

Museum Zuid

connecting culture through
multifunctional design

Max van Steen

P5 Public Building Graduation Studio

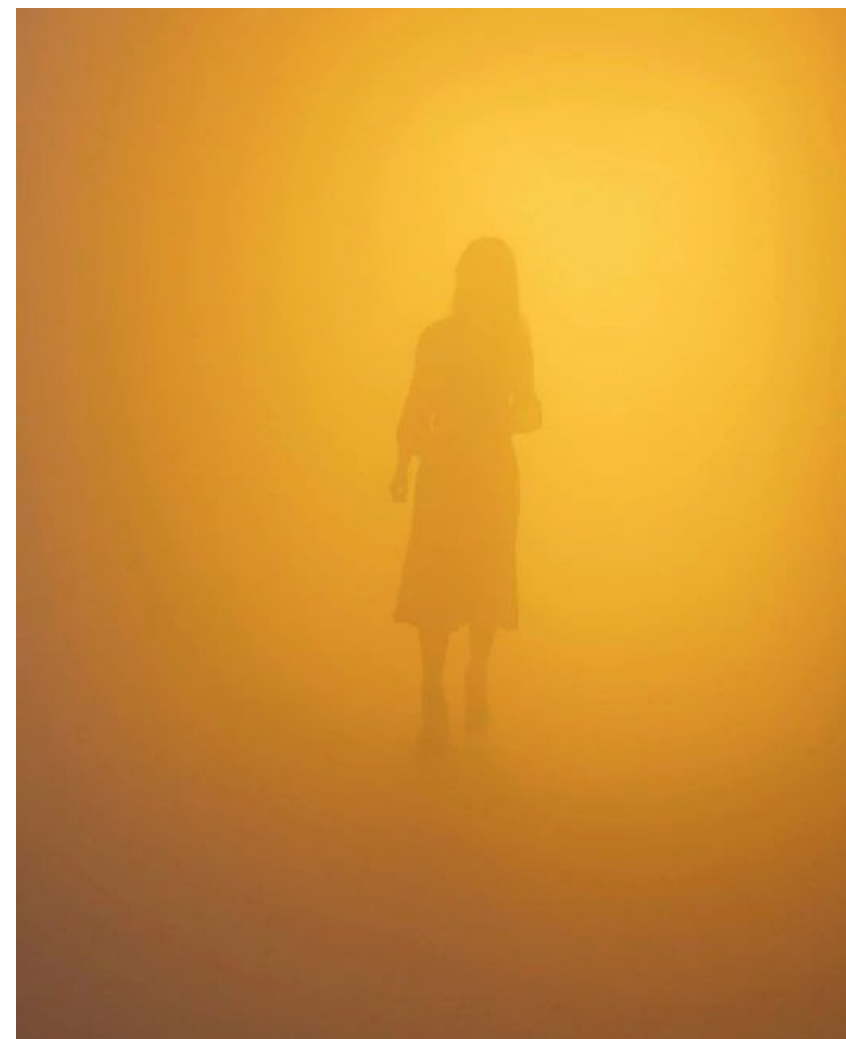
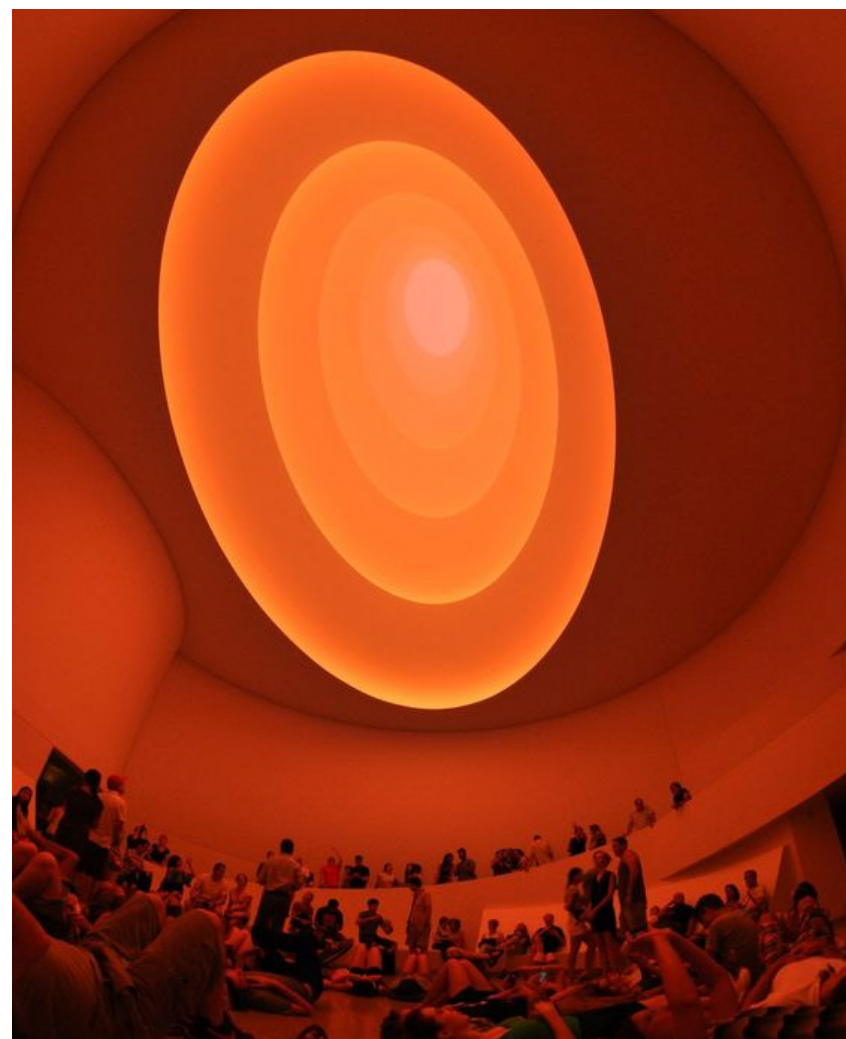
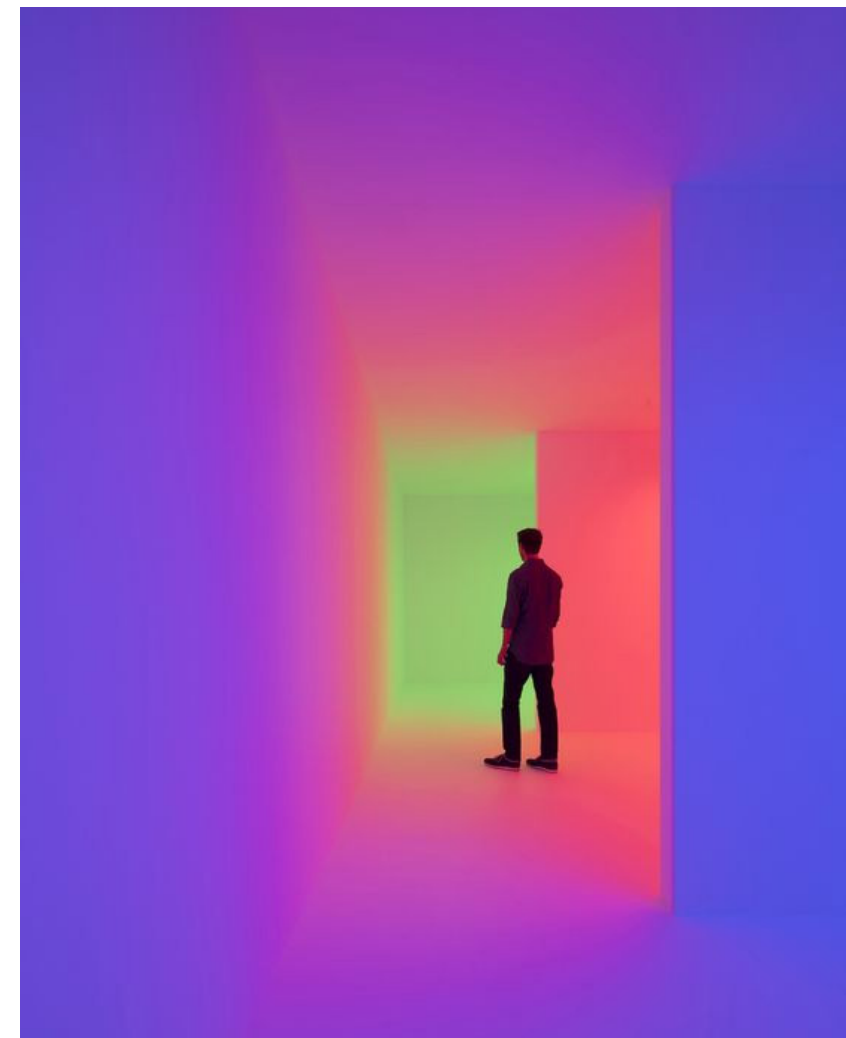
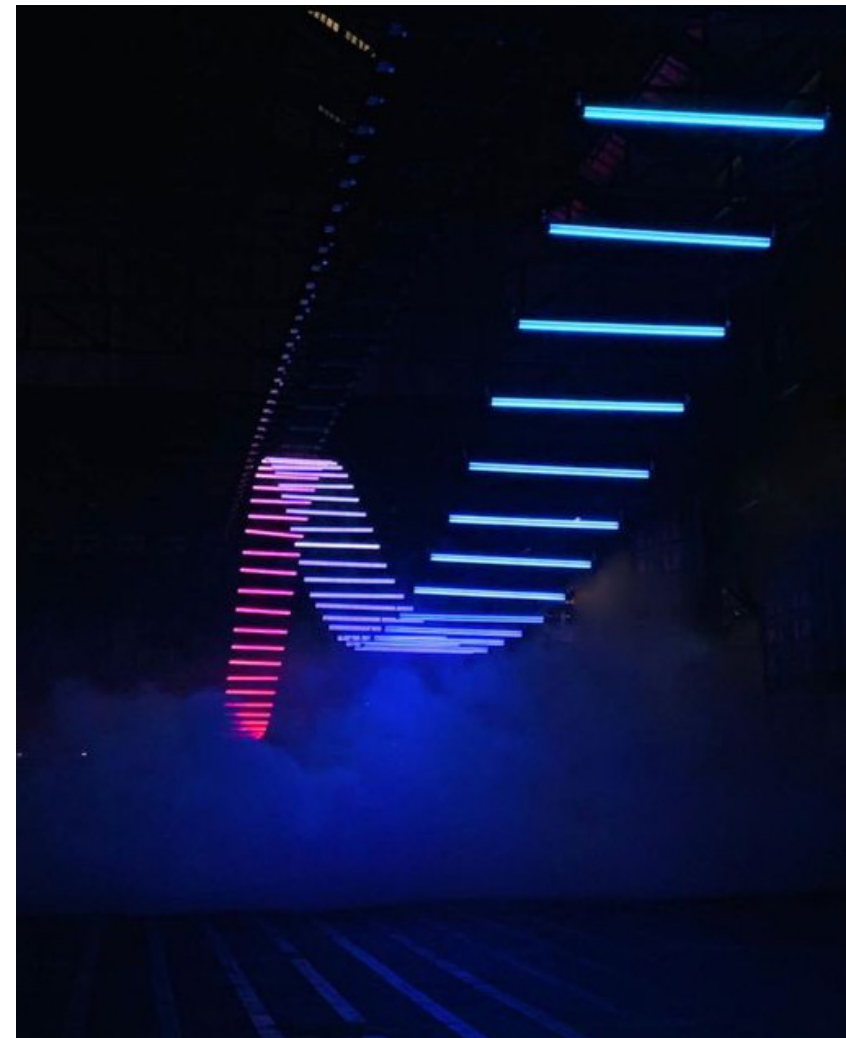
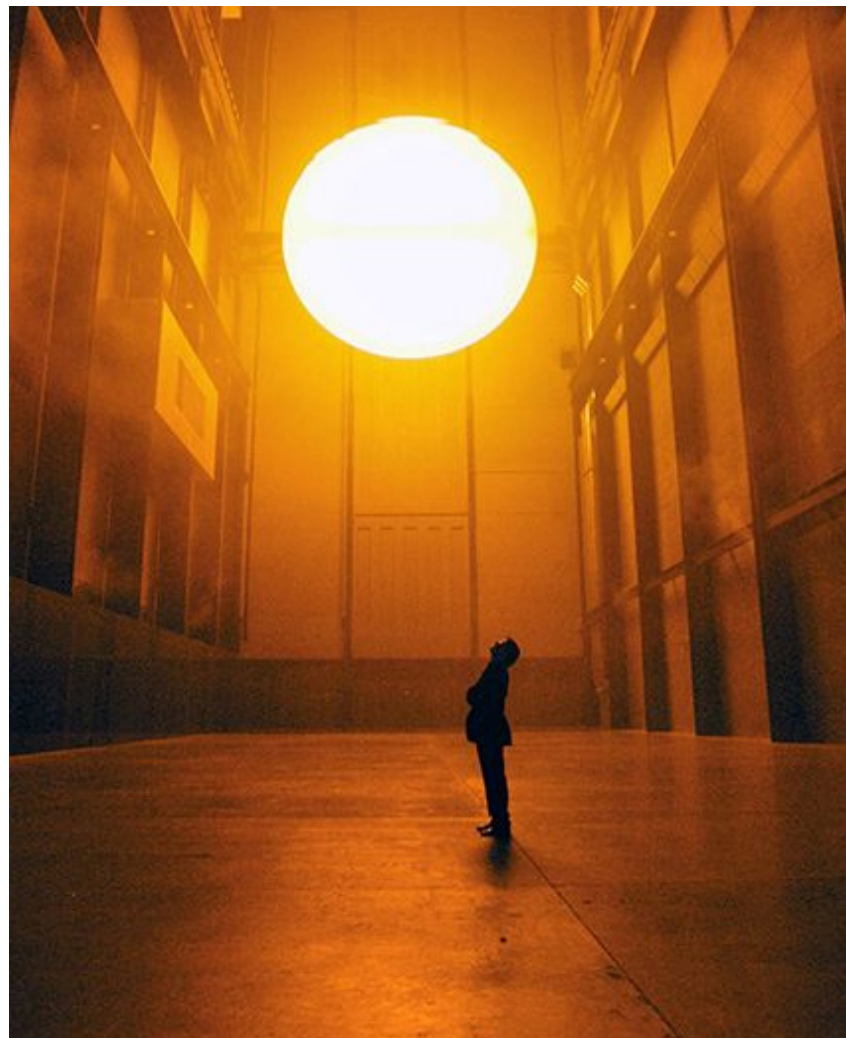
24-06-2021

Introduction



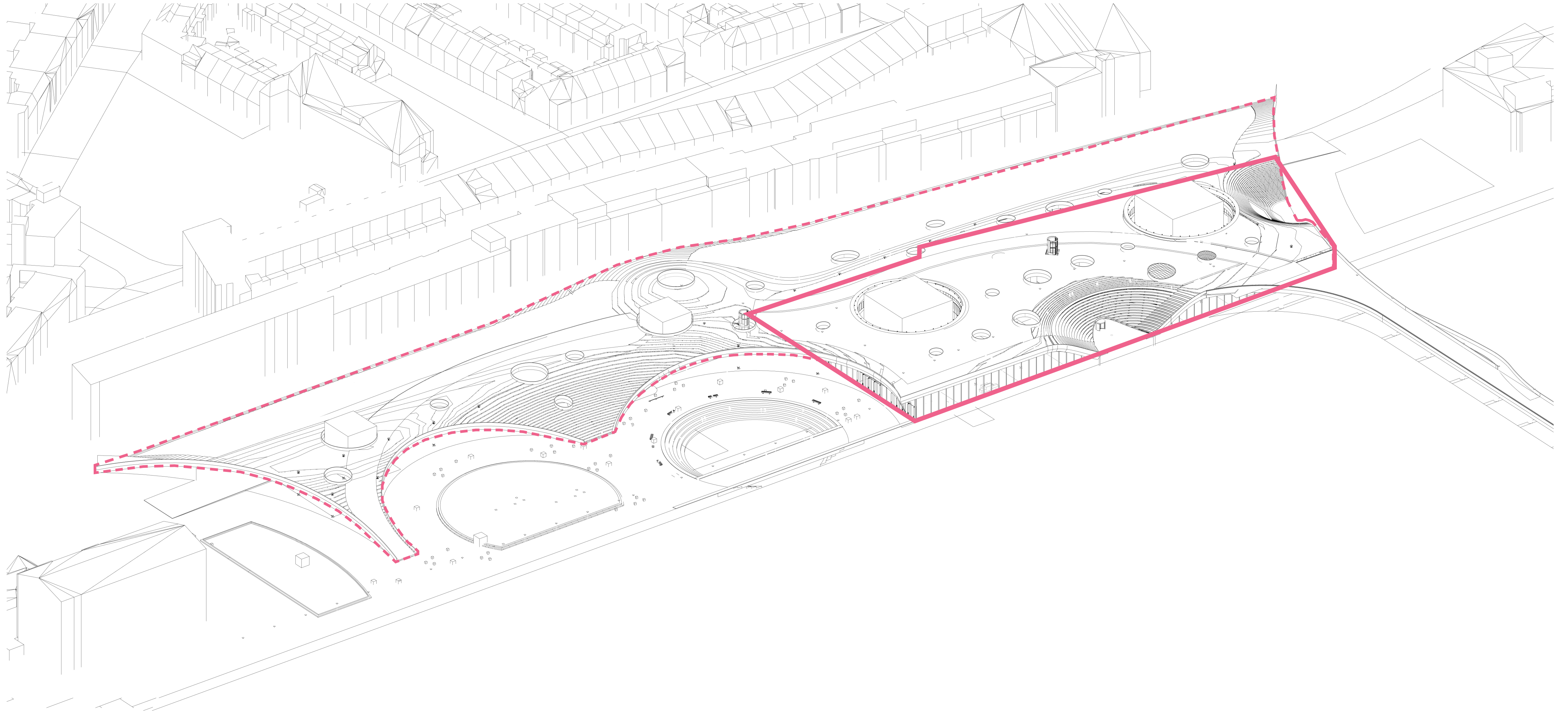
Location: Maashaven Zuidzijde, Tarwerwijk, Rotterdam

Introduction



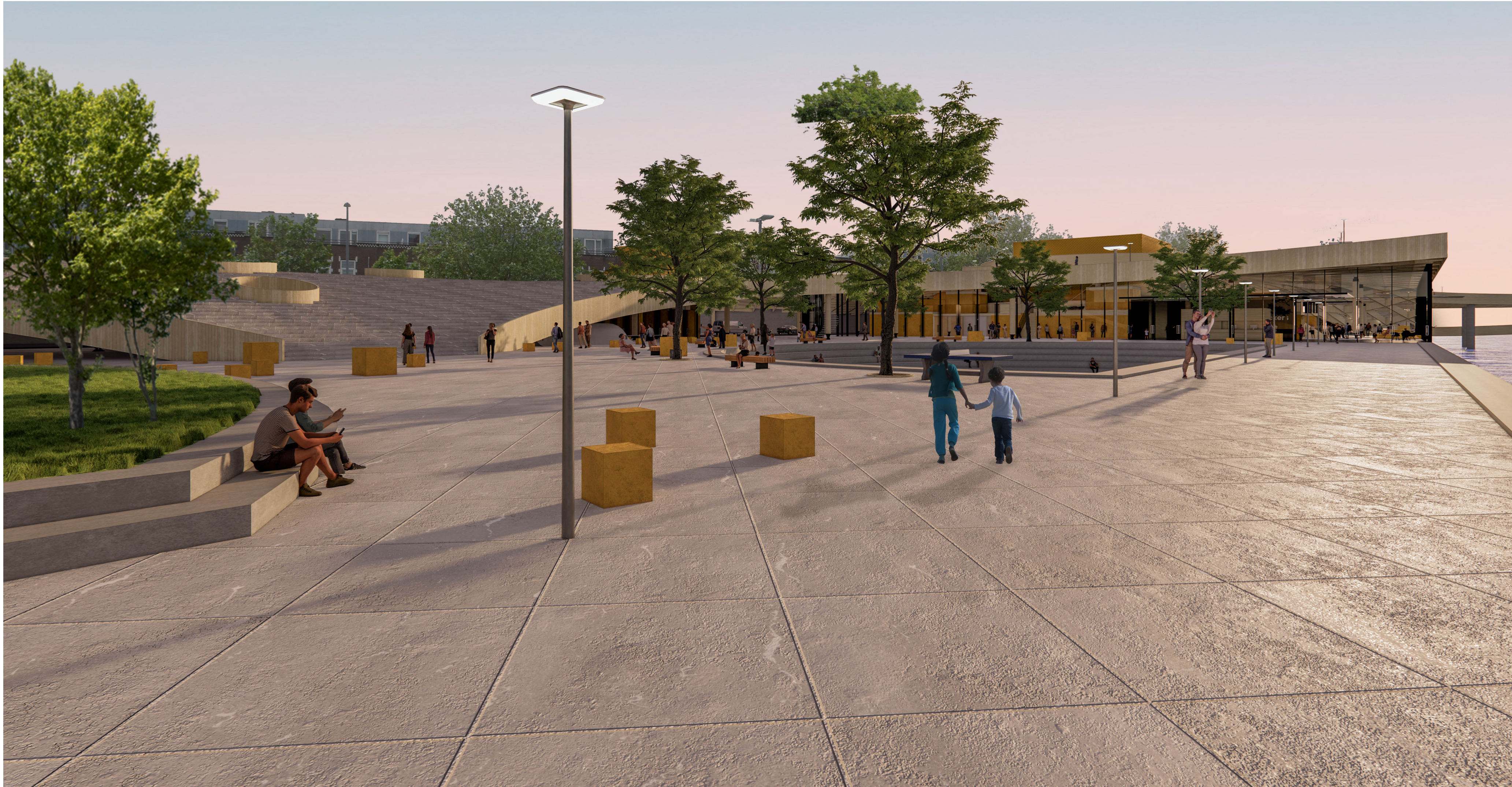
Museum for **immersive art**: the creation of a world around the person in a way that makes them feel part of and inside of it

Introduction



A building and public space covered under a giant roof park

Introduction



The museum merges with the public space

Introduction



Manifesto: the merging of museum and public space

Introduction



The museum merges with the public space

Introduction

Personal conclusions group analysis:

- The lack of quality public space
- The disengagement with art and culture in the Tarwewijk and Rotterdam South

Main goal

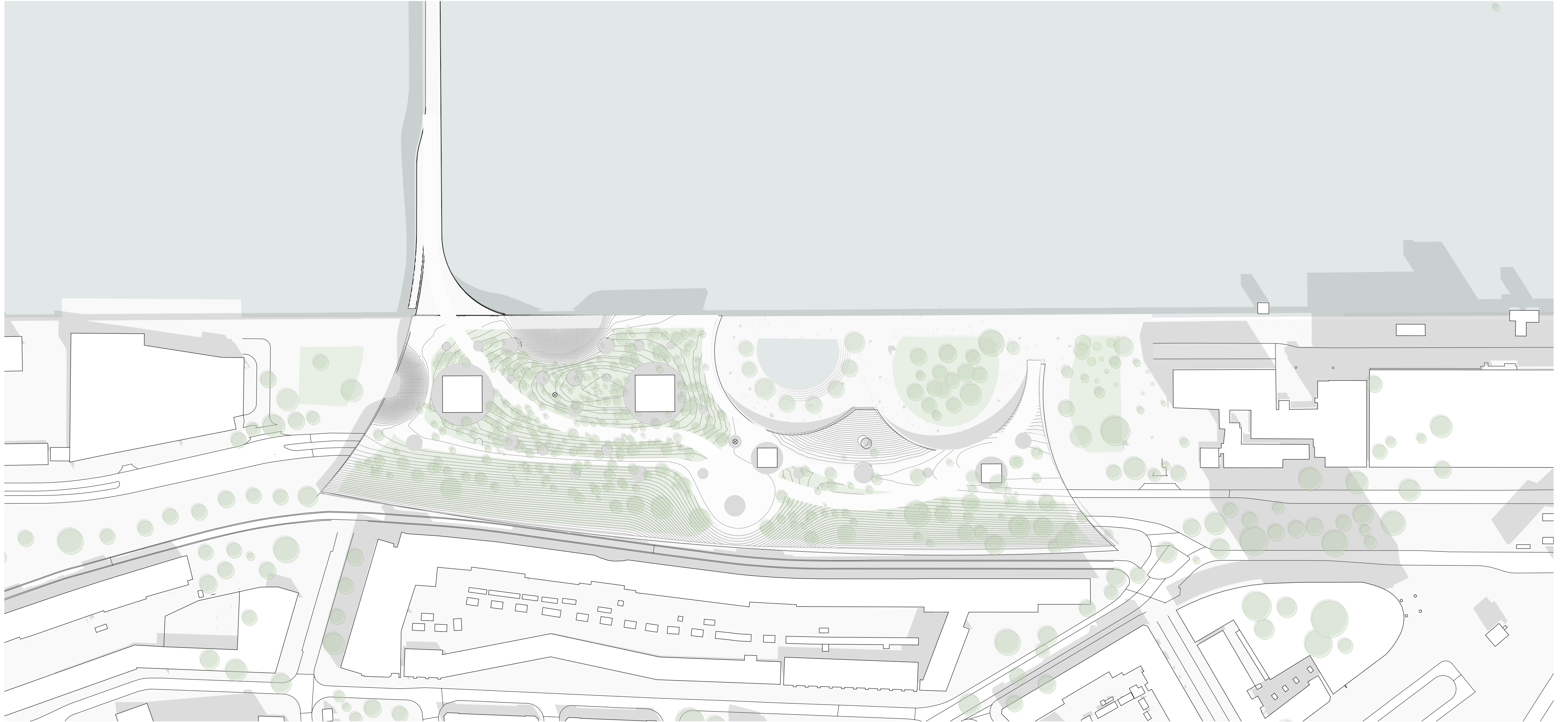
The building must be a public cultural place for the people of the Tarwewijk and Rotterdam Zuid that stimulates the experience of art and public life.

How?

1. The city as a part of the building
2. Combine the informality of the public sphere with the formality of a museum
3. A multifunctional (hybrid) complex with a variety of uses
4. A museum focused on people
5. A building that can adapt to society (multiplicity)
6. A roof structure that brings it together (climate + construction)

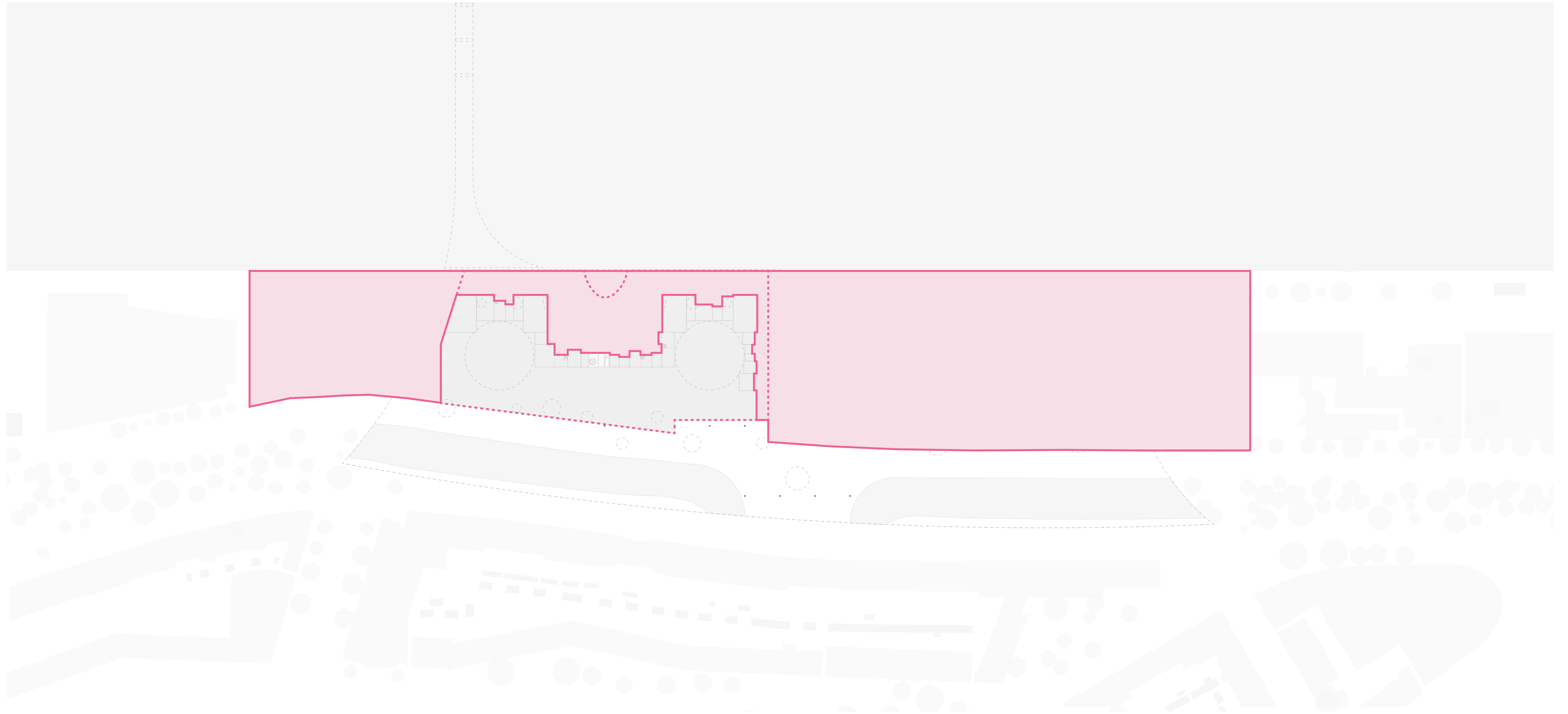
1. The city as a part of the building

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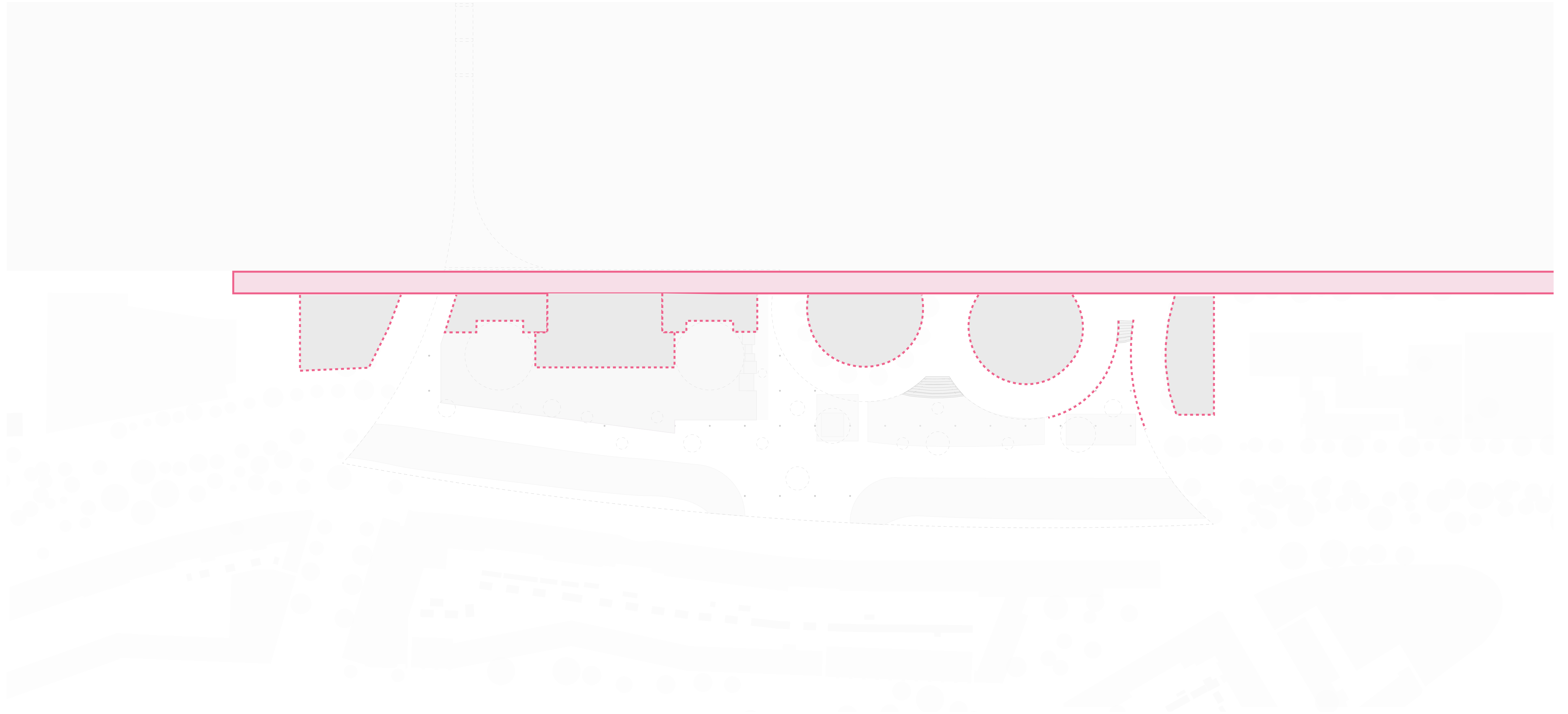
Site plan

1. The city as a part of the building



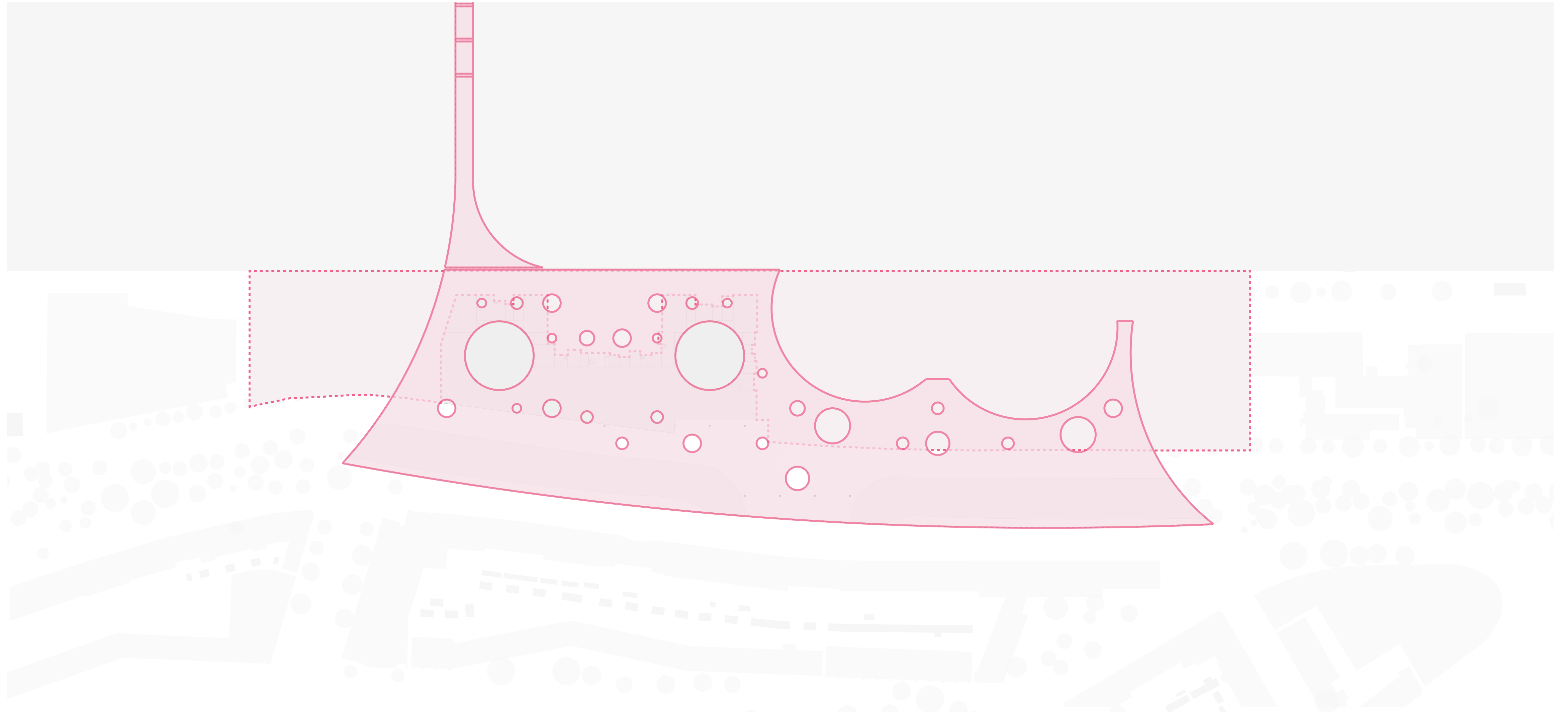
The public space at the ground level continues in the building

