

NeighbourFOOD

Raising food awareness in the future city

Dutch Housing Studio





<https://zaansgroen.wordpress.com/2013/05/04/mei-is-een-drukke-maand-in-de-tuin/>



<http://www.nationmultimedia.com/business/Urban-farming-takes-on-more-important-role-worldwi-30278361.html>

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Raising food awareness in the future city

1. Introduction

WHY is this topic relevant?

2. Research

WHAT do I want to achieve with this project?

3. Project Design

HOW can I achieve my goals through design?

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1. Introduction

WHY is this topic relevant?

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[...] Apart from these global issues (of which there are more, like sustainability), there are also some local and national issues that factor into the development of our cities. Each country has its own set of local challenges, be it the availability of affordable housing, a growing gap between rich and poor, unemployment, climate change, the quality of inner cities, etcetera. The task of future architects is to provide sensible solutions in this incredibly complex force field.

(Handout AR3AD131 Fall 2017-2018)

Which challenges is Amsterdam going to face in the future?

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Personal fascination

- Overpopulation



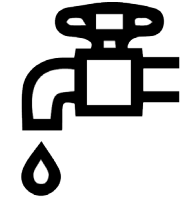
- Food supply



- Climate change



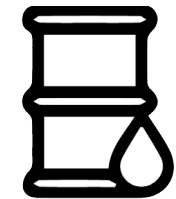
- Water management



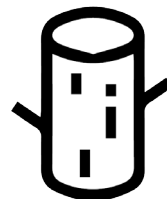
- Co2 emissions



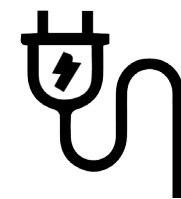
- Waste management



- Lack of raw materials



- Renewable energy



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Personal fascination

- Overpopulation



- Climate change



- Co2 emissions



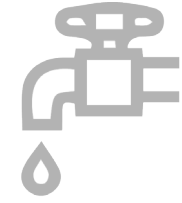
- Lack of raw materials



- Food supply



- Water management



- Waste management



- Renewable energy



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Personal fascination

- Overpopulation

- Climate change

- Co2 emissions

- Lack of raw materials

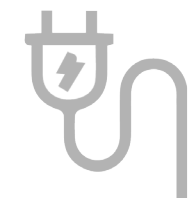


- Food supply

- Water management

- Waste management

- Renewable energy

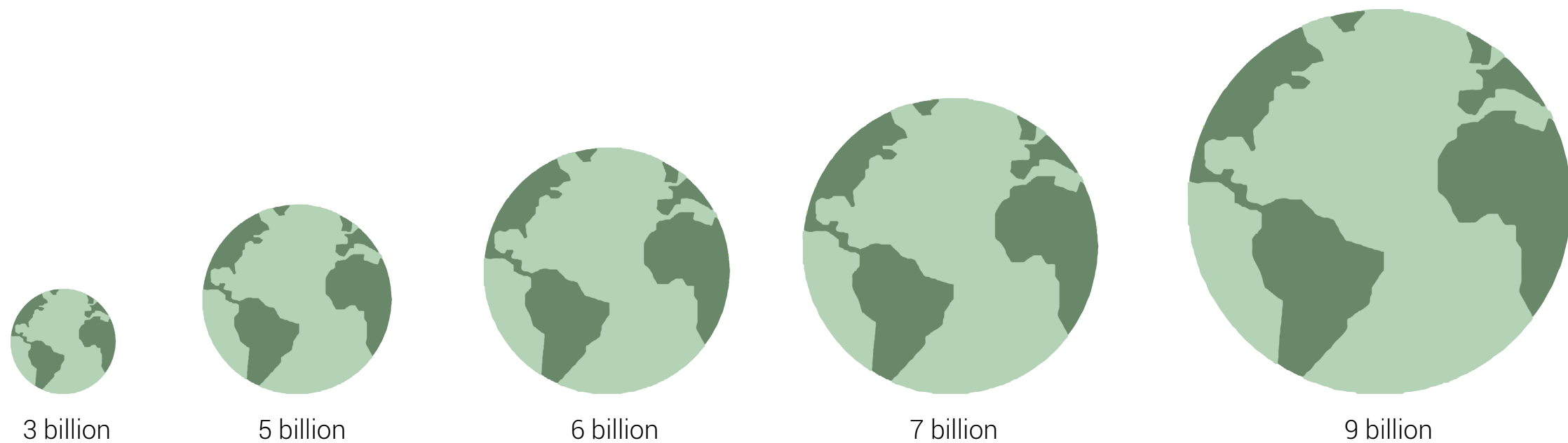


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Problem statement

Overpopulation and food demand



The world's population is expanding, thus food production must rise.
By 2050 we will need to increase food production by 70%.



Source: Steel, C. (2008). Hungry city: How food shapes our lives.

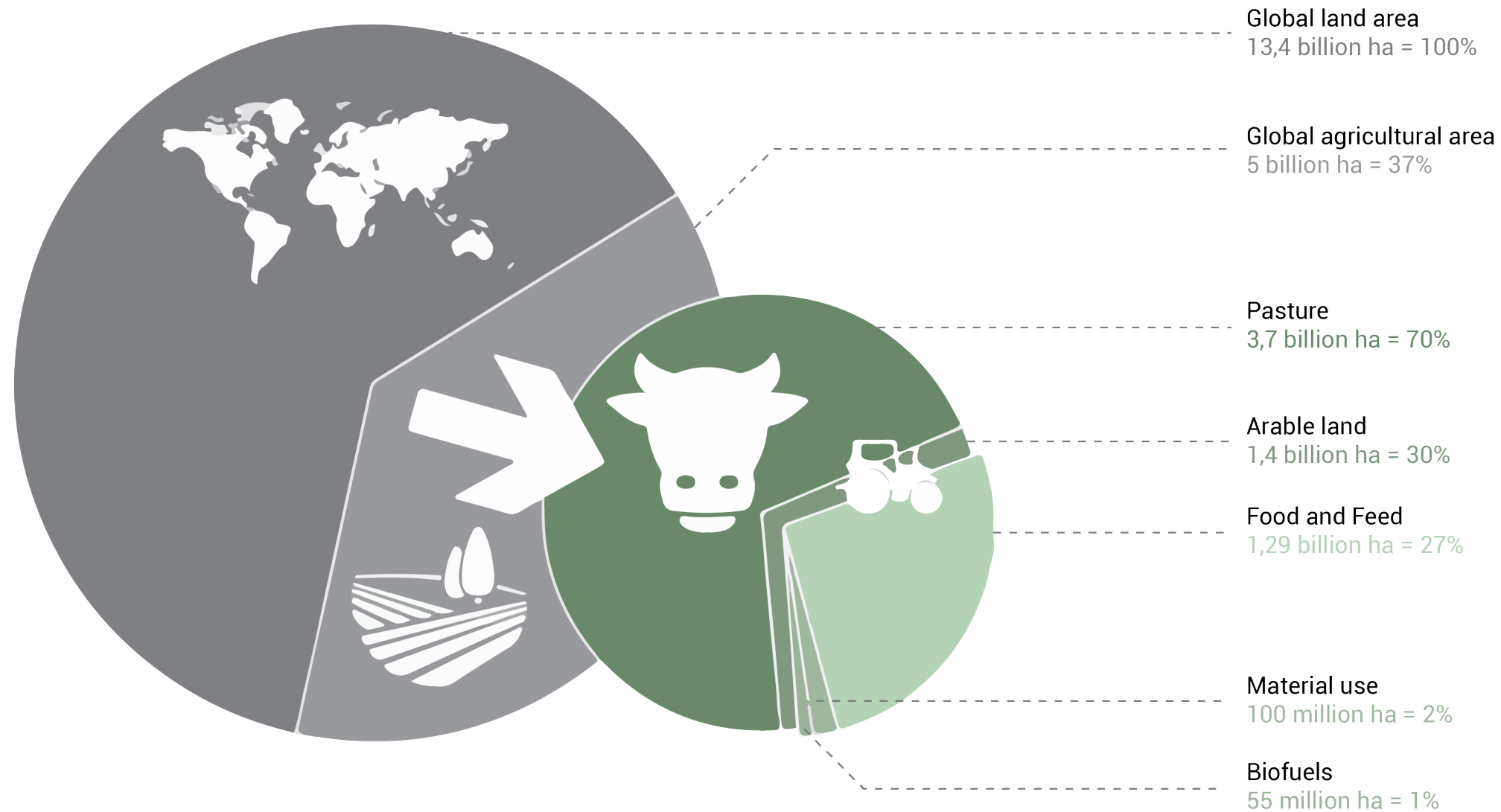
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Problem statement

Environmental footprint

Food production occupies almost 1/3 of the world's environmental footprint!



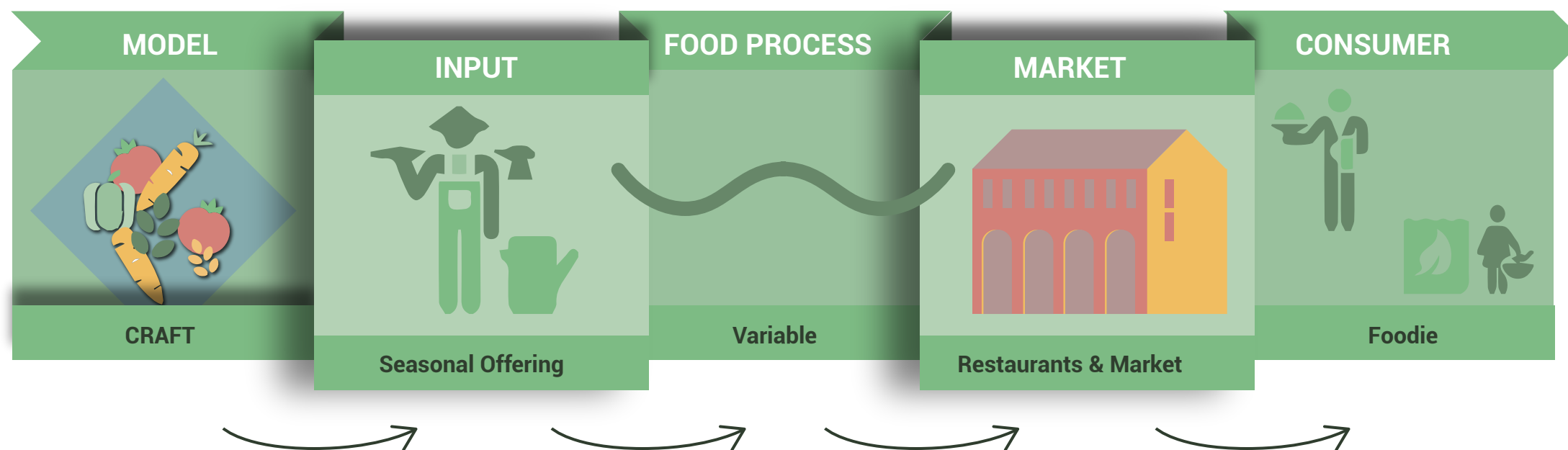
Source: <http://biomassmagazine.com/articles/8183/european-bioplastics-releases-2016-market-forecast>

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Problem statement

Awareness



People have lost their connection with the food that arrives in their table

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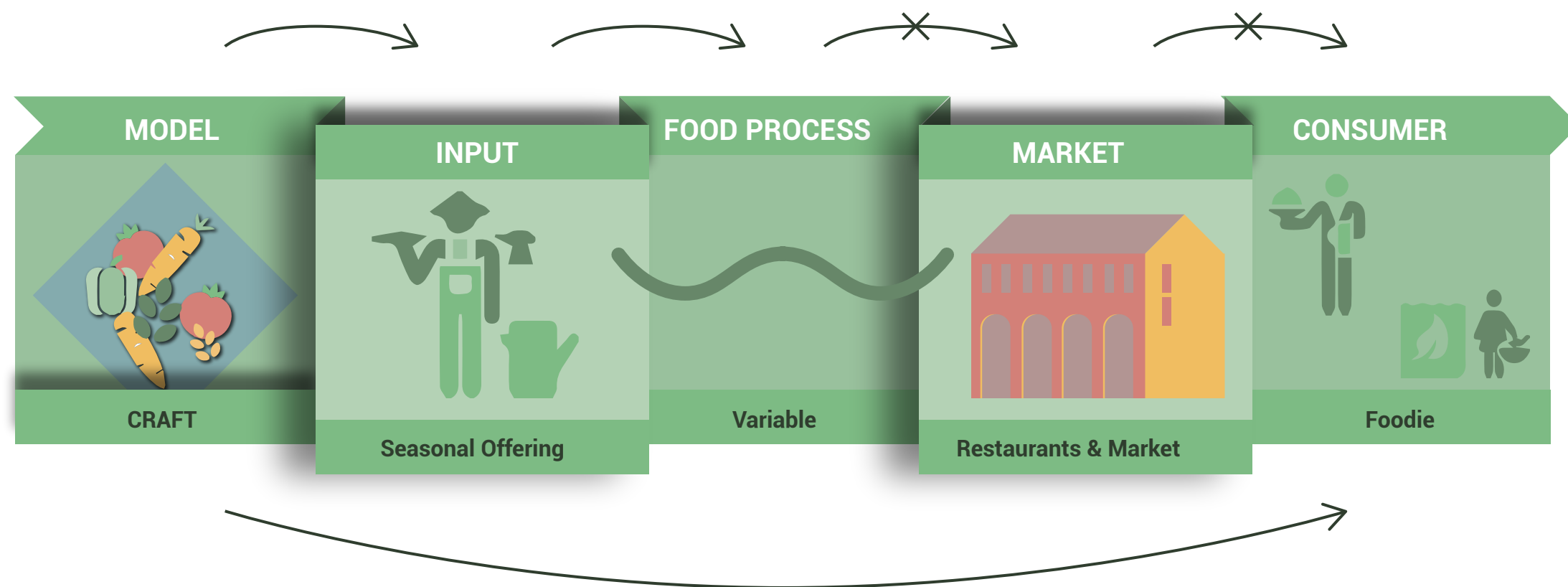
2. Research

WHAT do I want to achieve with this project?

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Project aim

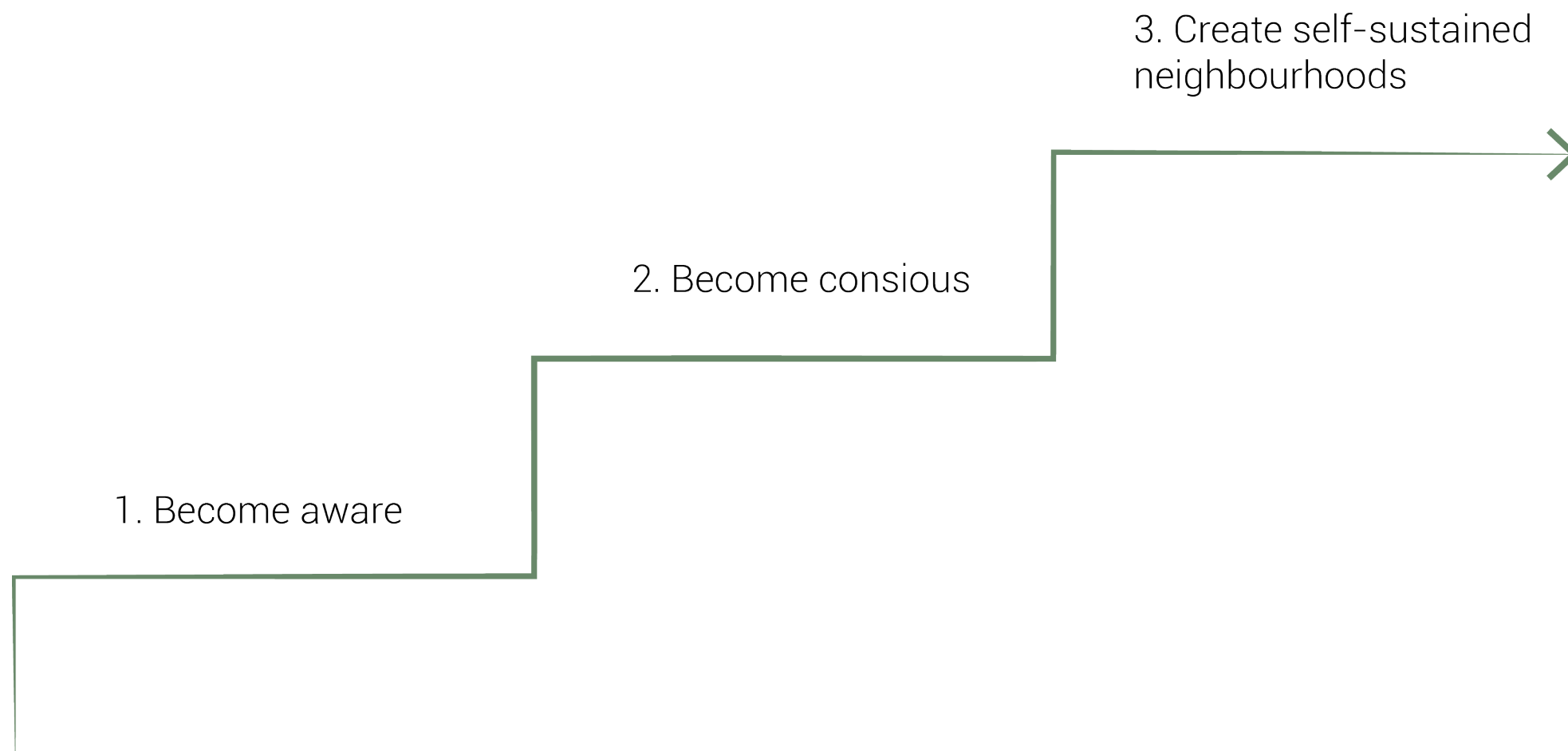


Re-gain the lost connection of people and food by introducing urban agriculture in the city as a mean of raising awareness about food production and consumption.

