



P5 - Presentation

# ACTIVATING LIFESTYLES

Architecture promoting health and well-being

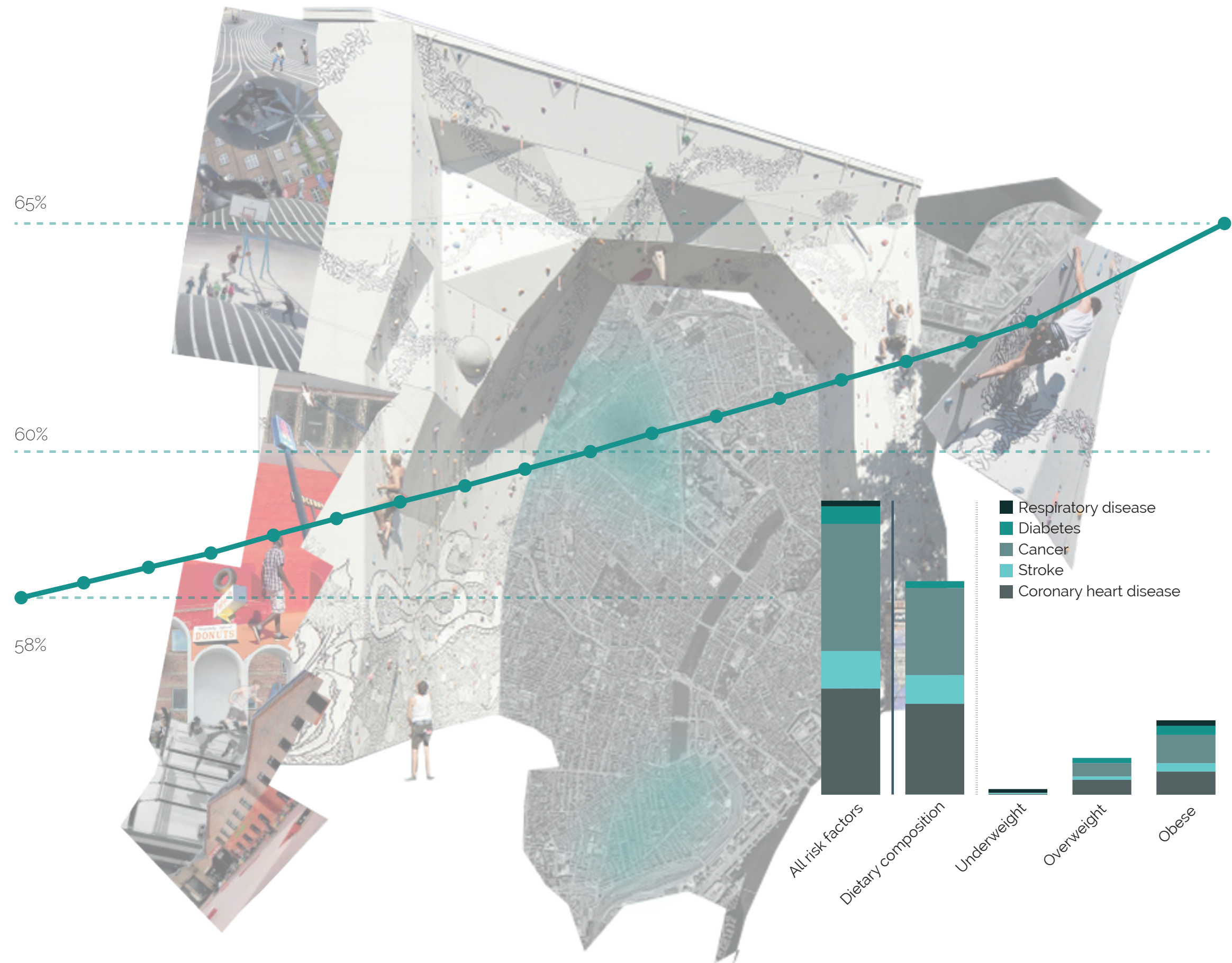
Public building graduation studio - Ydre Nørrebro, Copenhagen

Joram Vianen - 5960169

Antonio Cantero  
Sang Lee  
Ger Warries



# PROBLEM STATEMENT





# RESEARCH QUESTIONS

How can architectural design strategies be deployed as a catalyst for stimulating a **healthy lifestyle** and improving physical wellbeing among **low-income groups** in Ydre Nørrebro?

What facilities regarding improving physical health are missing in Ydre Nørrebro?

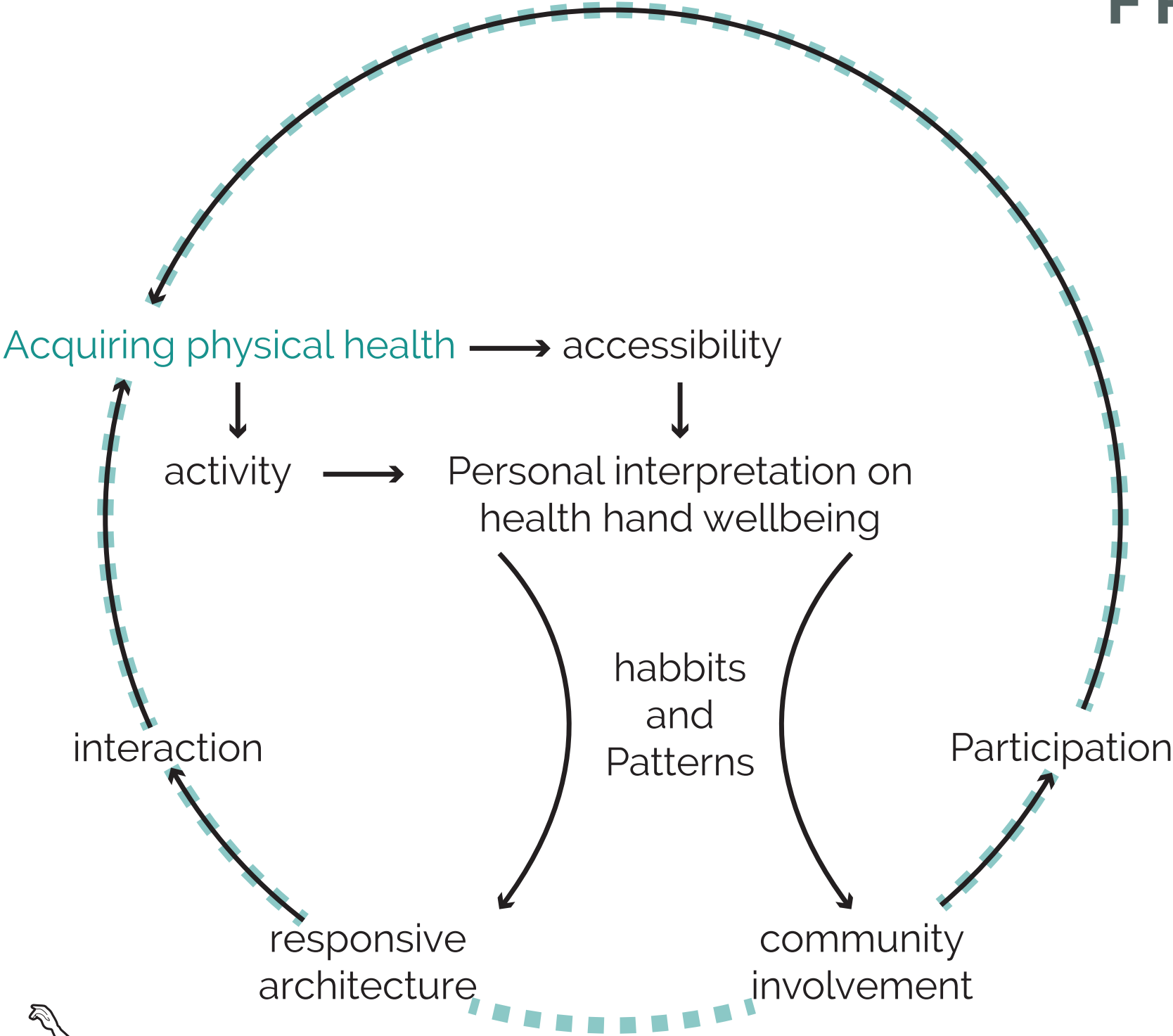
How can public health facilities be made accessible to low-income groups?

What is needed to stimulate and activate participation of low-income groups within a health and well-being focused environment?

How can the needs of different users for achieving a healthy lifestyle and improved wellbeing be translated into preventative architectural design measures?



# FRAMEWORK





# DEMOGRAPHICS



Sarah and Oscar - Age 38 and 40

Disposable income:  
medium income  
Family structure:  
couple without children

Healthcare:  
Access to some **basic private healthcare services**. Mostly reliant on Denmark's healthcare system

Physical activity:  
Without children they have **more time to spend on physical activities** like sports or walking. Access to basic and public sport facilities

Nutrition:  
**Average access to healthy food** alternatives and healthy dietary habits.



Family Celik - age 55, 56, 20, 25

Disposable income:  
low income  
Family structure:  
small family

Healthcare:  
**Reliant on Denmark's public healthcare system**. Language barriers and lack of familiarity with the system can prevent use of the public healthcare system

Physical activity:  
**Access to free and public sport facilities**. Commercial gyms and sport clubs are not always possible

Nutrition:  
**Restricted access to healthy food** alternatives often leading to unhealthy dietary habits



Maria - age 29

Disposable income:  
low income  
Family structure:  
Single

Healthcare:  
**Access to Denmark's public healthcare system**. Might not use healthcare facilities often due to Maria's age

Physical activity:  
**Limited access to sport facilities**. Mostly reliant on low-cost public facilities

Nutrition:  
**Restricted access to healthy food**. High education can mean an understanding in cheap healthy food alternatives despite her low income



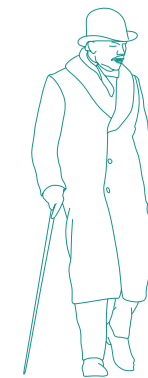
Family Nielsen - age 37, 38, 3, 5, 8, 11

Disposable income:  
high income  
Family structure:  
large family

Healthcare:  
**Access to premium private healthcare and wellness services** like therapy and private trainers

Physical activity:  
**Access to premium and private sport facilities**. Active holidays abroad, exclusive memberships and private coaching possible

Nutrition:  
**Access to premium and healthy food** sources. Possibility to frequently eat out



David - age 74

Disposable income:  
low / medium income  
Family structure:  
Widower

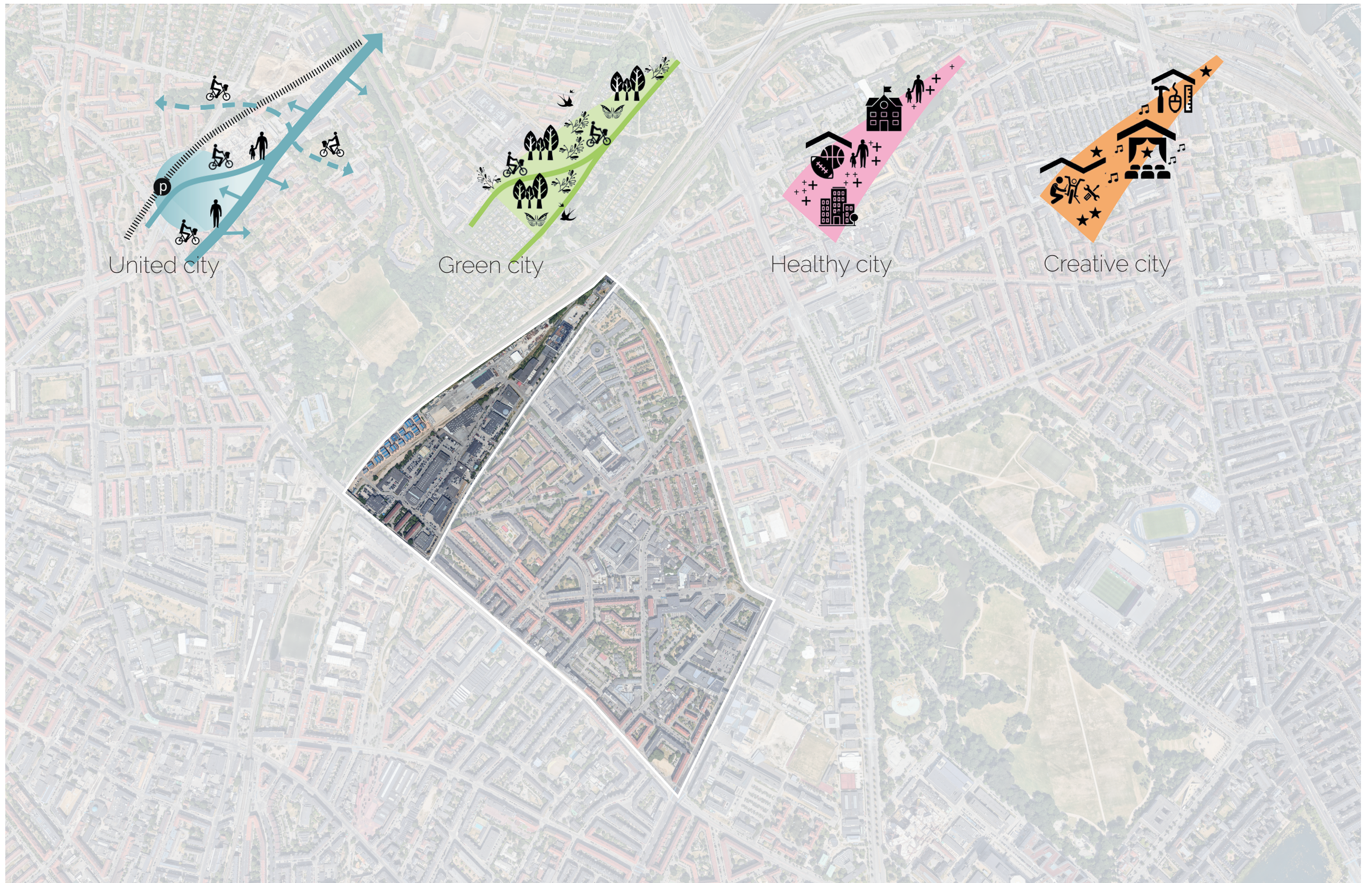
Healthcare:  
**Good access to Denmark's healthcare system**. Low income could limit access to private health services or additional care that isn't subsidized

Physical activity:  
**Access to public facilities and subsidized elderly activity programs**. Possible limited participation to organized activity facilities

Nutrition:  
**Less budget for buying healthy food** and less knowledge of cheap healthy food alternatives



