

SchelLink



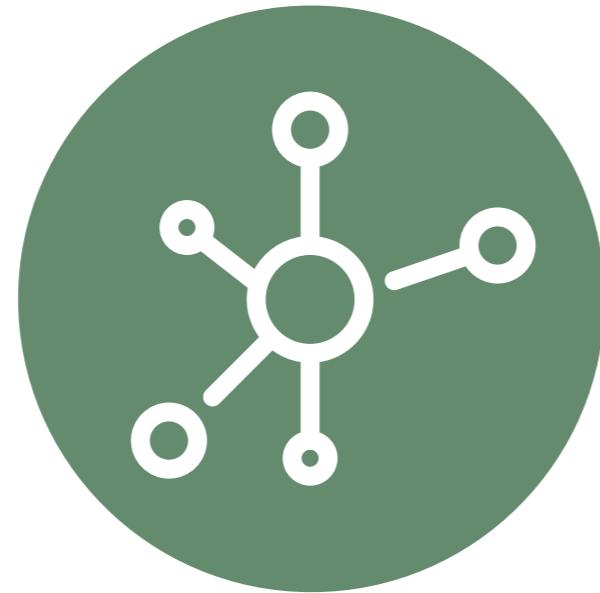
Connecting people, nature and the city

Multidisciplinary project
Group 1

Jeanne Bakker - 1298240
Wiebe van Spronsen - 1377825
Roy Souren - 1362461
Sabine Thodé - 0965813

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Vision and concepts



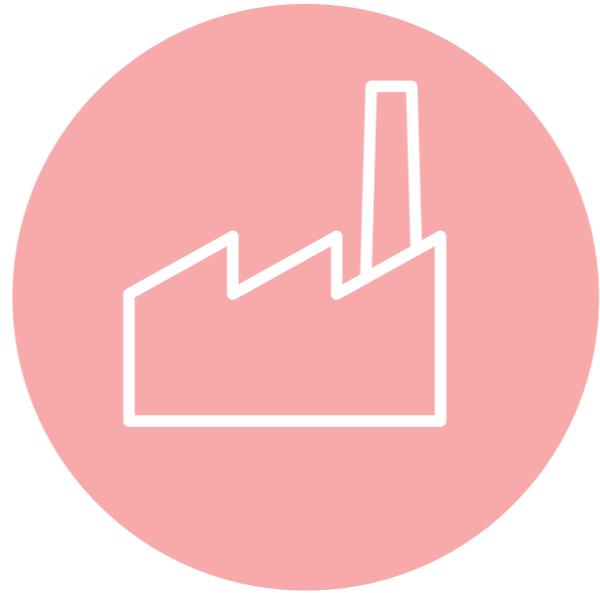
Lively connecting factor
in High-potential area.



Functional green heart for
recreation and meeting.



Innovative and sustainable
mobility system

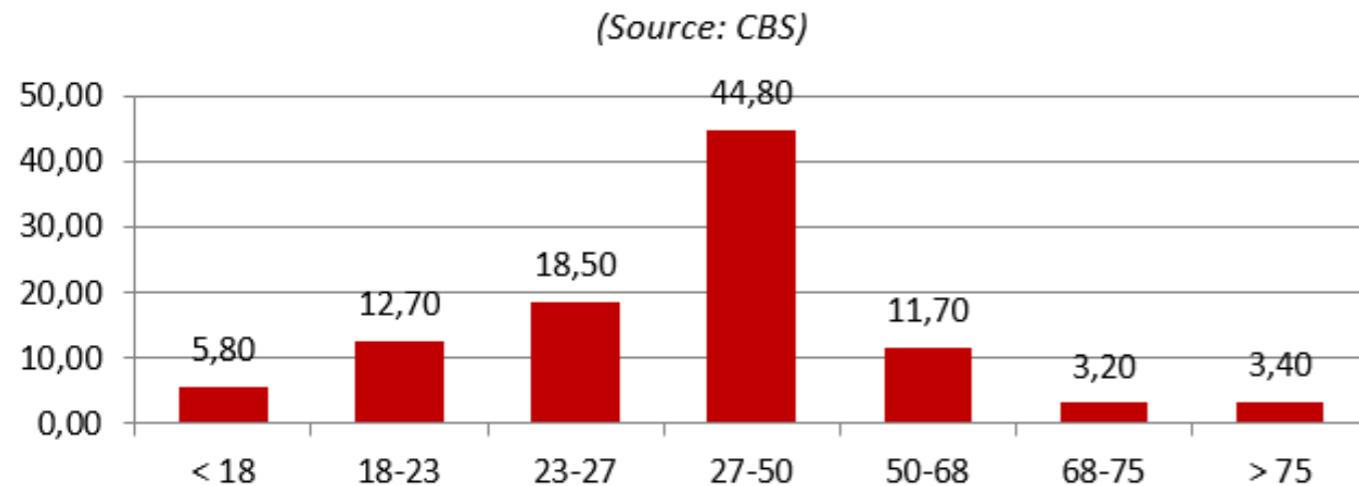


Embrace heritage and
unique character

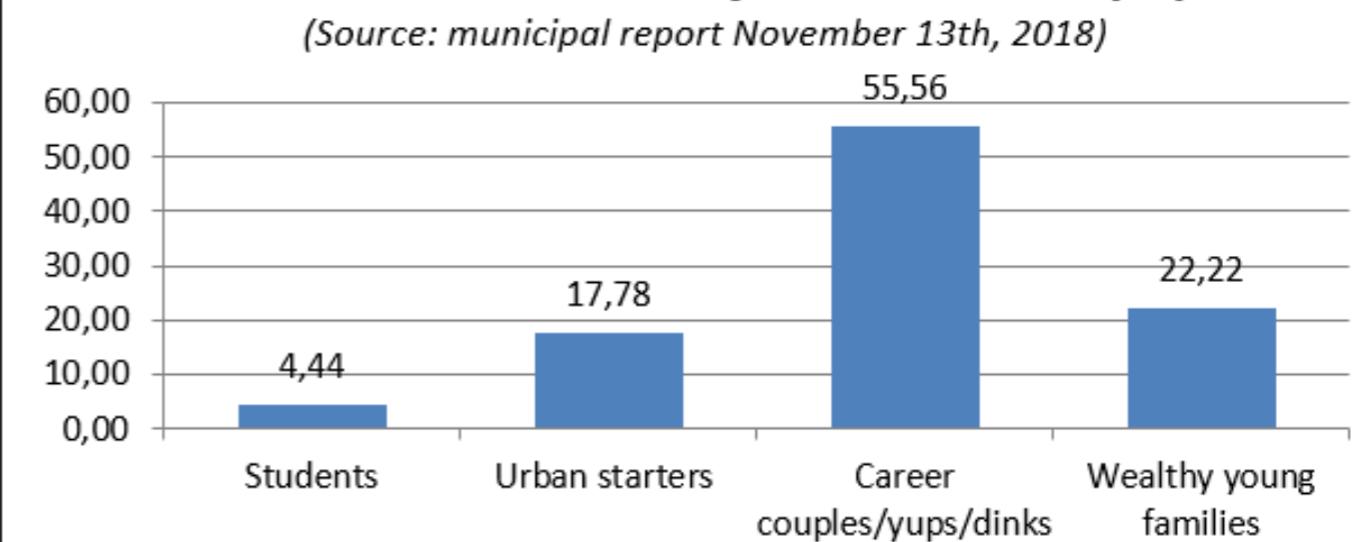
Market and location analysis

- Shortage of cheap and middle class housing in city centre;
- Most important target groups = young people 20 - 50 years old

Inhabitants Eindhoven Center by age (%)



Inhabitants 20-45 y/o in Center (%)

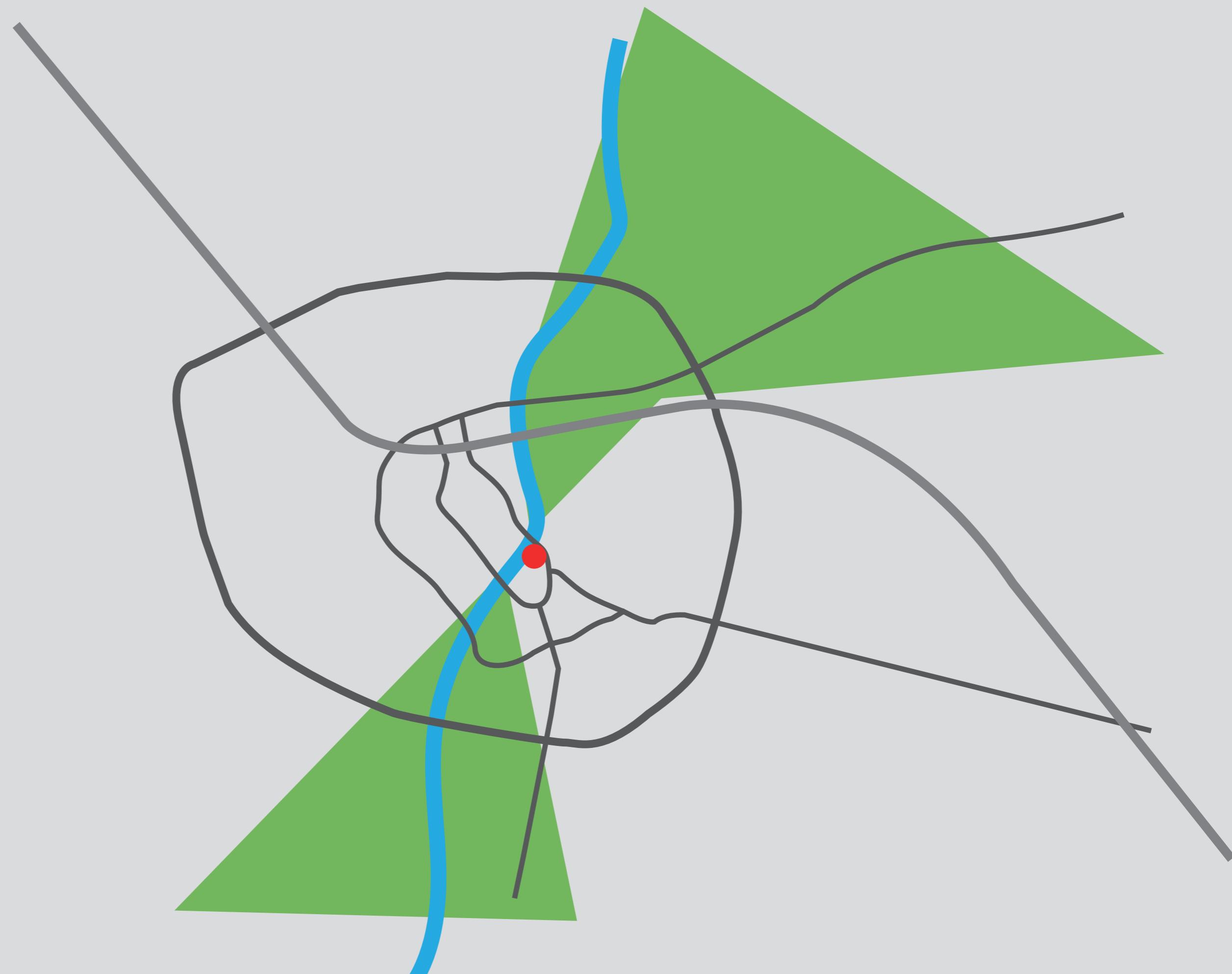


Flex working spaces + small retail (e.g. technique, design) needed;

Location with a lot of possibilities for extra functions;

Municipal policy: car free centre, no private parking.







