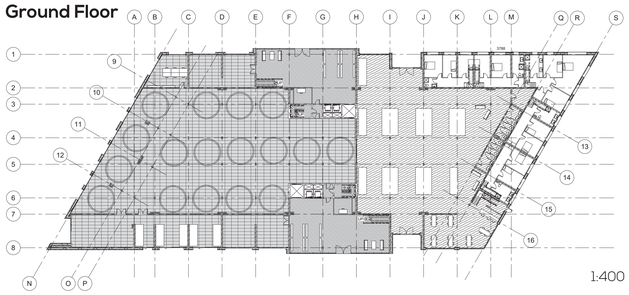
Floorplans

Ground Floor



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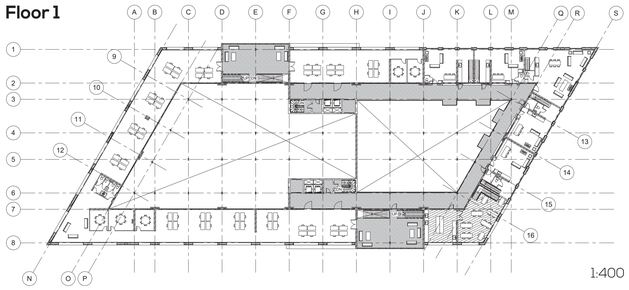
Floor 1



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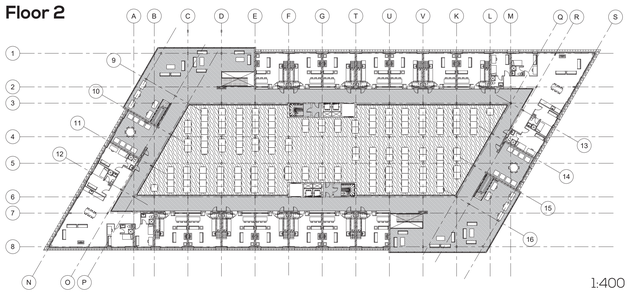
Floor 2



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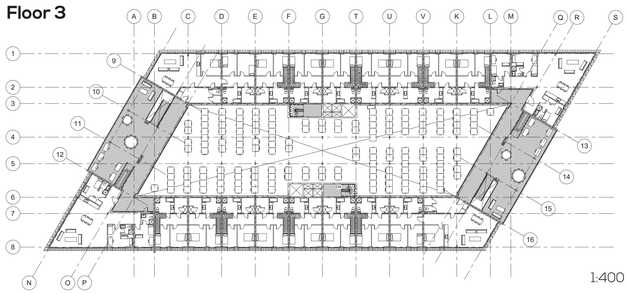

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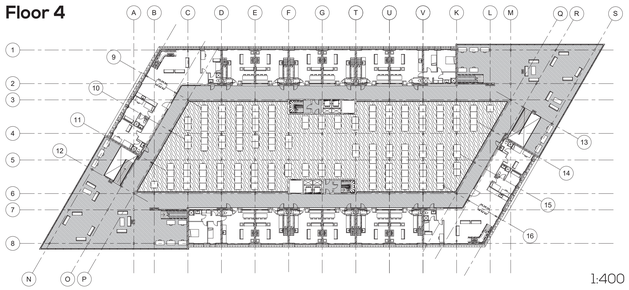

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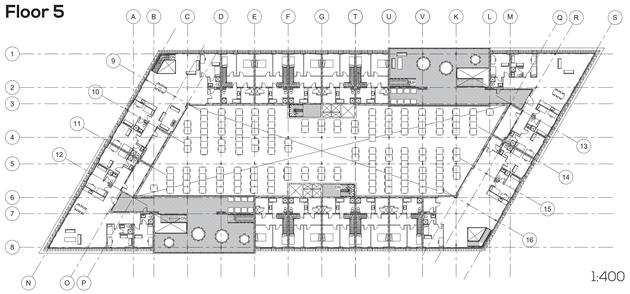