# MUNICIPAL VISION





# NEIGHBOURHOOD POTENTIAL

Borders interfere with access to public health areas



Bridging borders to incorporate public health areas



Extending the existing public space connecting to surrounding neighbourhoods

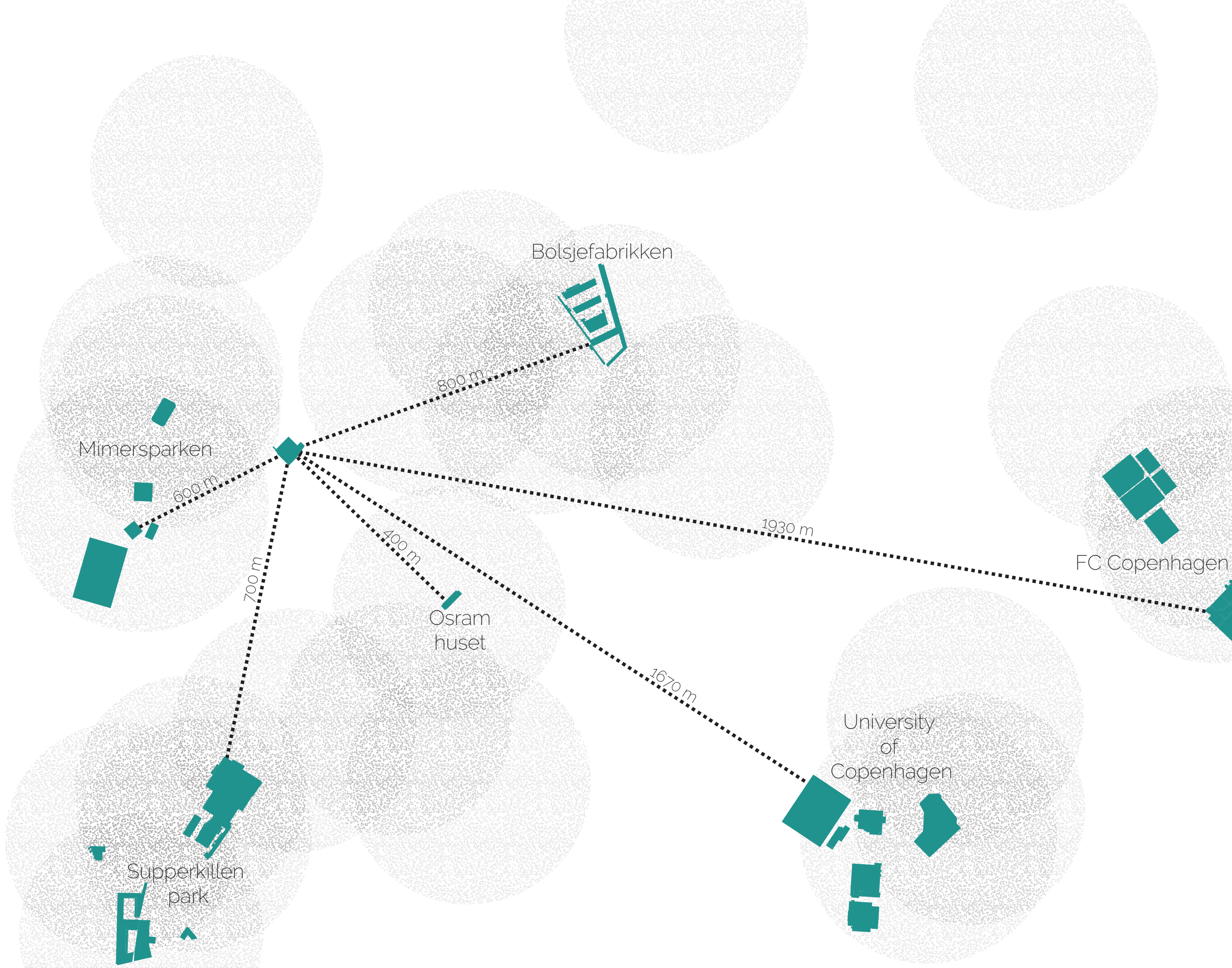




# SPORT FACILITY MAPPING





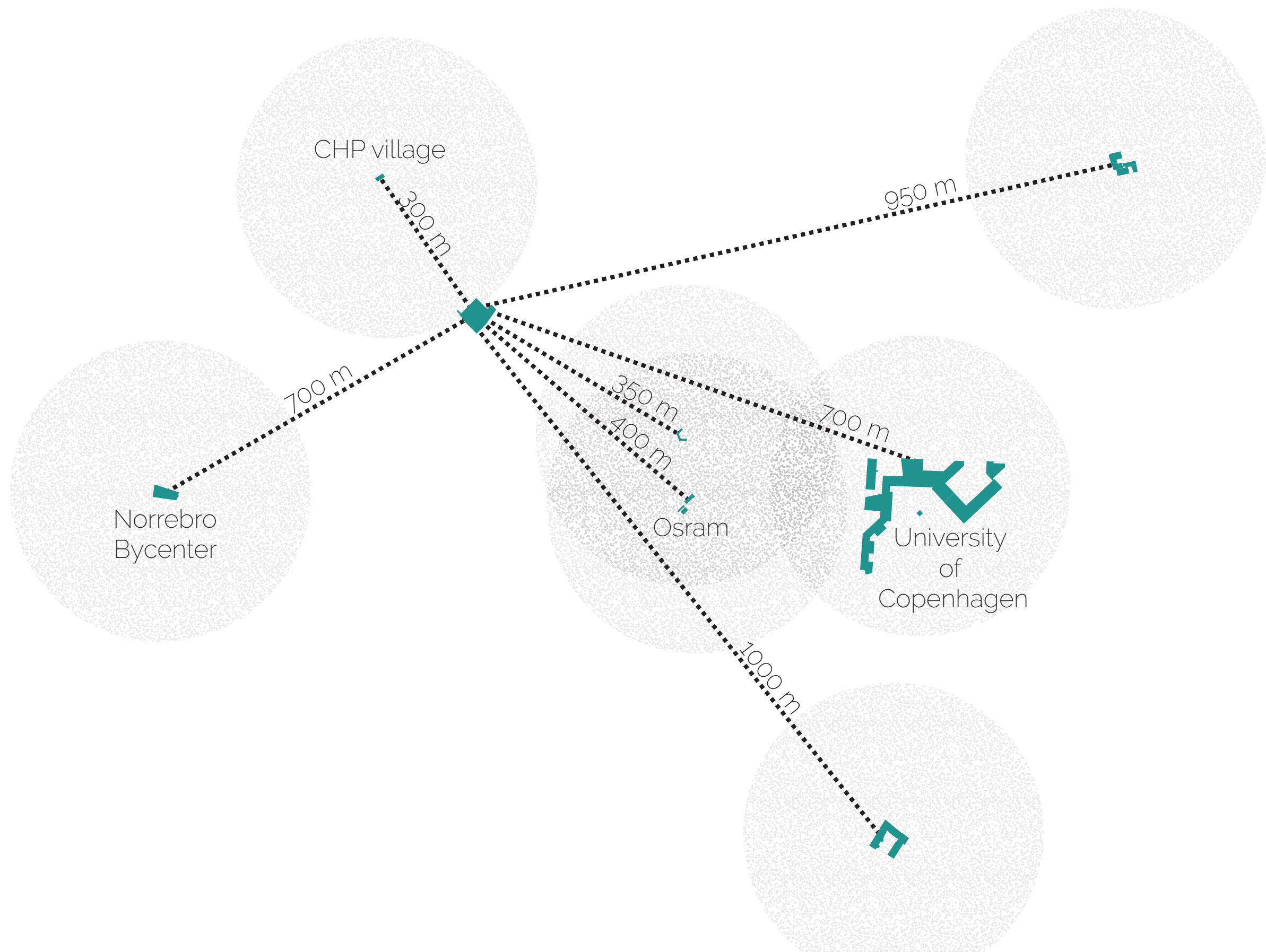




# DIET FACILITY MAPPING



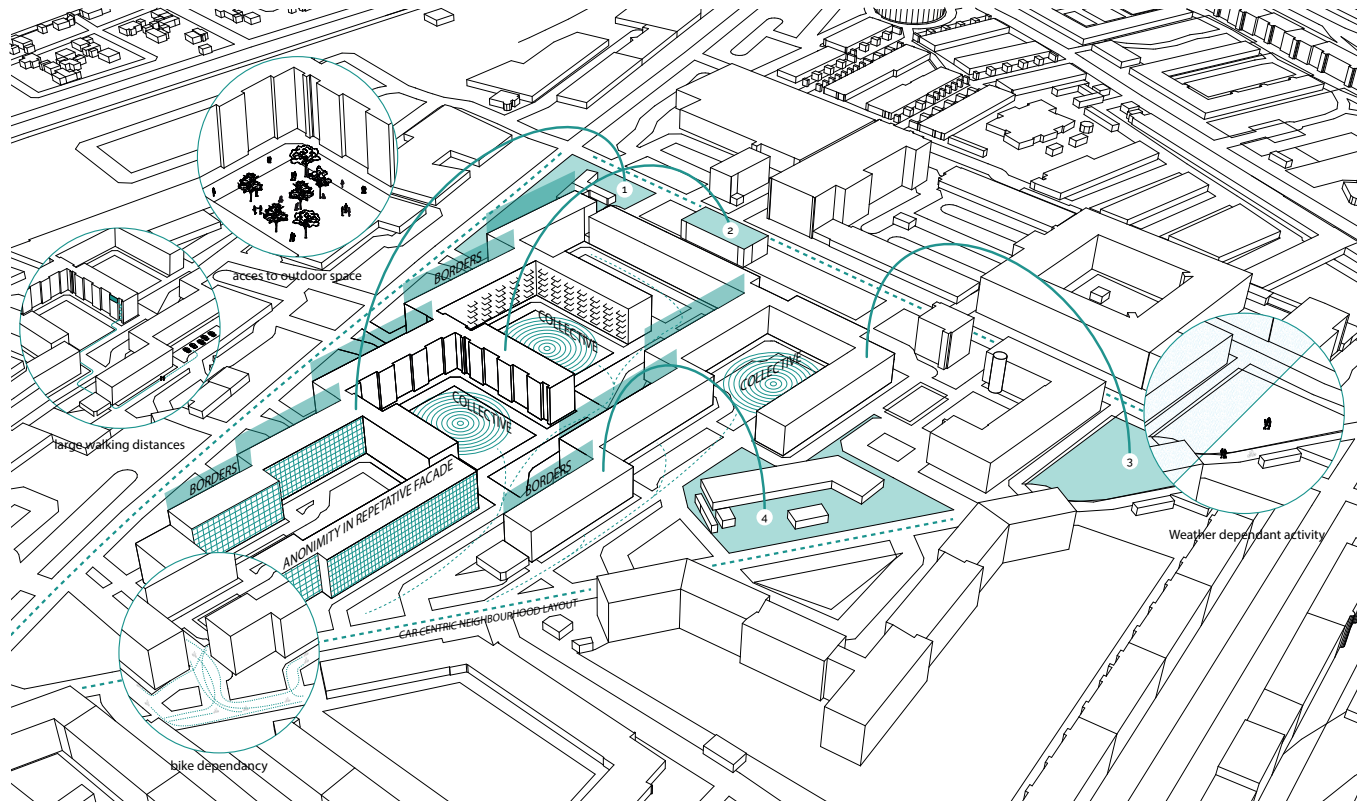




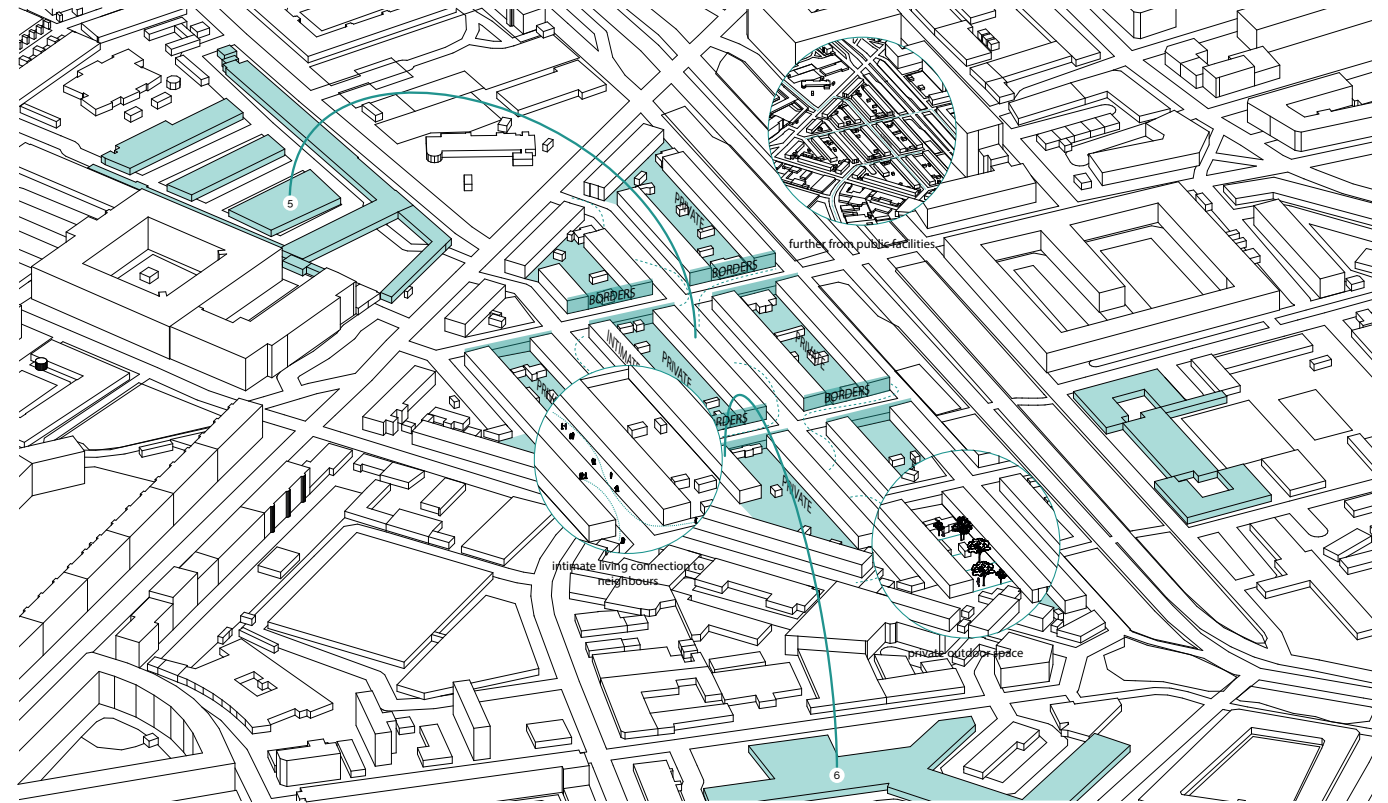


# ETHNOGRAPHY

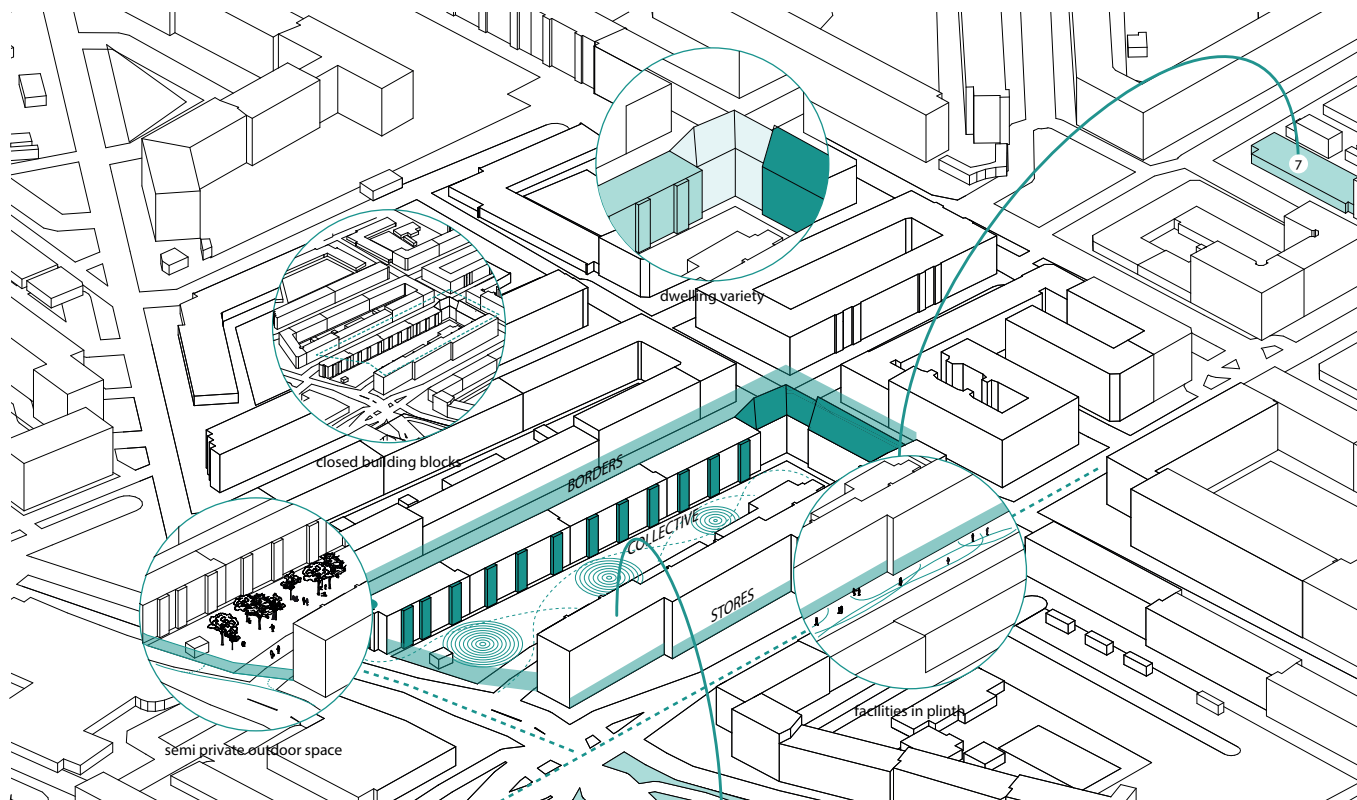
Public housing blocks



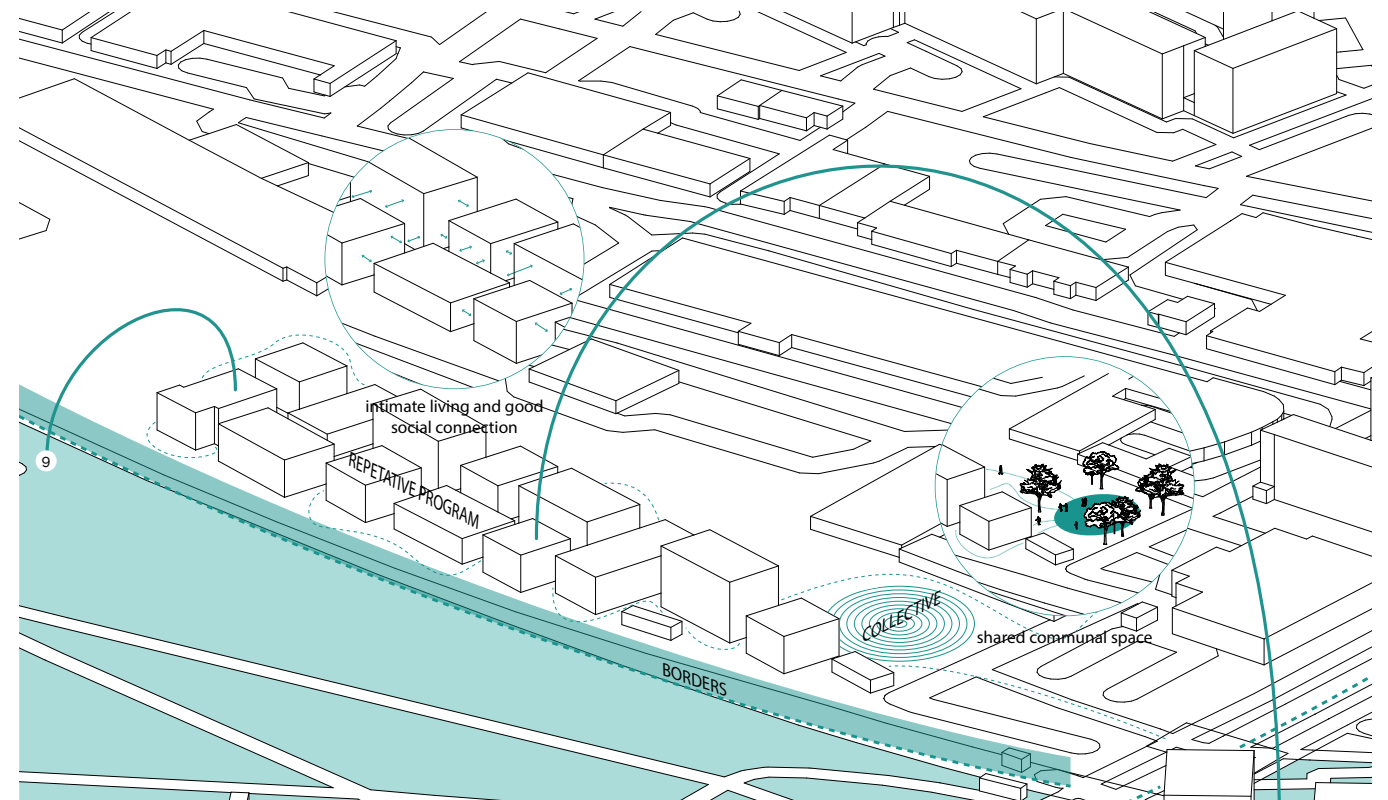
Private row houses



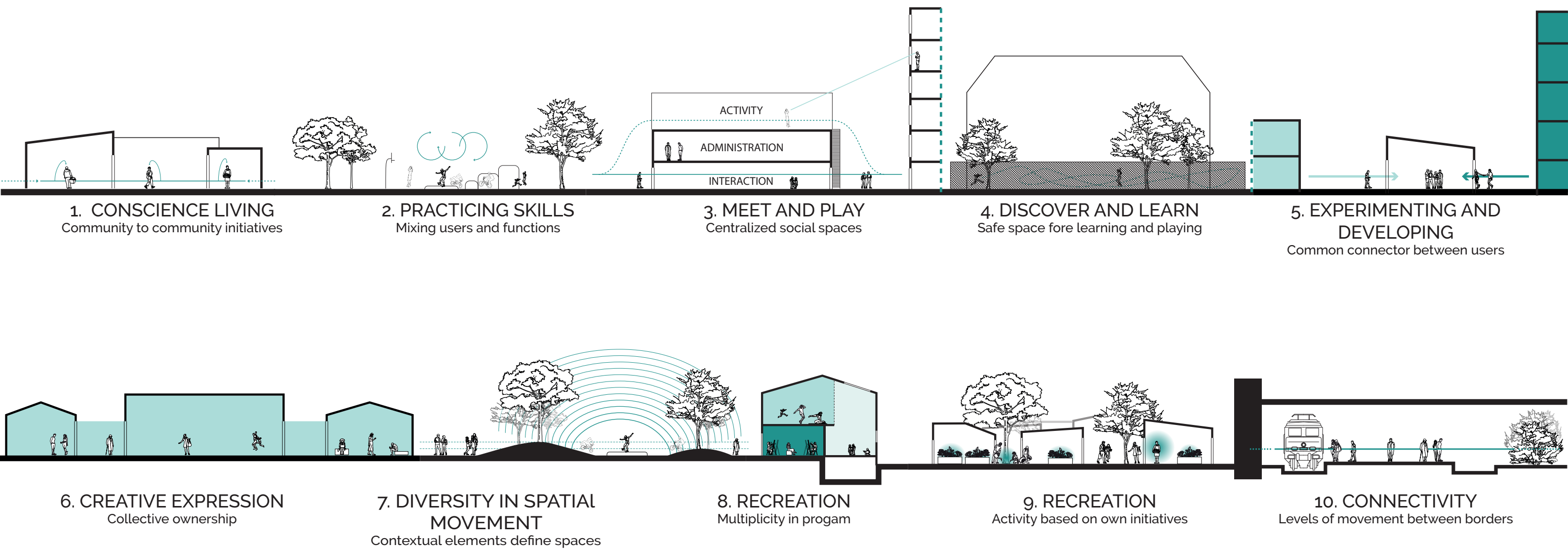