Mobility plan



Masterplan



City beach



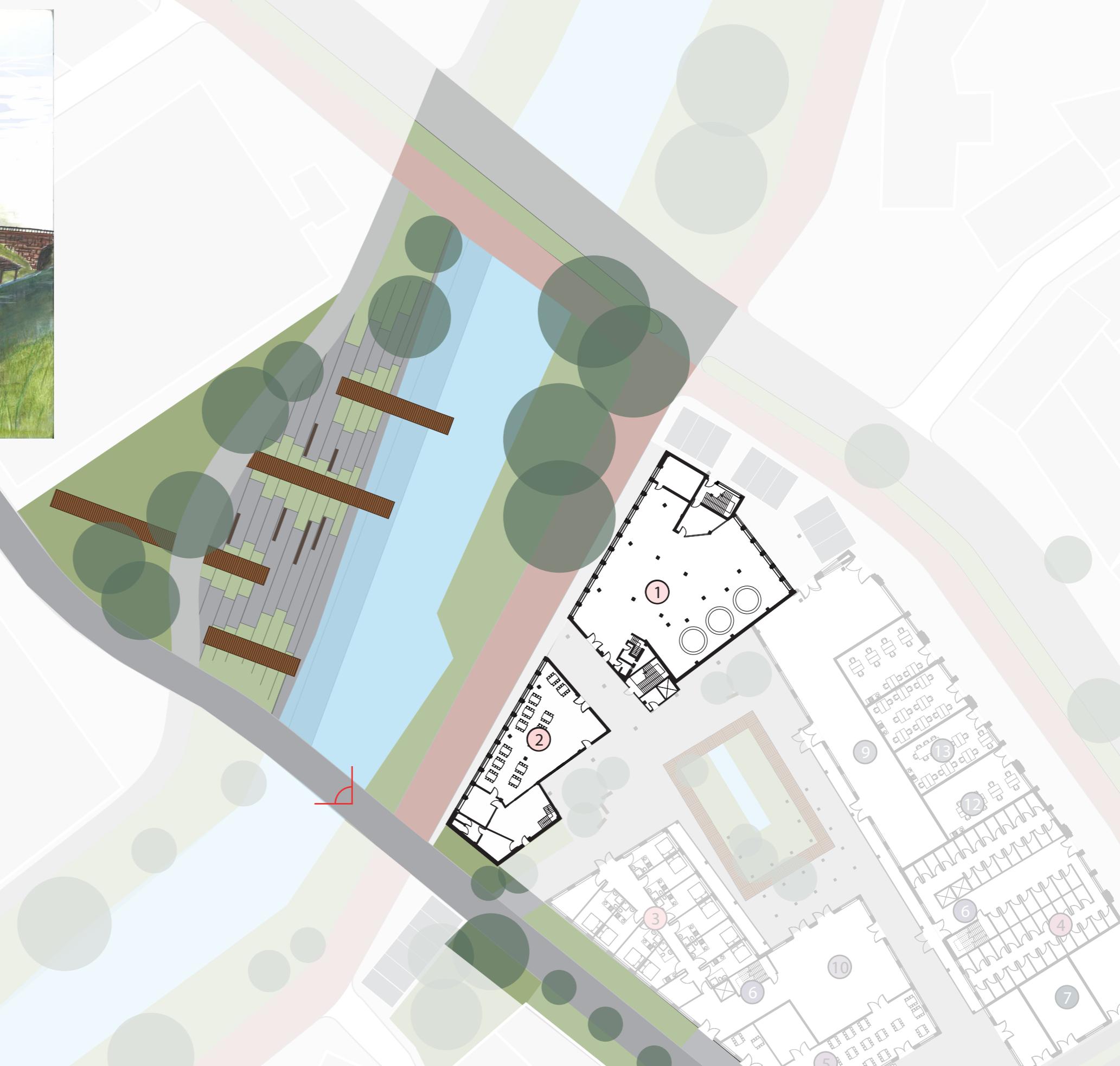
Side information

Function: connects nature and culture, will make the Dommel more attractive.

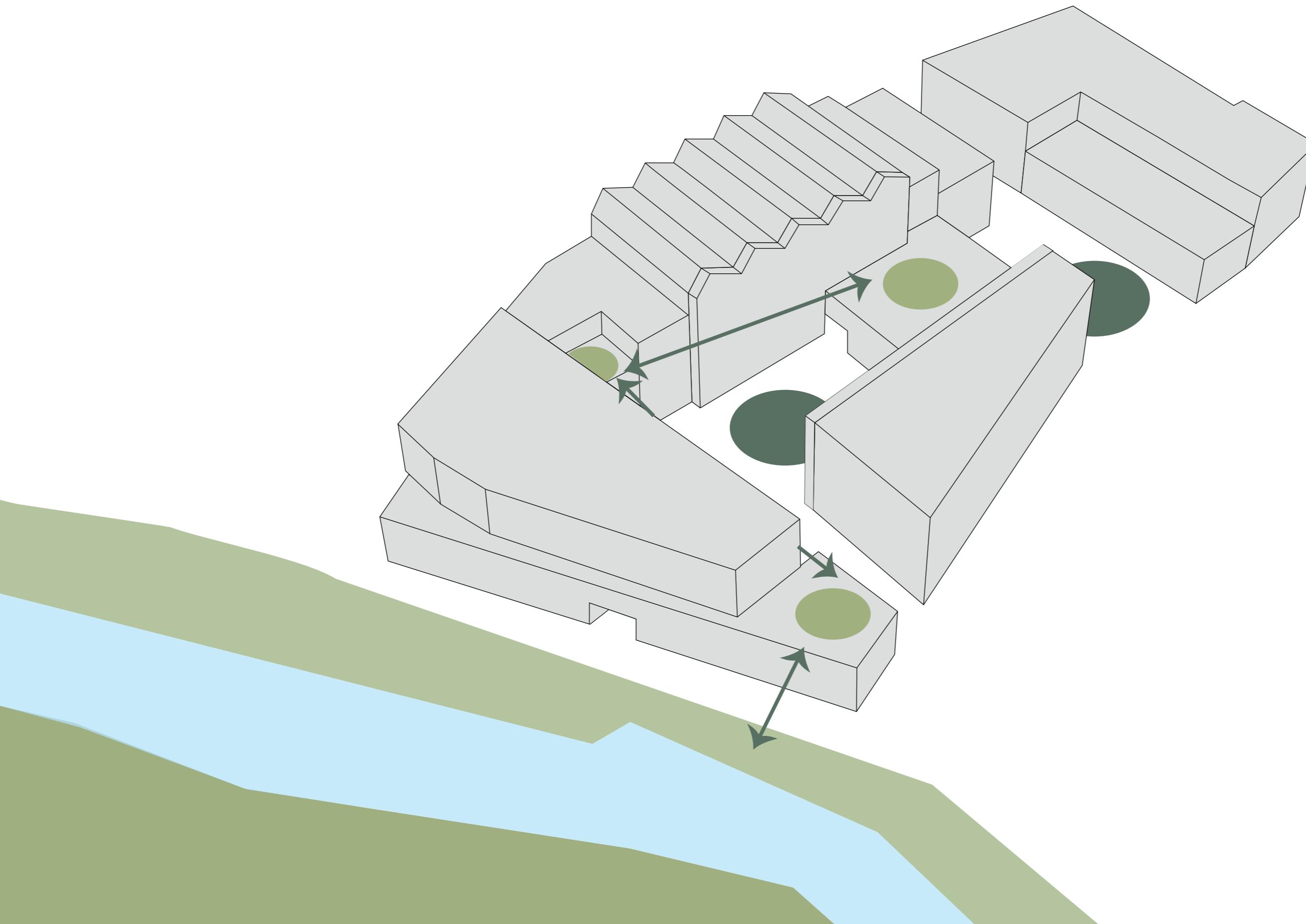
1379 m²

Costs: 110.320 EU

Paid by the municipality of Eindhoven.



Architectural concept



Program commercial space

Type	M2	Renter	Price/m2/p.a.
Office	3.000	Seats2meat	€ 180 p/m
Exhibition space	550	Incubator	€ 150 p/m
2 multifunctional halls	325	Incubator	€ 150 p/m
Horeca	185	incubator	€ 300 p/m
Office	75	Wooninc	€ 180 p/m
3 retail spaces	180	New renters	€ 500 p/m
Brewery/caf�	750	100 Watt Brewery + Café	€ 180 p/m
Office/shop	75	Studio Sander Mulder	€ 180 p/m
Office/shop	150	Lucifer CoffeeRoasters	€ 180 p/m
Office/shop	250	S-Plaza	€ 180 p/m

Public square



Side information

Function: connects
Dommel and SchelLink
Public square
960 m²

Costs: 38.400 EU
Paid Through sales and
rent of public facilities

Floorplan Ground Floor

- ① Brewery ② Café ③ Residential ④ Storage ⑤ Restaurant ⑥ Central hall
- ⑦ Retail ⑧ Exhibition ⑨ S-Plaza ⑩ Multi hall ⑪ Office ⑫ Lucifer coffee ⑬ Sander Mulder

N

Program residential space

Type	M2	Number	Prices
Student studio	21	14	€ 442 p/m
Social rental apartment	60	12	€ 752 p/m
Rental apartment	80	22	€ 1.100 p/m
Sale apartment	90	9	€ 375.000
Sale apartment	100	13	€ 417.000
Sale apartment	120	13	€ 550.000

Courtyard



Side information

Facilitates semi-private
outisdes space for
residents.
965 m²

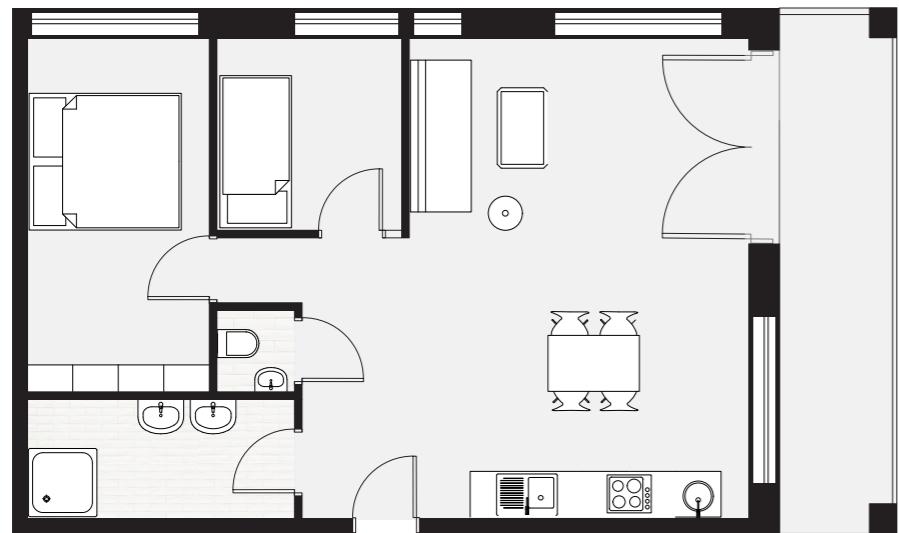
Costs: 77.200 EU
Paid through sales of
apartments.