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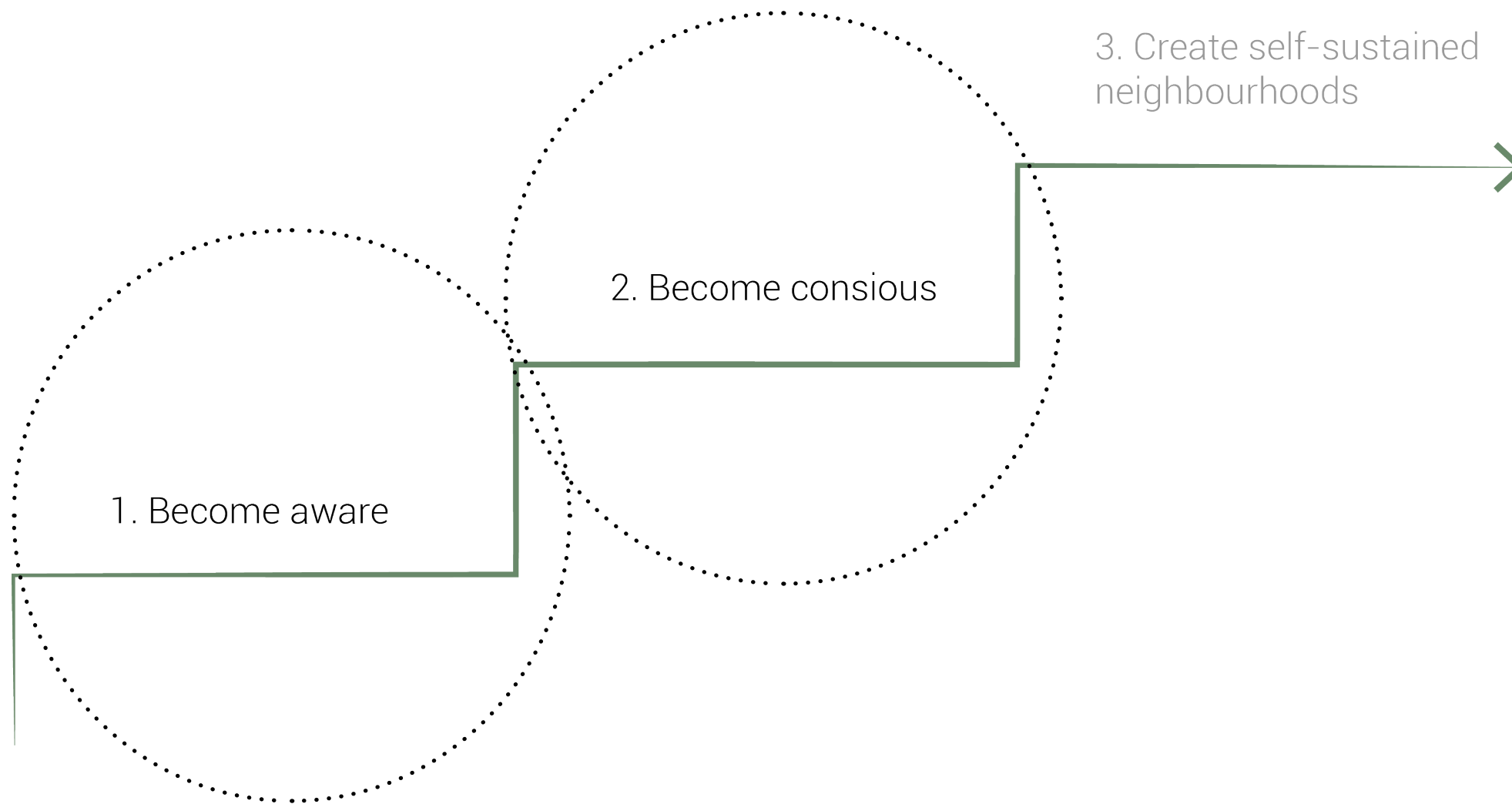
Project aim



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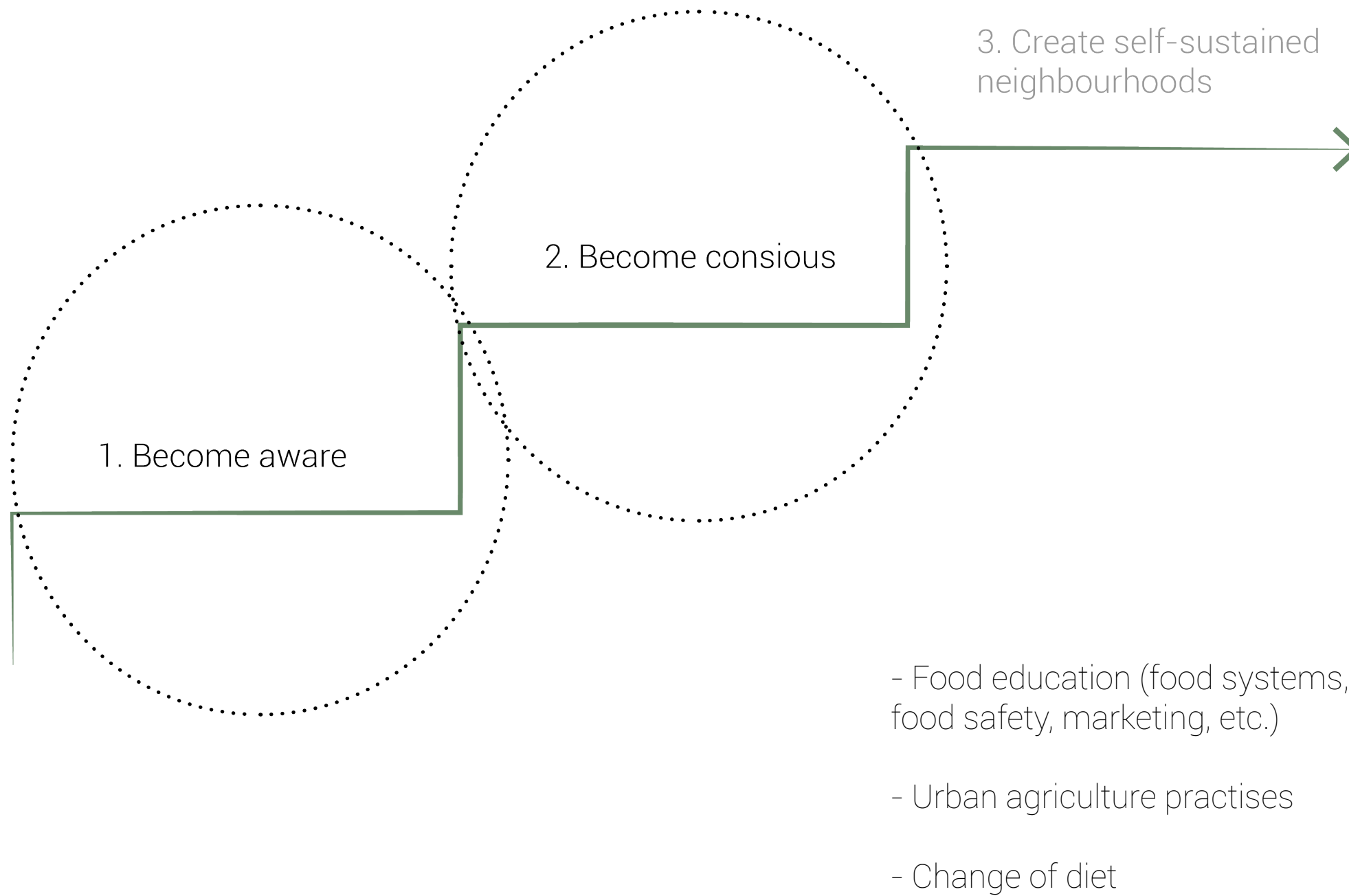
Project aims



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Project aims



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Project aims



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Target group



- 55+
- Food fanatics
- Owners of allotment gardens

- Retired farmers
- A lot of free time
- Willing to share and pass knowledge to other people.

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Research question

How can the architecture of a housing complex contribute in raising people's awareness about food supply, inside the urban fabric of Amsterdam?

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Case studies



Source: HK Urban Rooftop, <https://www.rooftoprepublic.com/>



Source: Utrecht Tolsteeg, <https://metroplex.nl/projecten/tolsteeg/>



Source: AMsterdam Zuidpark Rooftop, <http://zuidparkamsterdam.nl/>

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Case studies



Source: CERES community garden, <https://ceres.org.au/>



Source: <https://grist.org/article/food-washington-dc-common-good-city-farm/>



Source: Incredible Edible, <https://www.incredible-edible-todmorden.co.uk/>

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Case studies



Source: The People's Supermarket, <https://now-here-this.timeout.com/2012/03/05/the-peoples-supermarket-is-saved/>



Source: From Your Own City, <http://www.uitjeeigenstad.nl/>



Source: Forage Kitchen in San Fransisco, <http://www.foragekitchen.com/>

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Urban agriculture projects & their Key Dynamics



- Social

The project create or strengthens communities and social ties, and/or supports communication and cohesion.



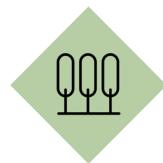
- Economics

The project creates jobs, supports local economic activity and/or promotes a viable business model.



- Education

The project teaches food skills and promotes awareness about food, health and the environment.



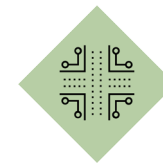
- Environment

The activities are sustainable or beneficial to the environment in terms of nature, waste, energy, soil, water and air.



- Health

The projects provides affordable, nutritious, fresh and healthy food and supports a positive public health agenda.



- Infrastructure

The projects contributes to the food infrastructure in terms of growing sites, transportation, community platforms and/or planning.



- Liveability

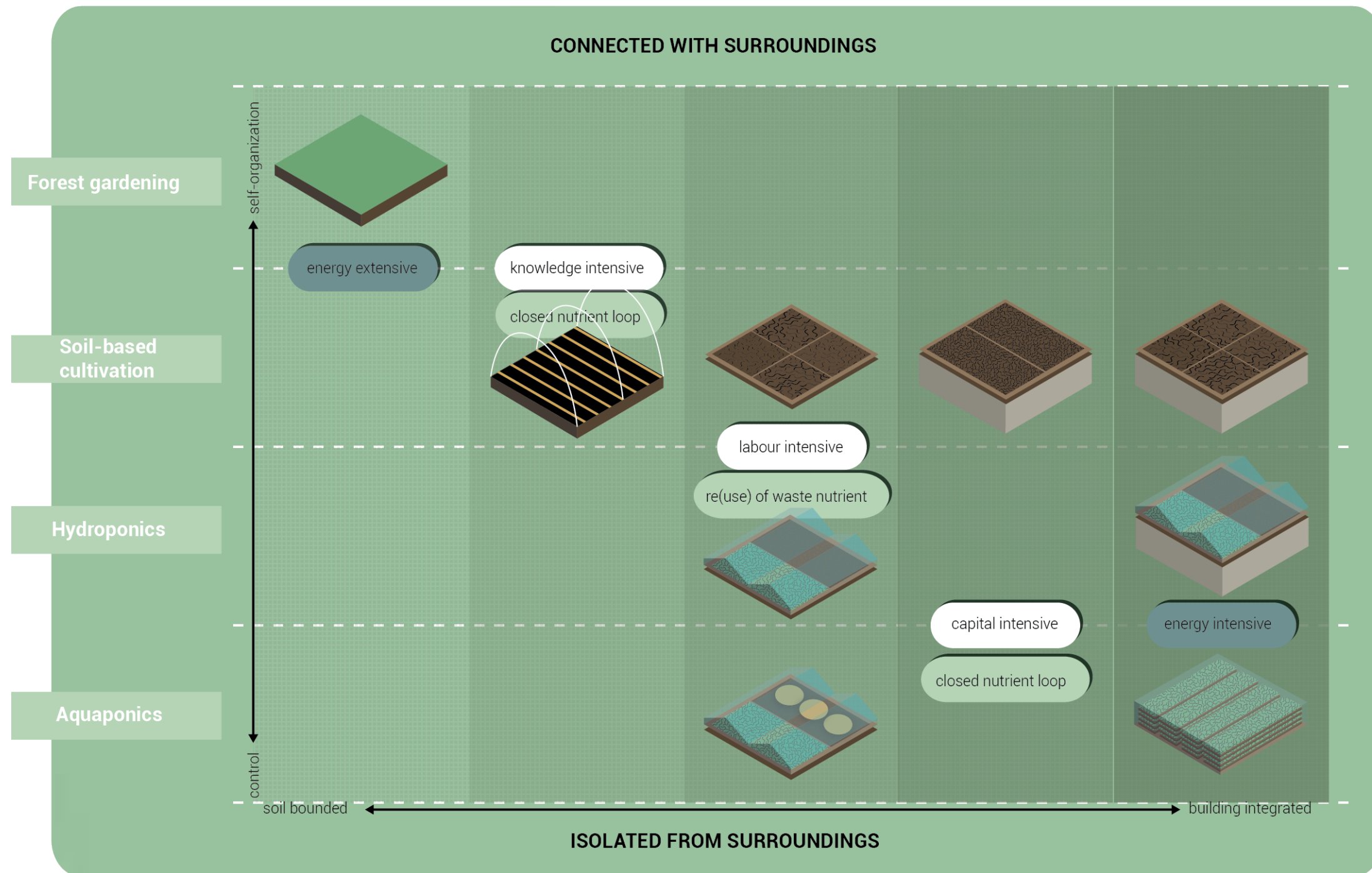
The projects creates interactive spaces, helps to reduce antisocial behaviour and provides urban amenities from cultural events and cafés to attractive and edible green space.

Source: Miazzo, F., & Minkjan, M. (2013). Farming the City: Food as a Tool for Today's Urbansation.

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Growing methods



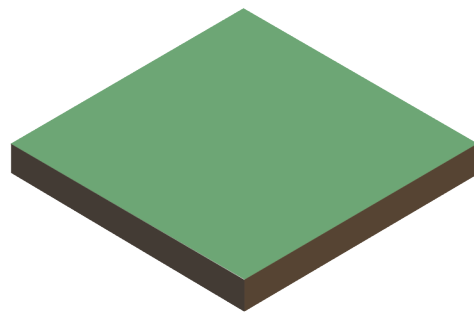
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Growing methods

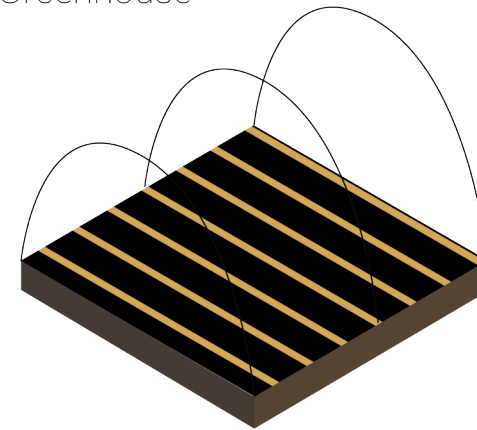
Soil-based cultivation

Forest gardening



Social: ++
Environment: +
Economic: -
Education: +
Livability: -

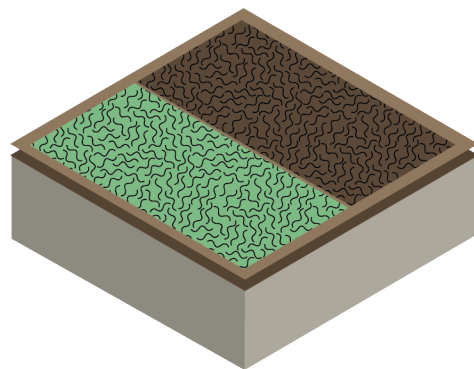
Greenhouse



Social: -
Environment: +
Economic: +
Education: -
Livability: +

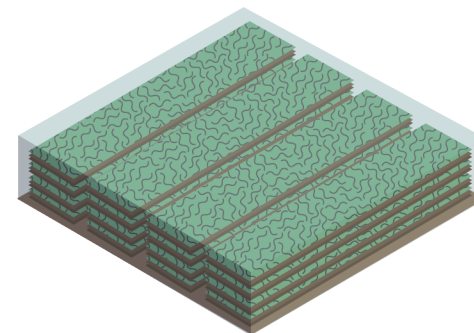
Building intergrated cultivation

Roof gardens and greenhouses



Social: +++
Environment: +
Economic: +
Education: ++
Livability: ++

Vertical farming



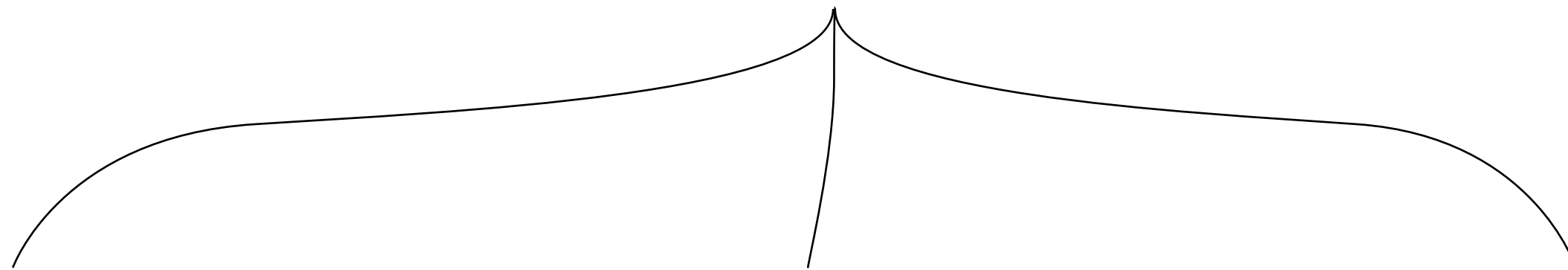
Social: -
Environment: -
Economic: +
Education: +
Livability: -

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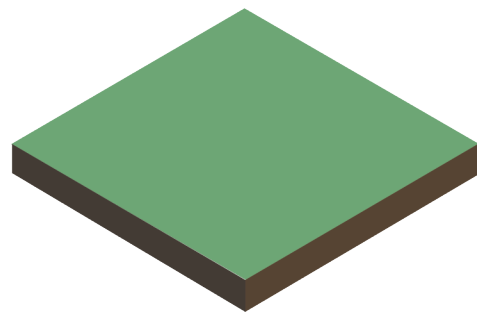
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Growing methods

In my project I want to include growing methods which can be integrated to the architecture of the building but also combine the key dynamics of social, education and efficiency as prior requirements.

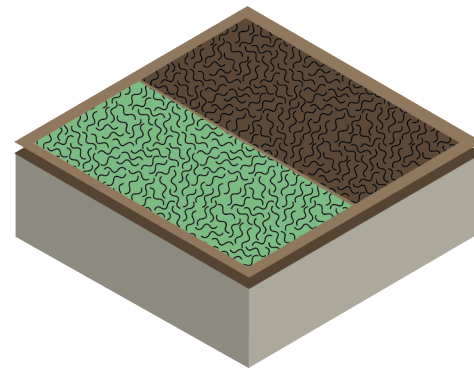


Forest gardening



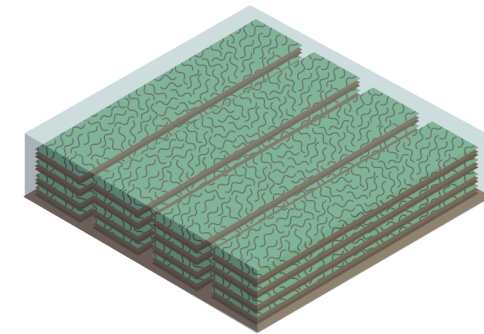
Social: ++
Environment: +
Economic: -
Education: +

Roof gardens and greenhouses



Social: +++
Environment: +
Economic: +
Education: ++

Vertical farming



Social: -
Environment: -
Economic: +
Education: +

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3. Project Design

HOW can I achieve my goals through design?

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Project location



Source: <https://www.arcam.nl/winterlezing-1-stedenbouwkundig-patroon/lezing-1-luchtfoto-amsterdam/>

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Project location



- Location: Hoogte Kadijk 401

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Site analysis



Kadijken neighbourhood map Scale 1:2000

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Site analysis



http://www.at5.nl/artikelen/166362/kantoorgebouw_hoogte_kadijk_omgebouwd_voor_statushouders

- Currently on the plot Hoogte Kadijk 401, lies the former Office of the Food and Consumer Product Safety Authority.

- This building has been vacant for the last five years.

- Currently the building functions as a squat for people of the 'Wij Zijn Hier' community.