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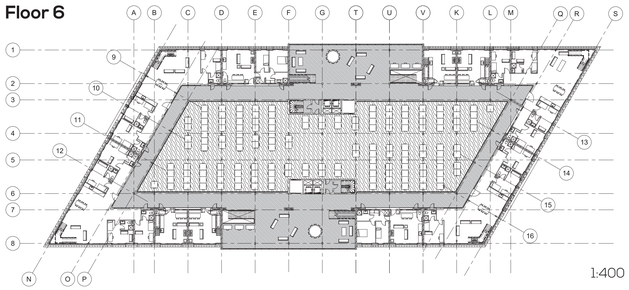
Floor 6



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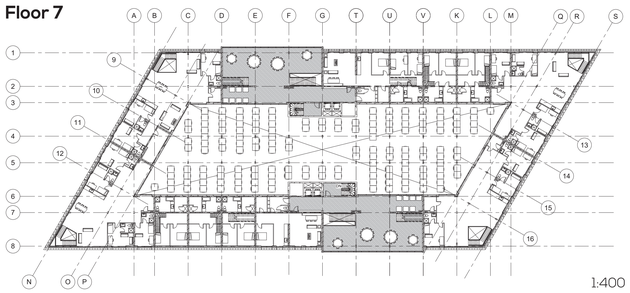
Floor 7



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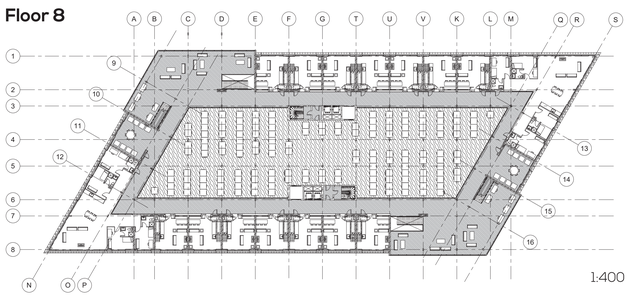
Floor 8



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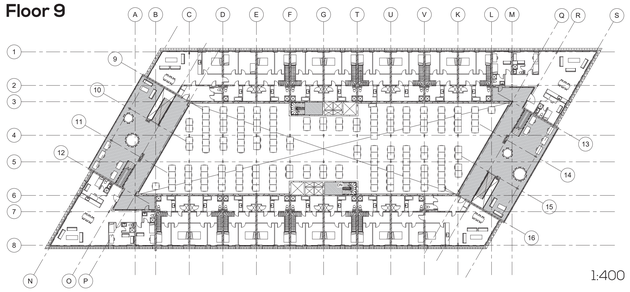
Floor 9



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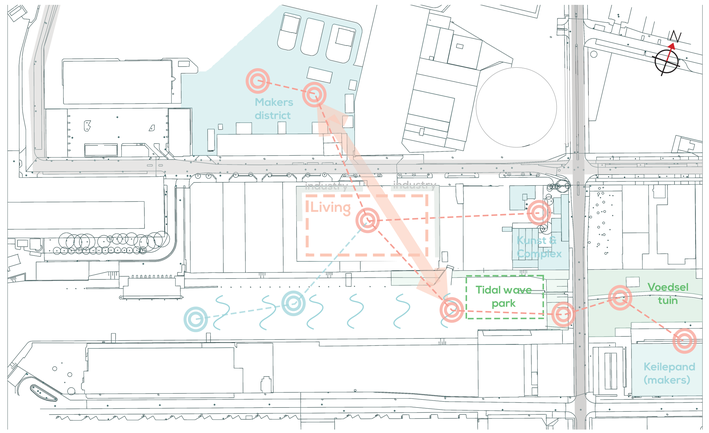
Opportunities & Restrains



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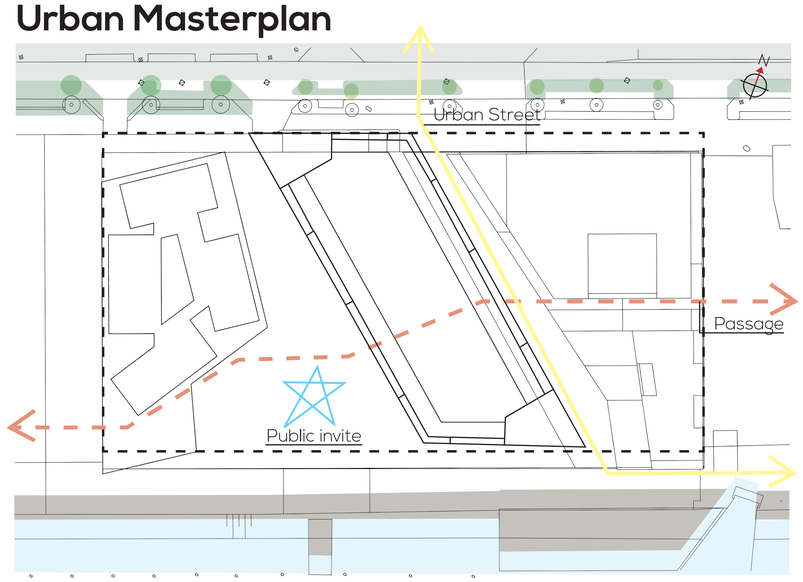
Urban Masplan