1. The city as a part of the building



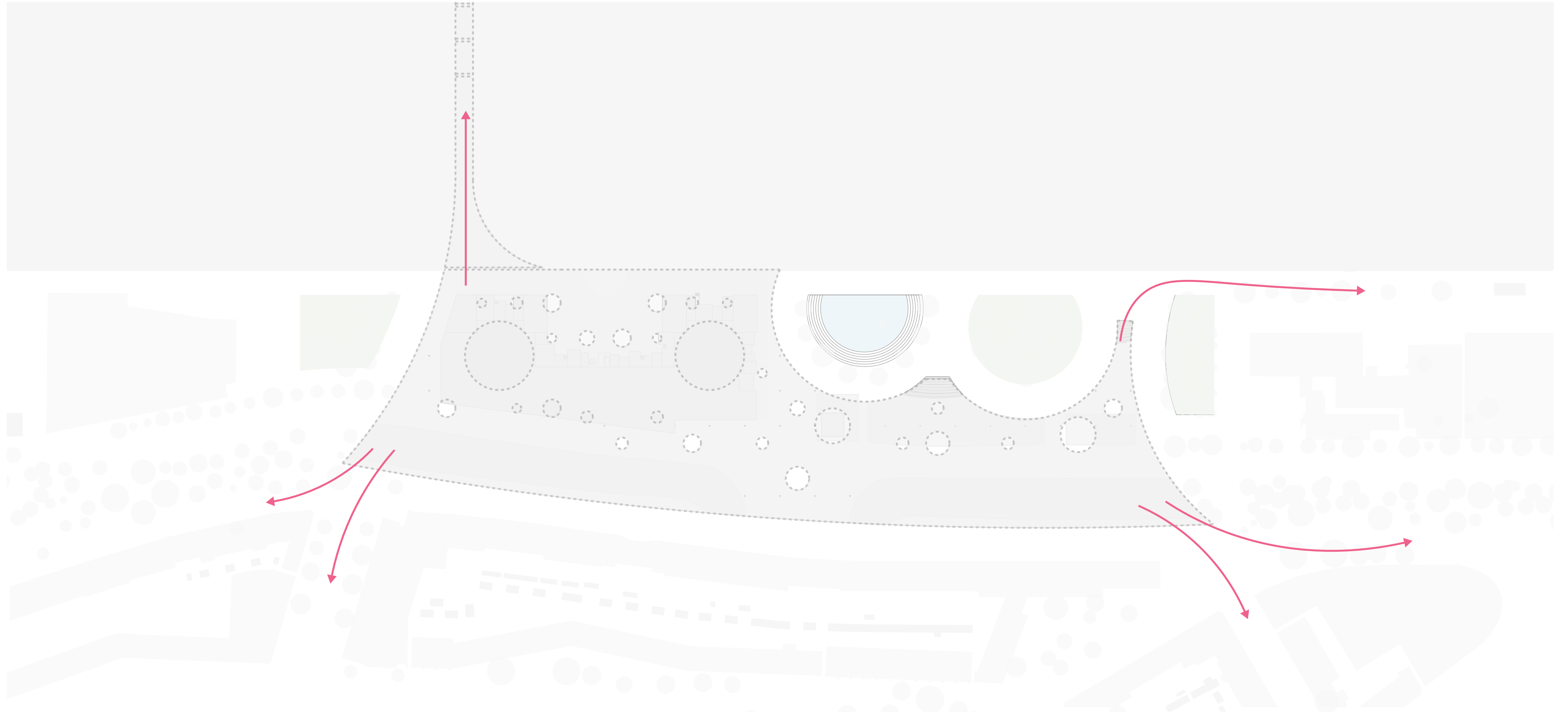
Continuation of the quay

1. The city as a part of the building



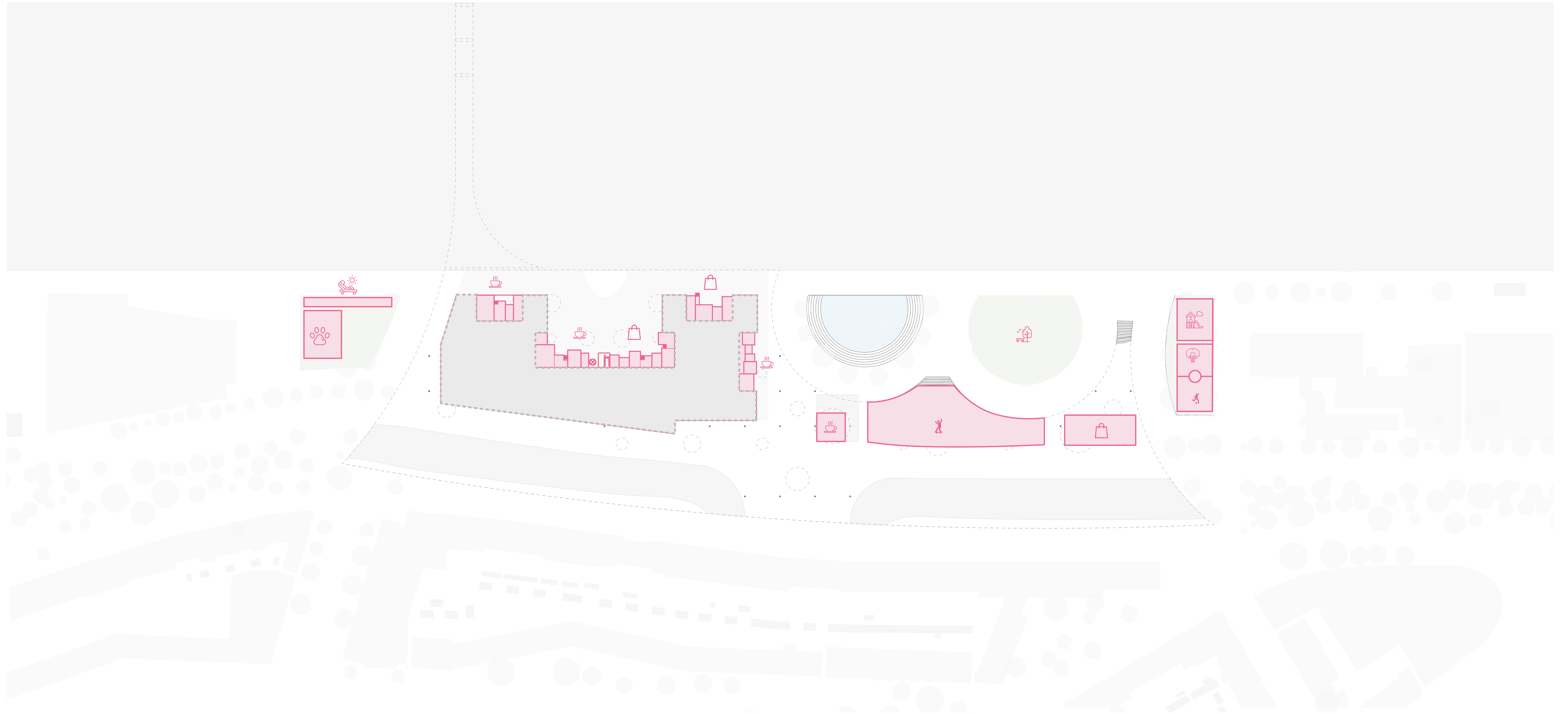
The roof park literally makes the building part of the public sphere

1. The city as a part of the building



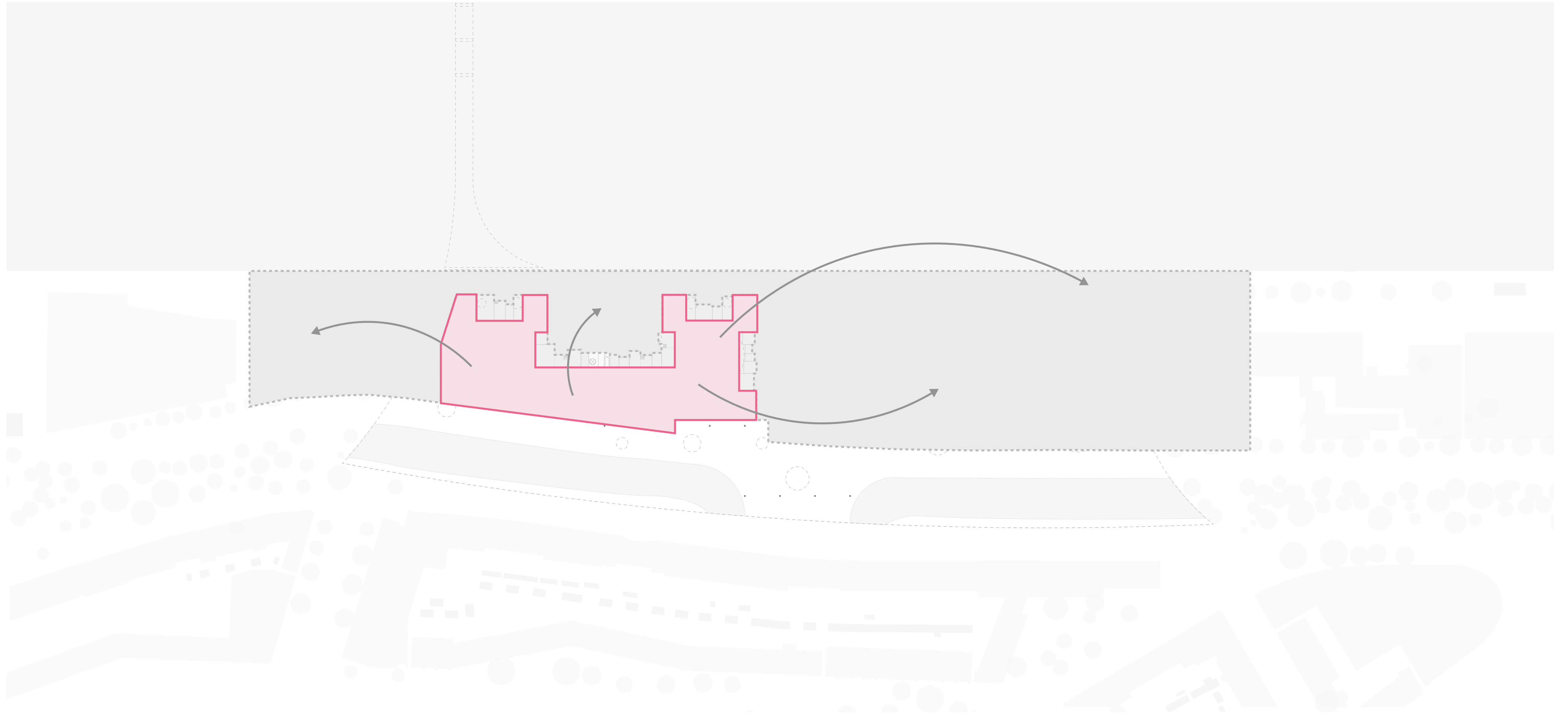
Roof as a connector between neighbourhoods

1. The city as a part of the building



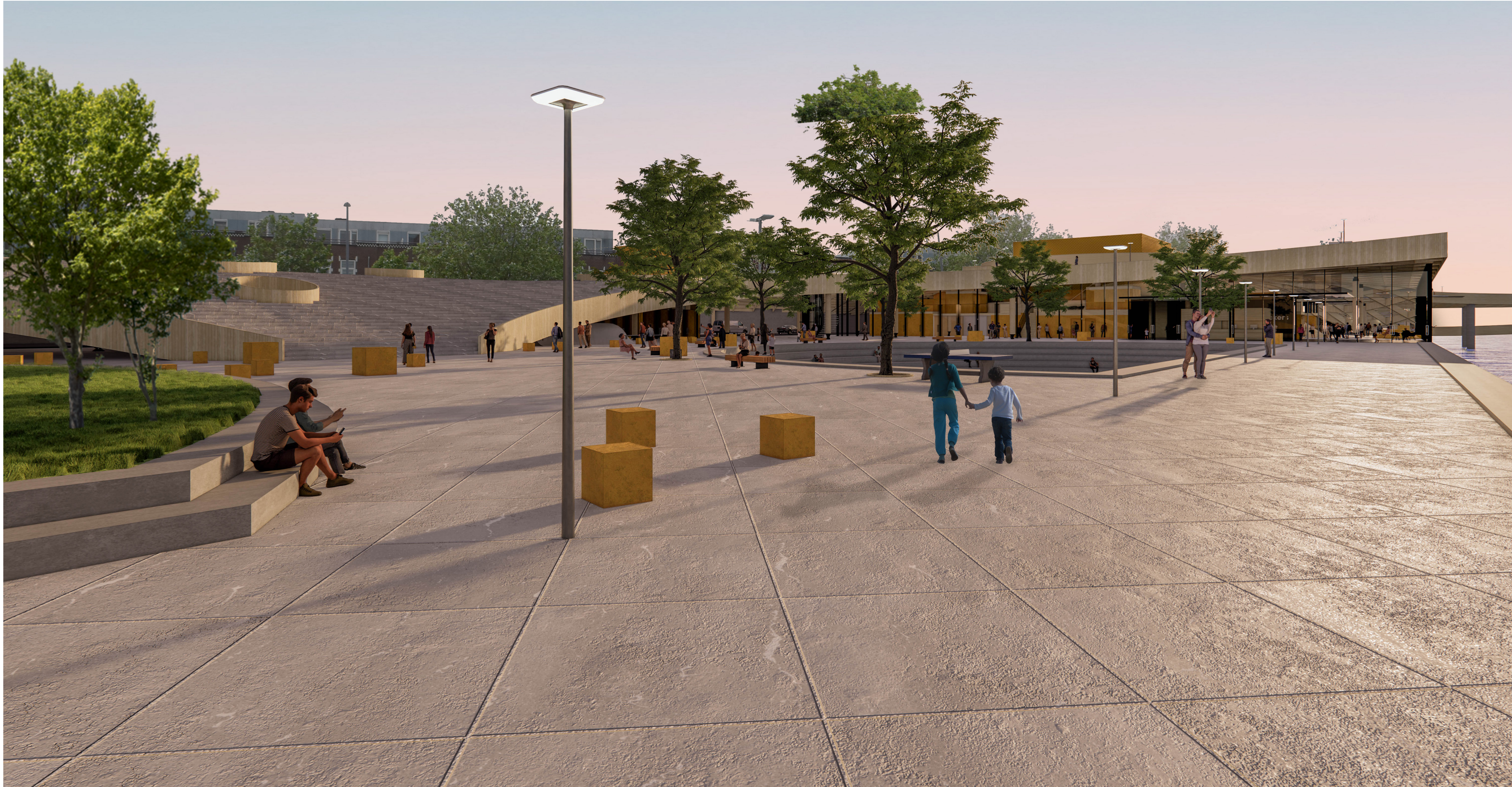
Area filled with activity as attractor for the museum

1. The city as a part of the building



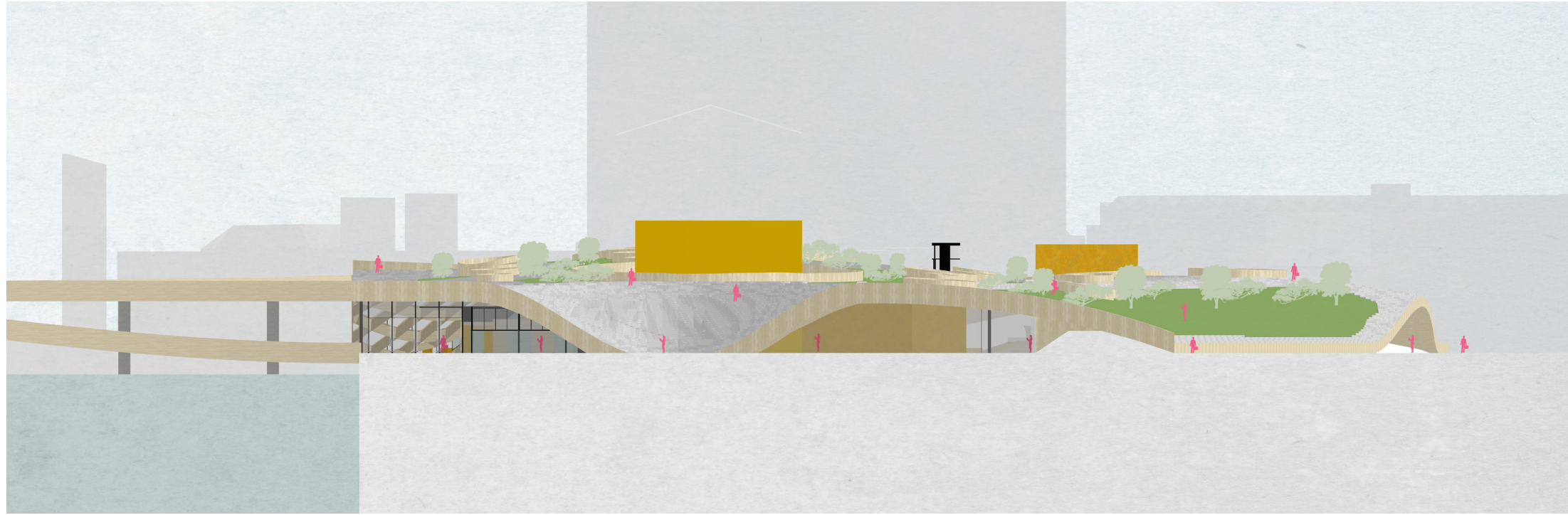
Museum as an incubator for the public space around it

