





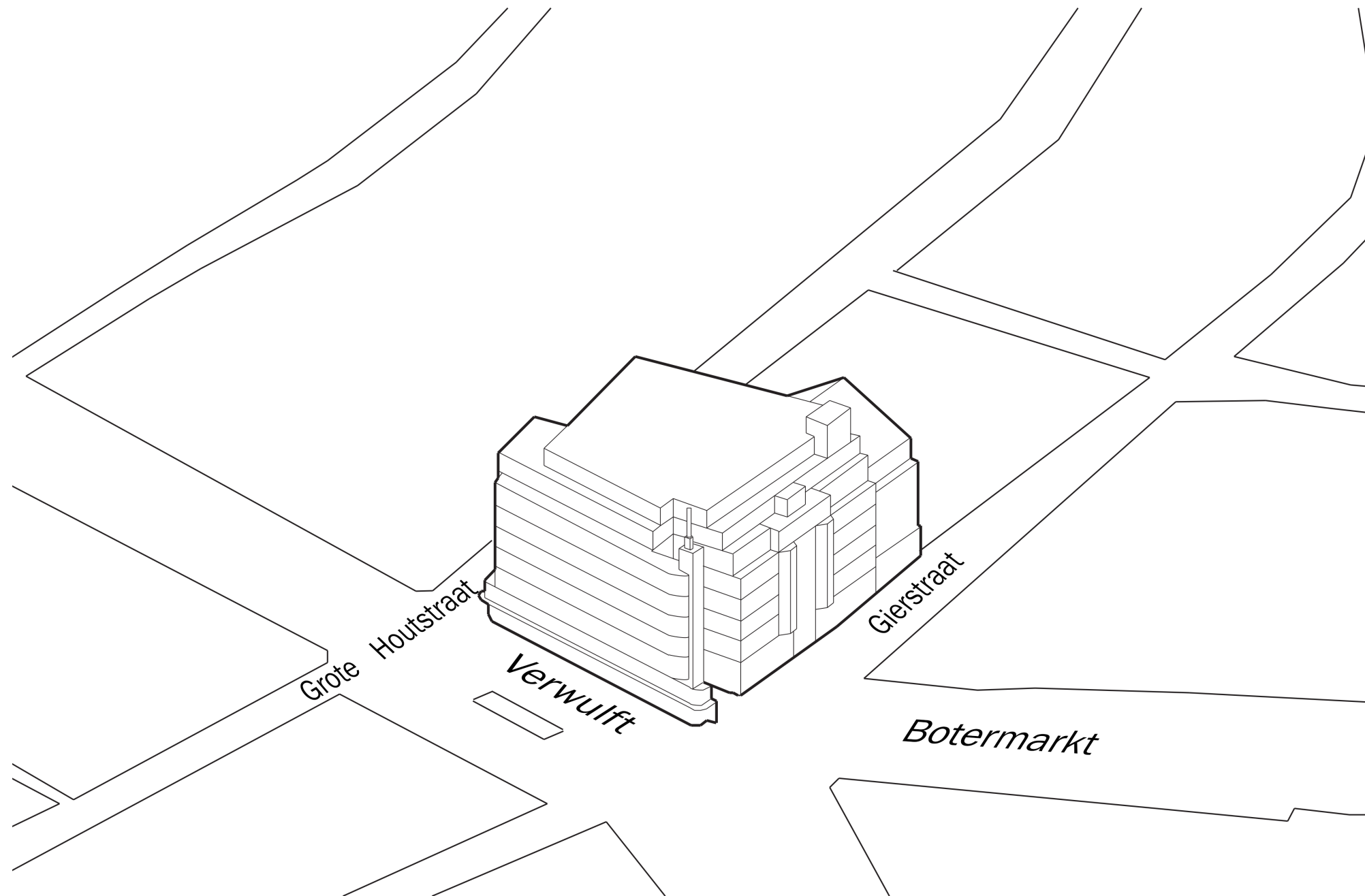
- I Research
- II Programme
- III Climate

Personal connection



© View roof terrace V&D Haarlem, 2015 (Haarlemnieuws)

V&D building



V&D building - Grote Houtstraat



V&D building - Verwulft



V&D building - Gierstraat



Public space



© V&D Haarlem terrace, 1991 (Beeldbank)

Sustainable development goals

*“Universal access to safe, inclusive and accessible, **green and public spaces**,
in particular for women and children, older persons and persons with disabilities”*

(United Nations, 2015)

Historic Urban Landscape















© (PARK)ing day Minneapolis, 2008 (SV Johnson)

Research question

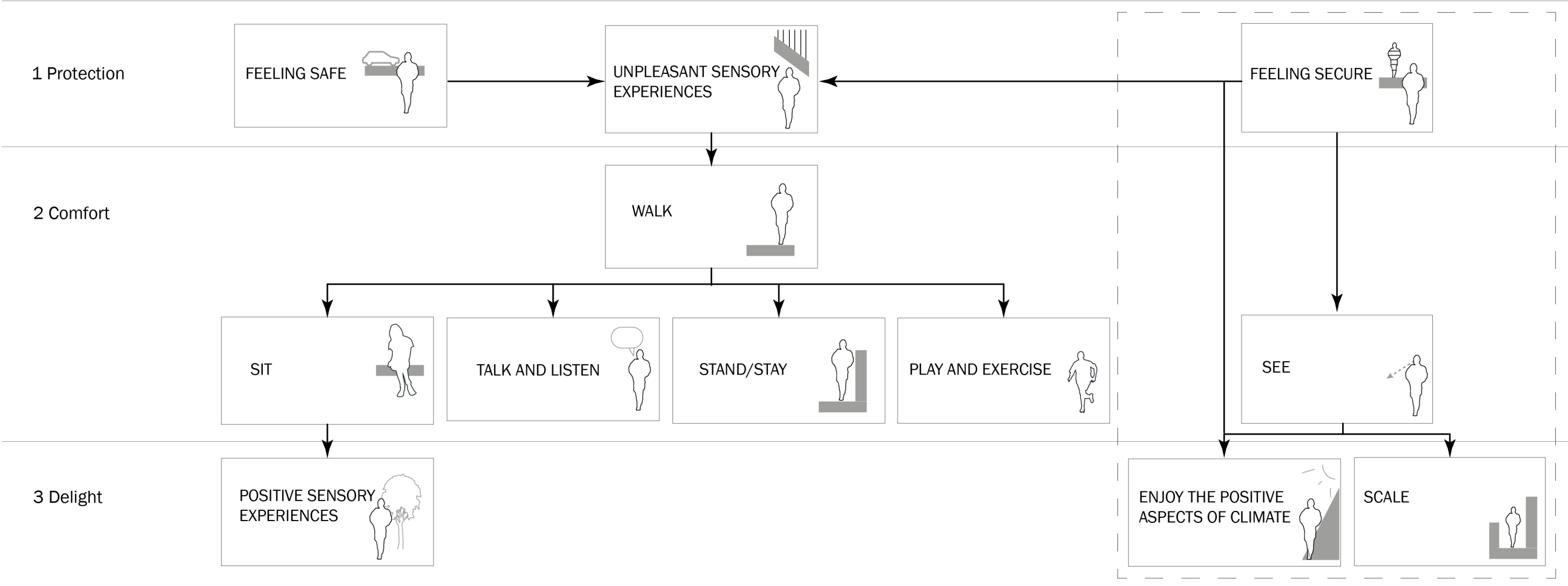
*How could V&D Haarlem be reactivated through a **user experience**-based design of the **public space** according to Gehl's 12 quality criteria concerning the pedestrian landscape?*

Methodology

Protection	<p>PROTECTION AGAINST TRAFFIC AND ACCIDENTS - FEELING SAFE</p> <p>Protection pedestrians Eliminating fear of traffic</p> 	<p>PROTECTION AGAINST CRIME AND VIOLENCE - FEELING SECURE</p> <p>Lively public realm Eyes on the street Overlapping functions Good lighting</p> 	<p>PROTECTION AGAINST UNPLEASANT SENSORY EXPERIENCES</p> <p>Wind Rain/snow Cold/heat Pollution</p> 
Comfort	<p>OPPORTUNITIES TO WALK</p> <p>Room for walking No obstacles Good surfaces Accessibility Interesting façades</p> 	<p>OPPORTUNITIES TO STAND/STAY</p> <p>Edge effect/ attractive zones for standing Supports for standing</p> 	<p>OPPORTUNITIES TO SIT</p> <p>Zones for sitting Utilizing advantages: view, sun, people Good places to sit Benches for resting</p> 
	<p>OPPORTUNITIES TO SEE</p> <p>Reasonable viewing distances Unhindered sightlines Interesting views Lighting (when dark)</p> 	<p>OPPORTUNITIES TO TALK AND LISTEN</p> <p>Low noise levels Street furniture that provides “talkscapes”</p> 	<p>OPPORTUNITIES FOR PLAY AND EXERCISE</p> <p>Invitations creativity, activity, exercise and play By day and night In summer and winter</p> 
Delight	<p>SCALE</p> <p>Buildings and spaces designed to human scale</p> 	<p>OPPORTUNITIES TO ENJOY THE POSITIVE ASPECTS OF CLIMATE</p> <p>Sun/shade Heat/coolness Breeze</p> 	<p>POSITIVE SENSORY EXPERIENCES</p> <p>Good design and detailing Good materials Fine views</p> 

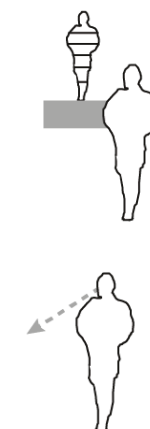
© 12 quality criteria concerning the pedestrian landscape, 2010 (Gehl)

