P5 - Jeroen Boots

The implementation of experience in our learning process and designing for experience based learning

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Building technology - Freek Speksnijder
Explore lab 2020 - Architecture and the built environment - TU Delft

Experience

What if we learn more from experiences?

How can we create a new experience based learning system and how to create (digital) architecture for it?

Conventional learning:

Broad knowledge Video/discussion	Deep knowledge Books/create
- Linear experience - Own space - Talk, discus, share - passive - Find specific interest - Clear overview of subject - Narrative by director	- Vast knowledge - At own speed - Very specific knowledge - Gradually builds up knowledge

Conventional learning:

Broad knowledge Video/discussion	Deep knowledge Books/create
- Linear experience - Own space - Talk, discuss, share - passive - Find specific interest - Clear overview of subject - Narrative by director	- Vast knowledge - At own speed - Very specific knowledge - Gradually build up knowledge

Lecture

Homework

New way of learning?

Experience knowledge AR/VR	Broad knowledge Video/discussion	Deep knowledge Books/create
- Immersive - Own speed - Allows exploration - Simulate exploration - Move/interact - No limits/restrictions - Active learning - Get intrigued - inspire	- Linear experience - Own space - Talk, discus, share - passive - Find specific interest - Clear overview of subject - Narrative by director	- Vast knowledge - At own speed - Very specific knowledge - Gradually builds up knowledge

Experience

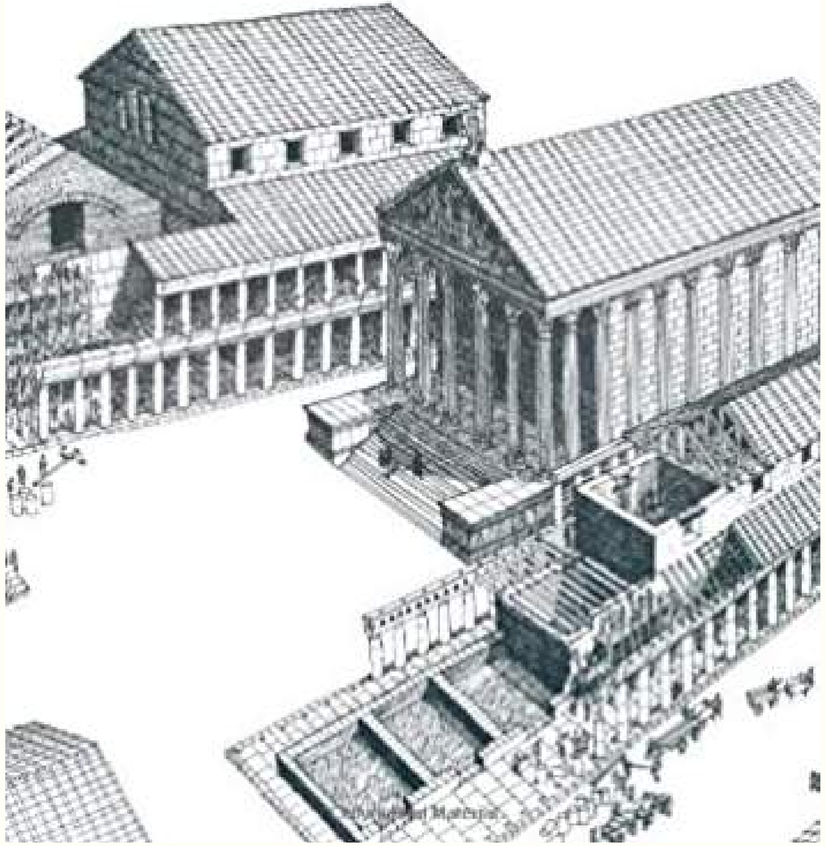
Lecture

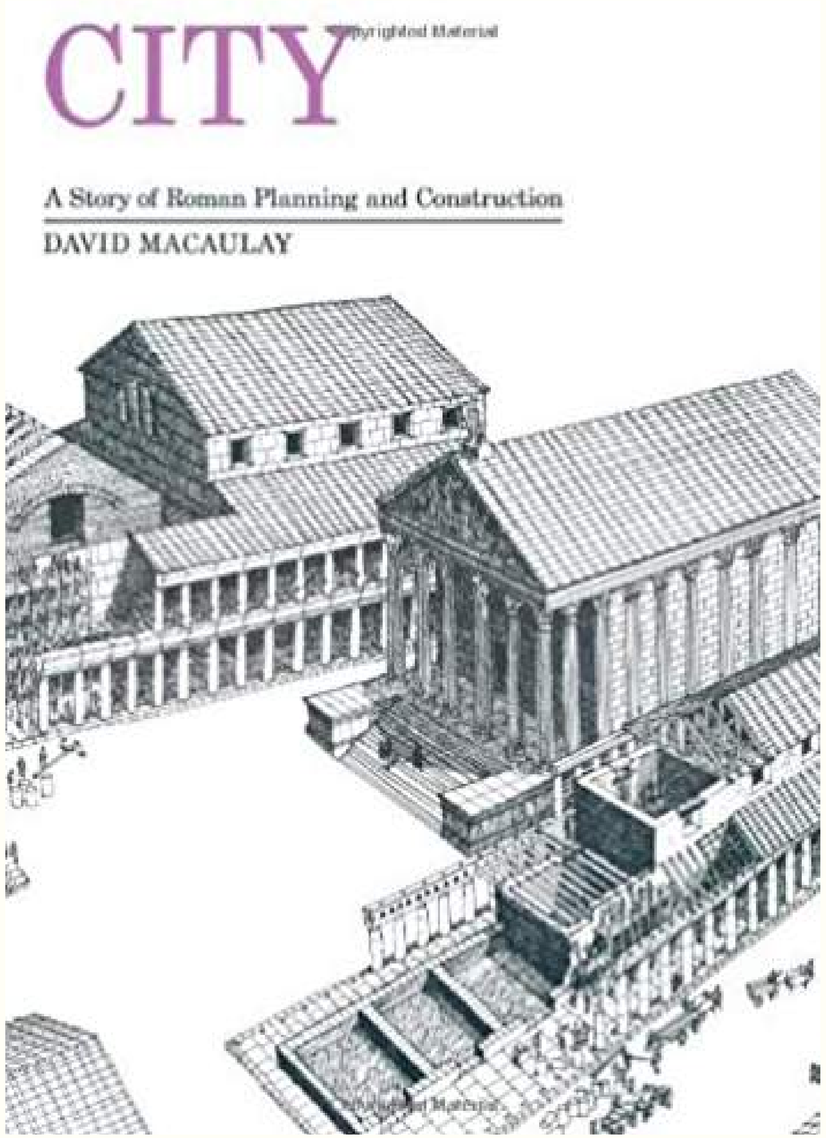
Homework

CITY

A Story of Roman Planning and Construction

DAVID MACAULAY

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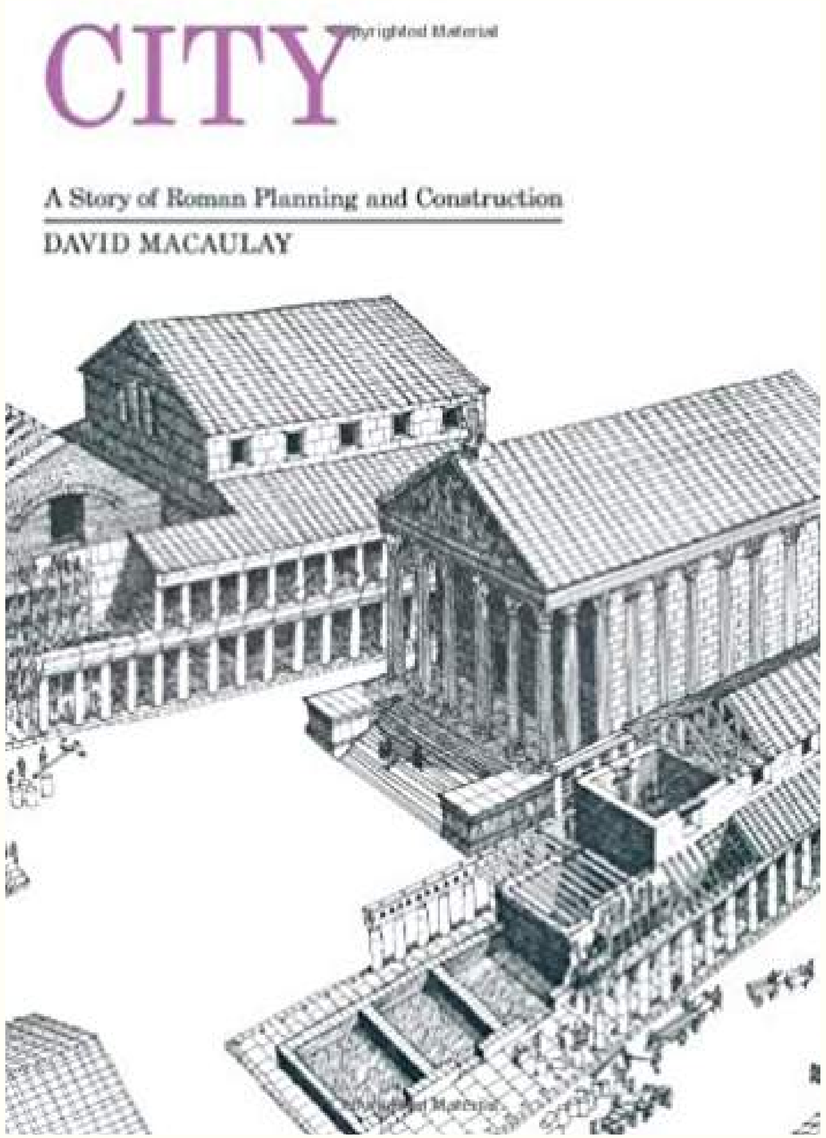
WHAT WE DO IN LIFE
ECHOES IN ETERNITY.
A RIDLEY SCOTT FILM
RUSSELL CROWE
GLADIATOR
UNIVERSAL PICTURES AND DREAMWORKS PICTURES PRESENT A DOUGLAS WICK PRODUCTION IN ASSOCIATION WITH SCOTT FREE PRODUCTIONS A RIDLEY SCOTT FILM RUSSELL CROWE "GLADIATOR"
JOAQUIN PHOENIX CONNIE NIELSEN OLIVER REED DEREK JACOBI DJIMON HOUNSOU AND RICHARD HARRIS MUSIC HANS ZIMMER AND LISA GERRARD COSTUME DESIGNER JANTY YATES EDITOR PIETRO SCALIA
PRODUCTION DESIGNER ARTHUR MAX DIRECTOR OF PHOTOGRAPHY JOHN MATHIESON EXECUTIVE PRODUCERS WALTER F. PARKES LAURIE MacDONALD PRODUCED BY DOUGLAS WICK DAVID FRANZONI BRANKO LUSTIG STORY BY DAVID FRANZONI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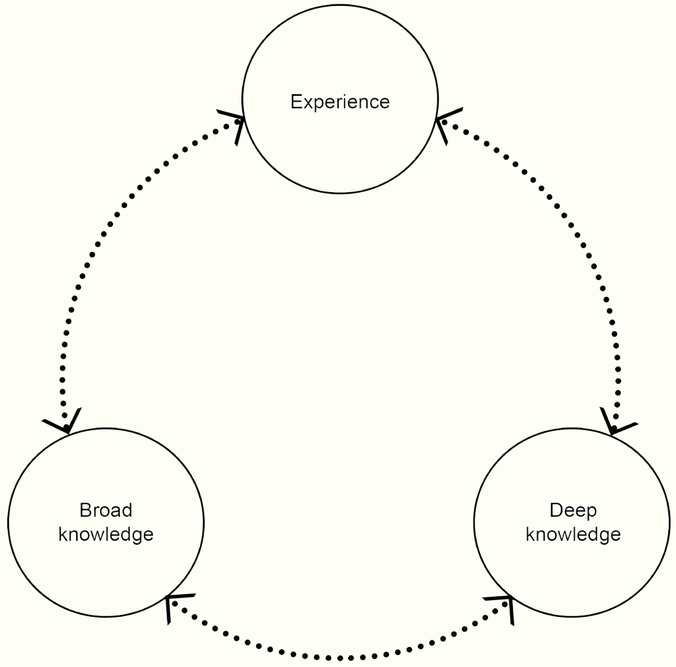
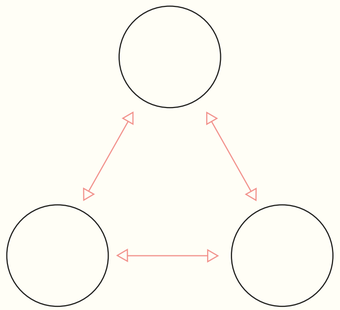


Trias Discere

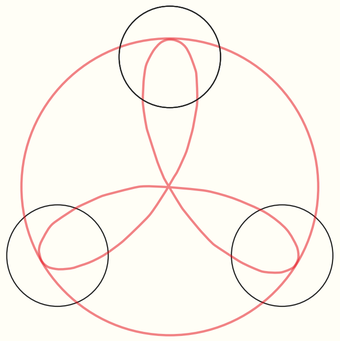
How can we create a new experience based learning system and how to create (digital) architecture for it?

Design focus

Trias Discere



The transition



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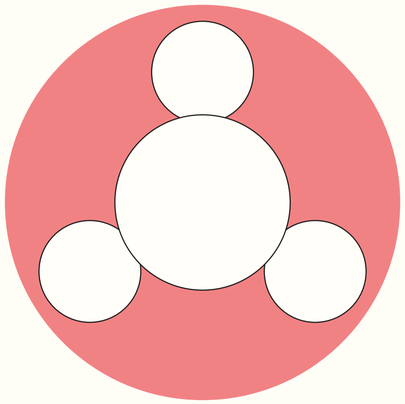

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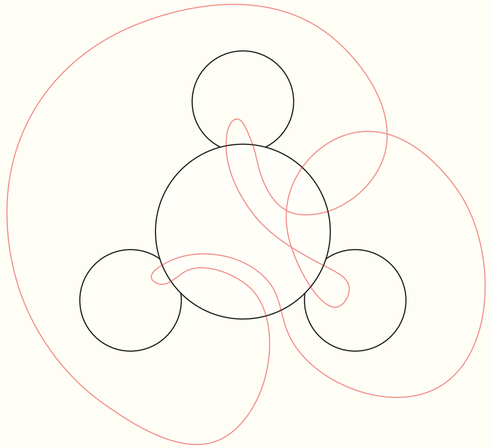
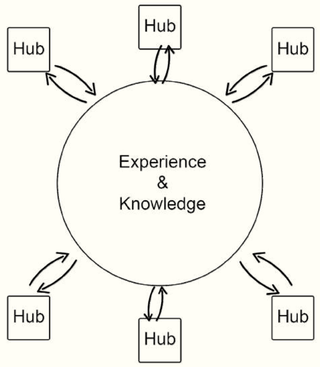


