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25/02/2021



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## Introduction

Design Brief

Concept

Design

Climate Design

Structural Design

Facade & Detail



How food can connect different cultures ?



## FOOD AS CULTURE CARRIER





## FOOD IMPACT TO ROTTERDAM





## FROM FOOD TO CULTURE



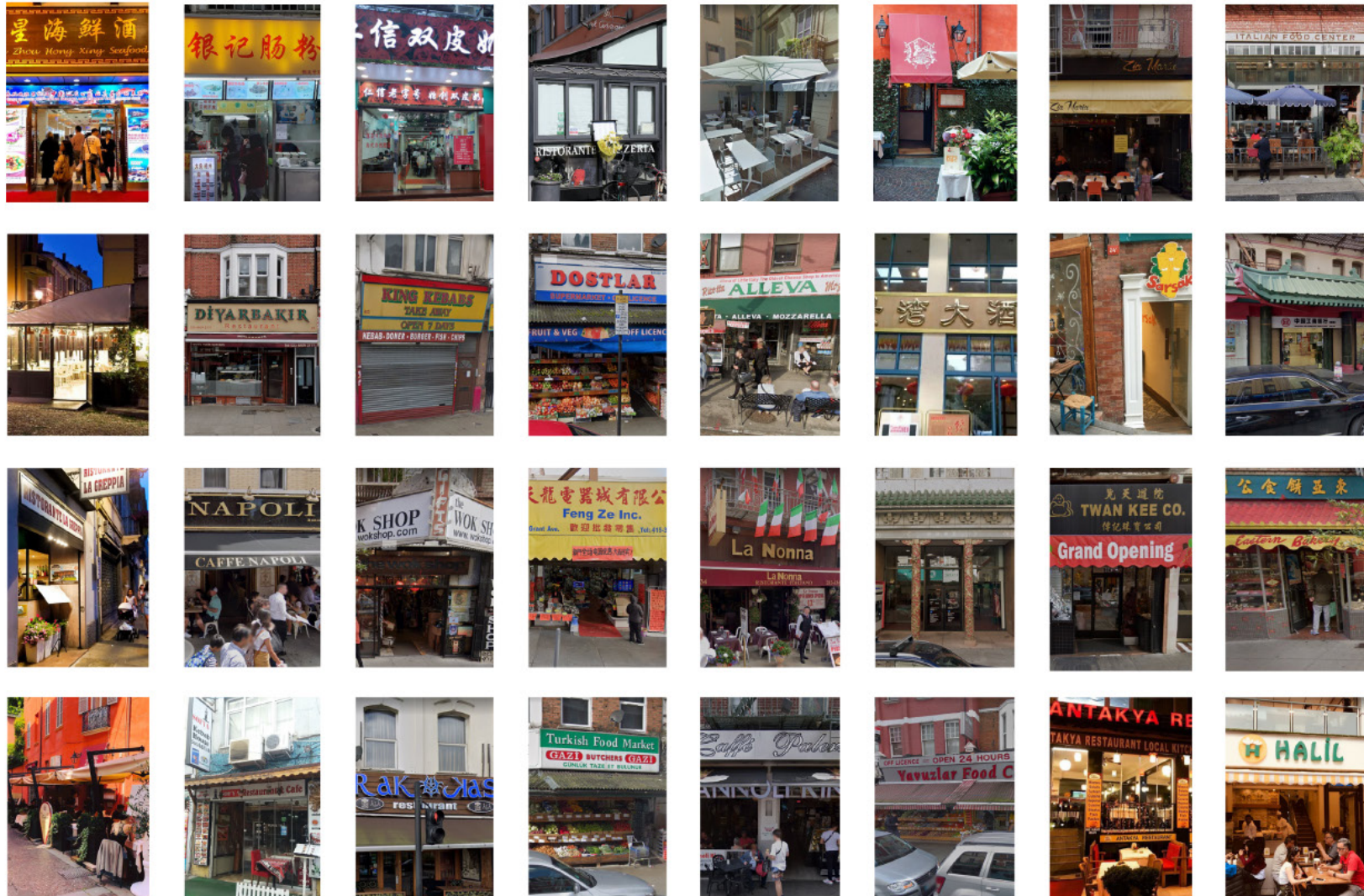


## ROTTERDAM POTENTIAL





# CULTURE FACET OF ROTTERDAM





## CITY INCLUSIVE OR EXCLUSIVE ?





## RESEARCH QUESTION

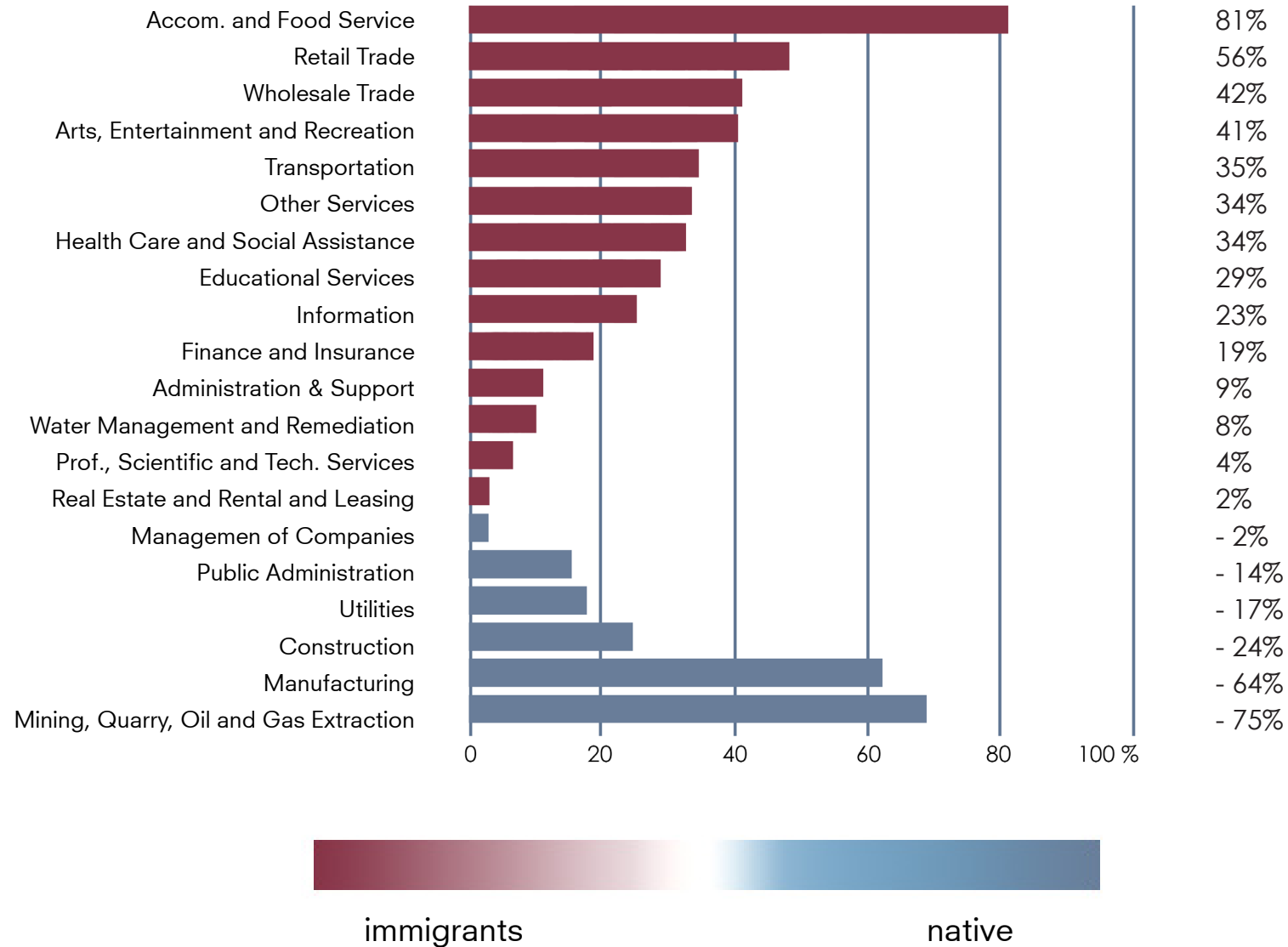
**HOW THE CITY OF ROTTERDAM  
CAN EMBRACE MULTICULTURAL  
BACKGROUND TO CONNECT  
DIFFERENT PEOPLE IN A BETTER  
WAY ?**







## DISPLACEMENT OF WORK



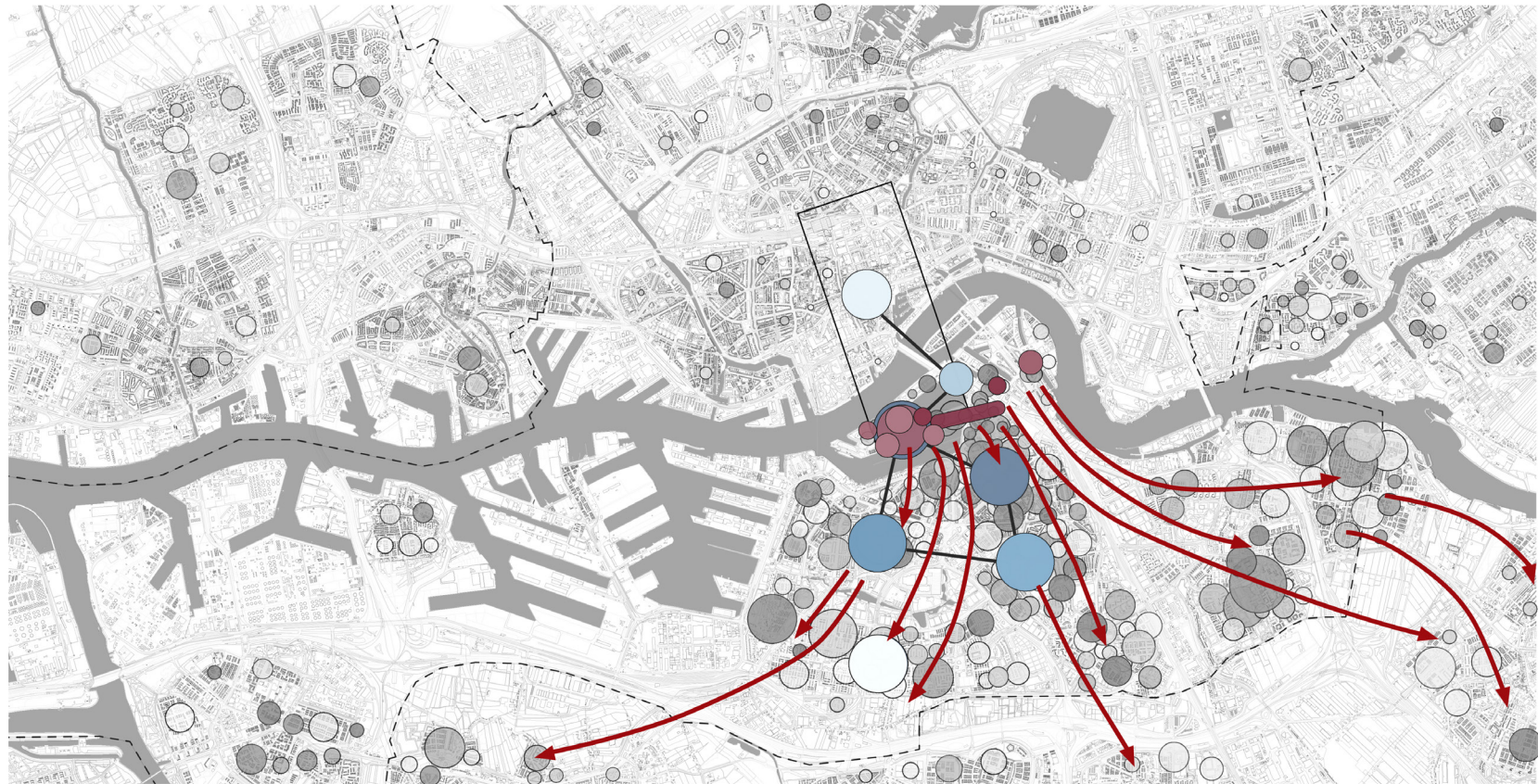


# WHERE TO LIVE





# MIGRATION CENTRE





## INCLUSIVE PLACE



Could we imagine Rotterdam  
without immigrants nowadays?  
NL Times Janene Pieters 2016



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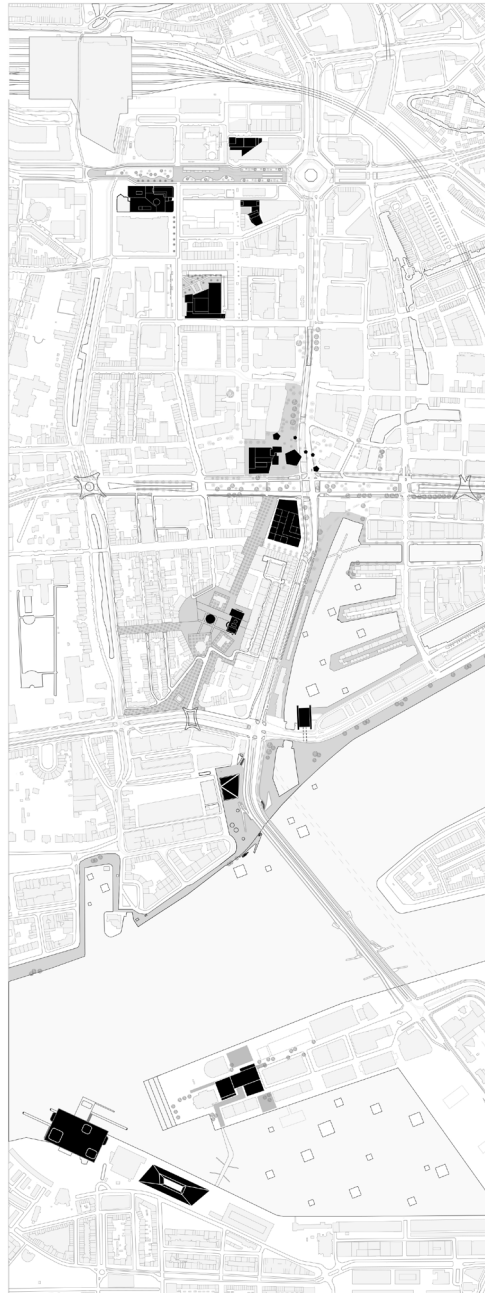
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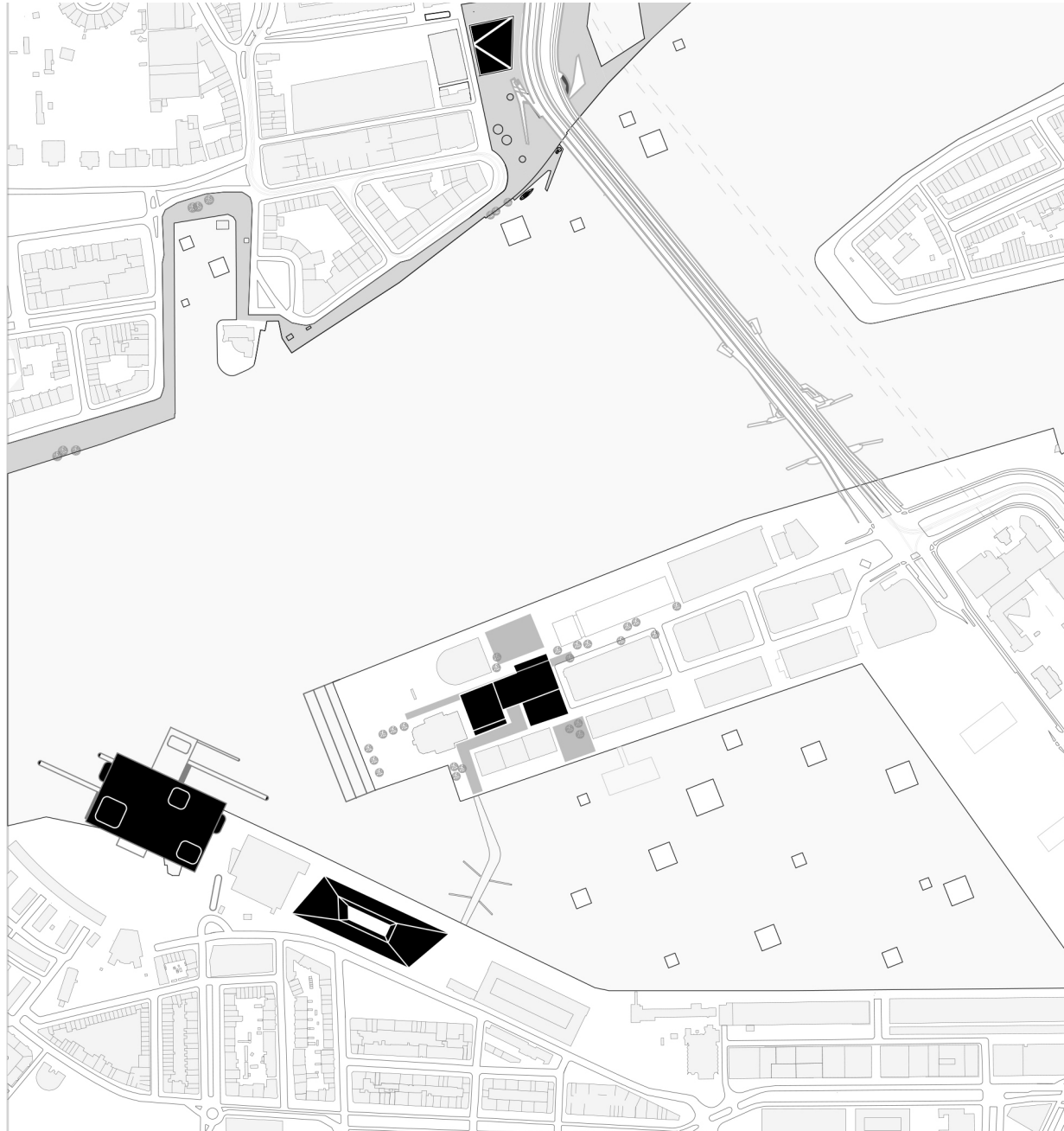


# SITE





## SITE



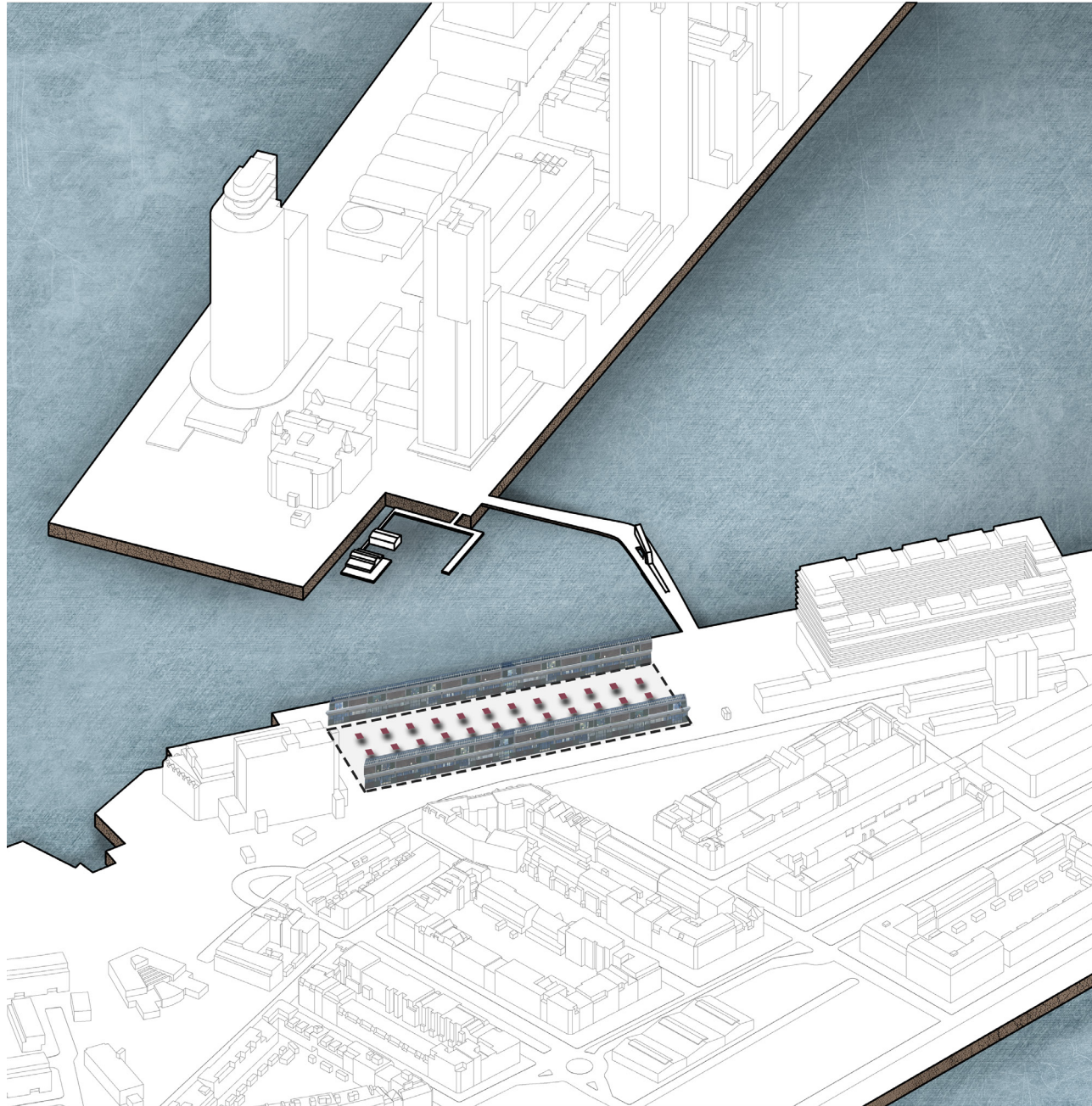


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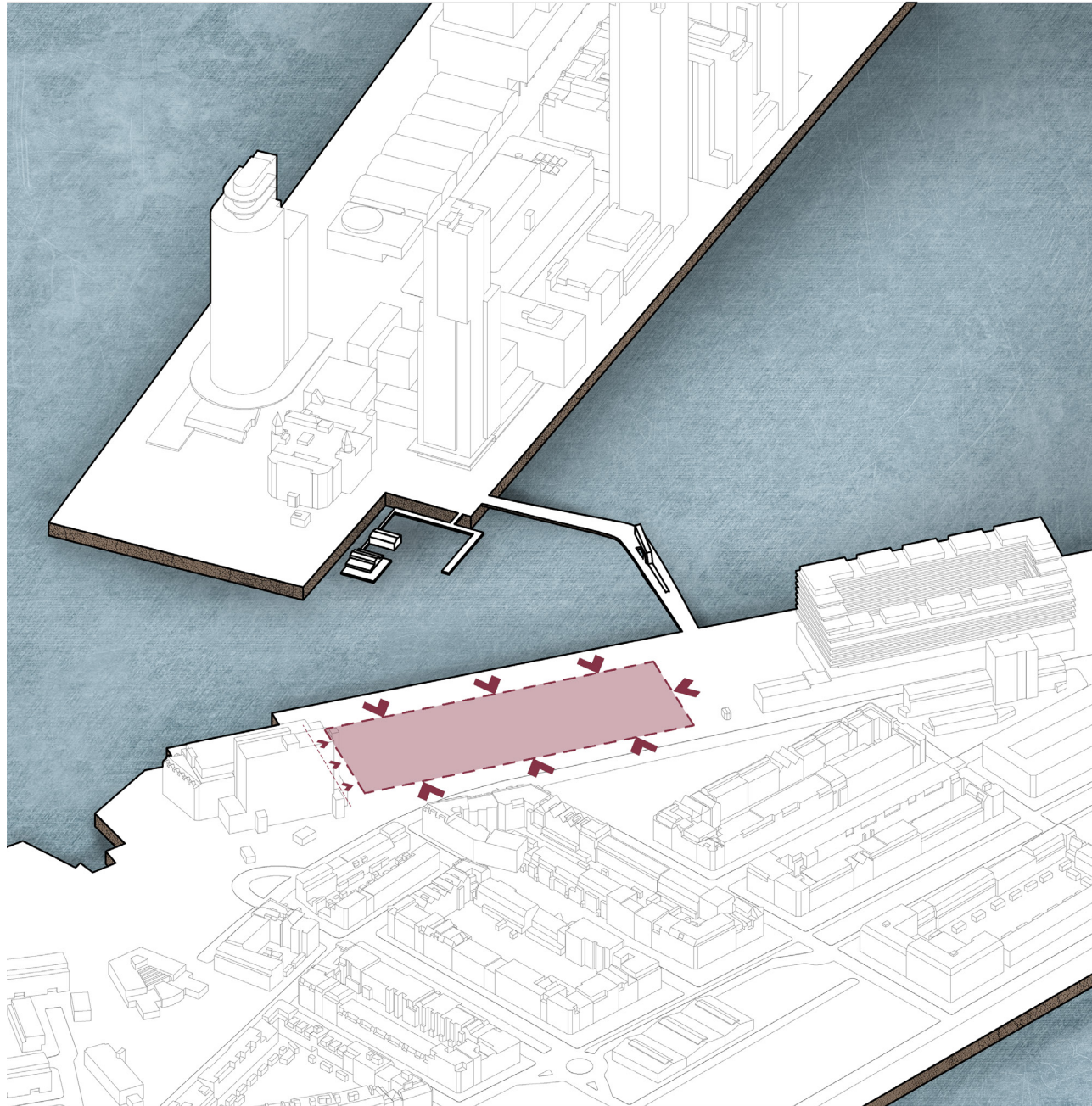


## FENIX 2.0



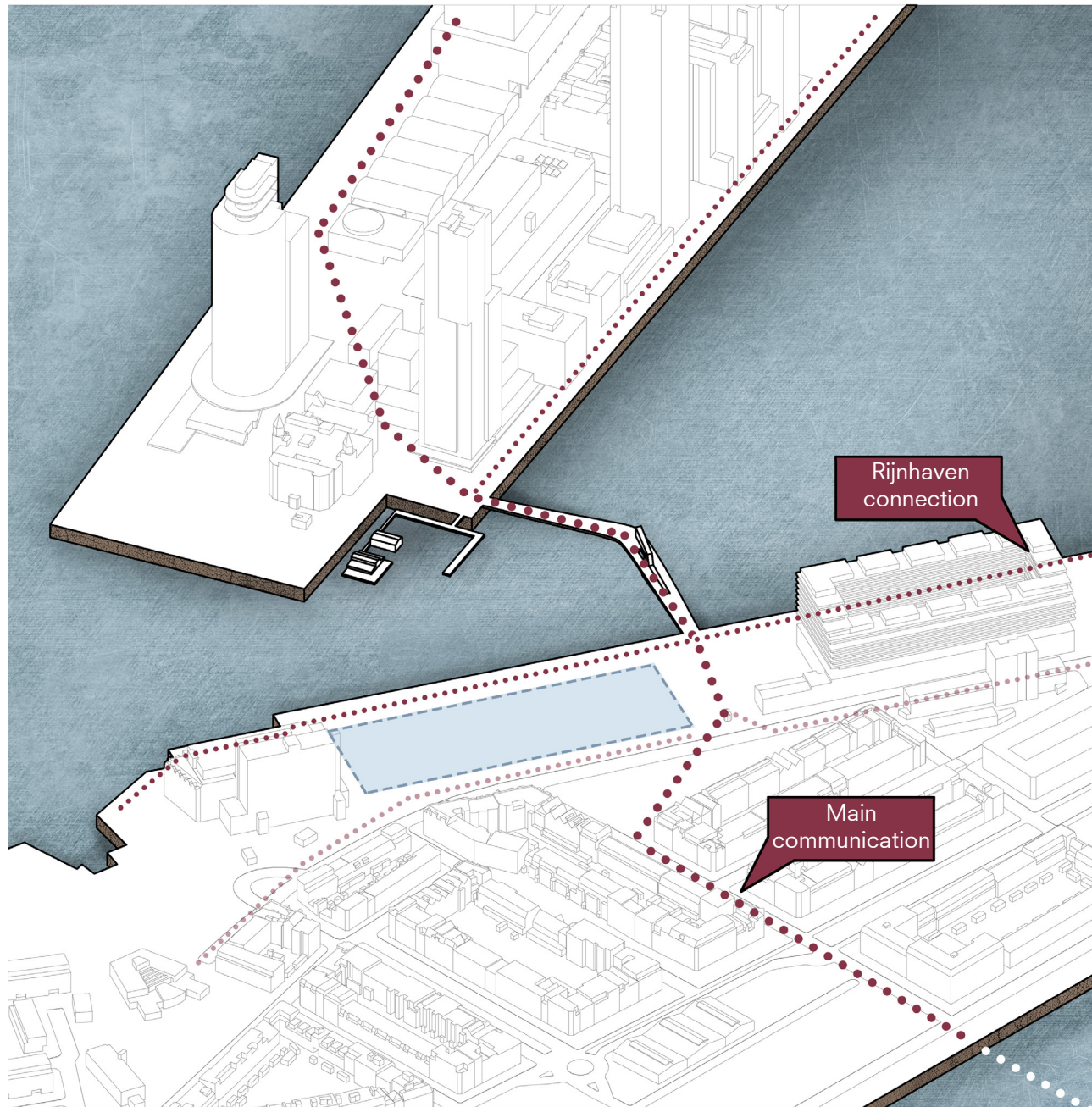


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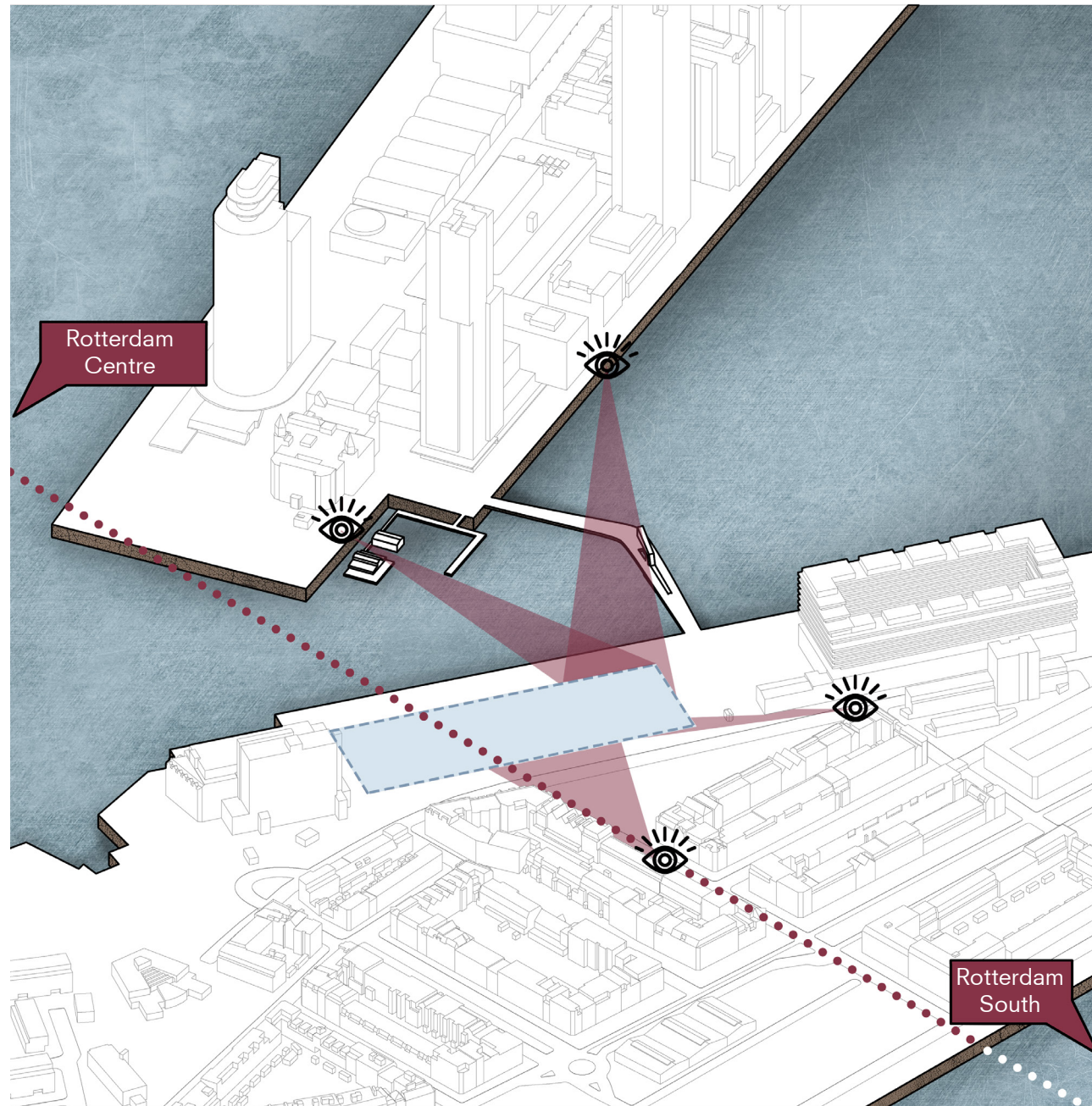


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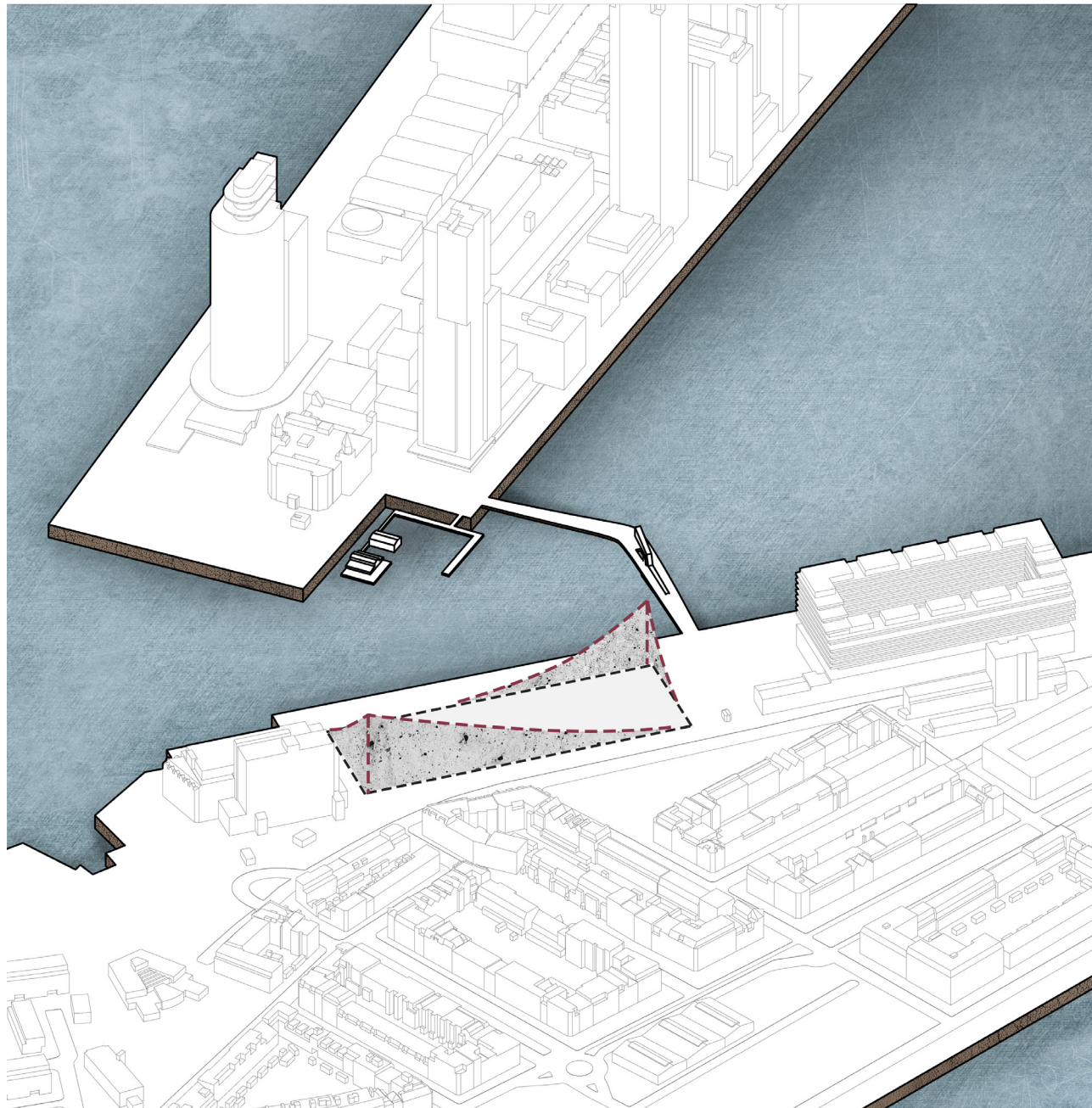


## VISUAL RELATIONSHIP





## URBAN FORNTAGE





## GOALS



Inclusive place



Stimulate  
immigrants



Create optimal  
place to practice  
and learn small  
businesses



Acts as example  
for future ideas  
and  
developments



# AMBITION COLLAGE





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# FUNCTION



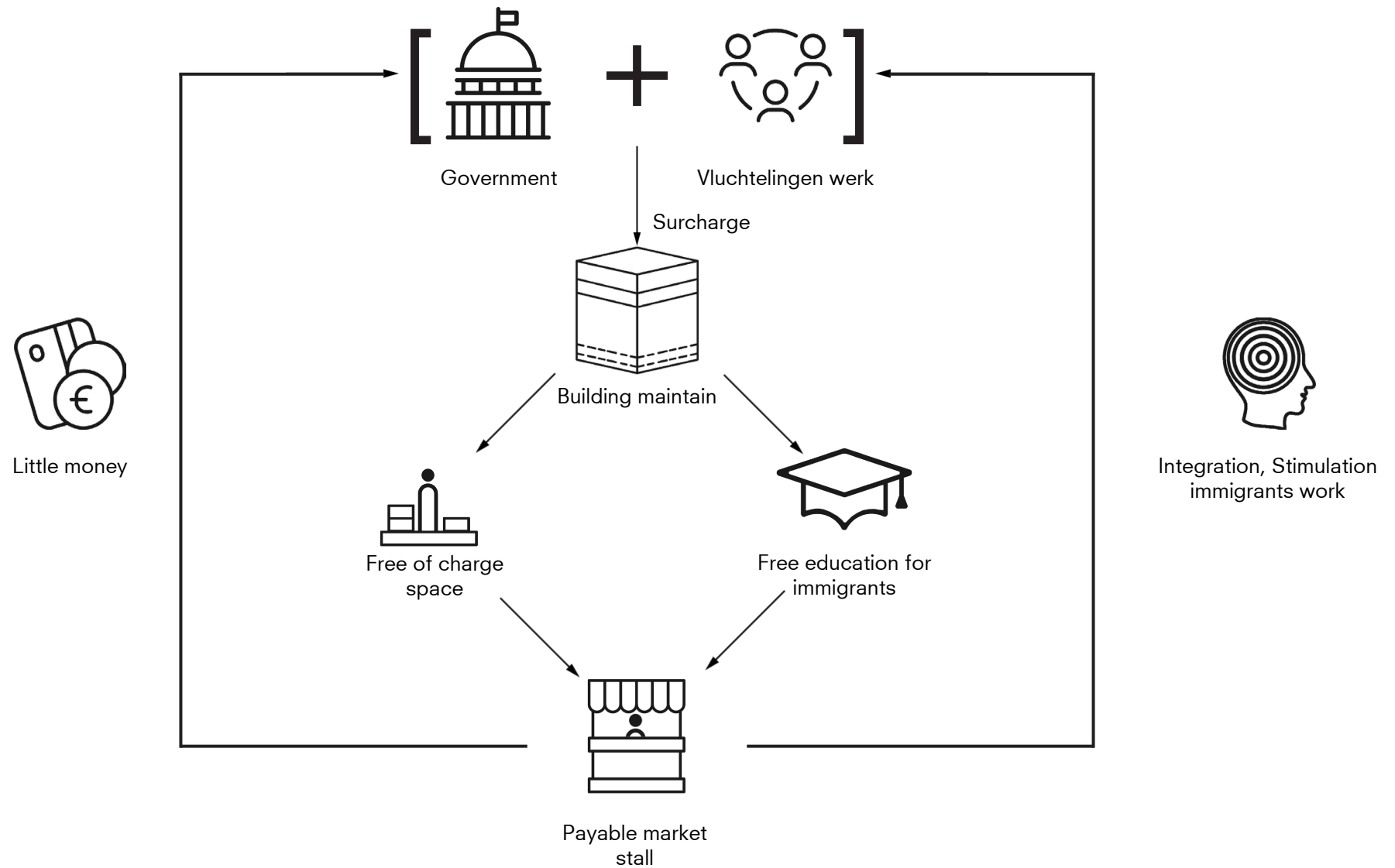
**market**



**education**



## HOW IT WORKS ?





## MARKET TYPOLOGY



Trajan's Market



The Grand Bazaar



Mercado san miguel



World of Food



Foodmet Abattoir



Mercat Encants



## IMIGRANTS EDUCATION TYPOLOGY



Laayoune



Cristalleries Planell



VUC Syd by AART



HF & VUC Fyn complex



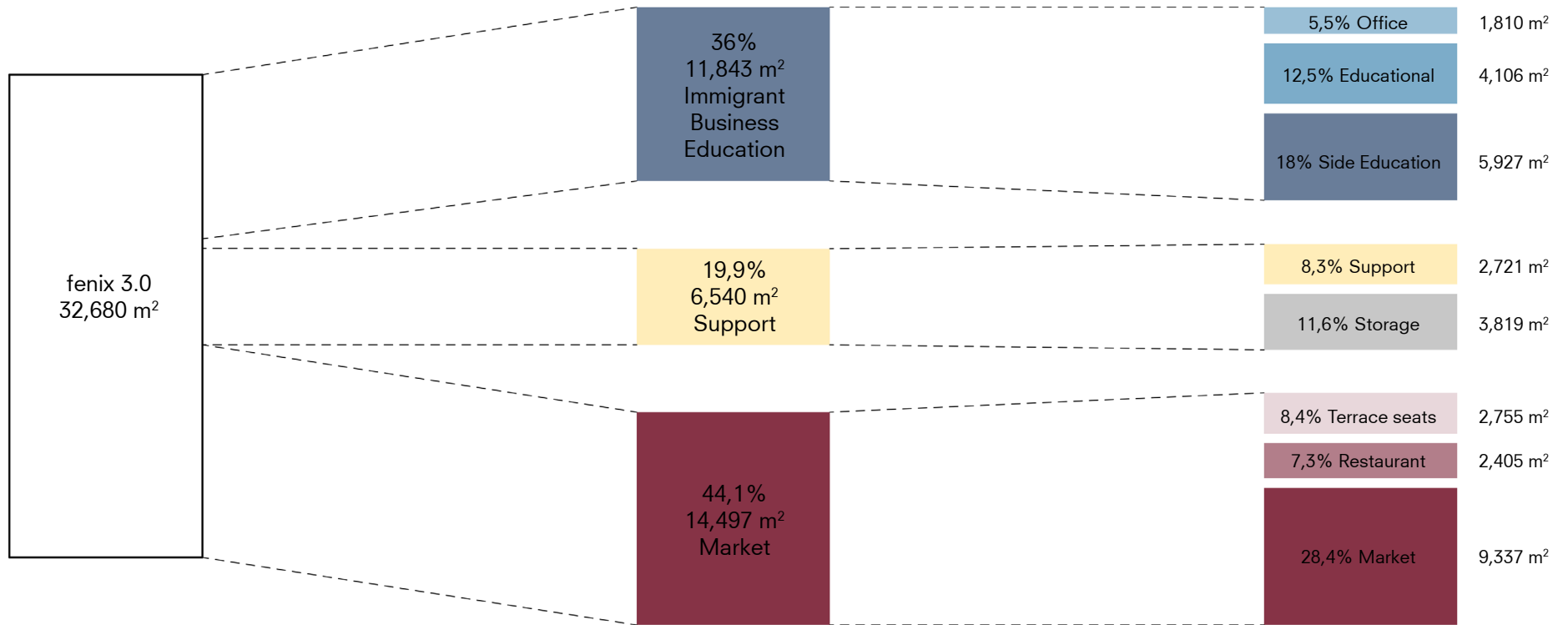
AIEP Building



Torrelavega

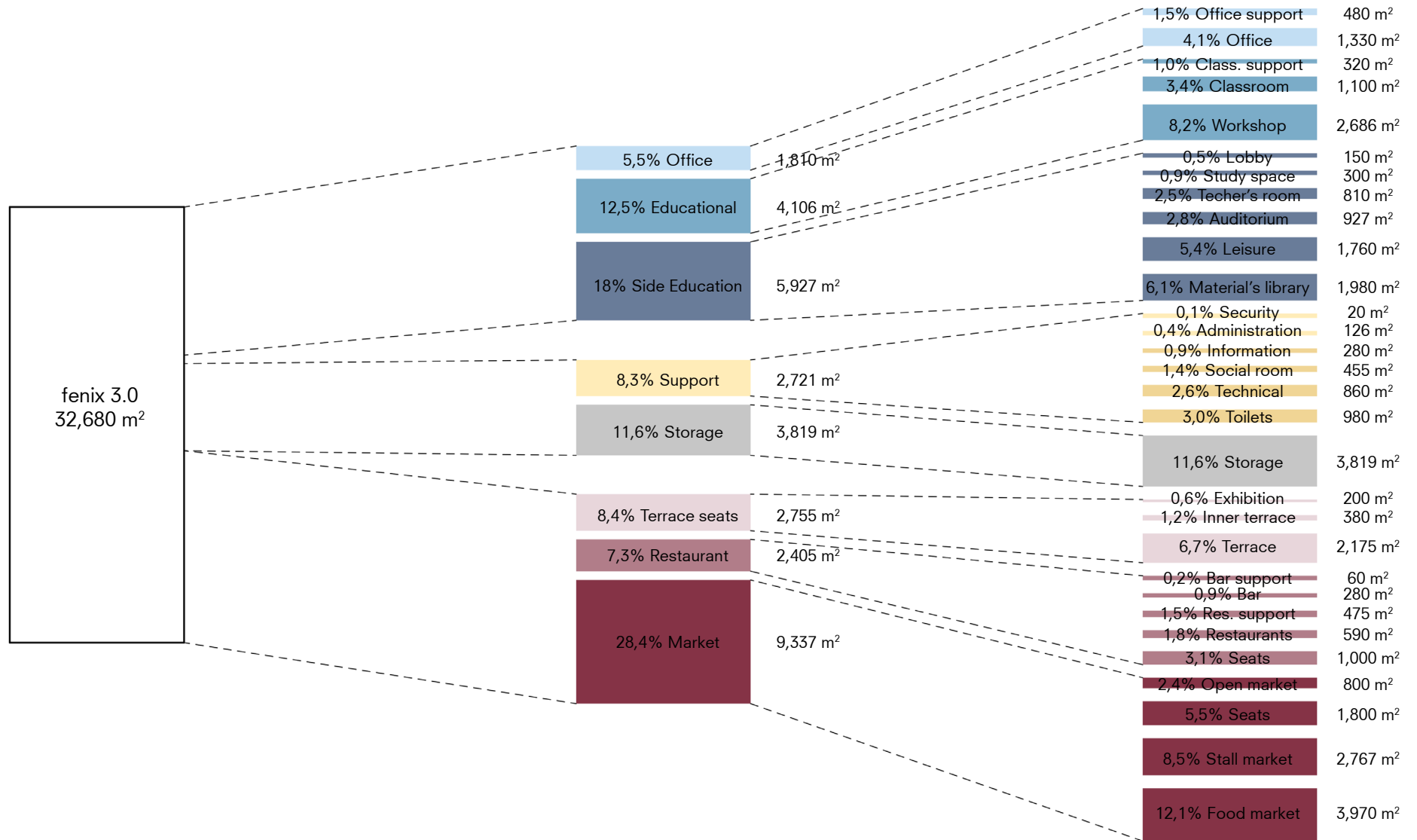


## CONCLUSION



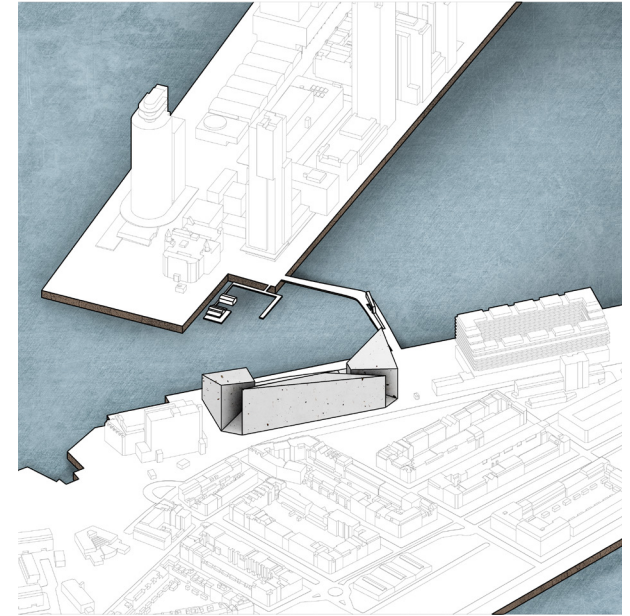
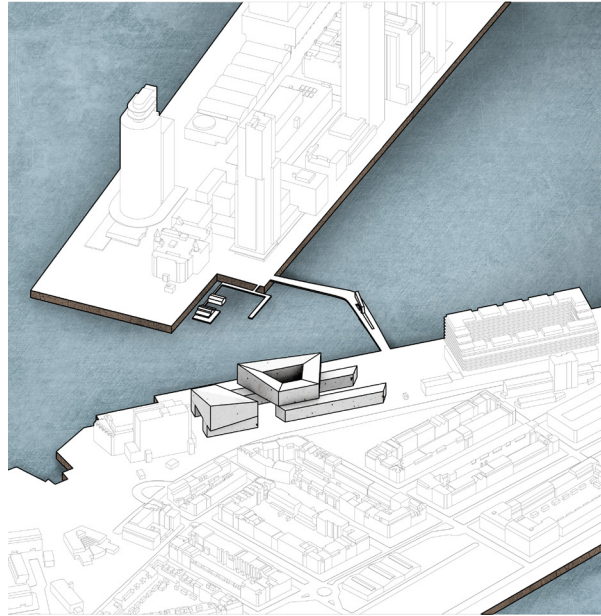
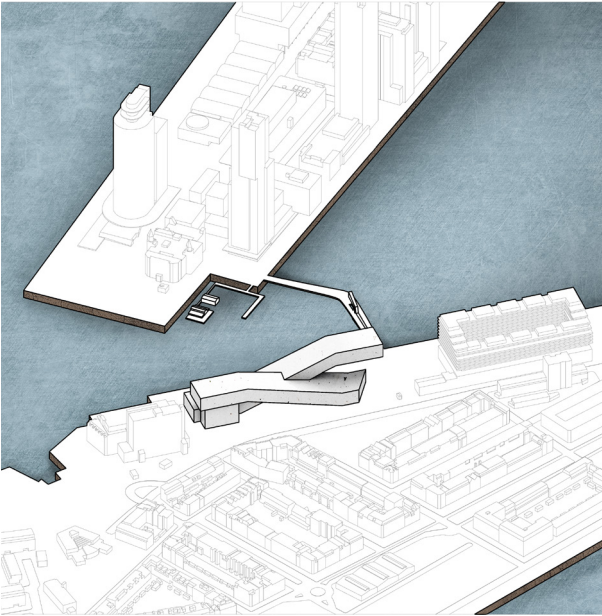