Interrelated quality criteria





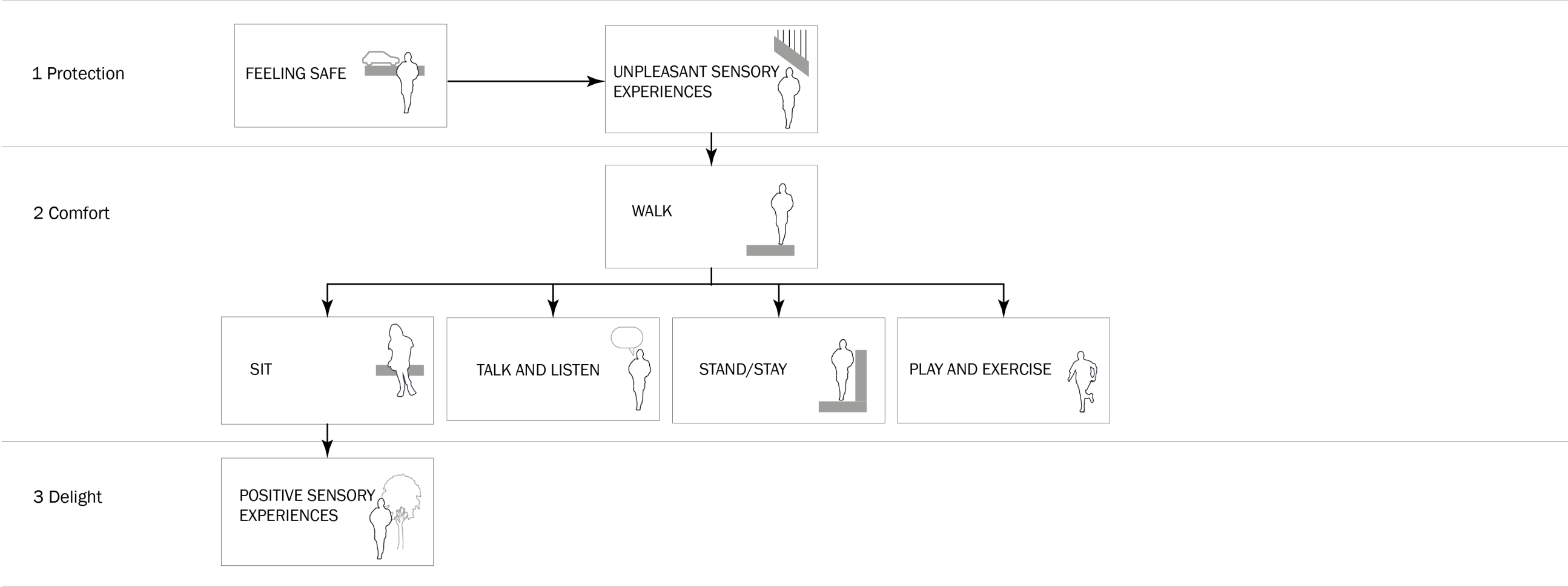




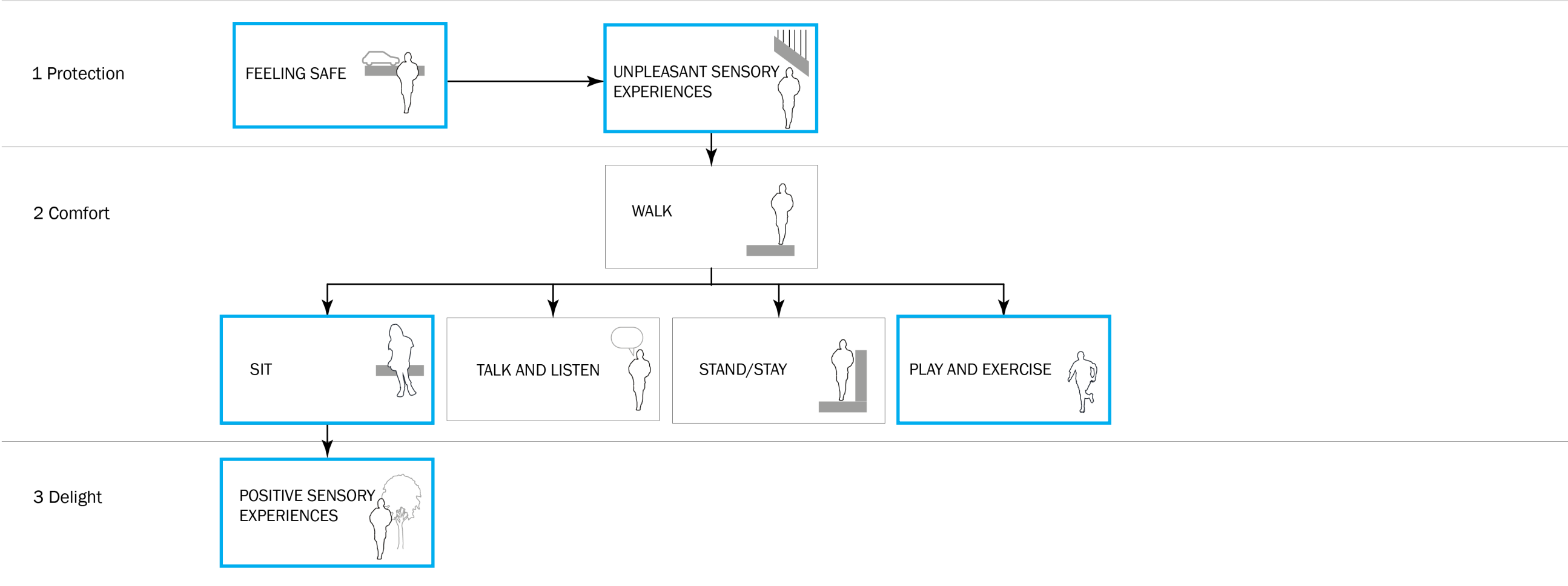




Interrelated quality criteria Haarlem

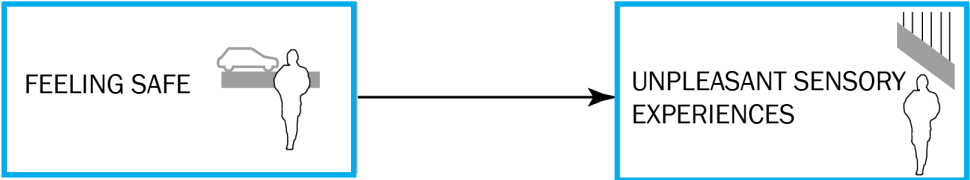


5 challenges



5 challenges

1 Protection



Field observations



- Public transport
- Cyclists
- Pedestrians



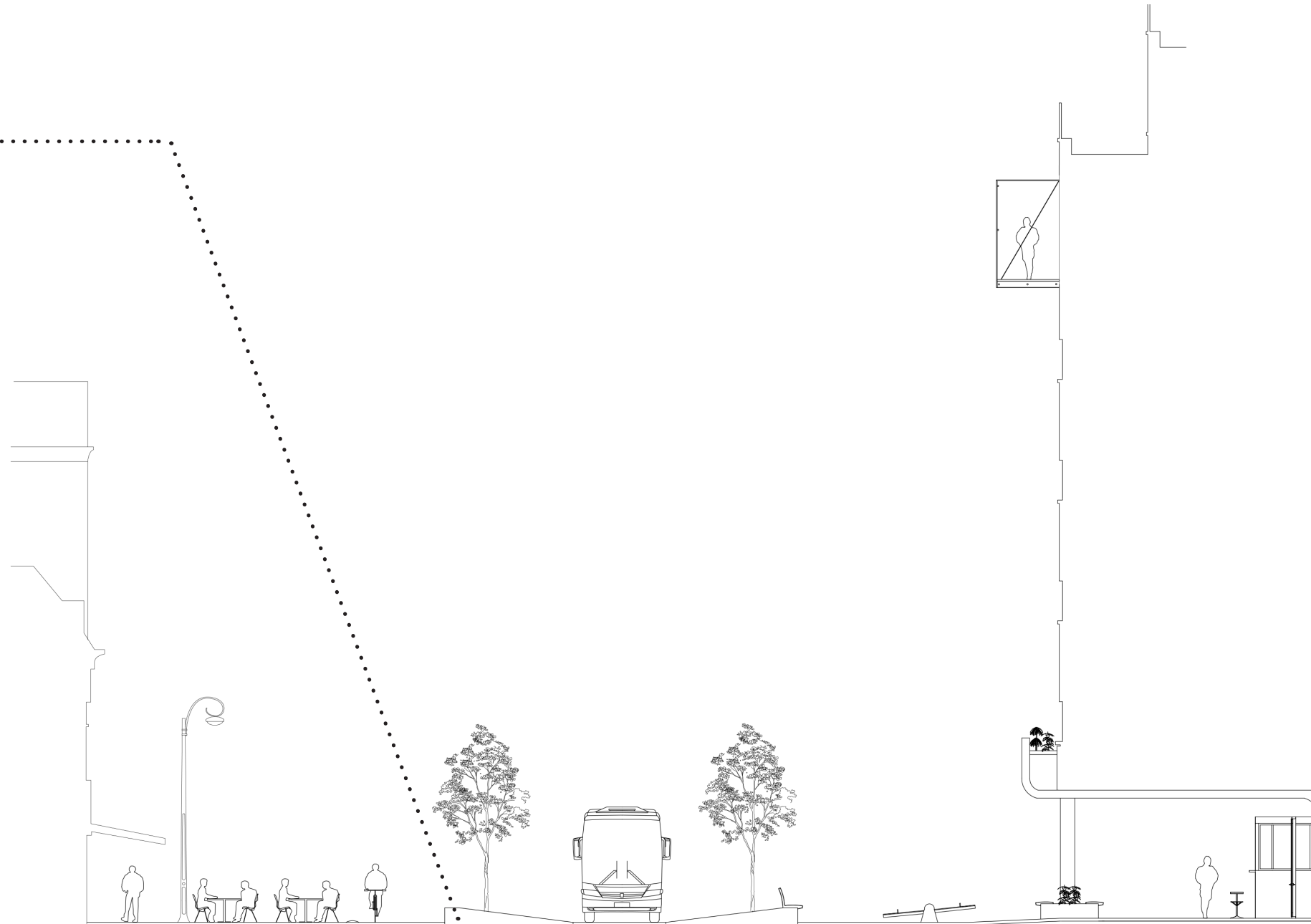
Public transport



Street profile

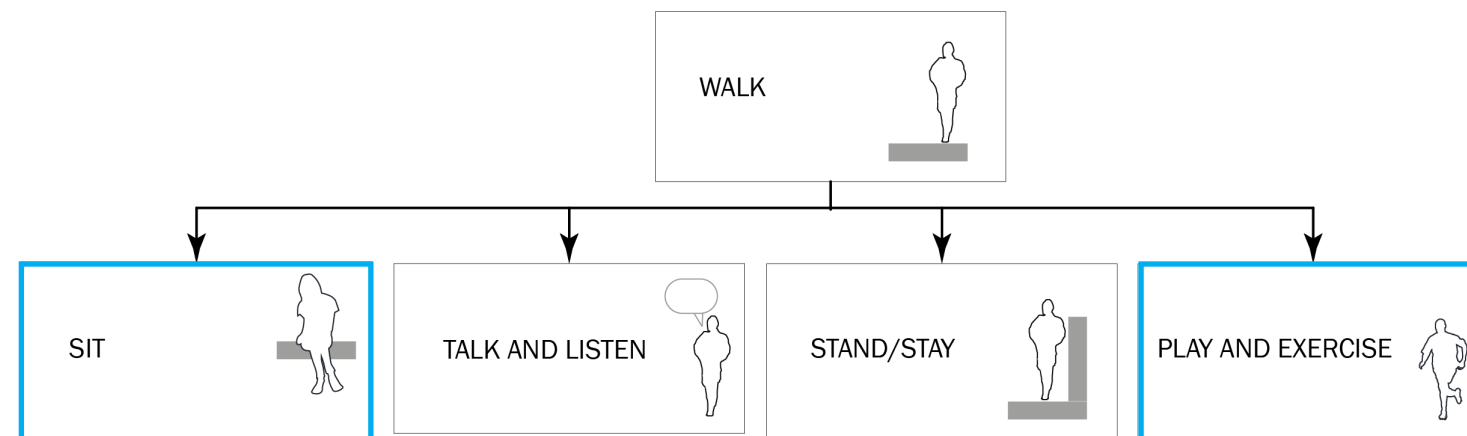


Kruisplein, Rotterdam



5 challenges

2 Comfort



Site plan



Kruisplein, Rotterdam



Coal Drops Yard, London

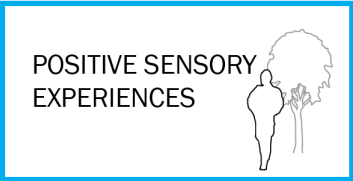


Averdung Platz, Duisburg



5 challenges

3 Delight



Site plan



Novartis garden, Basel

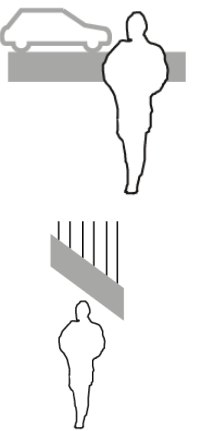


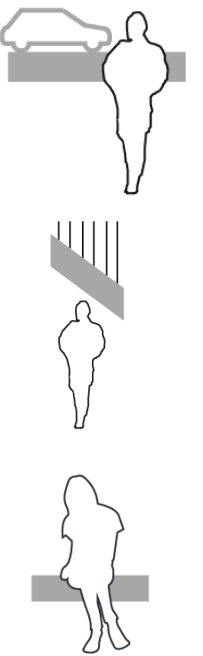
Averdung Platz, Duisburg











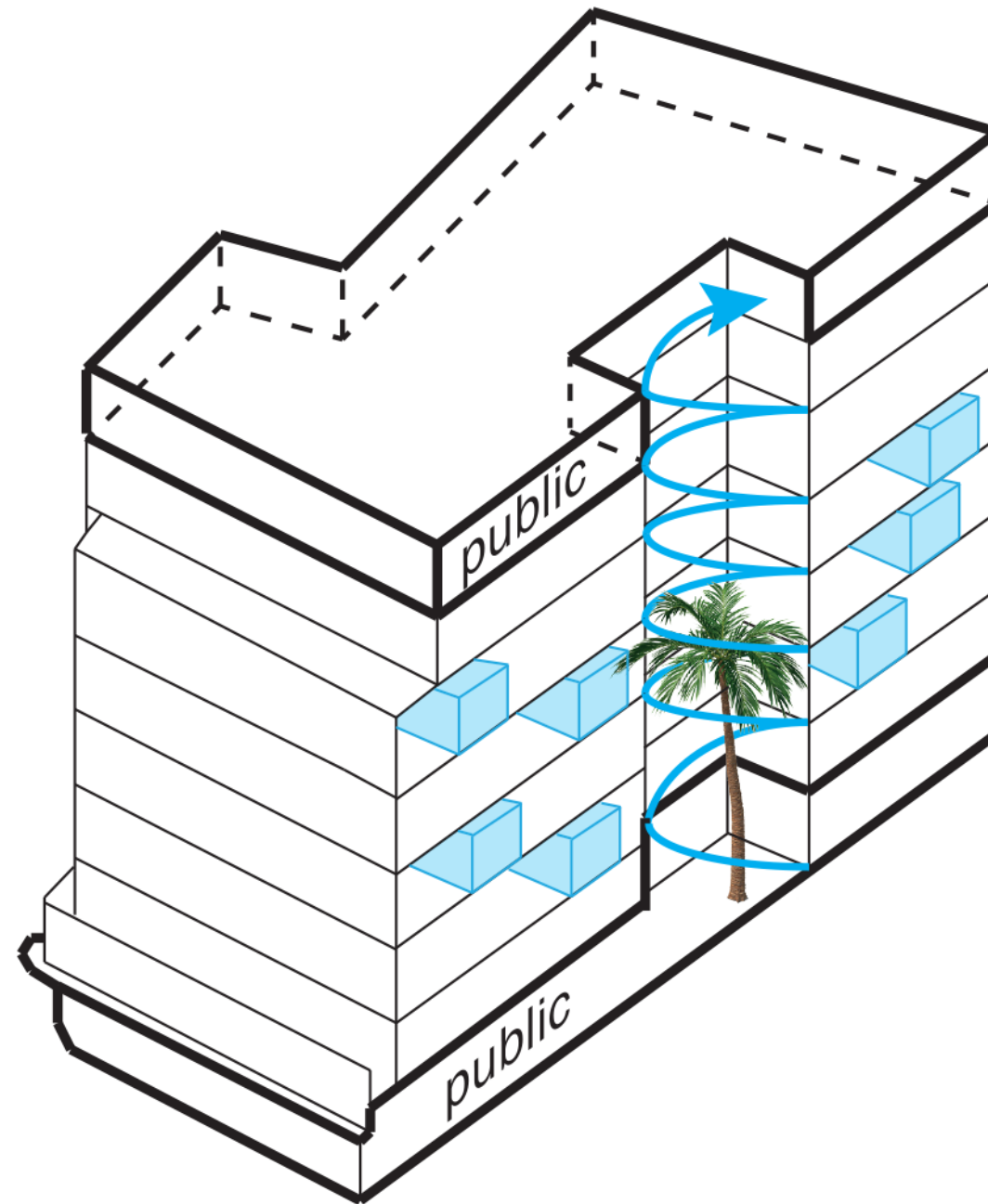