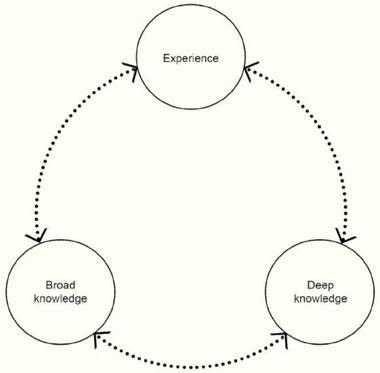
DEX hub

The first **Decentralized experiencing hub**

DEX hub concept



Decentralized knowl-
edge



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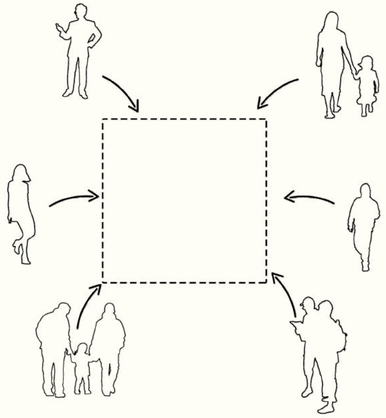
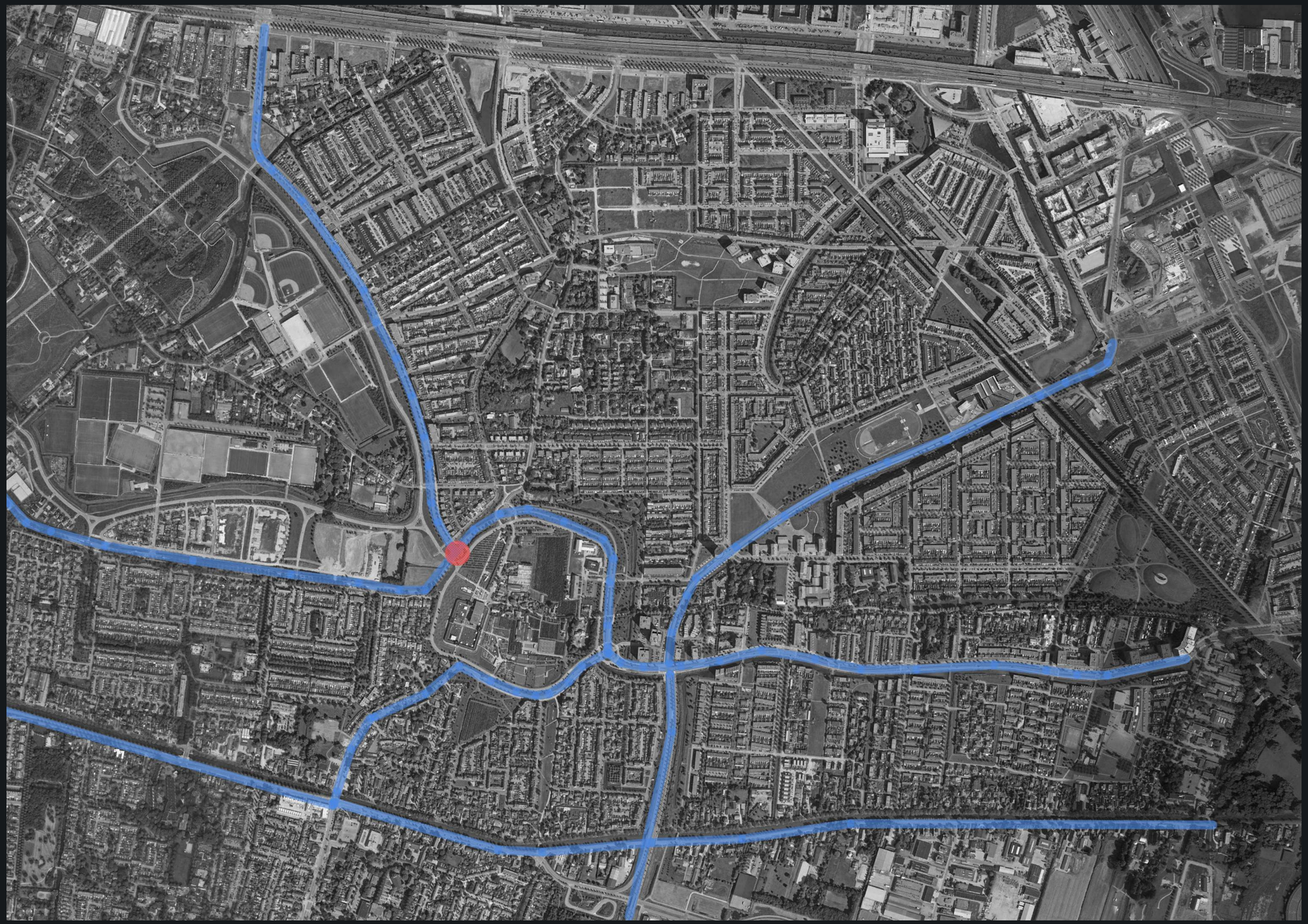
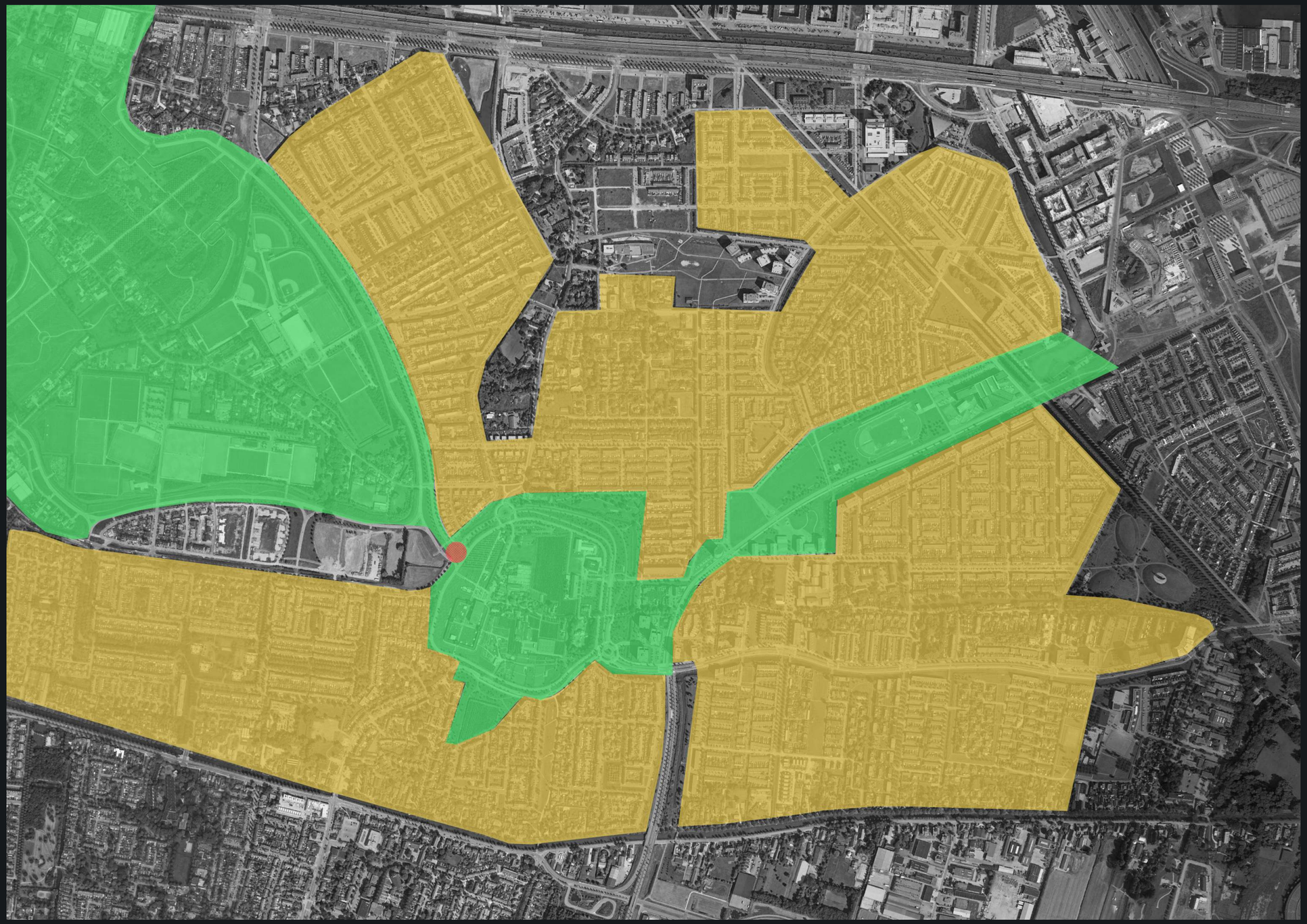


