



ZEIT&RAUM

The next generation history museum

Heime 't Hart
02/07/2024

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سرايو الوادية
الوادية و أوالاد
سرايو الوادية











Introduction

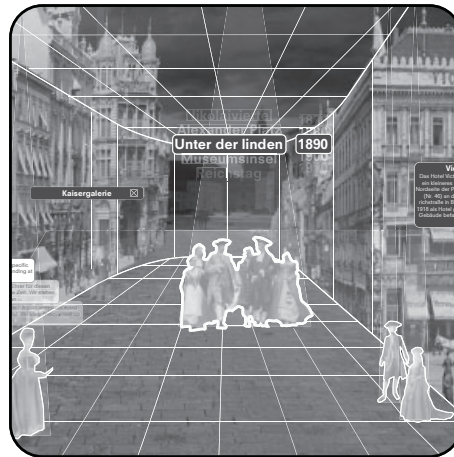
SUMMARY

Client



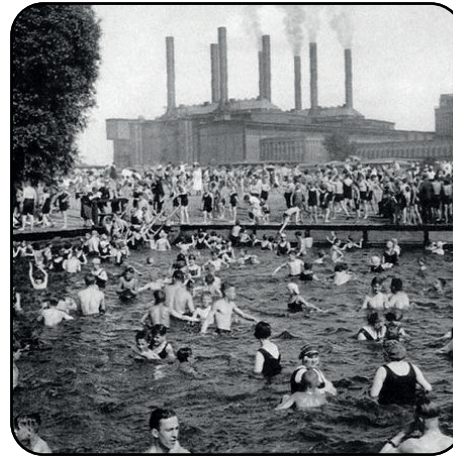
**Federal Government
BKM & BMVD**

Program



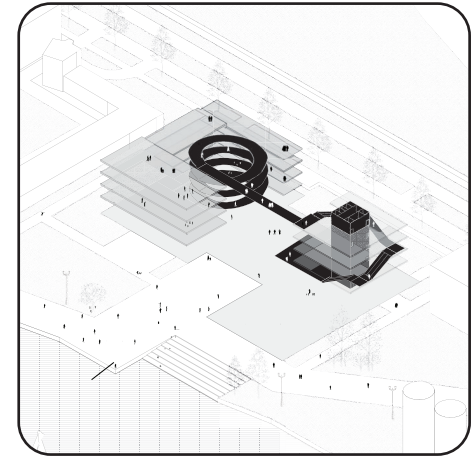
**Digitalized history
museum**

Site



**Klingenberg
Berlin**

Concept



**Time
machine**

Introduction

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Development

Conclusion

Research

IMPORTANCE



The life of reason
George Santayana, 1905

Research

IMPORTANCE



"Those who cannot remember the past are
condemned to repeat it."

The life of reason
George Santayana, 1905

Research

IMPORTANCE



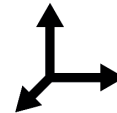
Reflect

Reflect on the past to
improve the future



Understand

understand (geo
political) changes



Perspective

Puts currentday
events in perspective



Think

Develops critical
thinking

Research DECLINE

Why Kids Don't Like Social Studies.

A survey of 6th and 12th grade students in a Midwest school district reveals largely indifferent or negative attitudes toward social studies subjects.

...

Seventeen percent chose social studies as the most important subject. Social studies ranked neither high nor low as a favorite or least favorite subject. Student comments indicate that it is not perceived as a particularly enjoyable subject and is not considered especially difficult.

...

Many students found social studies content boring, citing that the information is too far removed from their experience, too detailed, or too repetitious. These reasons suggest the need to strive for greater variety in instruction and provide more opportunities for student success. (KC)

Schug, Mark C., et al. (1982, November). Why Kids Don't Like Social Studies. <https://eric.ed.gov/?id=ED224765>

The Nations Report Card

REPORTS DASHBOARDS DATA TOOLS NEWSROOM FOCUS ON NAEP TAKE NAEP NOW



Between **18% and 88% of schools offered additional school programs** or classes to fourth-grade students **to make up for gaps in learning** in 2020–21.¹

¹Based on the 29 states that participated in the 2021 NAEP School and Teacher Questionnaire Study

Parents—along with teachers and schools—don't have a sense of alarm about their own child's social studies knowledge.

The politicization of this subject area discourages educators from broaching the complexities of governance and our history in the classroom—depriving students of critical opportunities to develop their civic skills.

The National Assessment of Educational Progress. (2023). Student Performance Across Subjects. <https://www.nationsreportcard.gov/>

The National Assessment of Educational Progress. (2023). Student Performance Across Subjects. <https://www.nationsreportcard.gov/>

Research

HISTORY & MUSEUMS



“Ennigaldi-Nanna helped organize all of these objects to **inform and share the history** of the empire.”

Ennigaldi-Nanna's 'Mouseion'
530BCE, Ur (Iraq)

Margherita Cole. (2023, June). Who Was Ennigaldi-Nanna? Learn About the Woman Who Founded the World's First Museum. <https://mymodernmet.com/ennigaldi-nanna-founded-the-first-museum-in-the-world/>

Research

MUSEUMS & YOUNG

Are Museums Still Relevant in the Digital Age?

Results showed that museums are attracting audiences 35-44, but not connecting with younger audiences, 18-24. There was a 16% increase in visitors between 35 and 44 and a 23% decrease in visitors between the ages of 18 to 24 compared to the national average.

Attracting the young Gen Z audience, ages 18-24, is critical for museums, since they are the next generation of visitors and donors. Gen Z is seeking more interactive and experiential options, like Instagrammable pop-ups, which are wildly popular with the age group.

While they show a lack of interest in most types of museums, Gen Z actually visits science museums at a greater rate (+11%) than the national average. This age group shows to be more attracted to the interactive and technological nature of science museums.

Bingham, G. (2019, 18 December). Are Museums Still Relevant in the Digital Age? <https://www.ubimo.com/blog/articles-and-research/museum-attendance-by-visitor-demographics/ABerlinStudiocomplexprojects38>

Research

MUSEUMS & THE DIGITAL AGE

Are Museums Still Important in the Digital Age?

Share full article



The 200-year-old National Museum of Brazil, in Rio de Janeiro, on Sept. 2. Leo Correa/Associated Press

By Michael Gonchar
Sept. 11, 2018

We live in an age when you can virtually “visit” the Louvre in Paris to see the Mona Lisa or the Metropolitan Museum of Art in New York to gaze at the [Egyptian Temple of Dendur](#) — all from your phone or desktop. So do museums still matter? Are they worth actually stepping inside to see collections firsthand? And are they worth protecting for the future?

In “[The Fire That Consumed Brazil’s Treasures](#),” the anthropologist Sarah Parcak wrote about the fire that destroyed the National Museum of Brazil in Rio de Janeiro on Sept. 2:

ICOM international council of museums

Museums have no borders, they have a network

Events IMD 2023 Heritage protection Training Research Resources Committees Get Involved About

← All news

August 22, 2023

The Digital Leap: Museums Adapting to COVID-19 and Beyond

ICOM VOICES

MICHAEL LOUIS EULENSTEIN AND DR. MICHAEL H. FABER
Research Assistant at University of Hildesheim, Department 4: Mathematics, Natural Sciences, Economics and Computer Science / President of the International Committee for Audiovisual, New Technologies and Social Media (AVICOM).

A Survey of Digital Strategies in Museums During the Pandemic and the Future of Audience Engagement

The Covid-19 pandemic introduced unprecedented challenges for museums worldwide, forcing them to develop digital strategies to maintain a public presence and engage with audiences. The ICOM-AVICOM/ICOM-MPR (International Committee for Audiovisual, New Technologies and Social Media and International Committee for Marketing and Public Relations) Solidarity Project Report, conducted in cooperation with ICOM Germany, investigated the digital approaches adopted by 173 museums from 51 countries across all continents. This article discusses the findings of this comprehensive study, and the potential impact on public relations and audience development in the digital era for small and medium-sized museums.

Re-examining The Role Of Museums In The Digital Age: How The Director Weighs In

Follow

Mar 23, 2023, 10:05am EDT

A photograph of a modern museum interior, showing a large, open space with a curved ceiling and people walking through the gallery. The architecture is contemporary, with clean lines and a bright, airy atmosphere.

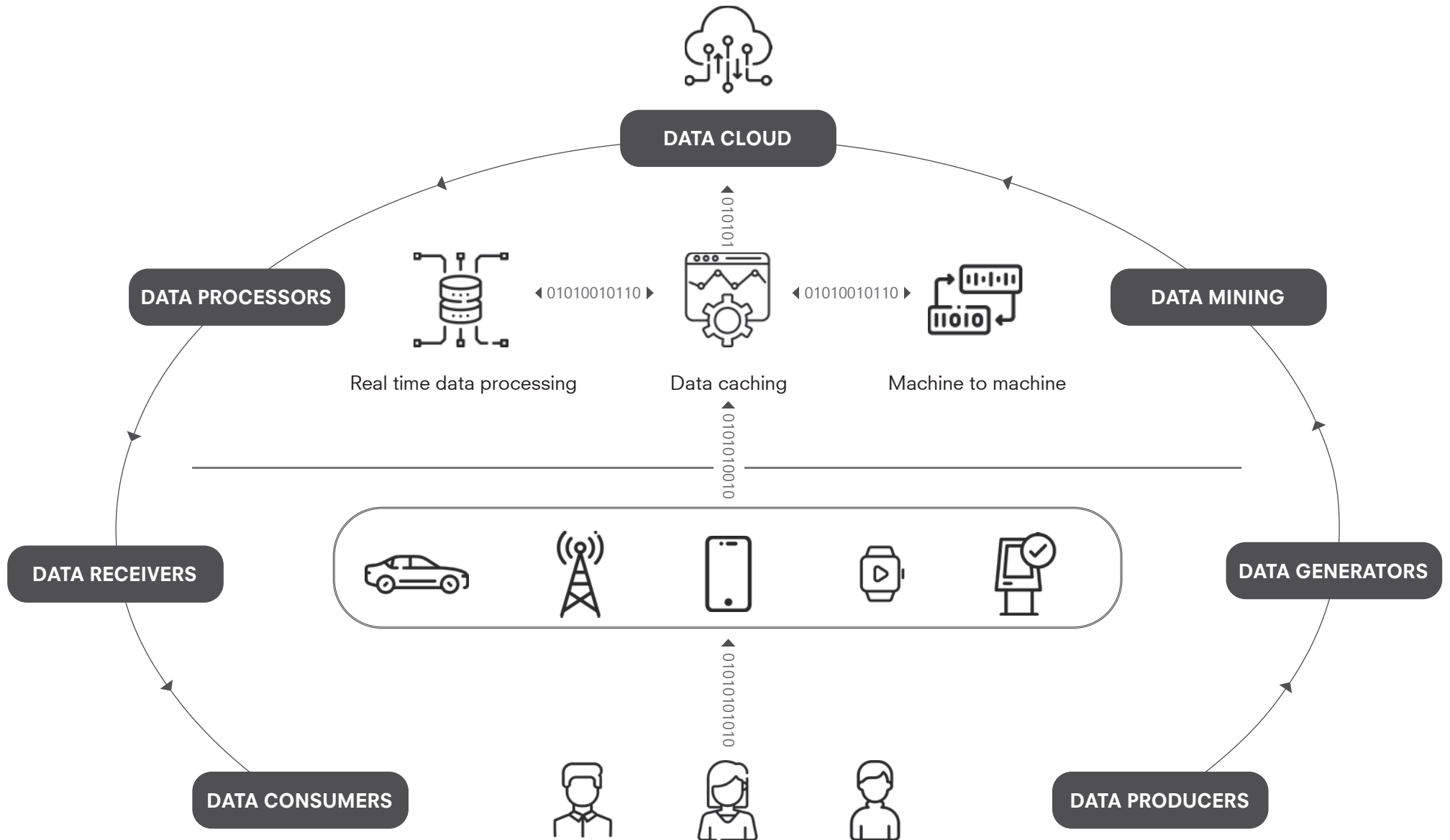
1. <https://www.nytimes.com/2018/09/11/learning/museums-protection-internet.html>
2. <https://icom.museum/en/news/the-digital-leap-museums-adapting-to-covid-19-and-beyond/>
3. <https://www.forbes.com/sites/jefffromm/2023/03/23/re-examining-the-role-of-museums-in-the-digital-age-mim-director-weighs-in/?sh=400dde281ebd>

Research

QUESTION

In which ways can digitalization impact the design for the next generation state-history museum of Berlin, benefitting the re-engagement with the young?

Research LENSE

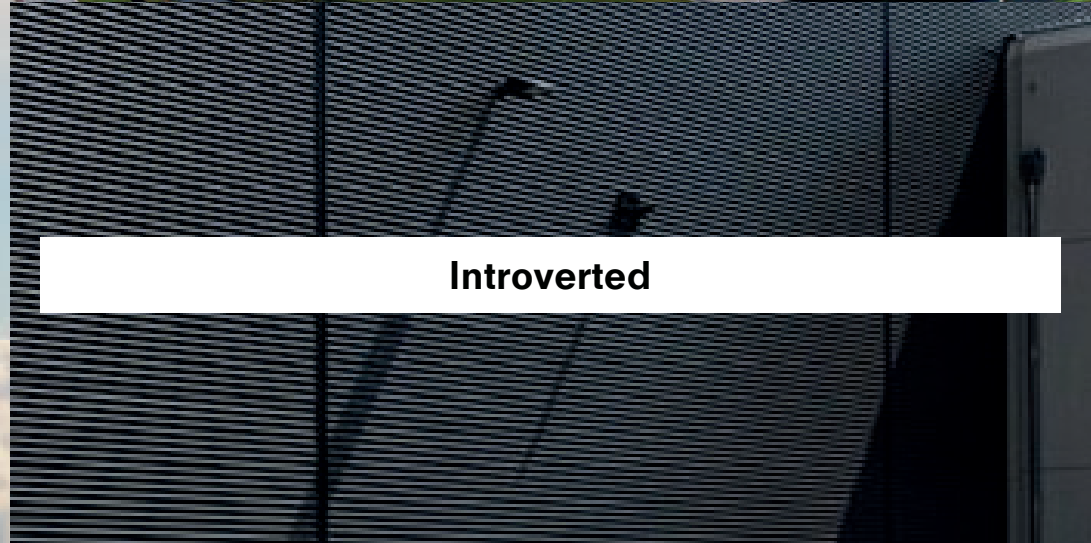




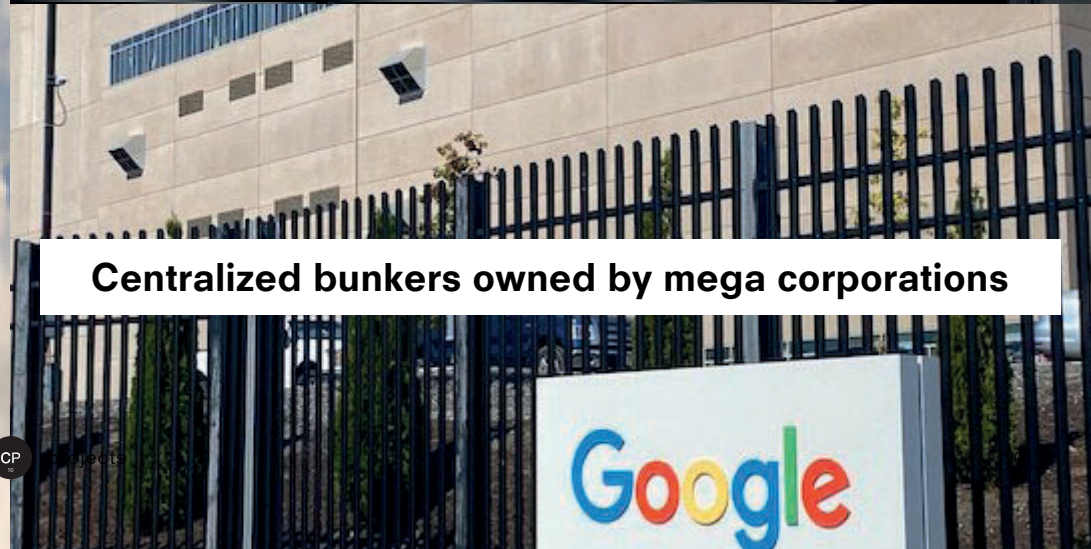
The cloud, but in reality they are...



Huge



Introverted



Centralized bunkers owned by mega corporations

**How can we decentralize and intergrate data centers into our public
built environment?**

Introduction

Research

Design Brief

Concept

Implementation

Development

Conclusion

Design Brief
USERS

Design Brief

CLIENTS

Claudia Roth
(BKM)

Problem statement:

It is vital to the German state that the young (up to 24) learn about history. A new generation of history museum in Berlin is needed. Make it cool!



Design Brief

CLIENTS

Kai Wegner
(Mayor Berlin)

Ambition:

Besides the preservation of our local cultural heritage, a museum could catalyse development in post industrial area's.



Brief: User, Client & Partner

DATA

Martina Klement
(CDO Berlin)

Ambition:

We want to fight the centralised, unhuman and unsustainable nature of data centers and integrate them into Berlin's public buildings.



Design Brief

CLIENTS

Commissioners

BKM

Federal level



Re-engage the youth with history by making it cool

BKM

City/ state level

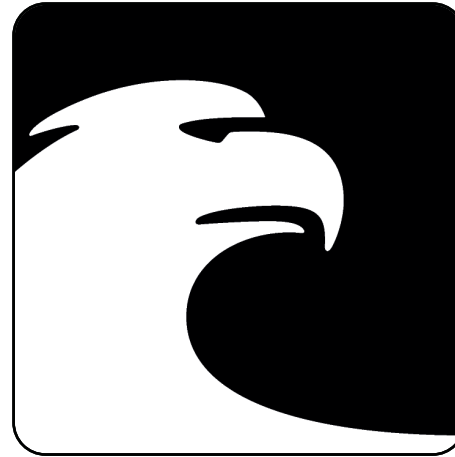


Preserve the cultural heritage and give an impulse to the city

Operator

SMB

(part of SPK)



Create the next generation history museum

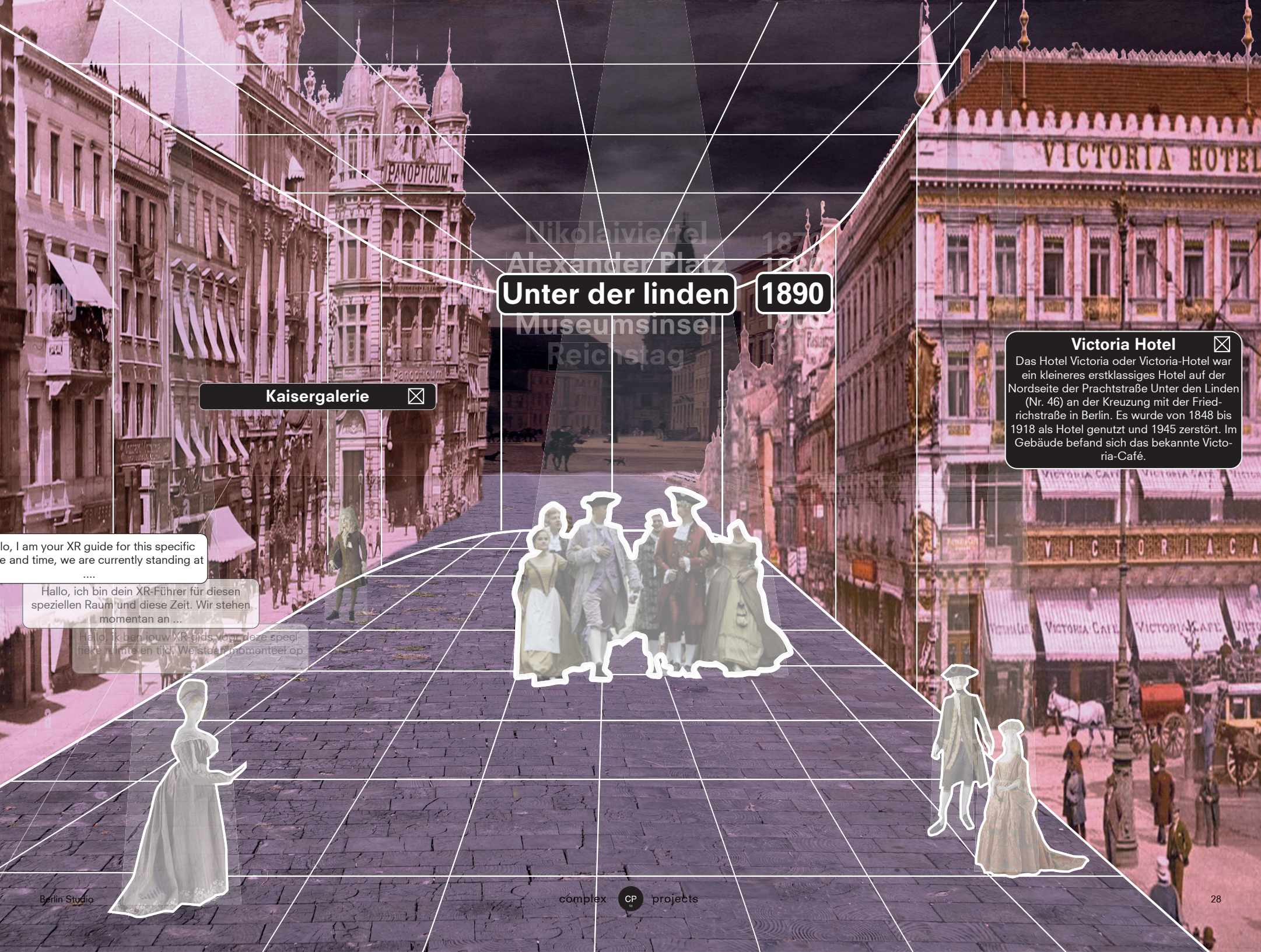
Data initiator

BMVD & CDO

Federal + state level



Intergrate data centers into public buildings



Unter der Linden

1890

Kaisergalerie



Victoria Hotel



Das Hotel Victoria oder Victoria-Hotel war ein kleineres erstklassiges Hotel auf der Nordseite der Prachtstraße Unter den Linden (Nr. 46) an der Kreuzung mit der Friedrichstraße in Berlin. Es wurde von 1848 bis 1918 als Hotel genutzt und 1945 zerstört. Im Gebäude befand sich das bekannte Victoria-Café.

lo, I am your XR guide for this specific
e and time, we are currently standing at
....

Hallo, ich bin dein XR-Führer für diesen
speziellen Raum und diese Zeit. Wir stehen
momentan an ...

Hallo, ik ben jouw XR-gids voor deze spec-
ifieke ruimte en tijd. We staan momenteel op

Design Brief

PROGRAM

Core program



Design Brief

PROGRAM

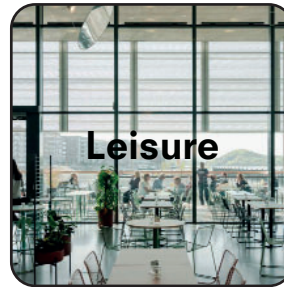
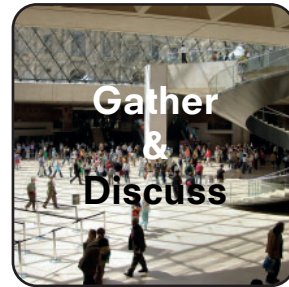
Core program



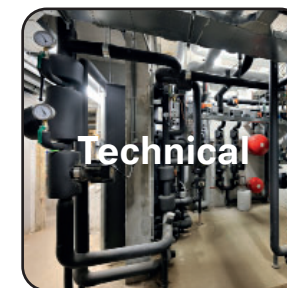
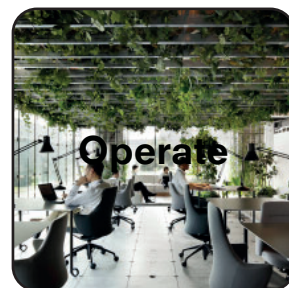
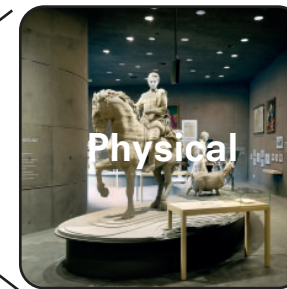
Design Brief

PROGRAM

Ancillary program



Core program



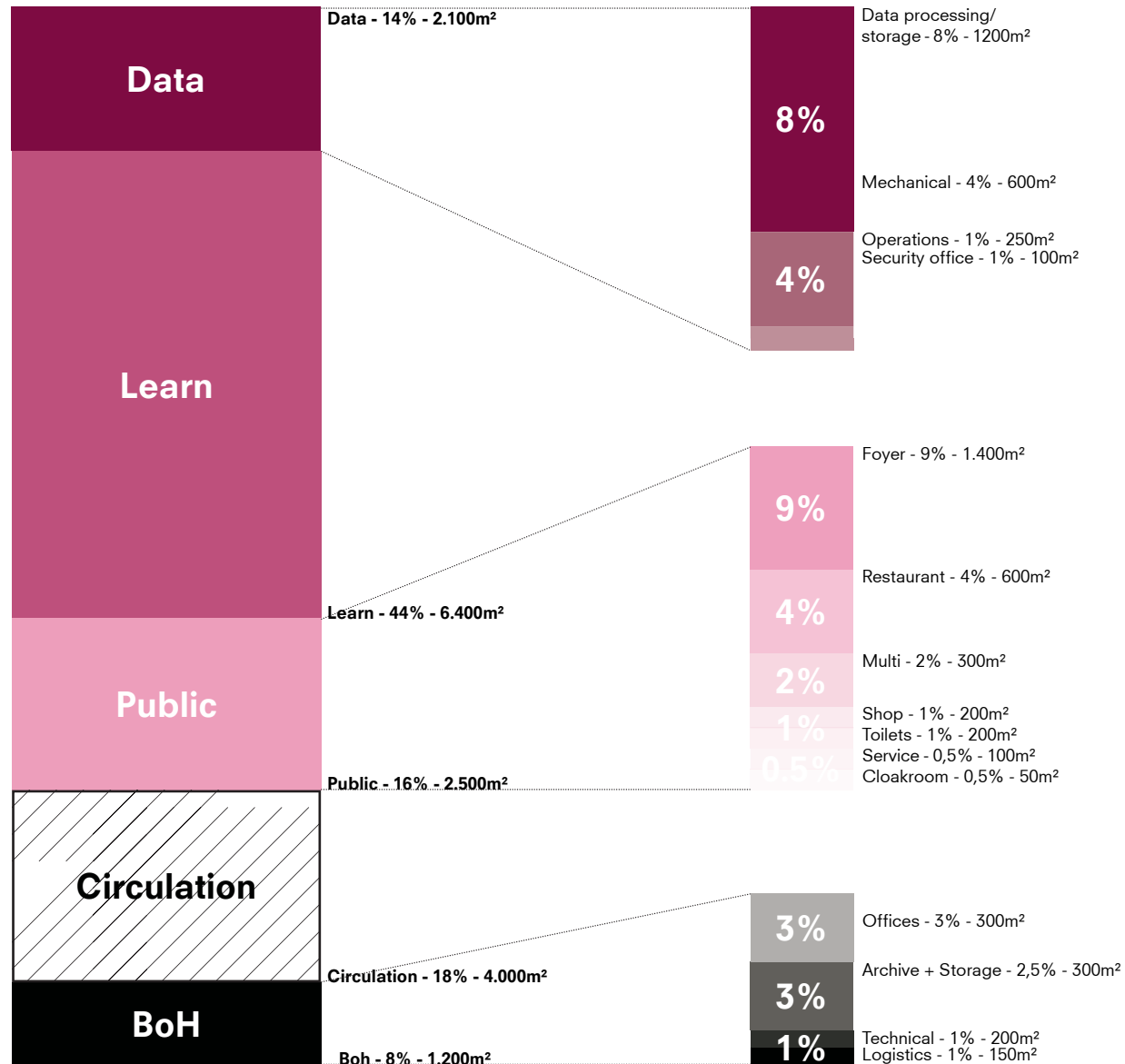
Support program



Design Brief

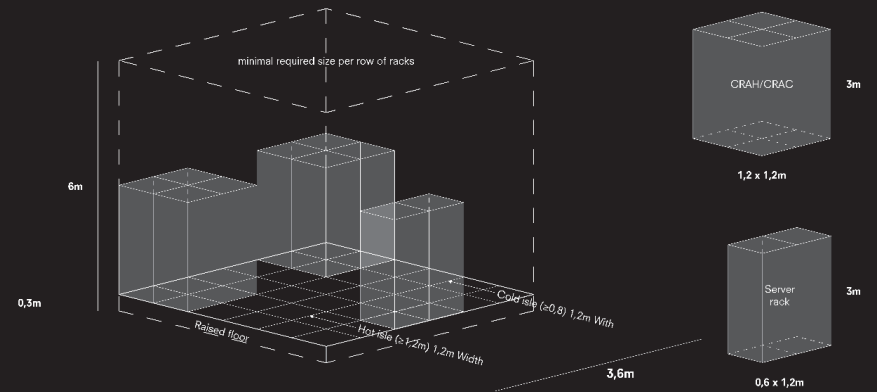
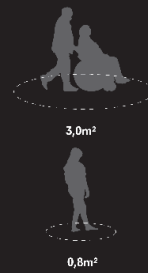
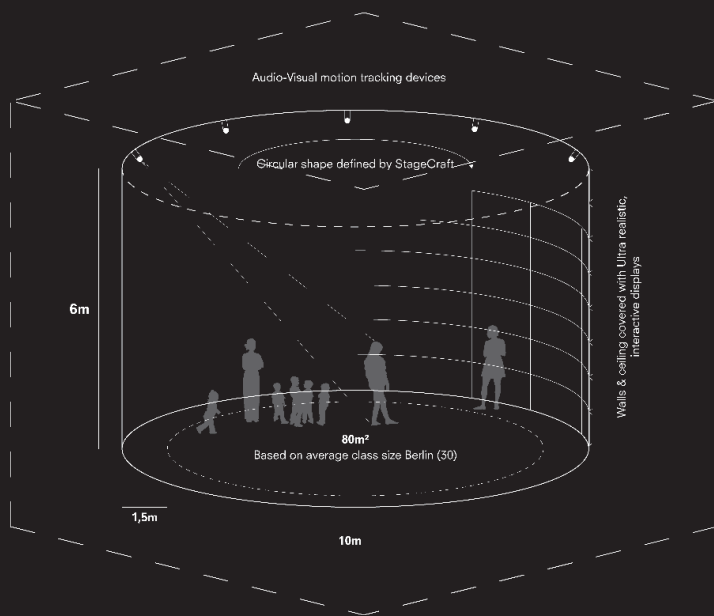
PROGRAM

