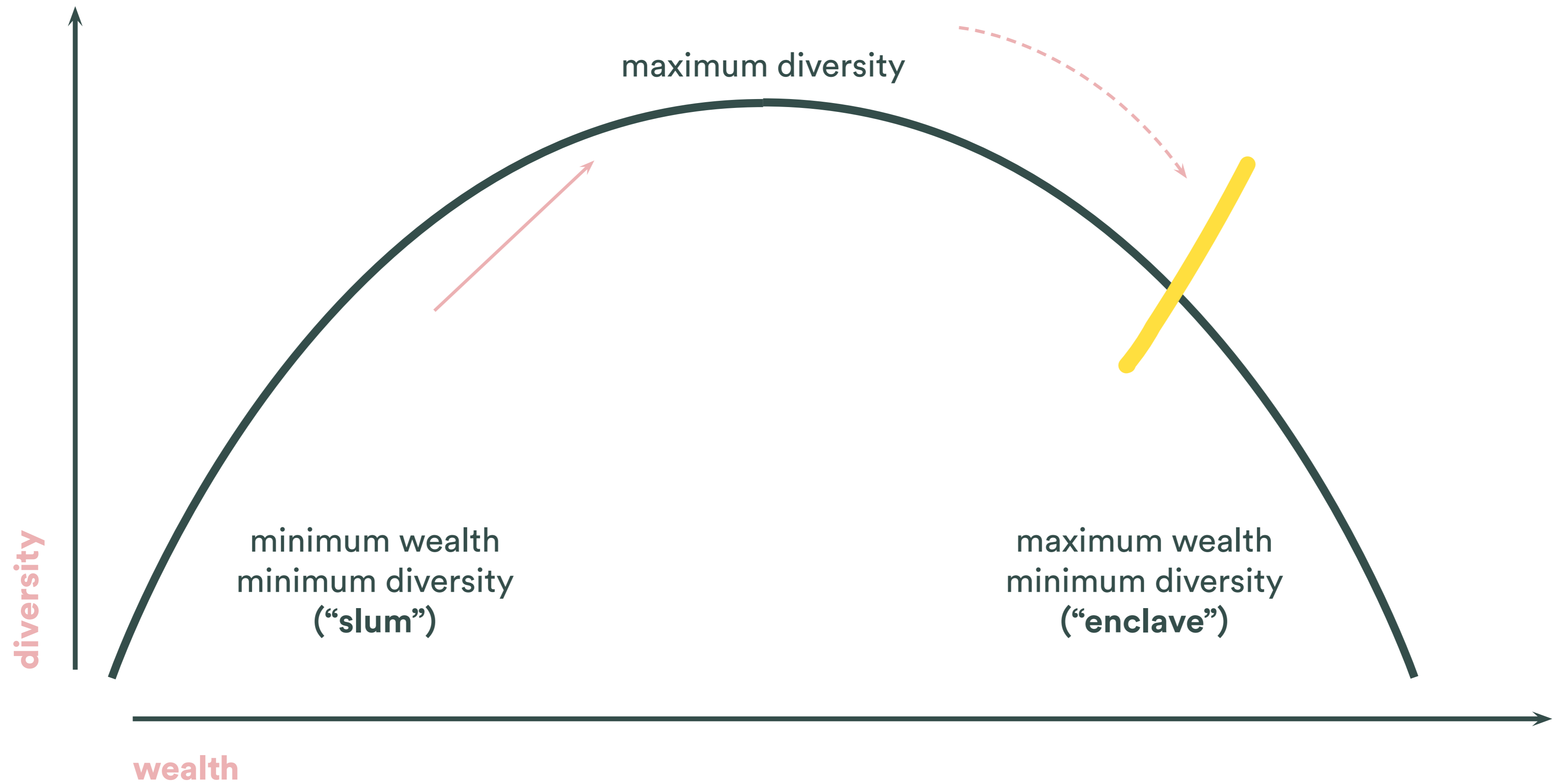




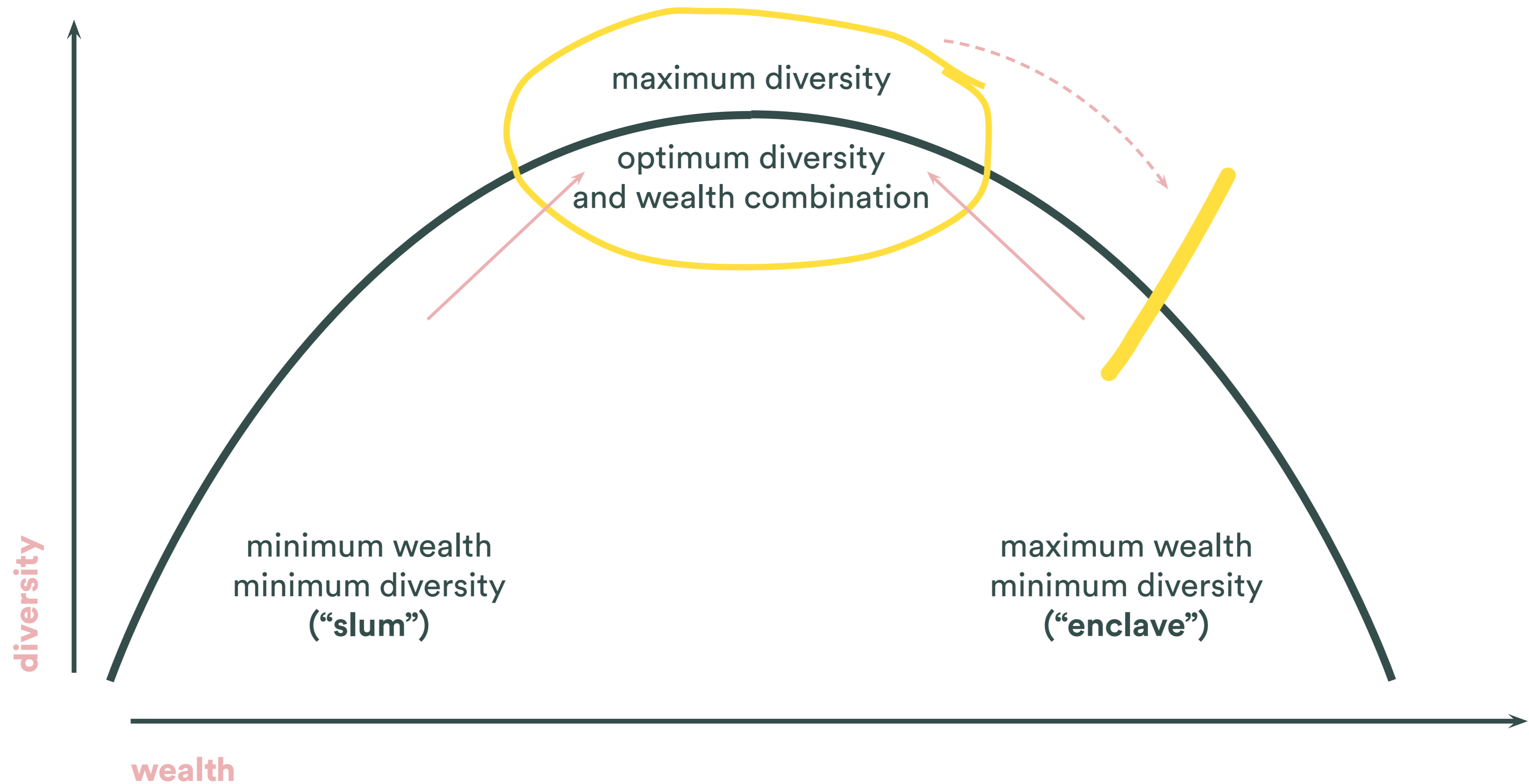
Jacob's Curve of Gentrification



Jacob's Curve of Gentrification



Jacob's Curve of Gentrification











**Recent studies
conclude that ...**

**In reality there is
a lot of social inequality**

**And this social inequality is
only increasing...**

(OECD, 2015)

Groei dakloosheid is ook mensenrechtelijk zorgwekkend

23 augustus 2019 - Laatste update 22 juni 2020

Dakloosheid is in Nederland nog steeds een groeiend probleem. Uit nieuwe cijfers van het CBS blijkt dat het aantal daklozen tussen 2009 en 2019 meer dan is verdubbeld. Dit is zorgwekkend: dak- en thuisloze mensen behoren tot de kwetsbaarste groepen in Nederland, en hun rechten staan op meerdere manieren onder druk. In deze Toegelicht gaat het College voor de Rechten van de Mens in op de vraag waarom deze toename van het aantal daklozen een mensenrechtelijk probleem is.



(College voor de rechten van de mens, 2019)



(Volkskrant, 2020; Ravesteijn, 2020)

**And the way we design and
build our cities unconsciously
contributes to this inequality.**

“

The lack of relation between social awareness and (urban) space design reinforces injustice in the built environment.

(Harvey, 1973)

NIEUWS KANSENONGELIJKHEID

Opgroeien in een arme buurt of in een rijke wijk kan later tienduizenden euro's inkomen schelen

De plek waar je wieg staat zegt veel over het inkomen dat je als volwassene gaat verdienen. Wie opgroeit in een kansarme buurt verdient later vaak aanzienlijk minder [dan wie afkomstig is uit een betere wijk](#). Samen met factoren als het inkomen van de ouders en het geslacht kan het inkomensverschil voor dertigers oplopen tot ruim dertigduizend euro per jaar.

Joris Tieleman 10 oktober 2020, 5:00

(Volkskrant, 2020; Ravesteijn, 2020)

Je buurt bepaalt (deels) je latere inkomen

Kansongelijkheid Iedere Nederlander kan van een dubbeltje een kwartje worden. Maar dat gaat wat gemakkelijker als je wieg op de juiste plek staat.

✎ Egbert Kalse ⌚ 12 december 2019

⌚ Leestijd 2 minuten



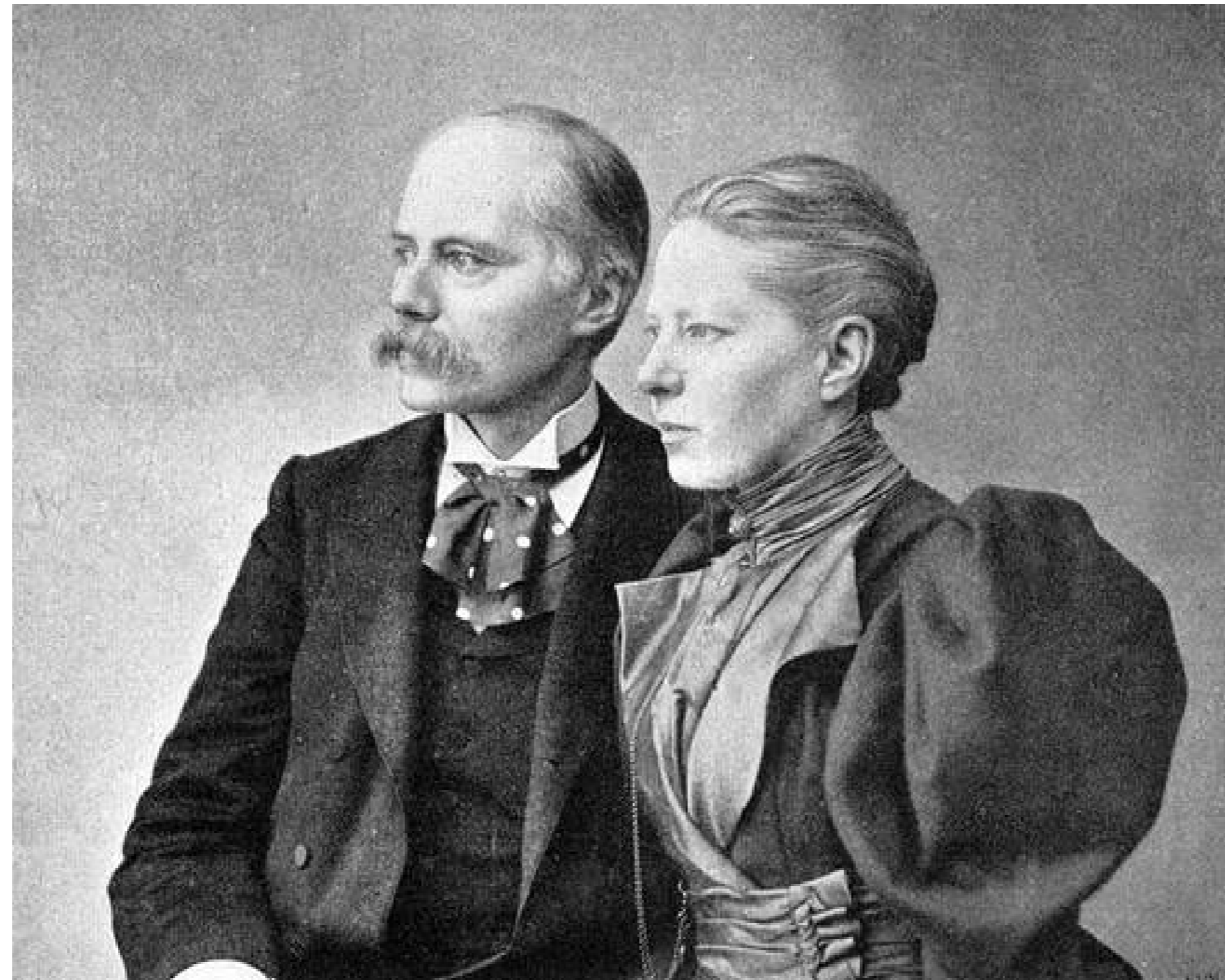
(NRC Handelsblad, 2019)

“

**To solve social inequality is to invest
and pay attention to sustainable and
social quality for everyone.**

(Harvey, 1973; Smith, 2001)

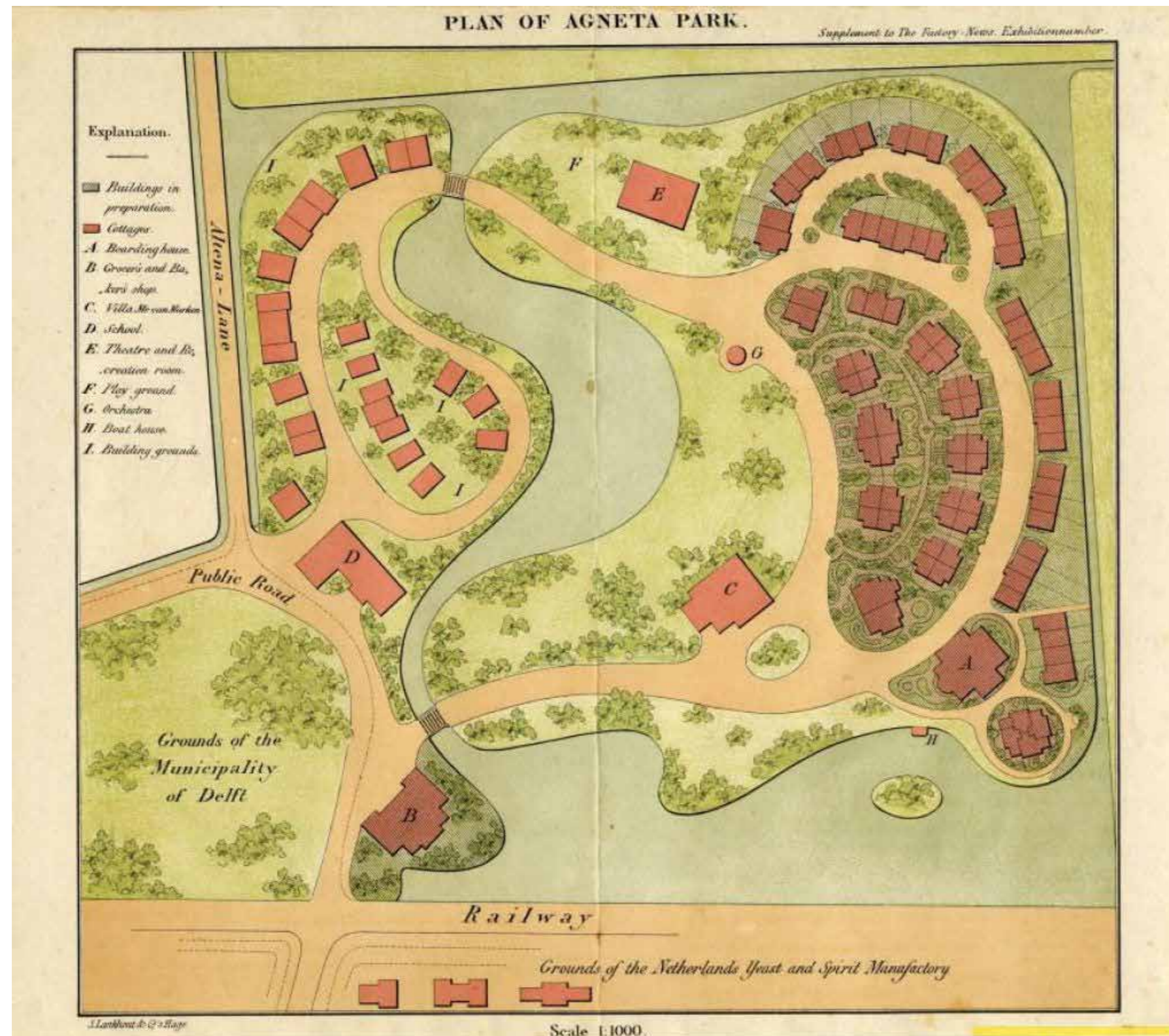
**How can we handle this
in a different way?**



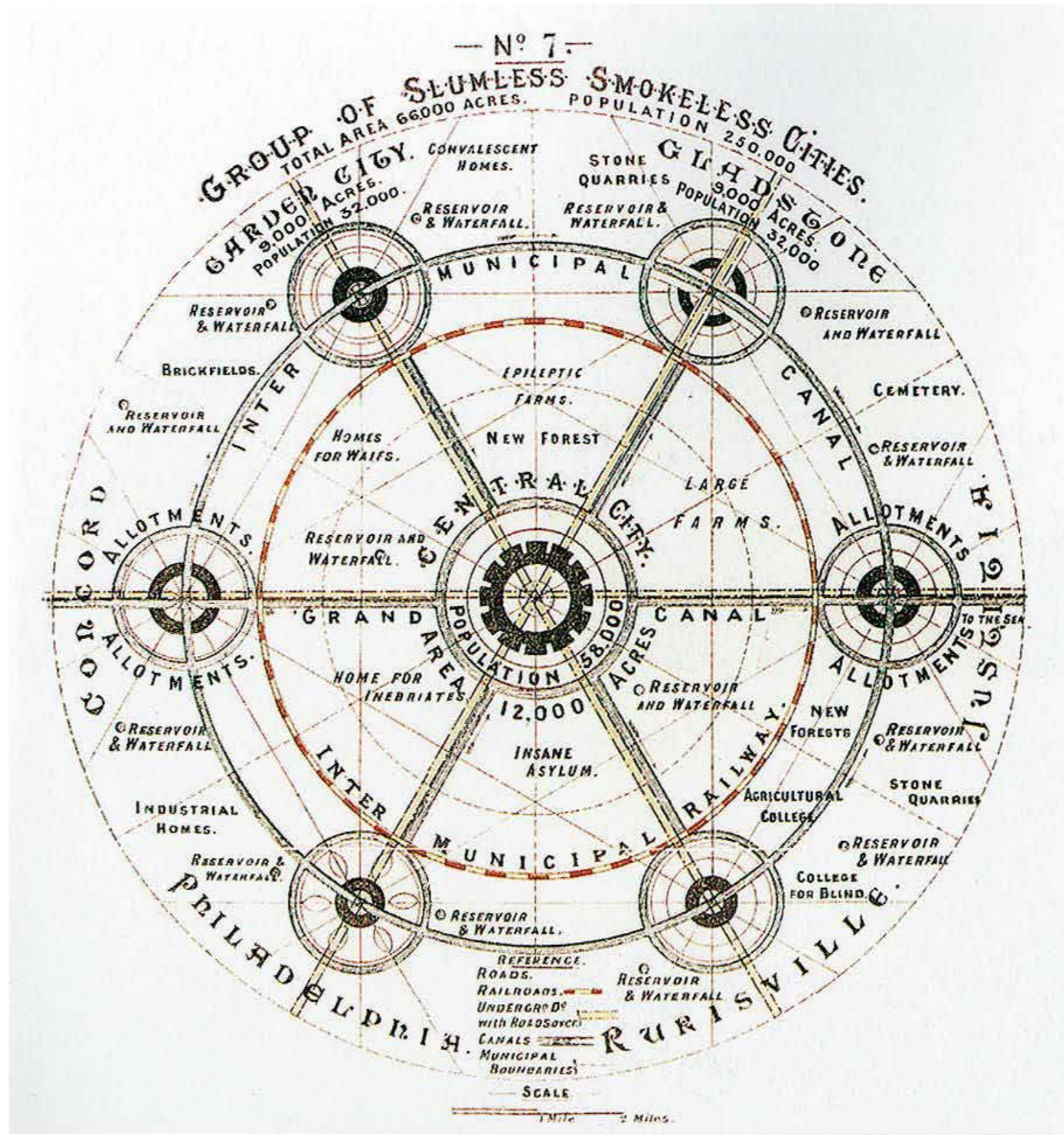
Jacques van Marken and Agneta van Marken-Matthes



**KONINKLIJKE NEDERLANDSCHE
GIST EN SPIRITUSFABRIEK**



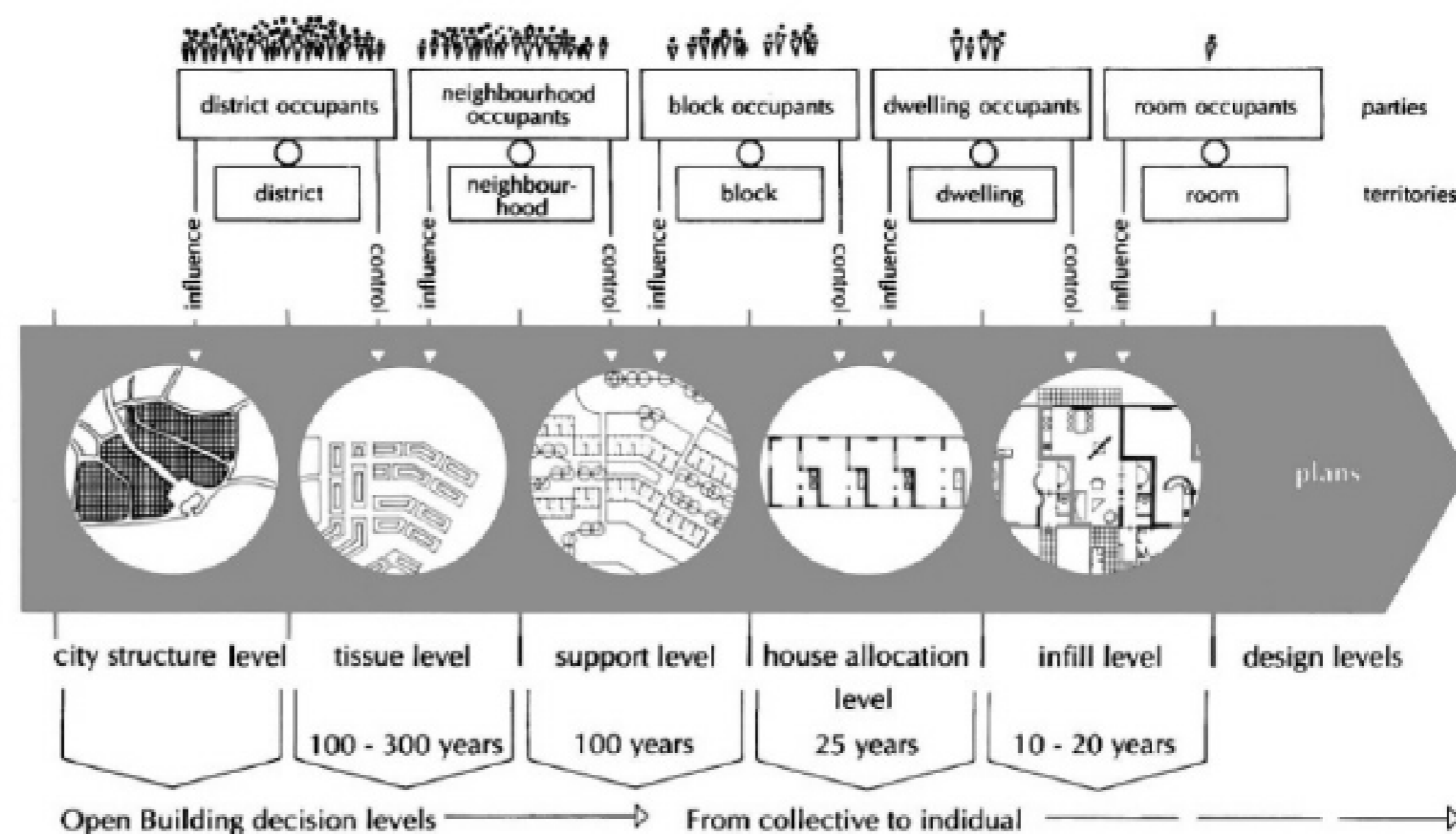
**Designers that also aimed to
create social change...**