Acessible for every-
one

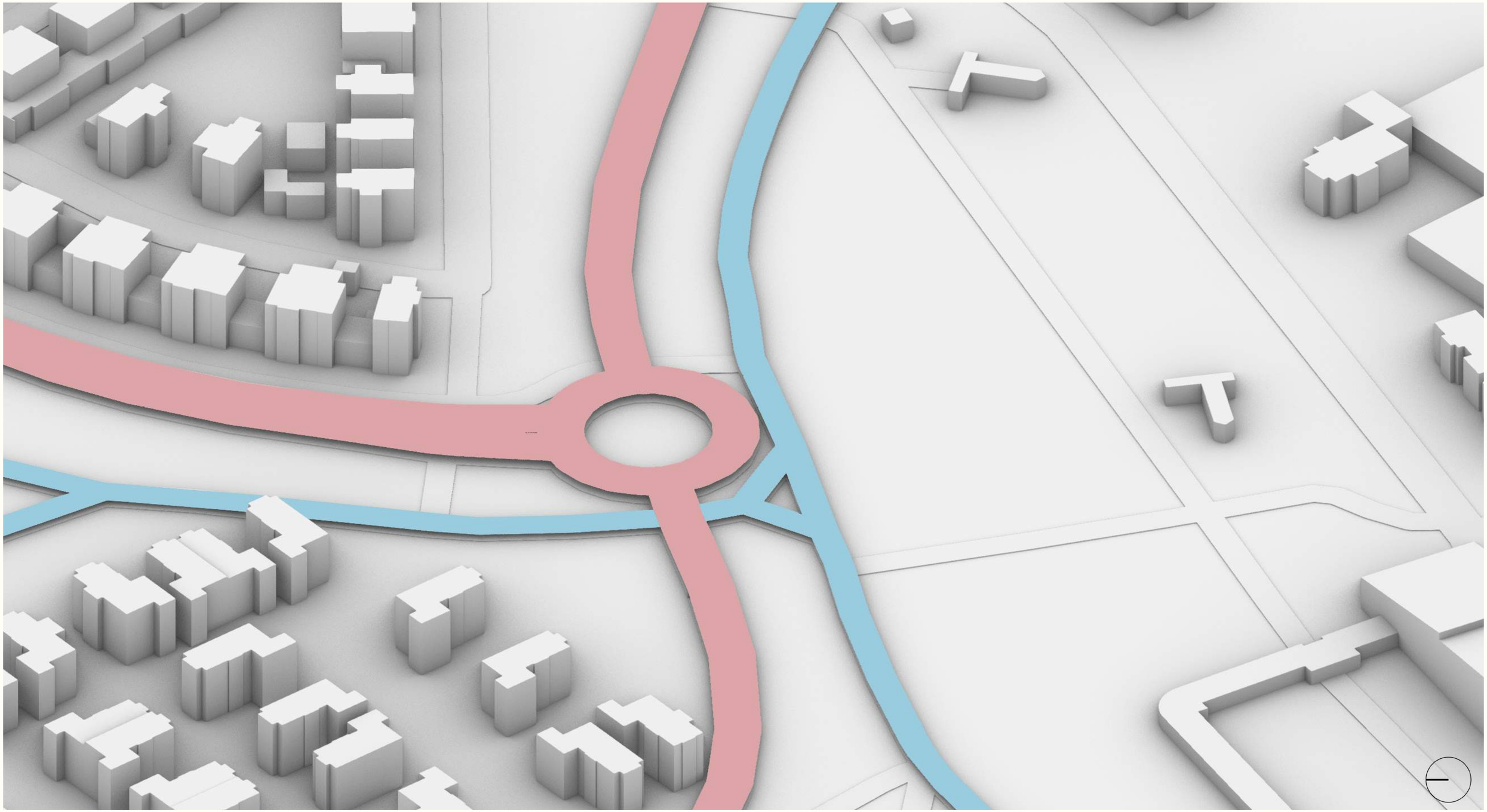
Location


Leidsche Rijn



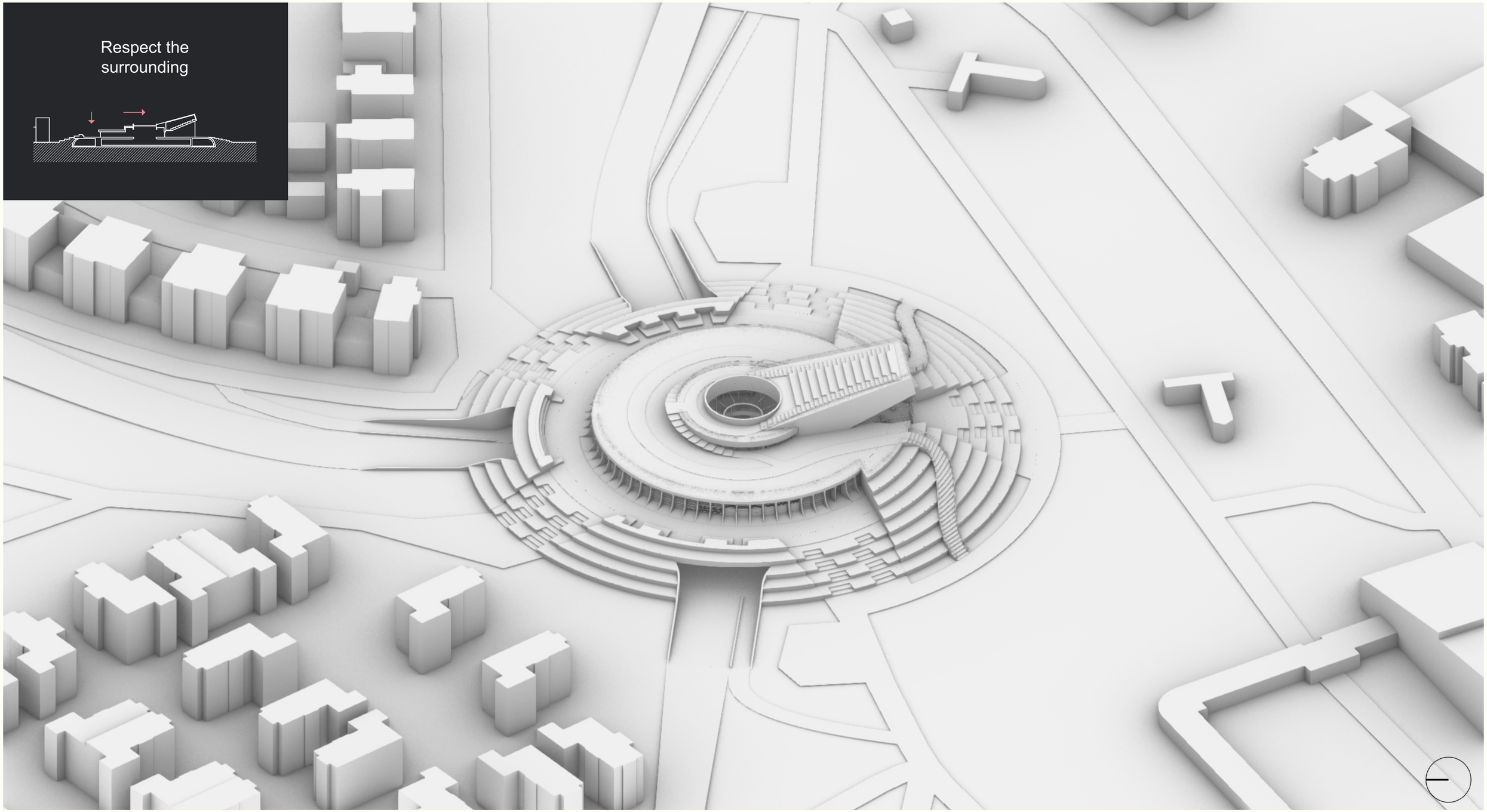


The local context

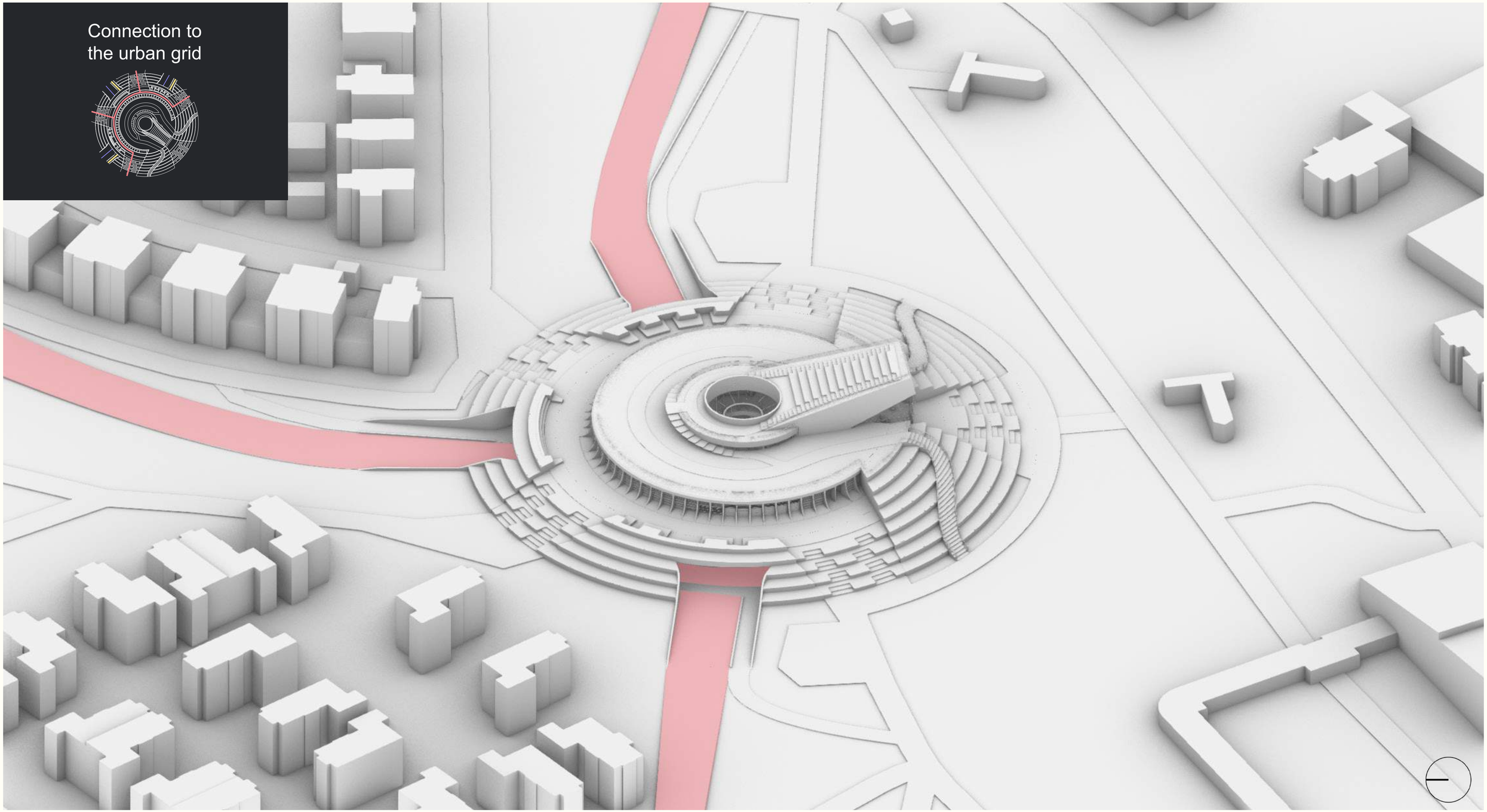


Respect the surrounding

Respect the
surrounding



Connection to
the urban grid



Connection to
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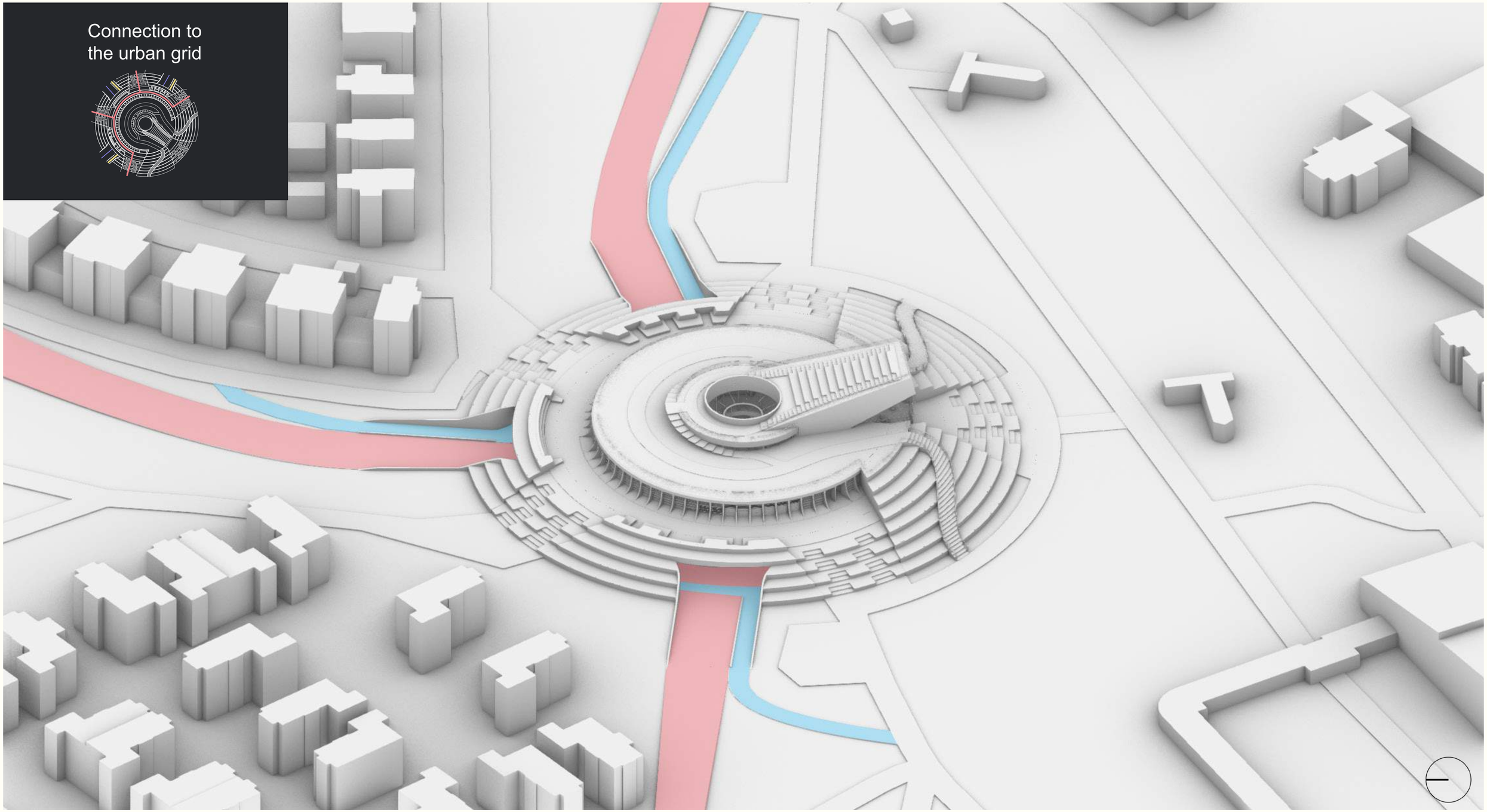

Connection to
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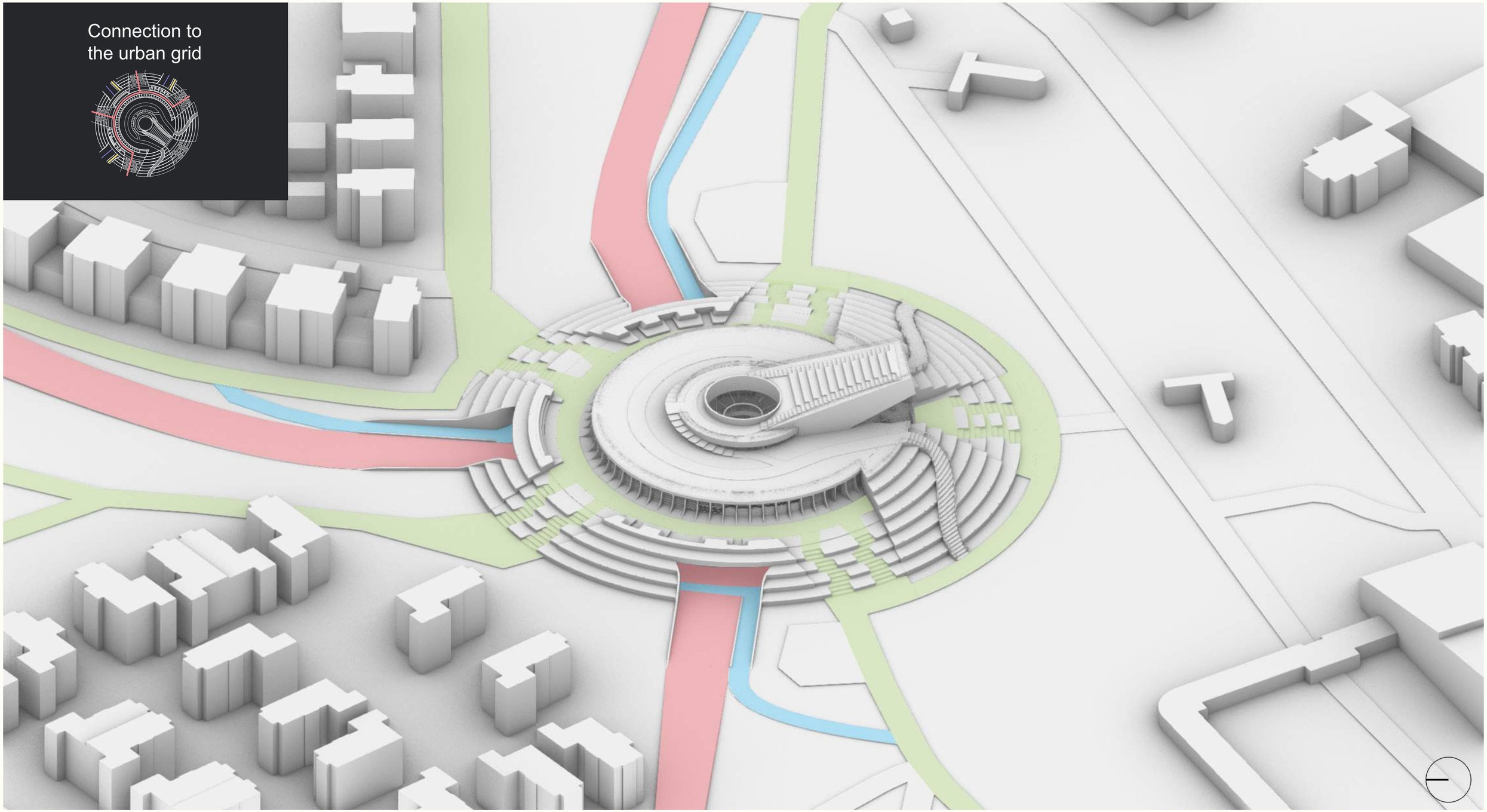
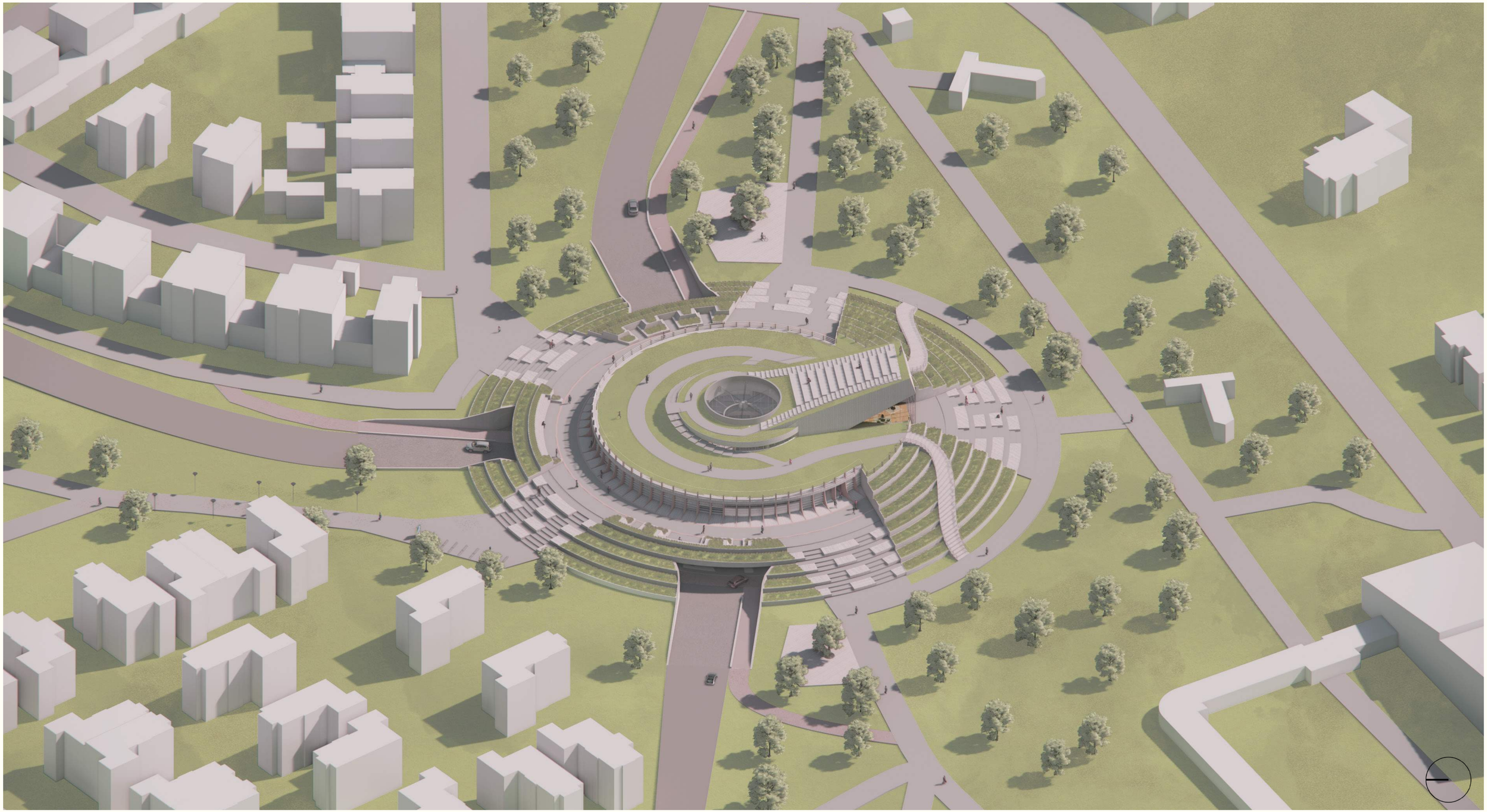
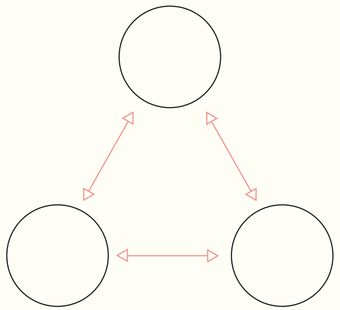




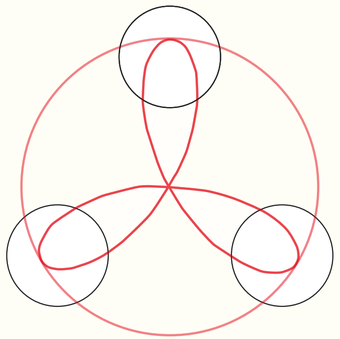
Video

Building focus

Trias Discere



The transition



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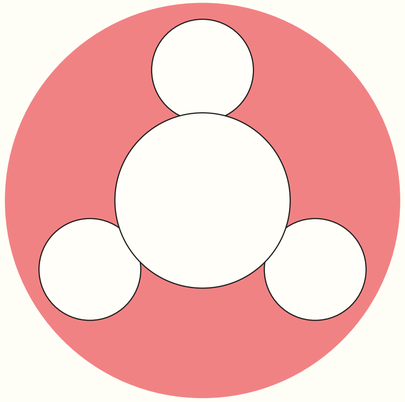