15.200m²



Design Brief

PROGRAM



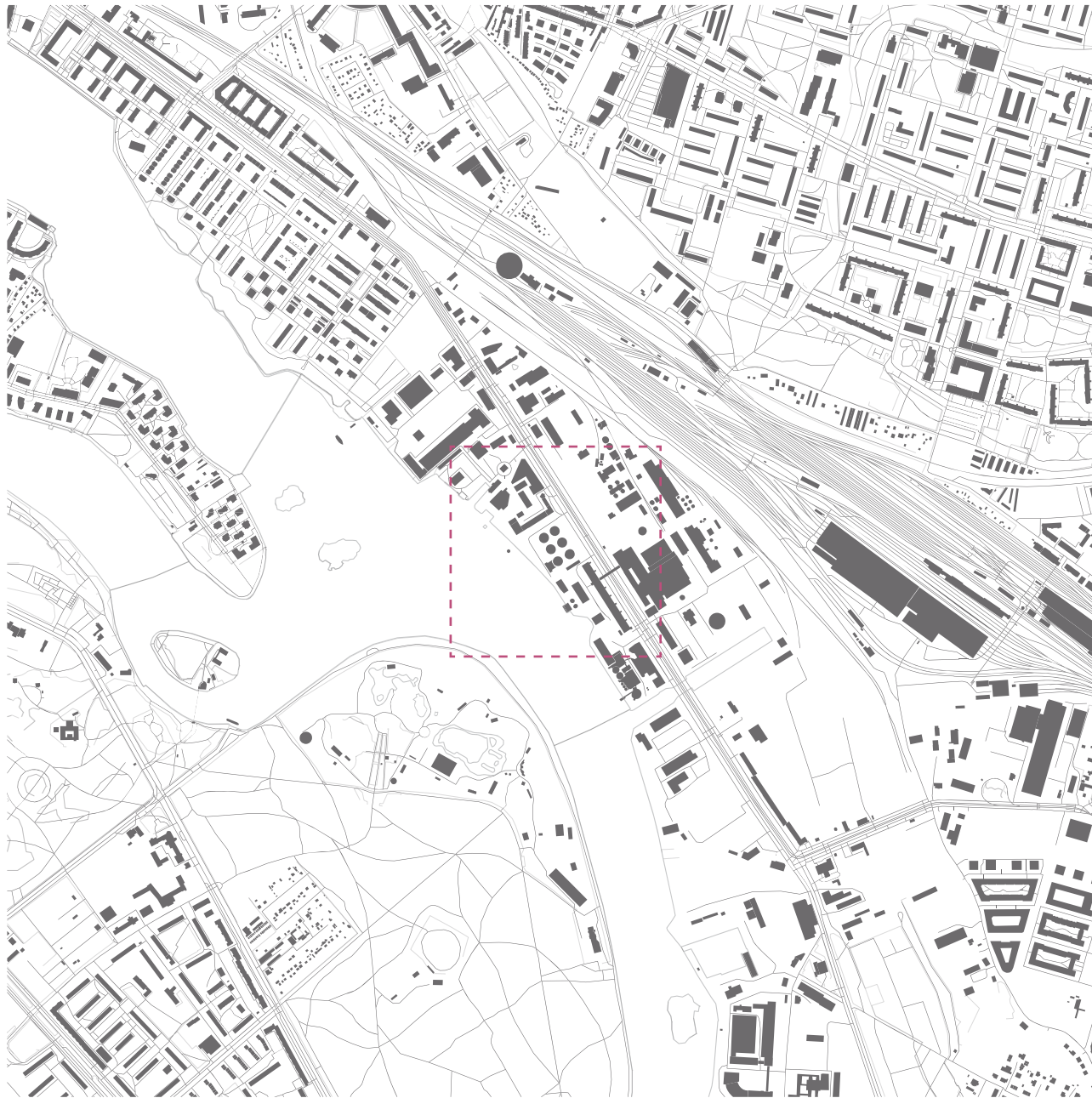
SITE

Berlin



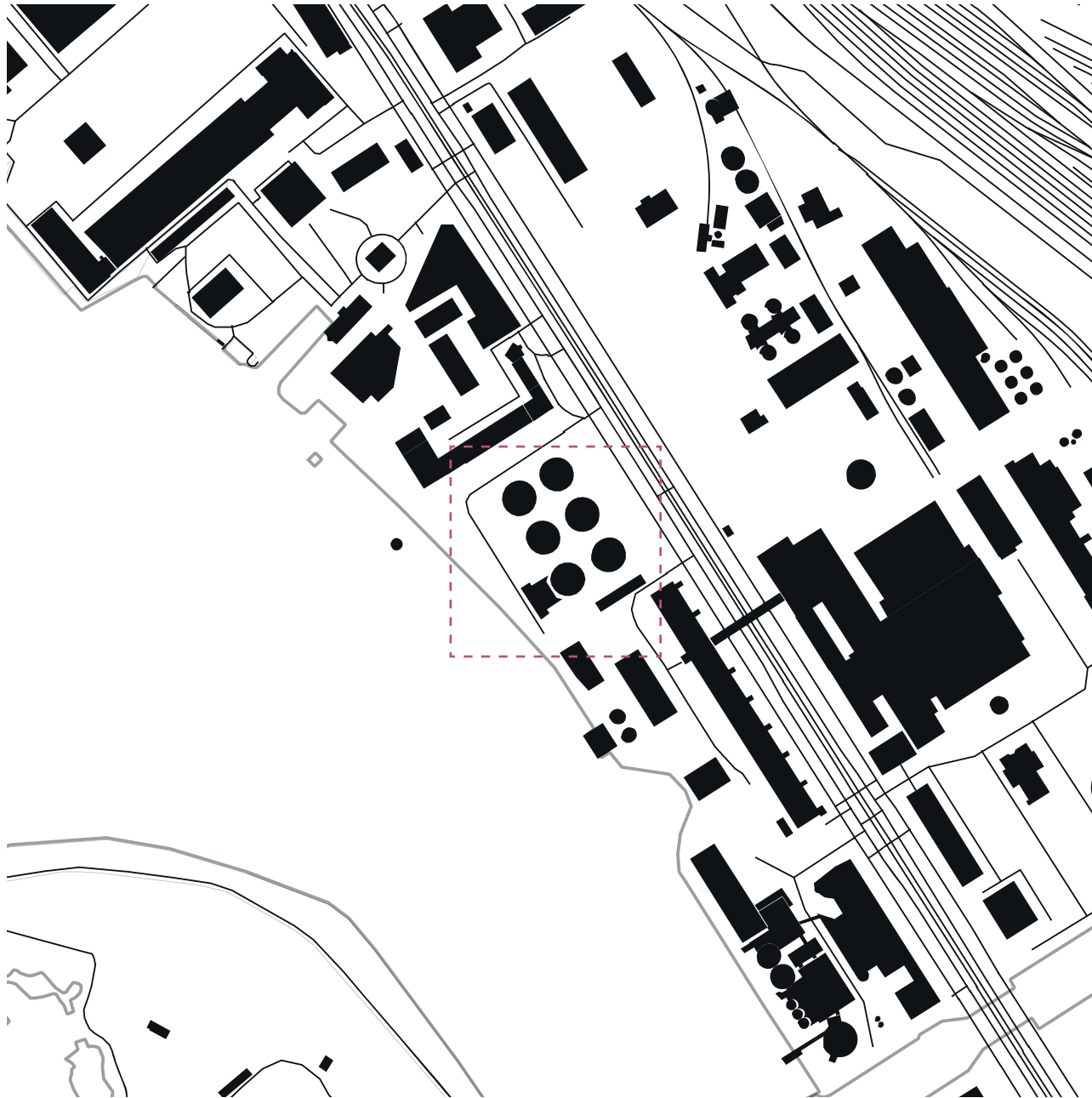
SITE

Rummelsburg,
Lichtenberg



SITE

köpenicker
Chaussee





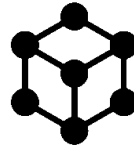
Design Brief

SITE

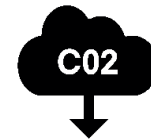
Display



Decentralize



Decarbonize



Developing



Prominent



Historical





Design Brief

SITE

Disused



Reference



Not protected



Introduction

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Concept

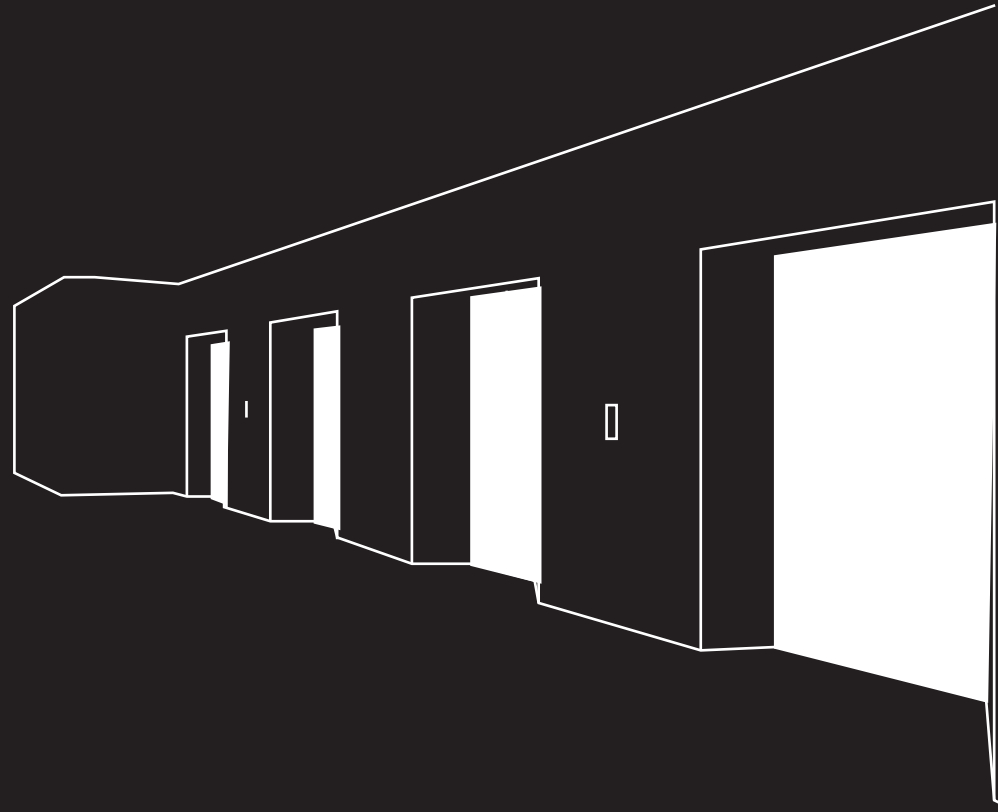
Implementation

Development

Conclusion

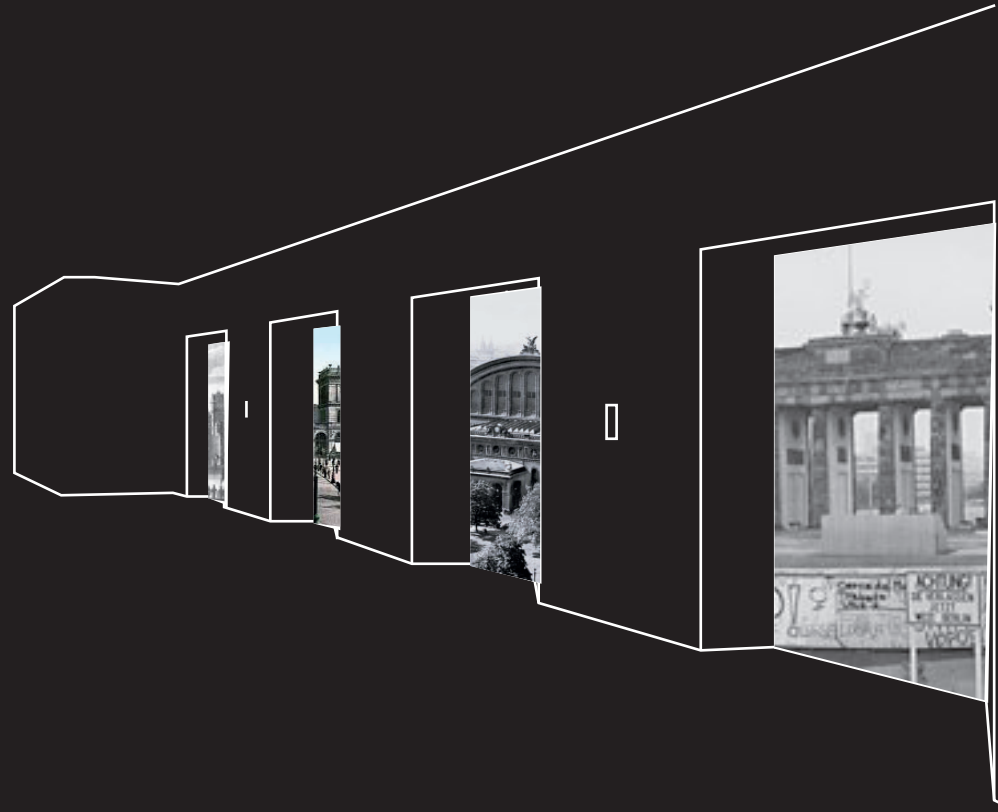
Concept

TIME TRAVEL



Concept

TIME TRAVEL



Concept

TIME TRAVEL



tomorrow



now



yesterday

Concept

TIME TRAVEL



tomorrow



ZEIT
RAUM



yesterday

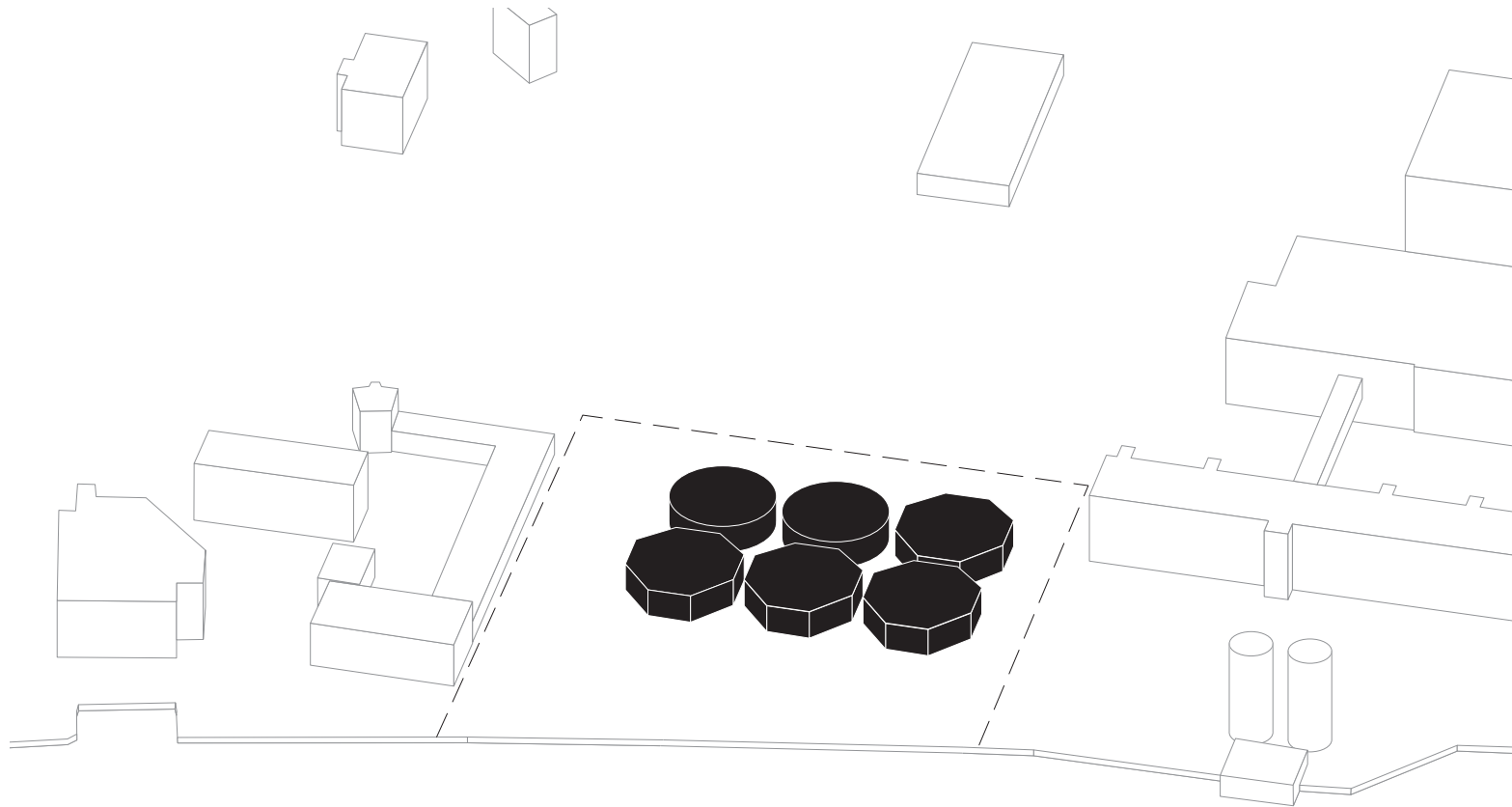
Digitalized
time travel





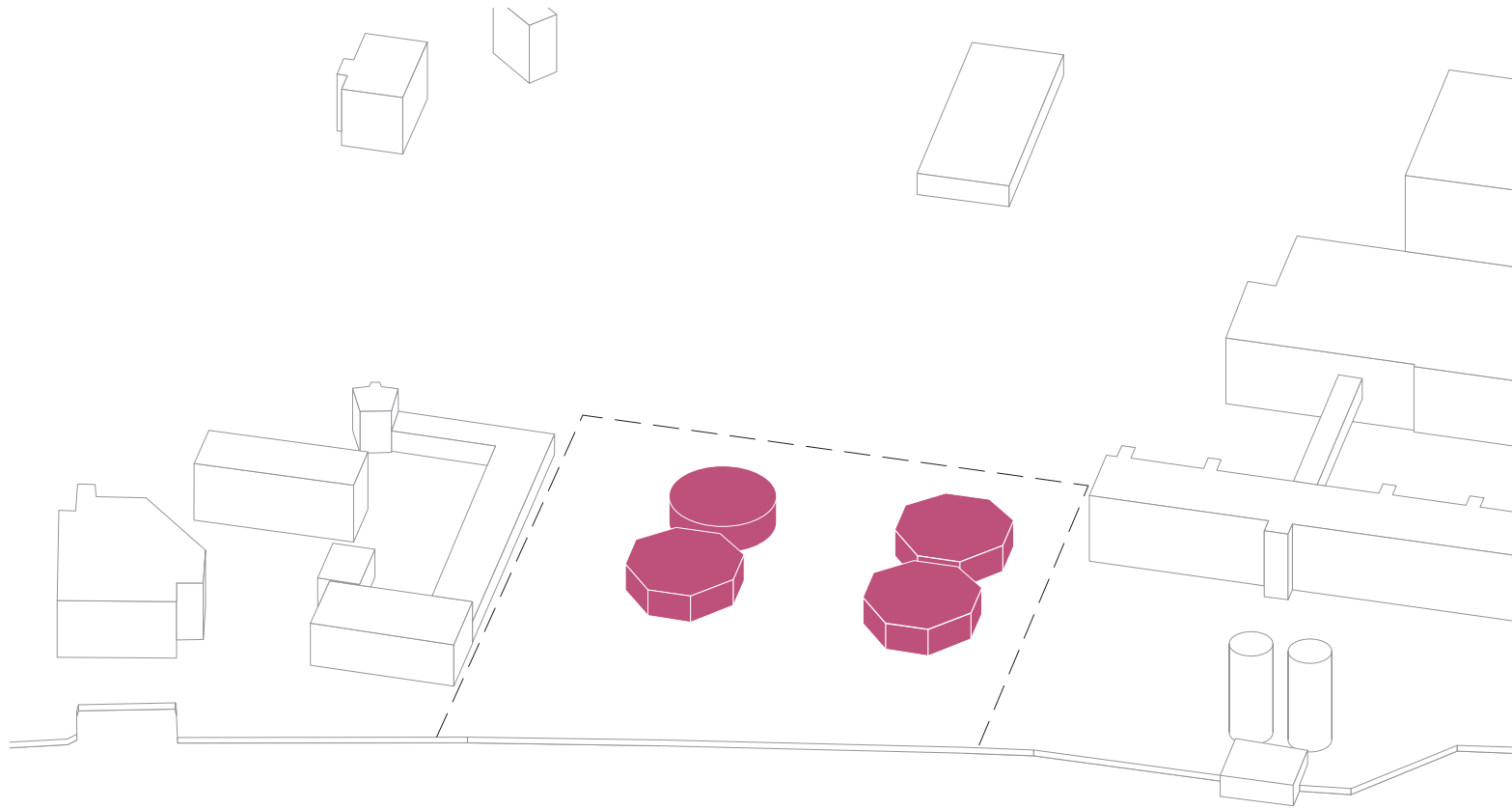
ZEIT
RAUM

Concept **PLOT**



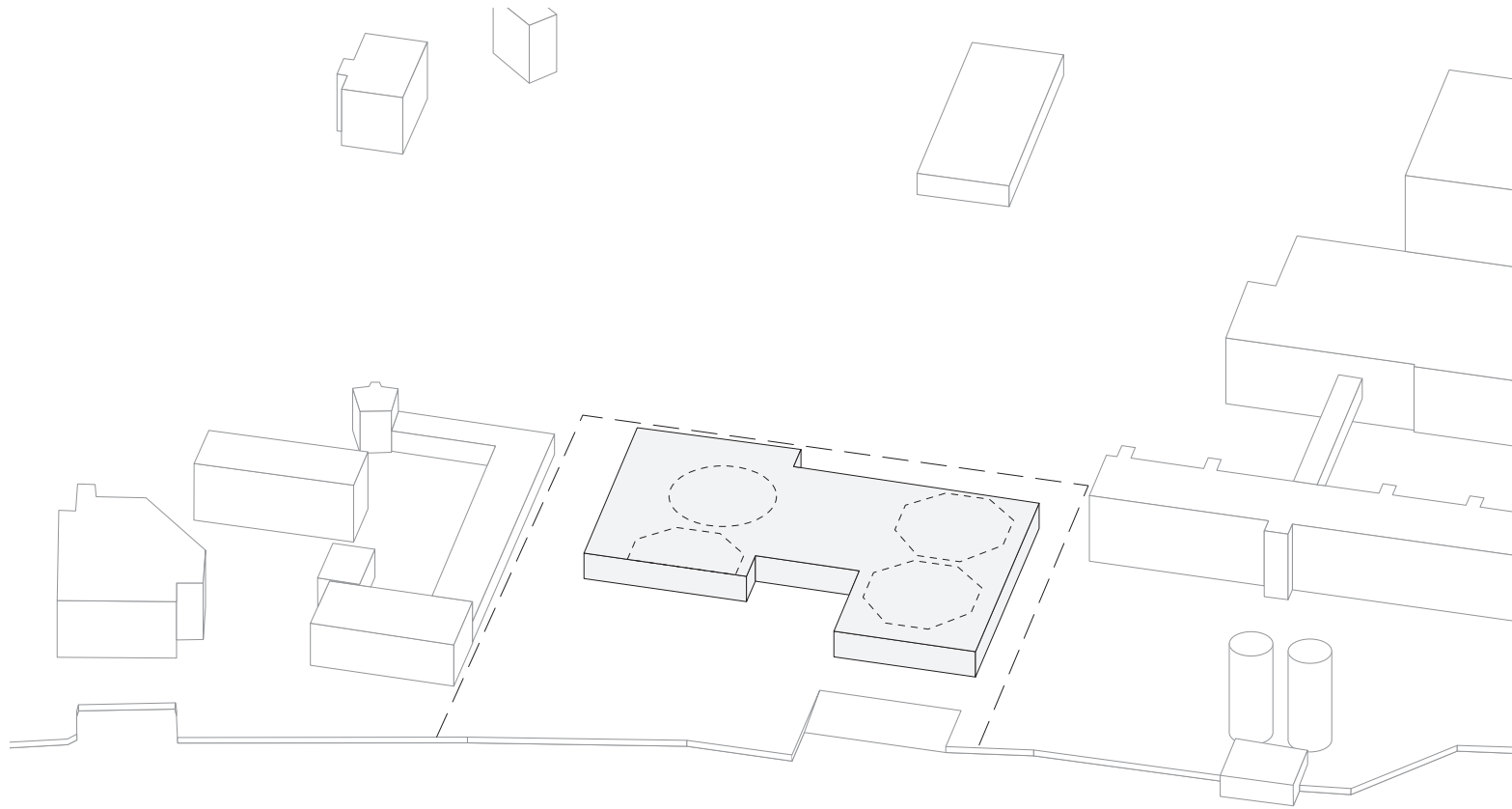
Six existing oil tanks, soil should be remediated
and/or capped