Floorplan Ground Floor

- ① Brewery
- ② Café
- ③ Residential
- ④ Storage
- ⑤ Restaurant
- ⑥ Central hall
- ⑦ Retail
- ⑧ Exhibition
- ⑨ S-Plaza
- ⑩ Multi hall
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N





60 m² Social rental apartment
752 EU p/m

Young people (20-30 y/0) and urban starters

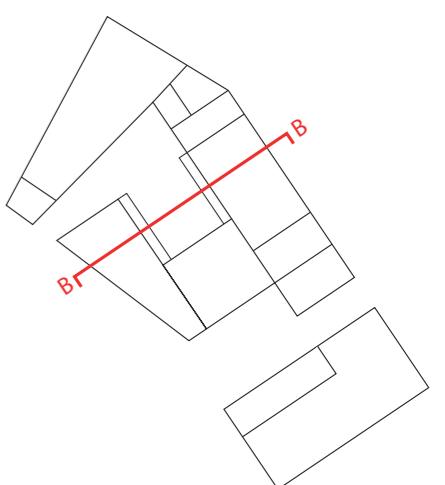


90 m² Sale apartment
375.000 EU

Carreer couples, Dinnks, Yuppies and expats.



Section BB

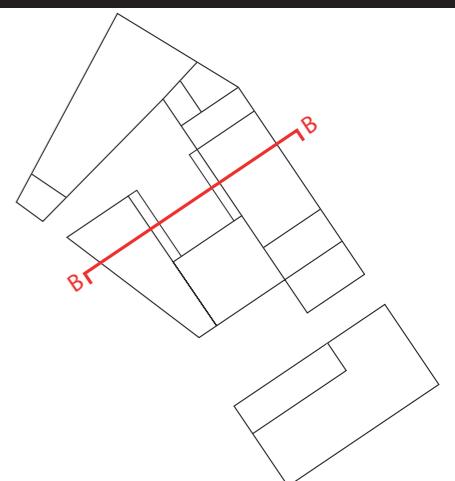


Air flows solar chimney



Reduction of OE: 51,6 GJ/a

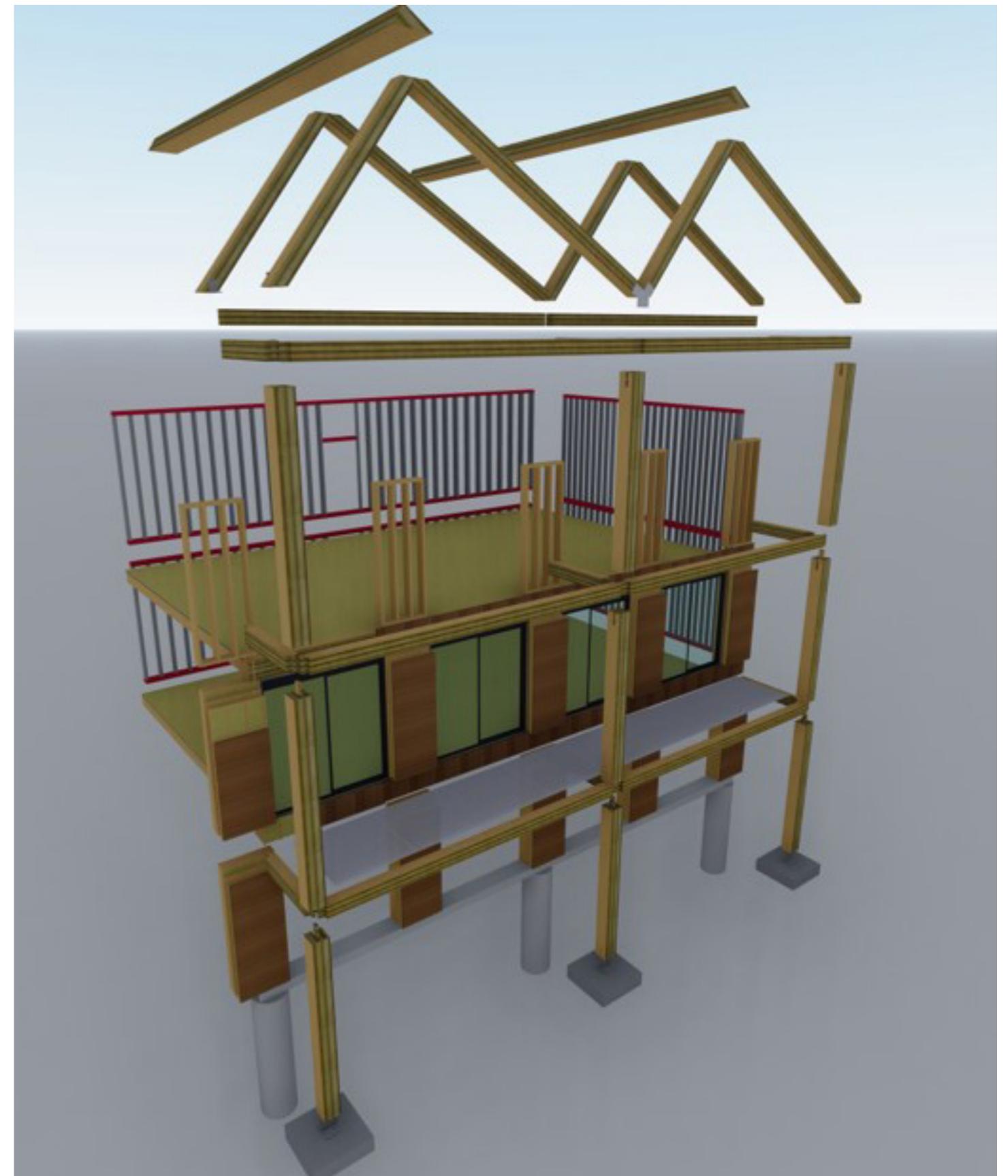
EE: 1526 GJ



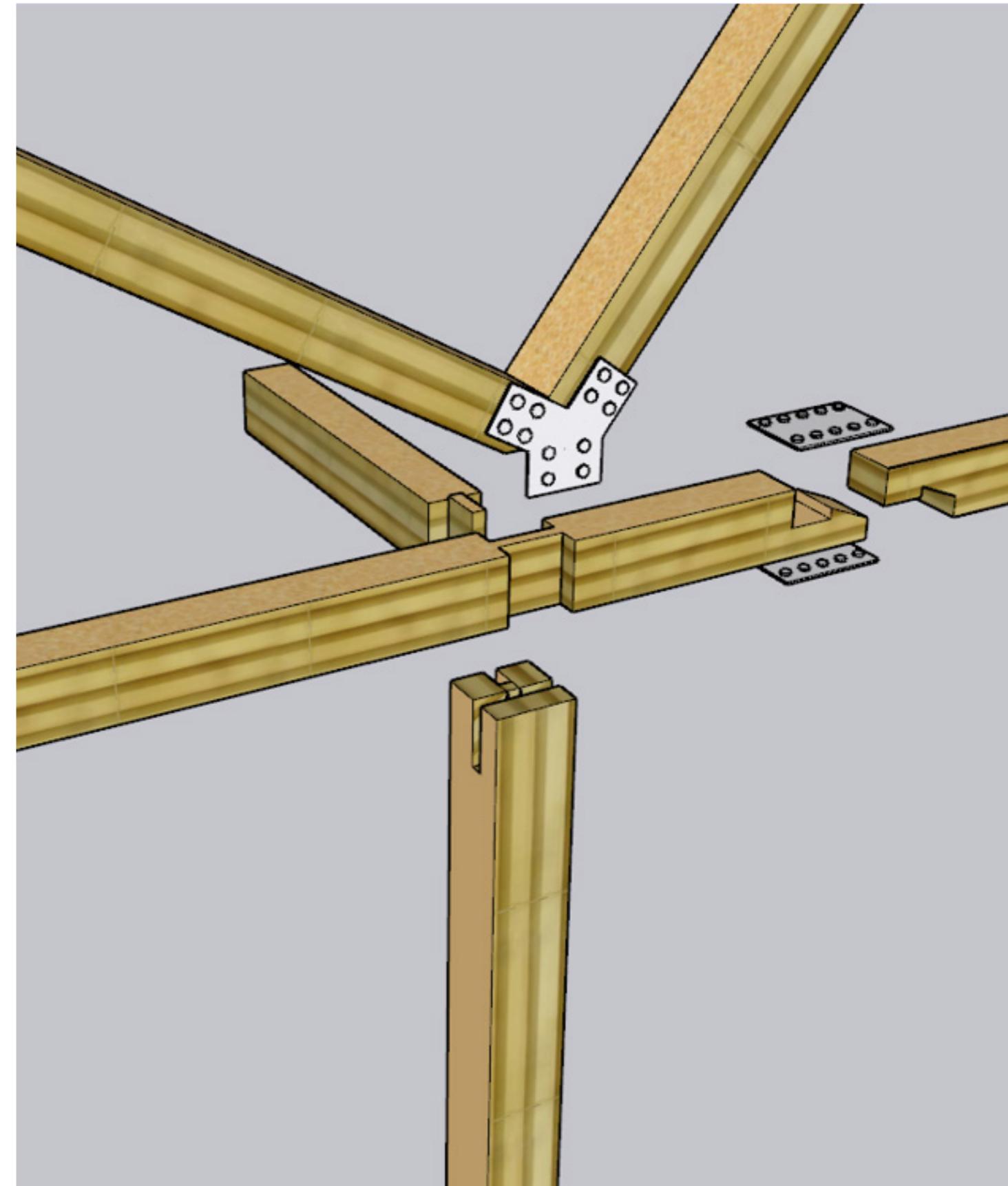
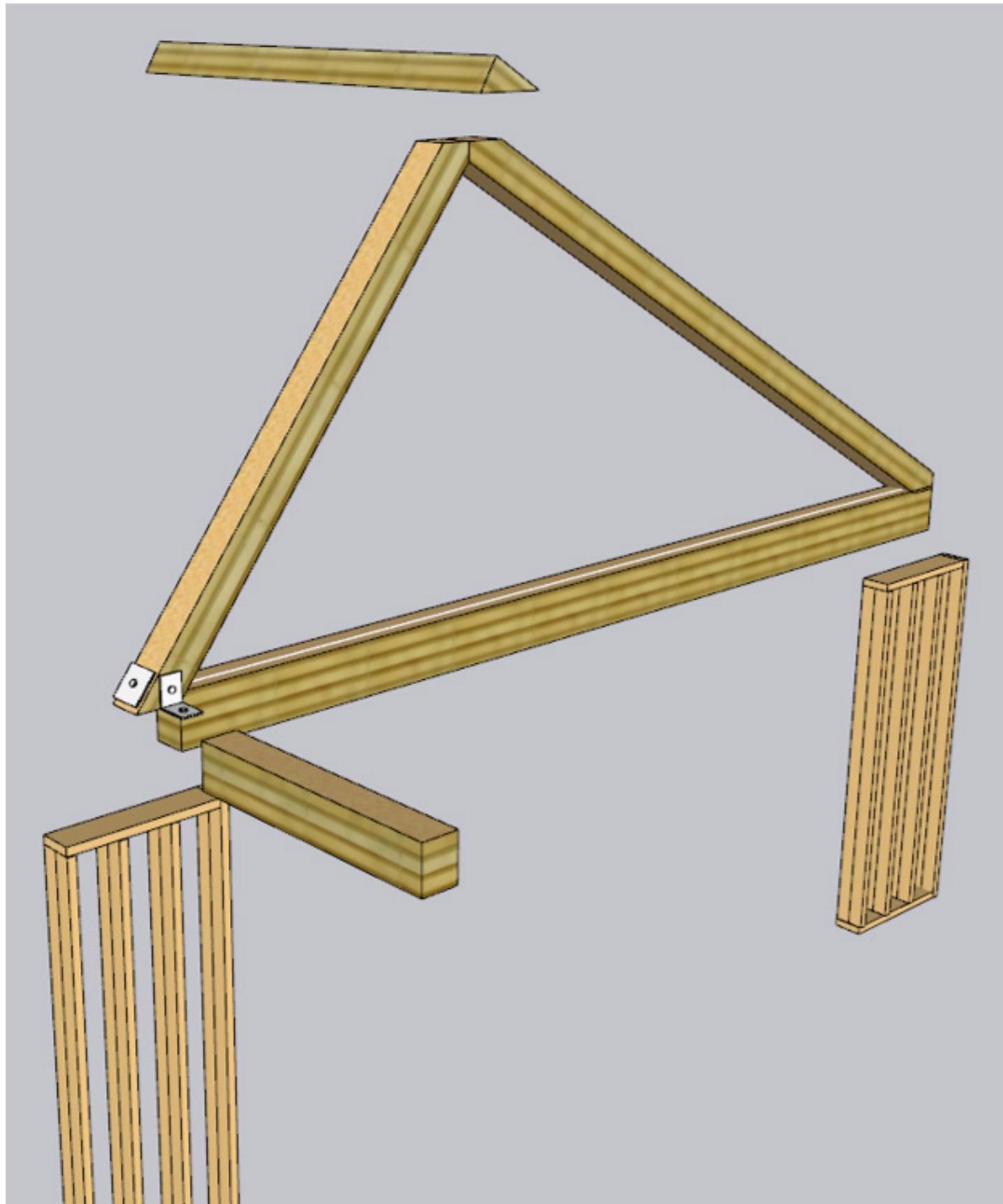
GL Timber columns and beams.