# PROGRAM



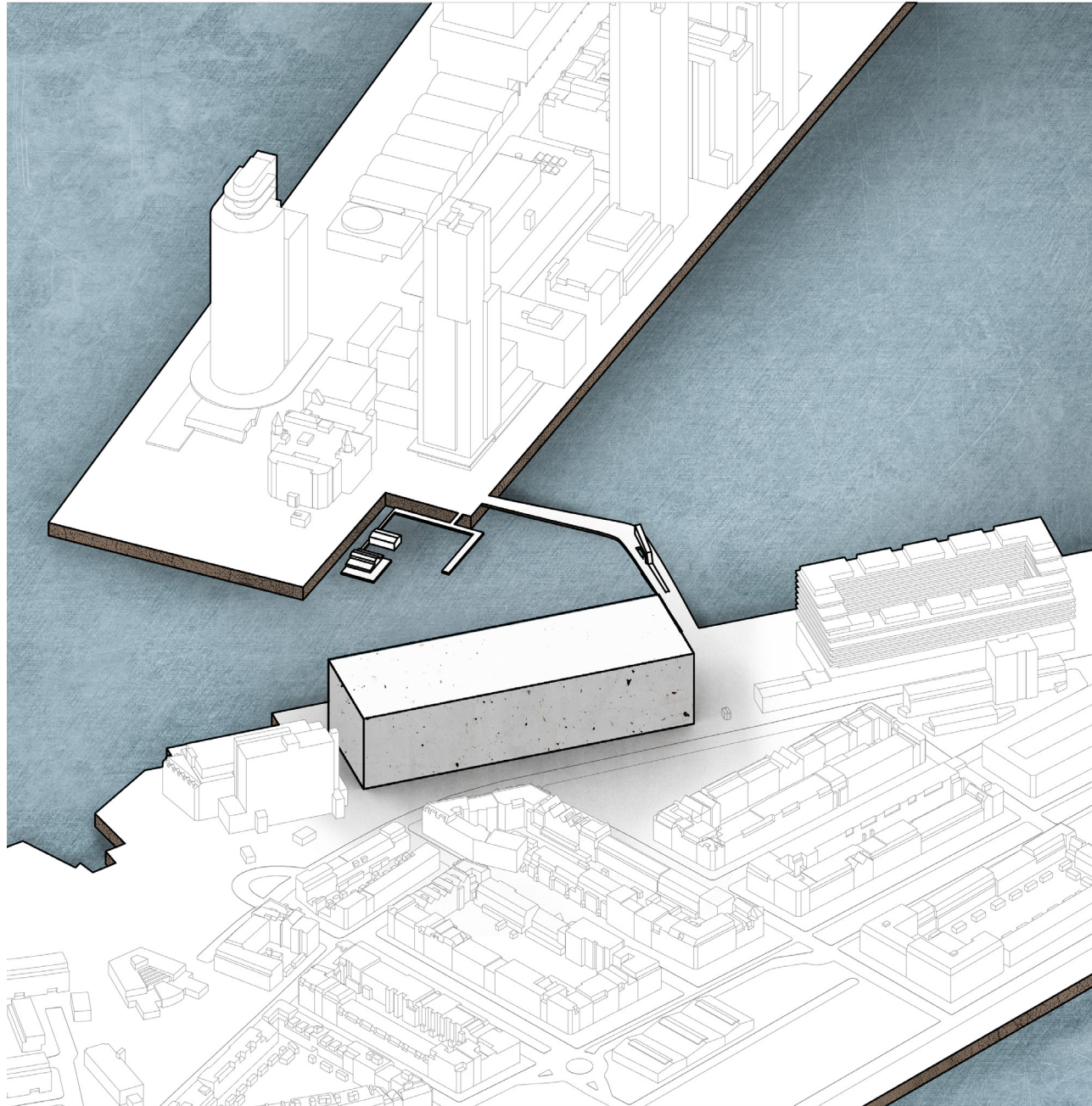


## VARIATIONS



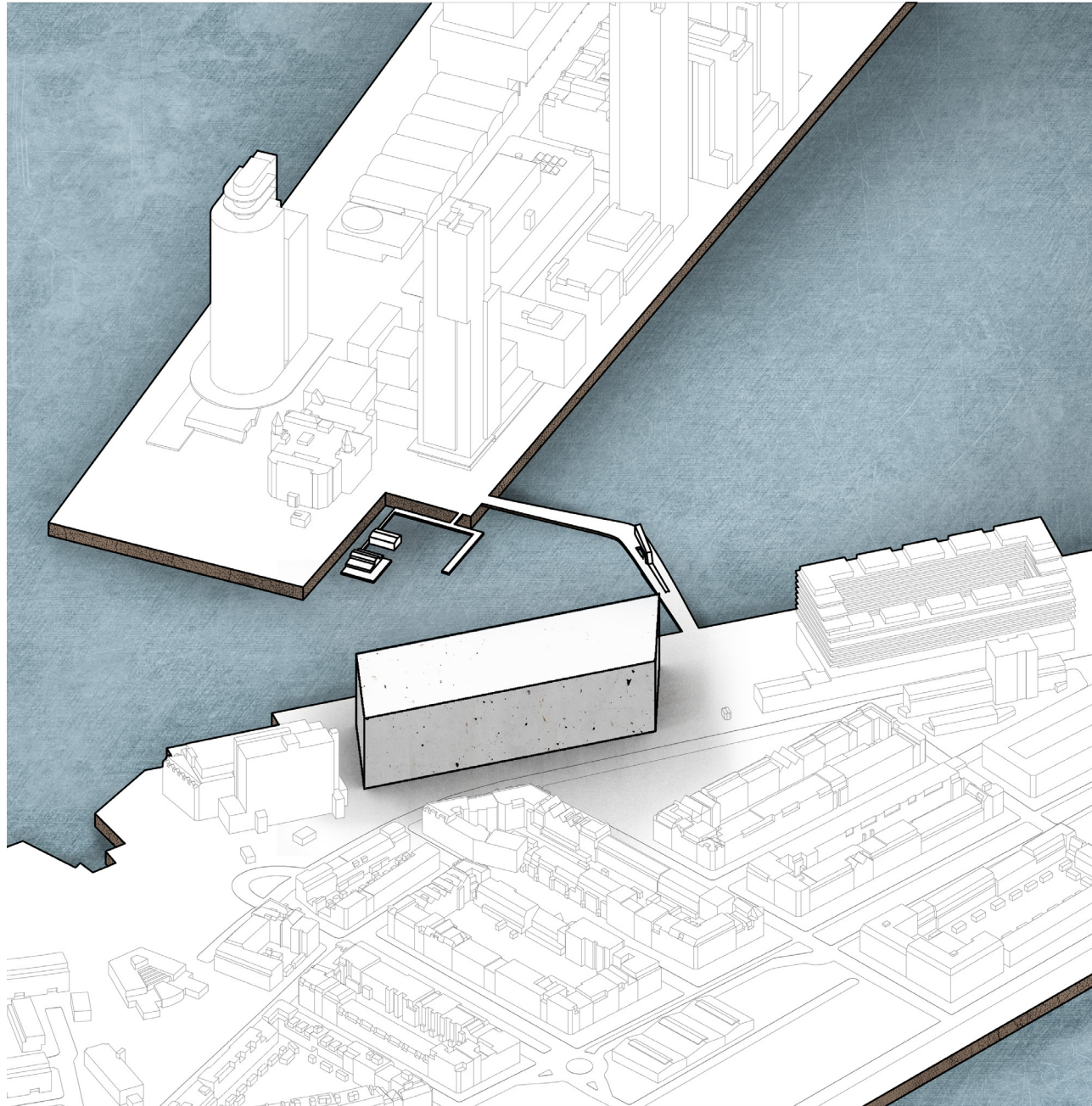


# EVOLUTION



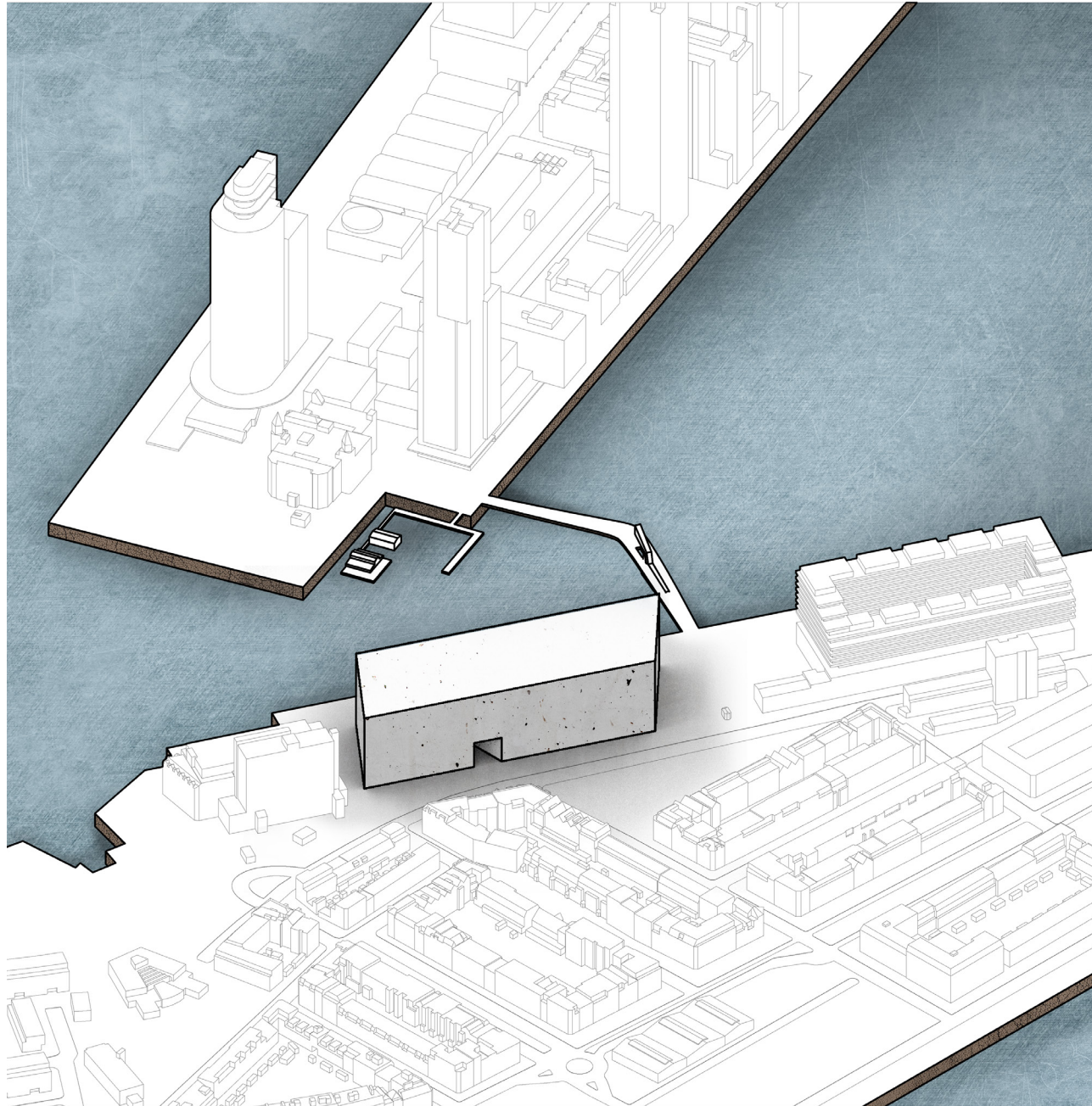


## VISUAL CONNECTION



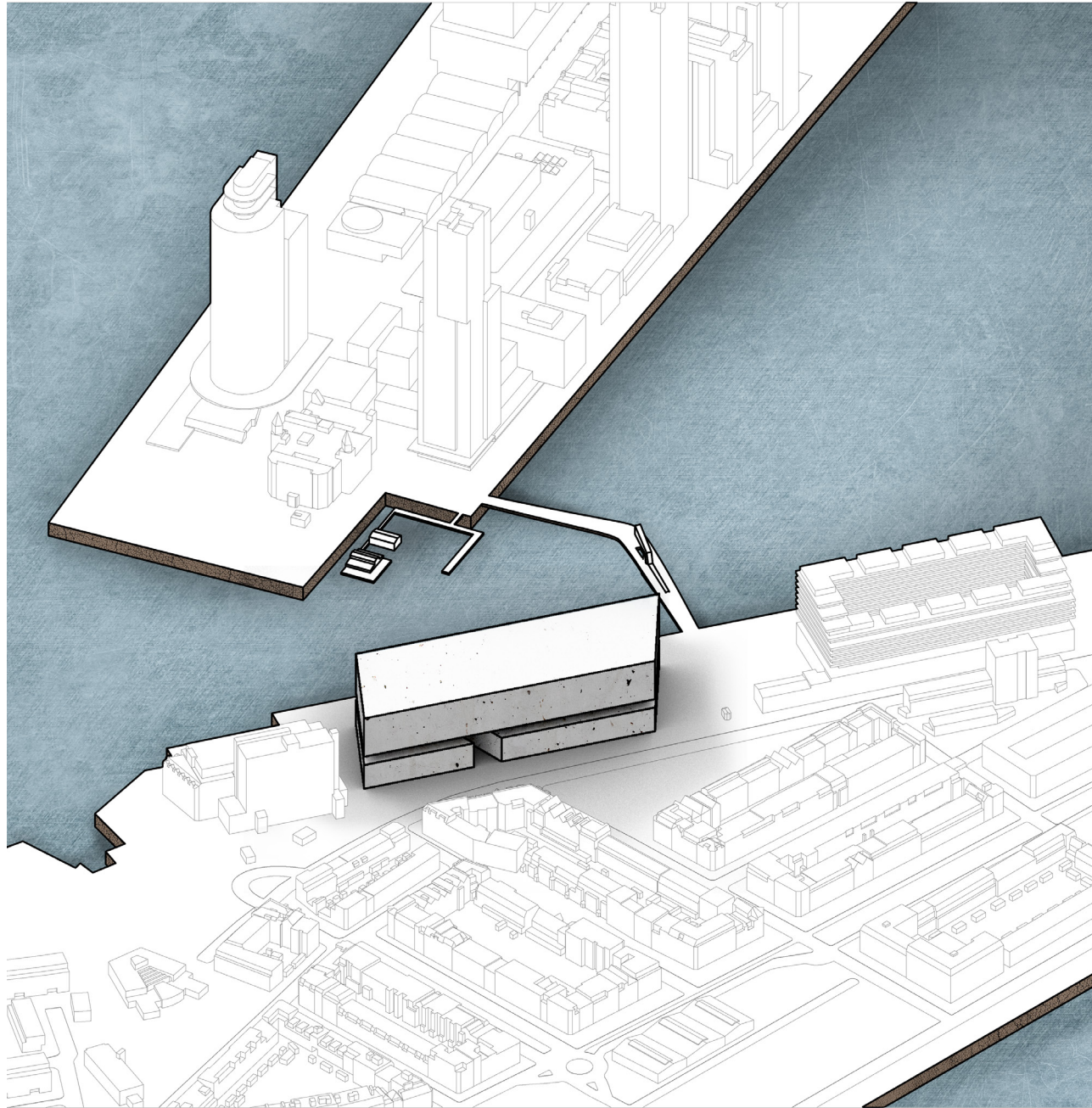


# AXIS



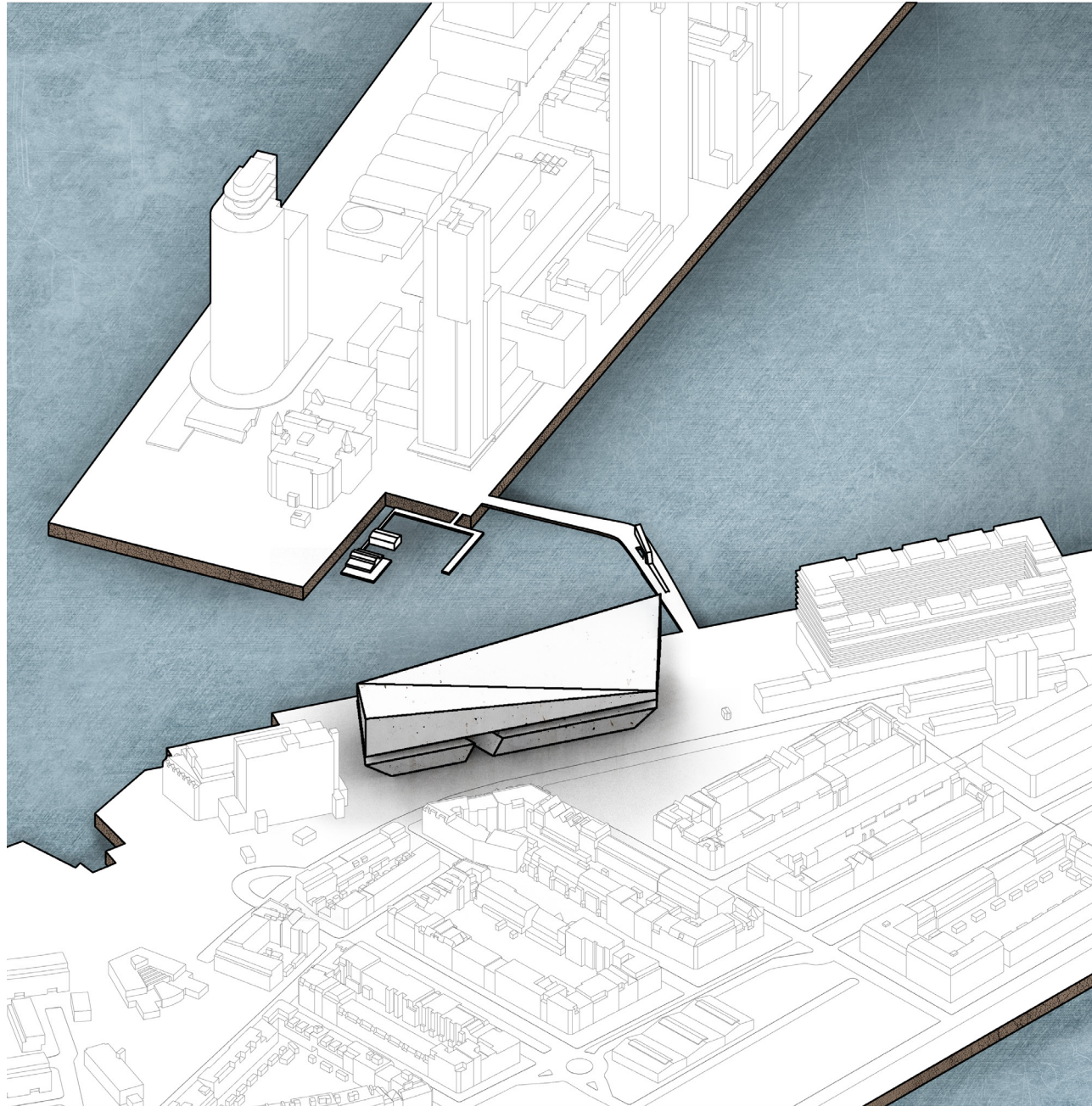


## SURROUNDINGS



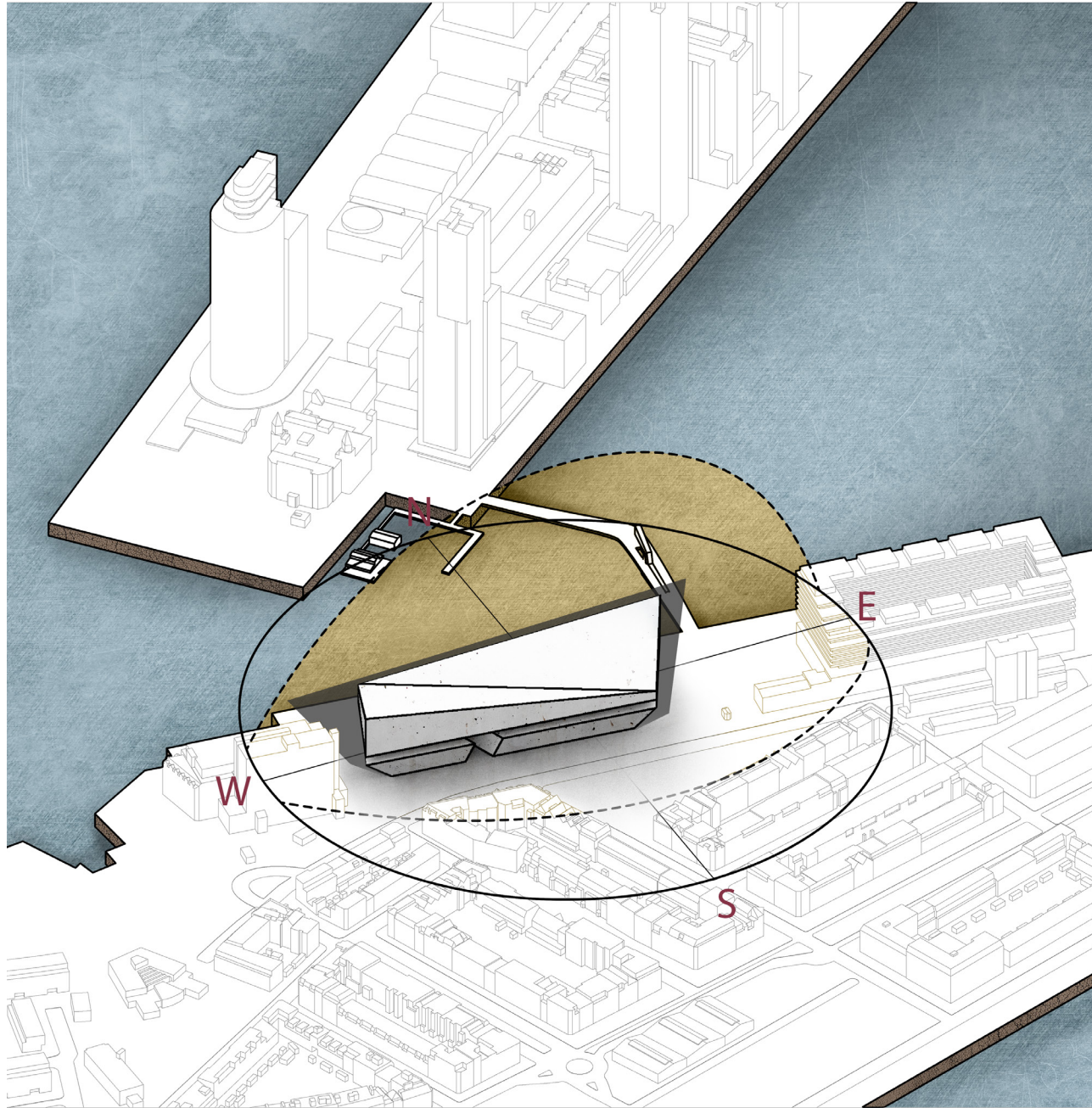


## FRONTAGE



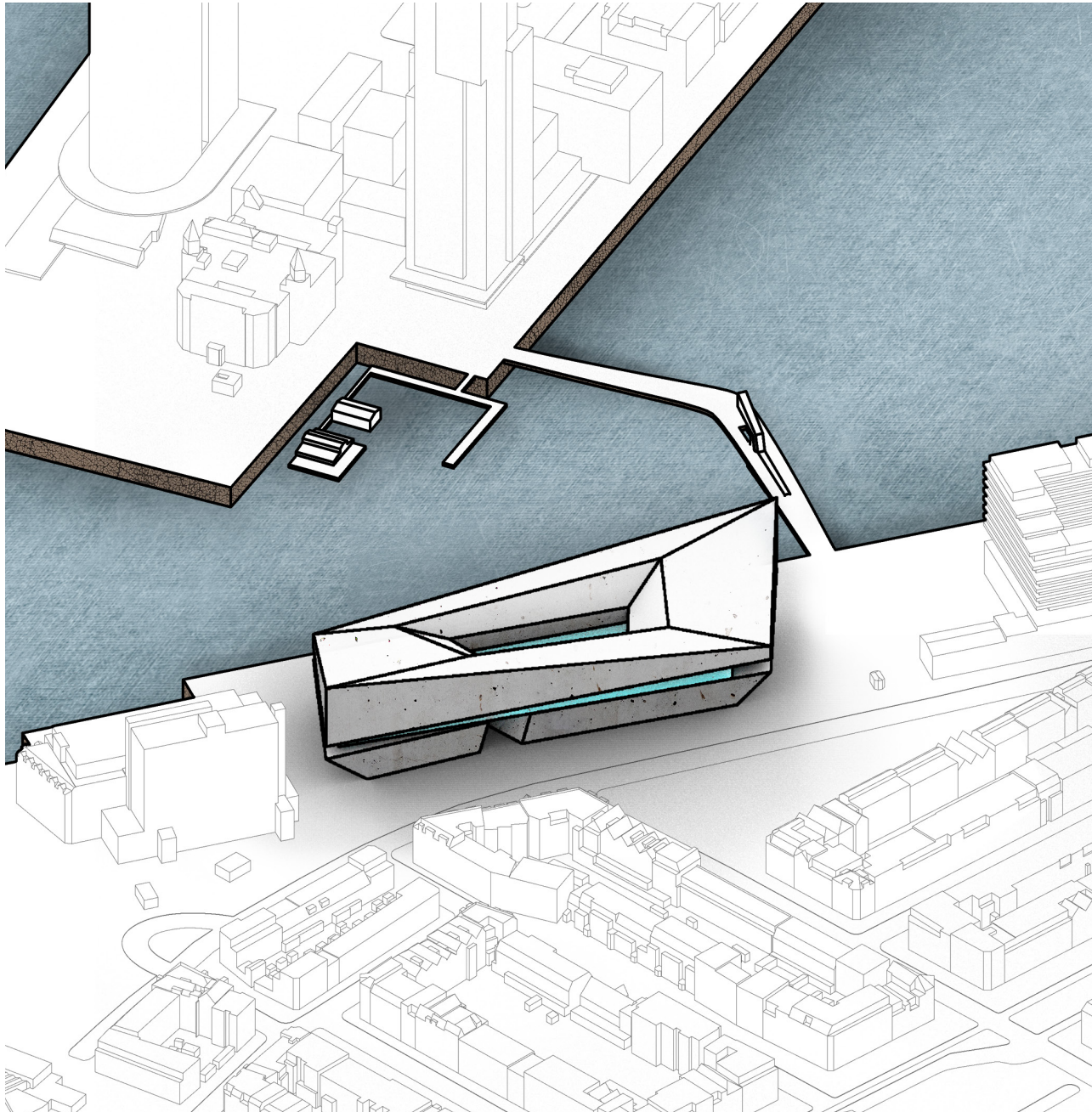


## BRIGHT ACCESS



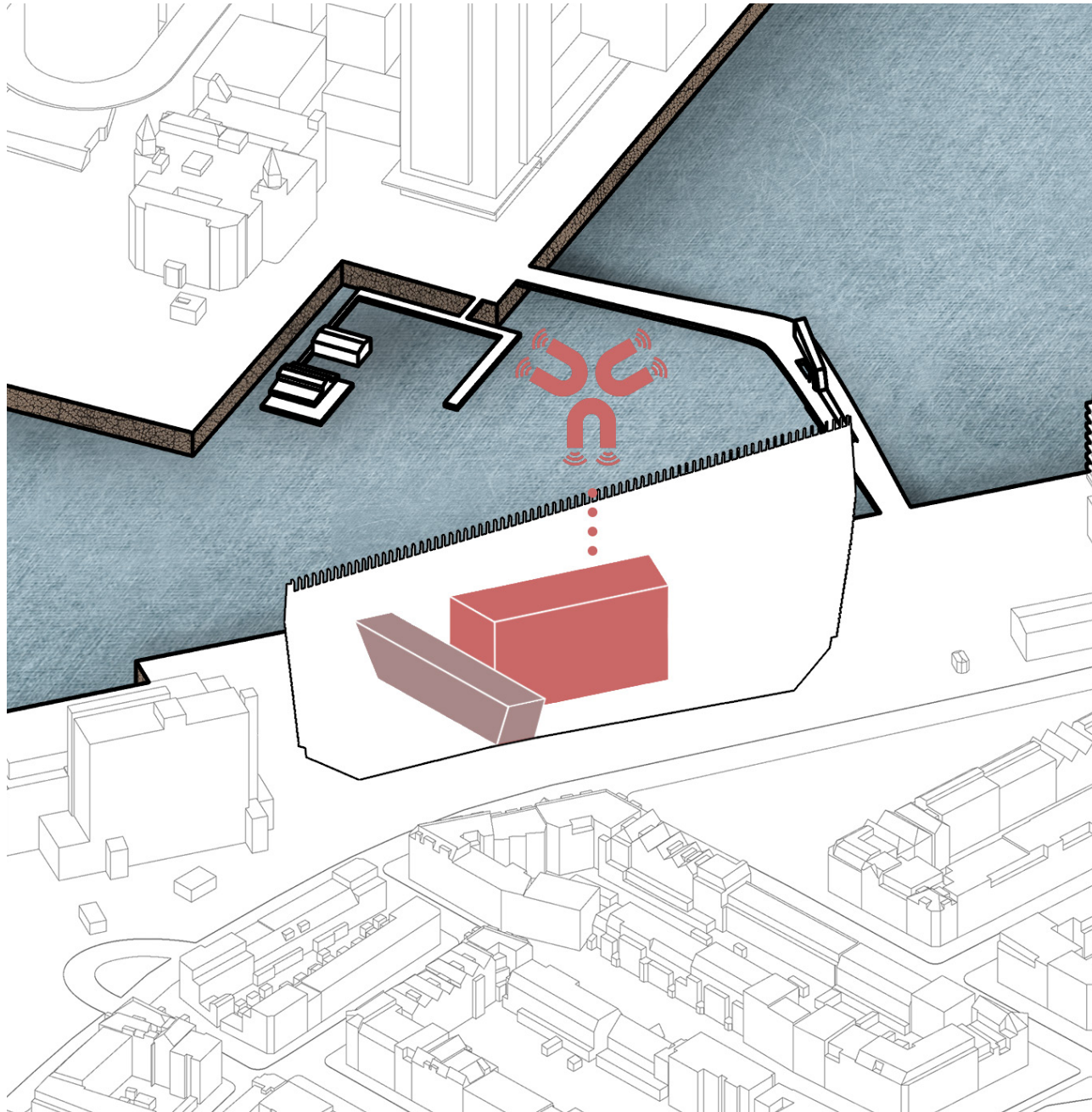


## BUILDING VOLUME



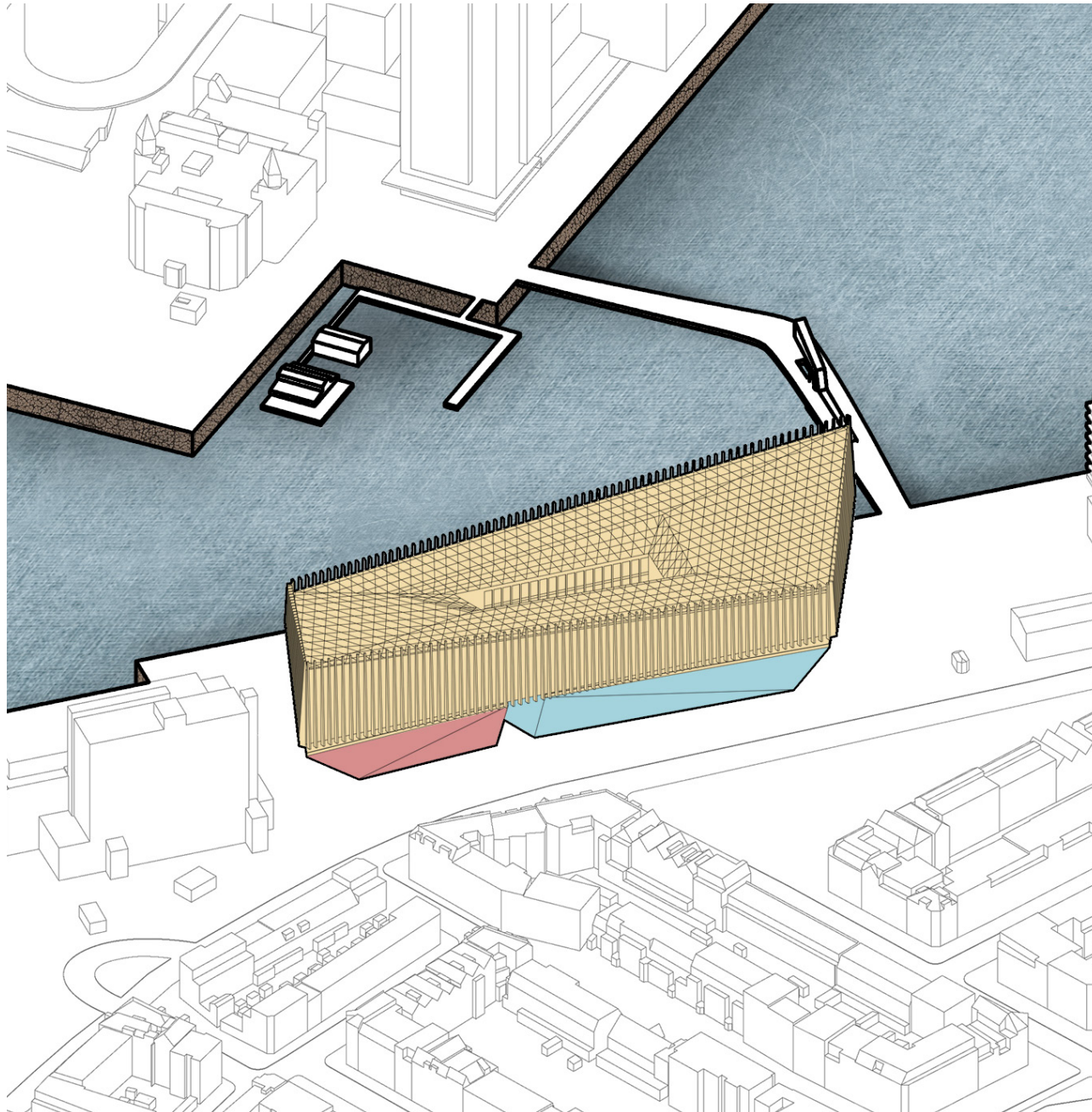


## CENTRAL HEART



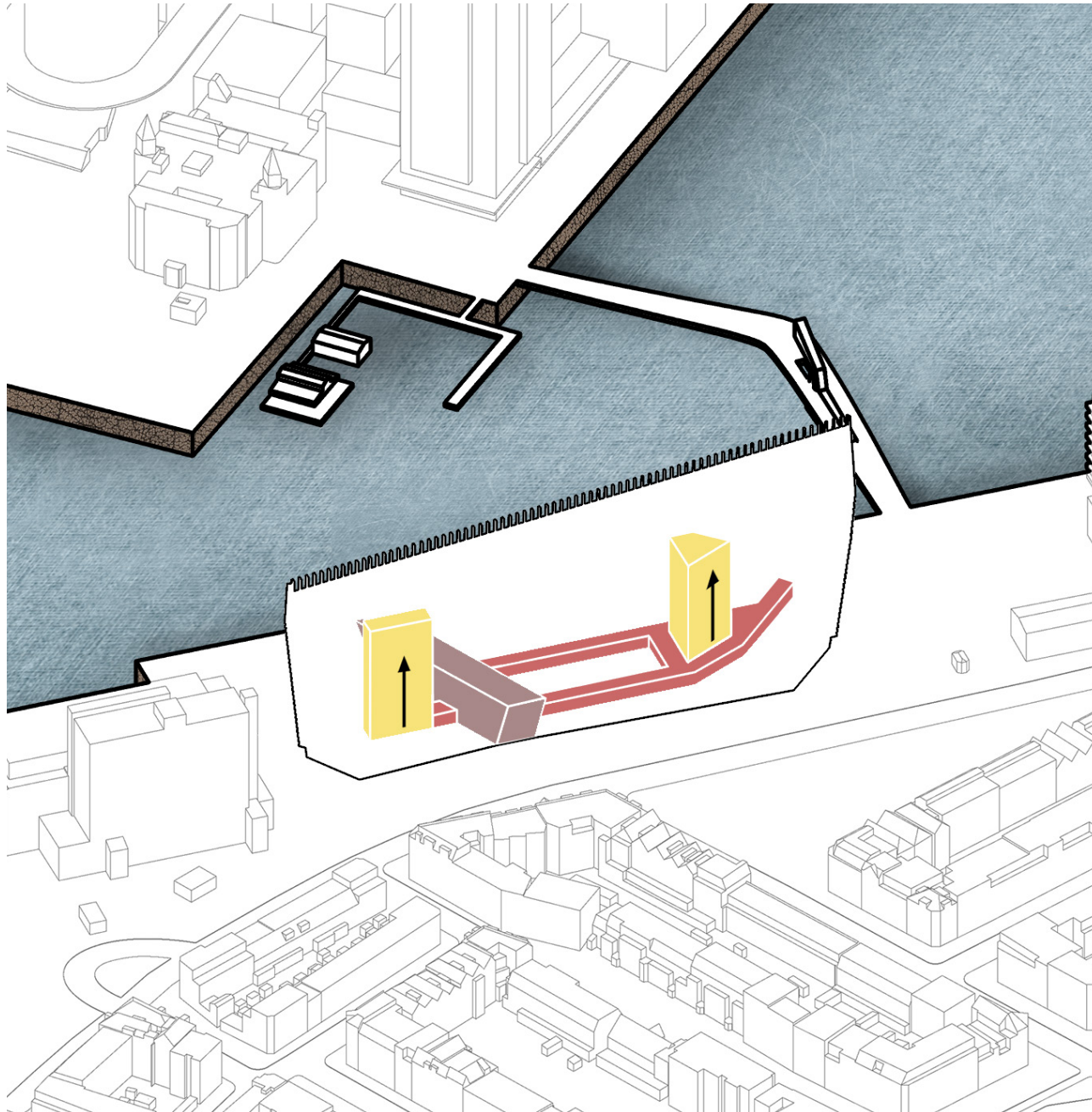


## FUNCTION DIVISION



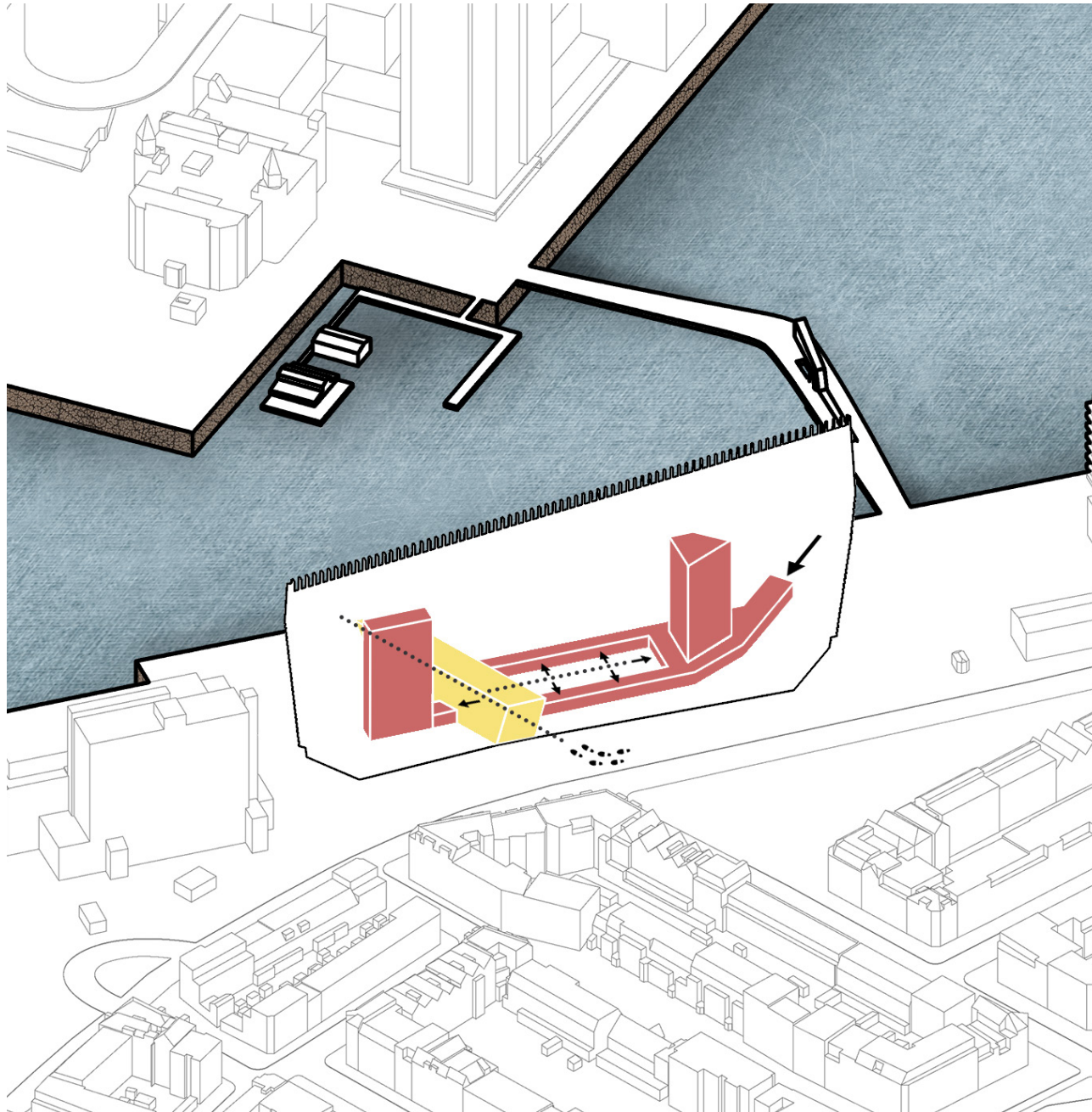


## VERTICAL CIRCULATION



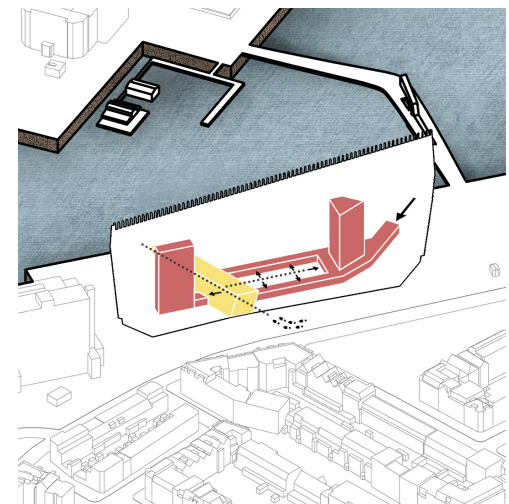
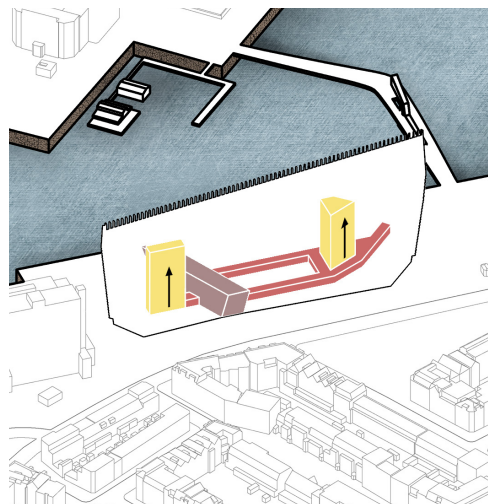
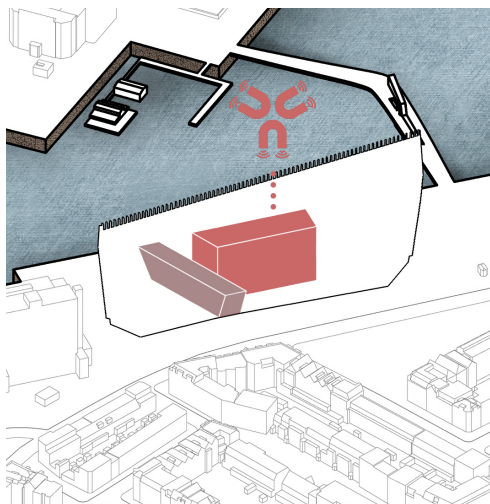