Concept **TANKS**



Four are kept and adapted on the public sides of
the future development

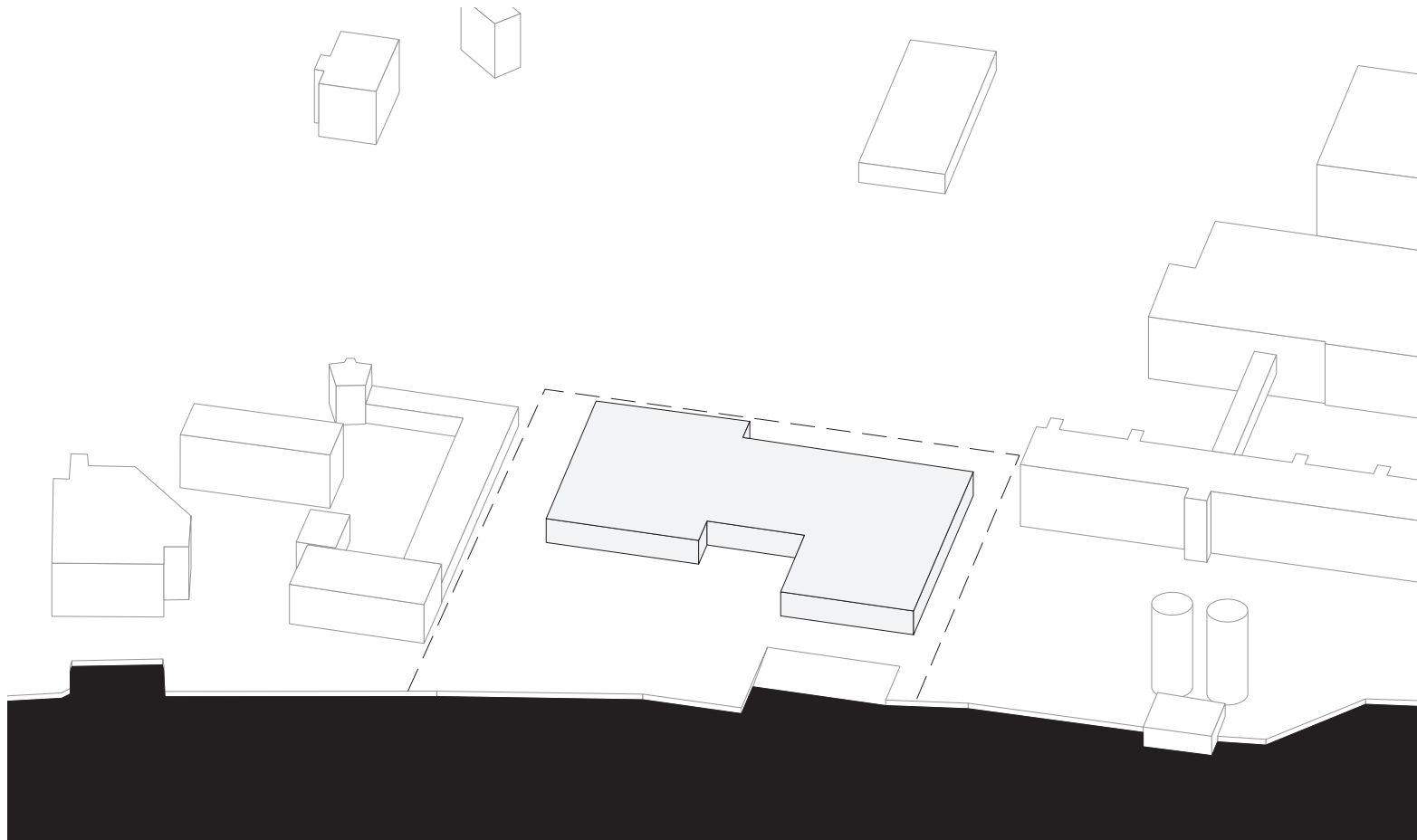
Concept **BASE**



A base is layed out around those tanks

Concept

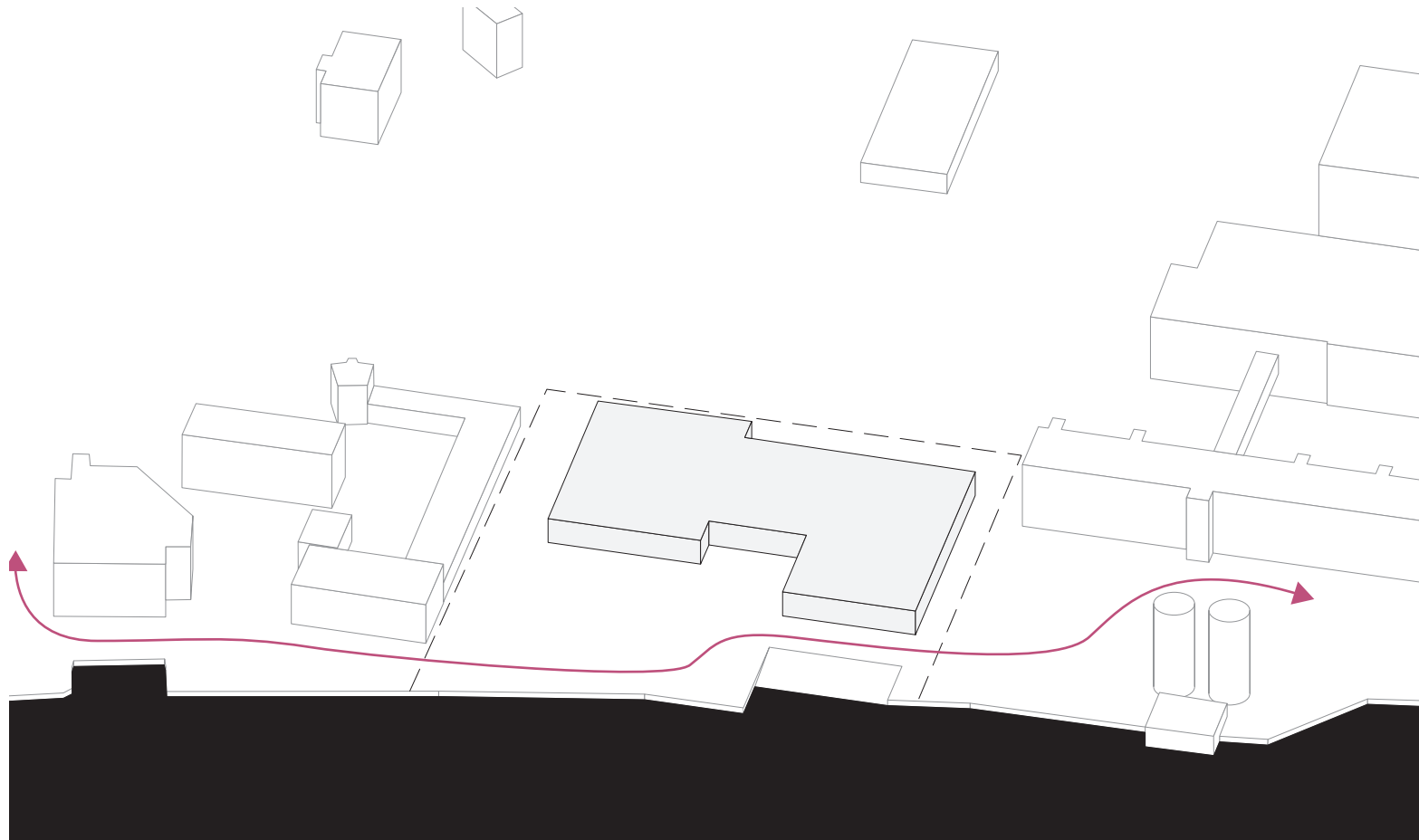
ORIENTATION



Oriented to the water

Concept

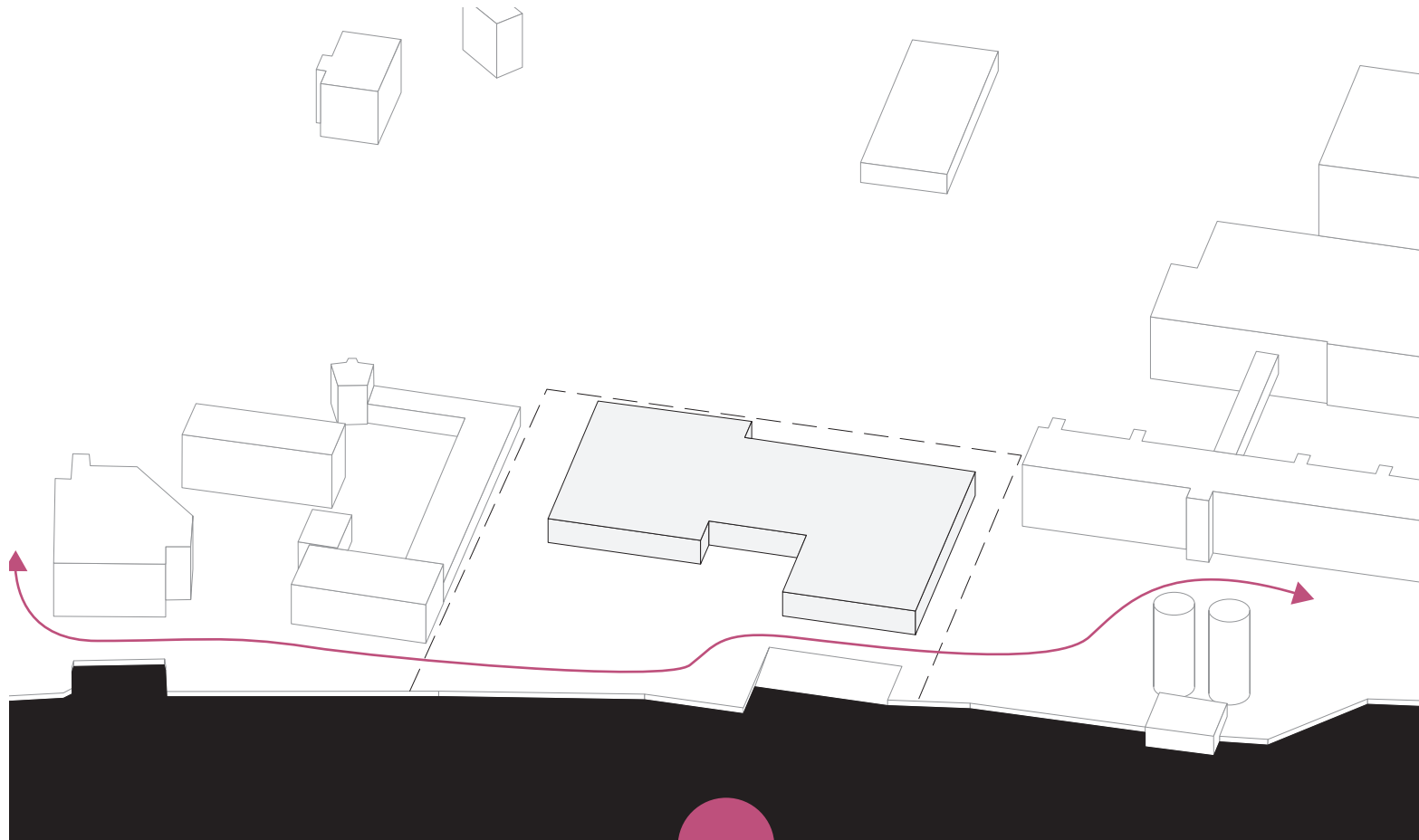
ORIENTATION



Set back from the Spree walk

Concept

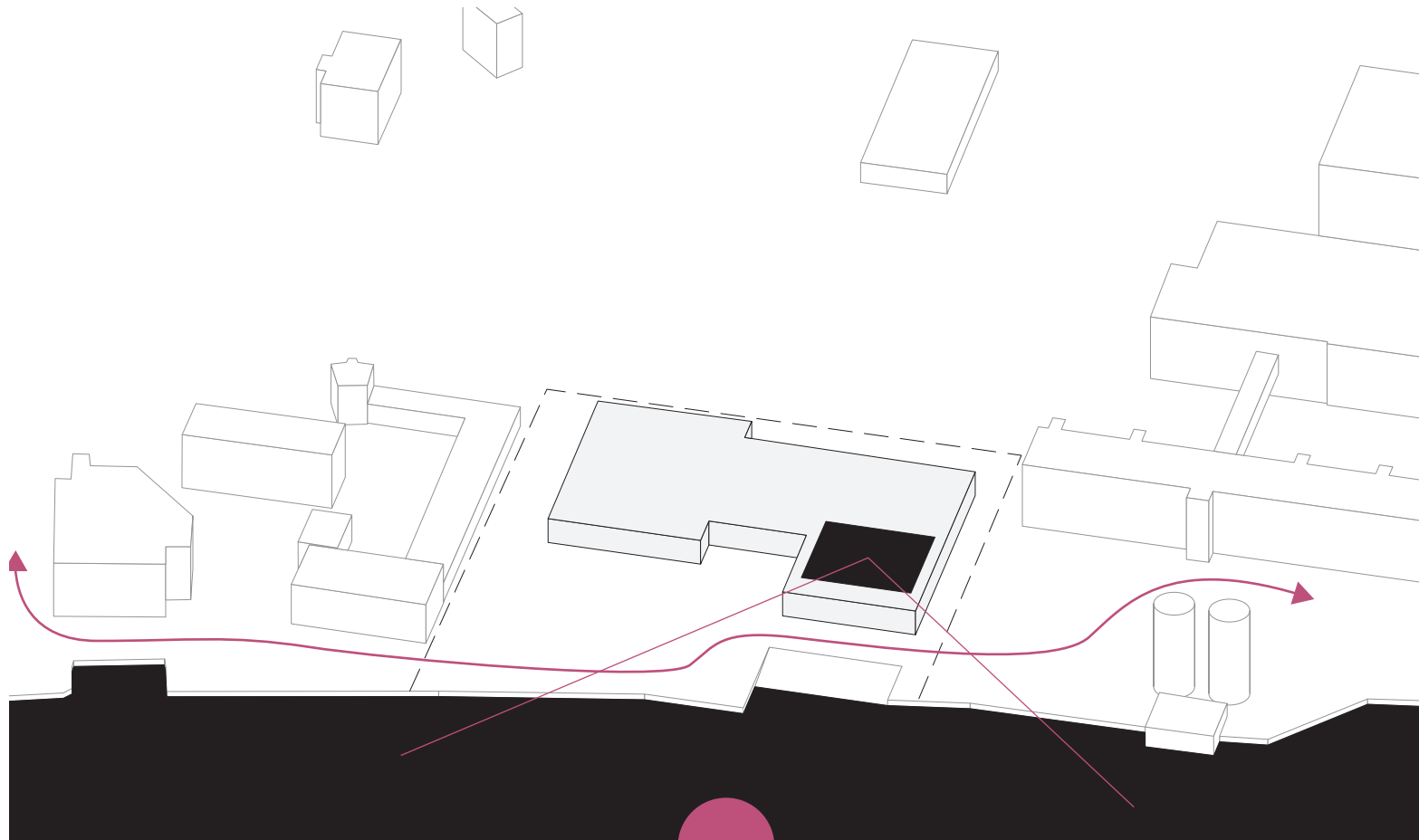
ORIENTATION



Oriented to the Sun

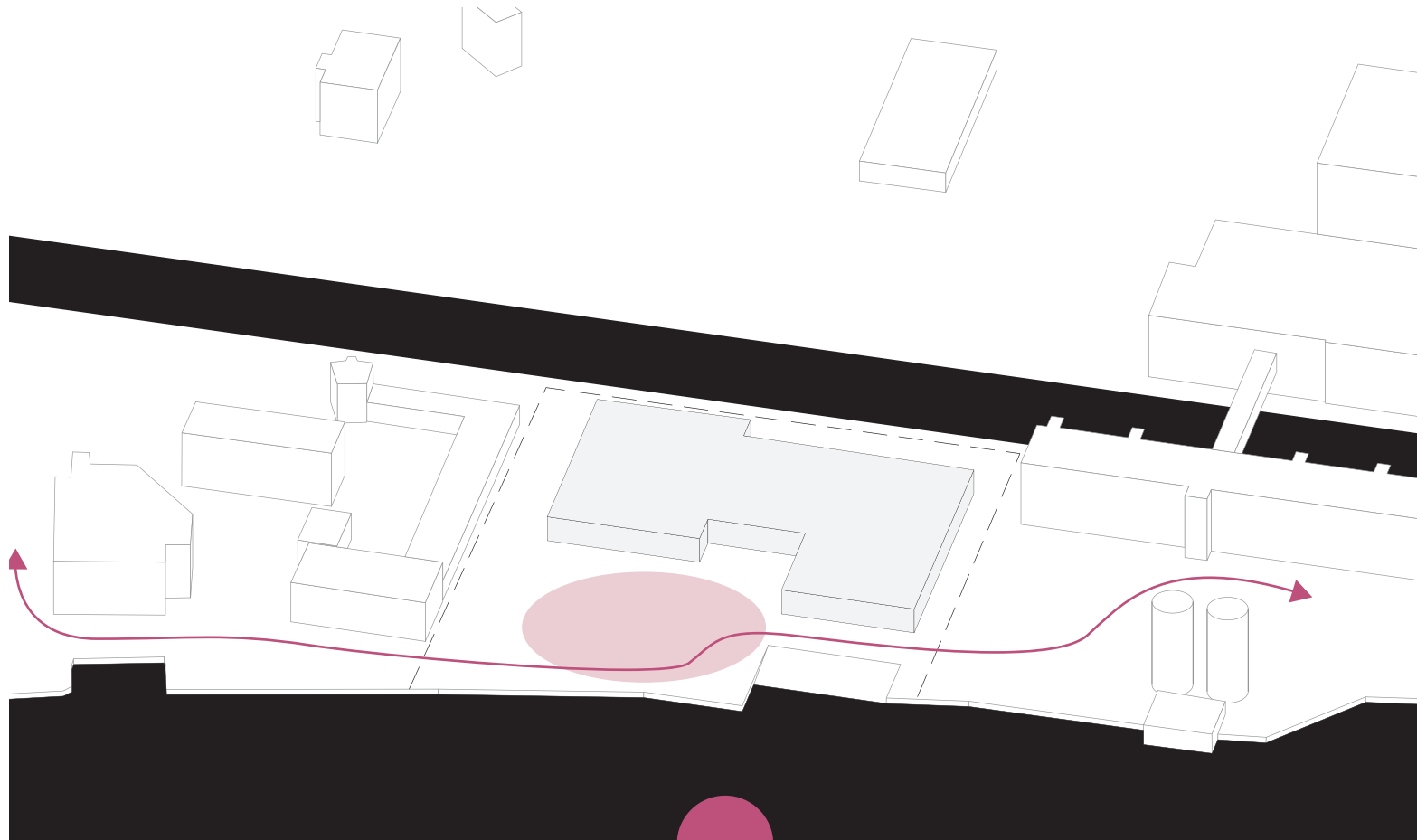
Concept

ORIENTATION



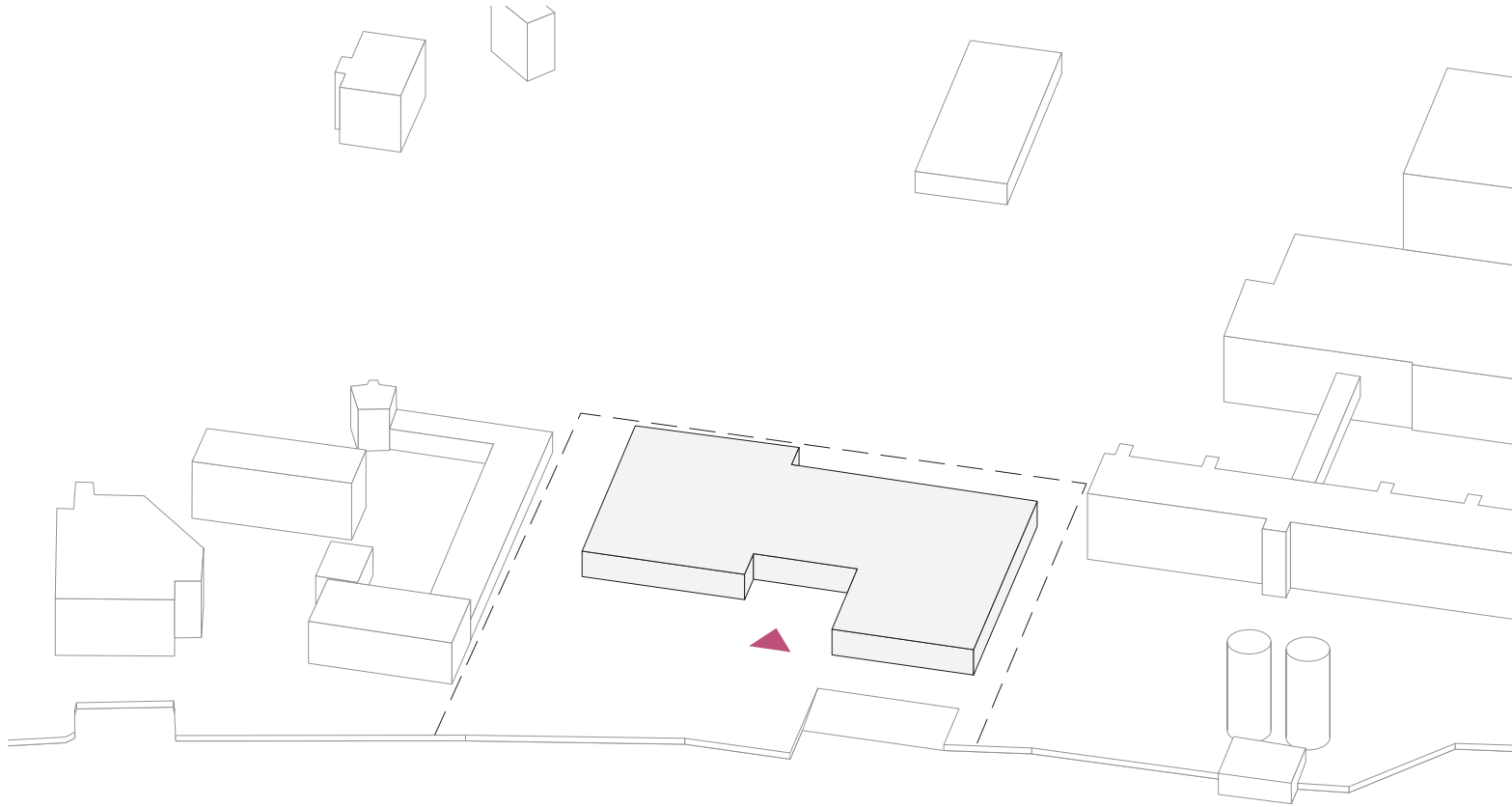
Oriented to the view

Concept **ORIENTATION**



Creating an attractive space sheltered from the
road

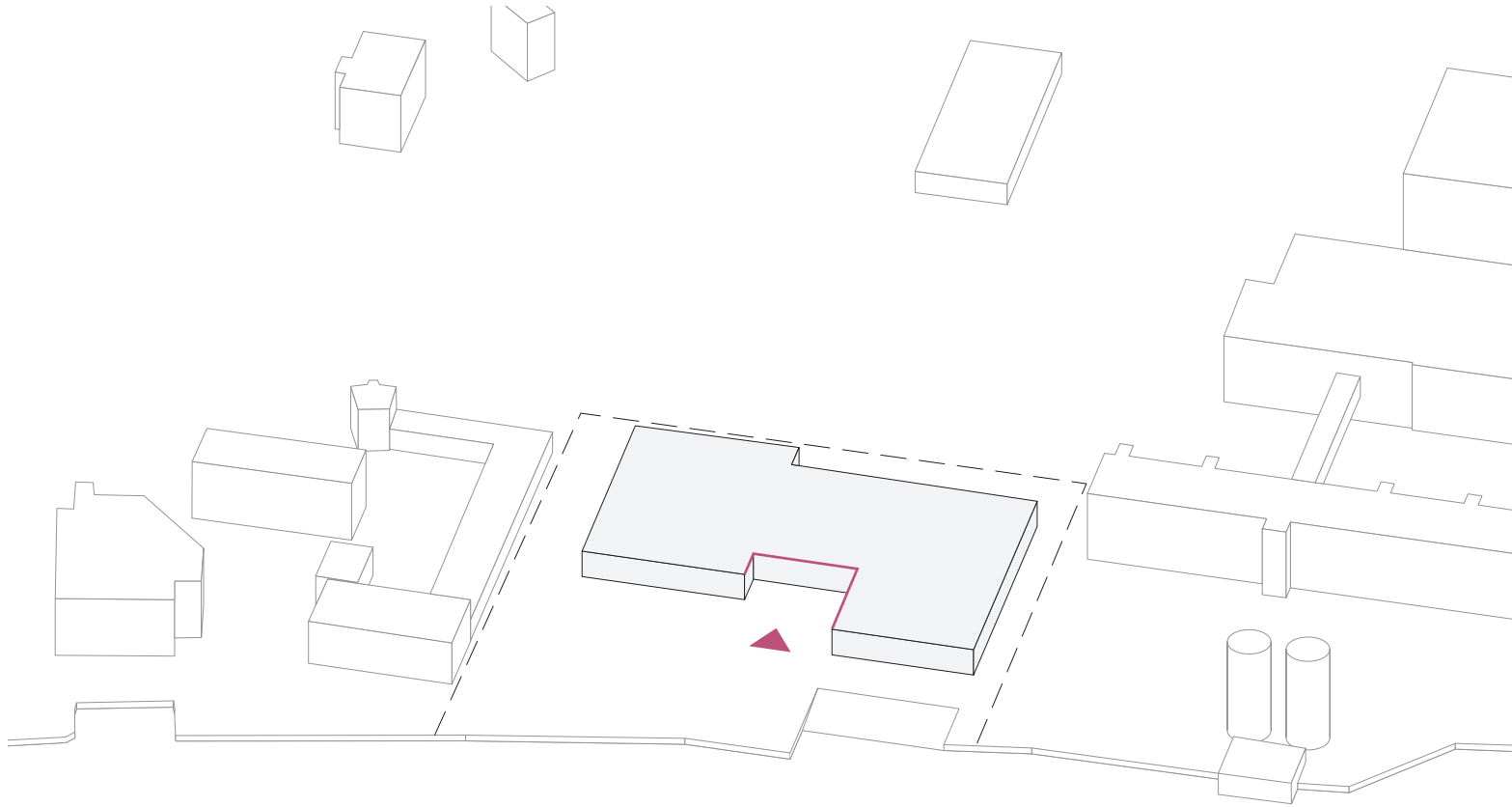
Concept **ENTRANCE**



Thus being the logical location for the entrance

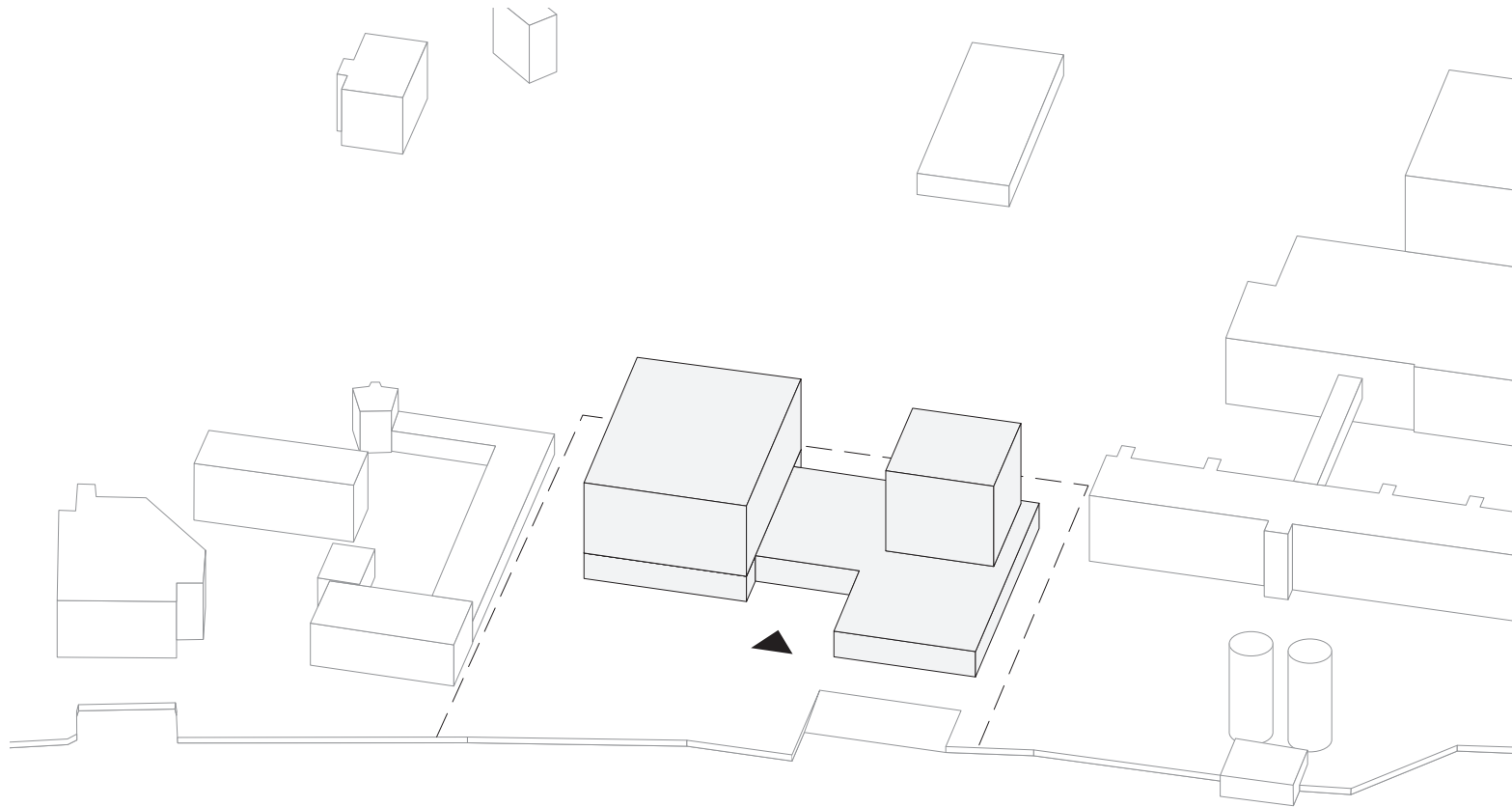
Concept

ENTRANCE



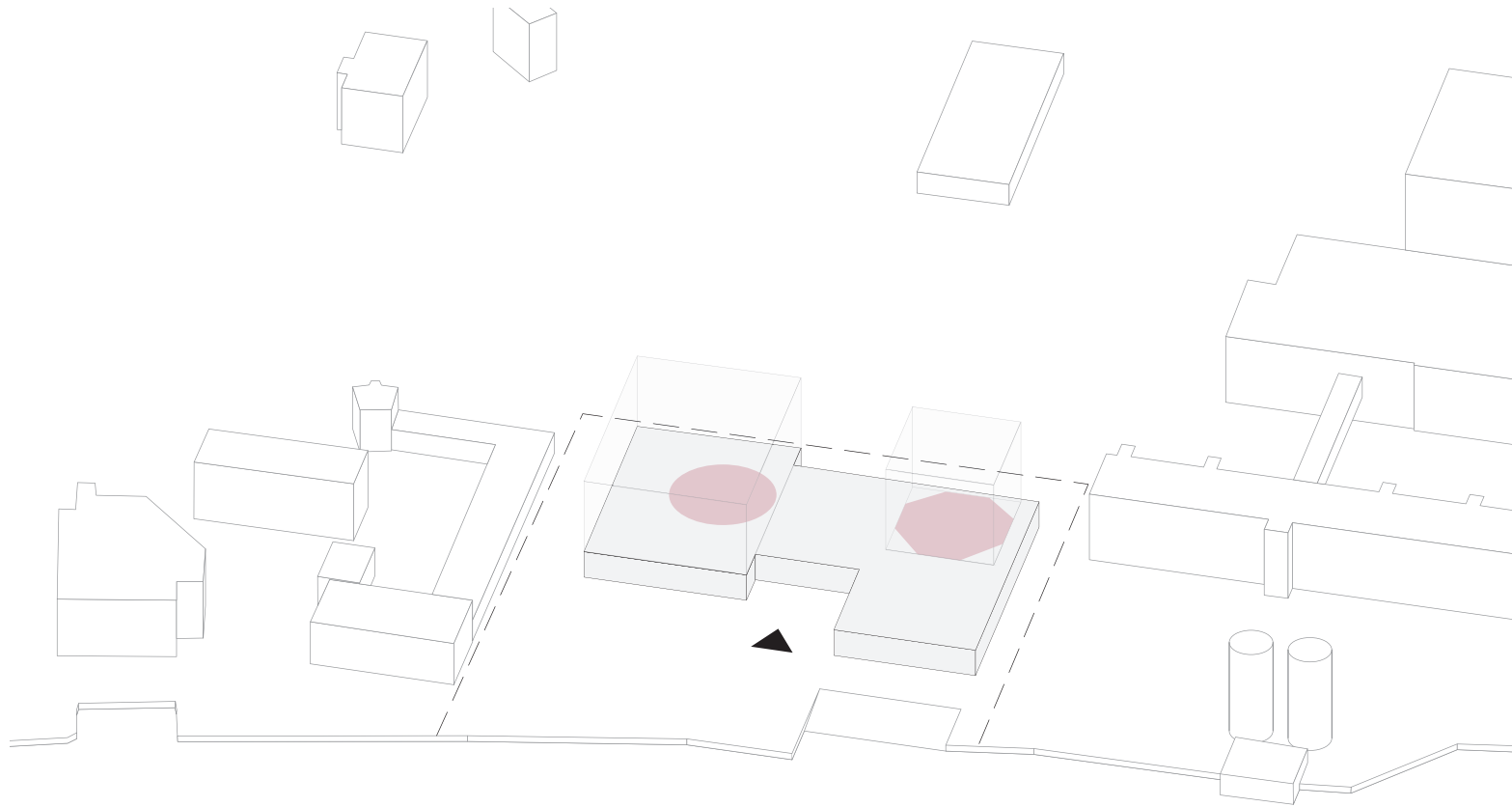