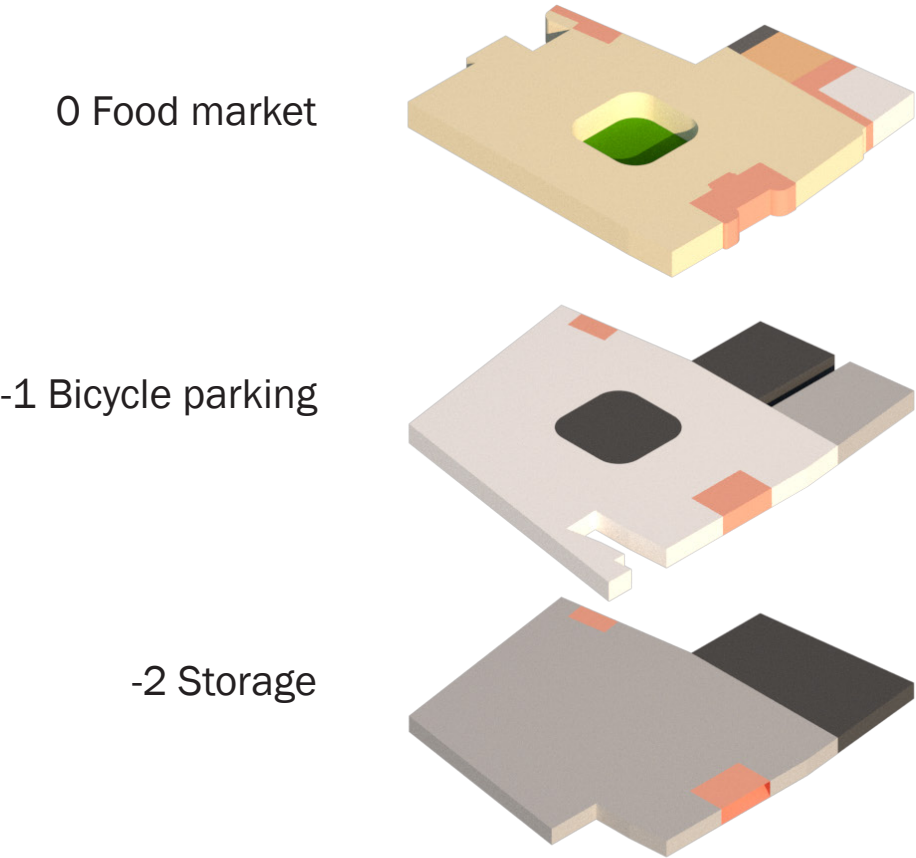


- I Research
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Concept

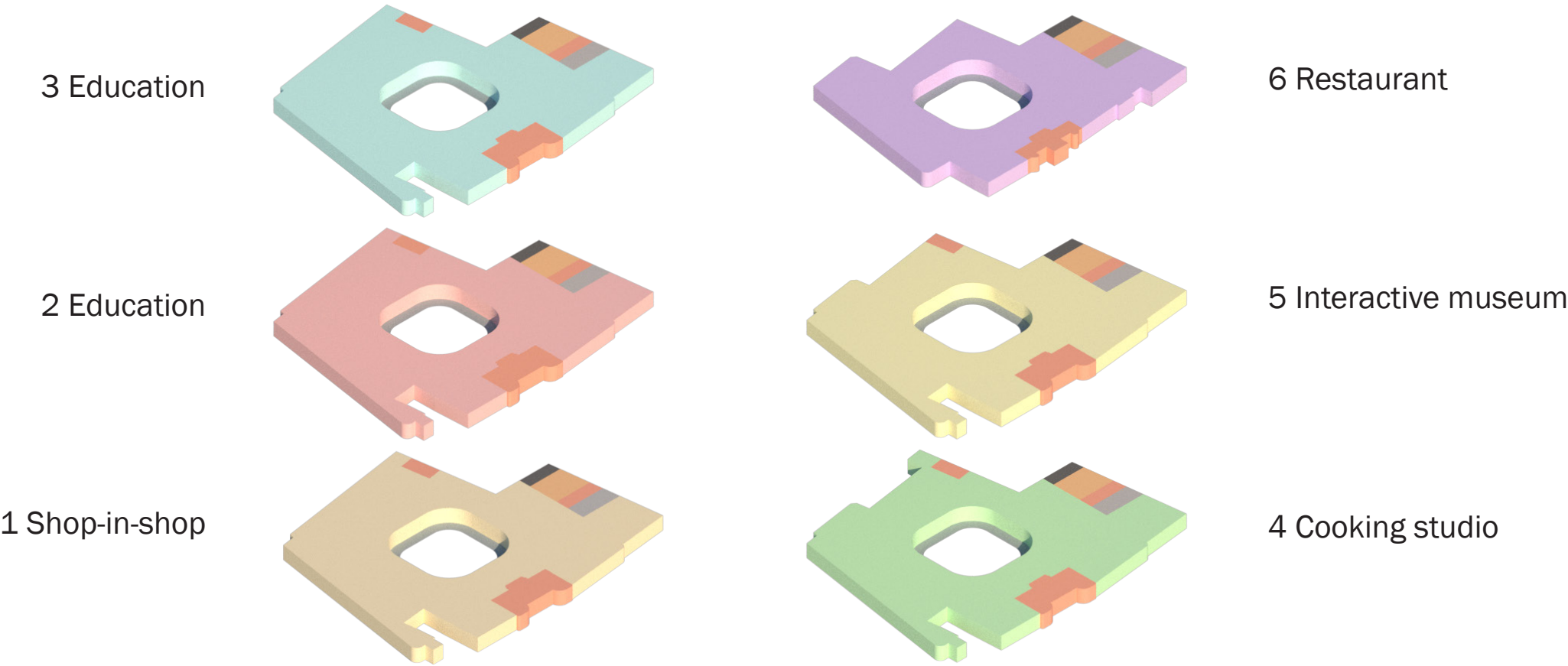


Programme

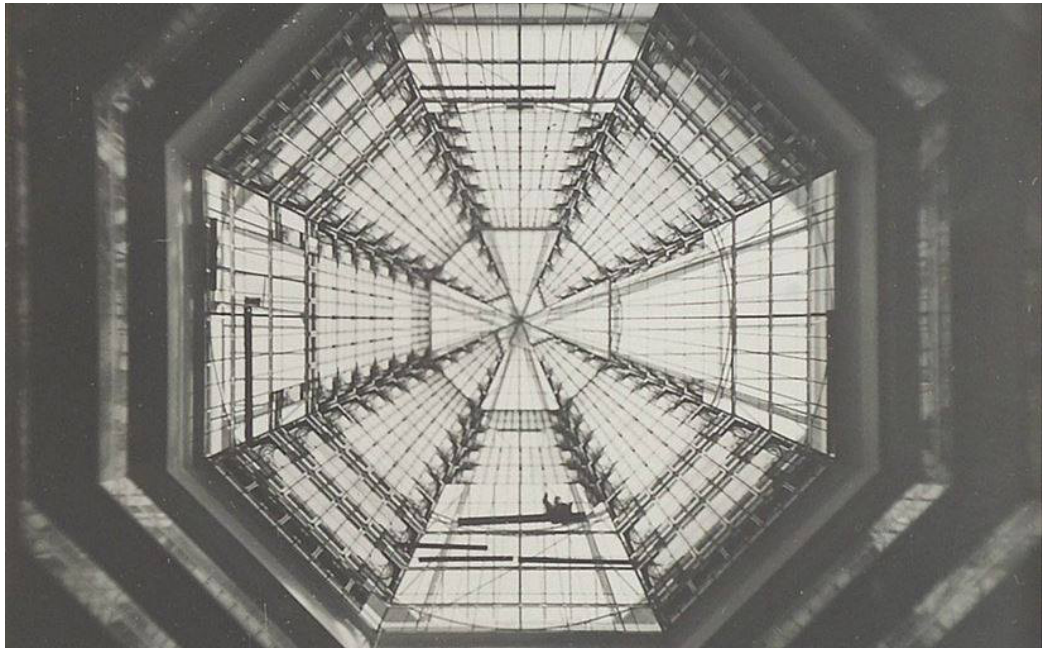


- Subtropical garden
- Bicycle mechanic
- Circulation
- Storage
- Services

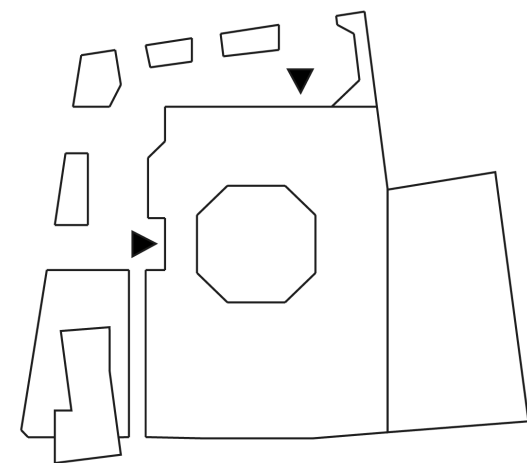
Programme



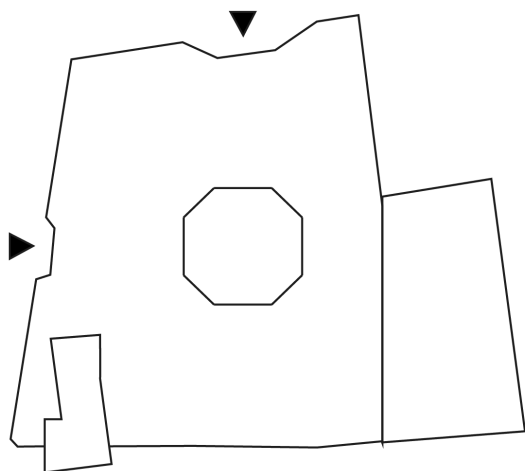
Existing building



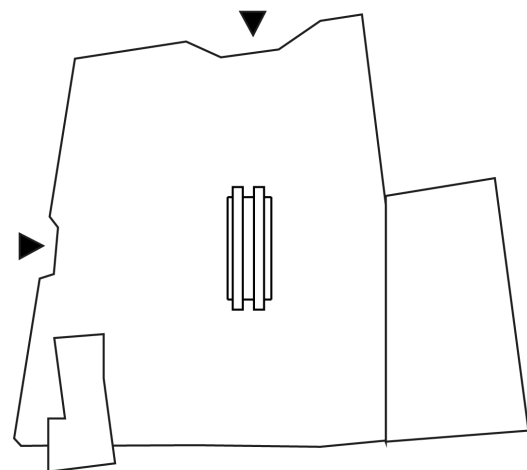
Interventions ground floor



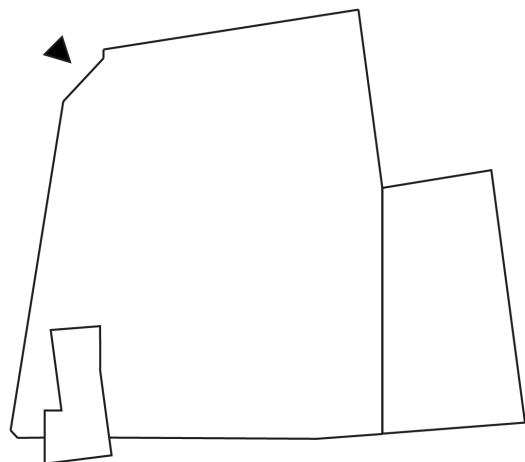
1935



1950

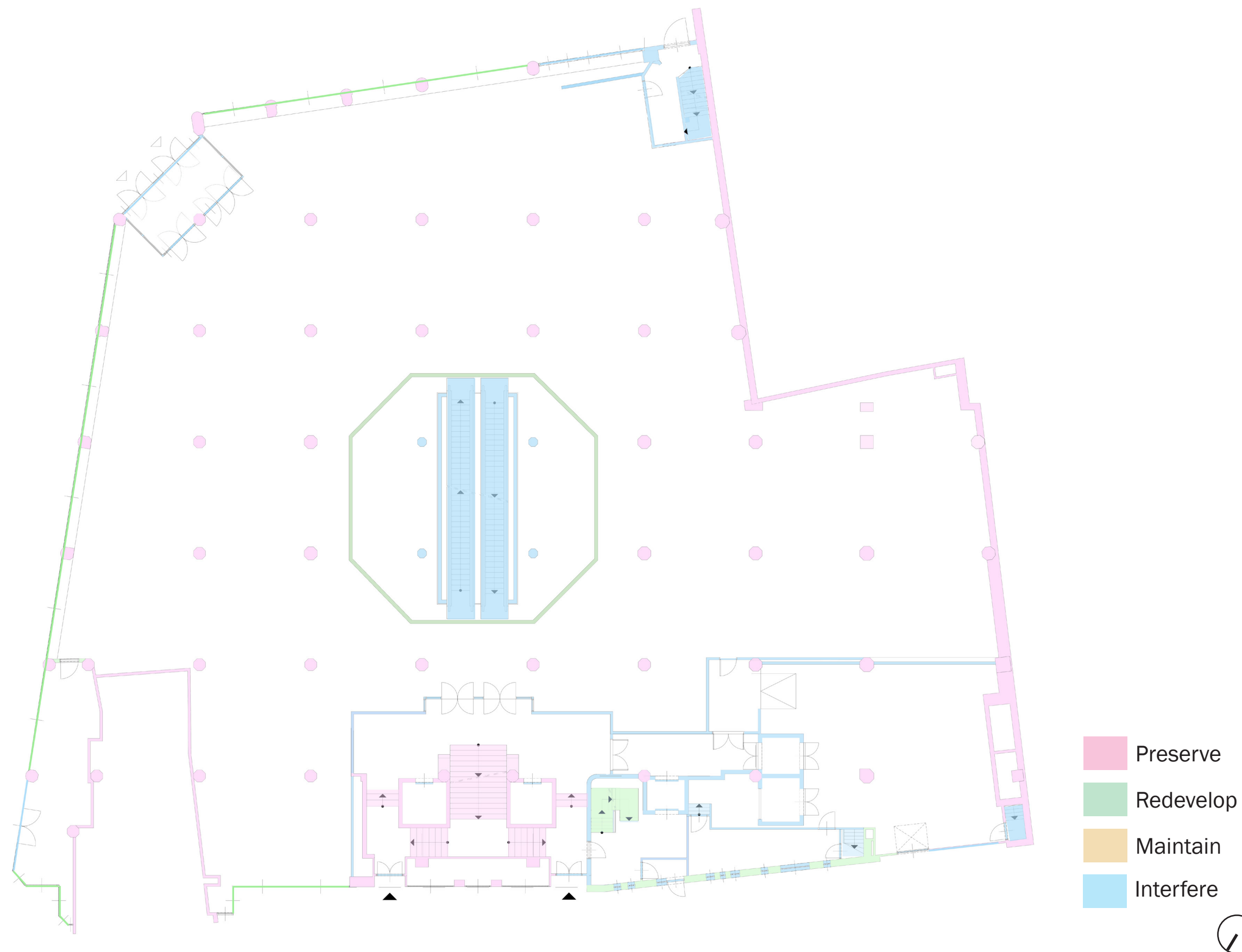


1963

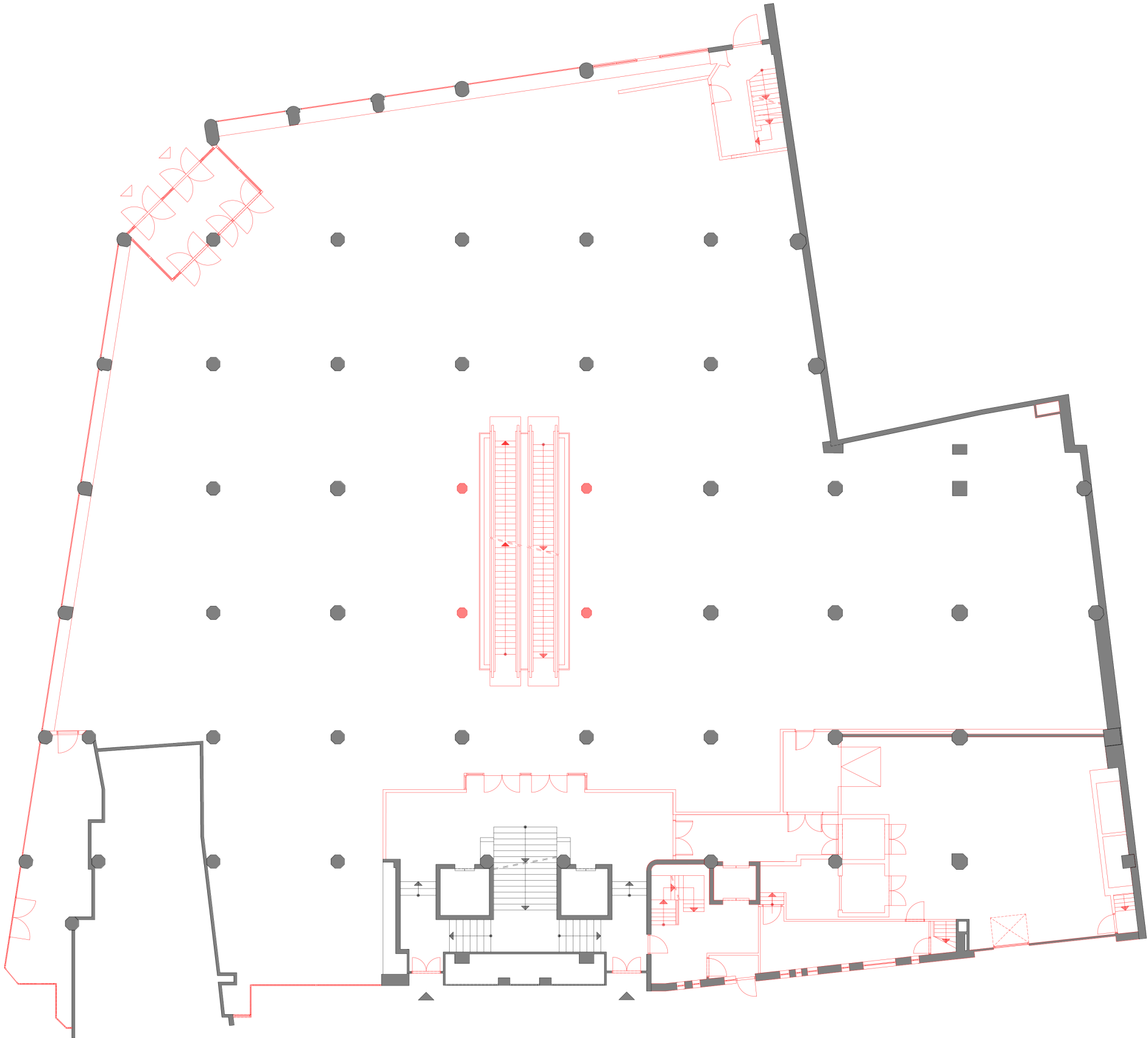


1995

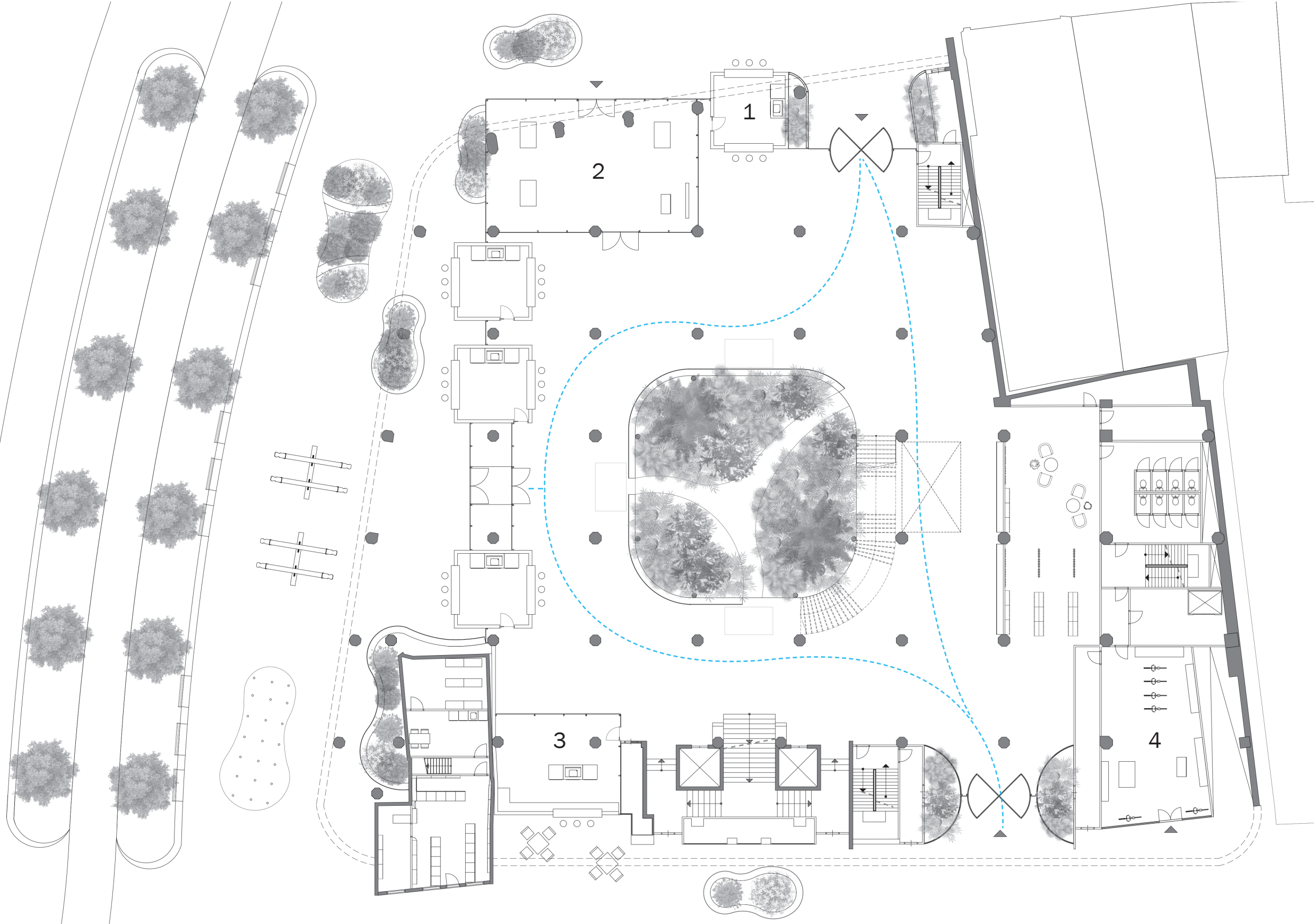
Limits of acceptable change



Demolition ground floor

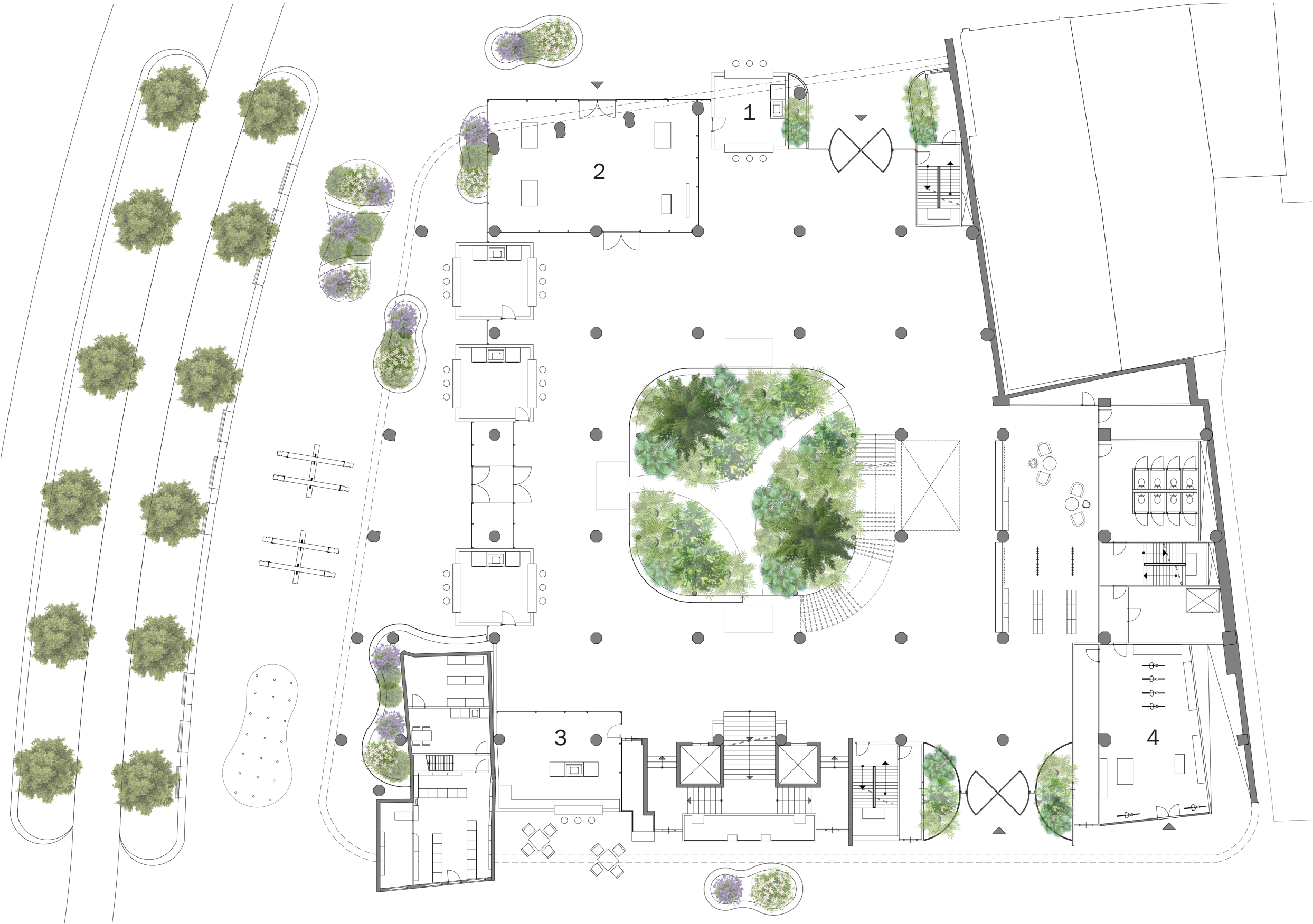


Ground floor



- 1 Food market
- 2 Shop
- 3 Fish market