- Government is planning to remove the building and design affordable housing for immigrants and young people.



own picture

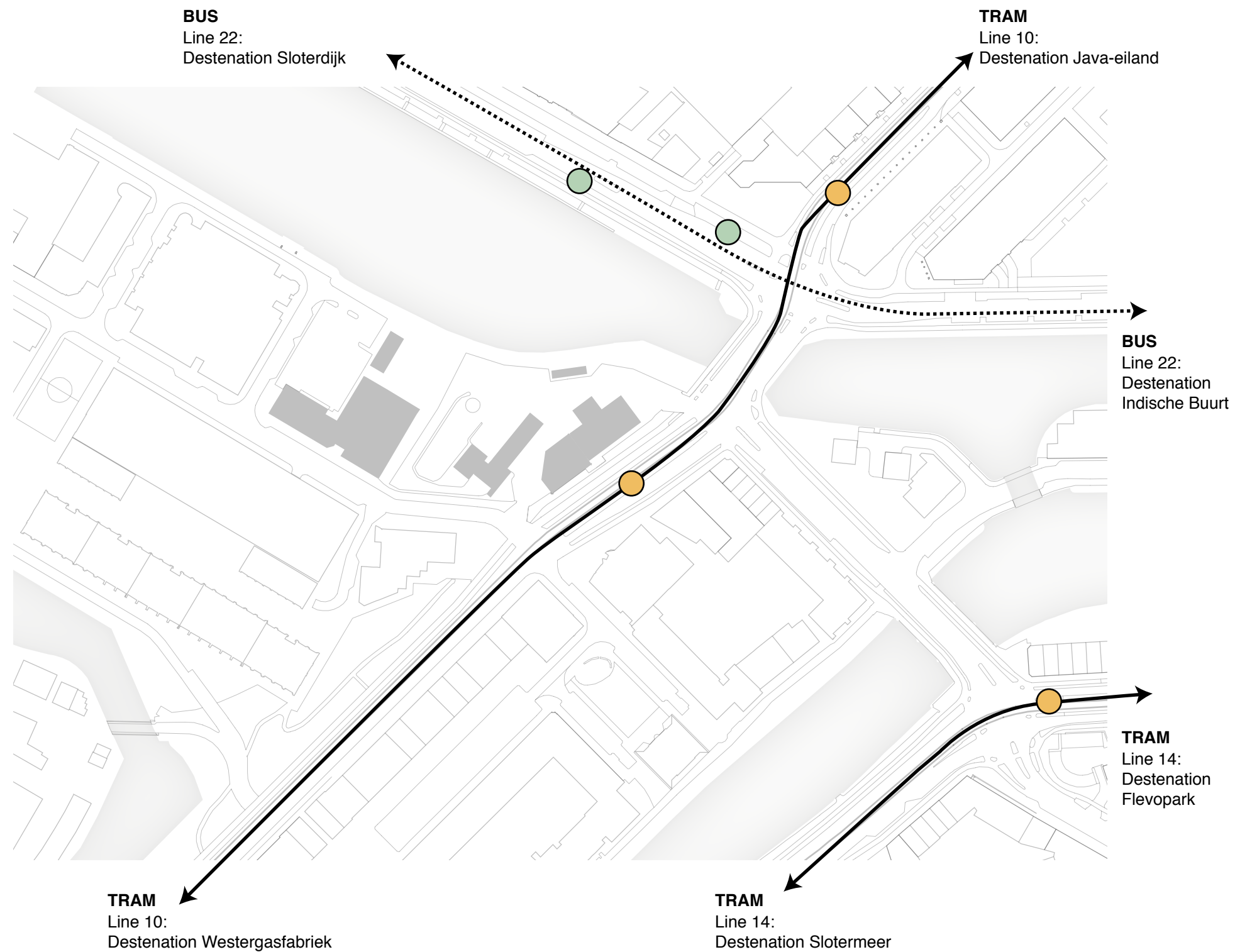


own picture

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Site analysis | Public transport



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Neighbourhood Amenities



- Supermarket
- Small grocery store
- Health and Hygiene (Hairdresser/drugstore/pharmacy/pedicure)
- Technical services (Bike shop/Workshop)
- Clothing store
- Other care functions
- Weekly Market



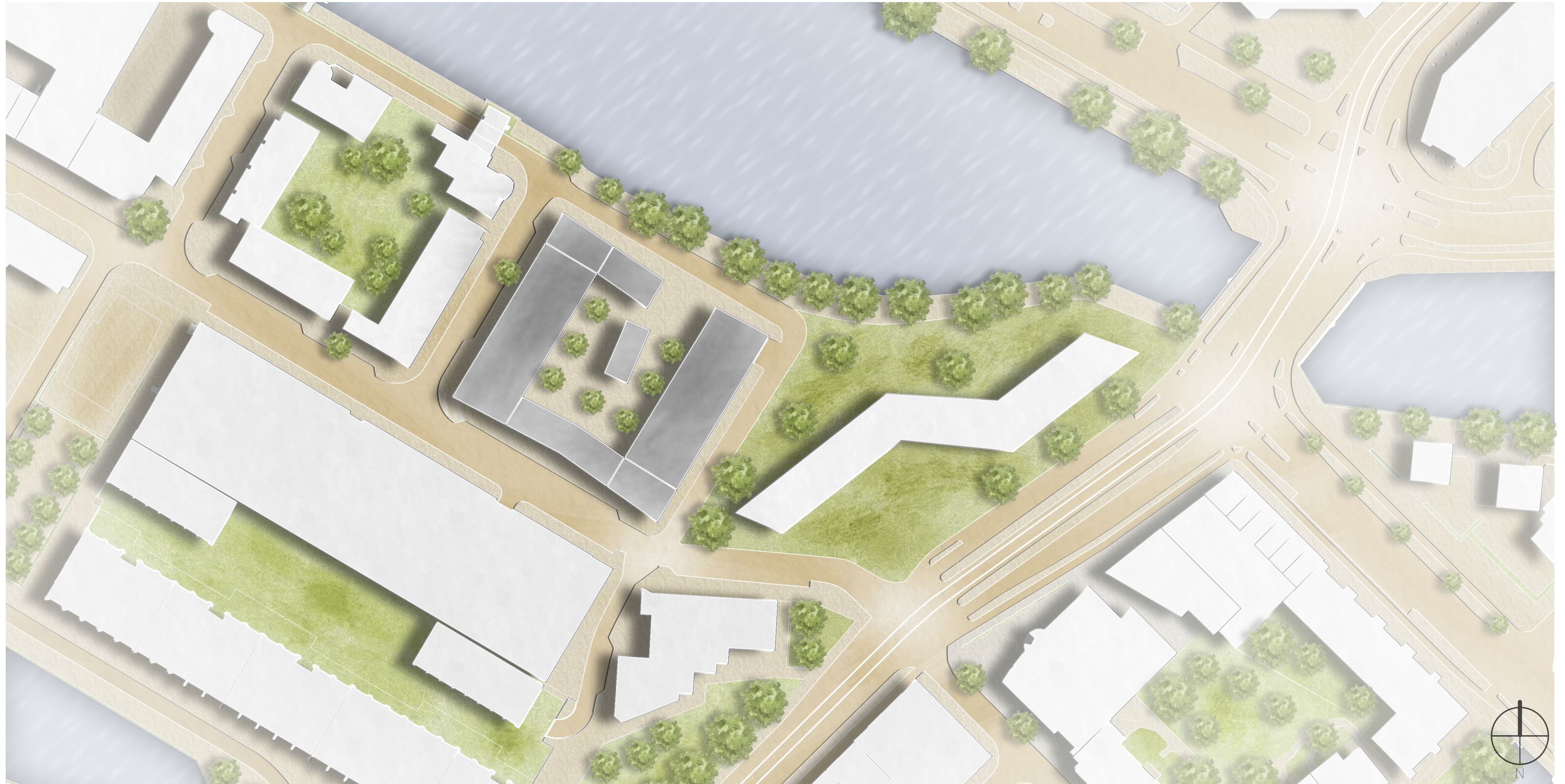
- Restaurant
- Café/Lunchrooms/Cafeteria
- Coffee shop (drugs)
- Theatre & Museums



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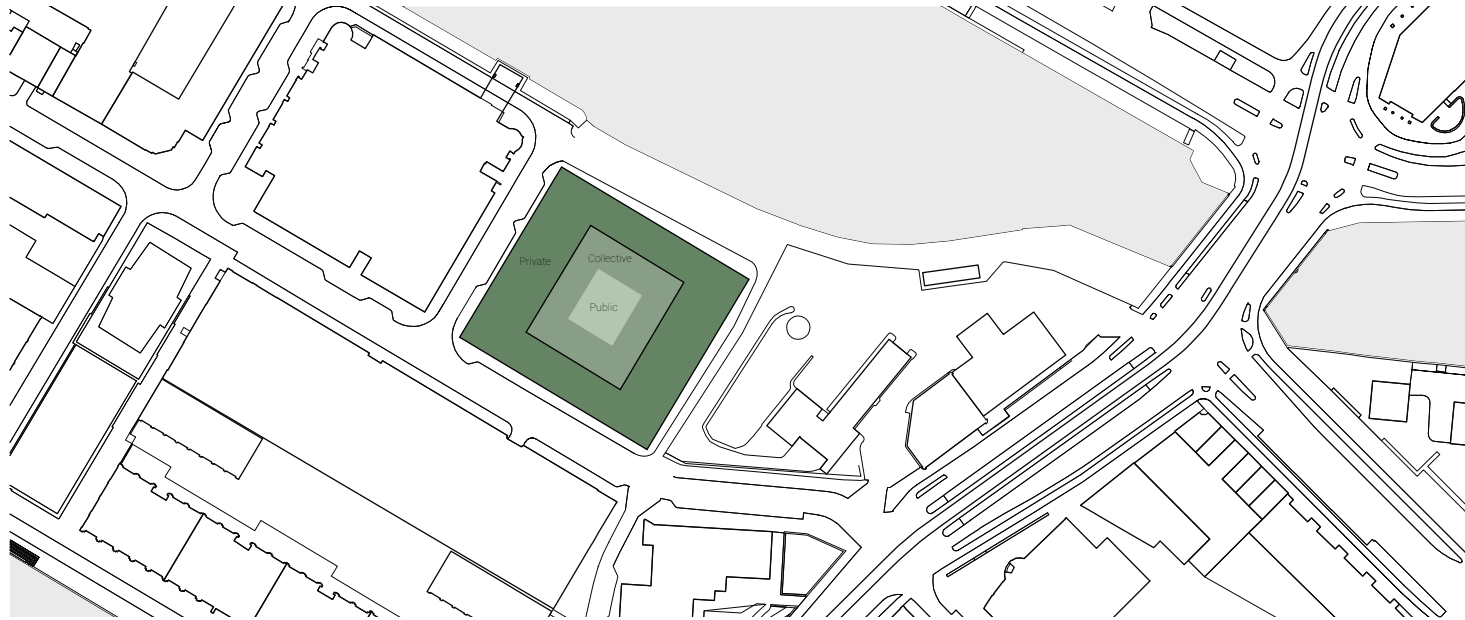
Urban Plan



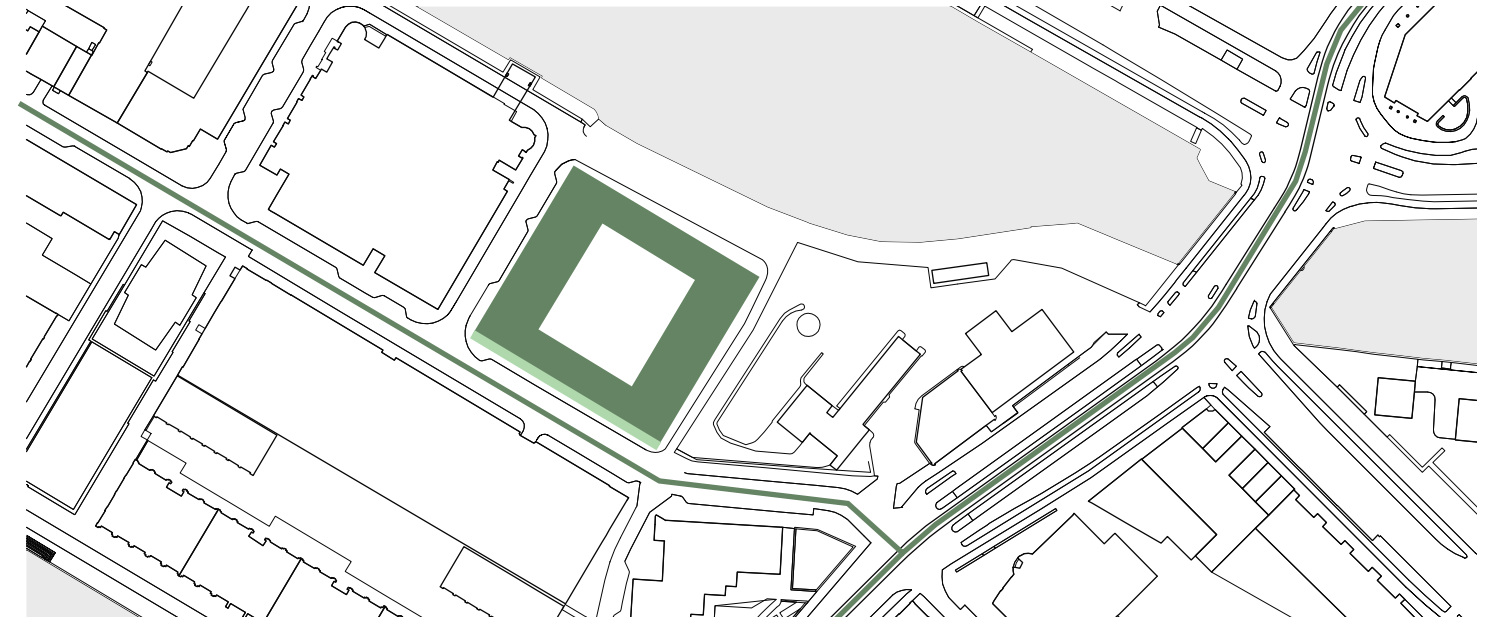
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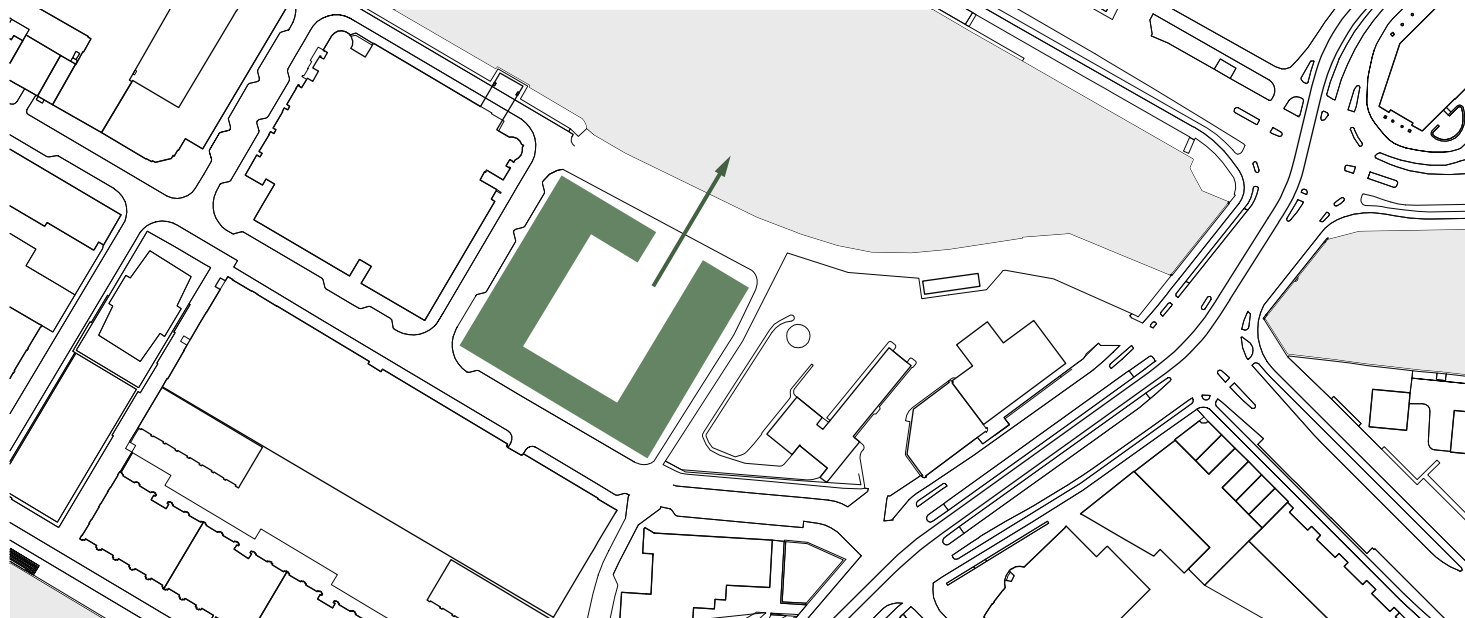
Building block emergence



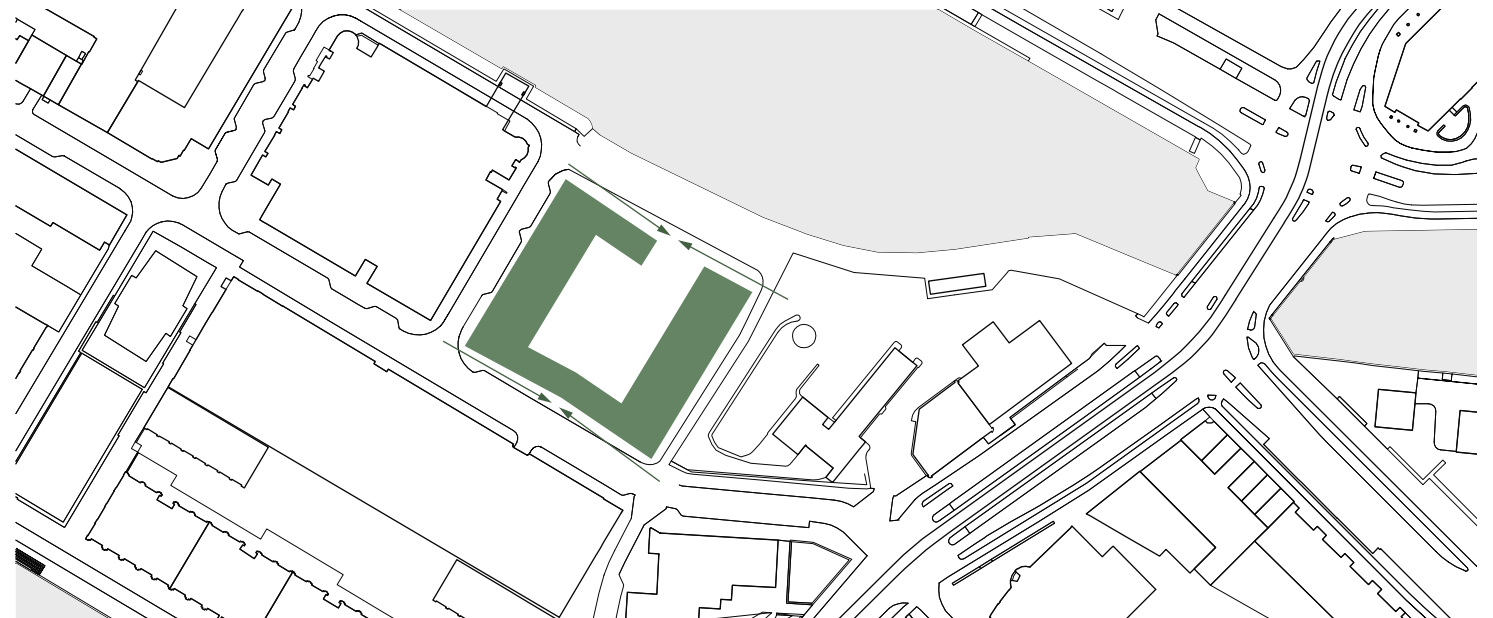
The form of the building emerged from the traditional block which is evident in the area but another reason to do so was in order to create different levels of privacy and collectivity. The building follows the perimeter of the plot.



The street side of the building takes a more public character by creating a public plinth, to connect the building better with Sarphatistraat.



To create a connection with the water, the closed block opens up in that side.



. The building façades are getting slanted a little in order to accentuate the view-lines from the street side.