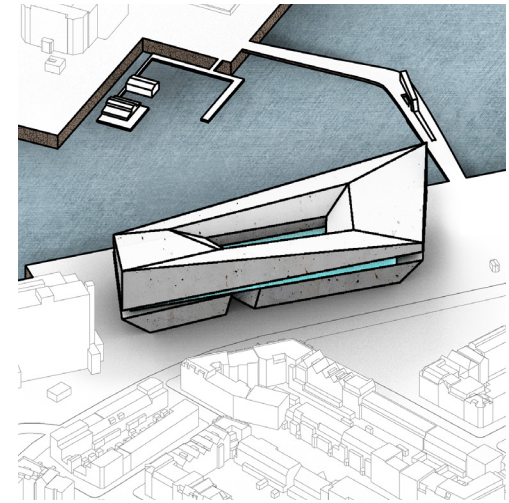
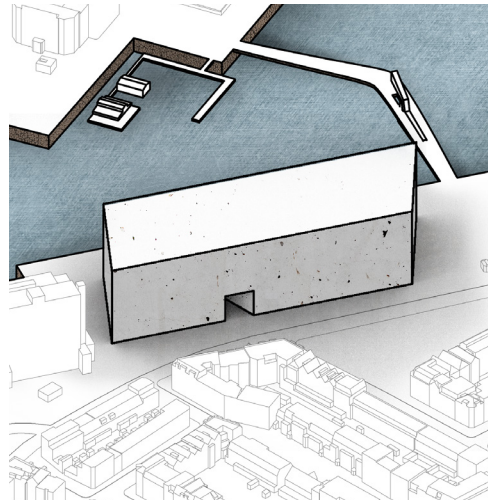
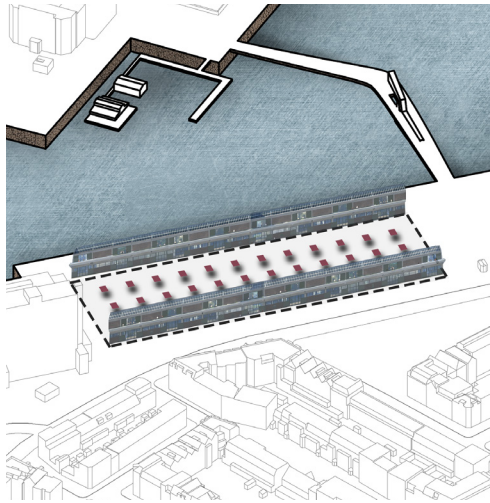


## ENTRANCES





## SUMMARY





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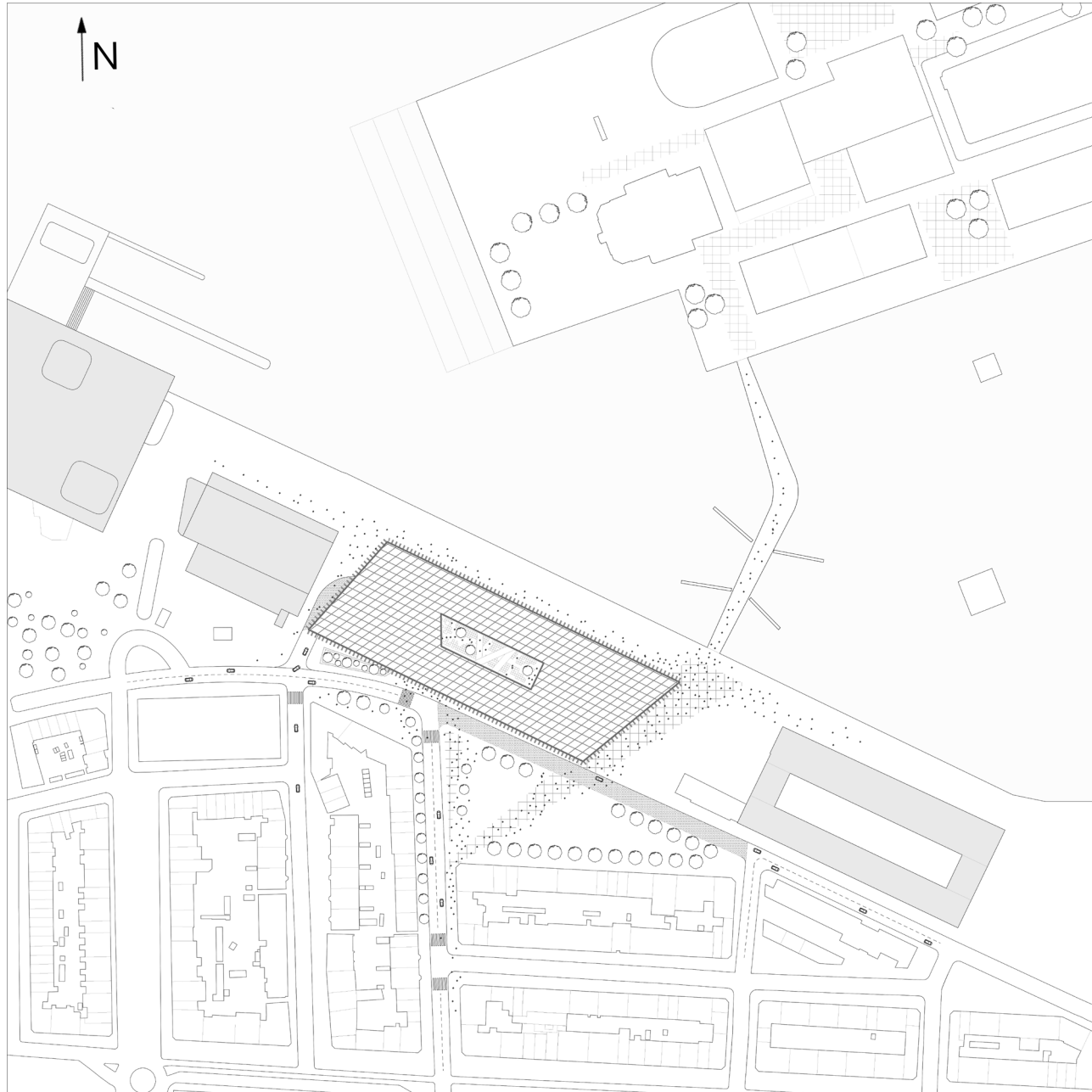


# IMPRESSION



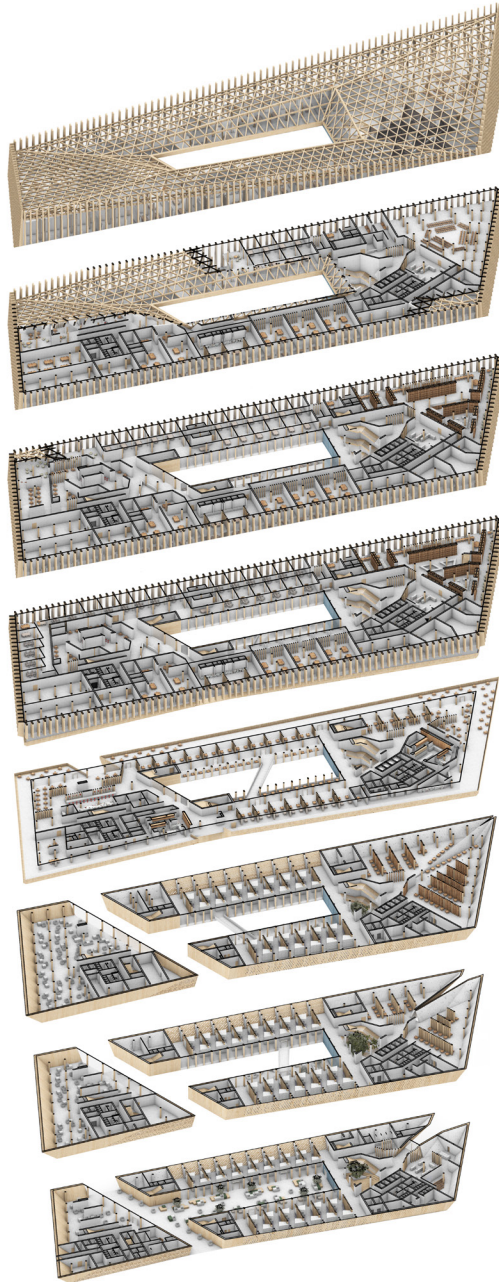


## SITE PLAN



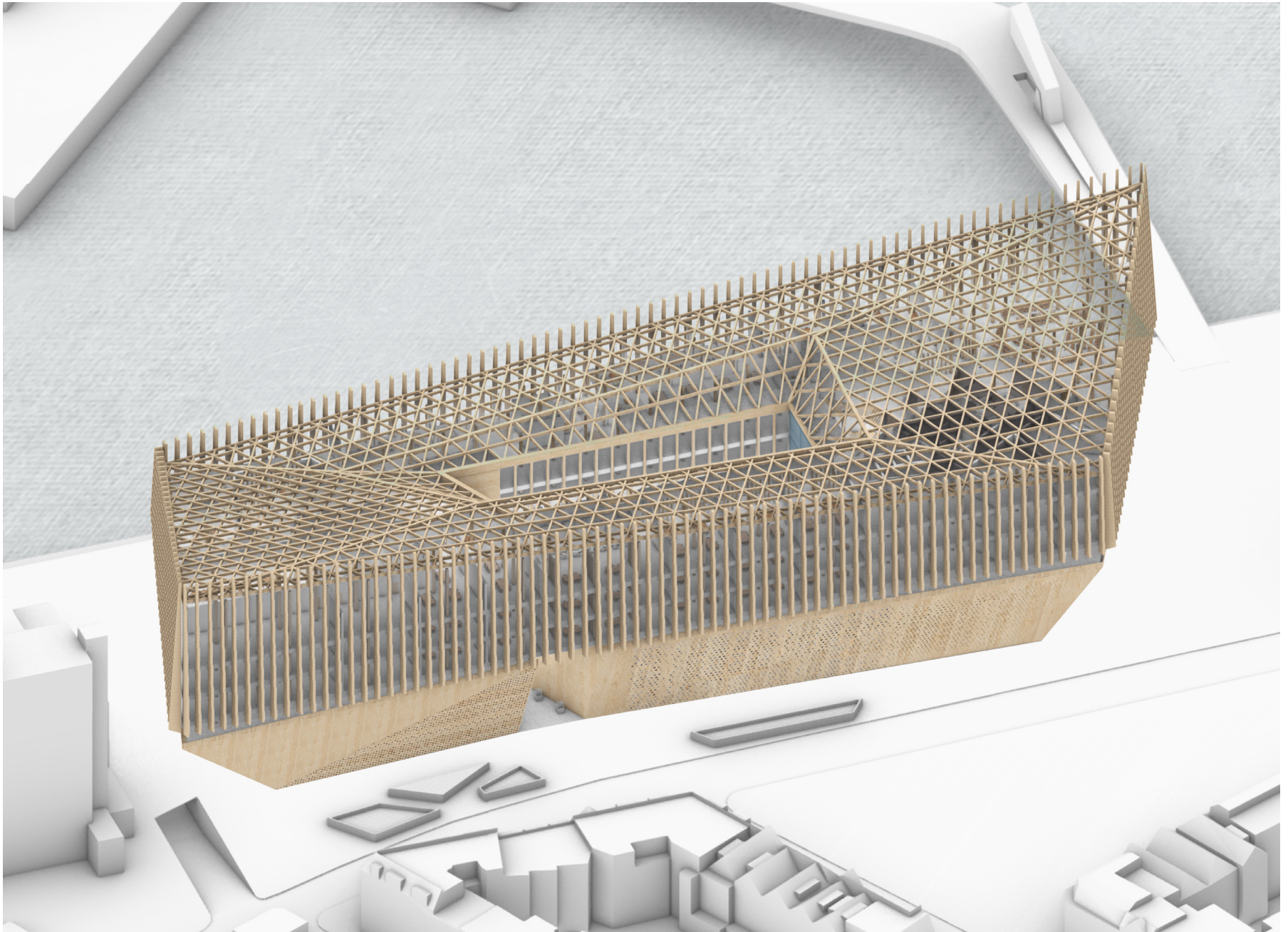


# AXONOMETRIC



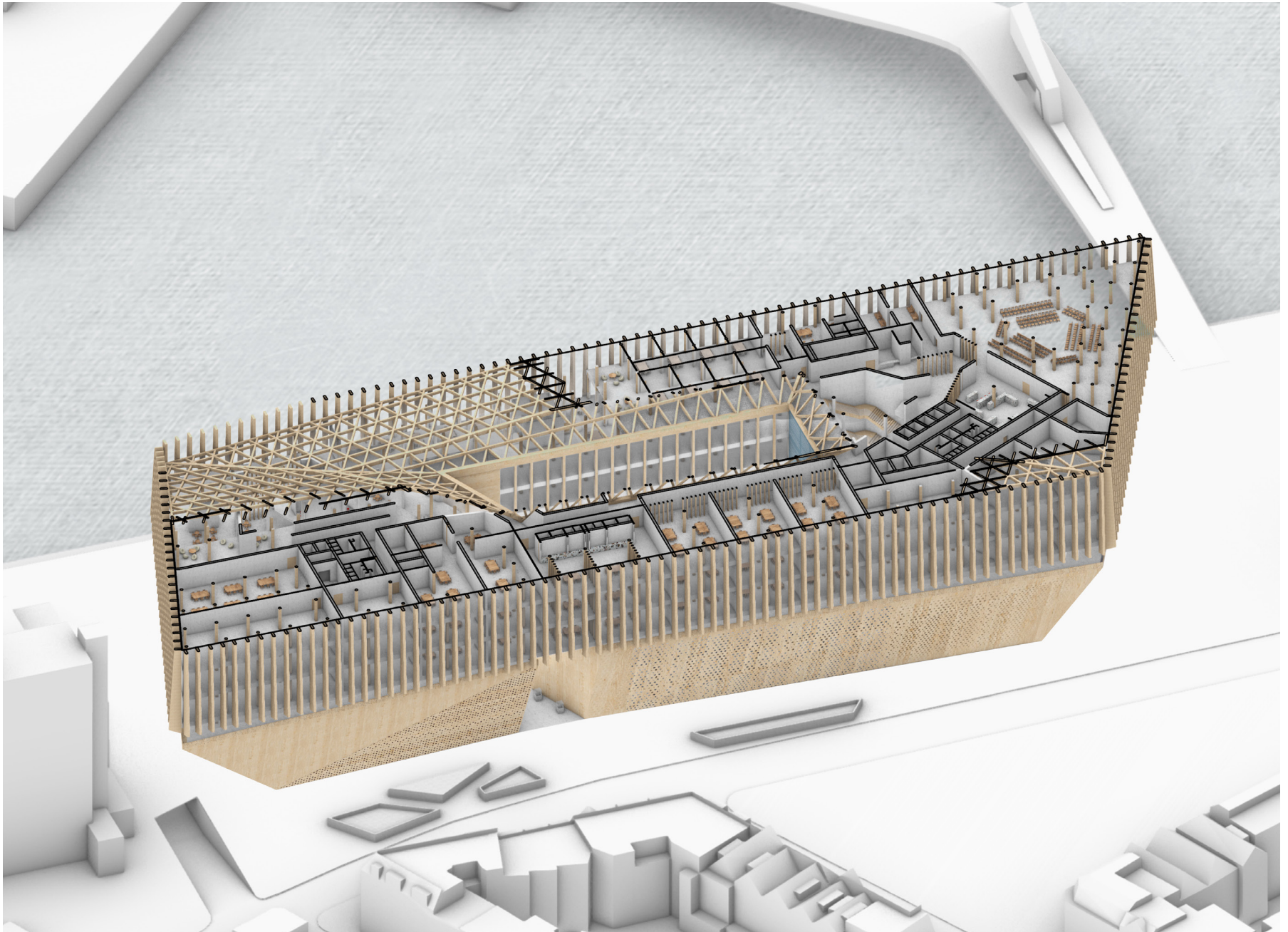


## AXONOMETRIC



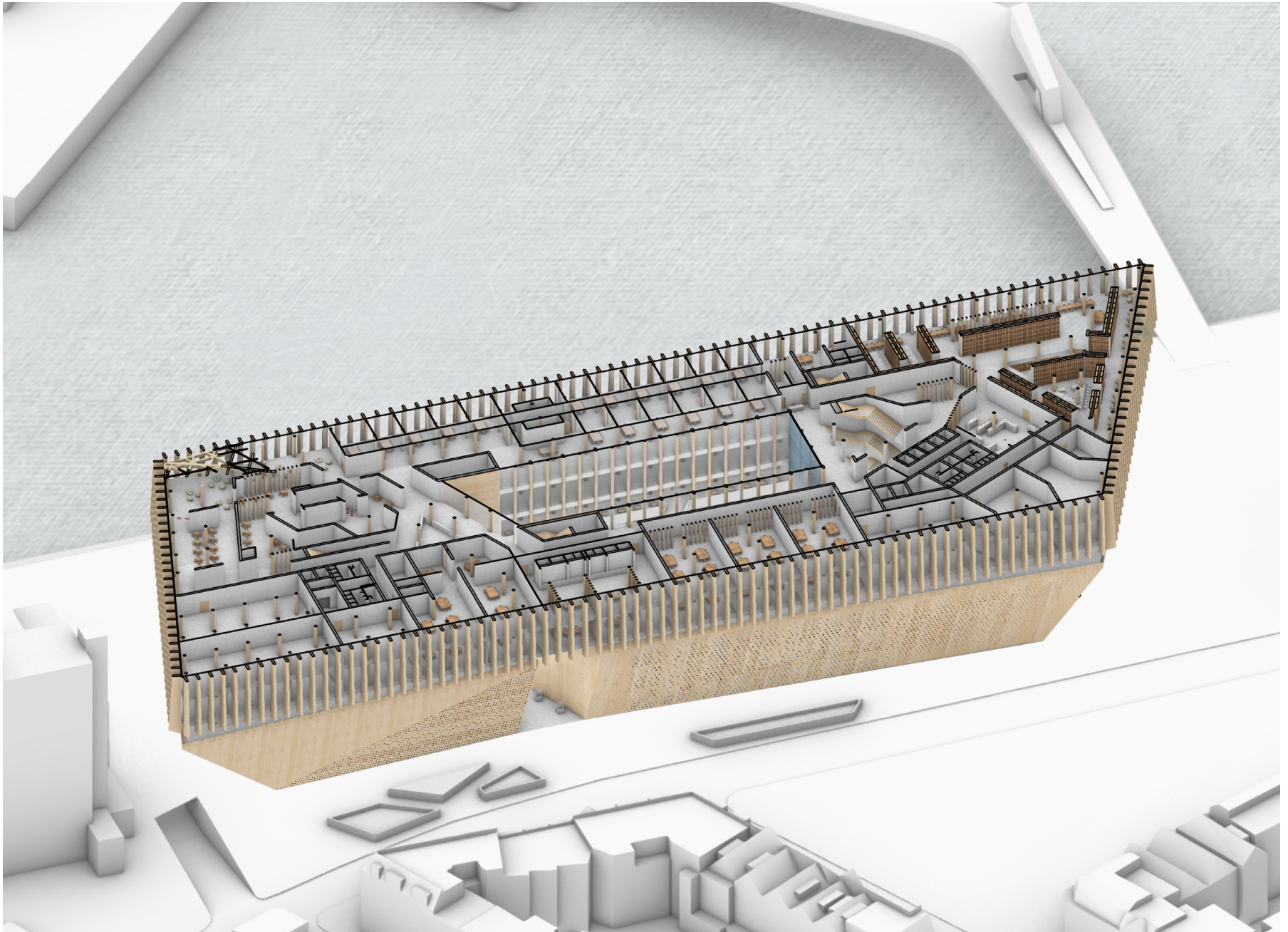


## AXONOMETRIC



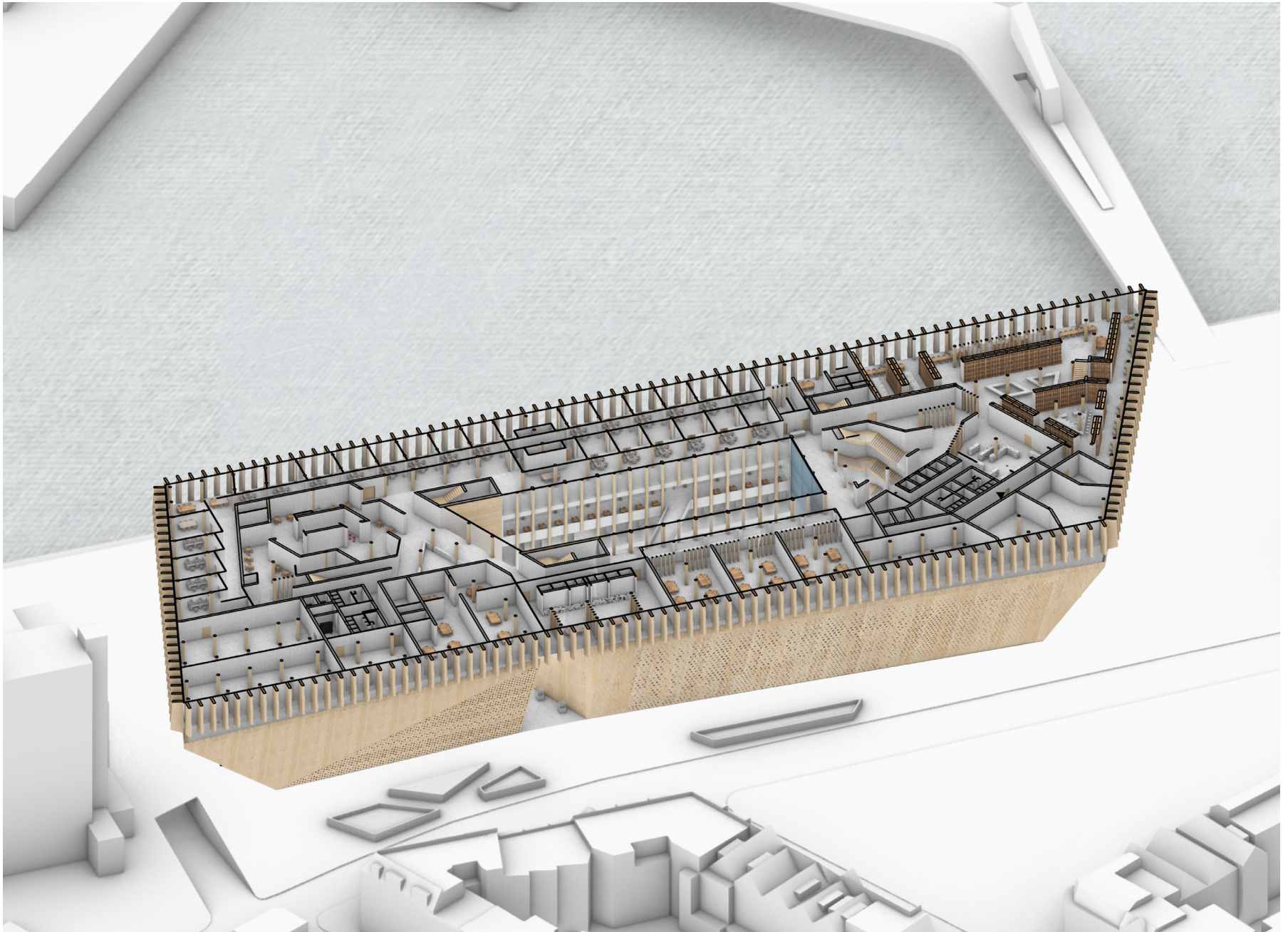


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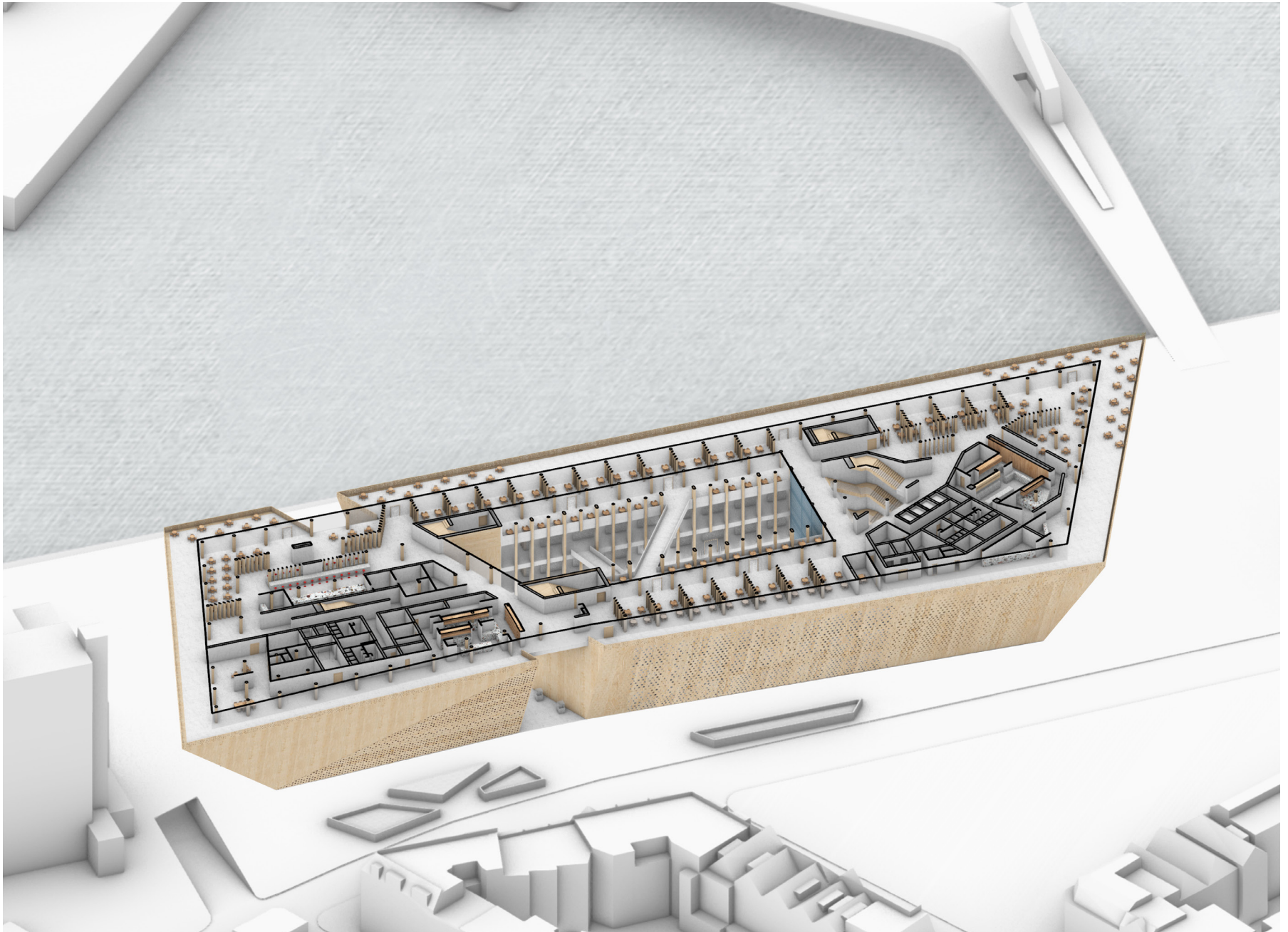


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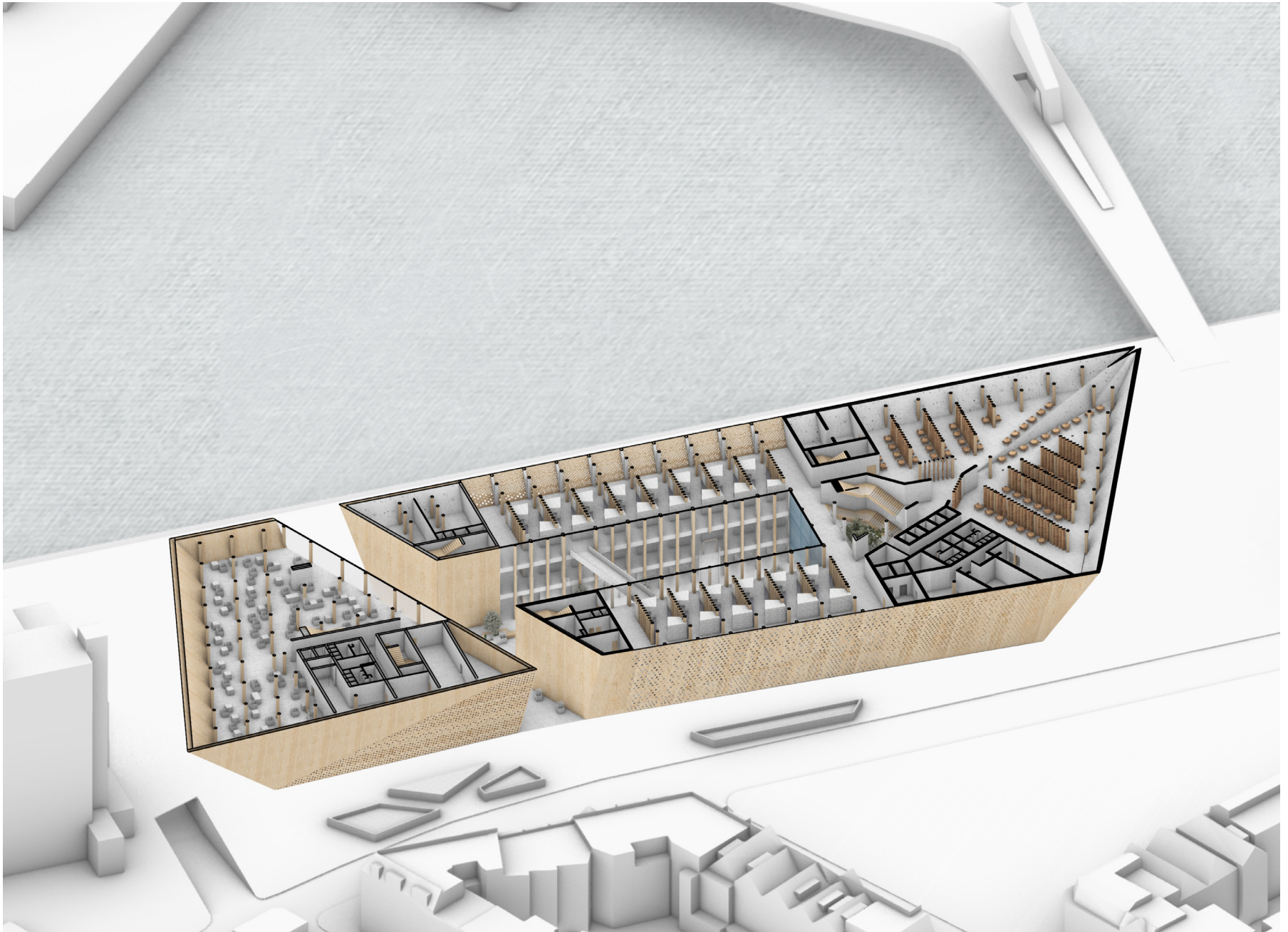


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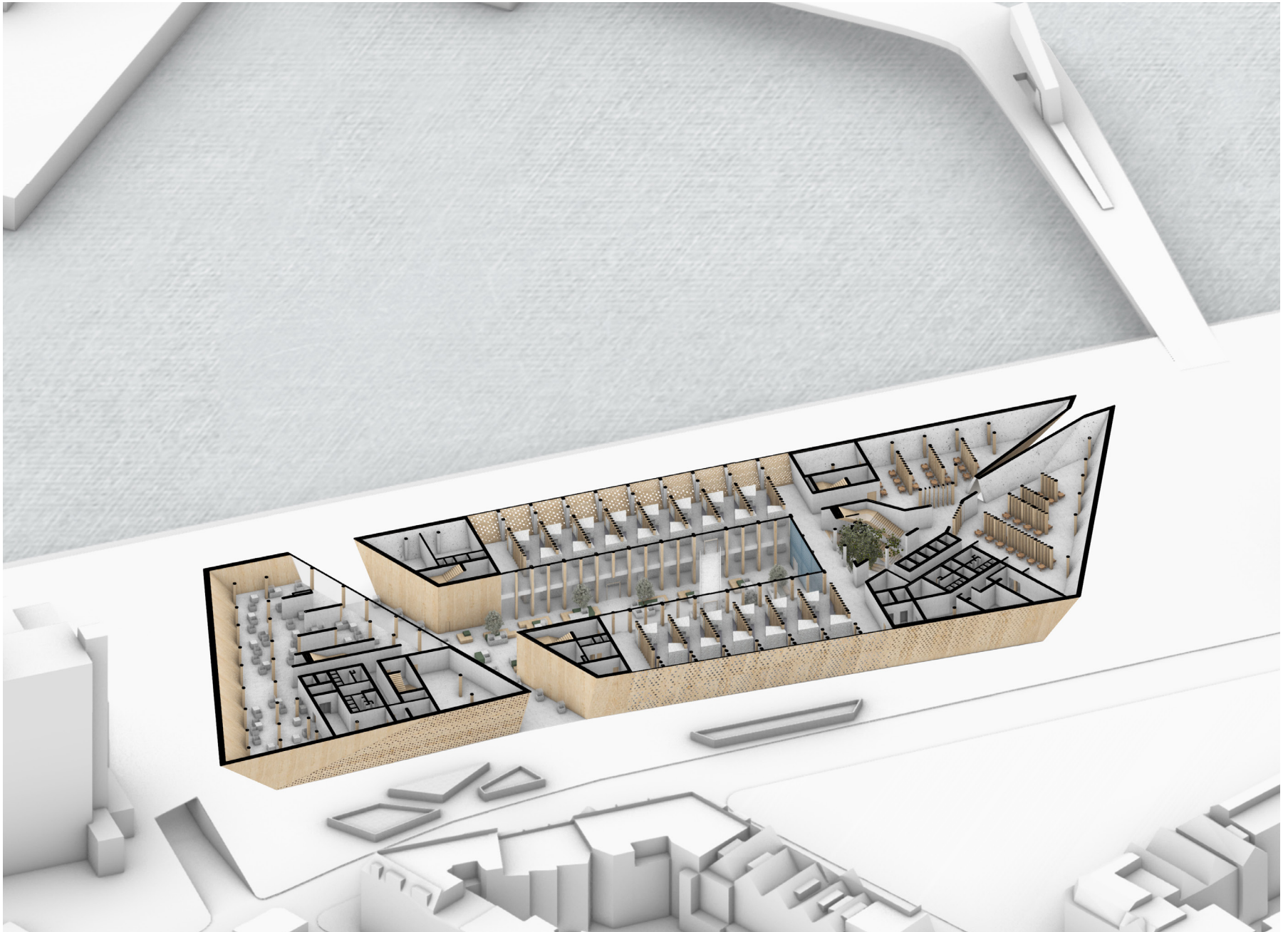