- 4 Bicycle mechanic

Ground floor

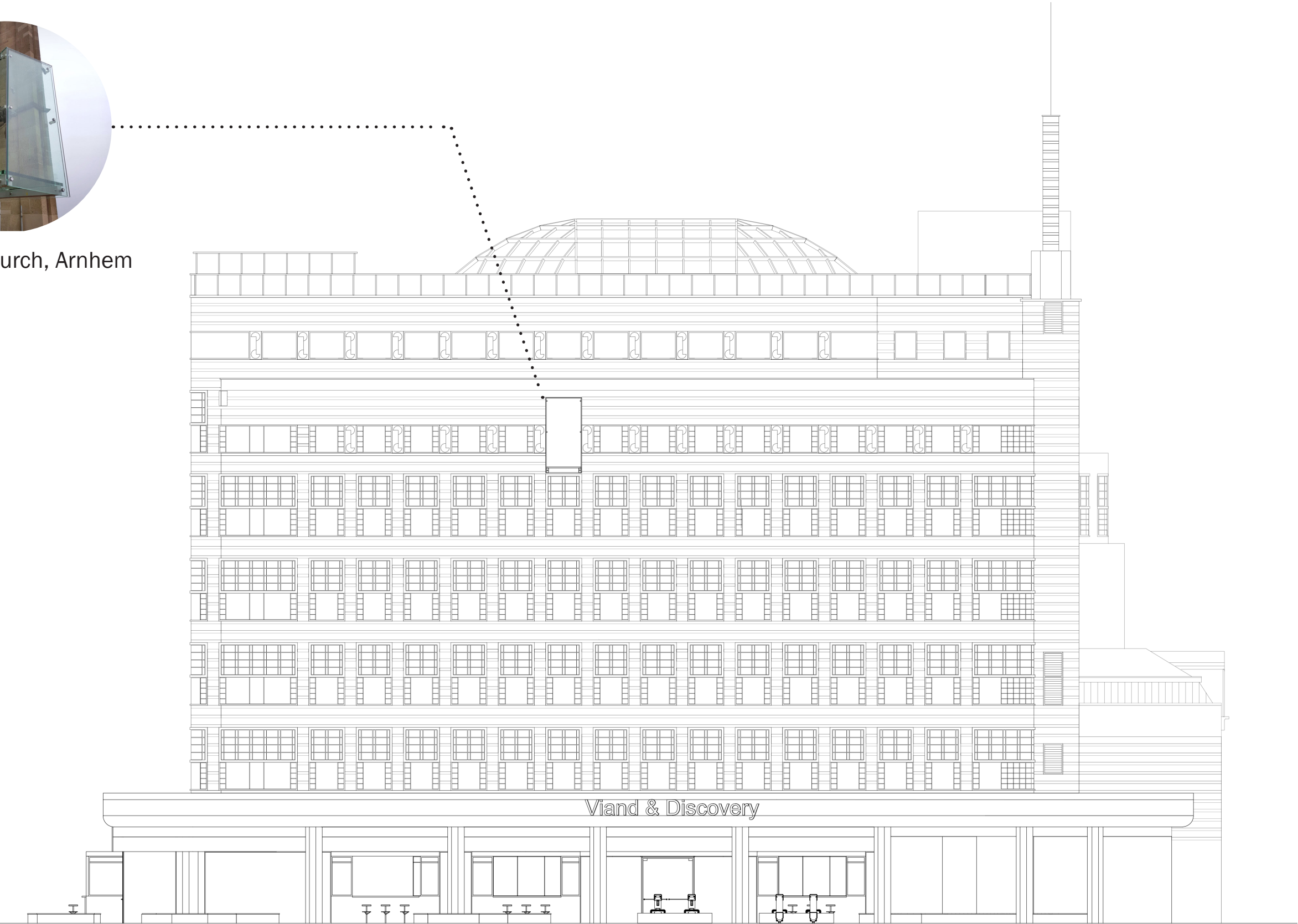


- 1 Food market
- 2 Shop
- 3 Fish market
- 4 Bicycle mechanic

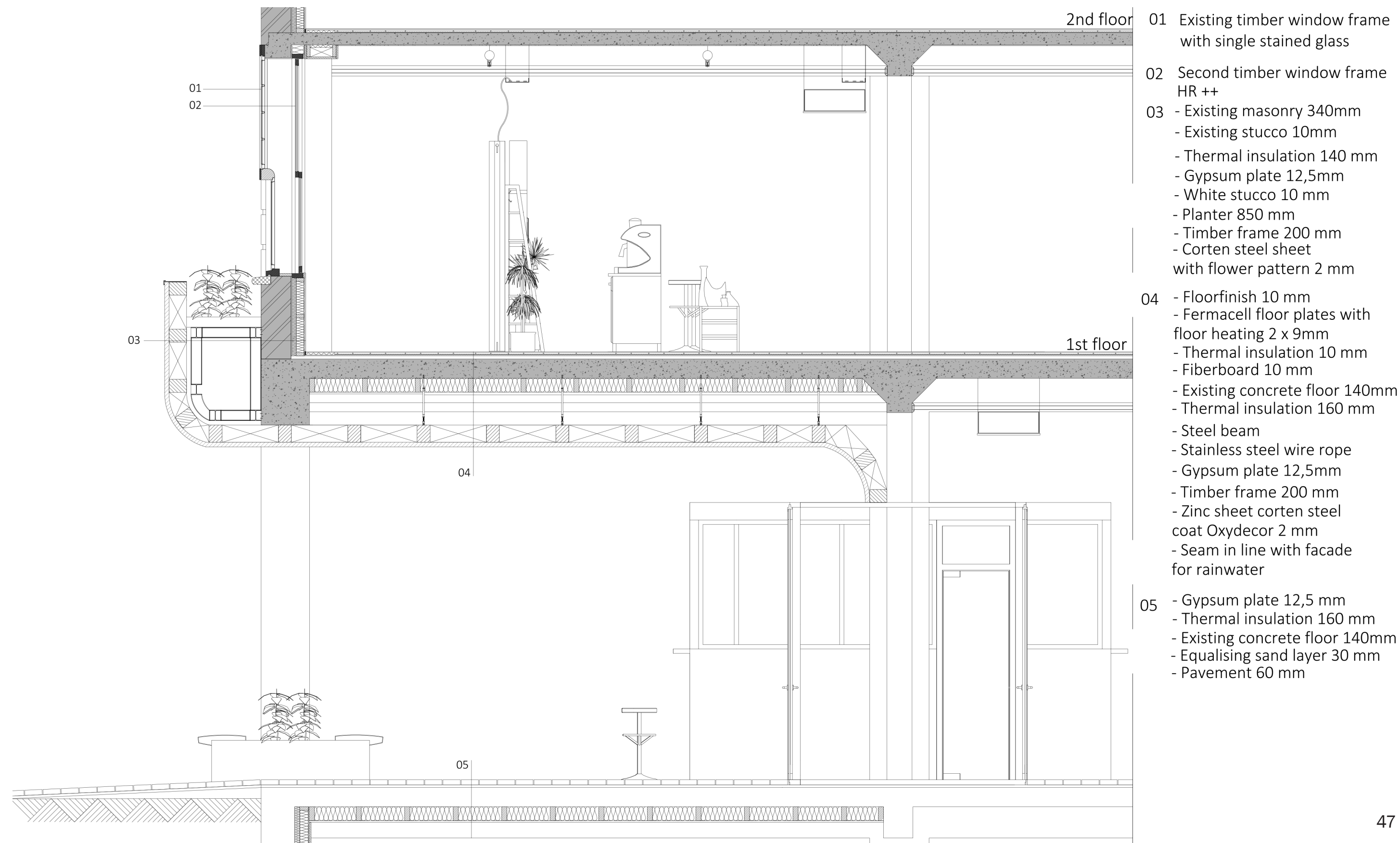
Elevation Verwulft



Eusebius church, Arnhem

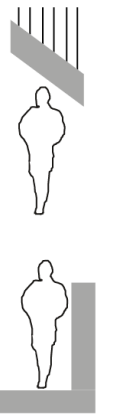


Fragment plinth

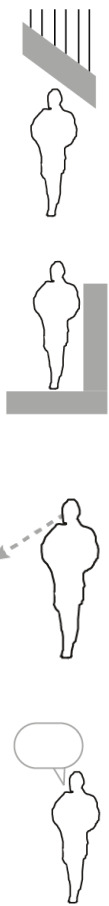


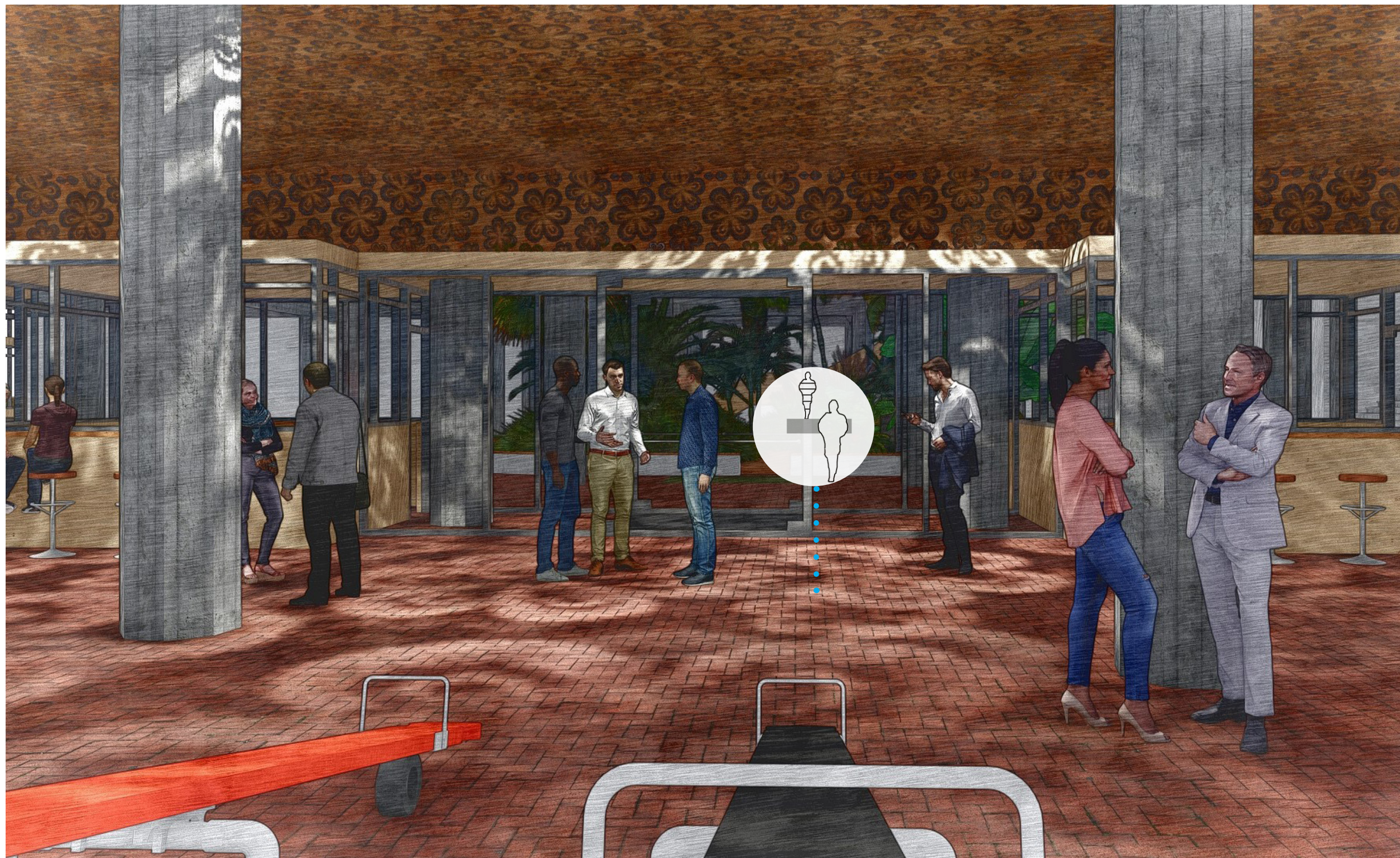






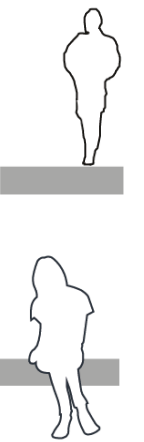














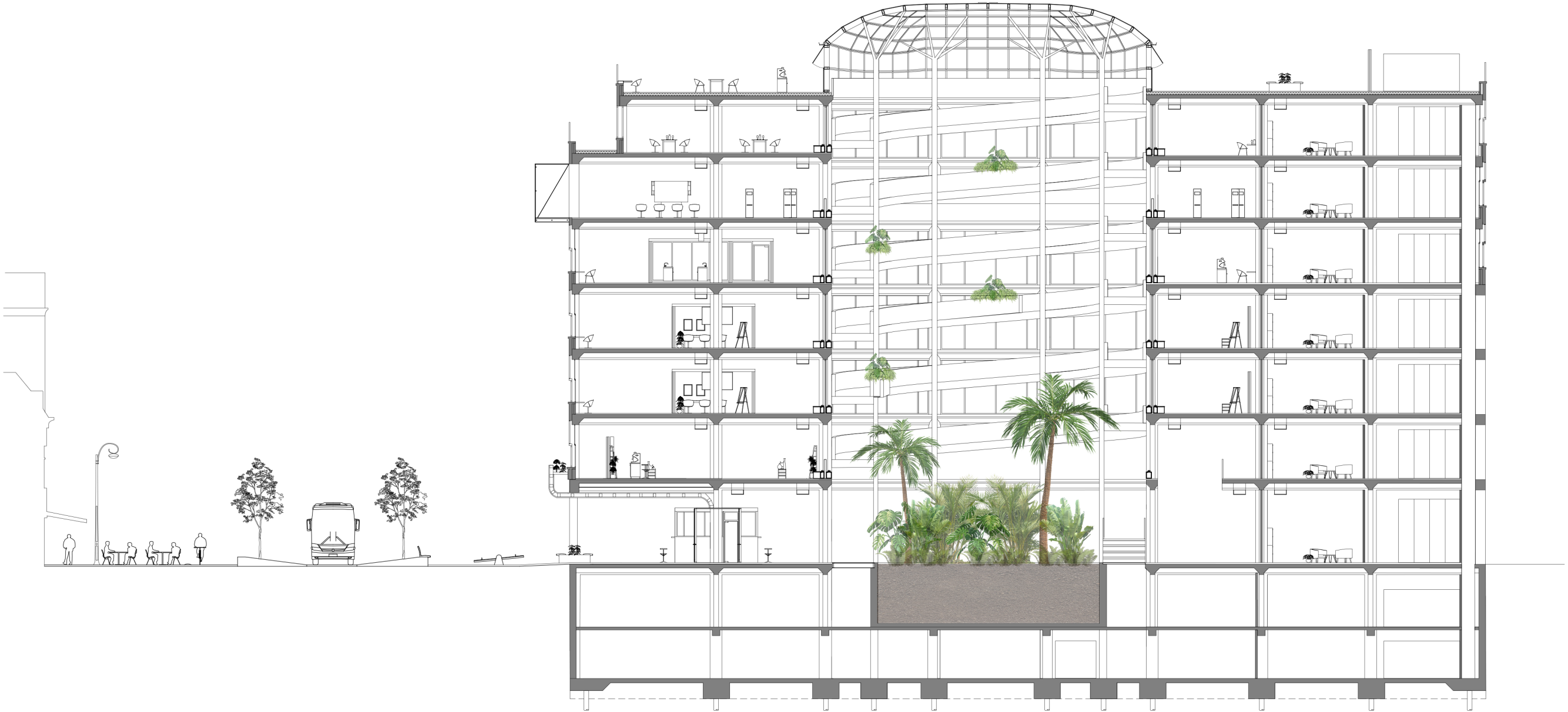








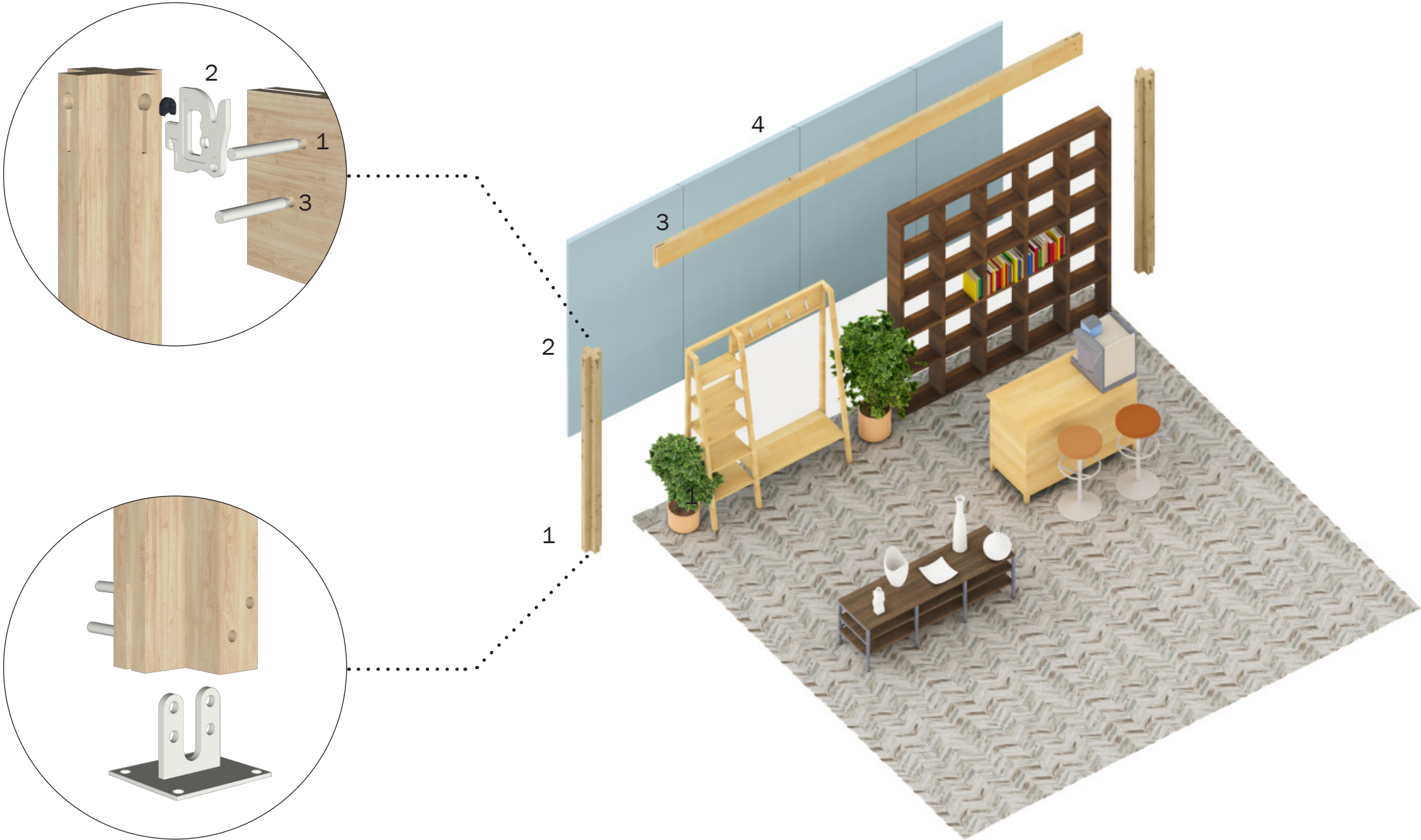
Section



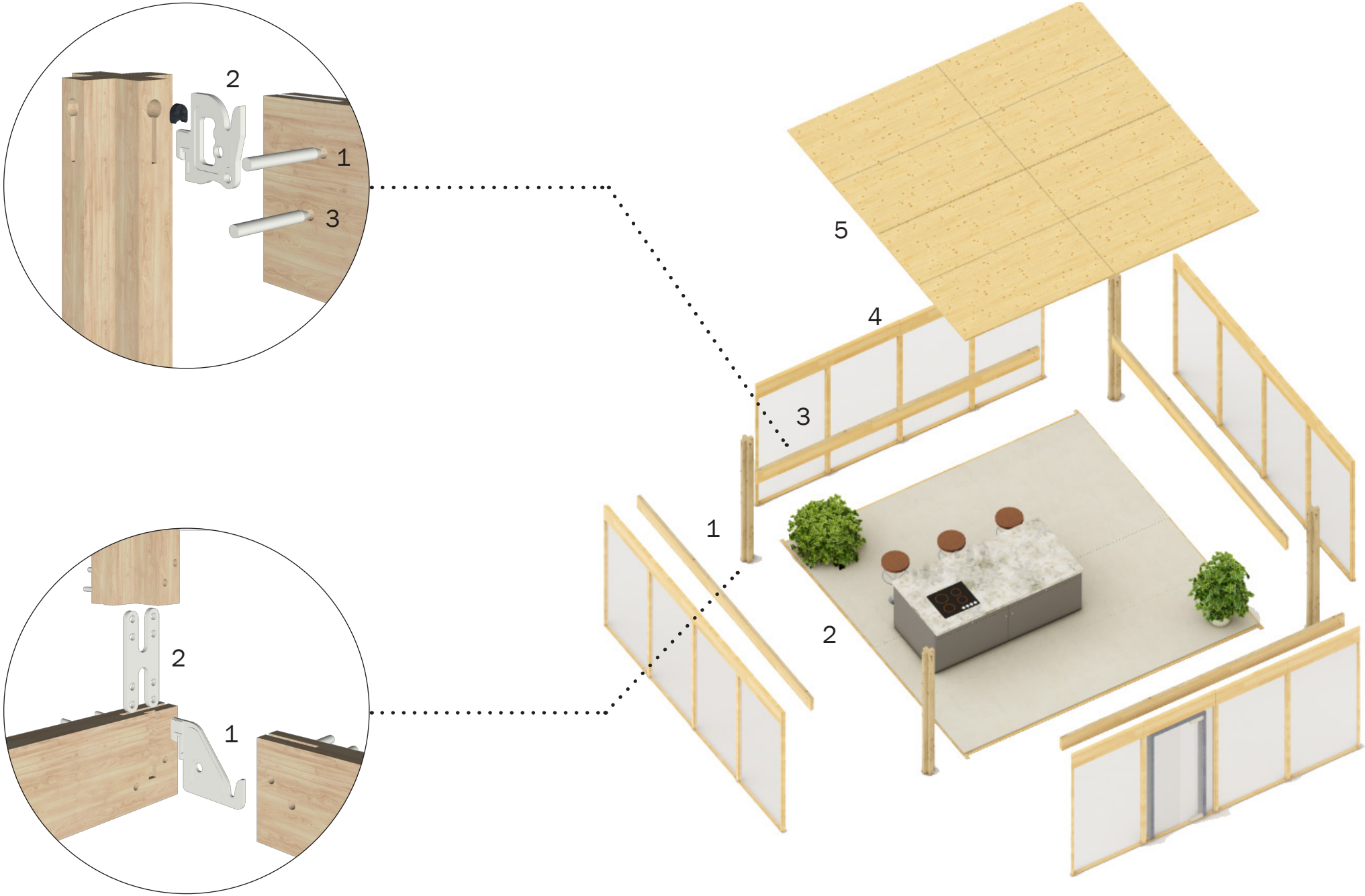
Concept modules



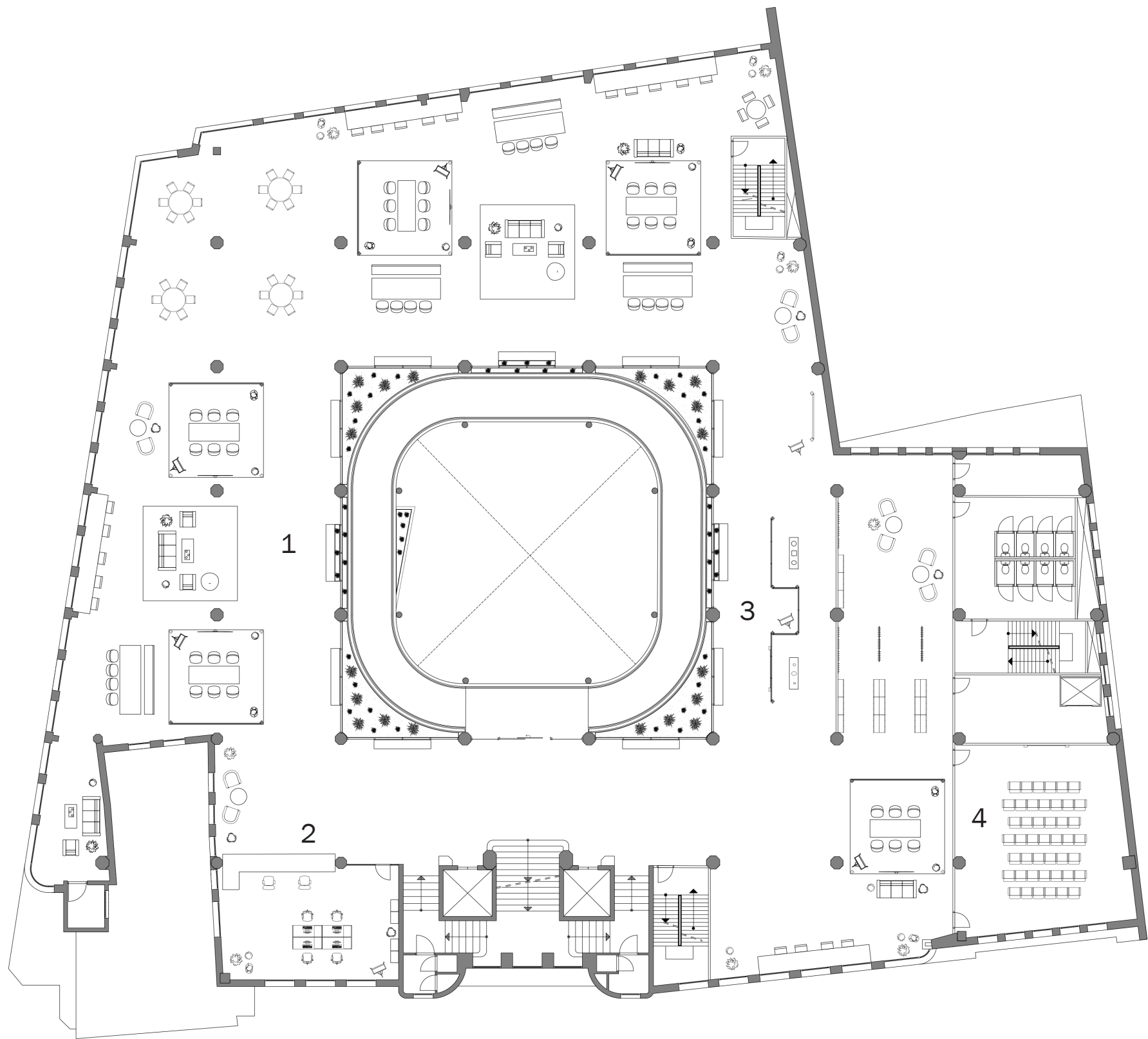
Modules



Modules

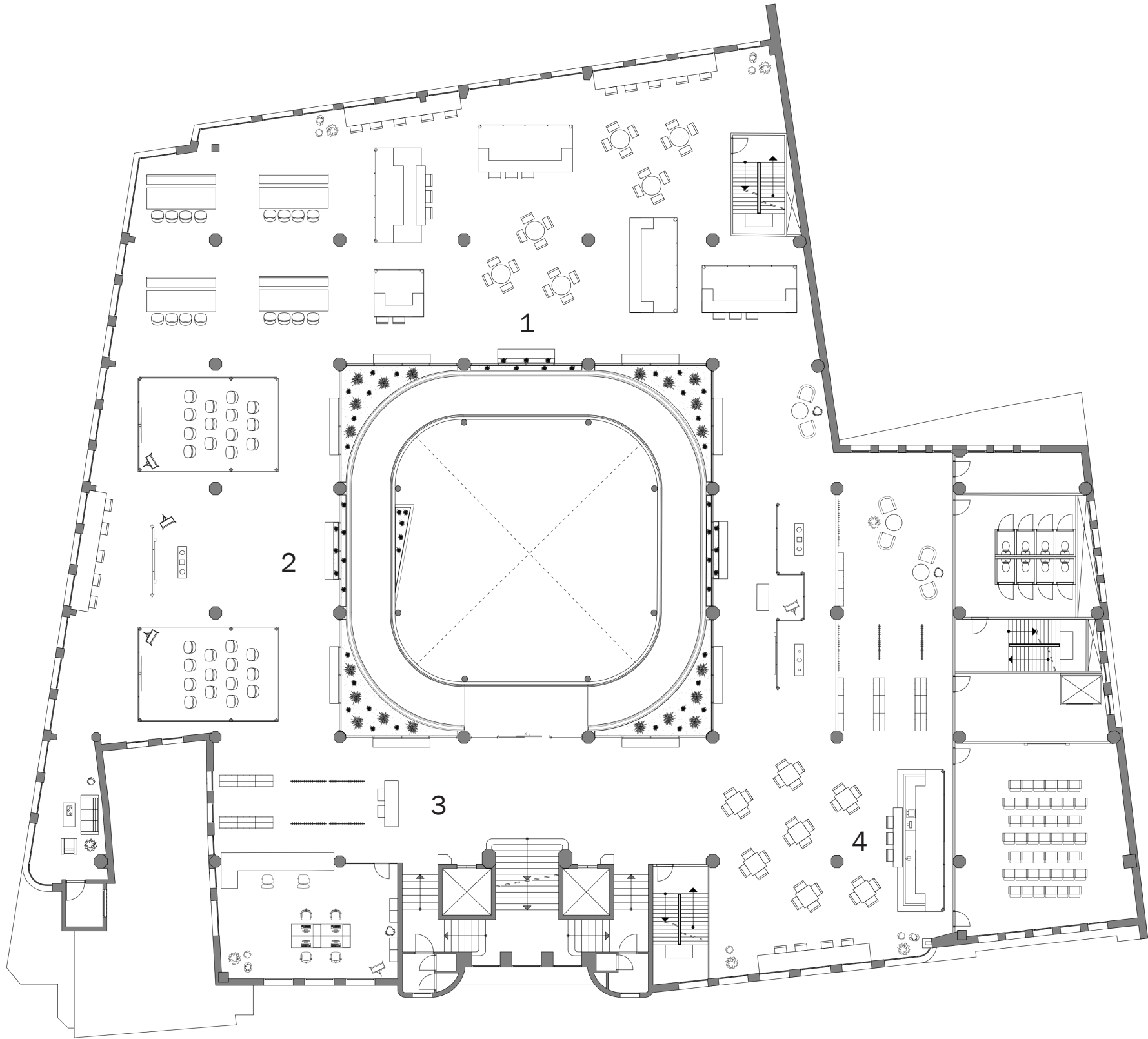


Second floor minimum scenario



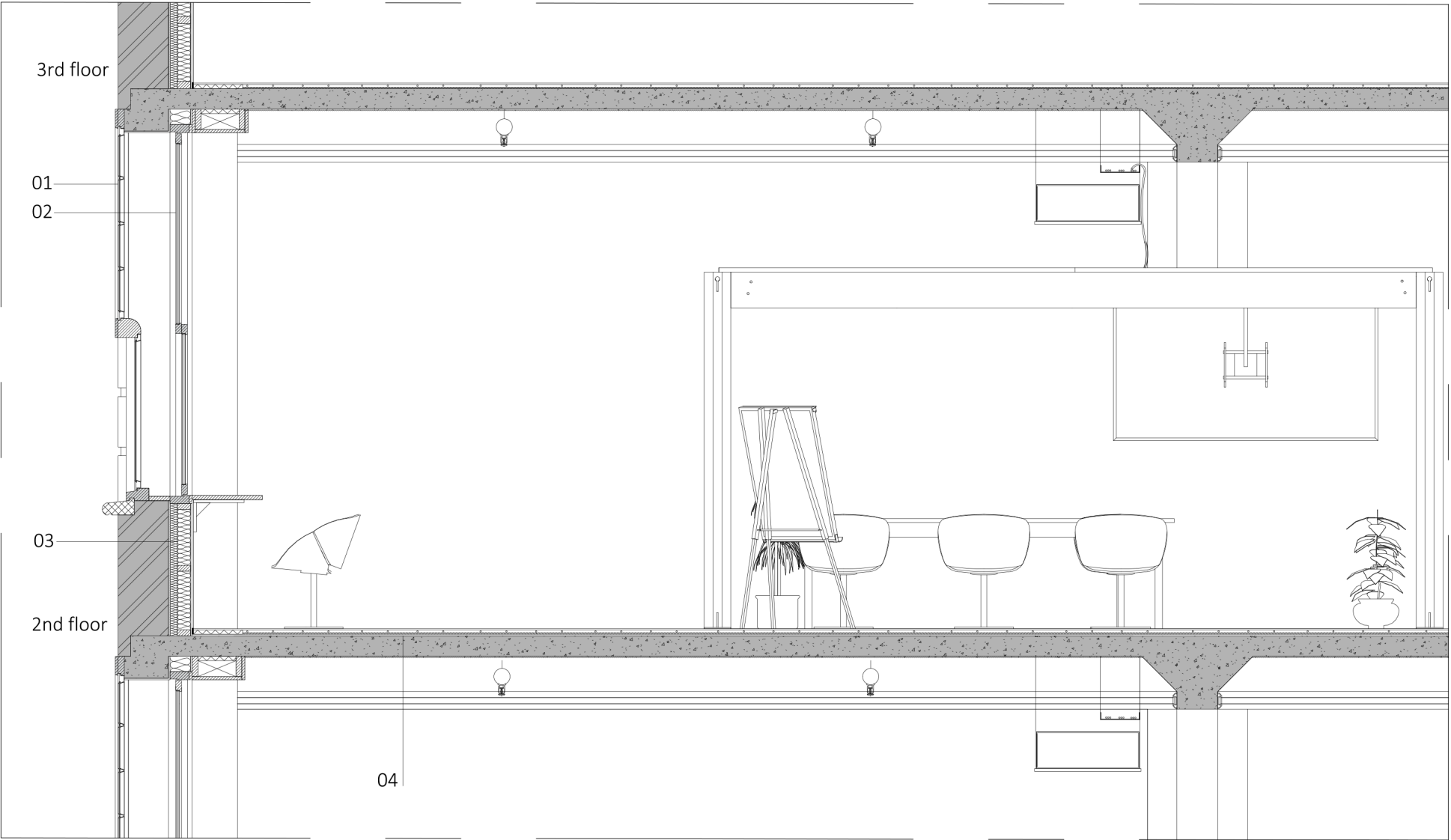
- 1 Study area
- 2 Reception
- 3 Exposition
- 4 Lecture room