Which is accentuated by a cut in the base to
'capture' visitors

Concept **MASSES**



Ontop this base two massings are placed,
preserving views to the water

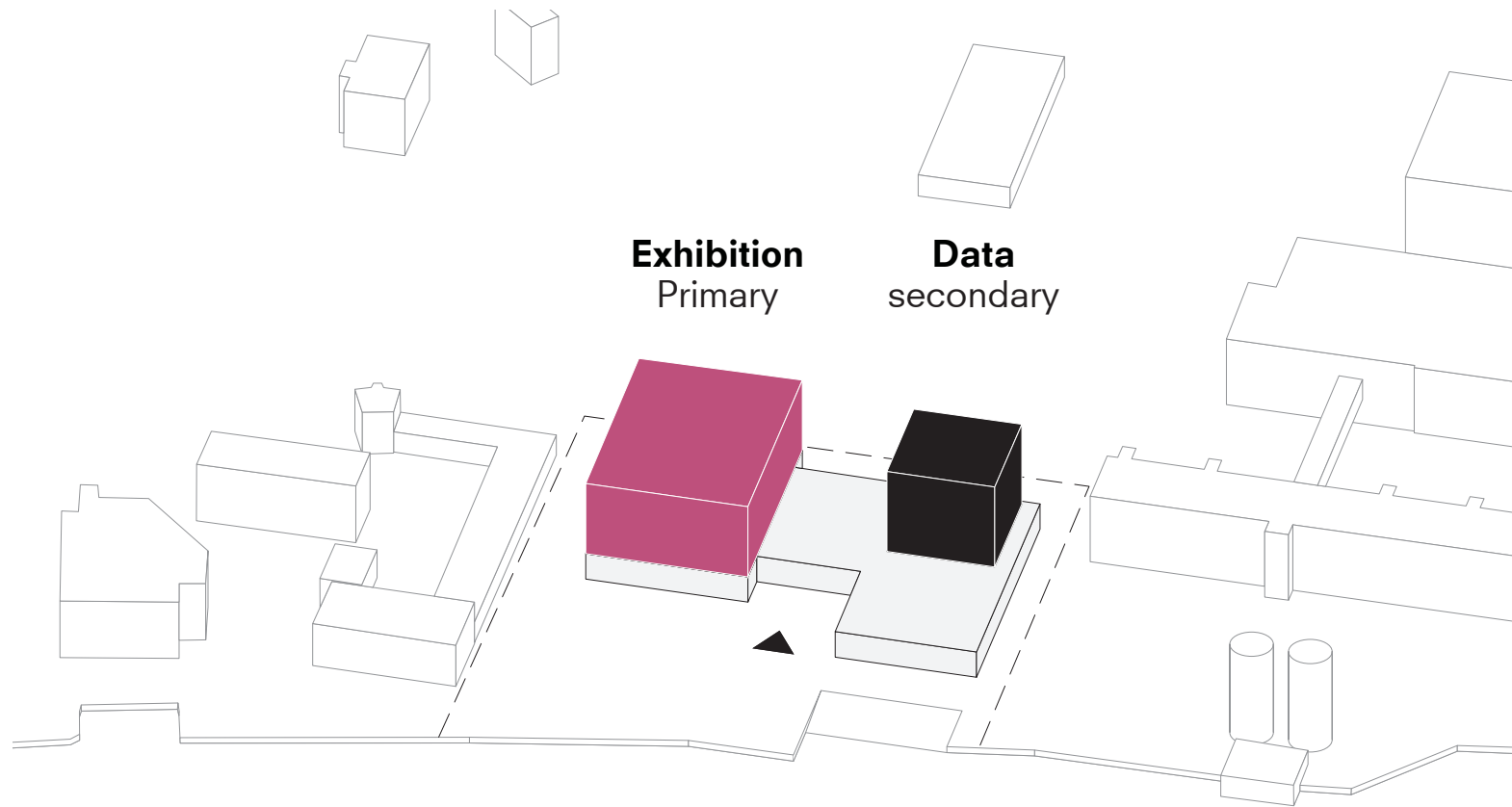
Concept **MASSES**



Ontop of and surrounding two of the old tanks,
as a chronologically logical next step

Concept

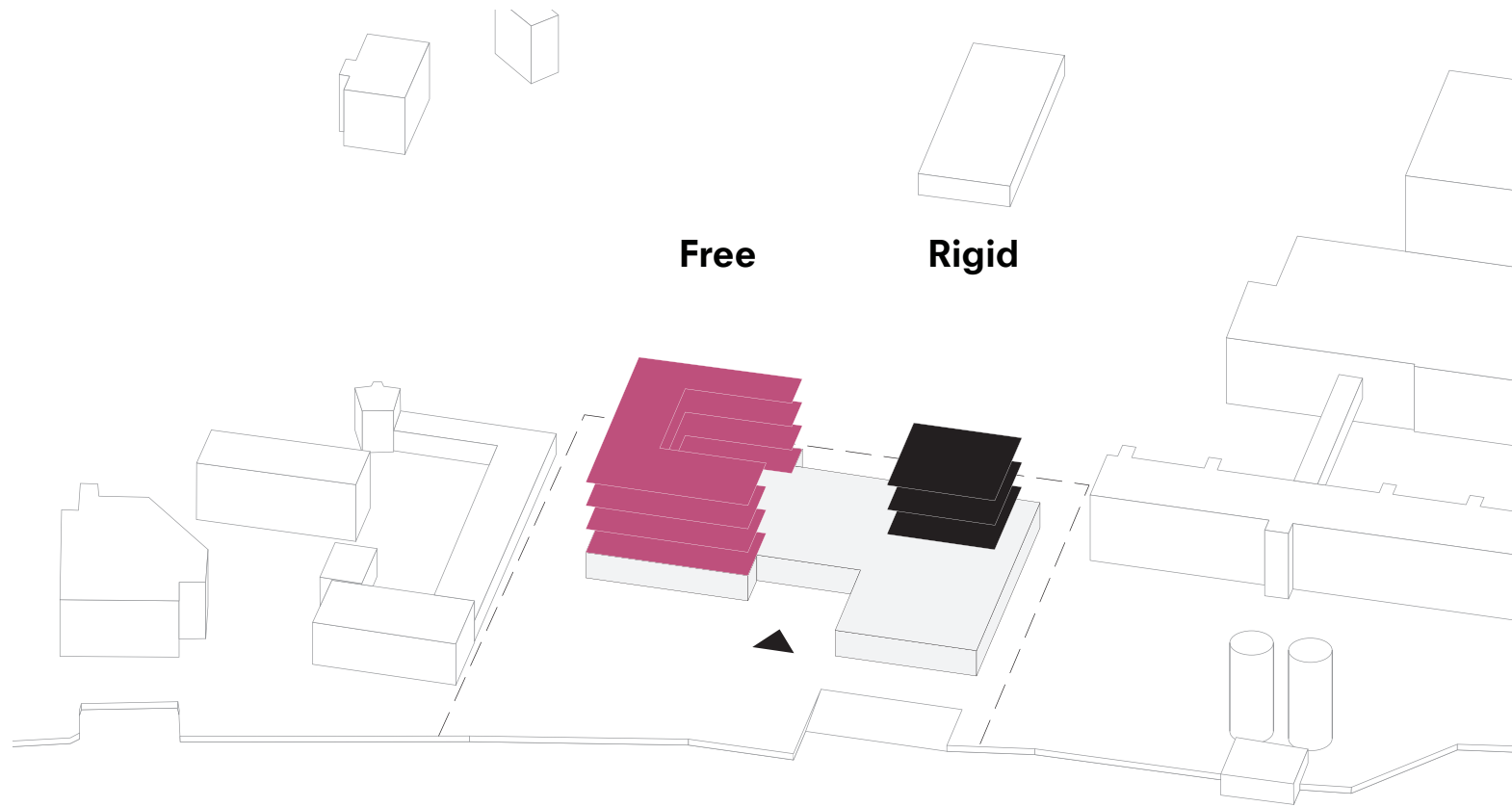
PROGRAMMING



These two masses both have their own programming

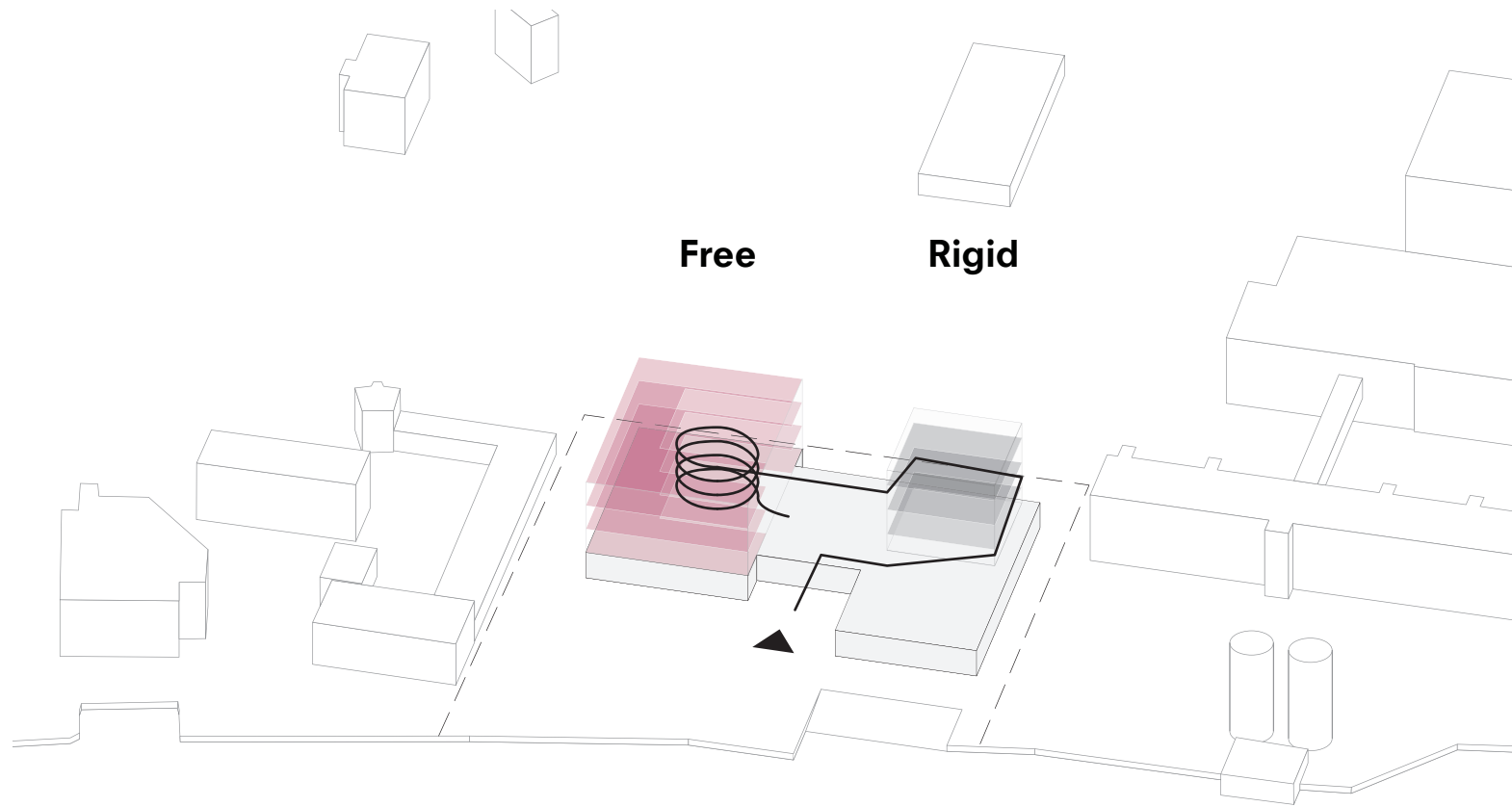
Concept

PROGRAMMING



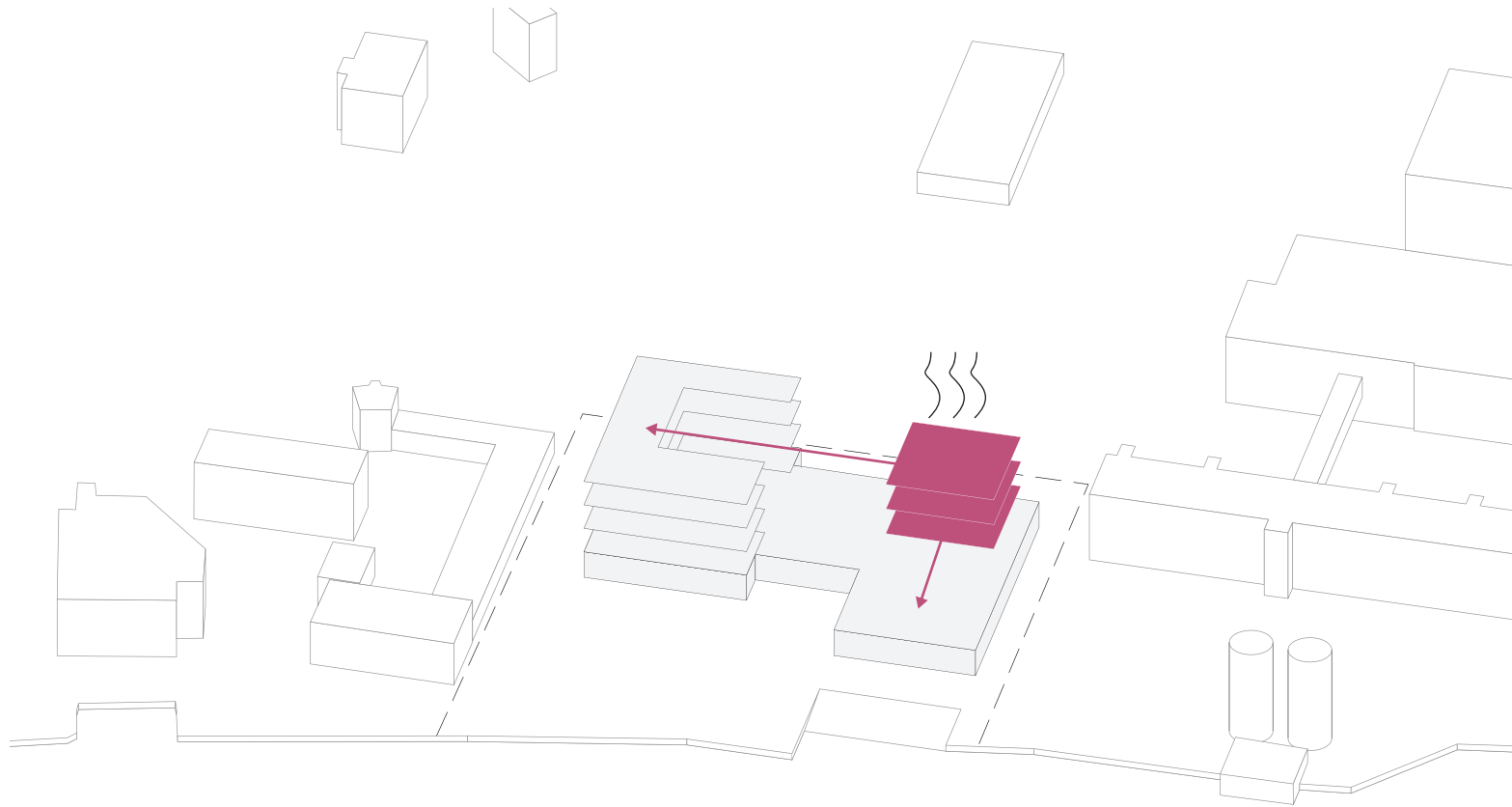
Combining both the public-private and flexible
and rigid programs in a vertical manner

Concept ROUTING



Brought together by an experience focussed
routing which enables 'time travel'

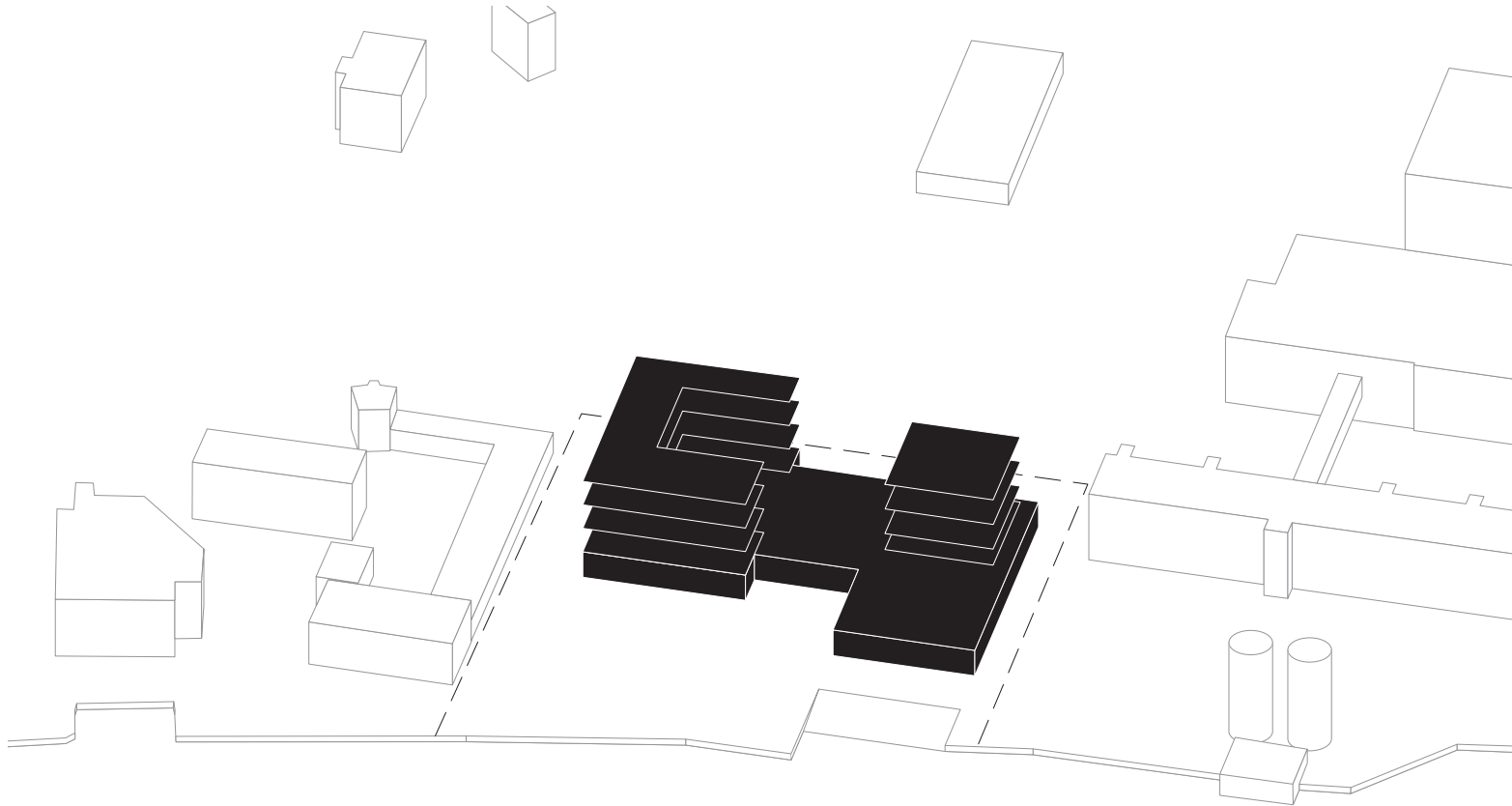
Concept **CLIMATE**



The data centre produces heat which can be stored and distributed over the building