1. The city as a part of the building



The building merges with the public space

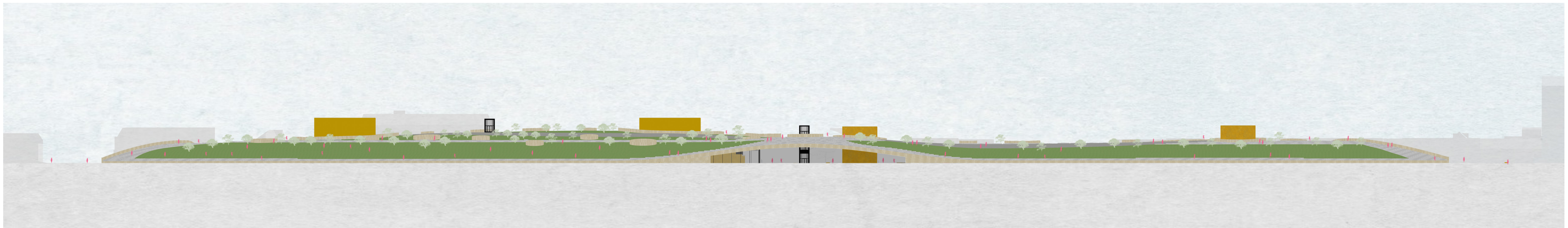
1. The city as a part of the building



West facade



East facade



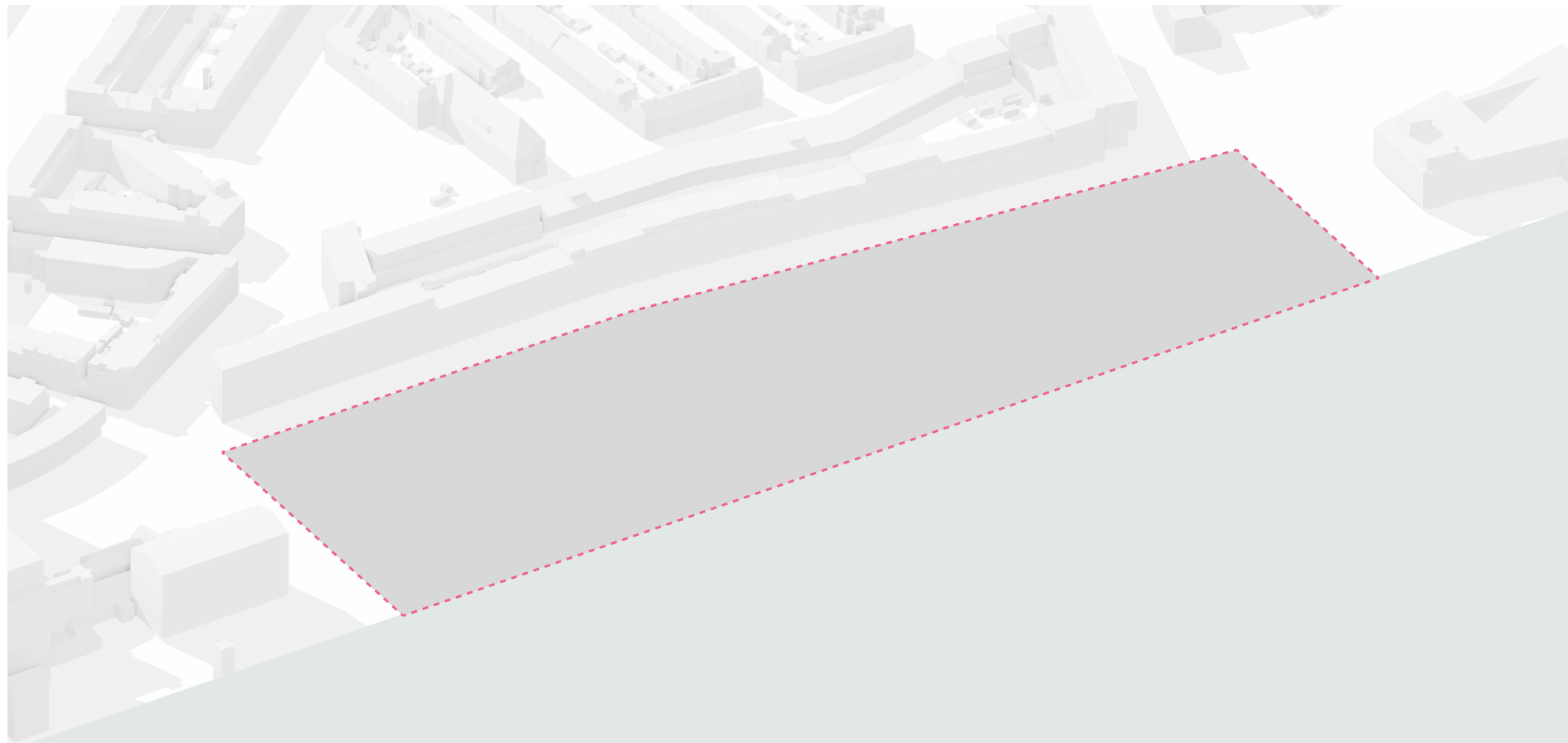
South facade



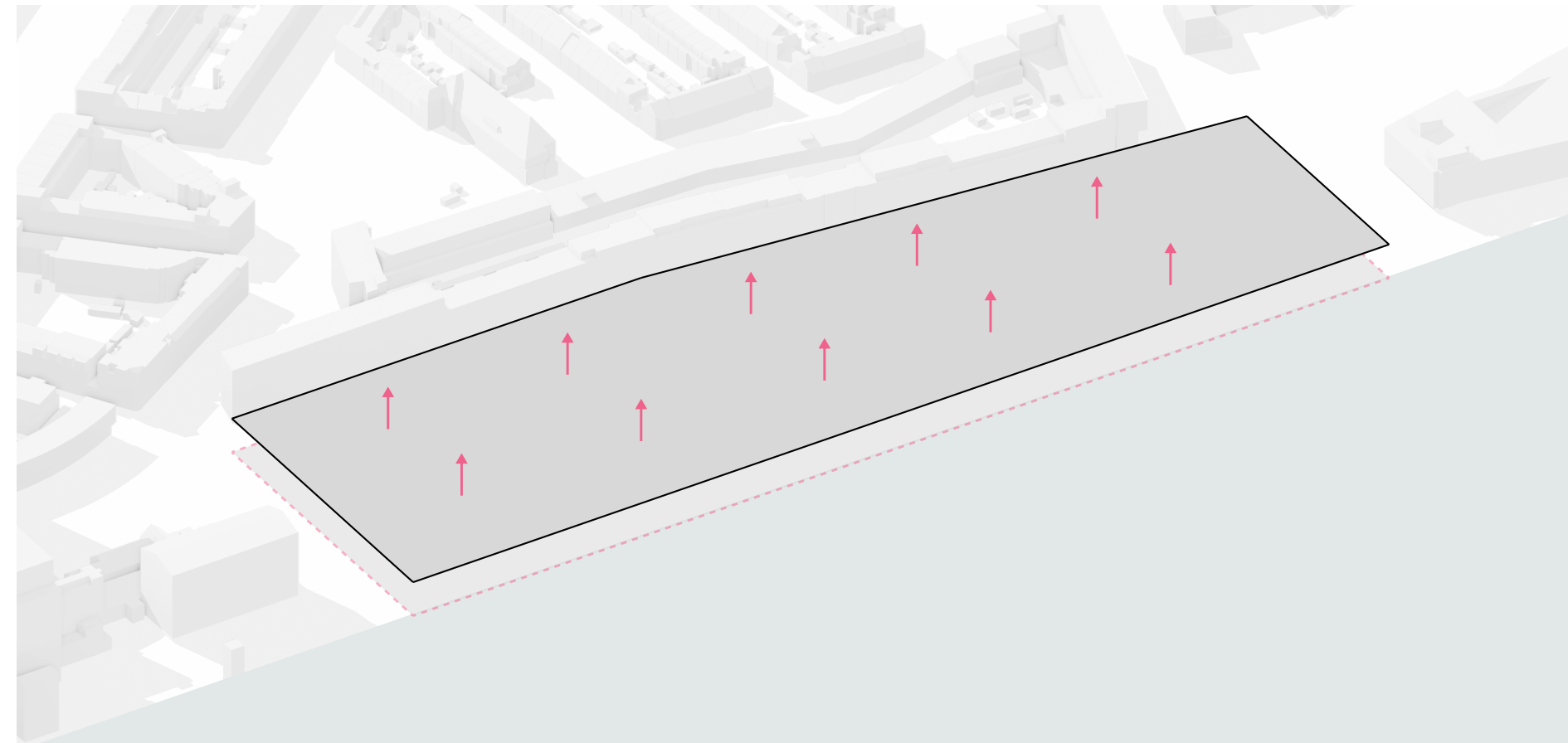
North facade

Roof park as connector to outside and within the site

1. The city as a part of the building



1. Site

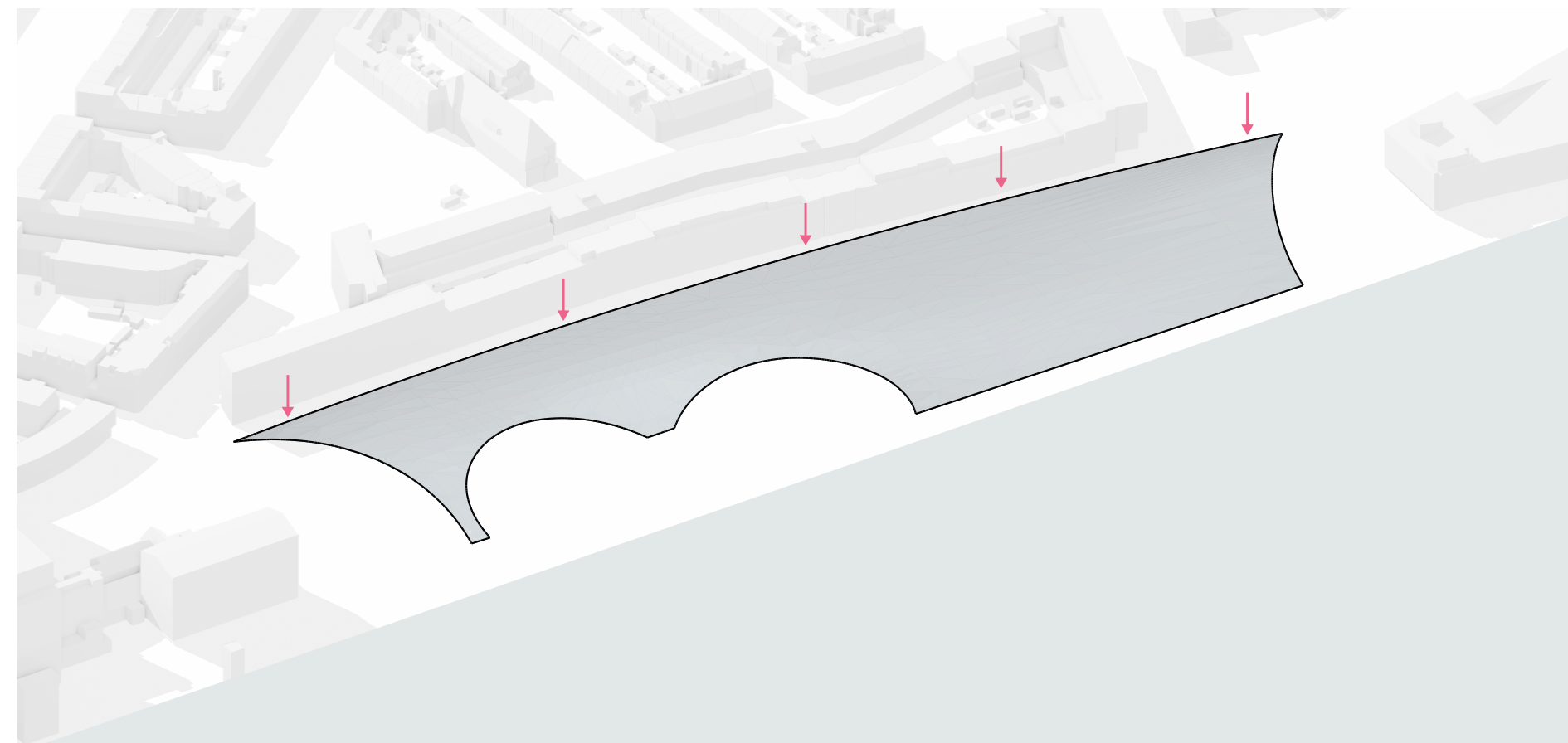


2. Raise site for extra public space



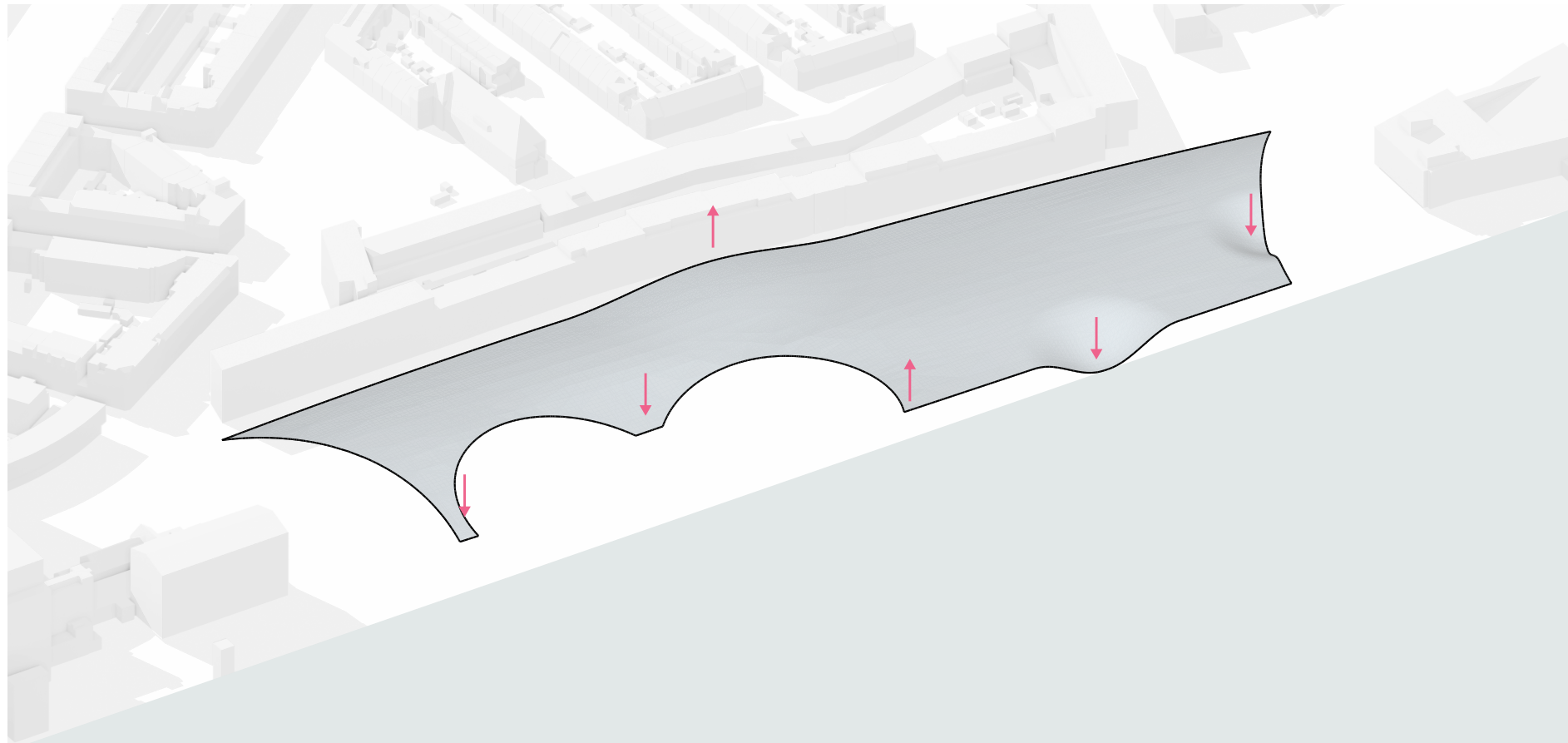
3. Give shape with long curved edges

The roof shape

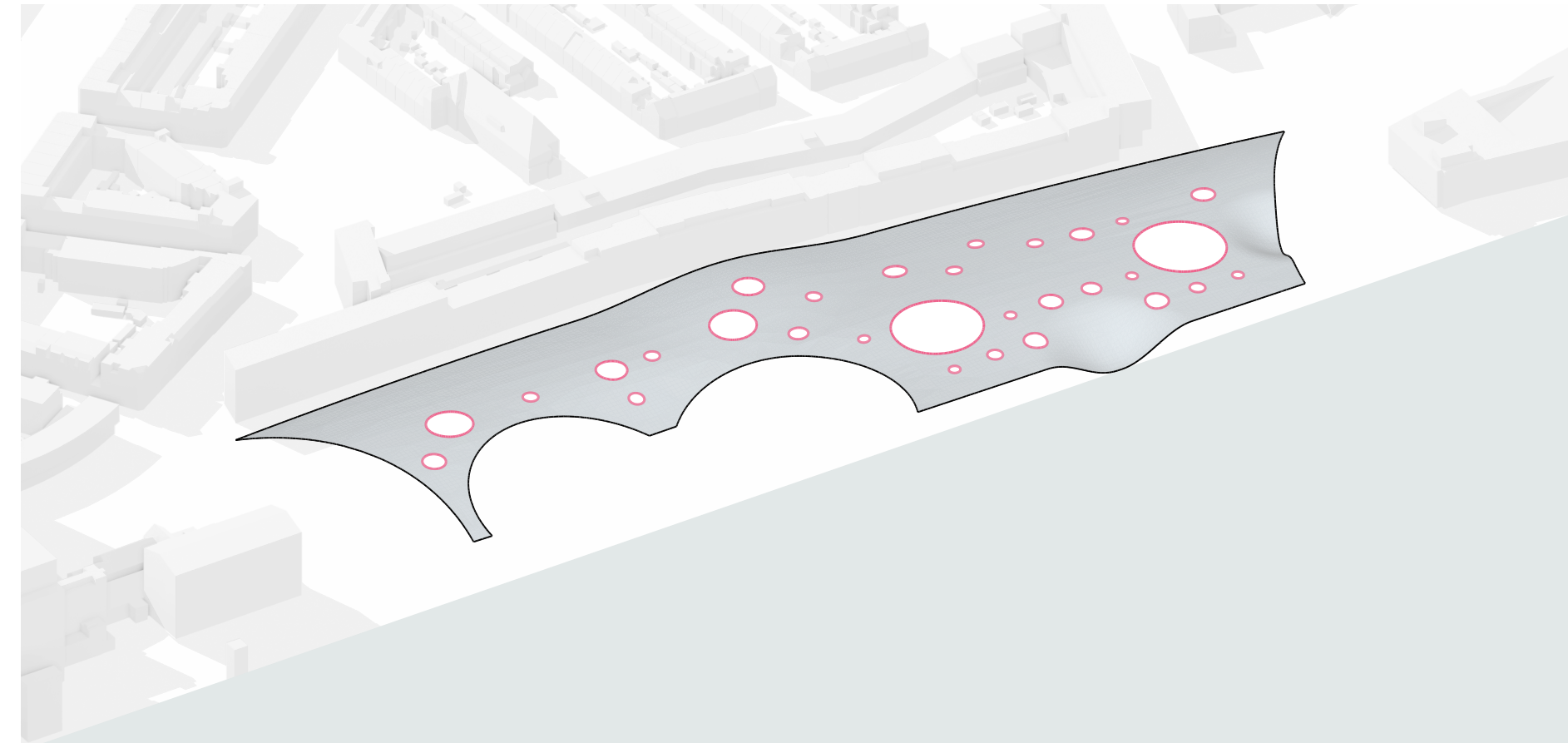


4. Connect to neighbourhood

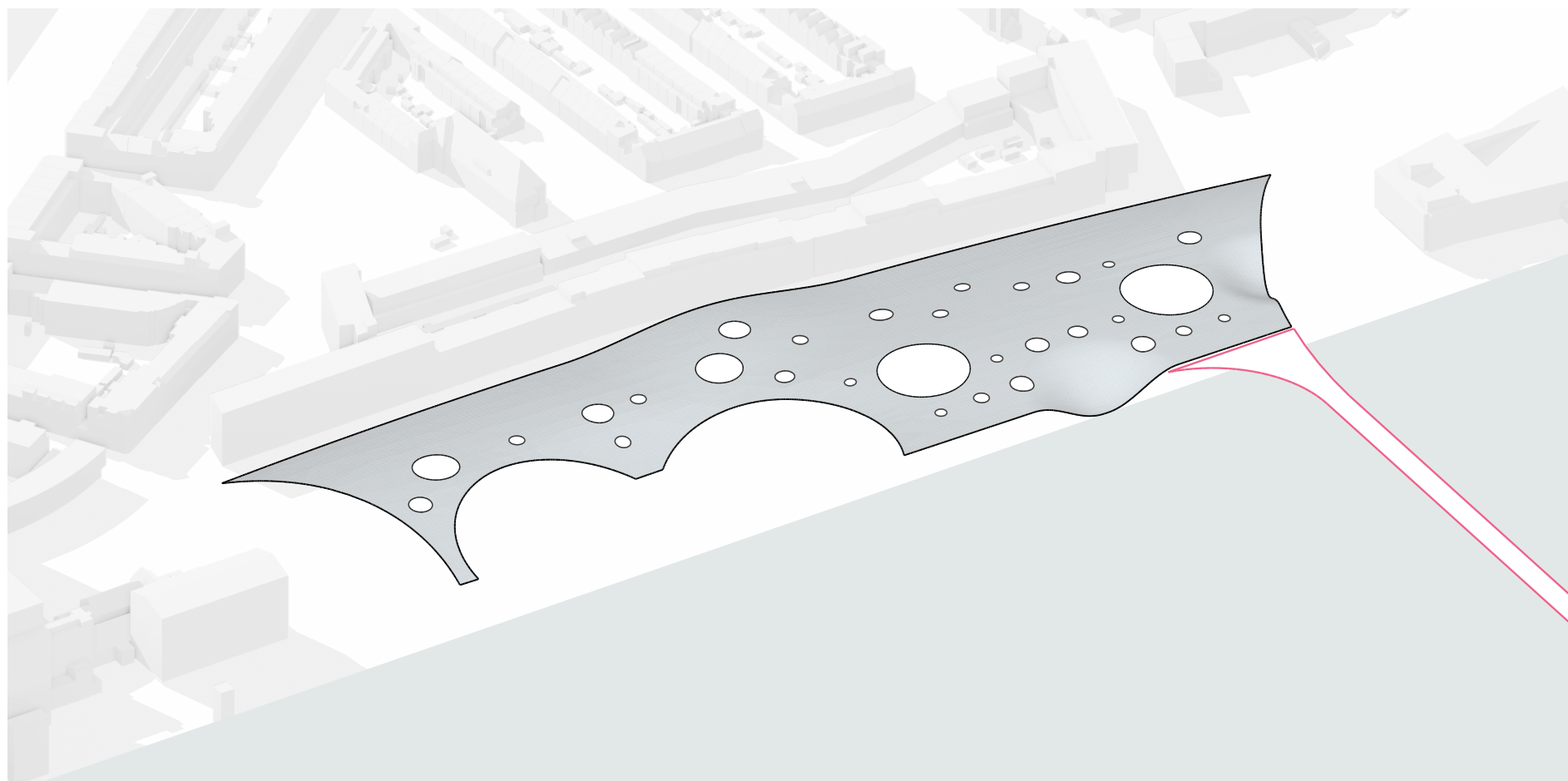
1. The city as a part of the building



5. Create virtical connections



6. Create holes for daylight



7. Connect to katendrecht with bridge

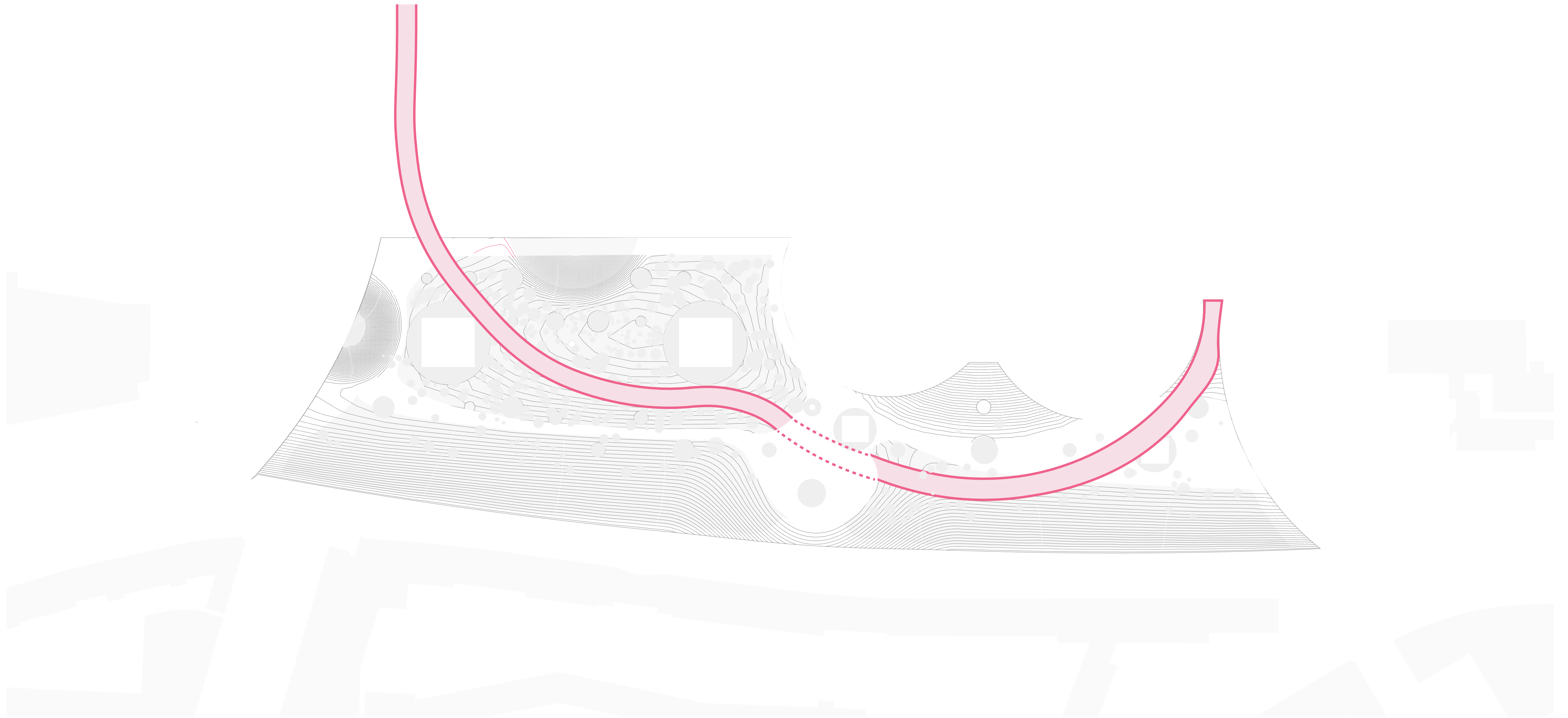
The roof shape

1. The city as a part of the building



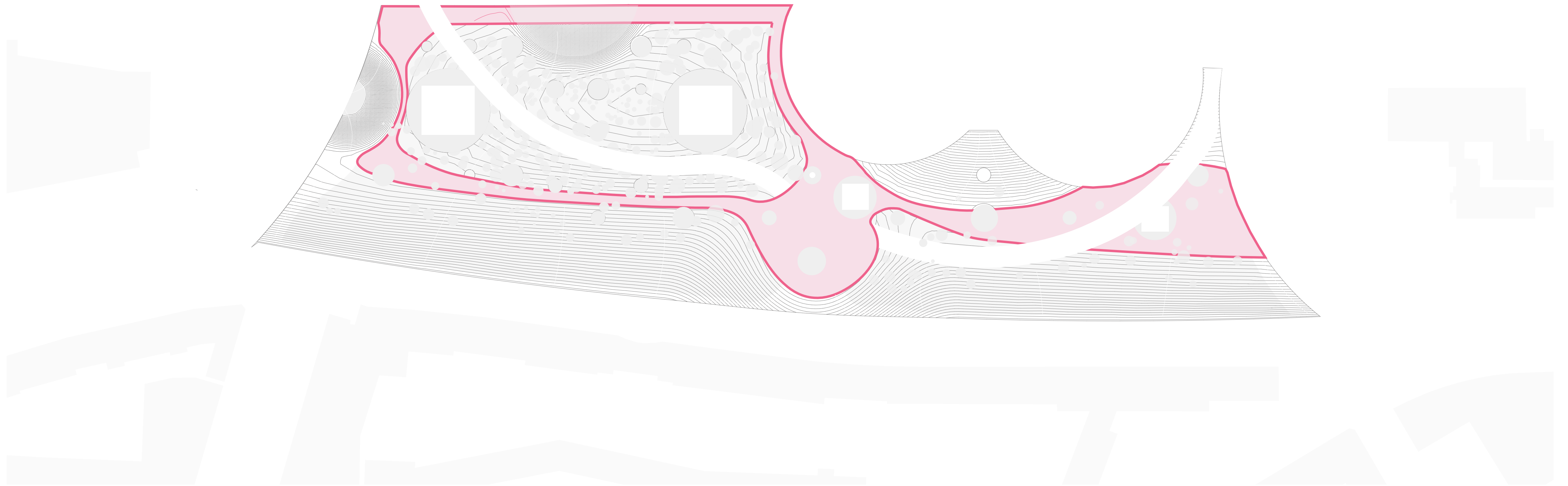
The roof park as a superposition of different layers

1. The city as a part of the building



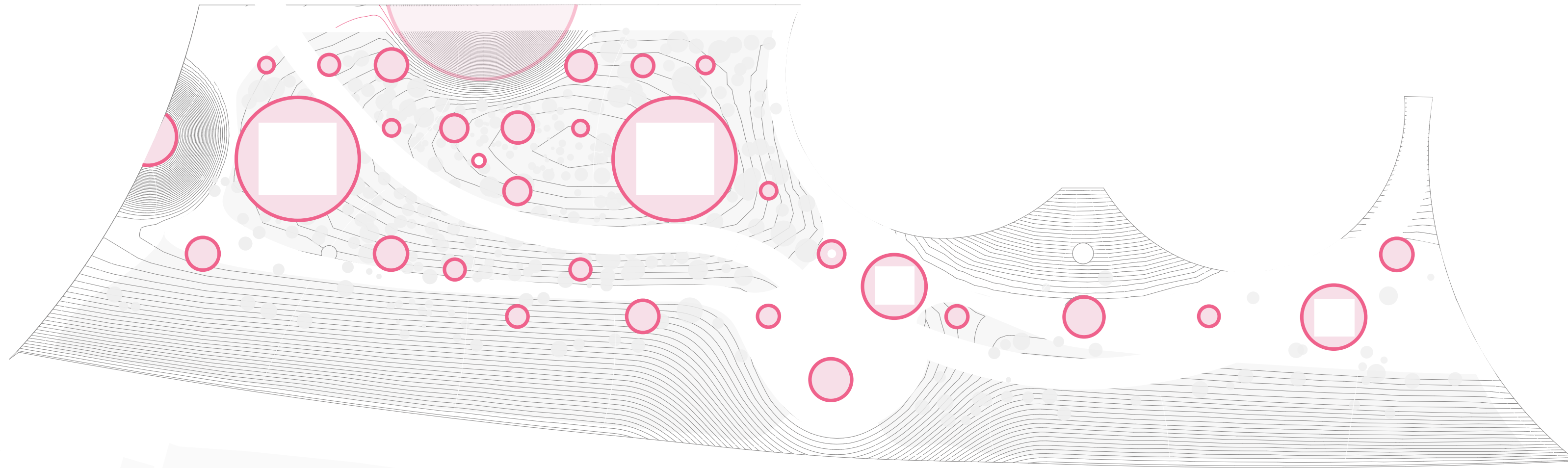
The primary layer is a broad path that goes along all the main elements of the roof.

1. The city as a part of the building



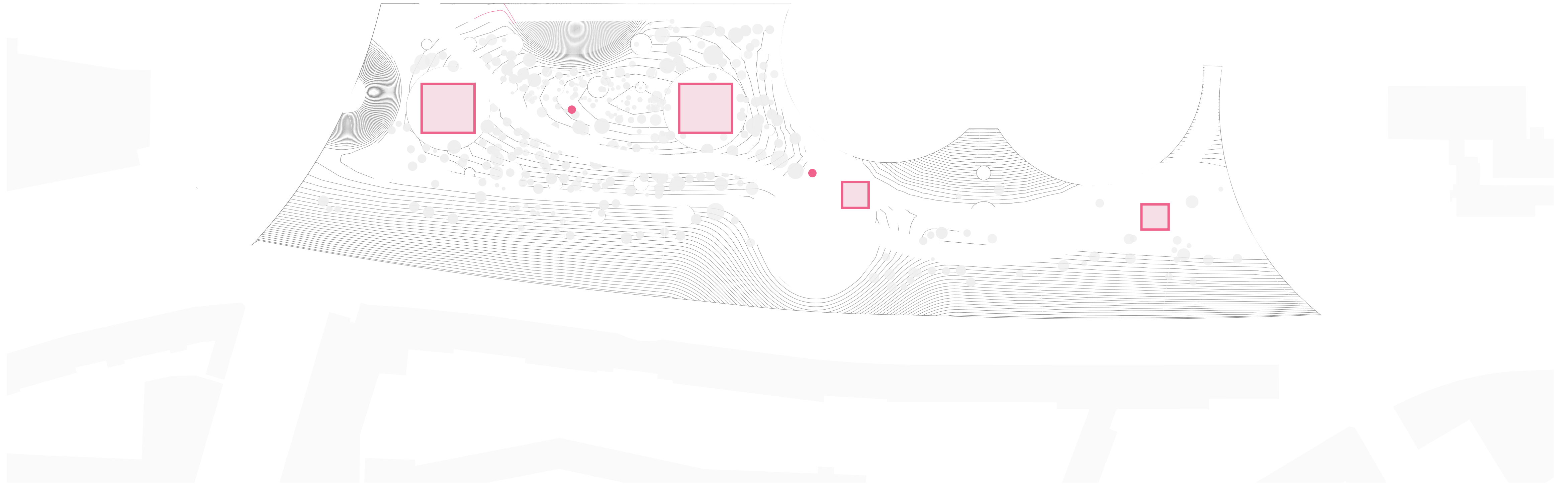
The secondary layer is a non sloped path following the height lines of the roof

1. The city as a part of the building



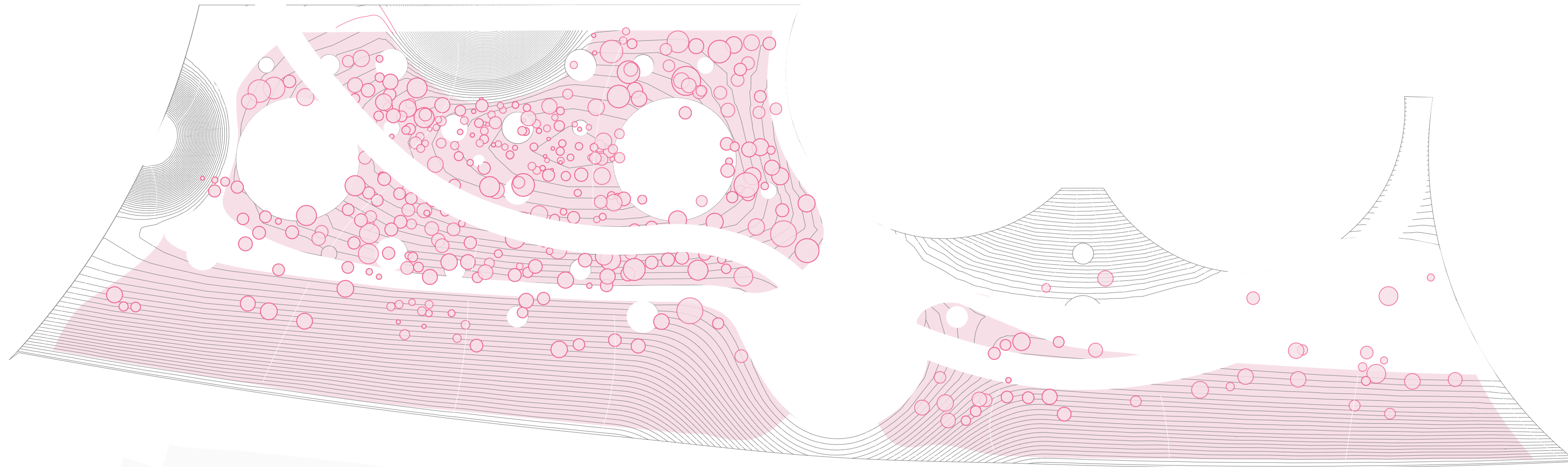
The holes in the roof provide daylight for the museum and create a visual connection

1. The city as a part of the building



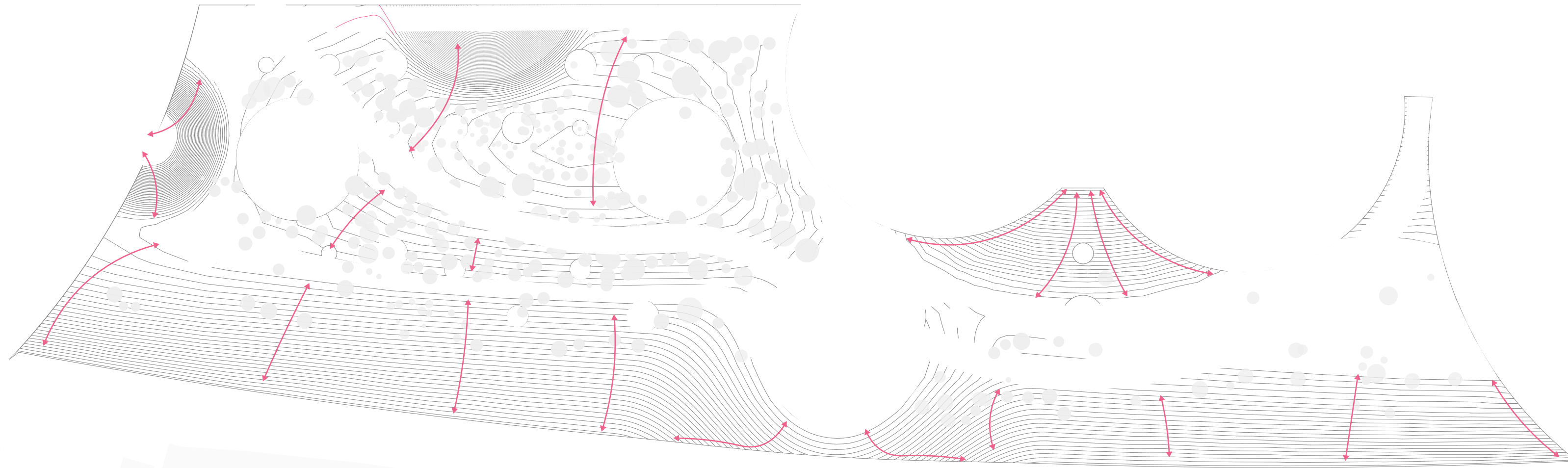
Blocks penetrating the roof and creating a functional connection

1. The city as a part of the building



The vegetation consists of grass fields with varying density of bush.

1. The city as a part of the building



Paths connecting the park internal and with the surroundings

1. The city as a part of the building



Roof park seen from the beginning of the bridge

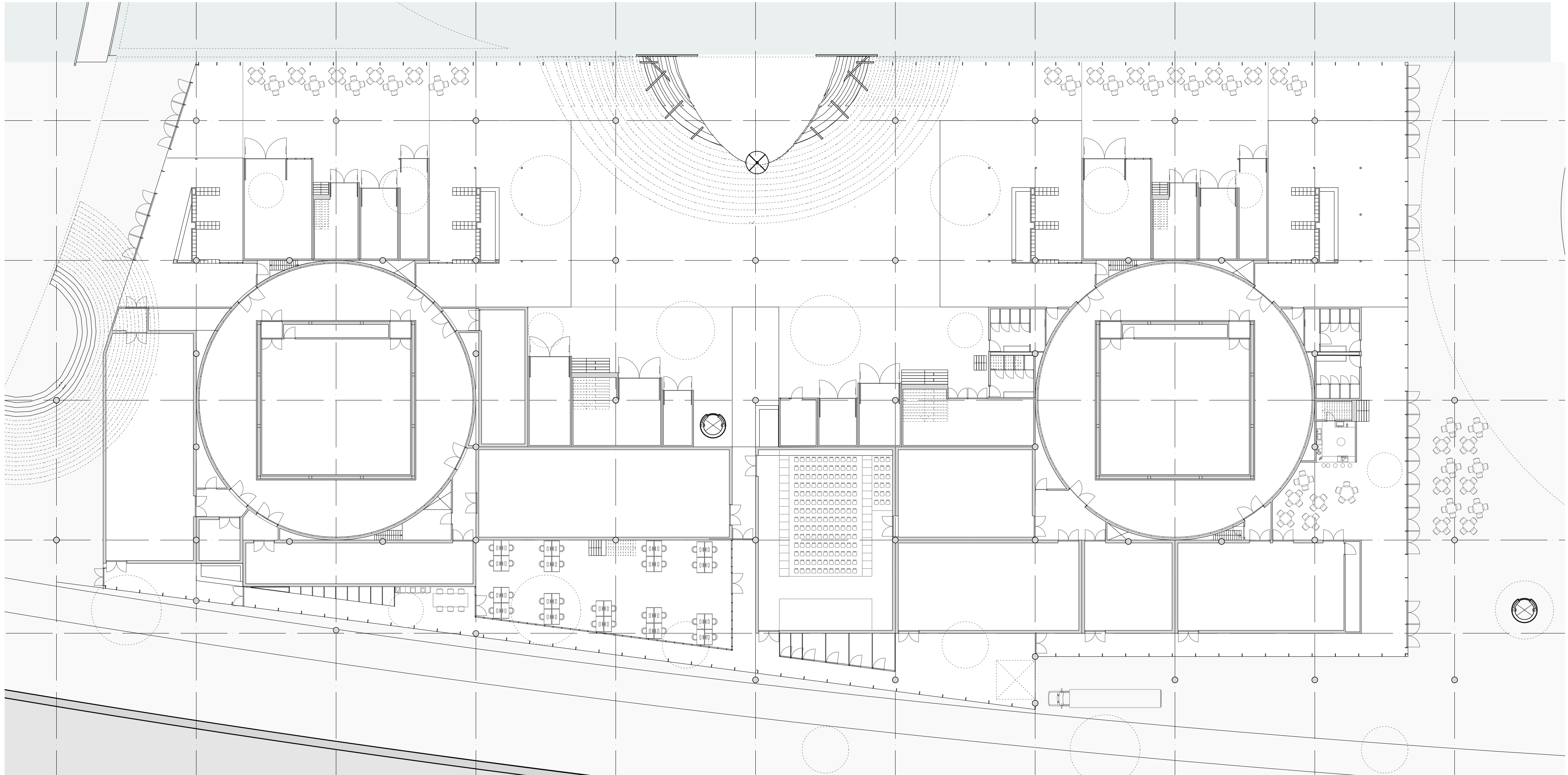
1. The city as a part of the building



Dakpark, Rotterdam West, by Buro Sant en Co

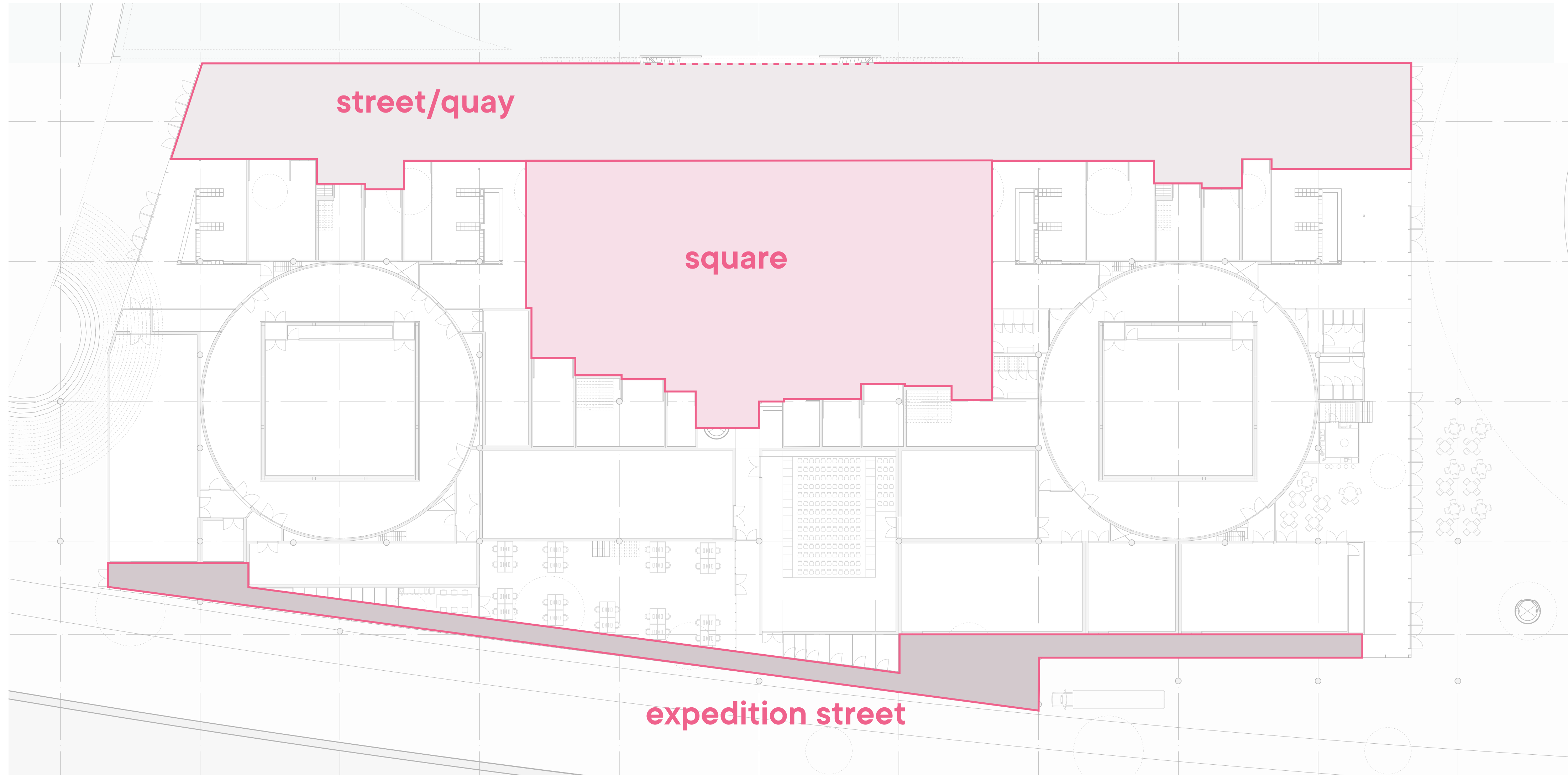
2. Combine the informality of the public space with the formality of the museum

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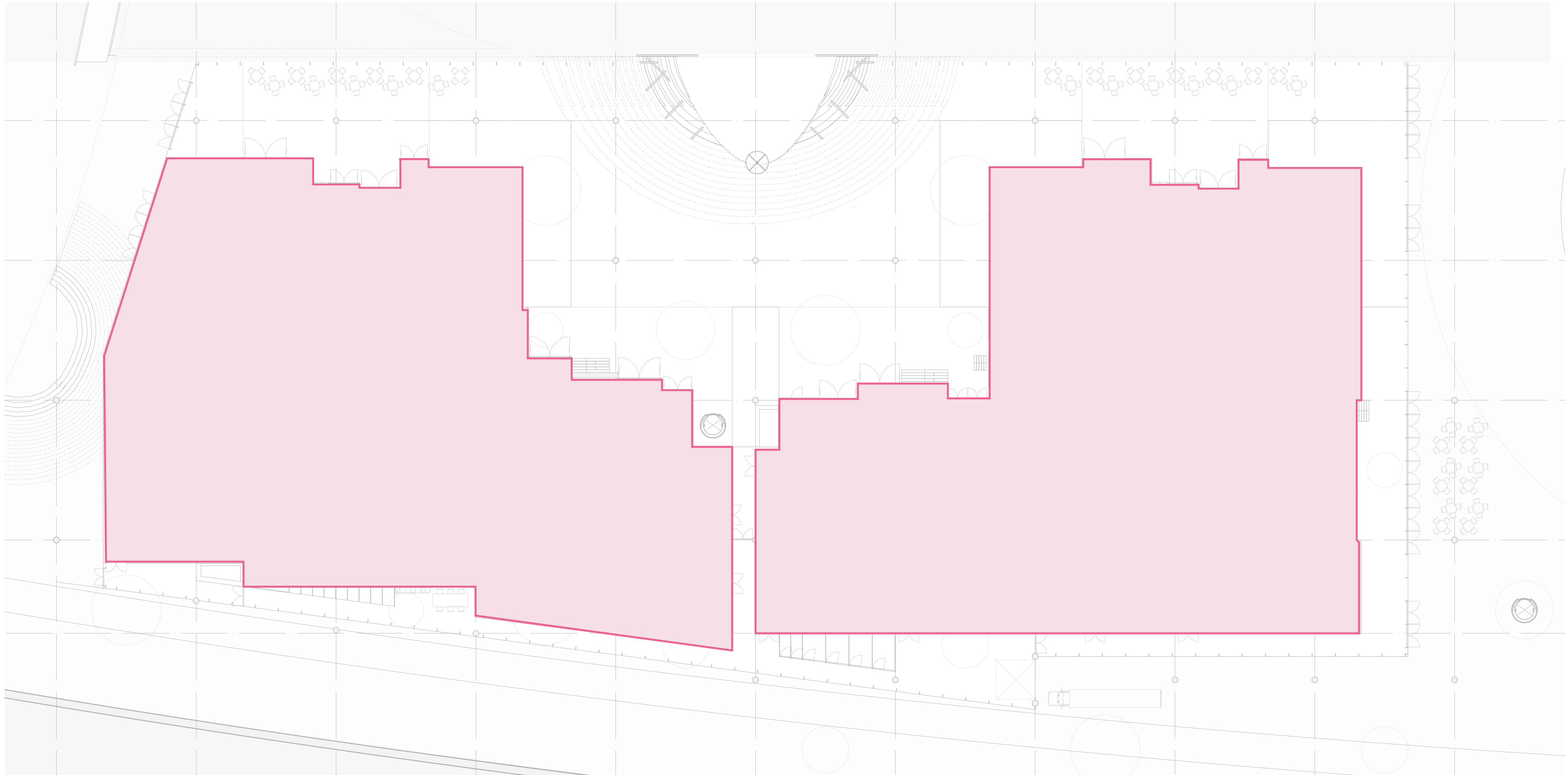
Floor plan ground floor

2. Combine the informality of the public space with the formality of the museum



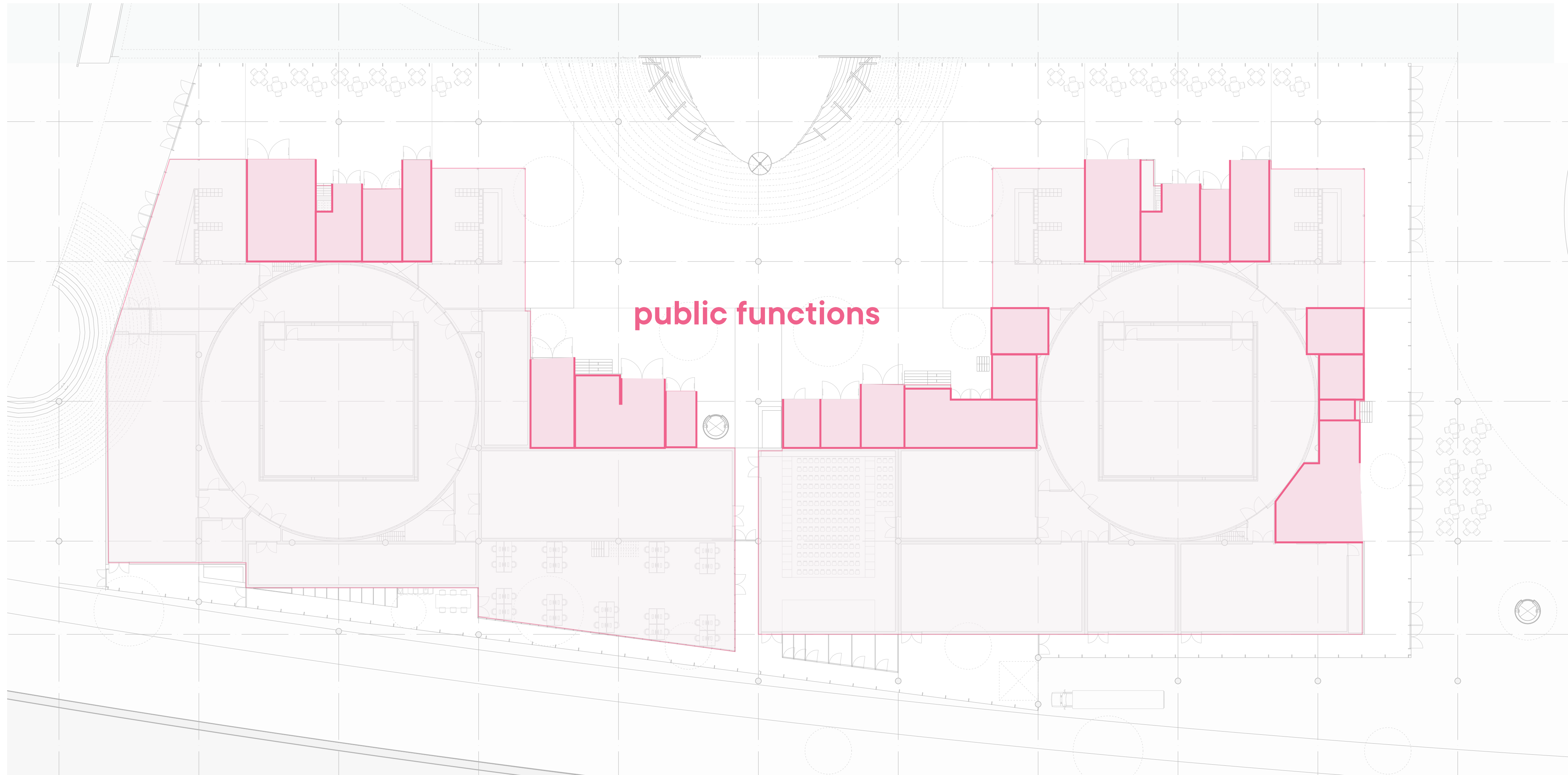
Urban design principles in building

2. Combine the informality of the public space with the formality of the museum



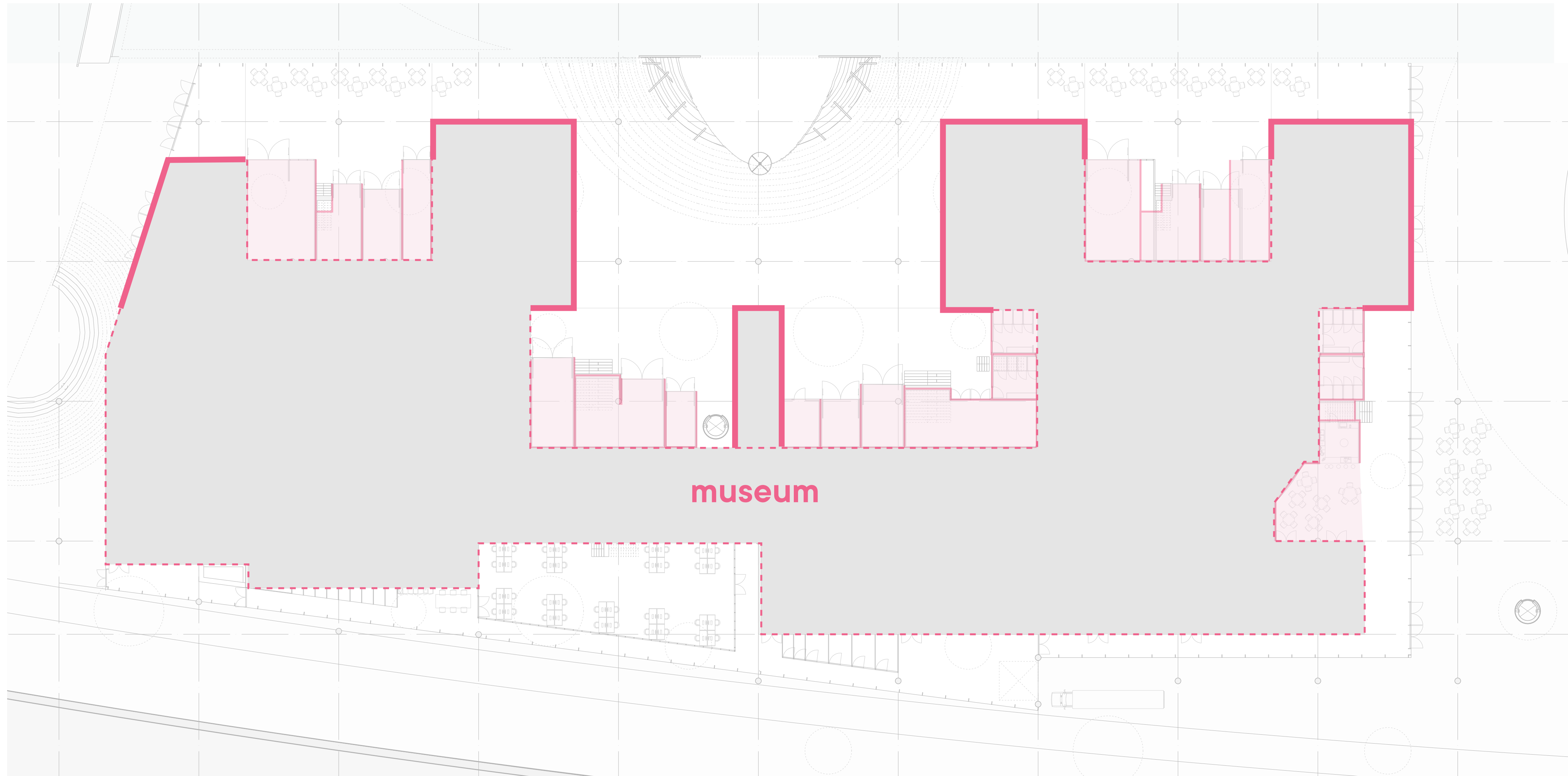
Building clusters like urban blocks

2. Combine the informality of the public space with the formality of the museum



An (inter)active plith along the public space

2. Combine the informality of the public space with the formality of the museum



The corners of the urban blocks form the openings to the museum

2. Combine the informality of the public space with the formality of the museum



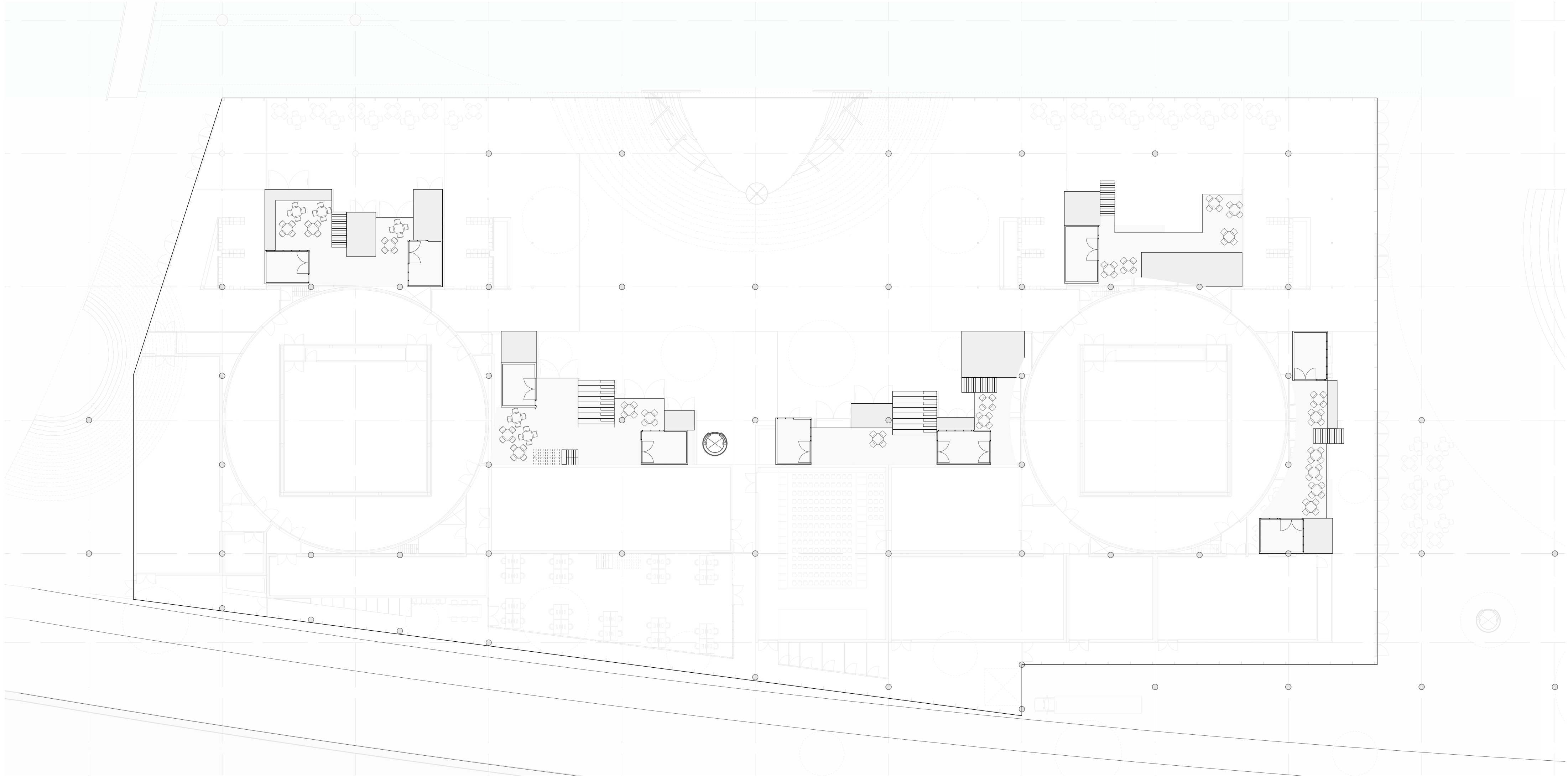
Main hall; formality of museum vs. informality of public sphere