Second floor maximum scenario



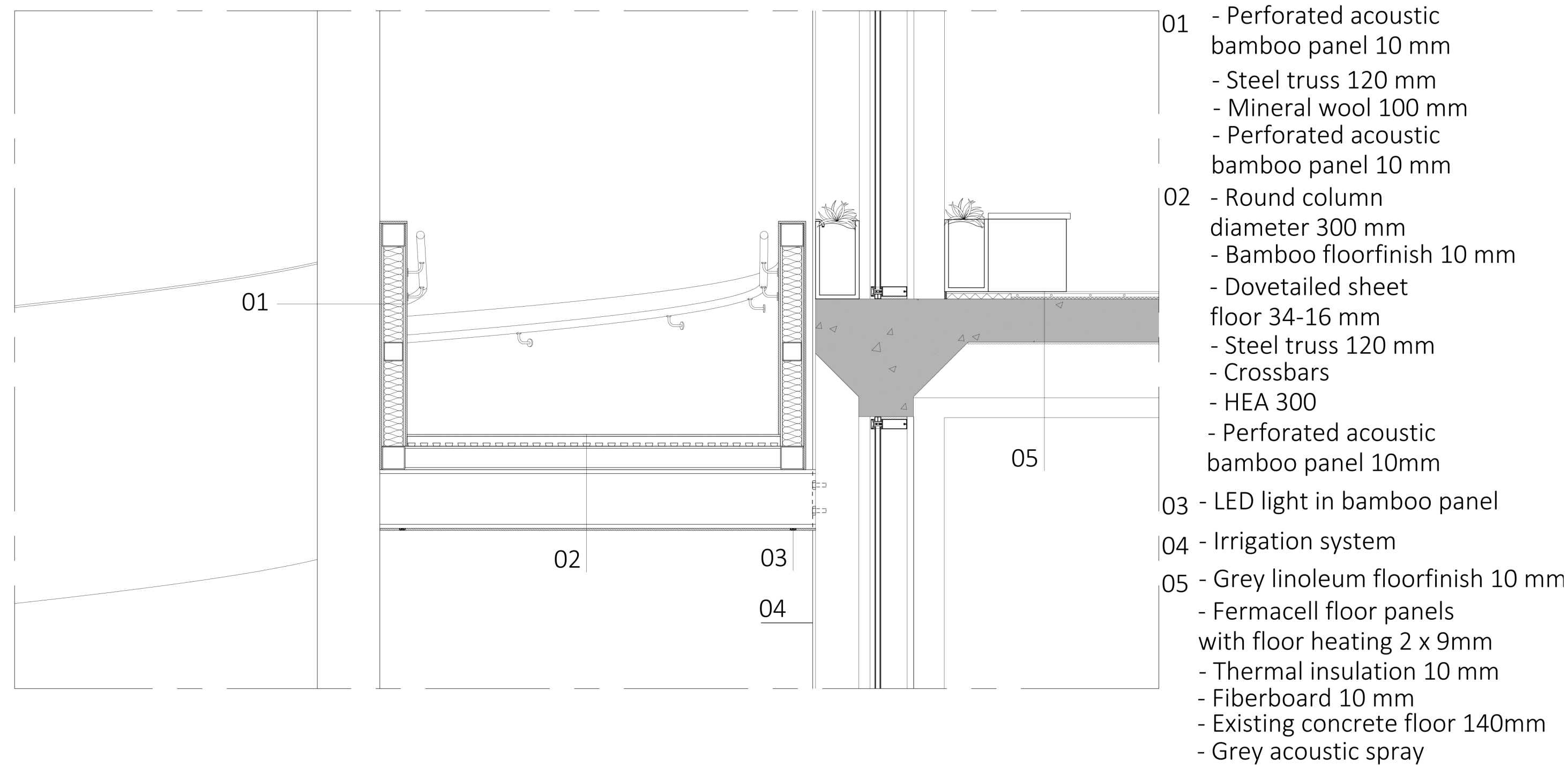
- 1 Food market
- 2 Presentation area
- 3 Cloak room
- 4 Bar

Fragment second floor

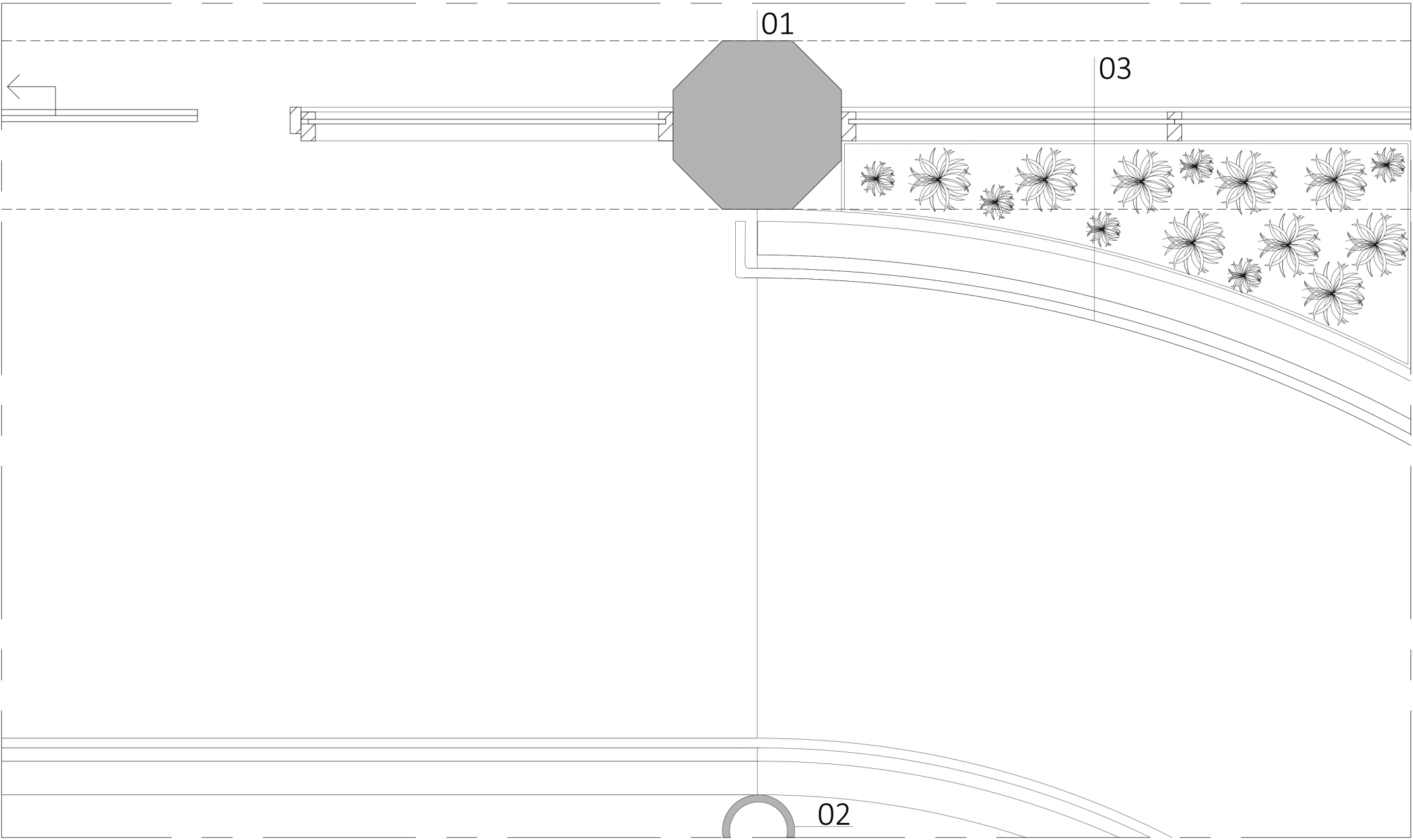


- 01 Existing timber window frame with single stained glass
- 02 Second timber window frame HR ++
- 03 - Existing masonry 340mm
- Existing stucco 10mm
- Thermal insulation 140 mm
- Gypsum plate 12,5mm
- White stucco 10 mm
- 04 - Floorfinish 10 mm
- Fermacell floor plates with floor heating 2 x 9mm
- Thermal insulation 10 mm
- Fiberboard 10 mm
- Existing concrete floor 140mm
- Acoustic spray

Fragment ramp

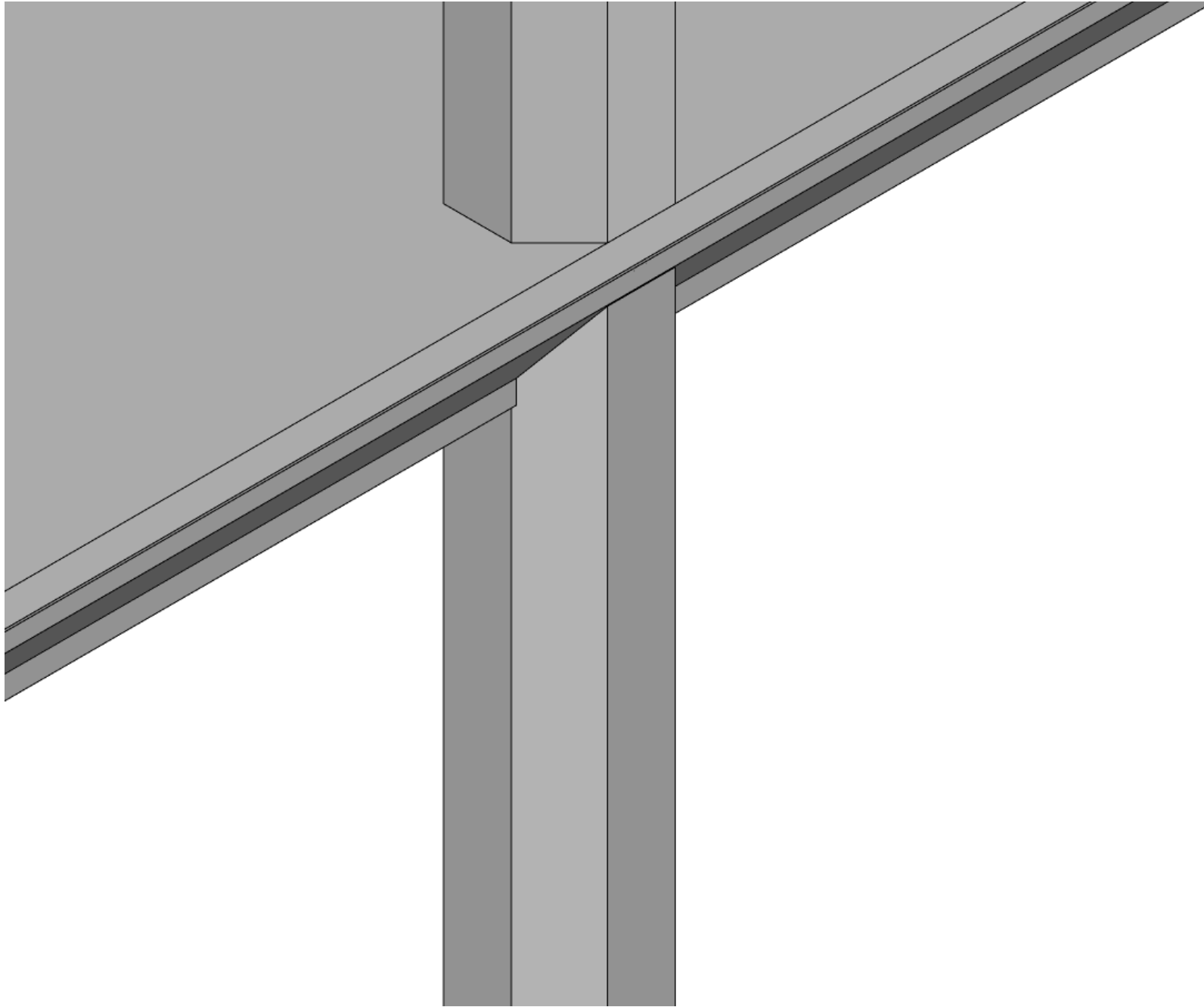


Fragment ramp horizontal

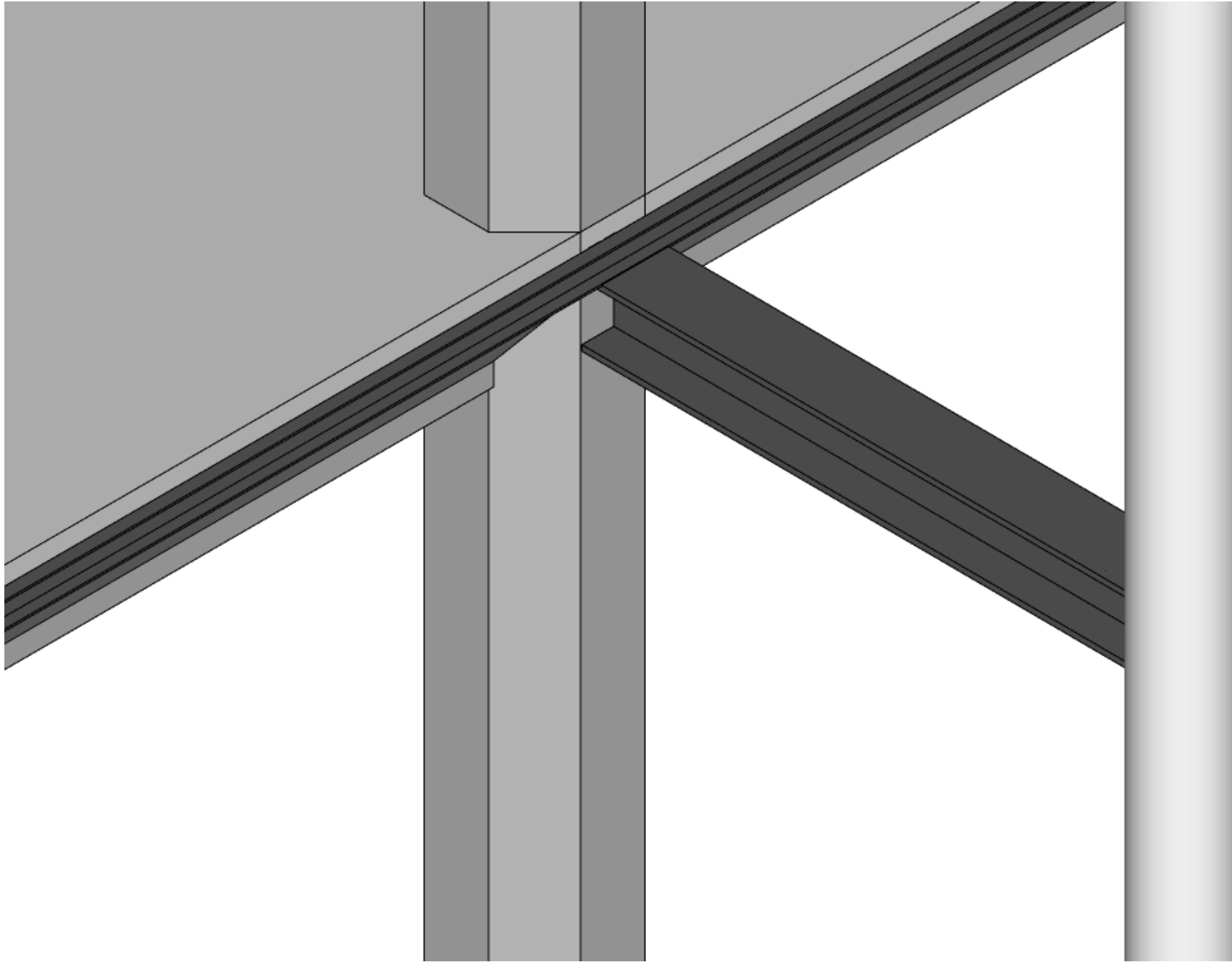


- 01 - Existing concrete column octogonal 700 mm
- 02 - Steel round column diameter 300 mm
- 03 - Stainless steel railing 40 mm
- Perforated acoustic bamboo balustrade 140 mm
- Planter
- Aluminium glass panel 120 mm