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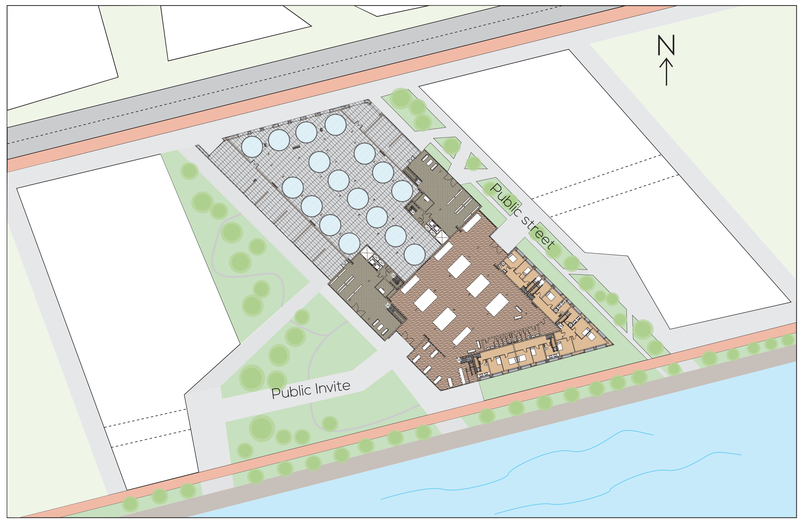
Ground Floor Connection



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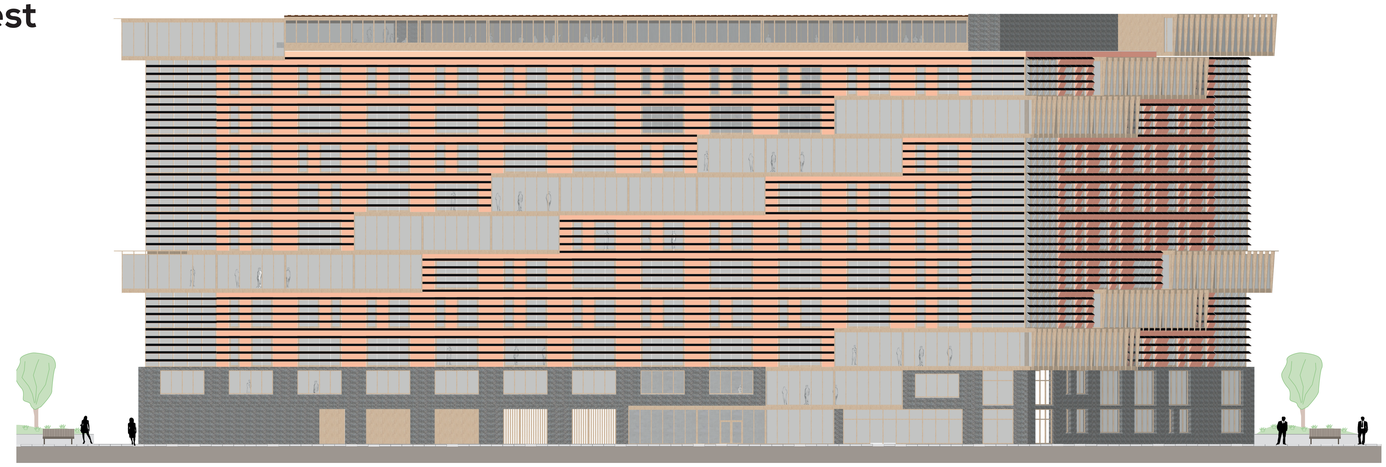
Elevations