## AXONOMETRIC



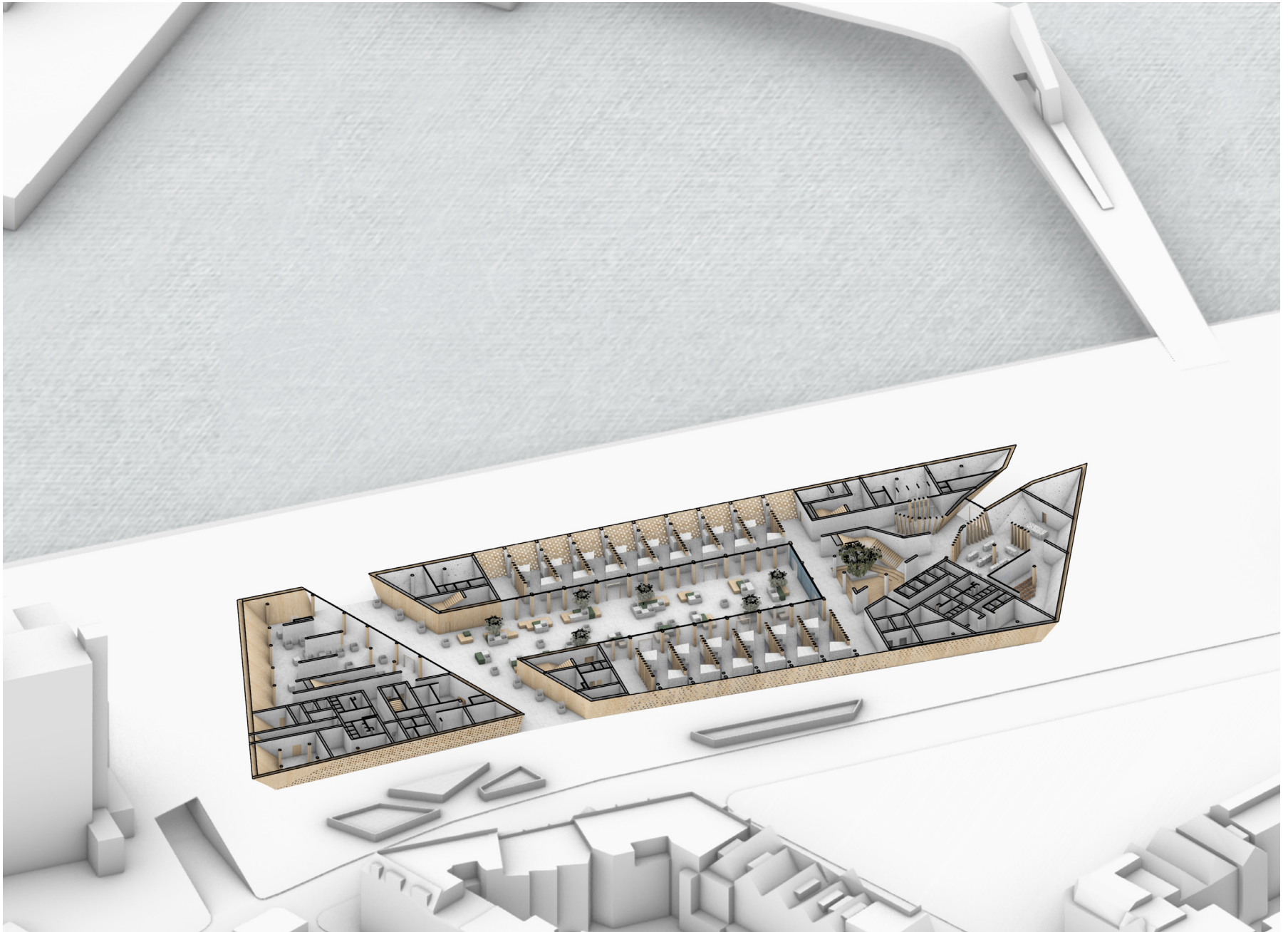


# AXONOMETRIC



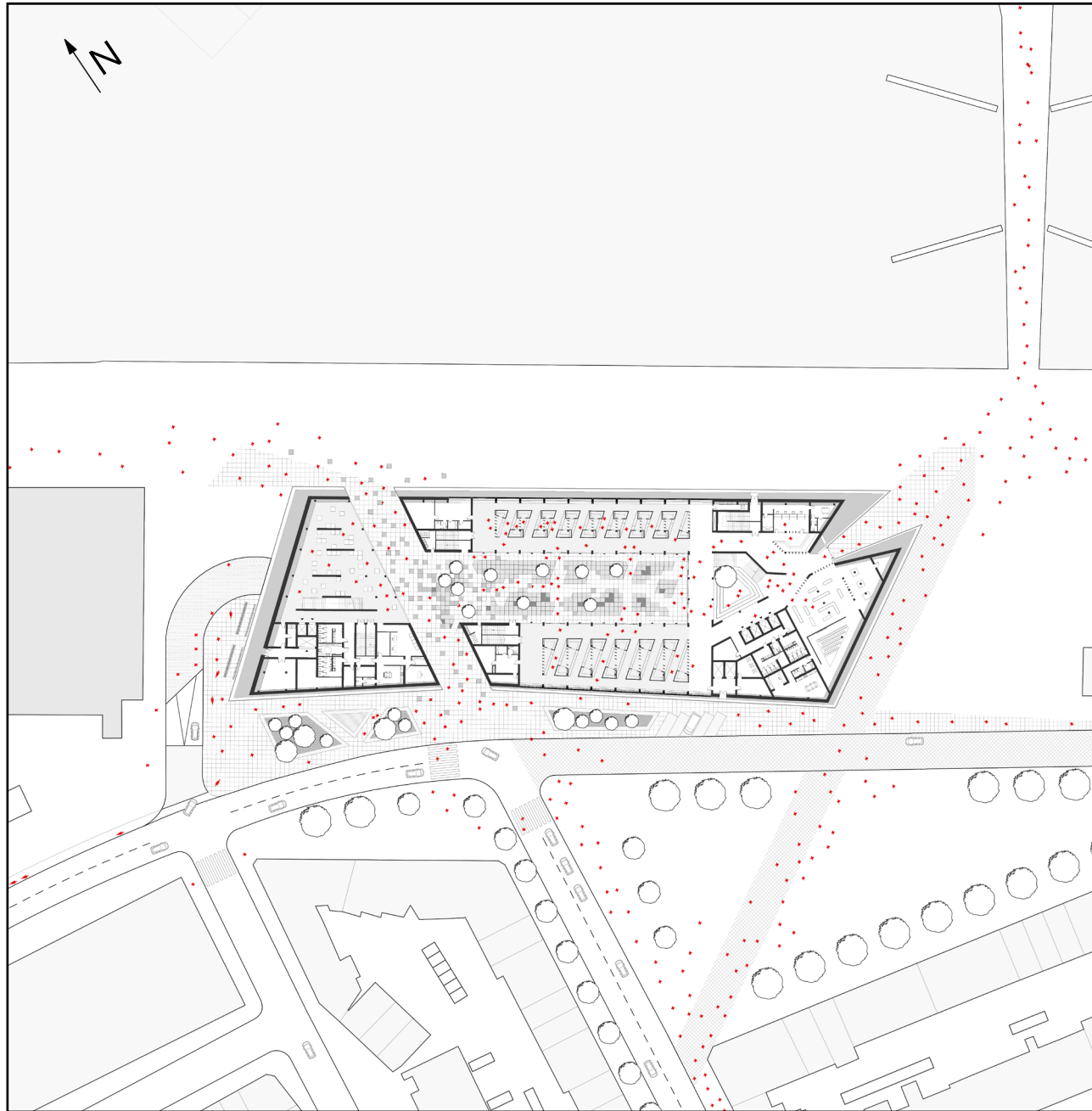


# AXONOMETRIC



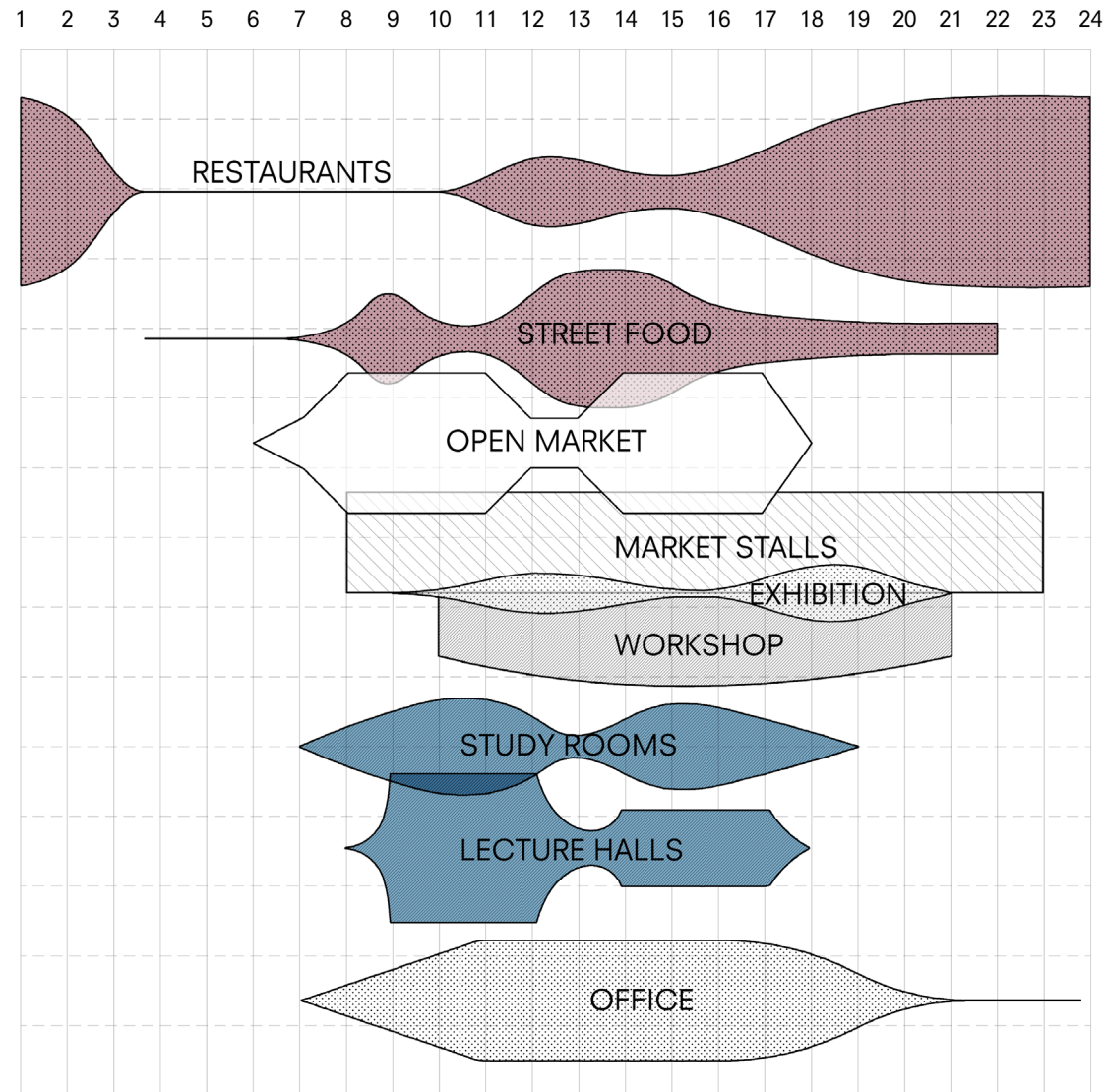


## URBAN IMPLEMENTATION



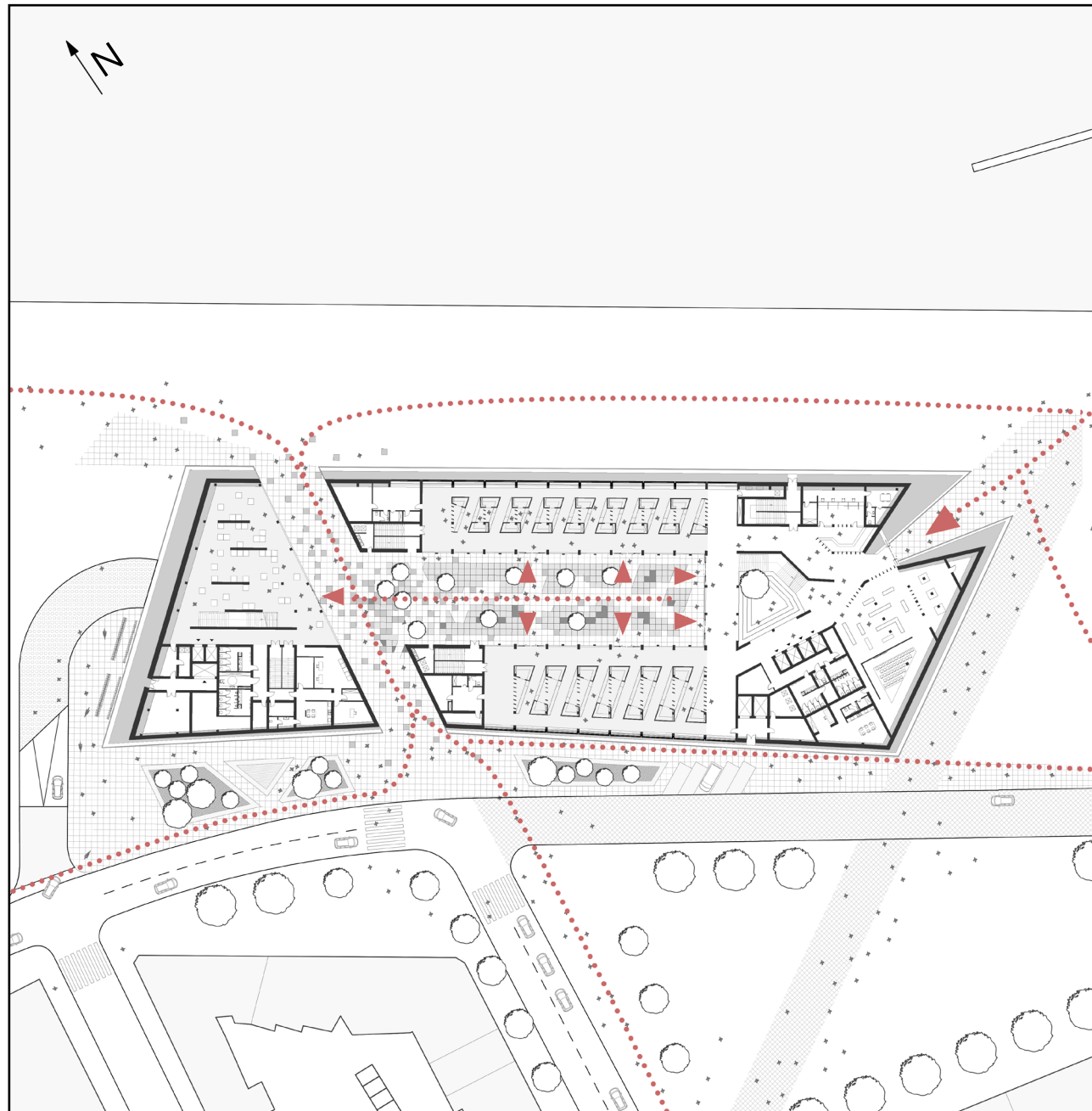


# TIMELINE





## BUILDING APPROACH



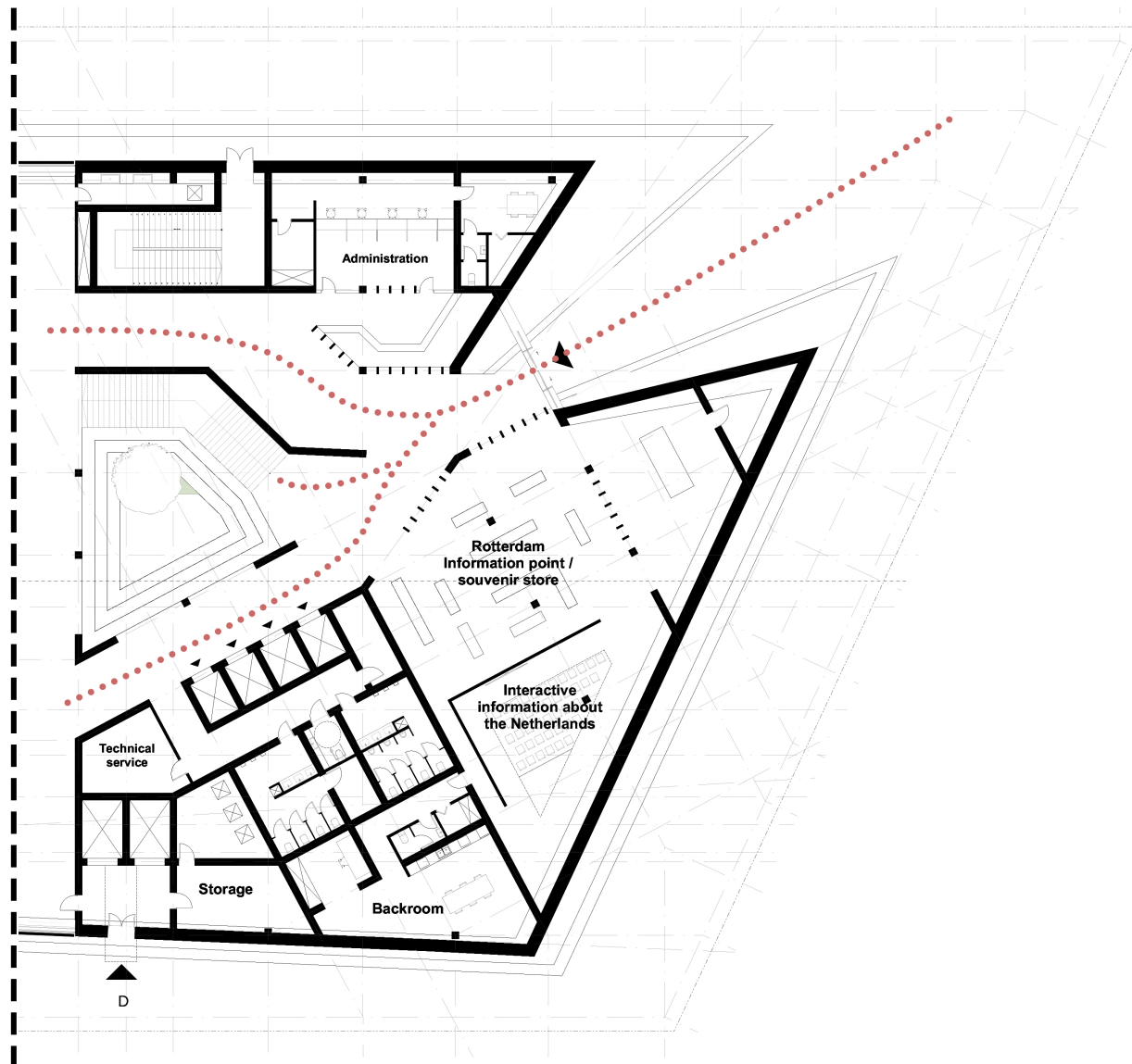


## FRONT ENTRANCE



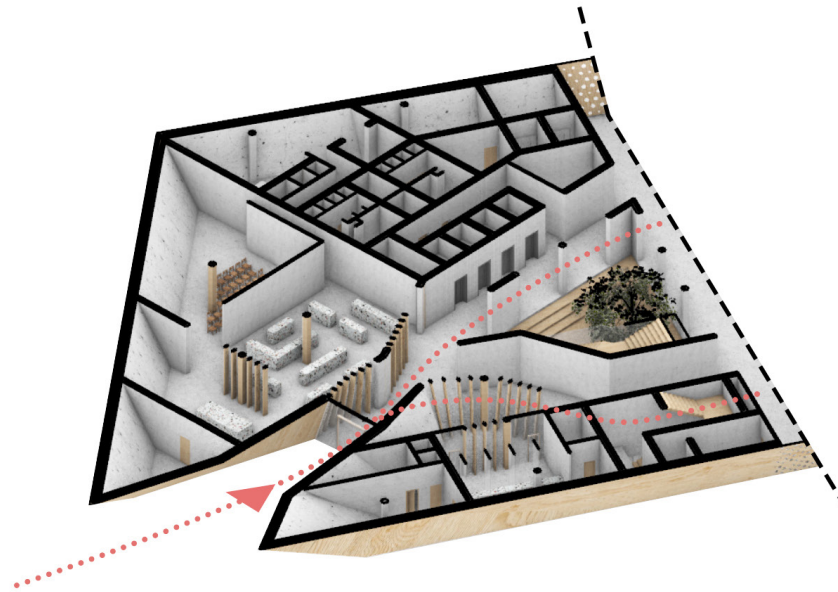


## FRONT ENTRANCE





## FRONT ENTRANCE





## MAIN COMMUNICATION BELT





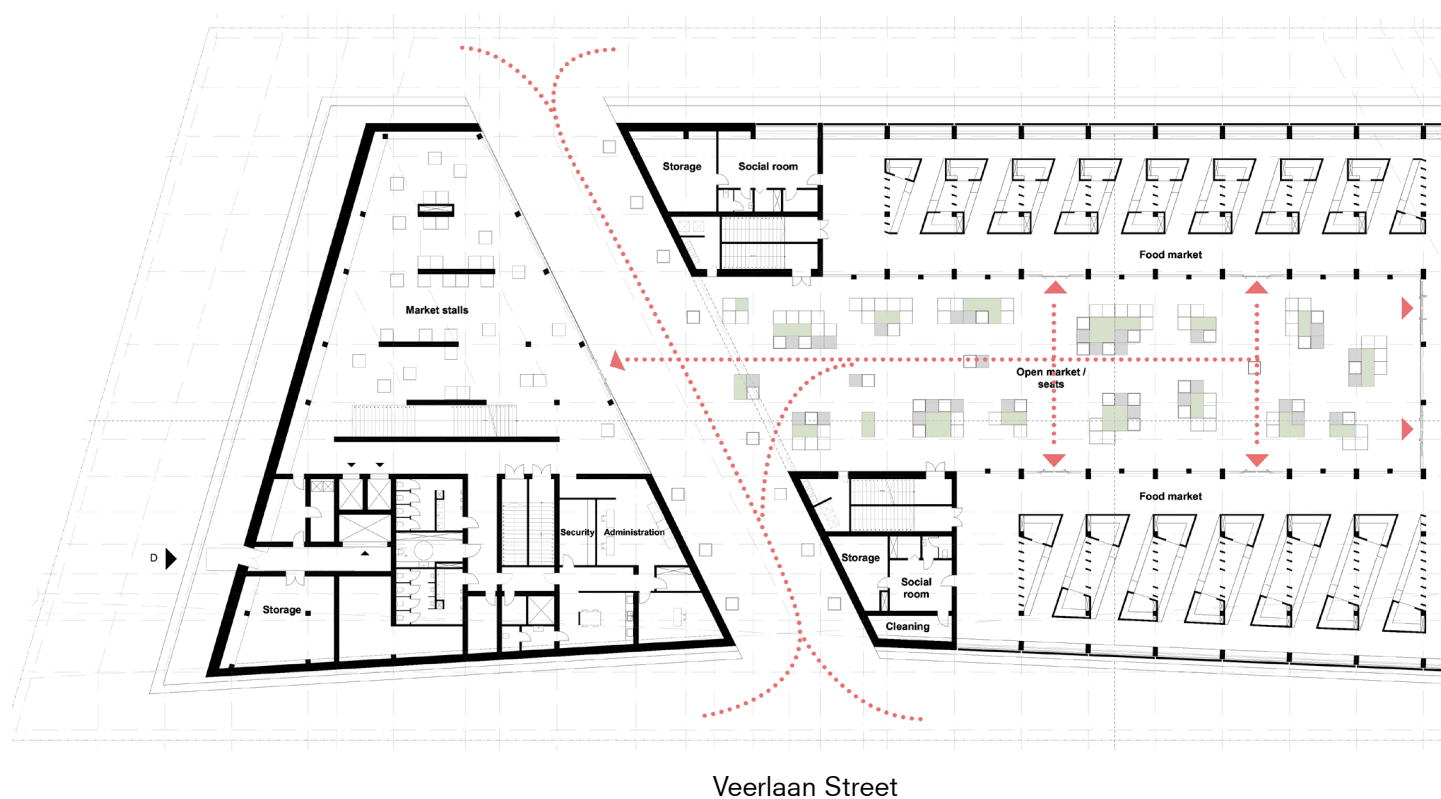
## MIDDLE ENTRANCE





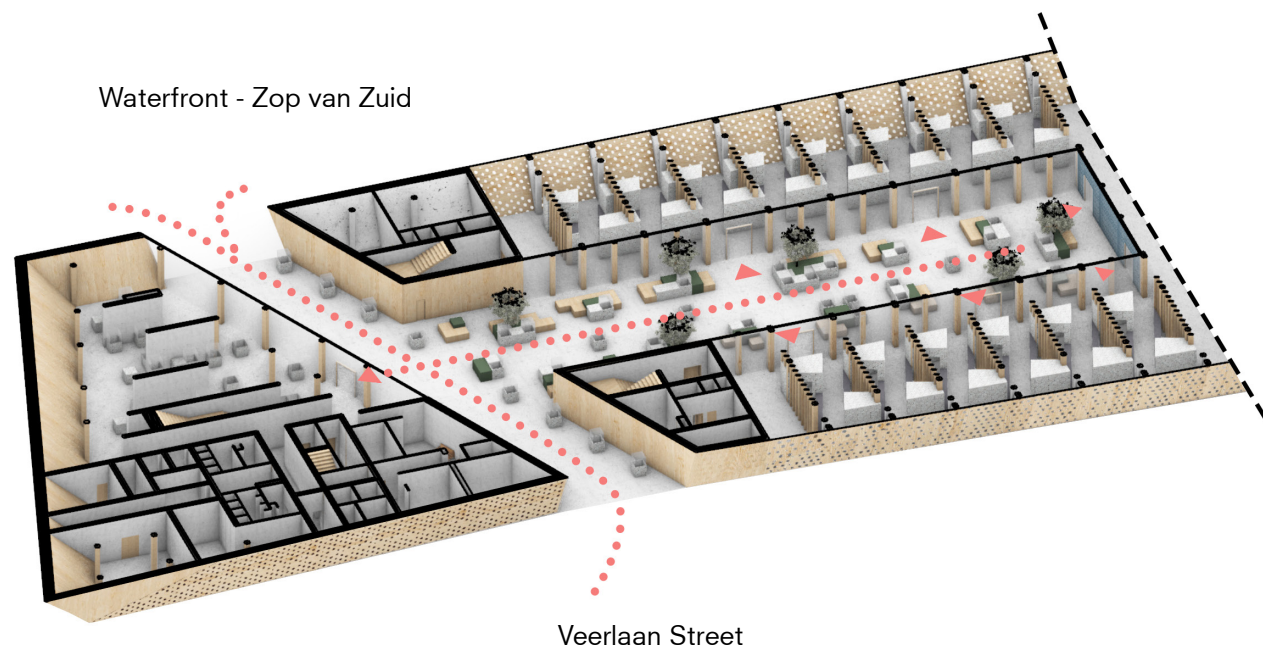
## MIDDLE ENTRANCE

Waterfront - Zop van Zuid





## MIDDLE ENTRANCE



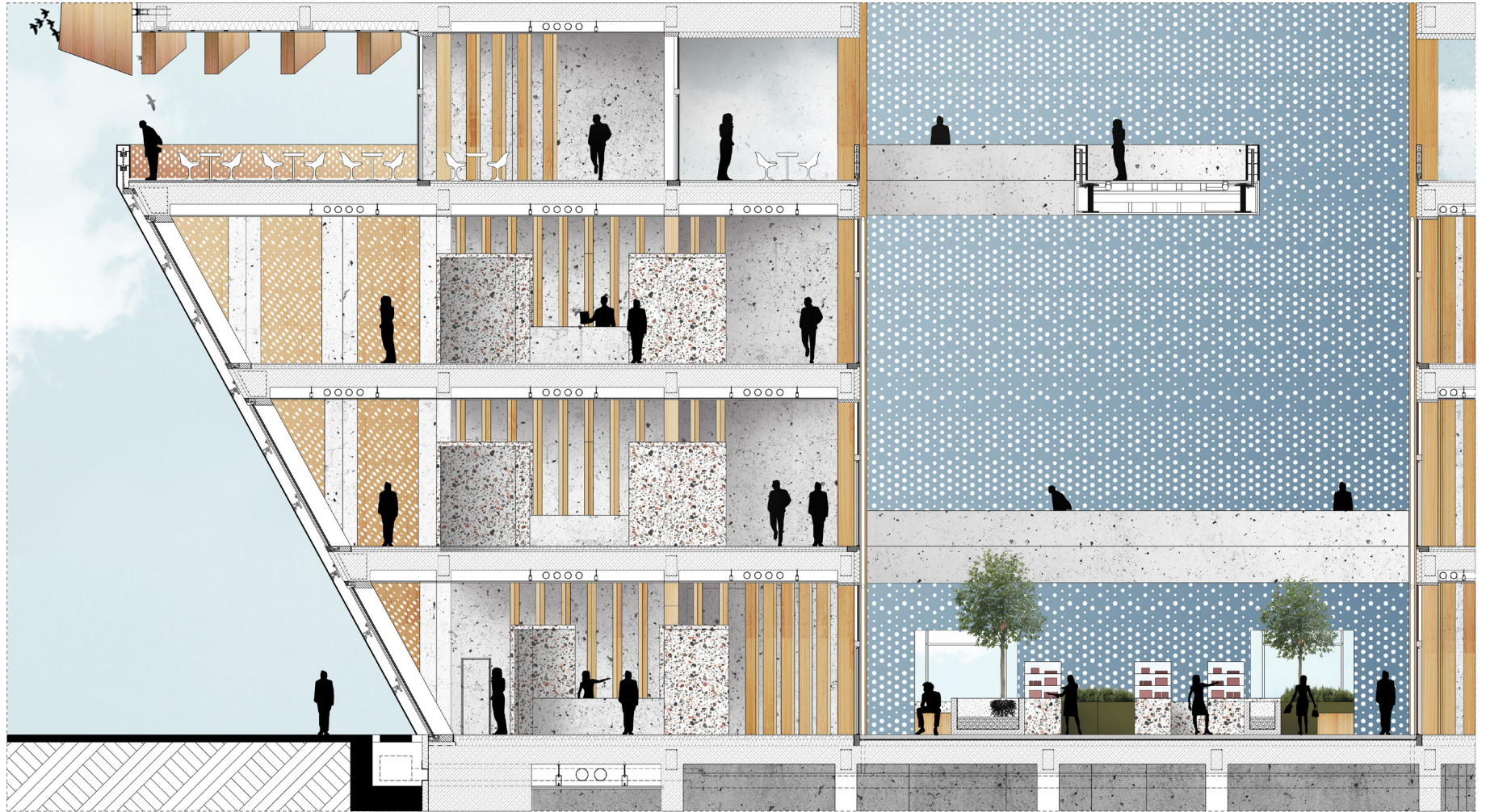


# MARKET



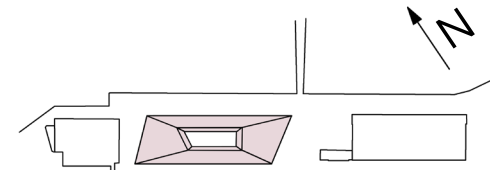
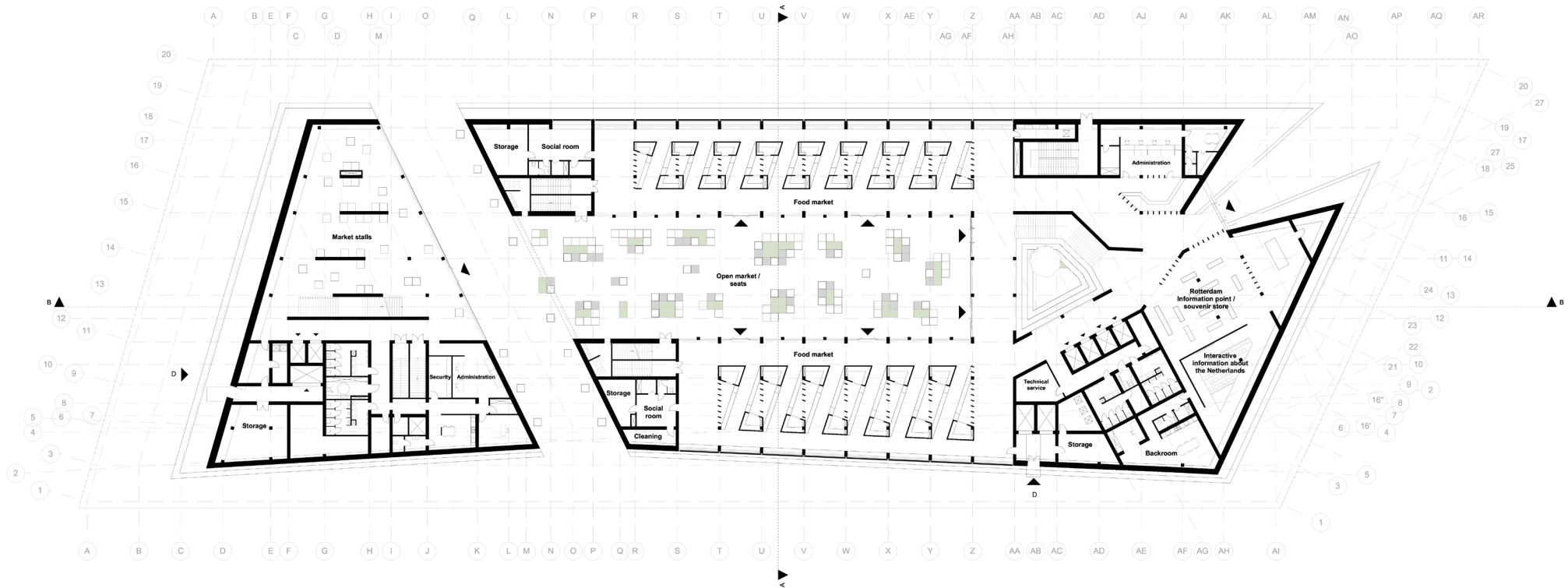


# MARKET



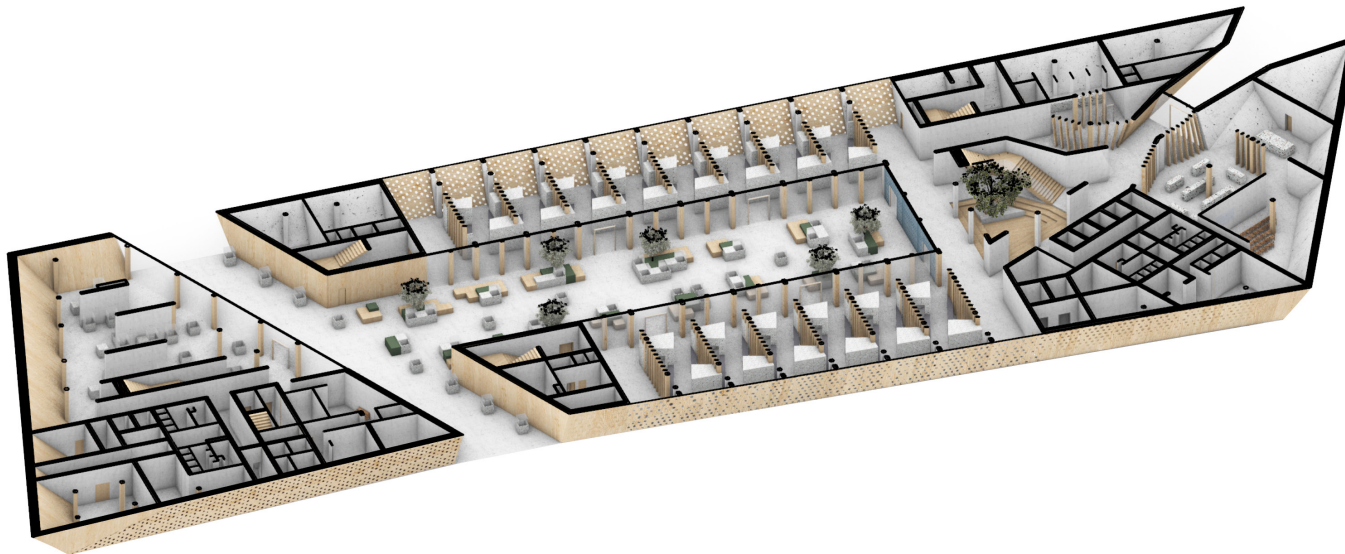


# GROUND FLOOR MARKET





## GROUND FLOOR MARKET





# FOOD MARKET





## OPEN ATRIUM





## INTERIOR - ATRIUM



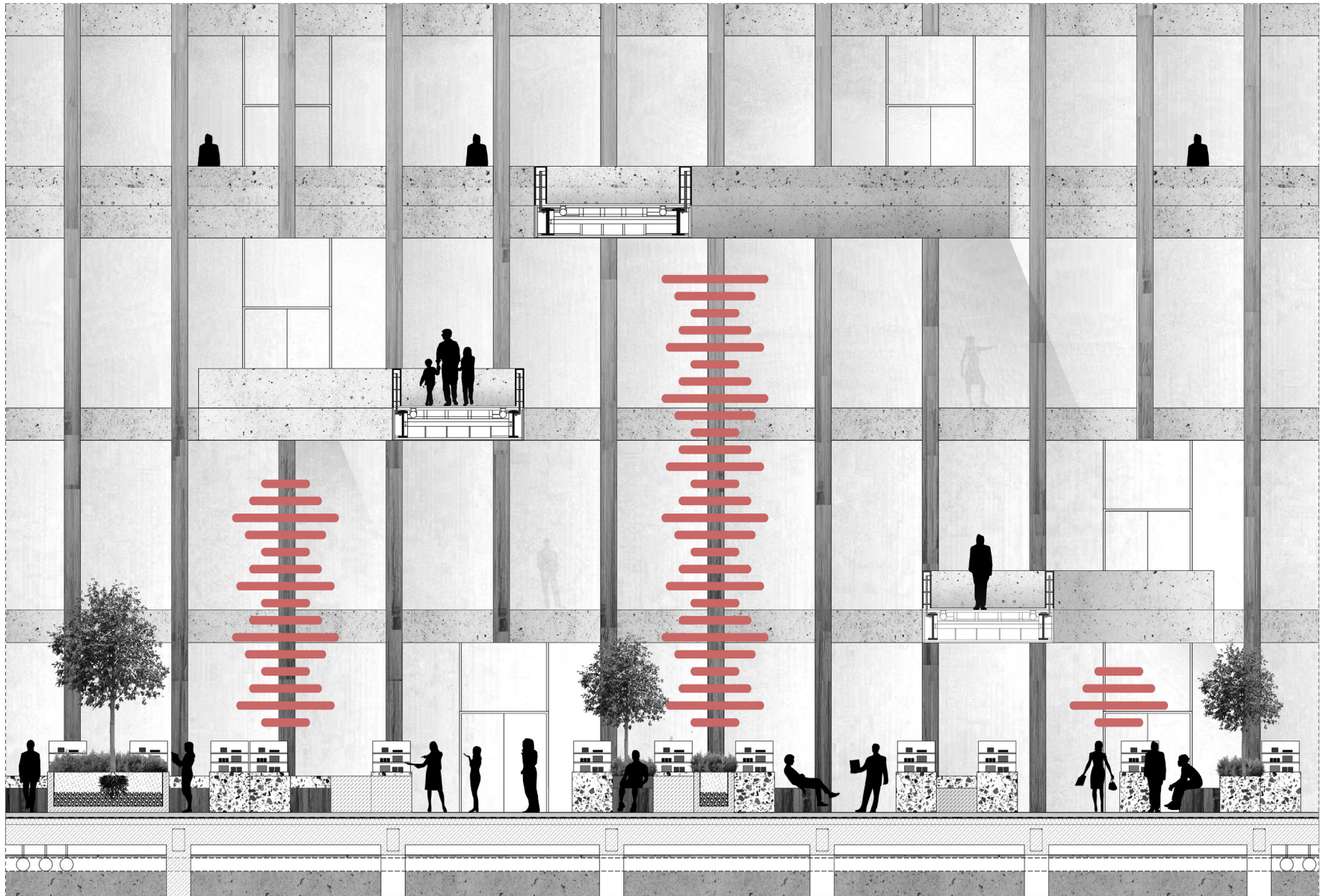


## BRIDGE - LIGHT



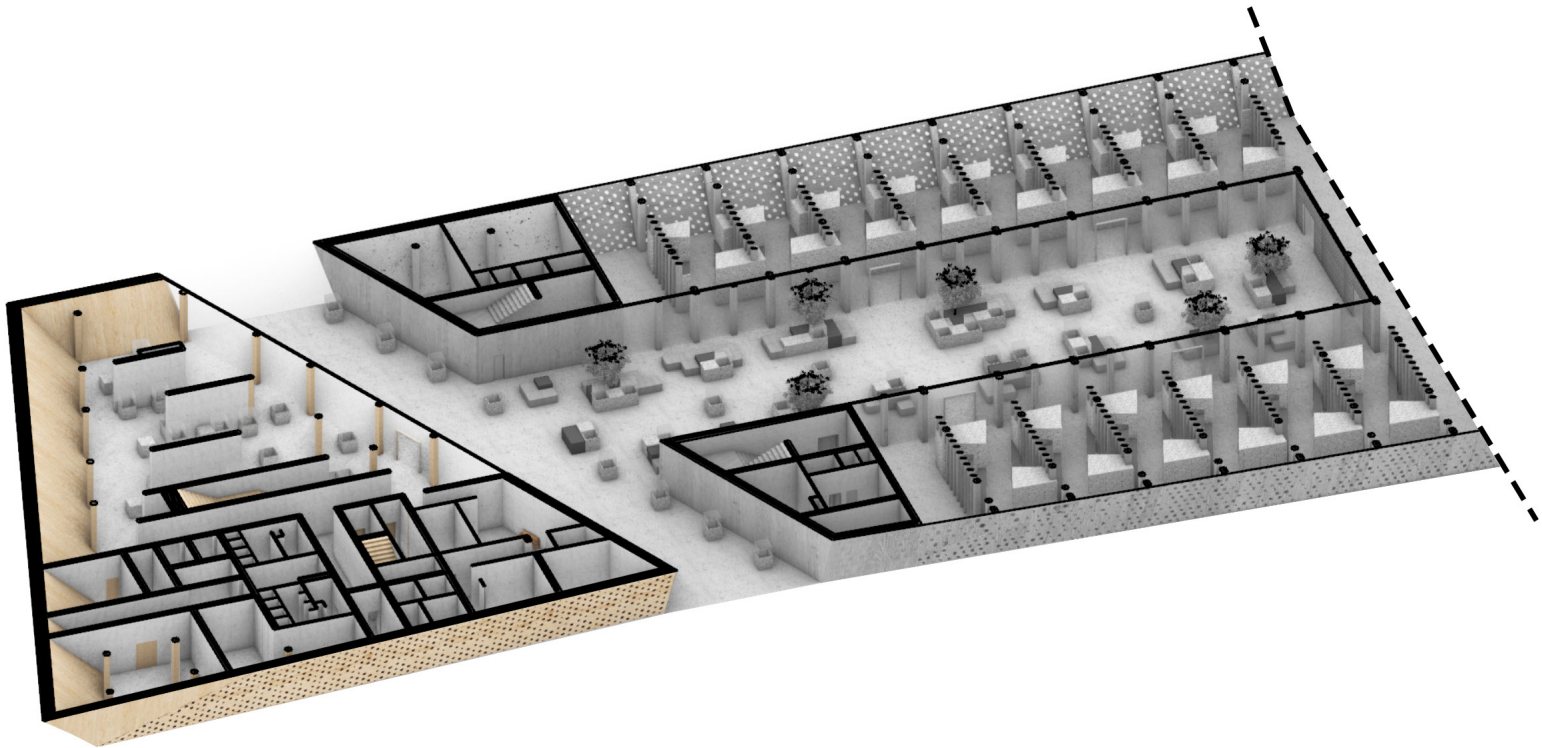


## BRIDGE - SOUND BARRIER



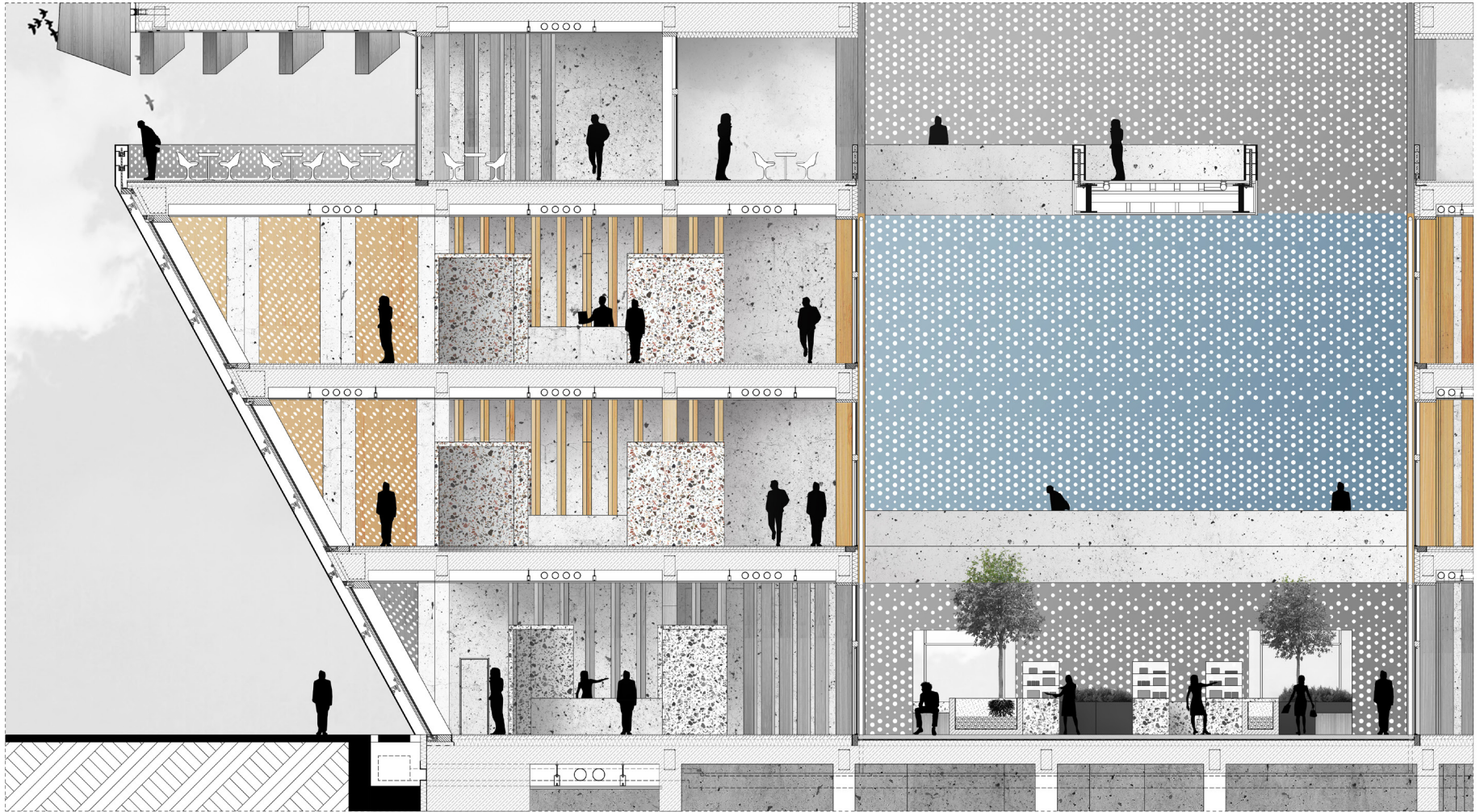


## GROUND FLOOR MARKET



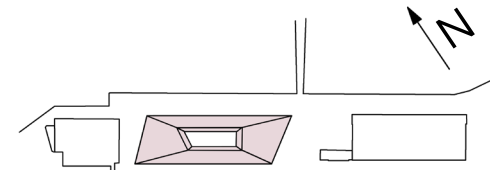
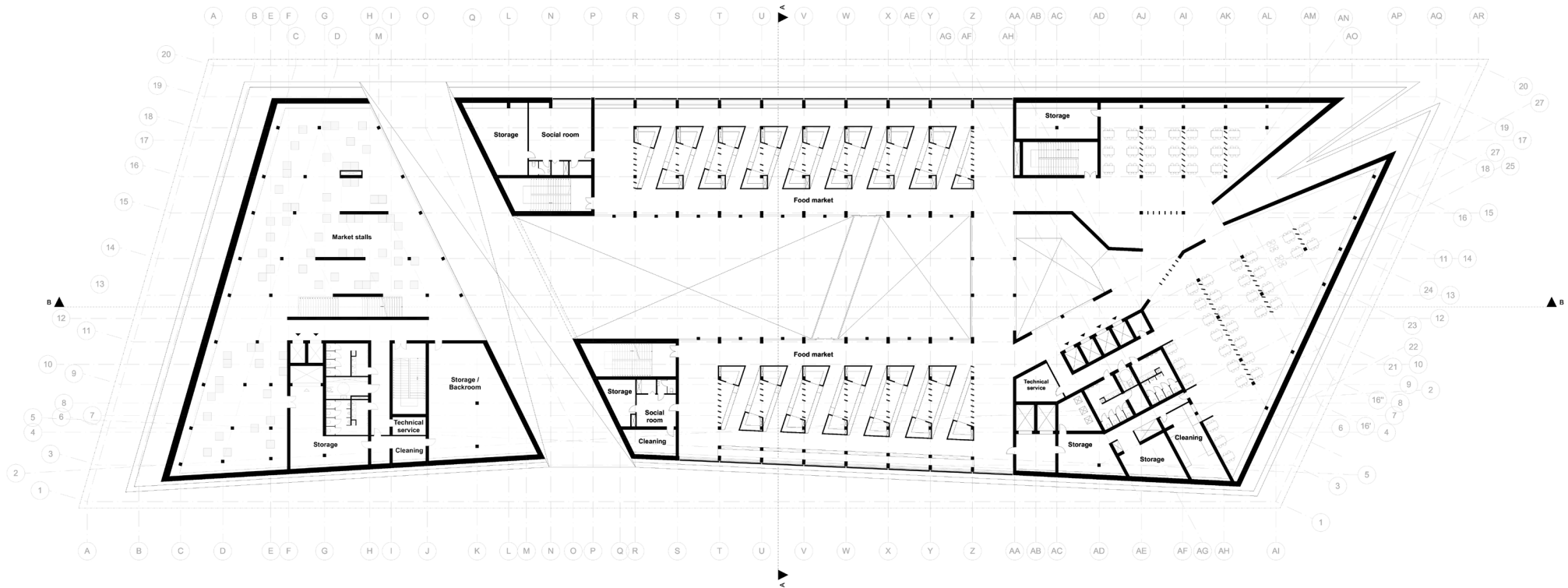