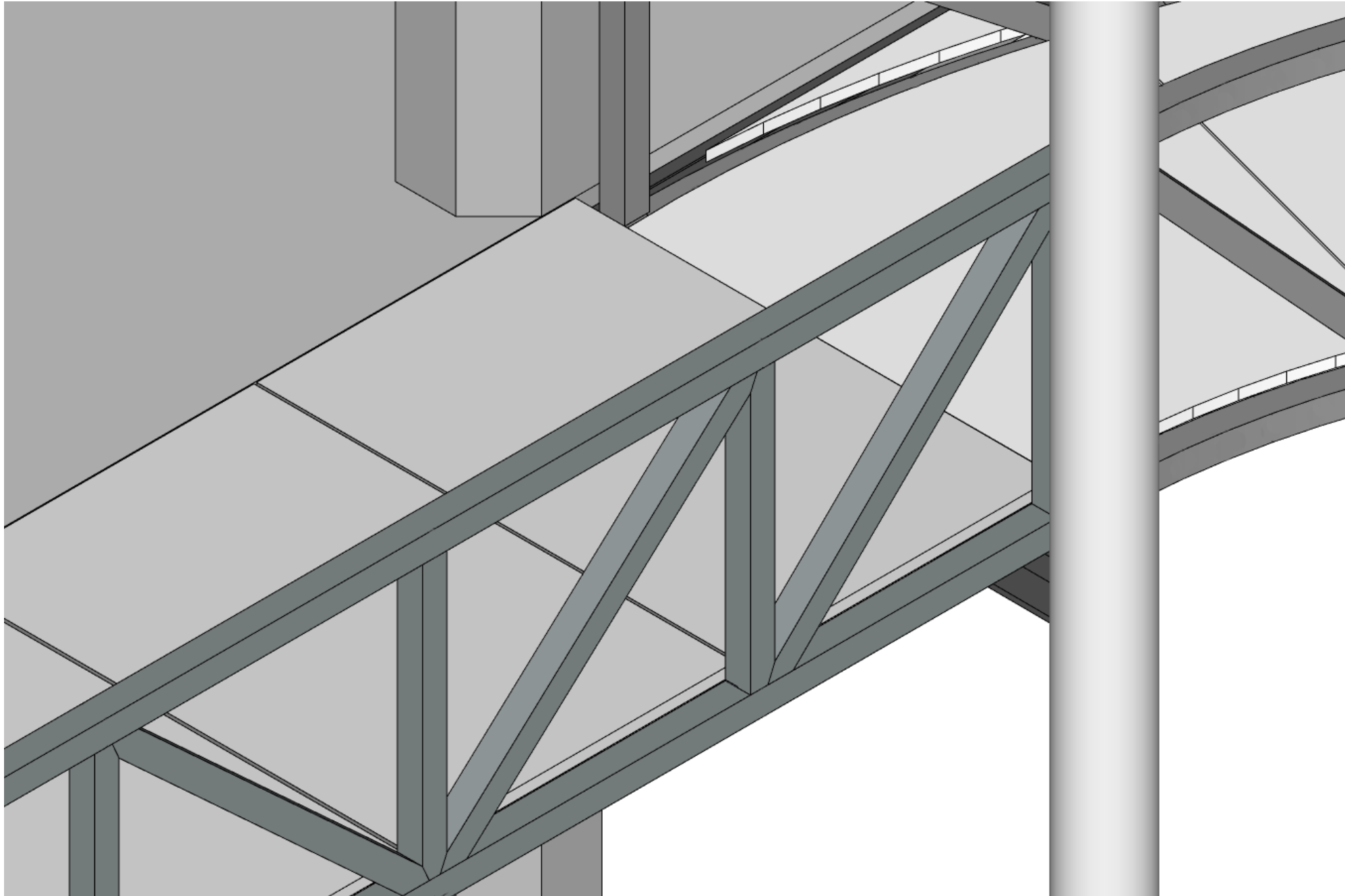
Fragment ramp 3D



Fragment ramp 3D

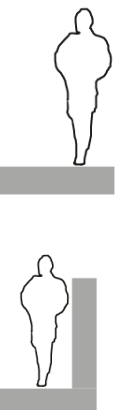


Fragment ramp 3D

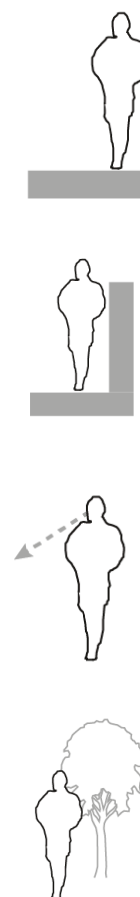








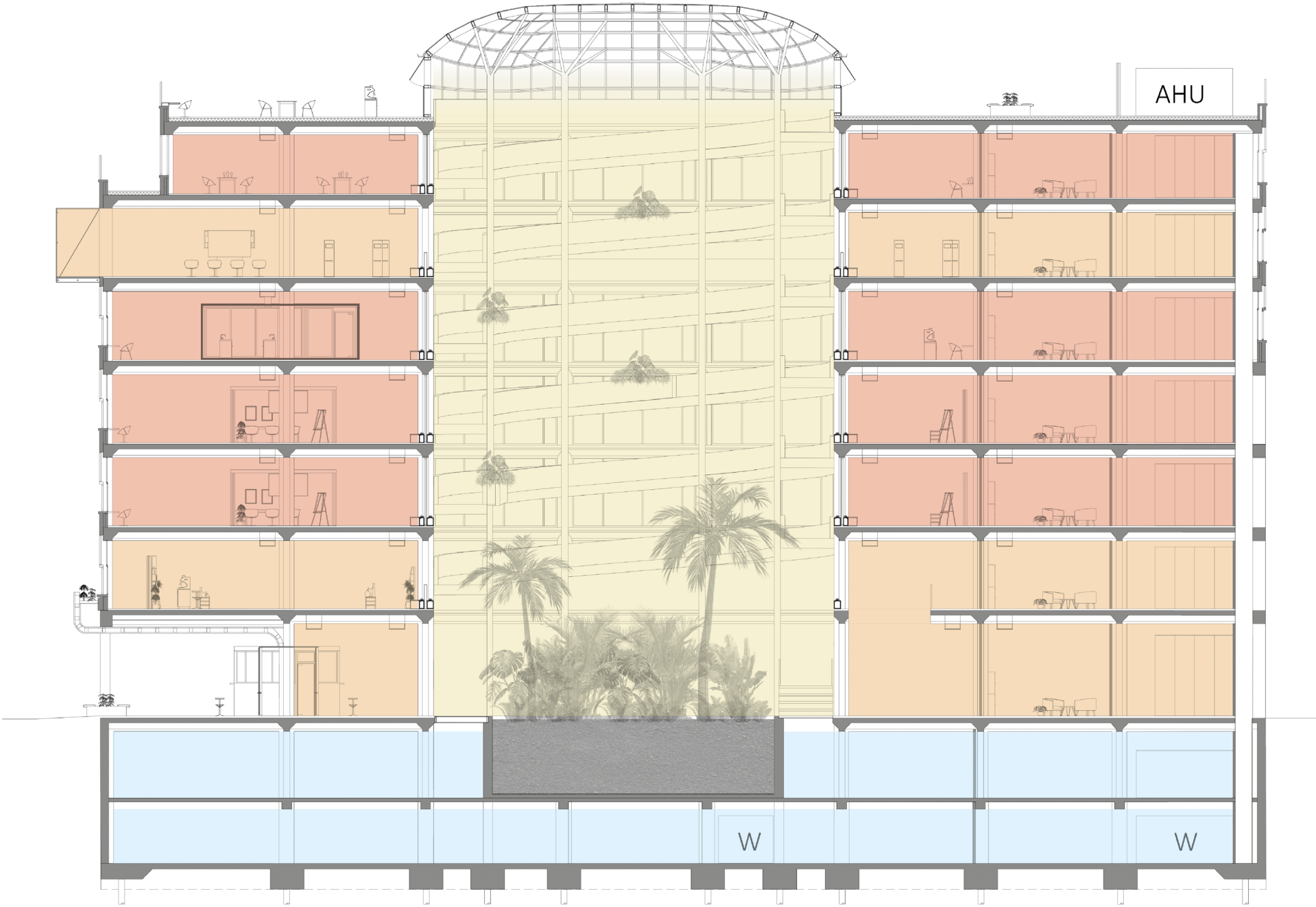






- I Research
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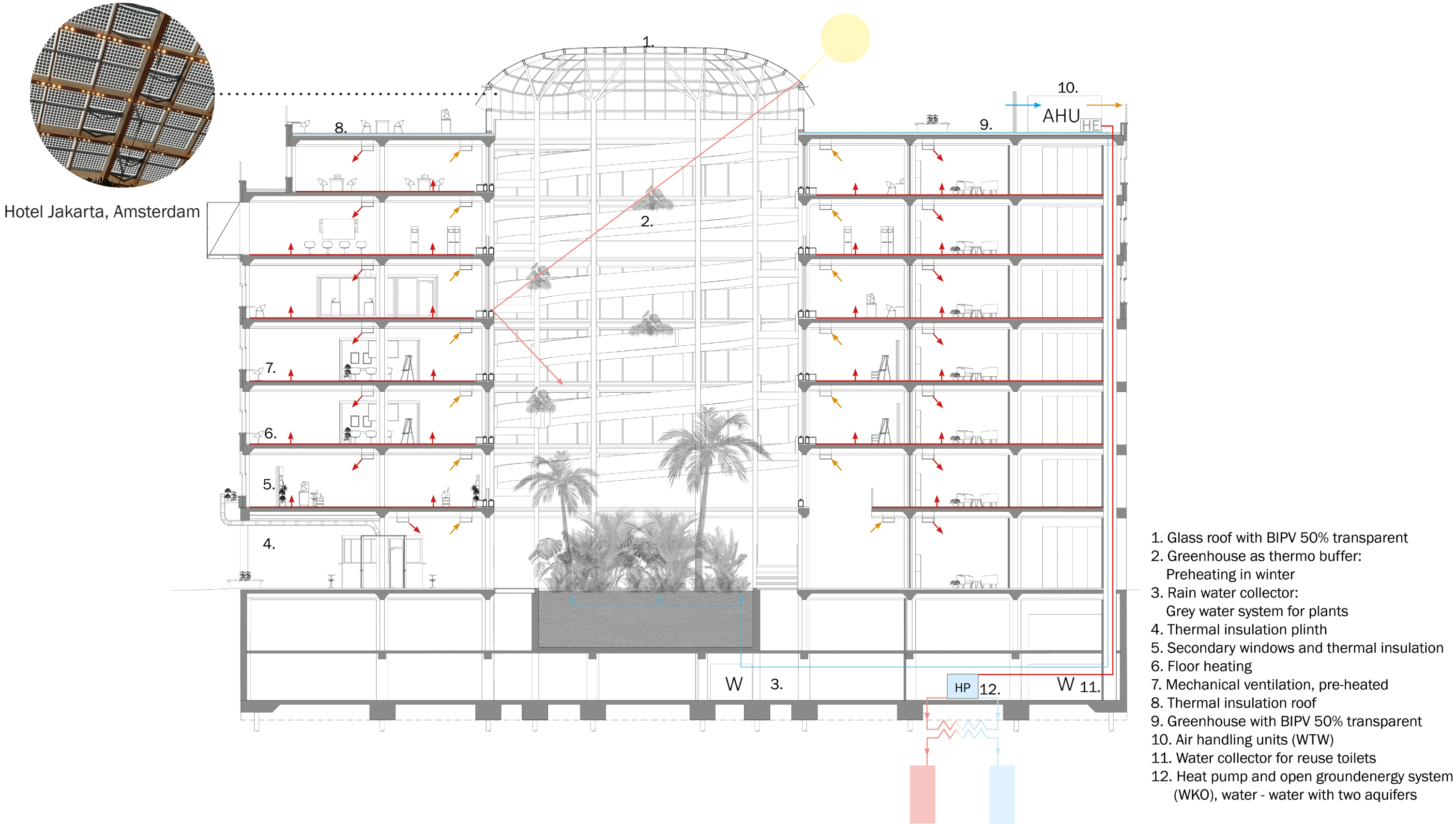
Thermal zones



- 20 degrees | education, cooking studio, restaurant
- 18 degrees | foodmarket, shop-in-shop, museum

- 16 degrees | atrium, circulation space heated by residual heat
- Exterior climate | bicycle parking, storage
- Self regulation climate | modules cooking studio

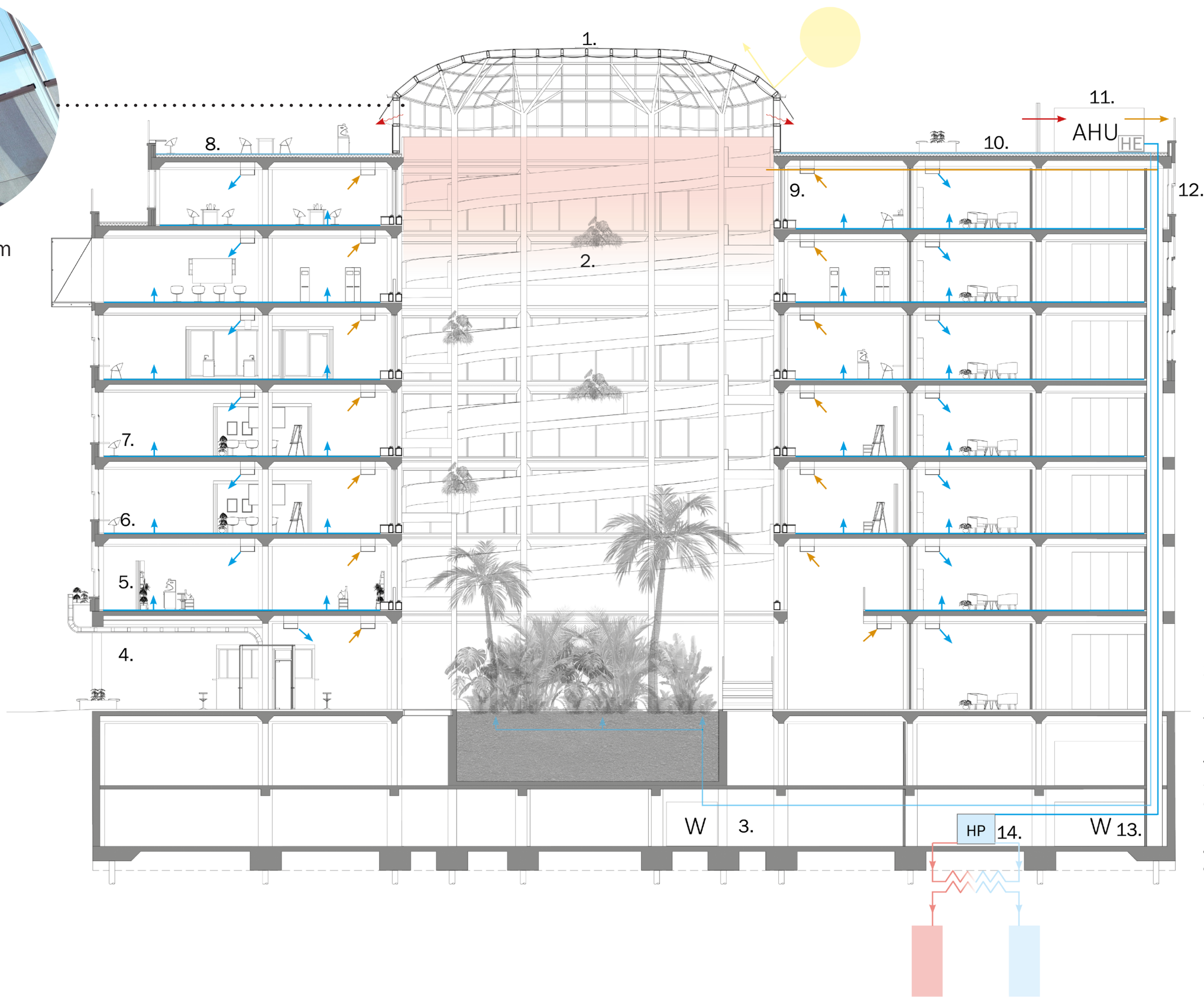
Winter situation



Summer situation

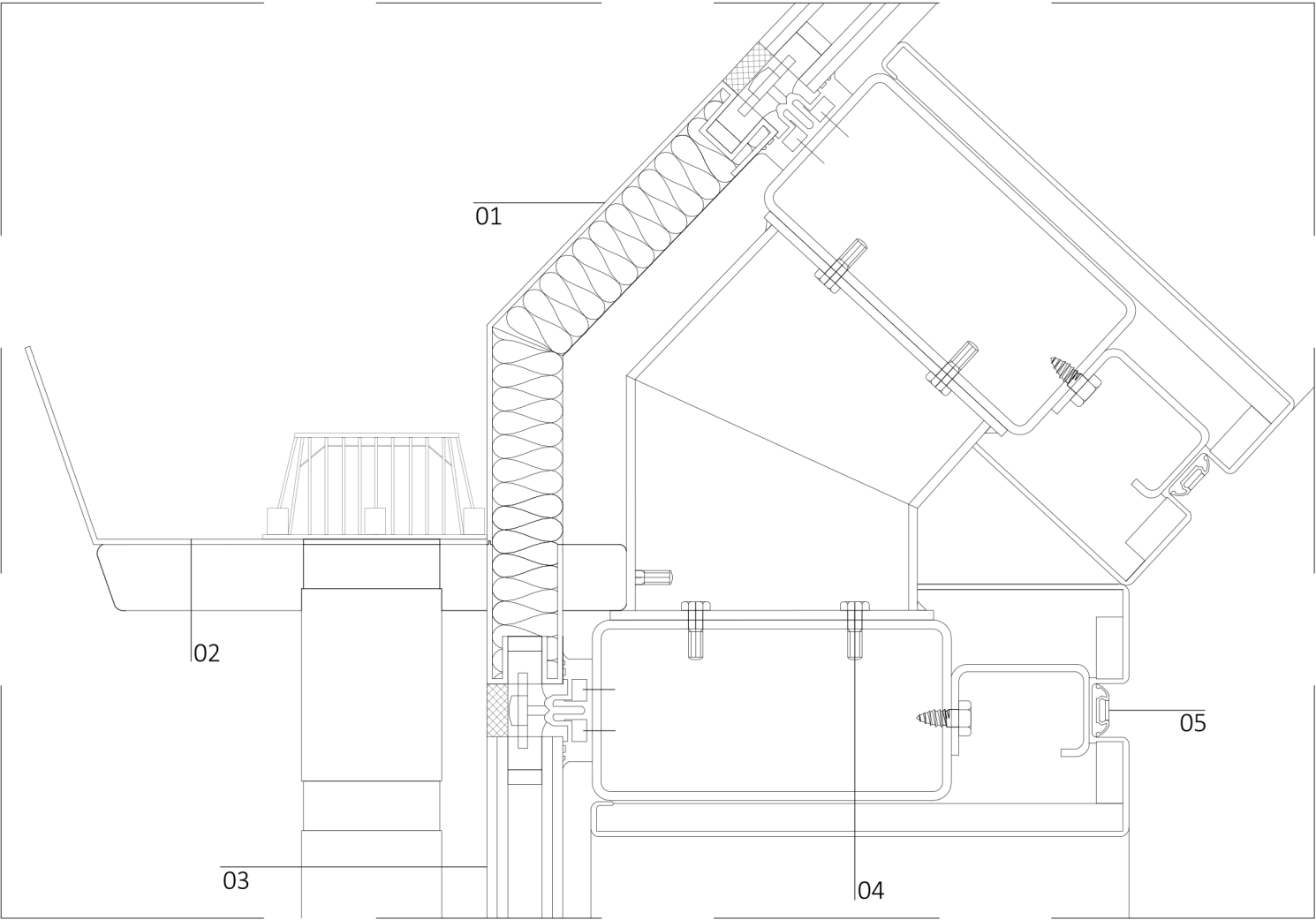


Grants, Westerham



- 1. Glass roof with BIPV 50% transparent
- 2. Greenhouse as thermo buffer:
Cooling in summer
- 3. Rain water collector:
Grey water system for plants
- 4. Thermal insulation plinth
- 5. Secondary windows and thermal insulation
- 6. Floor cooling
- 7. Mechanical ventilation
- 8. Thermal insulation roof
- 9. Store remaining heat for winter
- 10. Greenhouse with BIPV 50% transparent
- 11. Air handling units (WTW)
- 12. Dynamic sunscreens
- 13. Water collector for reuse toilets
- 14. Heat pump and open groundenergy system
(WKO), water - water with two aquifers

Detail gutter



- 01 Thermal insulation 40 mm
Steel profile 3 mm
- 02 Steel gutter width 220 mm
Steel square tube 300 x 40 mm
- 03 Glass 6.6/18/6.6 mm
Rainwater discharge
- 04 Bolt M6
Steel head plate
Steel square tube 200 x 100 mm
- 05 LED light

Rooftop

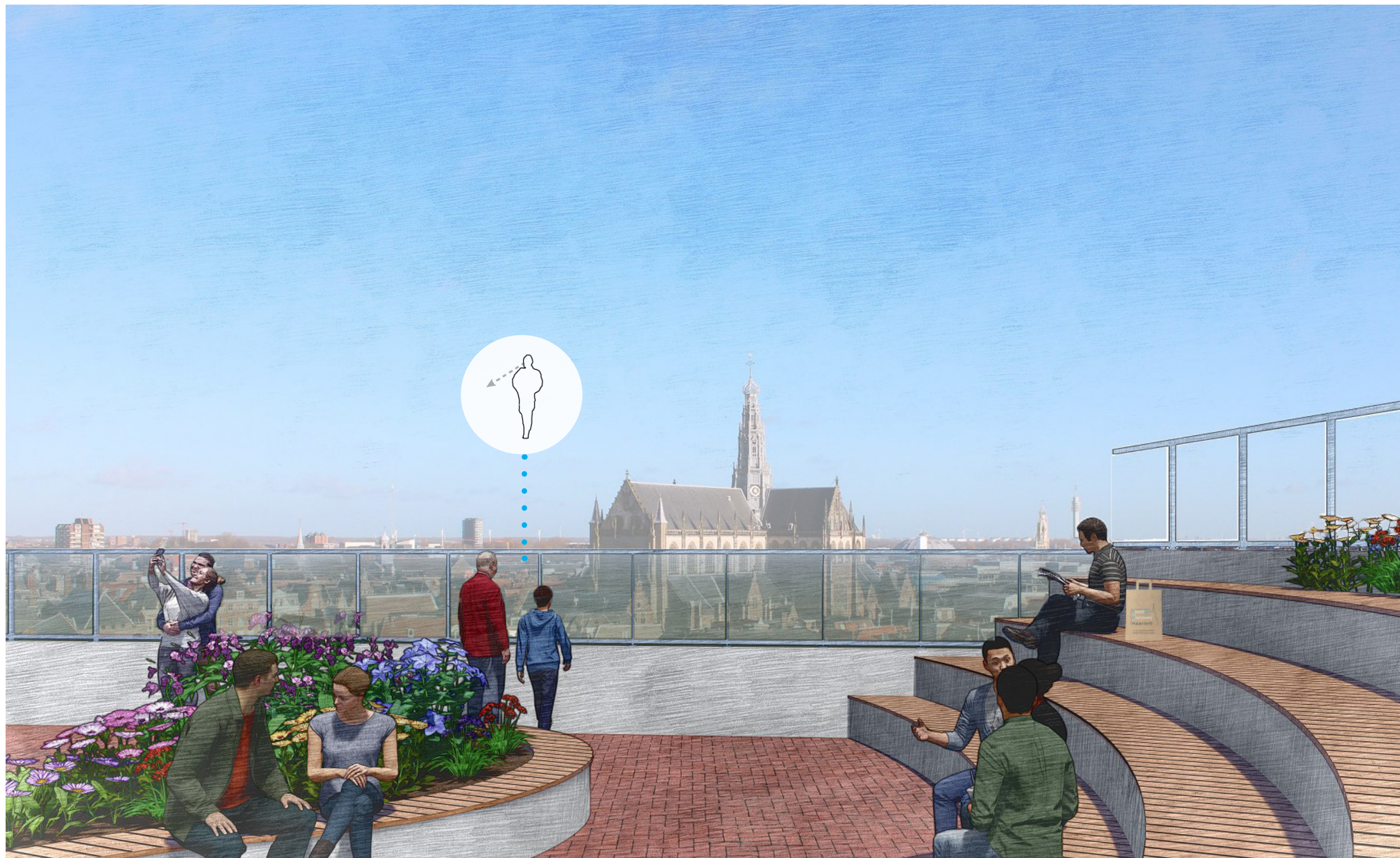


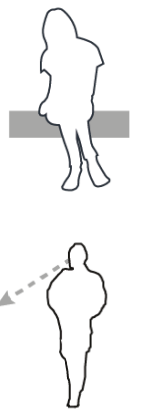
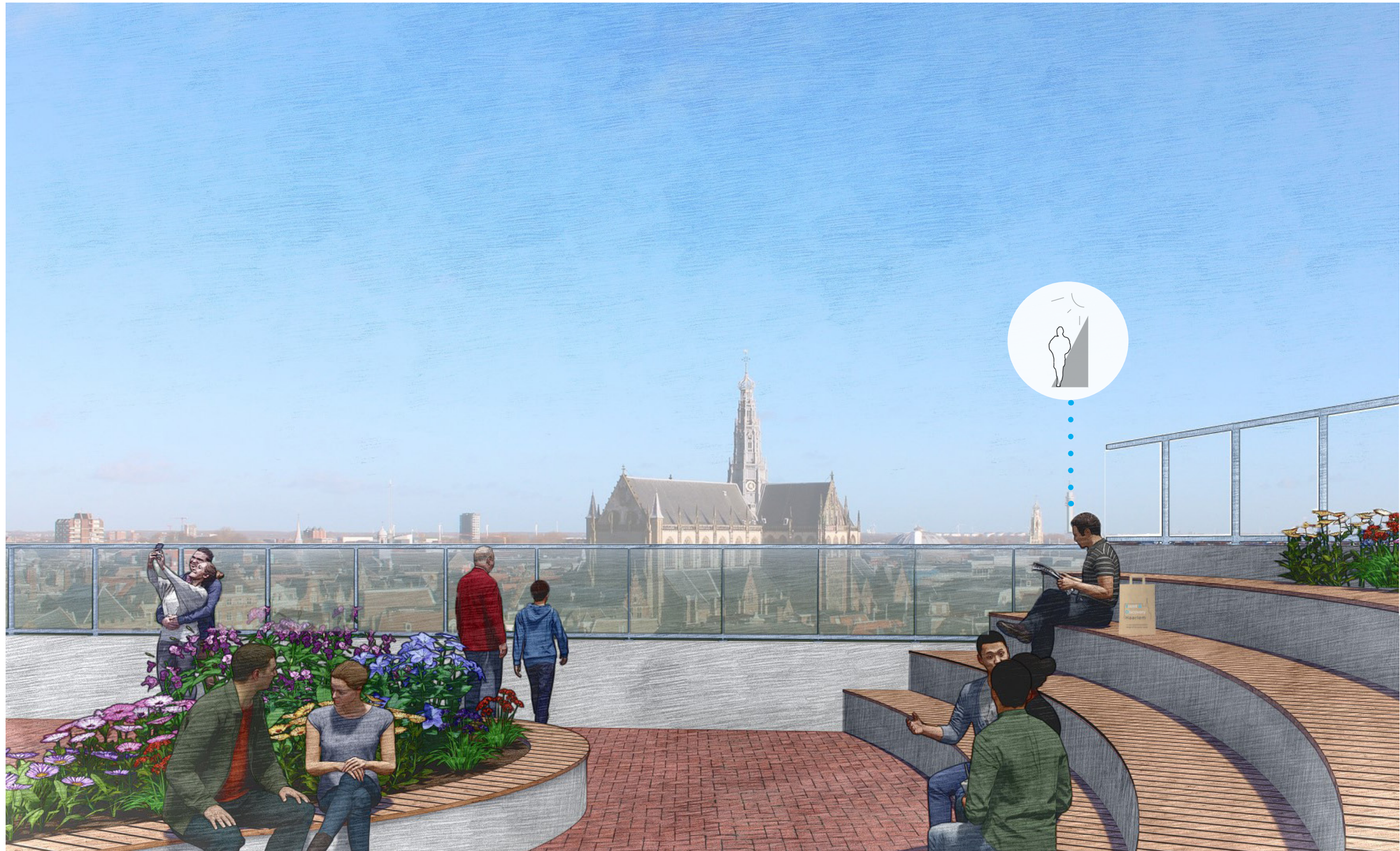
- 1 Amphitheatre
- 2 Bar
- 3 Kids playground
- 4 Greenhouse