West



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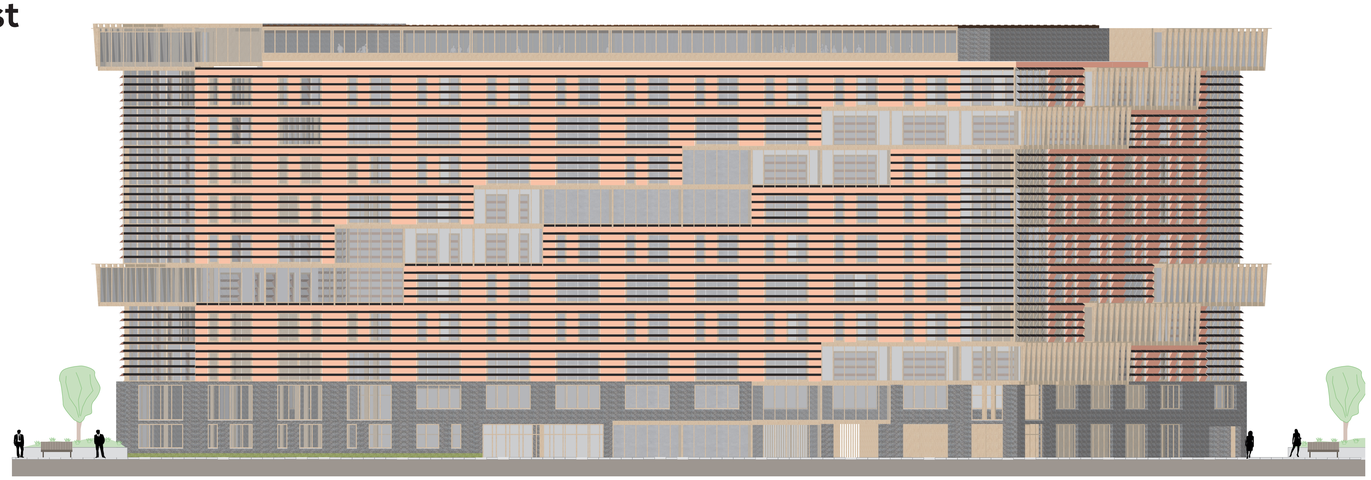
East



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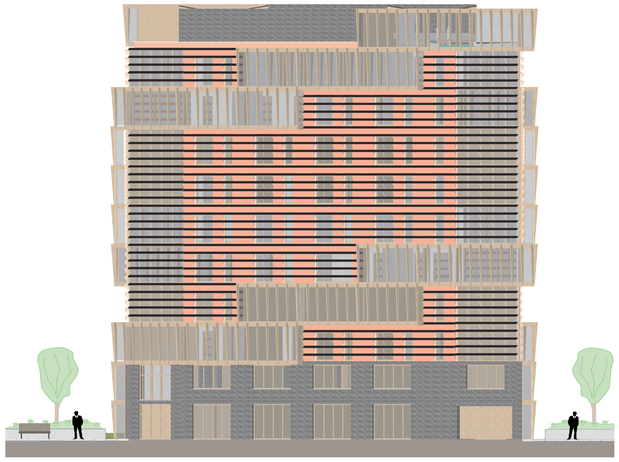
South