Private housing blocks



Student housing



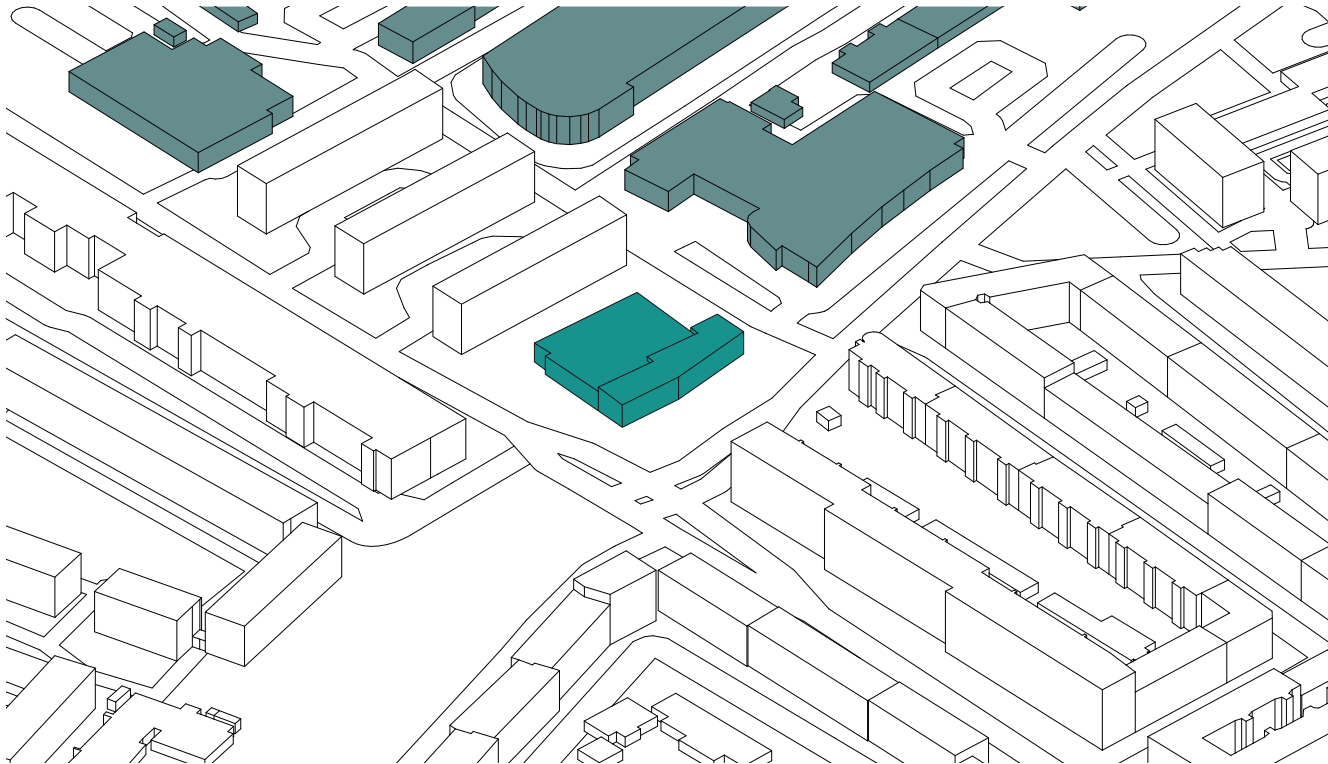




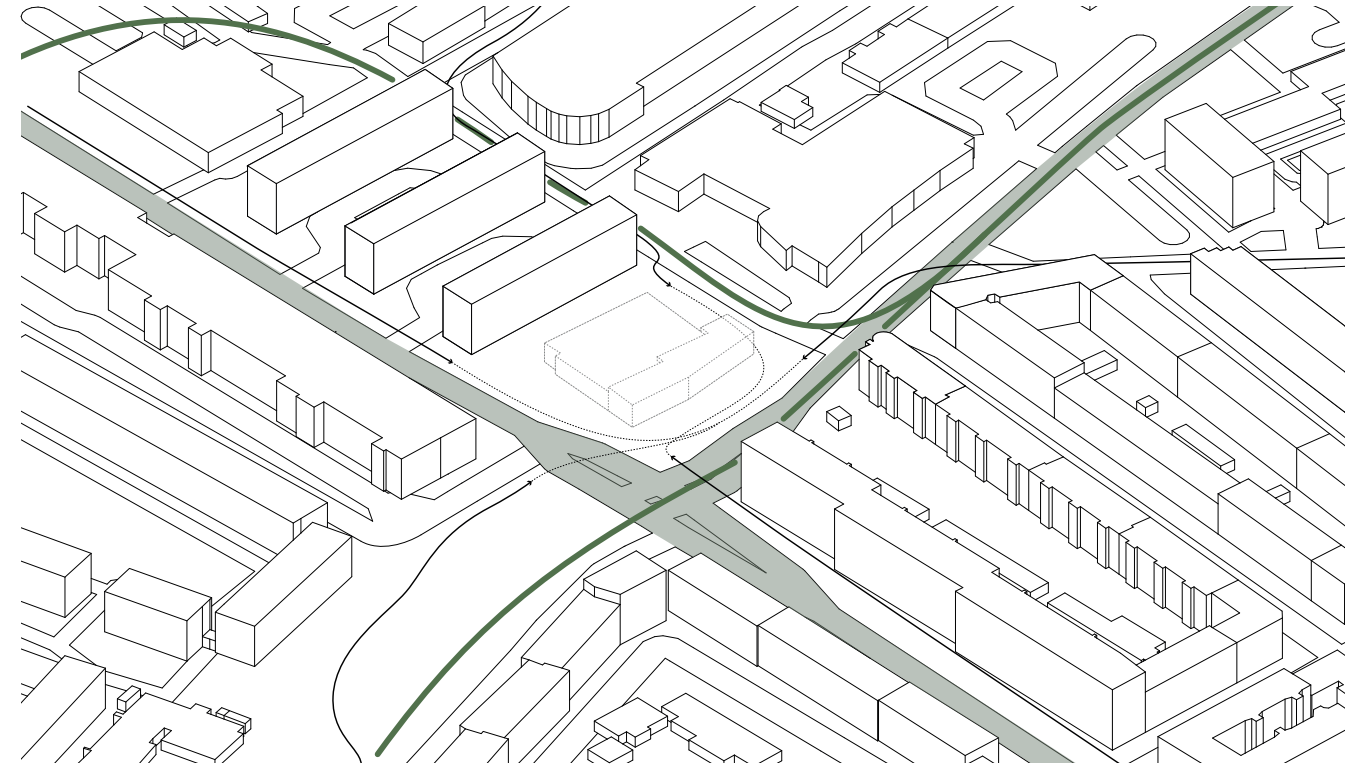


# SITE DEVELOPMENT

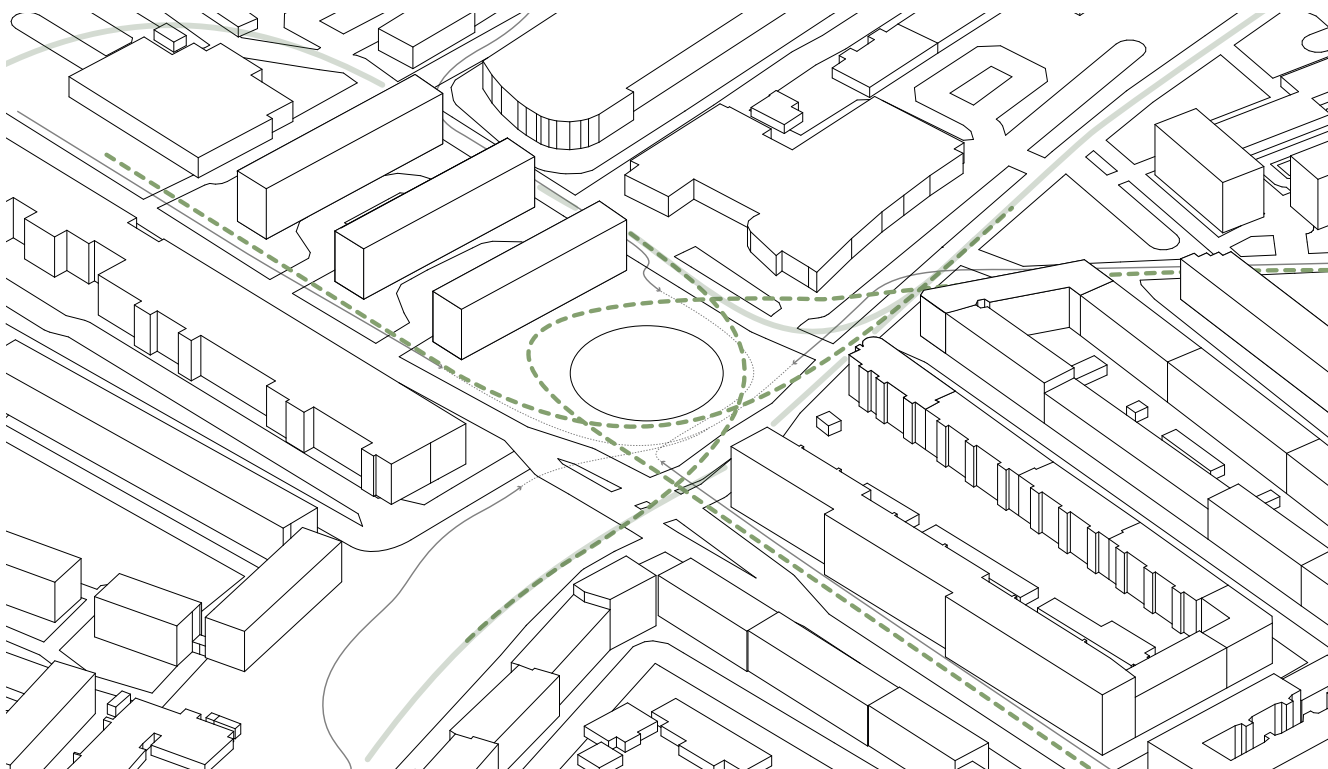
Demolition of existing buildings



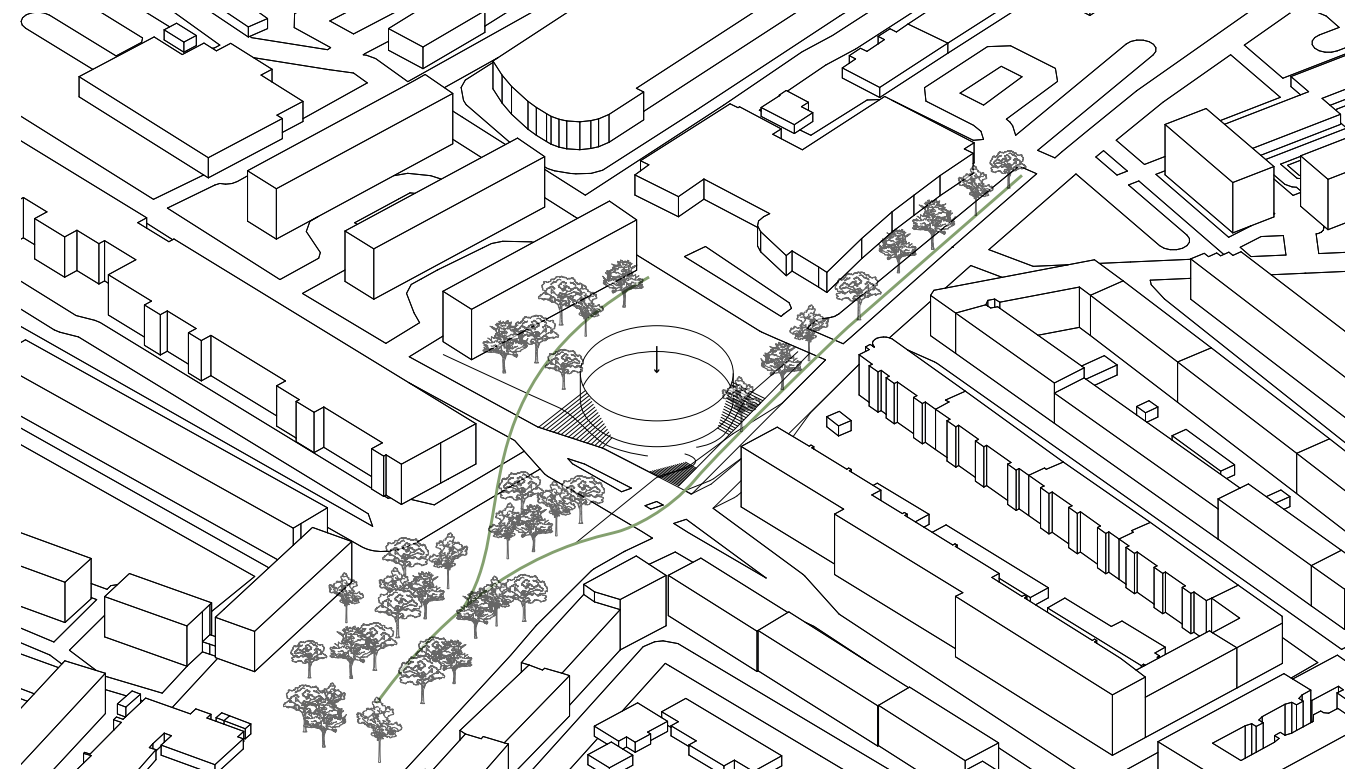
Site development potential



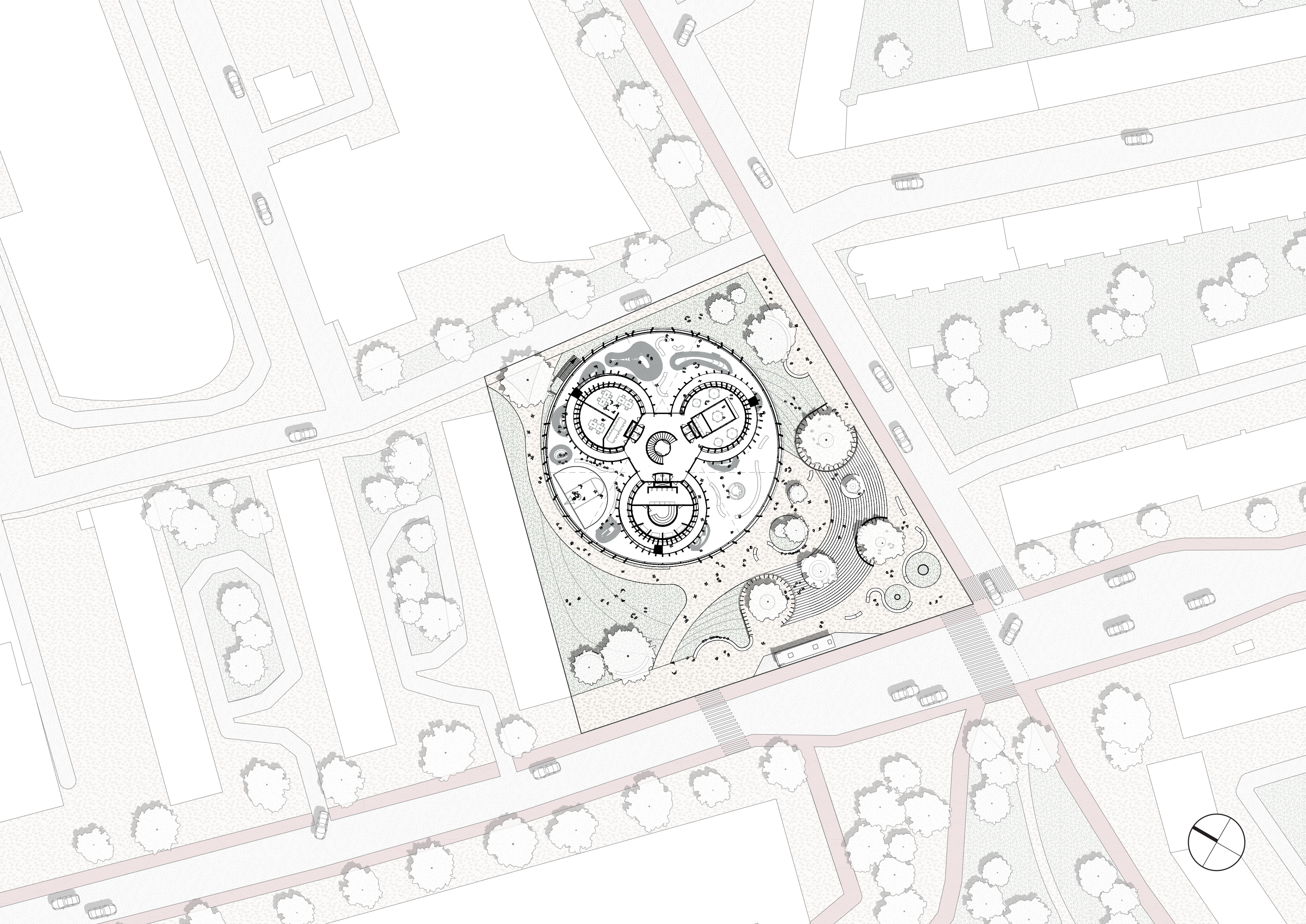
Building as a integral cornerstone



Landscape integration







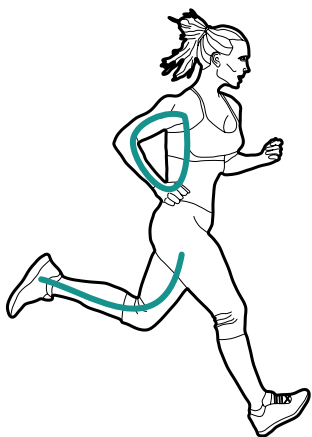




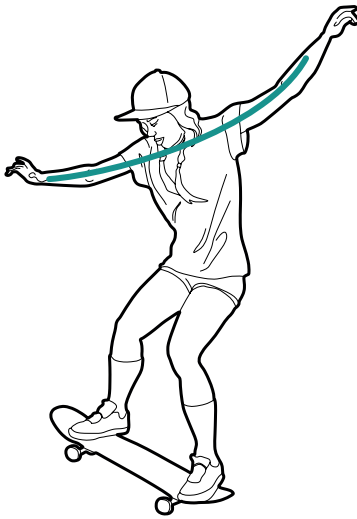




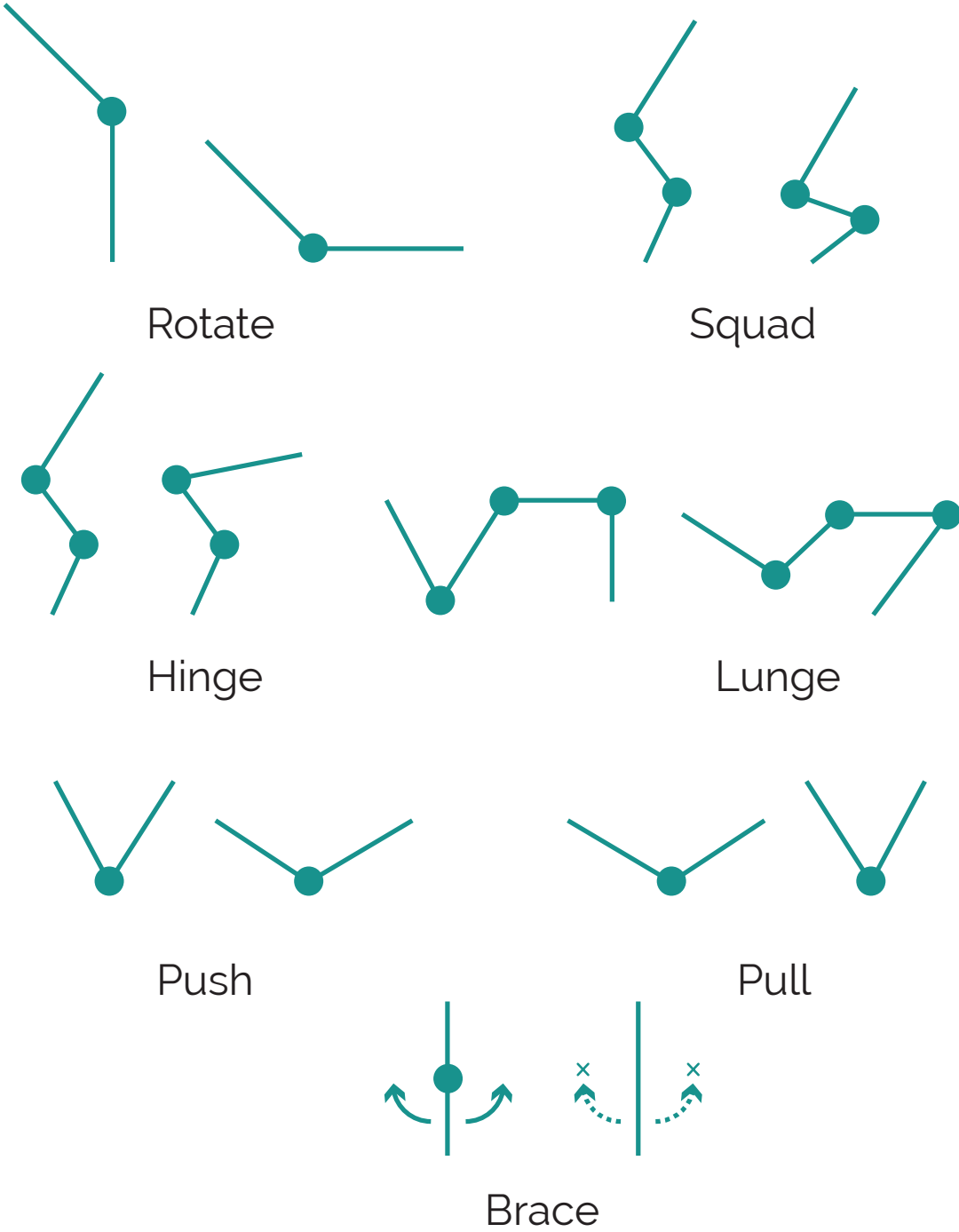
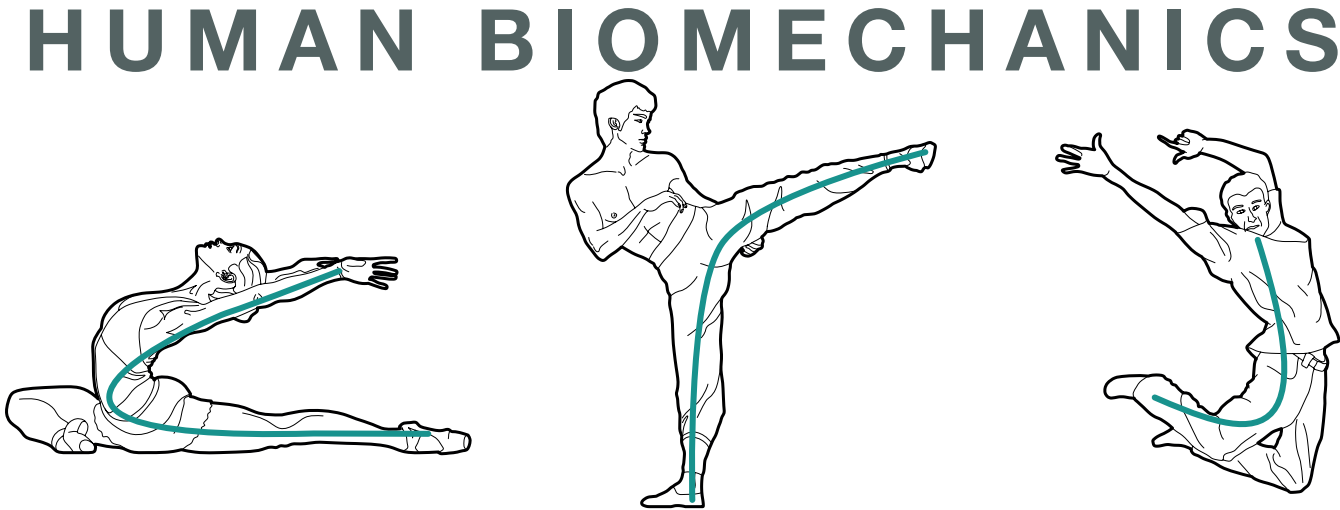
**Basketball game:**  
duration = 40 min  
  