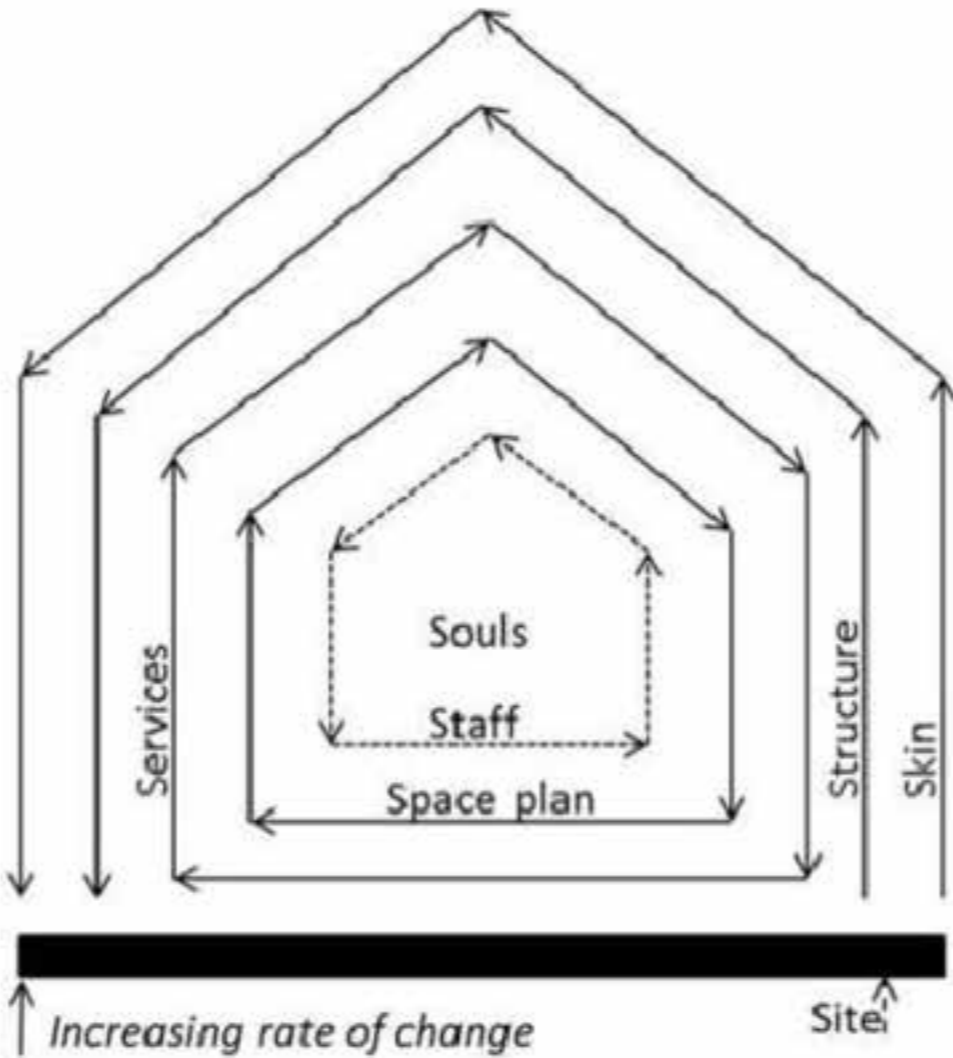
Garden City Diagram by Ebenezer Howard



Walter Gropius



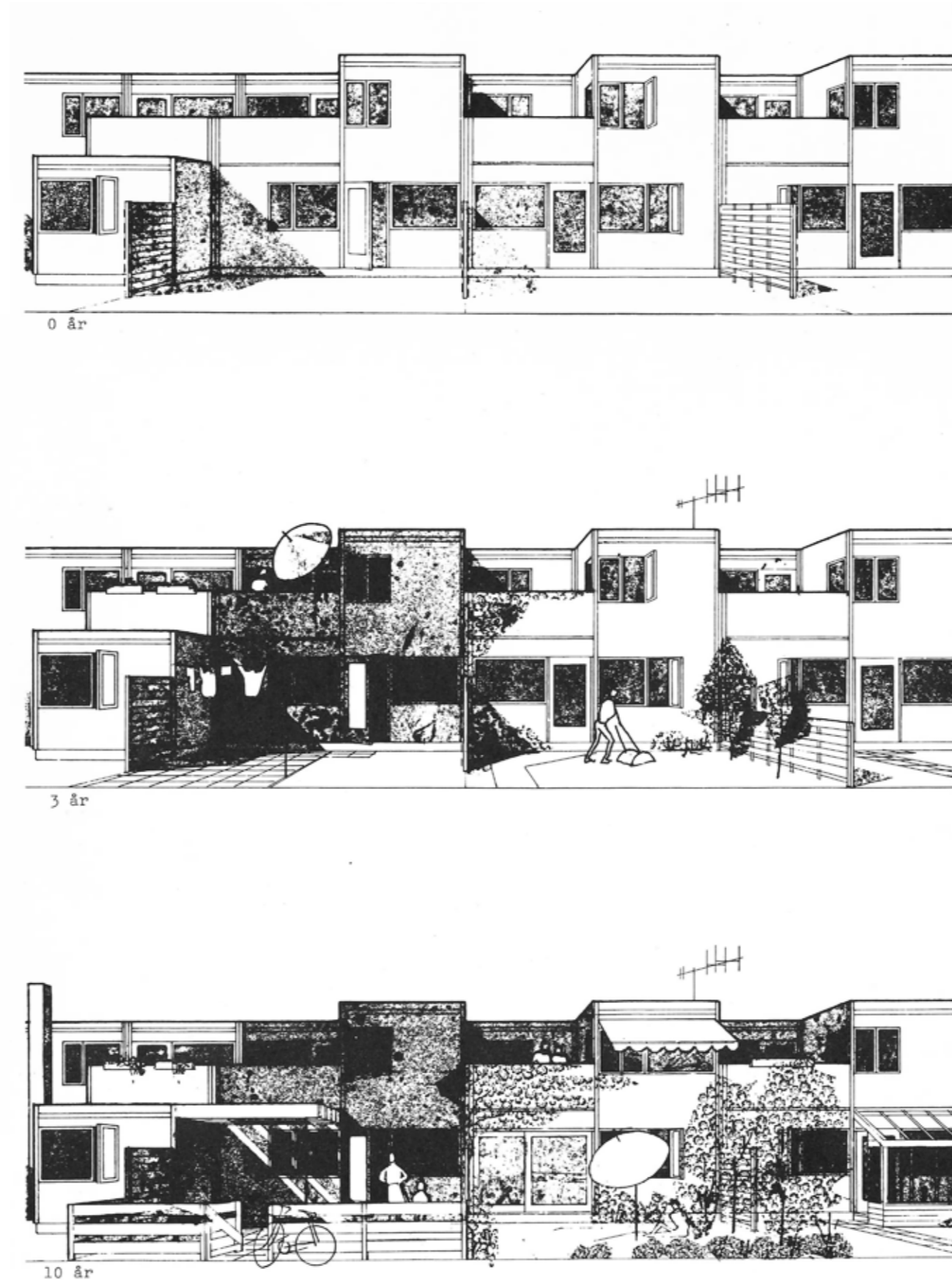
Open building by N. John Habraken



Shearing layers	Description	Typical lifespan/activity
Site	Location and context	Permanent
Structure	Bones	30-300 years
Skin	Envelope	20+ years
Services	Lifeblood	7-20 years
Space plan	Interior layout	3 years
Stuff	Furniture and equipment	Under 3 years
Souls	People	Daily

Shearing layers by Stewart Brand

Modular building with
handbook for personalisation



Skjettenbyen, home with a handbook, by Nils-Ole Lund



Half a house by ELEMENTAL (Alejandro Aravena)

Thinking outside the (architectural) box

Artist x industrial designer x architect x
real estate developer

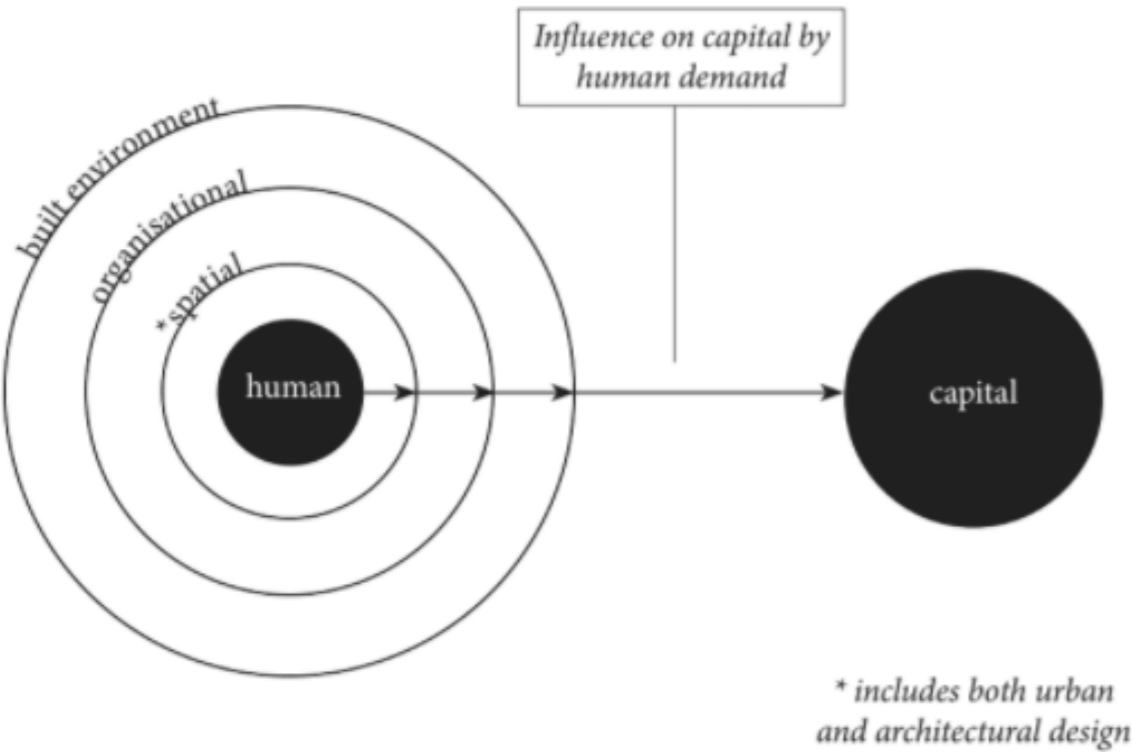


**How to design for long-term social impact:
a fair built environment - *for people and planet?***

- **Literature review** (*theory thesis - MSc. 2; graduation thesis*)
- **Cross-domain collaboration** (*real estate x architecture*)
- **Interviews** (*with experts and residents*)



Literature Review



Problem Statement

The Ideal Neighbourhood

139 years of Dutch urban development and architecture

1838
The beginning of the Dutch industrial revolution. A lot of factories open in many different fields. There is plenty of work opportunity for people.

1901
Aggravated social conditions have led to the Dutch Housing Act. The legislation is aimed at bettering and improving the lot of the low-income and the lower class.

Beautiful city
The desire behind this period is to improve the public housing. The aesthetic frame was important, often inspired by neo-baroque urban developments.

Social democracy
The last of social democracy in the government has led to several urban extension plans.

Example project
Early industrial development, 1838 (Dutch & Van Duijn, 1995; Duijn, 2001)

CHOLERA-COMMISSIE
In the Netherlands, cholera spread rapidly in 1832. The government had to take action to prevent further outbreaks. The cholera commission was set up to investigate the cause of the disease and to prevent its spread.

Poor living quality
In the production industry at that time was growing, people left their homes from the rural areas to the city for a rapid speed there was a lot of work available. This led to a high demand for housing, so people were in line close to their work. Usually the factories were placed near the cities. In desperation, often the workers got exploited and have the lot to live in very poor and unsanitary living environments. This in turn can have led to outbreaks of different deadly diseases such as cholera.

Example projects
Garden City, 1901 (Dutch & Van Duijn, 1995; Duijn, 2001)

Urban extension plan
In line with the government led by mostly social democracy, there are more plans for extension for better housing and living quality has finally reached the state.

The Garden City
Actual from alliance of mostly municipal who advocate for neighbourhood with local cultural traditions, enhancing the nature in the design.

Not just a beautiful city
The difference of the garden city approach to the beautiful city is the emphasis on creating neighbourhoods with a focus on harmonious security. The garden city movement conducted both socially and ethically inspired experiments for public housing.

1919 - Shared experiments buildings industrialised
The industrialisation began to emerge in the building construction industry. Different professional components are being developed.

Example projects
Organic suburb, 1919 (Dutch & Van Duijn, 1995; Duijn, 2001)

Social housing
Ever since the Dutch industrial revolution, the focus was on social housing. Especially after the World War II, this has not been changed. In fact, the need for social housing grew a lot bigger.

1947 - Housing shortage
After the World War II, there was a lot of war damage in the Netherlands. This created the housing shortage. The Netherlands had to reconstruct as quick as possible, to focus on a new future.

Standardisation & minimum dwelling
In order to act on the housing shortage, minimum (quality) dwelling were made. All standardised and efficiently to be made and built.

Large scale schemes & reconstruction
The standardisation made it possible for the state to plan large-scale schemes and in actuality physically realise this within a short amount of time.

Example project
Neighbourhood Concept, 1947 (Dutch & Van Duijn, 1995; Duijn, 2001)

Problem of reconstruction
As stated before, the living quality of the dwellings were poor and got worse quickly. People especially from generations after did not appreciate the other experience and thereby low dwellings.

1960 - Rise of capital
It took a long time for the Netherlands to be up and running again. Around 1960, the rise in wealth started in the Netherlands. This led temporarily led to more capital to invest in large-scale projects that previously had to be built.

1960 - Garden city 2.0
For the large-scale master plan, then this would take place around the edges of the city. The rural areas made plans for new typologies such as the garden city 2.0, or garden suburbs. These plans were inspired by garden city to integrate nature in the neighbourhood. But strongly different in execution as the original garden city. Also the nature that was integrated often did not have much function (highly green).

1963/1970 - Shift towards process planning
For some time people were content with the projects from the reconstruction. However, this did not last for long as the demands of the state of the reconstruction quickly worsened. This caused for a shift to a different planning process. As results was strong urban local governments, the state was not anymore responsible for large-scale housing development plans.

Example project
Neighbourhood Concept, 1963 (Dutch & Van Duijn, 1995; Duijn, 2001)

Evidence-based design principles

Cross-domain collaboration



Evidence-based impact scheme

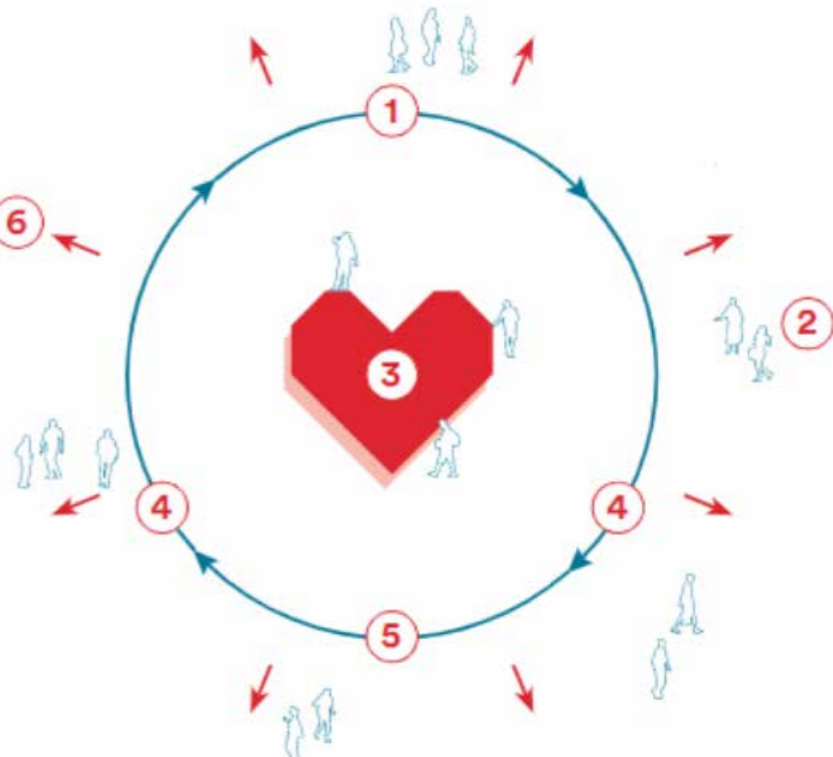
Interviews



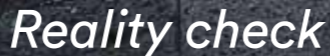
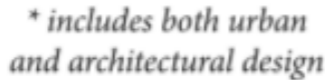
Principles from practice



Reality check



Impact development



Four principles for long-term social impact

- **Democracy**
- **Standardisation**
- **Diversity**
- **Adaptation**

Throughout three different scales

- **Area** (*Gebied*)
- **Block** (*Gebouw*)
- **Use** (*Gebruiker*)

**For a fair built environment for
people and planet**

Learning from the qualities of the past

Combining with the knowledge of today

Leaving space for the insights of tomorrow

**A new building method &
a new development proces**

“

Every building is a prediction

“

**Every building is a prediction
and every prediction is wrong**

“

**Every building is a prediction
and every prediction is wrong**

*From the book:
How Buildings Learn: What Happens After They're Built*

(Brand, 1994)

Design case



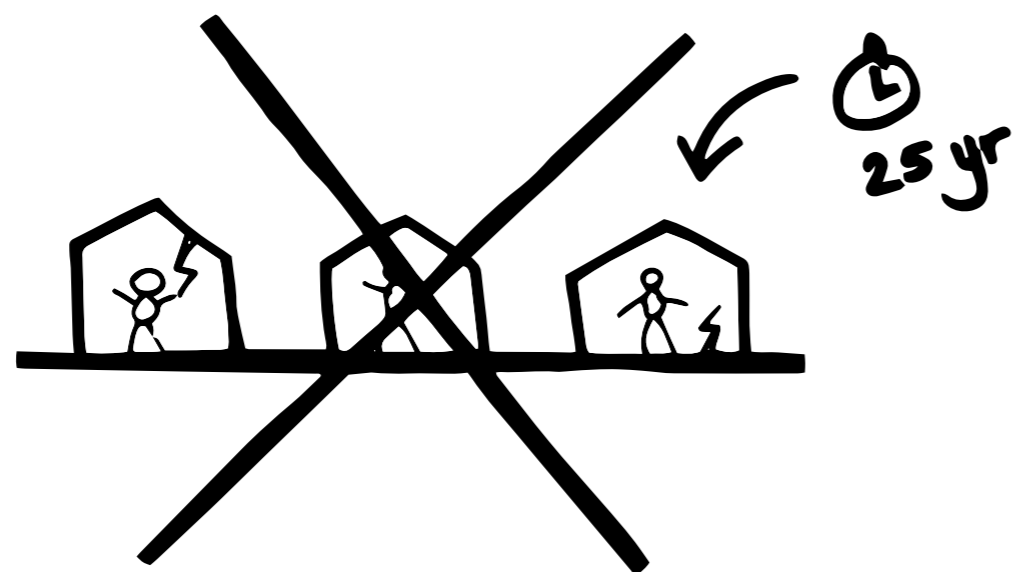












Democracy	Standardisation	Diversity	Adaptation
Give voice to all, especially the vulnerable and disadvantaged groups	Offer a clear framework in which most parts are standardised for affordability	Create space for all people and nature	Allow for change and new insights to happen for a continuously improving design

Democracy

Standardisation

Diversity

Adaptation

Area (Gebied)

Block (Gebouw)

User (Gebruiker)

Lessons from the past and today's knowledge

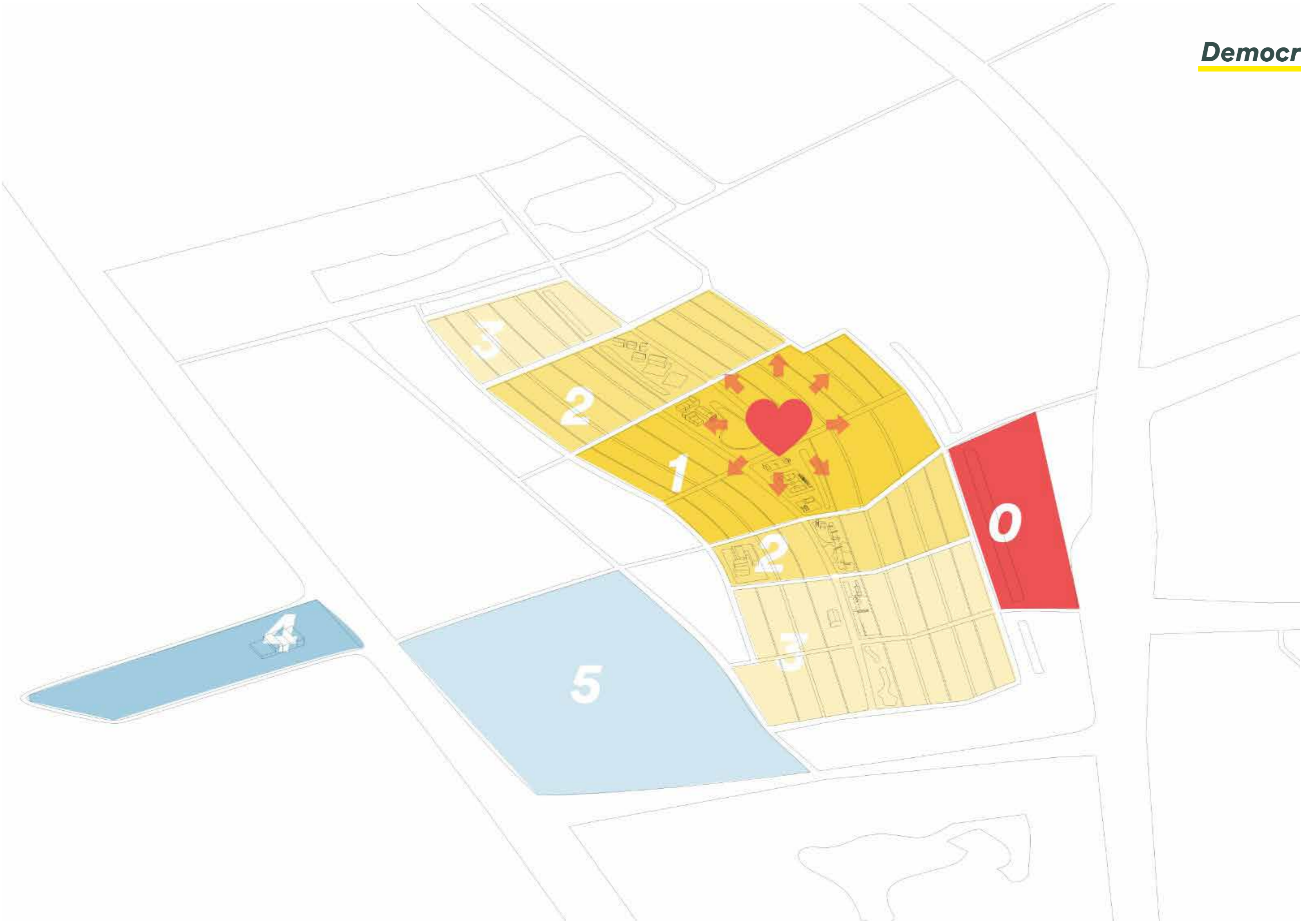
- Low rise housing seen as a quality
- Existing social cohesion is strong
- Great amount of green in the neighbourhood

Possible scenarios in the future

- Cities becoming even denser
- Different forms of housing, living and working
- Biodiversity becoming more and more important

Area *(gebied)*

**To create a built environment that
can evolve, ages gracefully and
just feels right.**



VrijCoop

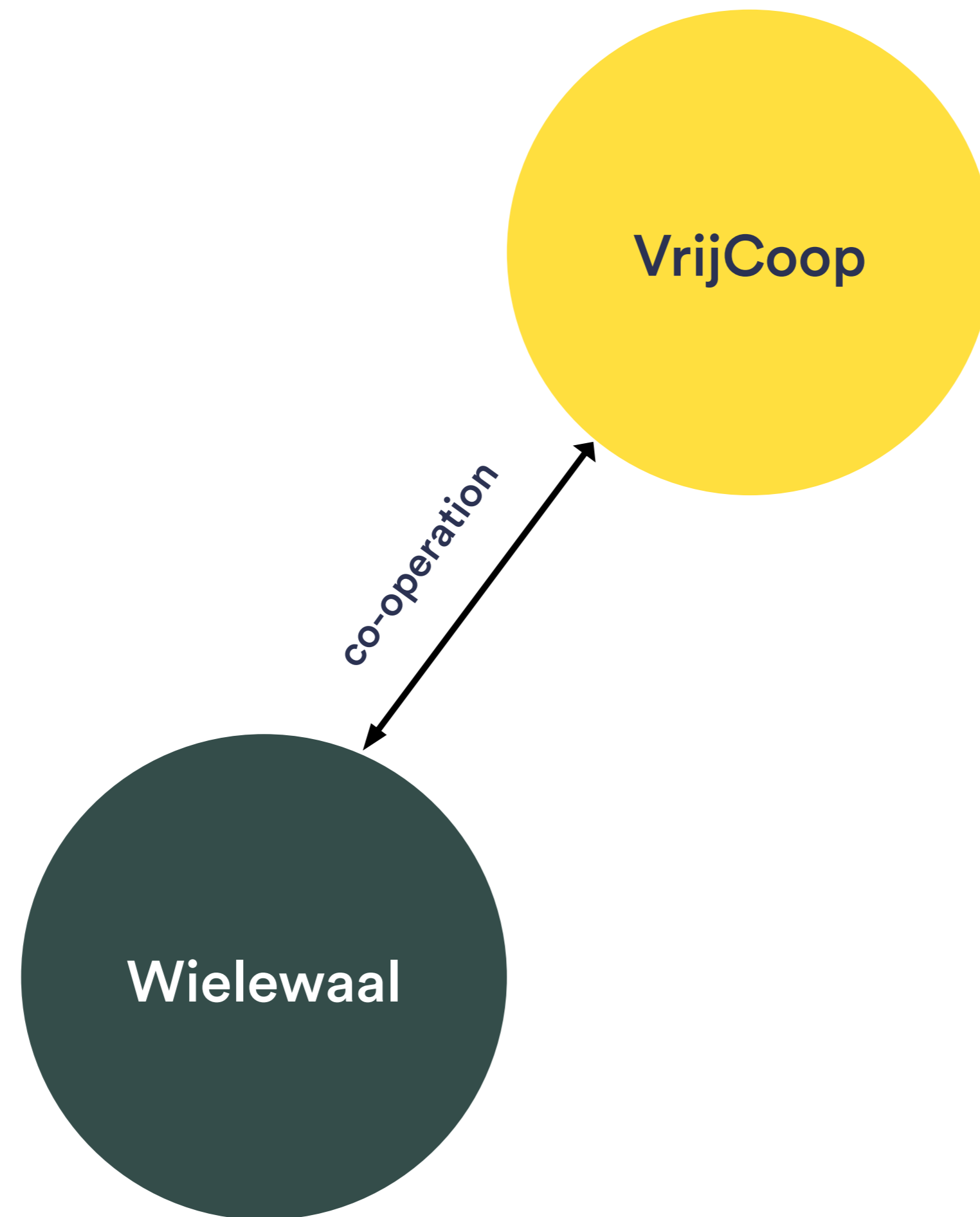
Association of housing co-operation with solidarity between the allied projects.