## 1st & 2nd FLOOR MARKET



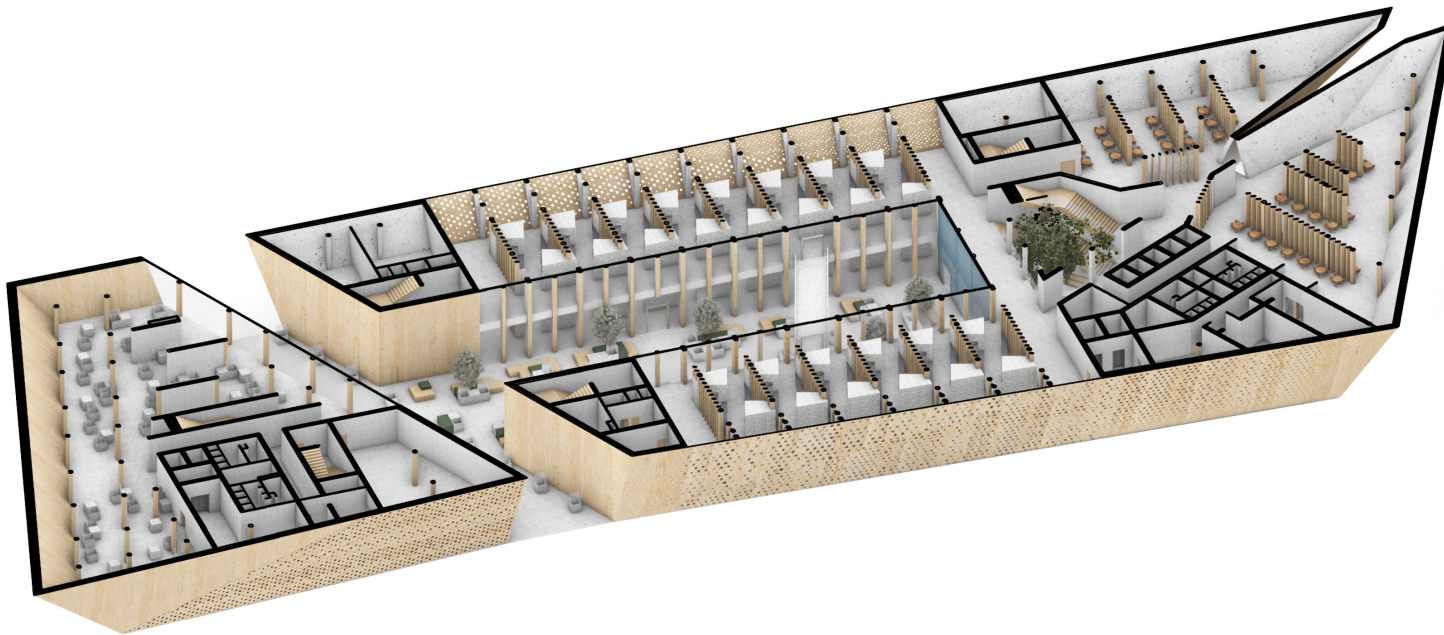


# 1st & 2nd FLOOR MARKET



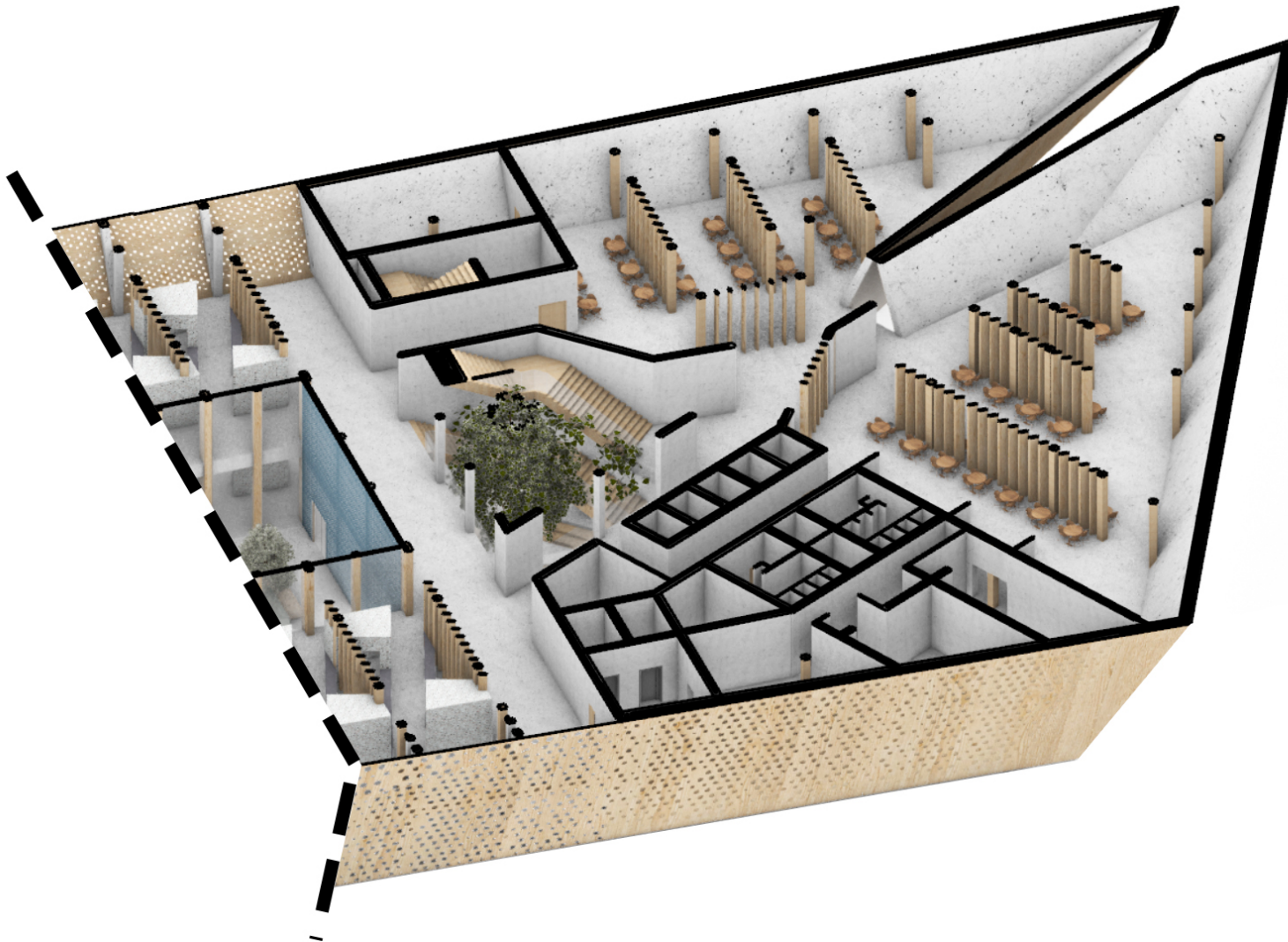


## 1st & 2nd FLOOR MARKET



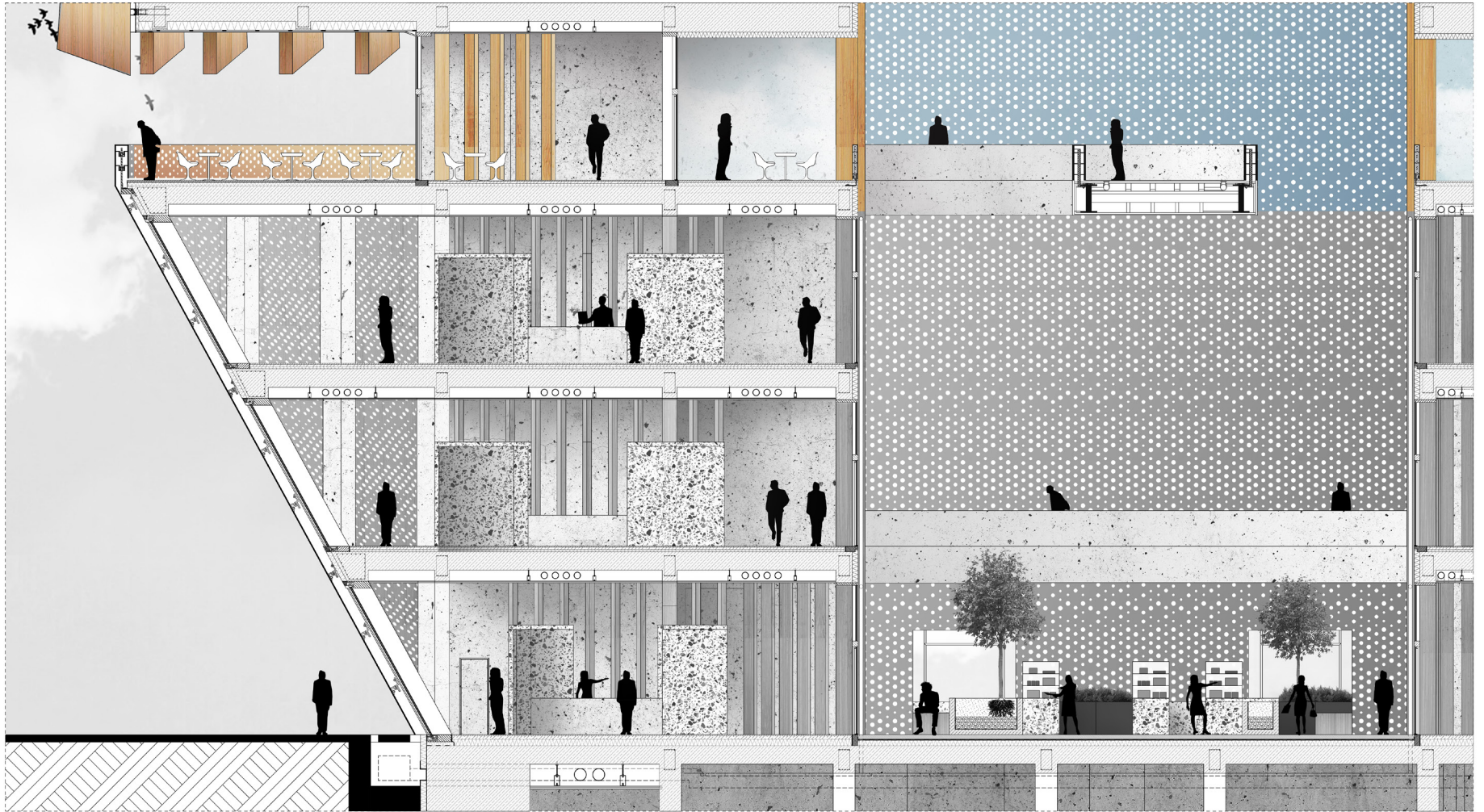


## 1st & 2nd FLOOR MARKET SEATS



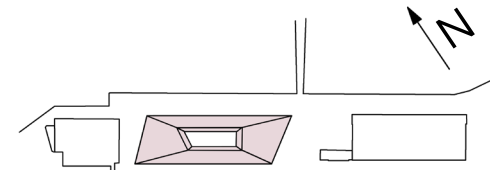
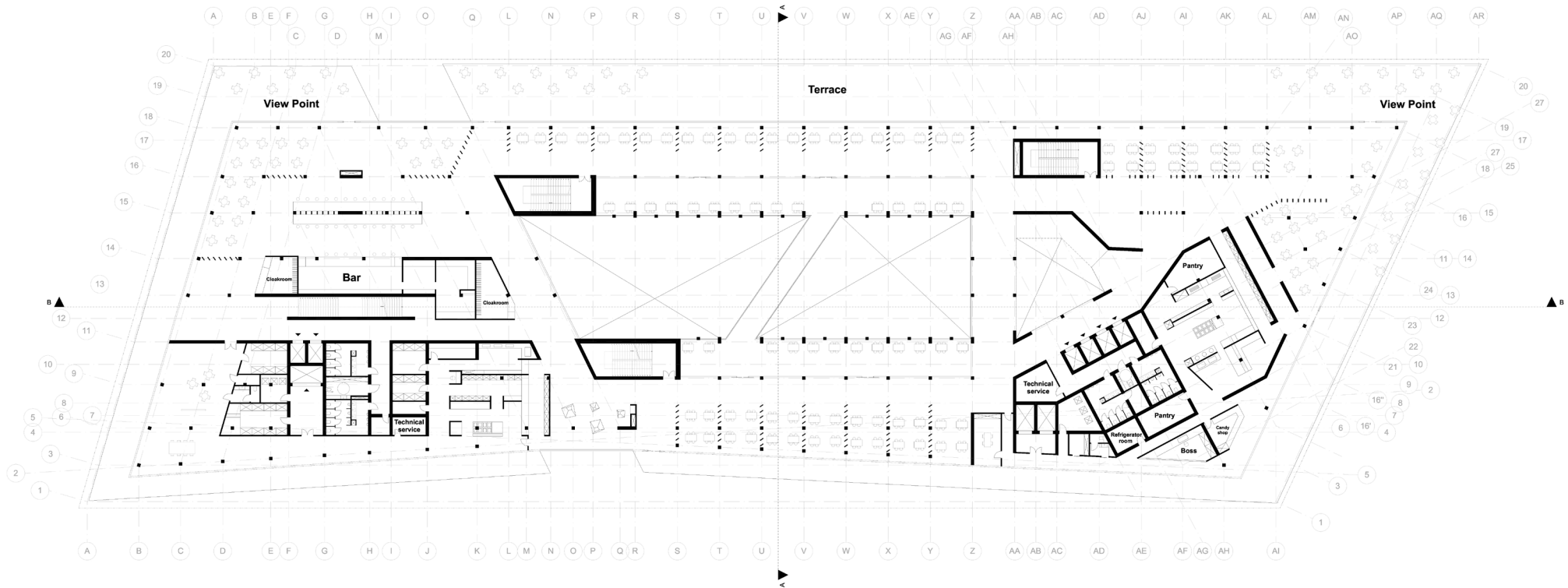


### 3rd FLOOR RESTAURANT



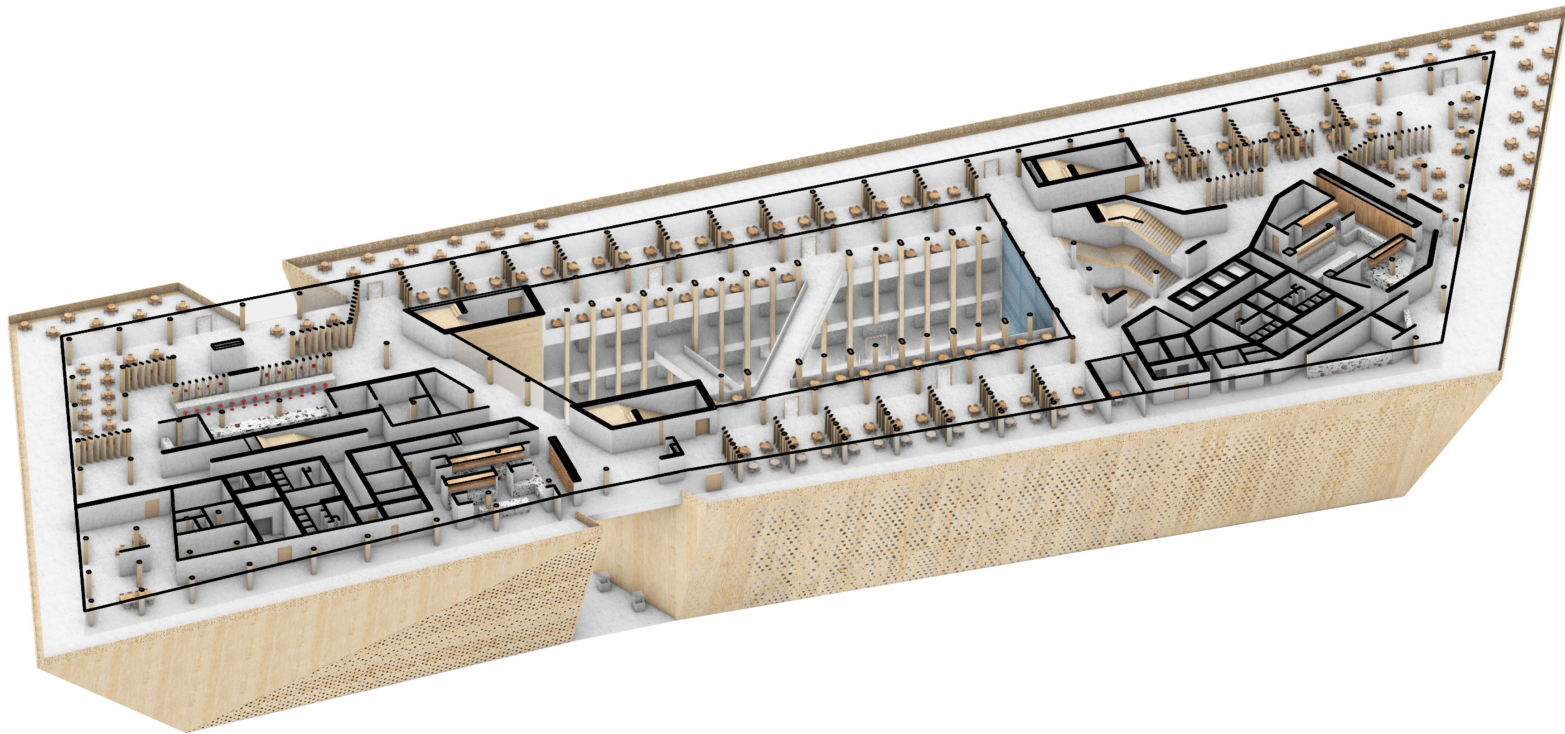


# 3rd FLOOR RESTAURANT





## 3rd FLOOR RESTAURANT





# RESTAURANT





## BAR





## EXTERNAL TERRACE





**SCHOOL**  
**BUSSINES**  
**IMMIGRANTS**



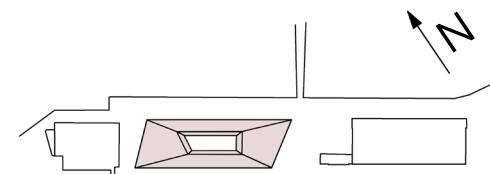
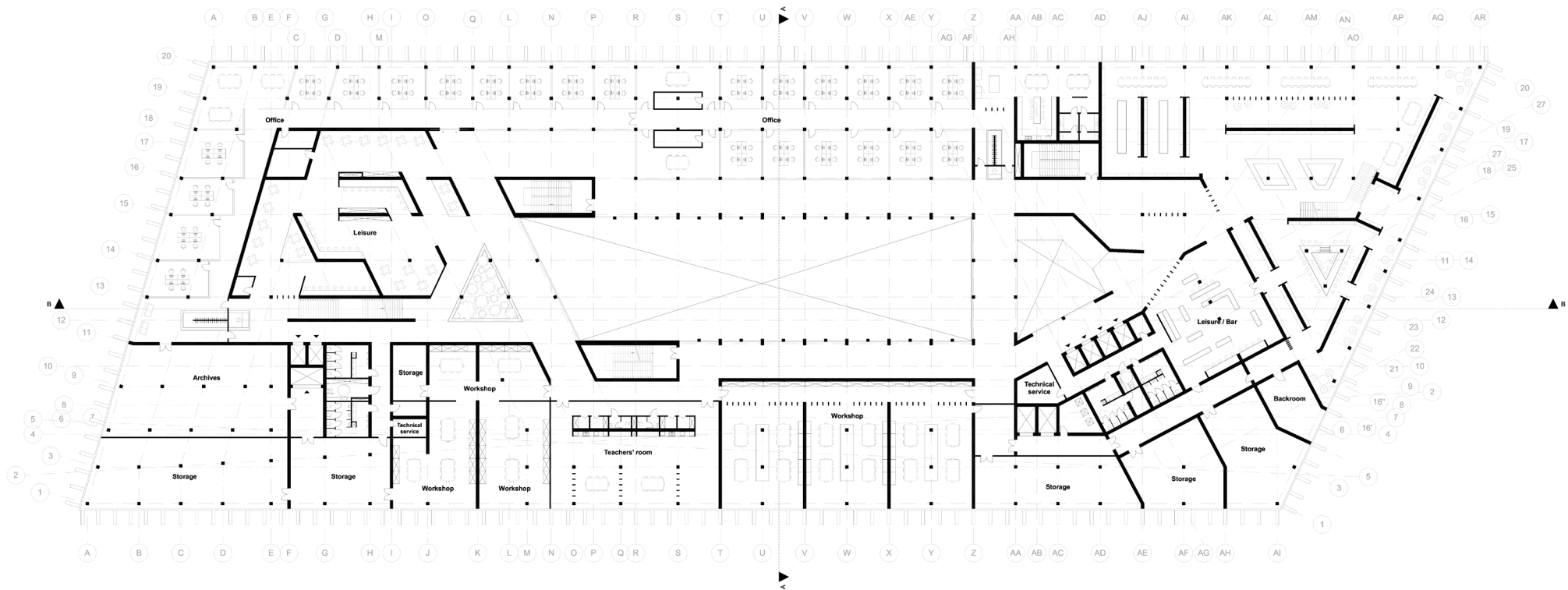


# EDUCATION



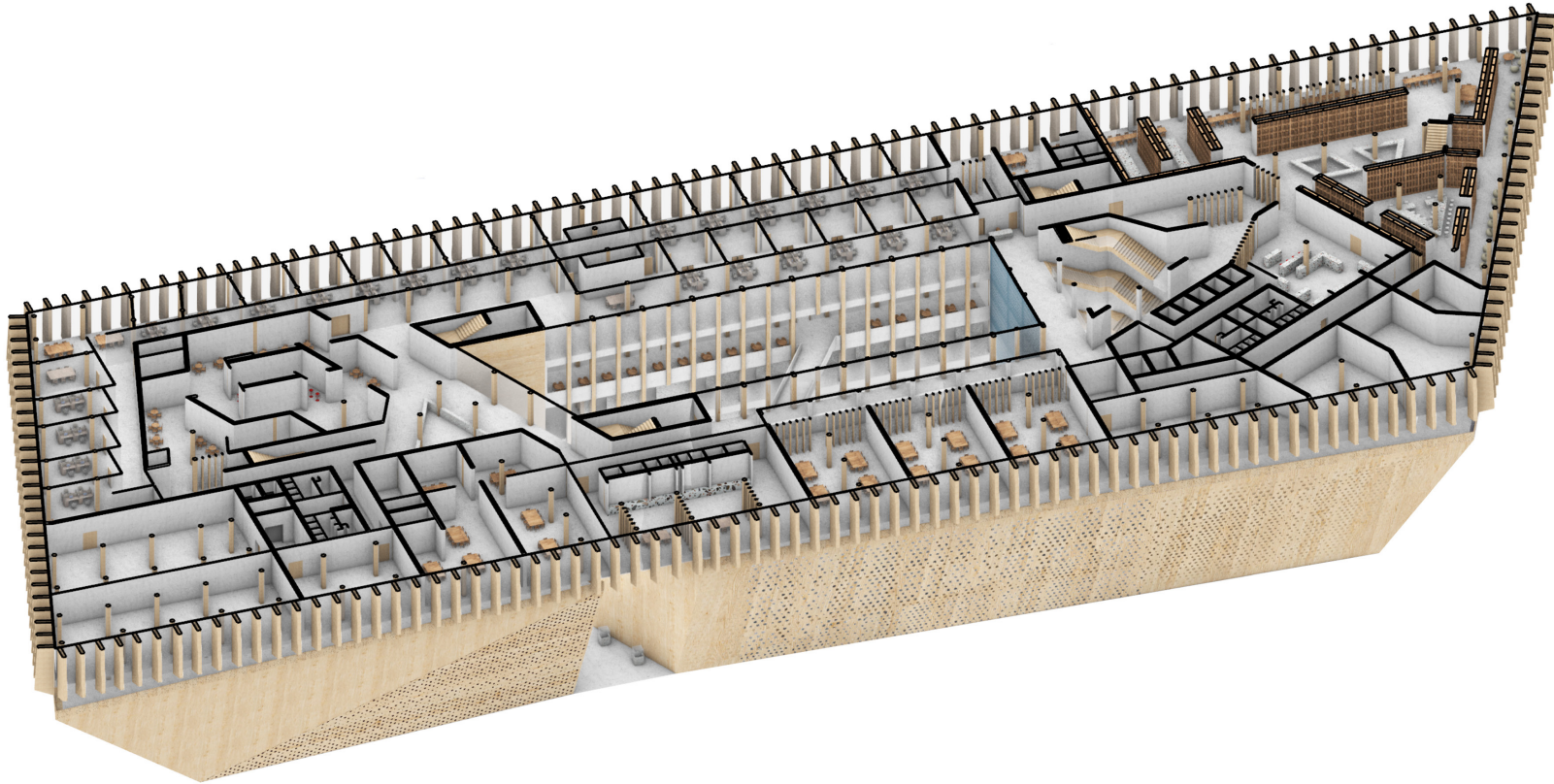


# 4&5th FLOOR EDUCATION



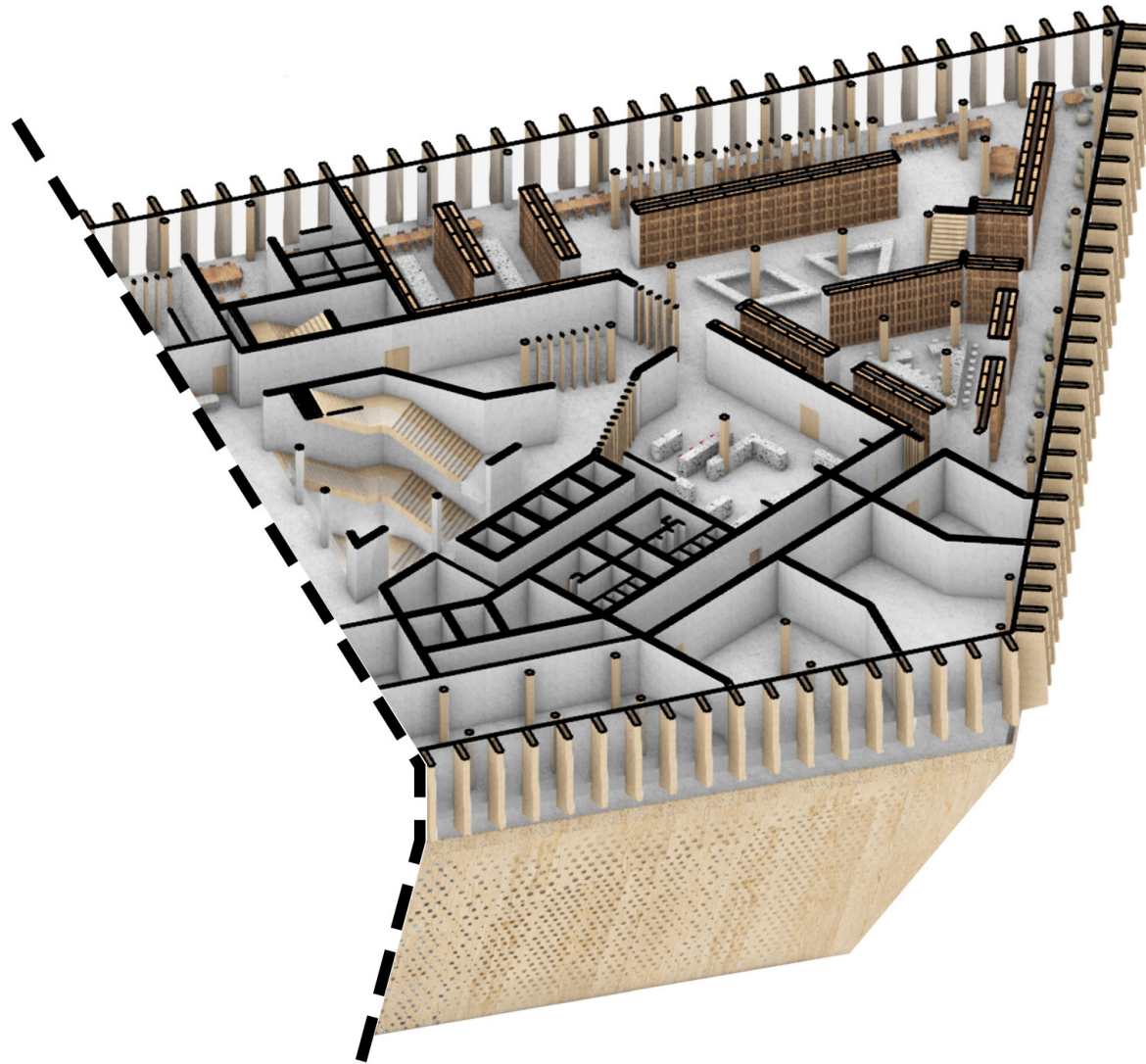


## 4&5th FLOOR EDUCATION



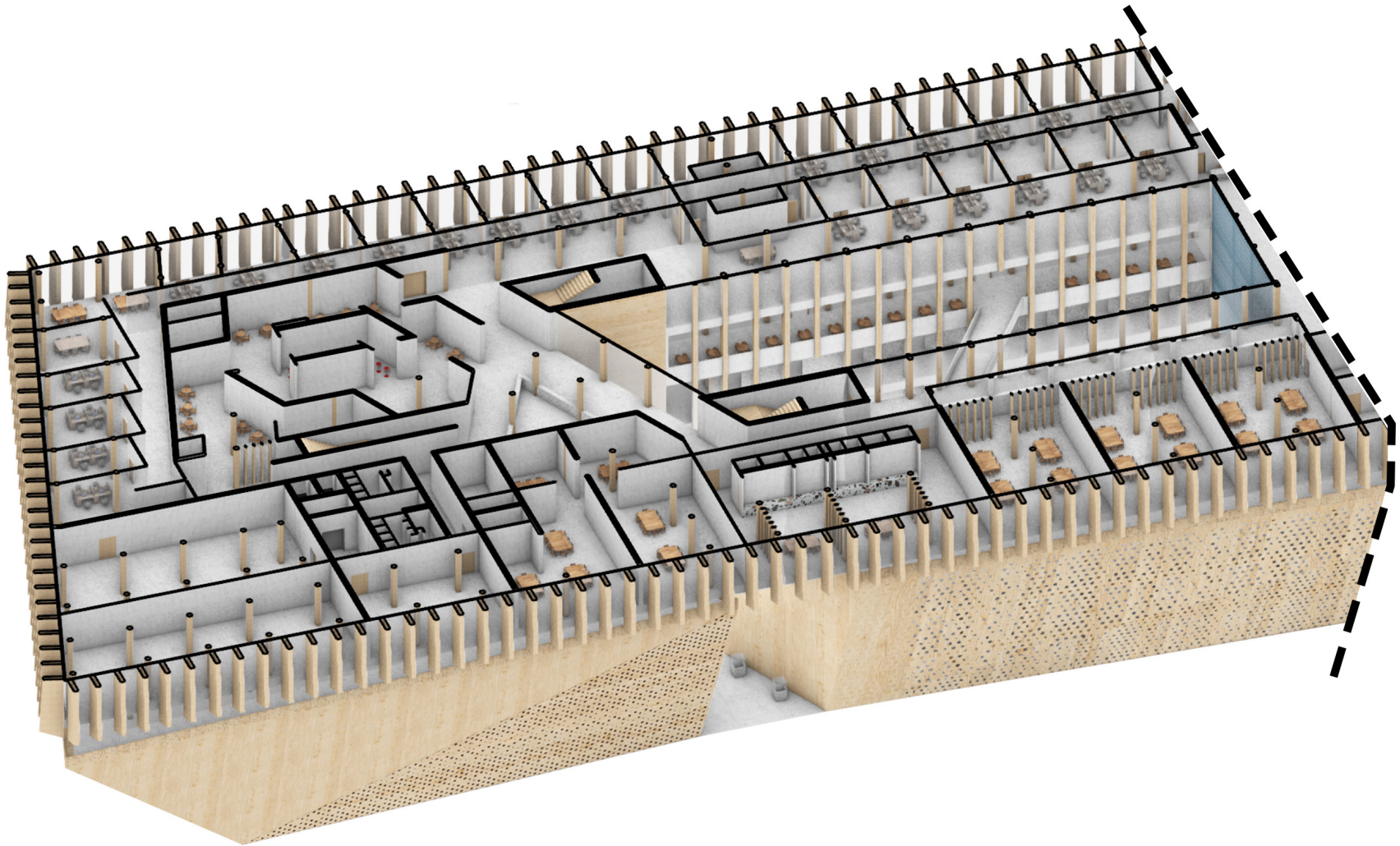


## 4&5th FLOOR LIBRARY



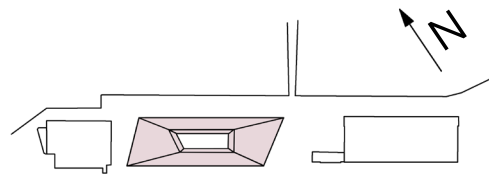
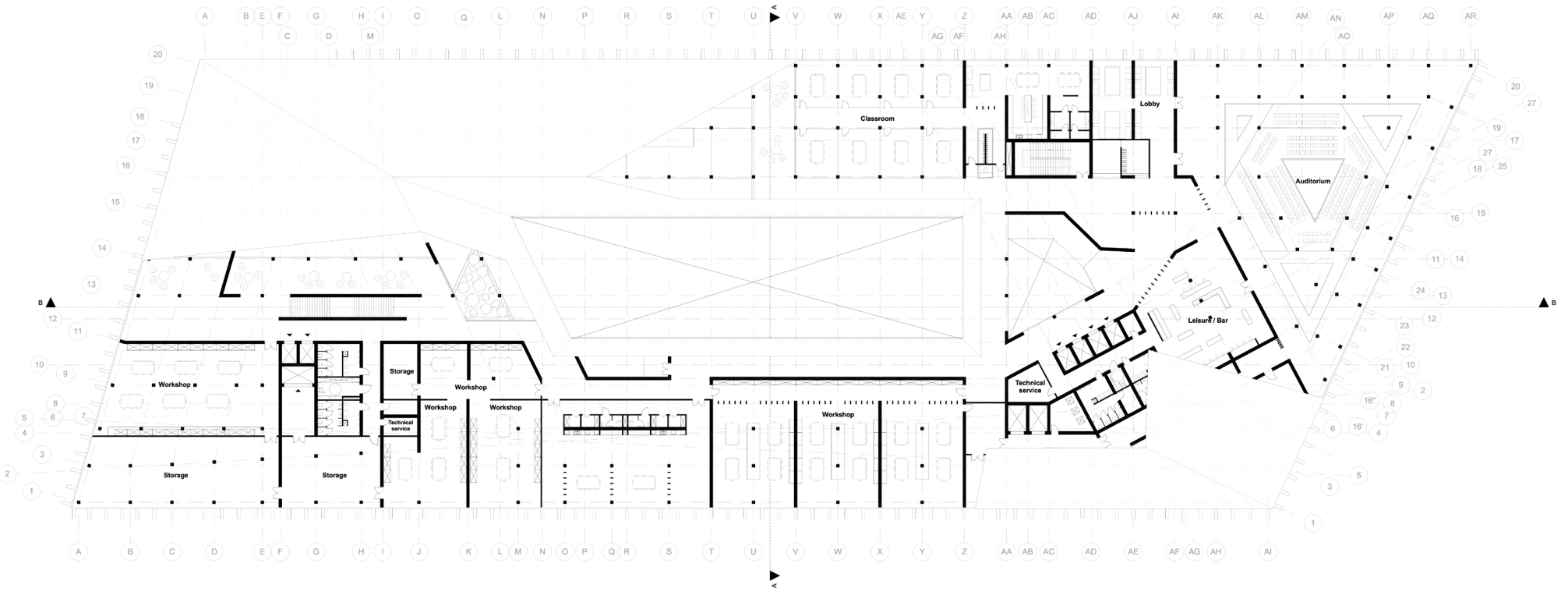


## 4&5th FLOOR LIBRARY



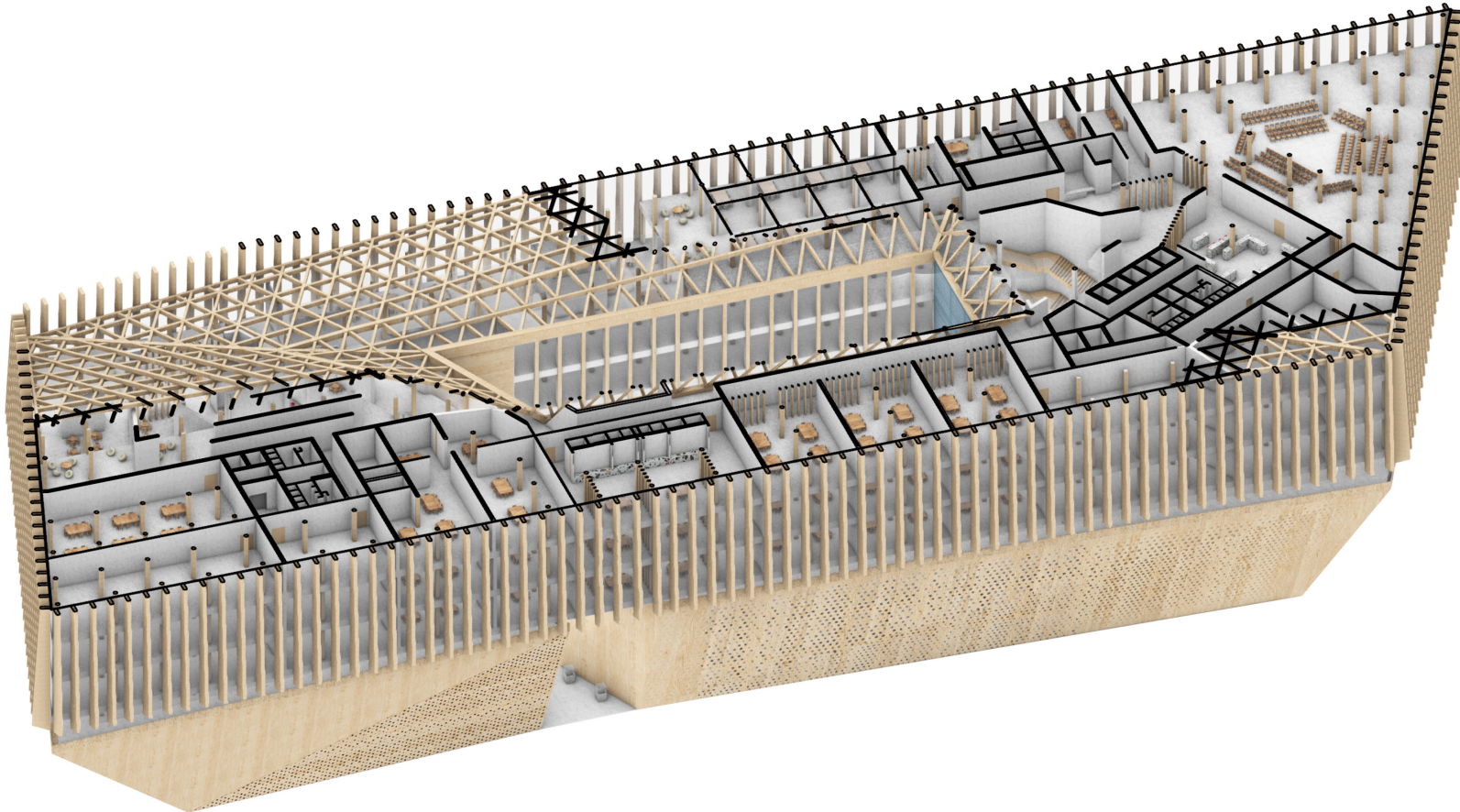


6th FLOOR EDUCATION & EXHIBITION



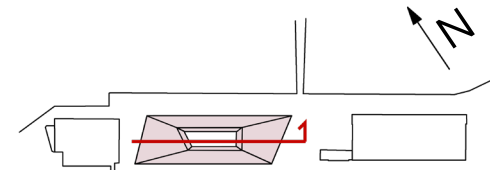
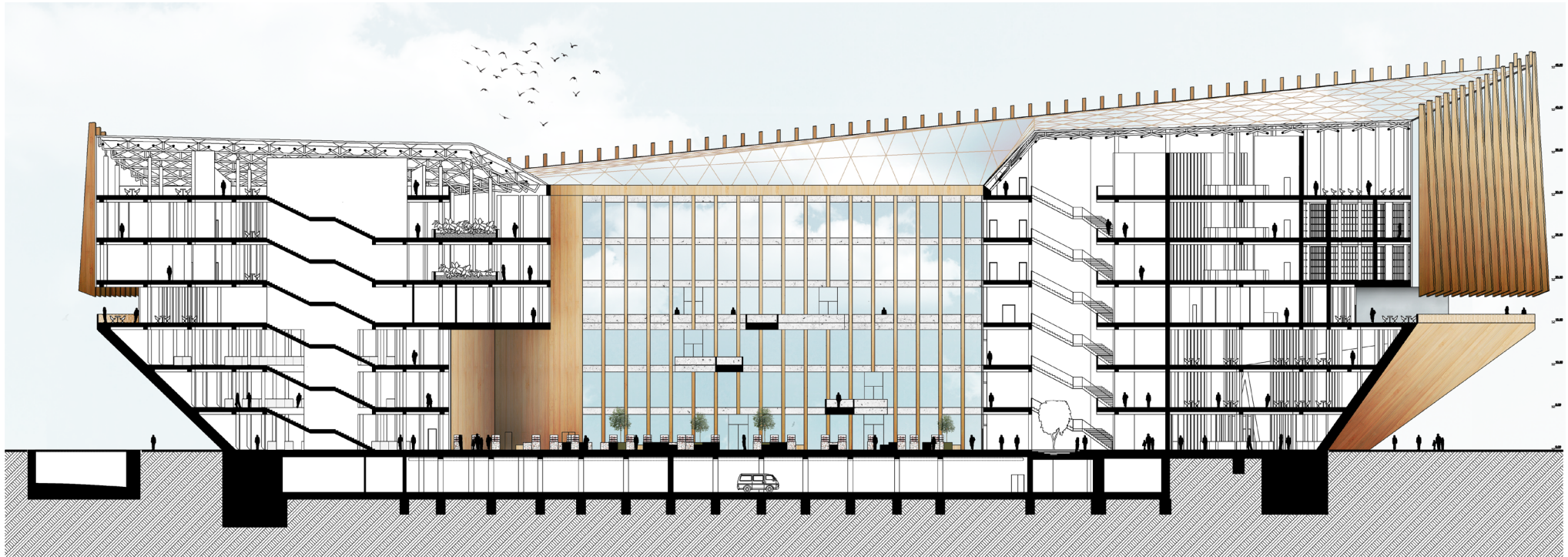