2. Combine the informality of the public space with the formality of the museum



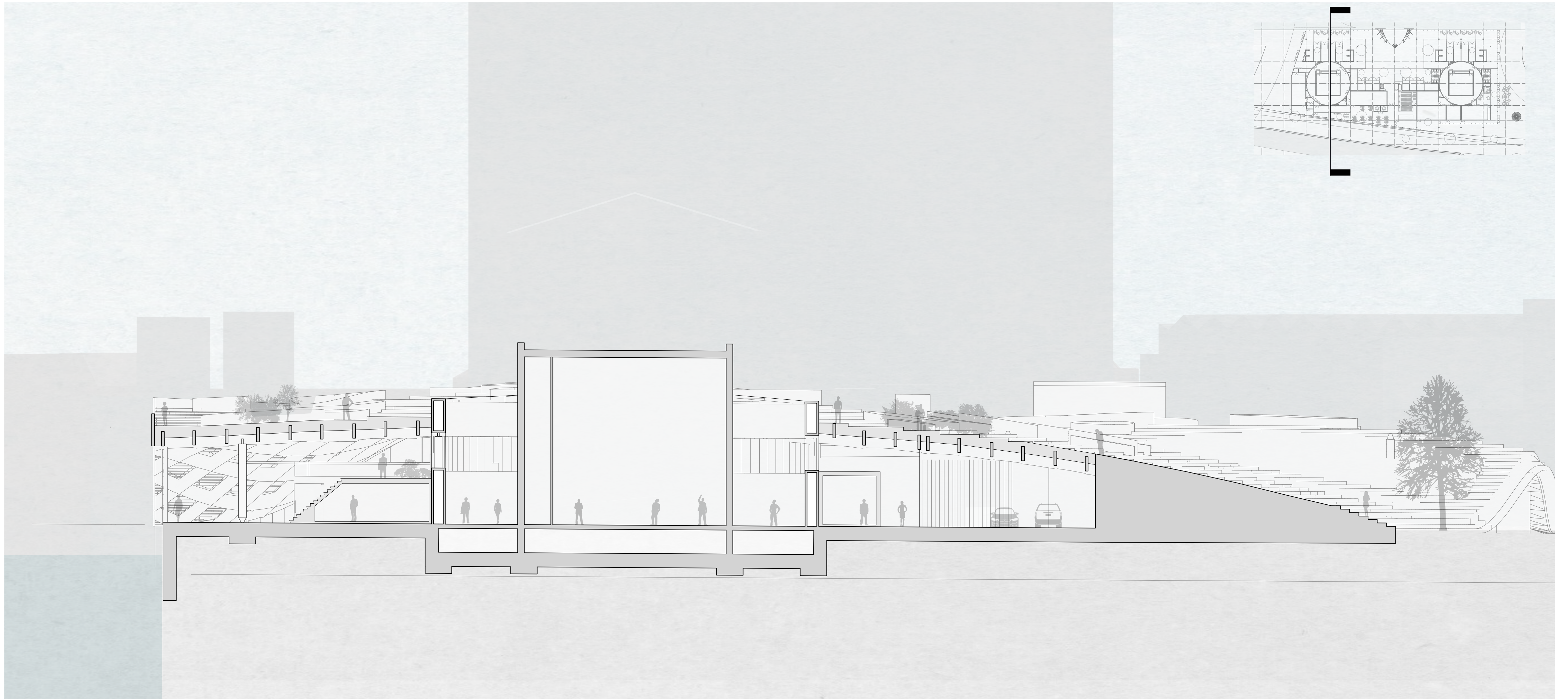
East entrance; formality of museum vs. informality of public sphere

2. Combine the informality of the public space with the formality of the museum



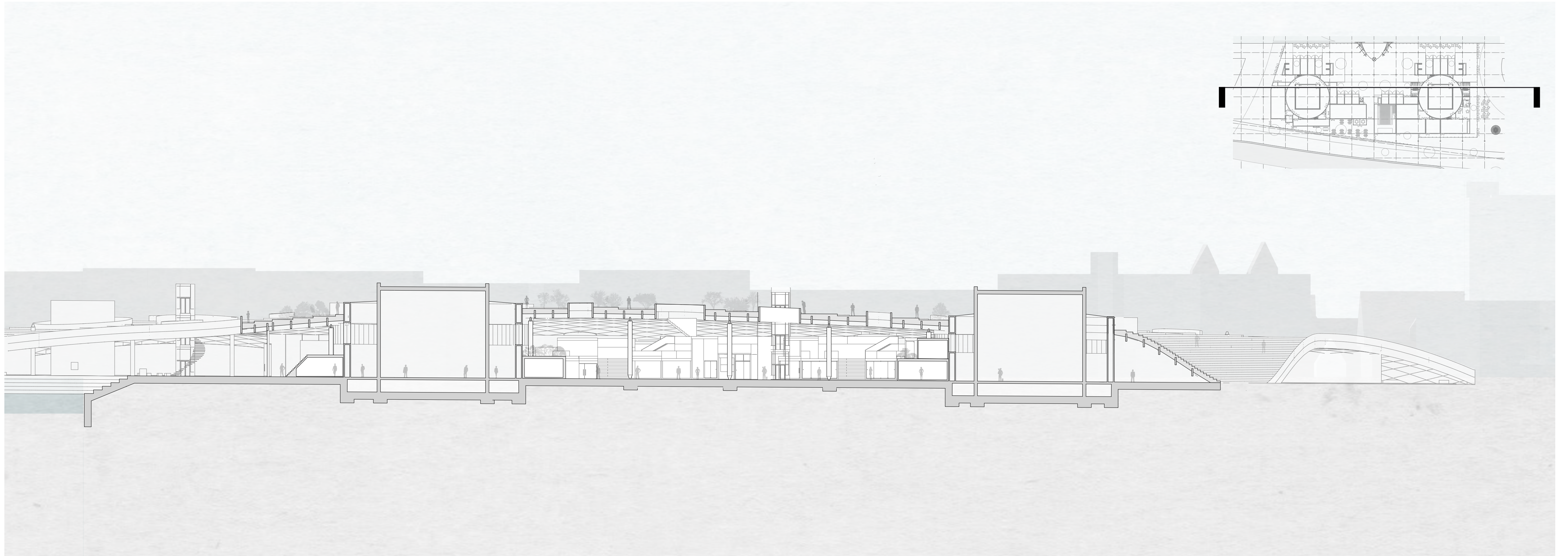
Terraces and stairs on the public blocks make it interactive

2. Combine the informality of the public space with the formality of the museum



The section shows the contrast between the distinctive roof and the generic shaped blocks under it

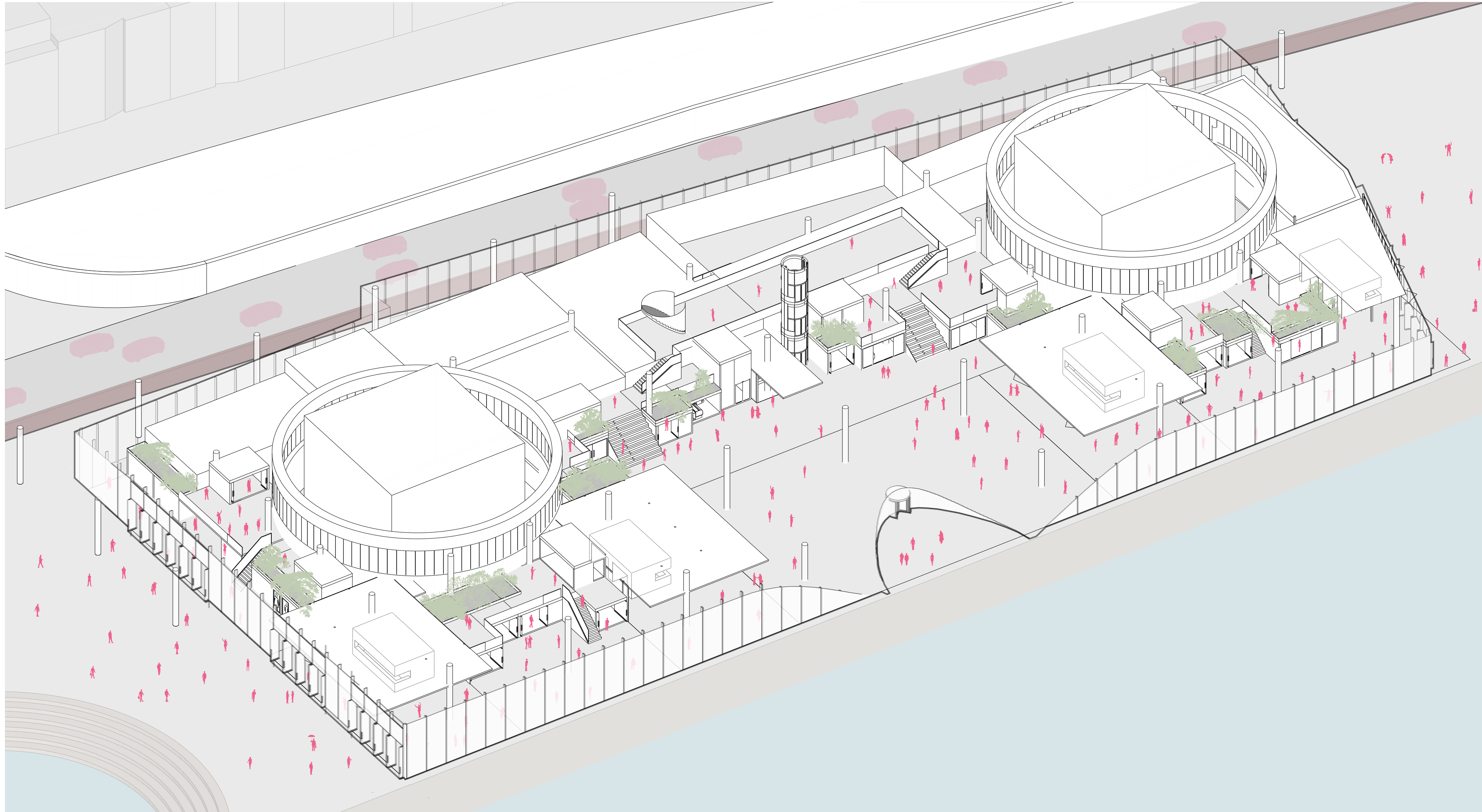
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The section shows the contrast between the distinctive roof and the generic shaped blocks under it

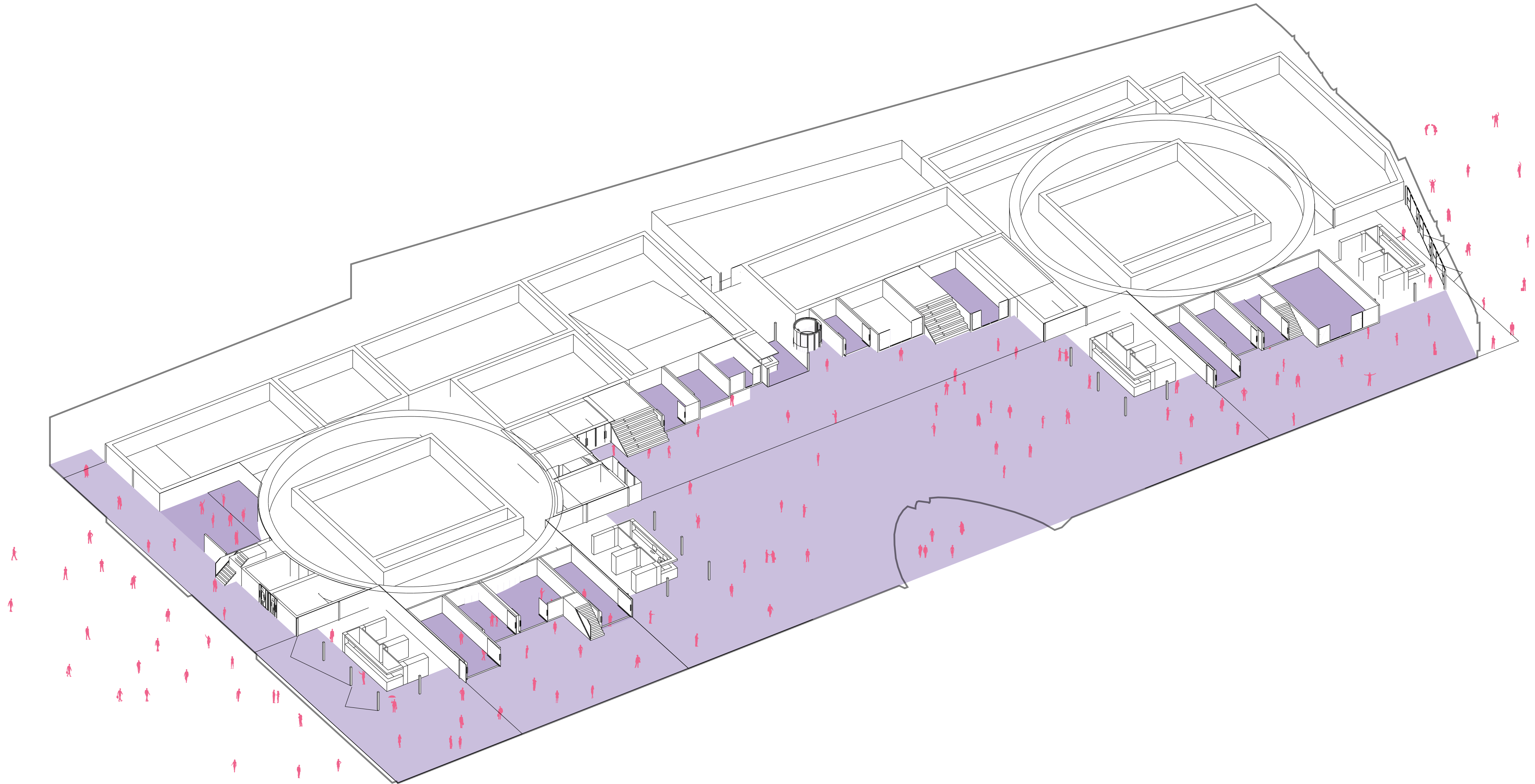
3. A multifunctional (hybrid) complex with a variety of uses

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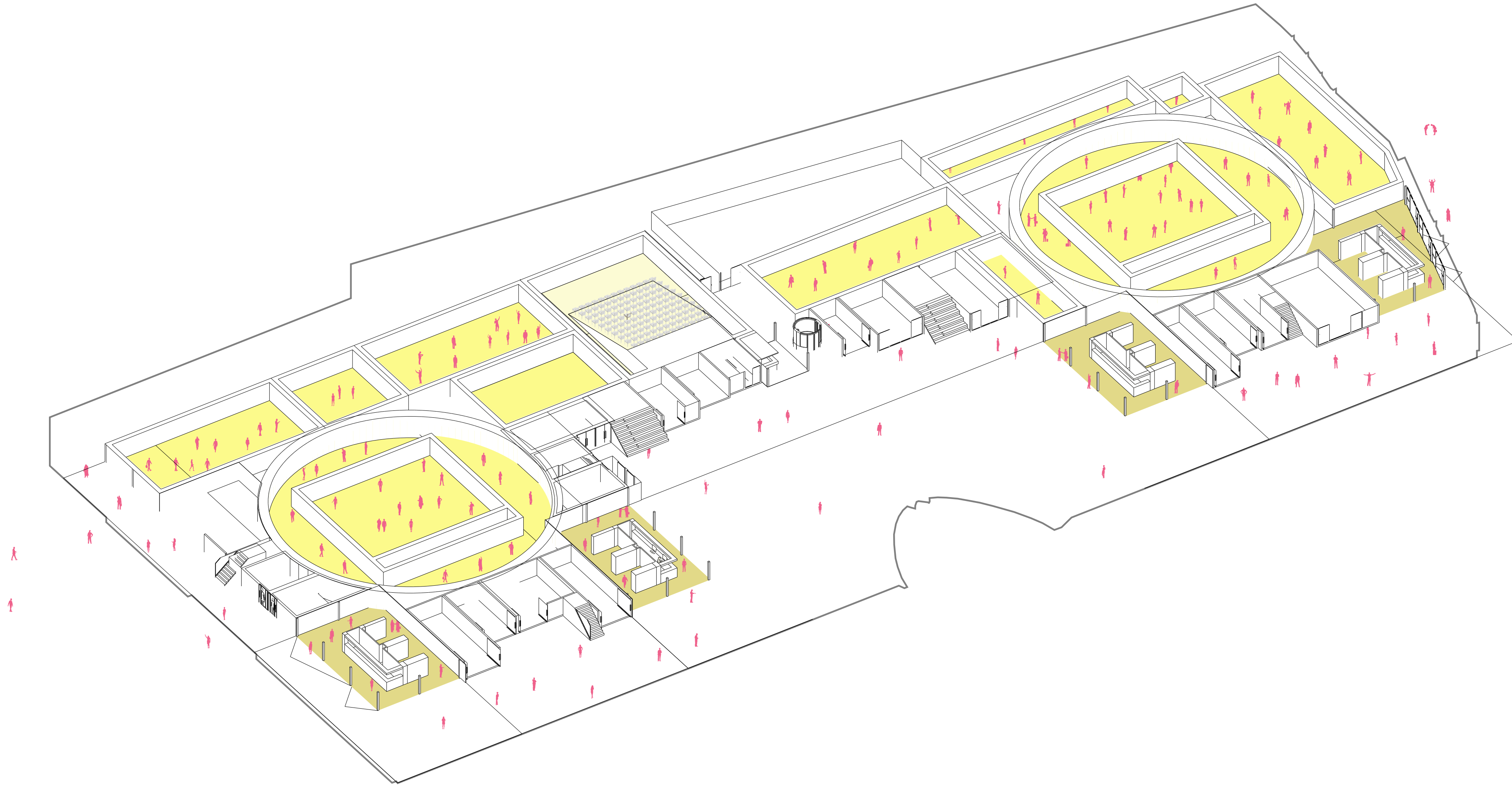
Axonometric view

3. A multifunctional (hybrid) complex with a variety of uses



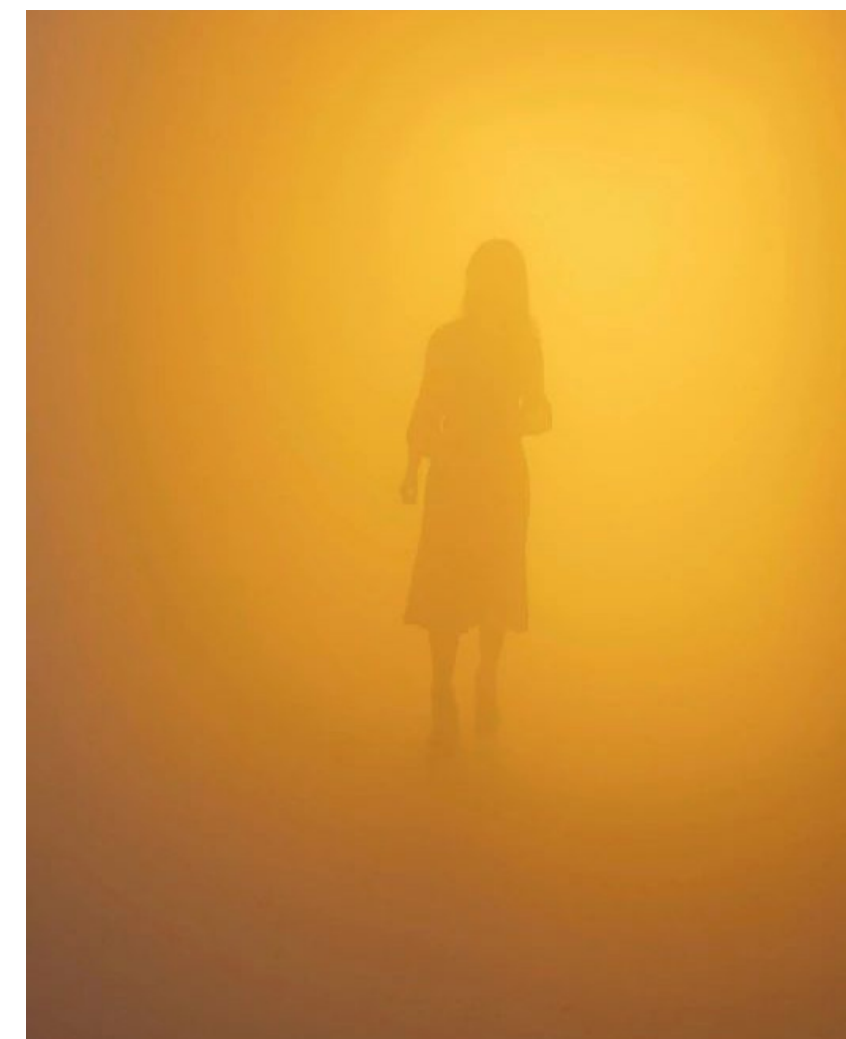
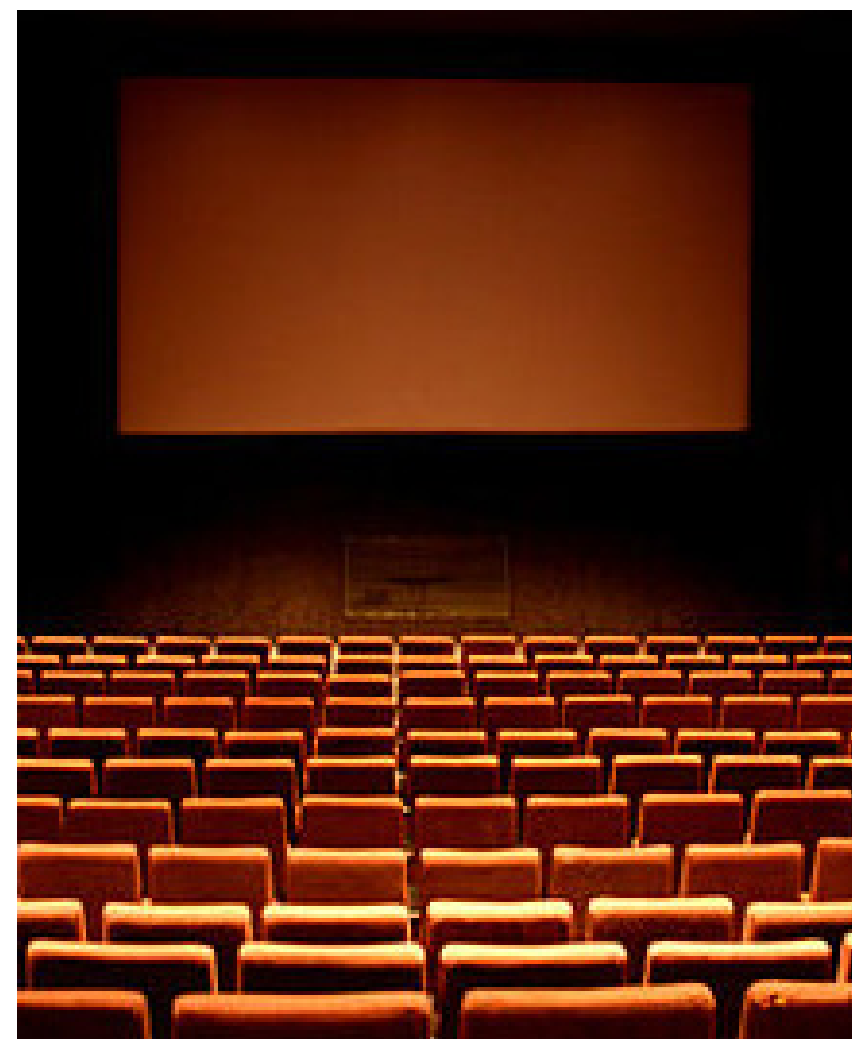
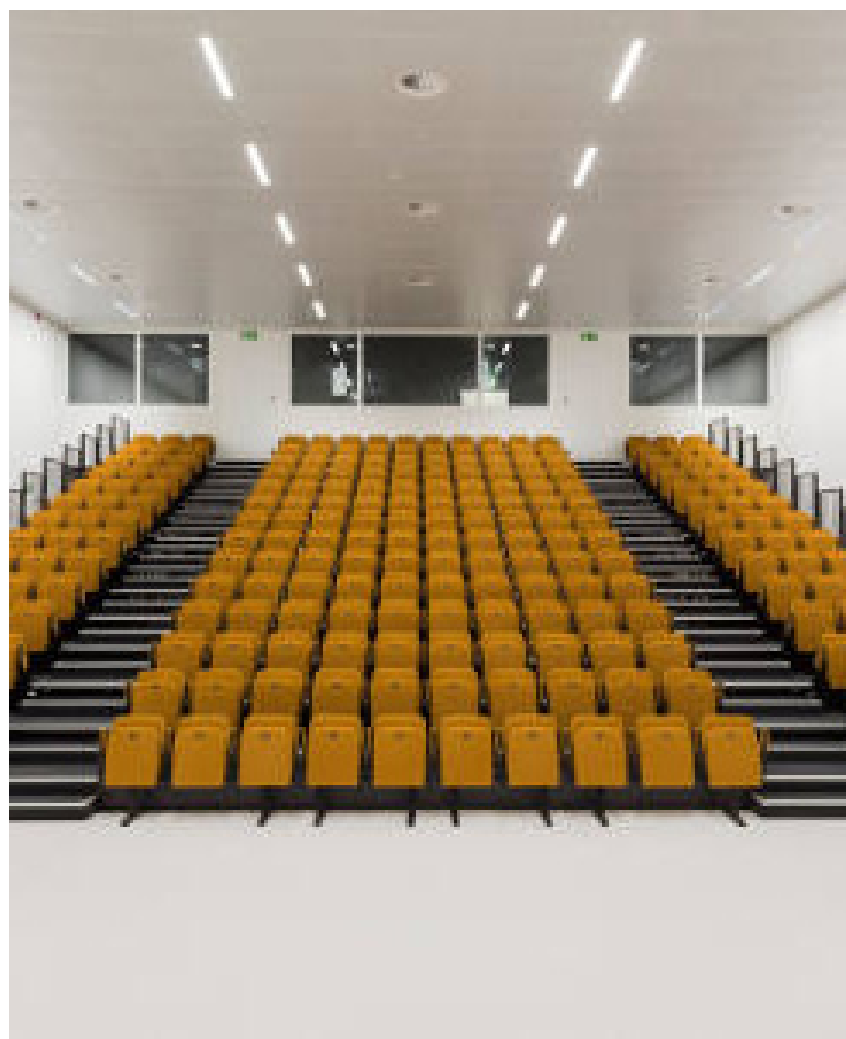
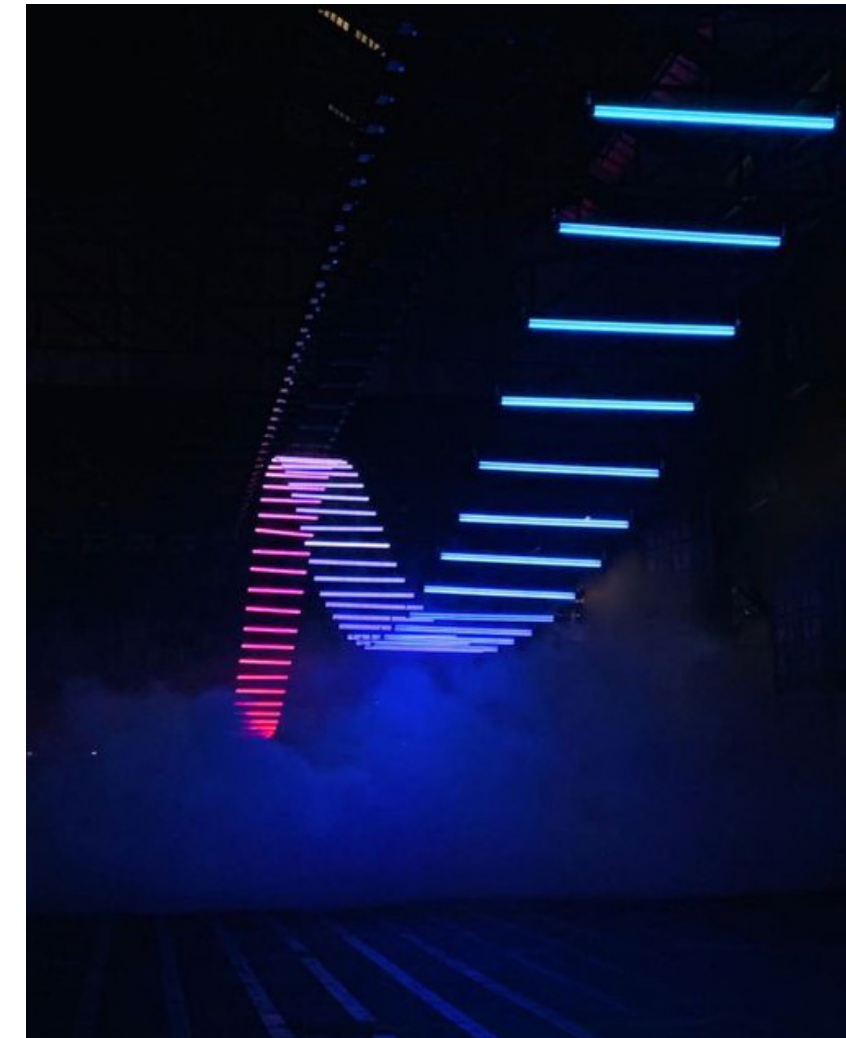
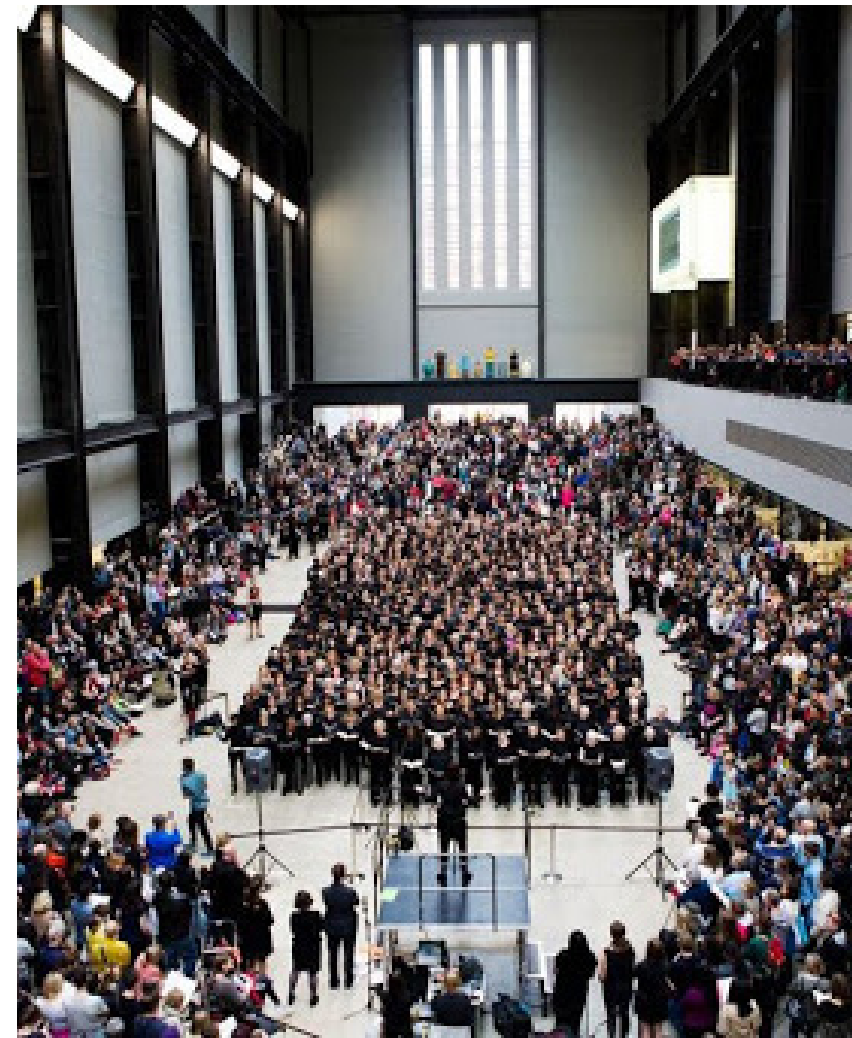
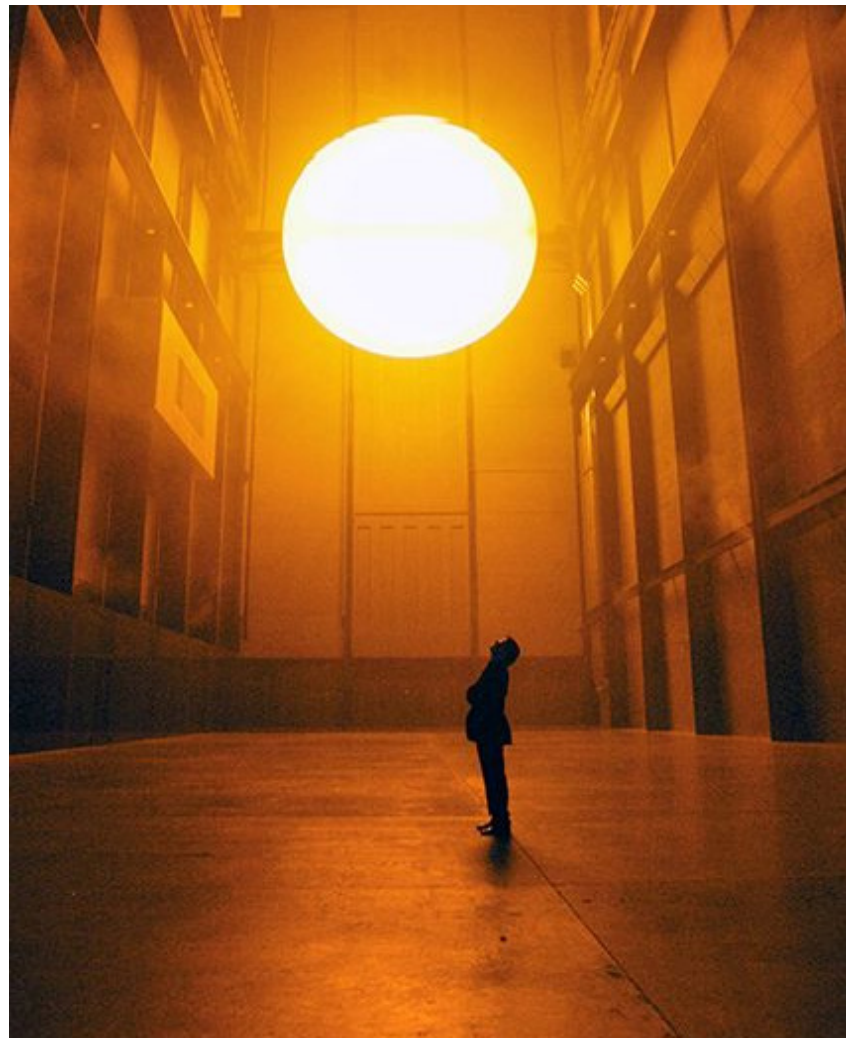
Public street, square with adjacent local shops