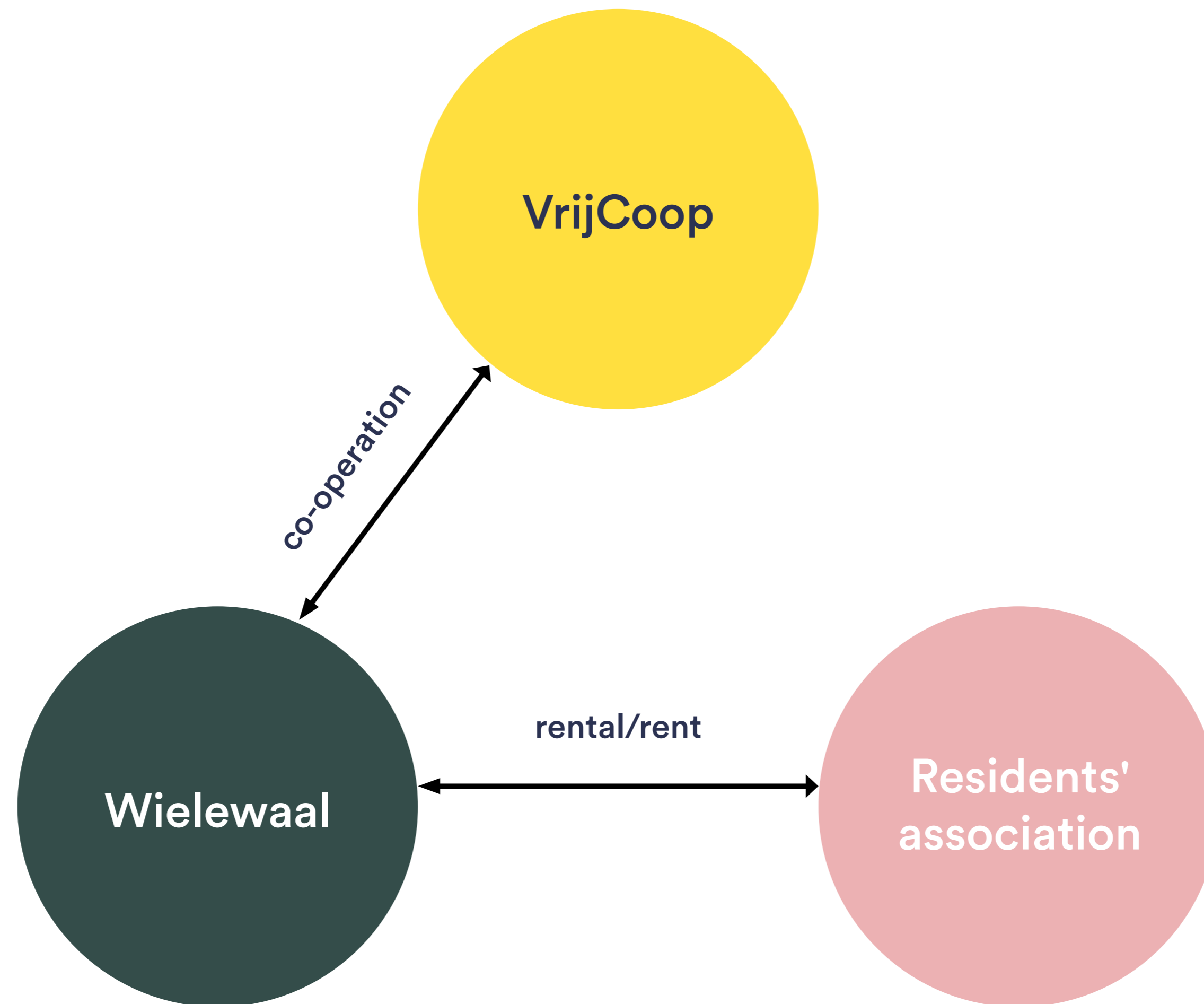
Collective ownership: to buy-off real estate from the market to ensure affordability.

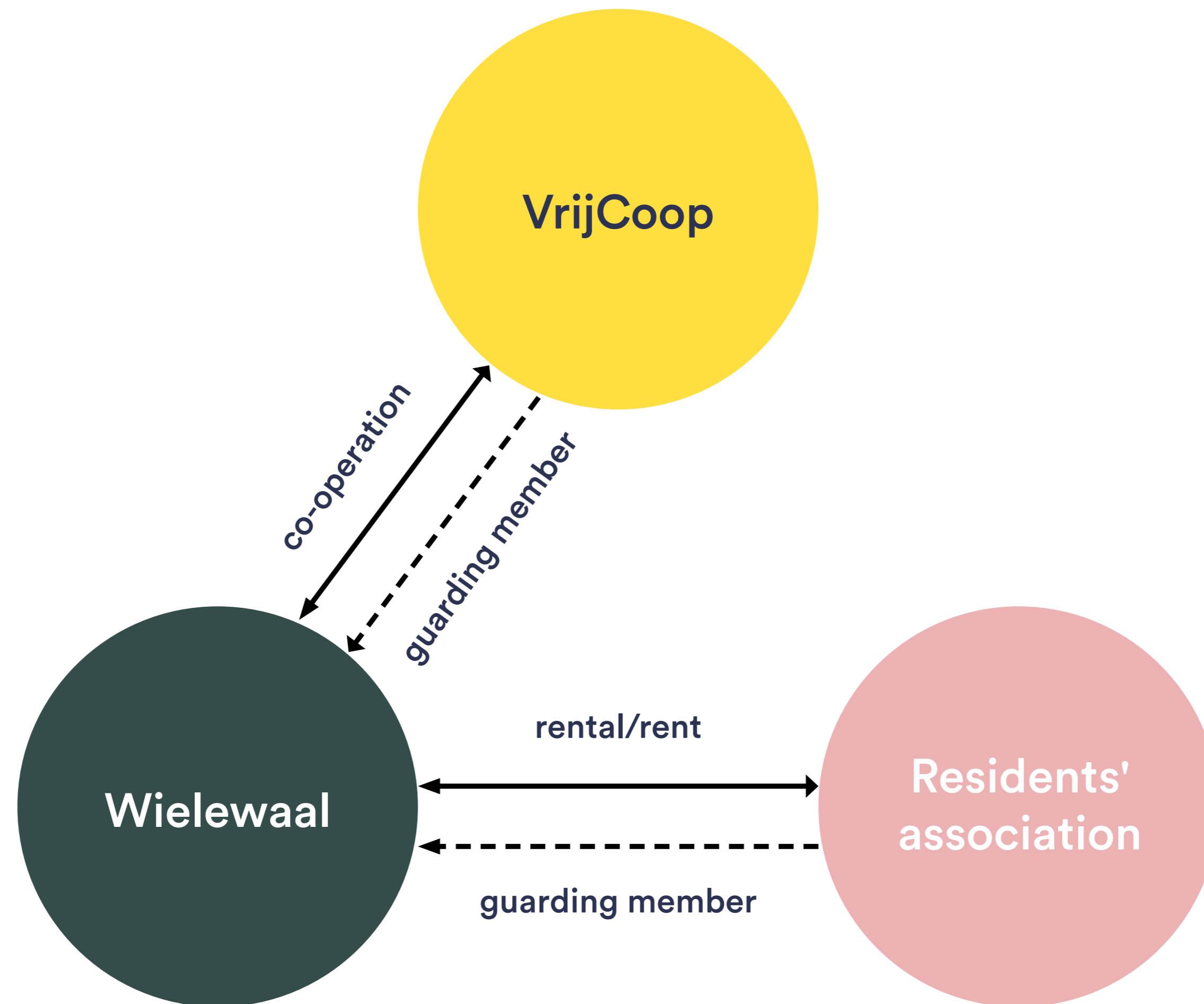
Allowing for self-management and self decision, independent from capital.

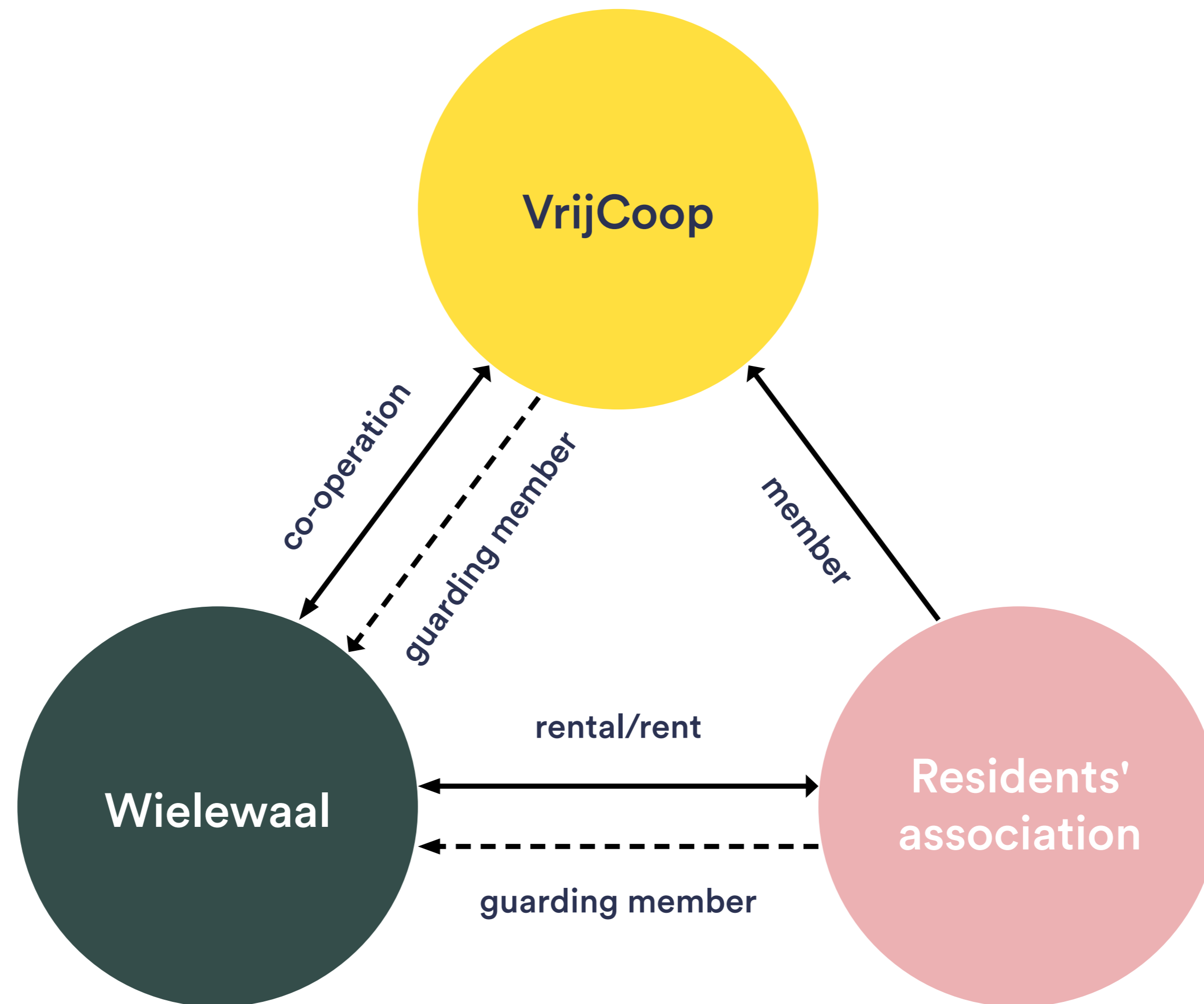












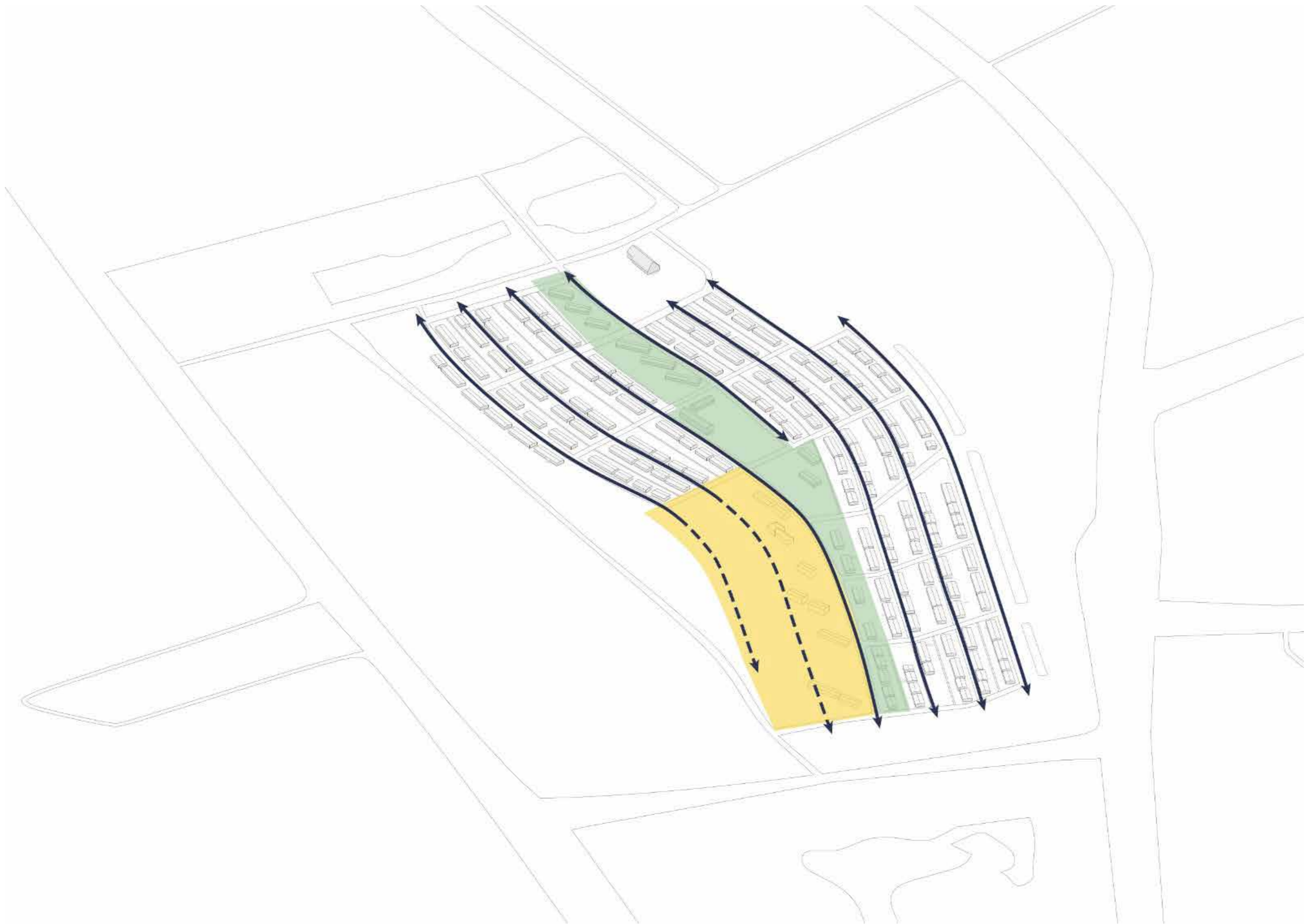
To ensure affordability of the housing and to voice the needs of all residents.

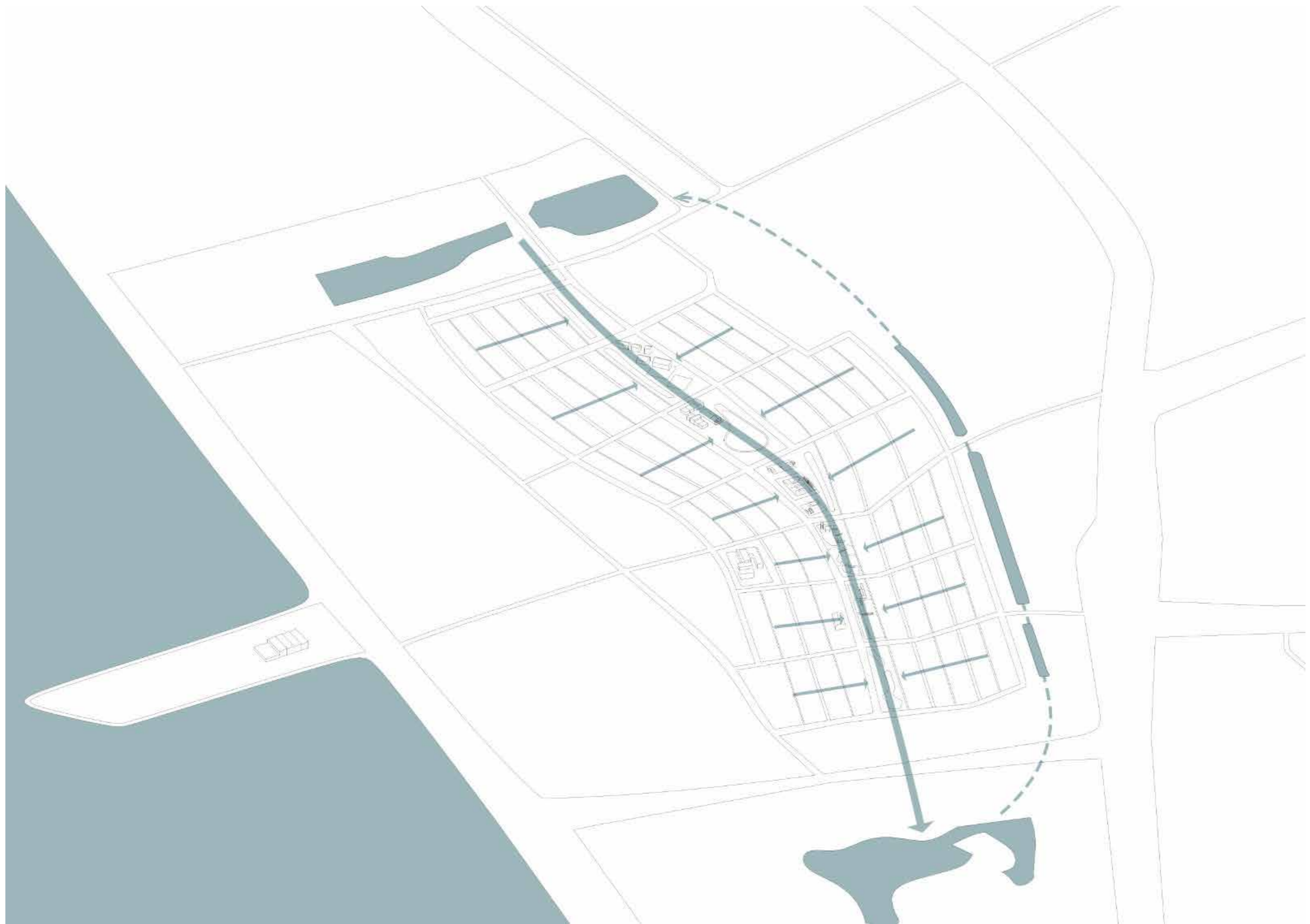
Standardisation to allow for affordability and variation