Concrete pad footing foundations.

Interlocking connections.



Air flows solar chimney



Design decisions energy neutrality

Adding solar chimeny that improve natural ventilation and act as thermal buffer

Insulation of the envelope with low-embodied energy

insulation material

Heat recovery to minimize energy losses due to ventilation

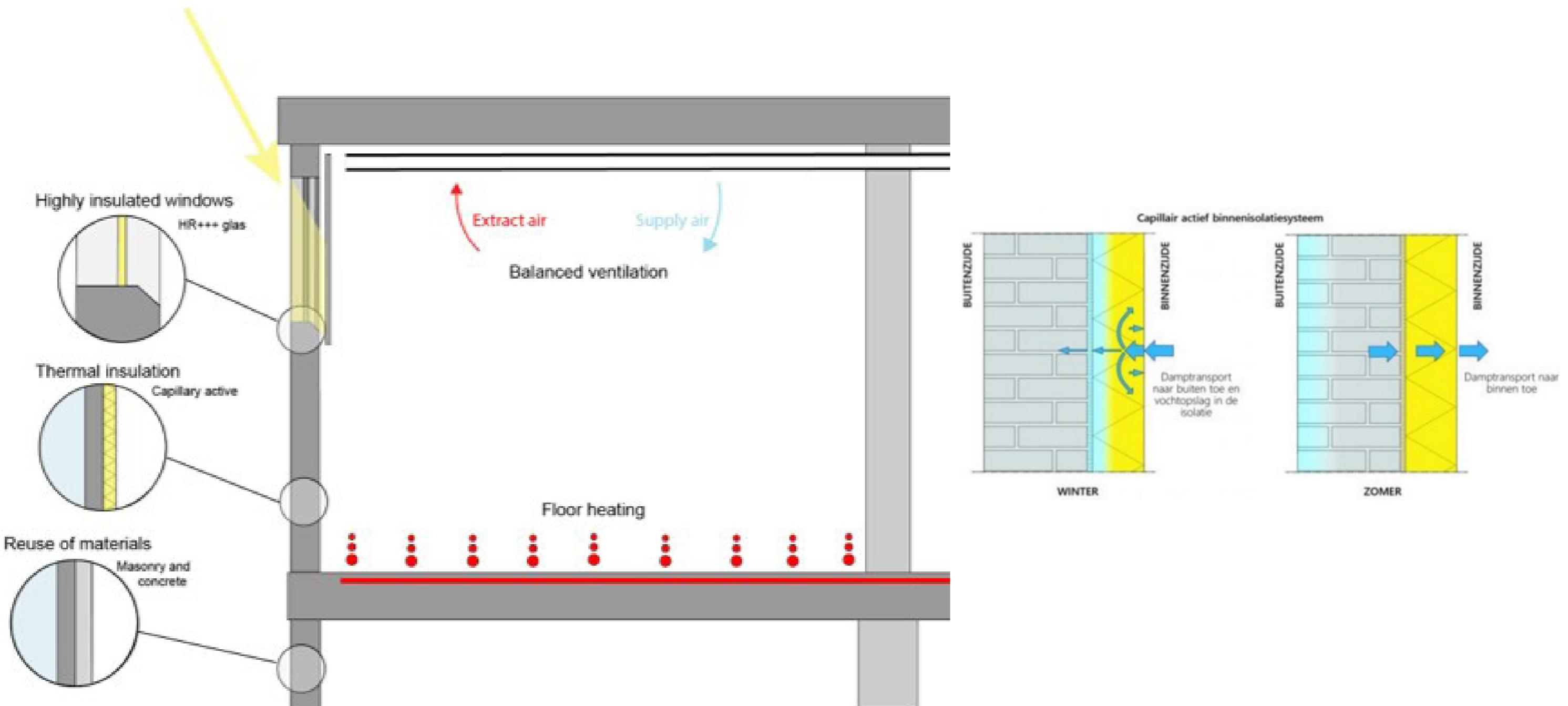
Light weight Timber structure.

Shading system

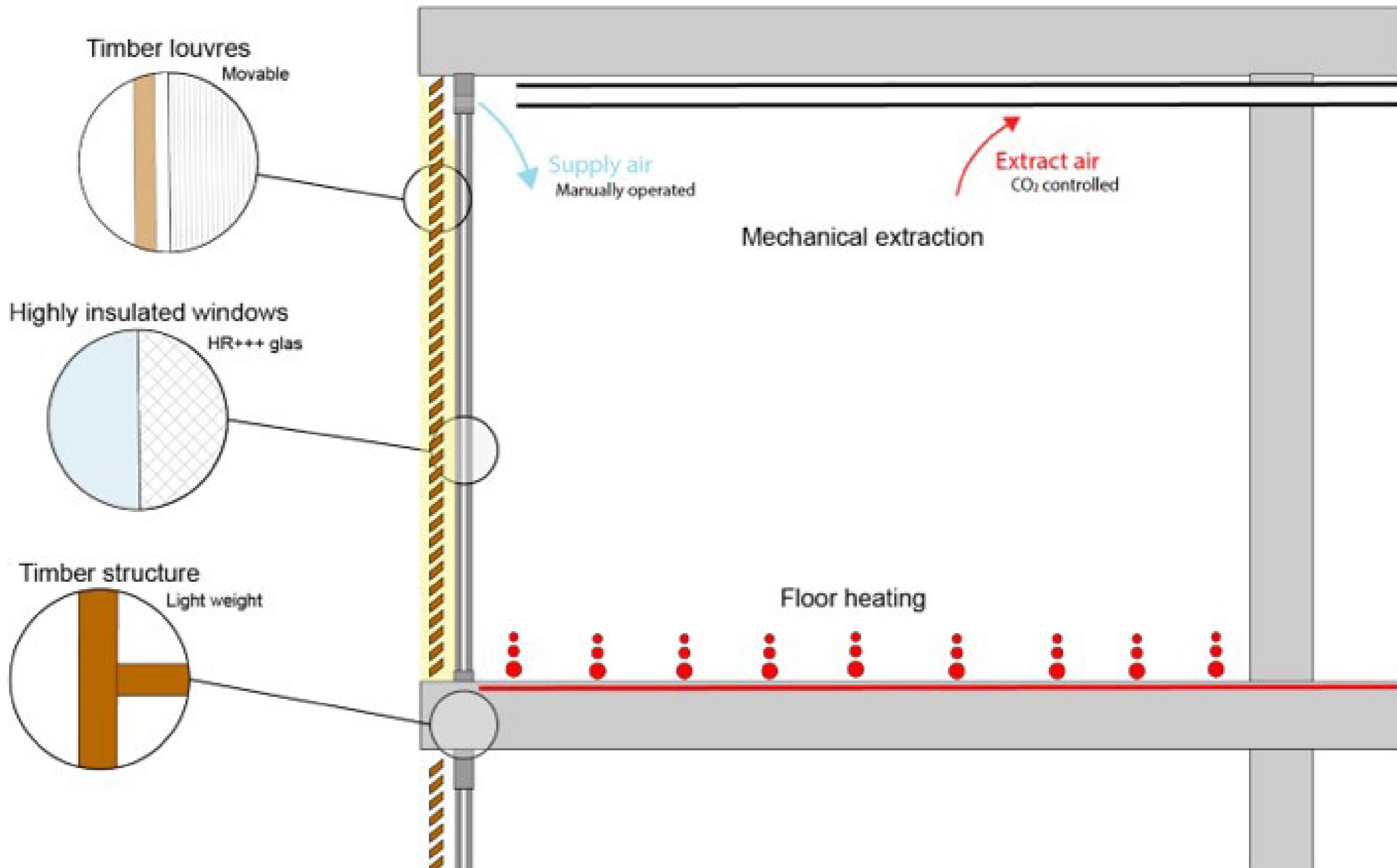
Using an ATES-system to store and provide thermal energy

Using PV and PVT panels.