3. A multifunctional (hybrid) complex with a variety of uses



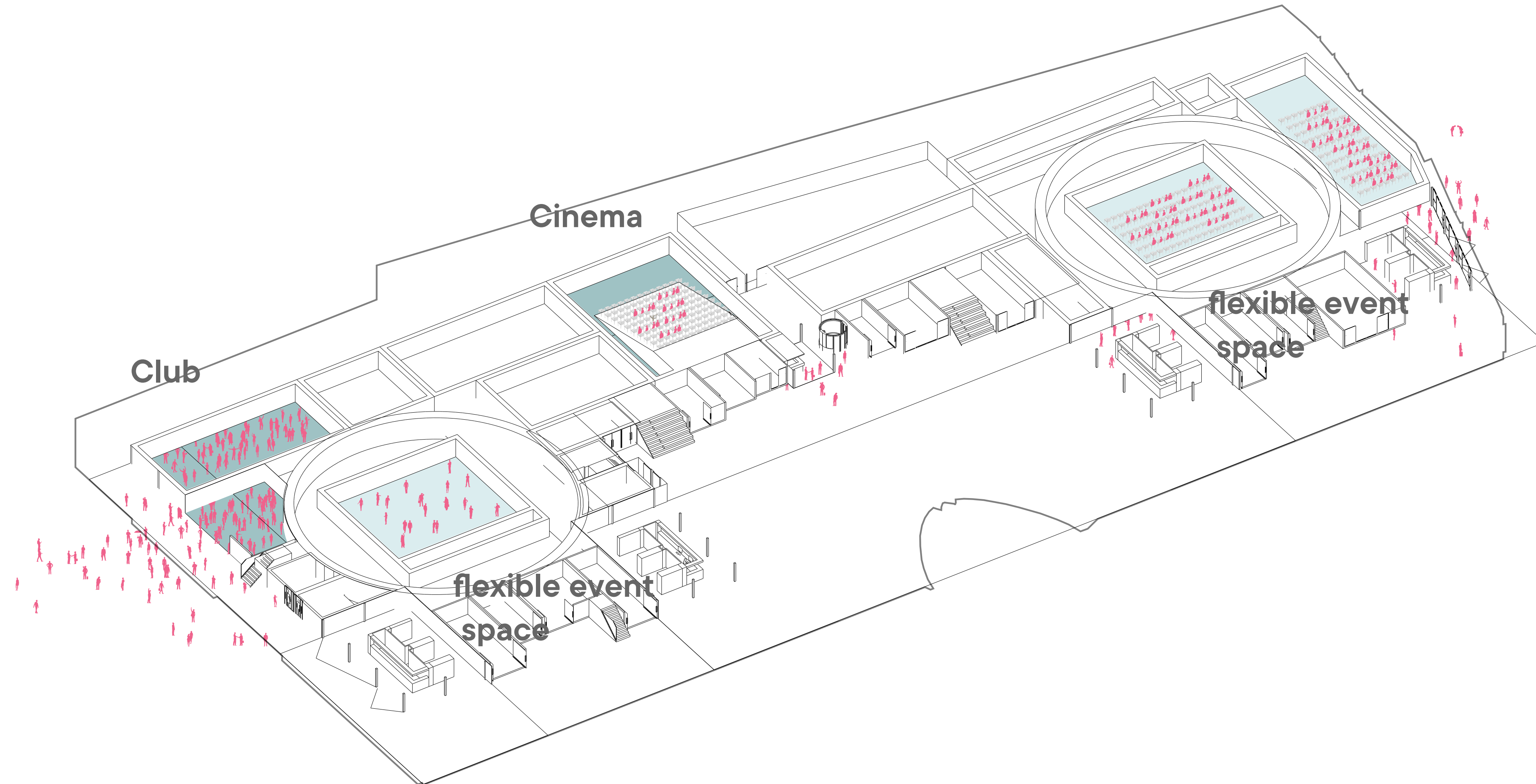
Museum galleries and auditorium with multiple entrances at the corners of the 'urban blocks'

3. A multifunctional (hybrid) complex with a variety of uses



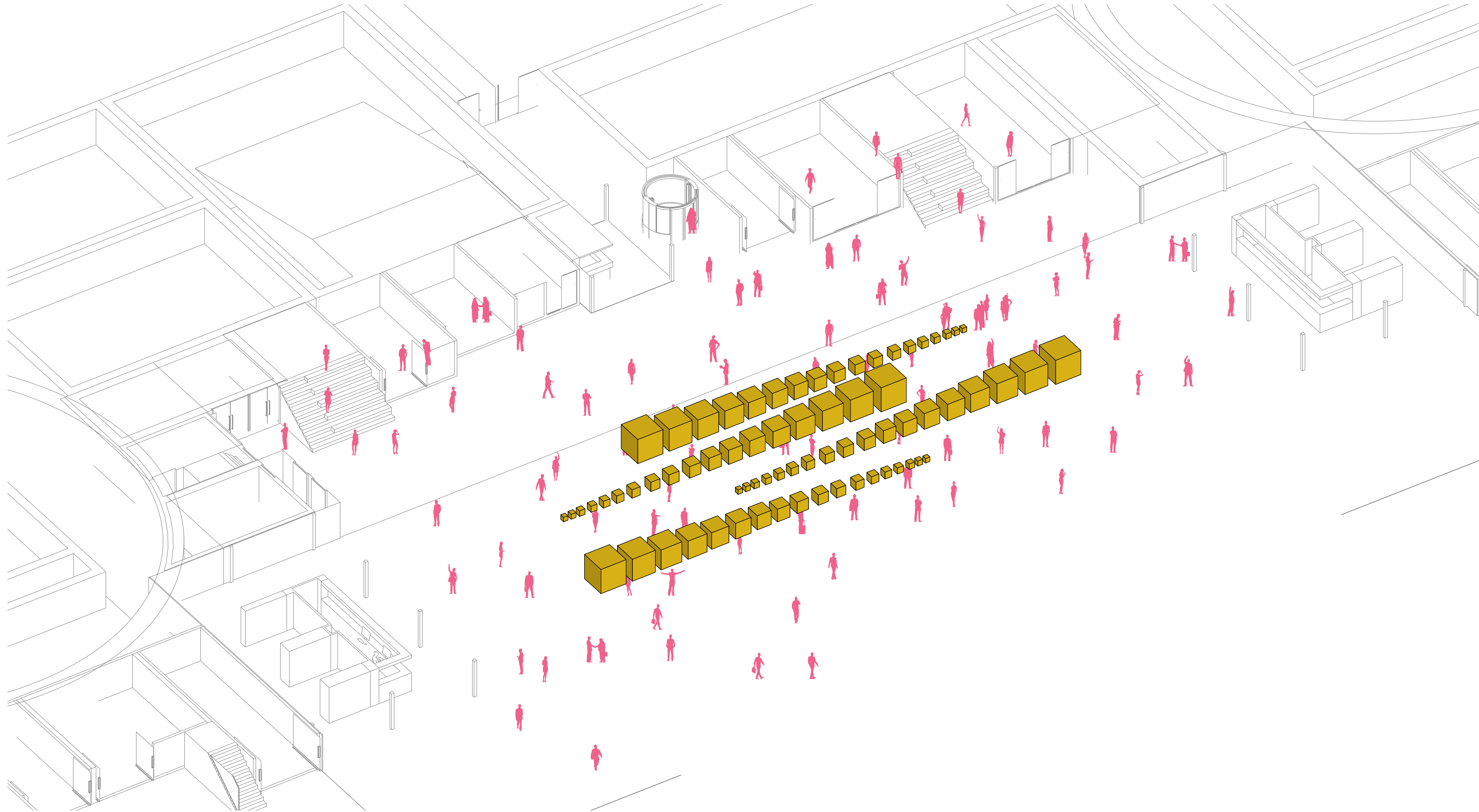
Secondary functions in the evening when the galleries are unused.

3. A multifunctional (hybrid) complex with a variety of uses



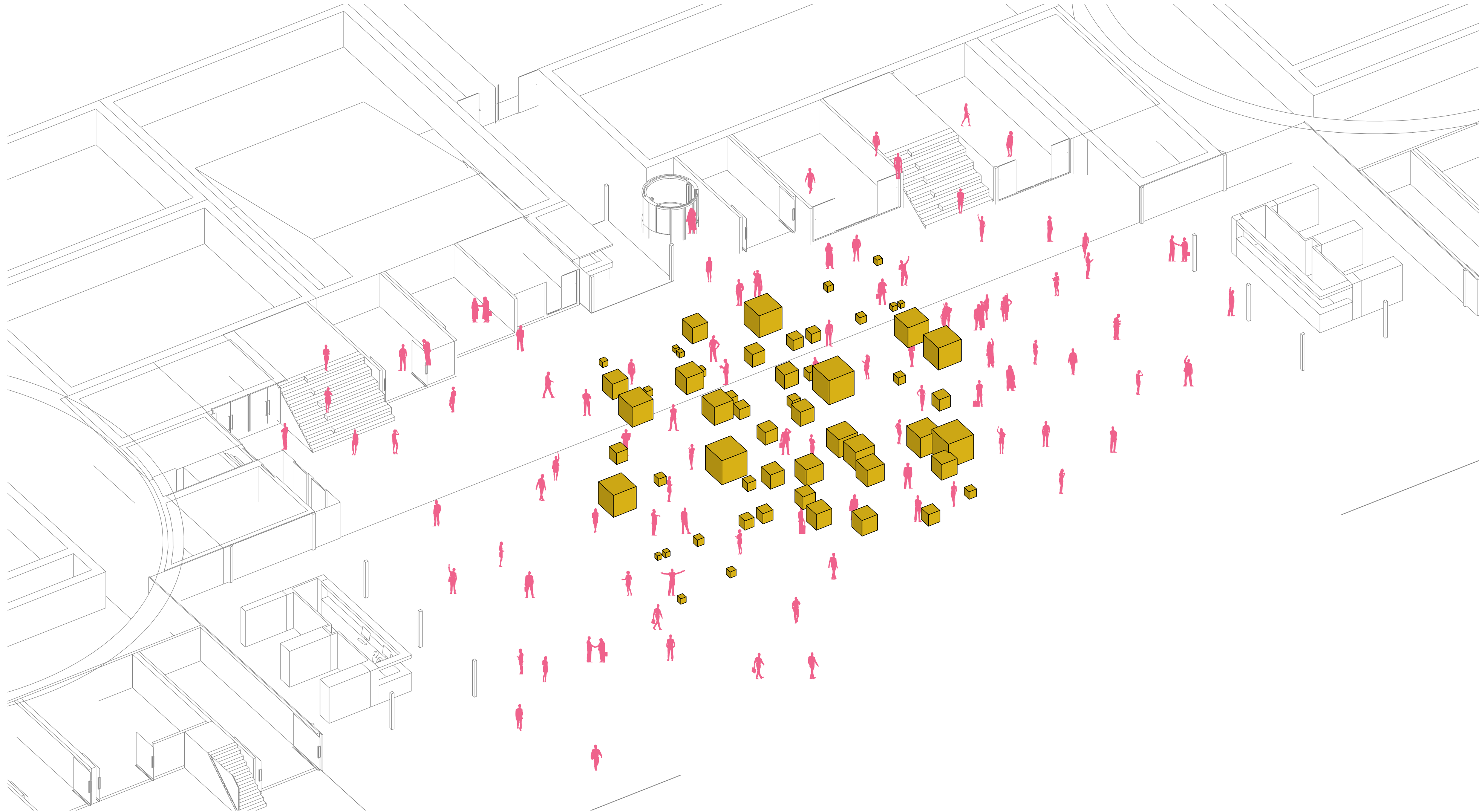
Secondary functions in the evening when the galleries are unused.

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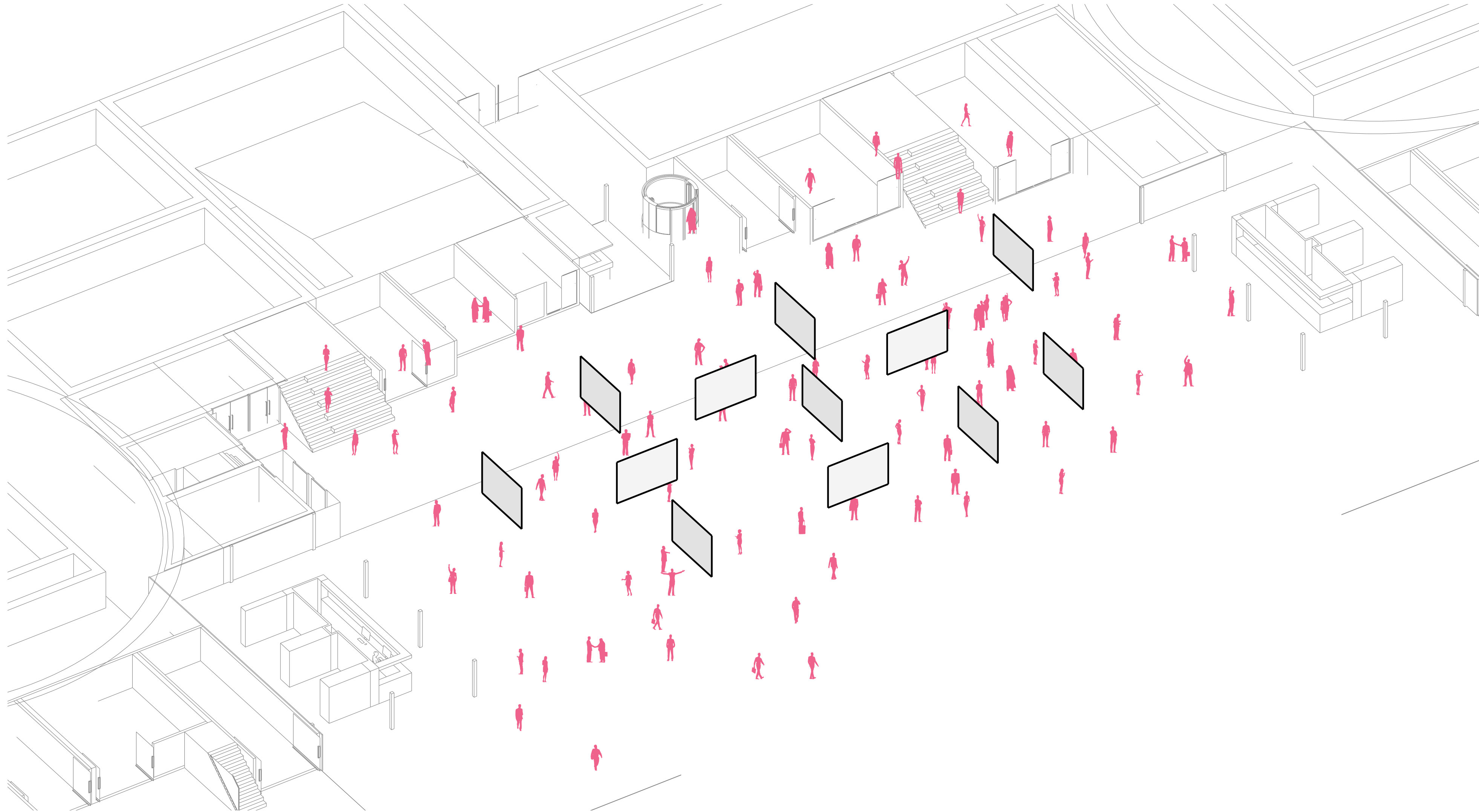
Standard use main hall: movable yellow foam blocks that can be positioned by the users

3. A multifunctional (hybrid) complex with a variety of uses



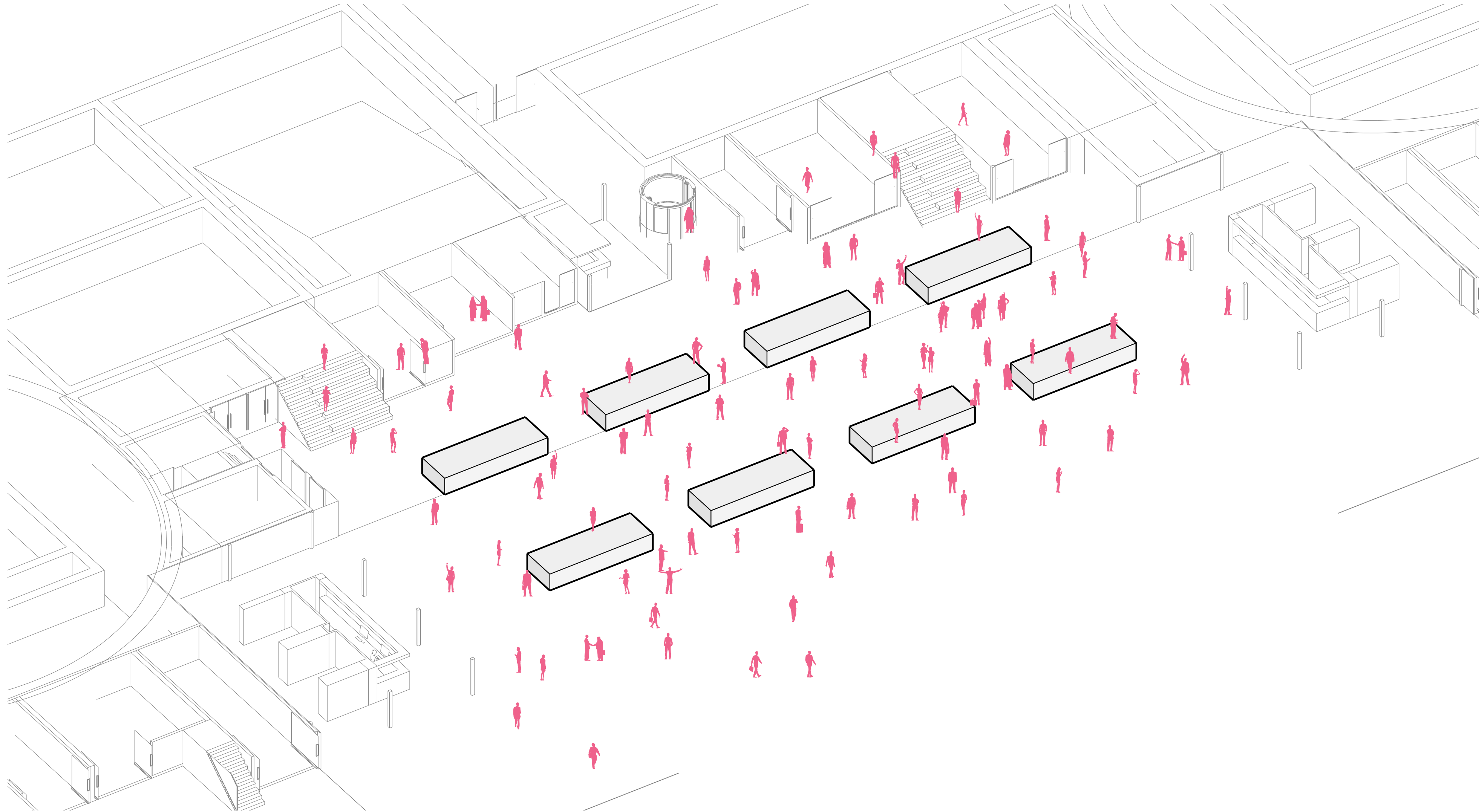
Standard use central hall: movable yellow foam blocks that can be positioned by the users

3. A multifunctional (hybrid) complex with a variety of uses



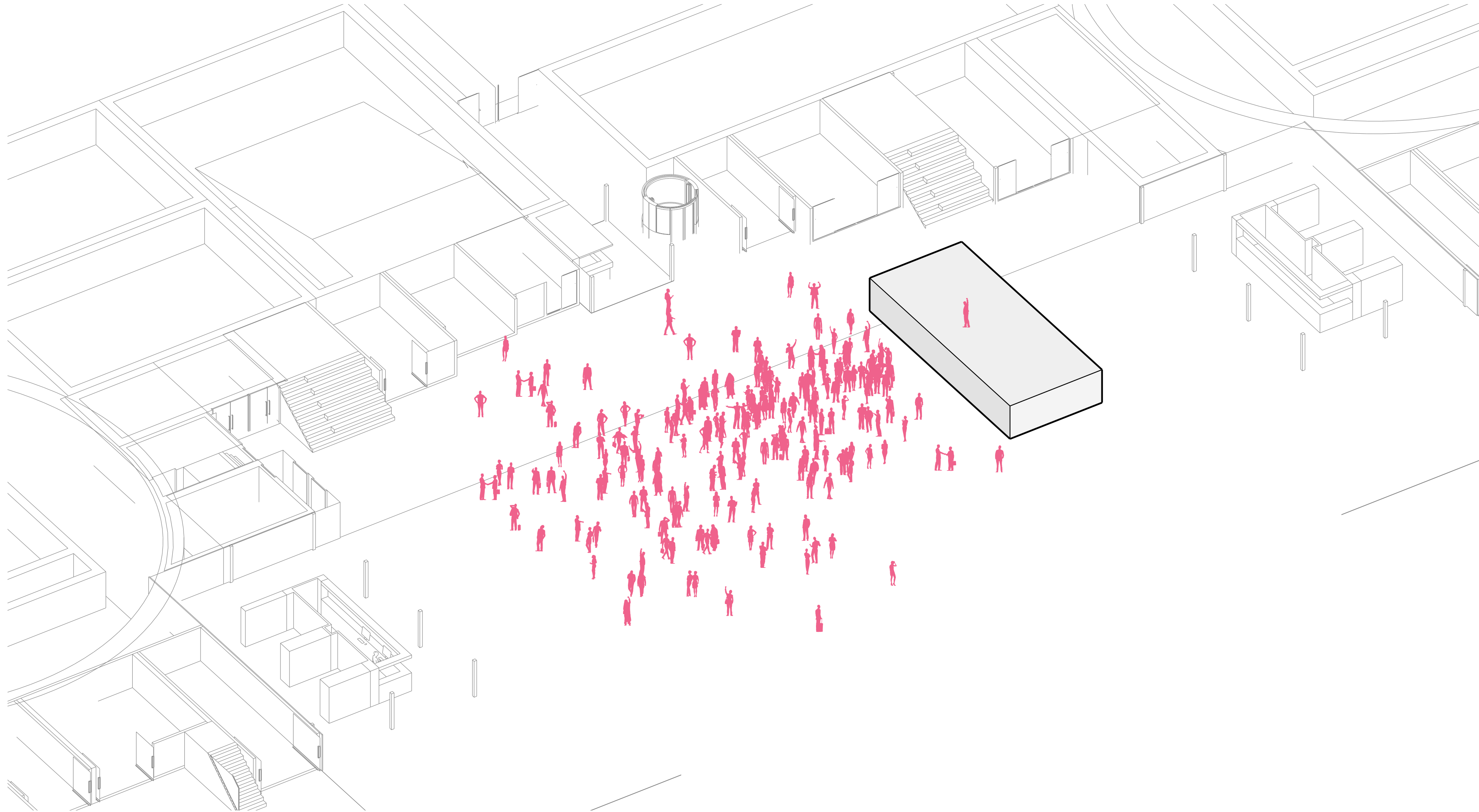
Central hall can be used for multiple purposes - Exhibition

3. A multifunctional (hybrid) complex with a variety of uses



Central hall can be used for multiple purposes - Weekly market

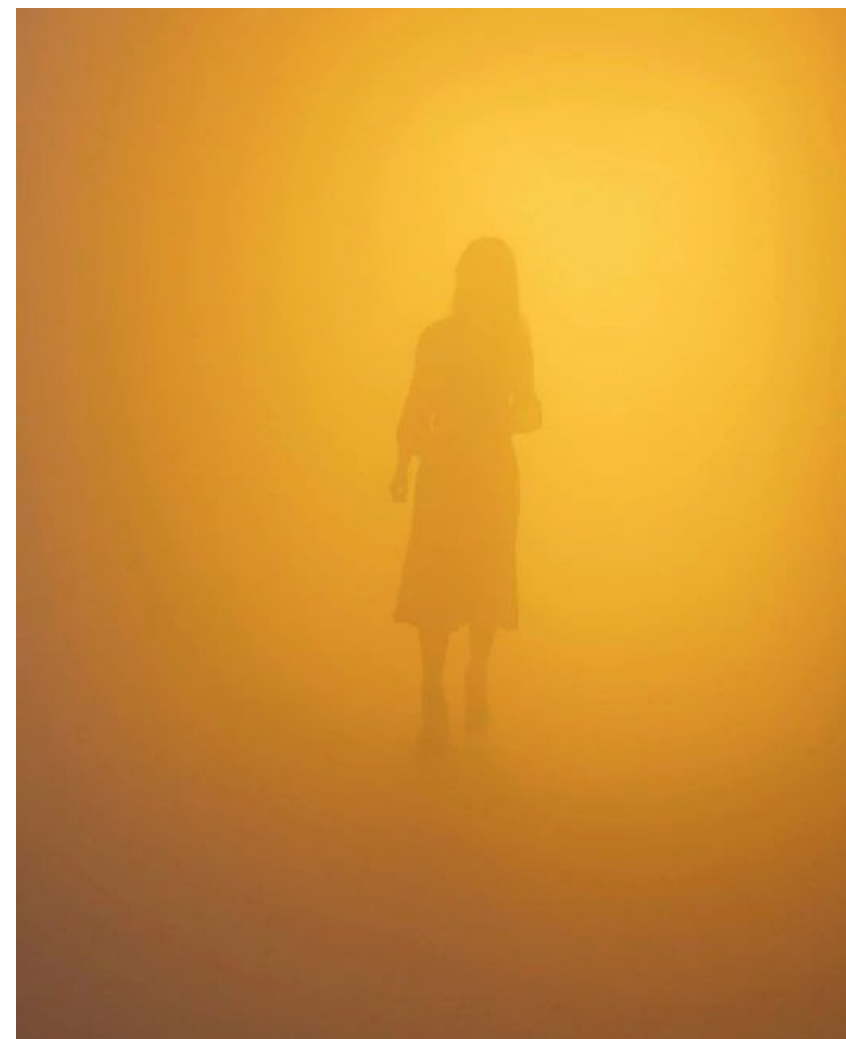
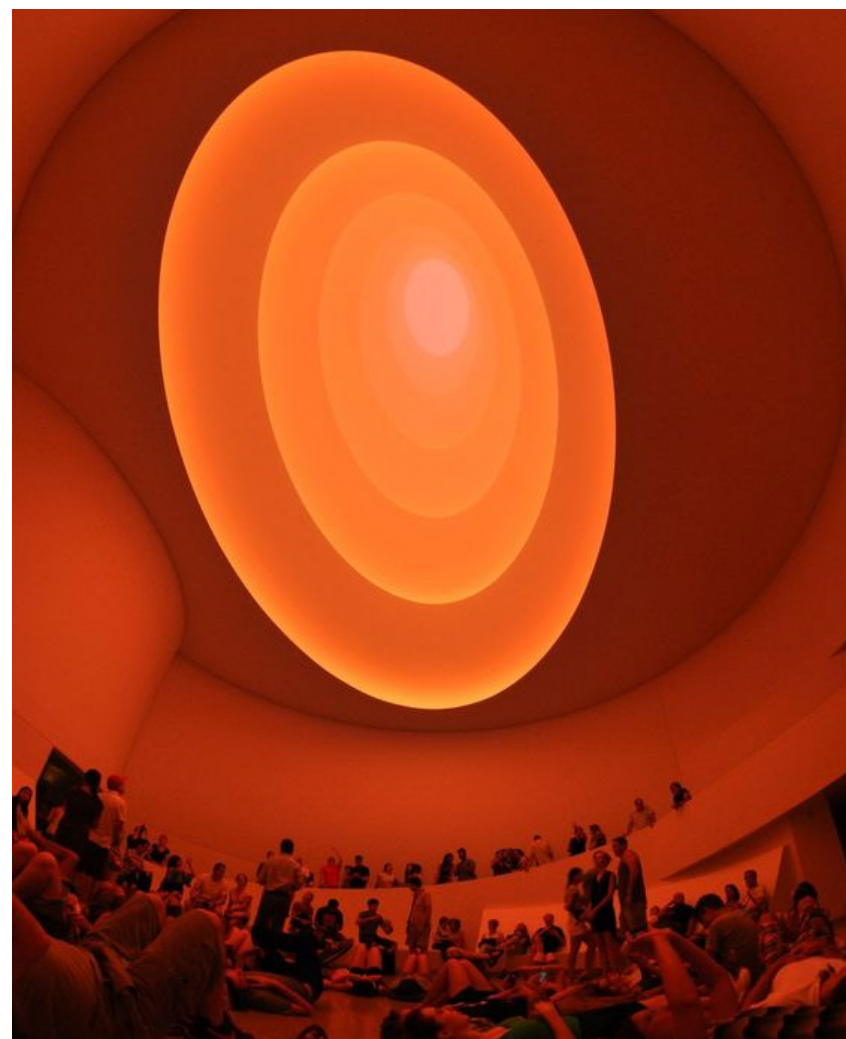
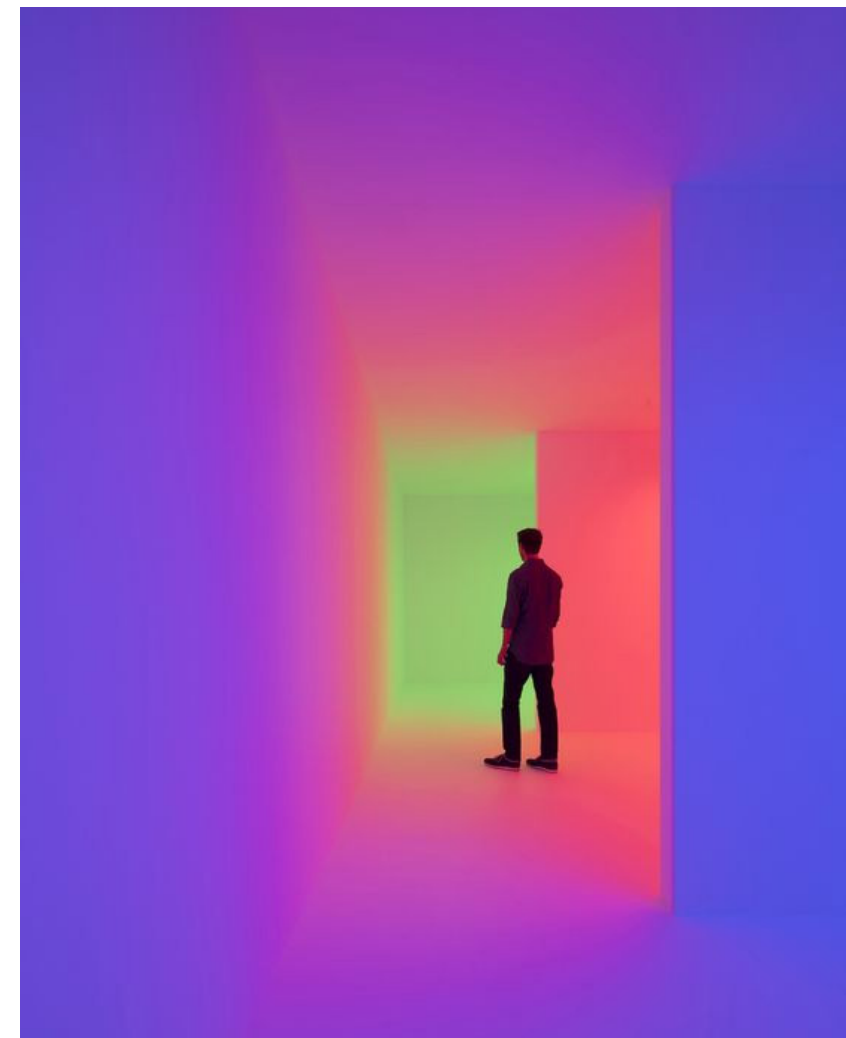
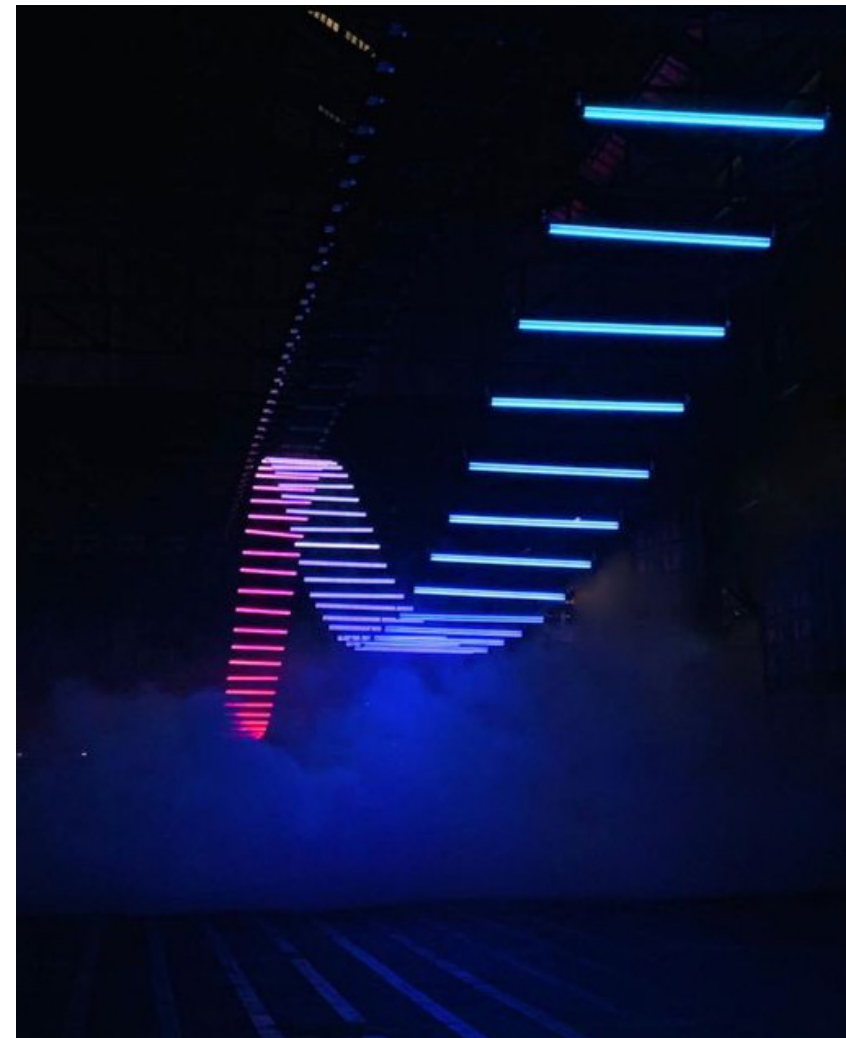
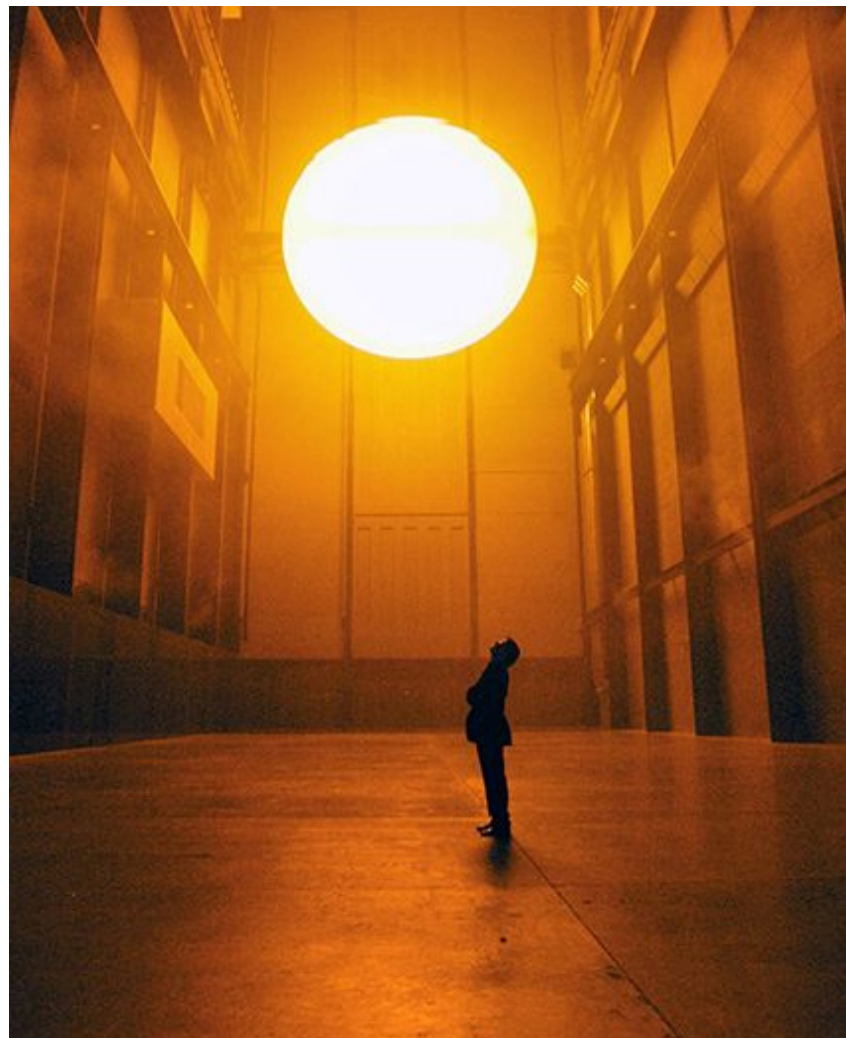
3. A multifunctional (hybrid) complex with a variety of uses