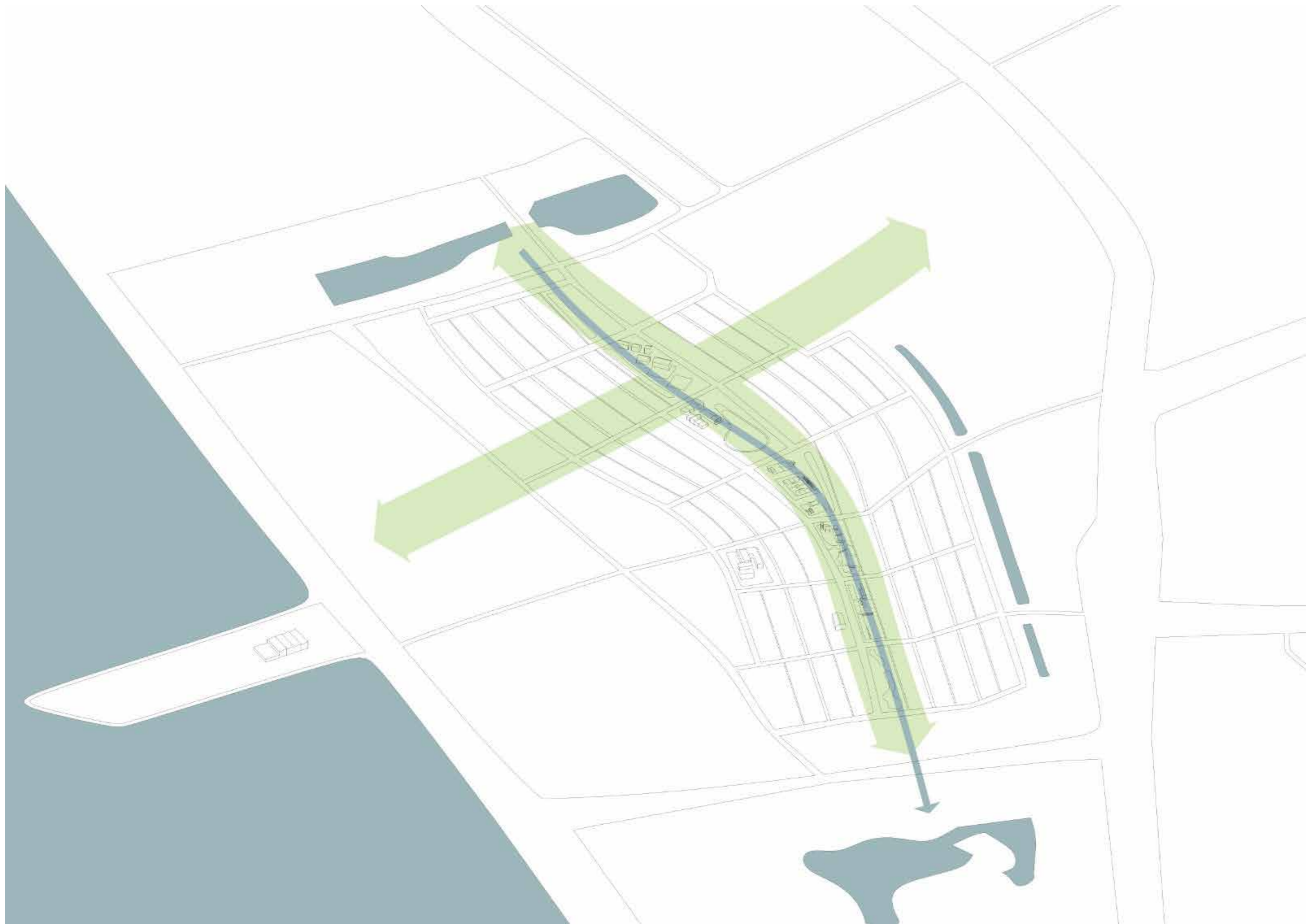






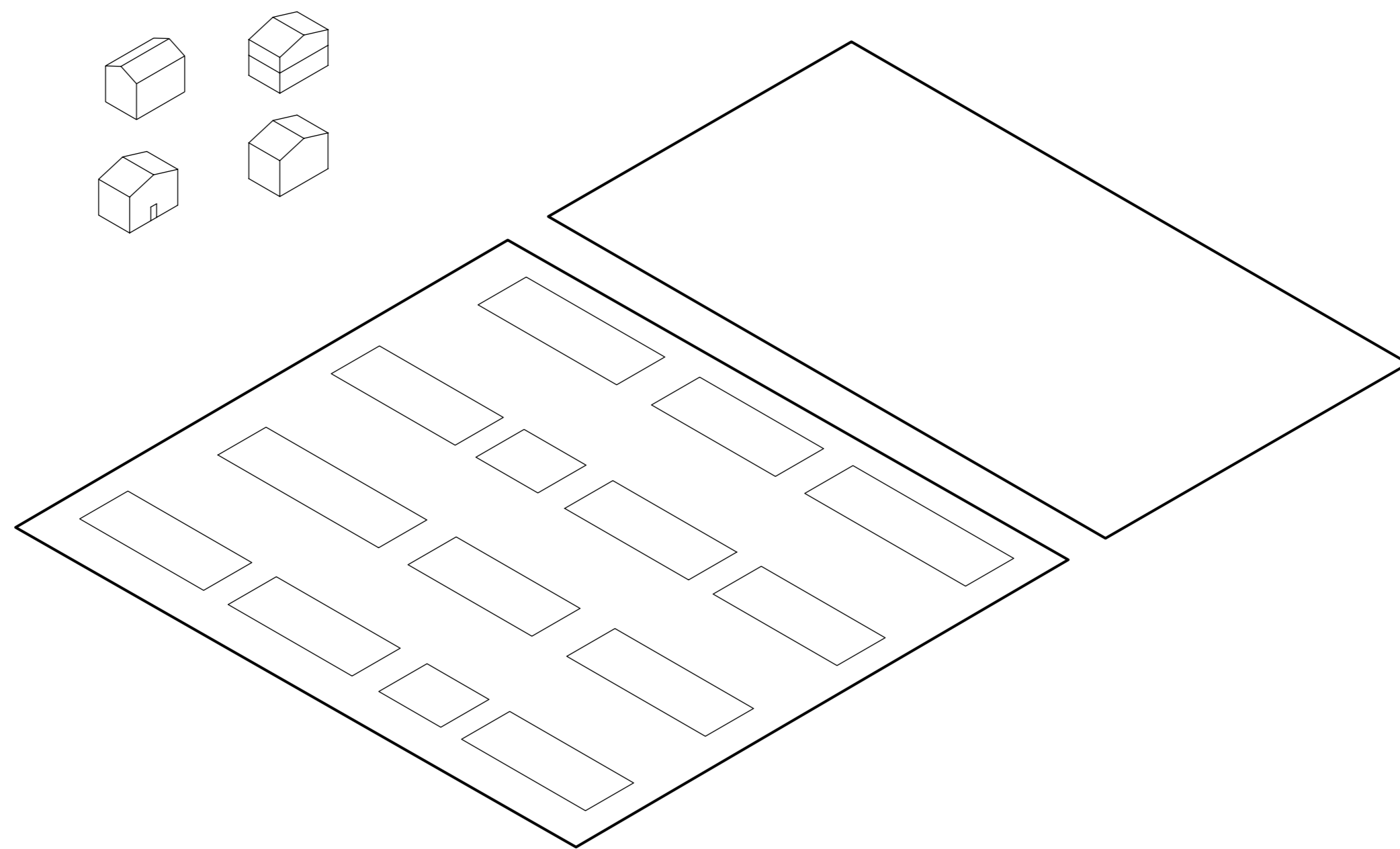


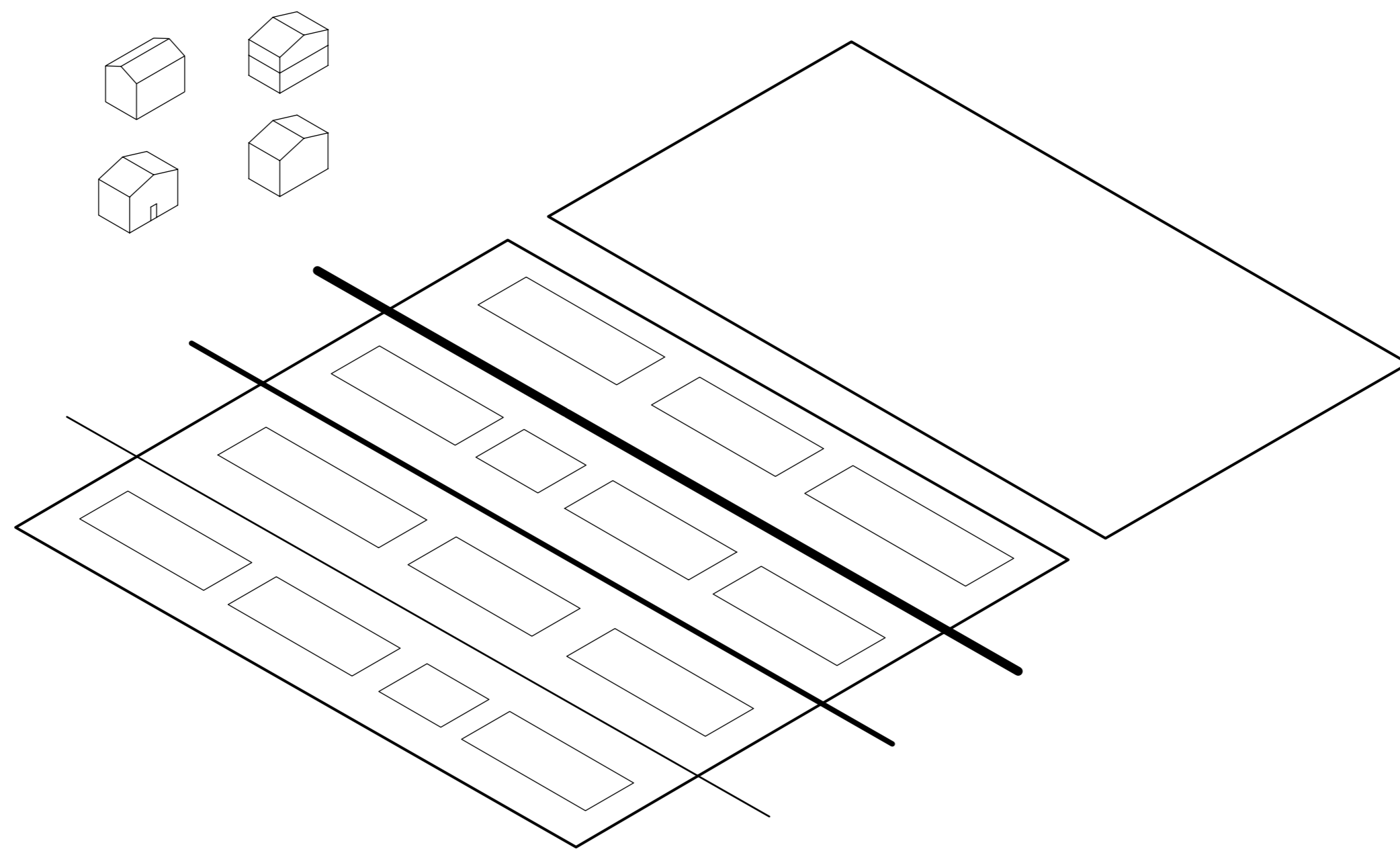


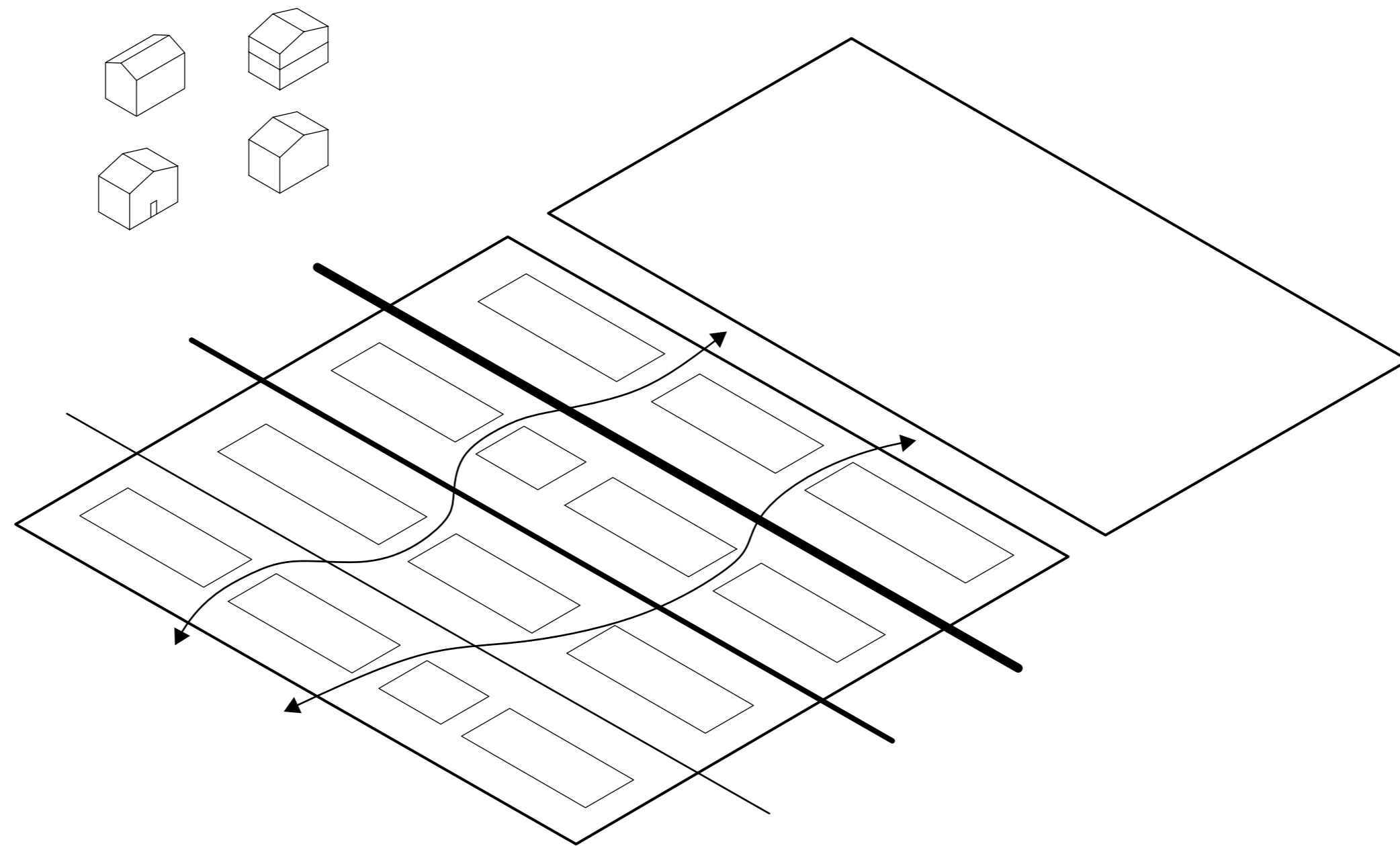


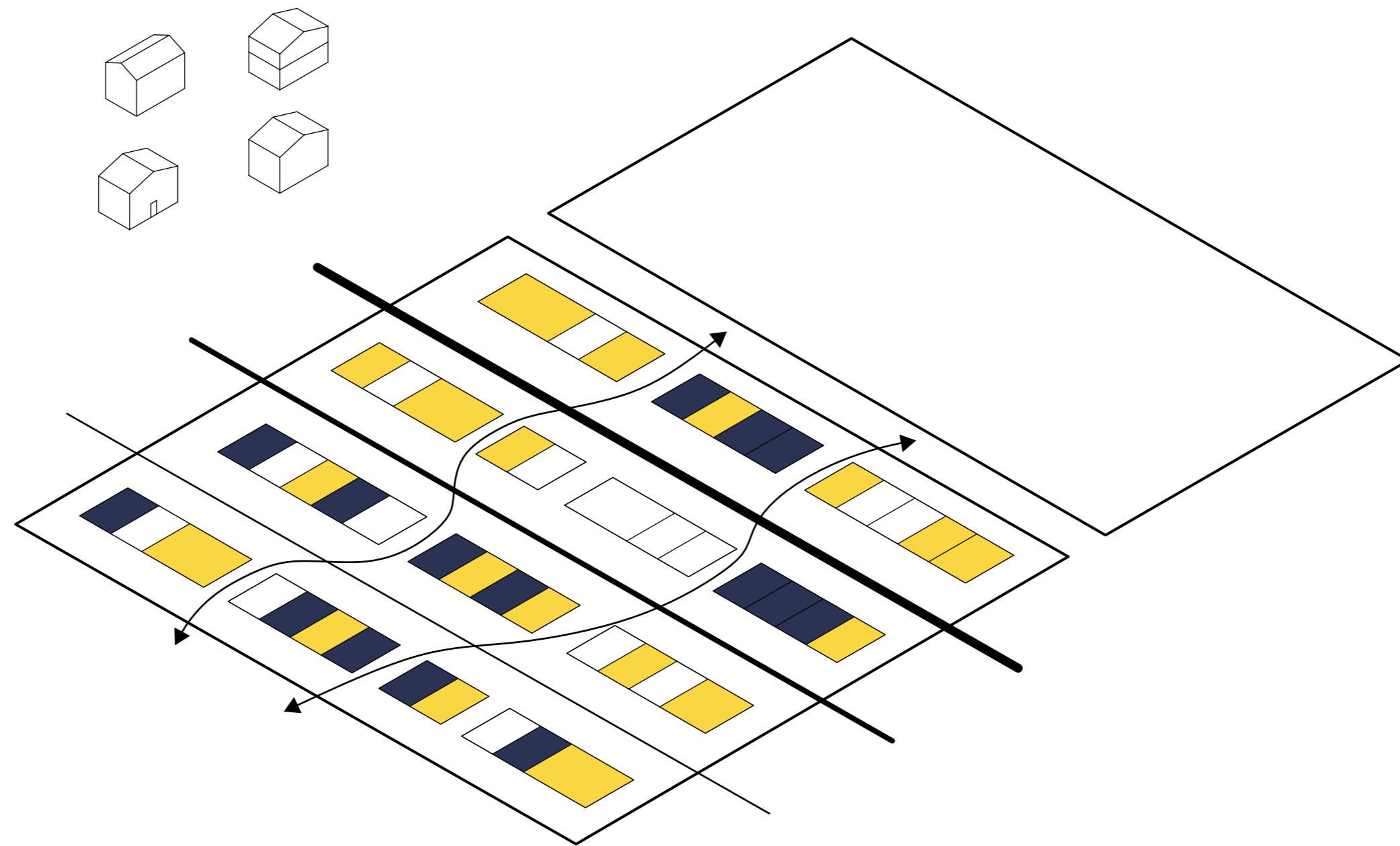


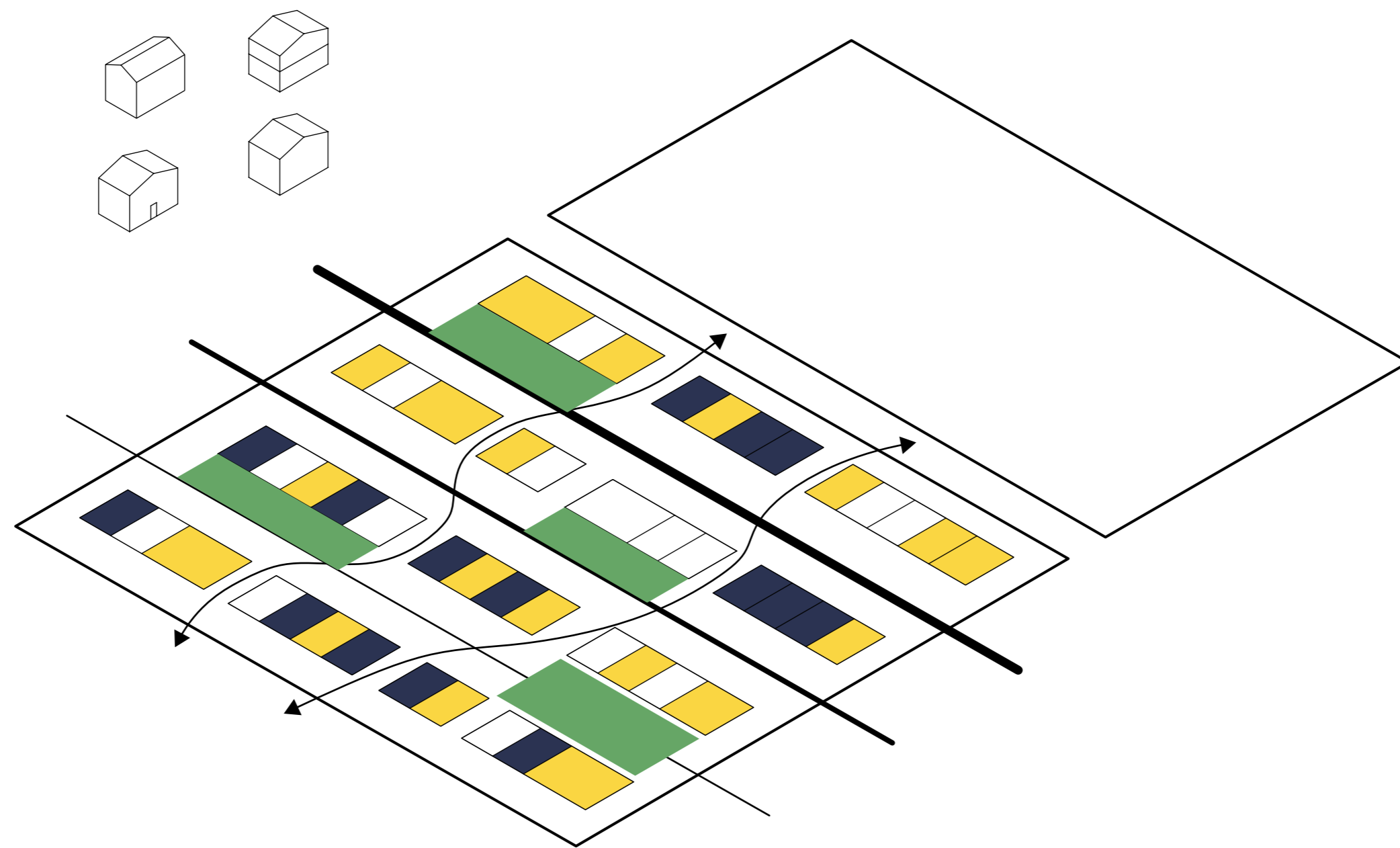
Development as affordable building blocks