Low EE insulation material and HVAC (monumental building)



Low EE insulation material and HVAC (new building)



Light-weight timber structure

Monument

- High operational energy
- Low embodied energy
- Reuse of masonry façade and concrete structure

Building 2

- Mixed building type
- High embodied energy due to steel and concrete structural elements
- Reuse of steel

Building 3

- Low operational energy
- High embodied energy
- Reuse of crushed brick as aggregate for necessary concrete structural elements

Building 3
Floor area: 5039,0 m²

OE: 46,2 kWh/m²/a
PE: 2123,9 GJ/a
Embodied Energy: 6,6 GJ/m²

Climate Neutral: 29,3 years

Building 2
Floor area: 2269 m²

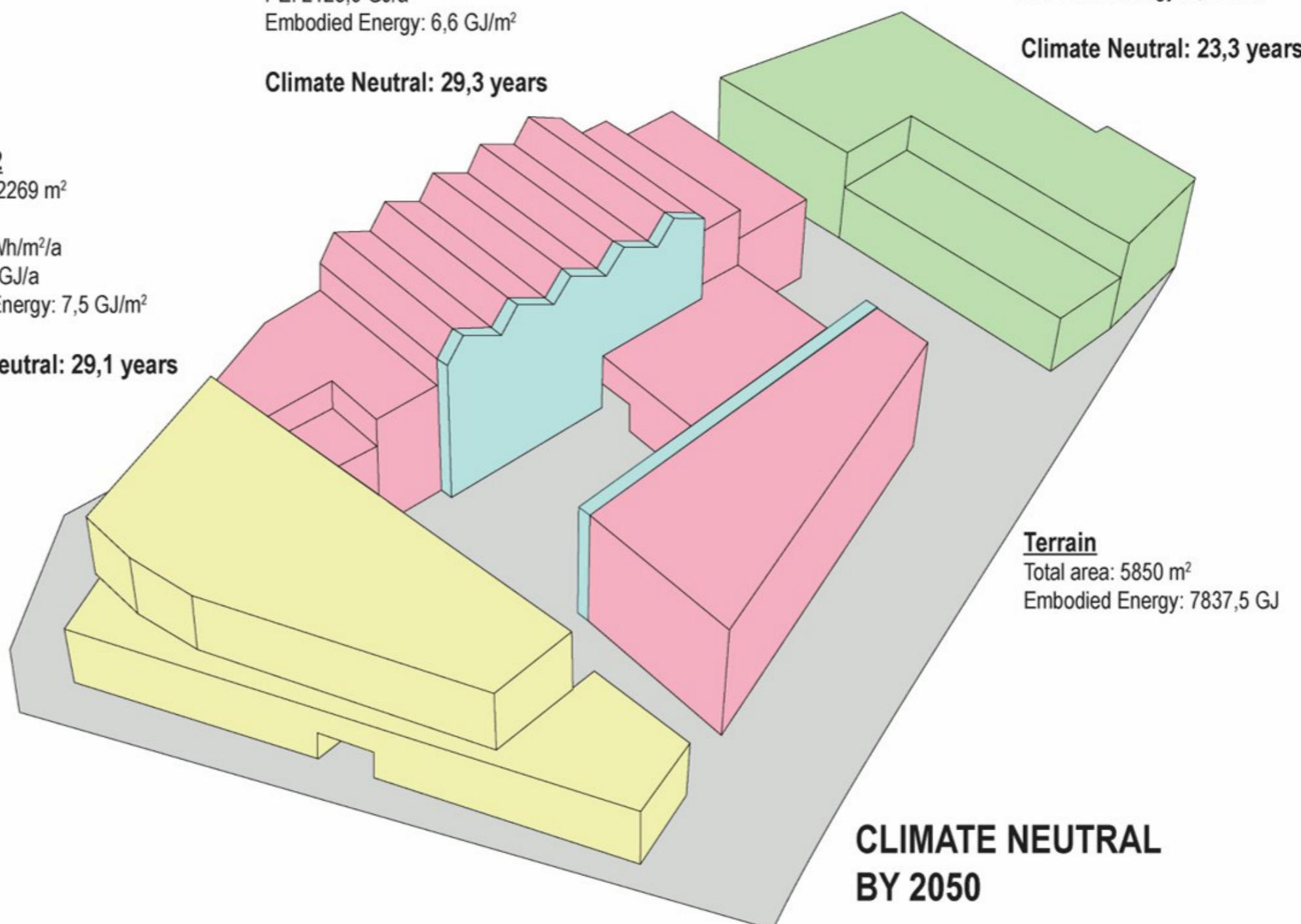
OE: 67,9 kWh/m²/a
PE: 1205,1 GJ/a
Embodied Energy: 7,5 GJ/m²

Climate Neutral: 29,1 years

Monument
Floor area: 2132,5 m²

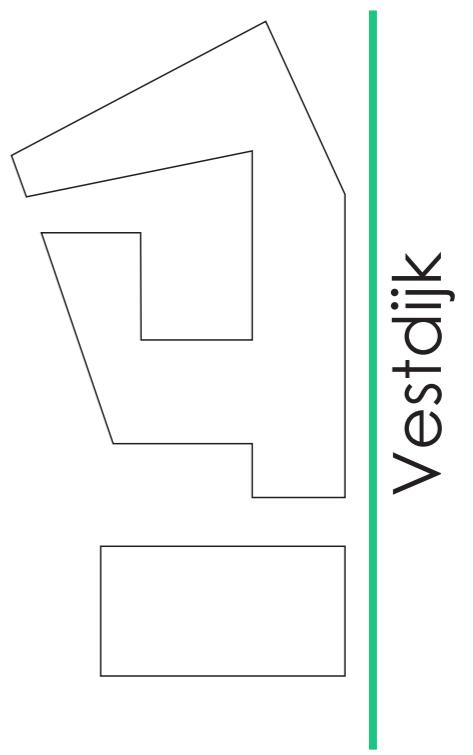
OE: 105,9 kWh/m²/a
PE: 1387,7 GJ/a
Embodied Energy: 5,5 GJ/m²