calories burned: 416 kcals  
  
**Yoga:**  
duration = 60 min  
  
calories burned: 229 kcals



**Volleyball game:**  
duration = 90 min  
  
calories burned: 810 kcals  
  
**Skateboarding:**  
duration = 60 min  
  
calories burned: 410 kcals



**Tennis game:**  
duration = 90 min  
  
calories burned: 854 kcals  
  
**BMX riding:**  
duration = 60 min  
  
calories burned: 696 kcals



**Hockey game:**  
duration = 60 min  
  
calories burned: 608 kcals  
  
**Cooking:**  
duration = 60 min  
  
calories burned: 164 kcals

**Football game:**  
duration = 60 min  
  
calories burned: 780 kcals  
  
**Gardening:**  
duration = 60 min  
  
calories burned: 311 kcals

**Fitness:**  
duration = 60 min  
  
calories burned: 390 kcals  
  
**Climbing stair:**  
duration = 1 min  
  
calories burned: 6 kcals

**Dancing:**  
duration = 60 min  
  
calories burned: 639 kcals

**Martial arts:**  
duration = 60 min  
  
calories burned: 819 kcals

**Walking (flat ground):**  
duration = 60 min  
  
calories burned: 390 kcals

**Climbing / bouldering:**  
duration = 60 min  
  
calories burned: 585 kcals

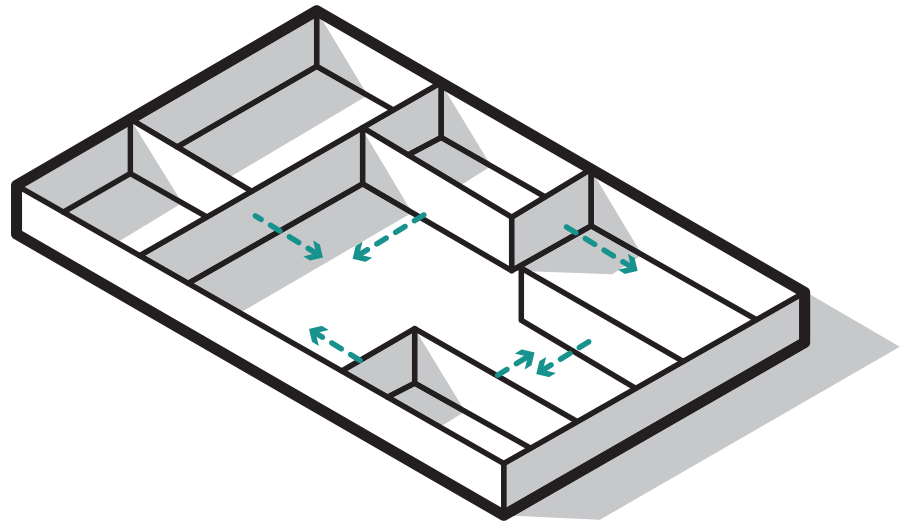
**Spectating:**  
duration = 60 min  
  
calories burned: 106 kcals

**Climbing ramps (10% slope):**  
duration = 60 min  
  
calories burned: 780 kcals

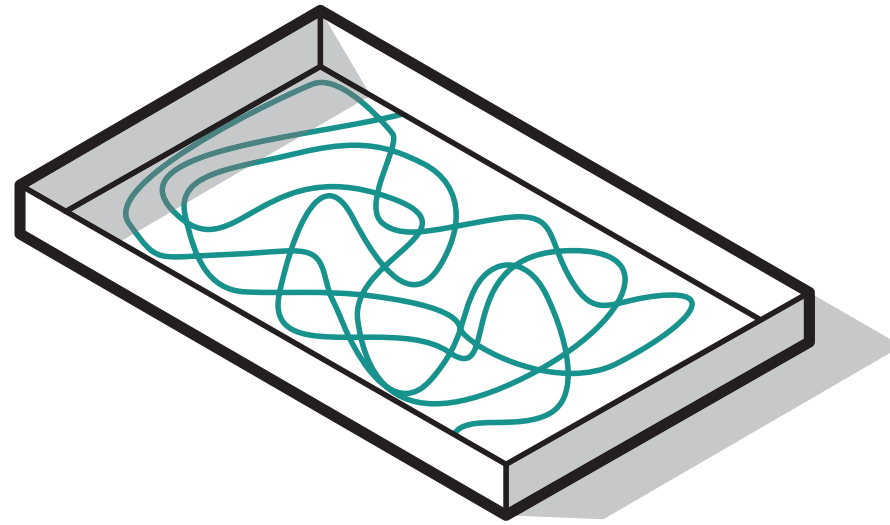


# DESIGN STRATEGIES

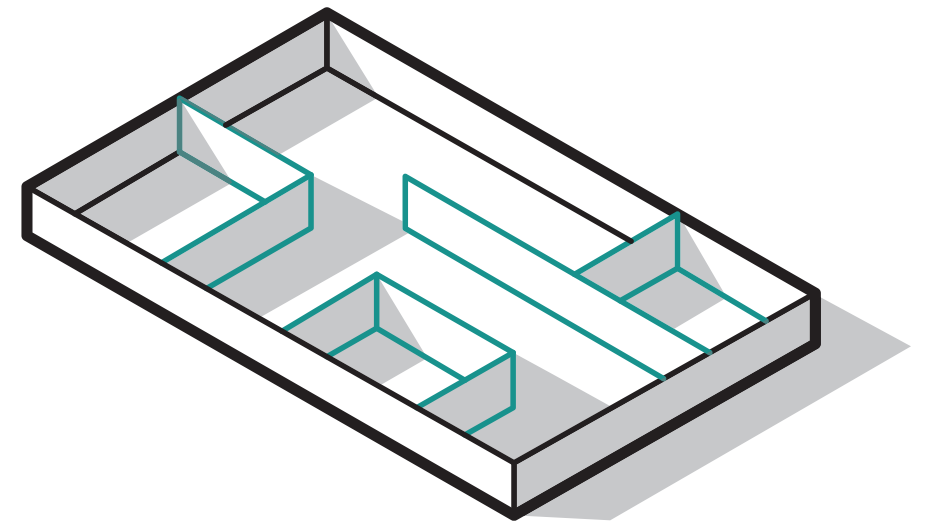