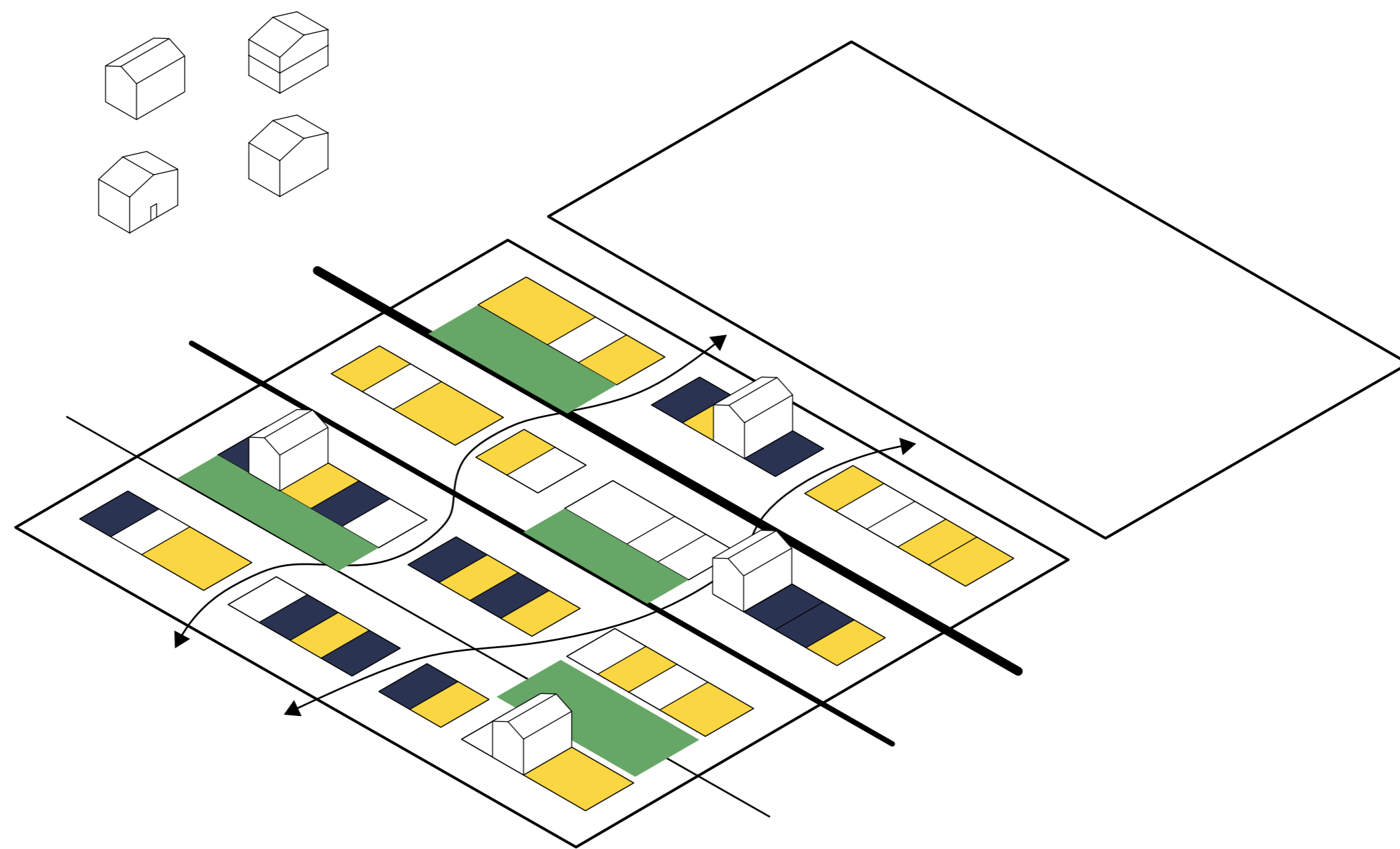


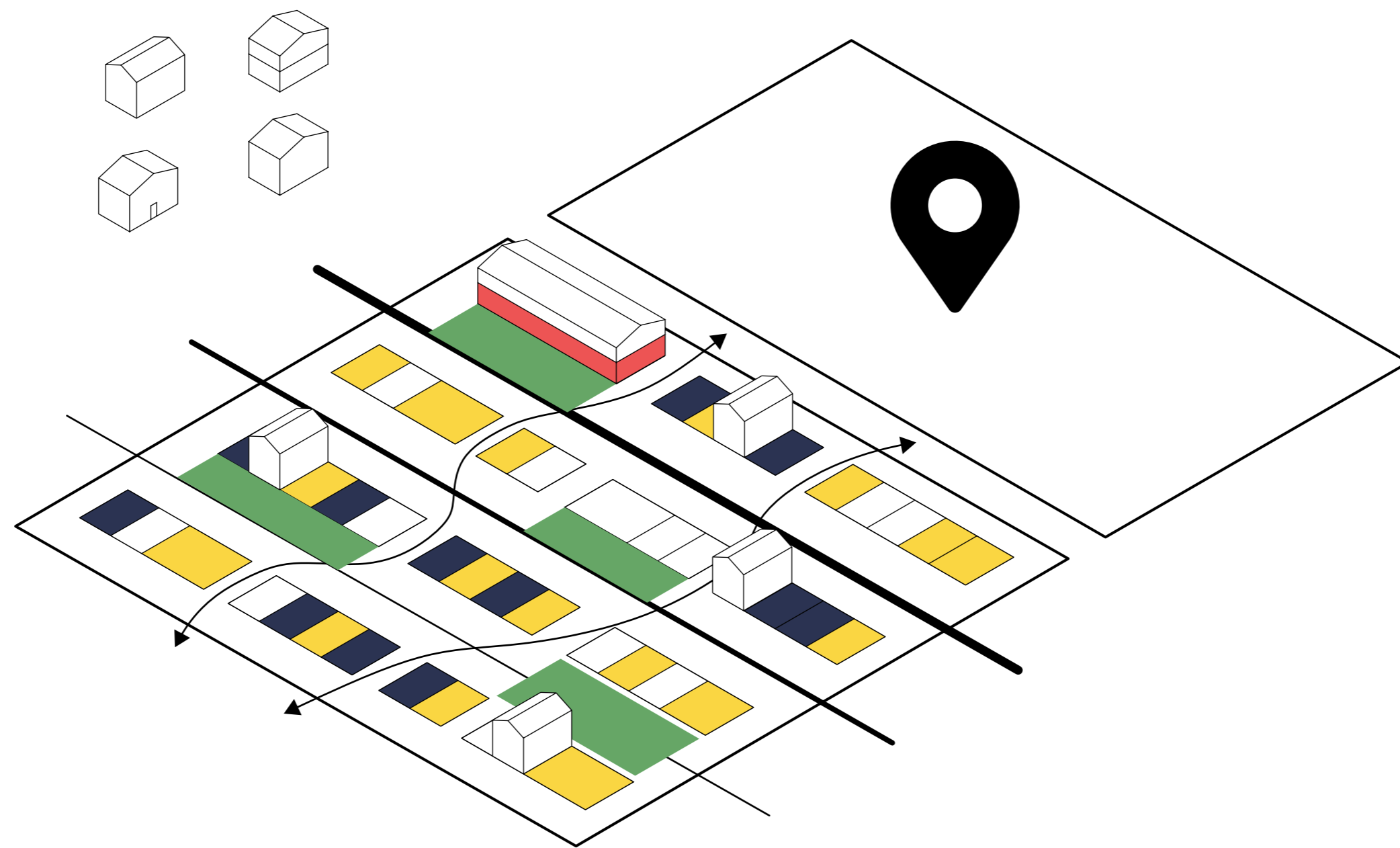


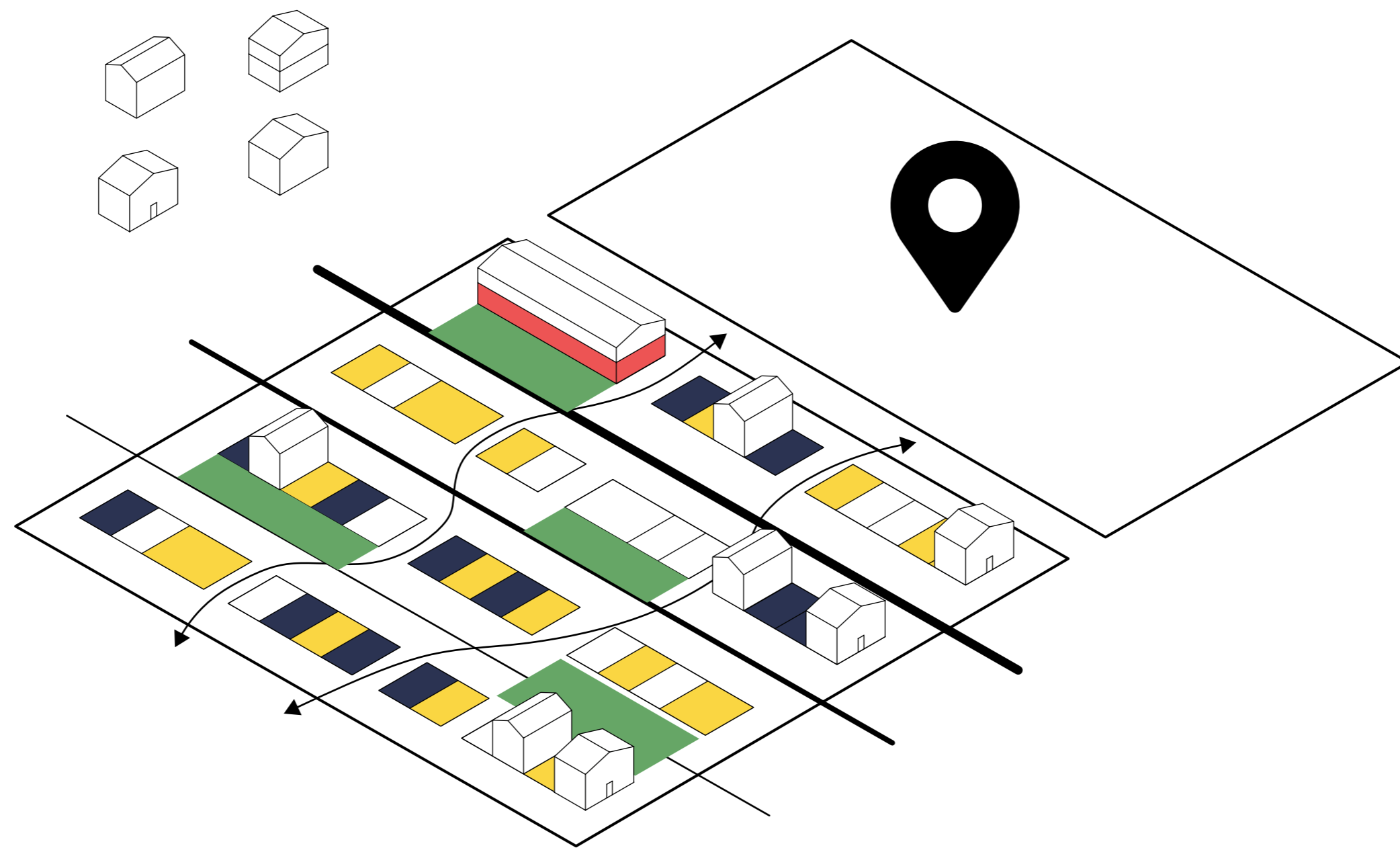


















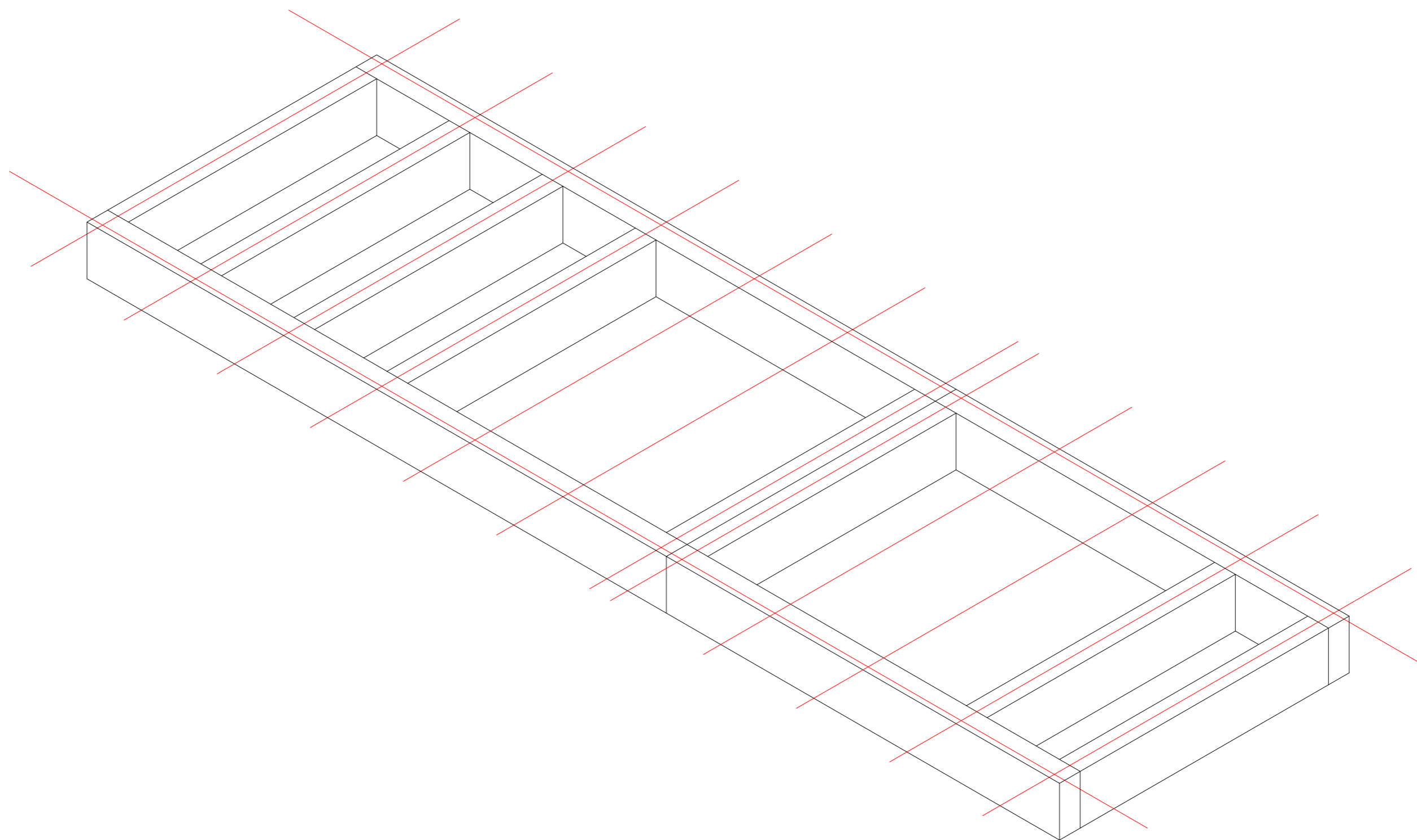


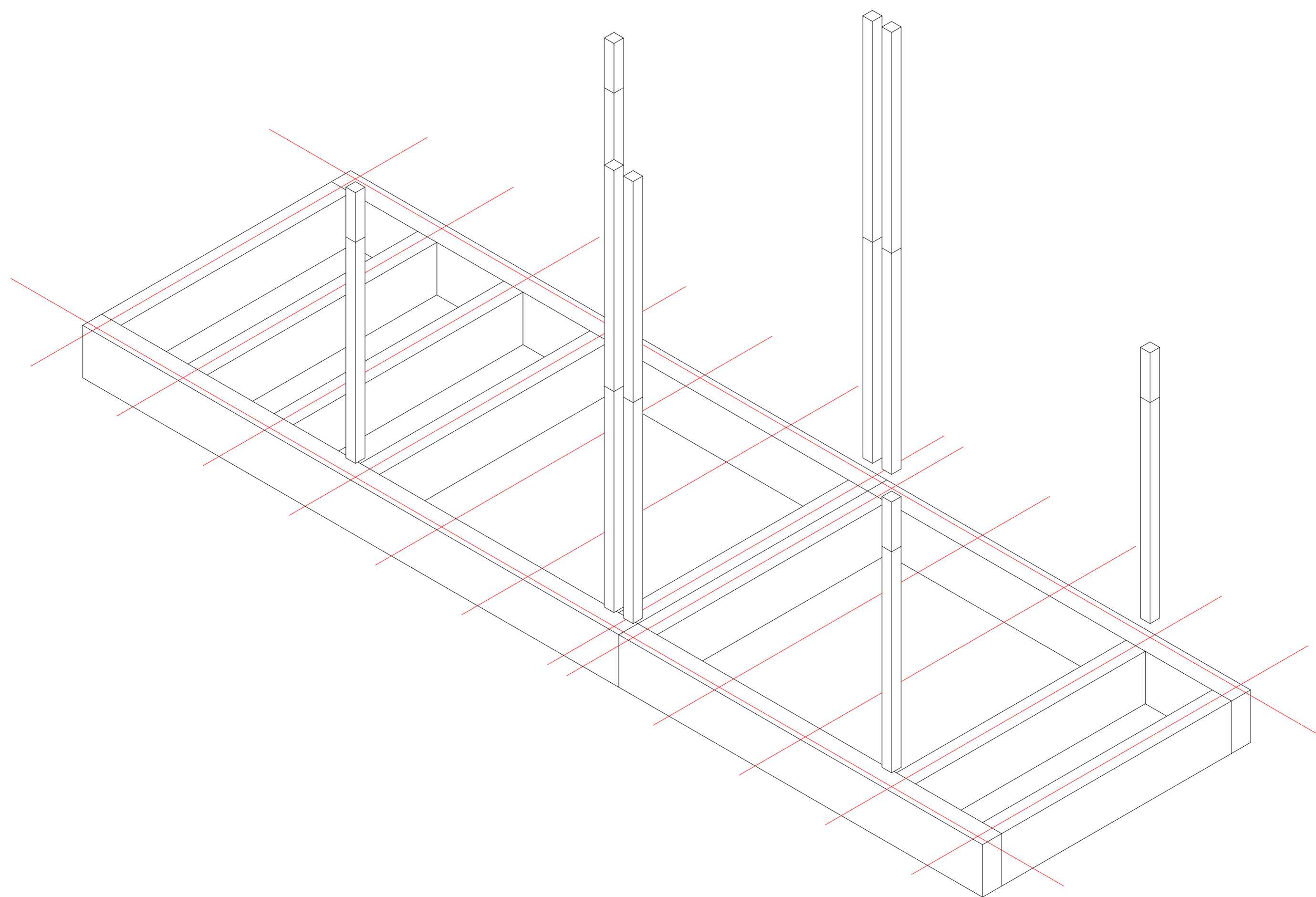


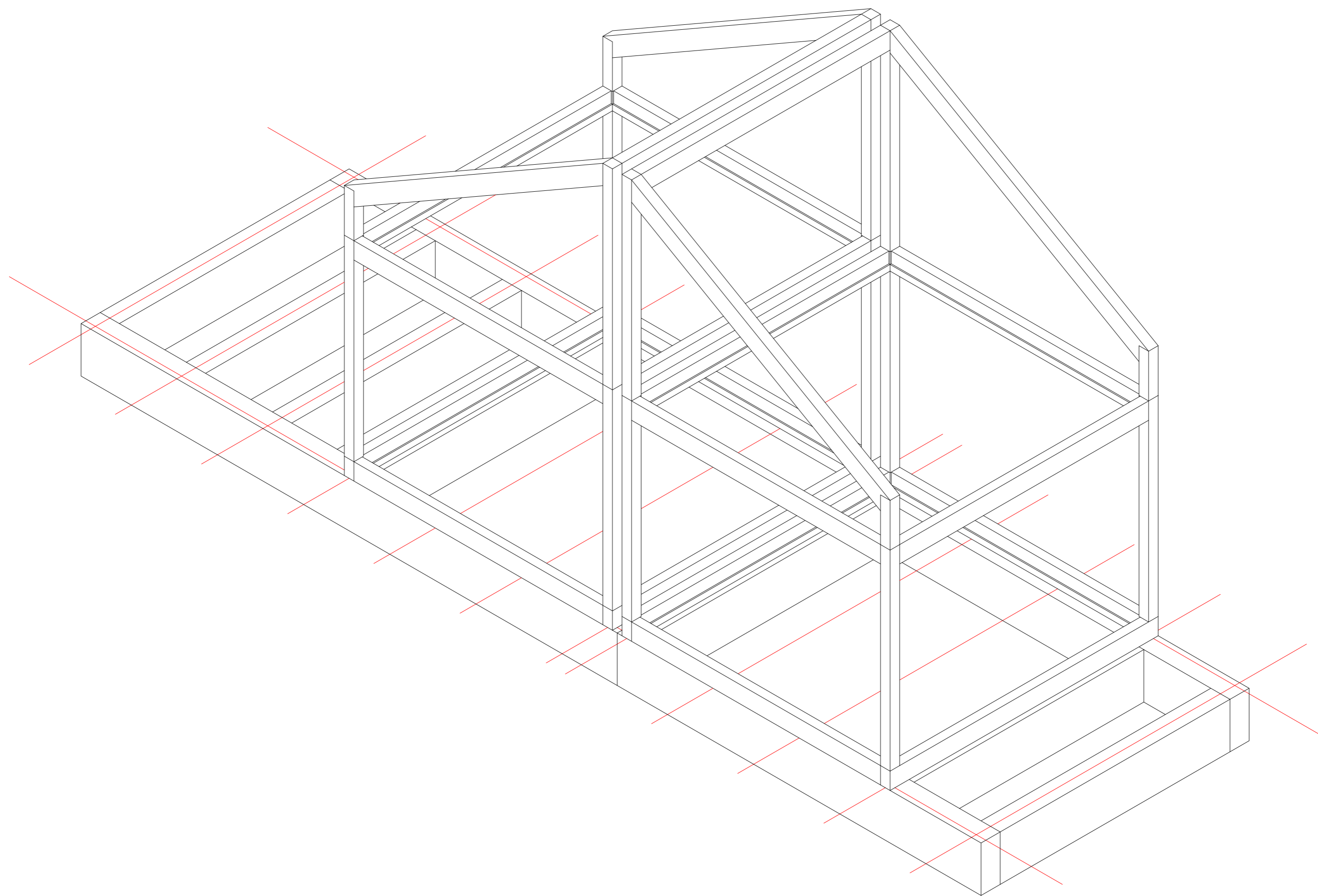


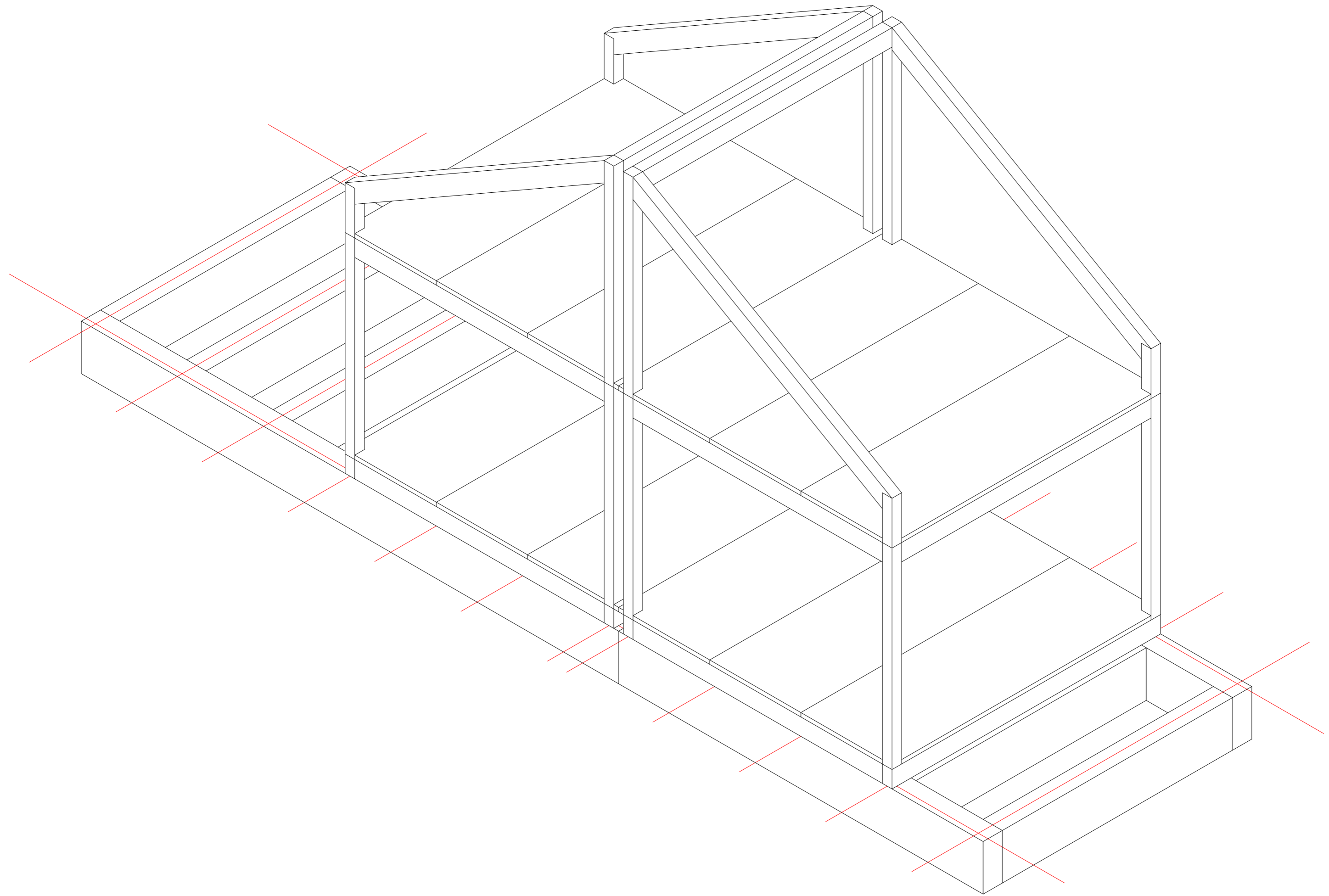
Block *(gebouw)*

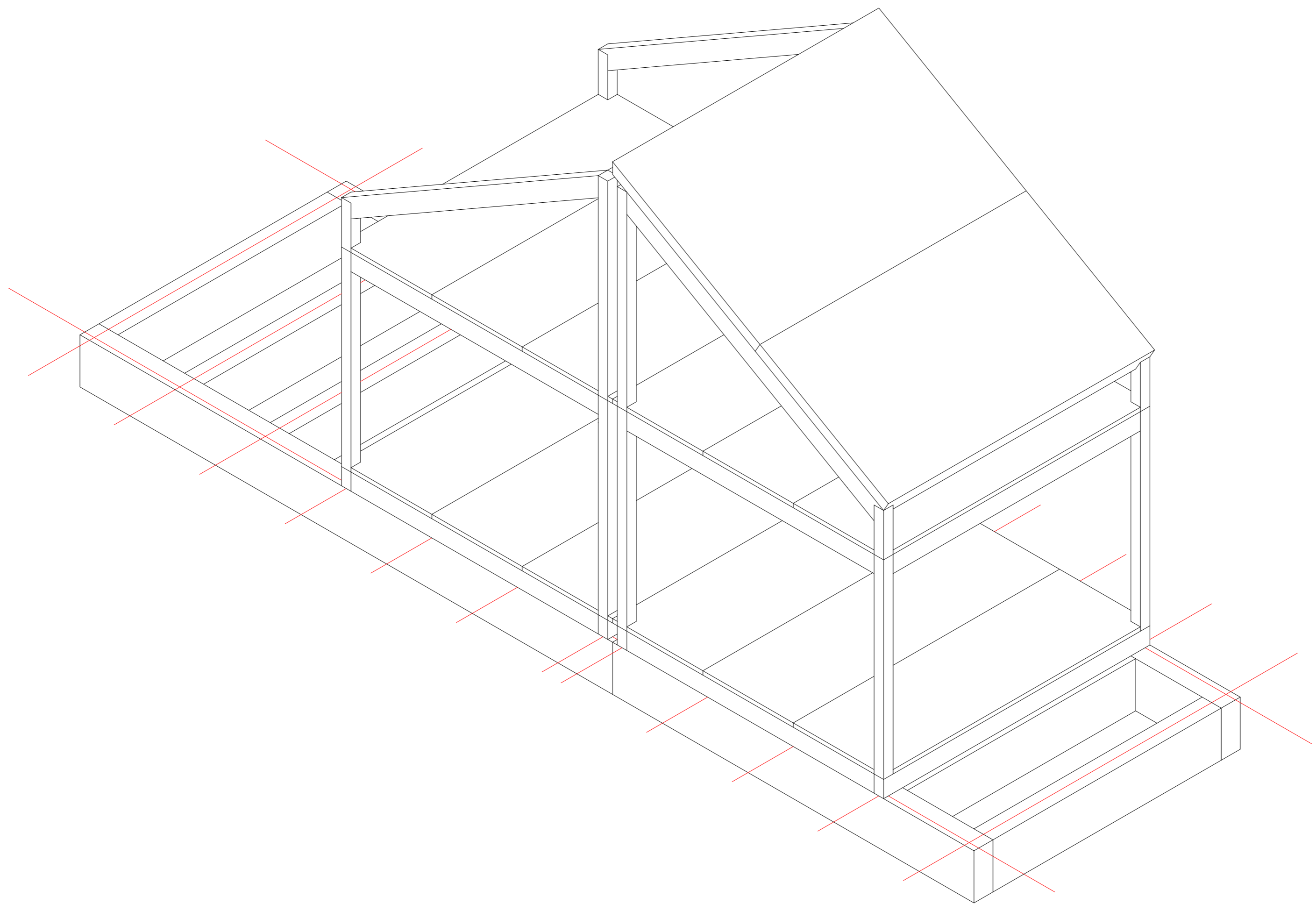
**To leave space for the
insights of tomorrow**