1:200

North



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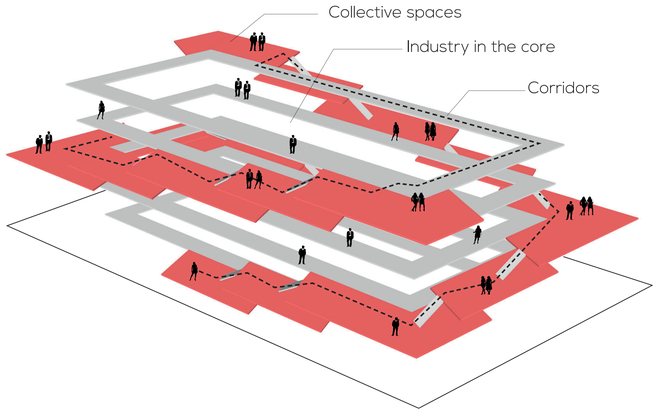
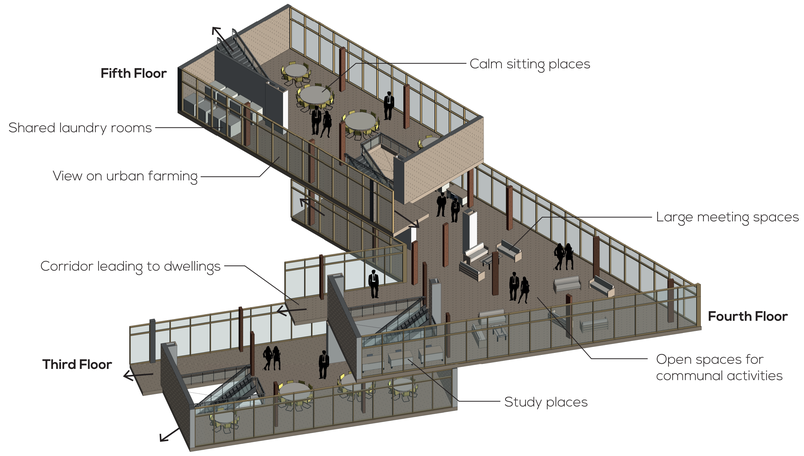
Circulation design





Section A

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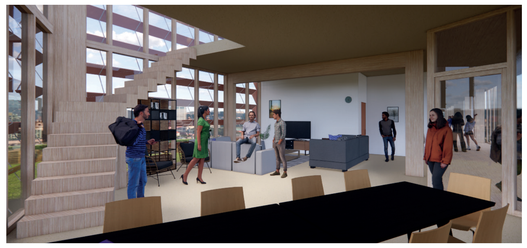
Food market

Collective spaces

Corridors-dwelling connection

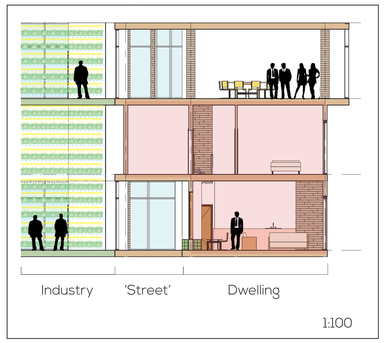
Dwellings Design

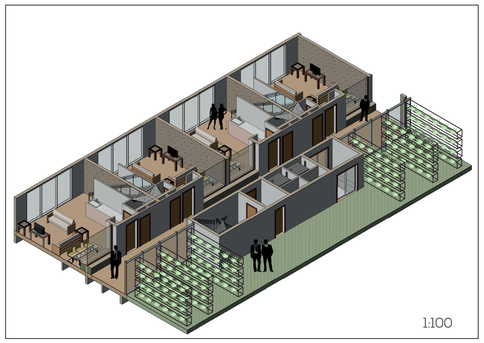


Outside

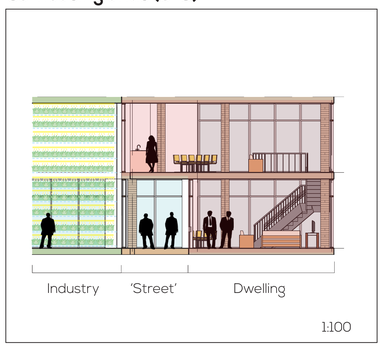
Dwelling Types

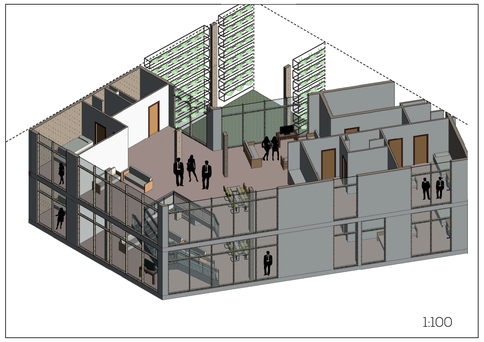
Solo-dweller apartments (1-2)



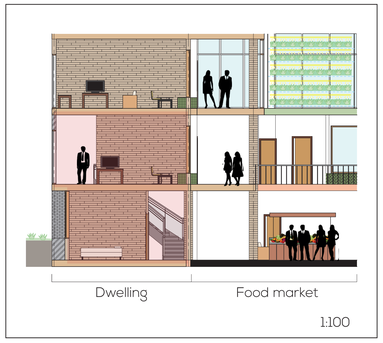


Co-housing untis (6-8)