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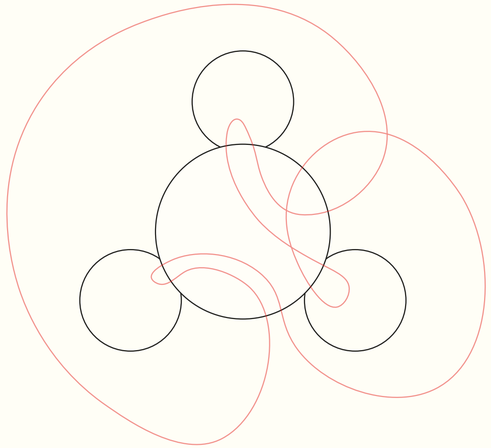
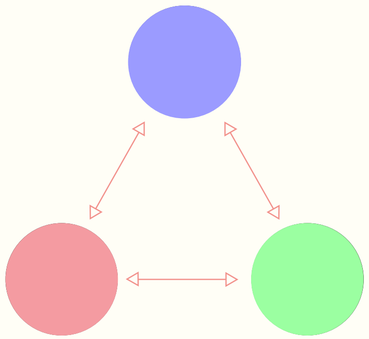
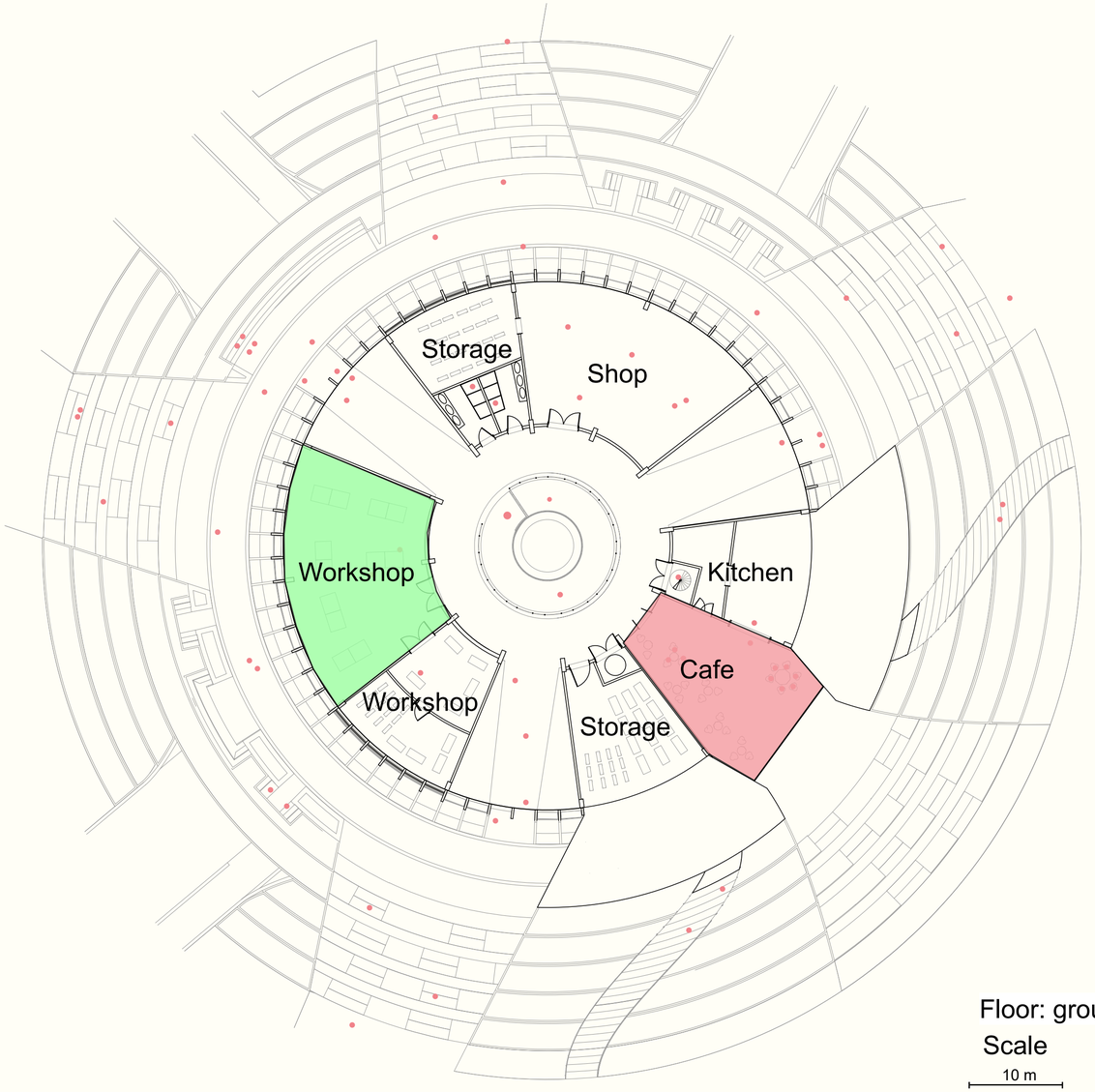


Building focus



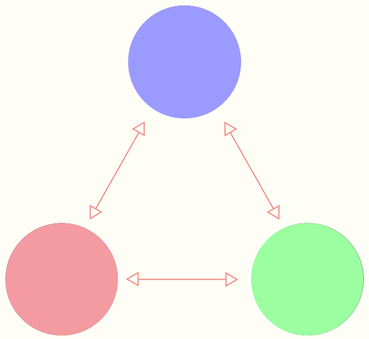
Trias
Discere



Floor: ground floor
Scale
10 m

Broad knowledge
Experience
Deep knowledge

Building focus



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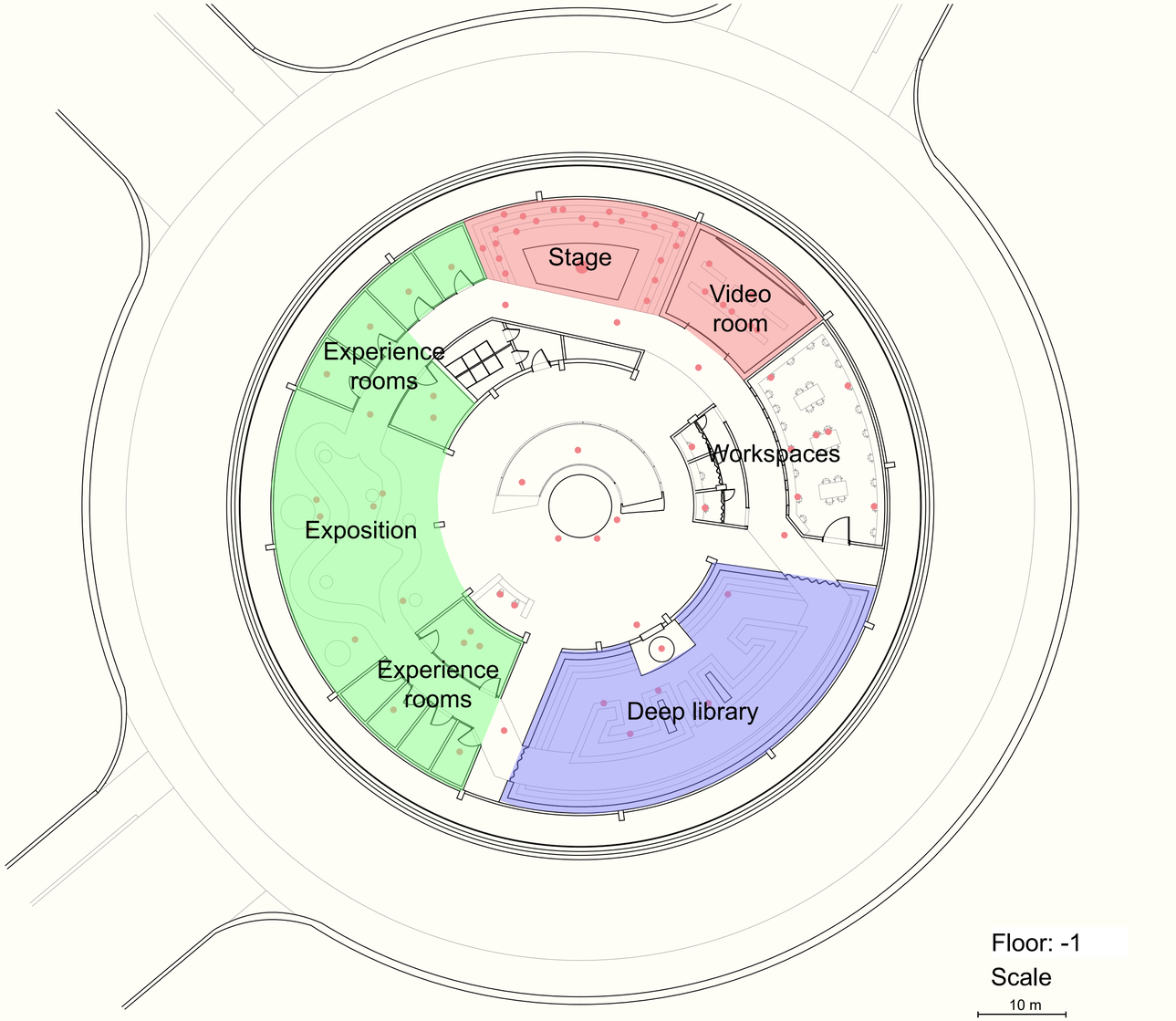
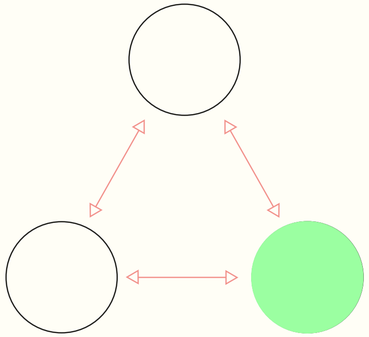


Broad knowledge
Experience
Deep knowledge

Building focus

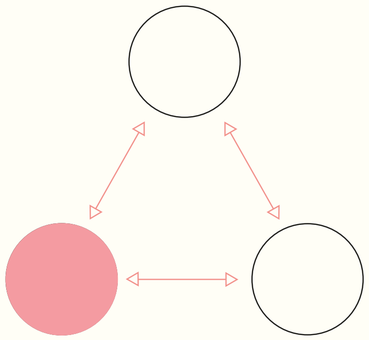
Experience

Digital experiences
VR/AR
Do it



Trias
Discere

Building focus

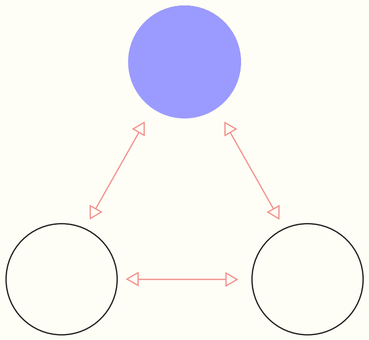


Trias
Discere

Broad

Flexible
Open
Discussion
Video

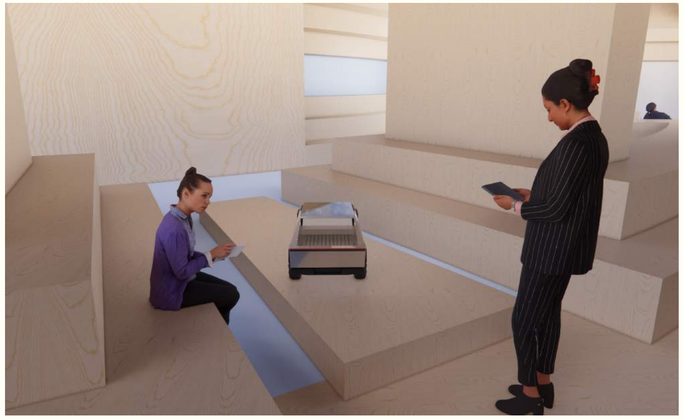
Building focus



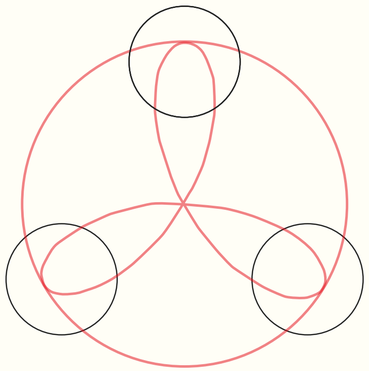
Trias
Discere

Deep

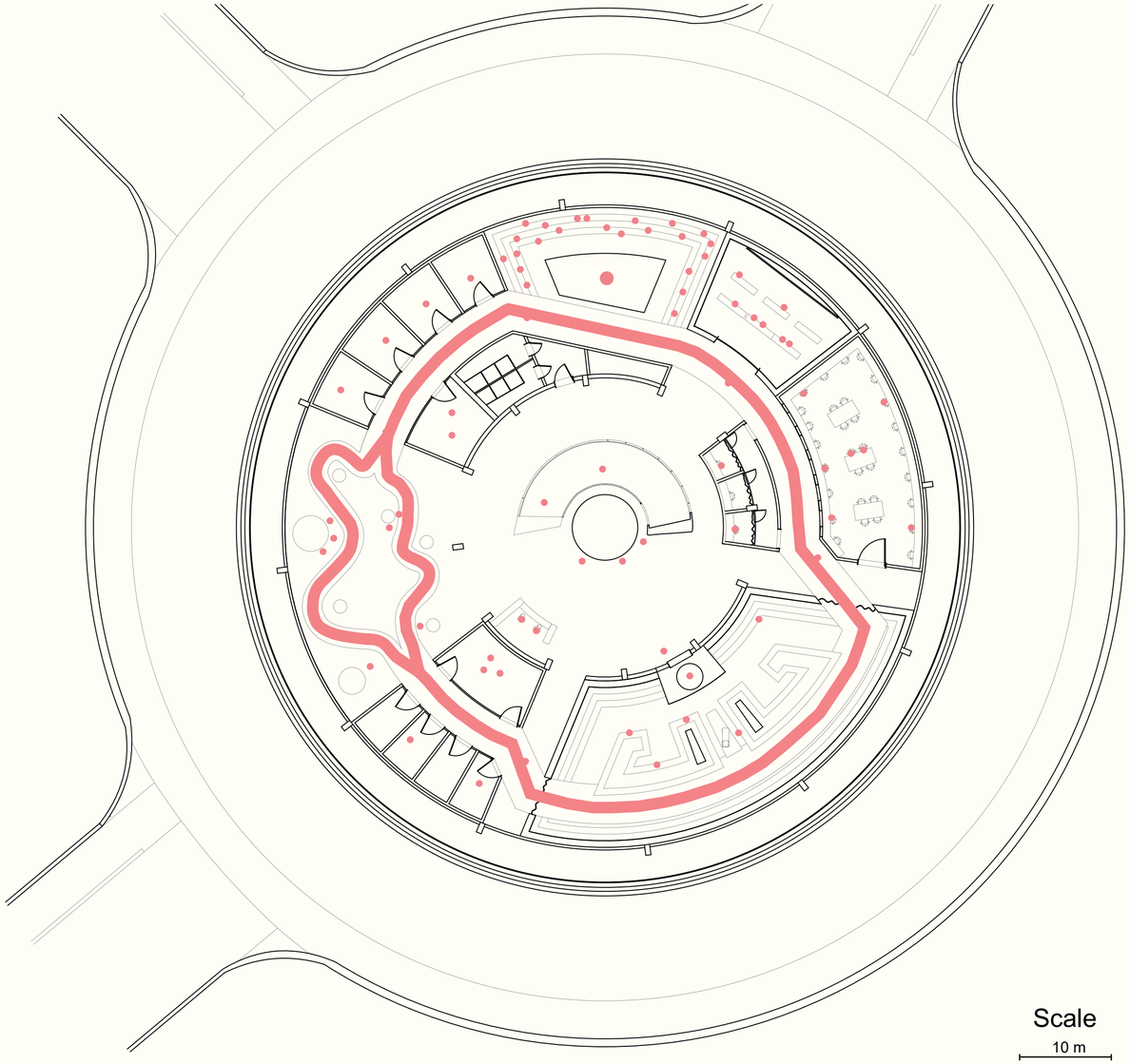
Safe
Comfortable
Quiet



Building focus



Transition



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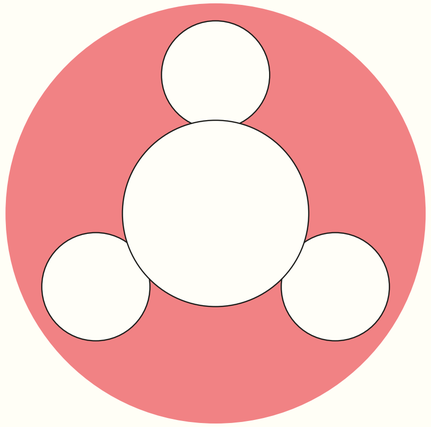