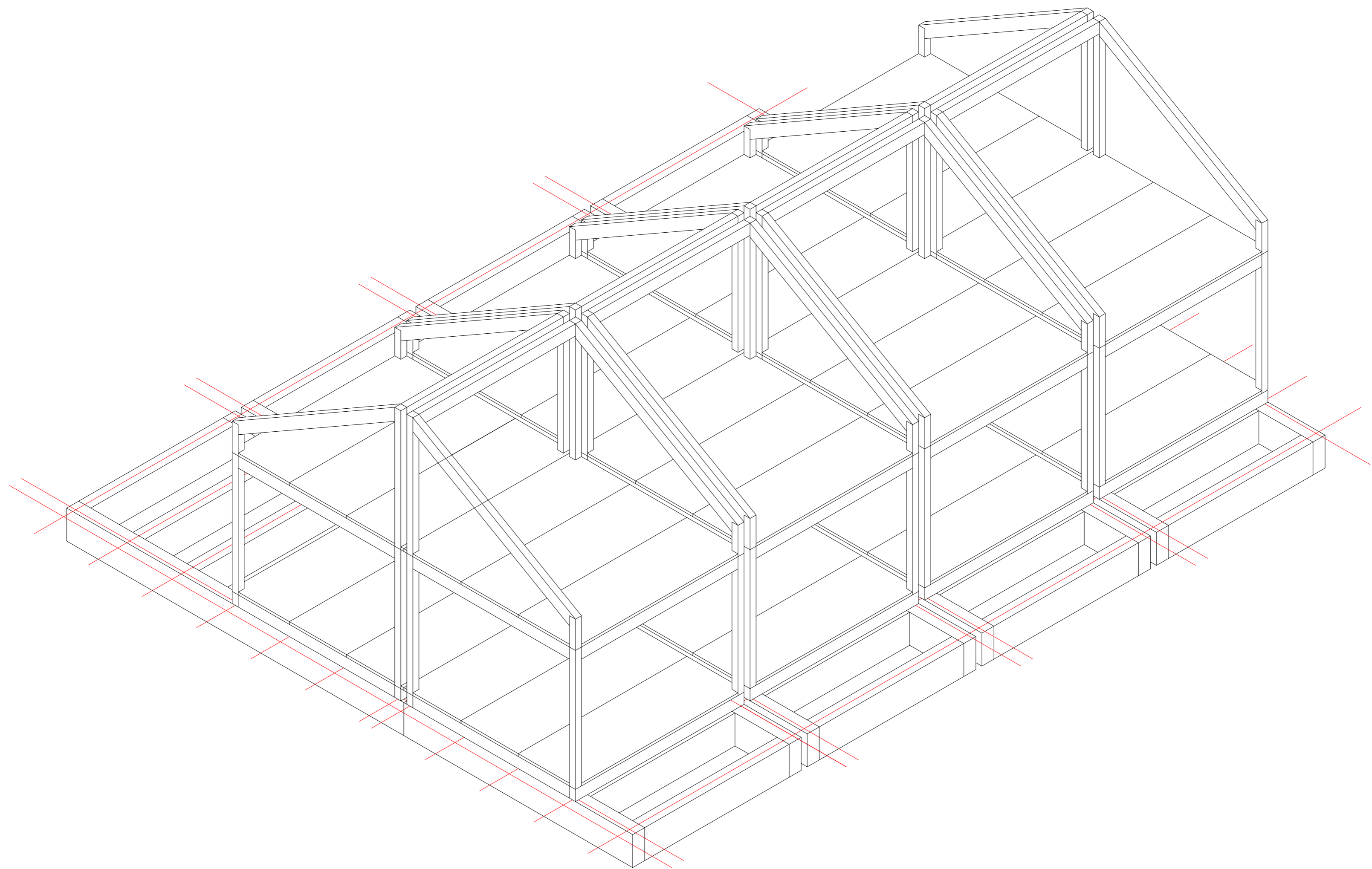


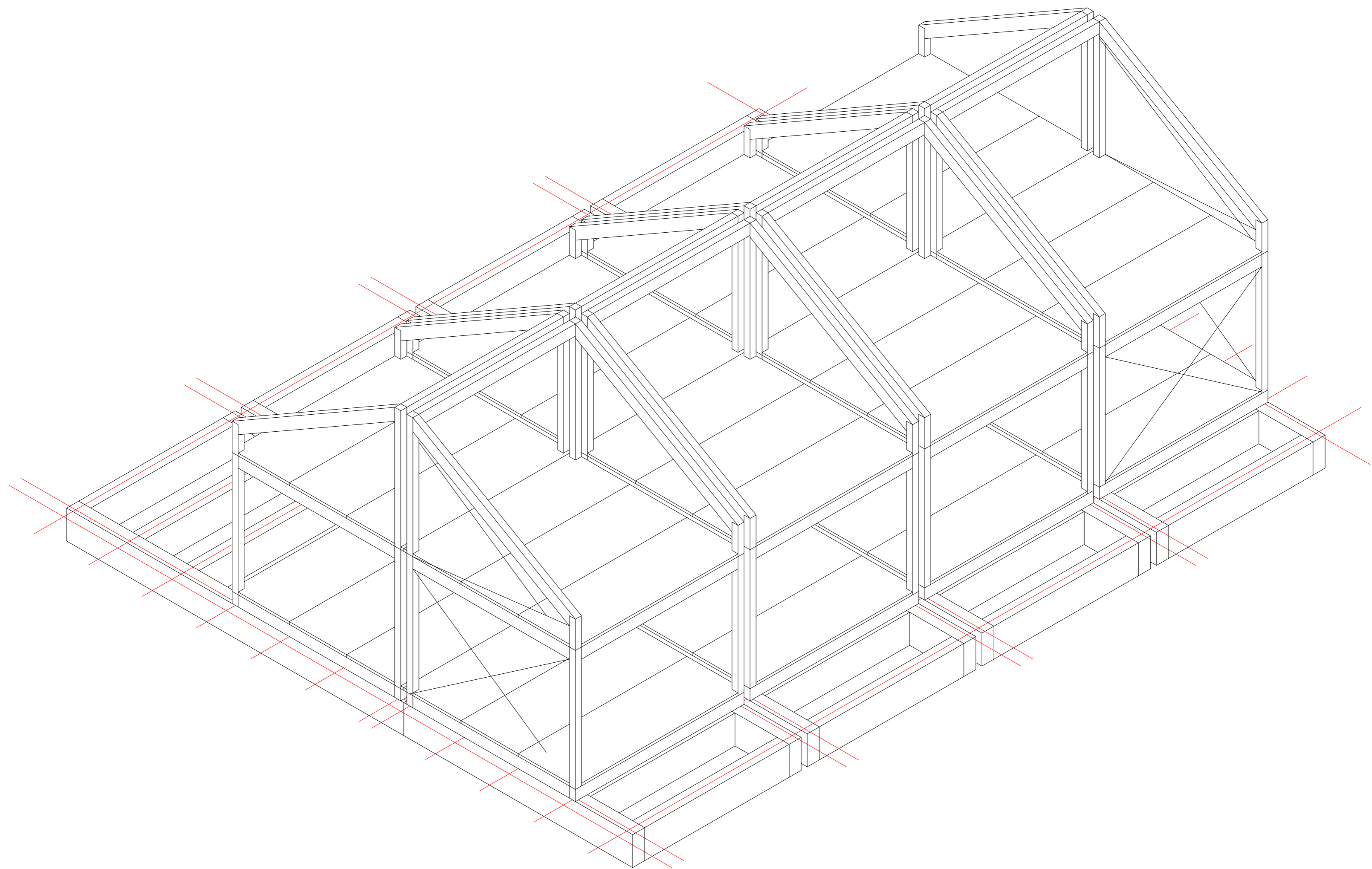


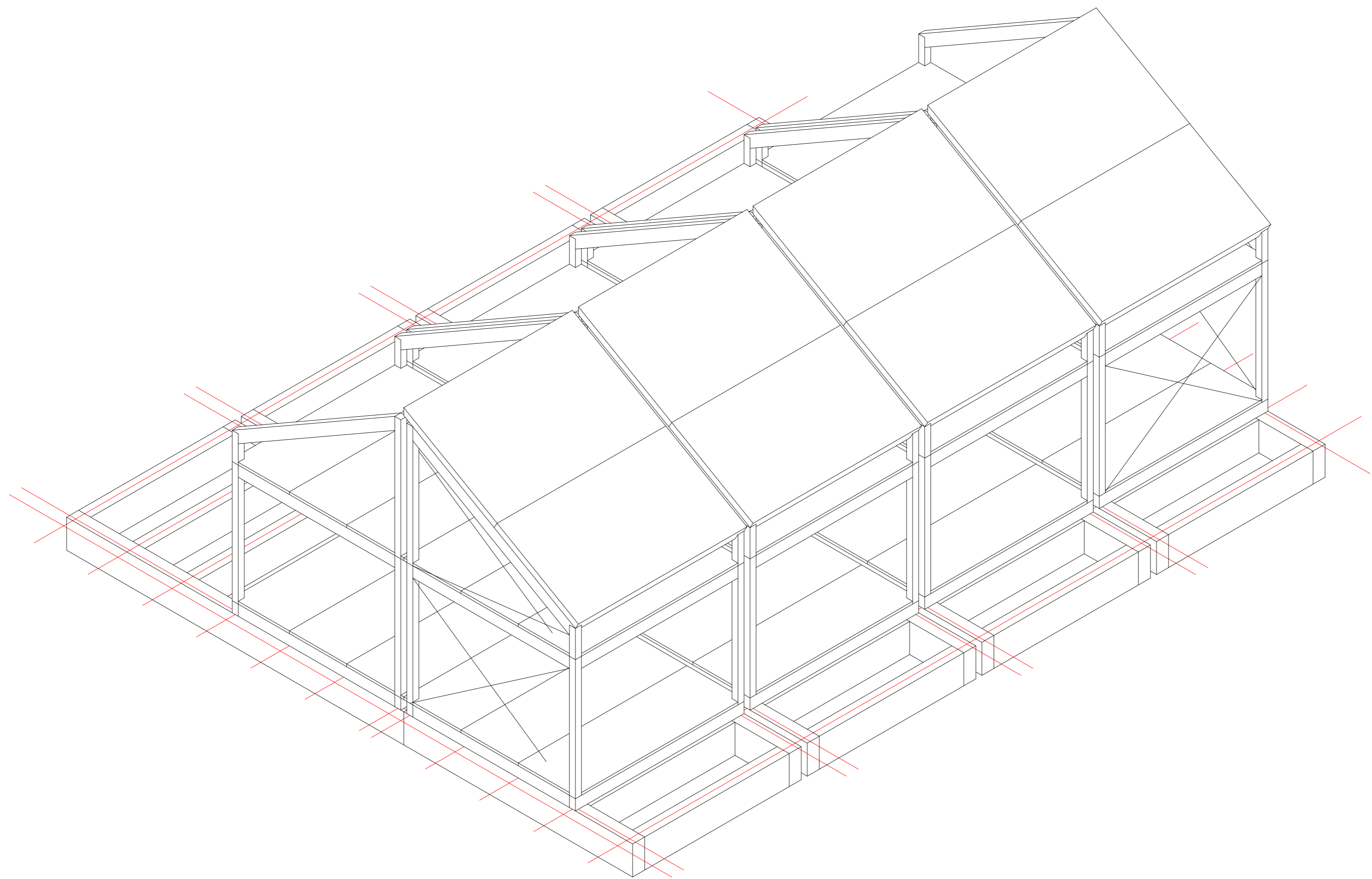


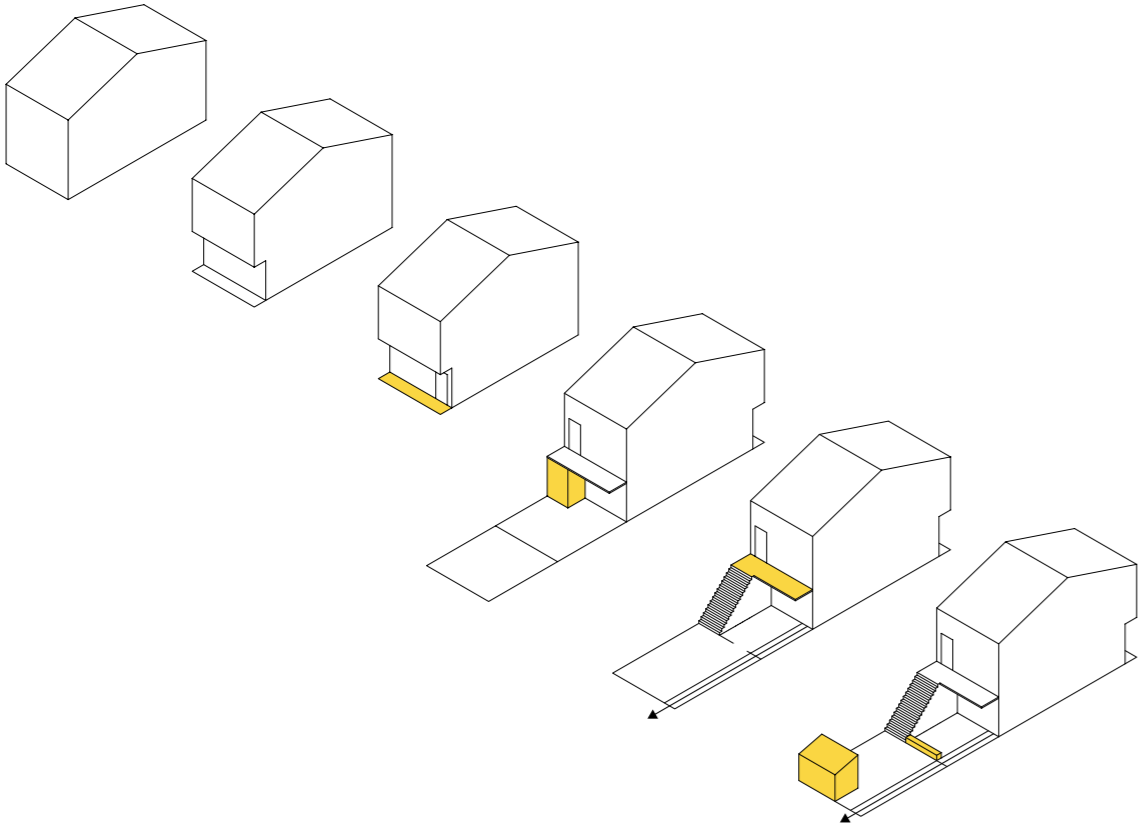




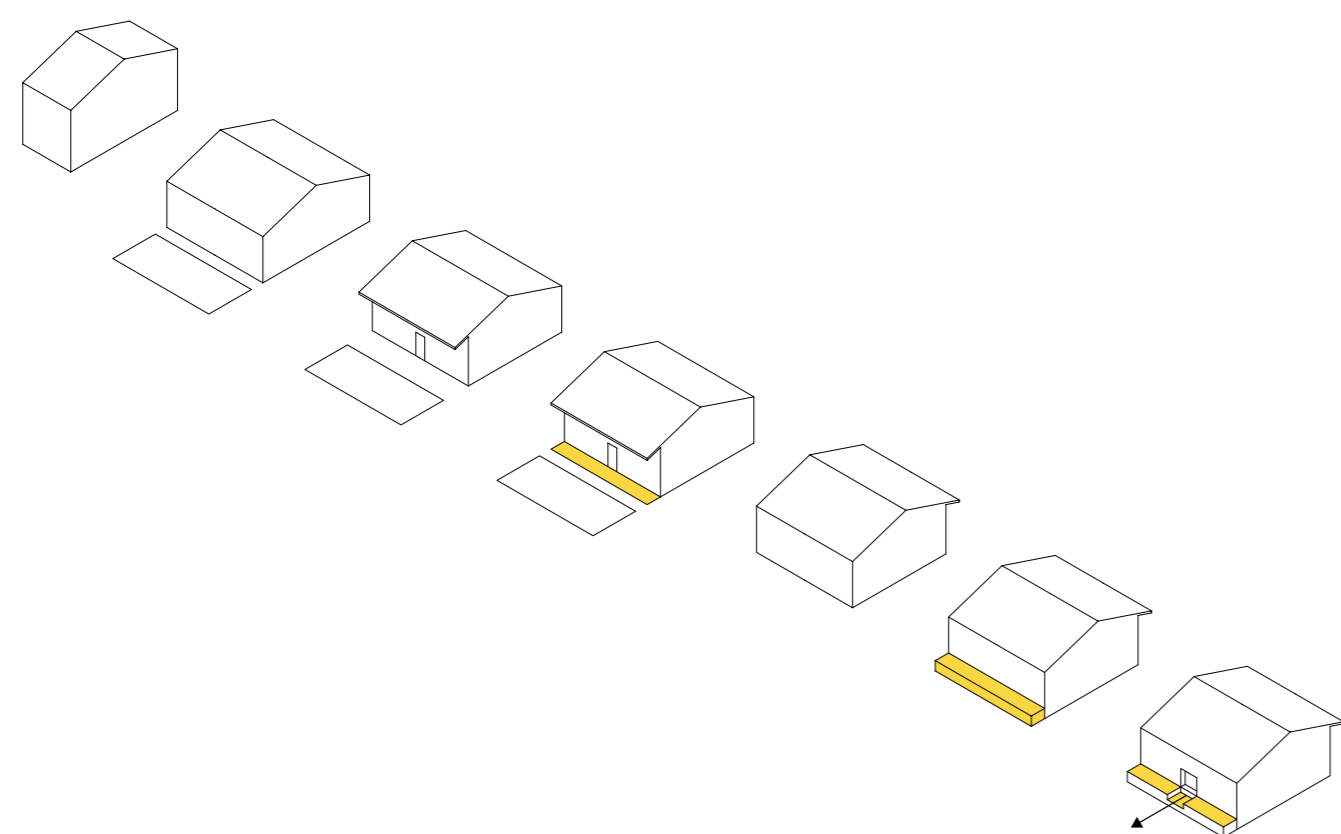






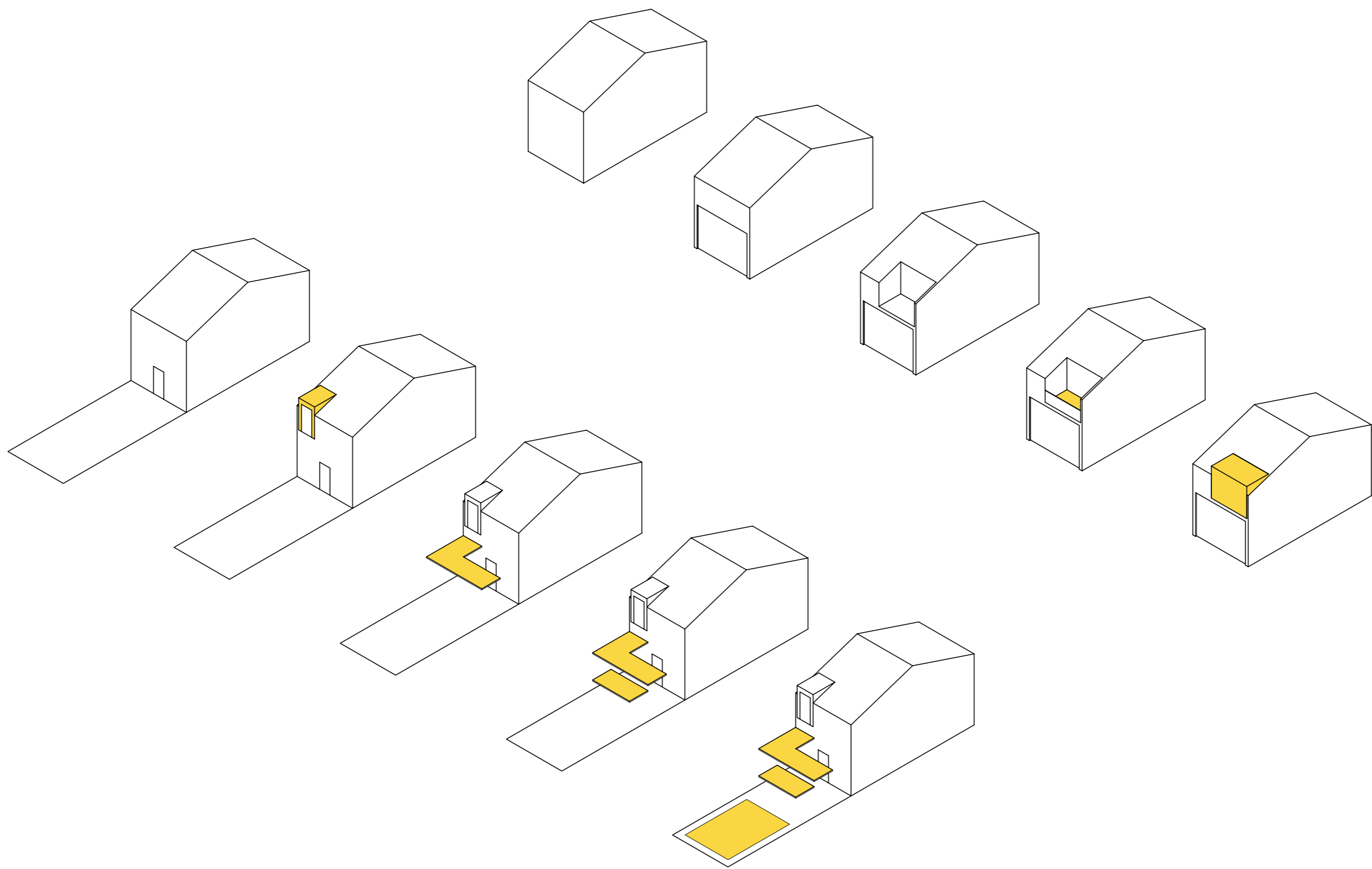


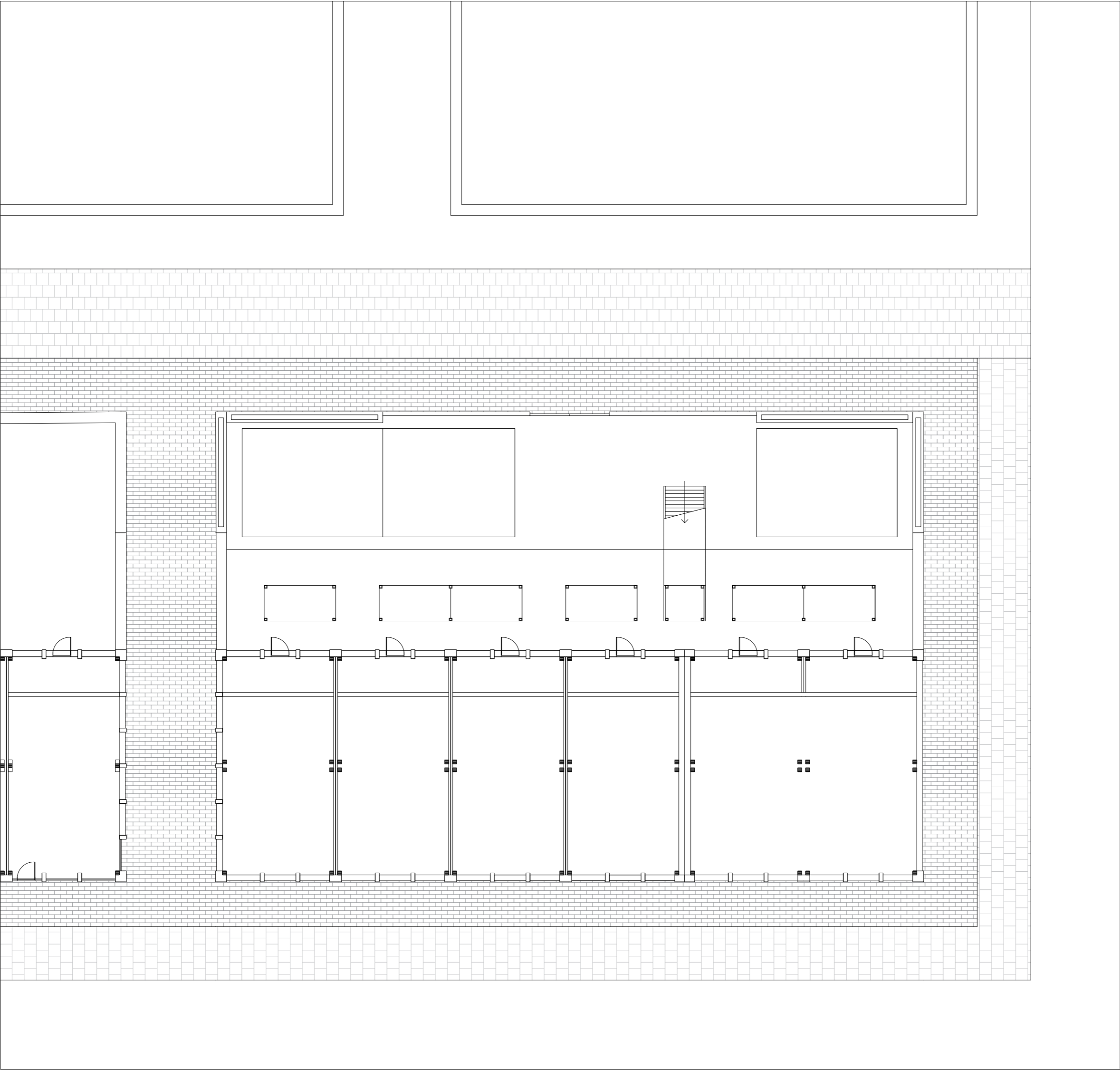


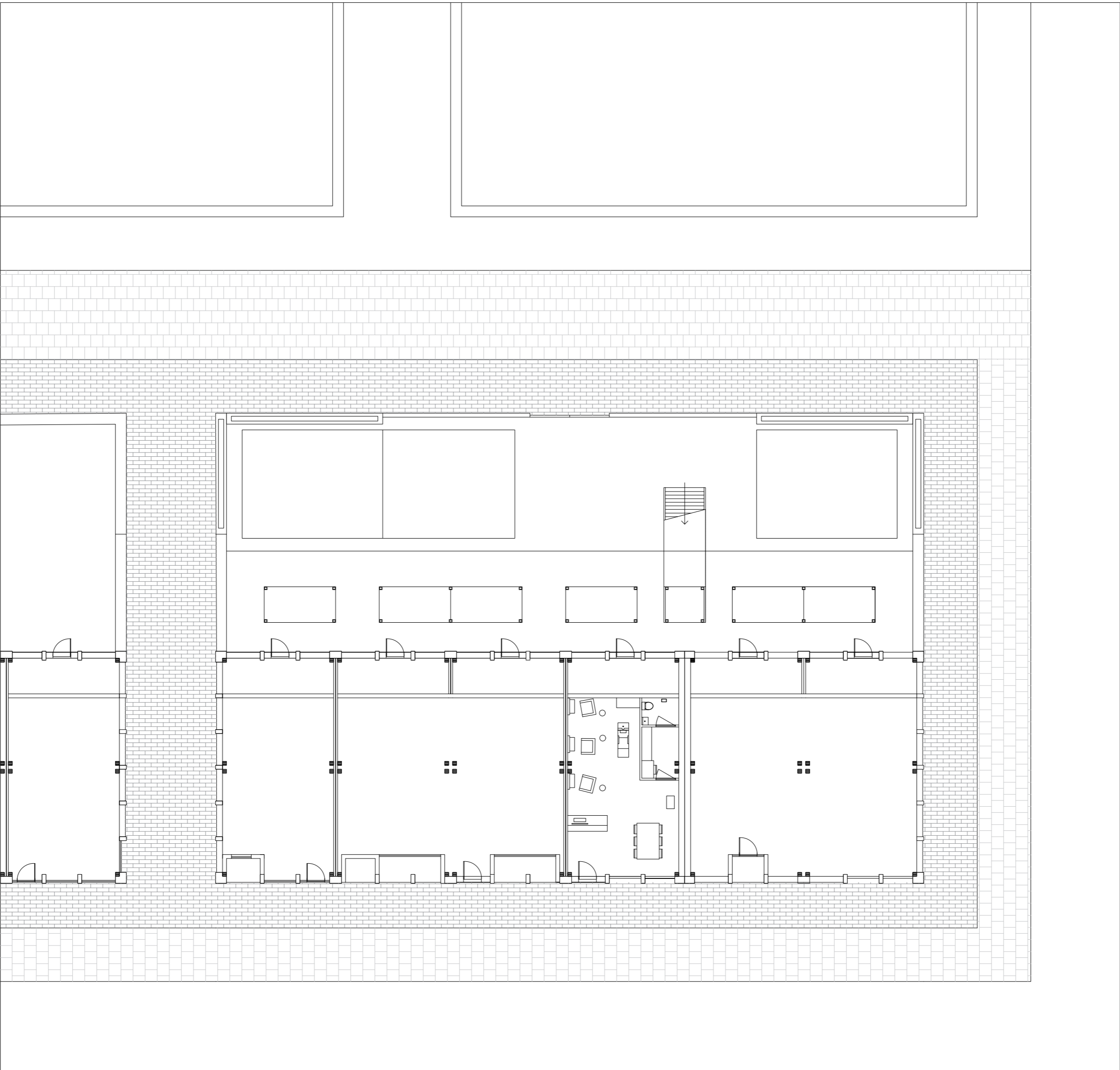


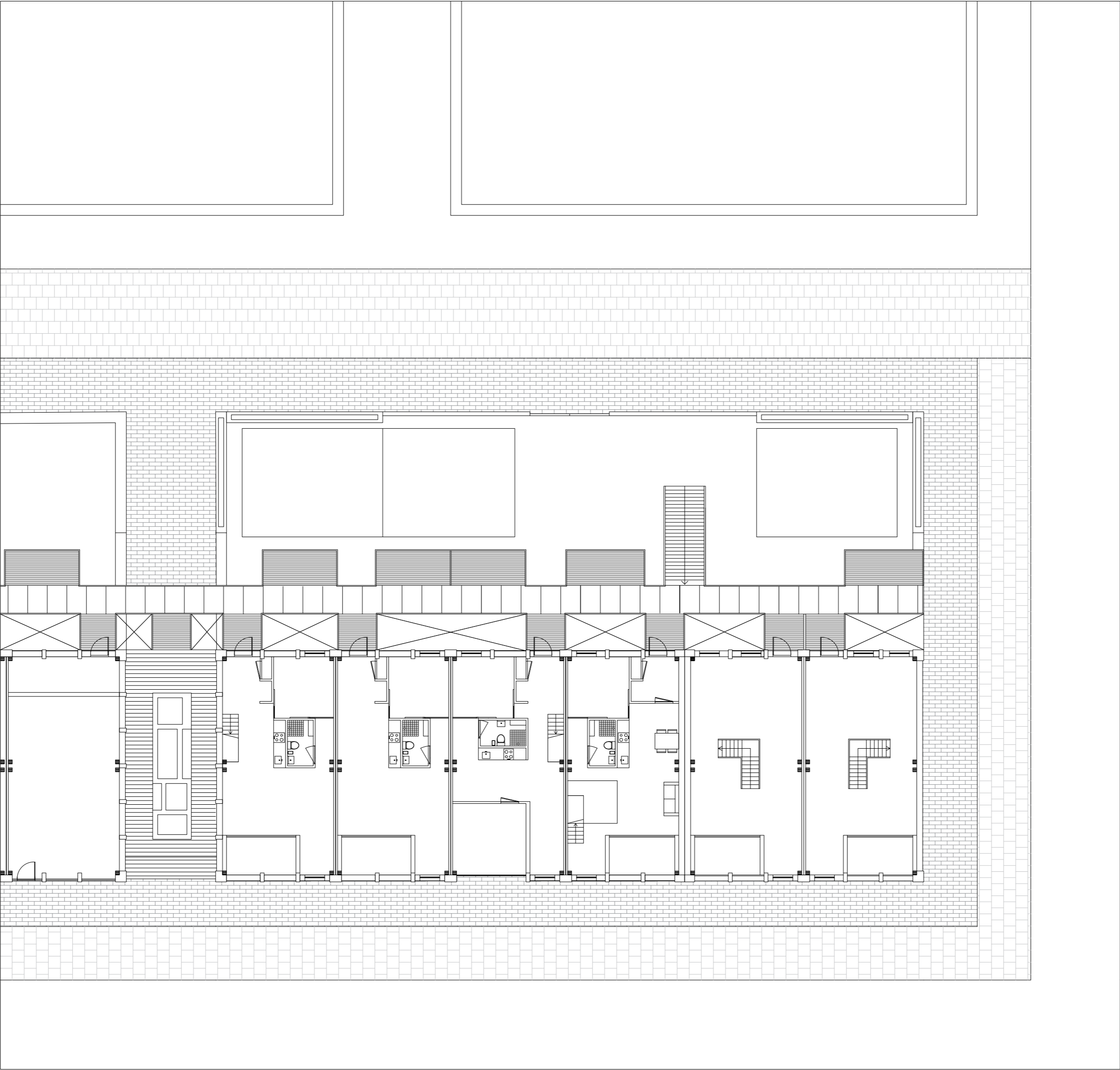


















Anne 5 jaar oud





Anne 80 jaar oud





MARKT

M RKT

Billy



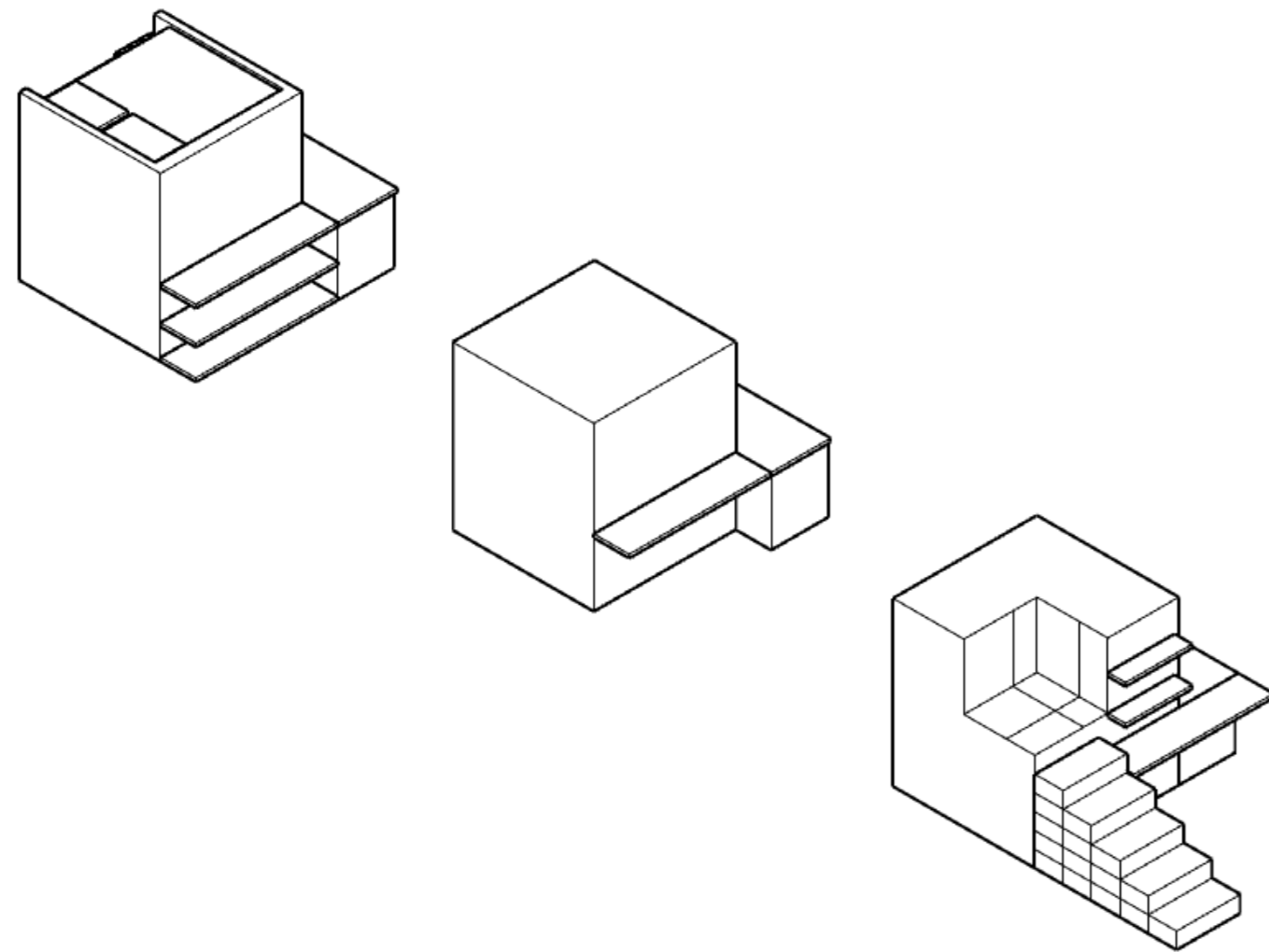


A SAND WICE

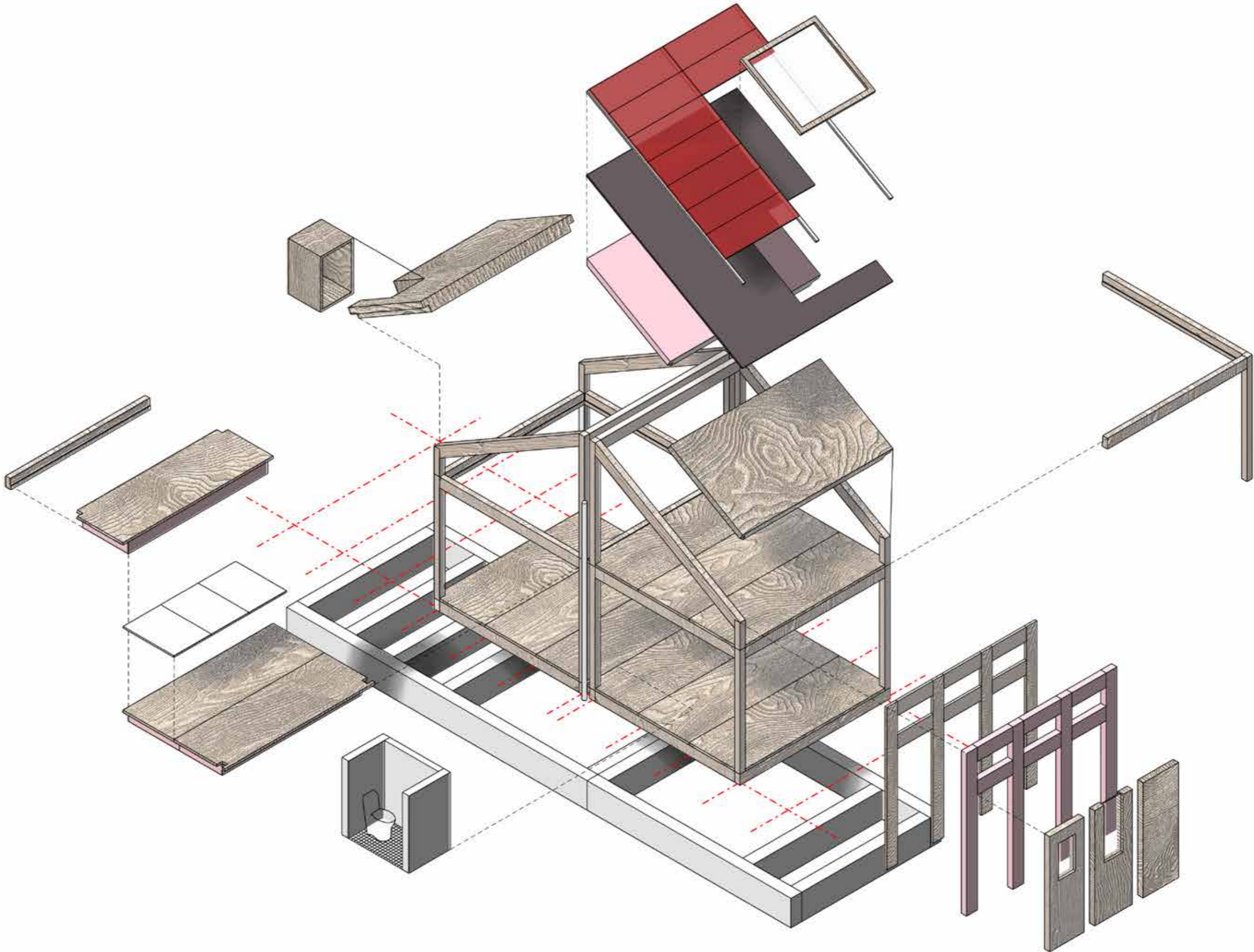
User (*gebruiker*)



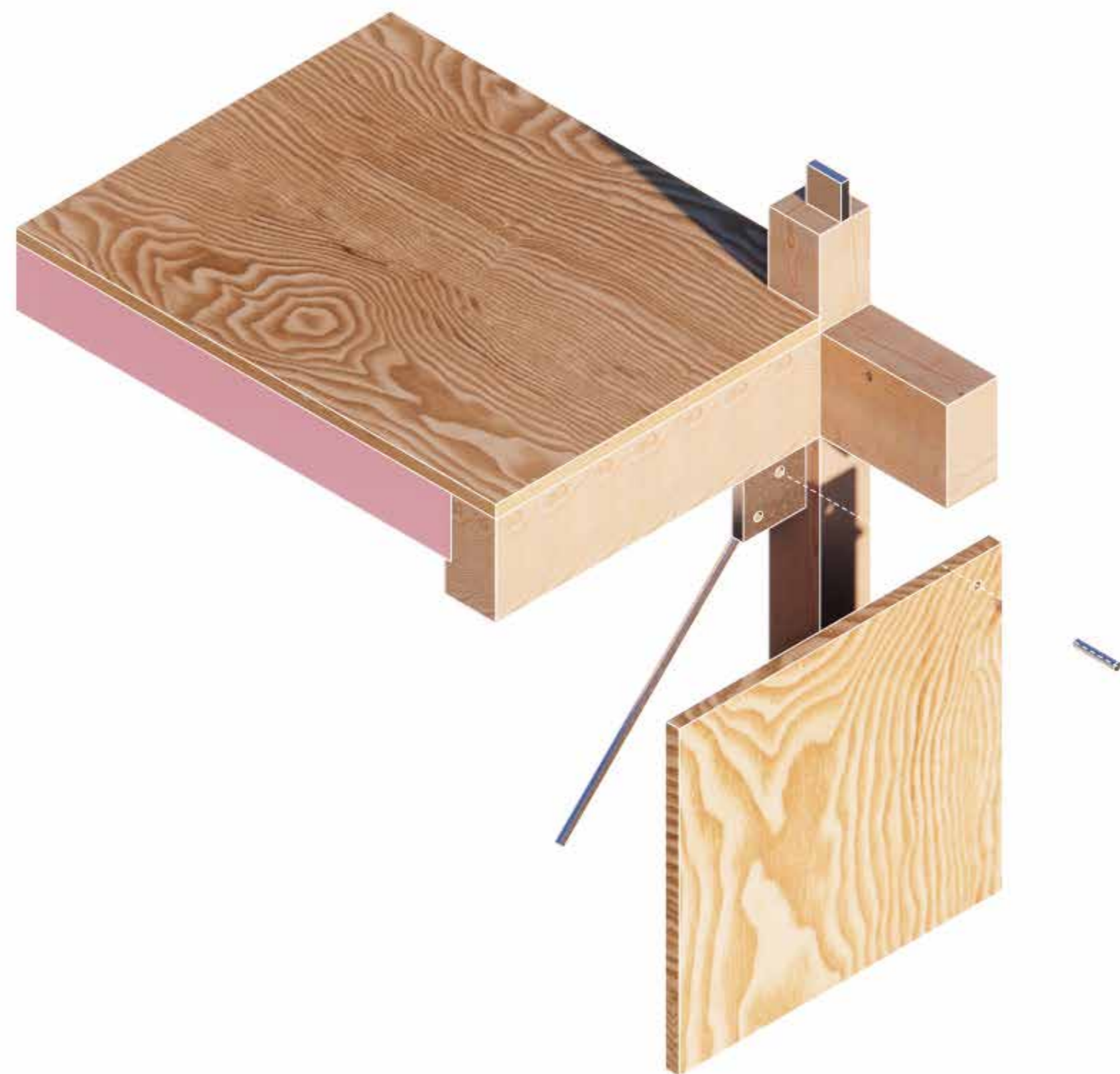