Concept

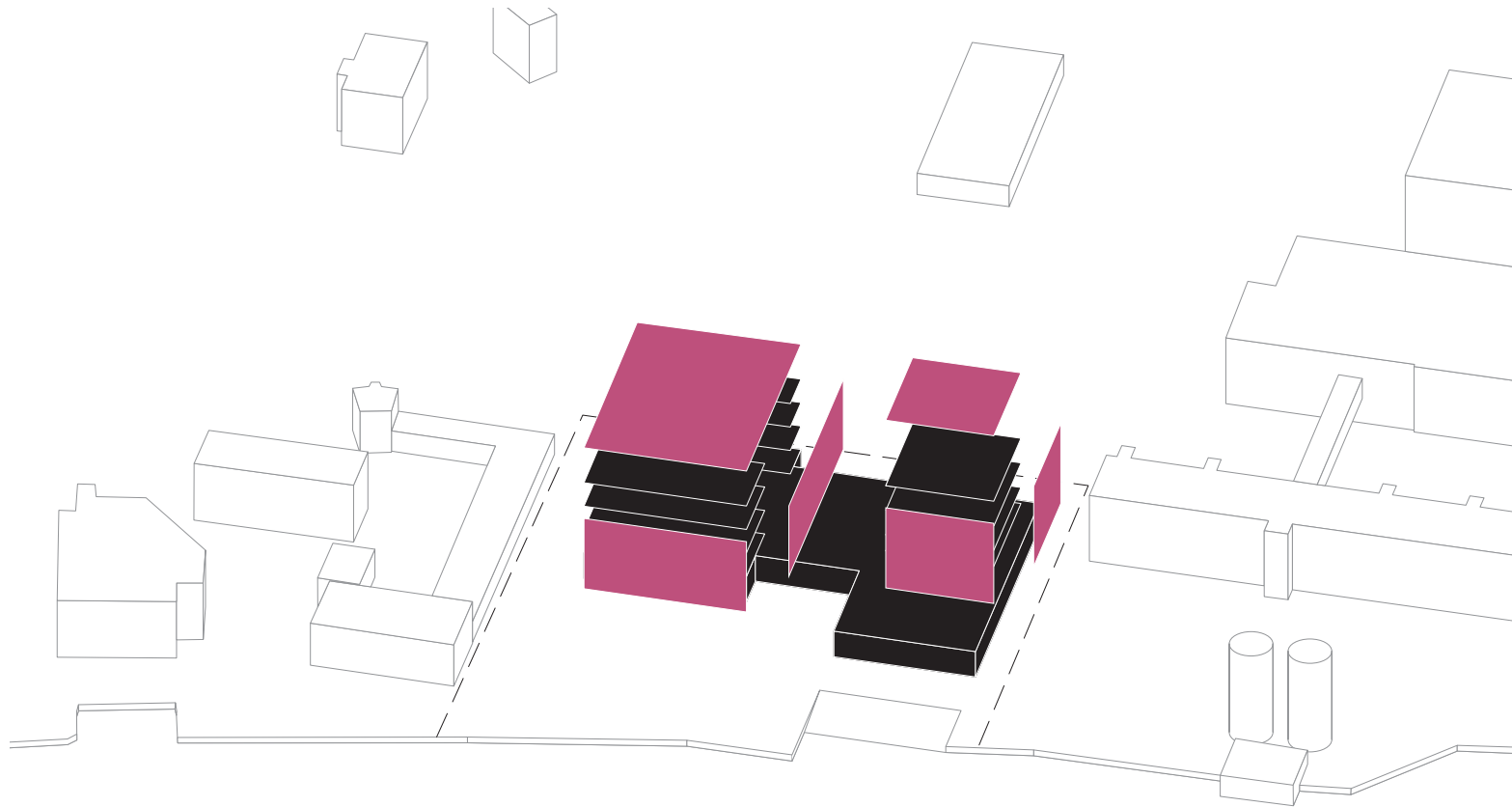
SUSTAINABILITY



The building uses a durable concrete structure

Concept

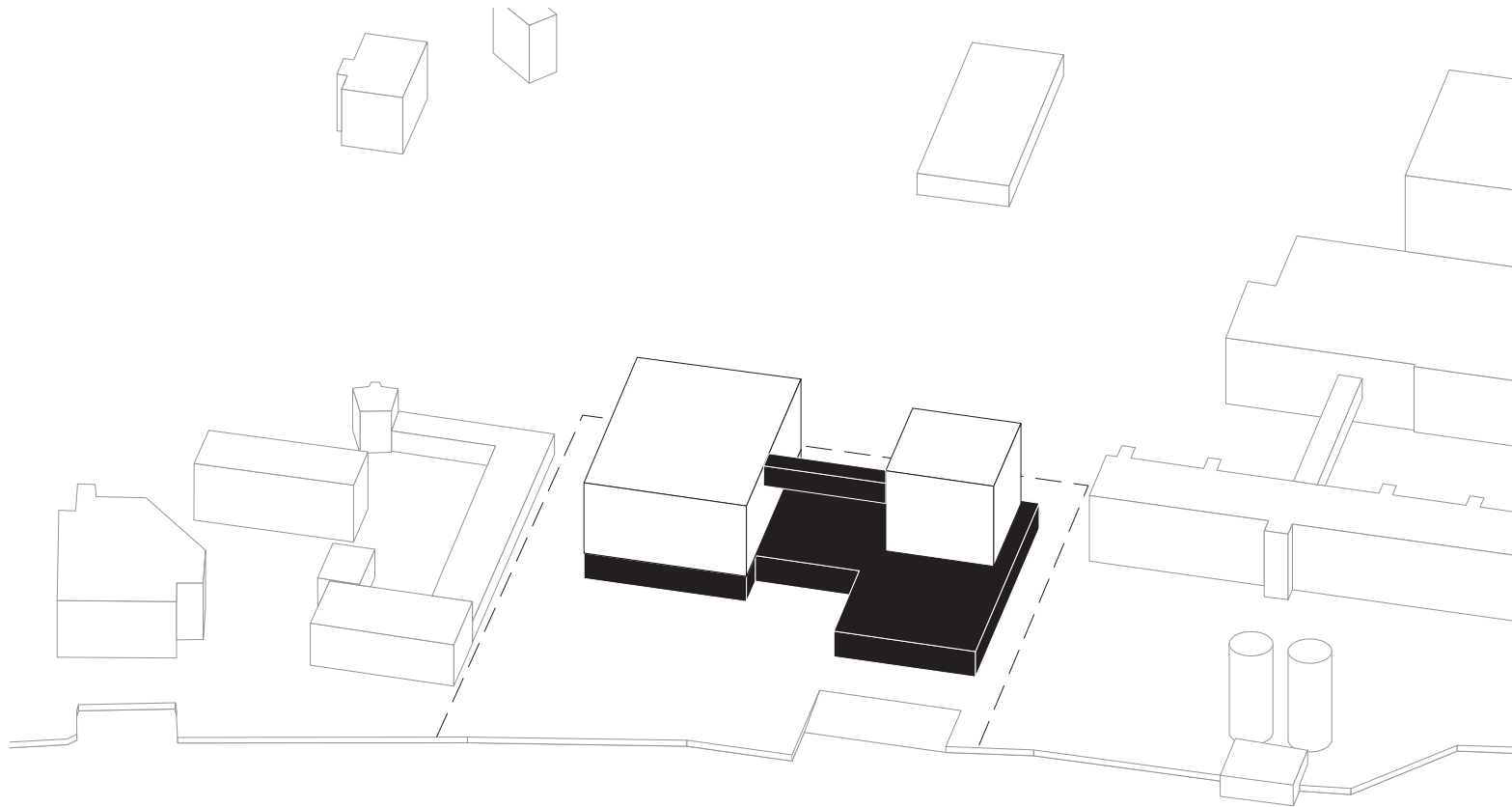
SUSTAINABILITY



In combination with flexible innerwalls and
facades for future flexibility

Concept

LANGUAGES



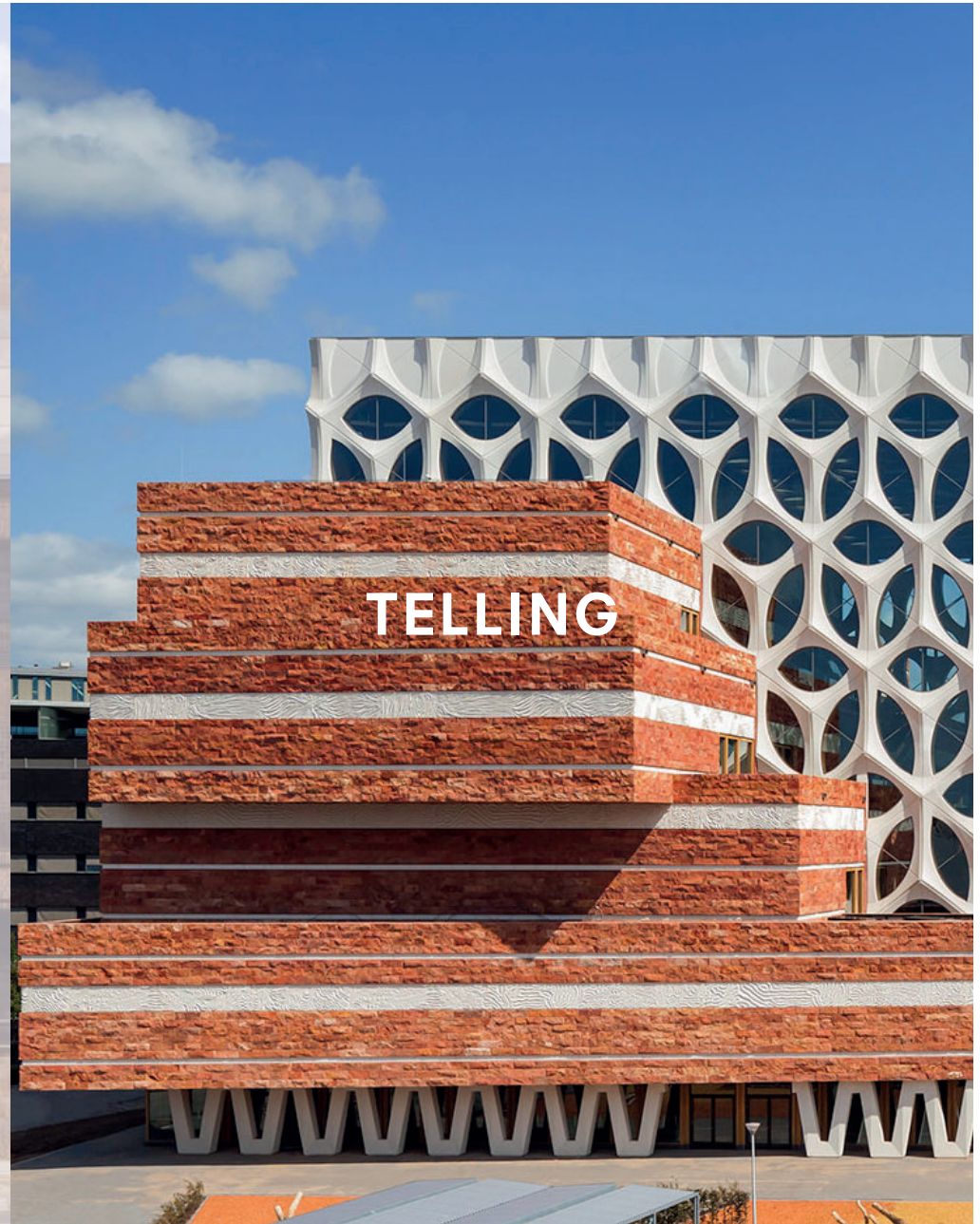
The museum employs strong yet simple
massings and colors

Concept

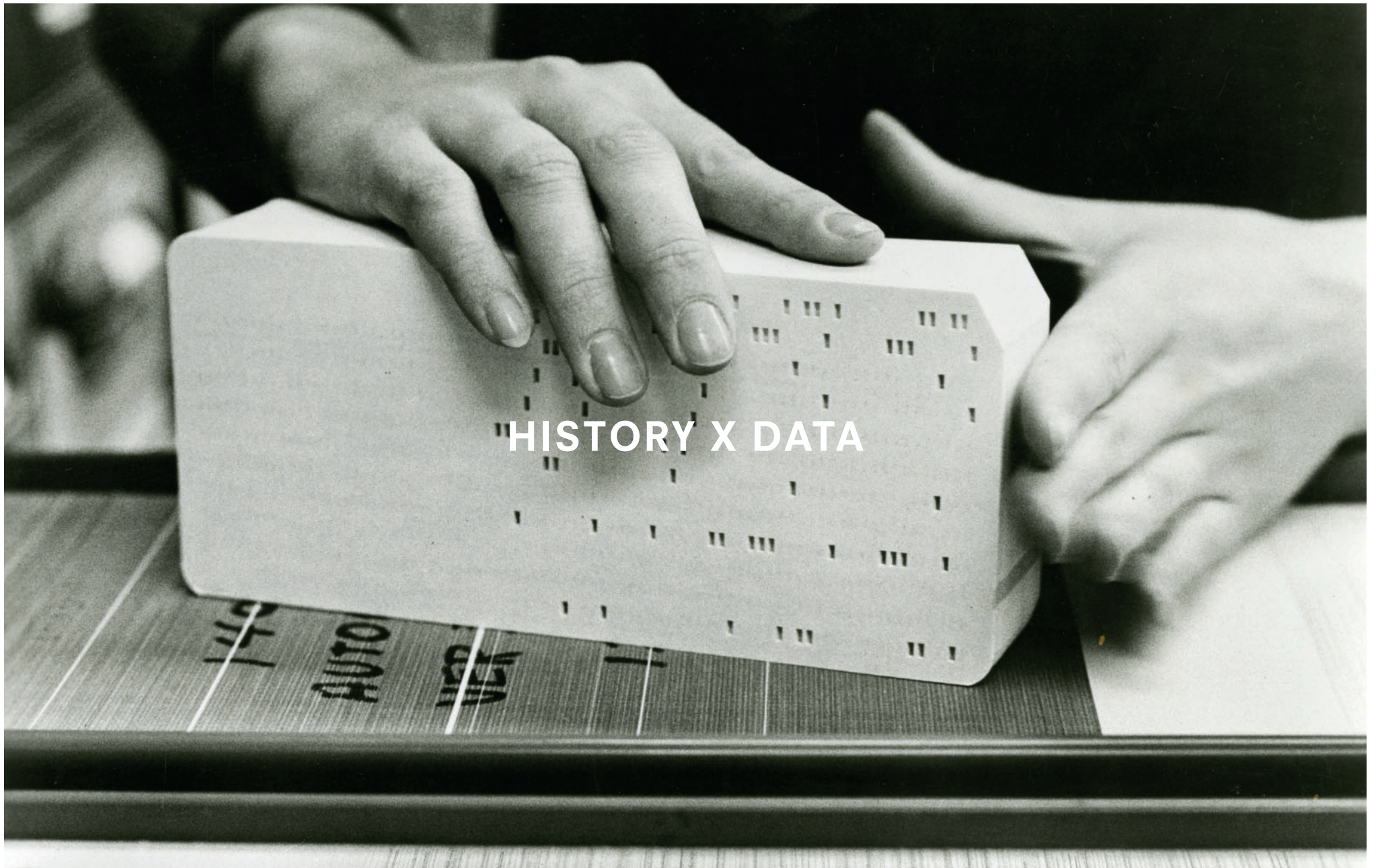
FACADE



Concept
FACADE



Concept
FACADE



Introduction

Research

Design Brief

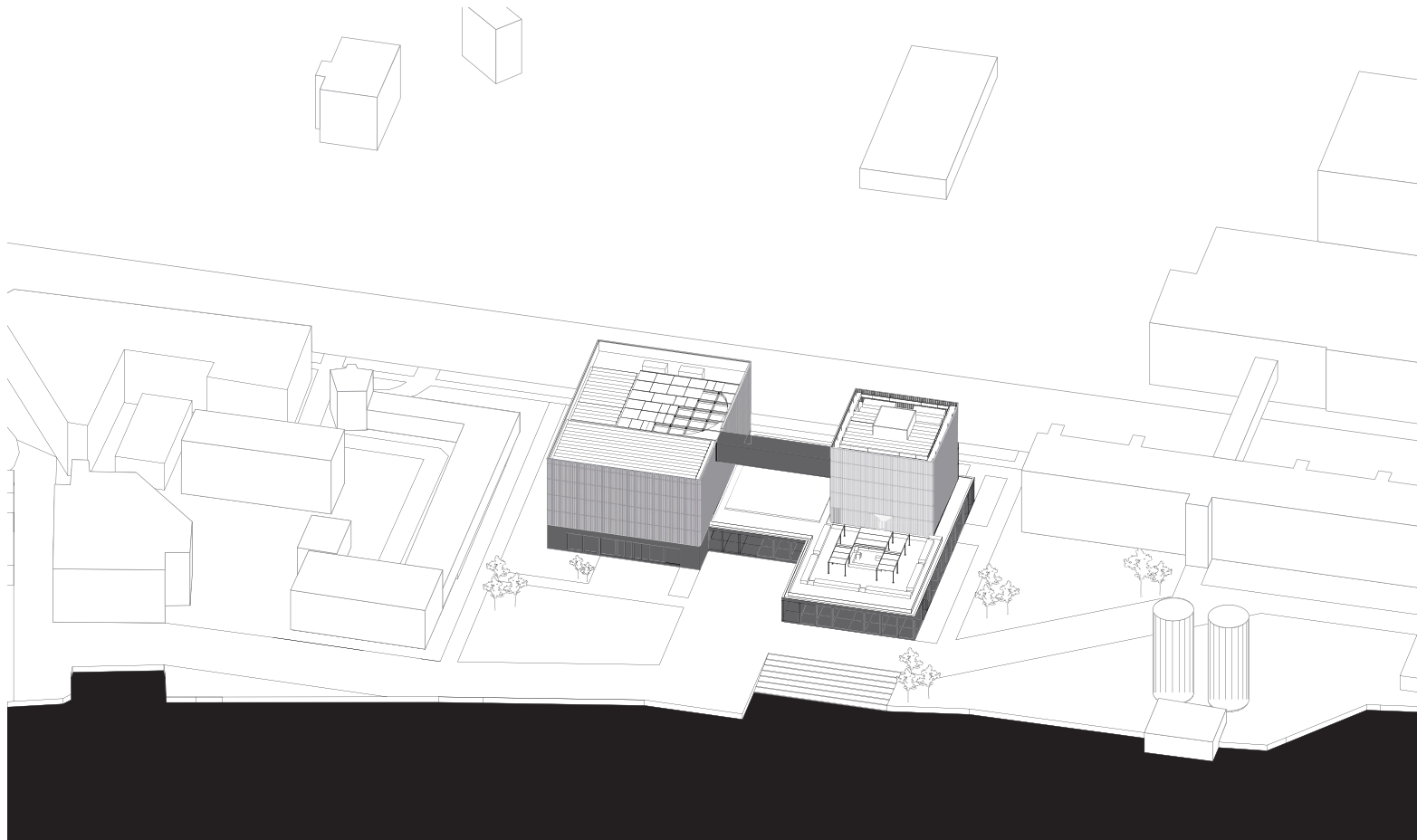
Concept

Implementation

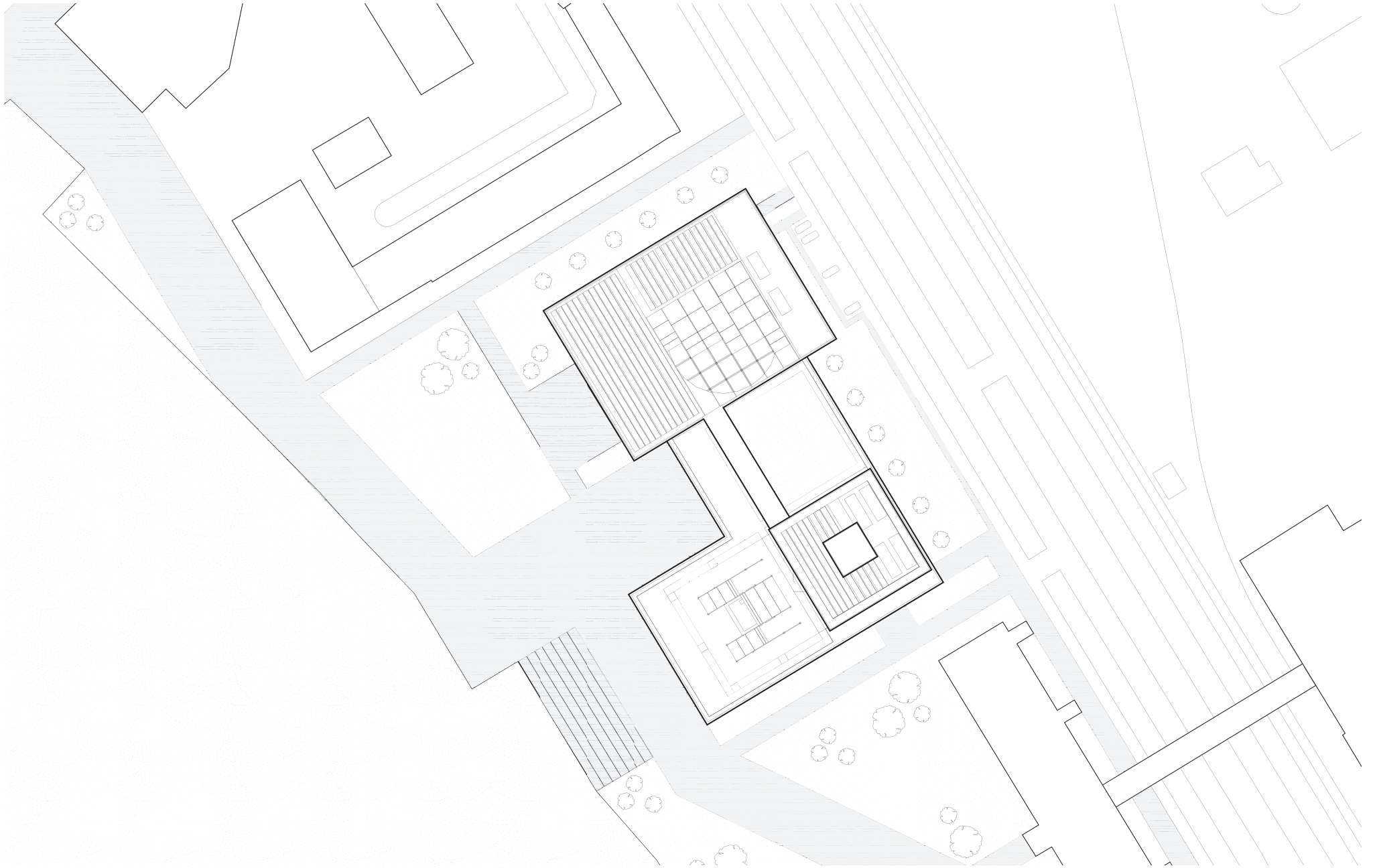
Development

Conclusion

implementation
OVERVIEW



Implementation **SITE**

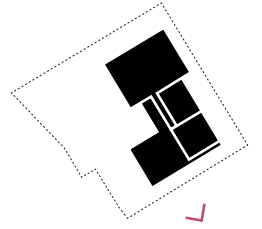


Site
Plan 1.1000
scaled 75%

0 13.3 53.3

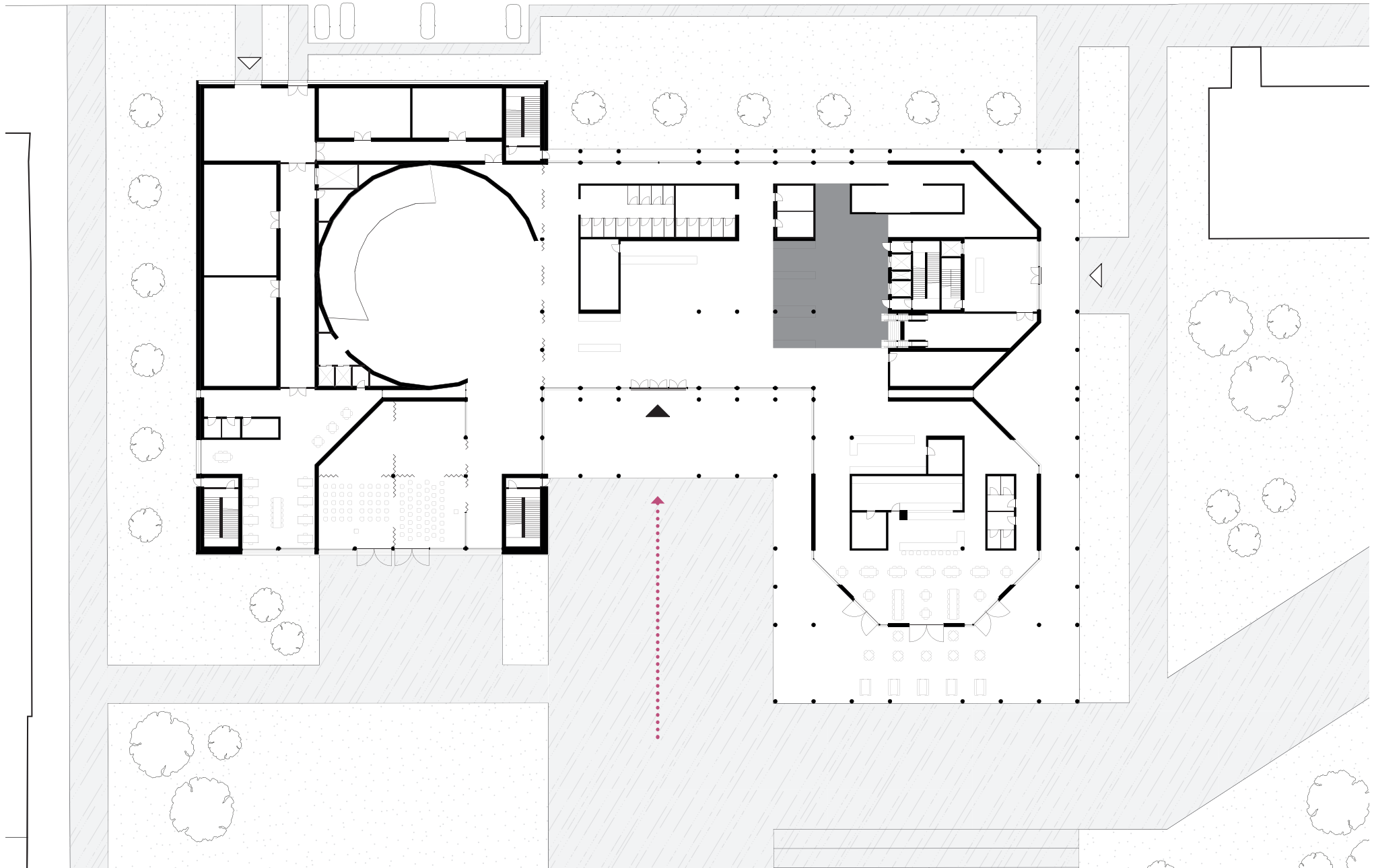


Implementation **APPROACH**



Implementation

URBAN IMPLEMENTATION



Urban implementation

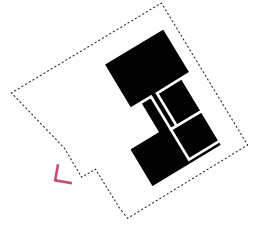
Plan 1.500
scaled 75%

0 6.6

26.6

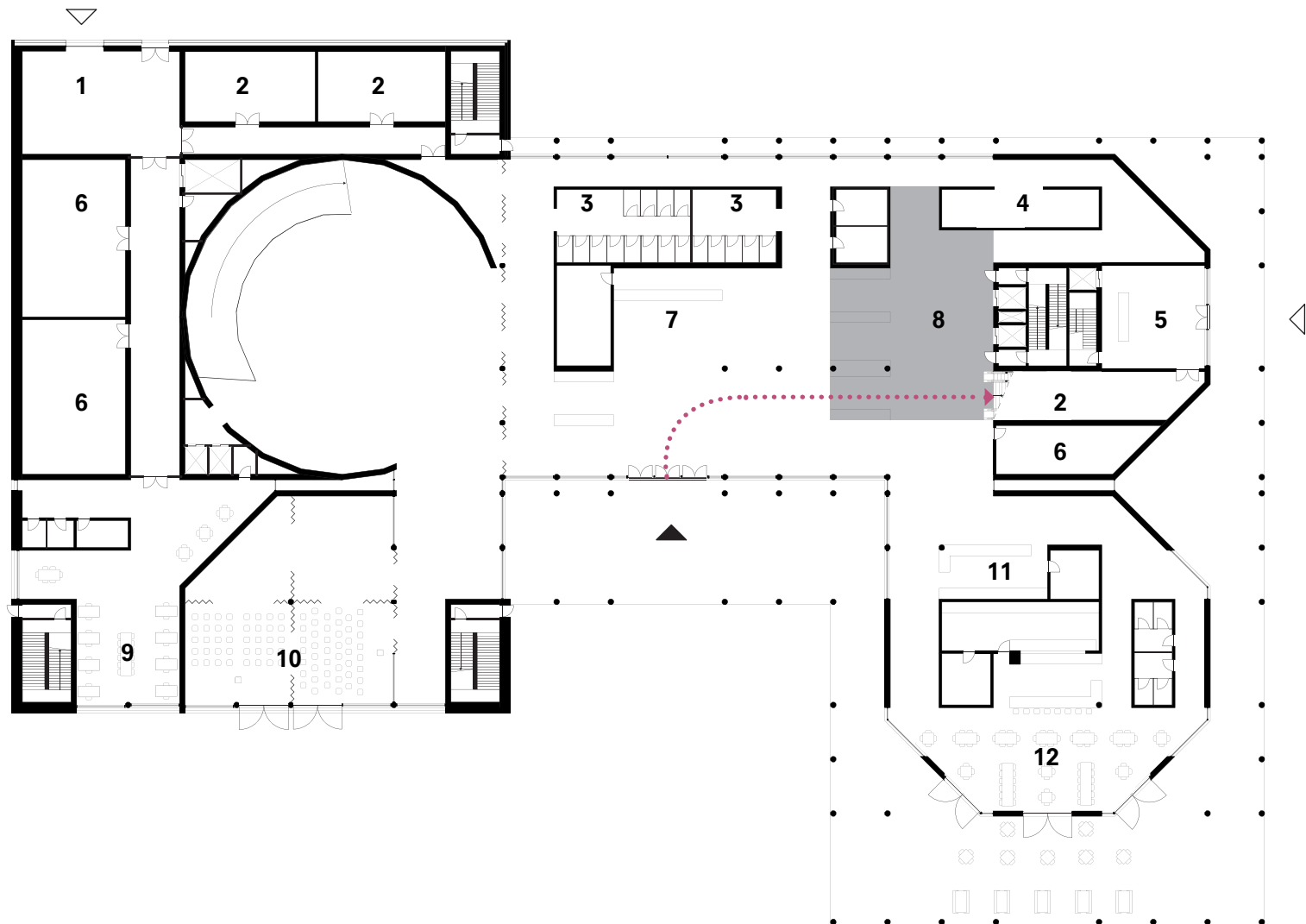


Implementation **ENTRANCE**



Implementation

GROUND FLOOR

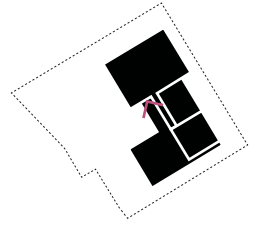


- | | | | |
|--------------|------------------|---------------|---------------------|
| 1. Logistics | 4. Coats | 7. Service | 10. multifunctional |
| 2. Technical | 5. Entrance data | 8. Data lobby | 11. Shop |
| 3. Toilets | 6. Storages | 9. Offices | 12. Restaurant |