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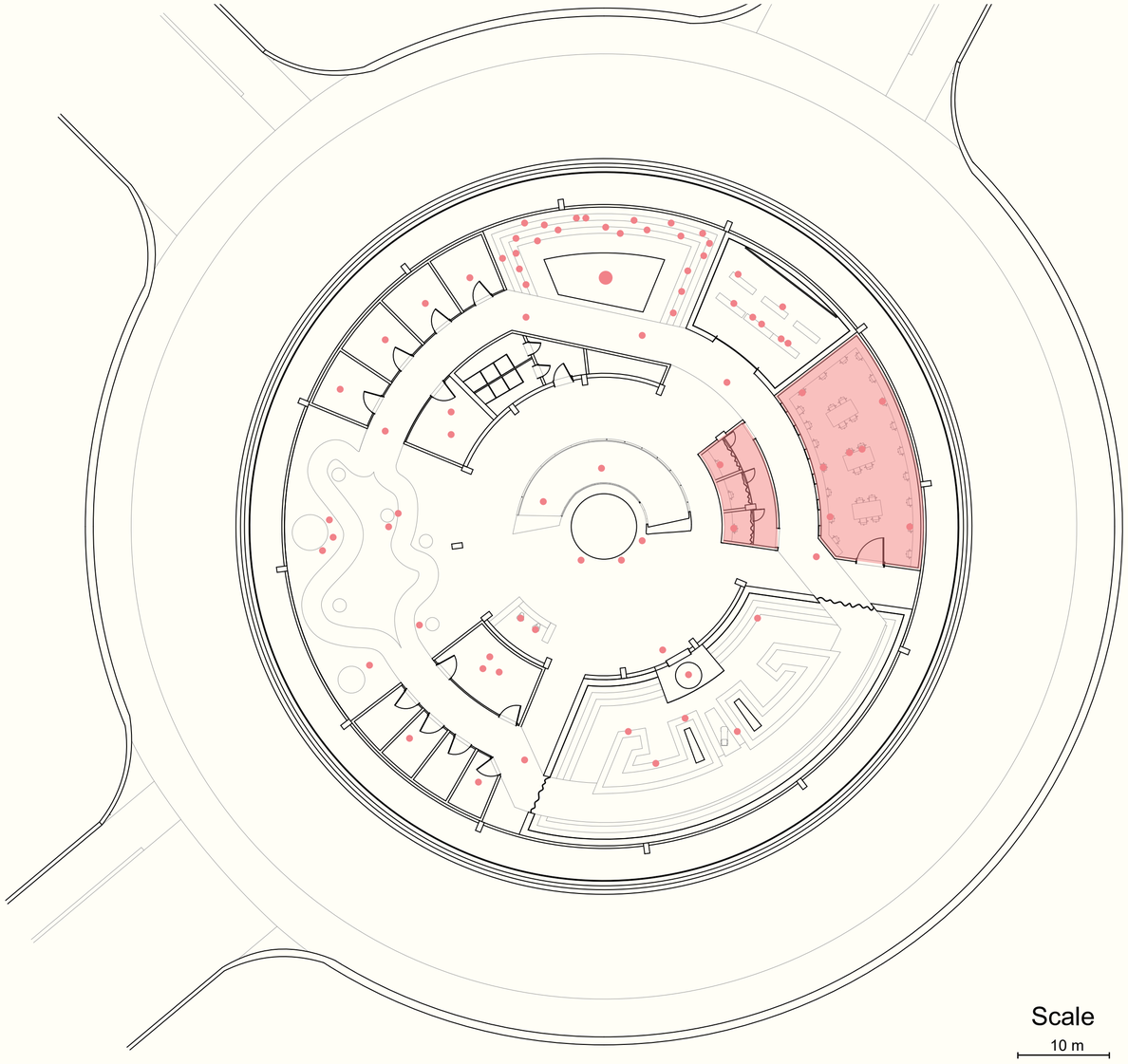
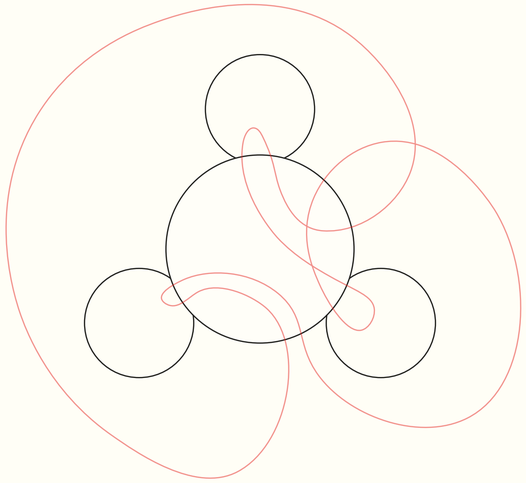


Building focus



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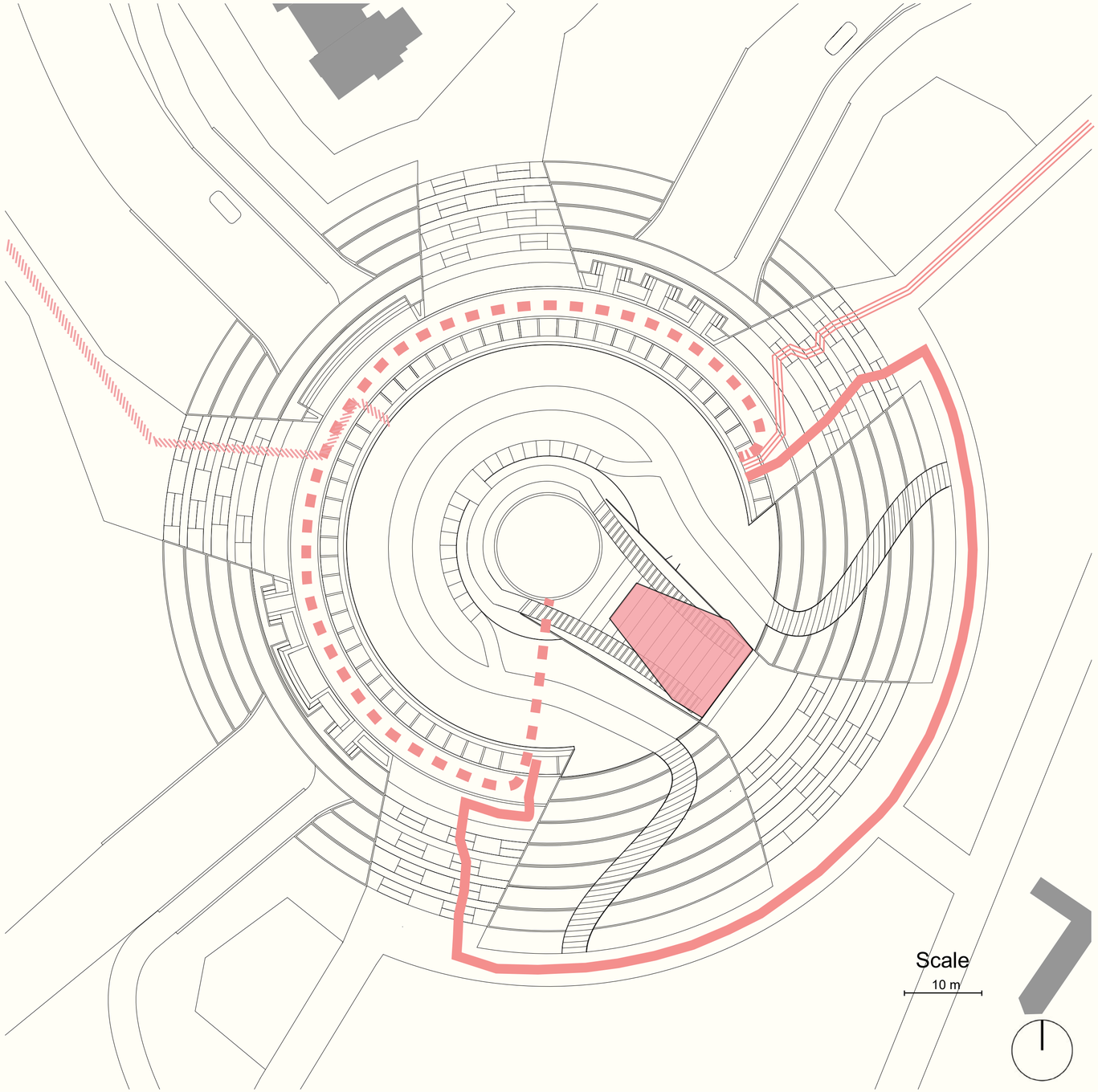
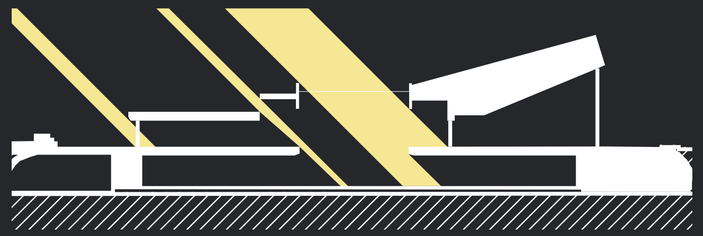
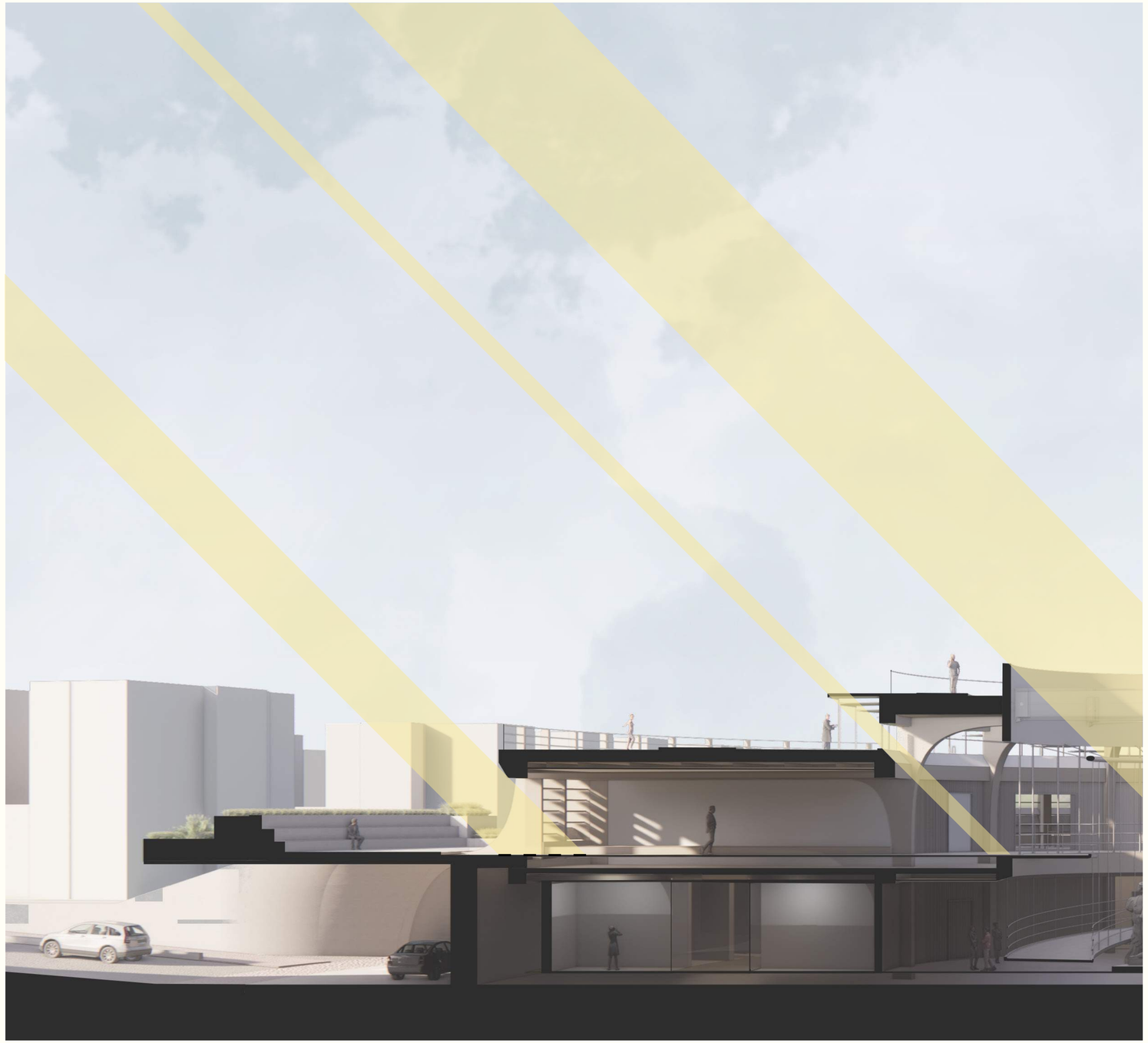