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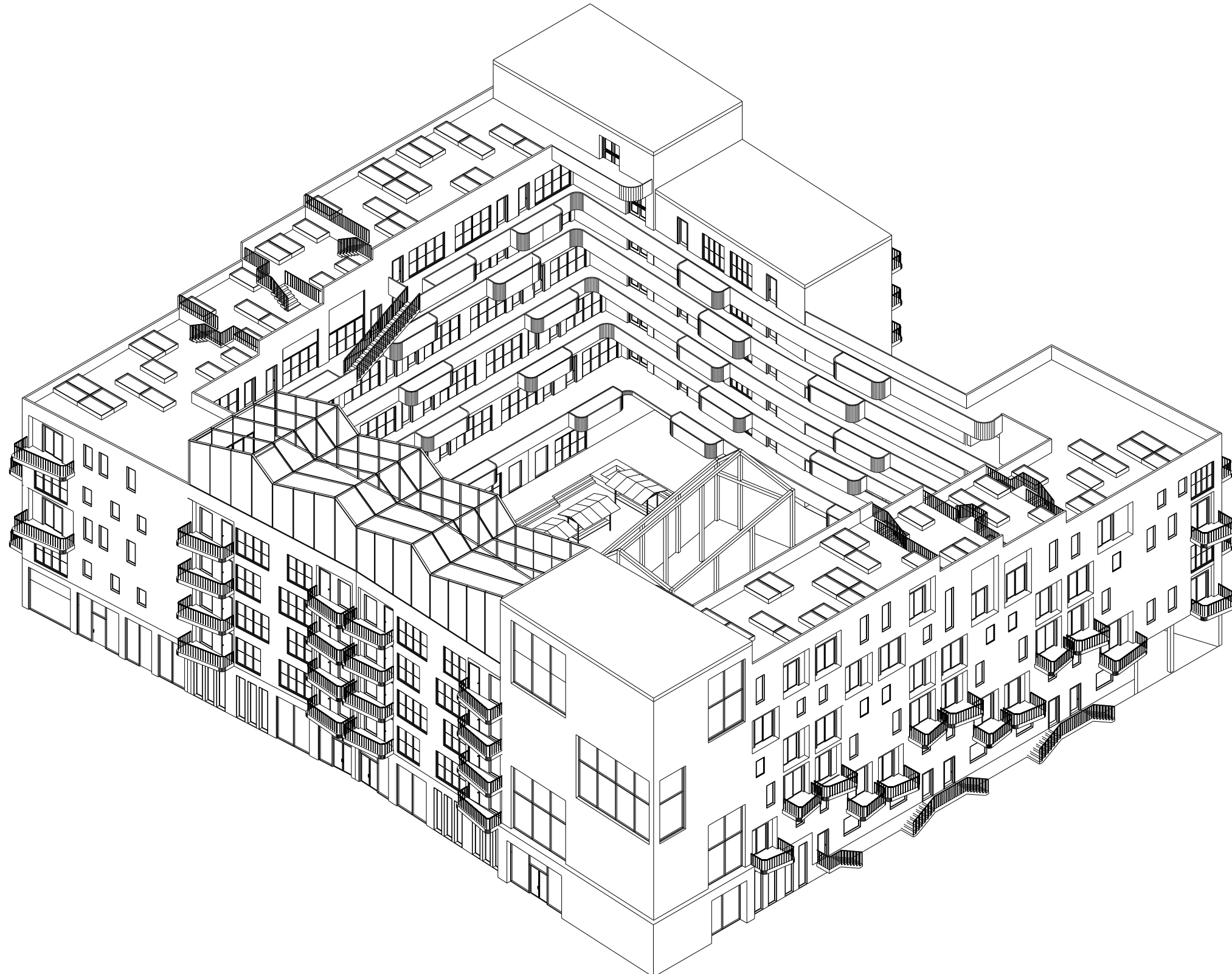
Urban Plan



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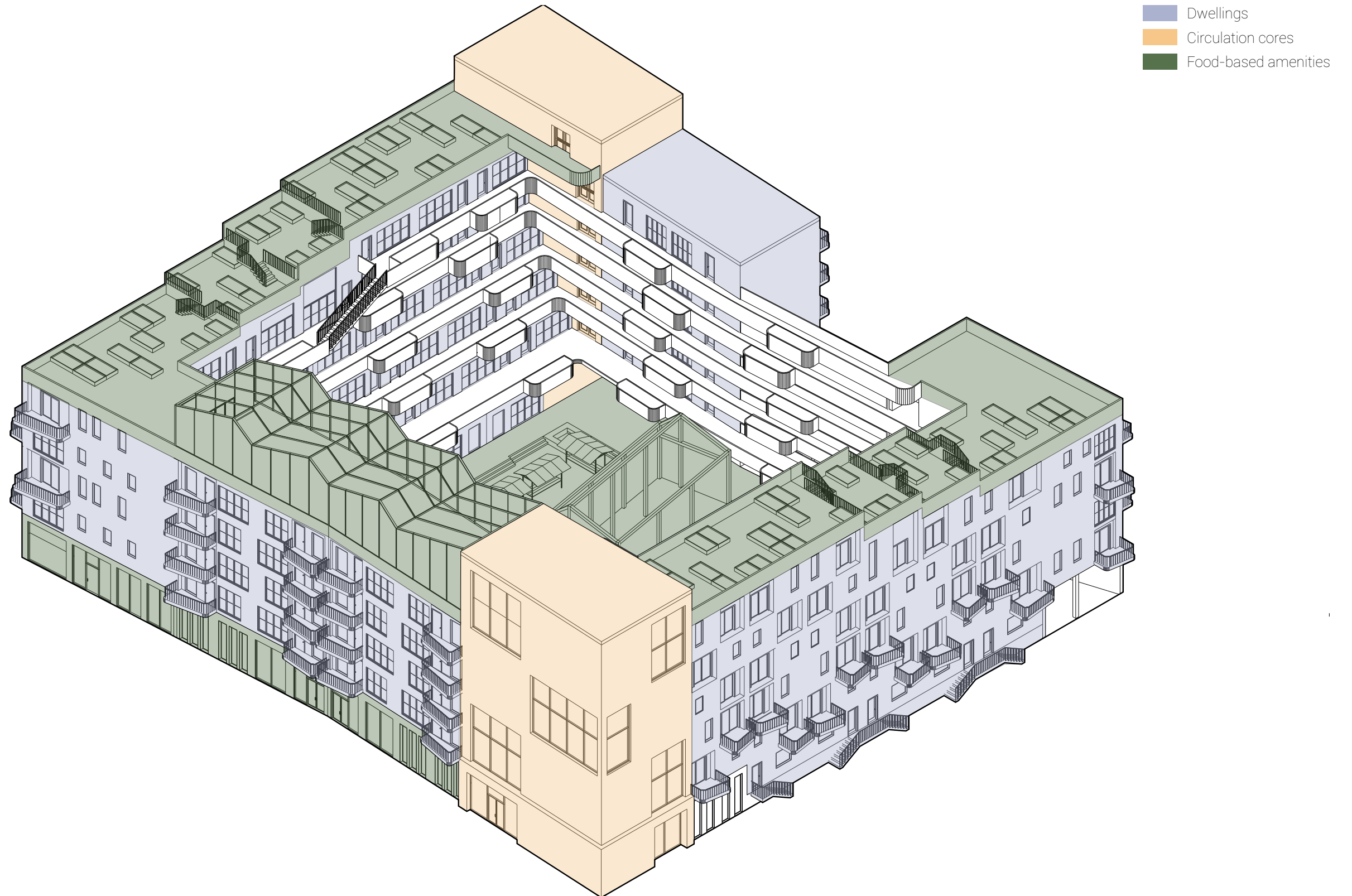
Building ensemble



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Building organisation



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Elevation | Southeast





Recycled plastic tiles, Photo by Jeroen van der Wielen.



People's pavilion by SLA Architects, Photo by Jeroen van der Wielen.

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Elevation | Northwest



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Elevation | Northeast



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Elevation | Southwest









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Building Ensemble | Ground Level



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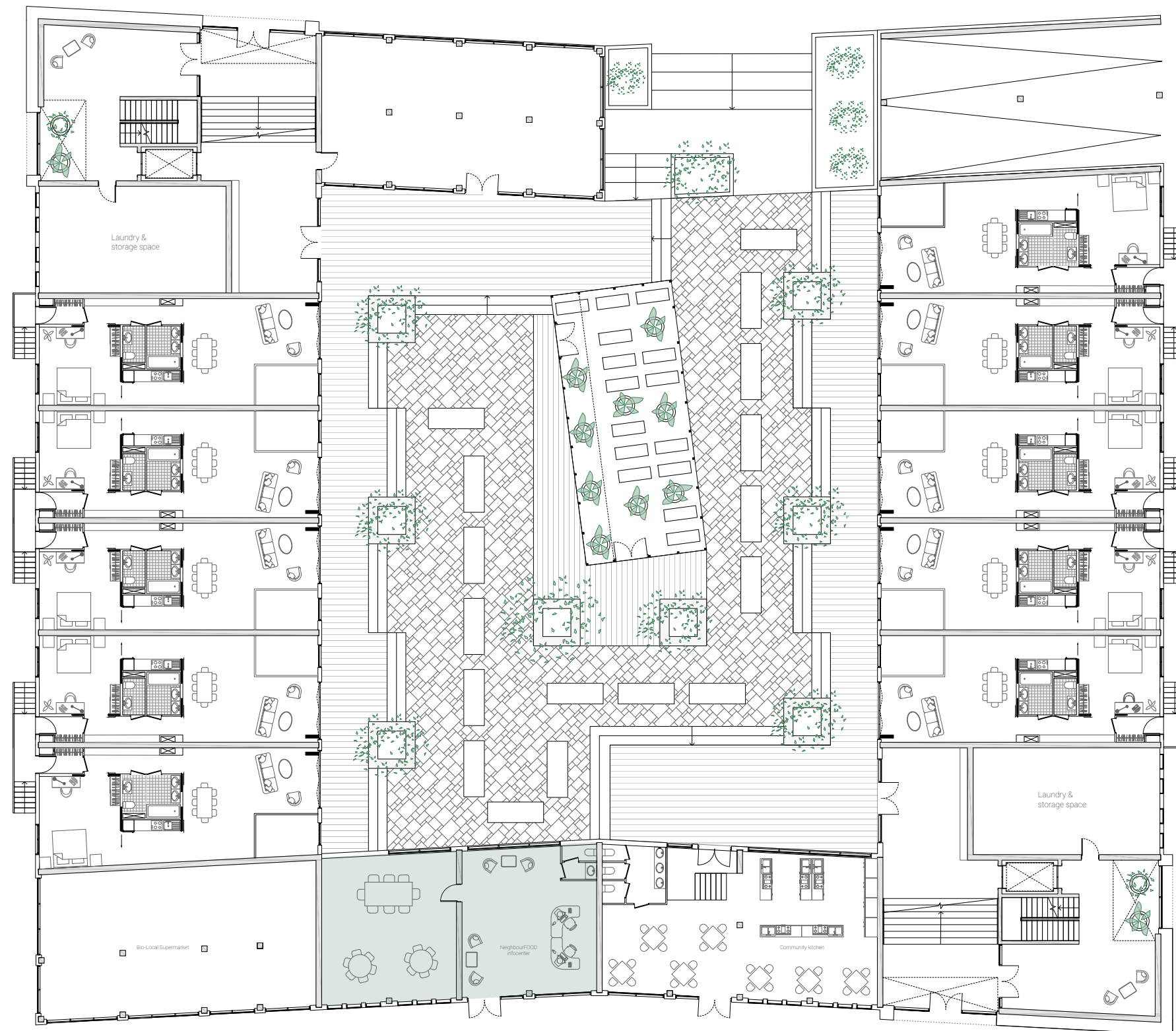
Building Ensemble | Ground Level



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Building Ensemble | Ground Level



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Raising food awareness in the future city

Building Ensemble | Ground Level



NeighbourFOOD

Raising food awareness in the future city

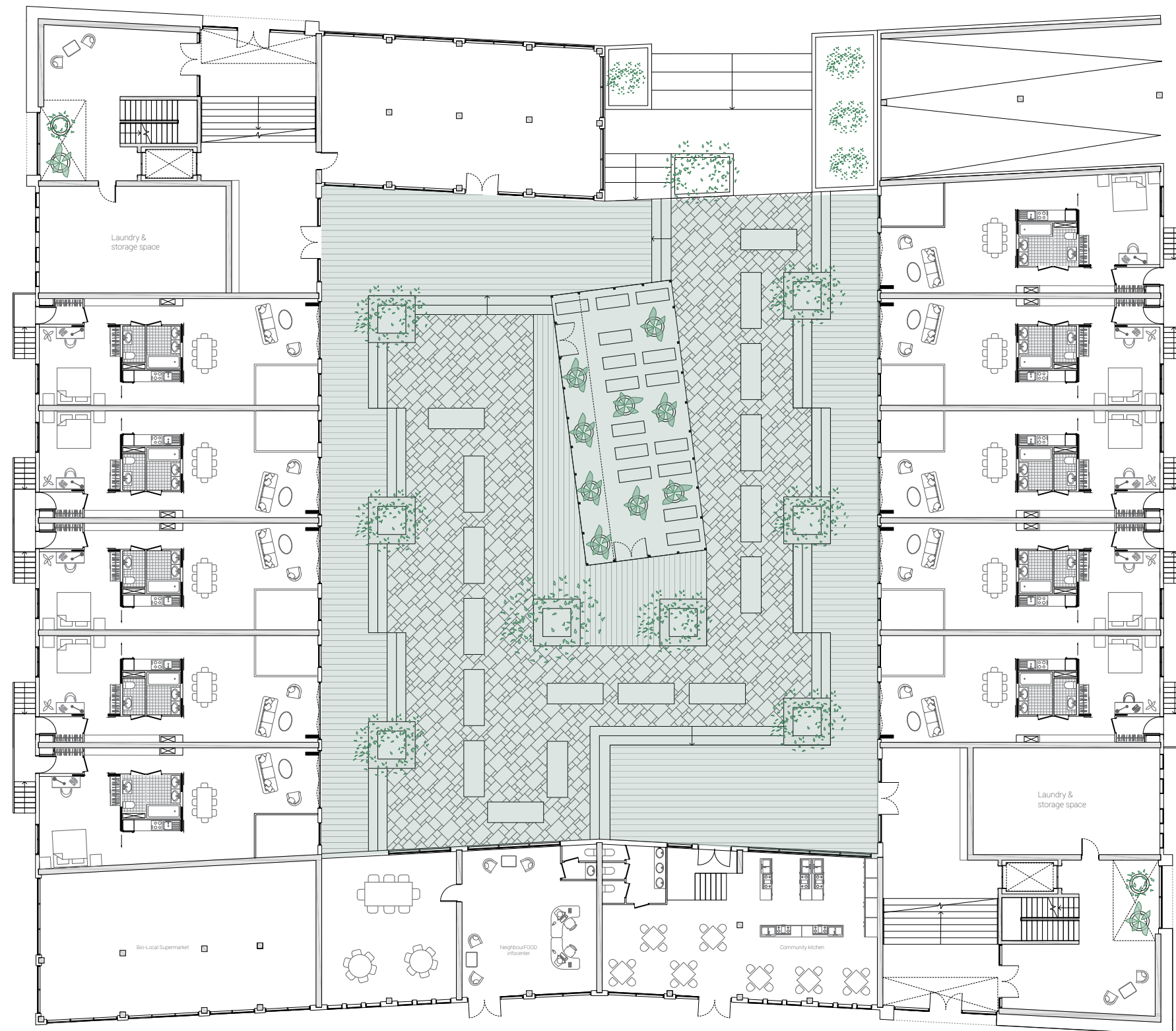
Building Ensemble | Ground Level



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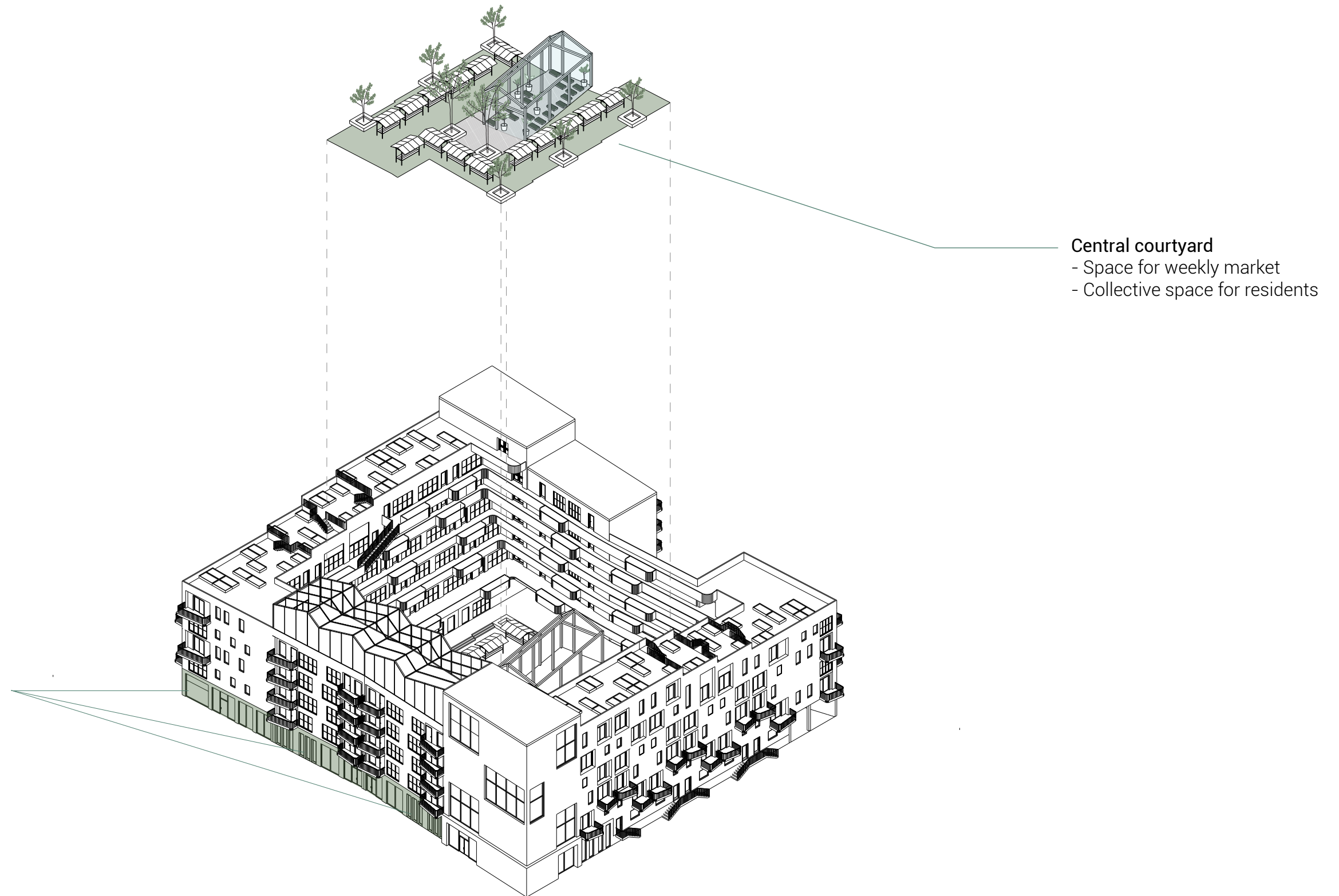
Building Ensemble | Ground Level



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Building Ensemble | Public amenities