Adaptable space



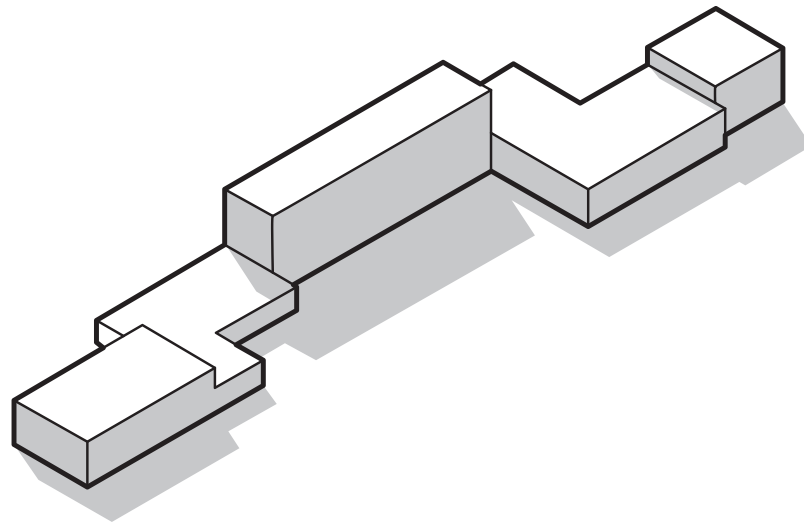
Freedom of movement



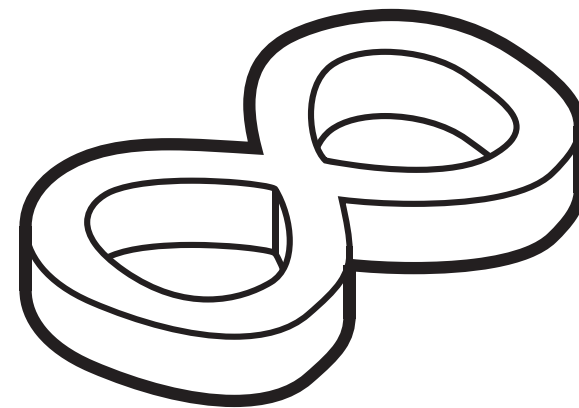
Transparent borders



Building as a walkway



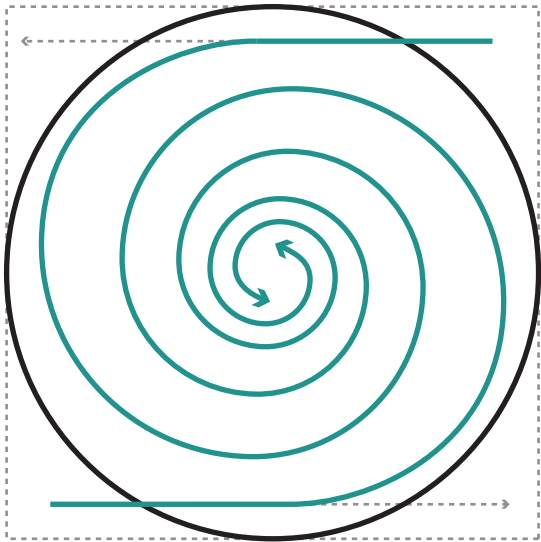
Continuous circulation



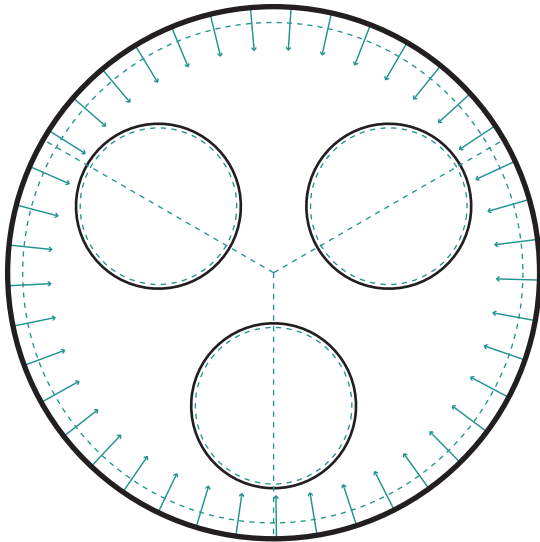


# FORM DEVELOPMENT

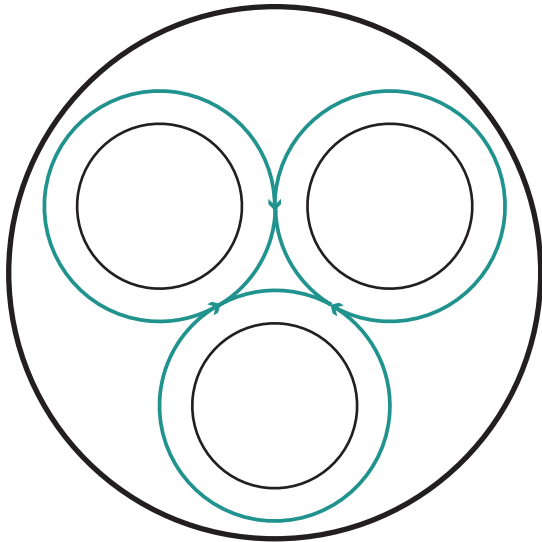
Creating movement



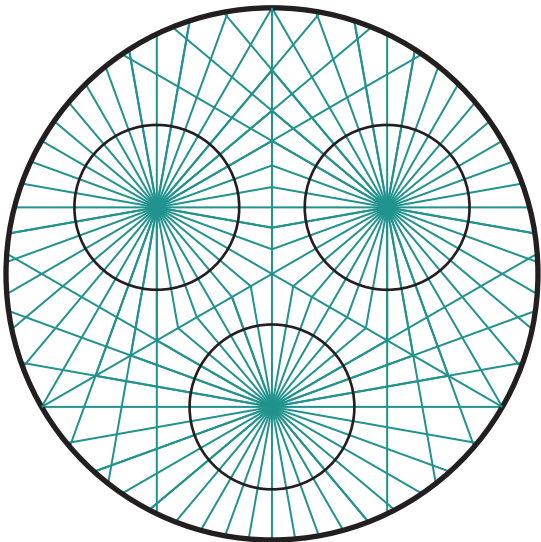
Repeating footprint



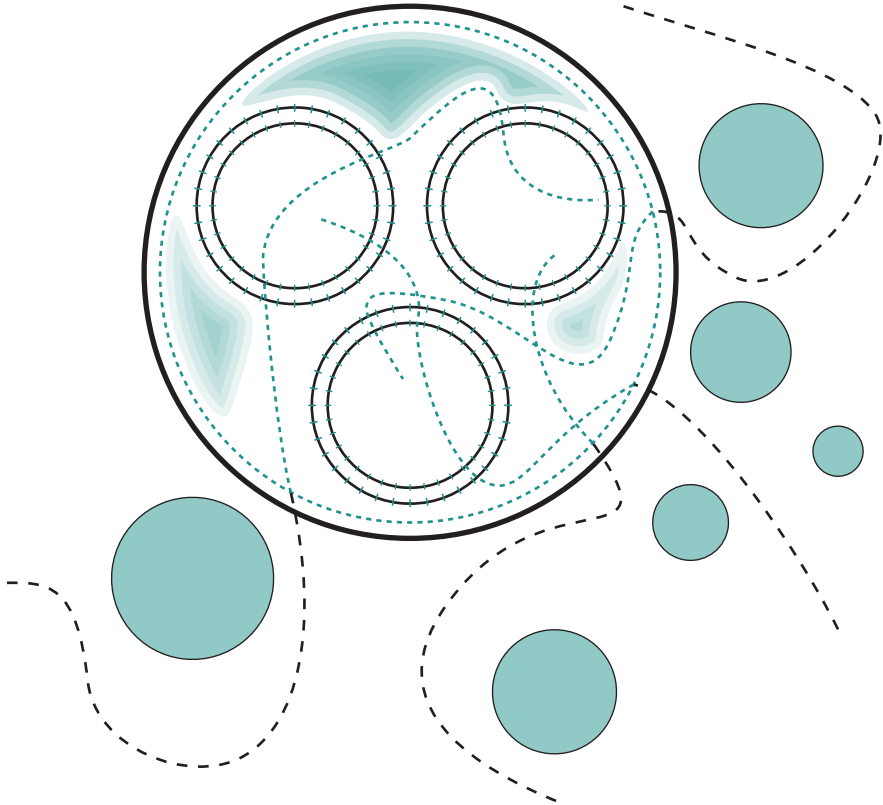
Continuous circulation



Radial grid layout

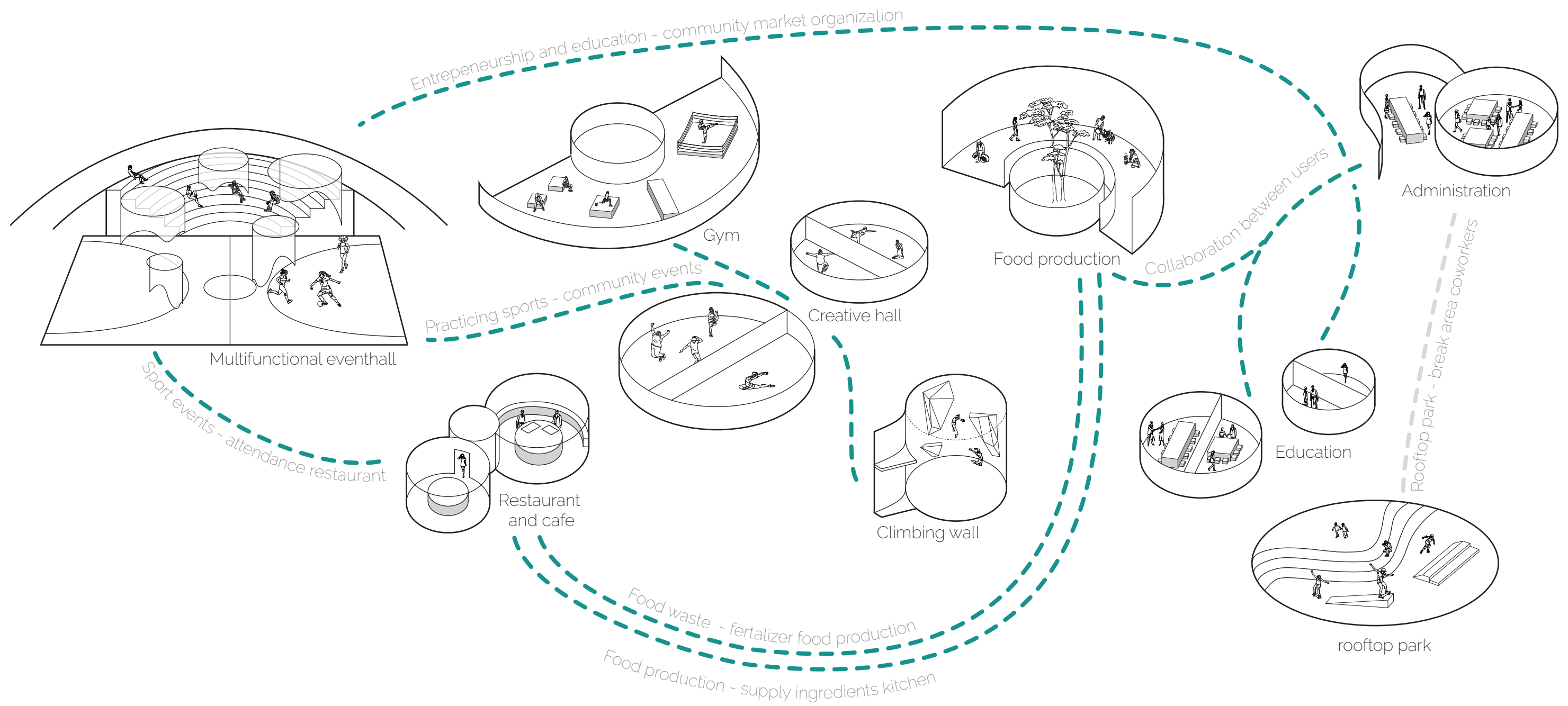


Connecting to the exterior



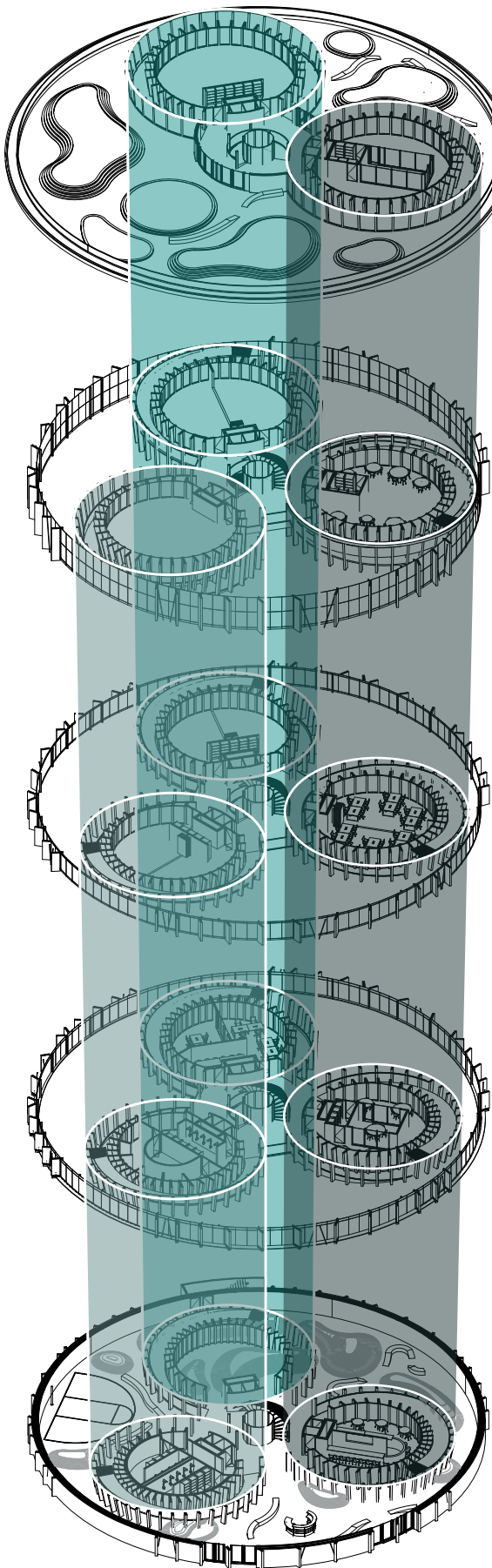


# SPATIAL RELATIONS

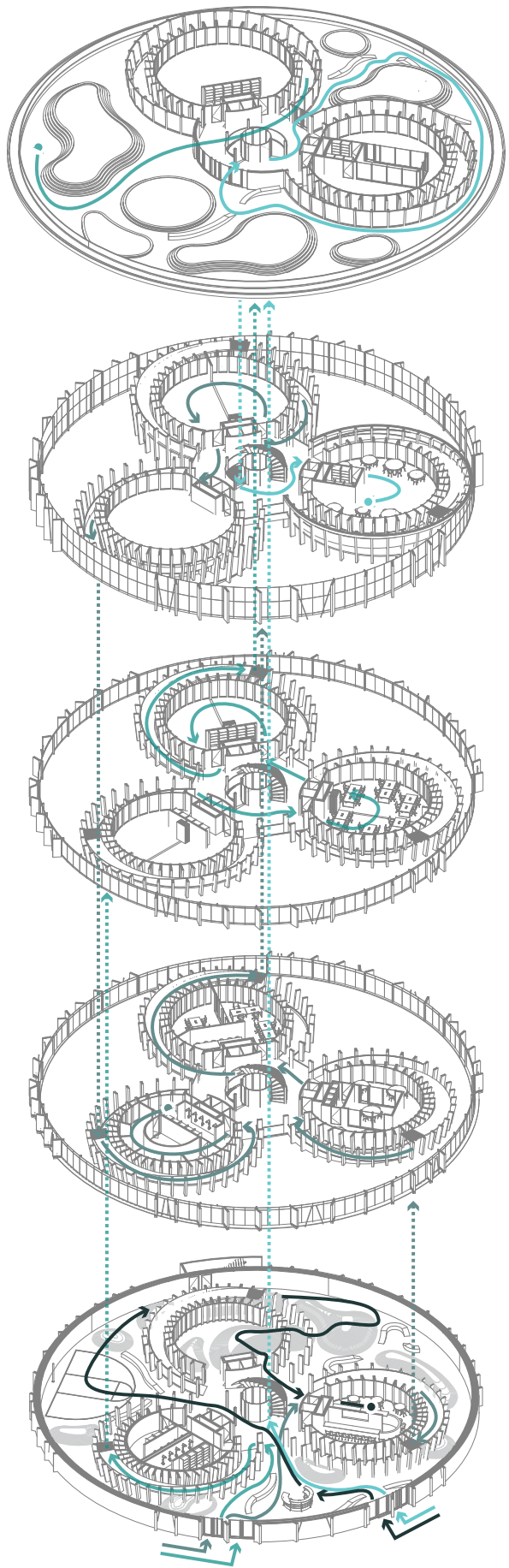




# PROGRAM AND MOVEMENT

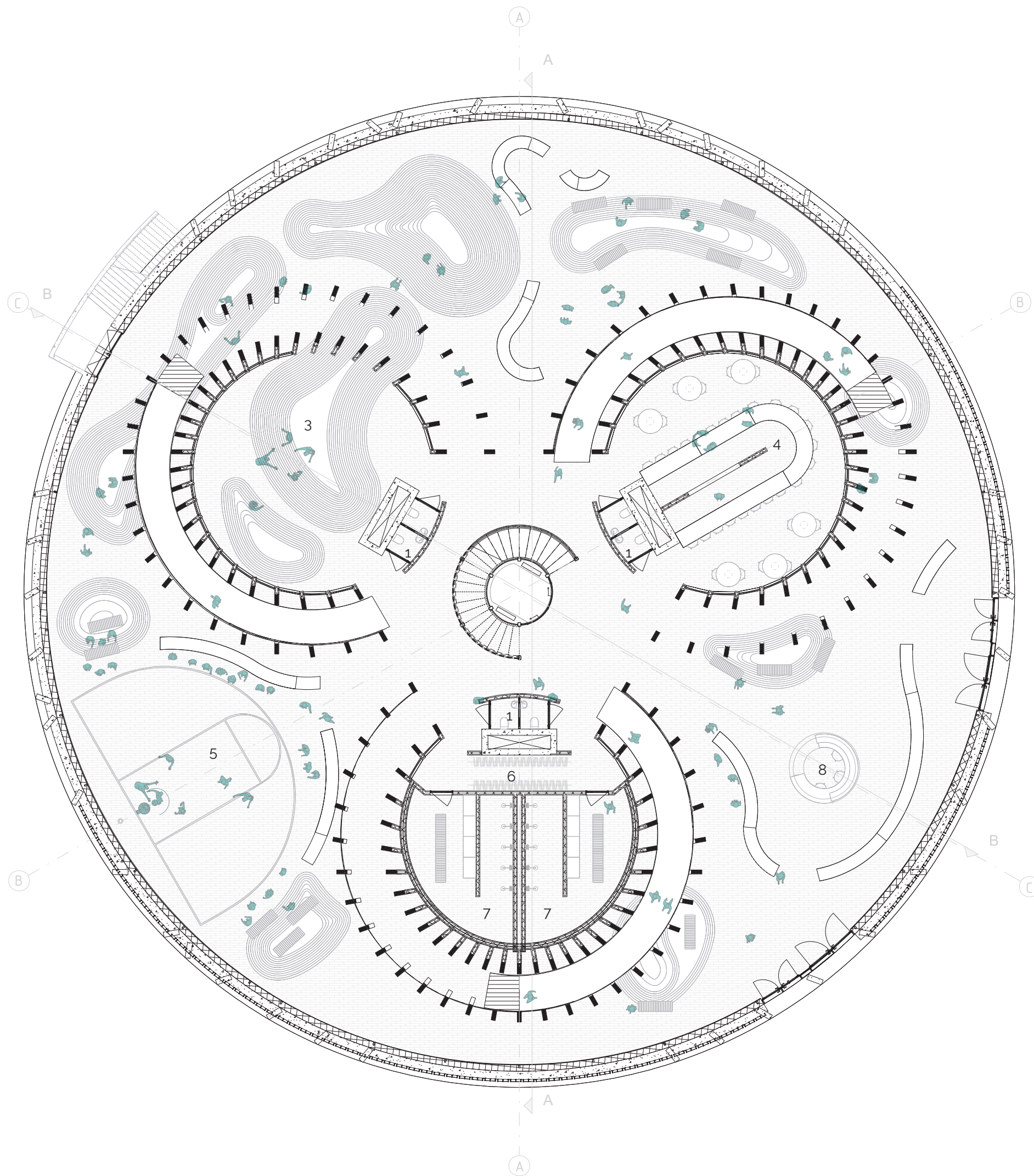


- 03
  - 1. Public gym
  - 2. Greenhouse
  - 3. Rooftop garden
  - 4. Rooftop park
- 02
  - 1. Dance studio
  - 2. Communal kitchen
  - 3. Mechanical space
- 01
  - 1. Fitness workshop area
  - 2. Classroom
  - 3. Meditation area
- 00
  - 1. Administration
  - 2. Public workspace
  - 3. Wellness and sauna
- 01
  - 1. Playscape
  - 2. Cafe
  - 3. Sports field
  - 4. Coat room
  - 5. Dressing rooms
  - 6. Information counter





# FLOOR PLAN| -01



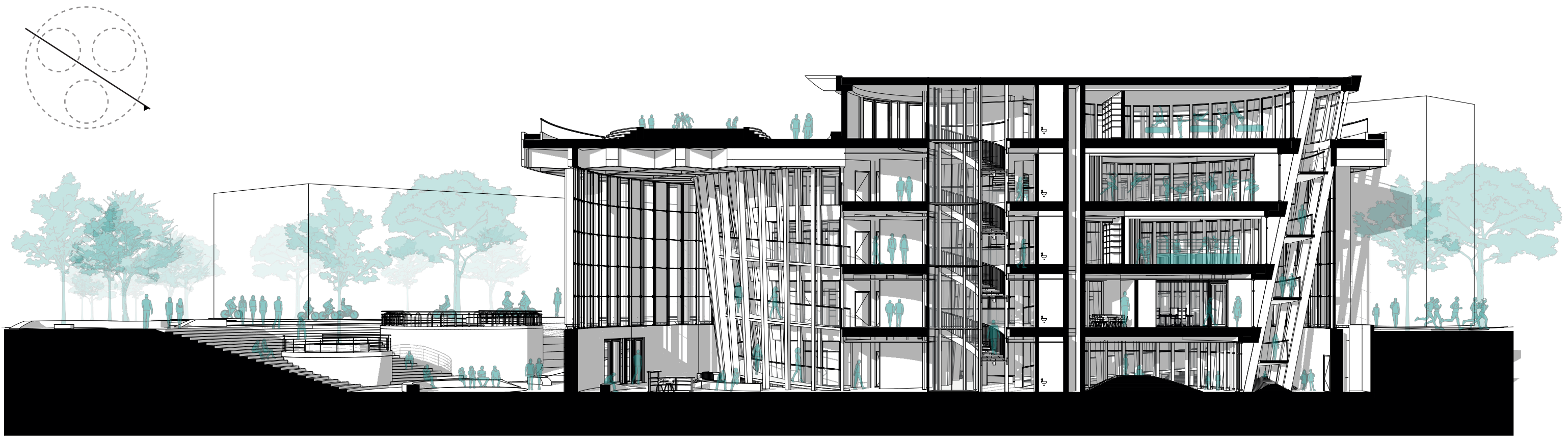
- 1. Toilets
- 2. Storage
- 3. Playscape
- 4. Cafe
- 5. Sports field
- 6. Coat room
- 7. Dressing rooms
- 8. Information counter