Climate

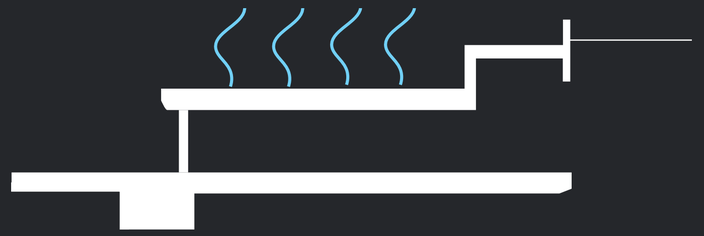
Natural daylight

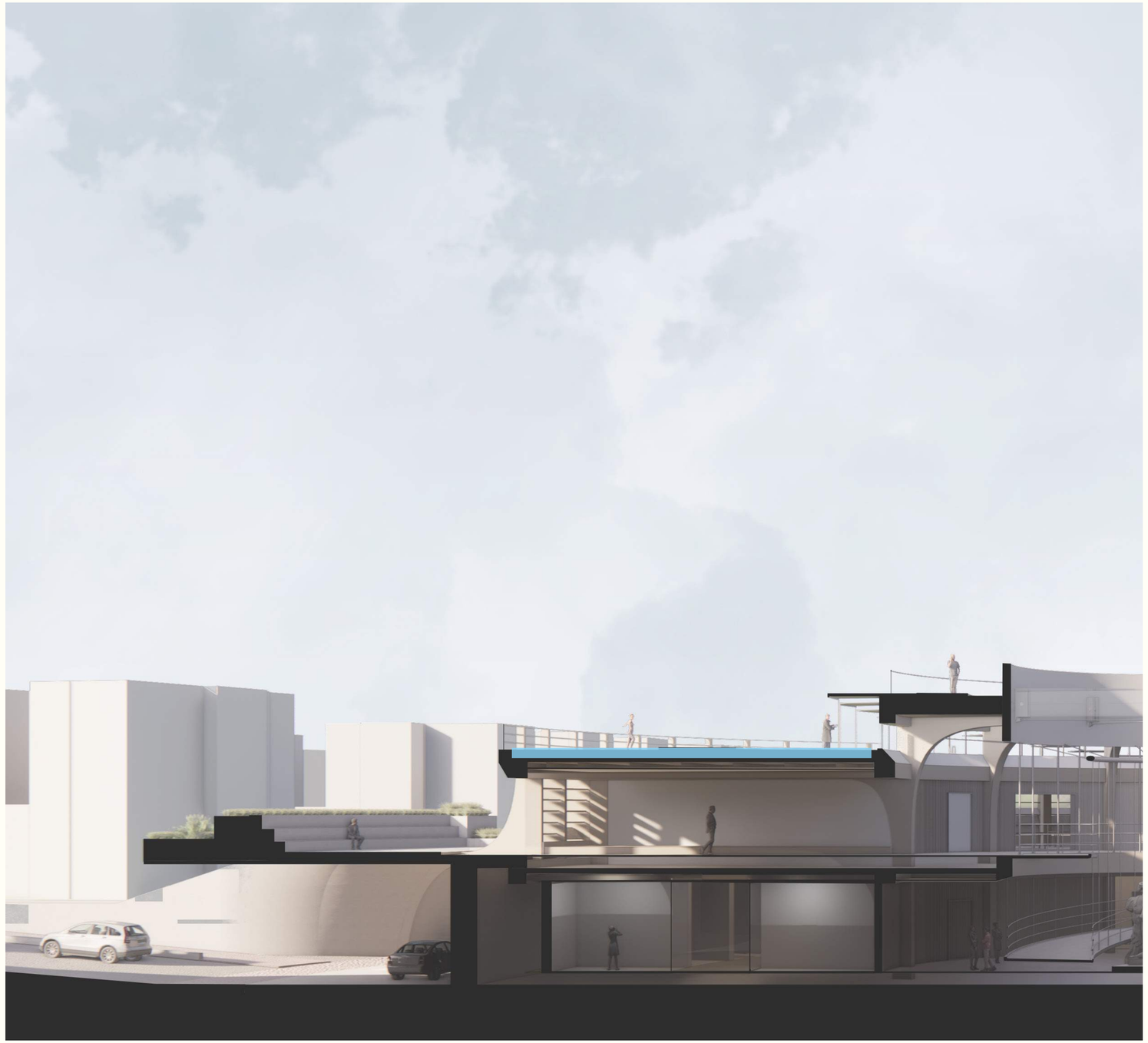




Climate

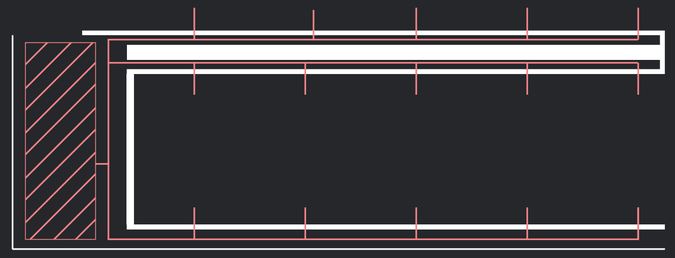
Water retention



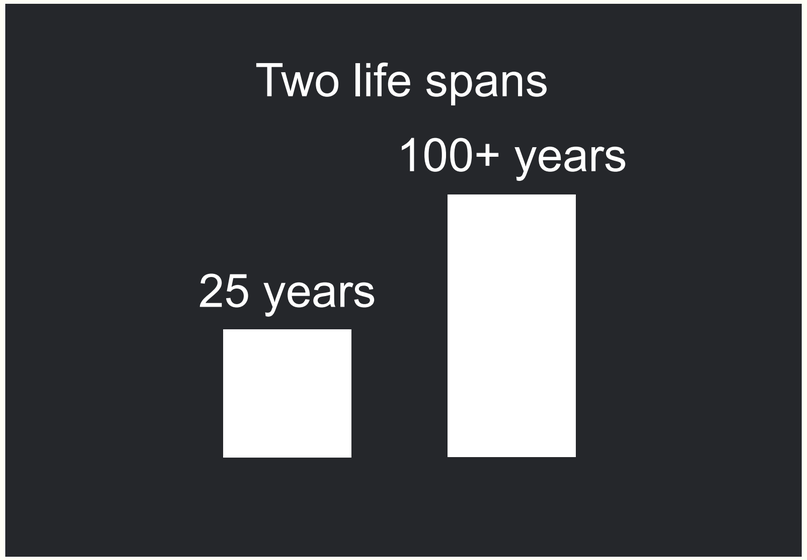


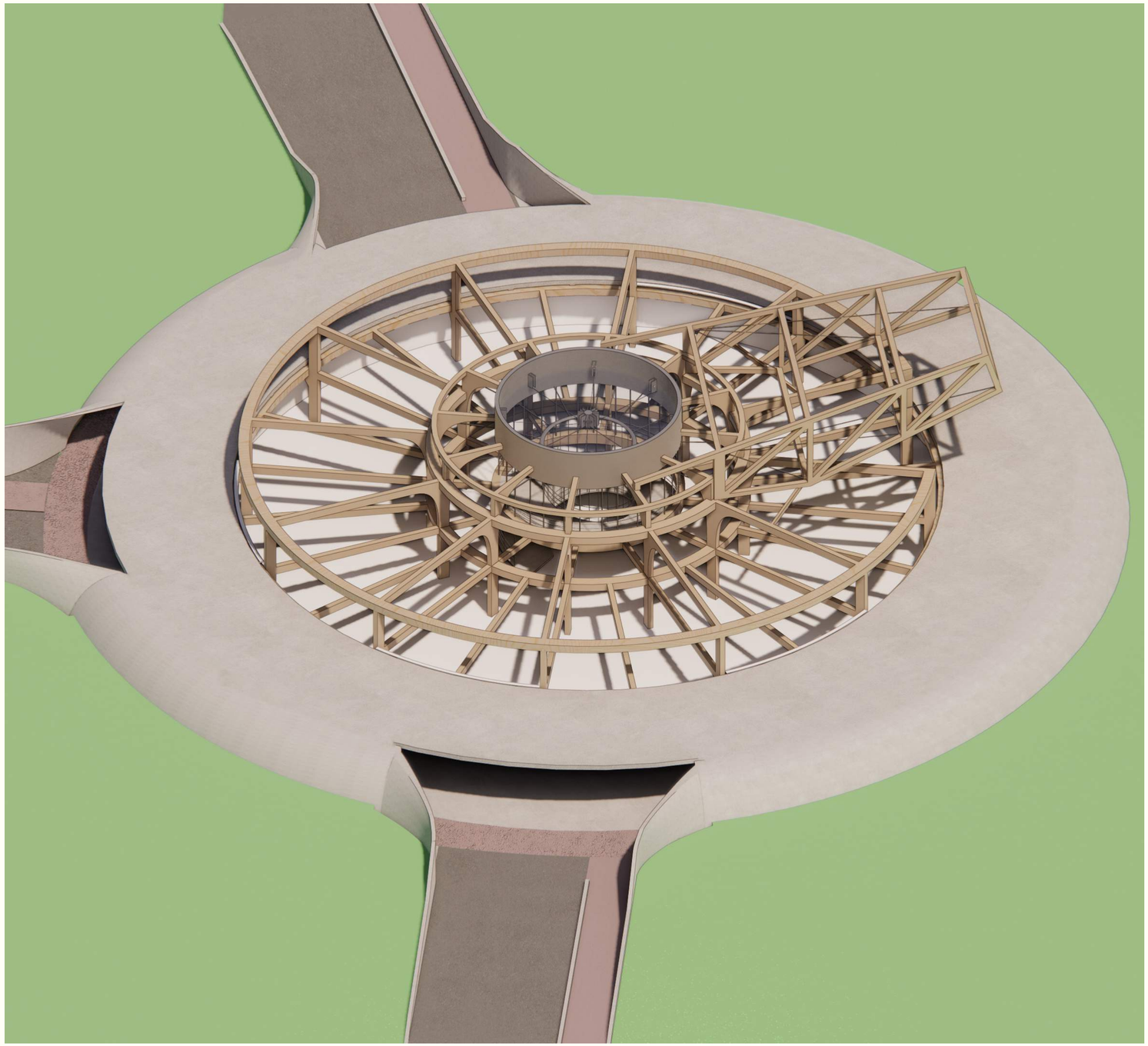
Climate

Flexible indoor climate

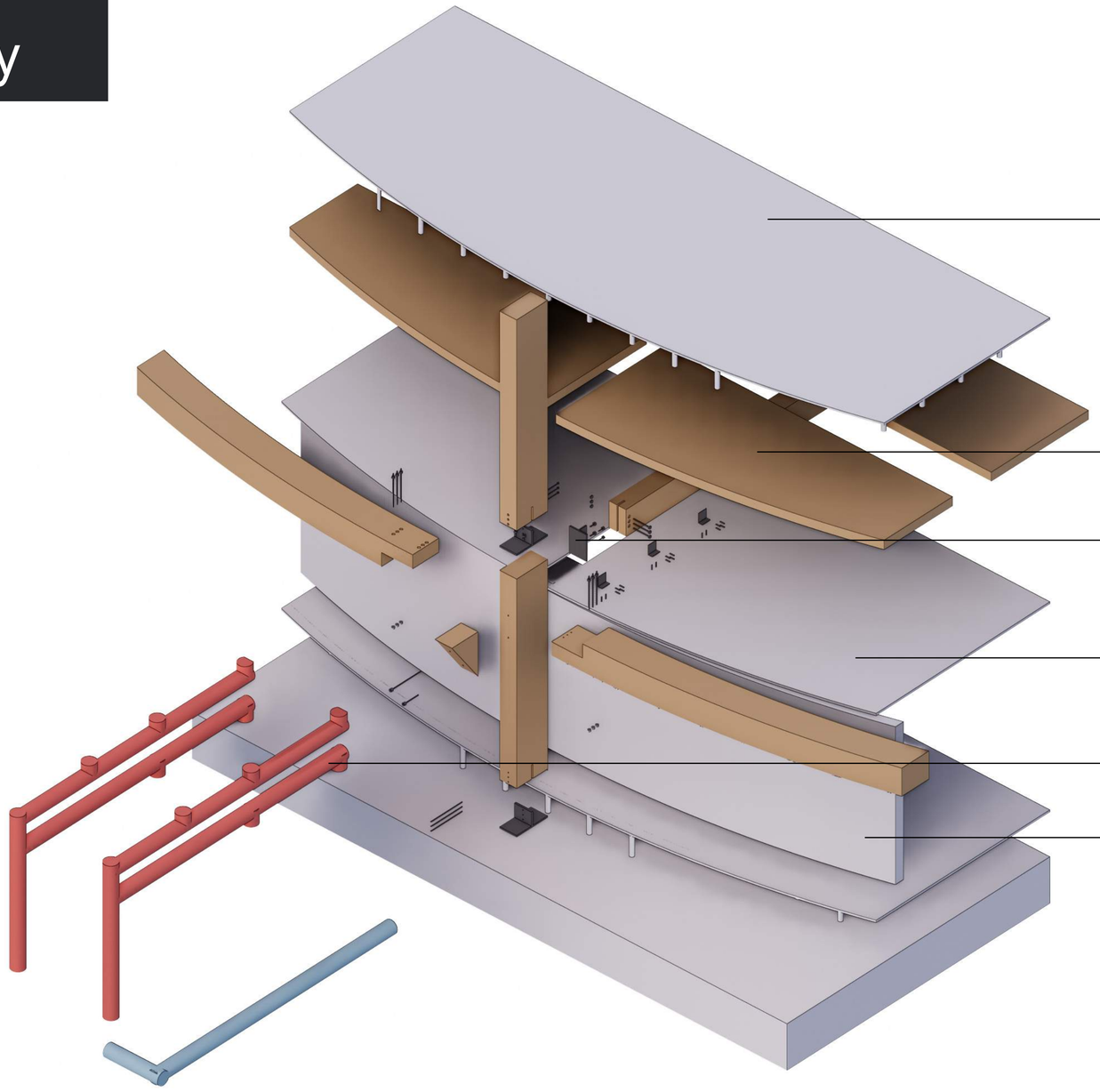


Structure

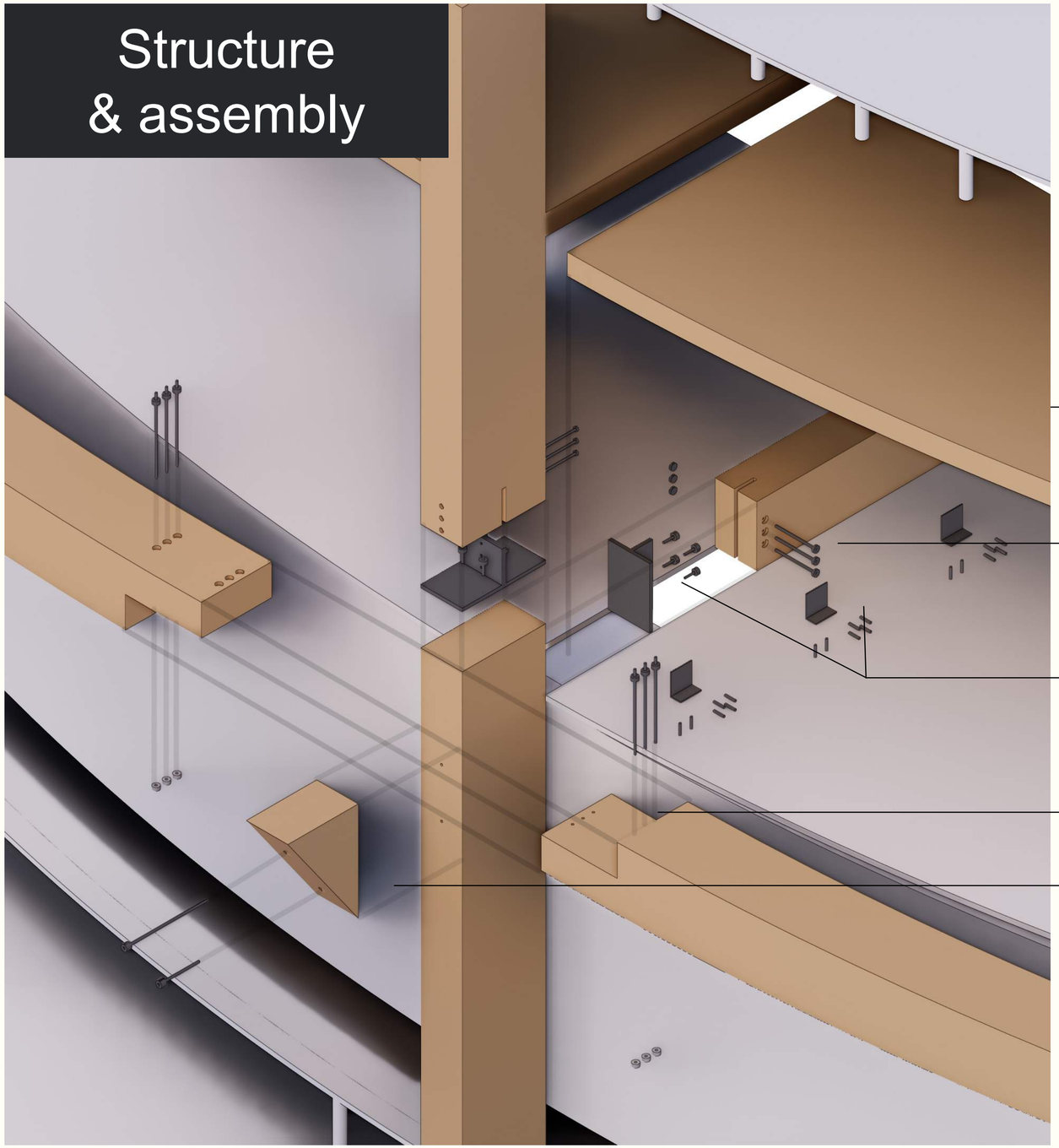




Structure & assembly



Structure & assembly



Computer floor
400 mm high

CLT floor
220 mm

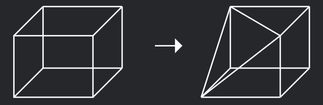
Bolts used to connect make disassembly & reuse possible