## 6th FLOOR EDUCATION & EXHIBITION



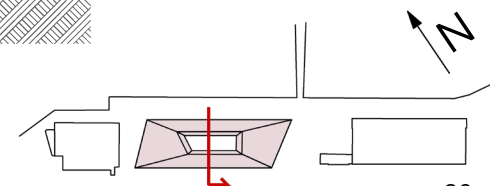
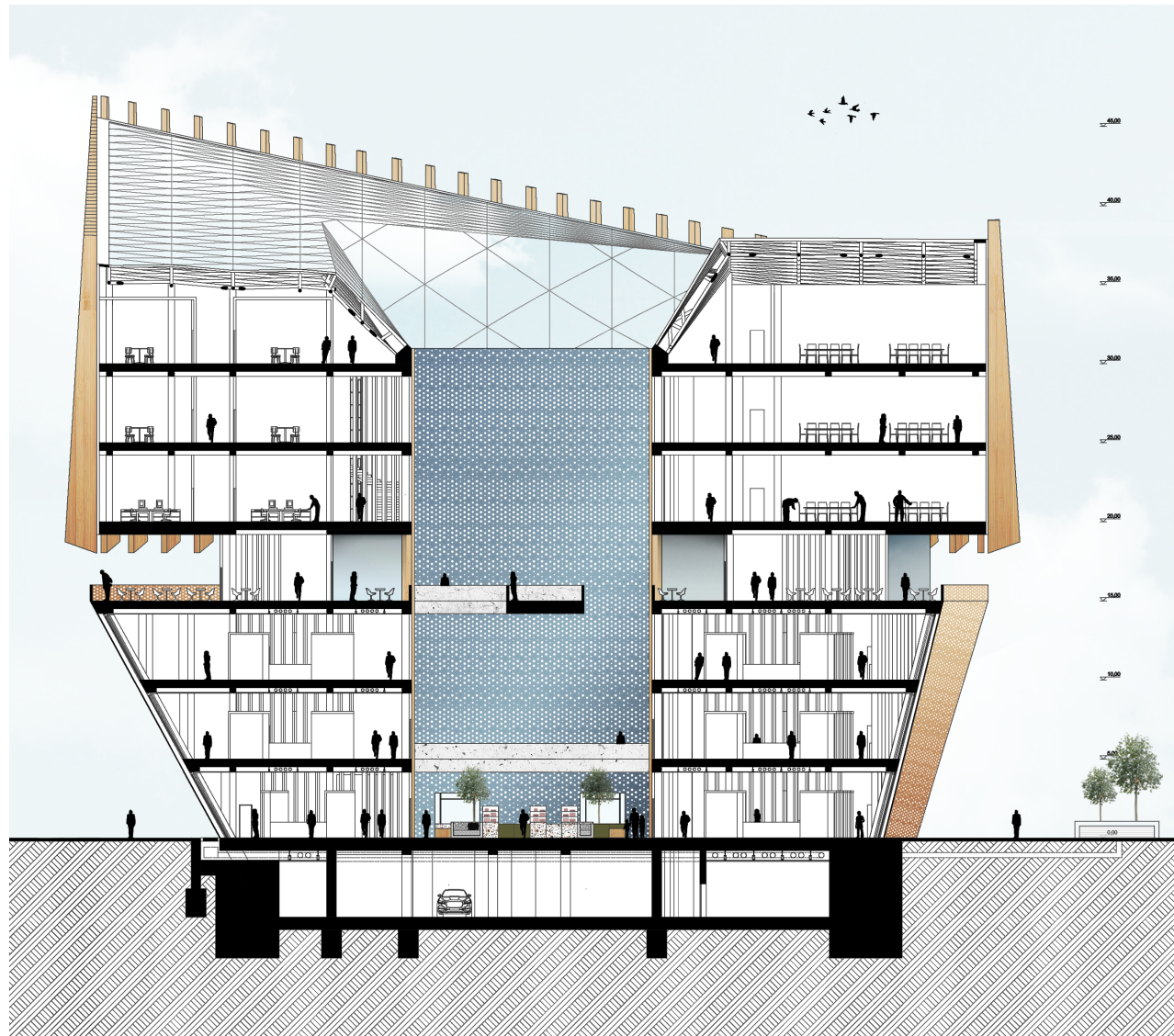


## CROSS SECTION





# CROSS SECTION



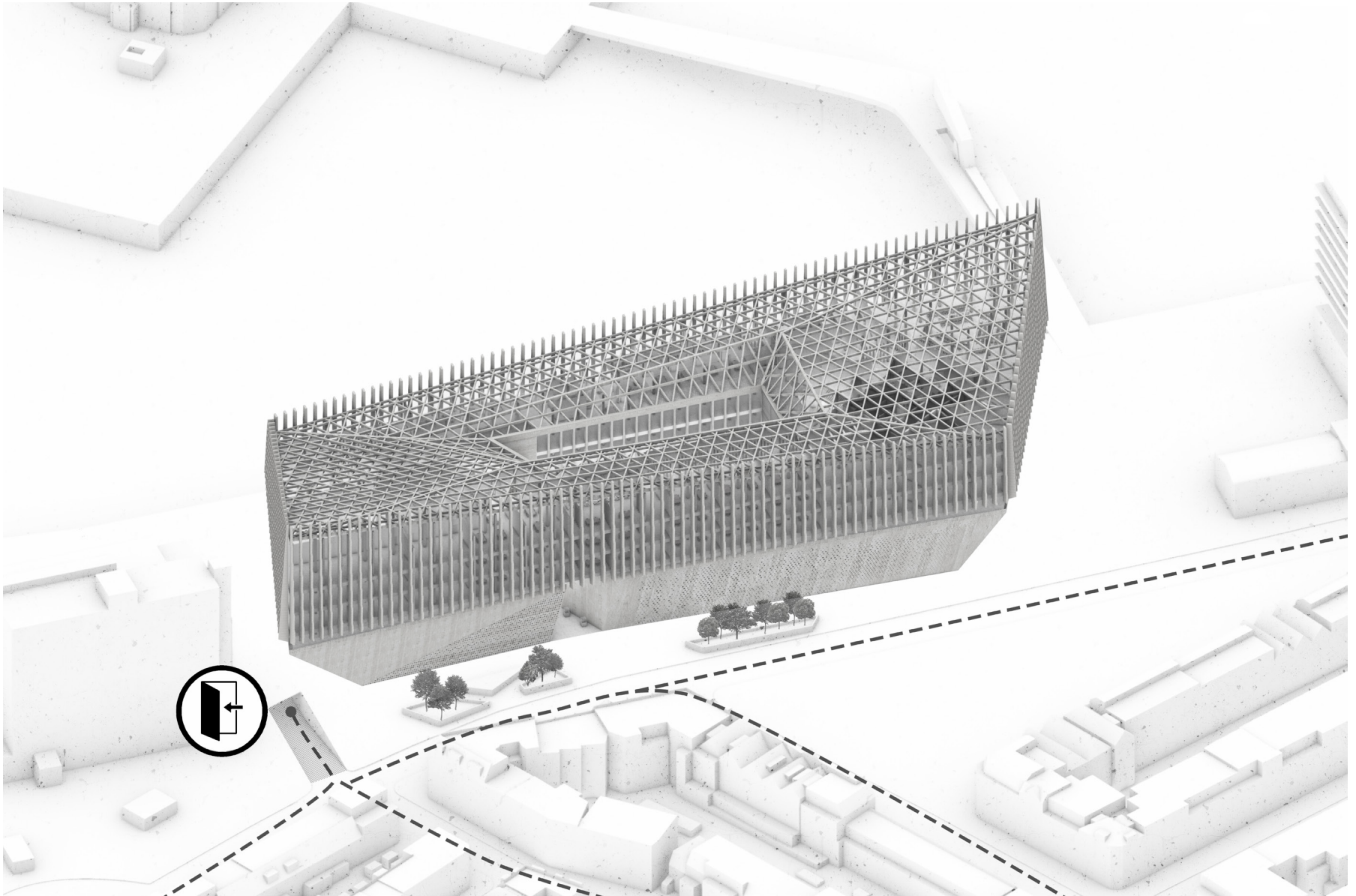


# **DELIVERY & MAINTENANCE**



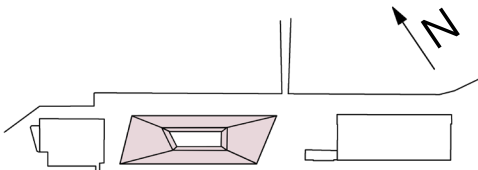
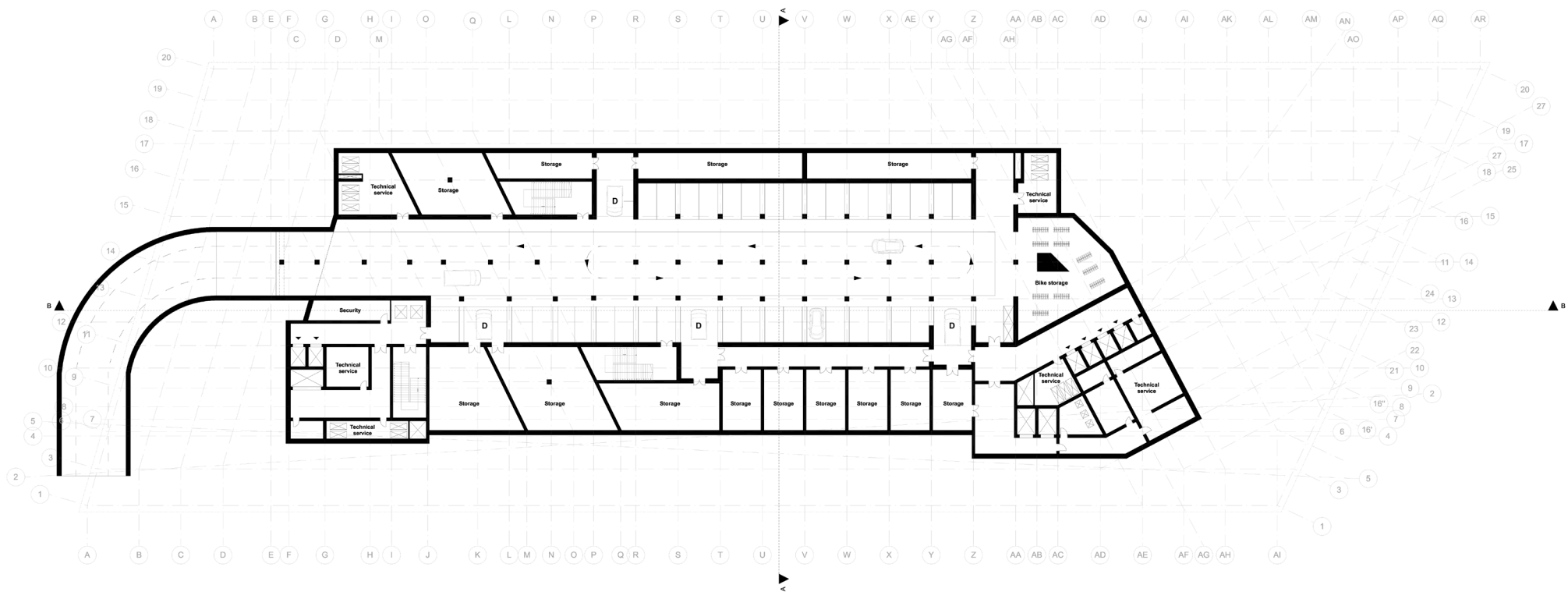


## UNDERGROUND ENTRANCE



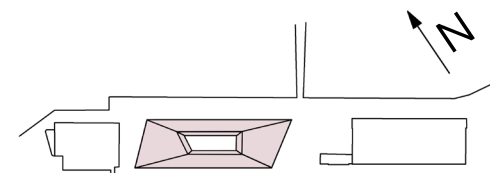
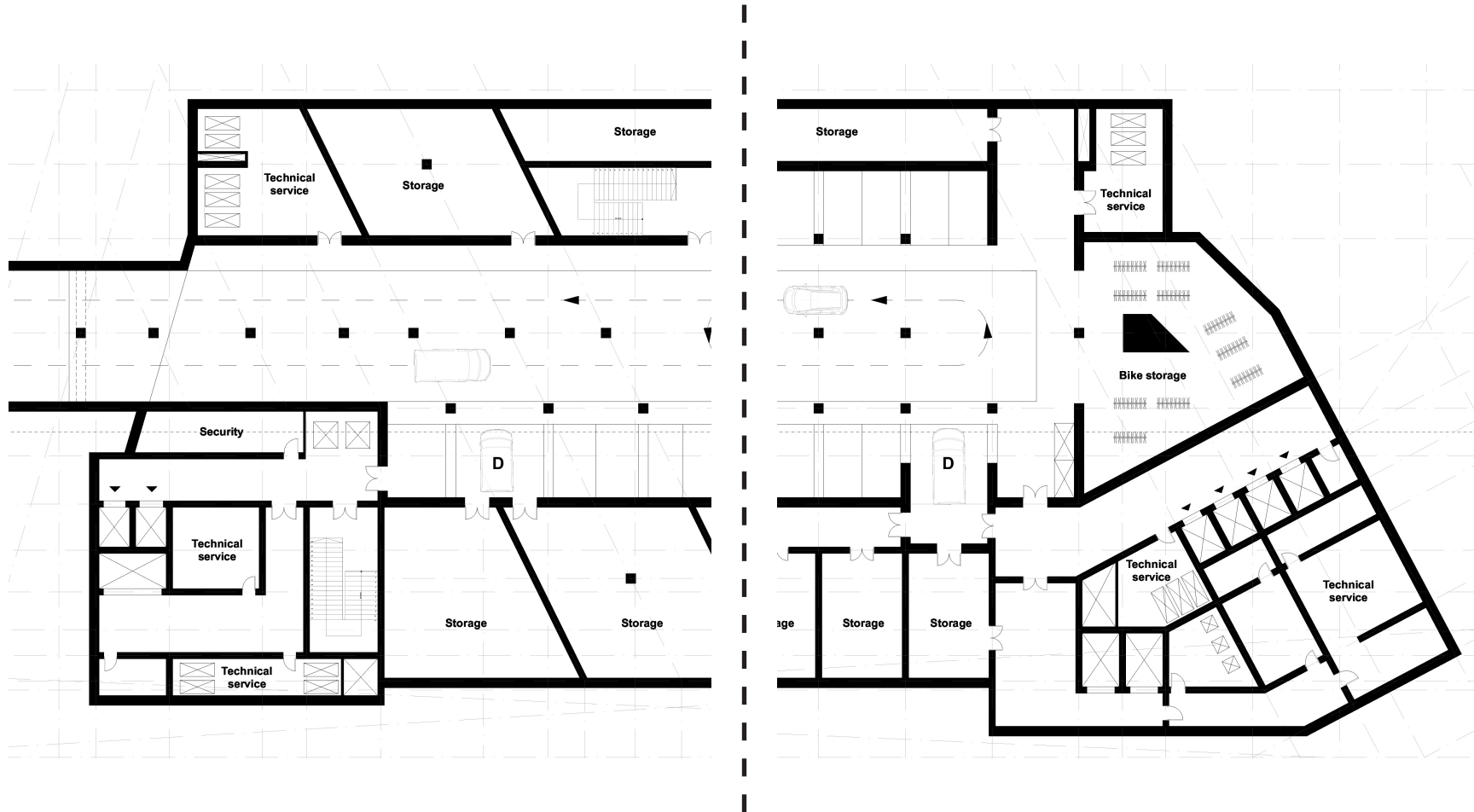


# UNDERGROUND FLOOR



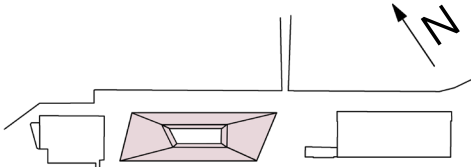
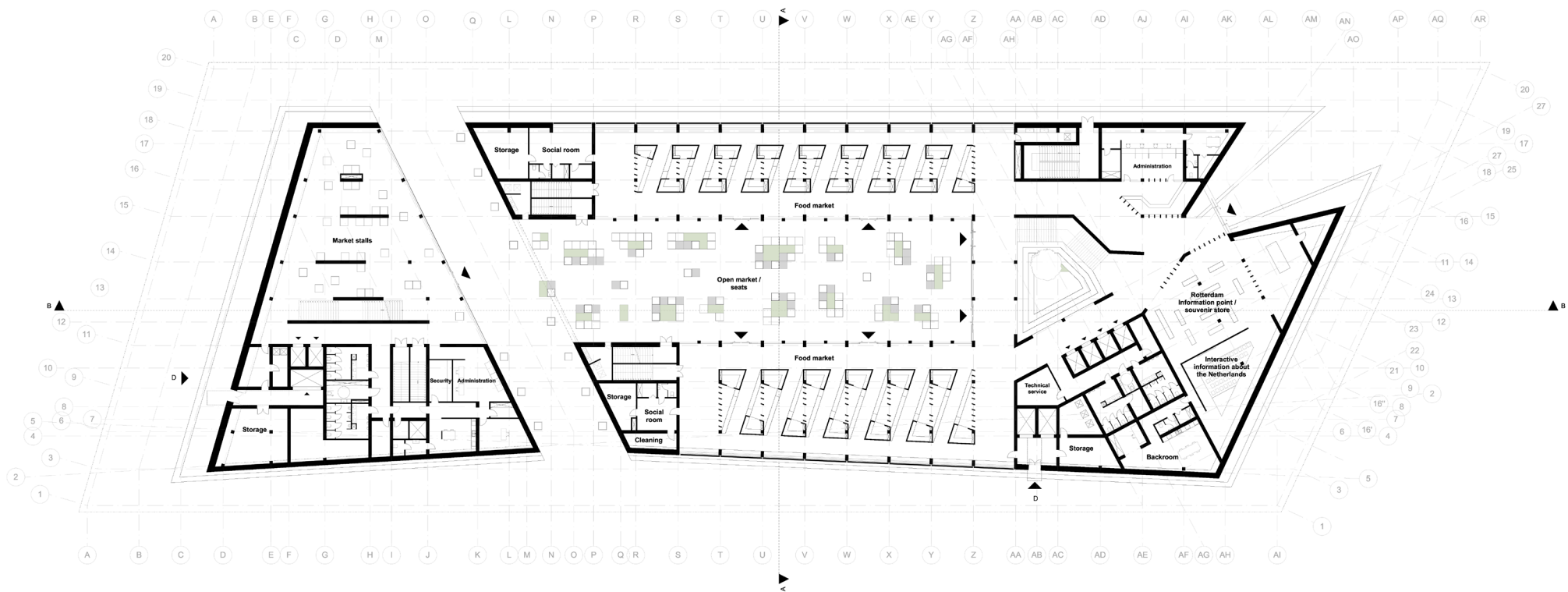


# UNDERGROUND FLOOR



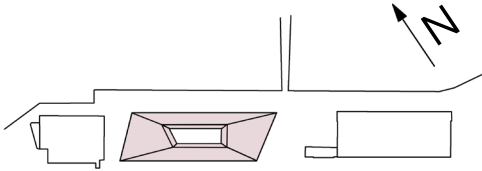
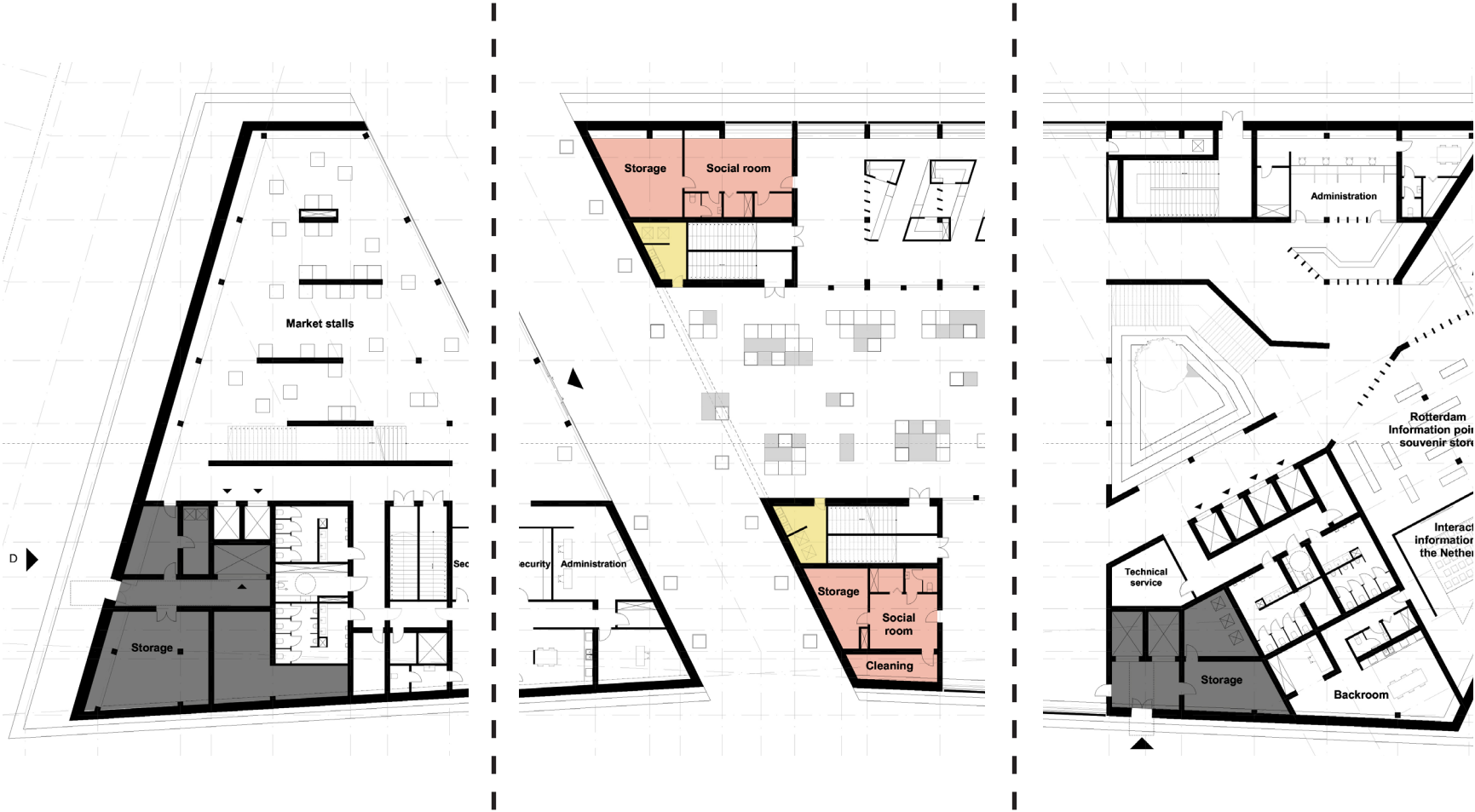


# MAINTENANCE MARKET





MARKET PART MAINTENANCE & STORAGE





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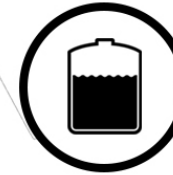


## CLIMATE SCHEME

**River water**  
Used to cool a building during the summer season.



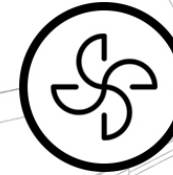
**Water collection & reuse**  
Collected rainwater from used is stored underground in the basement and reused for greywater use.



**Solar Panels & Solar Collectors**  
Solar panels and solar collectors will be installed to heat the water used to radiant heating and power the building.