Bird view











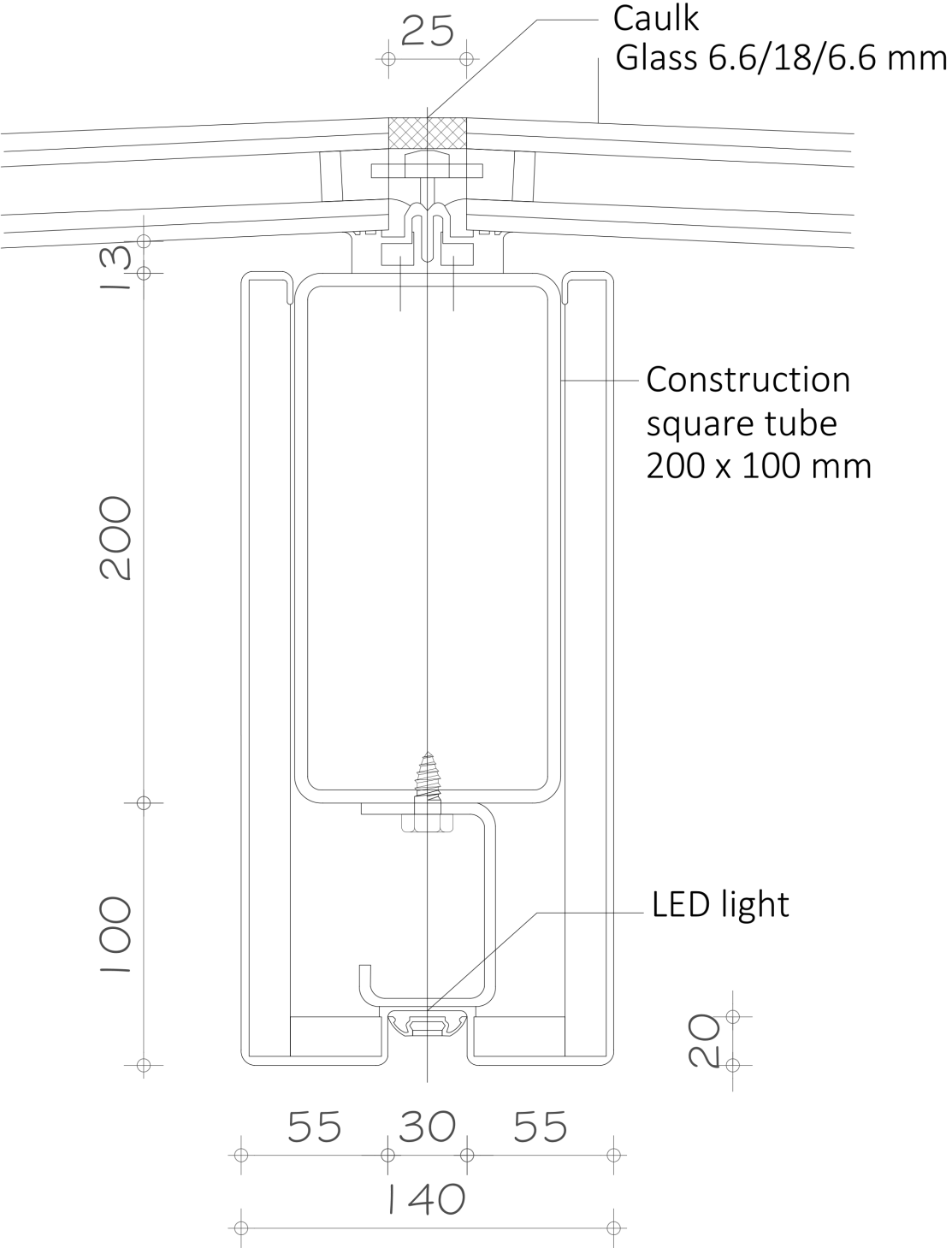


Video

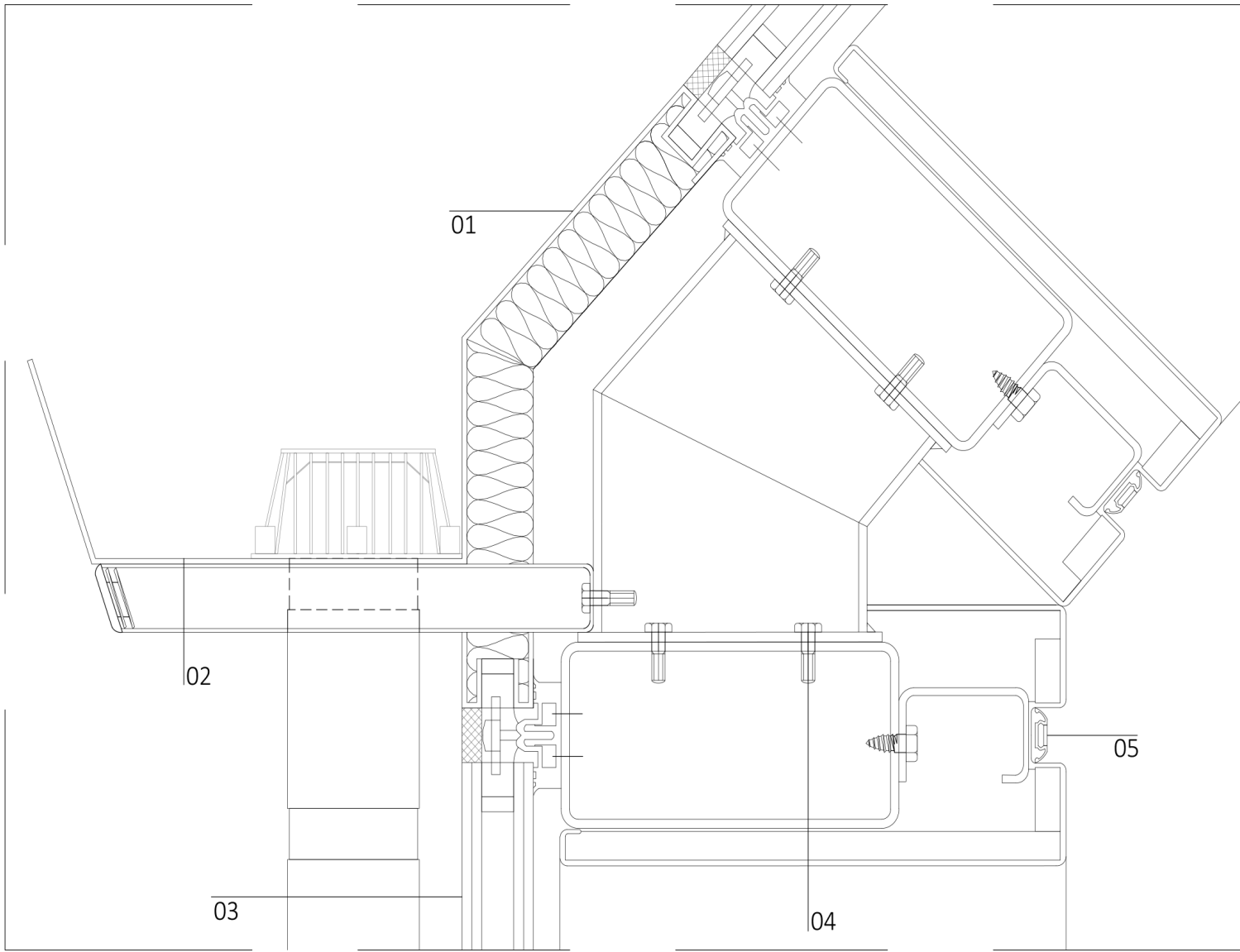




Detail Octatube

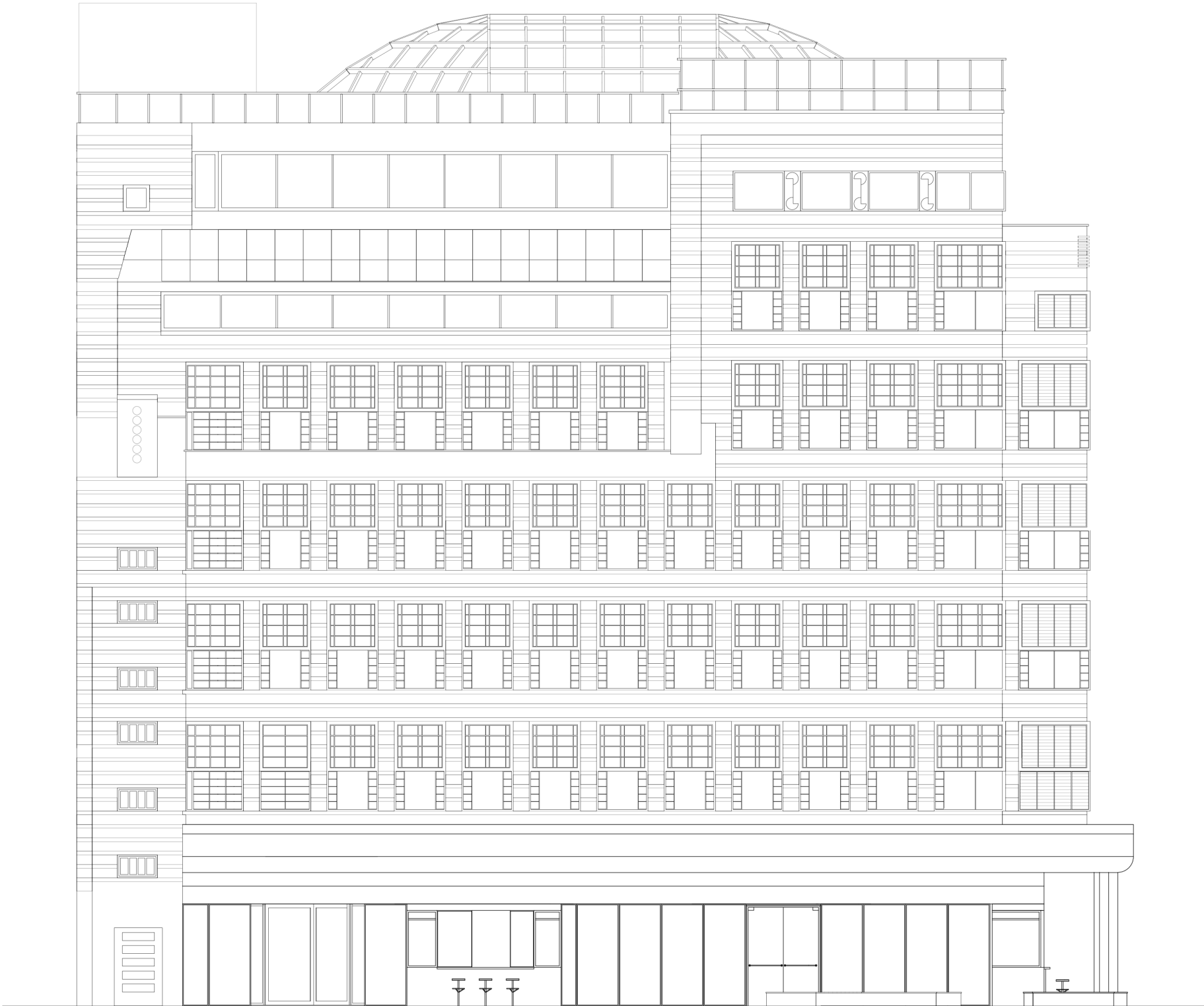


Detail gutter



- 01 Thermal insulation 40 mm
Steel profile 3 mm
- 02 Steel gutter width 220 mm
Steel square tube 300 x 40 mm
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Rainwater discharge
- 04 Bolt M6
Steel head plate
Steel square tube 200 x 100 mm
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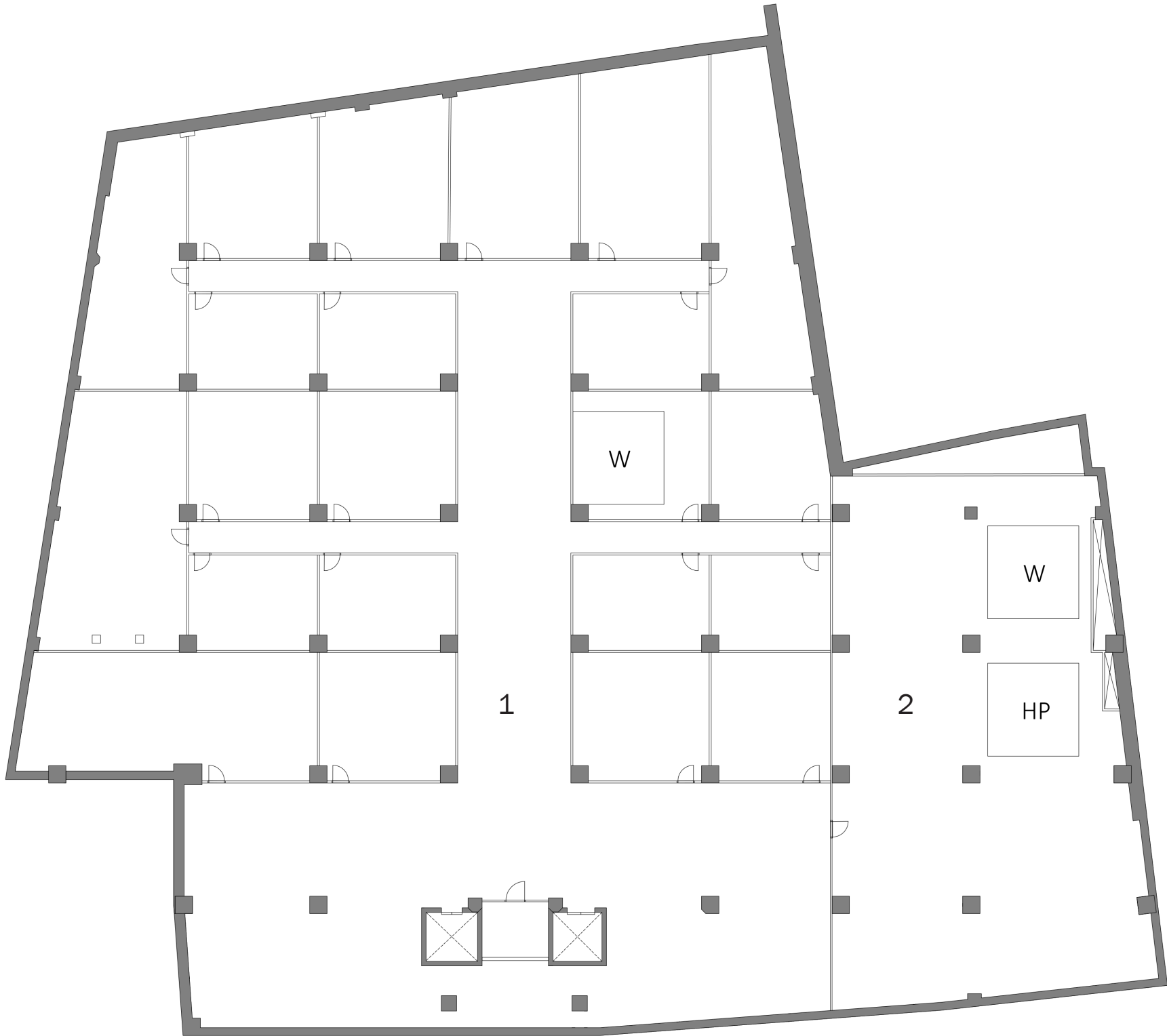
Elevation Grote Houtstraat