Steel connectors

The ring beam will be connected with vertical bolts

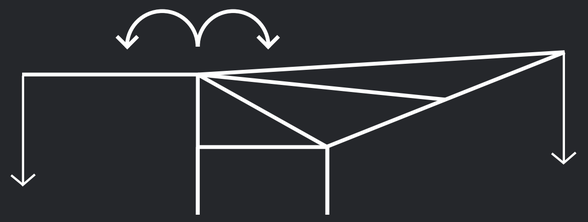
Support for ring beam

Designed to adapt

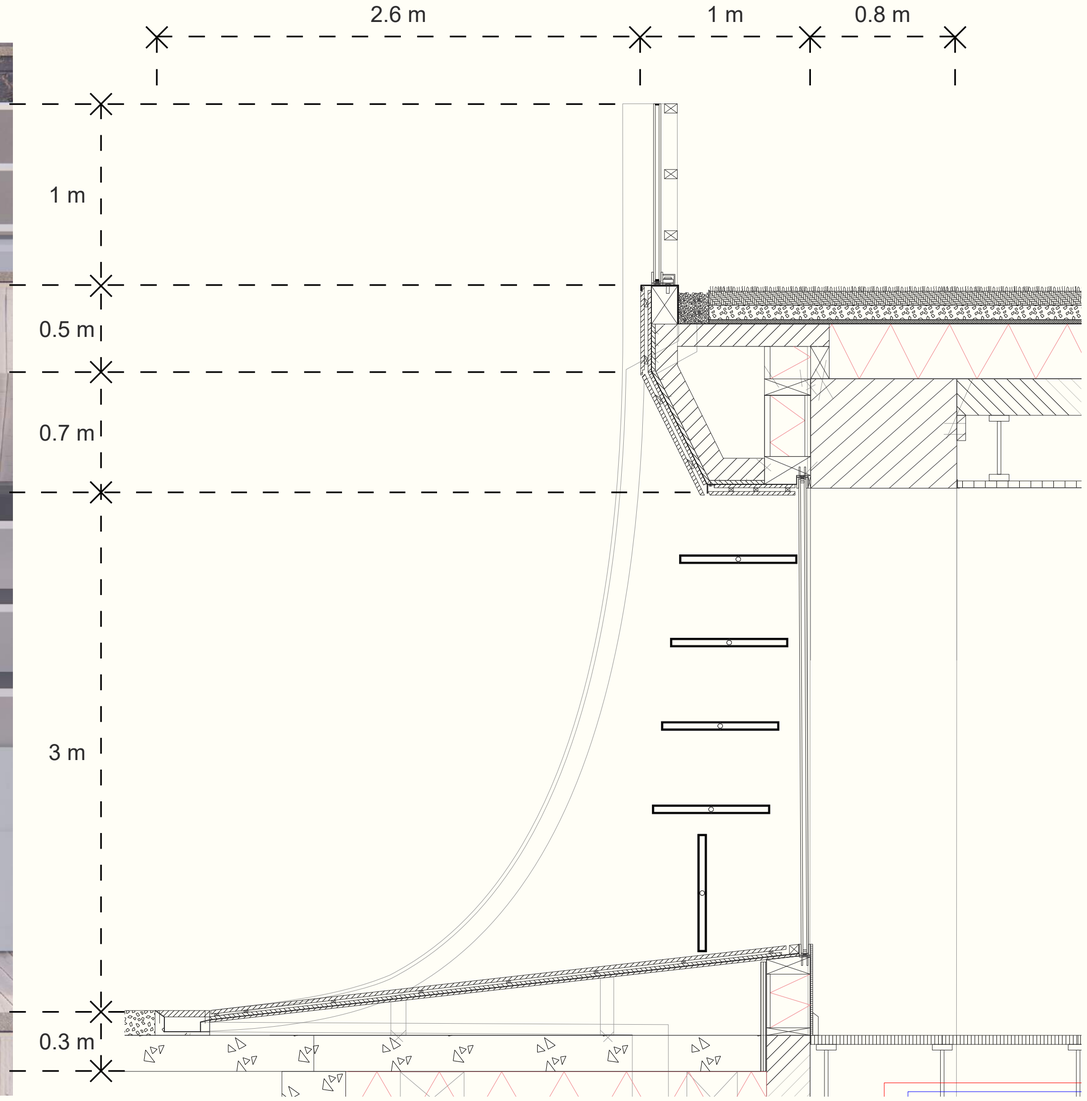


Structure

Counterbalancing forces



Facade



Materials

Wooden CLT panels

+ Prefab
+ CO2 positive
+ Regulates indoor climate
+ Natural and warm look
- Larger dimensions compared to steel and concrete
- Mass is relatively large compared to concrete and steel
- Shorter life span compared to con-concrete and steel

Carboncure concrete

+ Reduced carbon footprint by stor-ing CO2 in the concrete
+ A lot of shapes possible
+ Durable, lifespan of 200+ years possible
- Relatively large CO2 footprint com-pared to wood

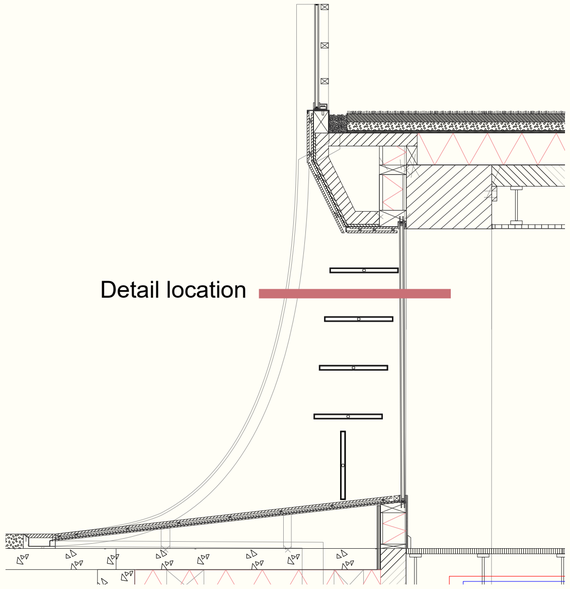
Lariks wood (cladding and beams)

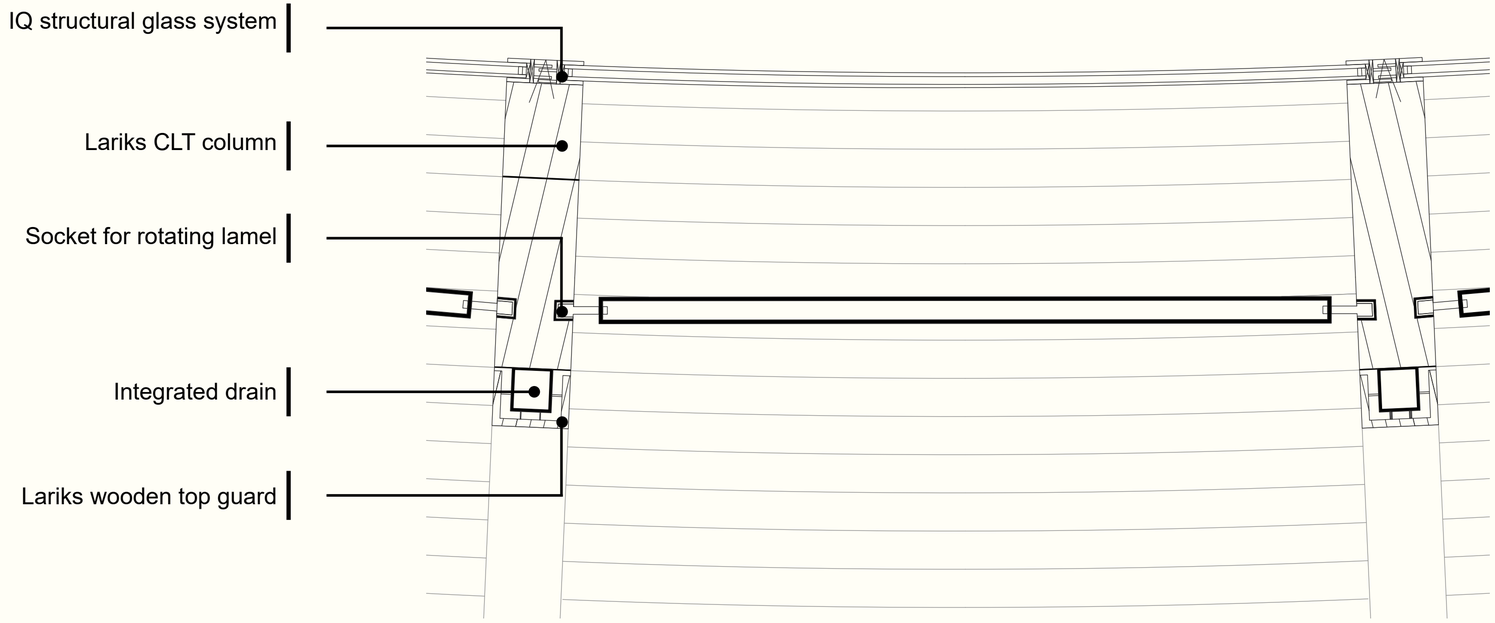
+ European grown sustainable wood
+ Non-chemically(steam) treated to increase lifespan to 25+ years.
+ Sustainable end of life alternatives
- Relatively short life span
- Fewer shapes possible than concrete

Aluminium lamellae

+ Controllable
+ Maintenance friendly
+ 100 % recycable
+ lightweight
- Needs to be designed to cope with expansion and retraction due to tem-perature changes.

Details


Detail location

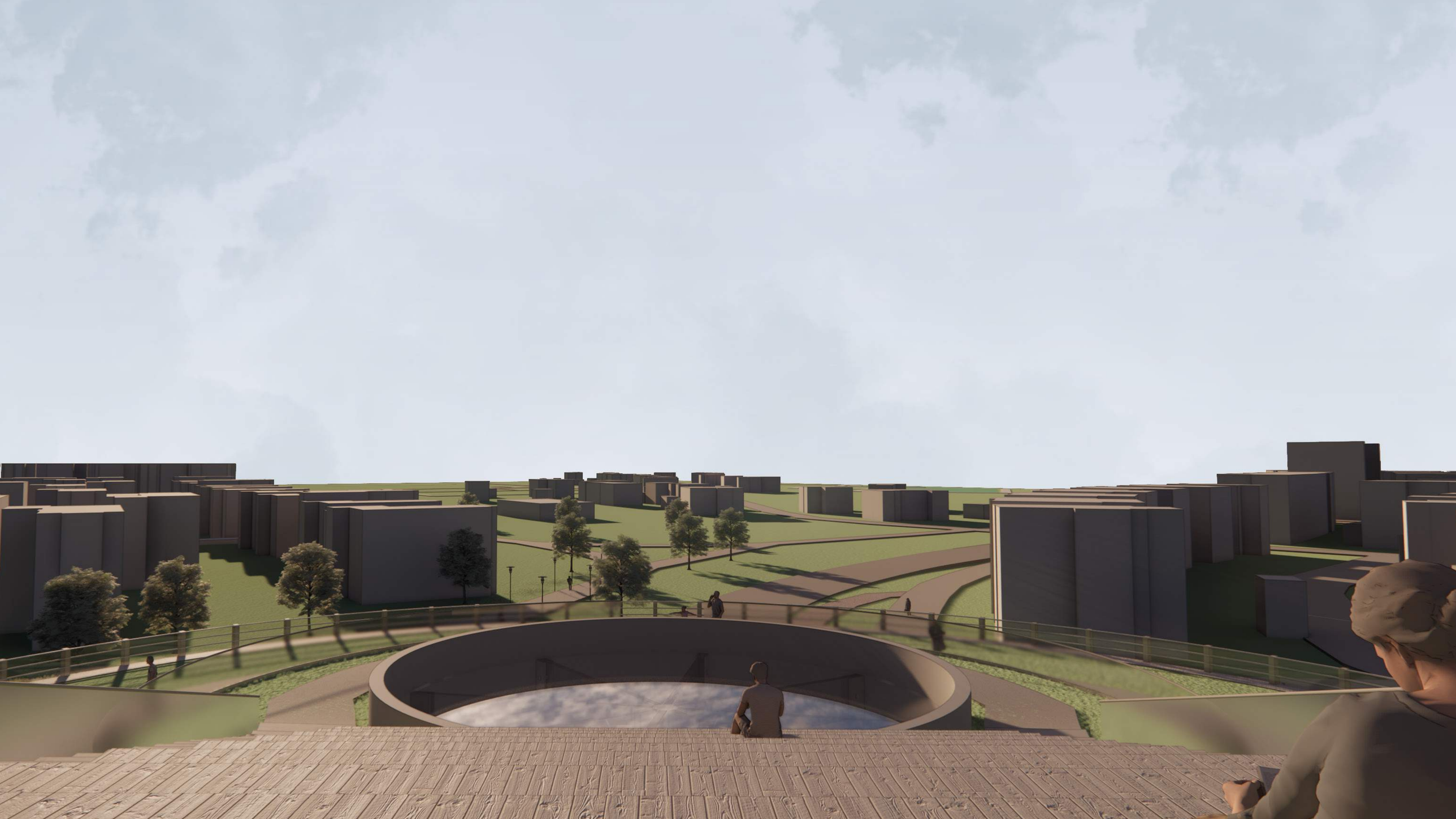

IQ structural glass system
Lariks CLT column
Socket for rotating lamel
Integrated drain
Lariks wooden top guard