Central hall can be used for multiple purposes - Public event

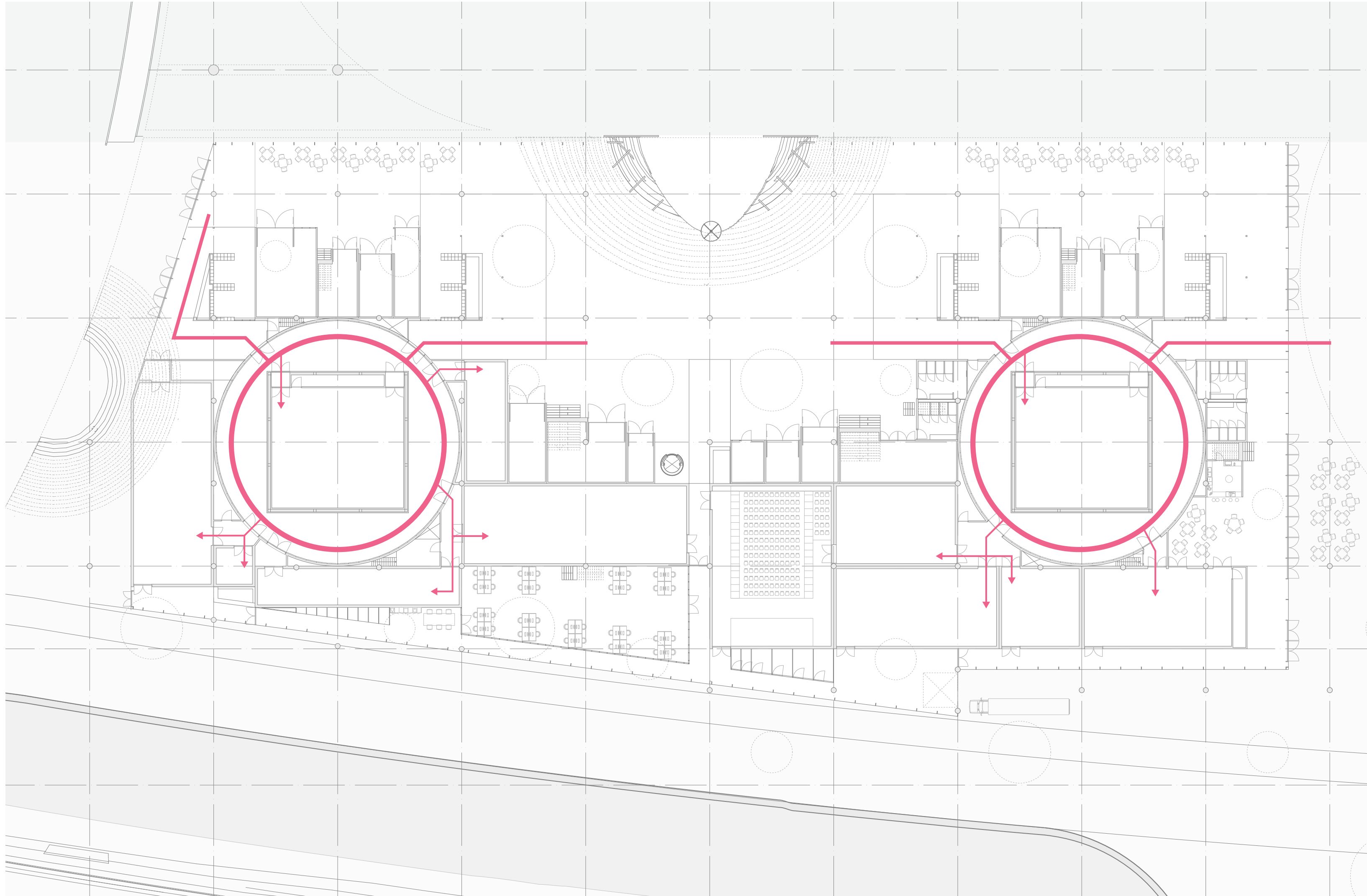
4. A museum focused on people

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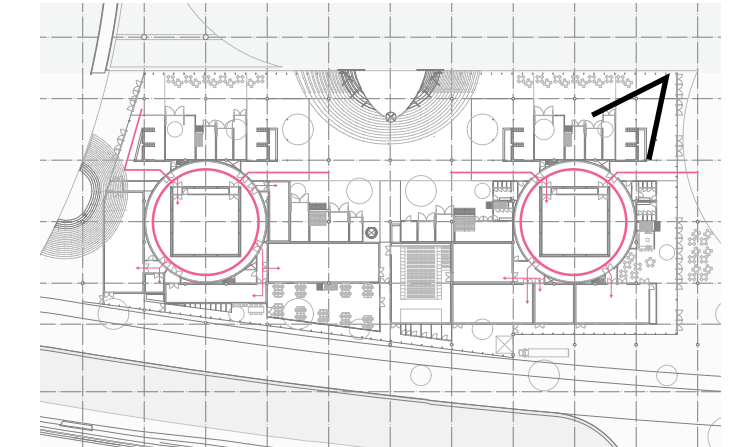
Museum for **immersive art**: the creation of a world around the person in a way that makes them feel part of and inside of it

4. A museum focused on people



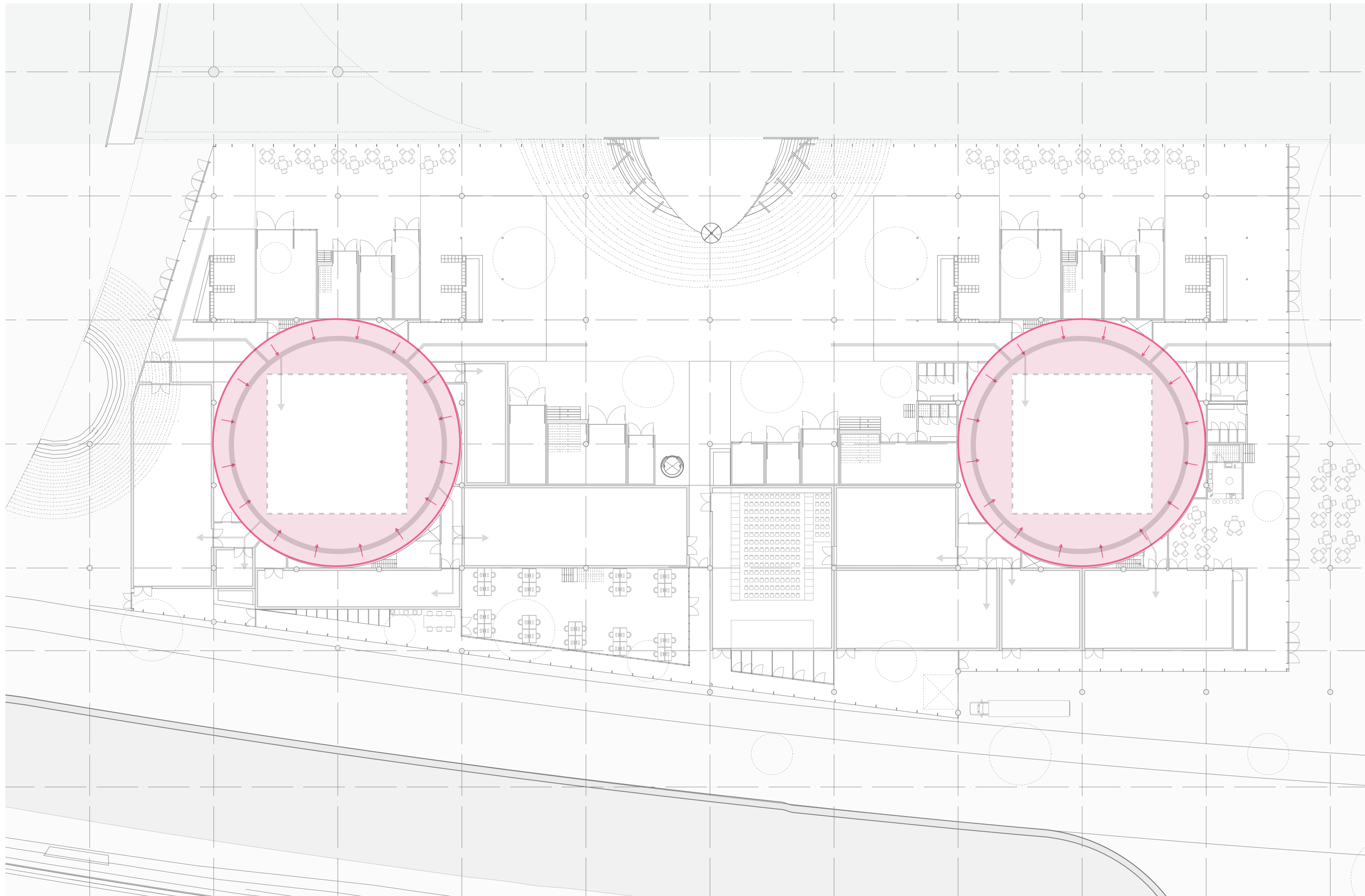
Museum routing

4. A museum focused on people



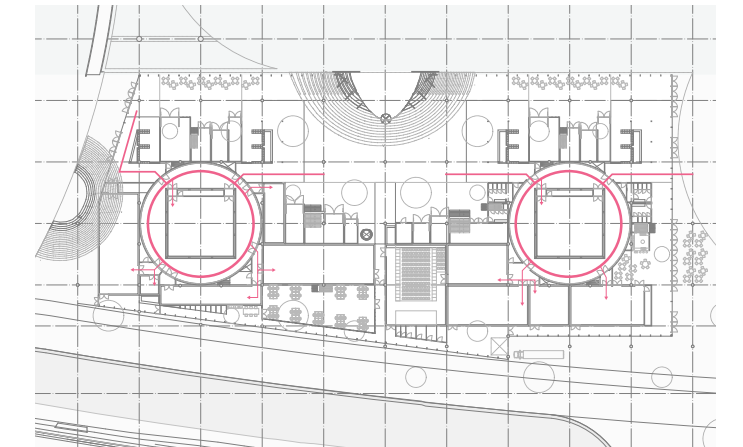
Museum entrance

4. A museum focused on people



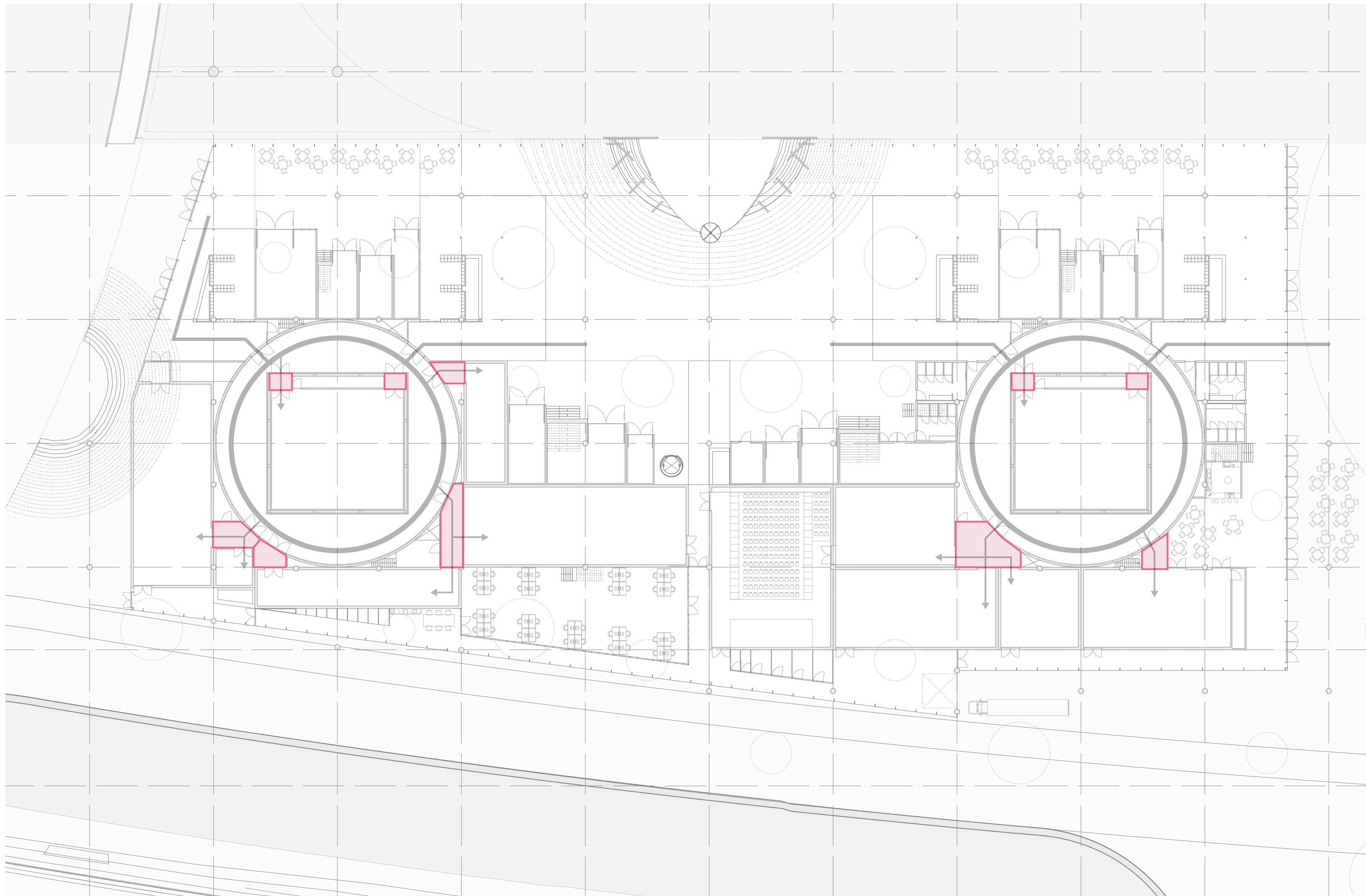
Circular mirroring hallway making the visitor loose their sense of direction

4. A museum focused on people



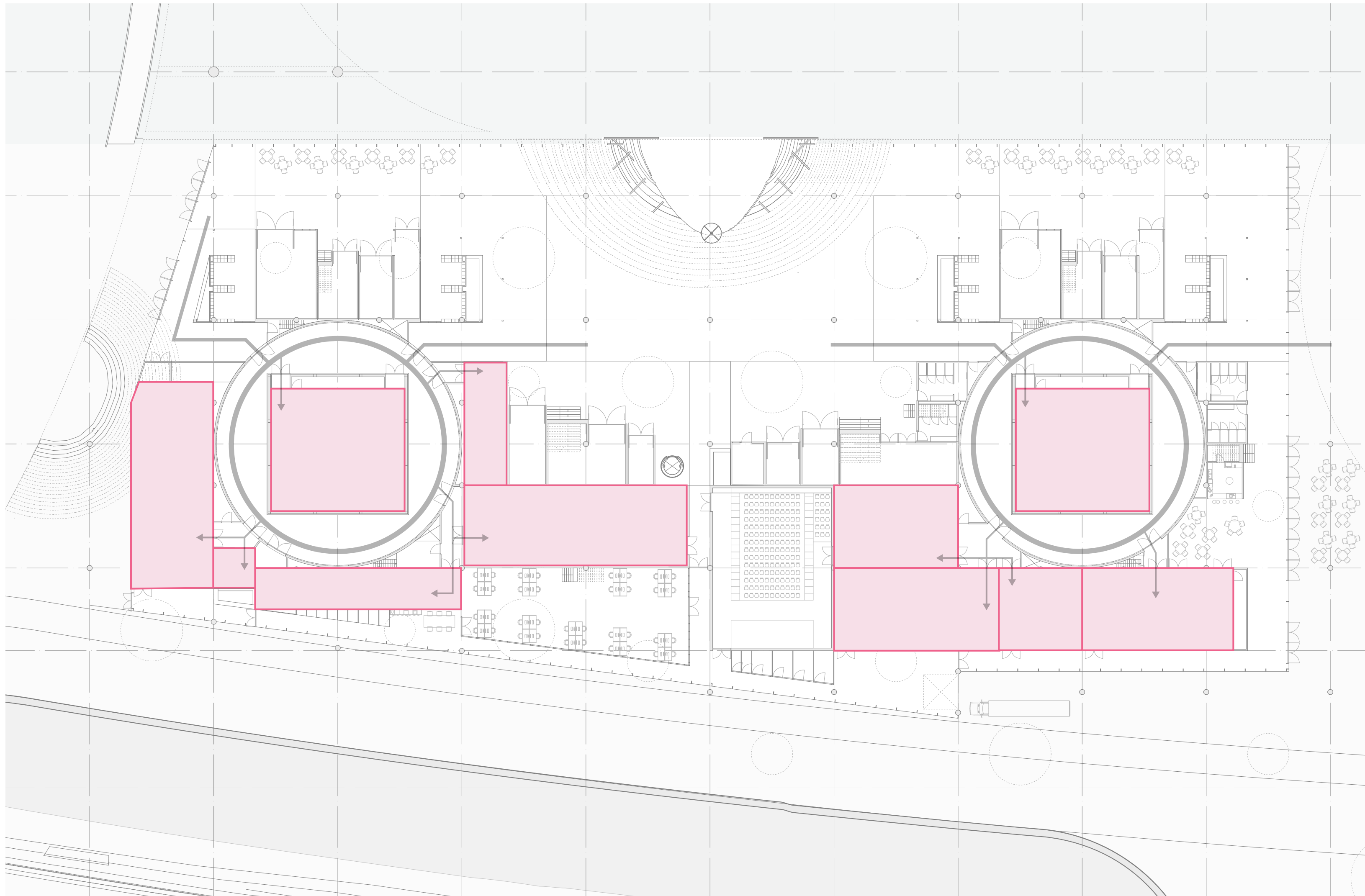
The immersive experience of the mirroring round hallway

4. A museum focused on people

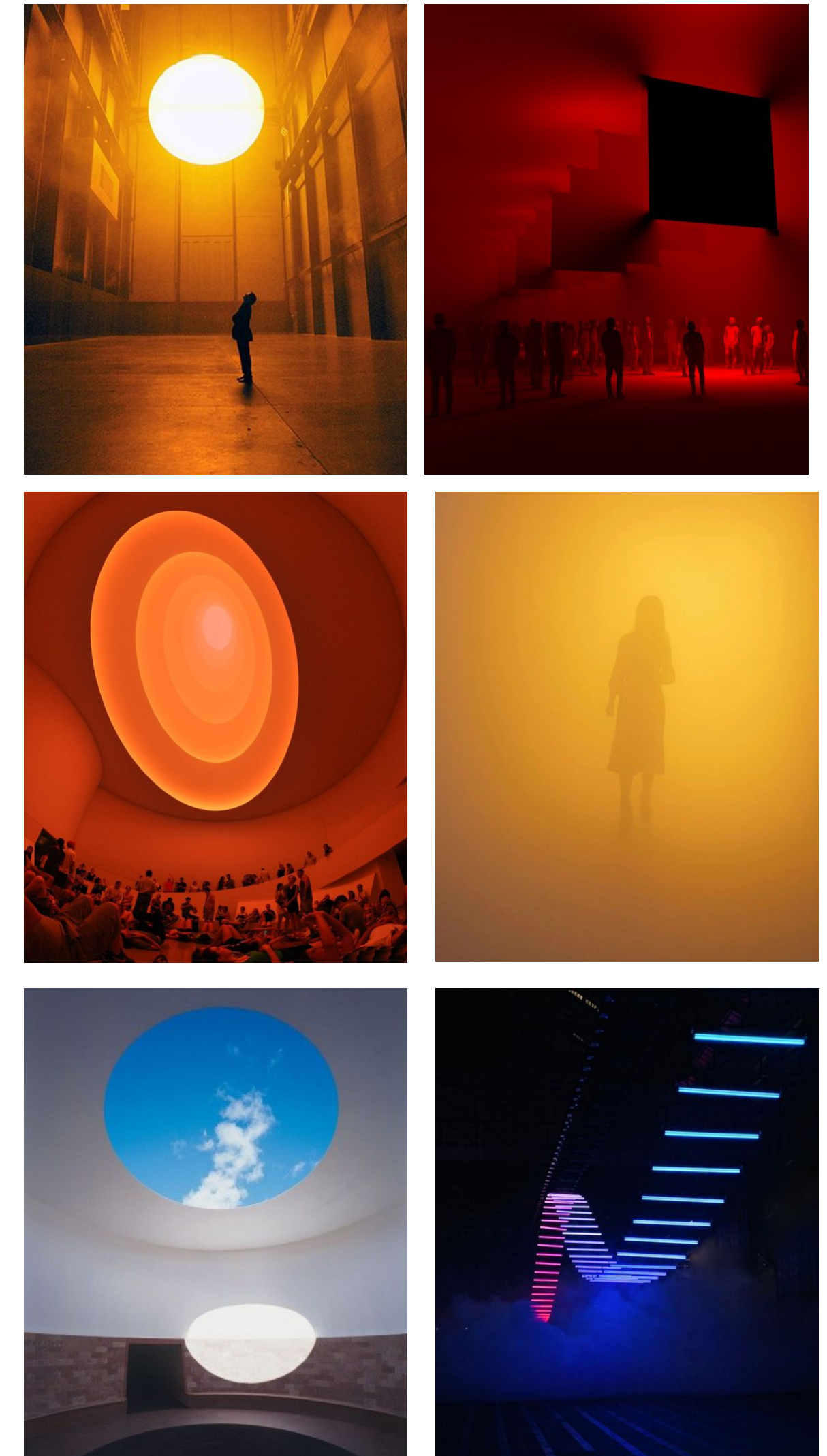


Dark transition room before the entrance of the gallery

4. A museum focused on people



Dark transition room before the entrance of the gallery

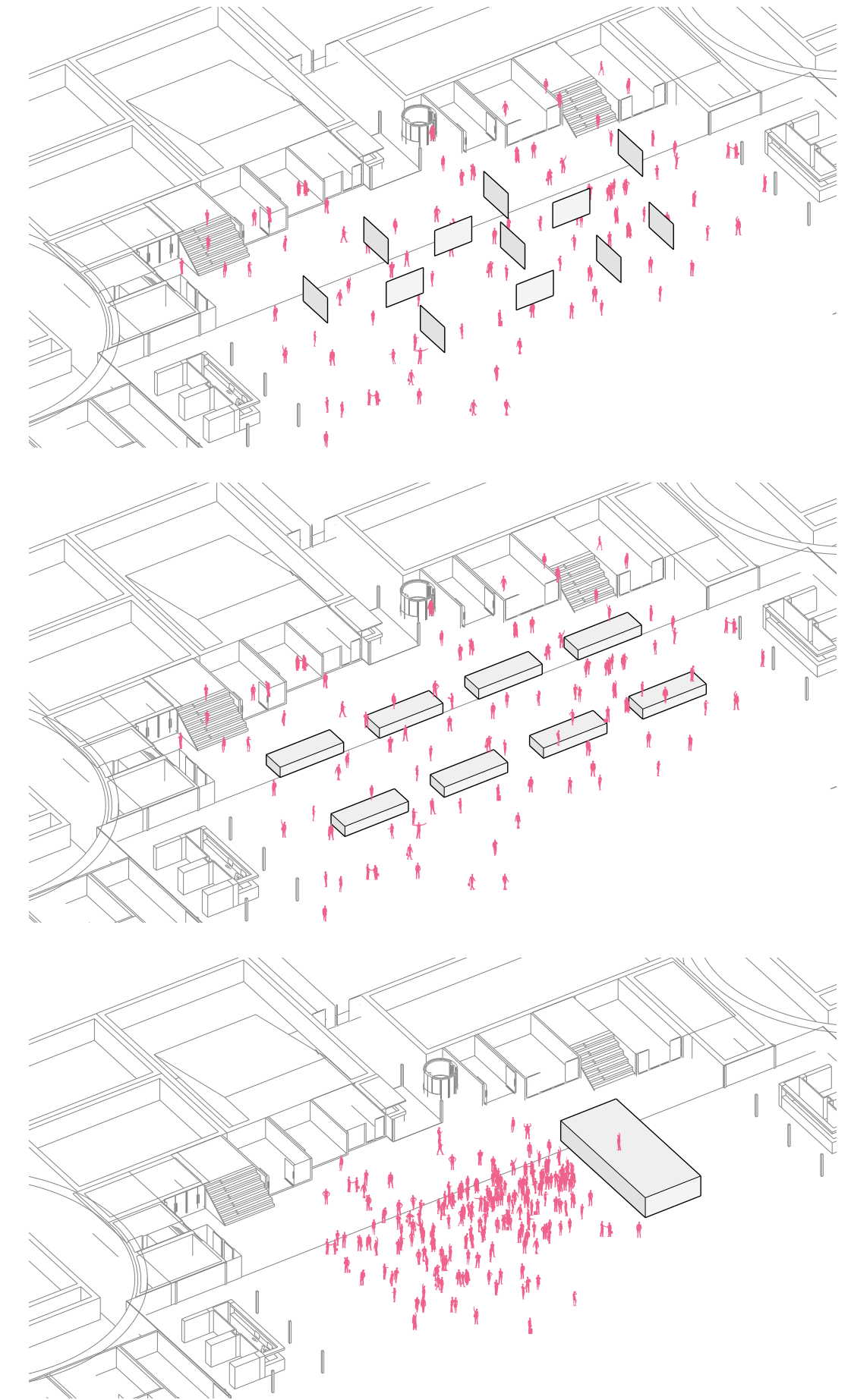
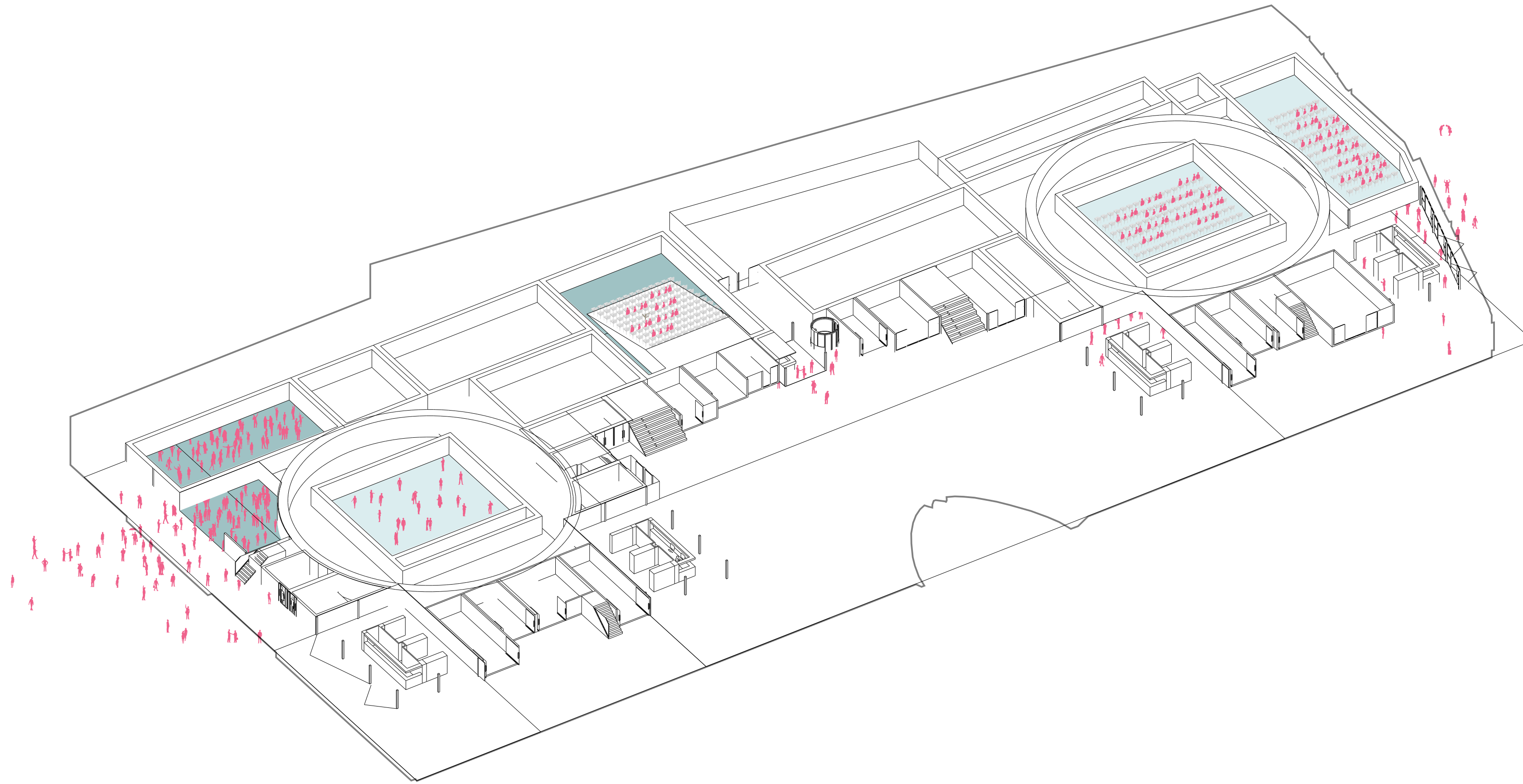


5. A building that can adapt to society (multiplicity)

5 levels of temporality within the ensemble

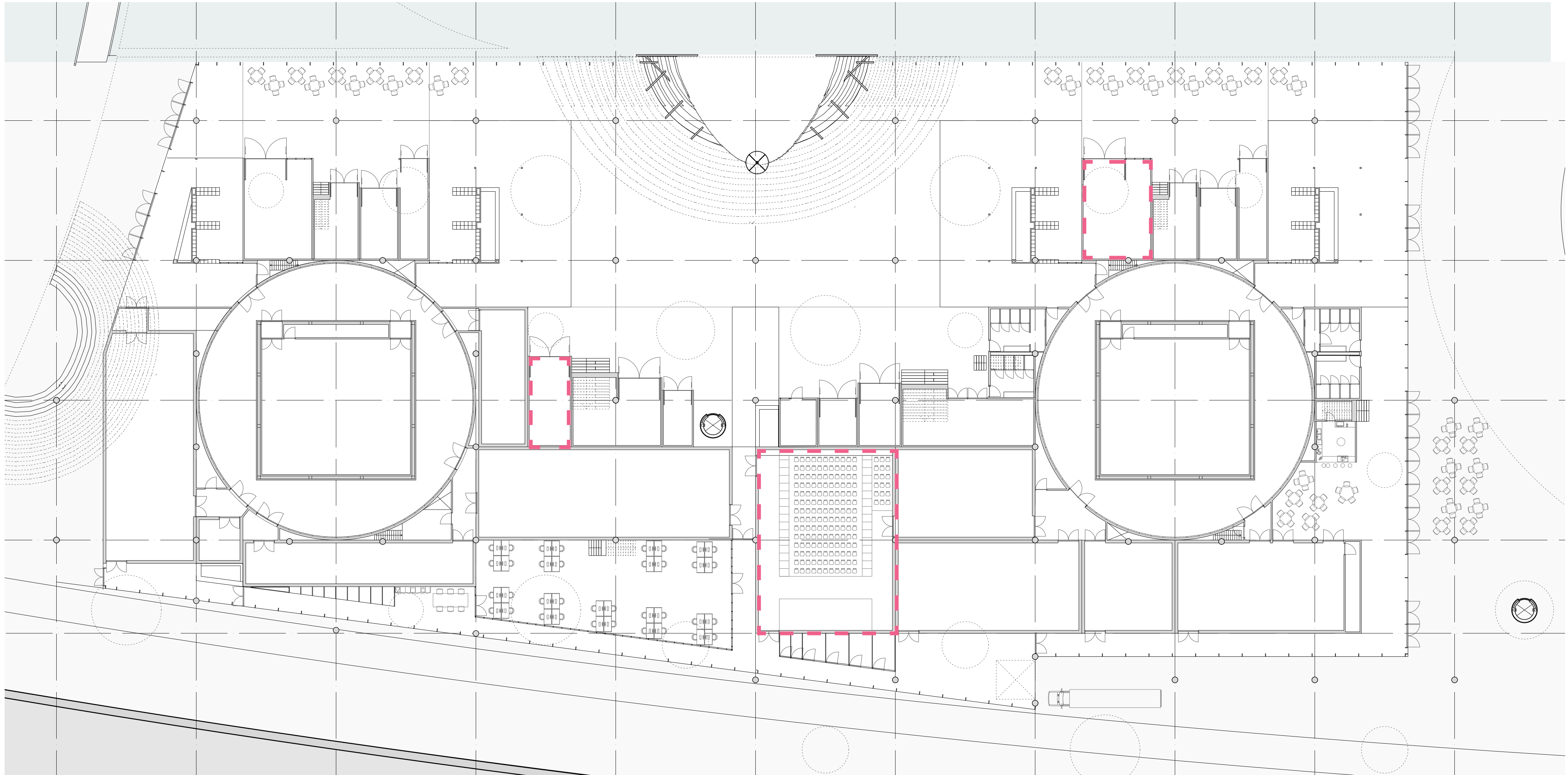
5. A building that can adapt to society (multiplicity)

1. Everyday temporality



Multifunctionality as short term temporality

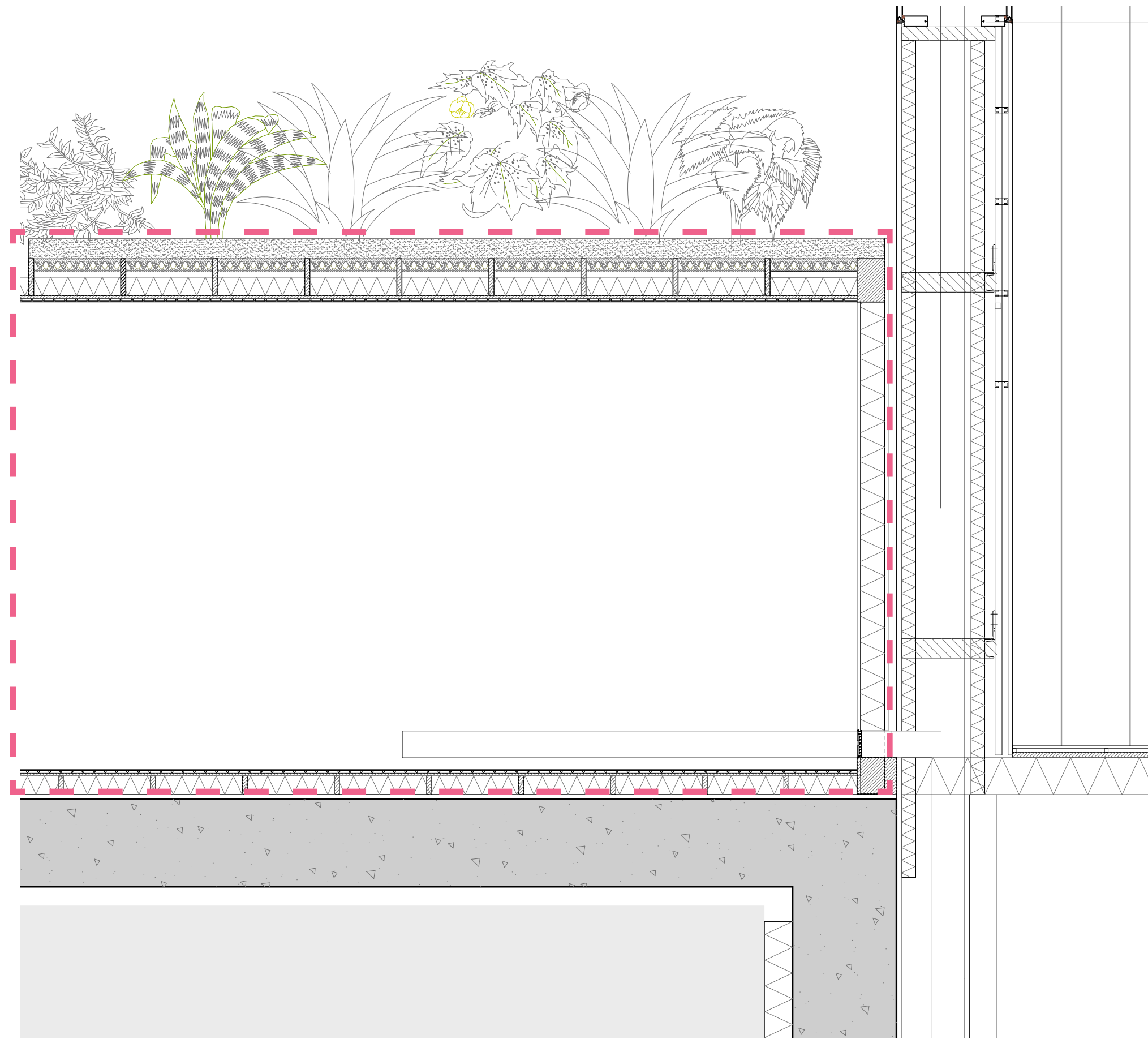
5. A building that can adapt to society (multiplicity)