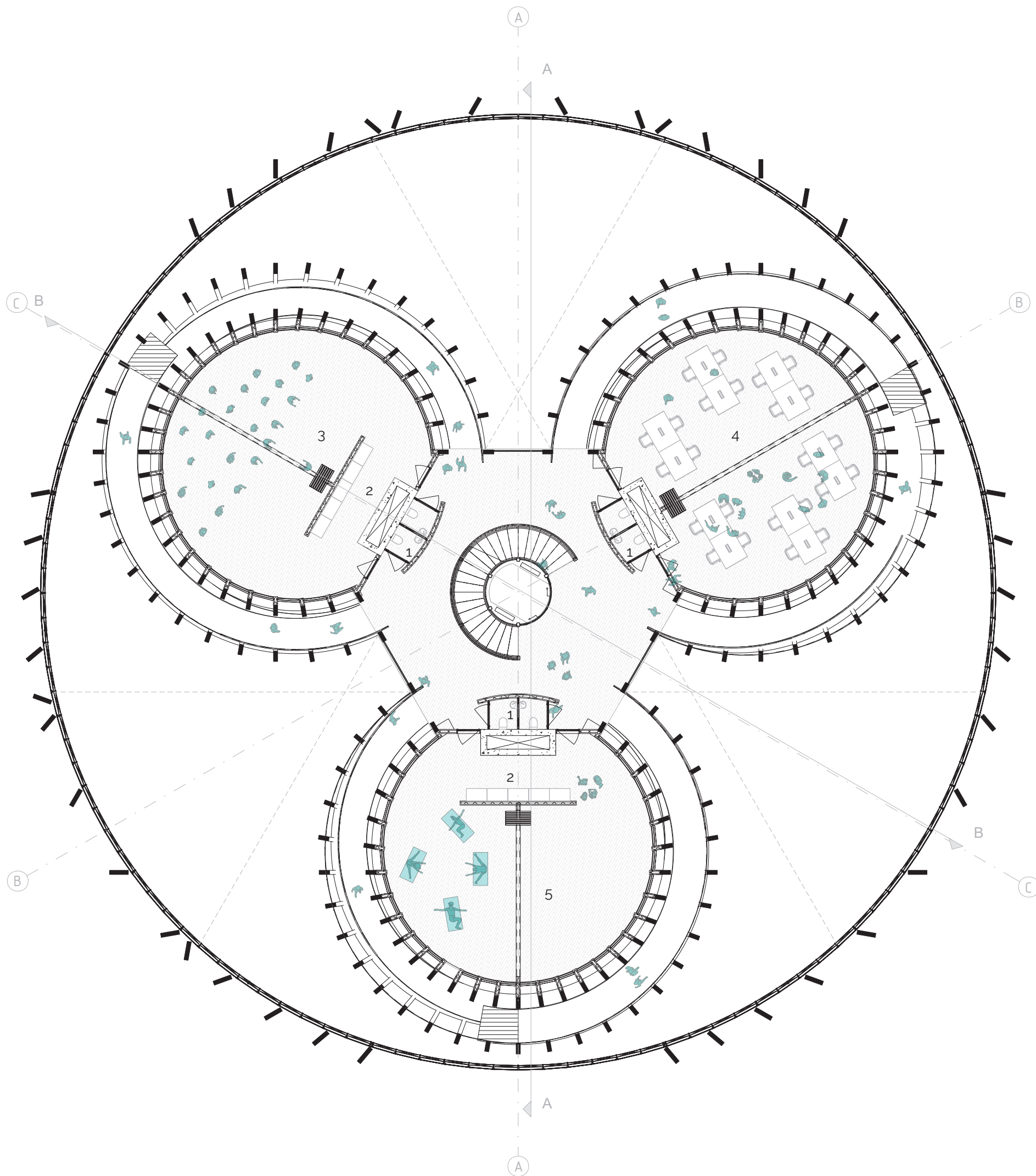


# SECTION | B





# FLOOR PLAN| 1



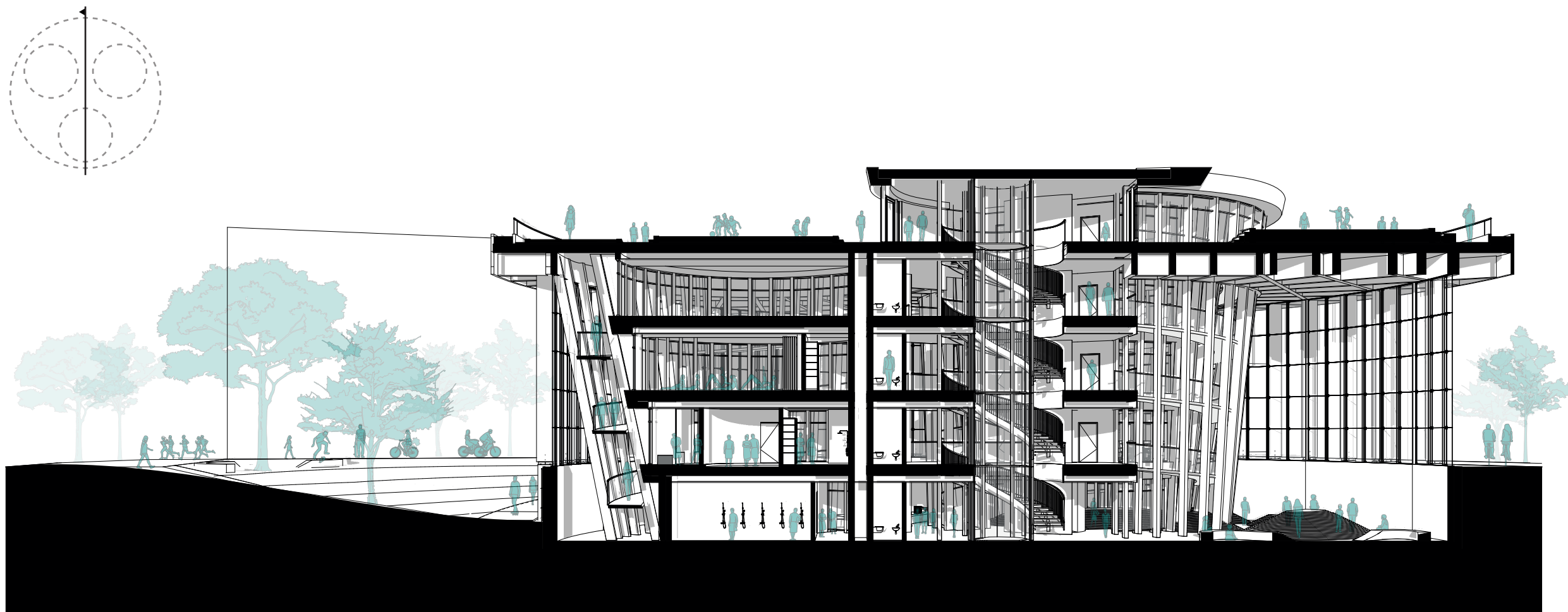
1. Toilets
2. Storage
3. Fitness workshop area
4. Classroom
5. Meditation area





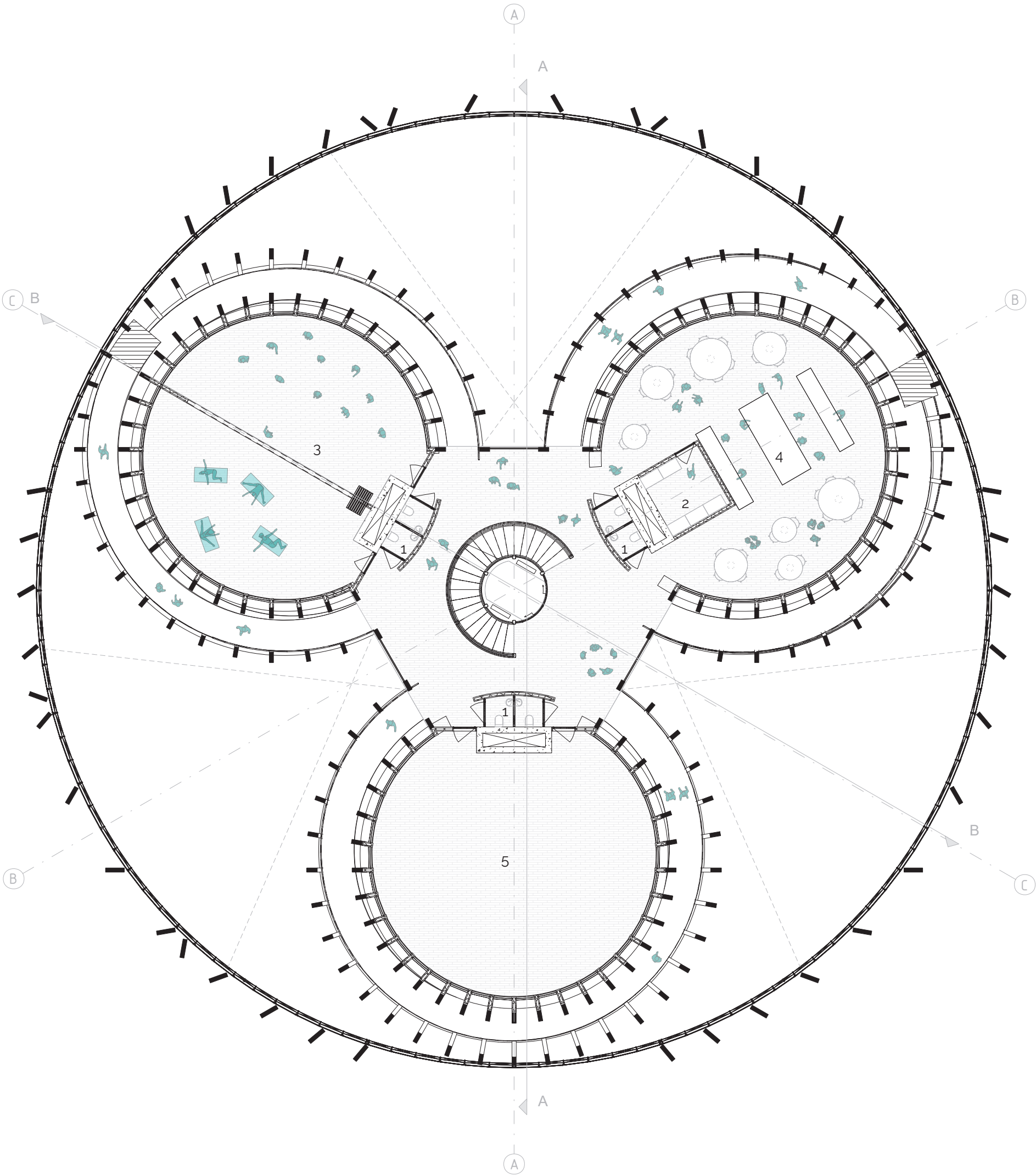


# SECTION | A





# FLOOR PLAN| 2



- 1. Toilets
- 2. Storage
- 3. Dance studio
- 4. Communal kitchen
- 5. Mechanical space



# FLOOR PLAN| 3



- 1. Toilets
- 2. Storage
- 3. Public gym
- 4. Greenhouse
- 5. Rooftop garden
- 6. Rooftop park