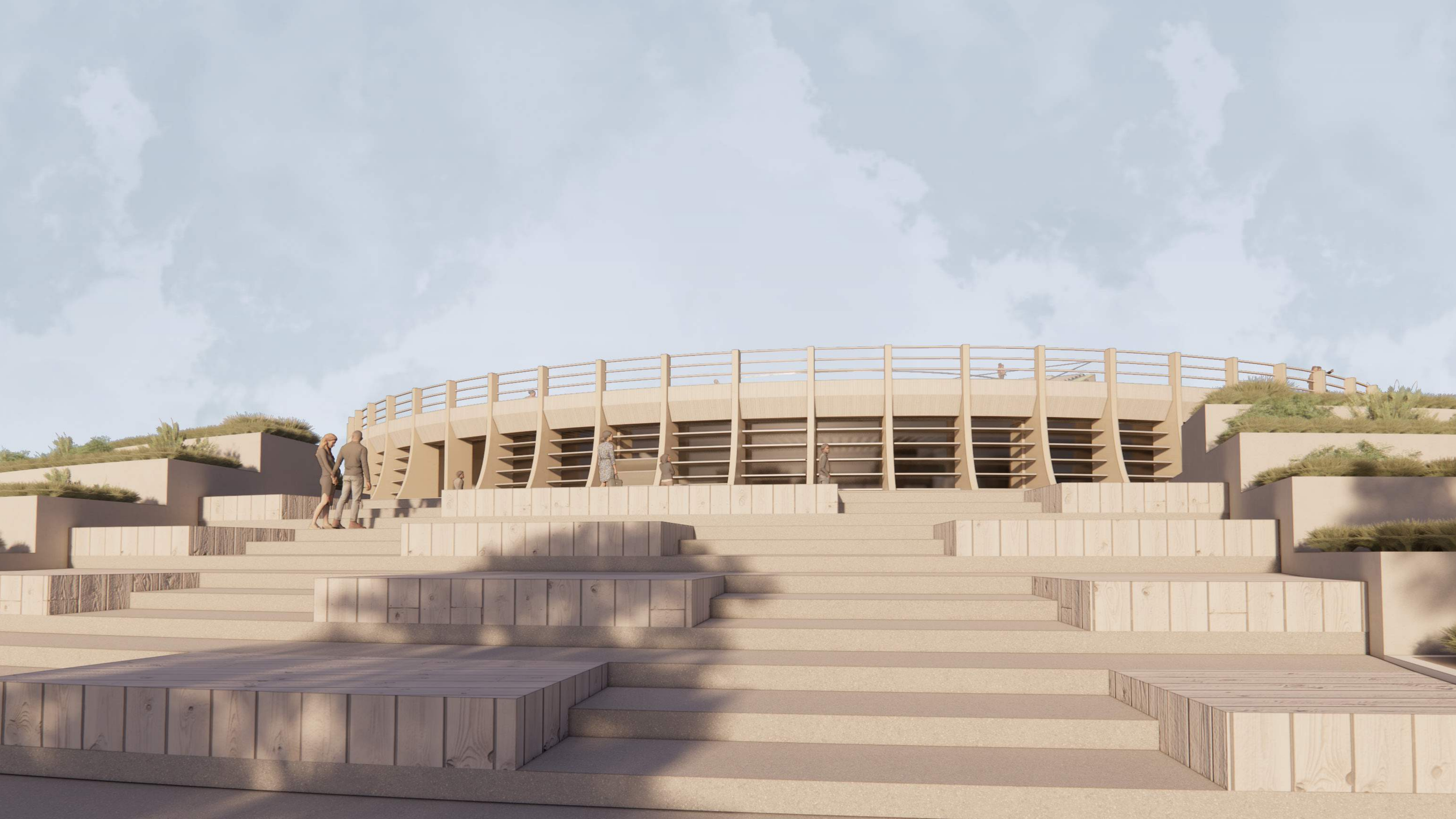

Women

Thank you for listening

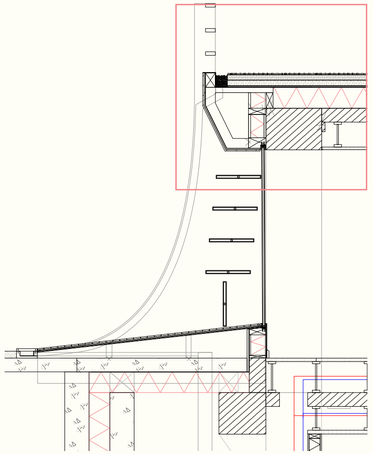

Café
Experience
Understand
Discover

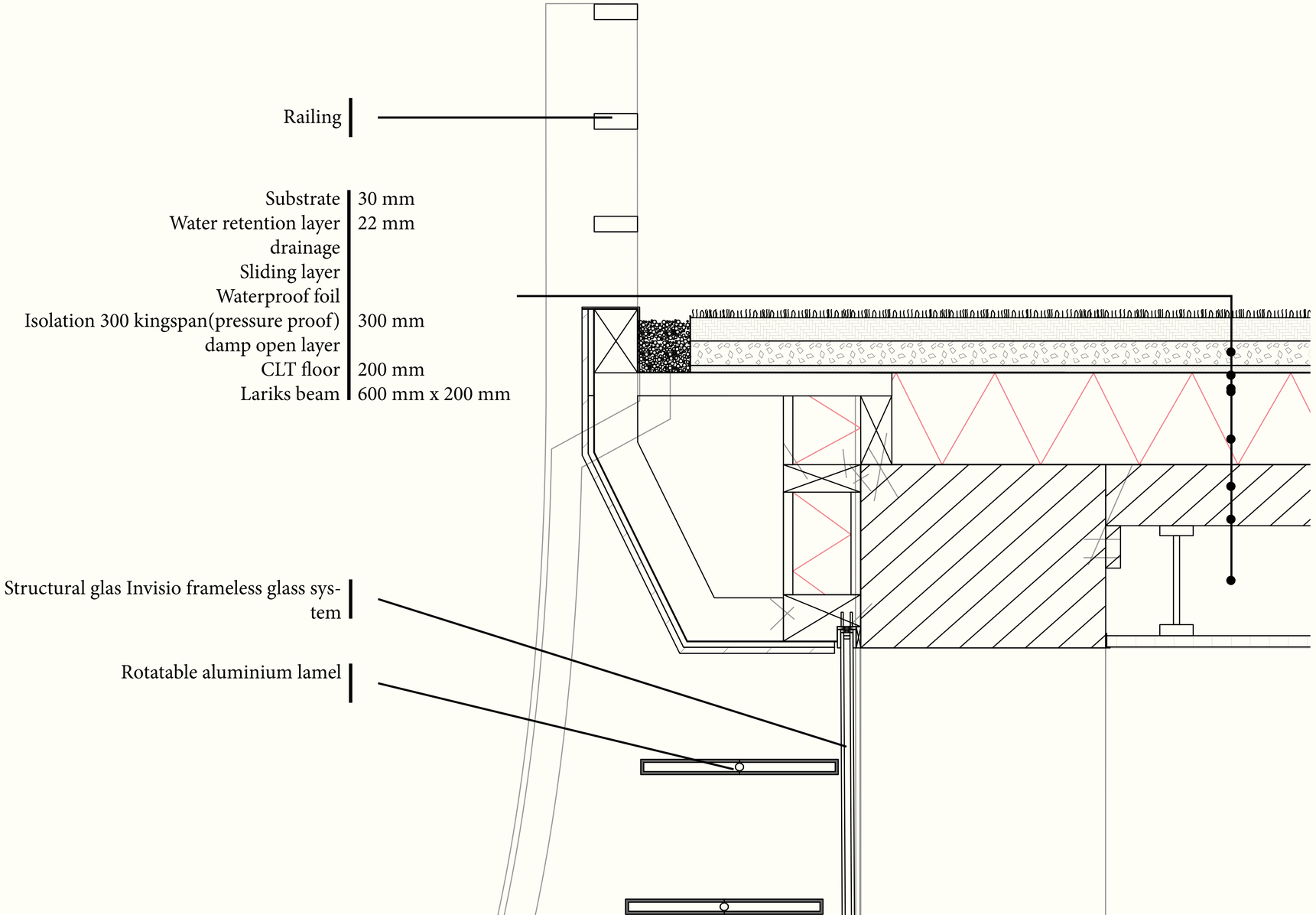

I LIKE
BIG
BOOKS
AND I



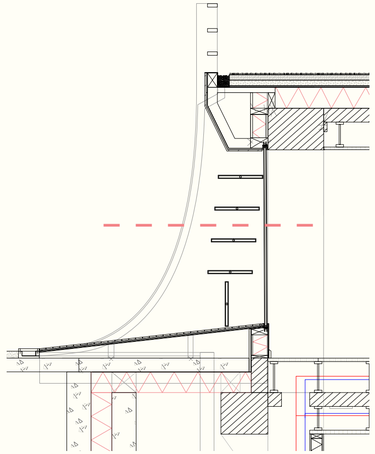


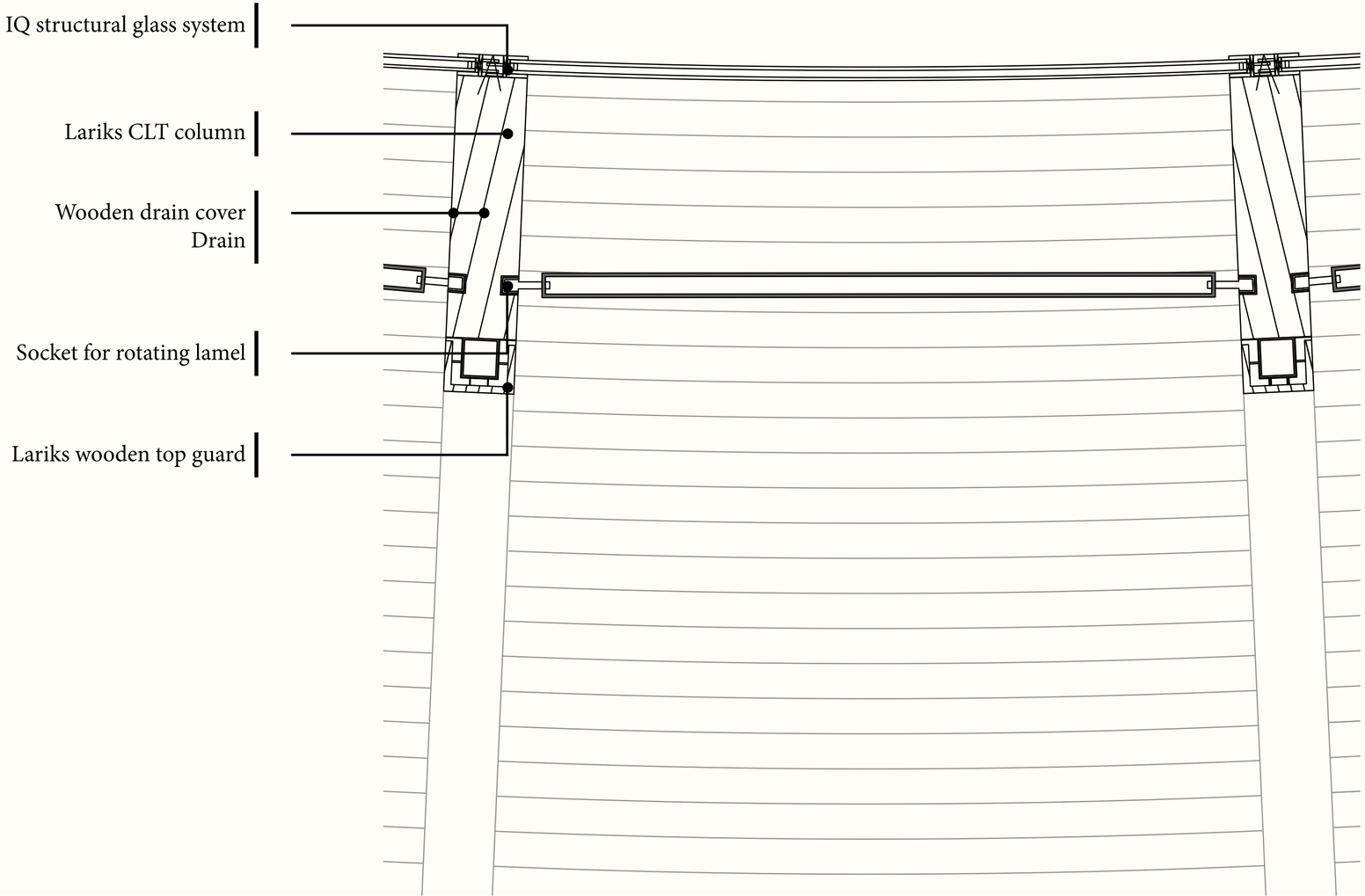
Detail vertical



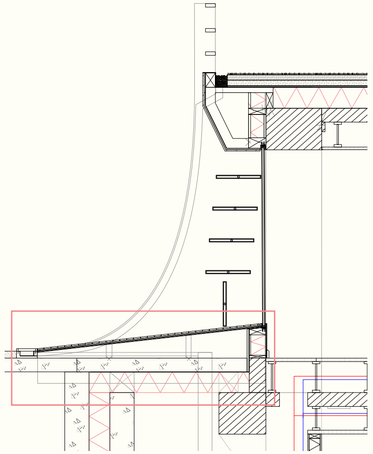


Detail horizontal





Detail vertical



Computer floor | 400 mm high

Insulating block | 240 mm x 690 mm
Lower beam of HSB
Kingspan kooltherm K12 | 240 mm
Top beam of HSB element
PE foil
Wooden trusses | 20 mm
Waterproof foil
Air | 20 mm
Lariks finishing | 20 mm

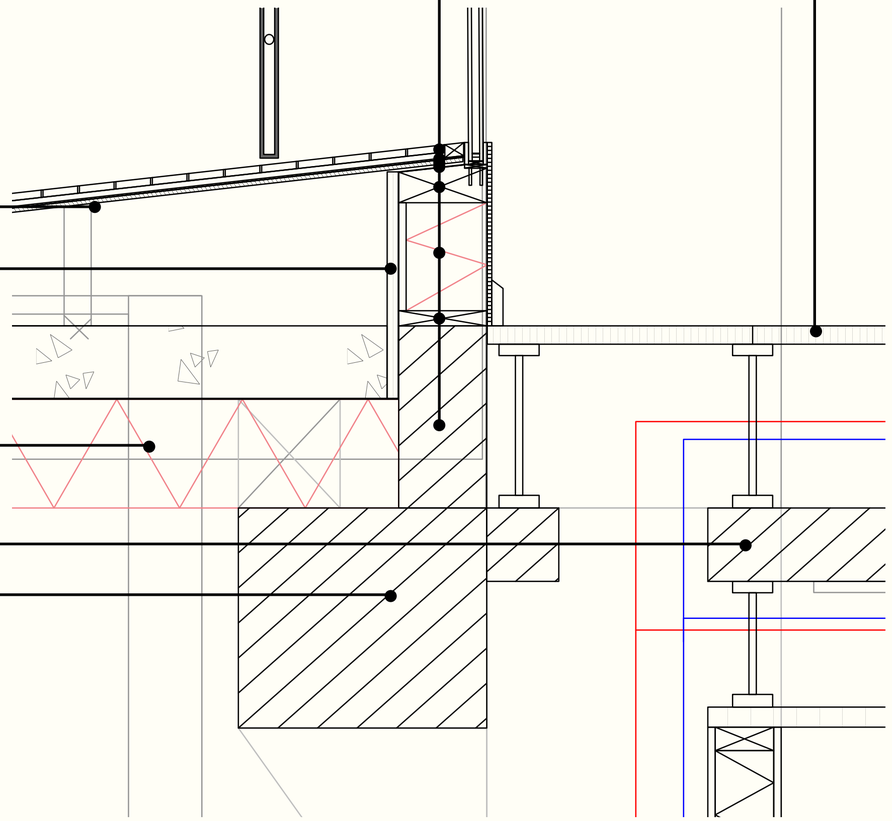
Drainage pipe

External finishing and fitting block

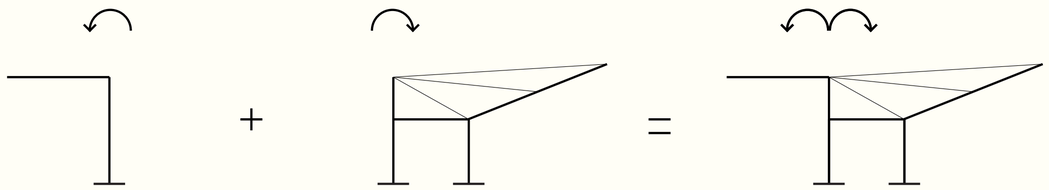
Insulation | 300 mm

CLT floor element | 1200 mm x 200 mm

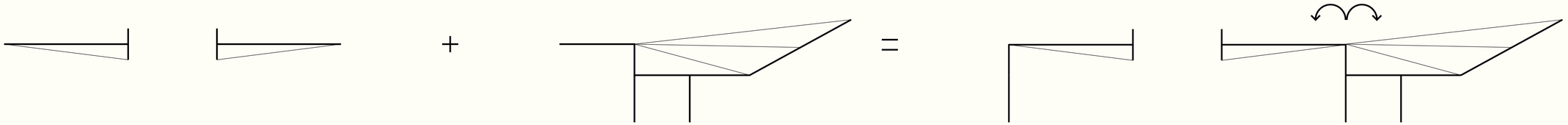
Lariks ring beam | 600 mm x 600 mm



Structure



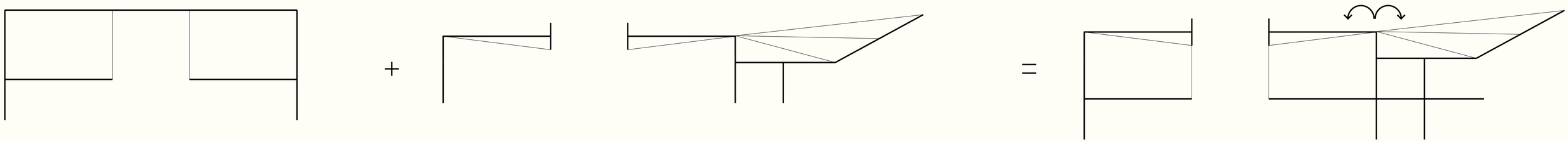
Overhang



Central hall

Overhang

Top floor structure



as few pillars as possible
underground structure

Top floor structure

Combined structure