Climate Neutral: 23,3 years

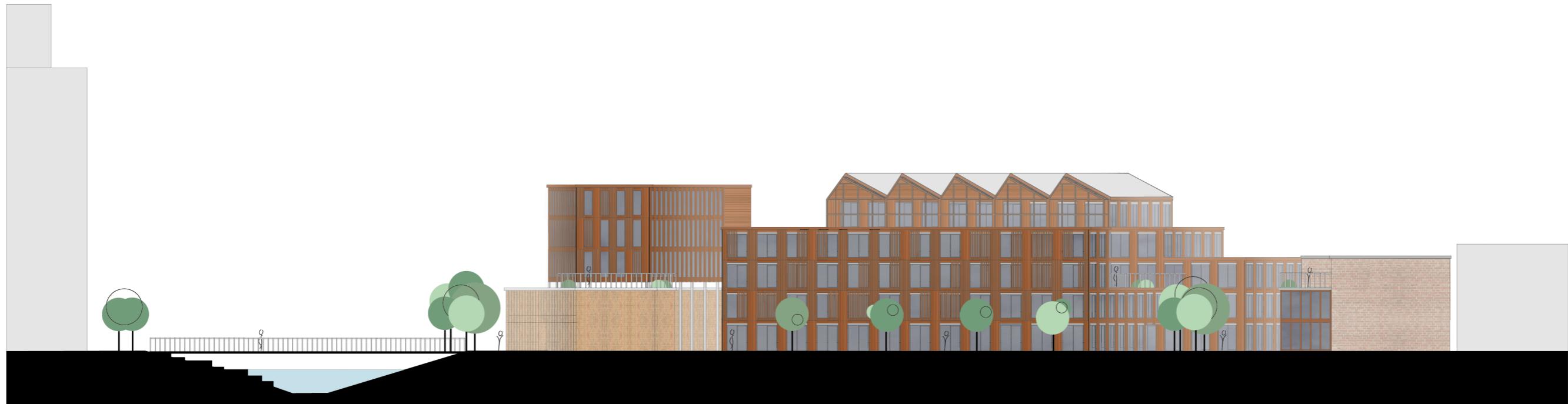




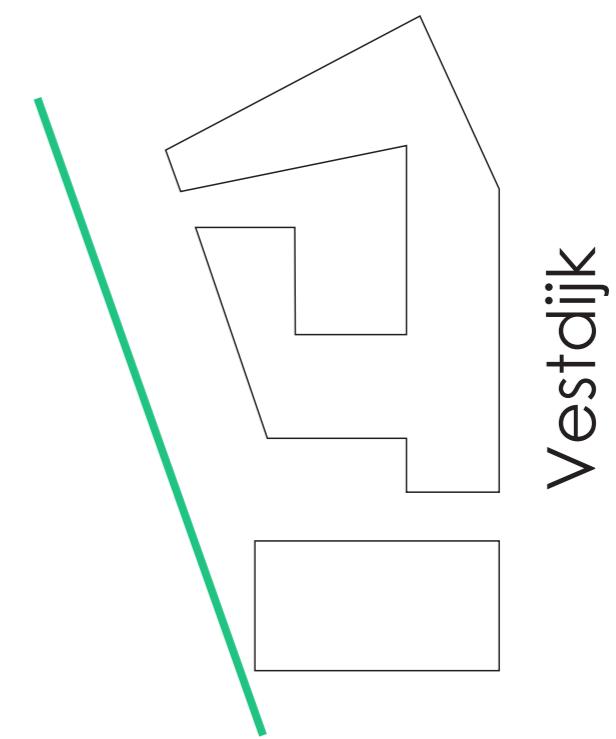
East elevation



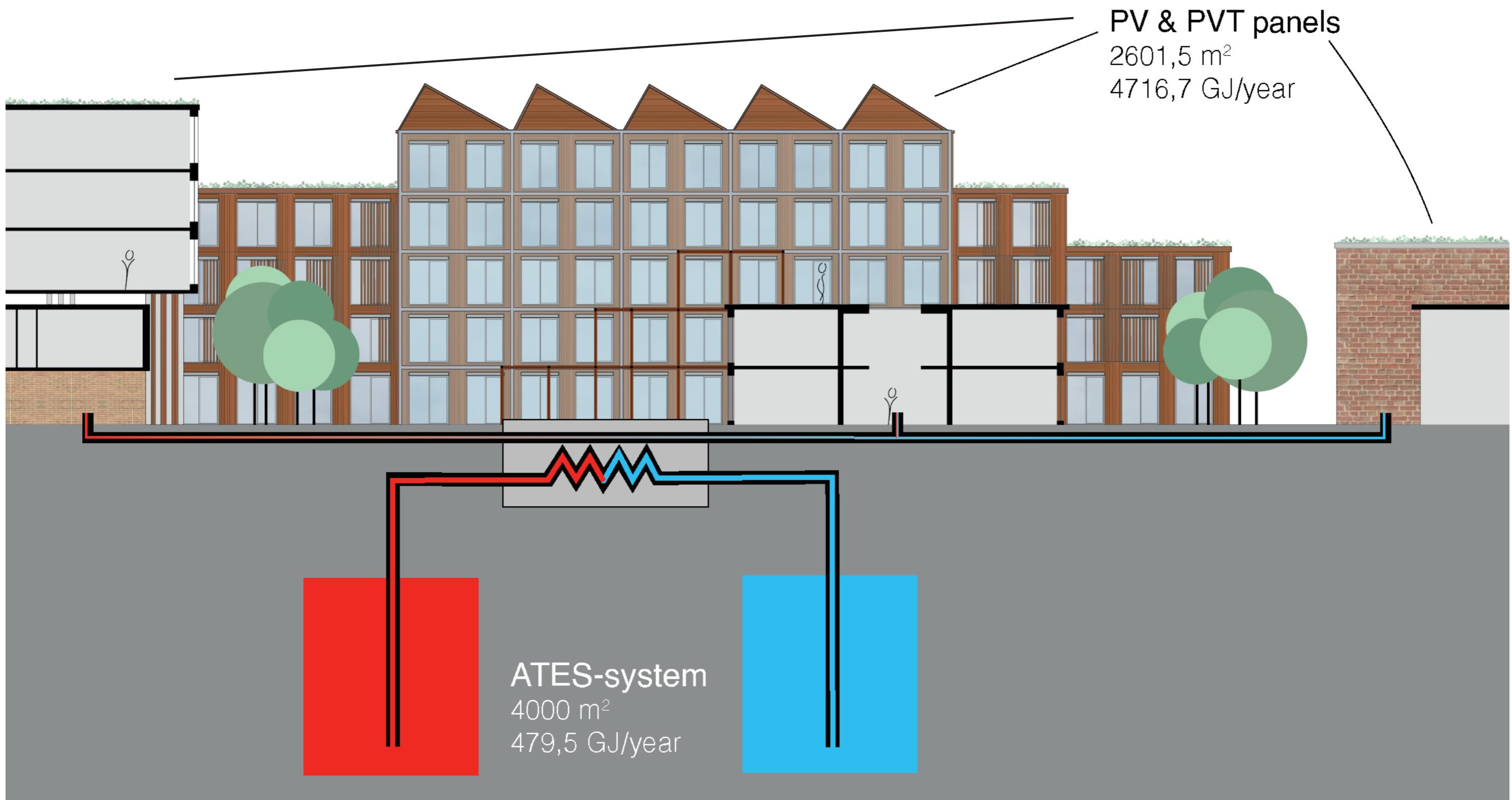
Shading system

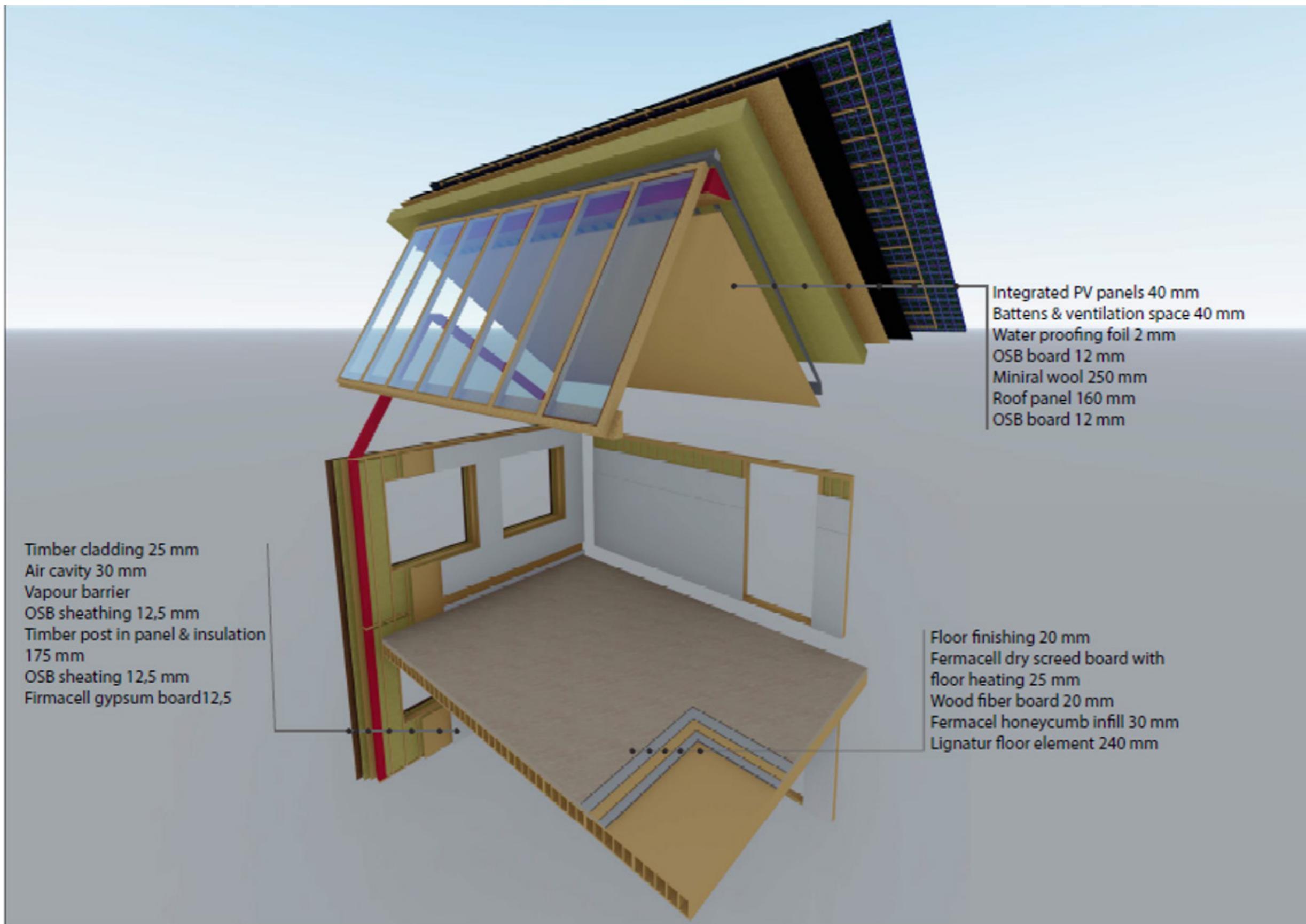


West elevation

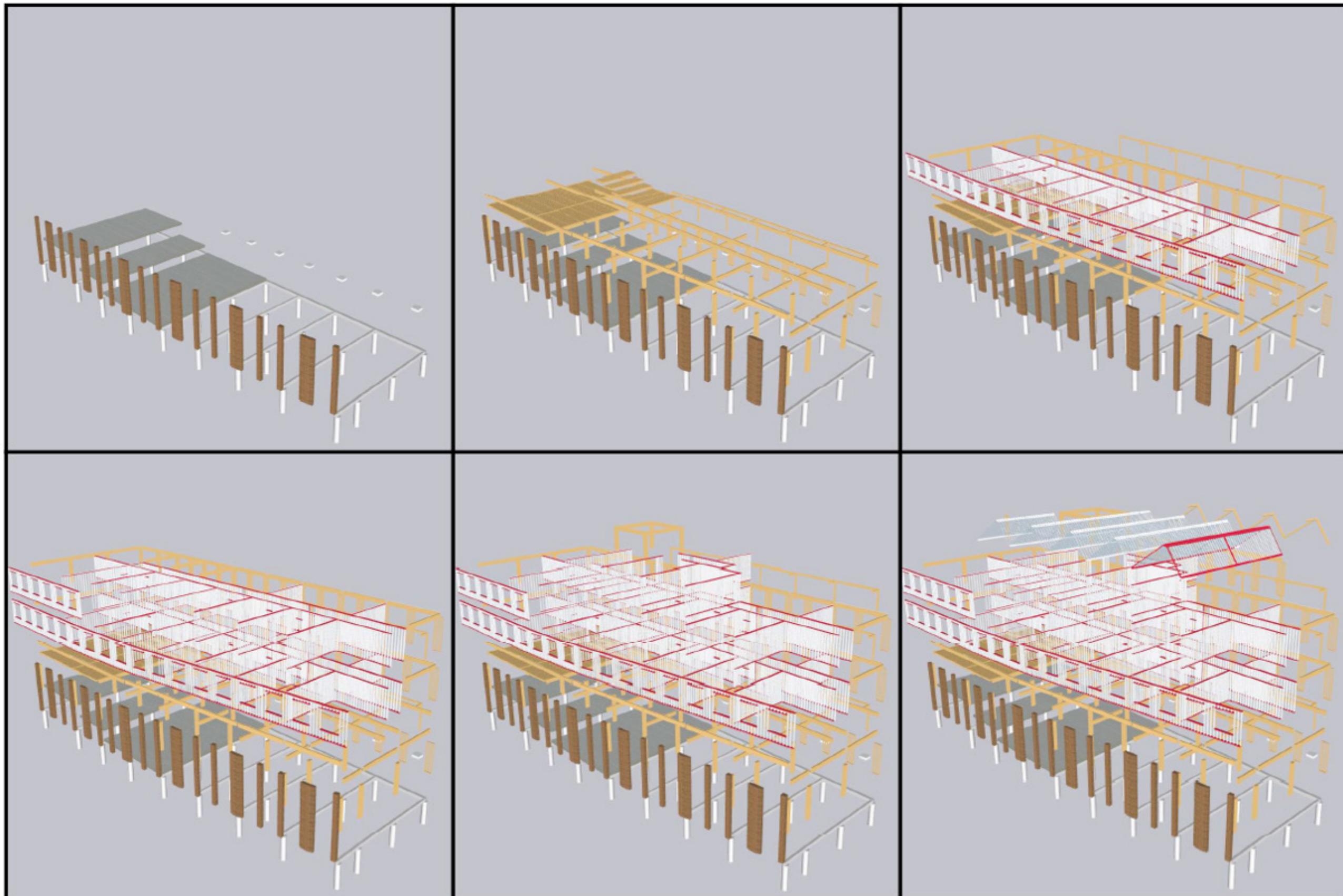