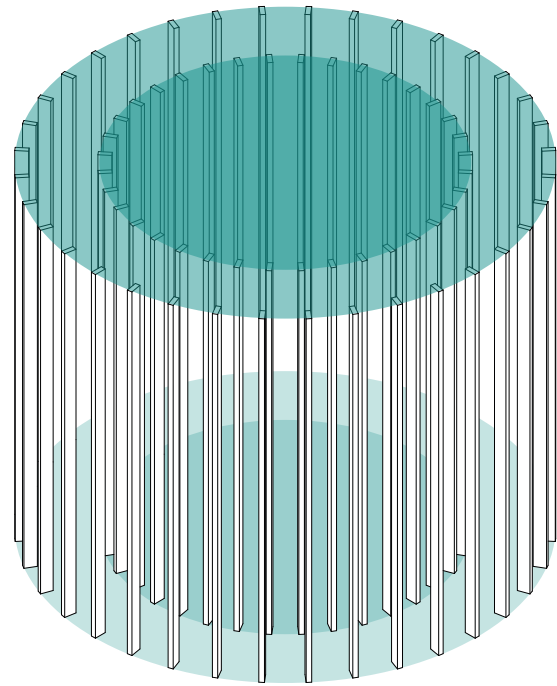




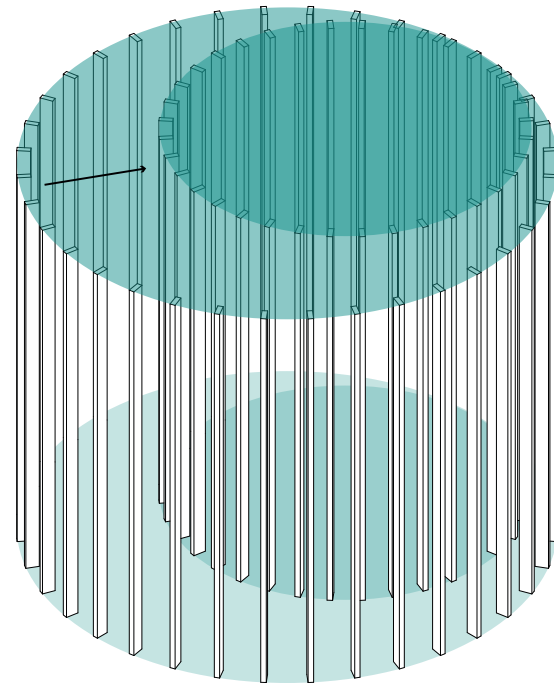


# STRUCTURE DEVELOPMENT

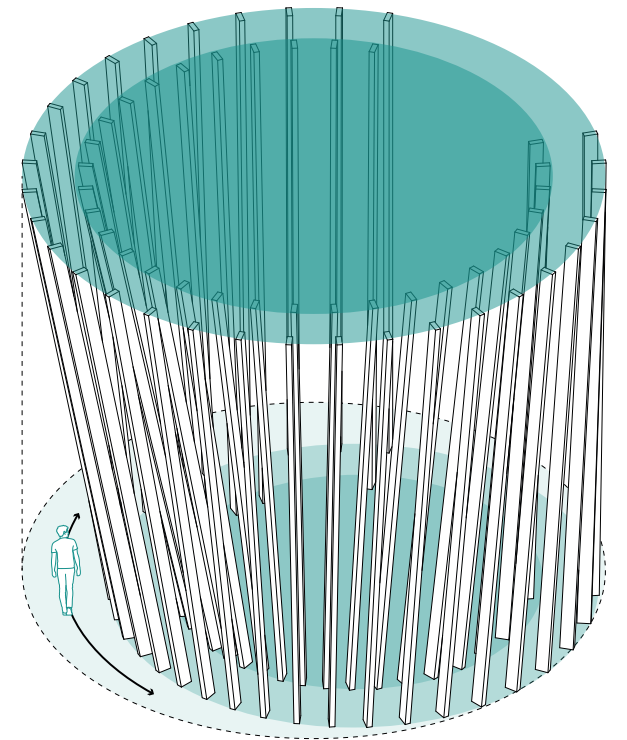
Circular tower footprint



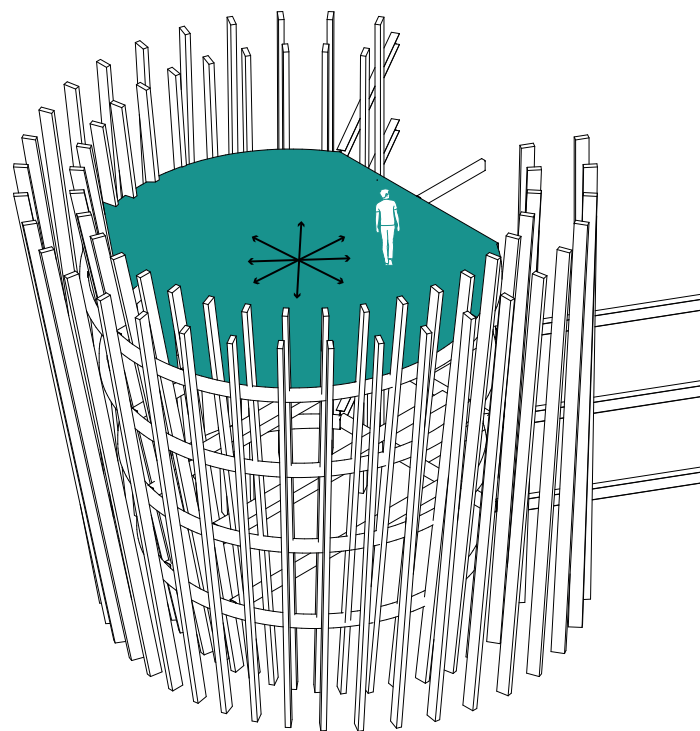
Shifting structure



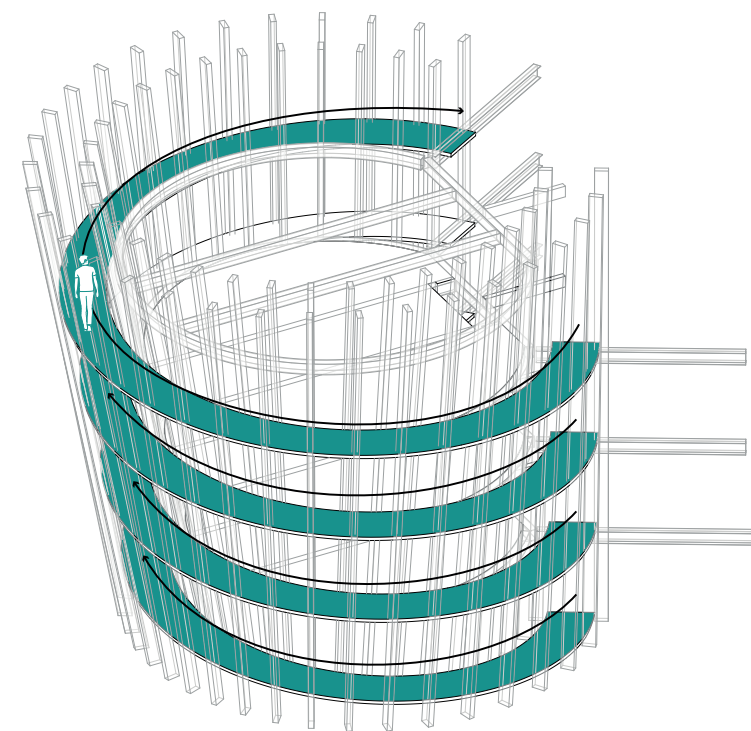
Creating movement



Uninterrupted open floorplans

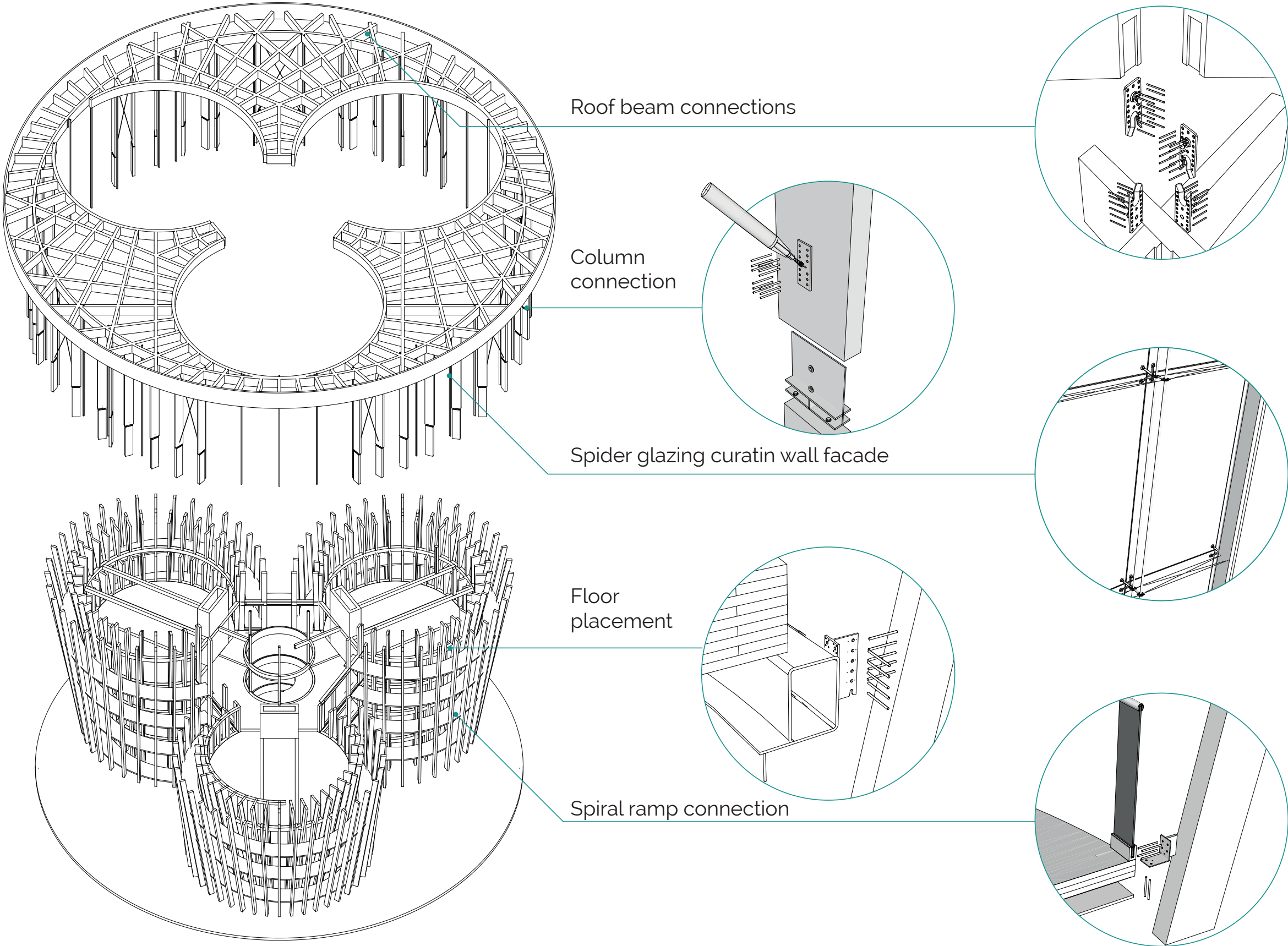


Continuous circulation



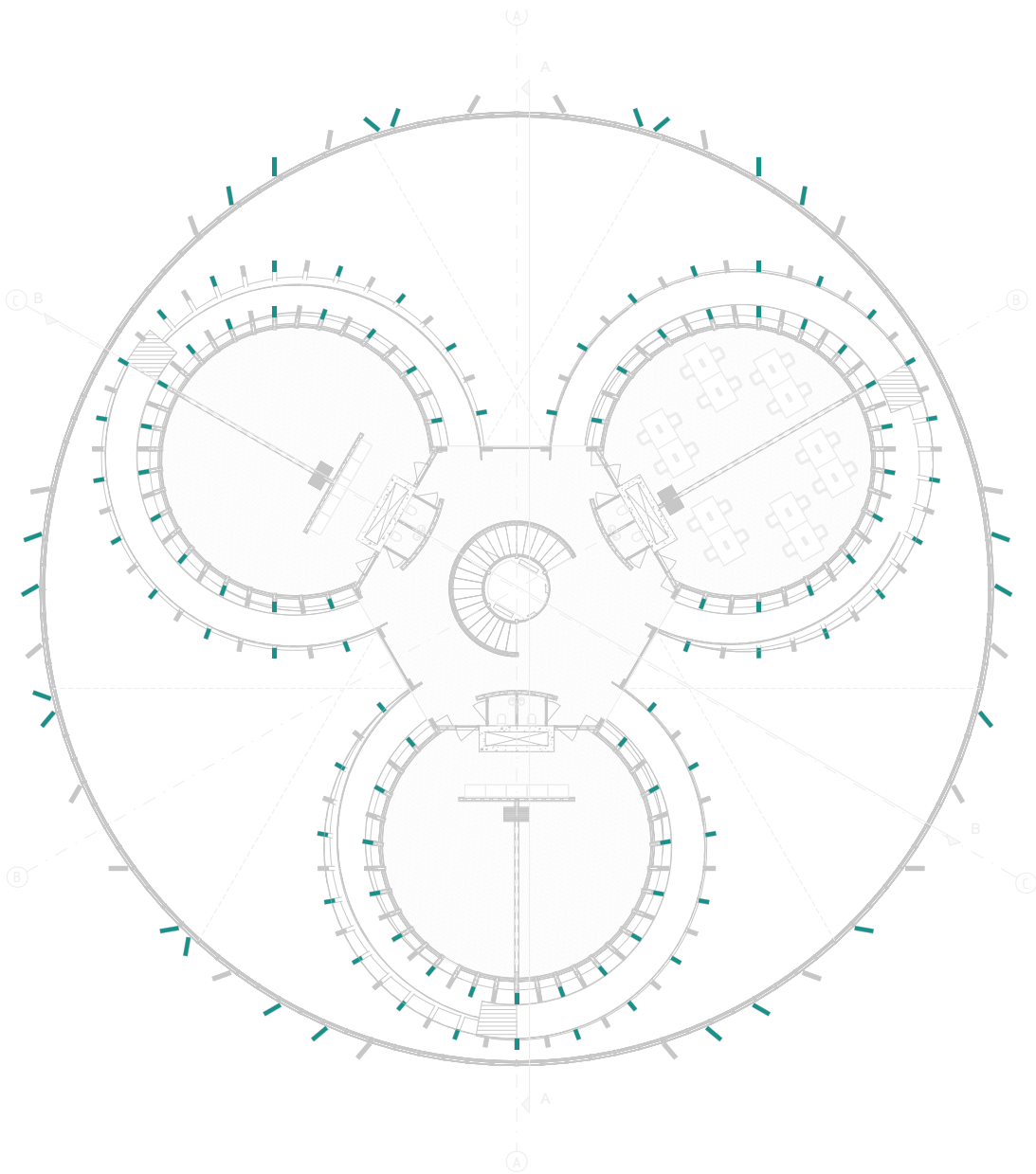
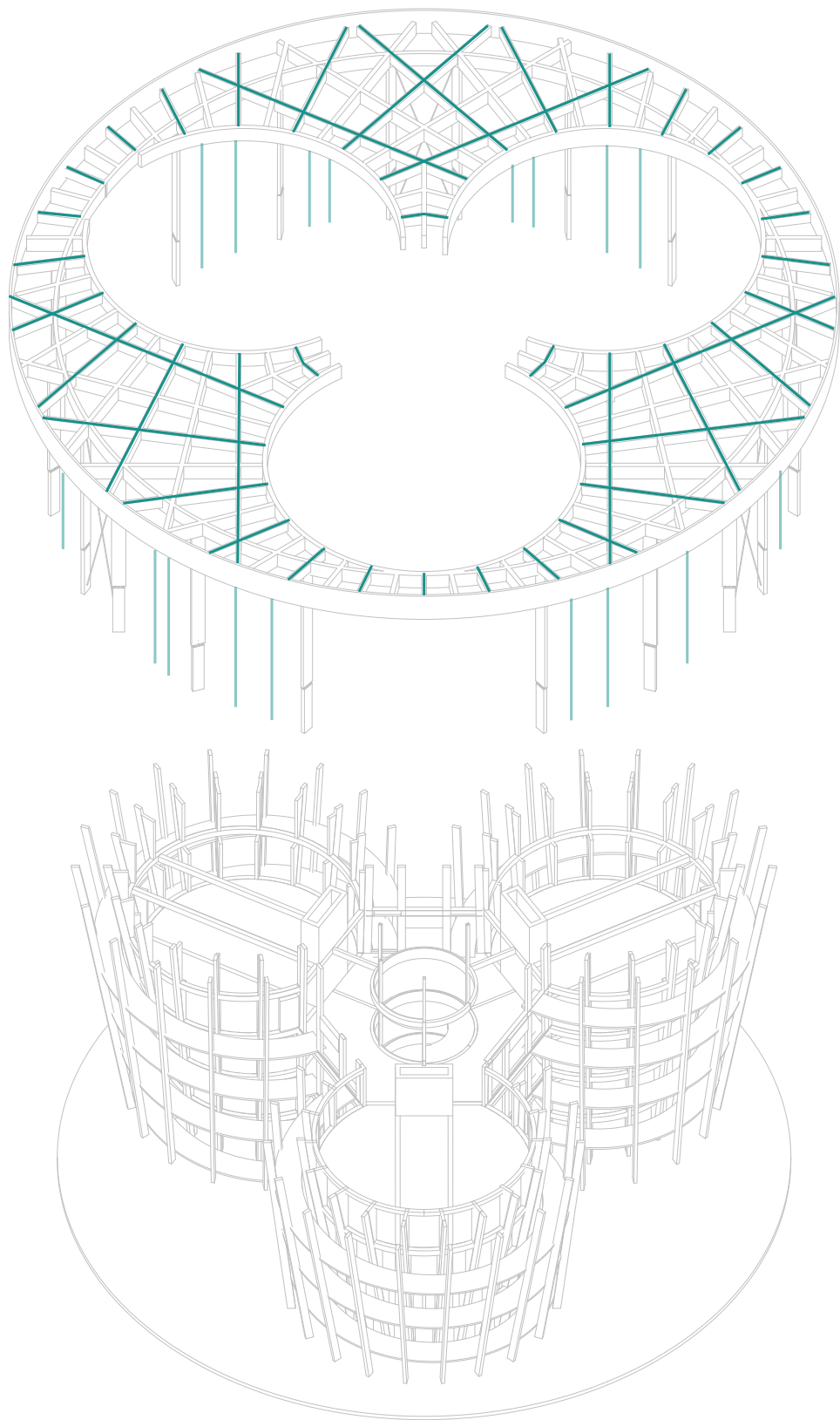


# STRUCTURAL CONNECTIONS





# STRUCTURAL DEVELOPMENT



Current construction	Structural elements	226
	Material use in m³	759,102 m³
	Material costs	€ 379.551,-
Future development	Structural elements	115
	Material use in m³	526,331 m³
	Material costs	€ 263.165,-



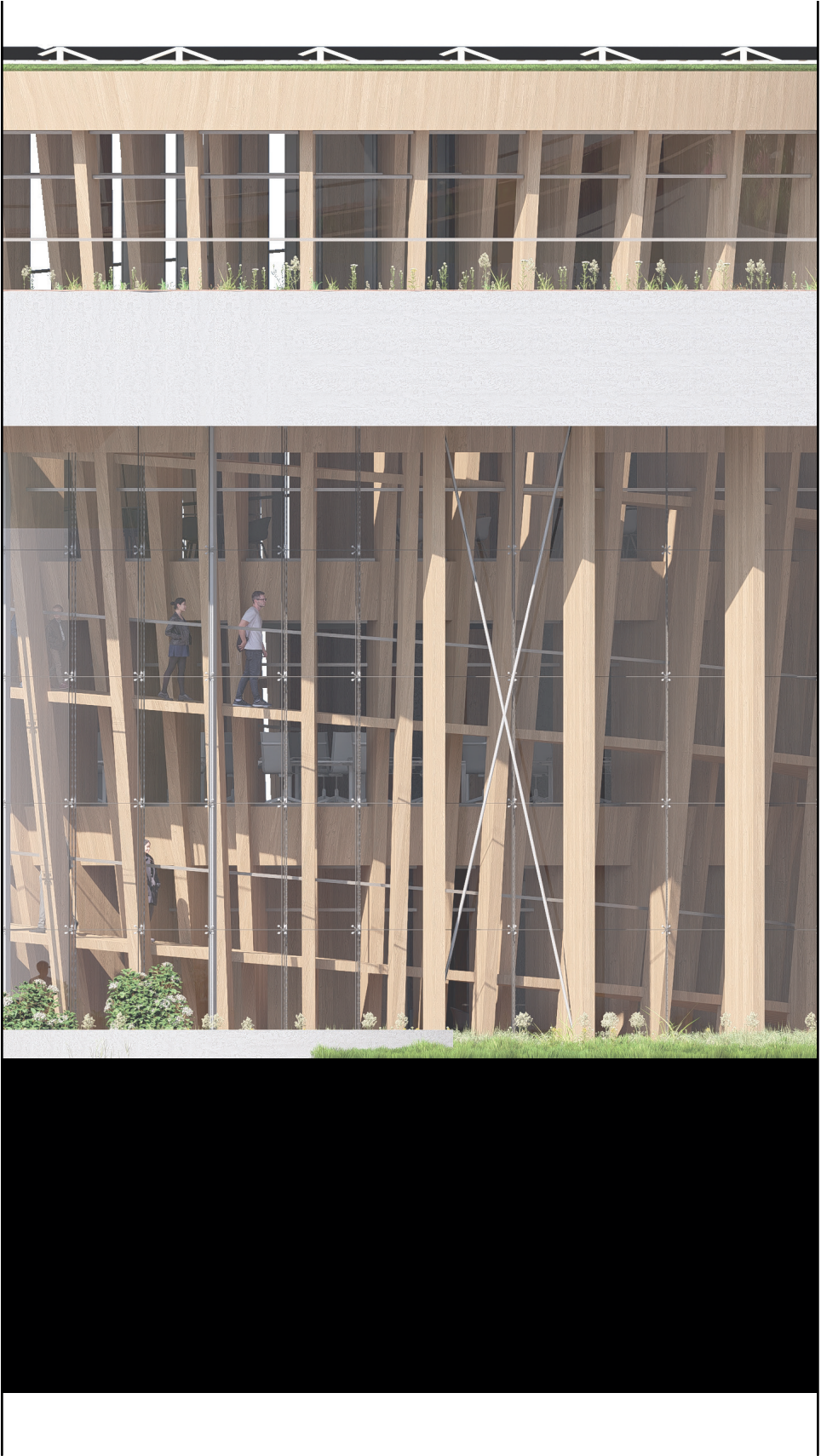
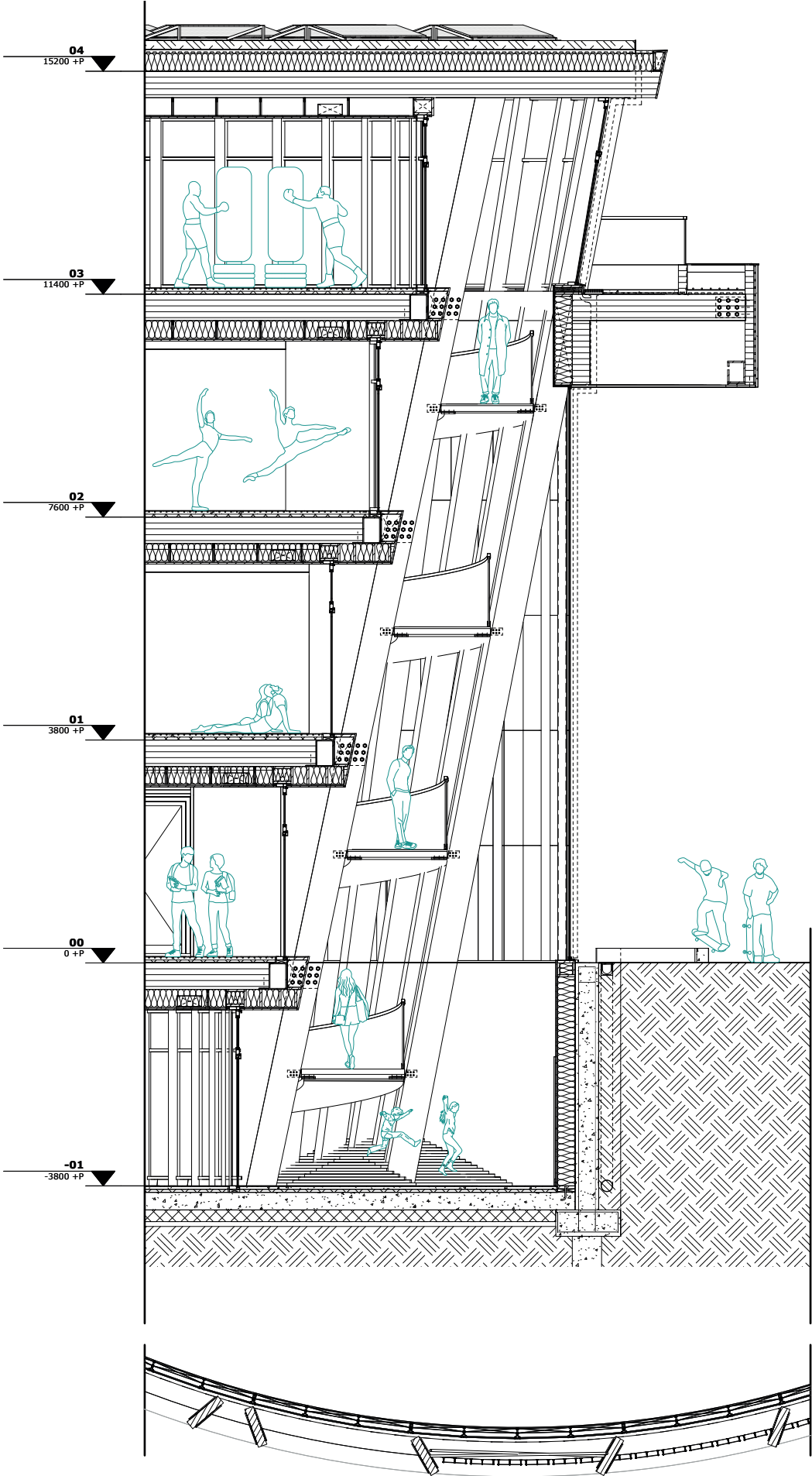