**Interior as modules, or even
seen as furniture**

















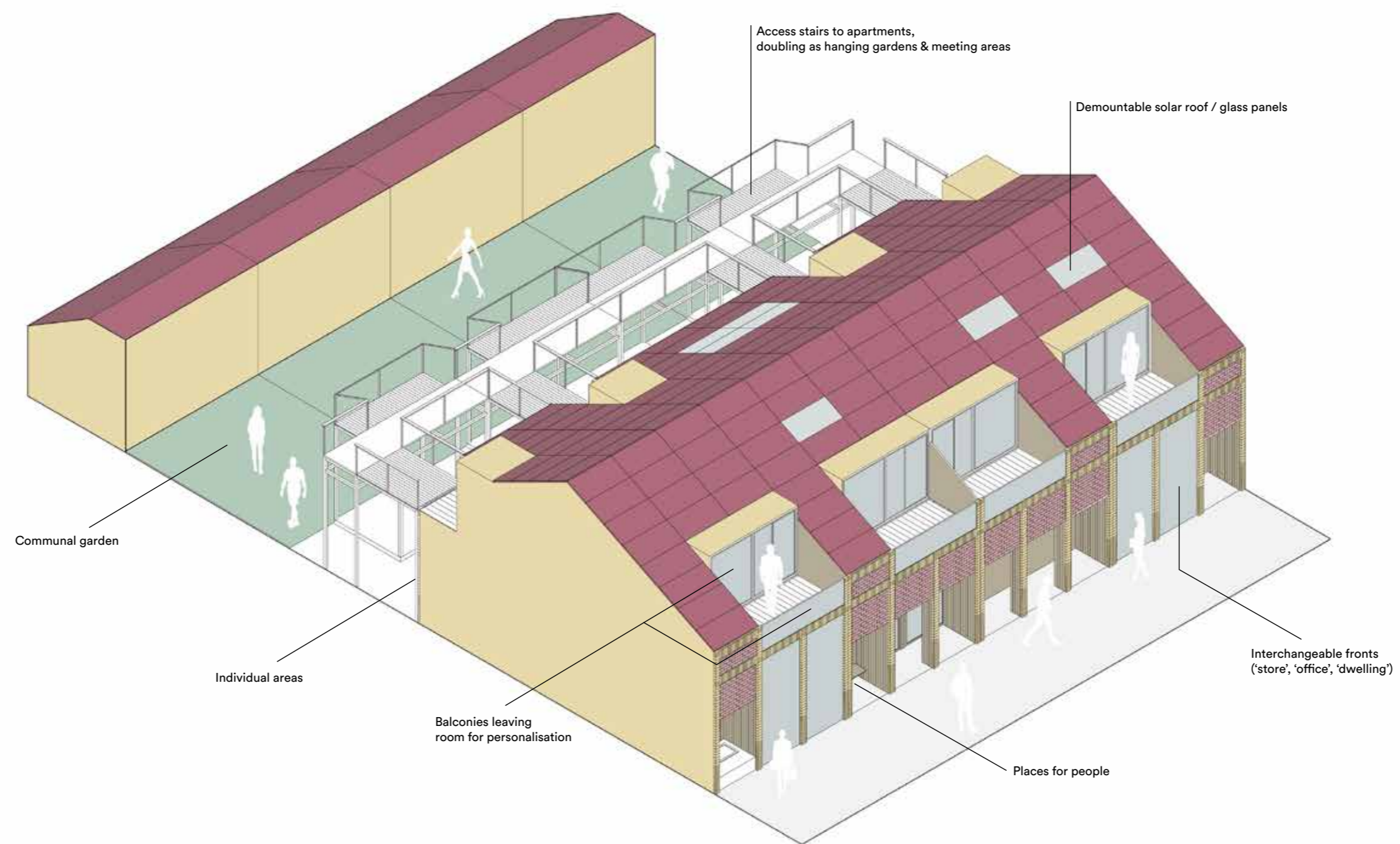
**Neighbourhoods that promote
equality of opportunities by
involving and enabling the residents**

A close-up photograph of a hand placing a small, green, stylized tree model onto a wooden architectural model of a city street. The model features rows of wooden houses with gabled roofs, green-painted lawns, and a central road with a red-painted curb. Other small models, including a crane and a car, are visible on the street. The text "For a fair built environment for people and planet" is overlaid in white, bold, sans-serif font across the center of the image.