ATES, PV and PVT systems

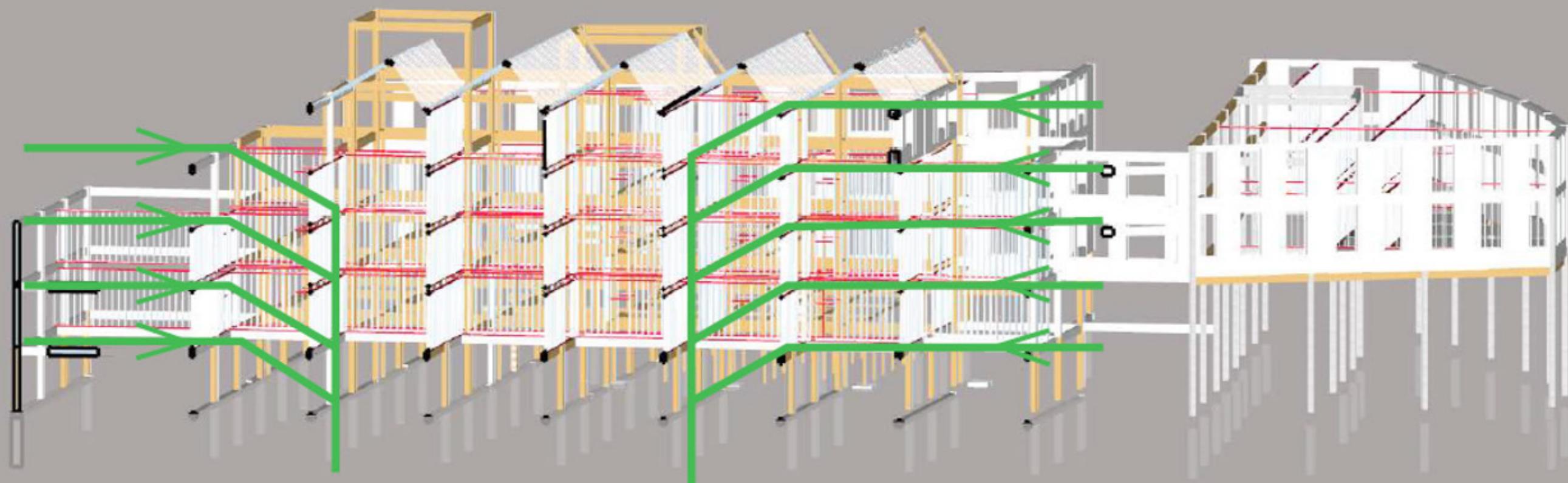




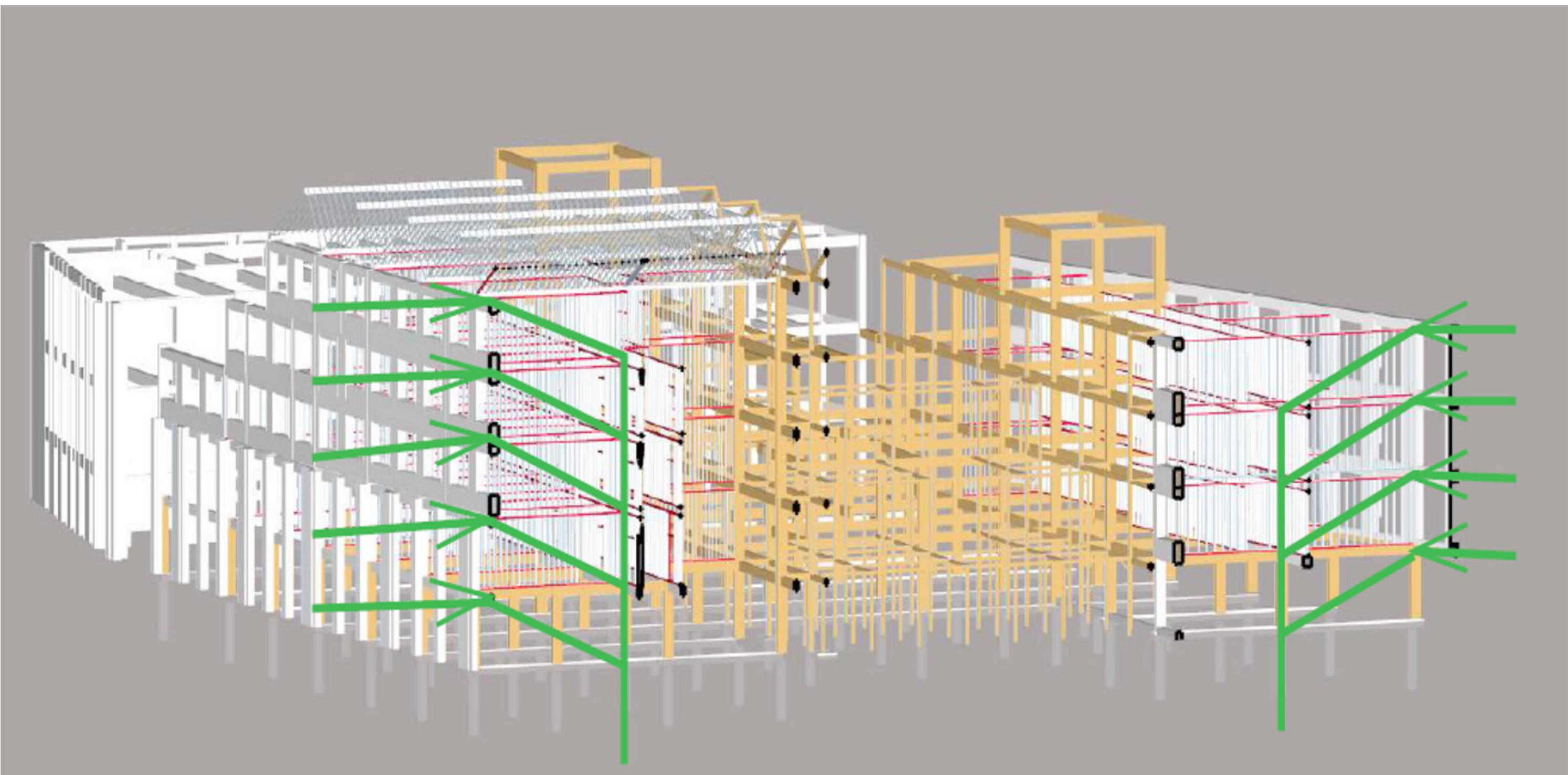
Construction steps

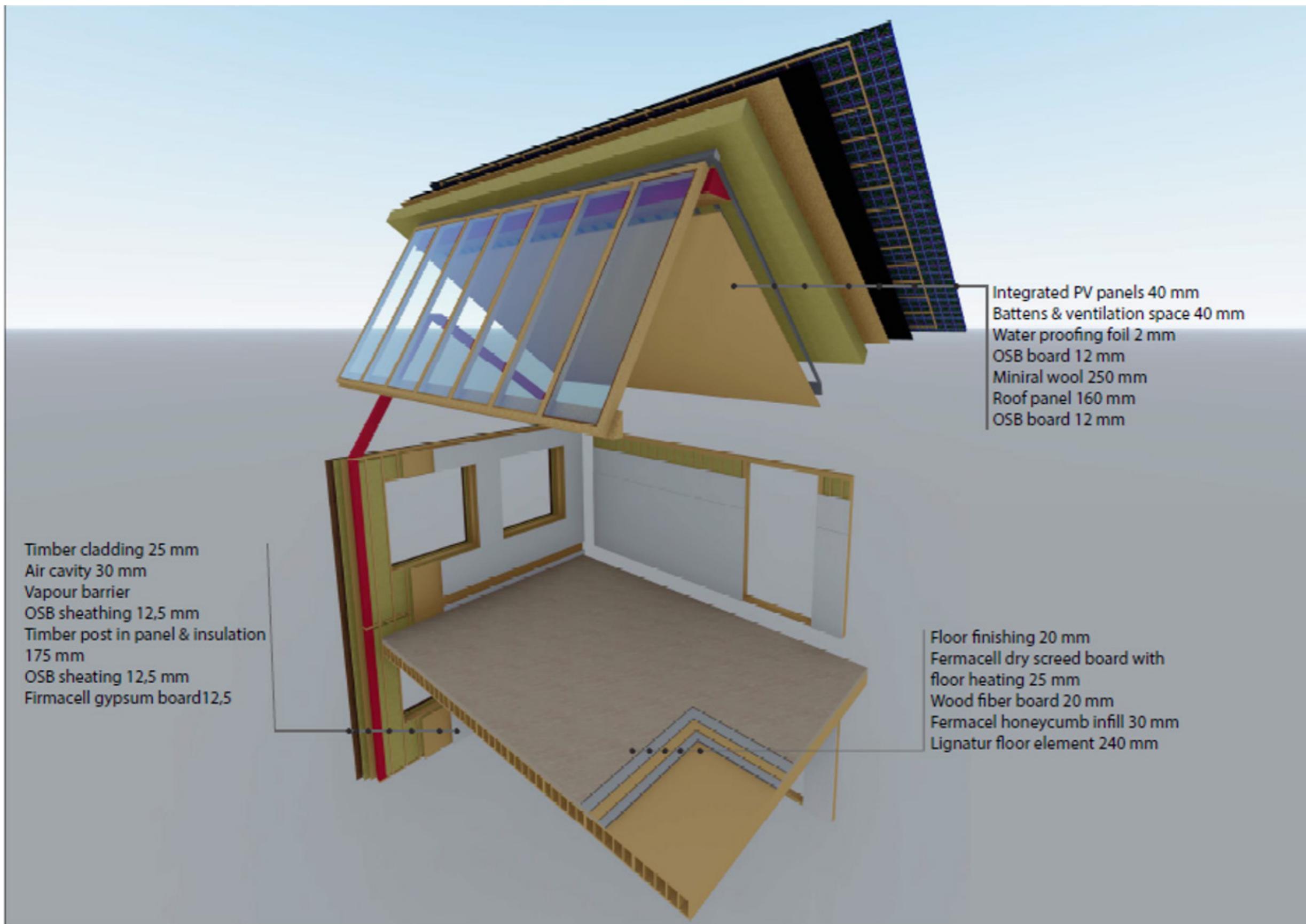


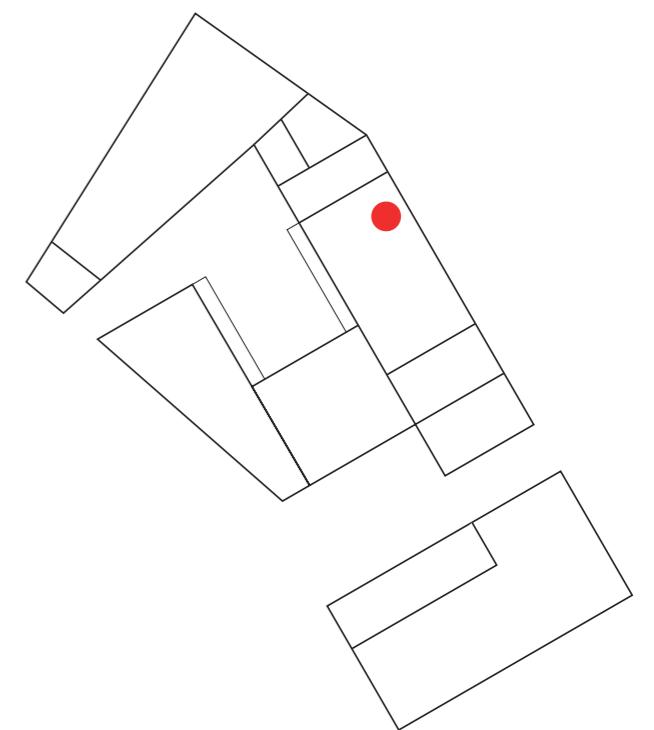
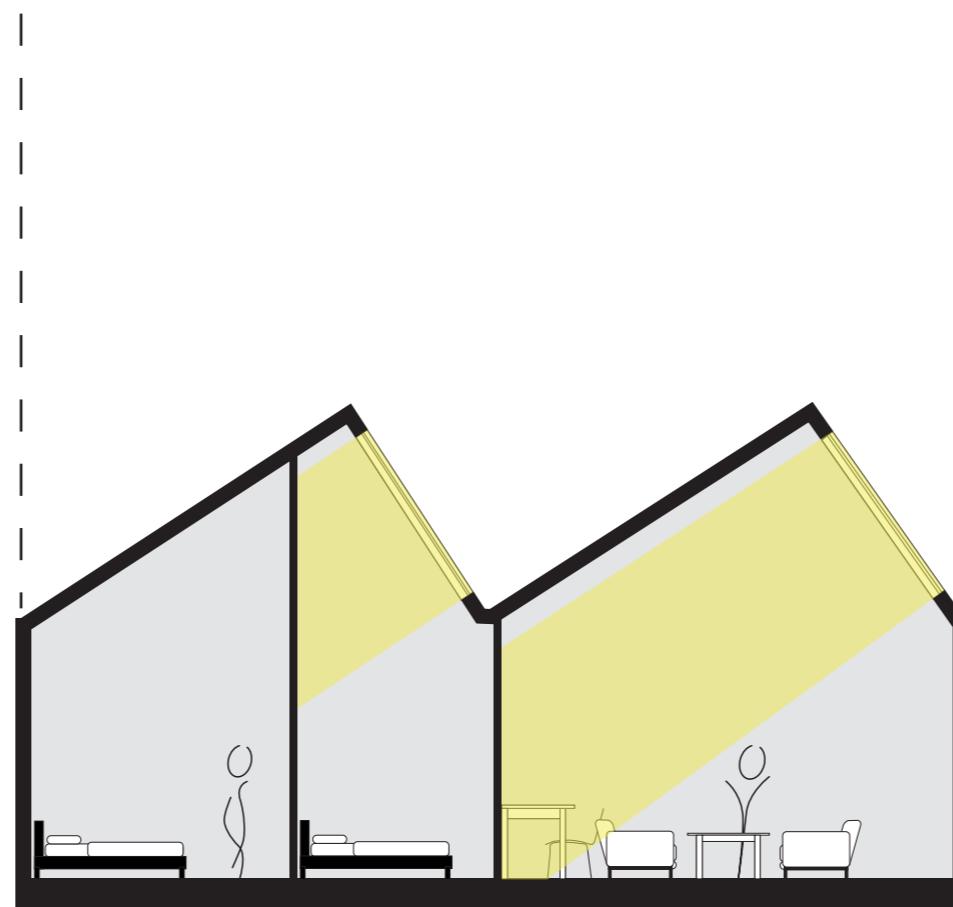
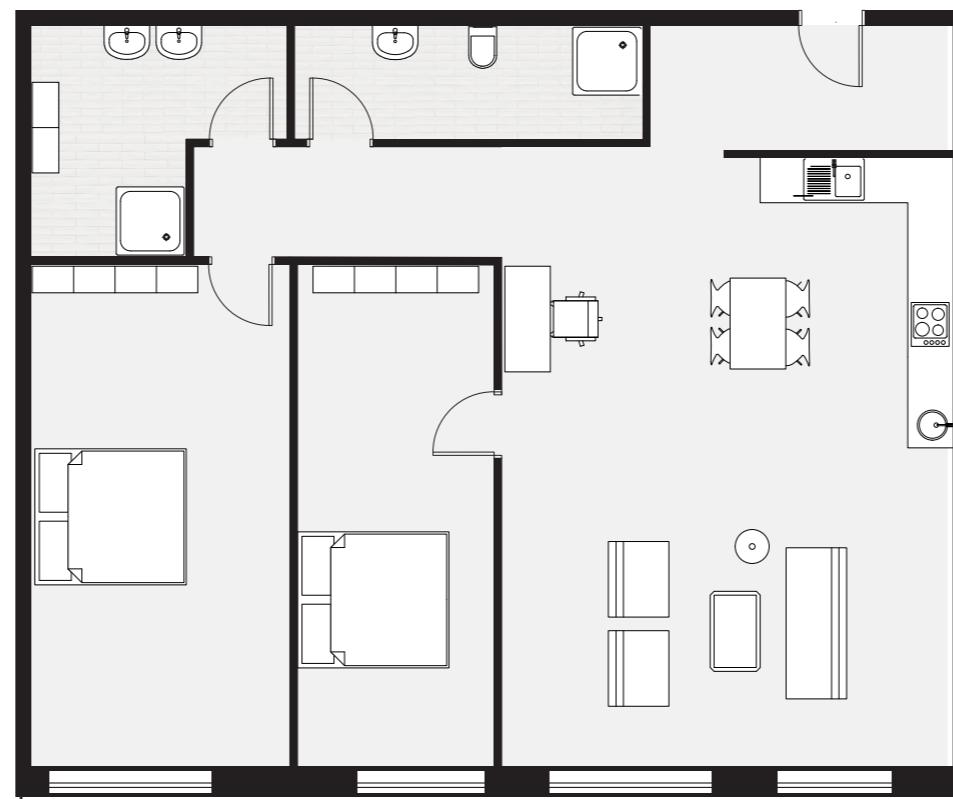
Stability scheme