Elevation Gierstraat



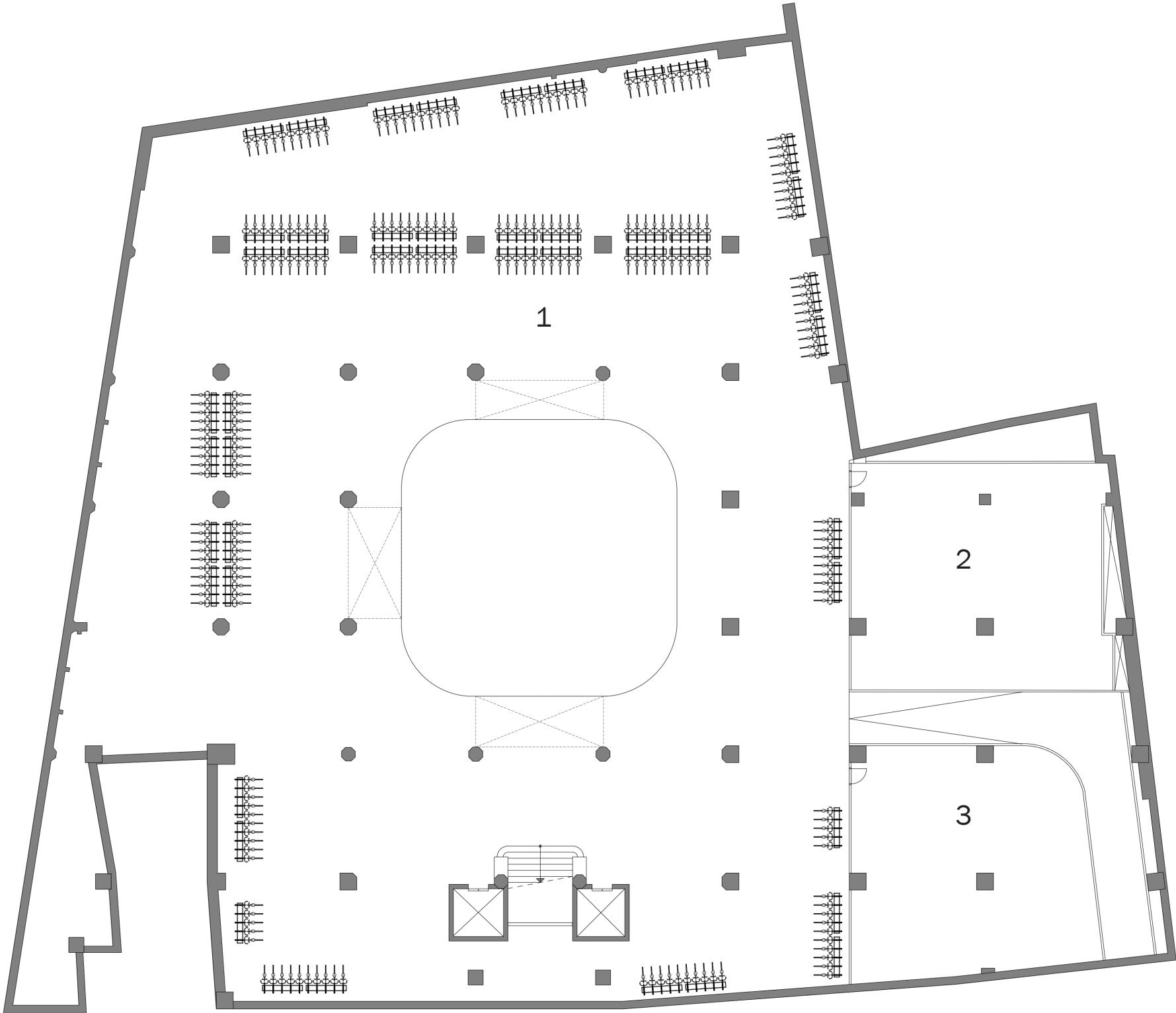
Basement -2



- 1 Storage
- 2 Installations



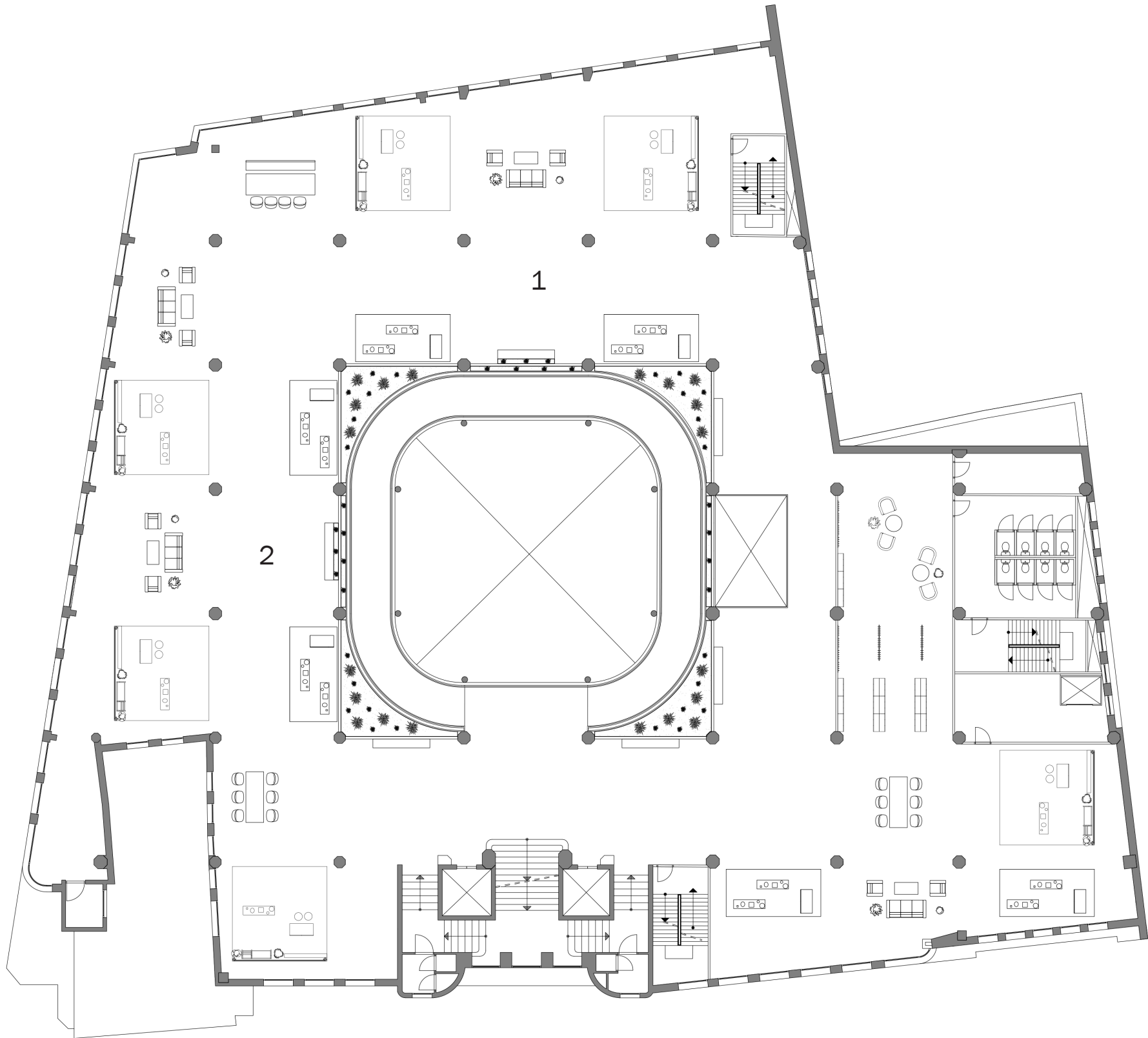
Basement -1



- 1 Bicycle parking
- 2 Installations
- 3 Storage



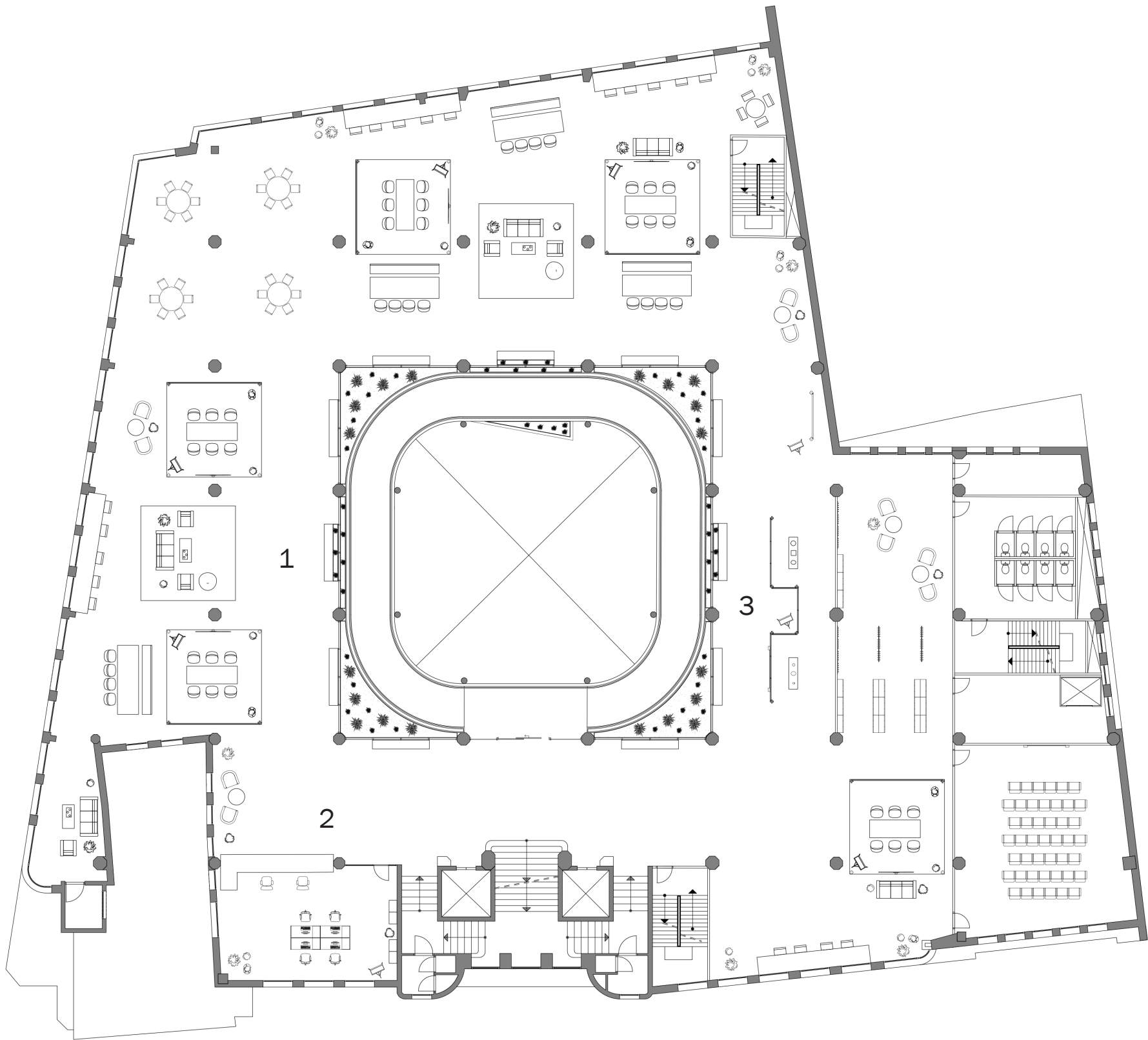
First floor



- 1 Shop-in-shops
- 2 Sit areas



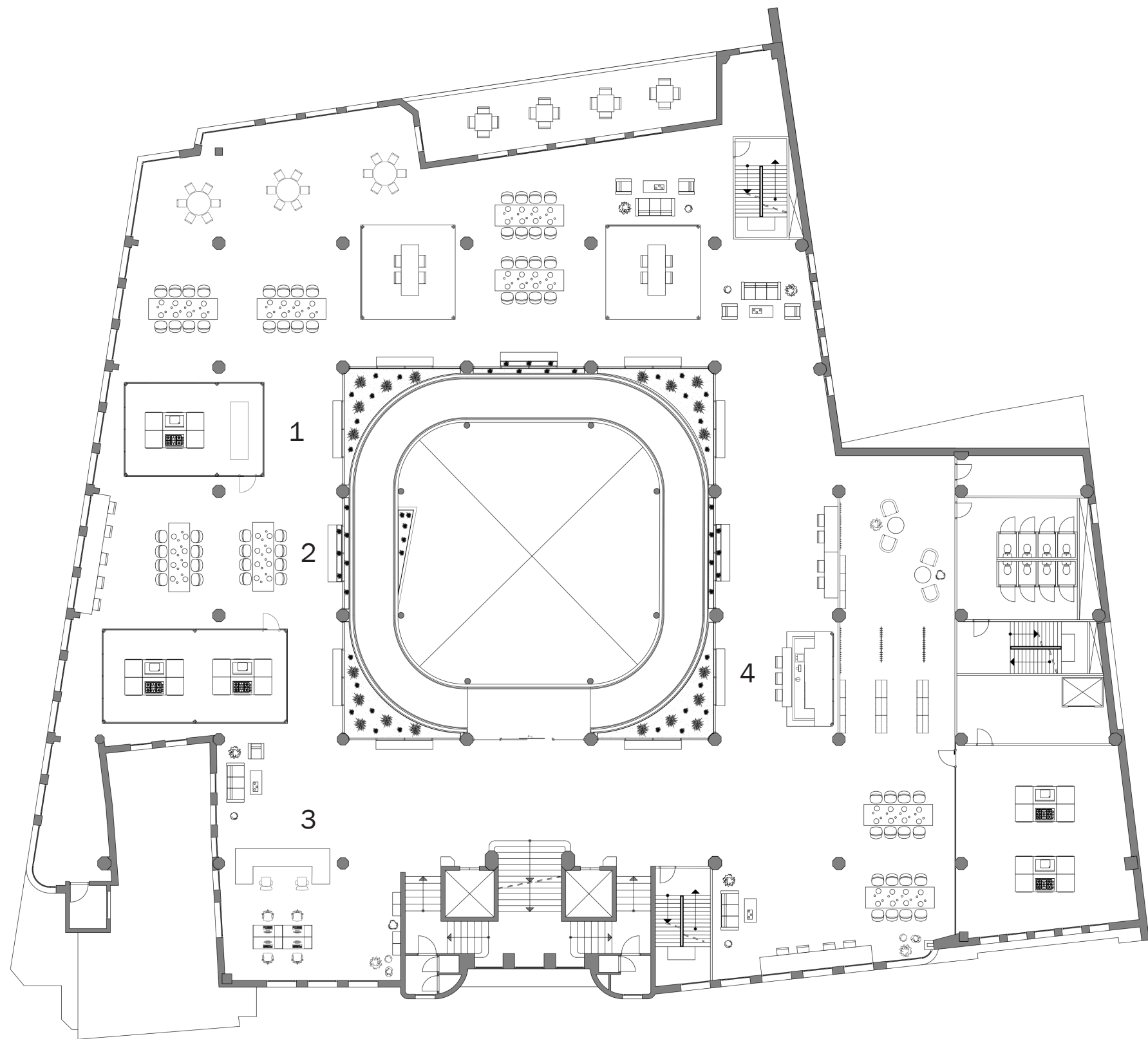
Third floor



- 1 Education module
- 2 Reception
- 3 Exposition



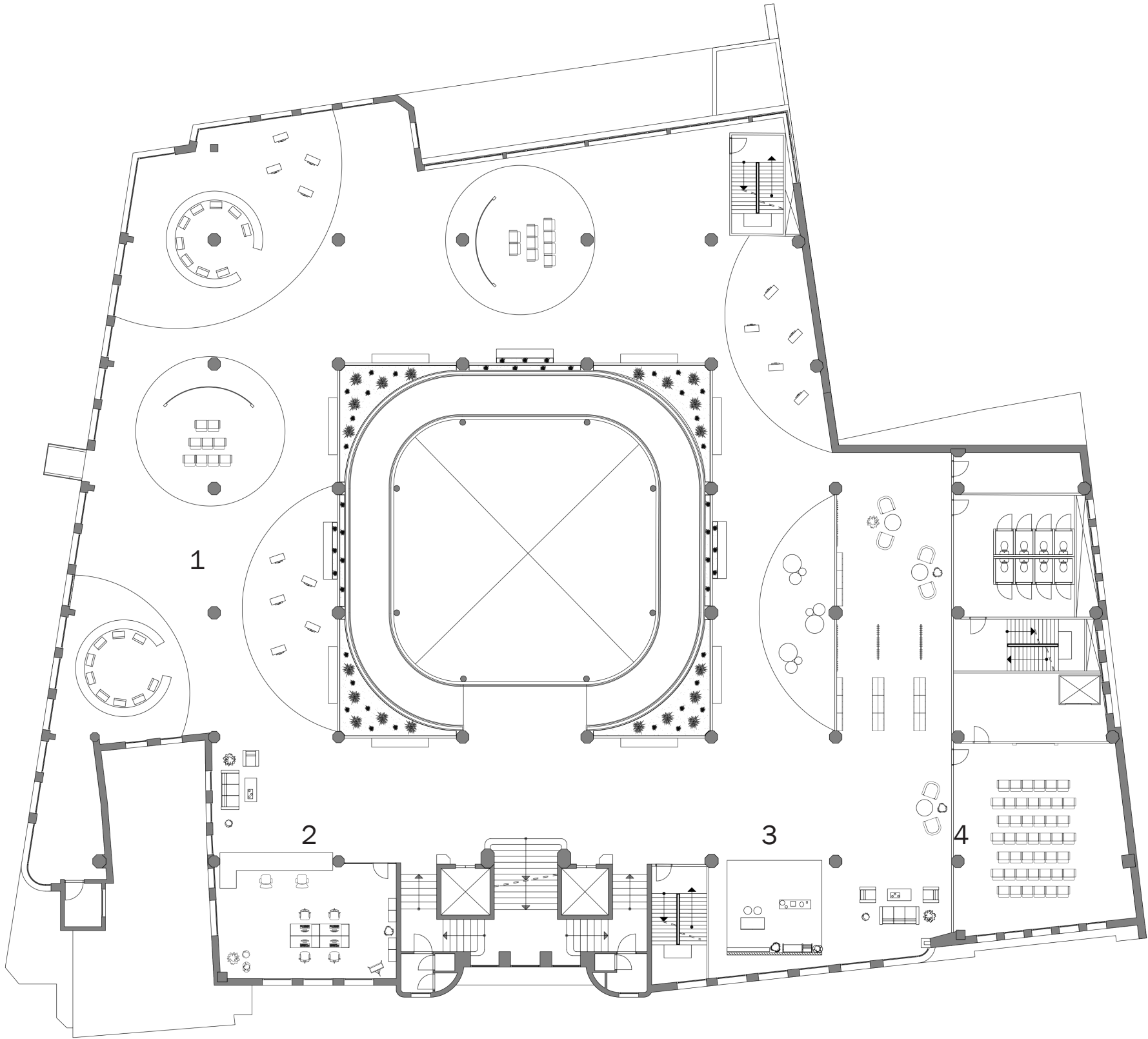
Fourth floor



- 1 Cooking module
- 2 Diner area
- 3 Reception
- 4 Bar



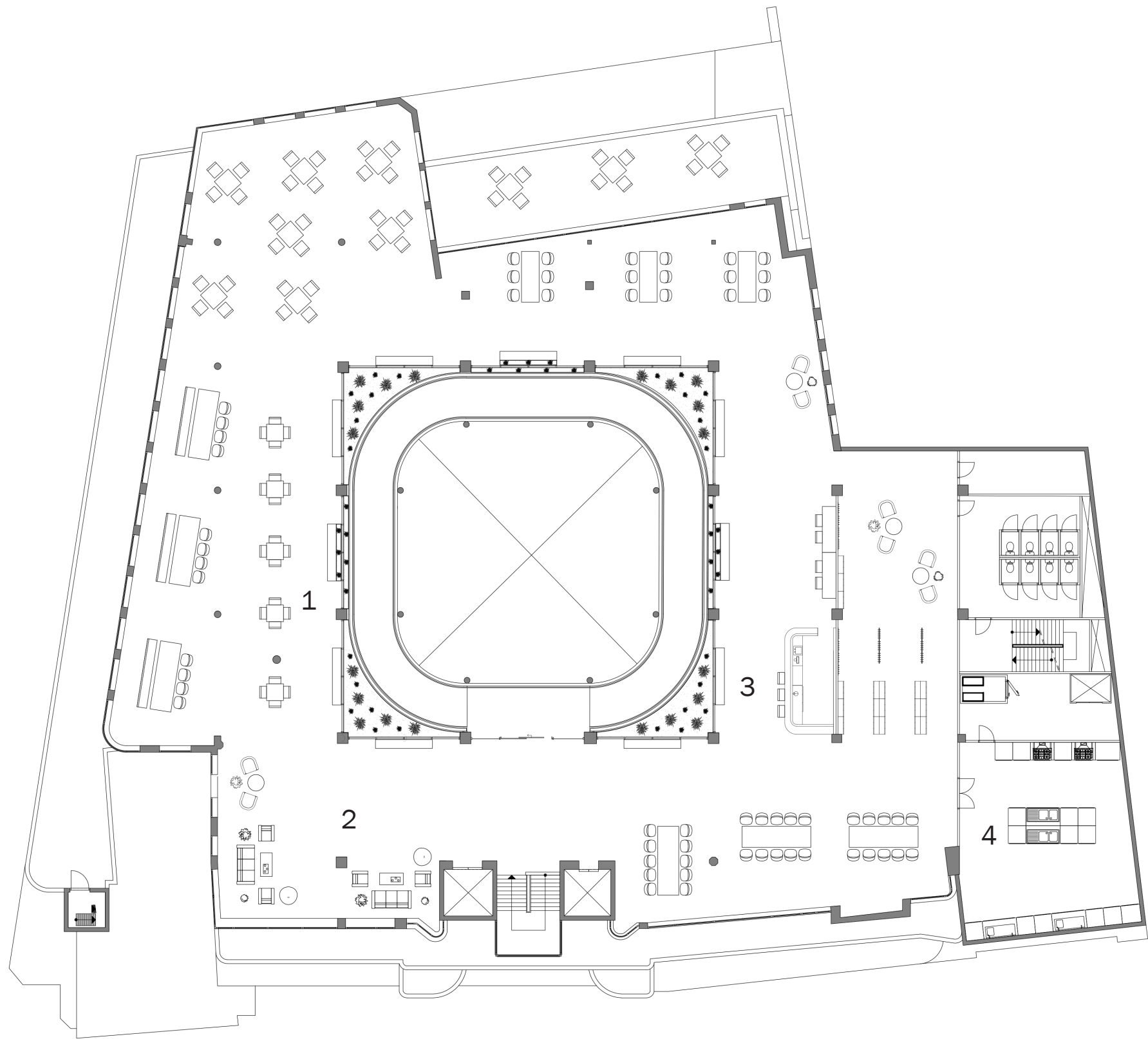
Fifth floor



- 1 Interactive museum
- 2 Ticket shop
- 3 Museum shop
- 4 Lecture room



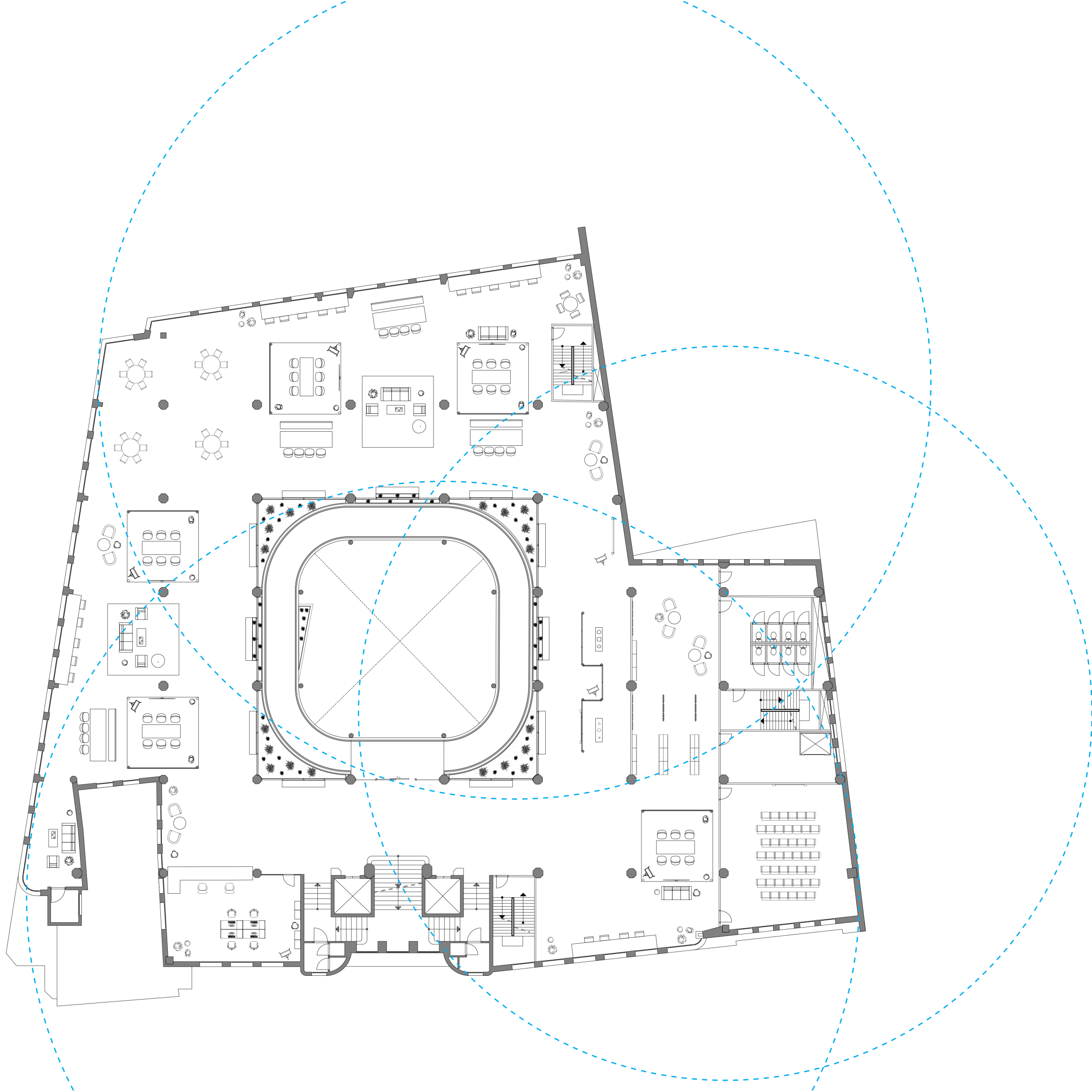
Sixth floor



- 1 Restaurant
- 2 Café
- 3 Bar
- 4 Kitchen



Escape routes



Scores field observations

Protection	<div>PROTECTION AGAINST TRAFFIC AND ACCIDENTS - FEELING SAFE</div> <div><div><div></div><div></div><div></div><div></div><div></div></div><div></div></div>	<div>PROTECTION AGAINST CRIME AND VIOLENCE - FEELING SECURE</div> <div><div><div></div><div></div><div></div><div></div><div></div></div><div></div></div>	<div>PROTECTION AGAINST UNPLEASANT SENSORY EXPERIENCES</div> <div><div><div></div><div></div><div></div><div></div><div></div></div><div></div></div>
Comfort	<div>OPPORTUNITIES TO WALK</div> <div><div><div></div><div></div><div></div><div></div><div></div></div><div></div></div>	<div>OPPORTUNITIES TO STAND/STAY</div> <div><div><div></div><div></div><div></div><div></div><div></div></div><div></div></div>	<div>OPPORTUNITIES TO SIT</div> <div><div><div></div><div></div><div></div><div></div><div></div></div><div></div></div>
	<div>OPPORTUNITIES TO SEE</div> <div><div><div></div><div></div><div></div><div></div><div></div></div><div></div></div>	<div>OPPORTUNITIES TO TALK AND LISTEN</div> <div><div><div></div><div></div><div></div><div></div><div></div></div><div></div></div>	<div>OPPORTUNITIES FOR PLAY AND EXERCISE</div> <div><div><div></div><div></div><div></div><div></div><div></div></div><div></div></div>
Delight	<div>SCALE</div> <div><div><div></div><div></div><div></div><div></div><div></div></div><div></div></div>	<div>OPPORTUNITIES TO ENJOY THE POSITIVE ASPECTS OF CLIMATE</div> <div><div><div></div><div></div><div></div><div></div><div></div></div><div></div></div>	<div>POSITIVE SENSORY EXPERIENCES</div> <div><div><div></div><div></div><div></div><div></div><div></div></div><div></div></div>

Subtropical garden plants

Alexandra palm

Travelers palm

Sabal palm

Date palm

Blue Fescue

Philodendron
monstera



King palm

Coconut palm

Banana plant

Fan palm

Elephant ear plant

Sago palm

Relation void and staircase