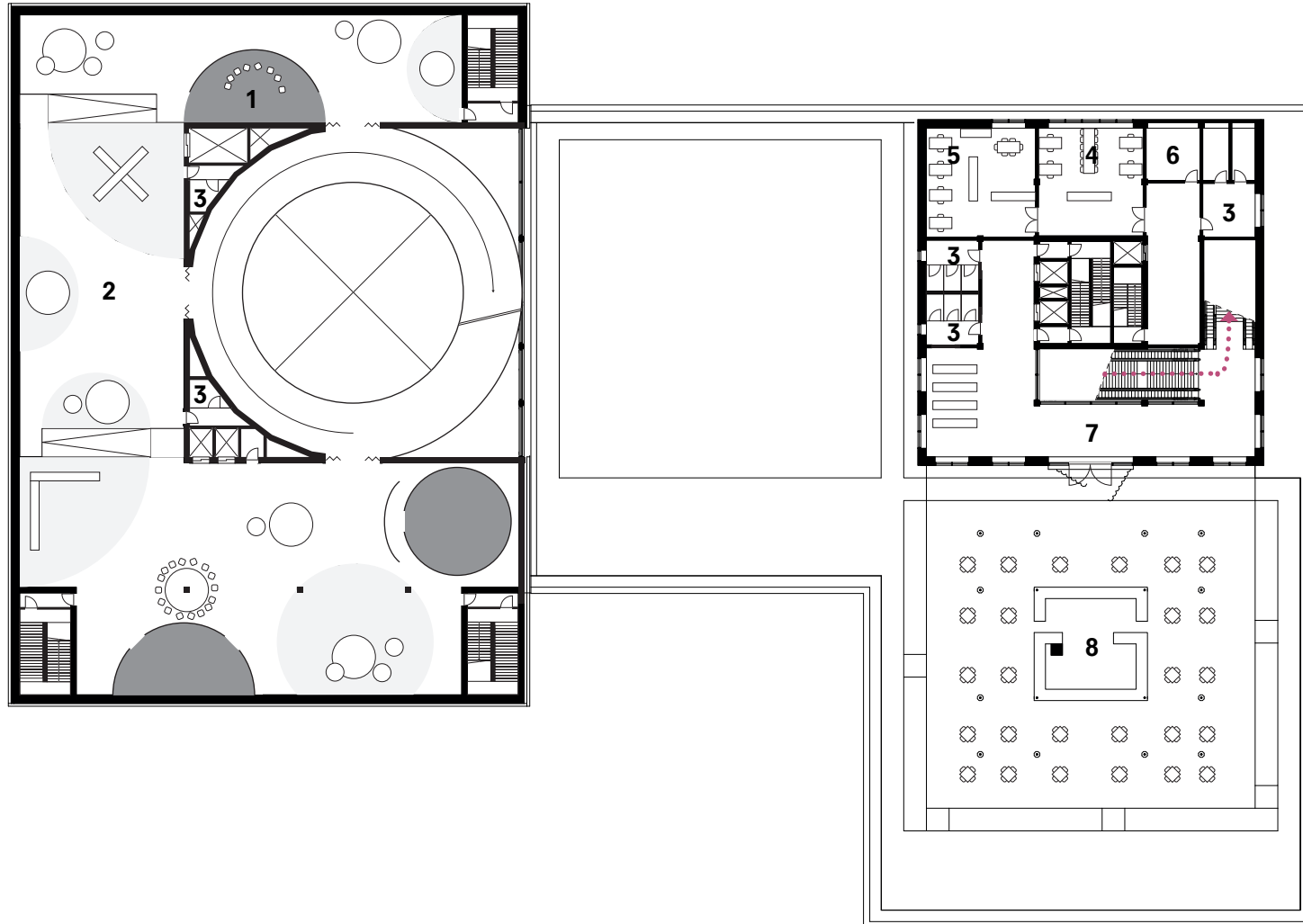
Ground floor
Plan 1.300
scaled 50%



Implementation **FOYER**



Implementation FIRST FLOOR



1. Physical exhibitions
2. Digital exhibitions
3. Toilets

4. Data operations
5. Data safety office
6. Storages

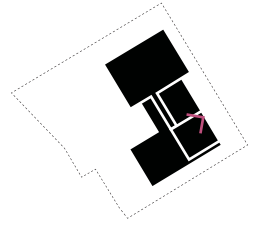
7. Data awareness
8. Terrace (bar)

First floor
Plan 1.300
scaled 50%

0 6 24

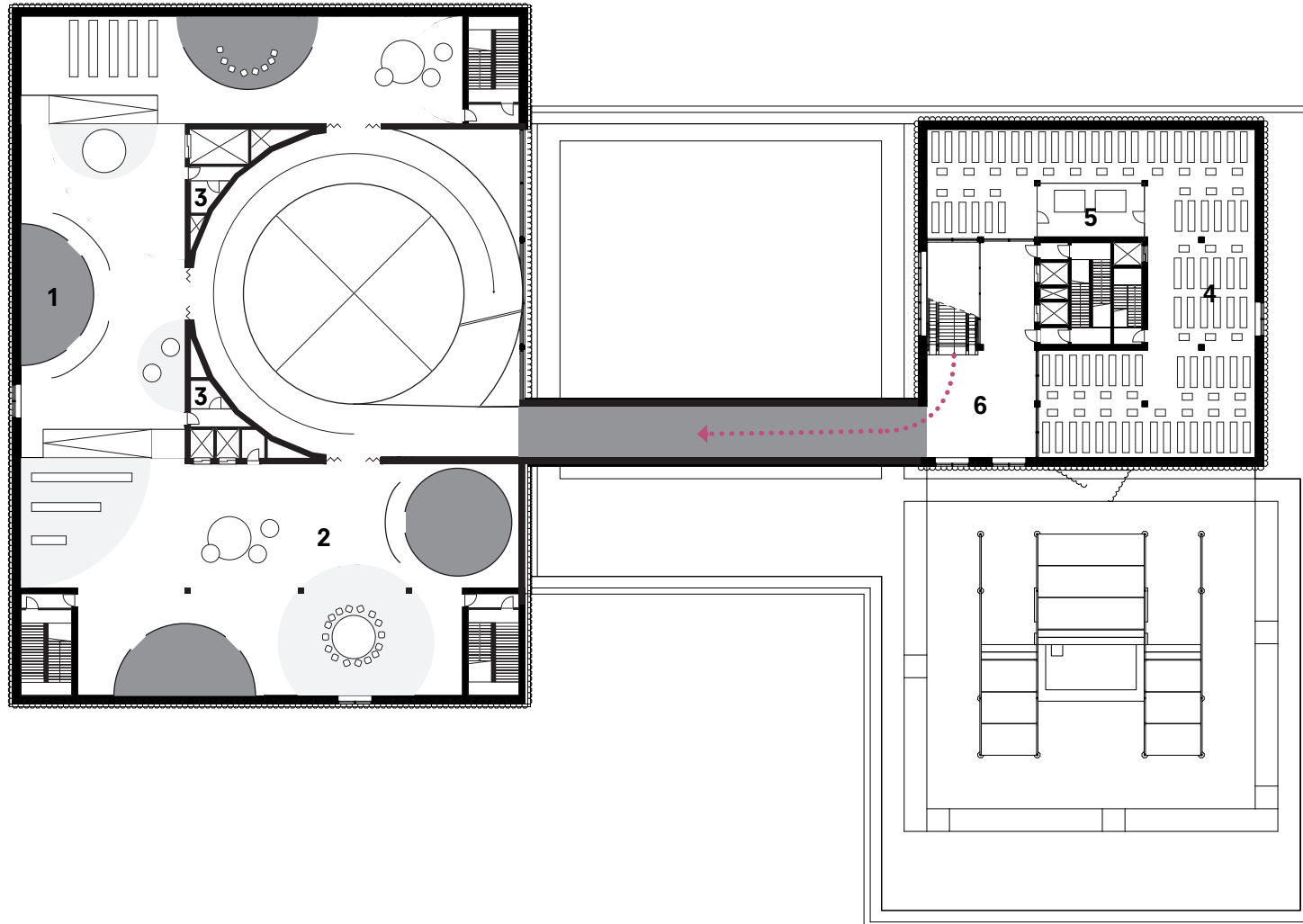


Implementation **DATA SPACES**



Implementation

FOURTH FLOOR



- 1. Physical exhibitions
- 2. Digital exhibitions
- 3. Toilets

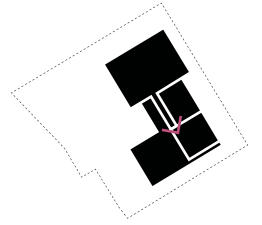
- 4. Data storage
- 5. Installation plant
- 6. Data awareness

Fourth floor
Plan 1.300
scaled 50%

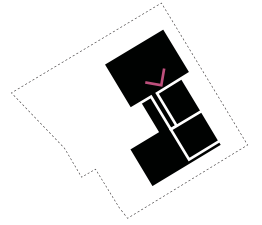
0 6 24



Implementation **BRIDGE**

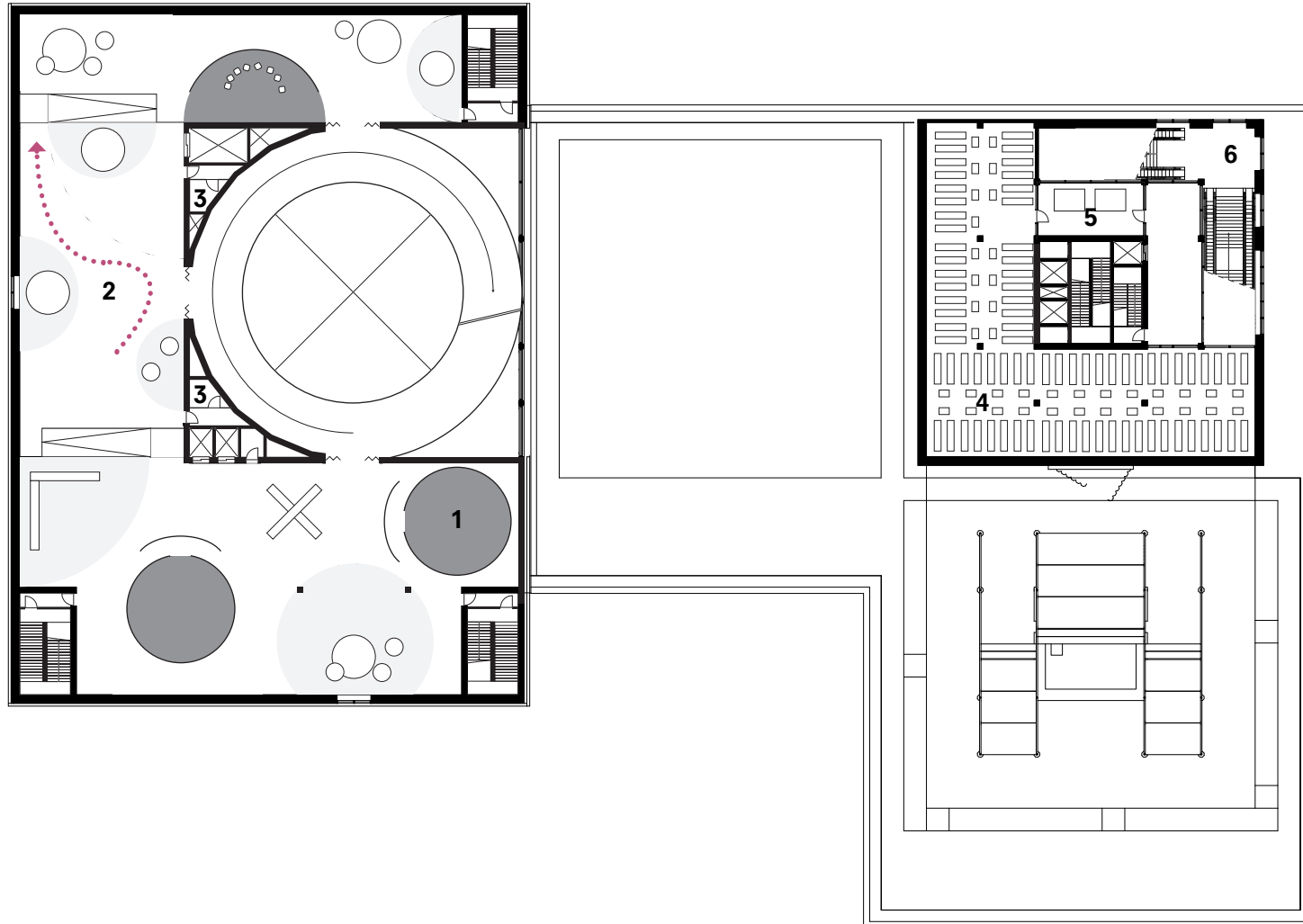


Implementation
WORM HOLE



Implementation

SECOND FLOOR



1. Physical exhibitions
2. Digital exhibitions
3. Toilets

4. Data operations
5. Data safety office
6. Storages

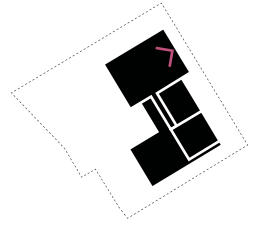
4. Data storage
5. Installation plant
6. Data awareness

Second floor
Plan 1.300
scaled 50%

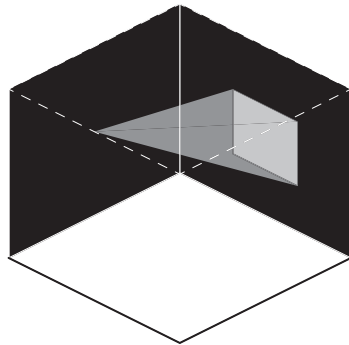
0 6 24



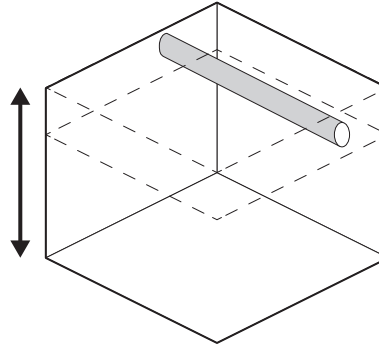
Implementation **EXHIBITS**



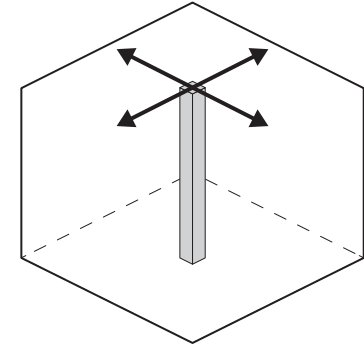
Implementation **EXHIBITS**



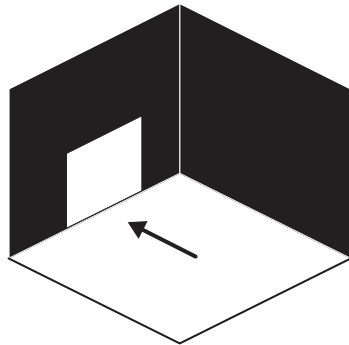
Dark spaces for
projections



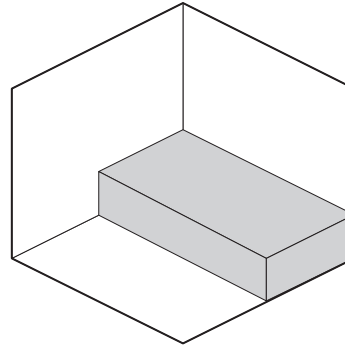
Sufficient (ceiling)
height for
installations



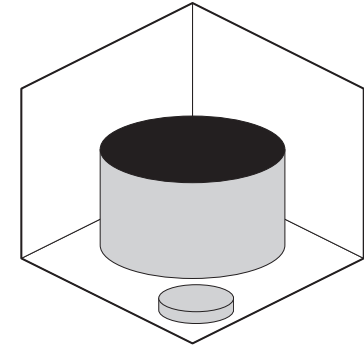
Open-floor
concept for flexible
exhibitions



Clear and sufficient
exits due to fire risk



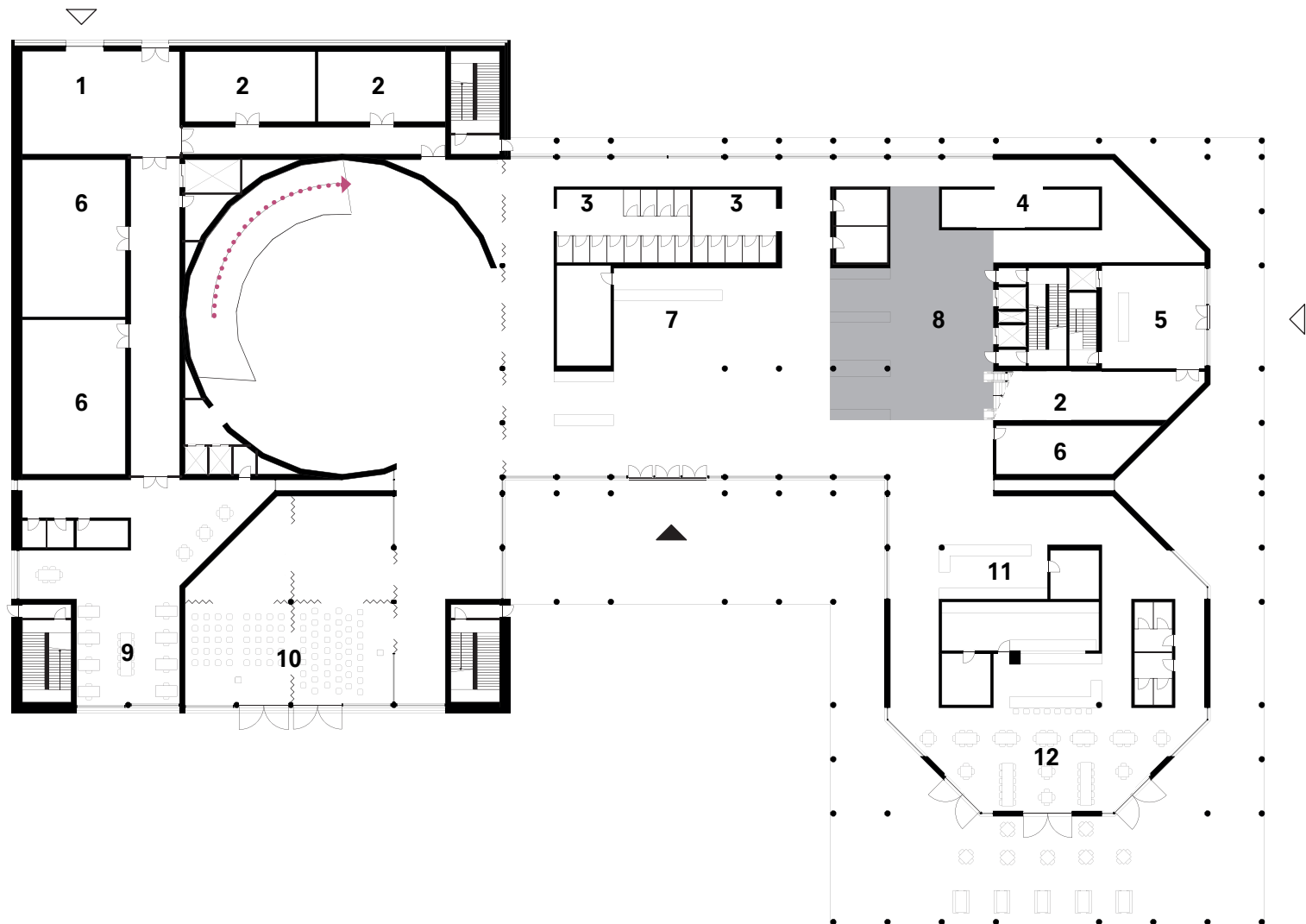
Stepped exhibition
spaces for slowed
experience/ zoning



Digitalized &
physical exhibitions
in units or zones

Implementation

GROUND FLOOR

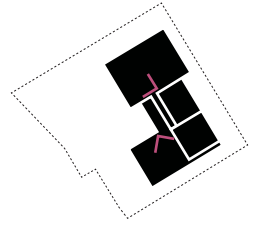


- | | | | |
|--------------|------------------|---------------|---------------------|
| 1. Logistics | 4. Coats | 7. Service | 10. multifunctional |
| 2. Technical | 5. Entrance data | 8. Data lobby | 11. Shop |
| 3. Toilets | 6. Storages | 9. Offices | 12. Restaurant |

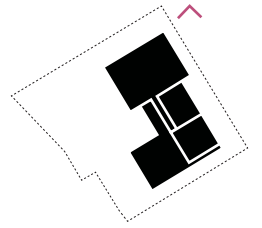
Ground floor
Plan 1.300
scaled 50%



Implementation **AUXILIARY**

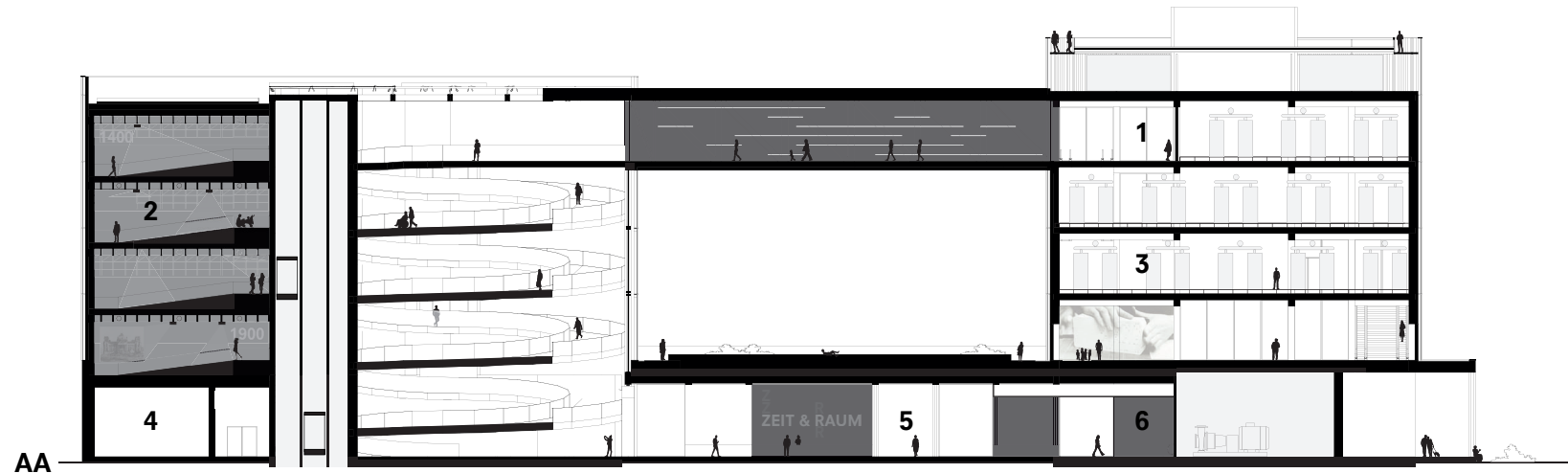
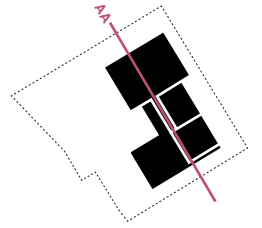


Implementation **BACKSIDE**



Implementation

SECTION AA



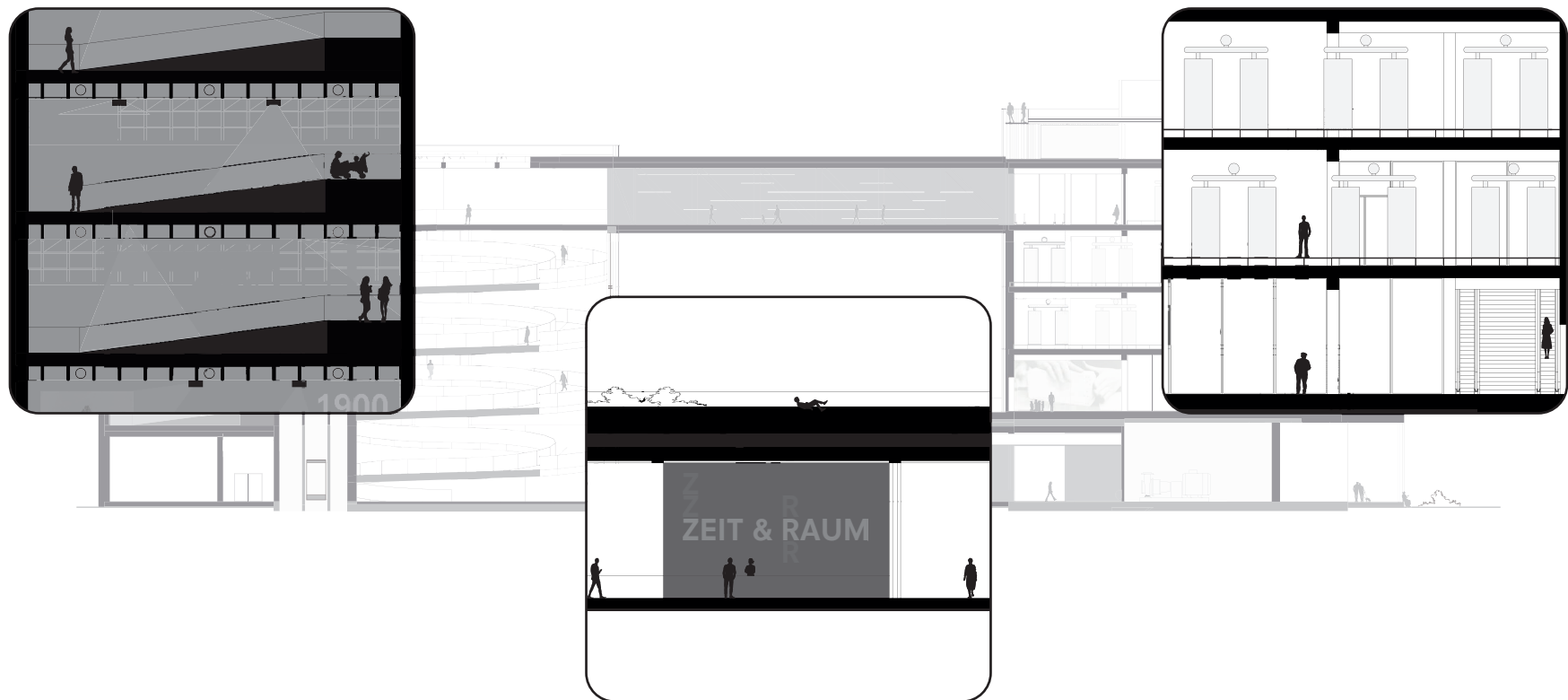
- | | | |
|-------------------|---------------|--------------|
| 1. Data awareness | 4. Storage | 7. Technical |
| 2. Exhibitions | 5. Foyer | |
| 3. Data storage | 6. Data lobby | |