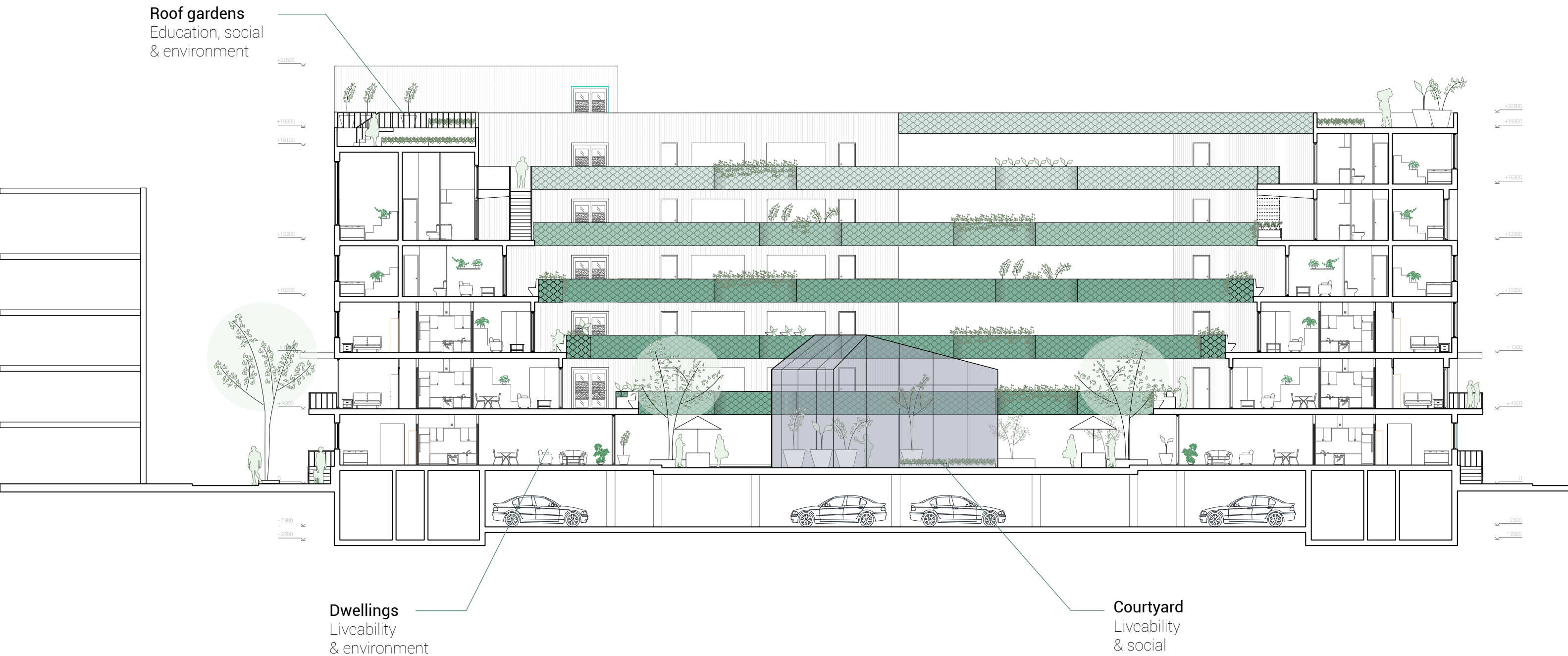




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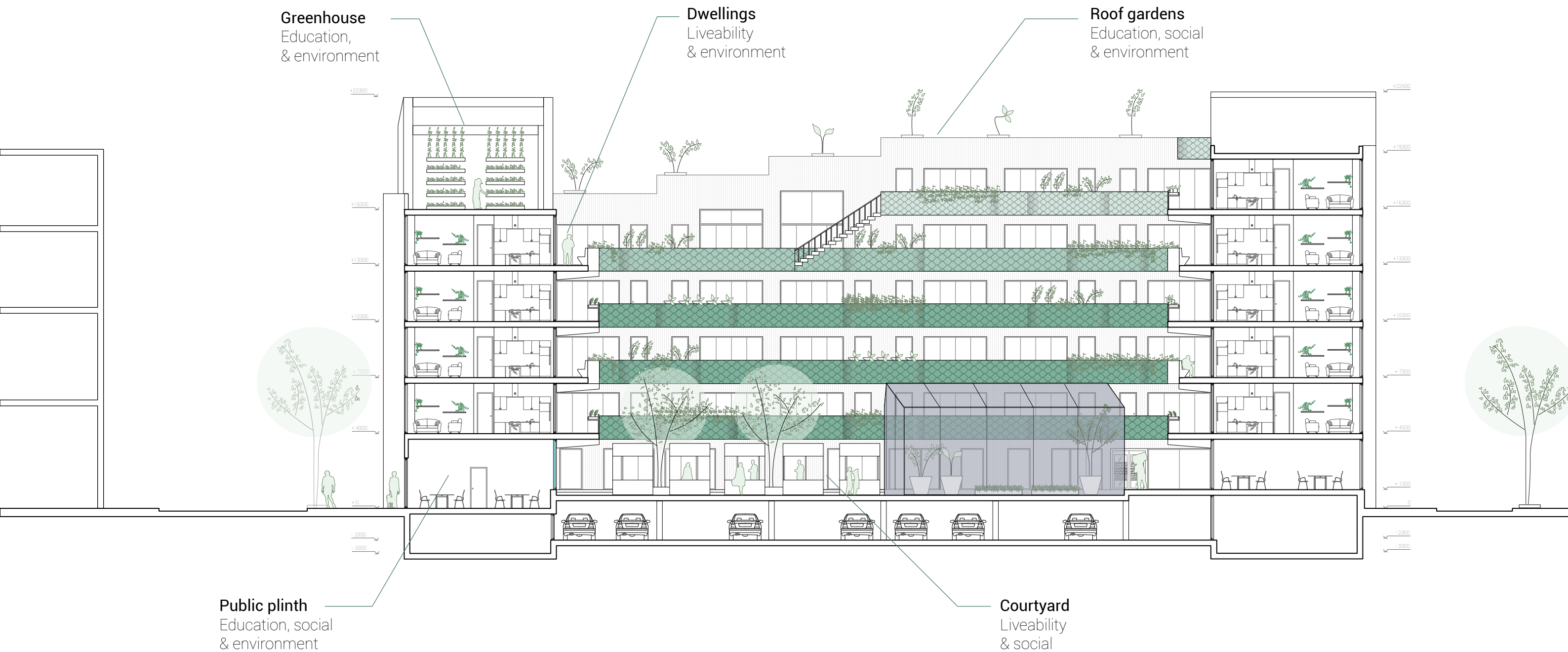
Building Section | A-A'



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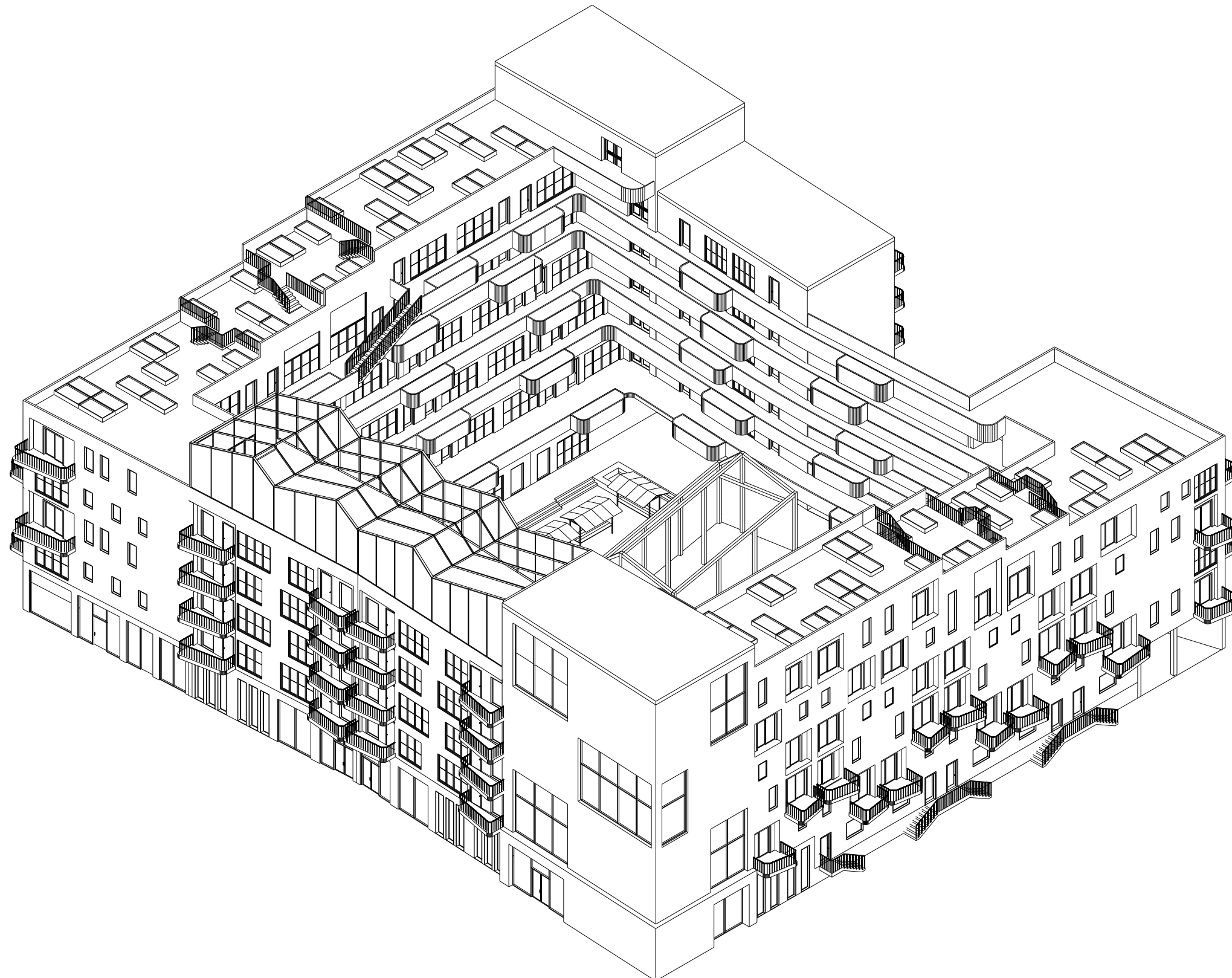
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Building Section | B-B'



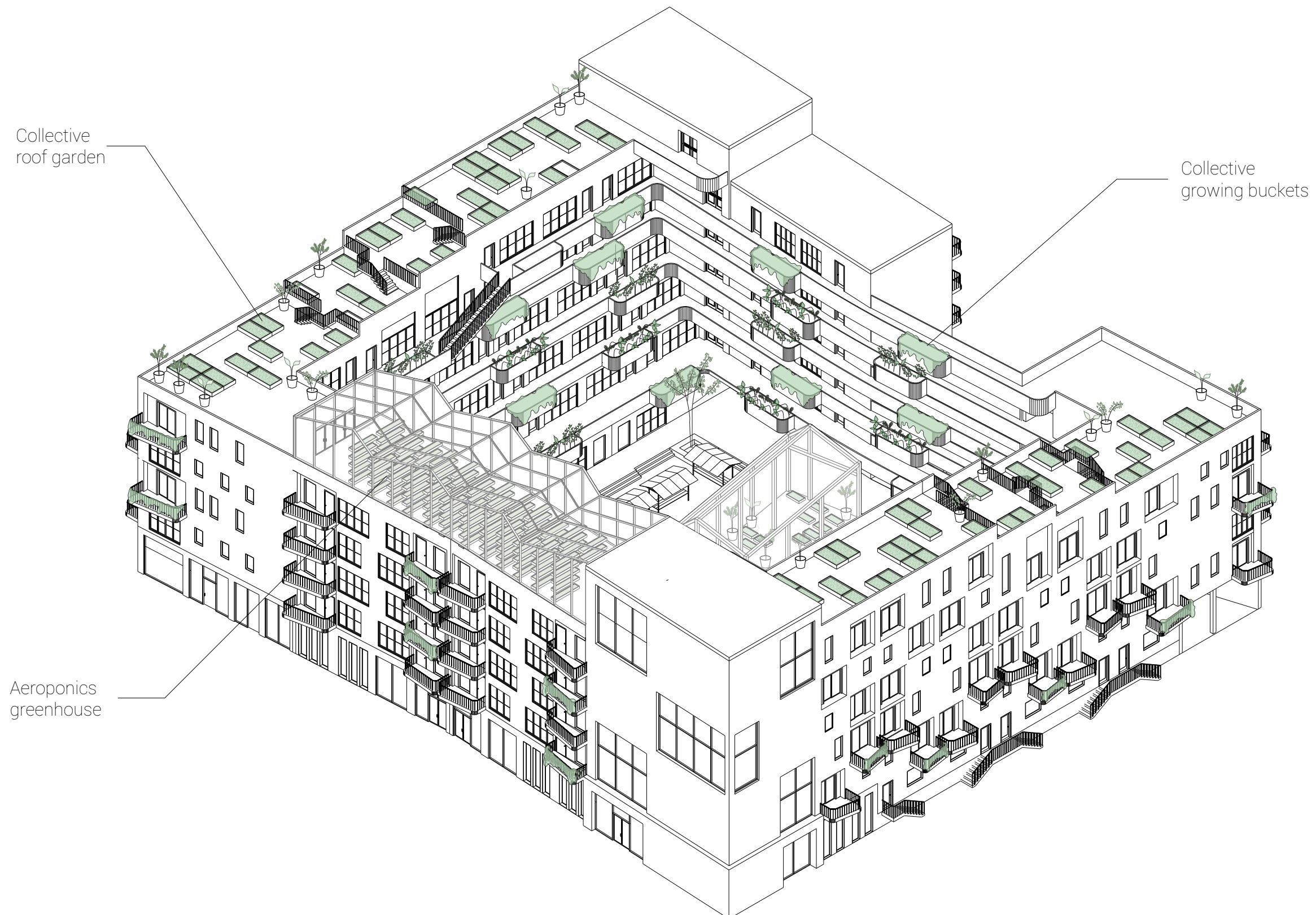
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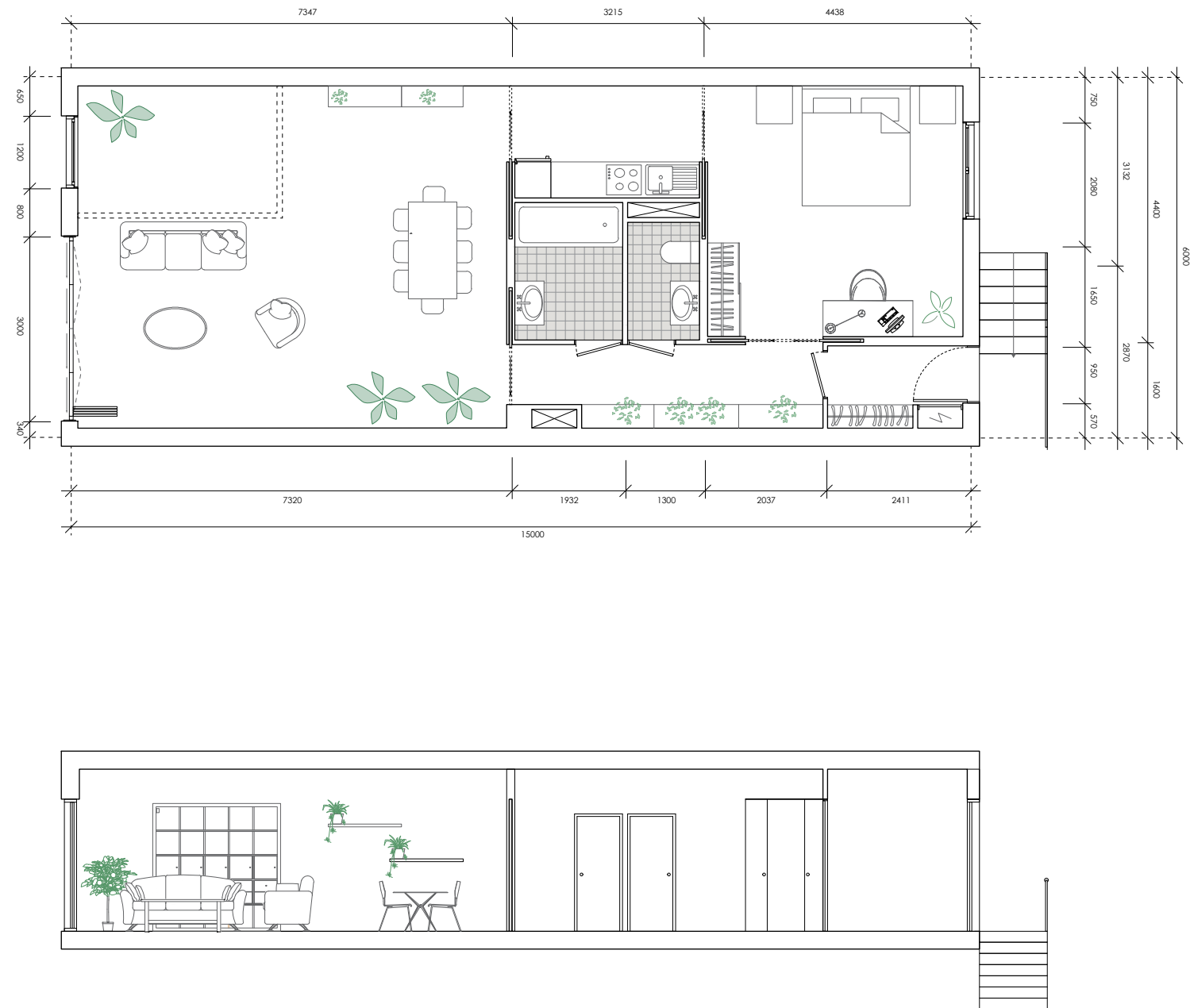
Building Ensemble | Ground floor level



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Dwelling floor-plan | 90m² apartment