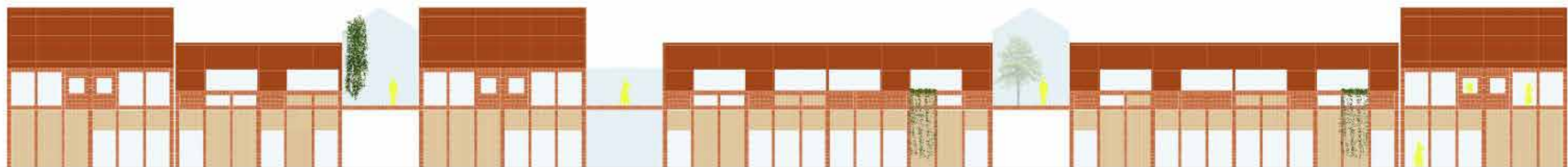
**For a fair built environment for
people and planet**

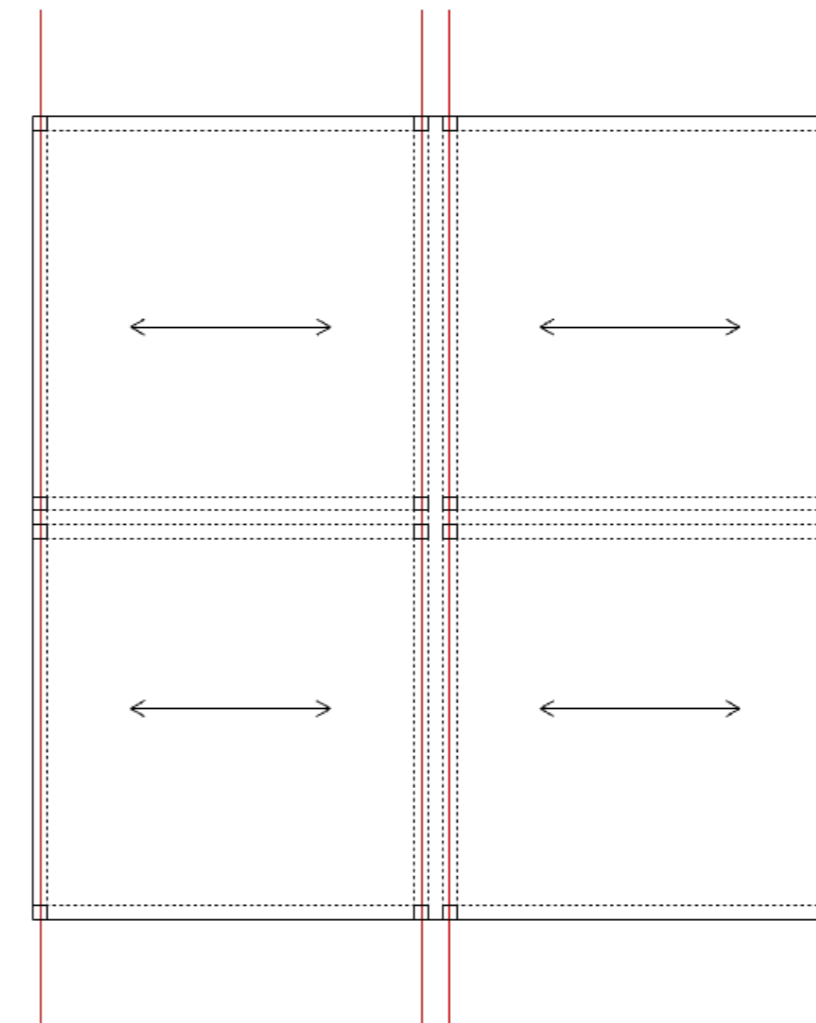
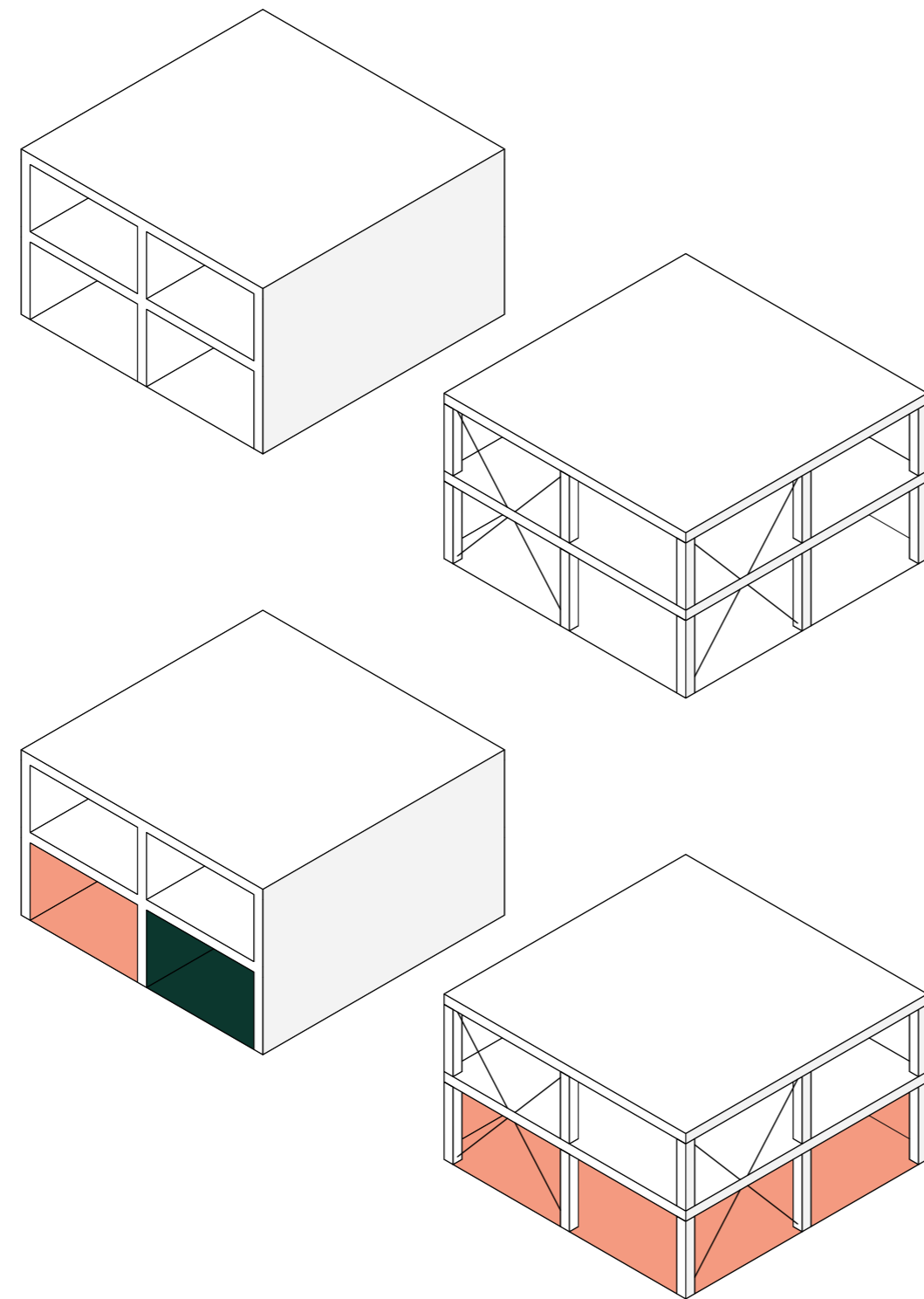
**Breng ieder uur
een woord, een daad.
Die voor de wereld
iets achterlaat.**

Appendix



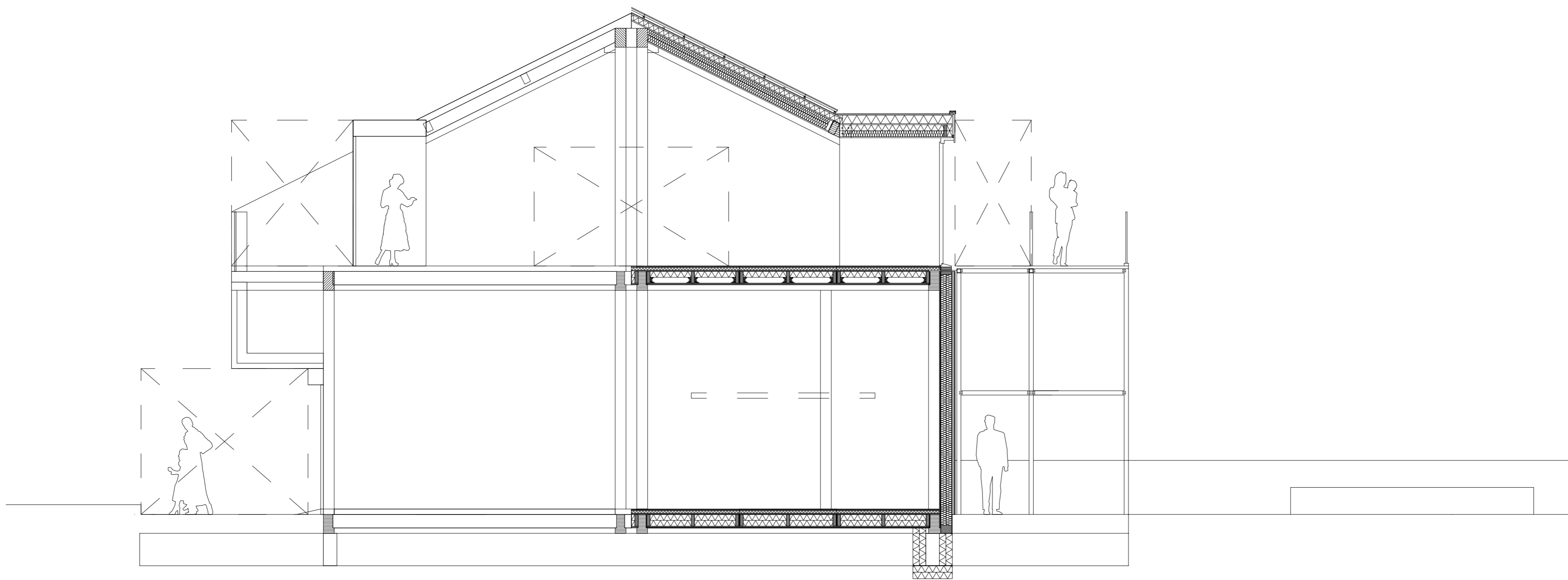


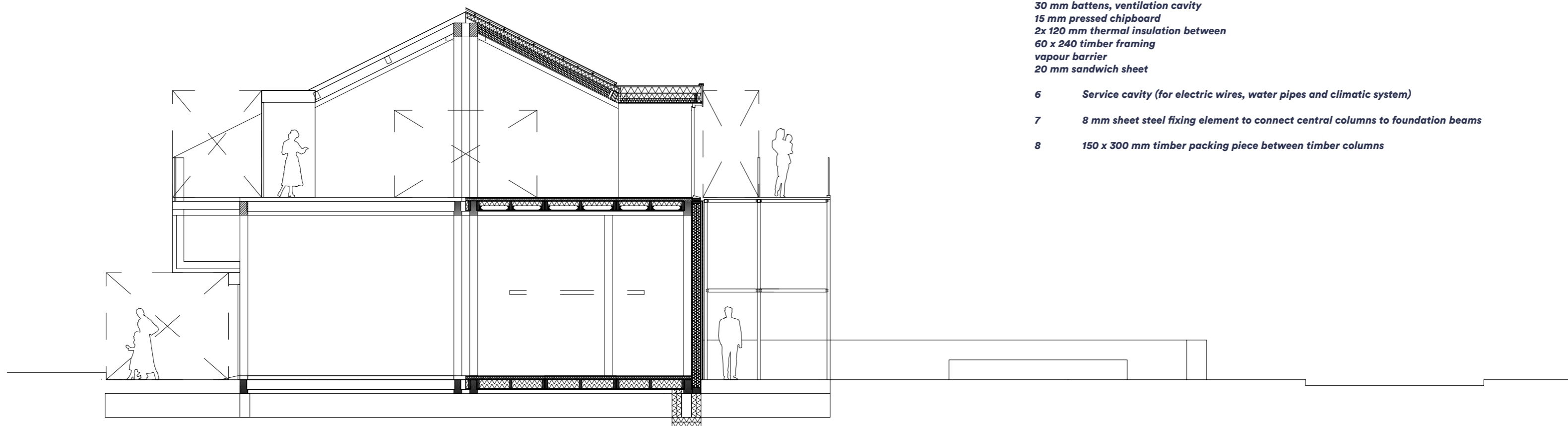




Modules vs. columns







1 **Roof construction**
Solar panel roof tiles (incl. system with battens)
Plastic waterproof membrane
90 mm insulation to falls
20 mm sandwich sheet
2x 100 thermal insulation between
60 x 200 mm timber framing (brand/type)
vapour barrier
20 mm sandwich sheet
9 mm veneered plywood

2 **Load-bearing beam**
200 x 250 mm laminated timber edge beam (Suteki Wood System)

3 **Load-bearing column**
200 x 200 (double) laminated timber column (Suteki Wood System)
demountably connected with sheet steel fixing elements (8 mm) and screws

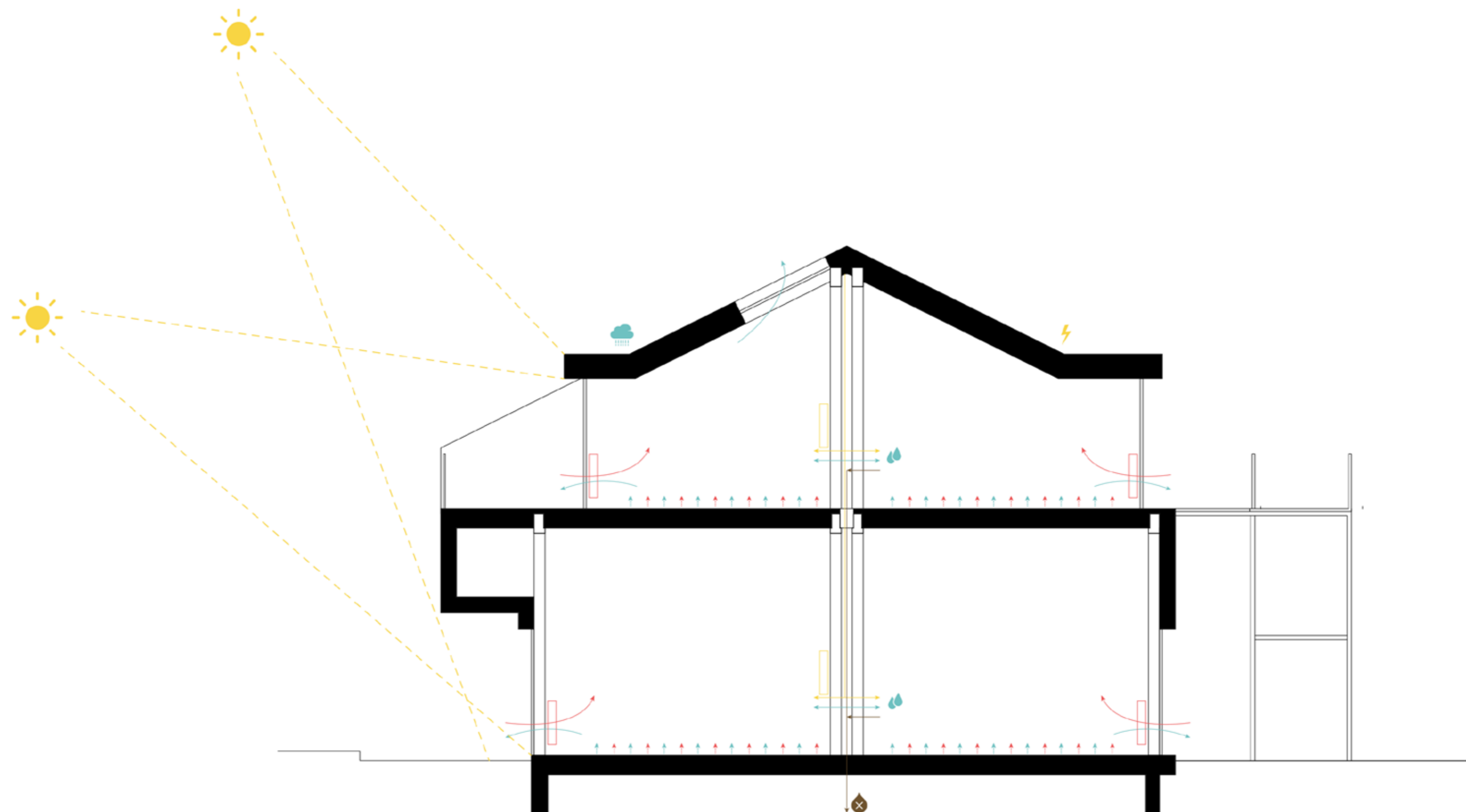
4 **Floor construction**
9 mm veneered plywood
25 mm sandwich sheet
20 + 30 mm sound insulation
20 mm sandwich sheet
100 mm thermal insulation and
100 mm crushed limestone between
60 x 200 mm timber framing (or Kerto Ripa houten kanaalplaatvloer)
20 mm sandwich sheet
9 mm veneered plywood

5 **Wall construction**
20 mm tongue-and-groove boarding
30 mm battens, ventilation cavity
15 mm pressed chipboard
2x 120 mm thermal insulation between
60 x 240 timber framing
vapour barrier
20 mm sandwich sheet

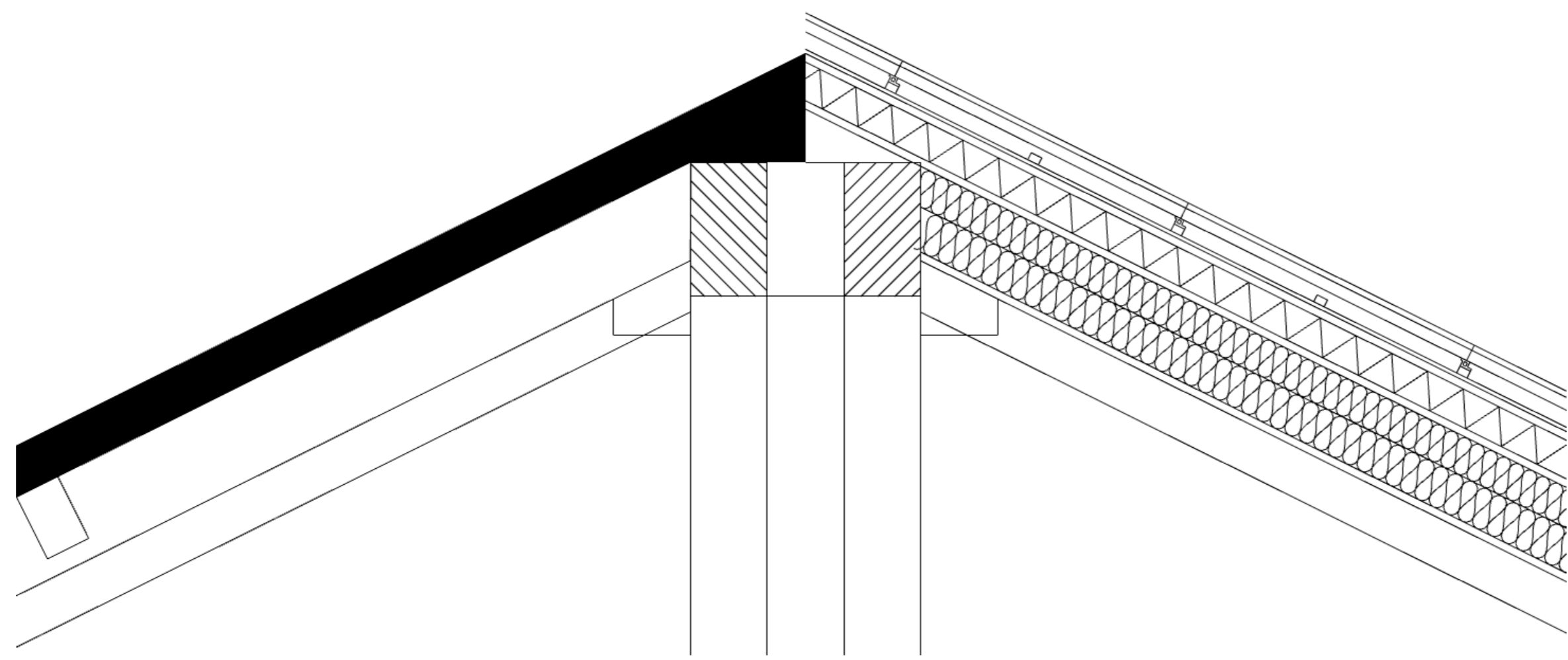
6 **Service cavity (for electric wires, water pipes and climatic system)**

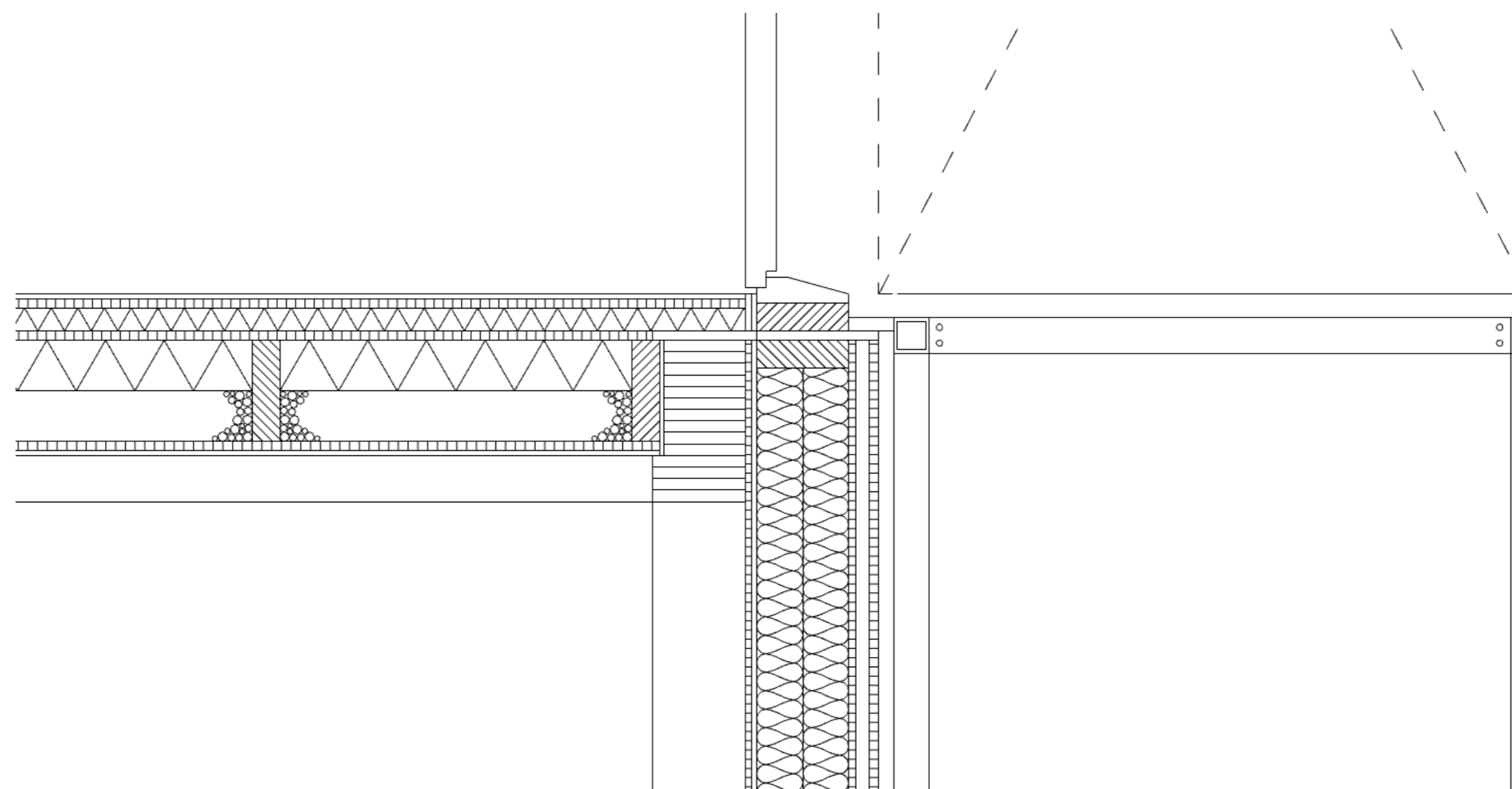
7 **8 mm sheet steel fixing element to connect central columns to foundation beams**

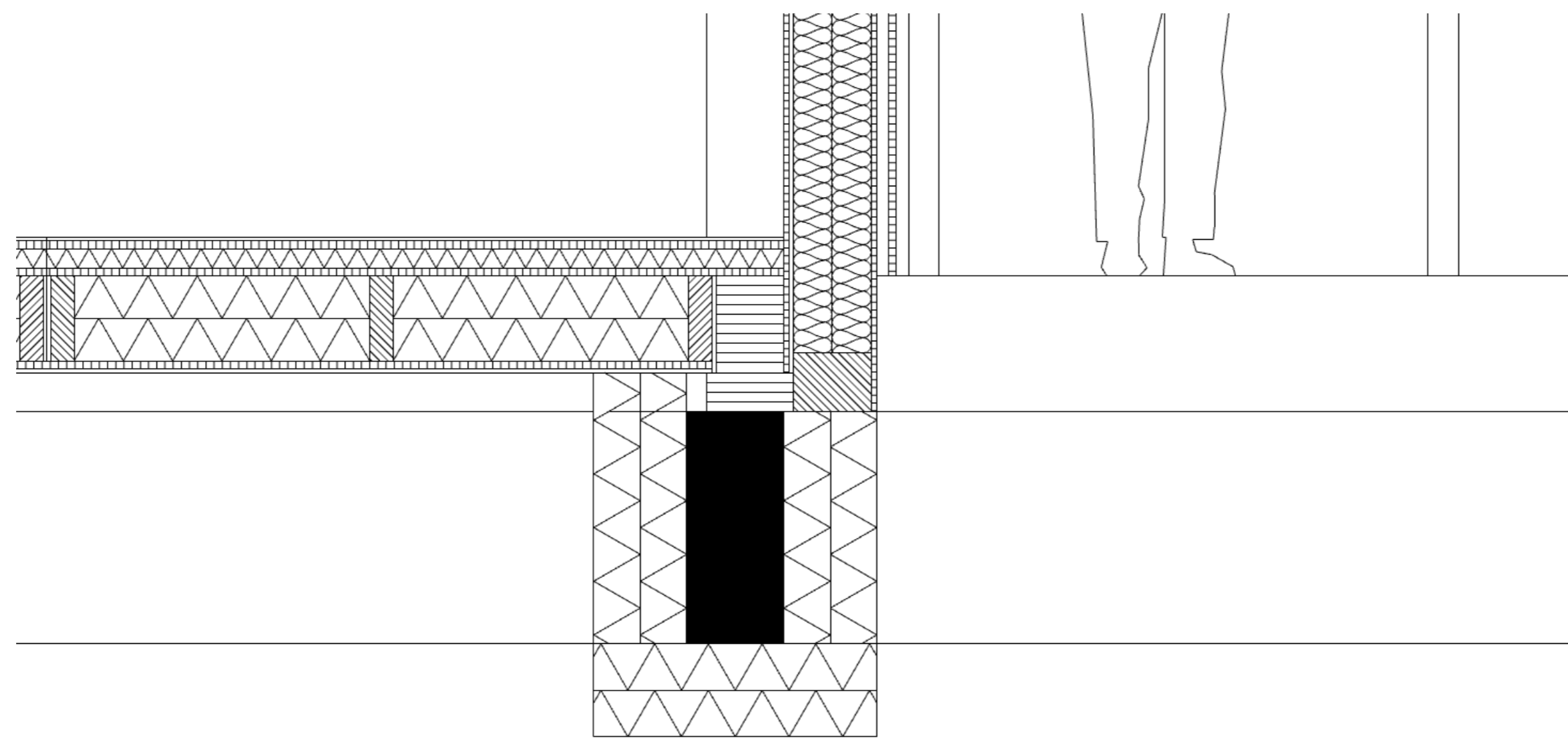
8 **150 x 300 mm timber packing piece between timber columns**











Wall construction
20 mm tongue-and-groove boarding
30 mm battens, ventilation cavity
15 mm pressed chipboard
2x 120 mm thermal insulation between
60 x 240 timber framing
vapour barrier
20 mm sandwich sheet