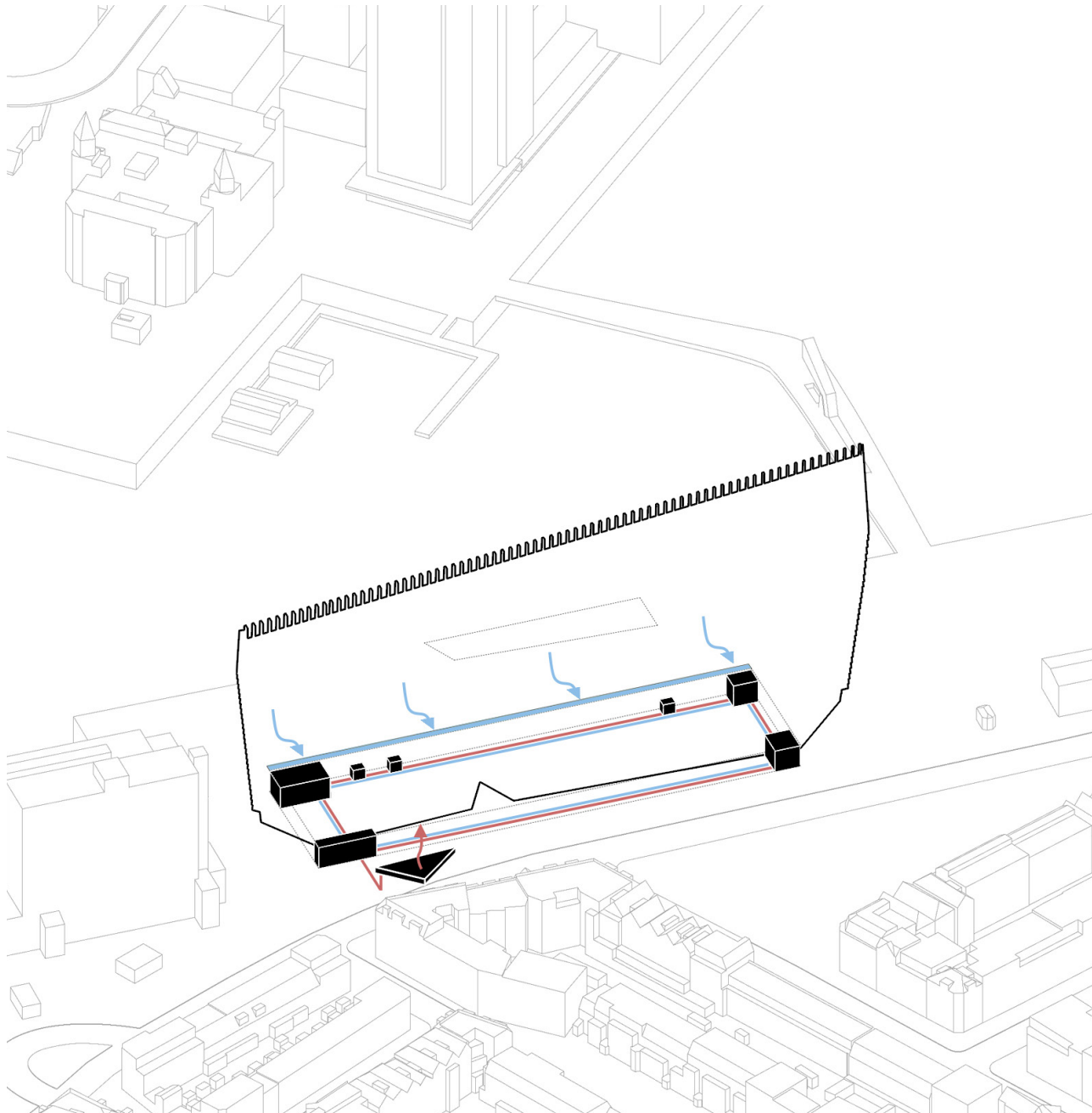


**Decentral Ventilation**  
MULTI V-AHU located underground supports natural ventilation through the atrium.



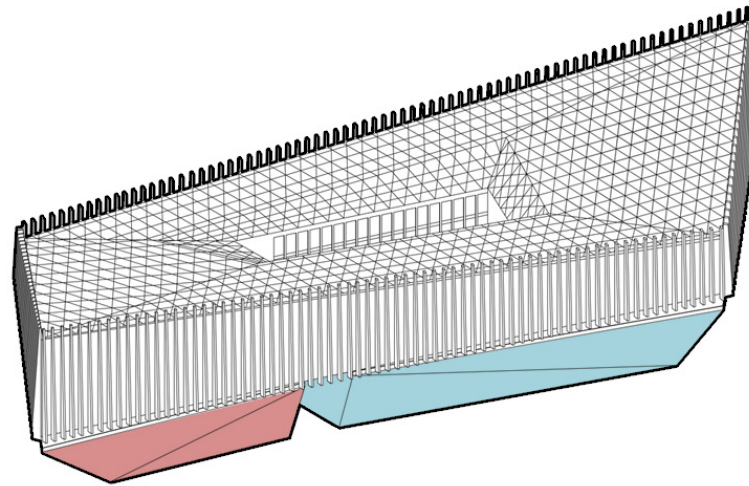


## VENTILATION - AIR TREATMENT UNITS



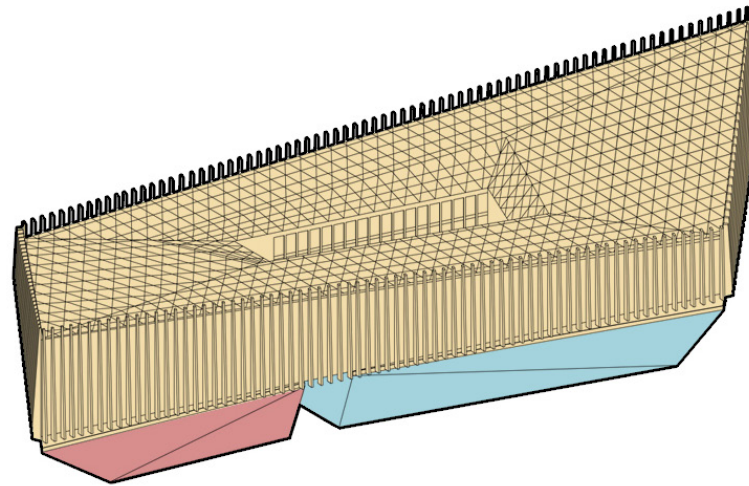


# VENTILATION ZONES



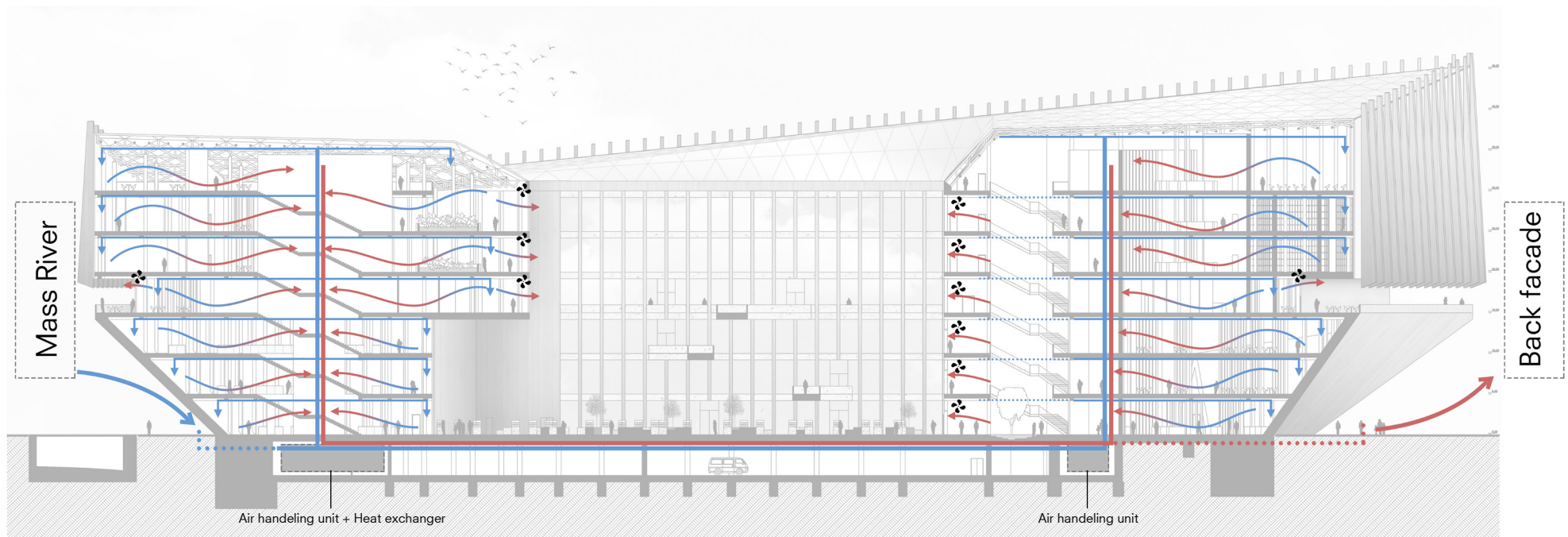


# VENTILATION ZONES



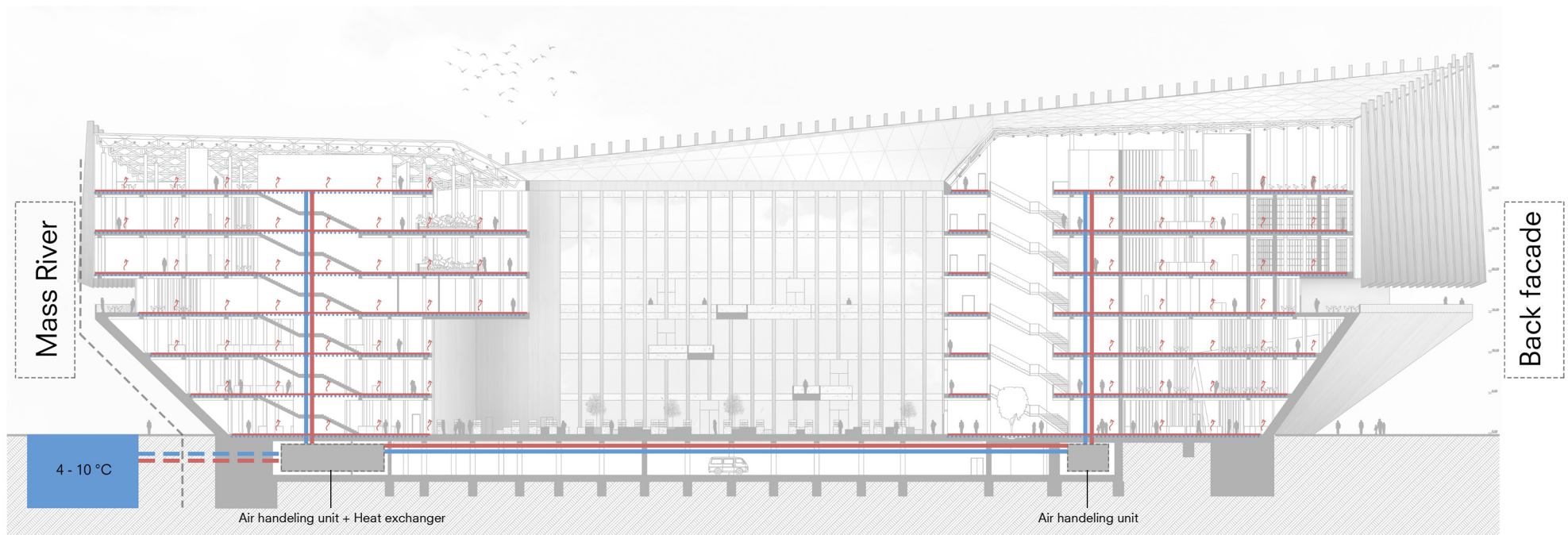


# VENTILATION





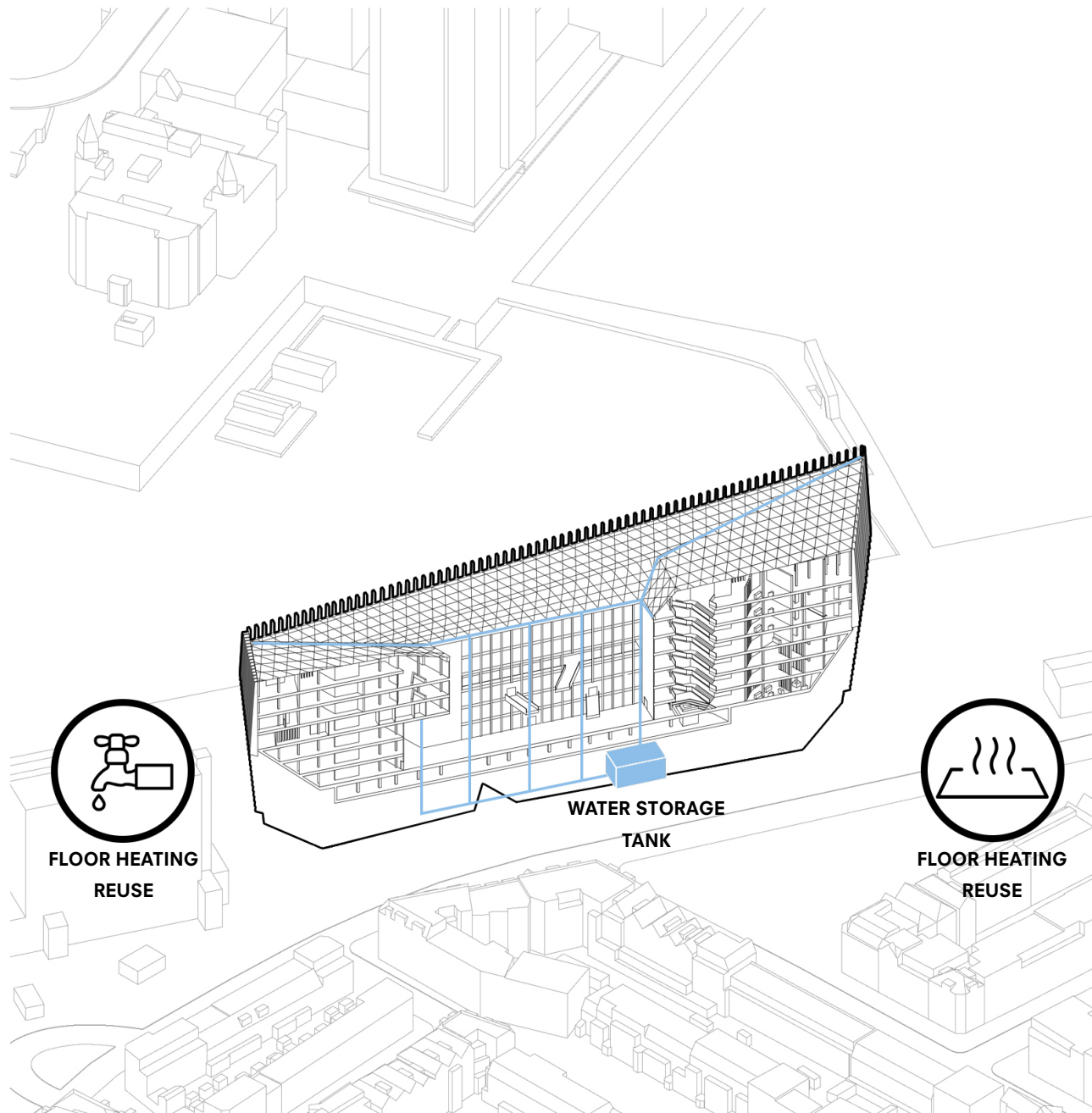
## COOLING/HEATING



Cooling/Heating - Concrete core activation + floor/  
wall heating

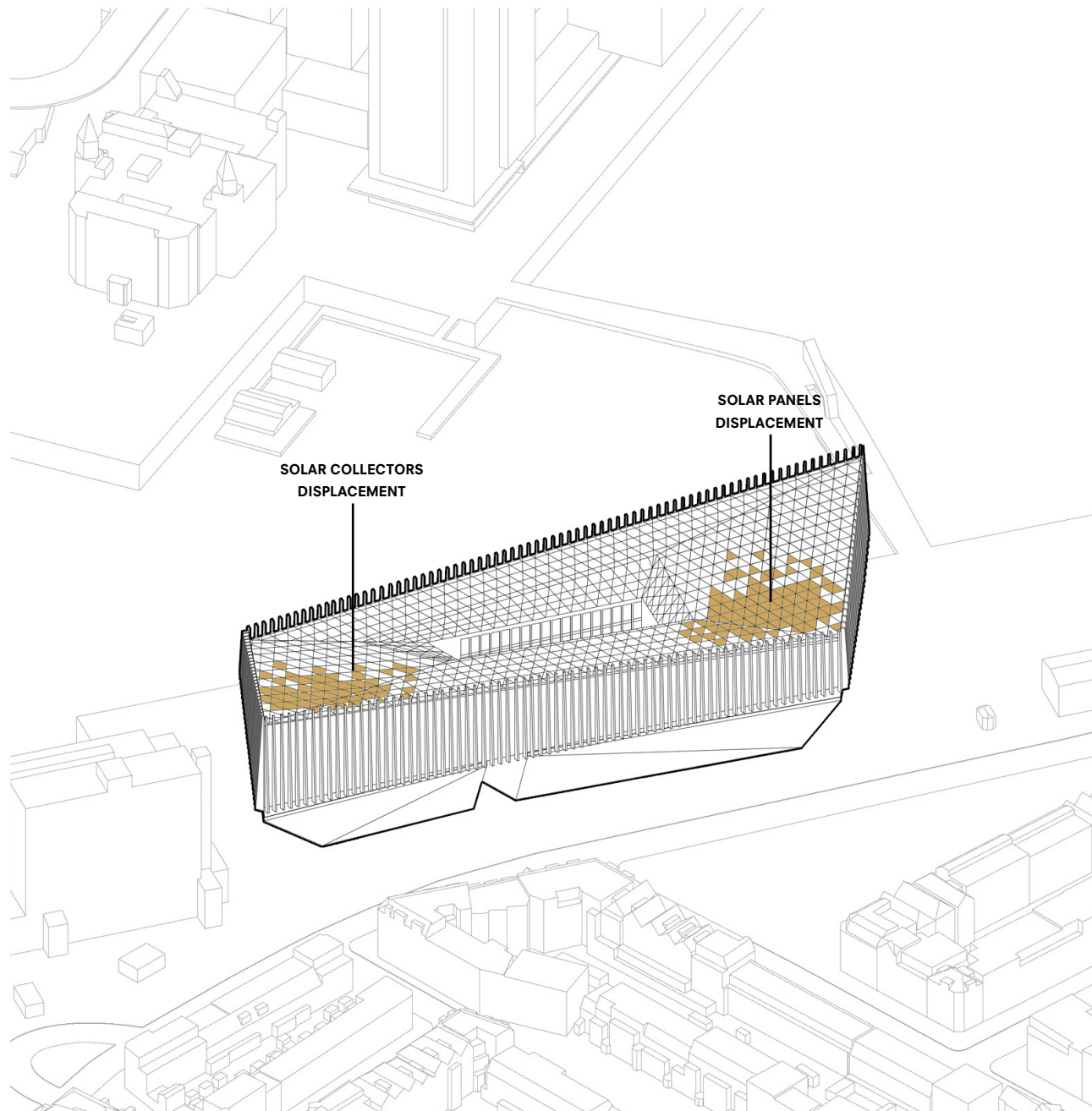


# WATER



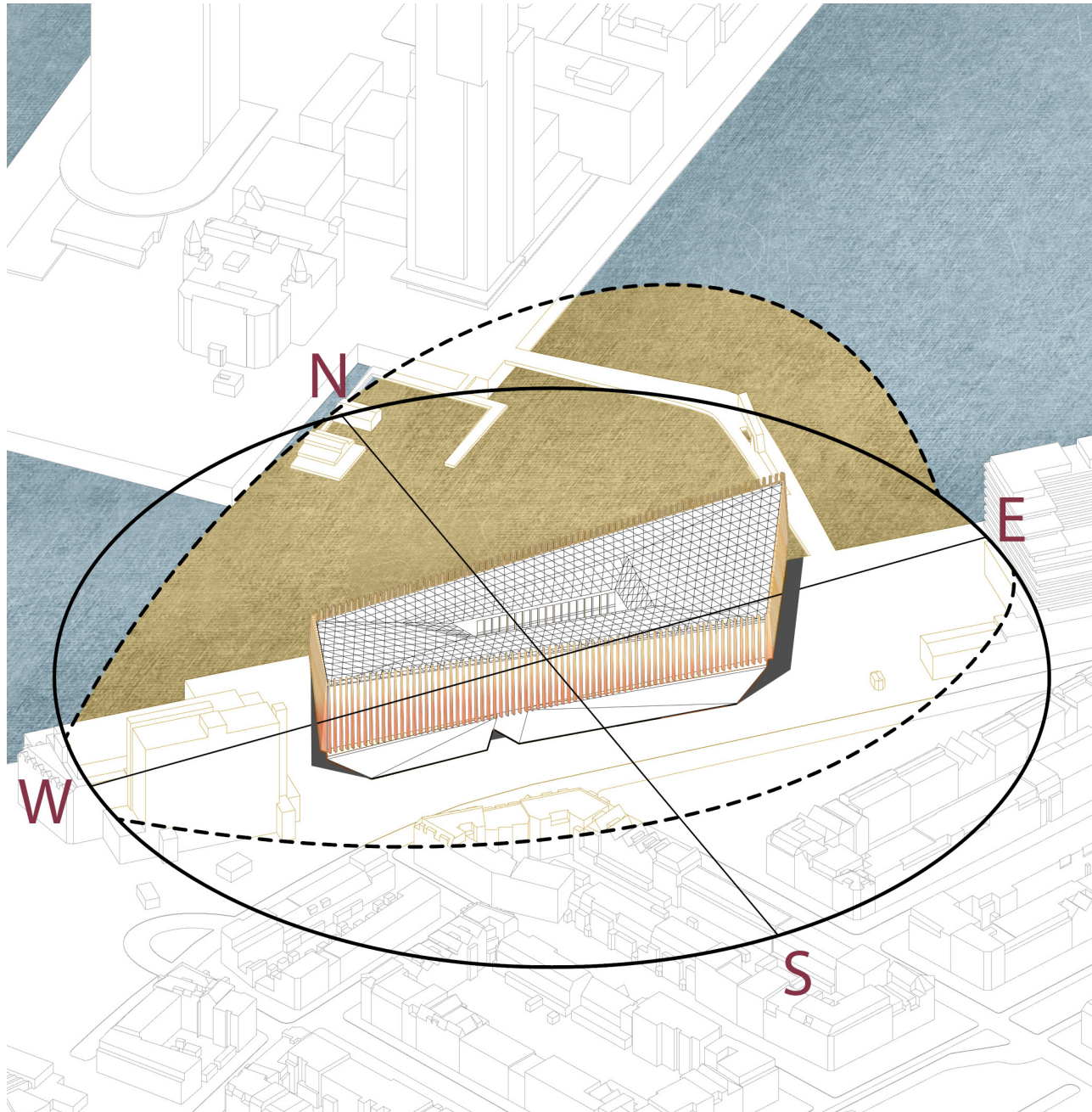


# ENERGY





## PANELS SHADING



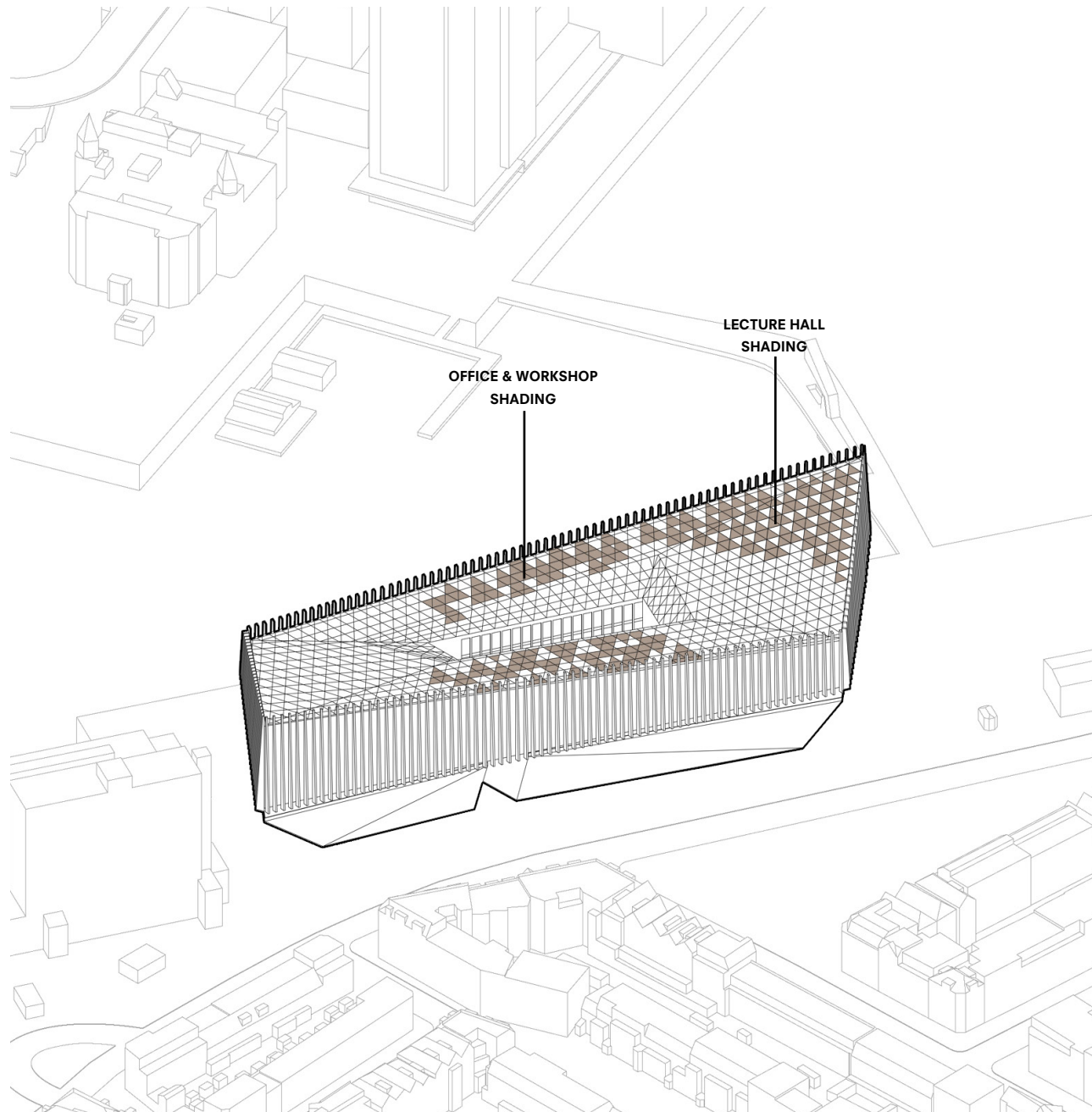


## PANELS SHADING



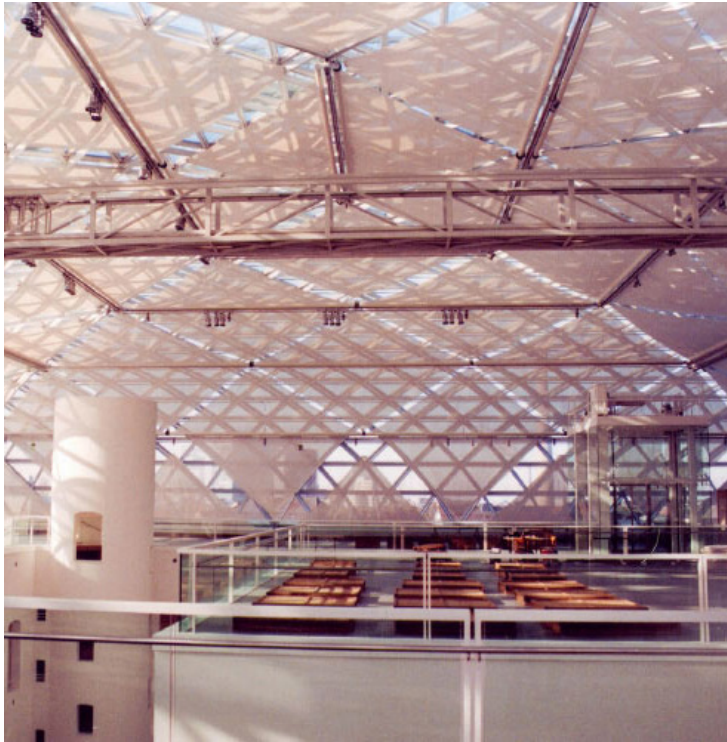


## GLASS ROOF SHADING LOCATION





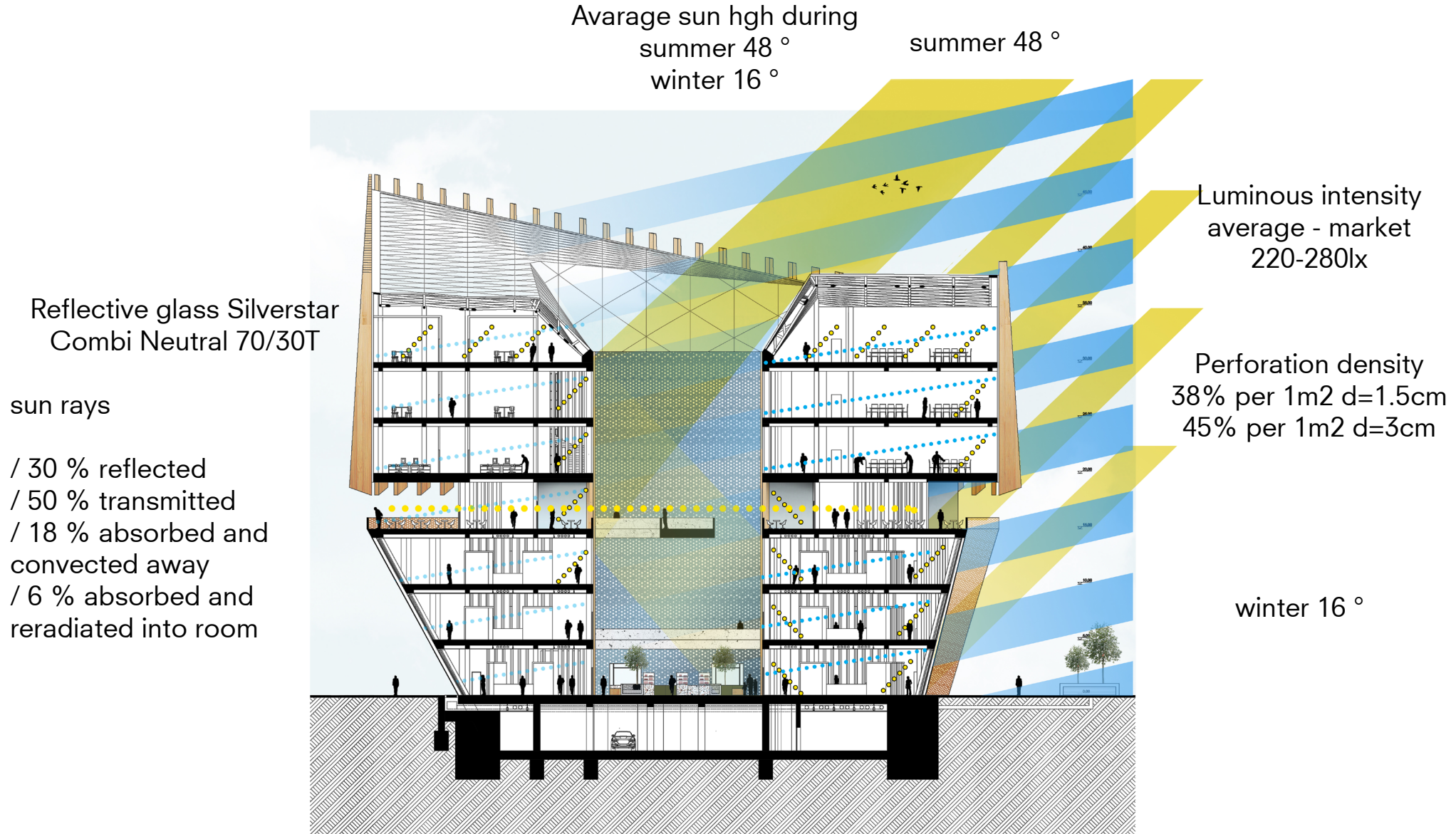
## TEXTILE SUN PROTECTION SYSTEM



Sun works GMBH Trio Trapez System 9 x 7,5 m



## ATRIUM FASADE BRIGHT ACCESS





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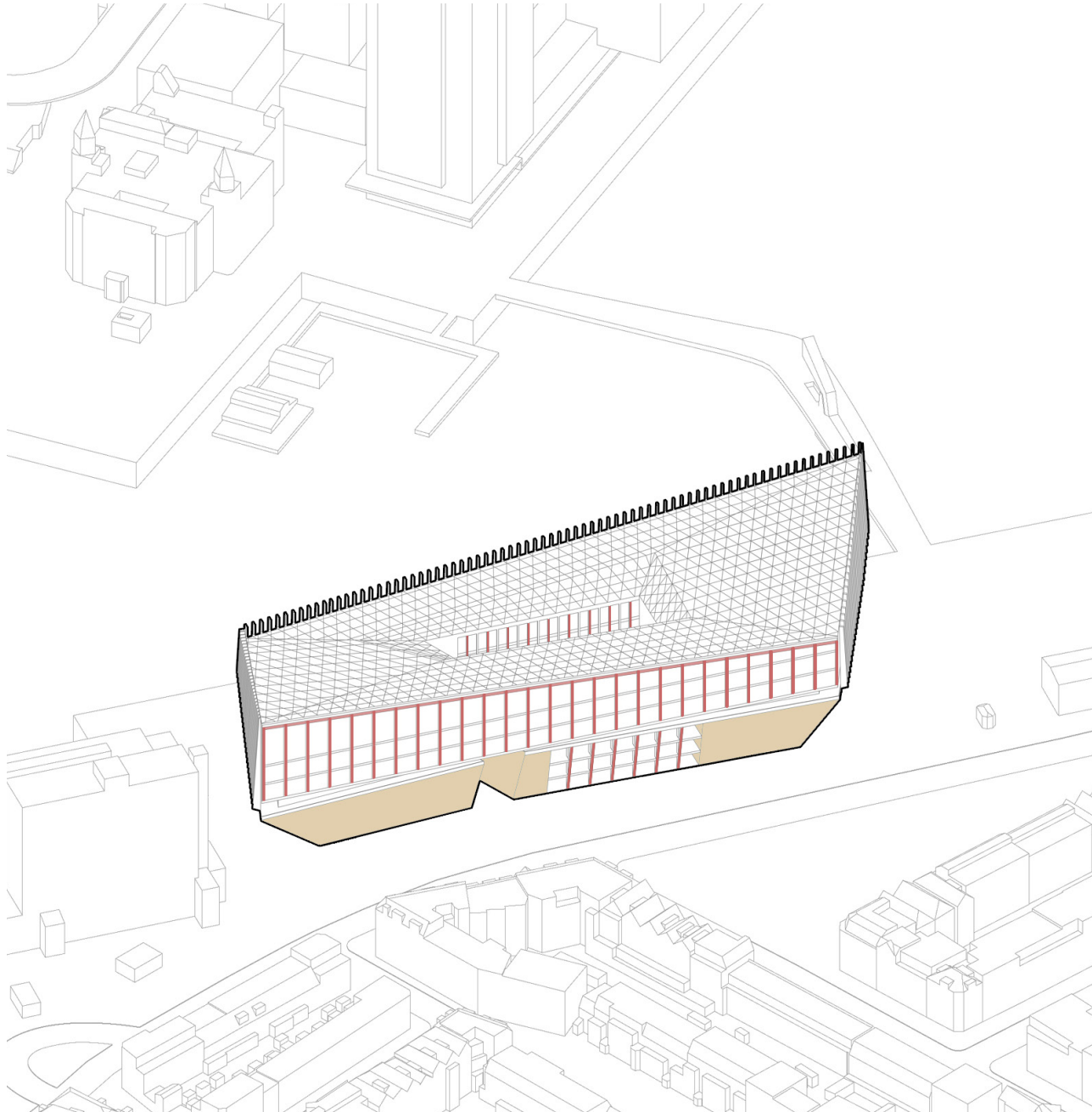
Climate Design

**Structural Design**

Facade & Detail

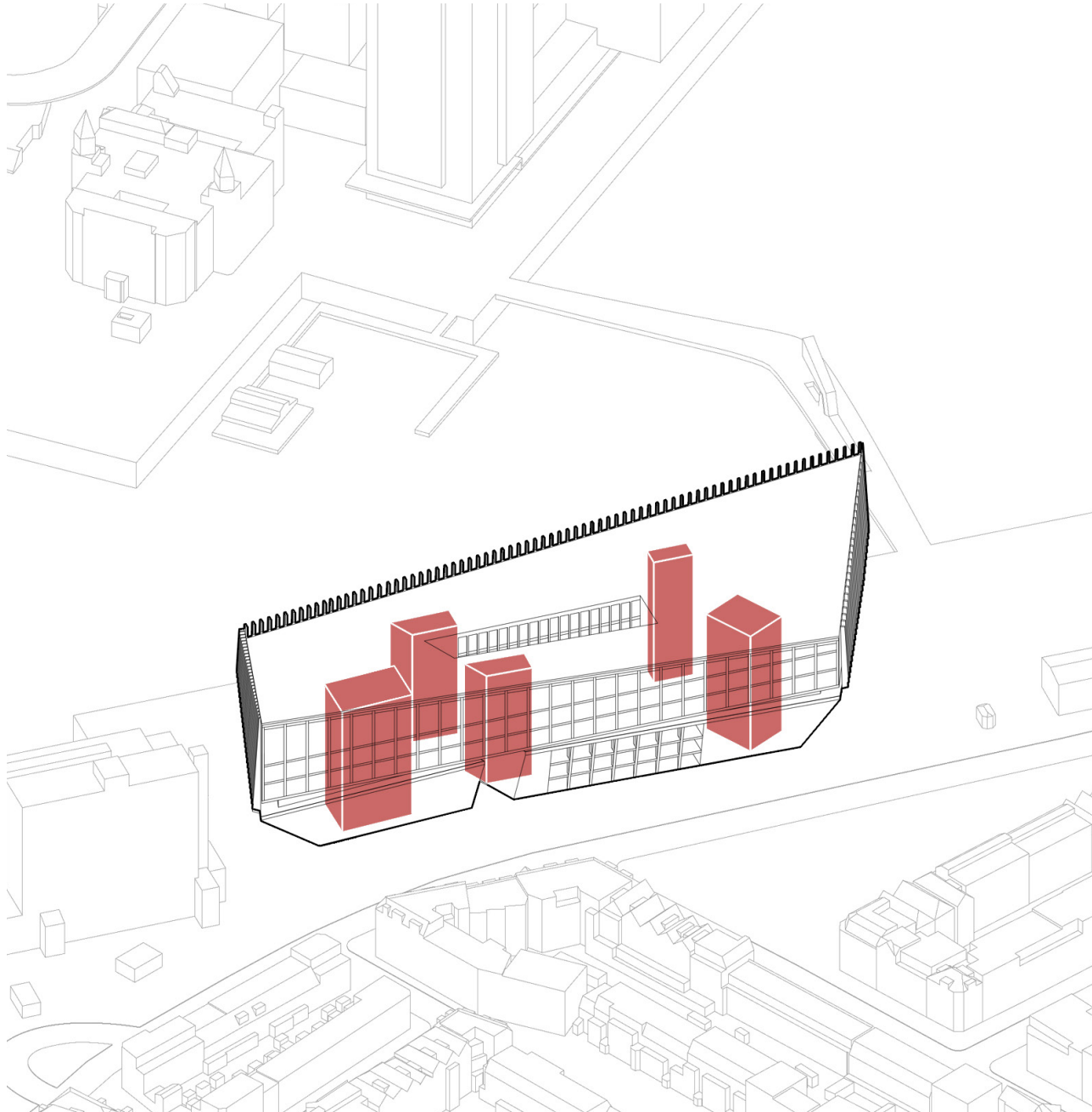


## OVERALL STRUCTURE



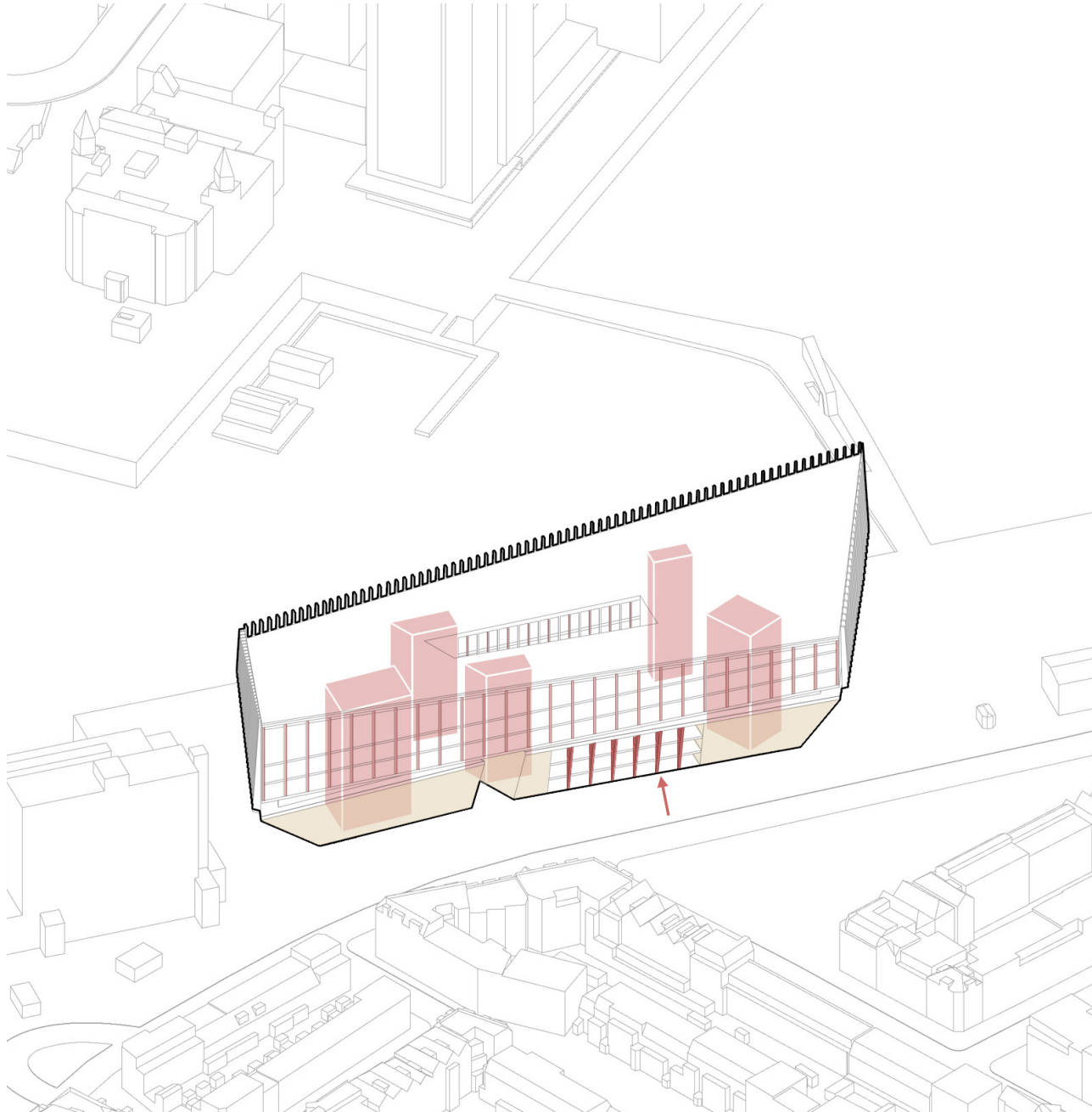


## OVERALL STRUCTURE



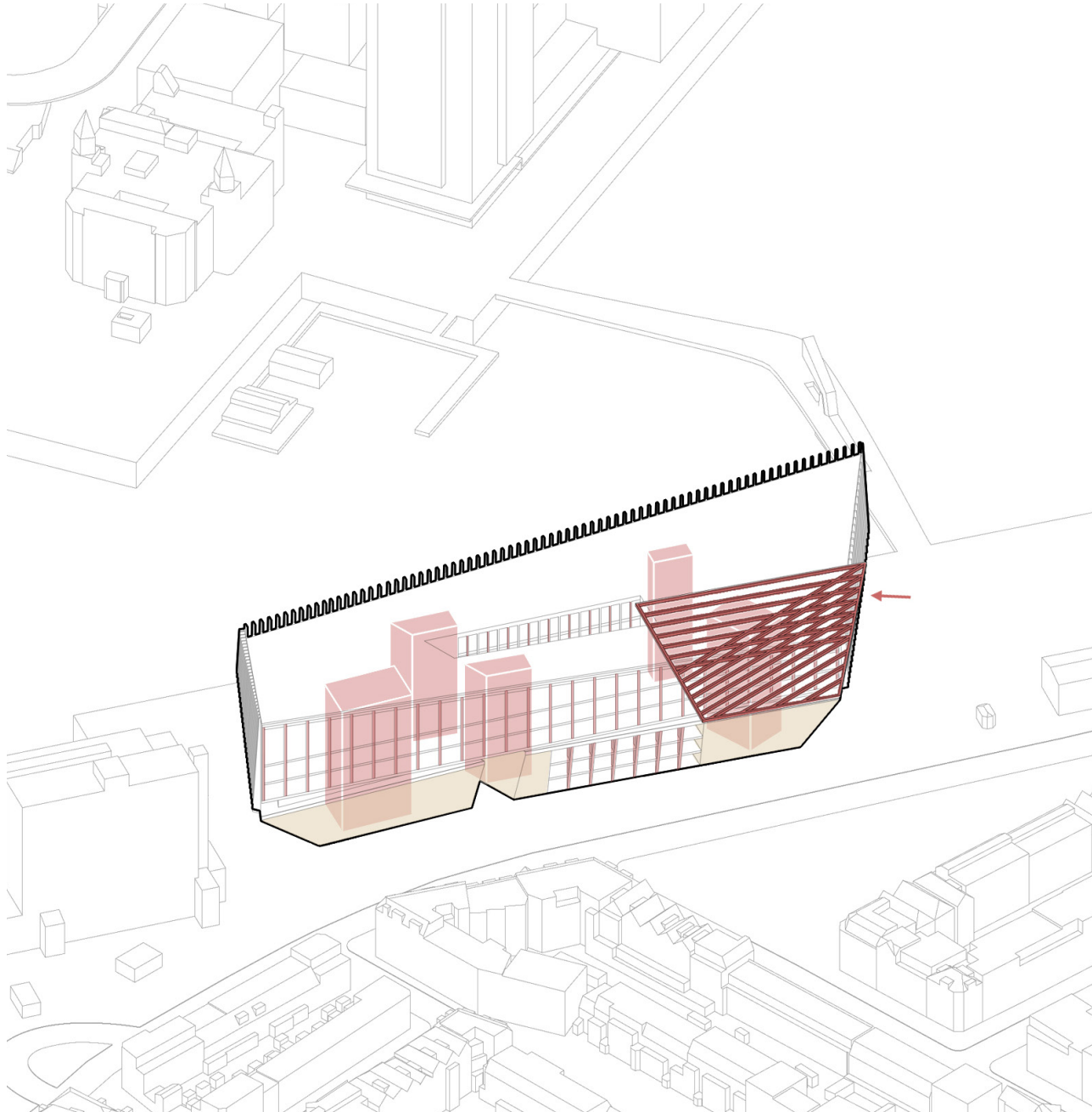


## OVERALL STRUCTURE



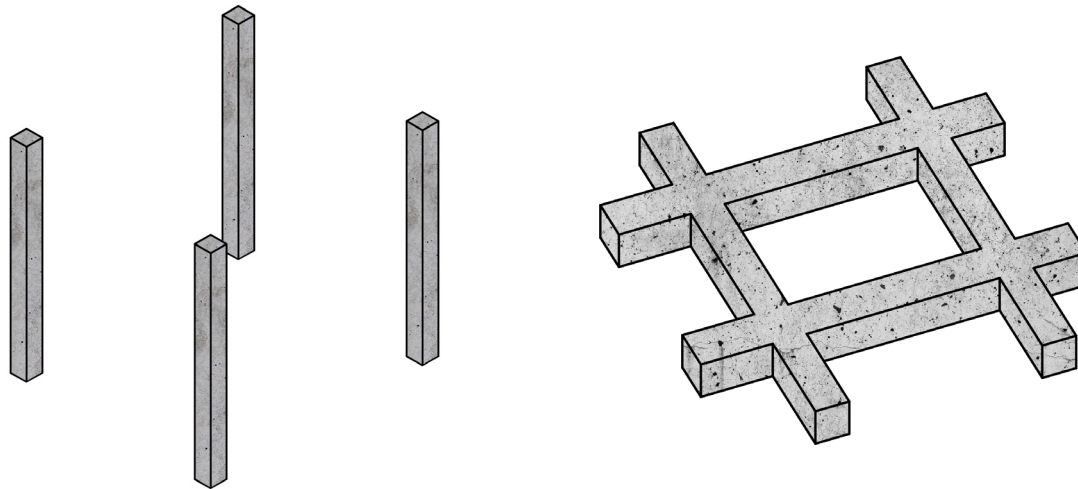


## OVERALL STRUCTURE





## OVERALL STRUCTURE

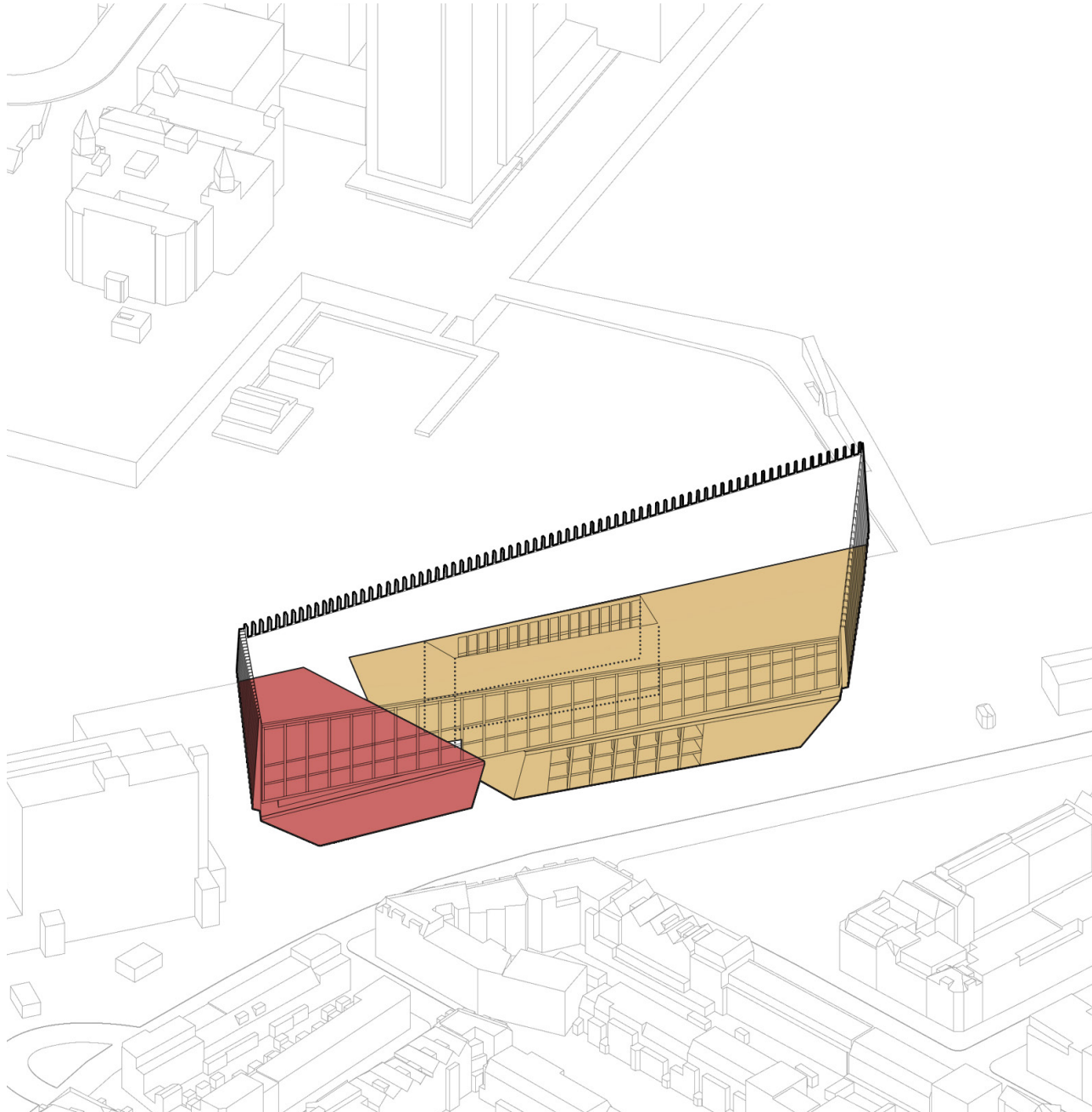


Columns 50 x 50 cm;  
60 x 60 cm

Beam  $h = 50 - 80$  cm

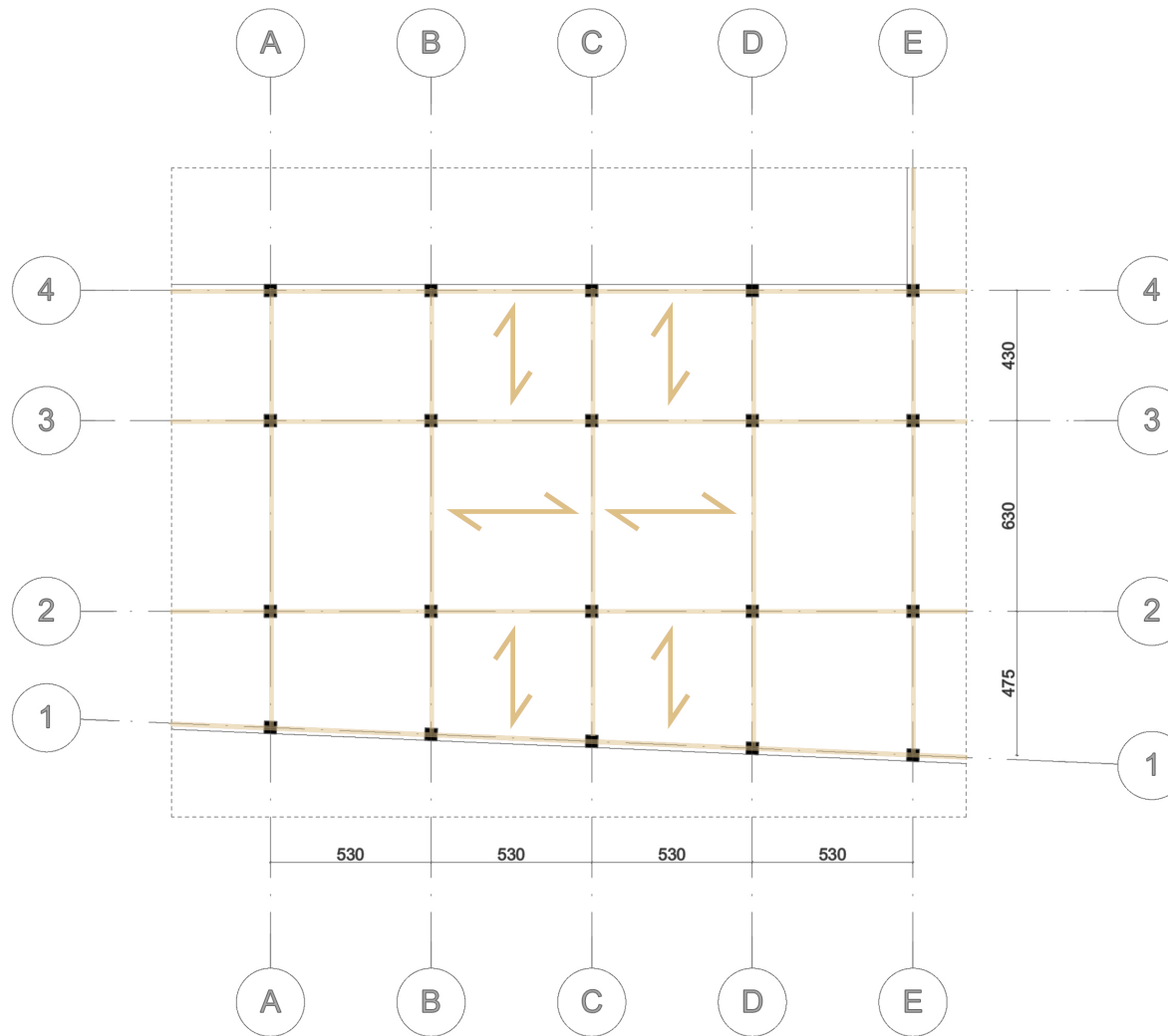


## OVERALL STRUCTURE



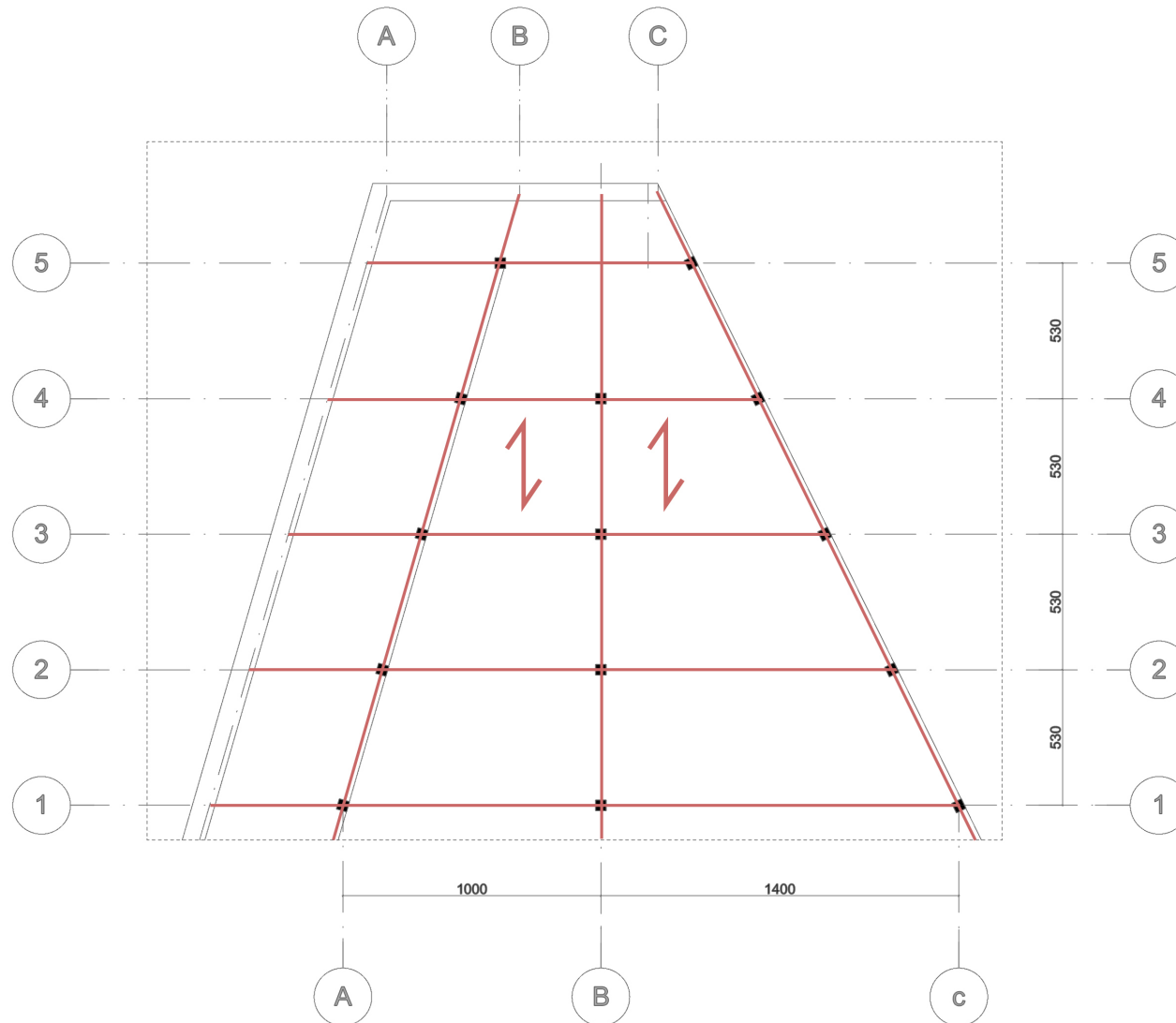


## COLUMNS & BEAM LAYOUT FOOD PART





## COLUMNS & BEAM LAYOUT FOOD PART





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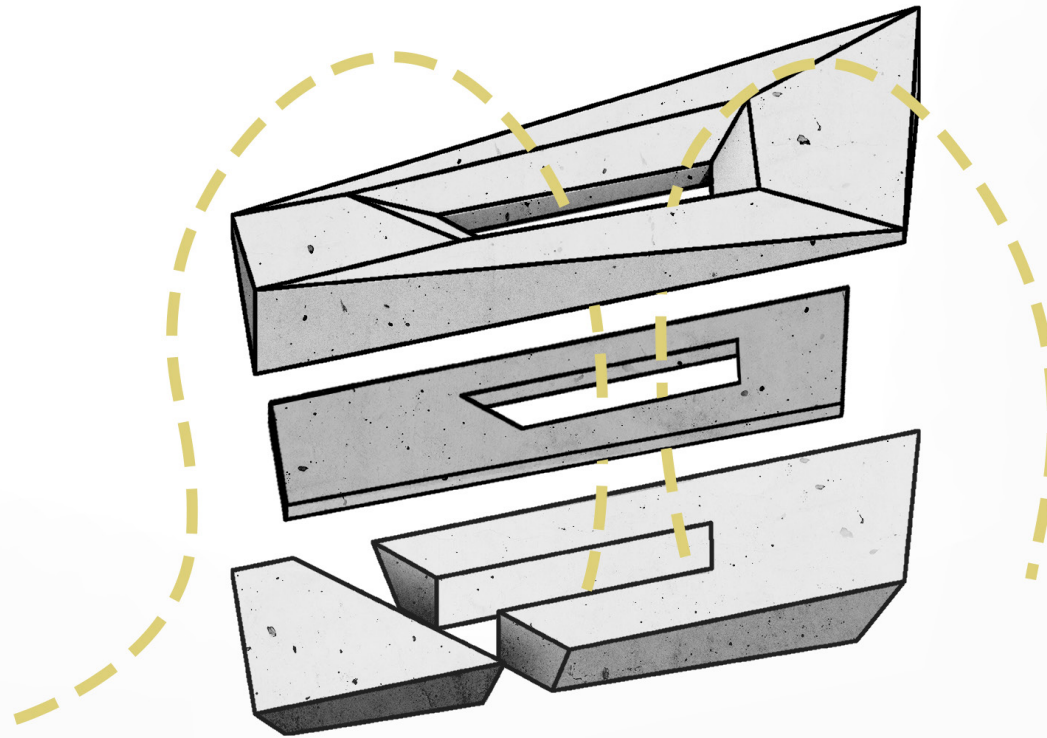


# IDEA





## MATERIAL CONTINUITY





## MATERIAL CONTINUITY



Teak wood



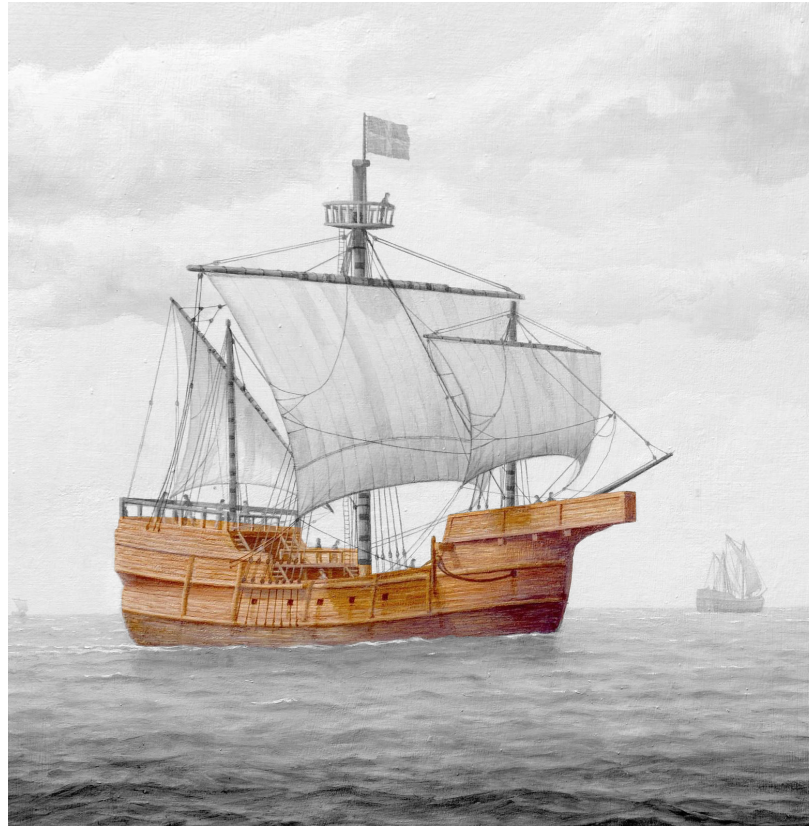
Pigmented Concrete  
(white)



Pigmented Concrete  
(dark)