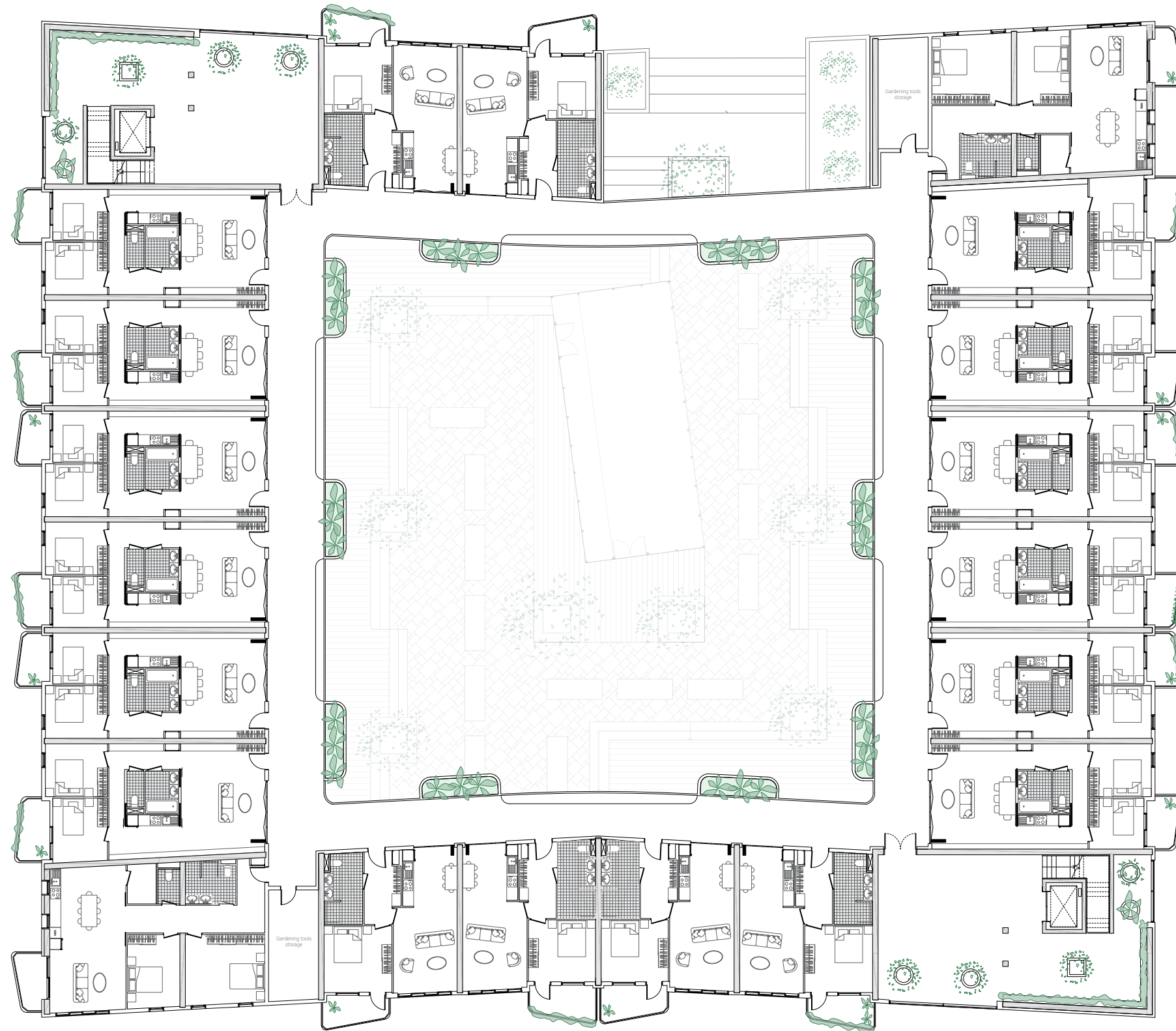




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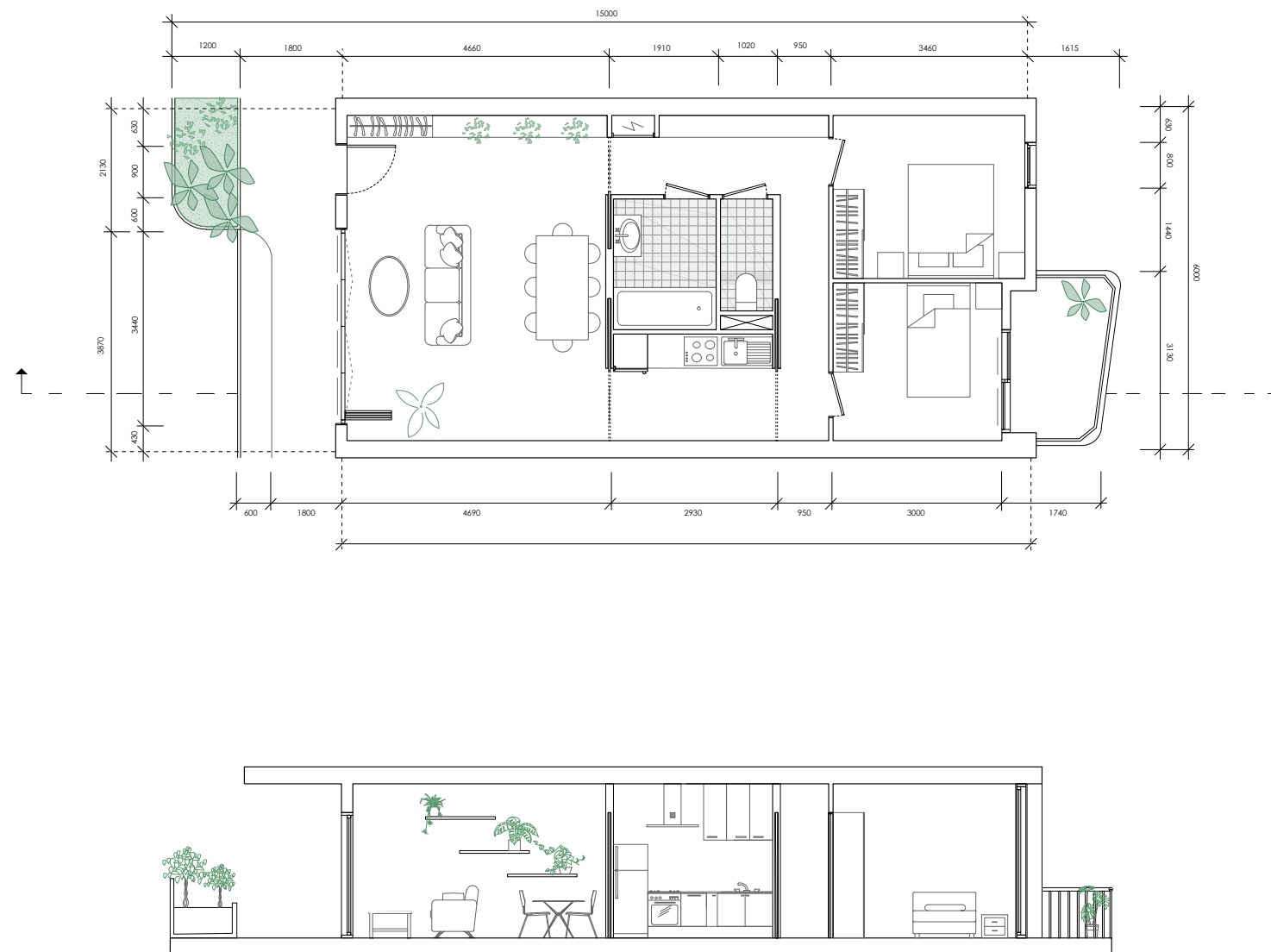
Building Ensemble | First Level



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Dwelling floor-plan | 72m² apartment





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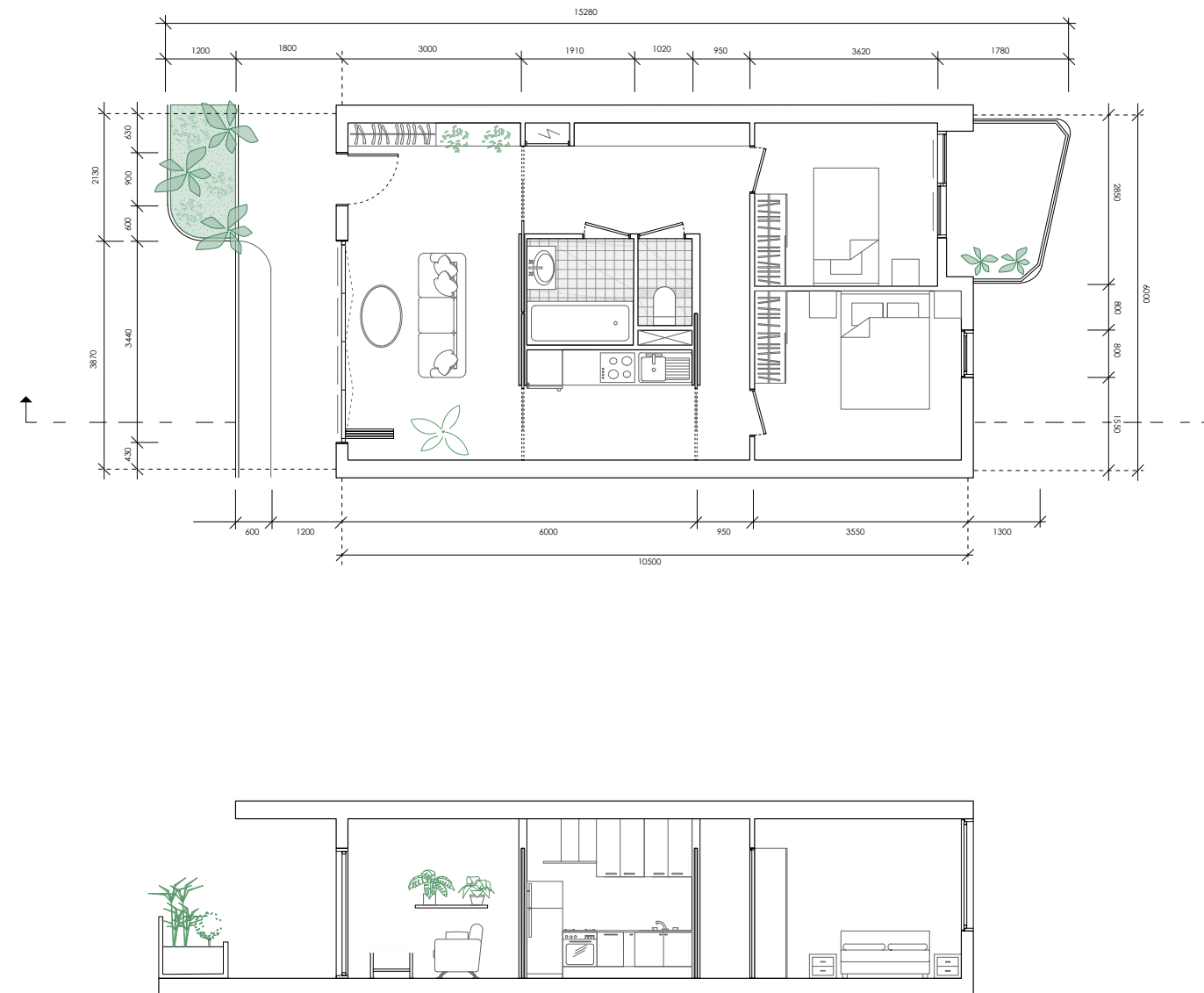
Building Ensemble | Second Level



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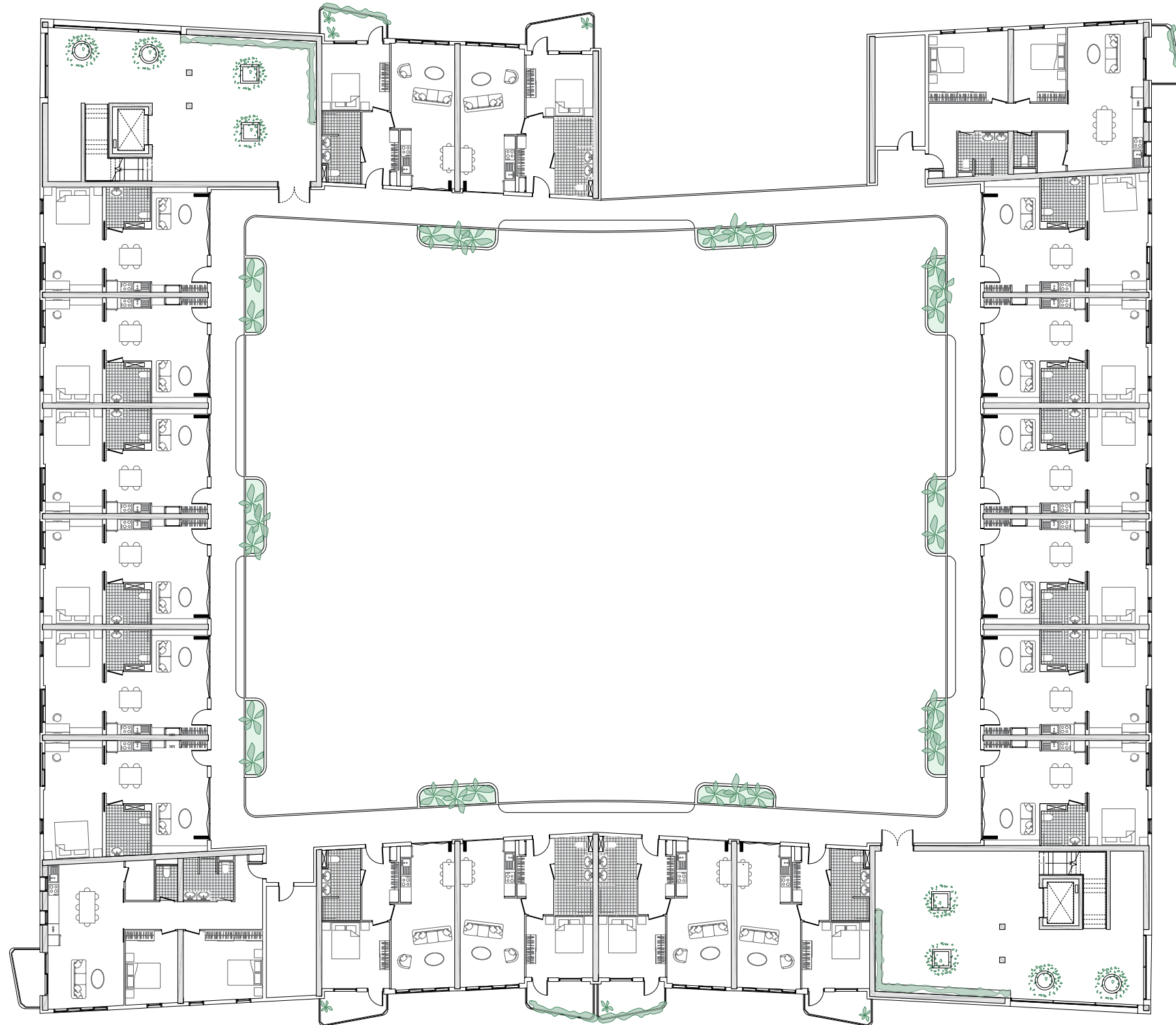
Dwelling floor-plan | 63m² apartment



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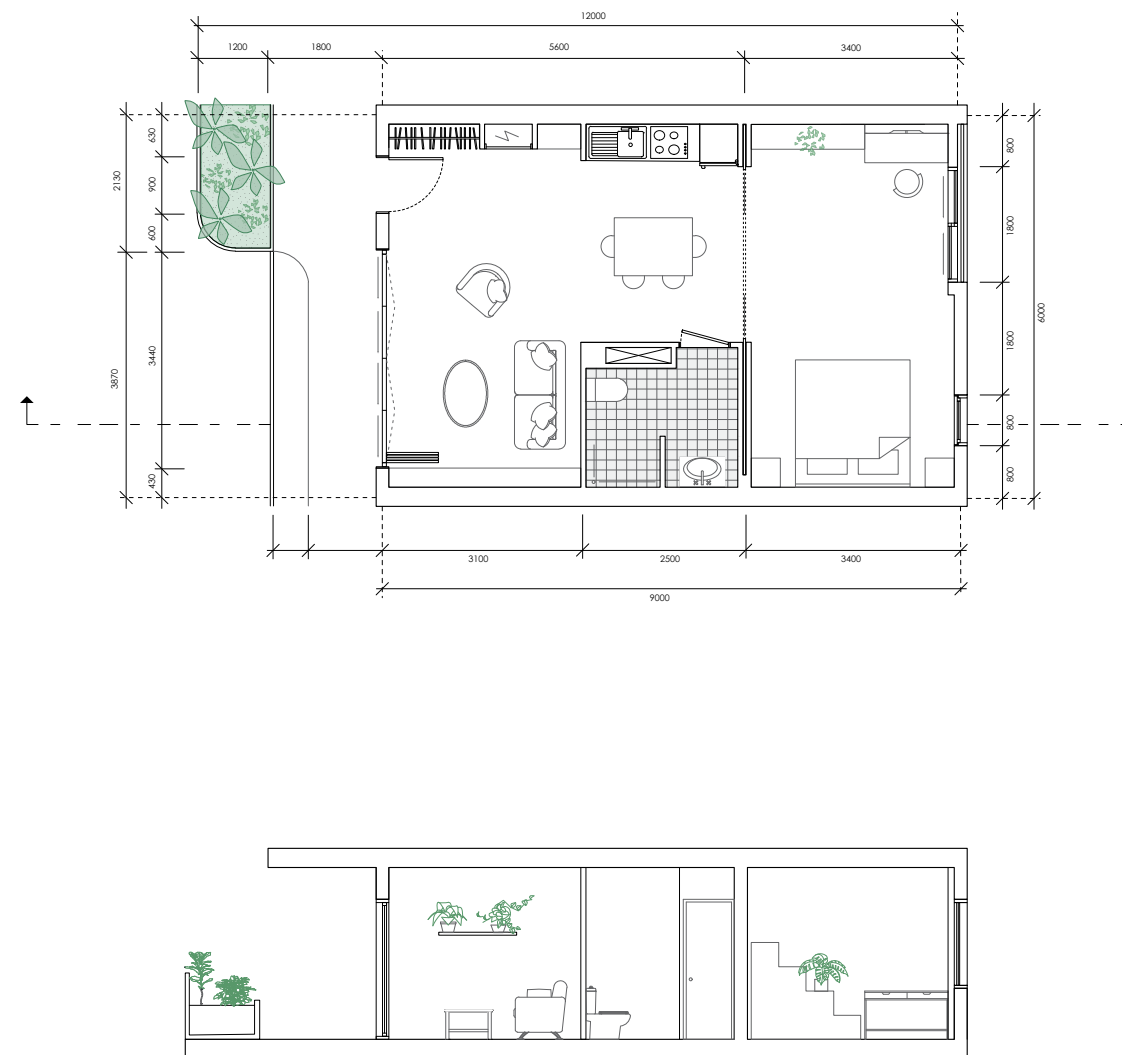
Building Ensemble | Third Level



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Dwelling floor-plan | 54m² studio

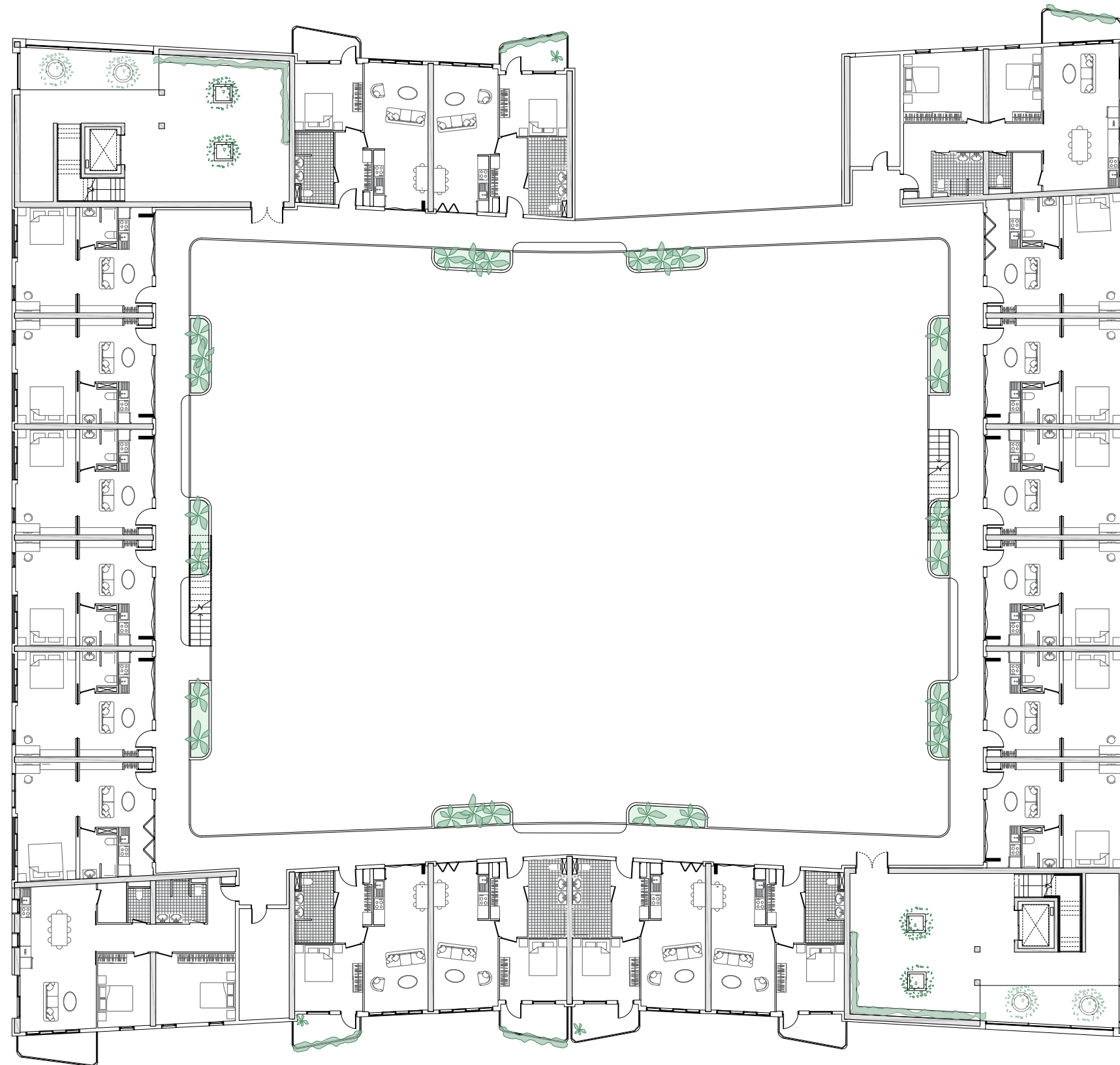




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Building Ensemble | Fourth Level