The generic use of the rectangular block

5. A building that can adapt to society (multiplicity)

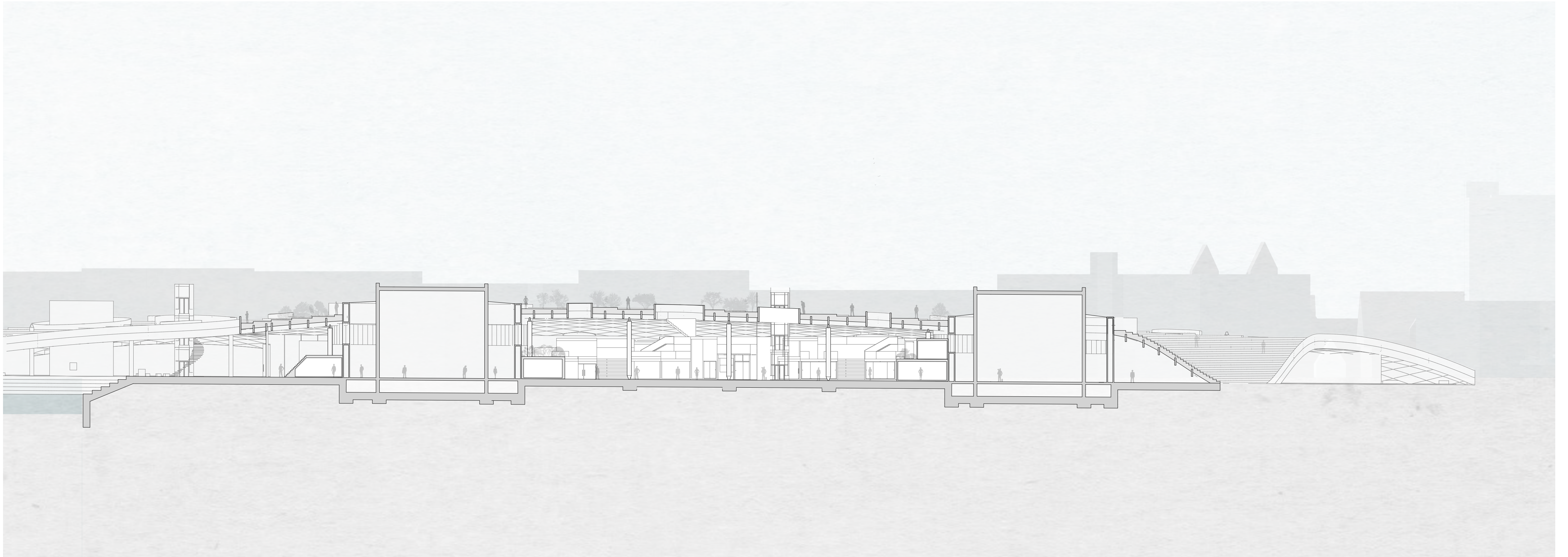
3. The ability for the blocks to be dismantled and reused



Demountable blocks

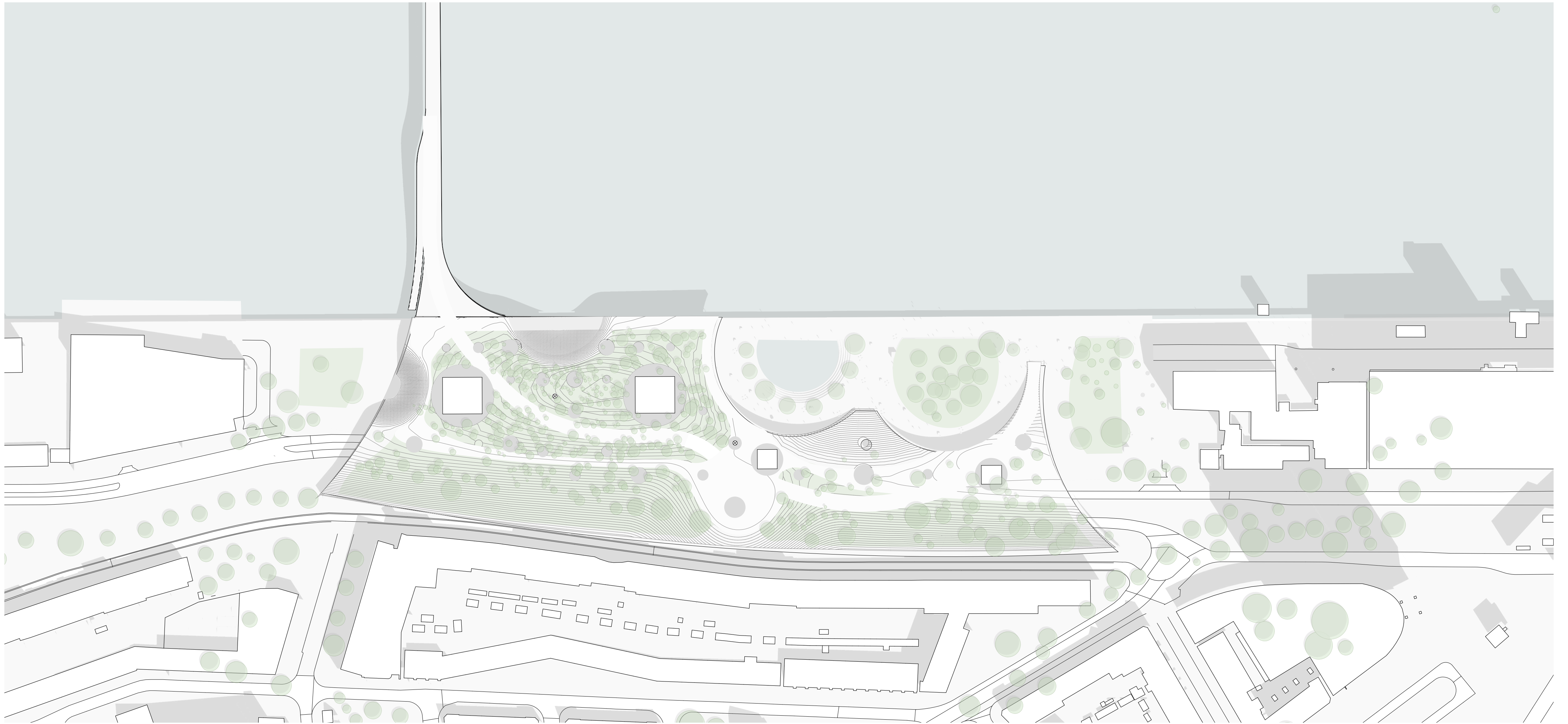
5. A building that can adapt to society (multiplicity)

4.. The ability for the structure to remain with a complete function change



The freestanding structure allows for future change of function

5. A building that can adapt to society (multiplicity)



The roof structure betakes itself on the level of urban planning

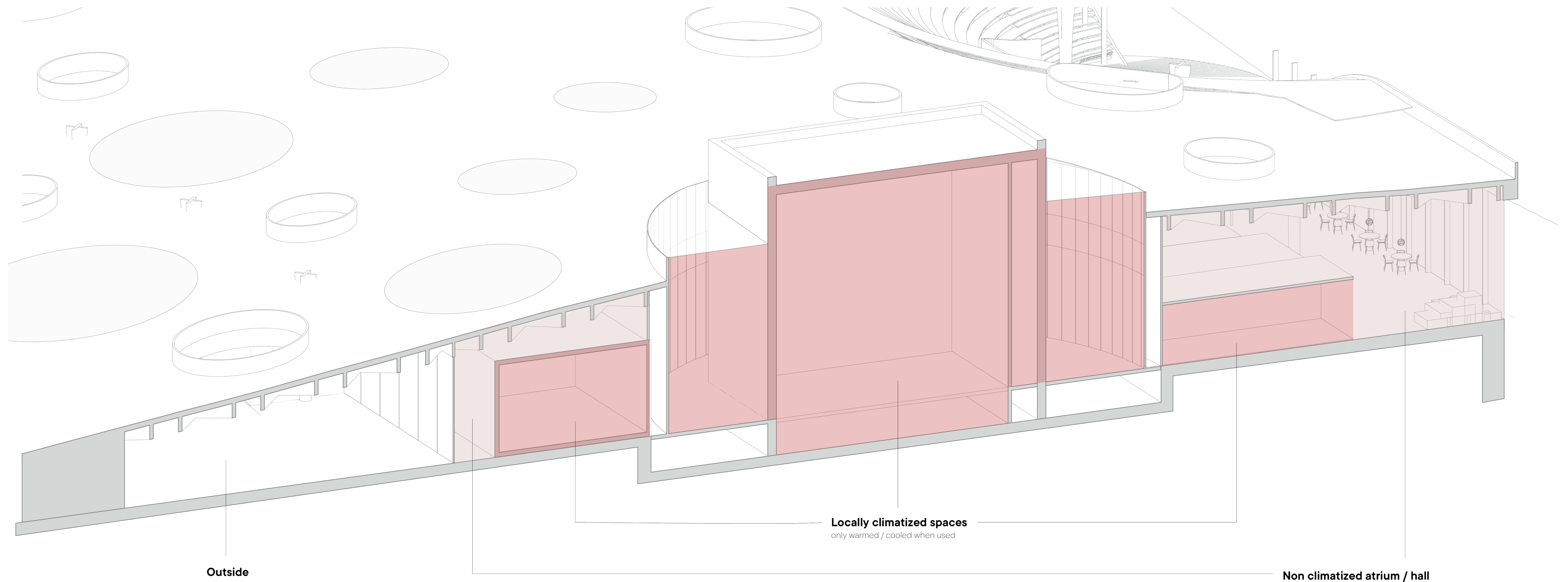
6. A roof structure that brings it together (climate + construction)

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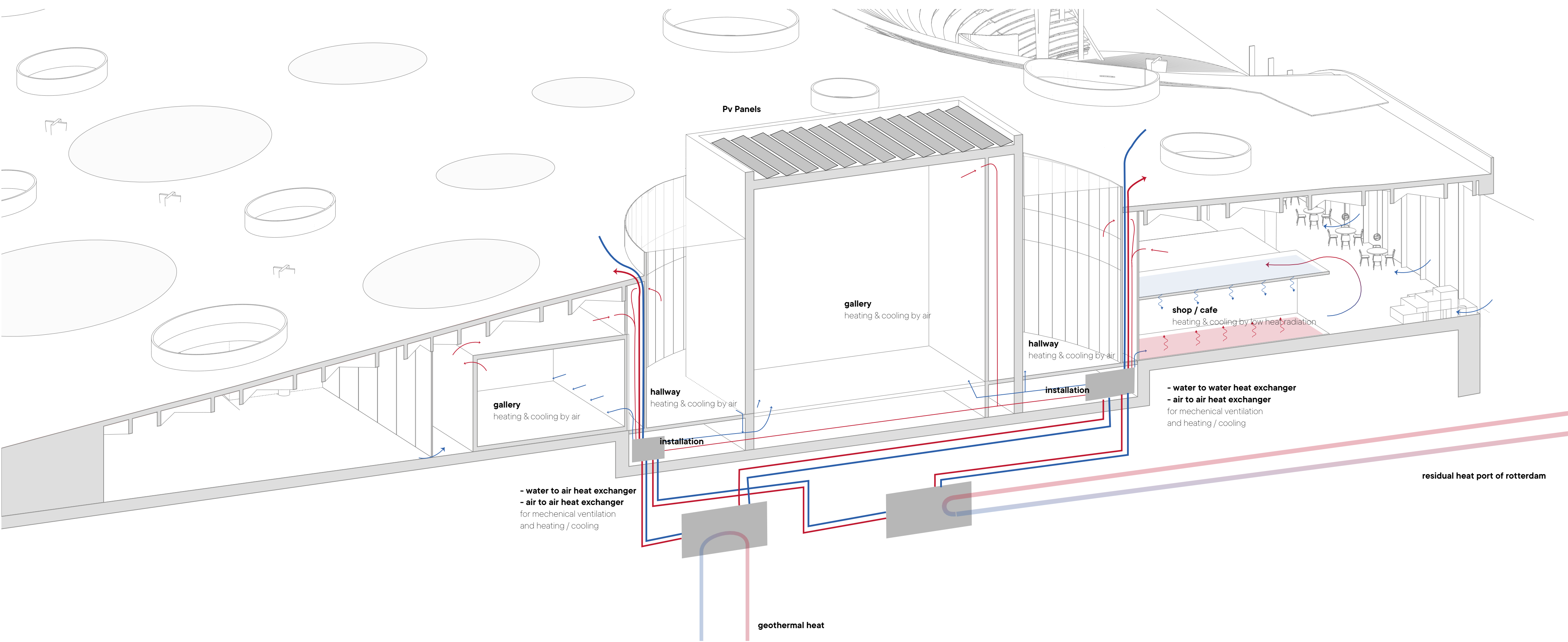
The roof as a shelter for interior and exterior public space

6. A roof structure that brings it together (climate + construction)



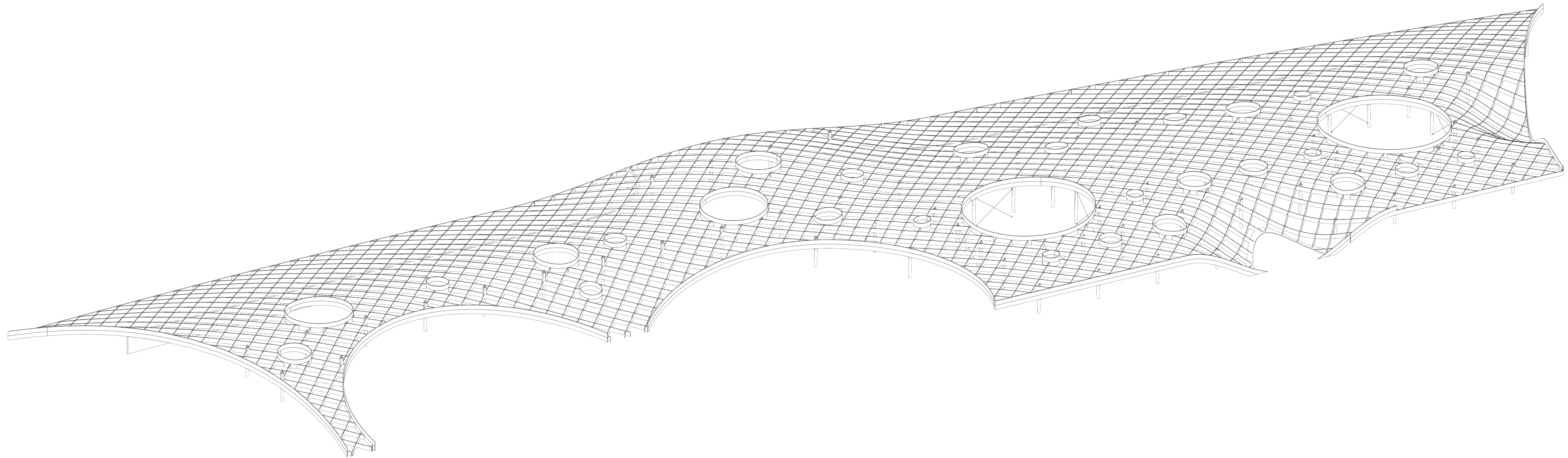
Climate strategy

6. A roof structure that brings it together (climate + construction)



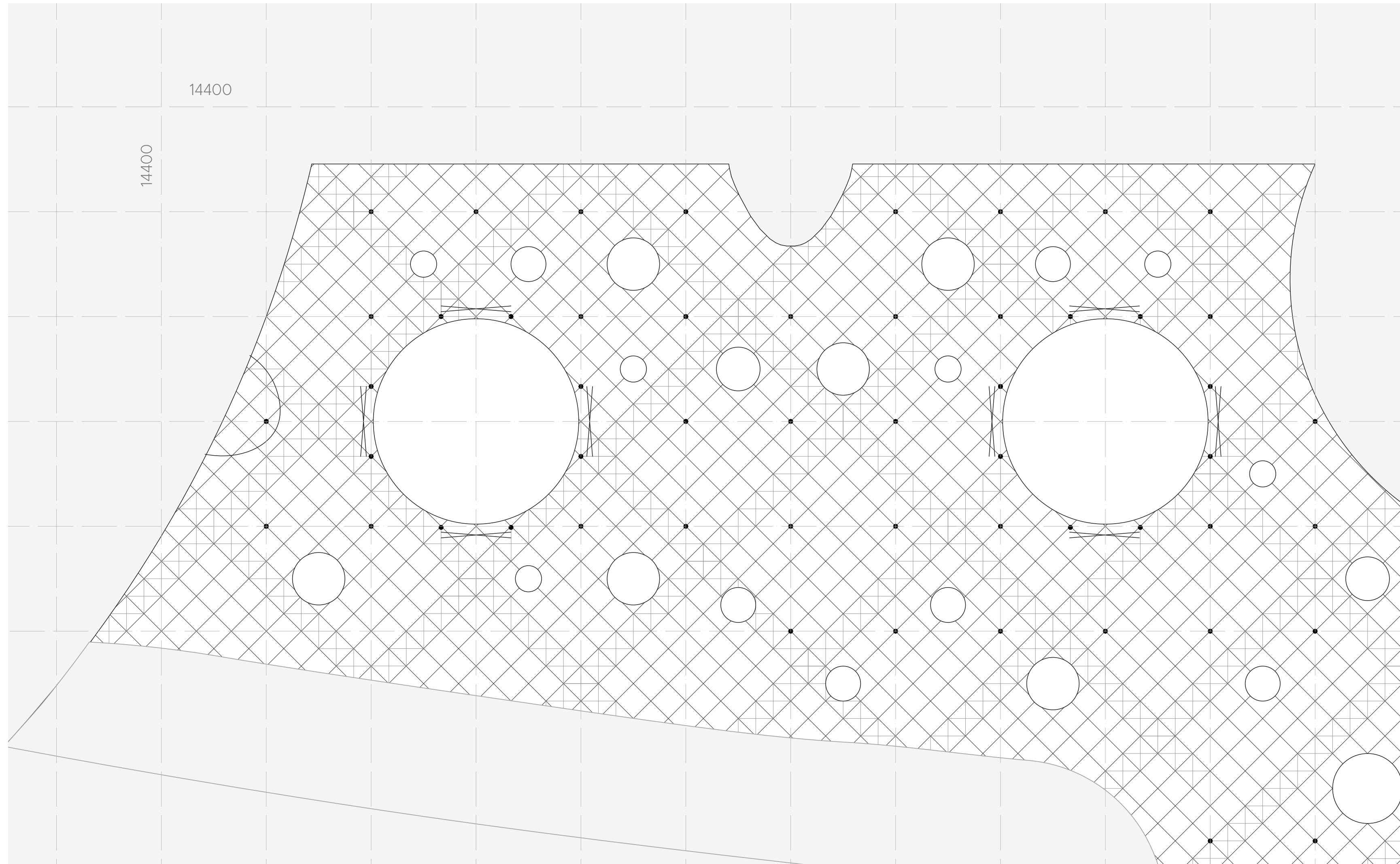
Climate strategy

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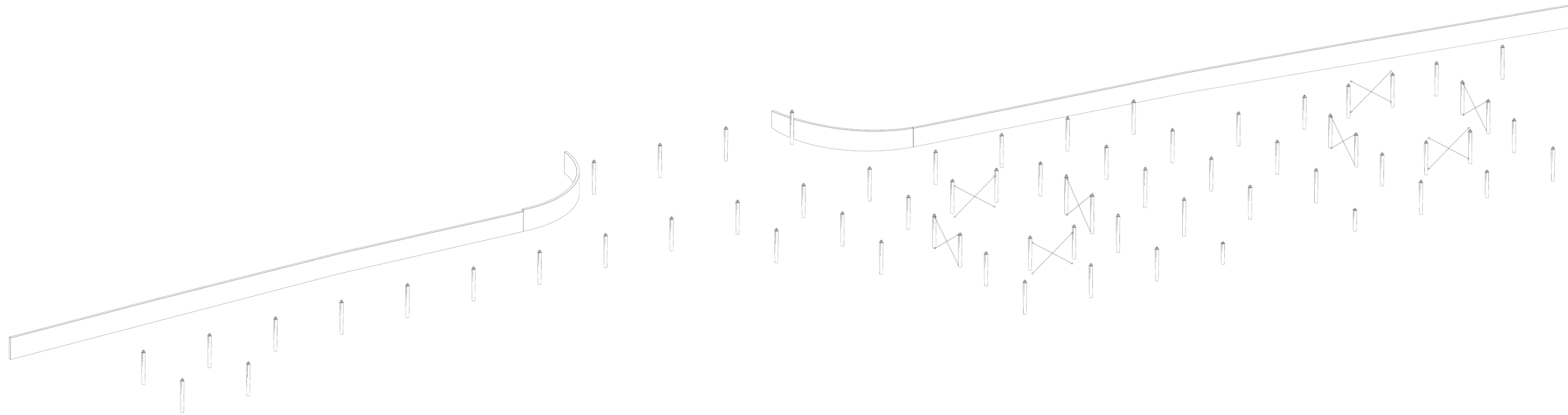
Overview roof construction

6. A roof structure that brings it together (climate + construction)



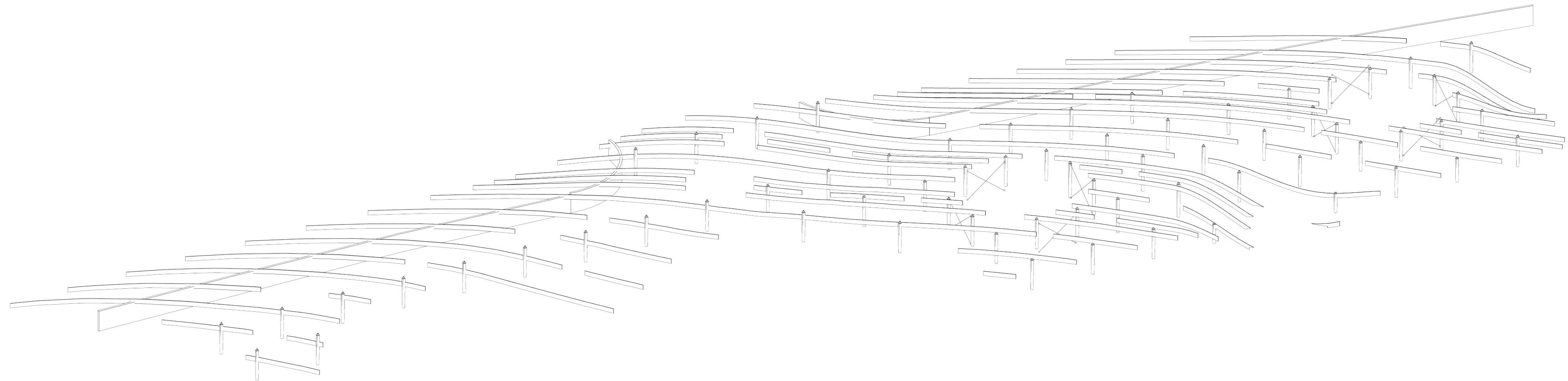
Overview roof construction

6. A roof structure that brings it together (climate + construction)



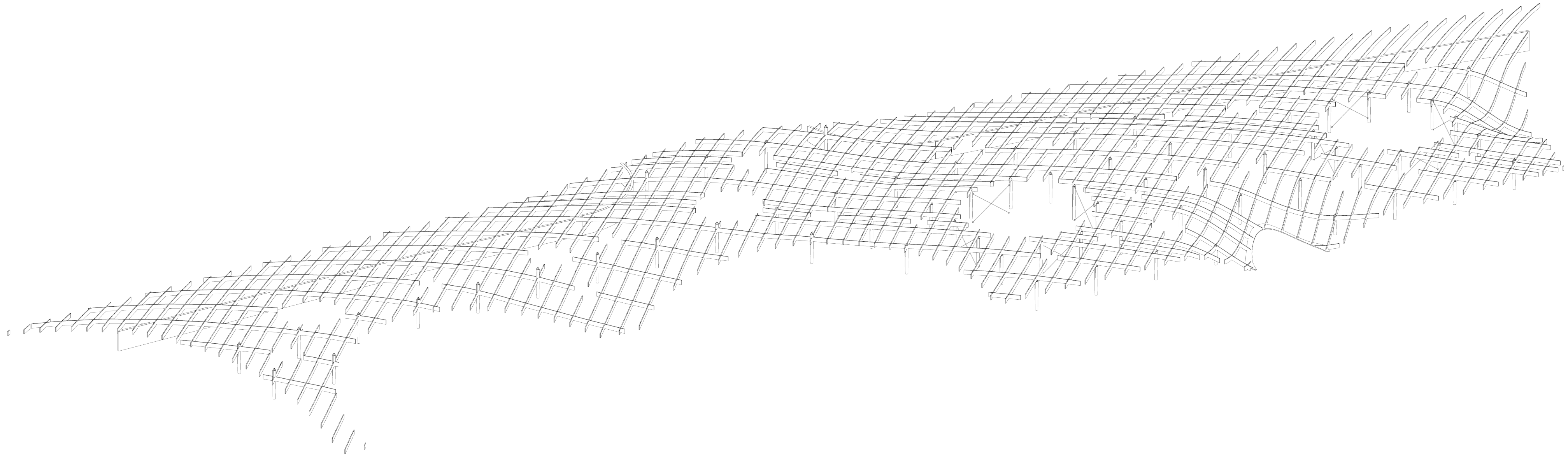
Assembly step 1; columns, structural walls

6. A roof structure that brings it together (climate + construction)



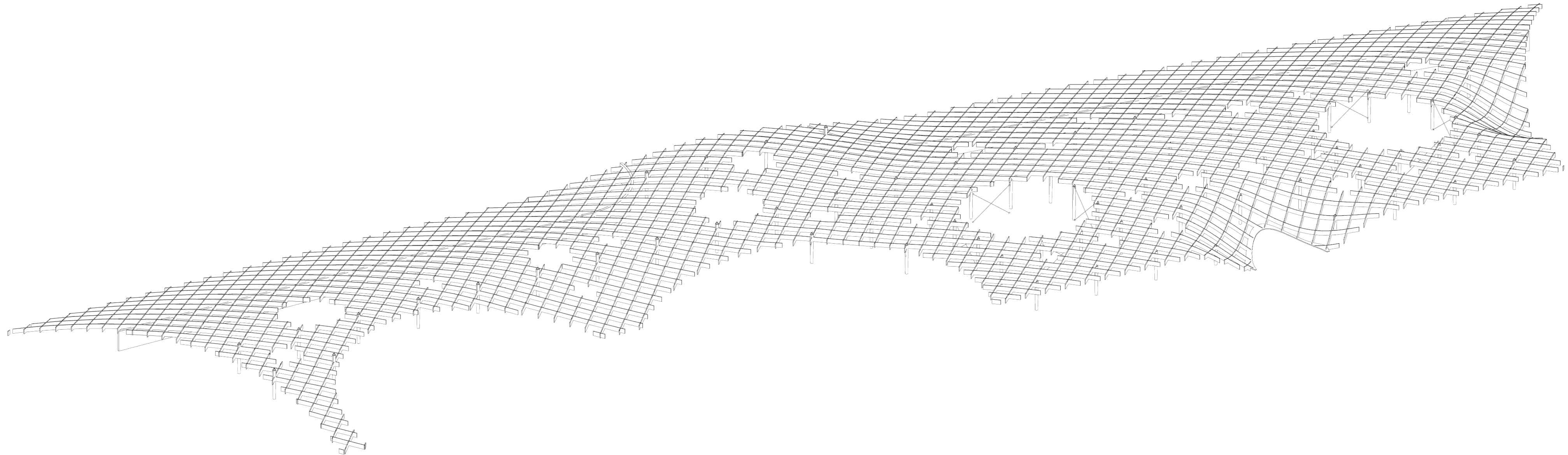
Assembly step 2: primary prefabricated long beams installed and connected to the columns

6. A roof structure that brings it together (climate + construction)



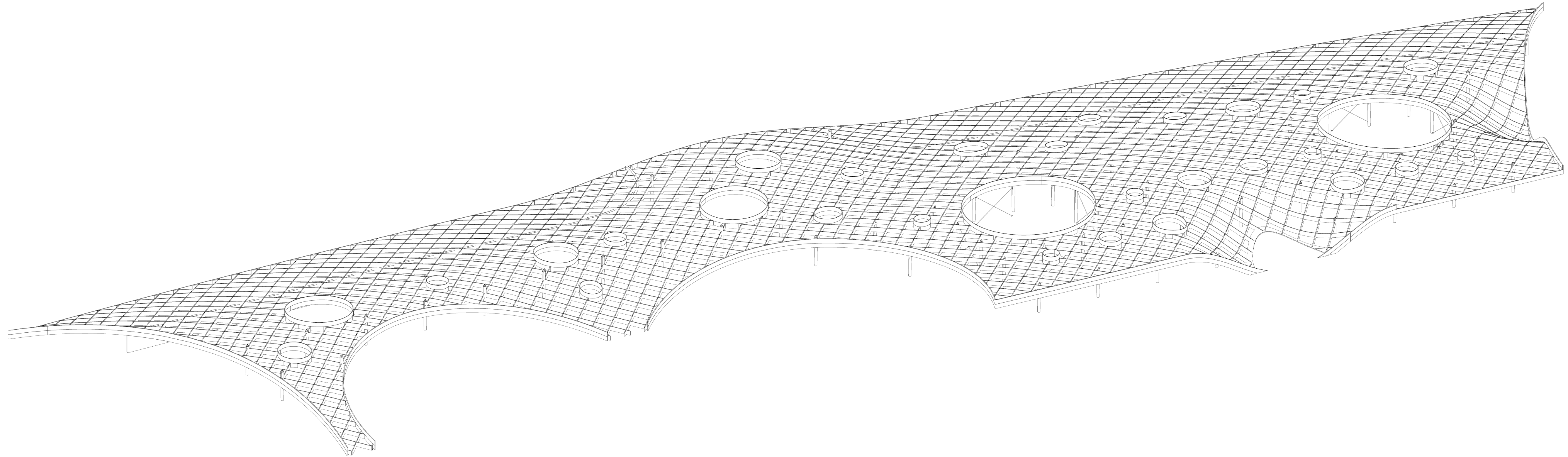
Assembly step 3: Secondary beams in the perpendicular direction installed on the primary beams

6. A roof structure that brings it together (climate + construction)



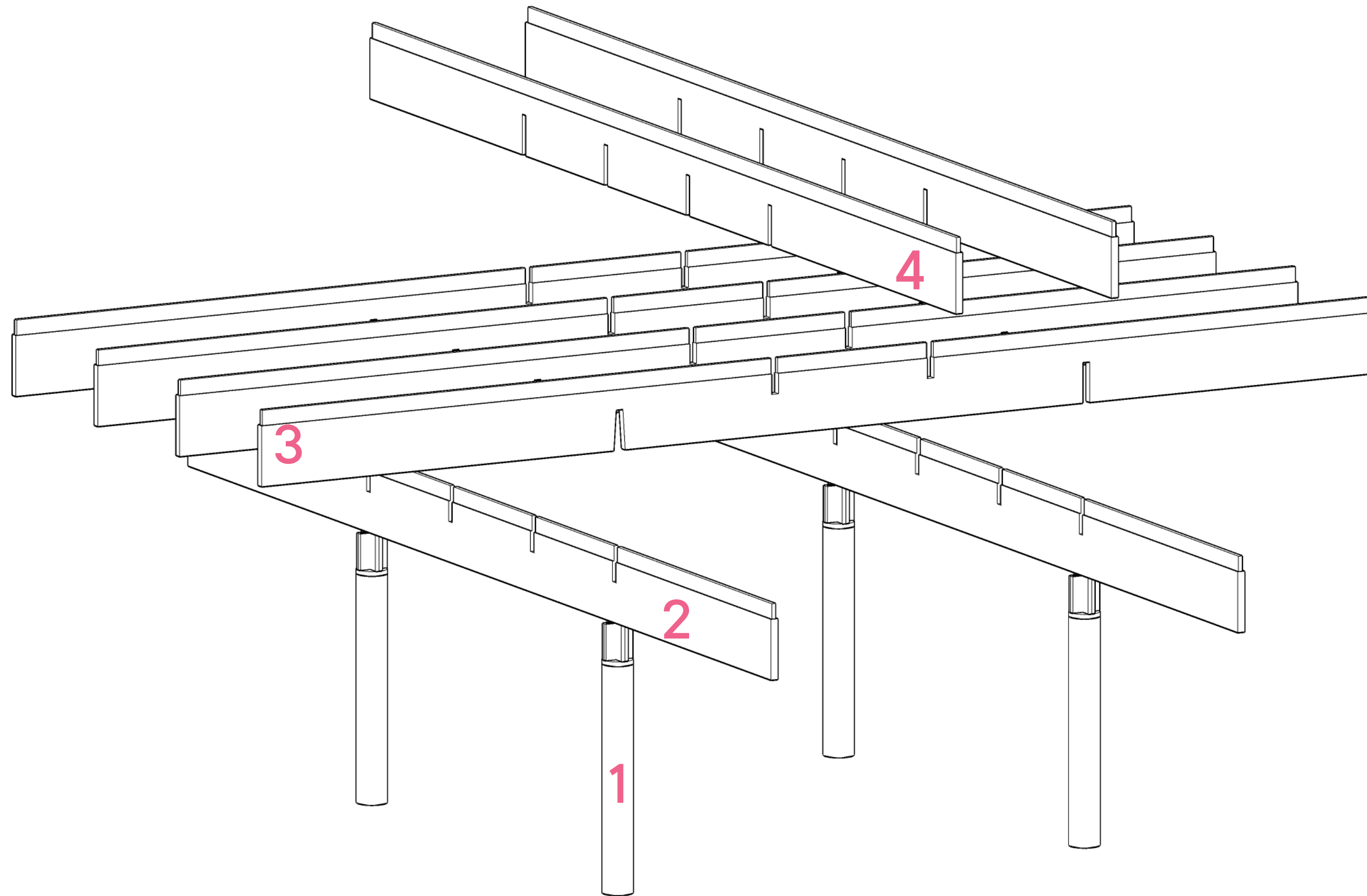
Assembly step 4: Tertiary beams connected that fill the roof structure and create a grid of 3400 x 3400

6. A roof structure that brings it together (climate + construction)



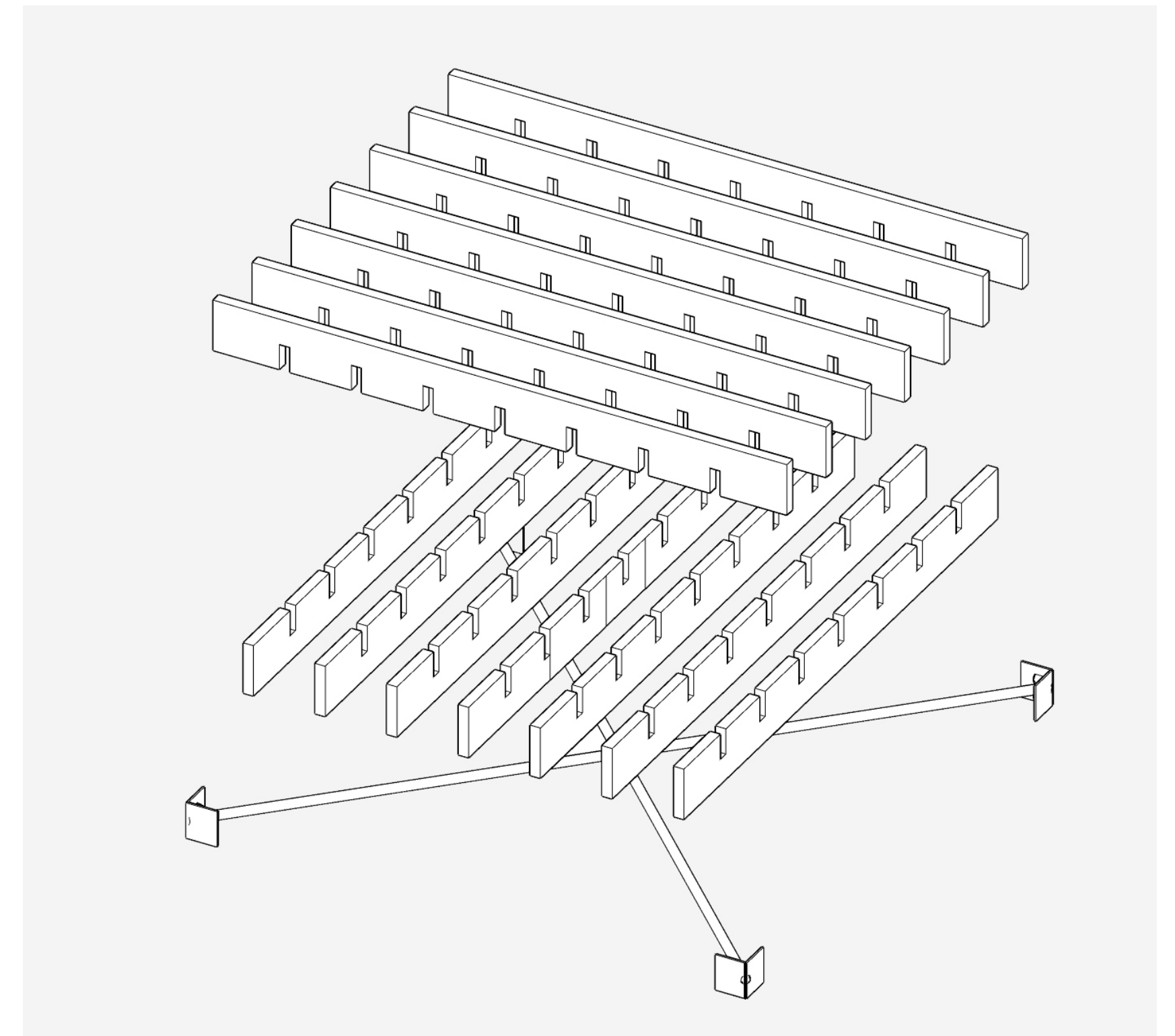
Assembly step 5: Edges of the roof structure (prefabricated pieces) installed and connected to the beams

6. A roof structure that brings it together (climate + construction)



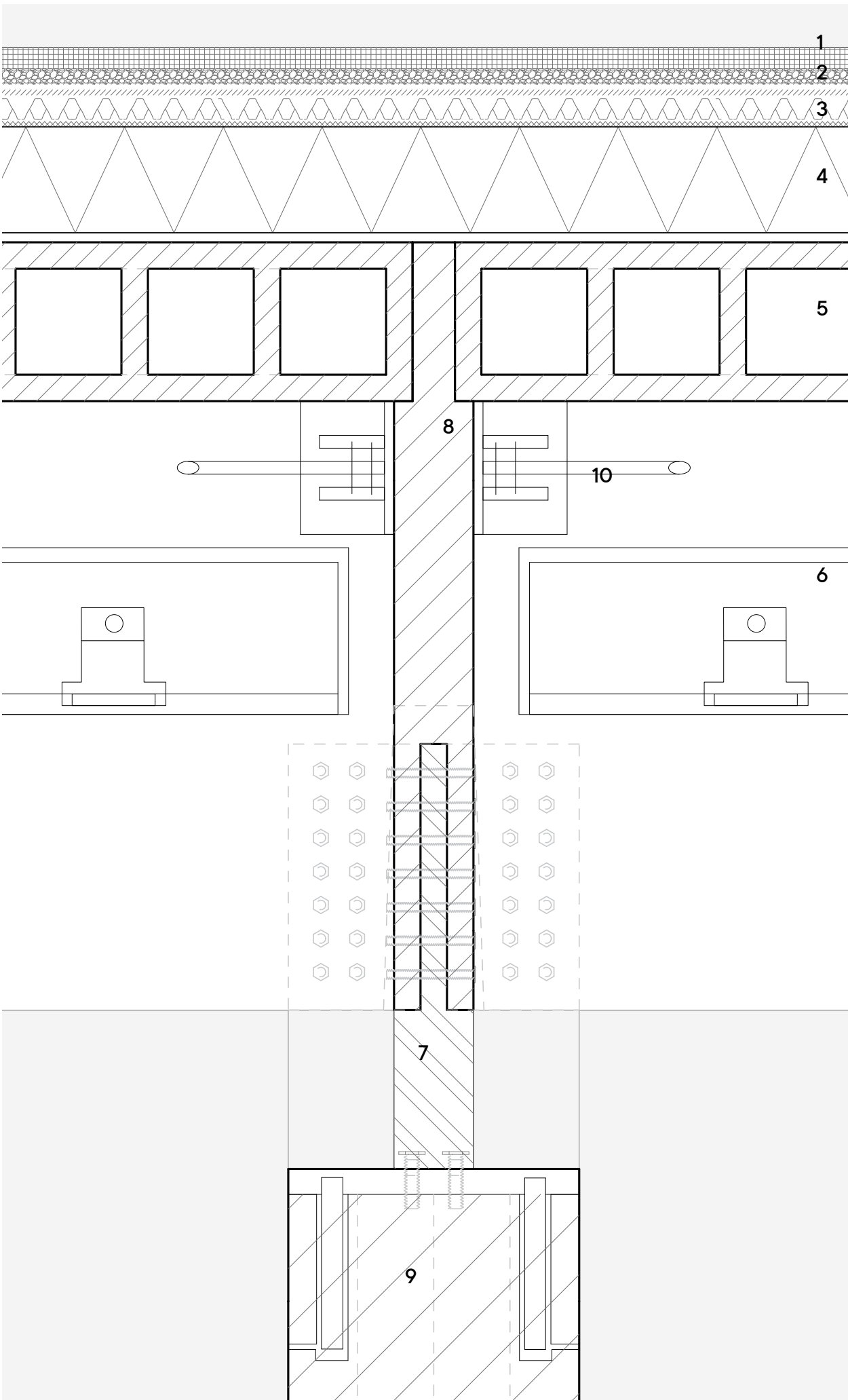
The assembly steps in detail. The beams slide in each other through the recesses in the wood.