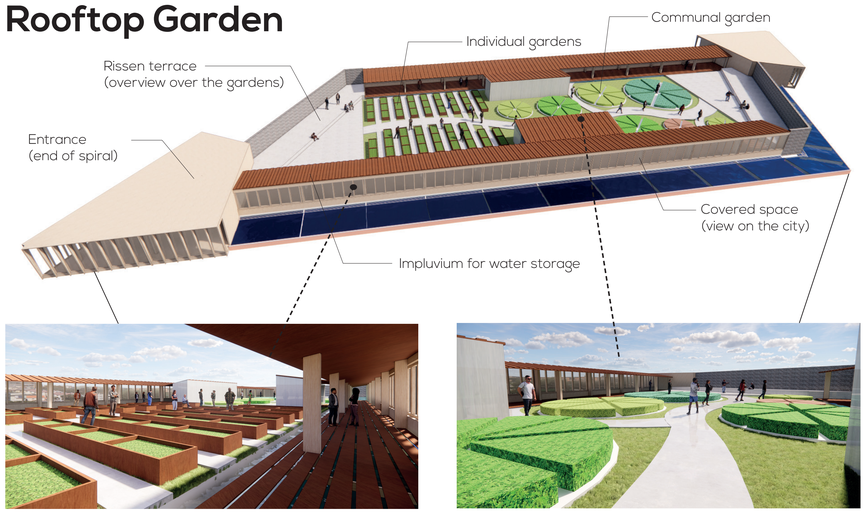




Family houses (3-6)



Rooftop Garden



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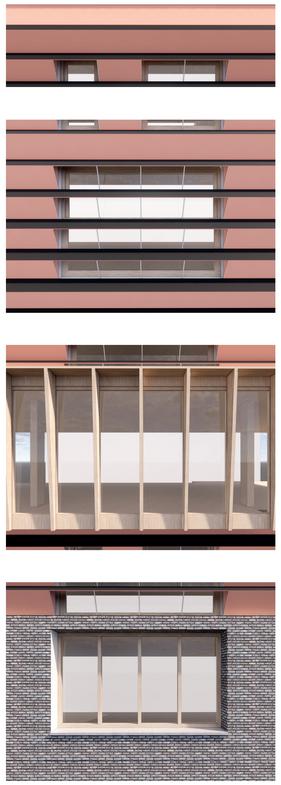
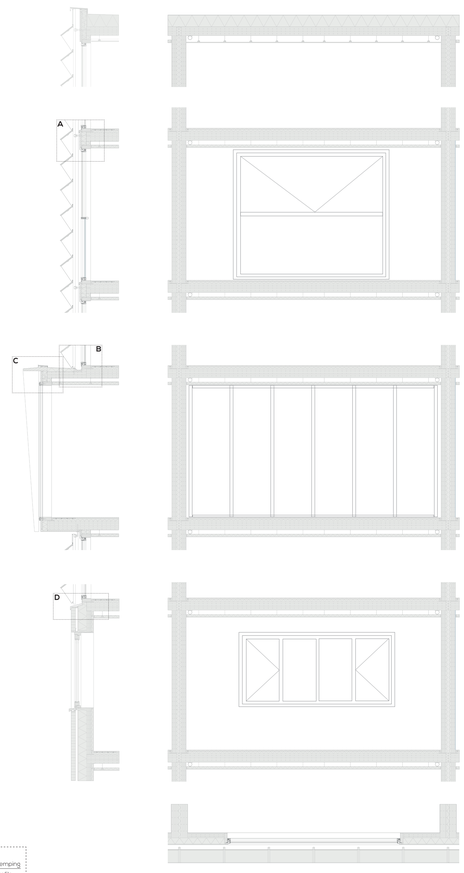
Facade Fragment