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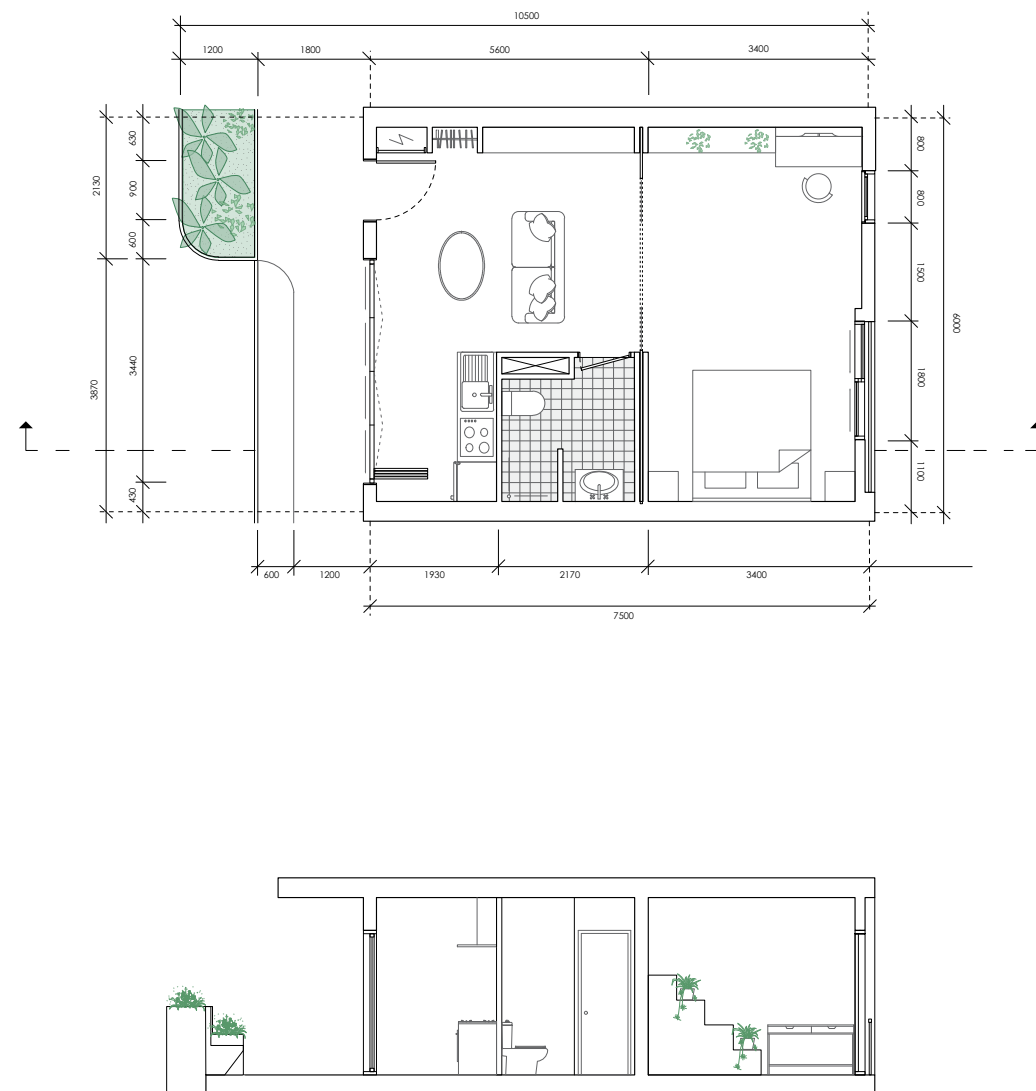
Building Ensemble | Fifth Level



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Dwelling floor-plan | 45m² studio



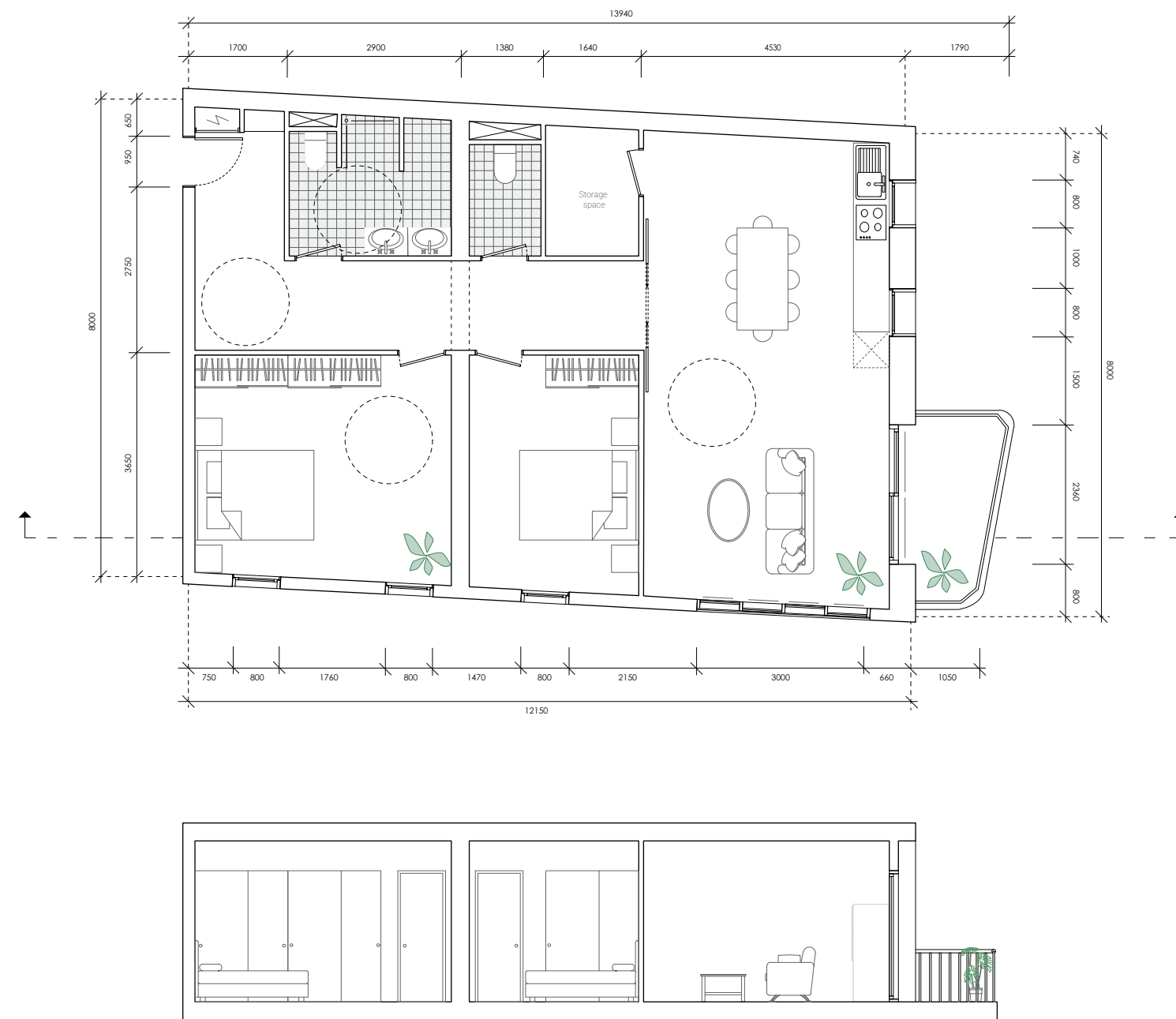
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This architectural floor plan shows a house with a total width of 8000 and a total depth of 7500. The layout includes a living area with a sofa, armchair, and coffee table; a dining area with a table and chairs; a kitchen with a sink, stove, and refrigerator; a bathroom with a bathtub, toilet, and sink; and a bedroom with a bed and wardrobe. The plan also shows a large circular area in the living room, a smaller circular area in the dining area, and a rectangular area in the kitchen. Dimensions are provided for various sections: 1560, 3750, 4250, 1200, 600, 800, 1250, 570, 900, 680, 2900, 1440, 1465, 3700, 1000, 3300, 1800, 1200, 2500, 950, 1550, and 2500. A north arrow is located in the bottom left corner.

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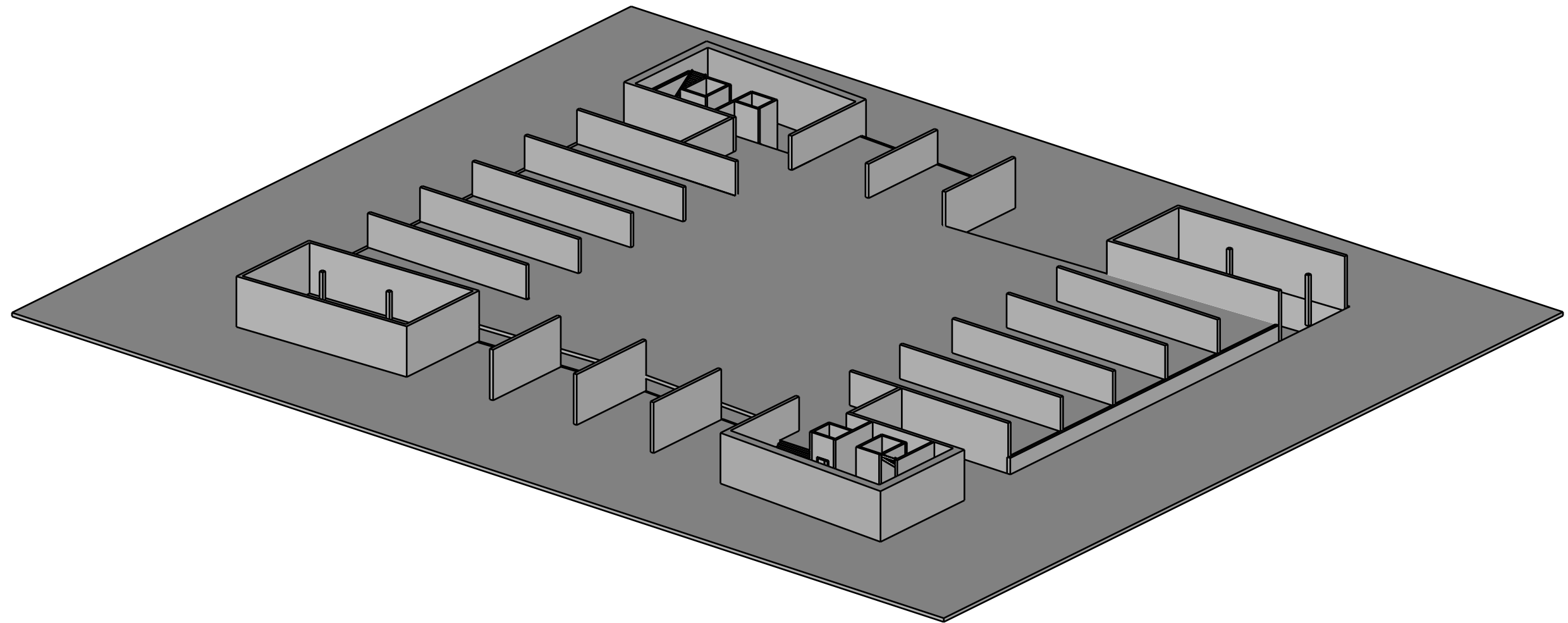
Dwelling floor-plan | 90m2 apartment (wheel-chair friendly)



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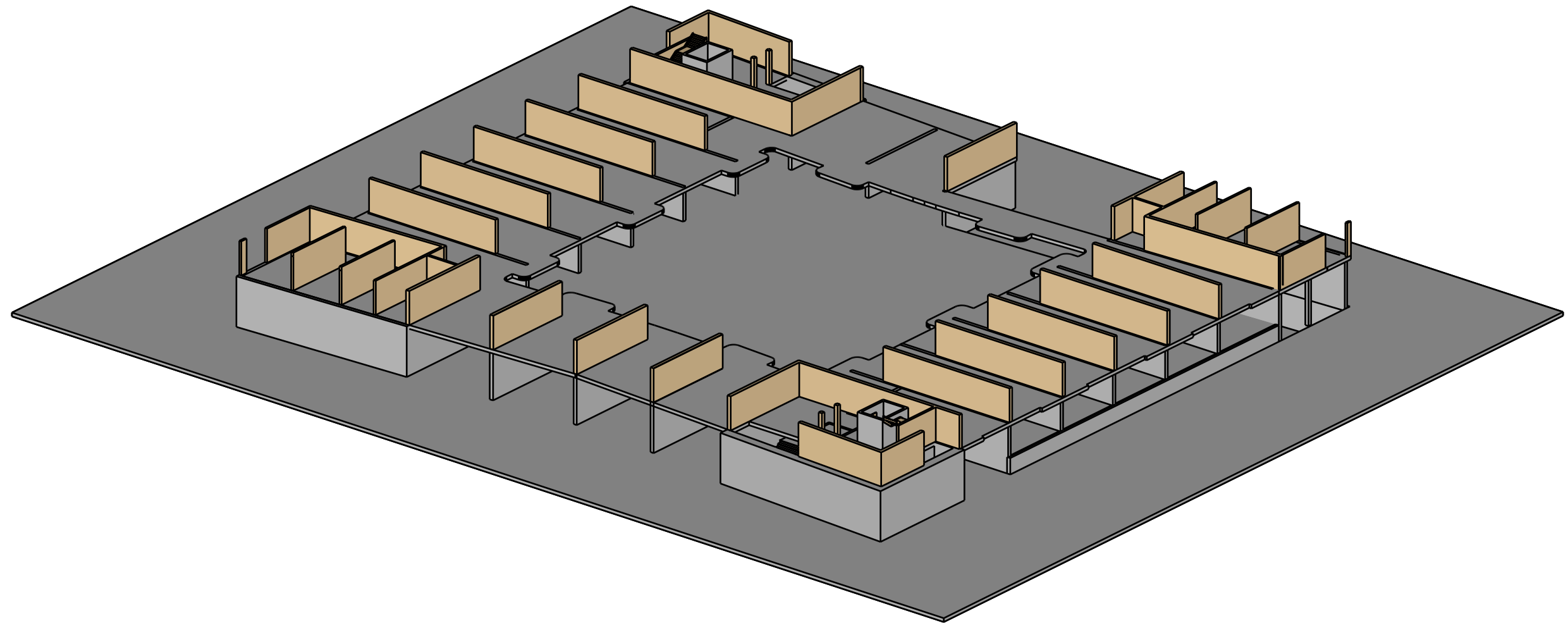
Building construction system



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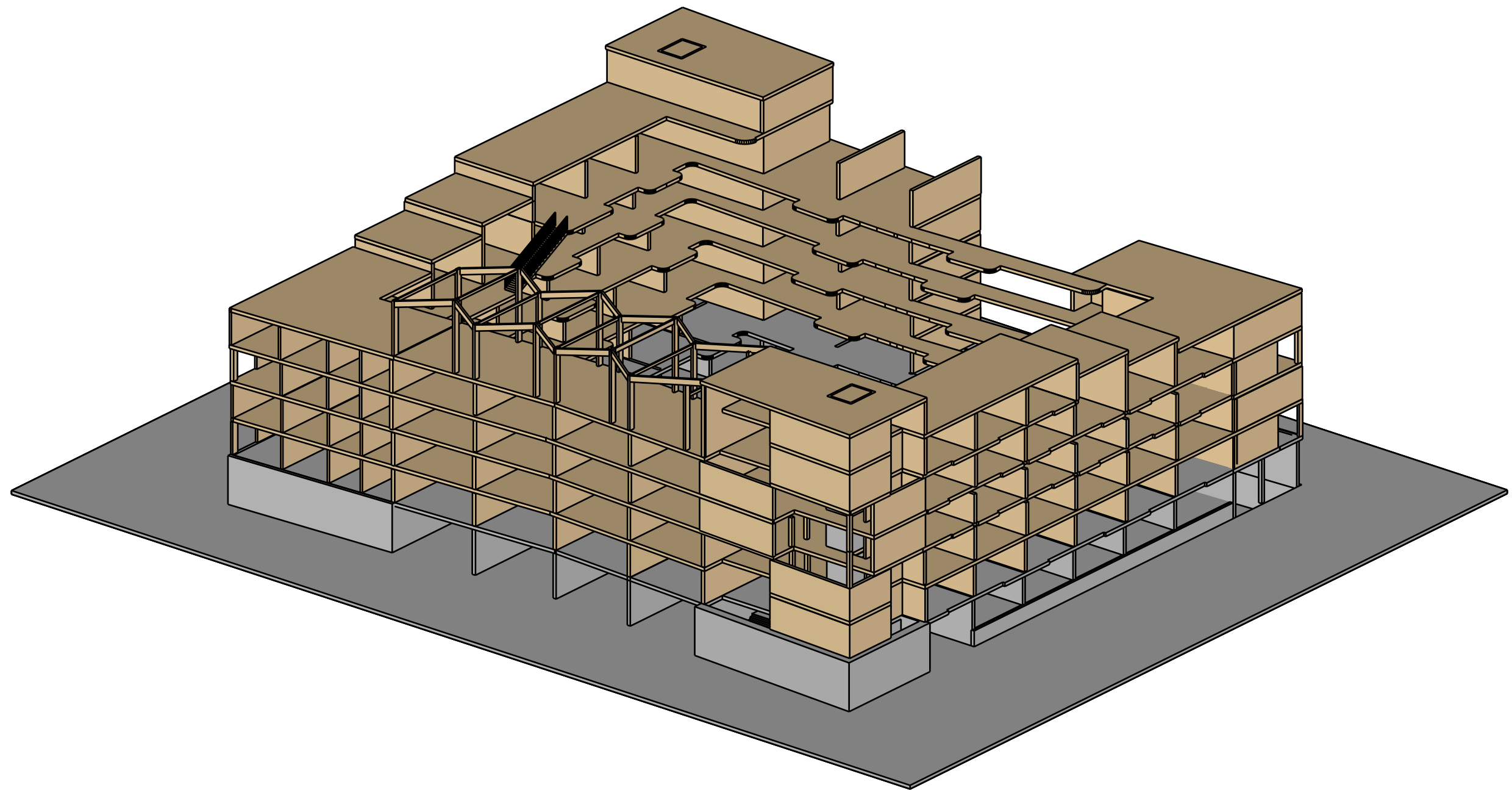
Building construction system



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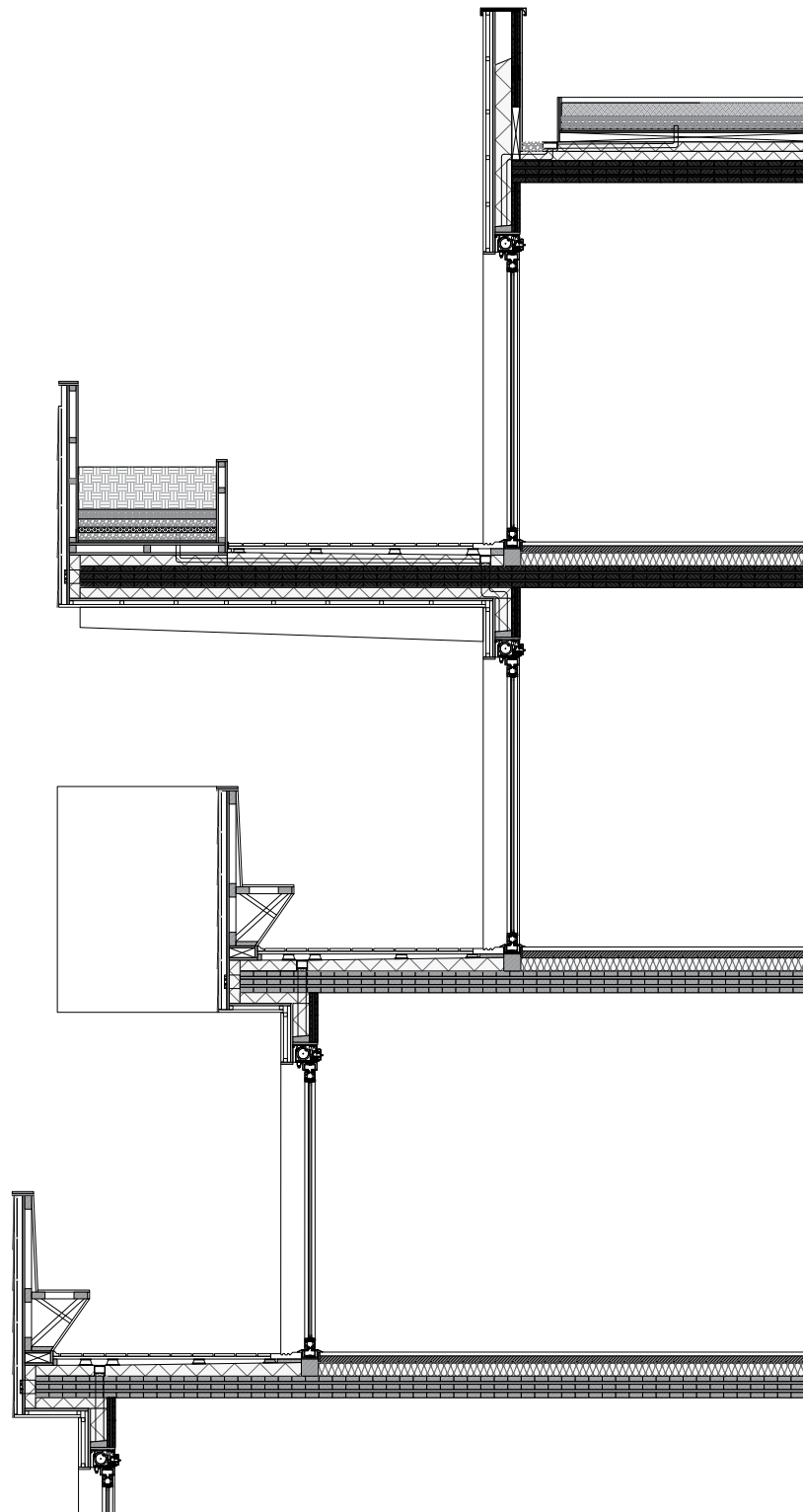
Building construction system