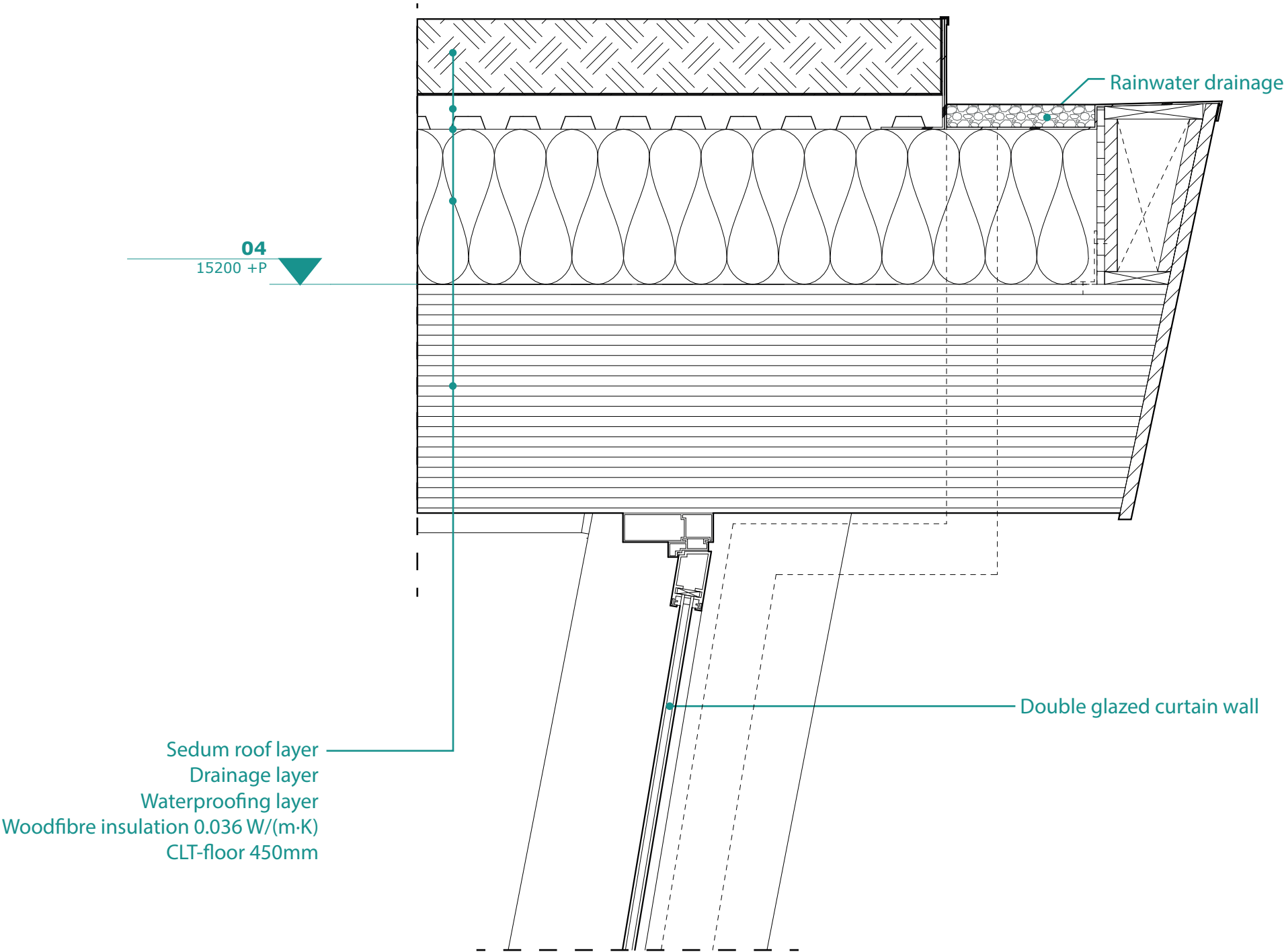


# FRAGMENT



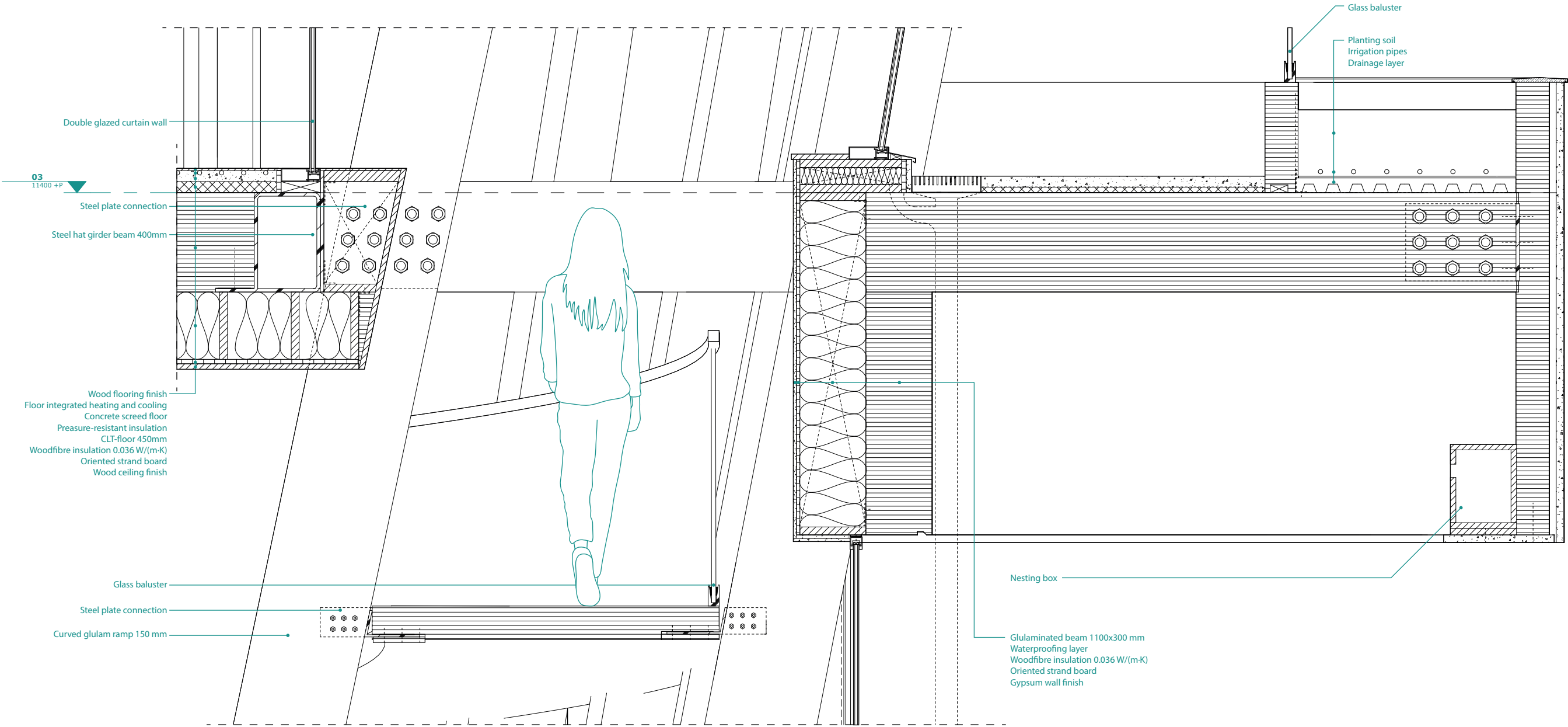


DETAIL | 1



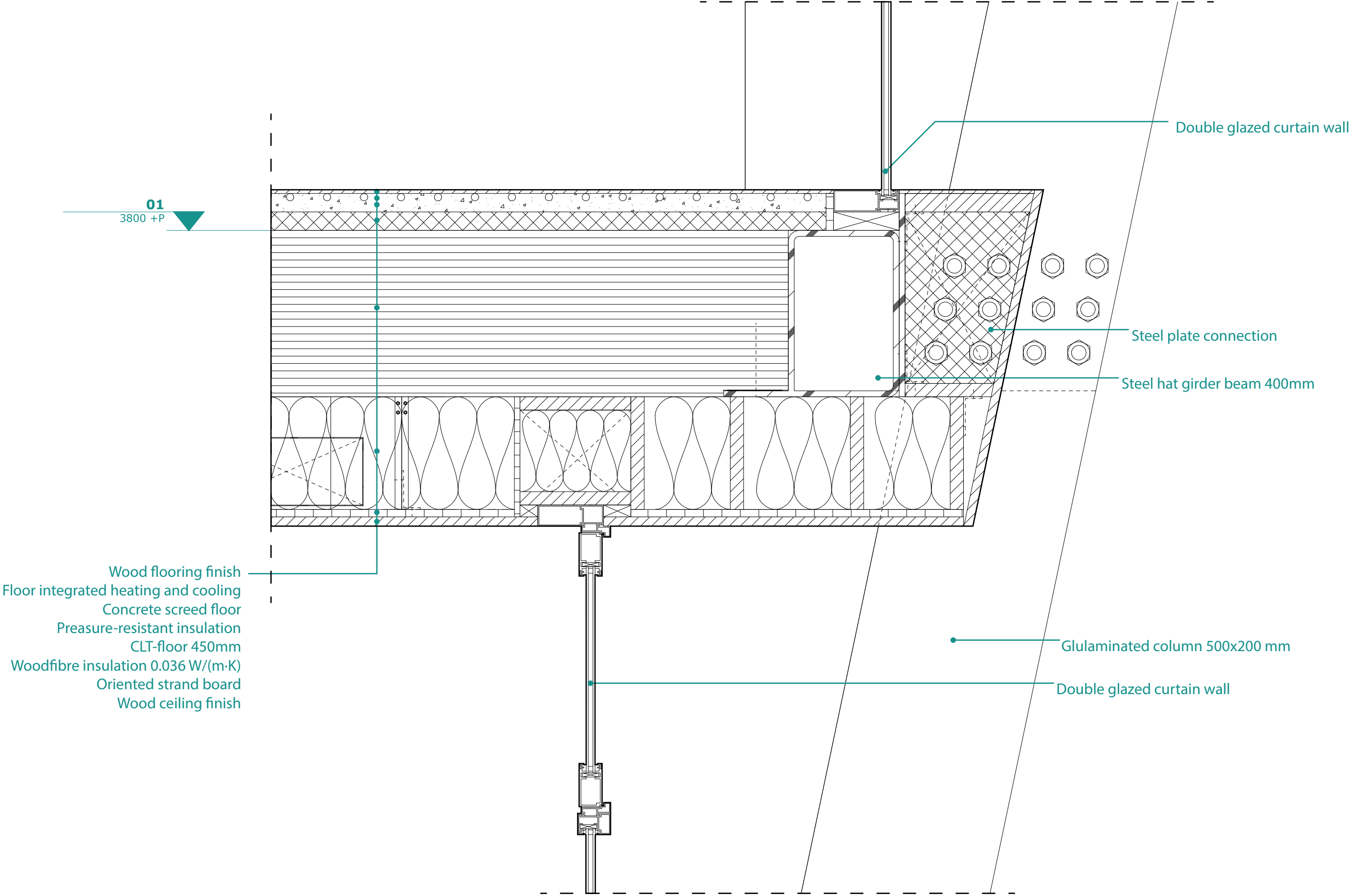


# DETAIL | 2



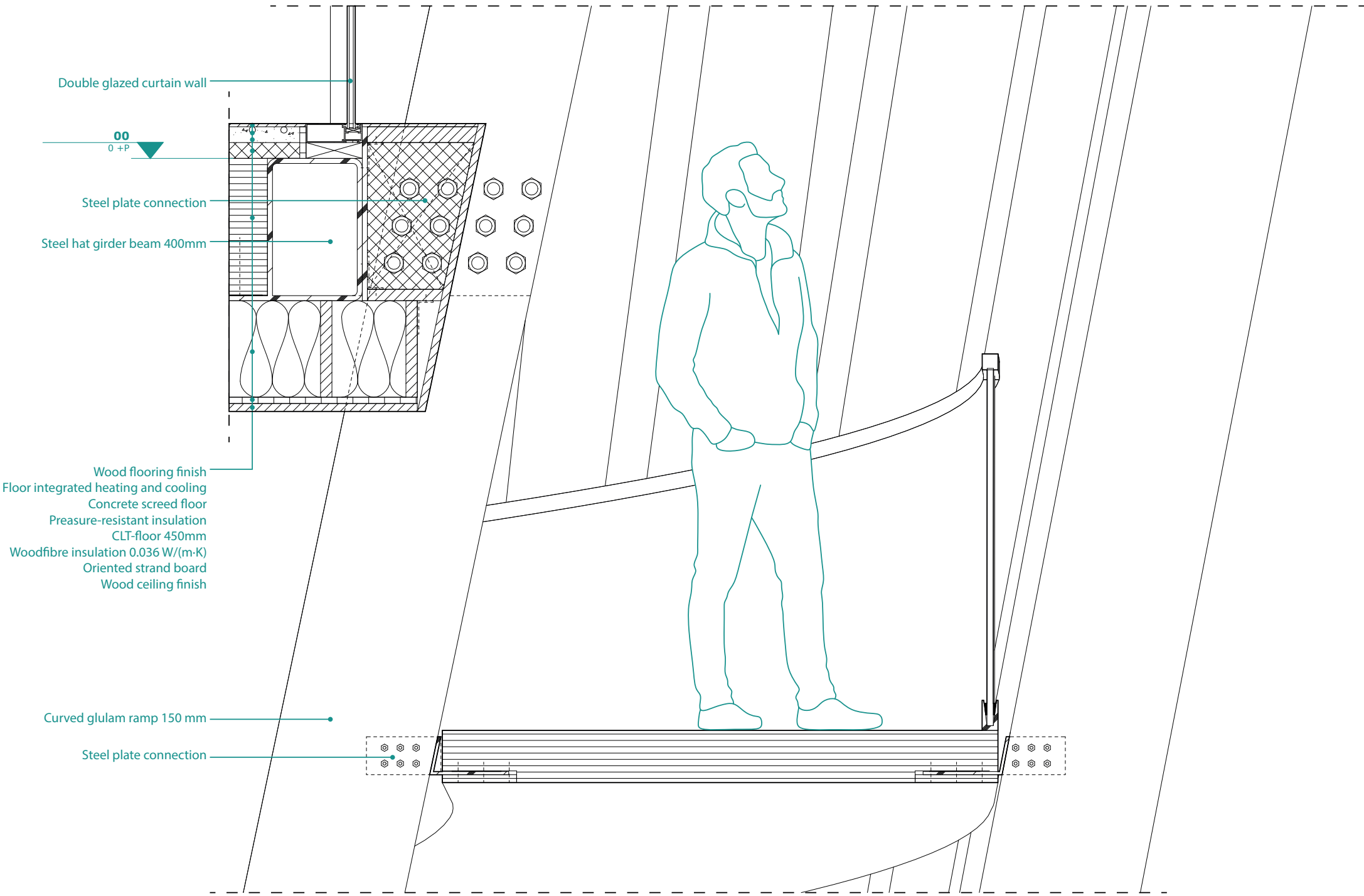


DETAIL | 3



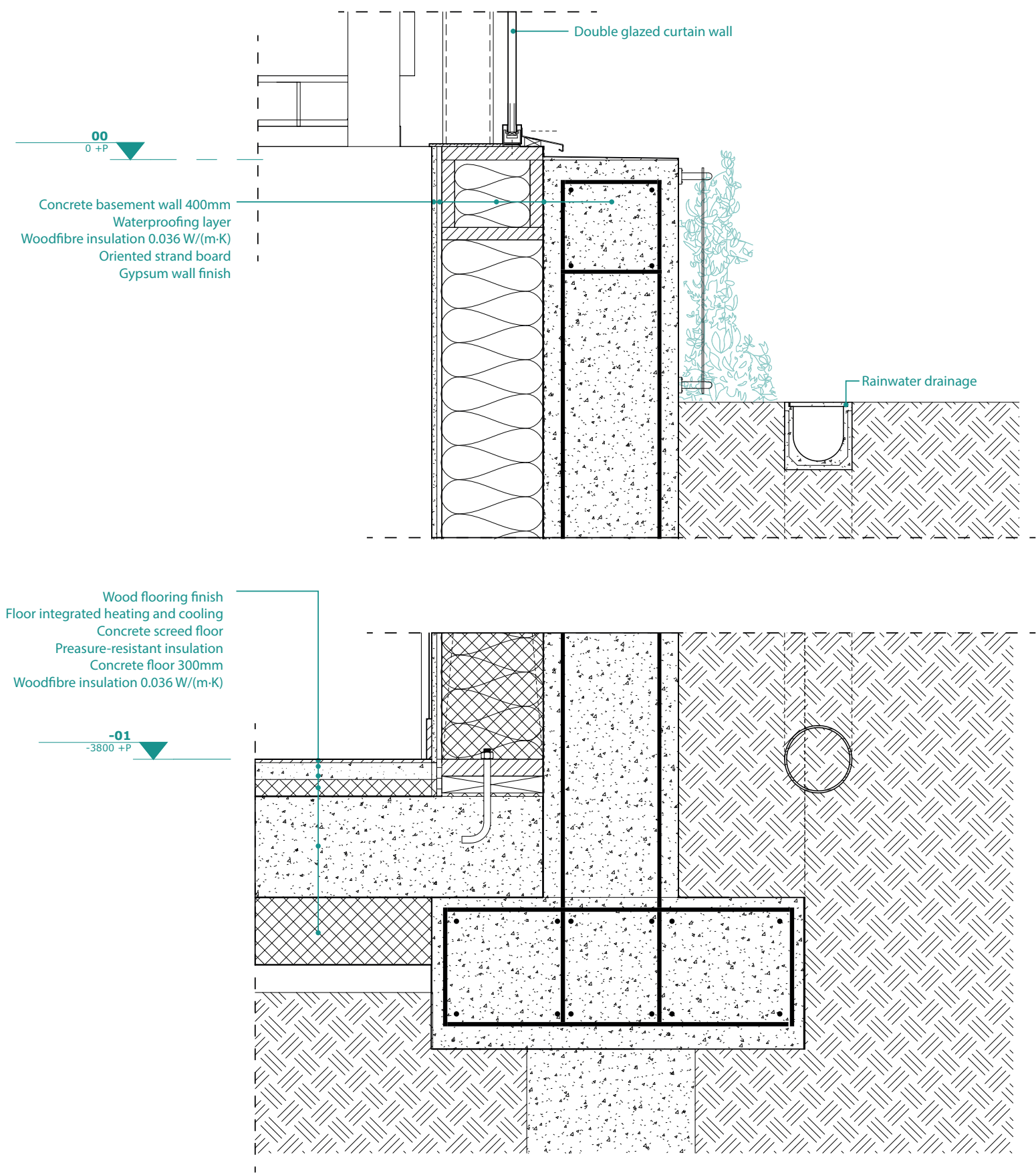


DETAIL | 4





DETAIL | 5









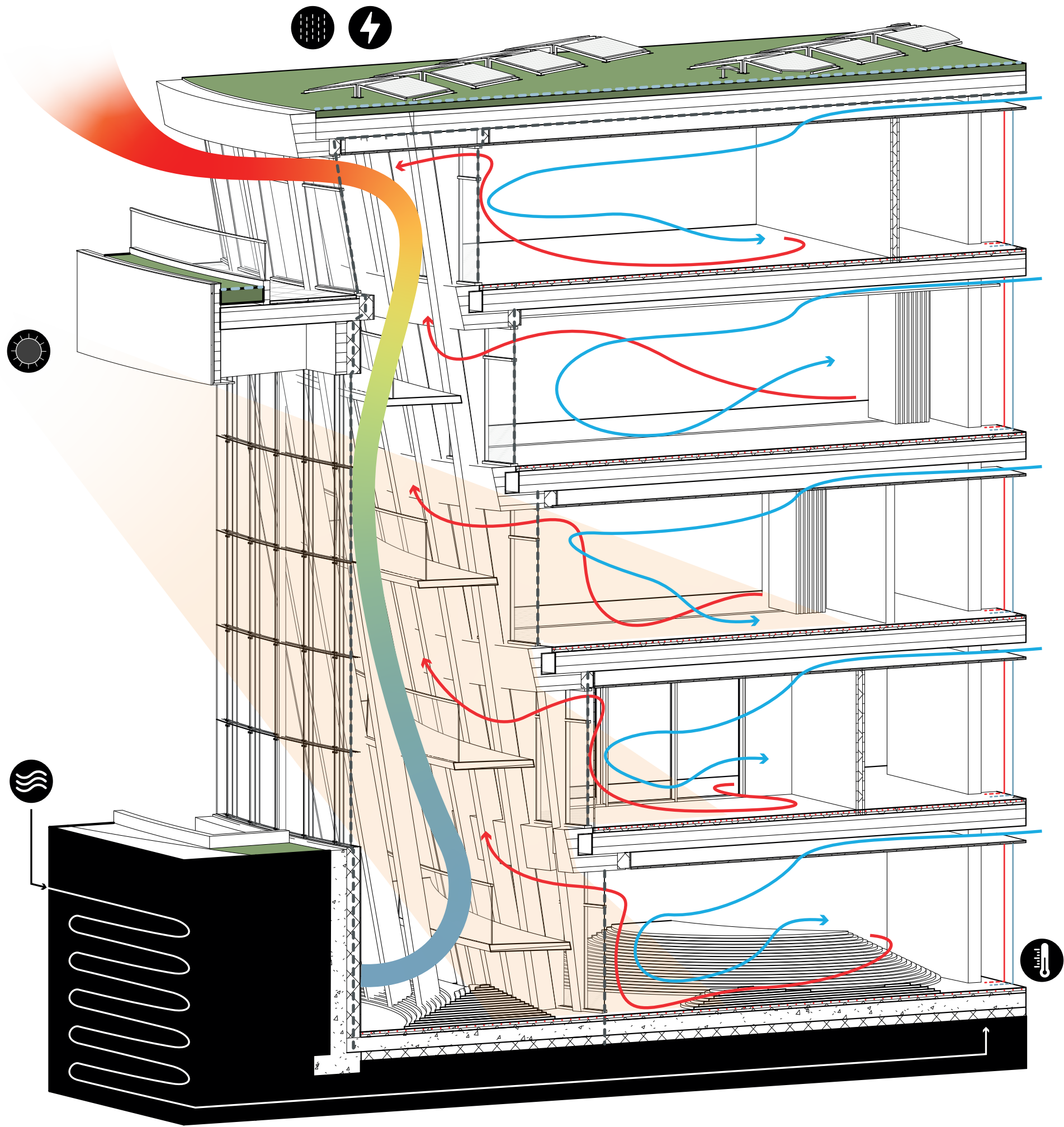








COMFORT

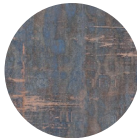




# CLIMATE



Blackthorn  
Height: 4 - 8 m  
Bloom: Spring



Structural steel  
Footprint:  
5403 Kg CO<sub>2</sub> / M<sup>3</sup>



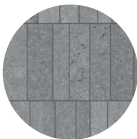
Common Hazel  
Height: 3 - 15 m  
Bloom: Spring



Concrete  
Footprint:  
215 Kg CO<sub>2</sub> / M<sup>3</sup>



Common Hawthorn  
Height: 5 - 14 m  
Bloom: summer



Reconstituted stone  
Footprint:  
13 Kg CO<sub>2</sub> / M<sup>3</sup>



Chestnut  
Height: 6 - 20 m  
Bloom: Spring



Woodfibre insulation  
Footprint:  
-61 Kg CO<sub>2</sub> / M<sup>3</sup>



European Plum  
Height: 6 - 15 m  
Bloom: Spring



CLT  
Footprint:  
-664 Kg CO<sub>2</sub> / M<sup>3</sup>











# LIFESTYLES ACTIVATED

Thank you for your attention