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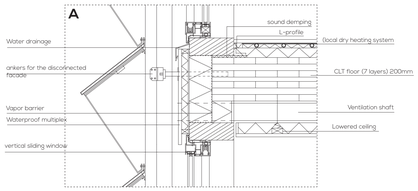
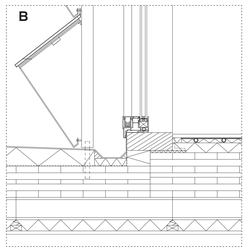
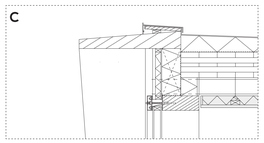
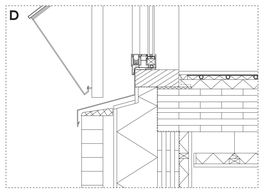
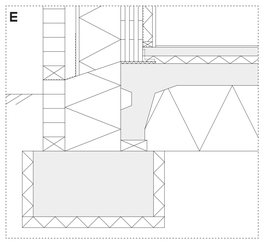
1:10 Details







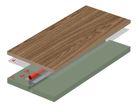




Used systems

Stabalux: (collective spaces)
- Self-supporting curtain wall
- Maximum thermal insulation
- Dismountable system
- Suitable for wooden suporting structure

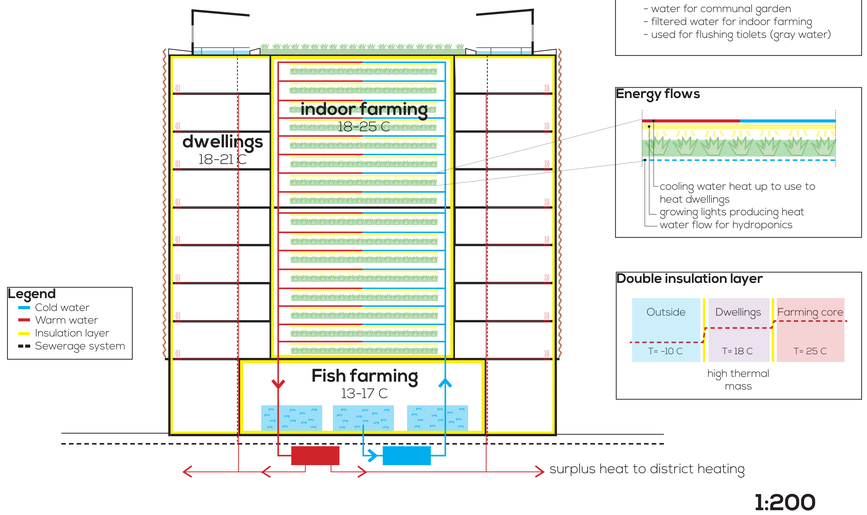
Metaglas: (dwellings)
- thin window frames
- large openable area to create terrace environment



Staenis: (dry floor heating system)
- fast reaction time
- made from sustainable materials
- very light system
- high efficiency

Zigzagsolar: (solar facade)
- optimal energy production
- reducing heat stess on the facade
- creating natural sun protection

Climate section (industry)



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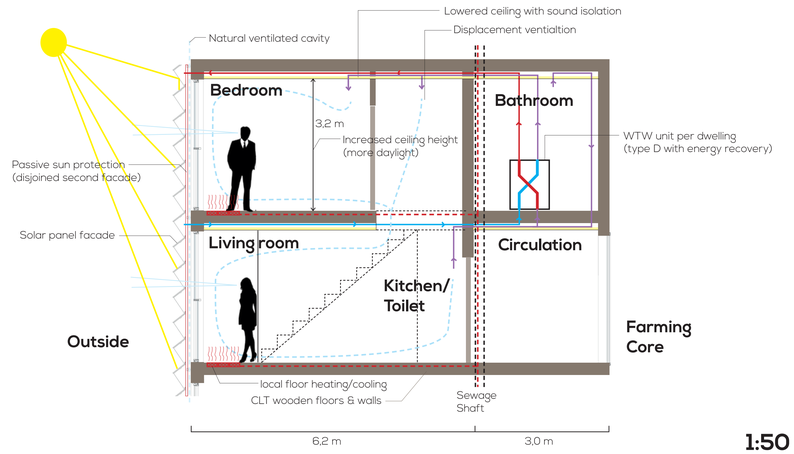
Climate section (dwelling)