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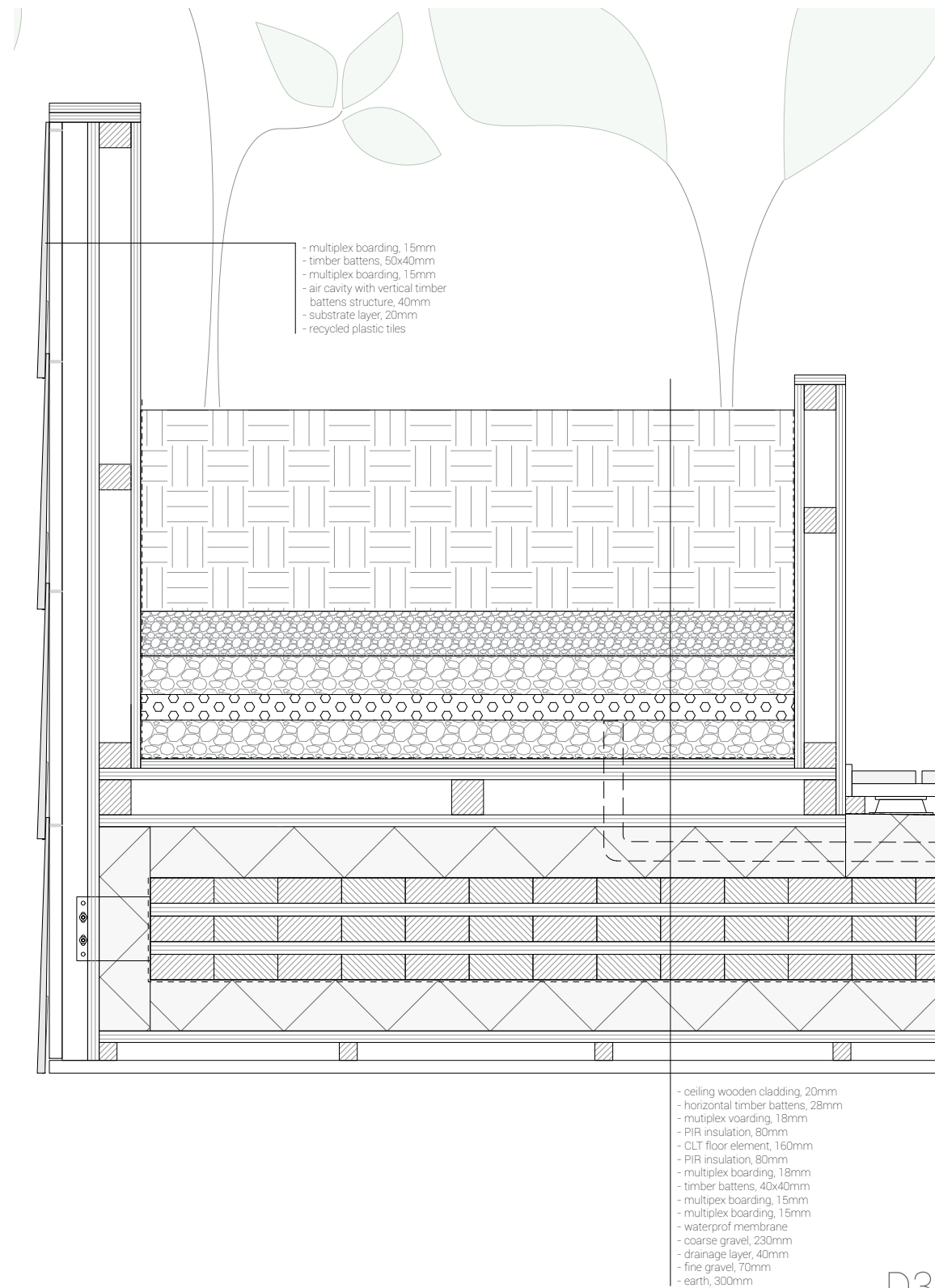
Horizontal Facade Fragment



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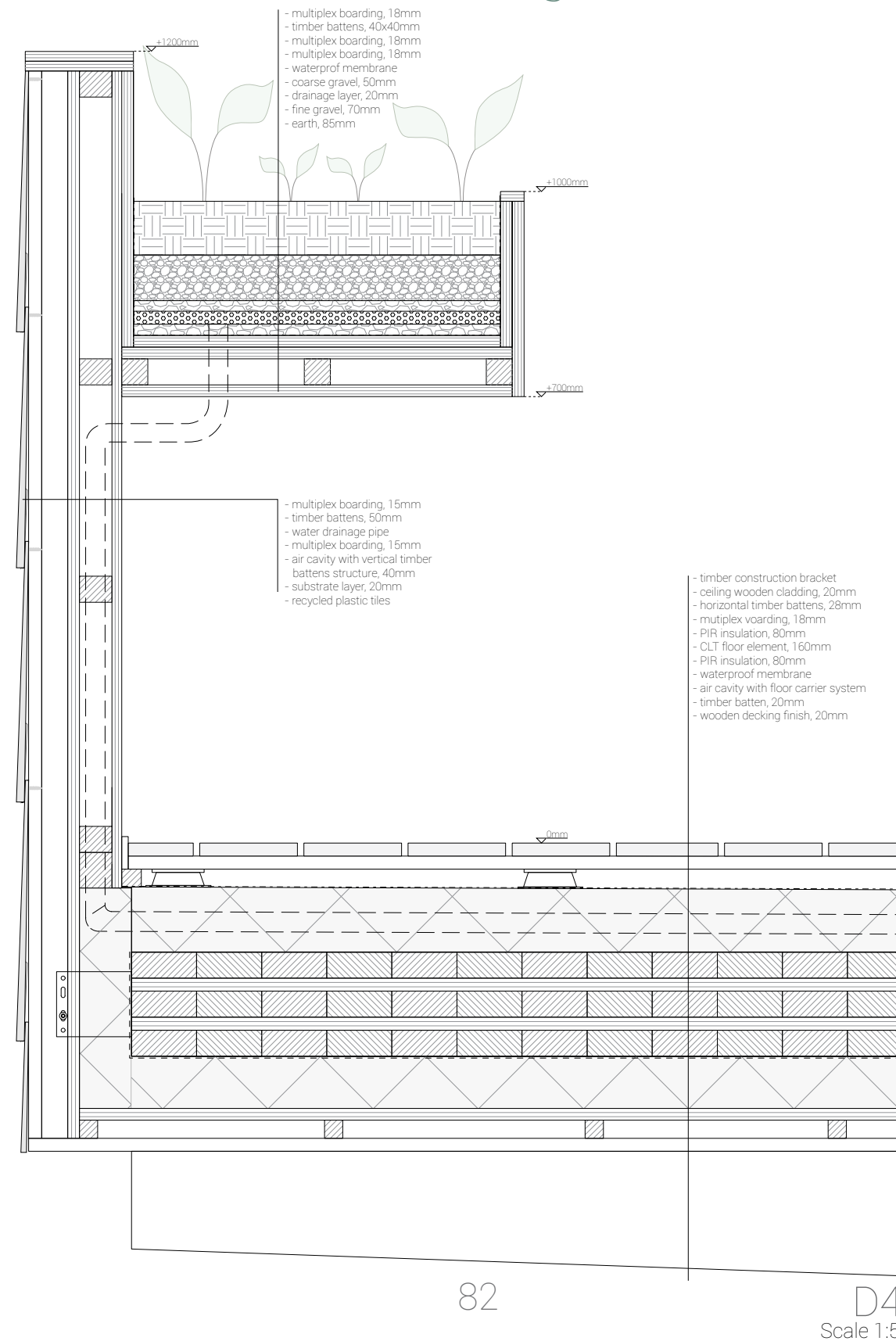
Detail | Growing bucket



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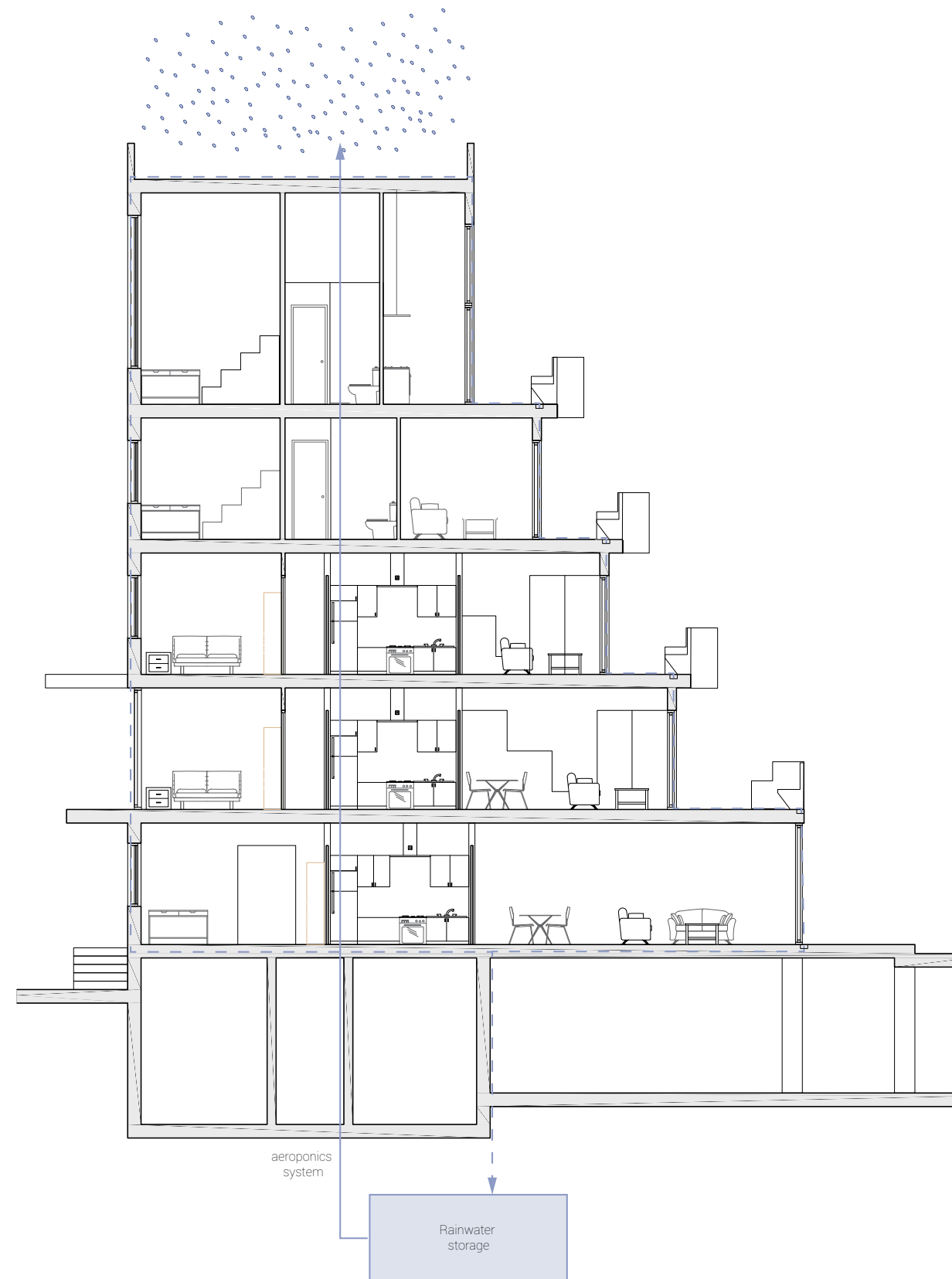
Detail | Growing bucket



NeighbourFOOD

Raising food awareness in the future city

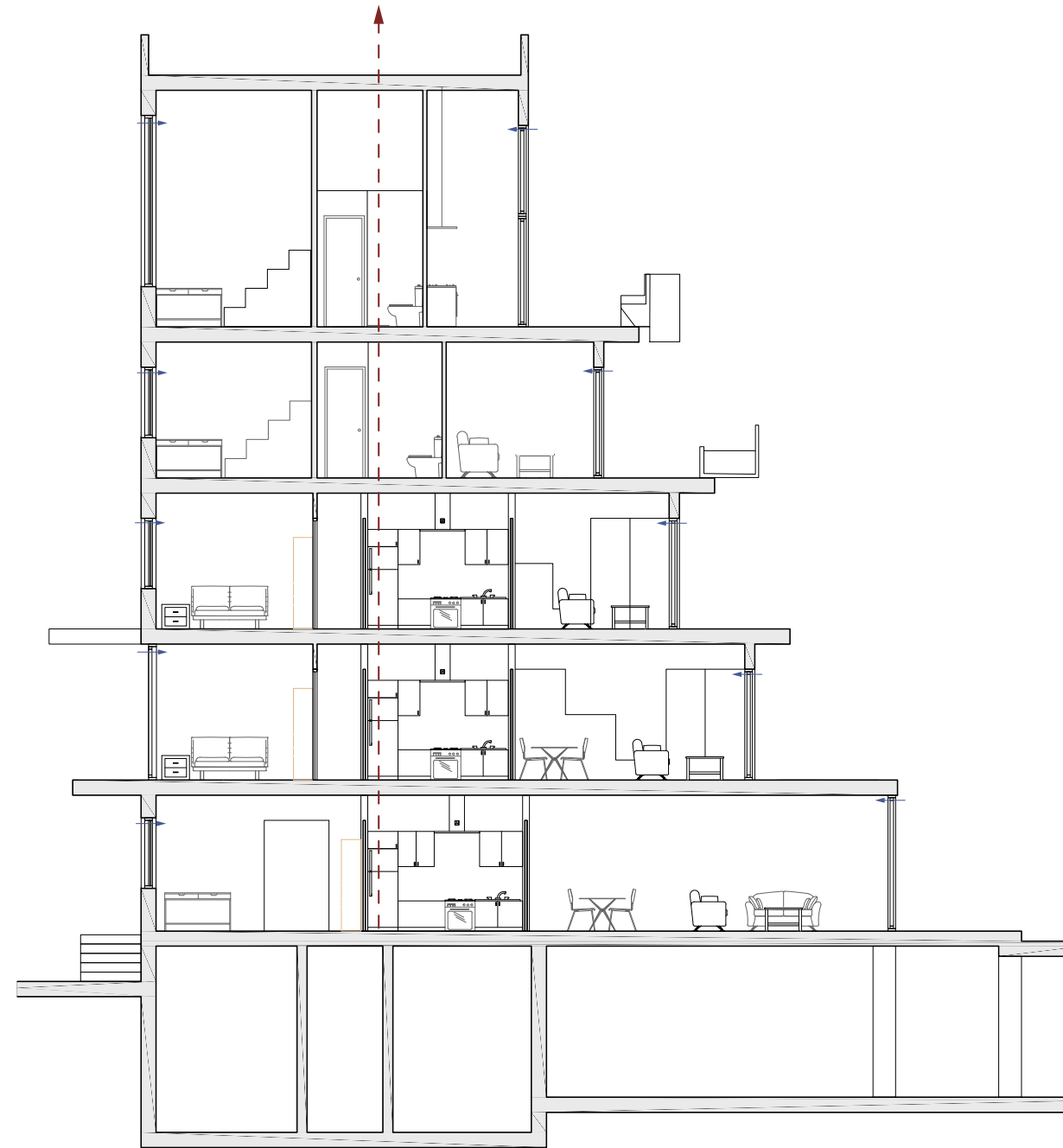
Climate | Rainwater system



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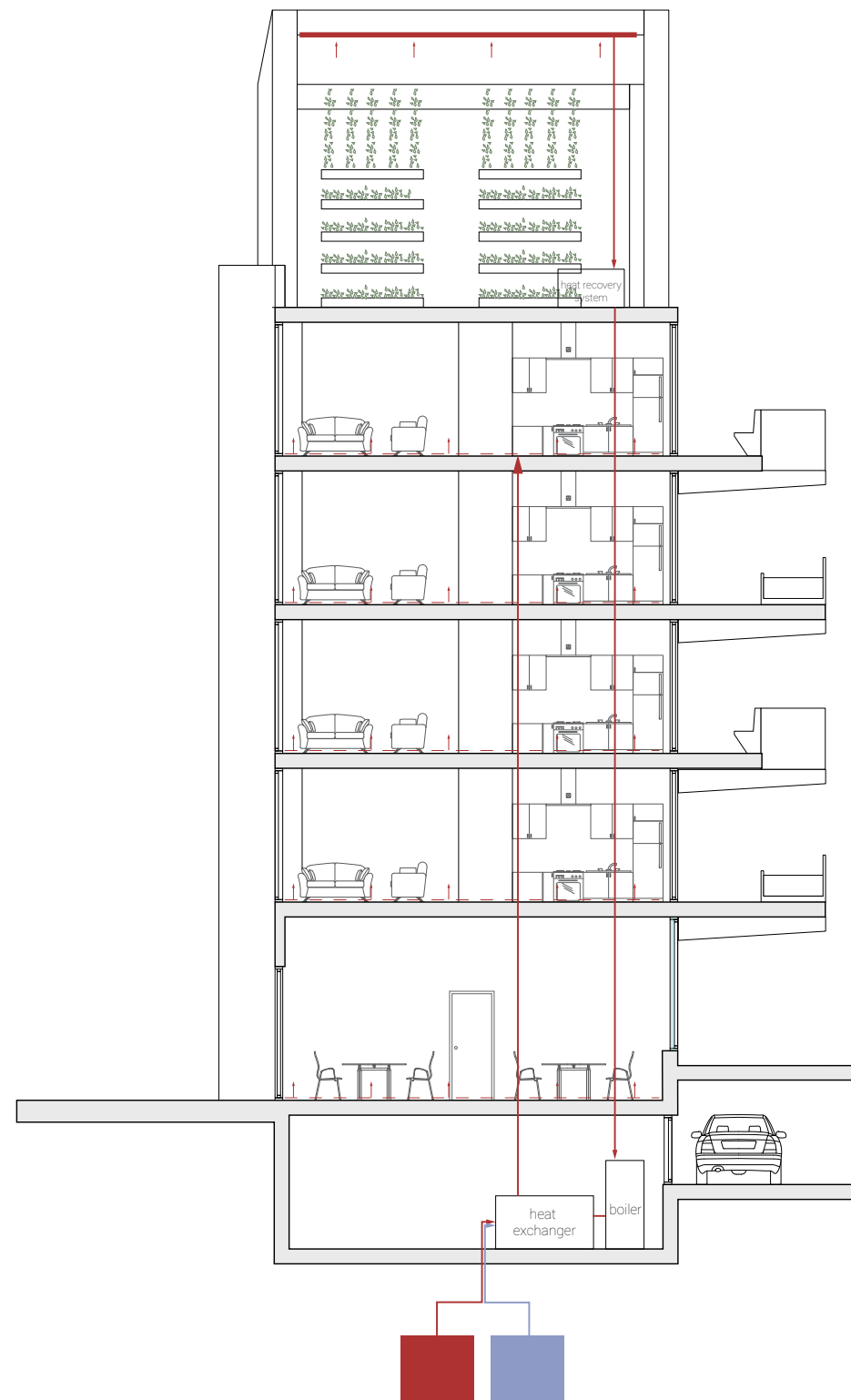
Climate | Ventilation system



NeighbourFOOD

Raising food awareness in the future city

Climate | Heating system



heat-cold water
storage system
85















Thank you!

Questions?