# IDEA





## INTERIOR VS EXTERIOR



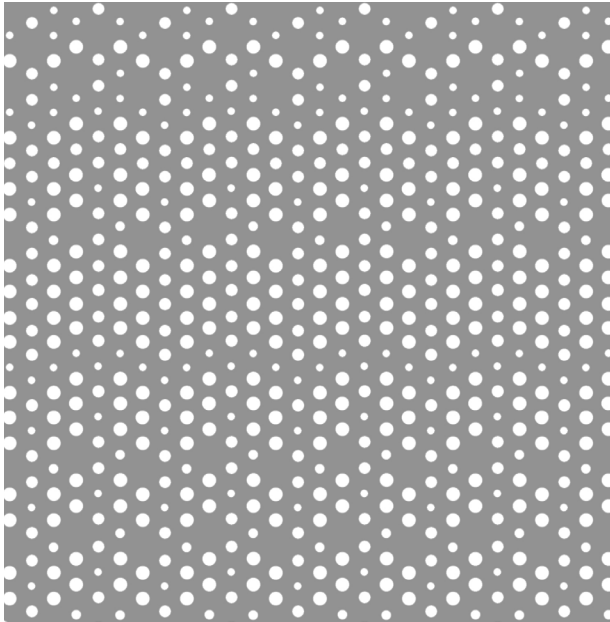


## INTERIOR TRANSITION

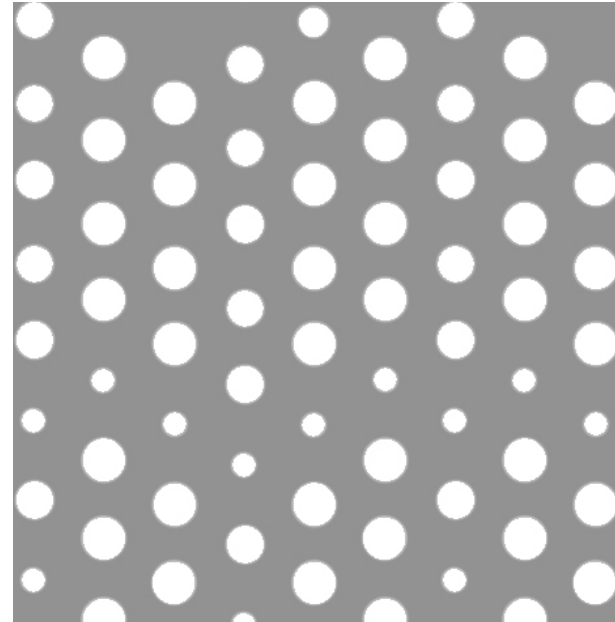




## BASE FACADE MATERIALS EXTERIOR



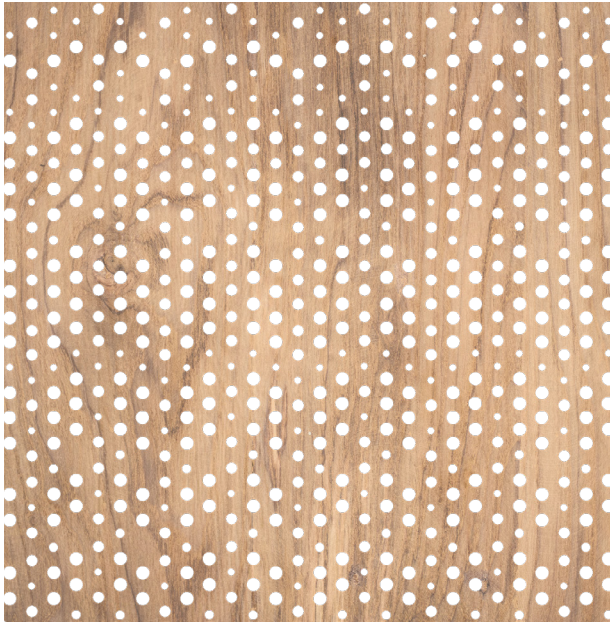
d = 1,5 cm 210 x 500 cm



d = 3 cm 210 x 500 cm



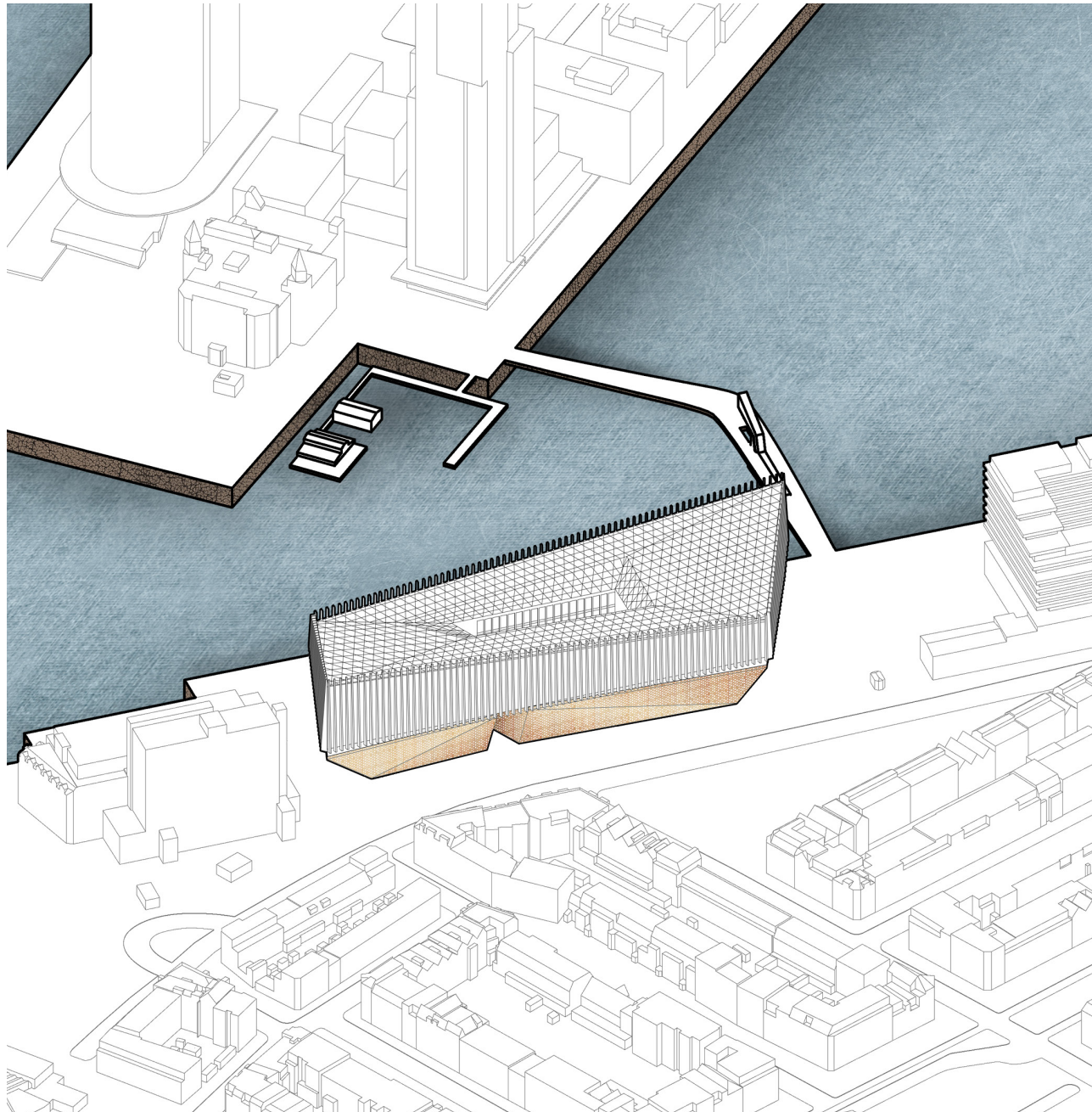
## BASE FACADE MATERIALS EXTERIOR



Teak wood panels

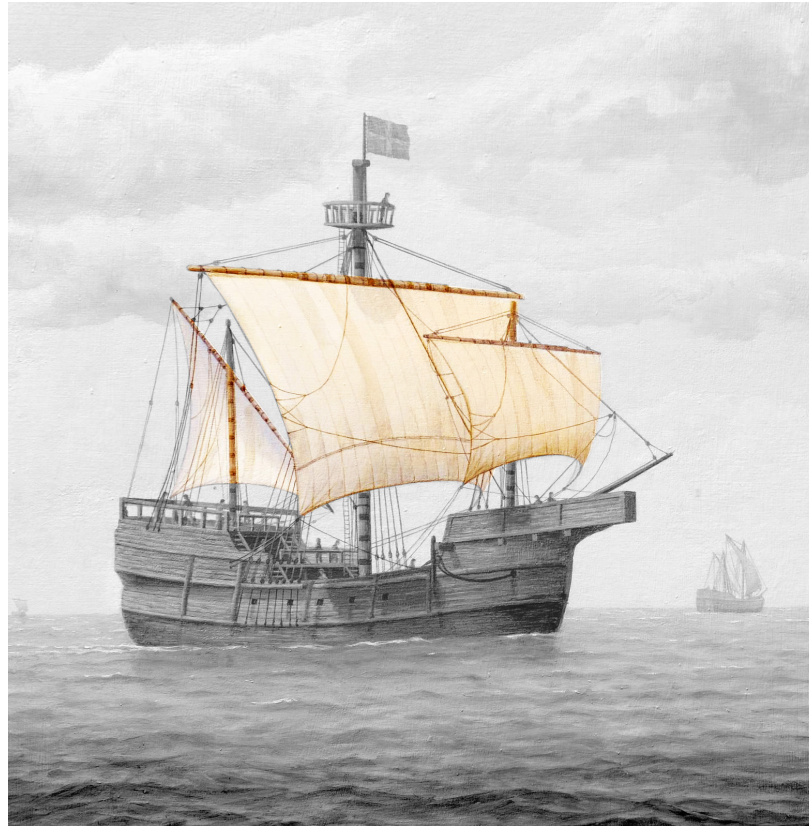


## DISCOVER THE INTERIOR



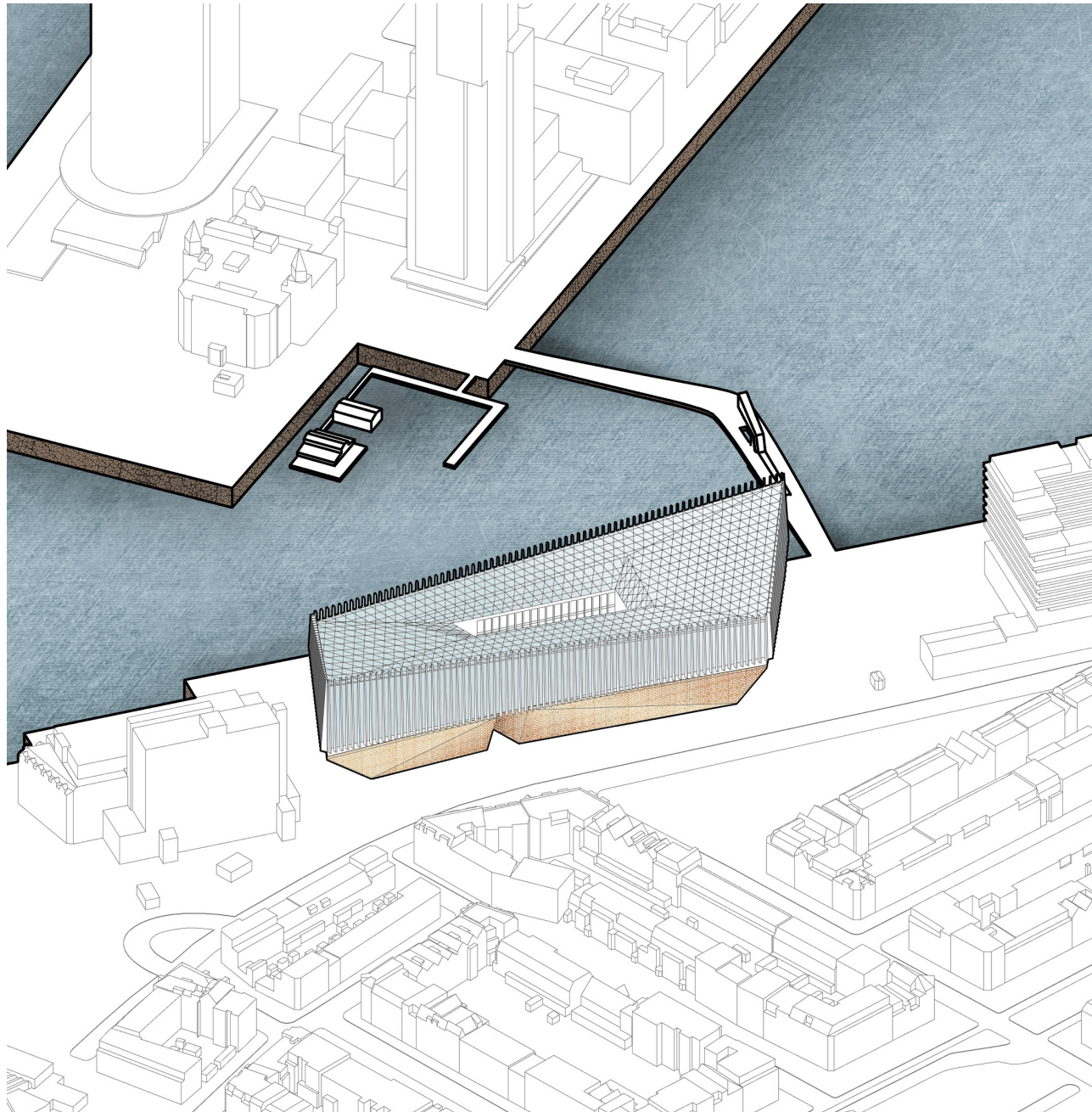


# IDEA





## SKY EXTENSION



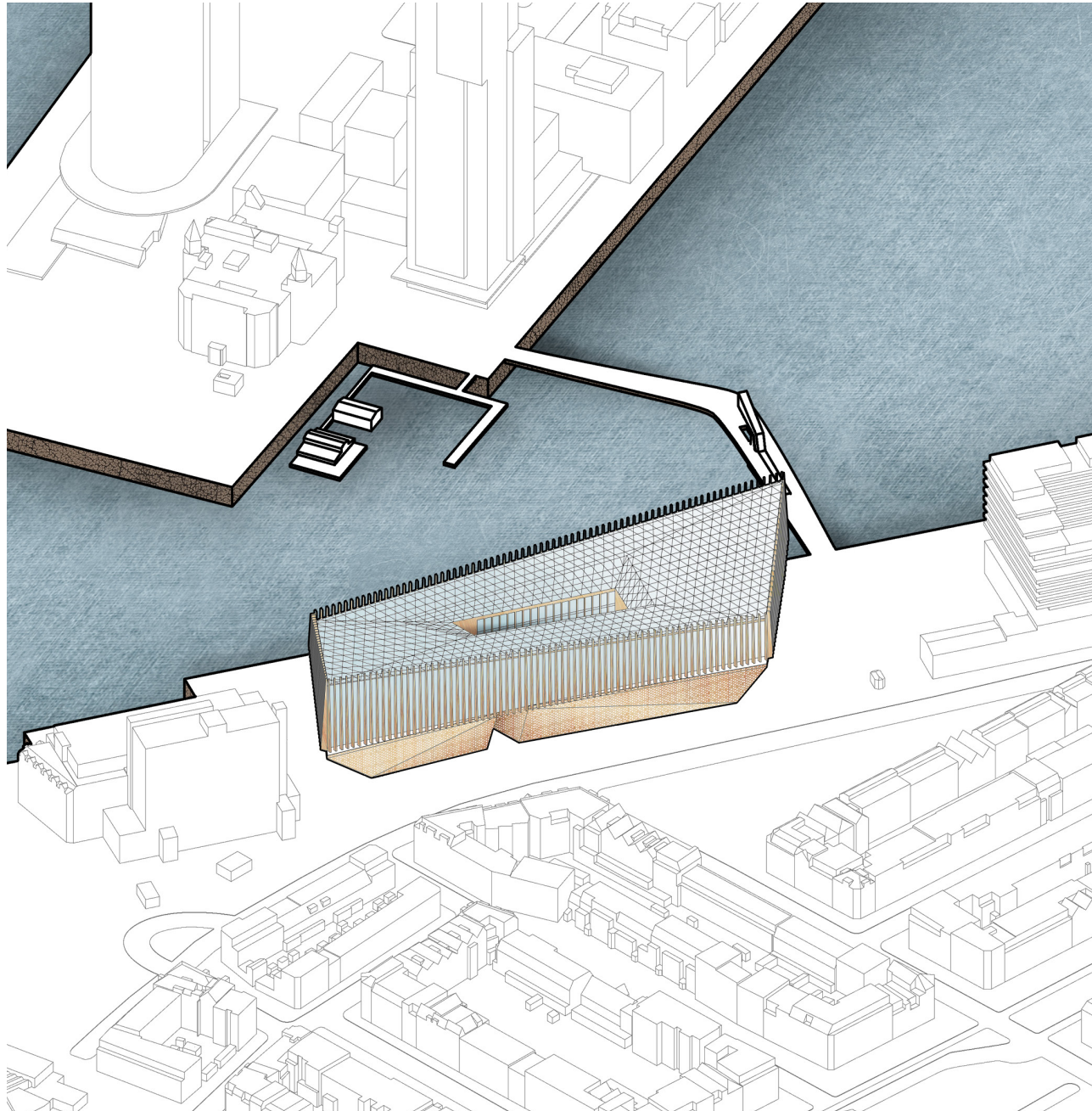


## REFLECTIVE GLASS EXTERIOR





# SAIL





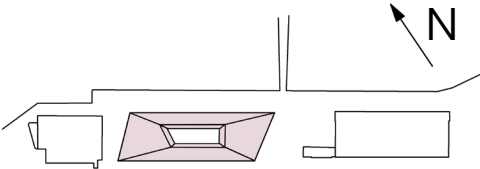
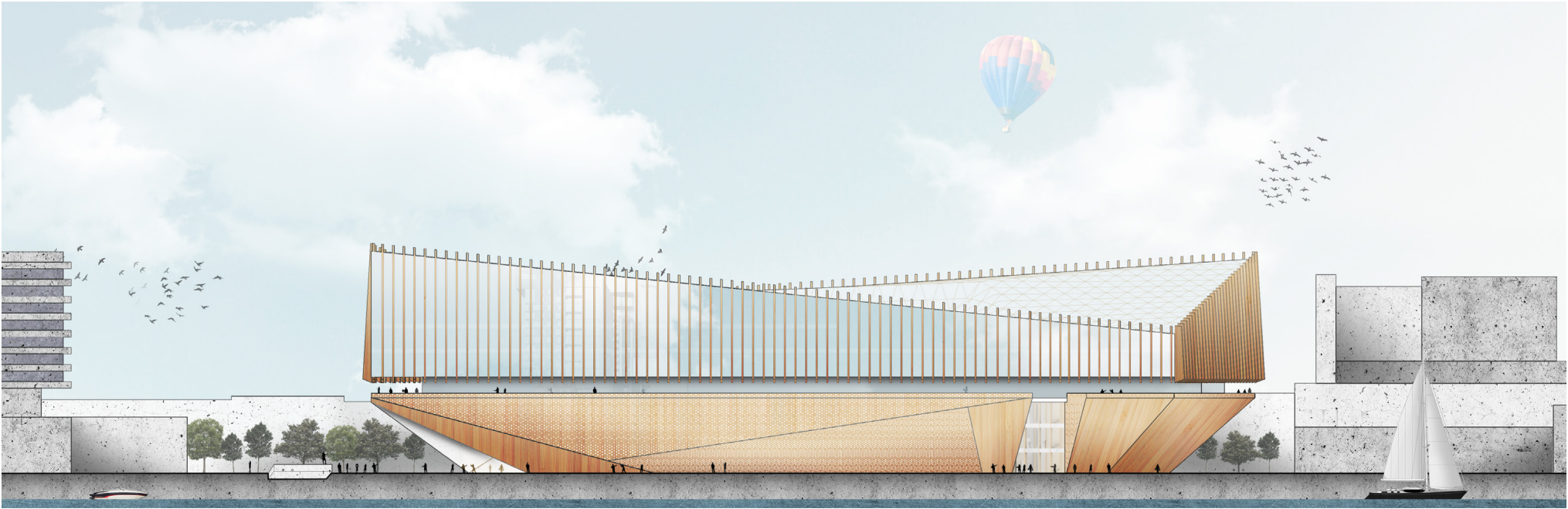
## SAIL MATERIAL



Teak wood panels

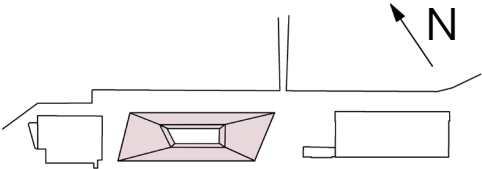
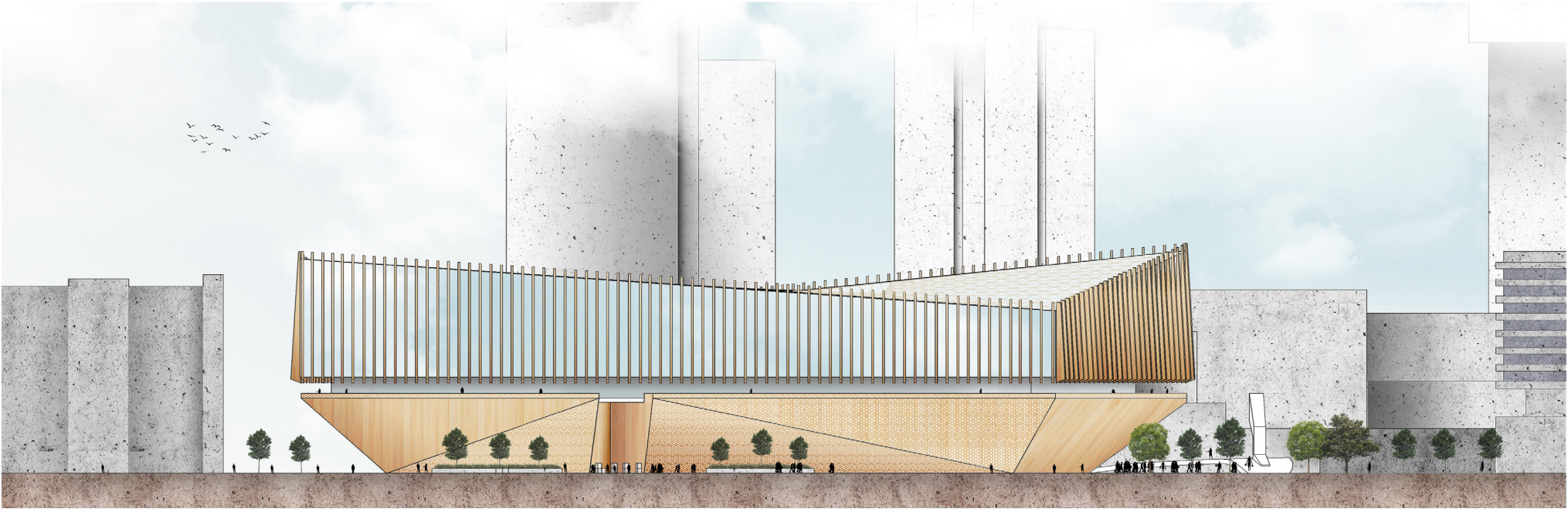


NORTH ELEVATION



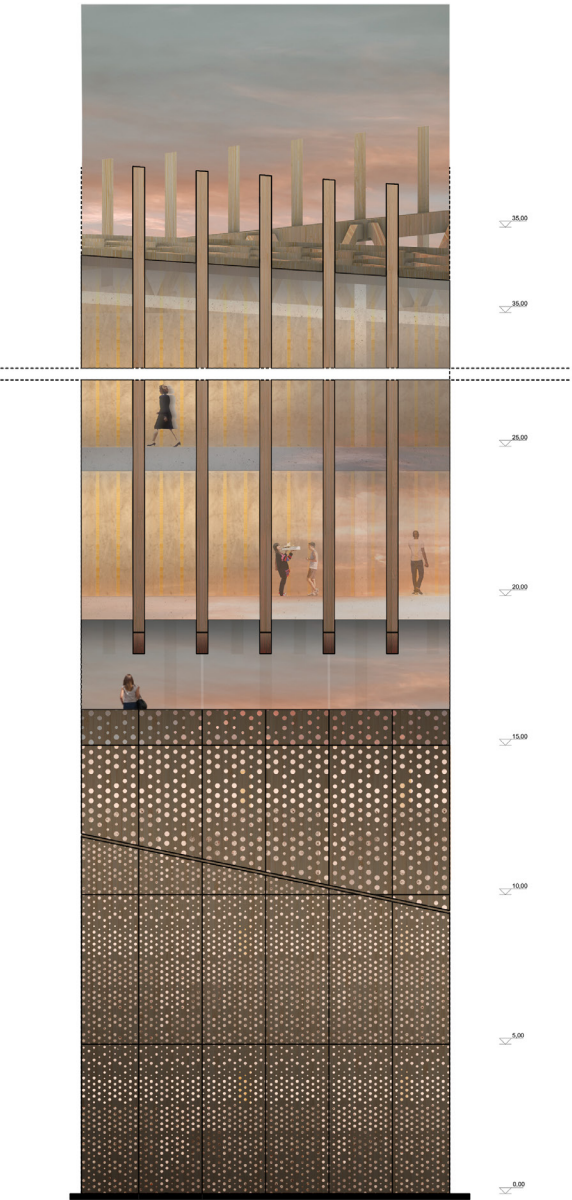
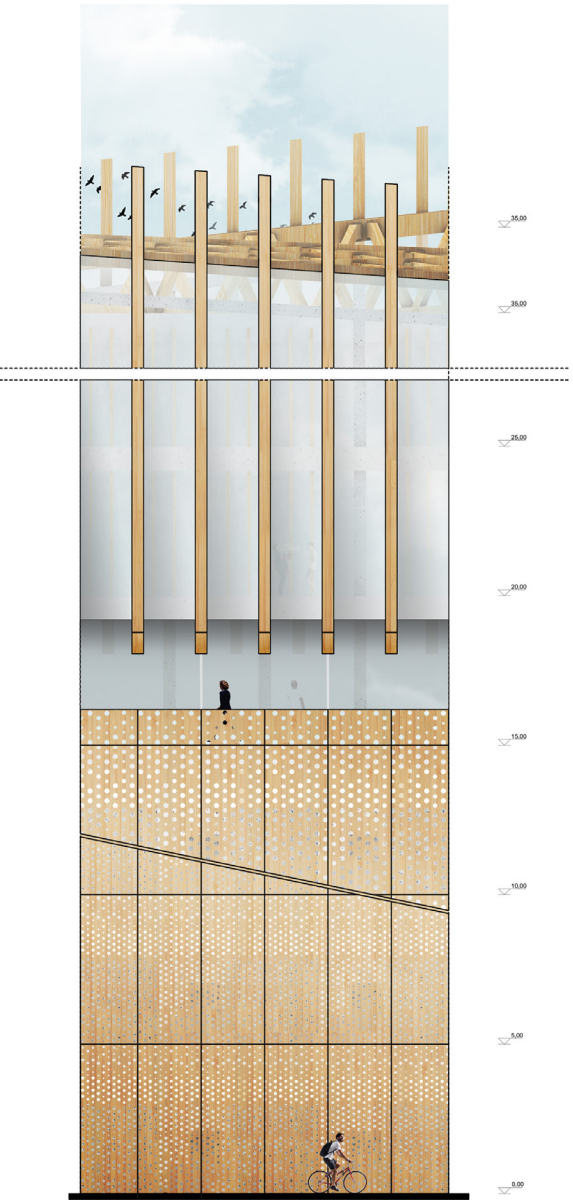


SOUTH ELEVATION



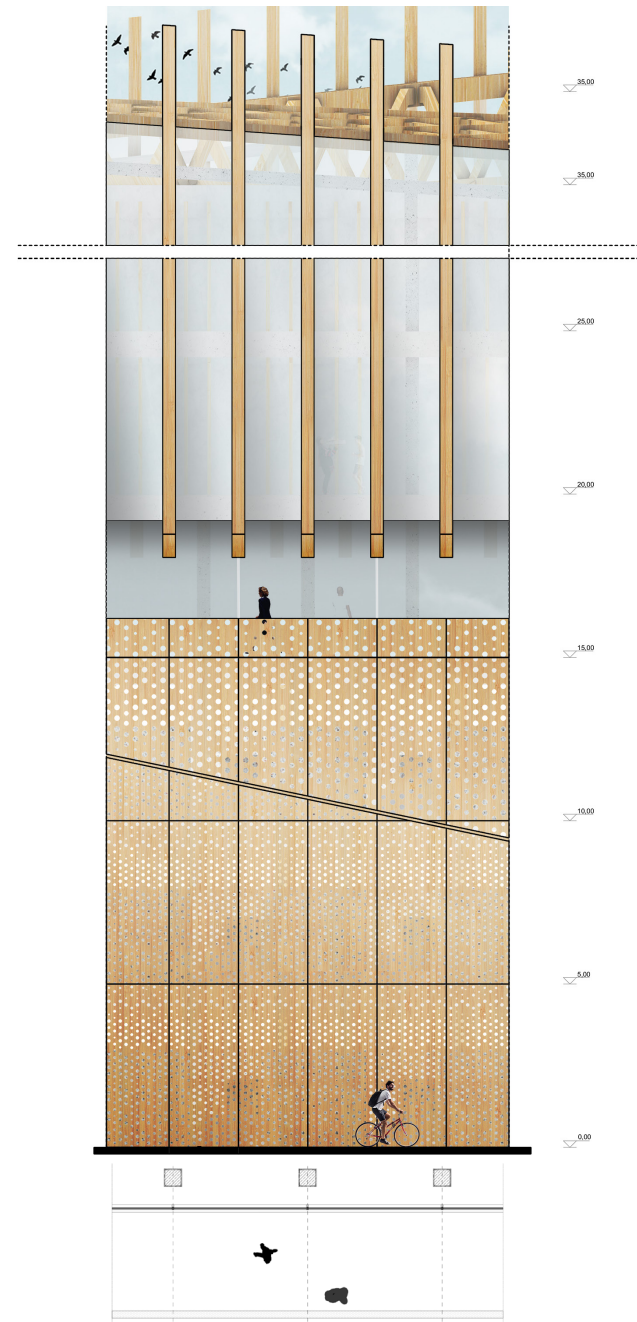
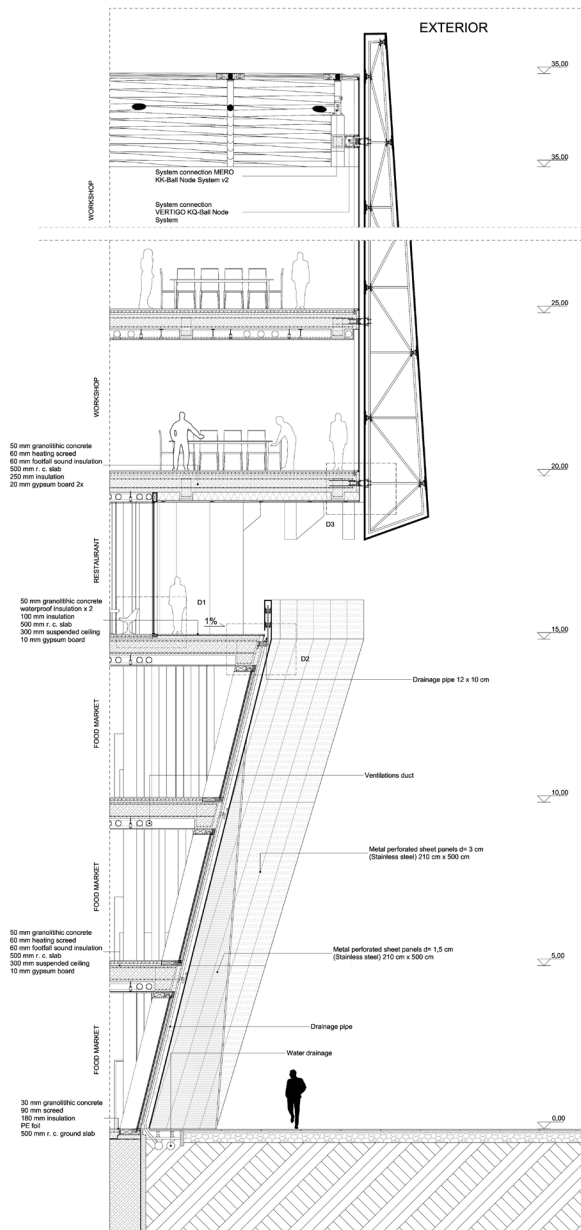


# FACADE 1: 20 DAY/ EVENING



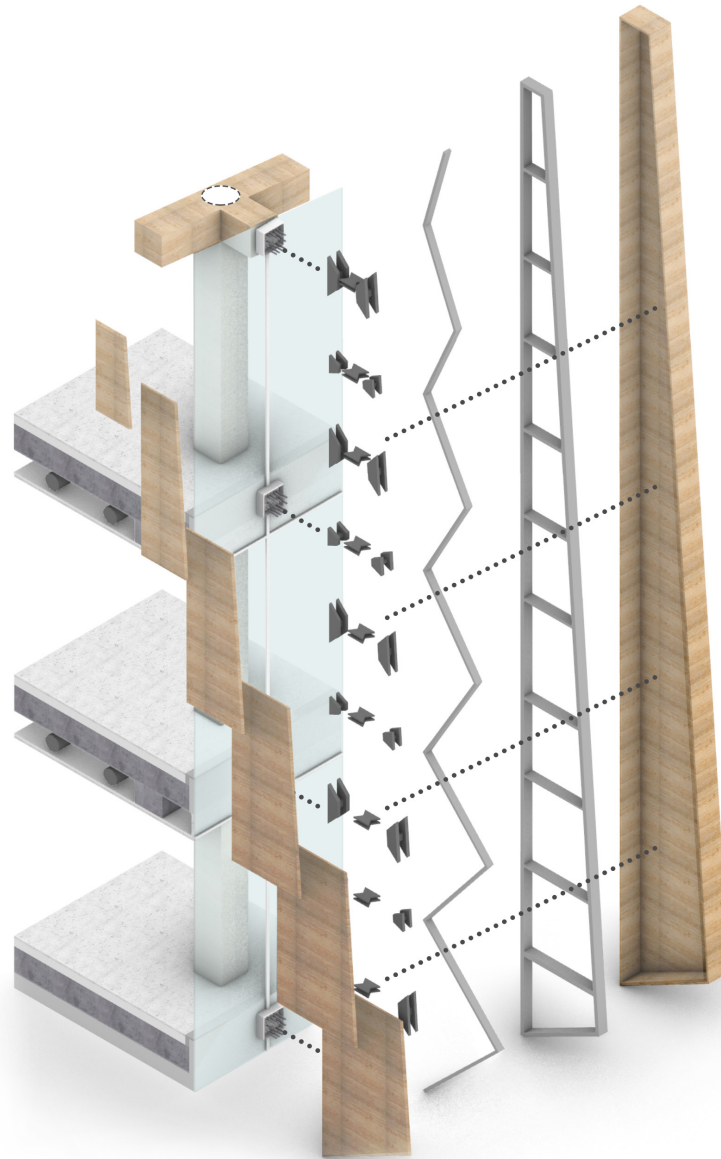


# FACADE 1: 20





## PANEL DIAGRAM

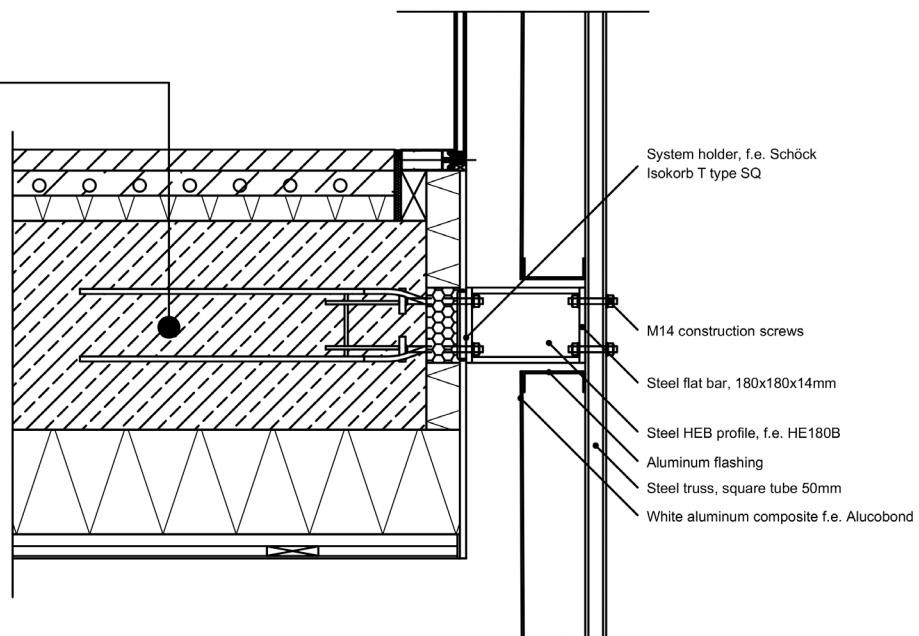


NERO KK Truss System Exterior



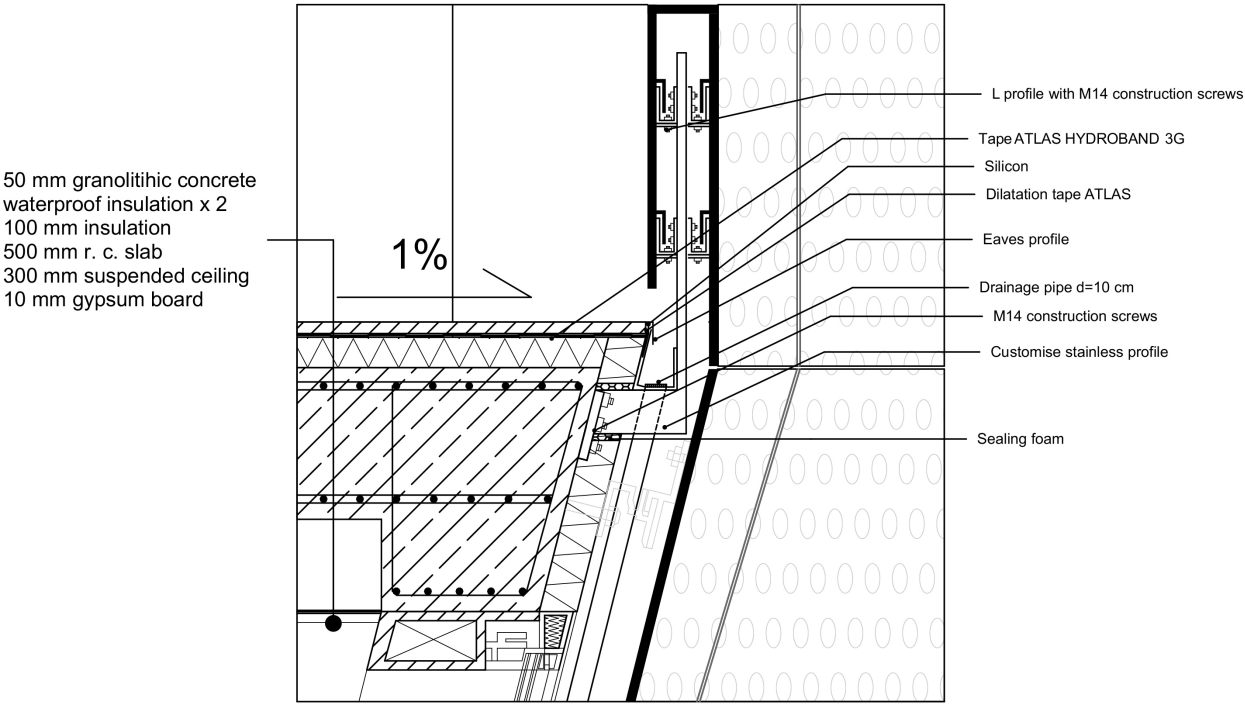
## DETAIL 1: 10

50 mm granolithic concrete  
60 mm heating screed  
60 mm footfall sound insulation  
500 mm r. c. slab  
250 mm insulation  
20 mm gypsum board 2x



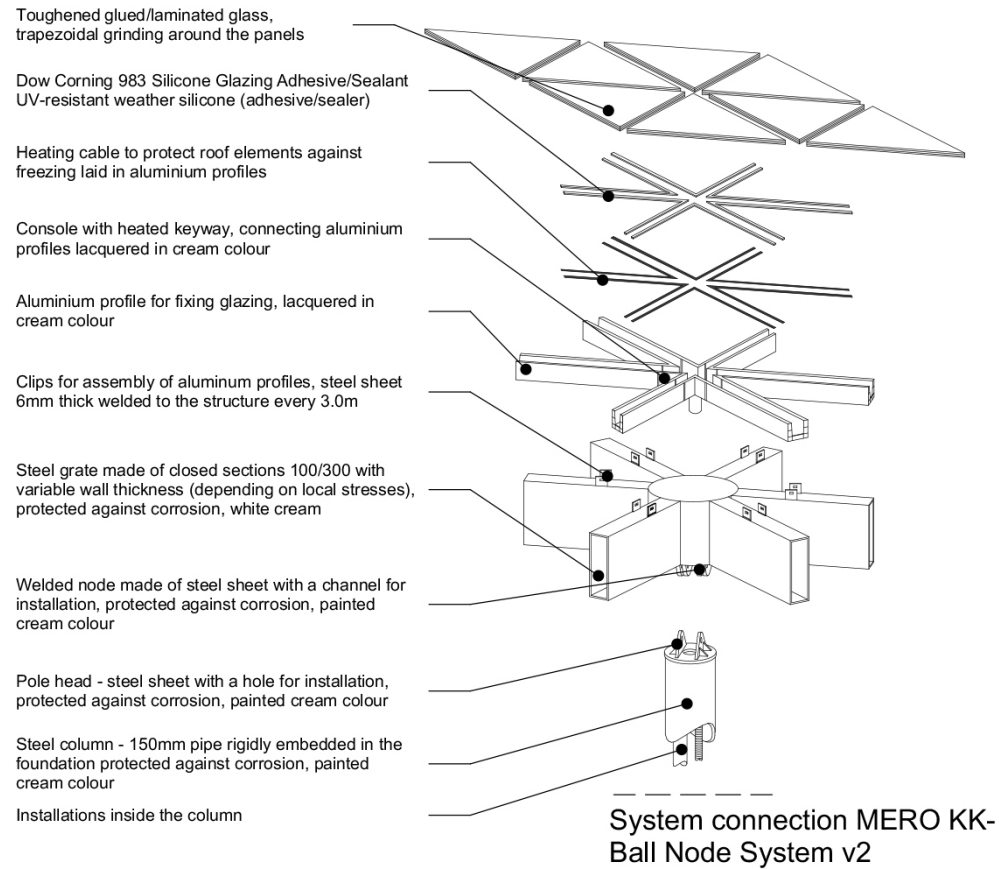


DETAIL 1: 10





# ROOF DIAGRAM





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FENIX 3.0 MARKET

FOOD GENERATOR

SIDE DISH/DESSERT



MAIN DISH



DRINK



STALL INFO

STALL NAME	STALL NAME	STALL NAME
UNIT NO.	UNIT NO.	UNIT NO.

GENERATE!

CAN'T DECIDE  
WHAT TO HAVE?  
LET US TAKE A  
PICK FOR YOU.



## FENIX 3.0





## FENIX 3.0

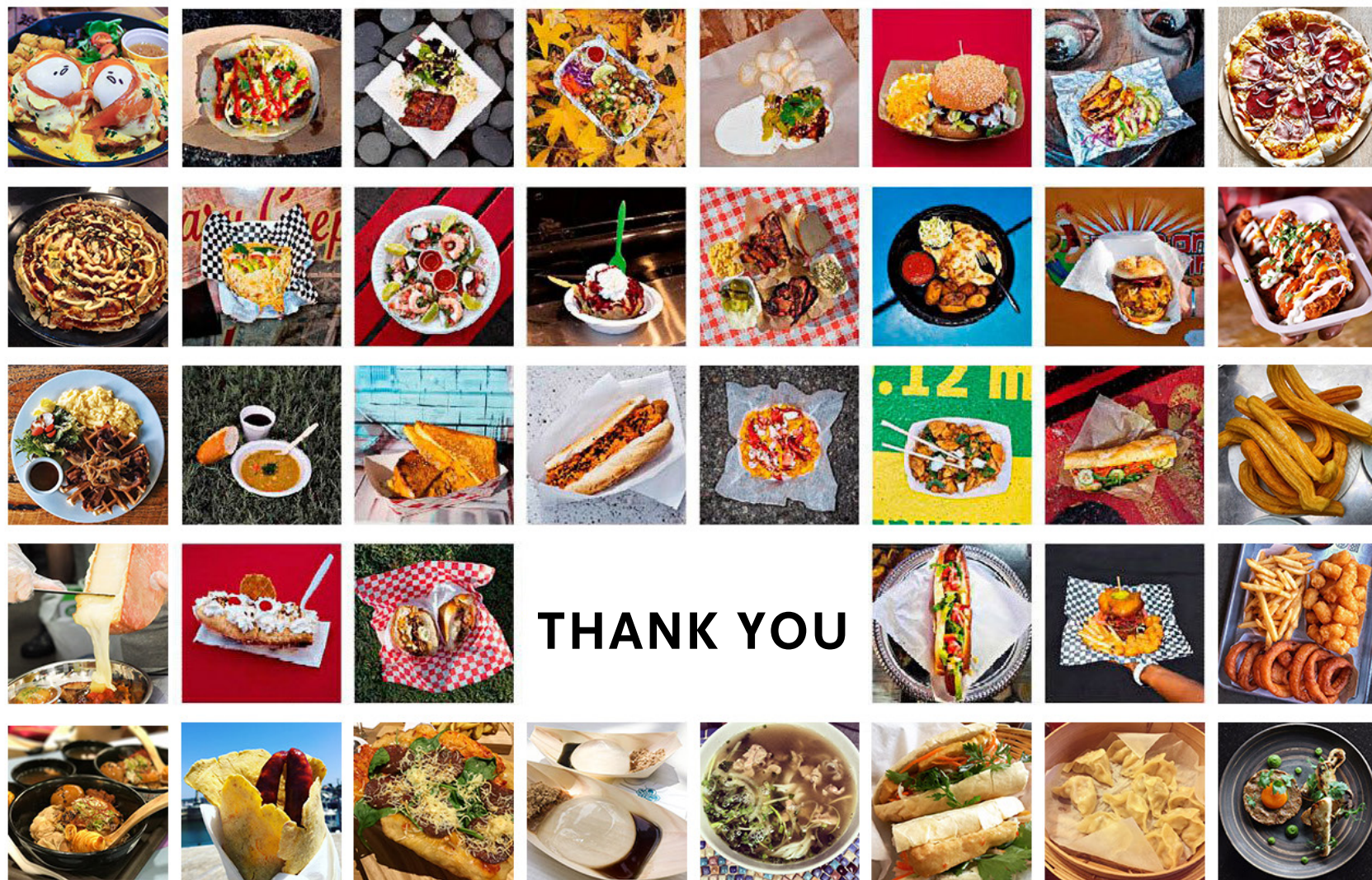




## FENIX 3.0







complex projects 

25/02/2021

fall semester