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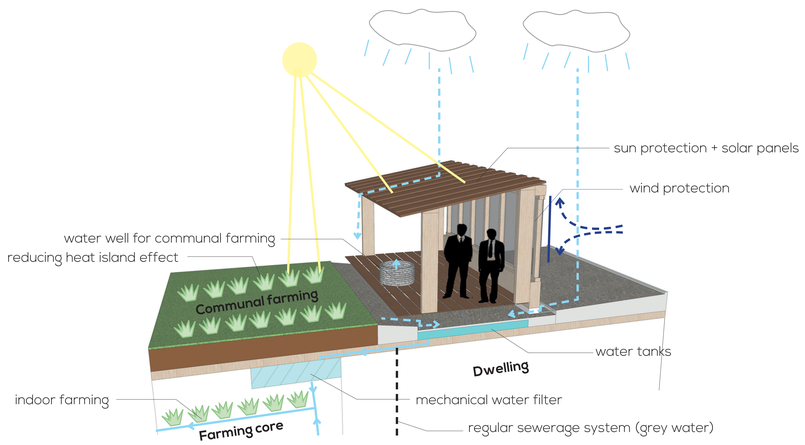
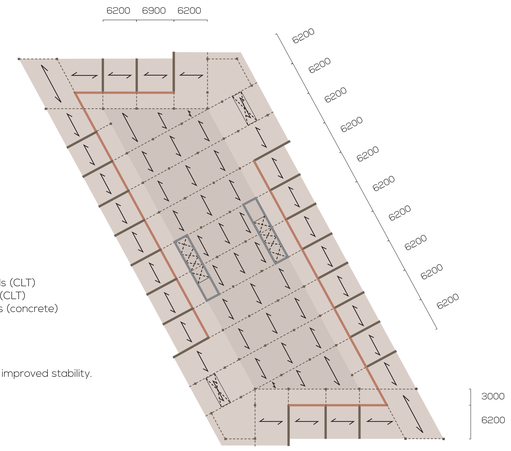
Rooftop climate concept



Structure



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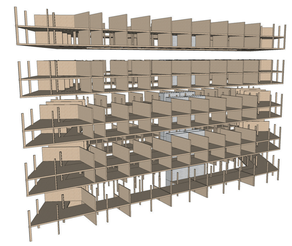
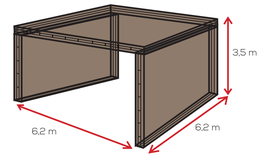
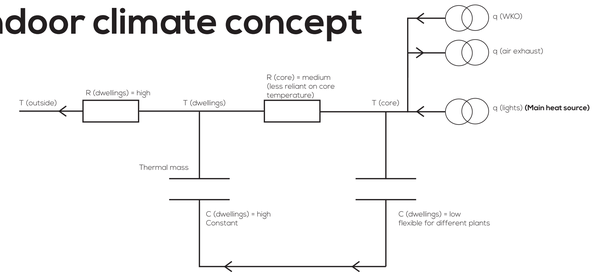
Axo





Indoor climate concept



Solar benefits

dwellig surface:
6,2*3,5*2 = 43,4 m²
solar panel surface:
0,35*36*2 = 25,2 m²

energy yield, East or West orientation:
125 kWh/m²
125*25,2 = 3150 kWh per (standard) dwelling
(rendement circa 90%)
3150*0,90 = 2850 kWh

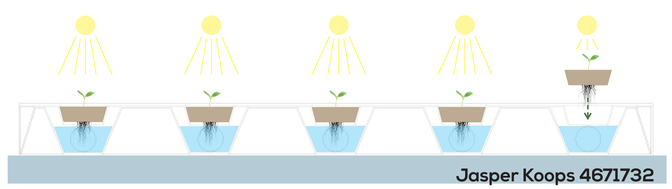
energy usage
1-2 person household = 1830 - 2850 kWh
total of the building:
2850*10*4*2*1,5 = 342000 kWh

Indoor climate

Heat/cold loss (winter)
Heating requirement per dwelling
Q = A * U * (delta)T
Qwinter = (7*6) * 1/5 * 30) = 252 W
Qcore = (7*6) * 1/3 * 5 = 70 W
Qtotal = 252 - 70 = 182 W

Heat/cold loss (summer)
Cooling requirement per dwelling
Q = A * U * (delta)T
Qzomer = (7*6) * 1/5 * 20) = 168 W
Qcore = (7*6) * 1/3 * 5 = 70 W
Qtotal = 168 + 70 = 238 W

Hydroponic farming



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