6. A roof structure that brings it together (climate + construction)

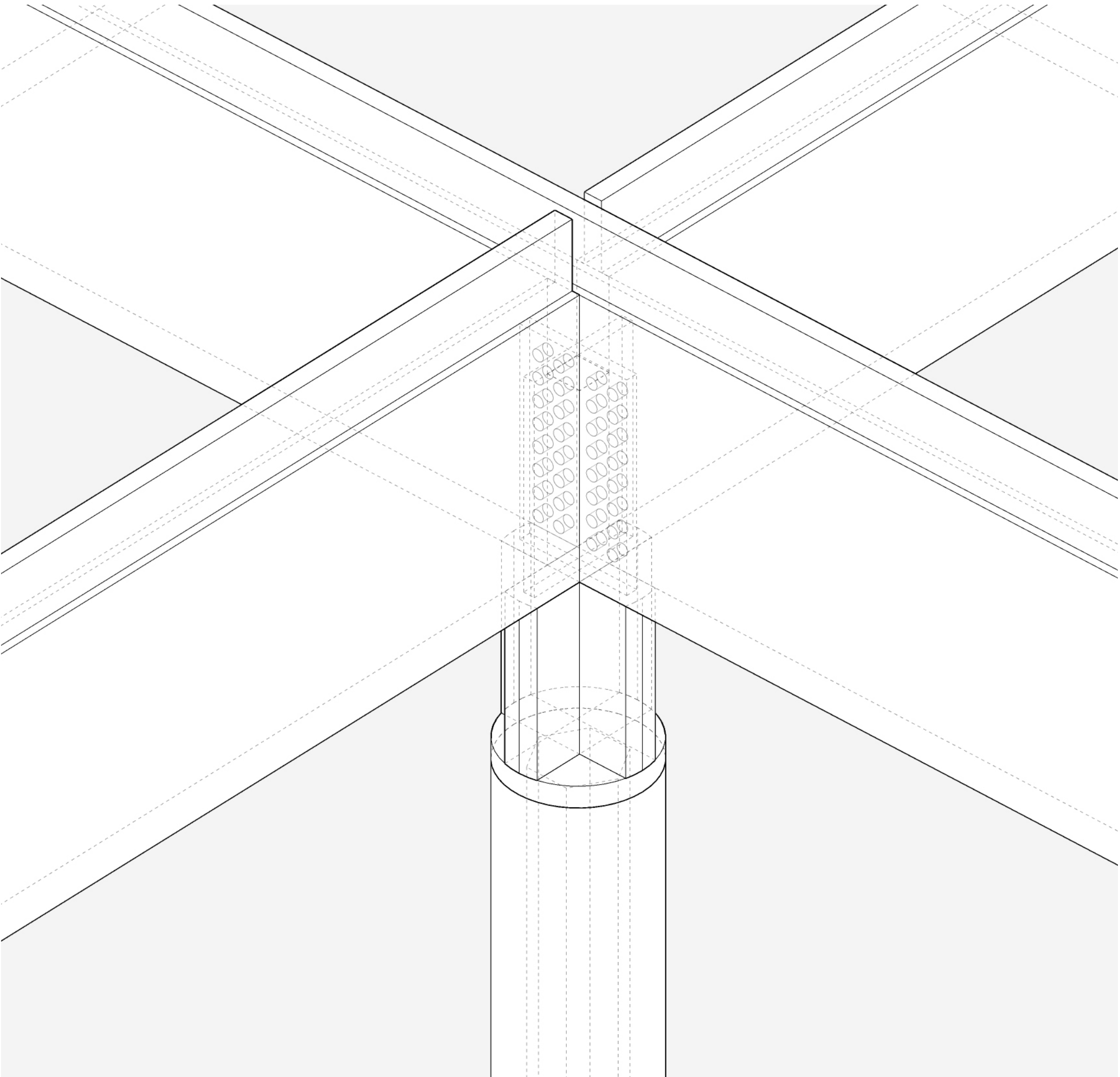


Assembly step 6: Robotically prefabricated slightly curved identical pieces of CLT flooring fill the roof.

6. A roof structure that brings it together (climate + construction)

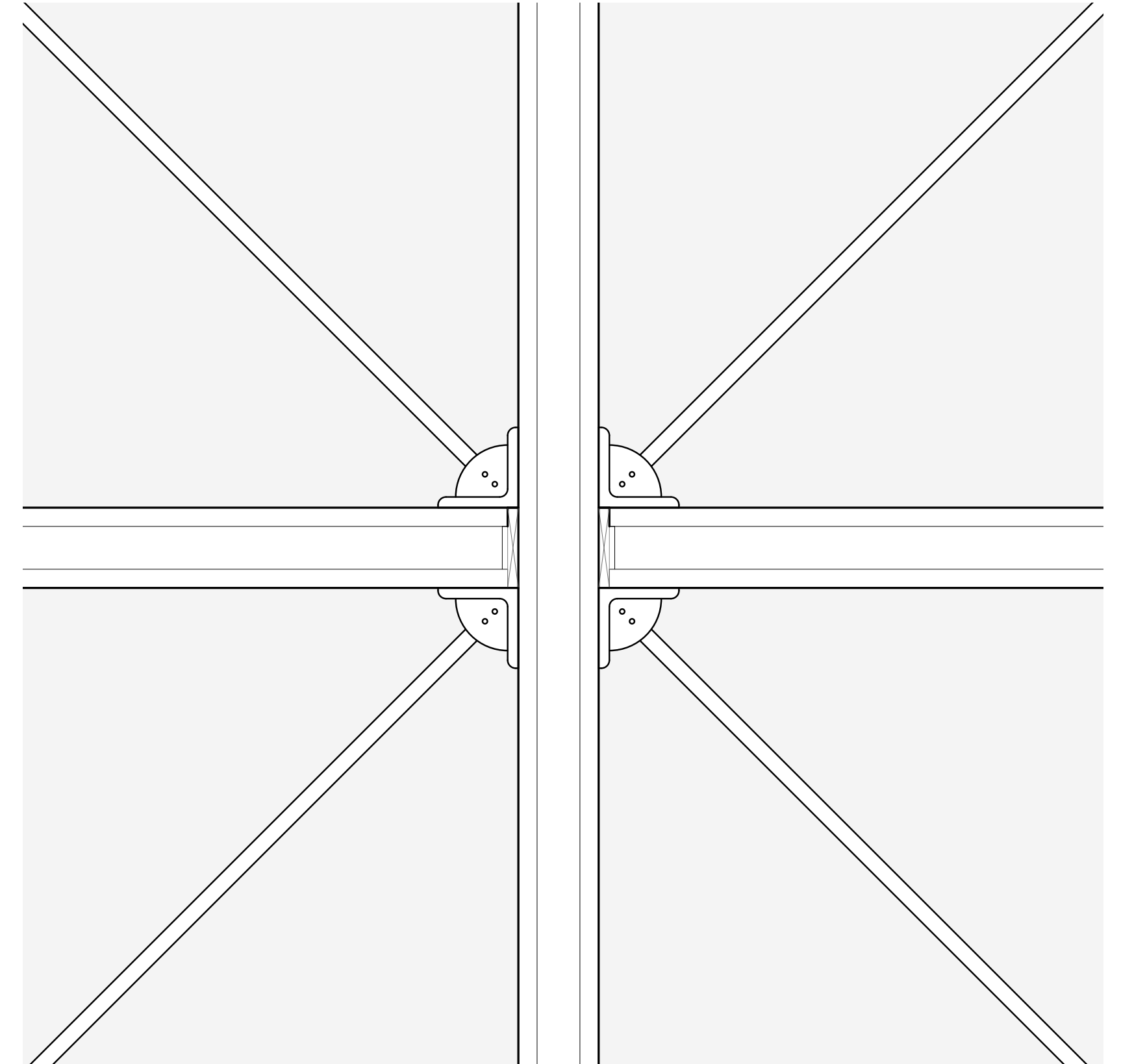
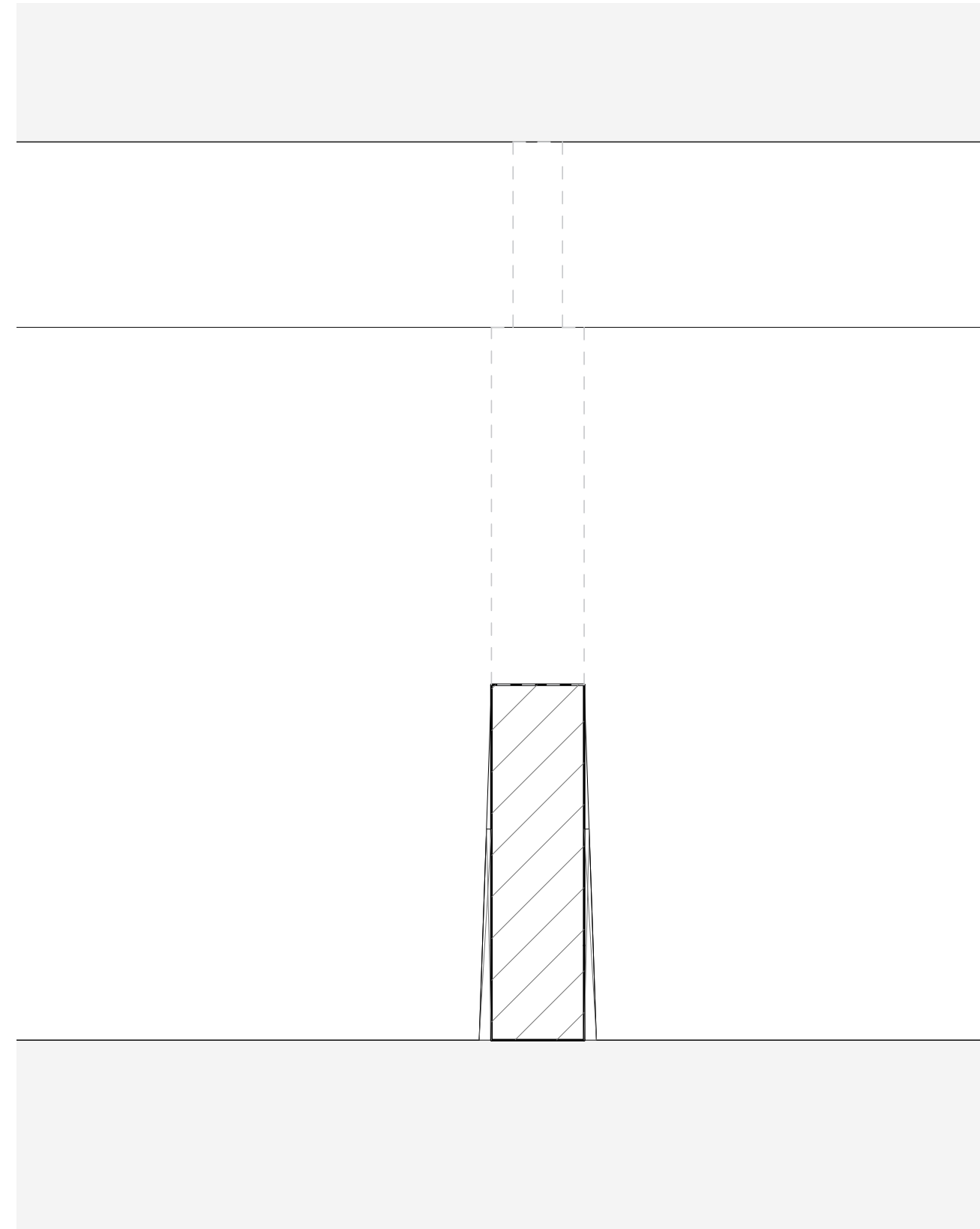
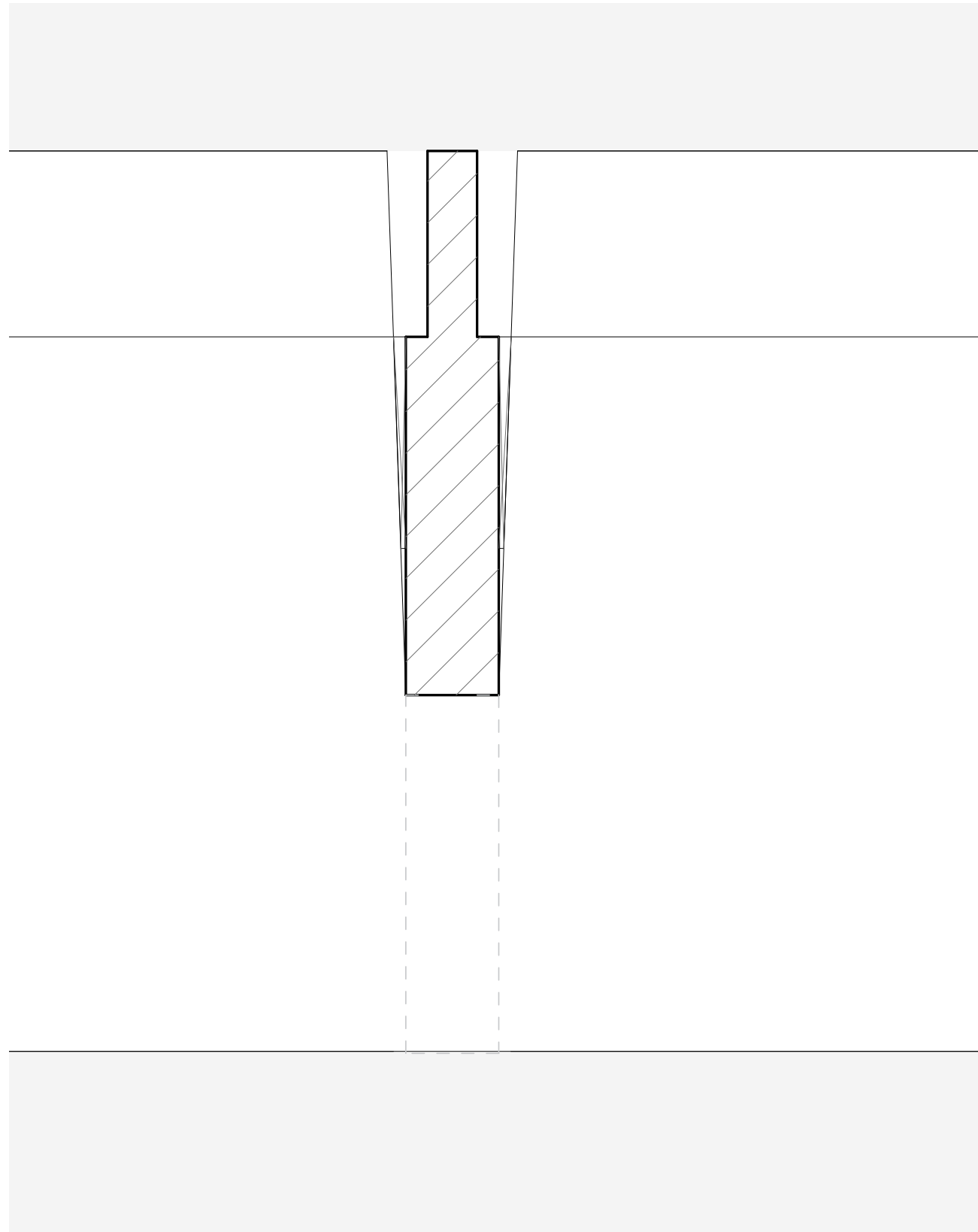


- 1. tiles roof park
- 2. gravel
- 3. drainage
- 4. hard insulation
- 5. hollow CLT floor element
- 6. hanging box with interior lighting
- 7. steel connection between column and beam
- 8. laminated timber beam
- 9. hollow hardwood timber column
- 10. Wind bracing



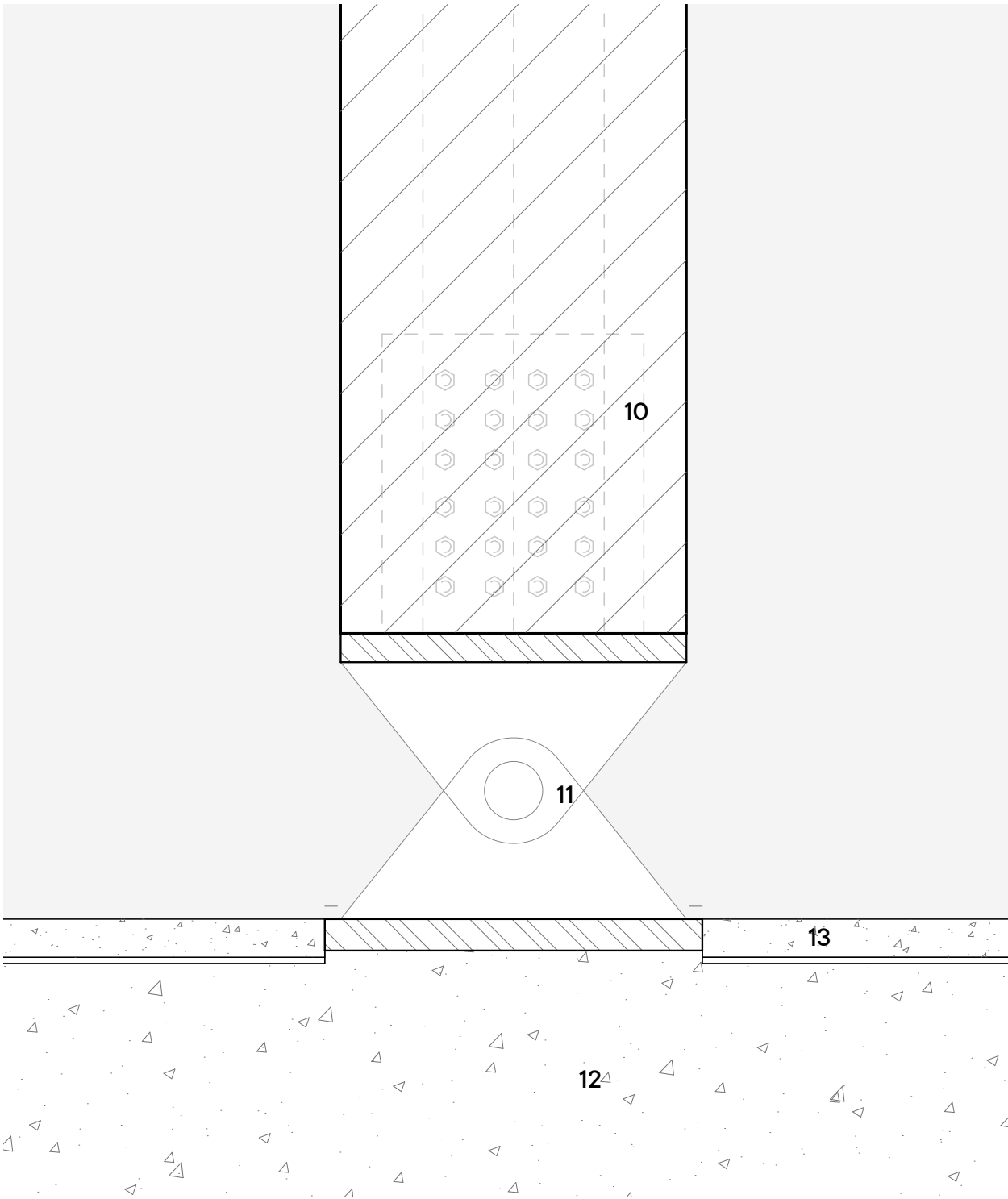
Connection beam column

6. A roof structure that brings it together (climate + construction)

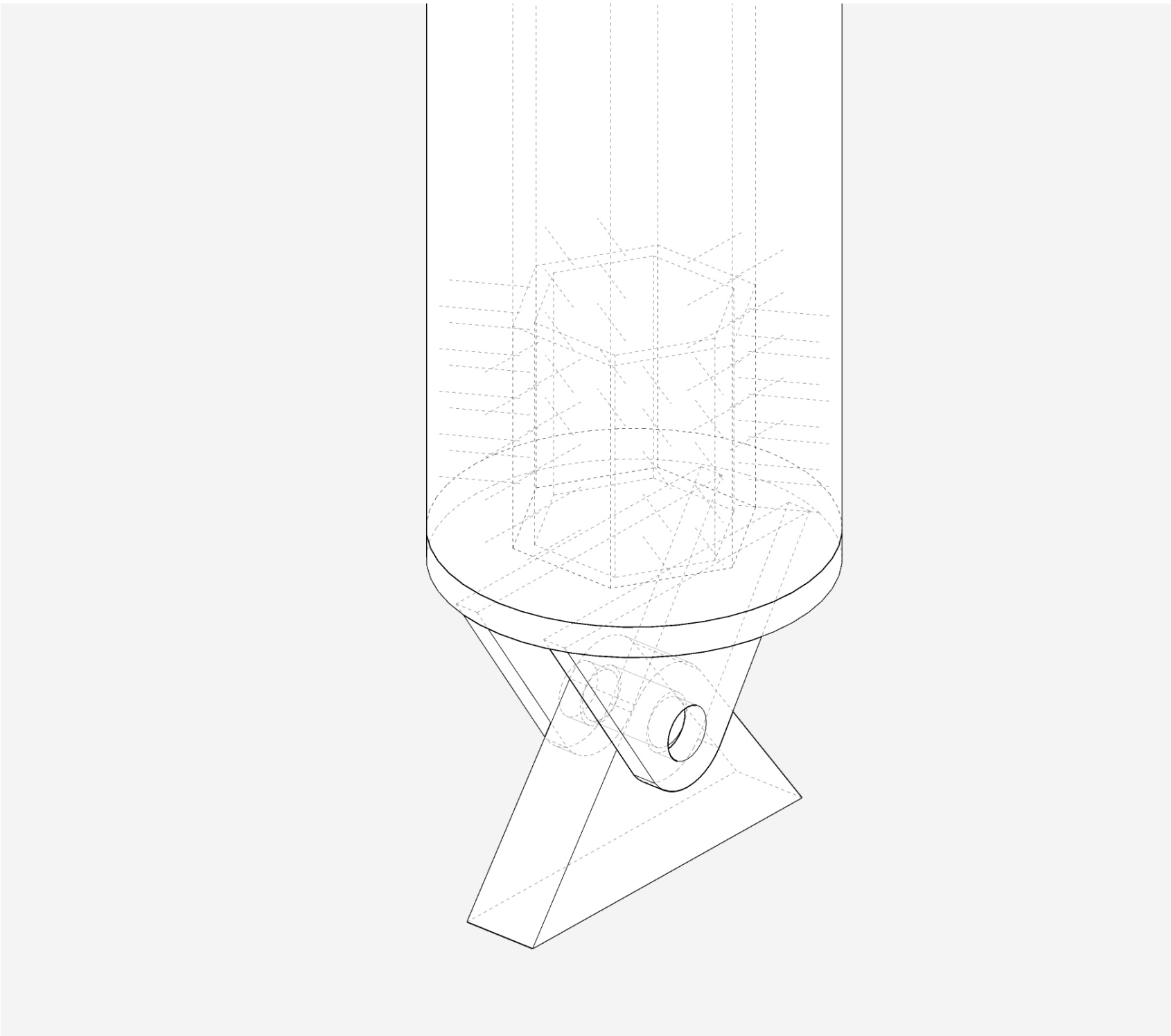


perfect fitting beams

6. A roof structure that brings it together (climate + construction)

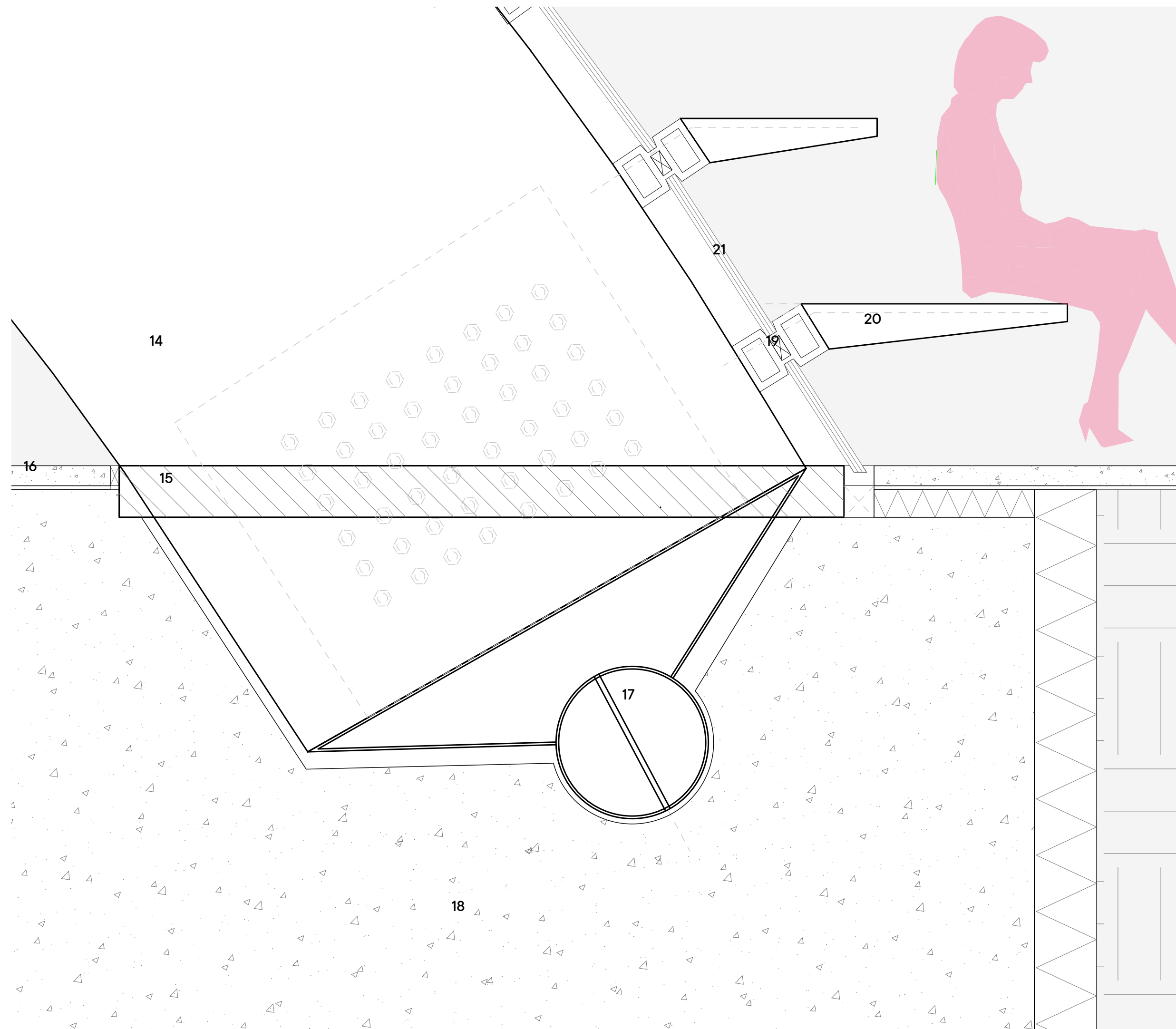


- 10. hollow hardwood timber column
- 11. steel hinge mounted on foundation
- 12. concrete foundation
- 13. concrete flooring
- 14. laminated timber beam
- 15. timber finish stroke
- 16. concrete floor finishing
- 17. Steel hinging connection element fabricly installed in the laminated timber piece
- 18. Concrete foundation
- 19. steel window frame connected to bench
- 20. timber bench forming a tribune
- 21. glass



Connection foundation column

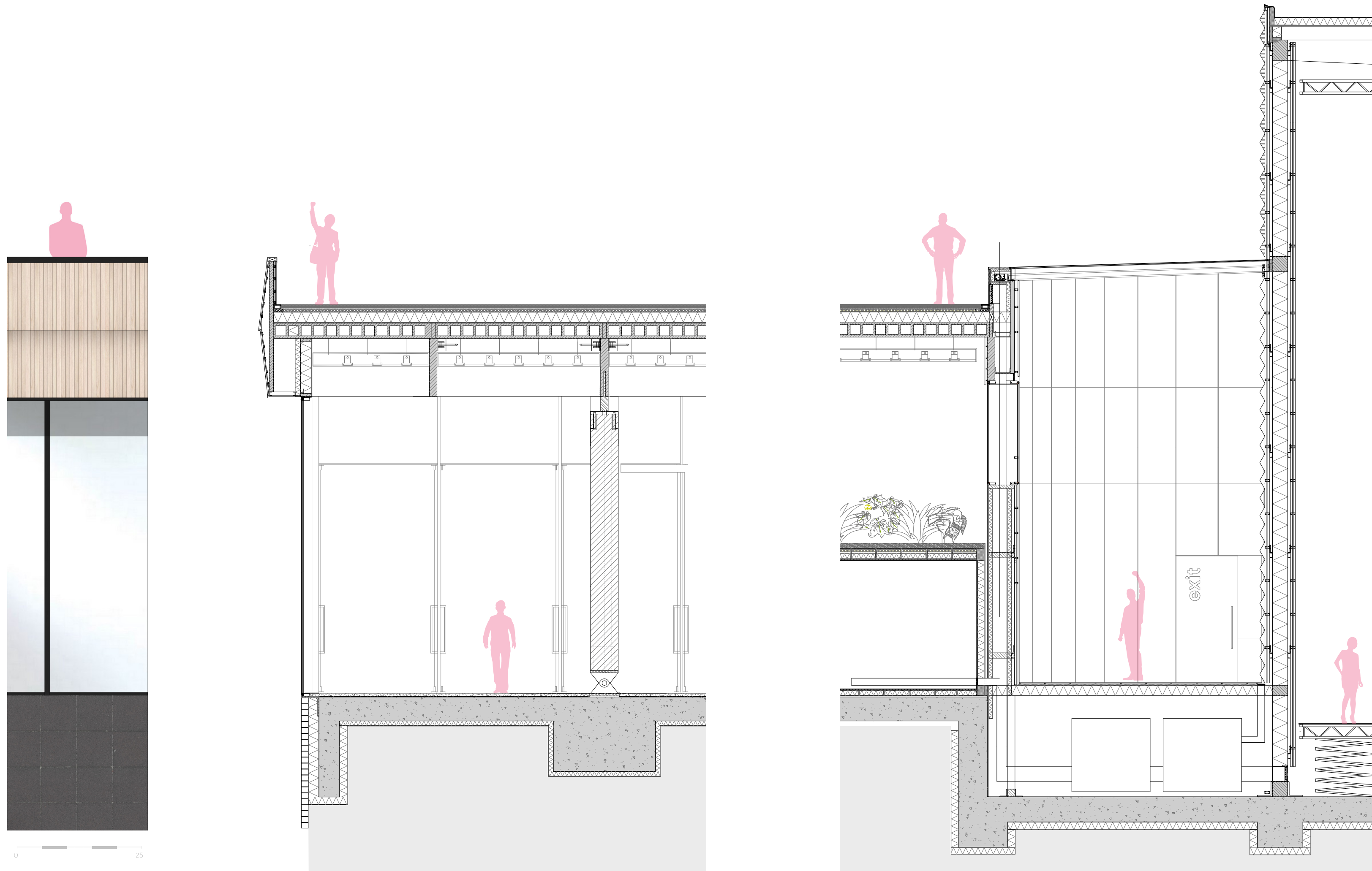
6. A roof structure that brings it together (climate + construction)



Connection roof to foundation

- 1. tiles roof park
- 2. gravel
- 3. drainage
- 4. hard insulation
- 5. hollow CLT floor element
- 6. hanging box with interior lighting
- 7. steel connection between column and beam
- 8. laminated timber beam
- 9. hollow hardwood timber column
- 22. windbracing in roof

6. A roof structure that brings it together (climate + construction)



Detailed section and elevation

Conclusion

Conclusion

Museum Zuid is a place that connects culture through multifunctional design

Connecting different sorts of culture by combining unexpected functions

Bringing the museum and its art to the public sphere by taking away the boundaries

Creating a public place for the people of the Tarwewijk

Merging urban planning and architecture to create truly public architecture

Museum Zuid

connecting culture through
multifunctional design

Thank you