AA
Section 1.300
scaled 50%

0 6 24

Implementation

SECTION AA



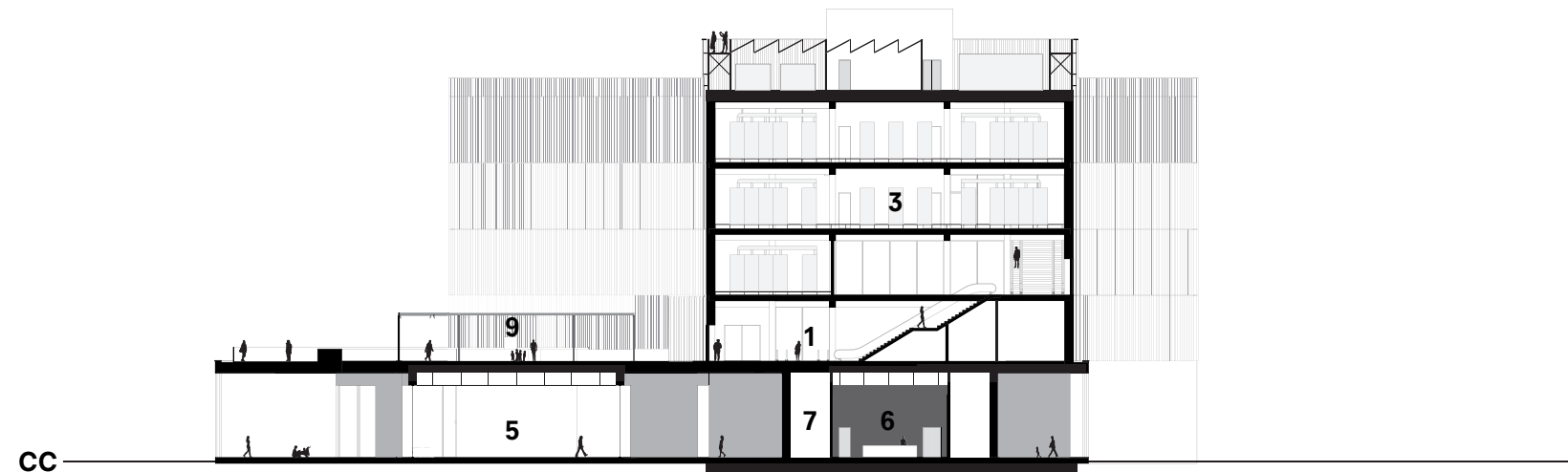
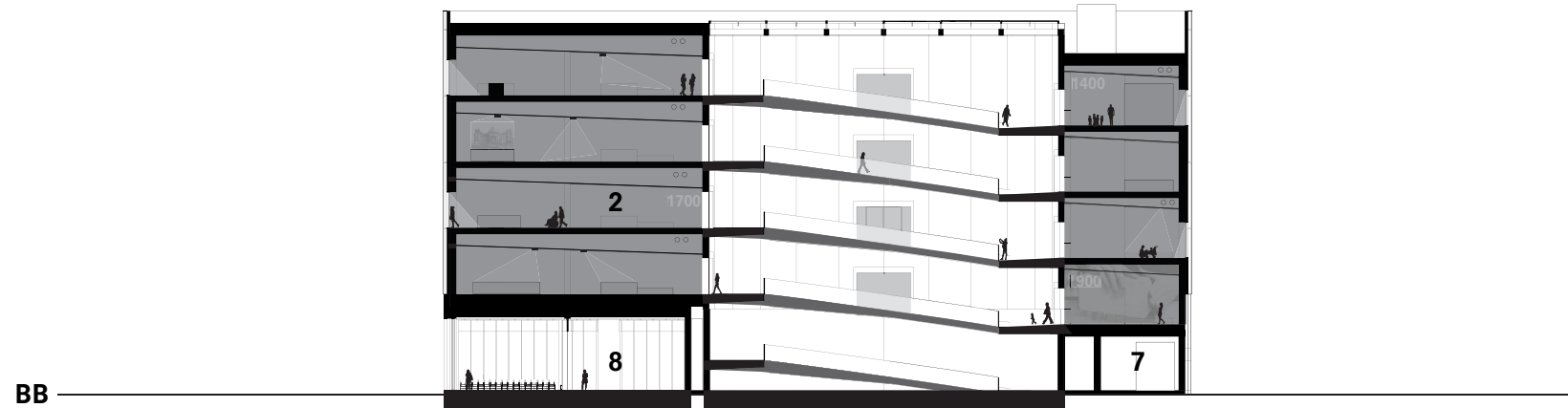
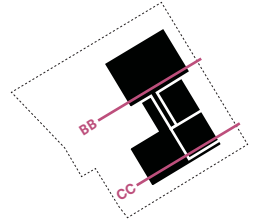
- | | | |
|-------------------|---------------|--------------|
| 1. Data awareness | 4. Storage | 7. Technical |
| 2. Exhibitions | 5. Foyer | |
| 3. Data storage | 6. Data lobby | |

AA
Section 1.300
scaled 50%

0 6 24

Implementation

SECTION BB & CC



- | | | |
|-------------------|-------------------|--------------------|
| 1. Data awareness | 4. Data awareness | 7. Technical |
| 2. Exhibitions | 5. Restaurant | 8. Multifunctional |
| 3. Data storage | 6. Data lobby | 9. Terrace |

BB & CC
Section 1.300
scaled 50%

0 6 24

Implementation

FRONT ELEVATION



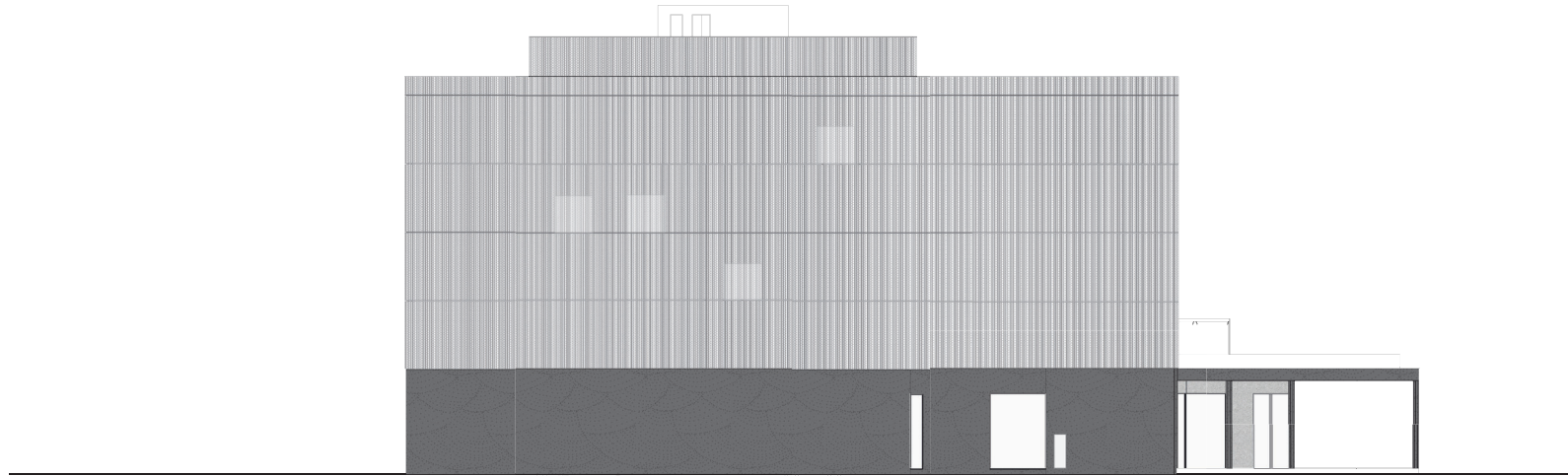
Implementation

FRONT ELEVATION



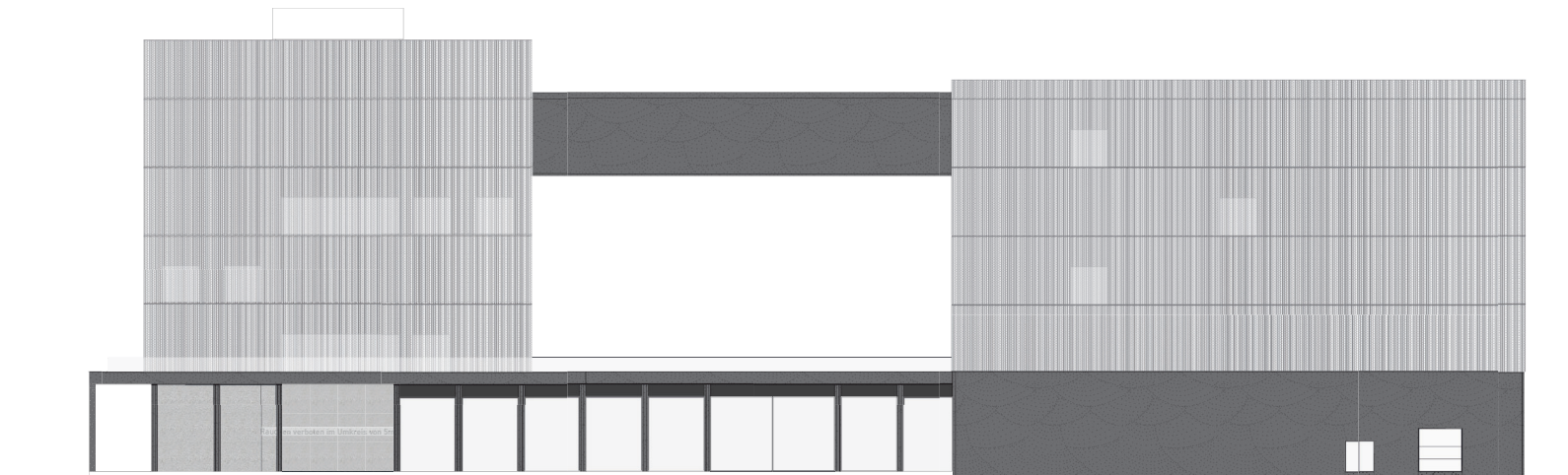
Implementation

SIDE ELEVATION



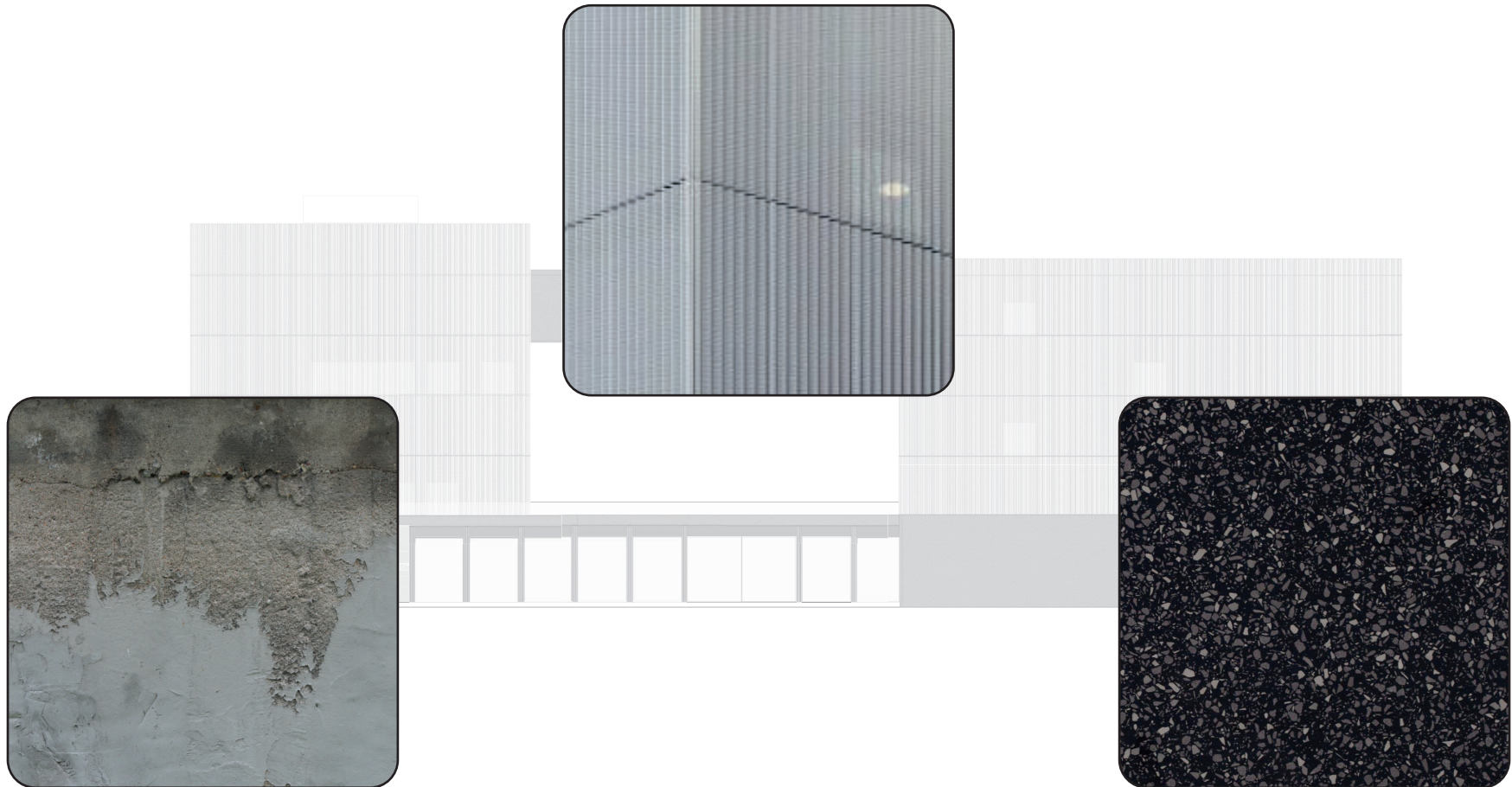
Implementation

BACK ELEVATION



Implementation

BACK ELEVATION



Introduction

Research

Design Brief

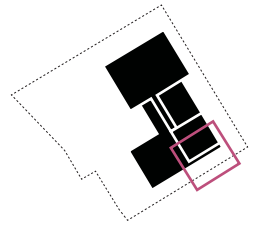
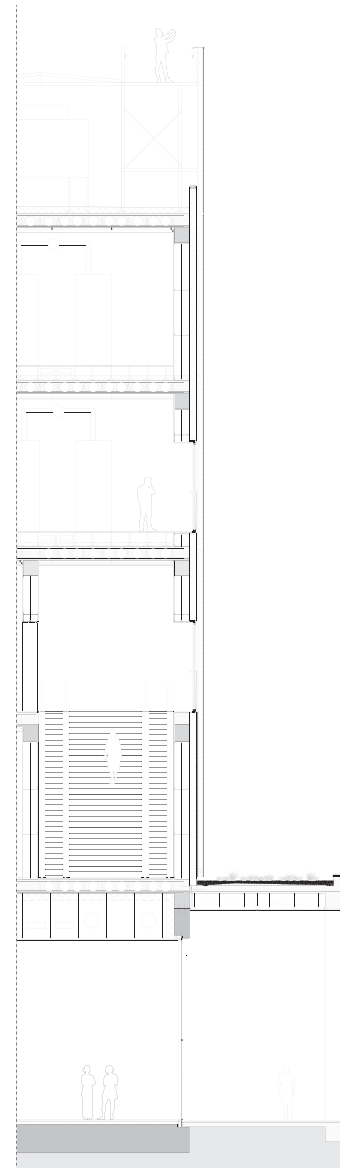
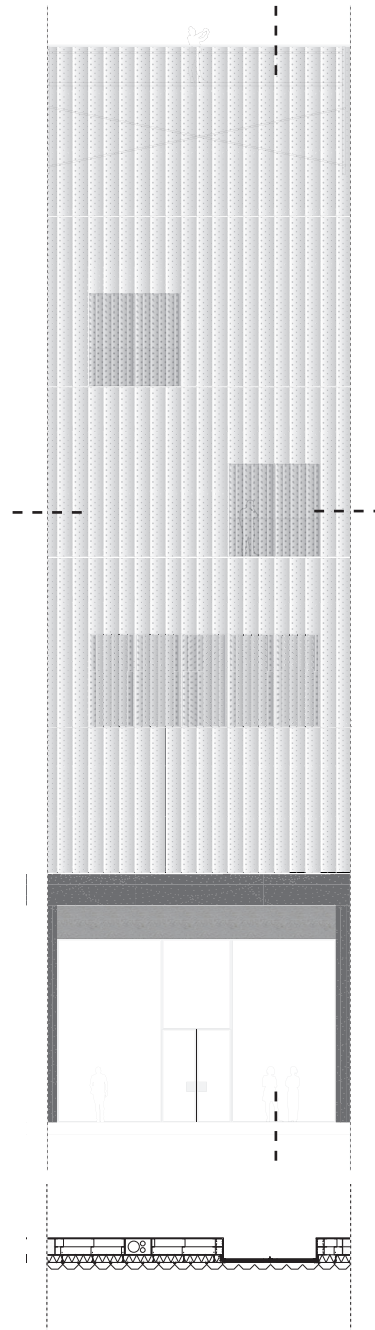
Concept

Implementation

Development

Conclusion

Development
FRAGMENT



Development FRAGMENT

Roof
Installations
+31 m

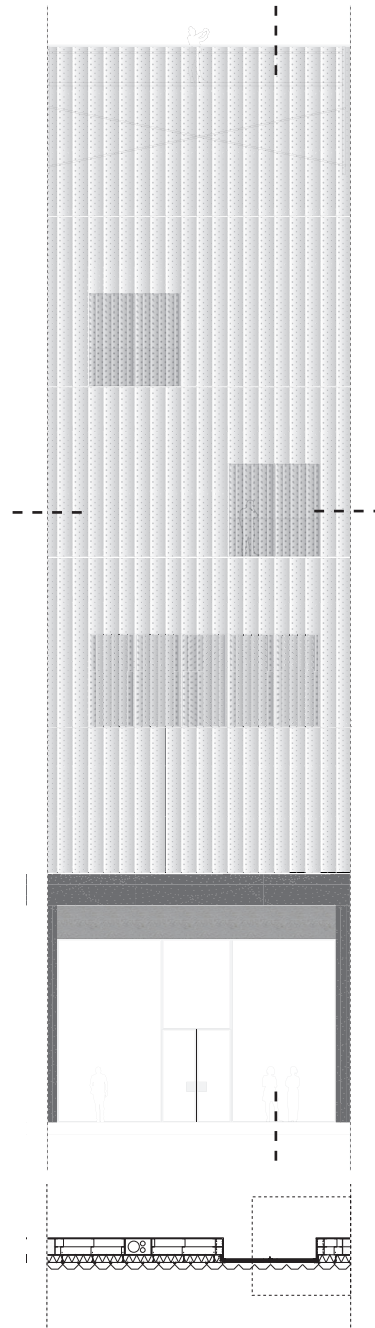
4th floor
Data center
+26 m

3rd floor
Data center
+20,5 m

2nd floor
Data center
+14.5 m

1st floor
Data offices
+8.5 m

Ground floor
Mixed
+0.5 m



Detail E
Facade
(vertical)

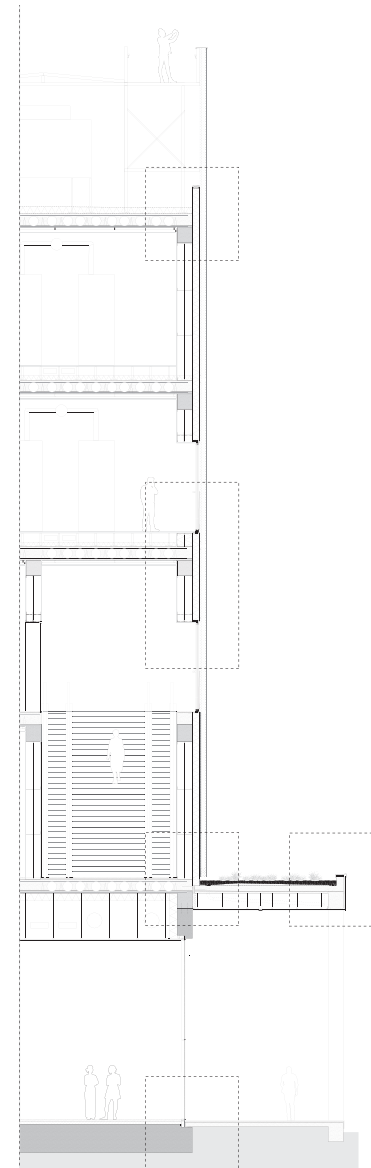
Detail A
Roof - facade

Detail B
Floor - facade

Detail C1
Colonnade

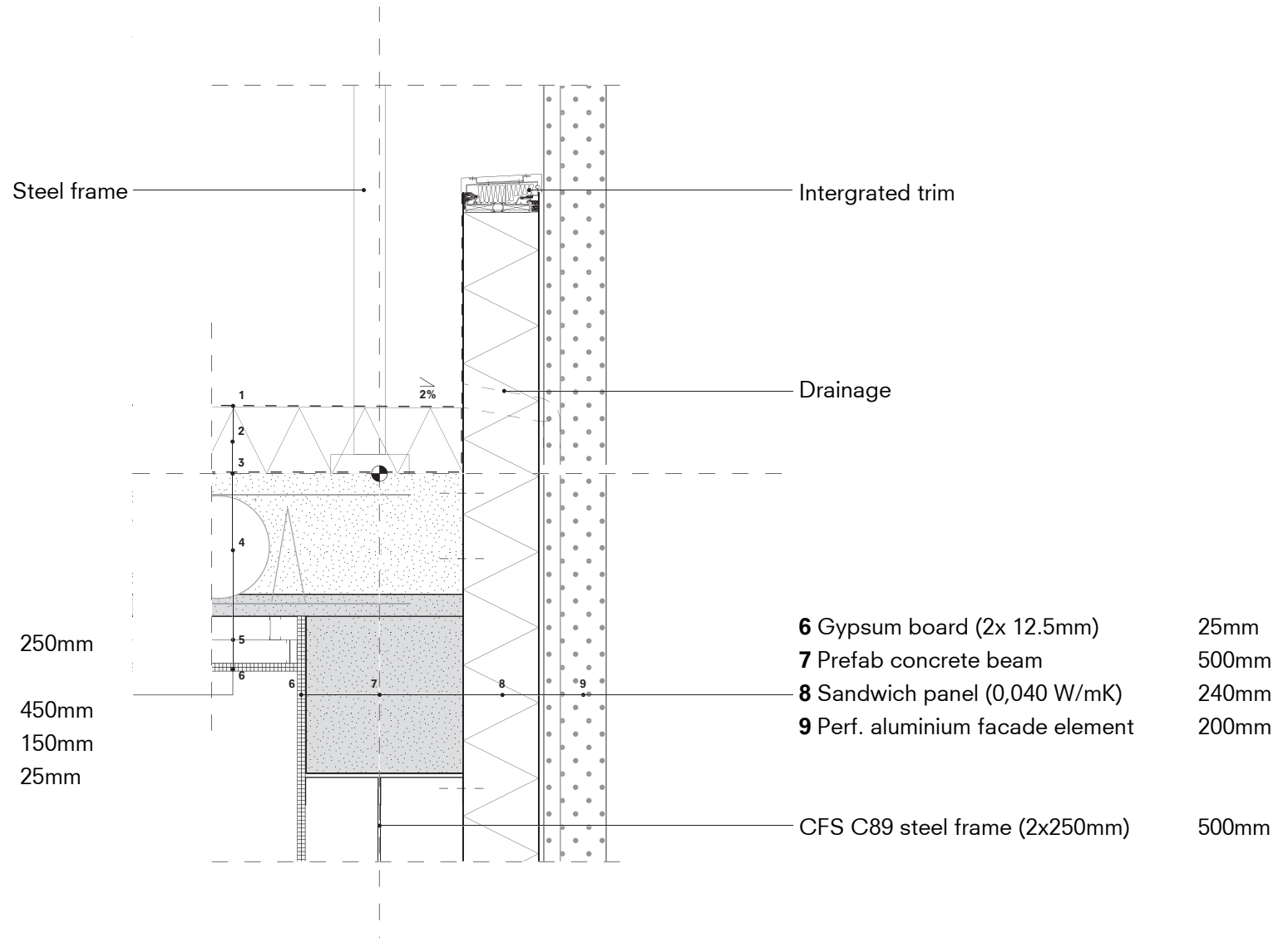
Detail C2
Colonnade

Detail D
Colonnade - tank
(foundation)