Stability scheme



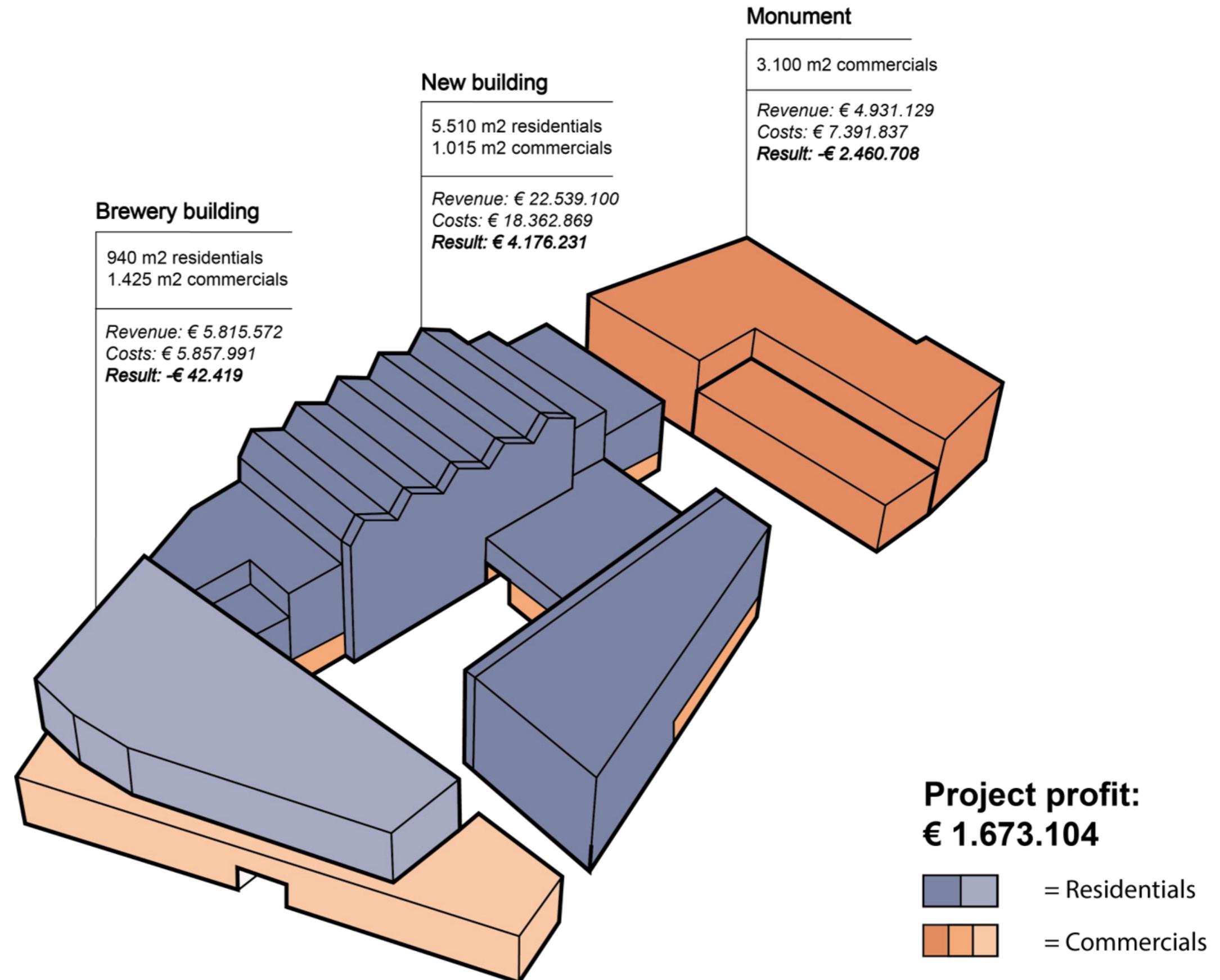


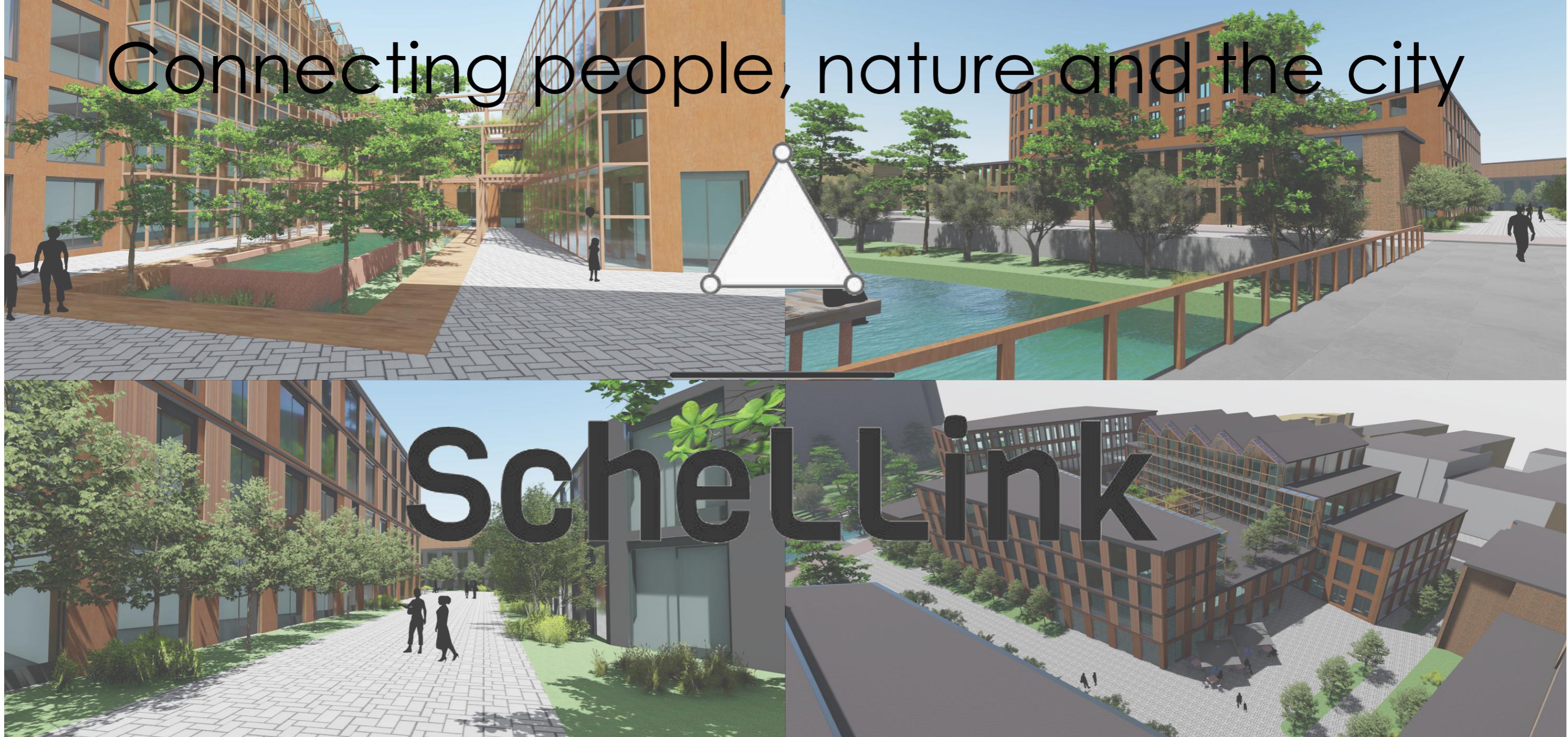


Project overview

Stakeholders

Future residents
Future/current
commercial renters
Neighbourhood
Municipality
Wooninc
Investors/developer





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