Development

DETAIL A - ROOF

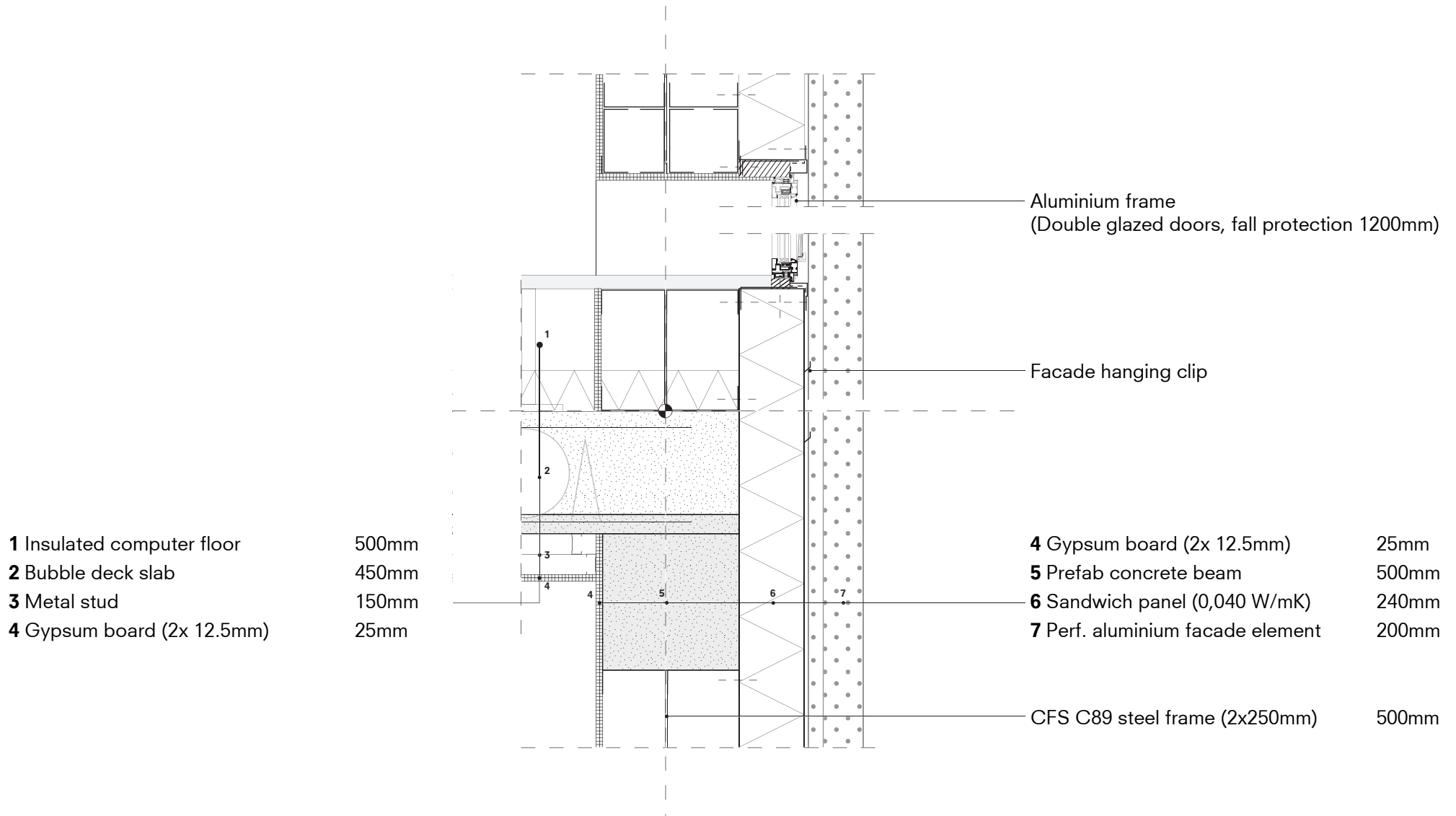


A - Roof
Detail 1.5
scaled 25%

0 200 800

Development

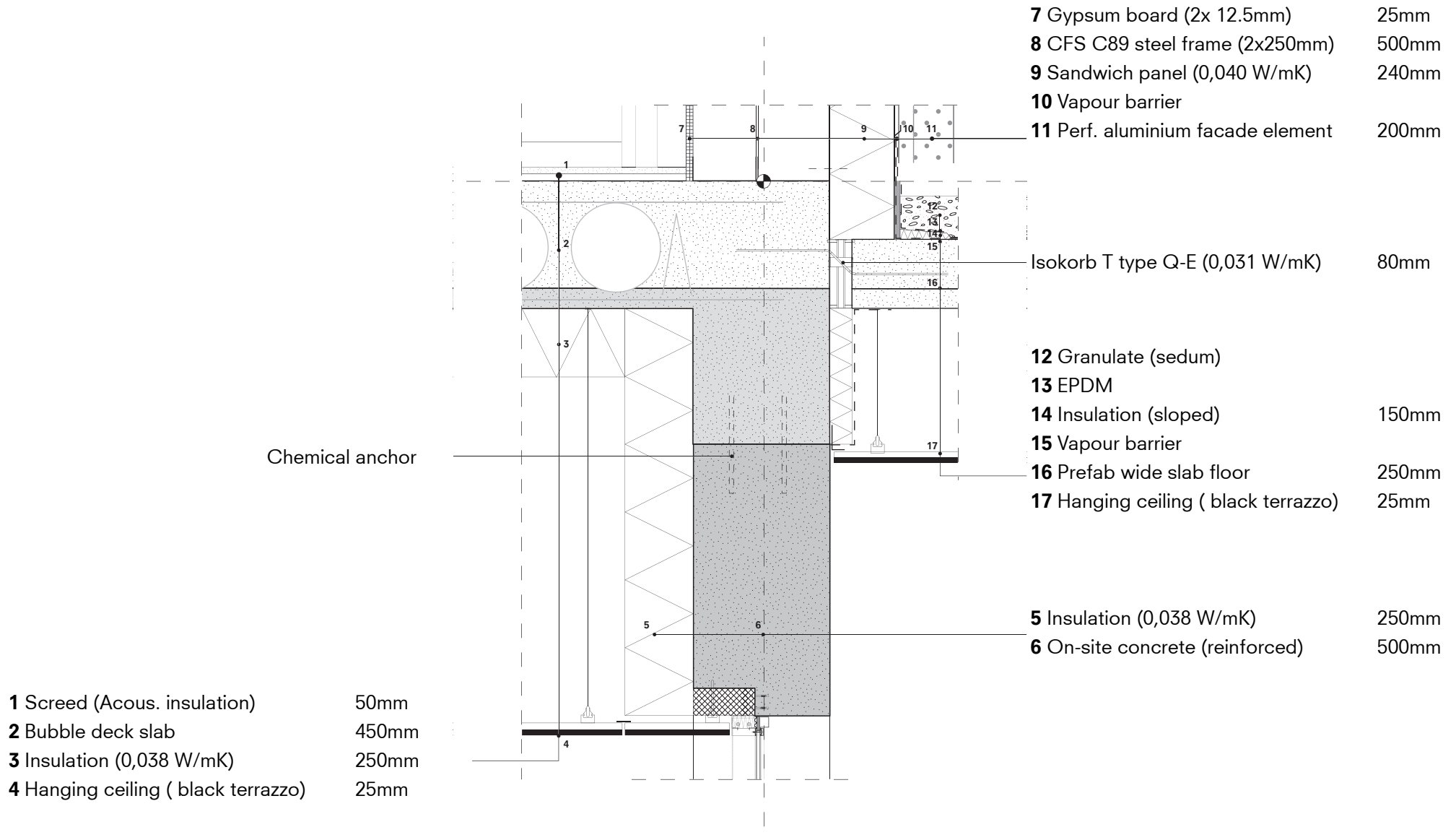
DETAIL B - FLOOR



B - Floor
Detail 1.5
scaled 25%

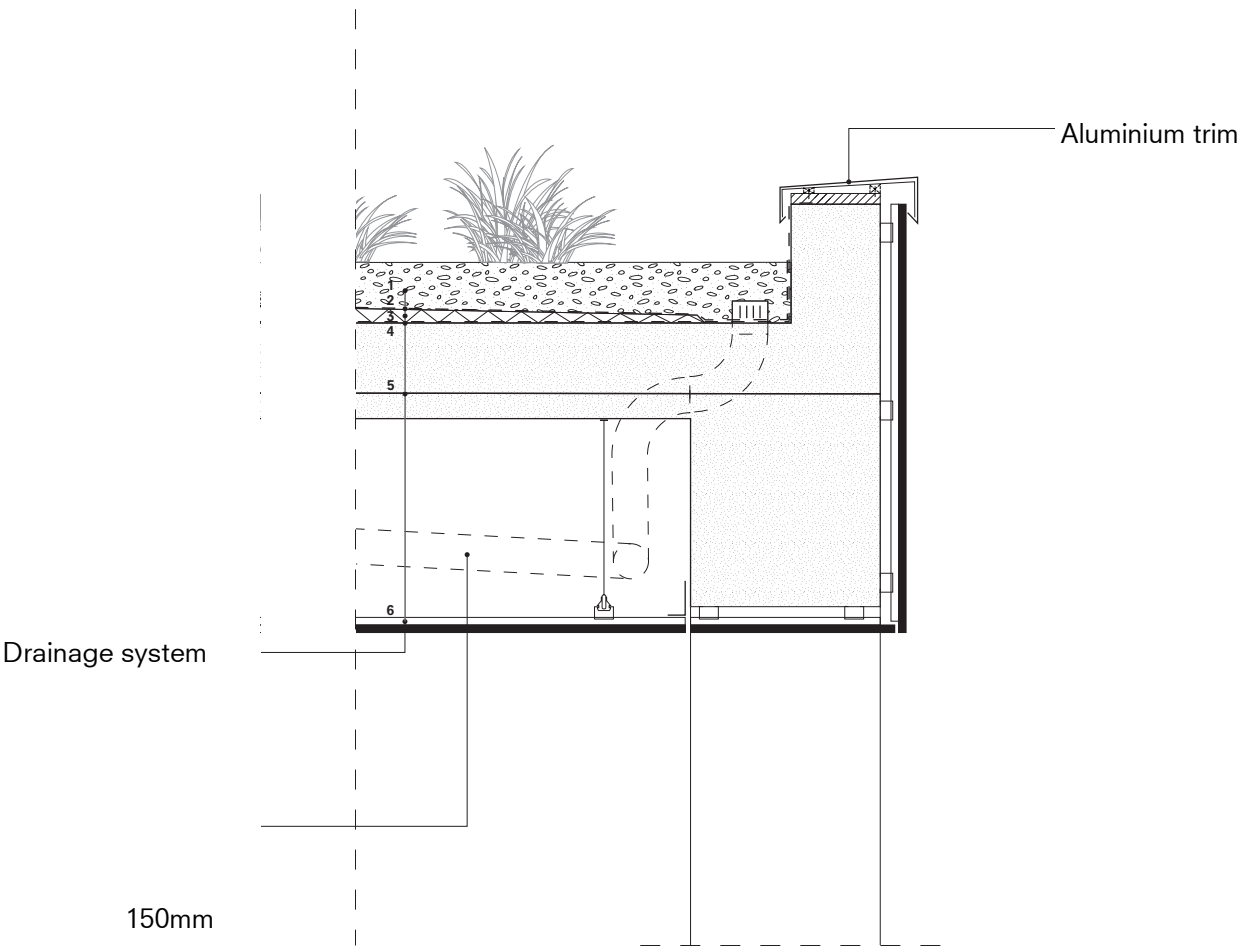
0 200 800

DETAIL C1 - COLONNADE



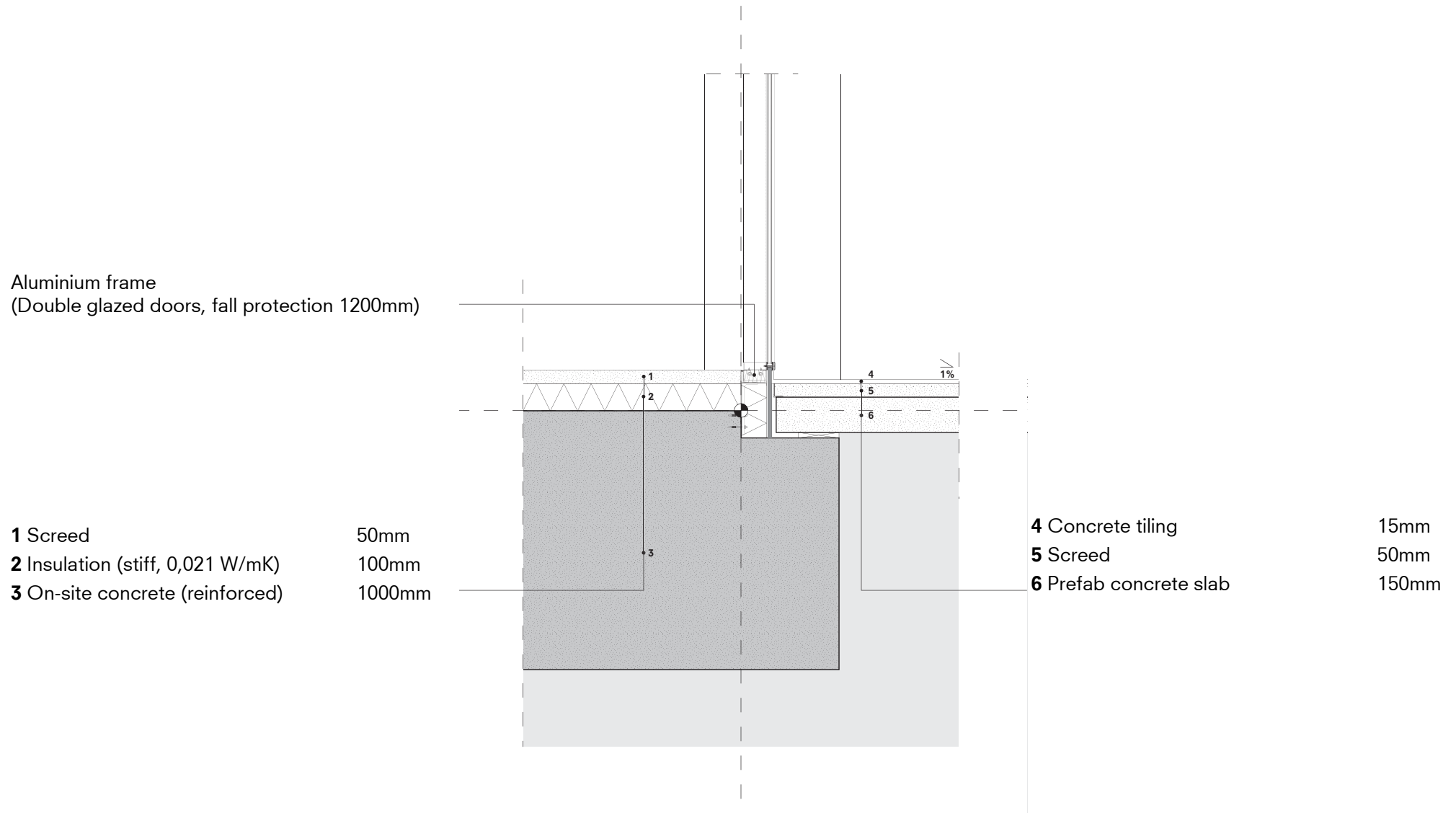
Development

DETAIL C2 - COLONNADE



Development

DETAIL D - FOUNDATION



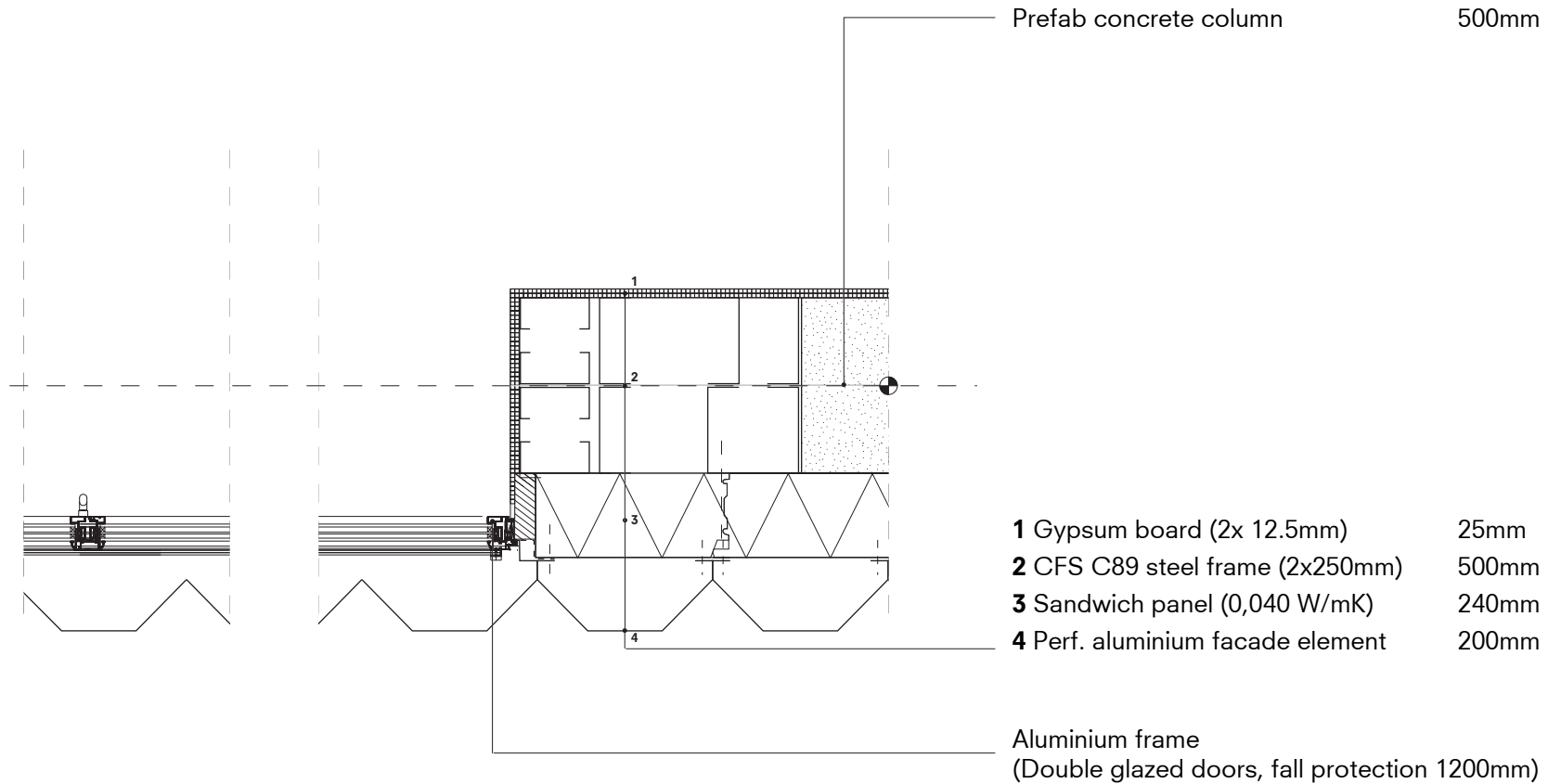
D - Foundation

Detail 1.5
scaled 25%

0 200 800

Development

DETAIL E - FACADE

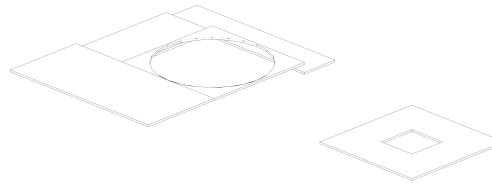


E - Facade

Detail 1.5
scaled 25%

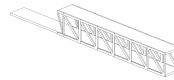
0 200 800

Development STRUCTURE



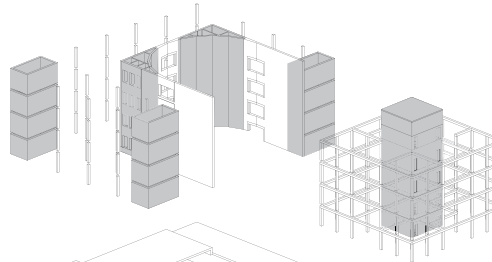
Roof

- Bubble deck
(450mm)



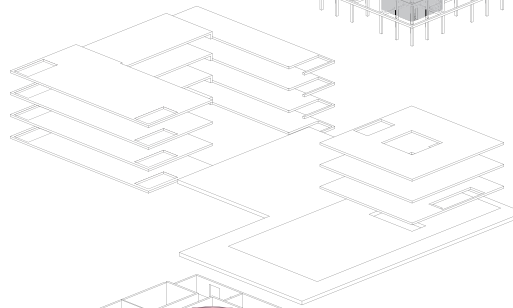
Bridge

- Steel truss
- Prefab concrete slabs



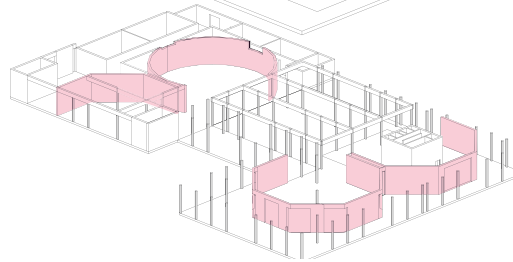
Cores + frame

- Concrete walls in-situ
(250-500mm, 5 m tall)
- Prefab concrete elements
(500x500mm, 5 m tall)



Floors

- Bubble deck
(450mm)



Ground floor

- Concrete former tanks
(500mm, 7 m tall)
- Concrete walls in-situ
(250-500mm, 7 m tall)
- Prefab concrete elements
(500x500mm, 7 m tall)

Available
concrete:
1000m³

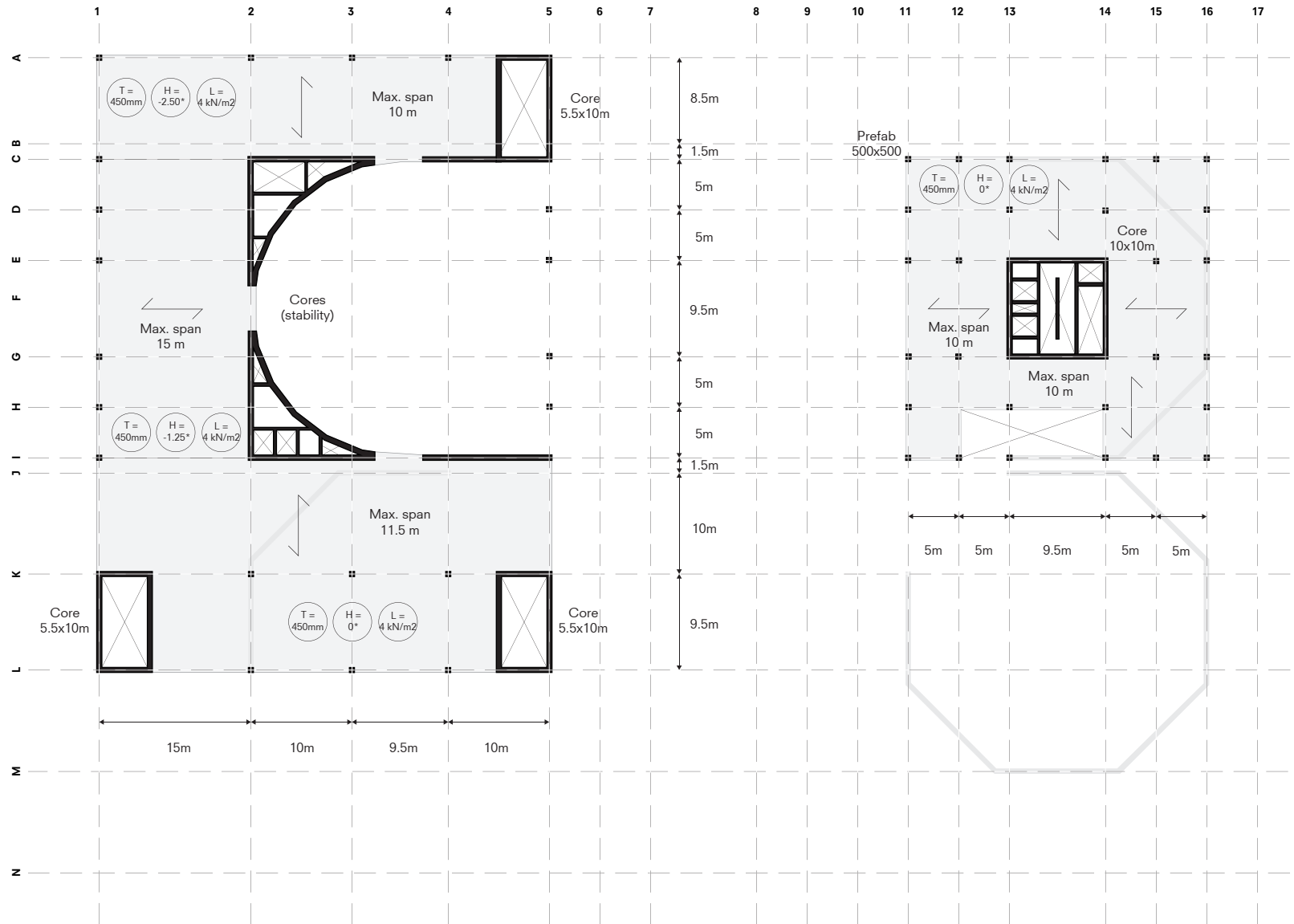
used: **400m³**
Recycle: **600m³**

Development
STRUCTURE

CONCRETE RECYCLING

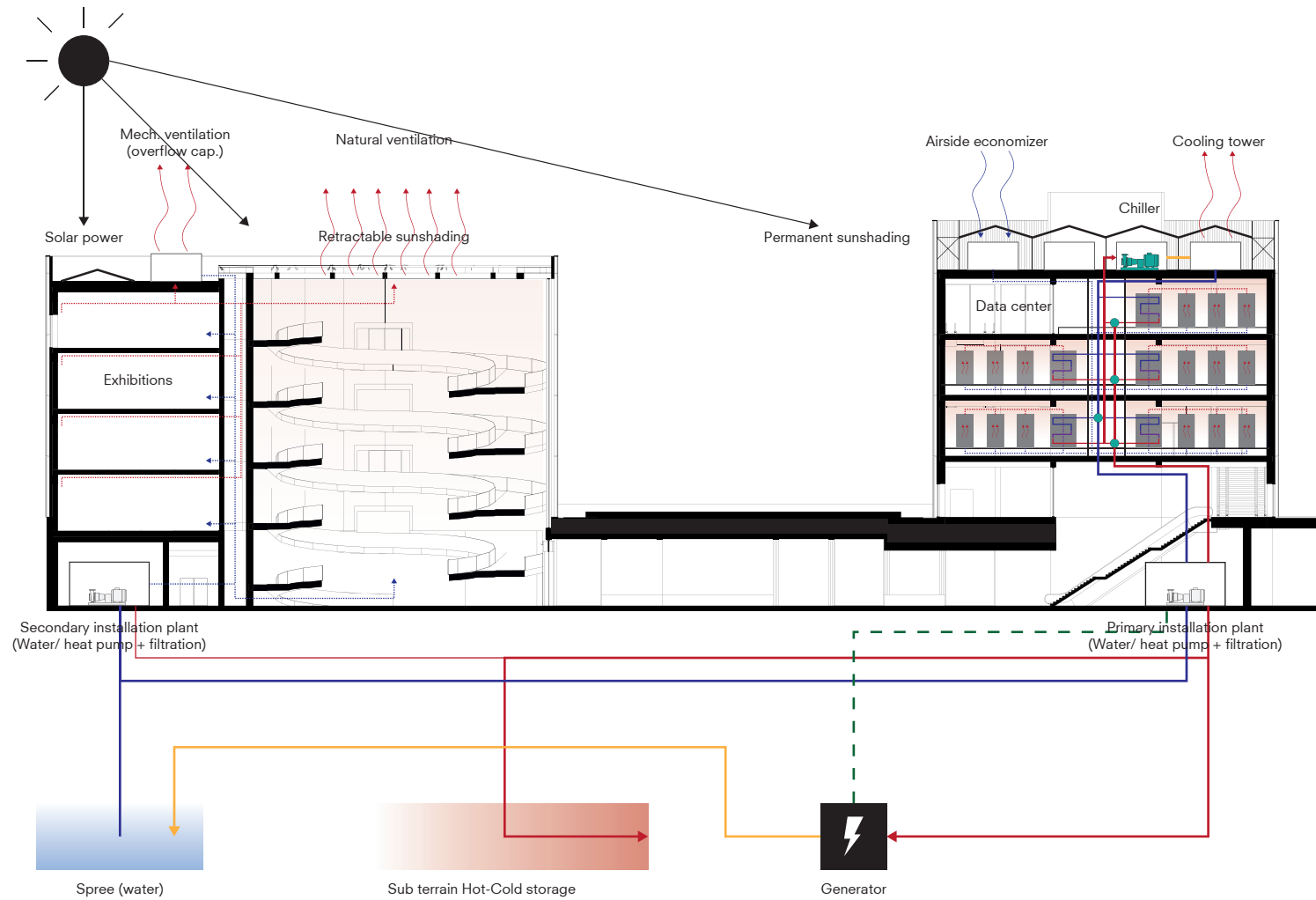


Development STRUCTURE

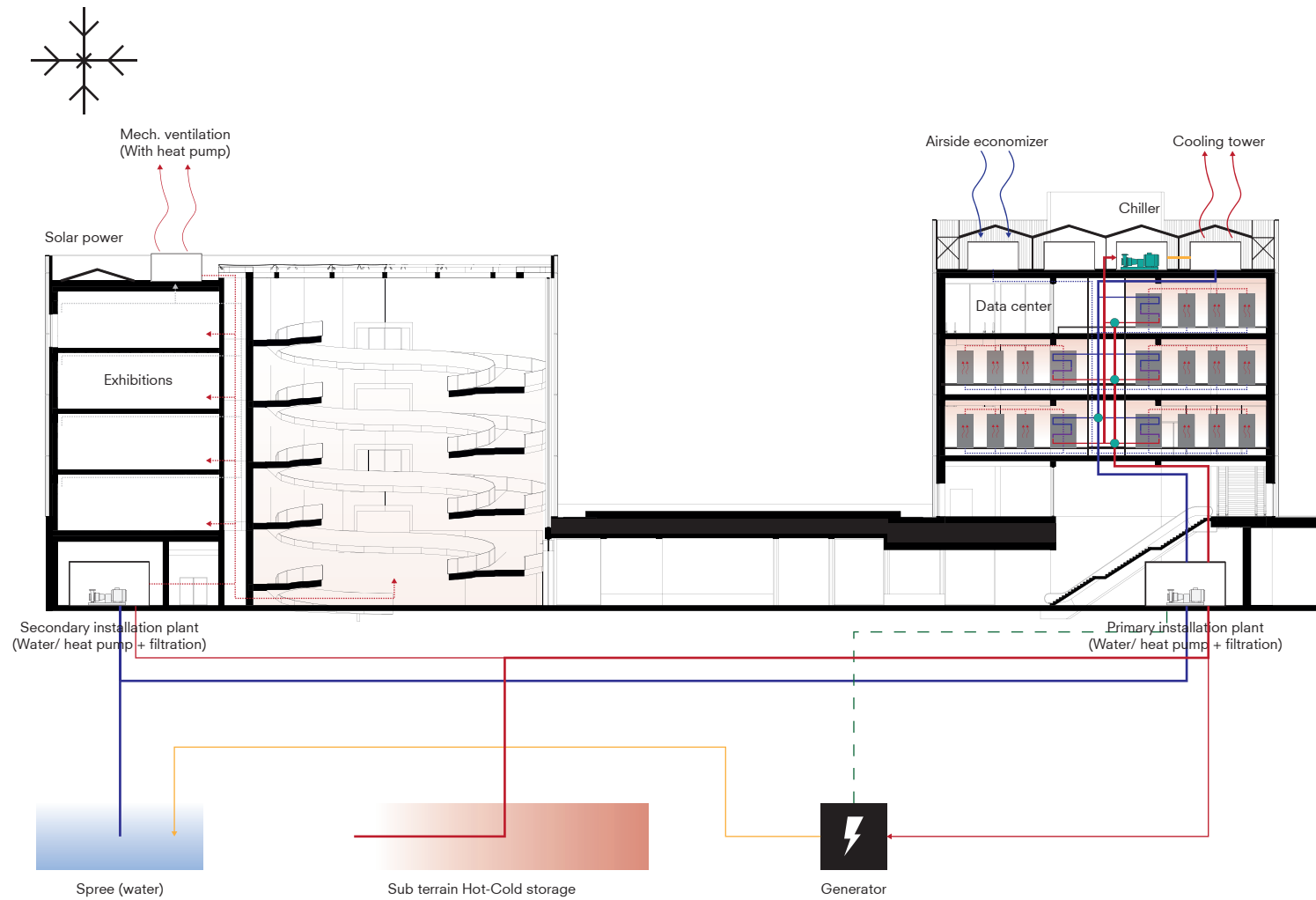


Development

CLIMATE SUMMER

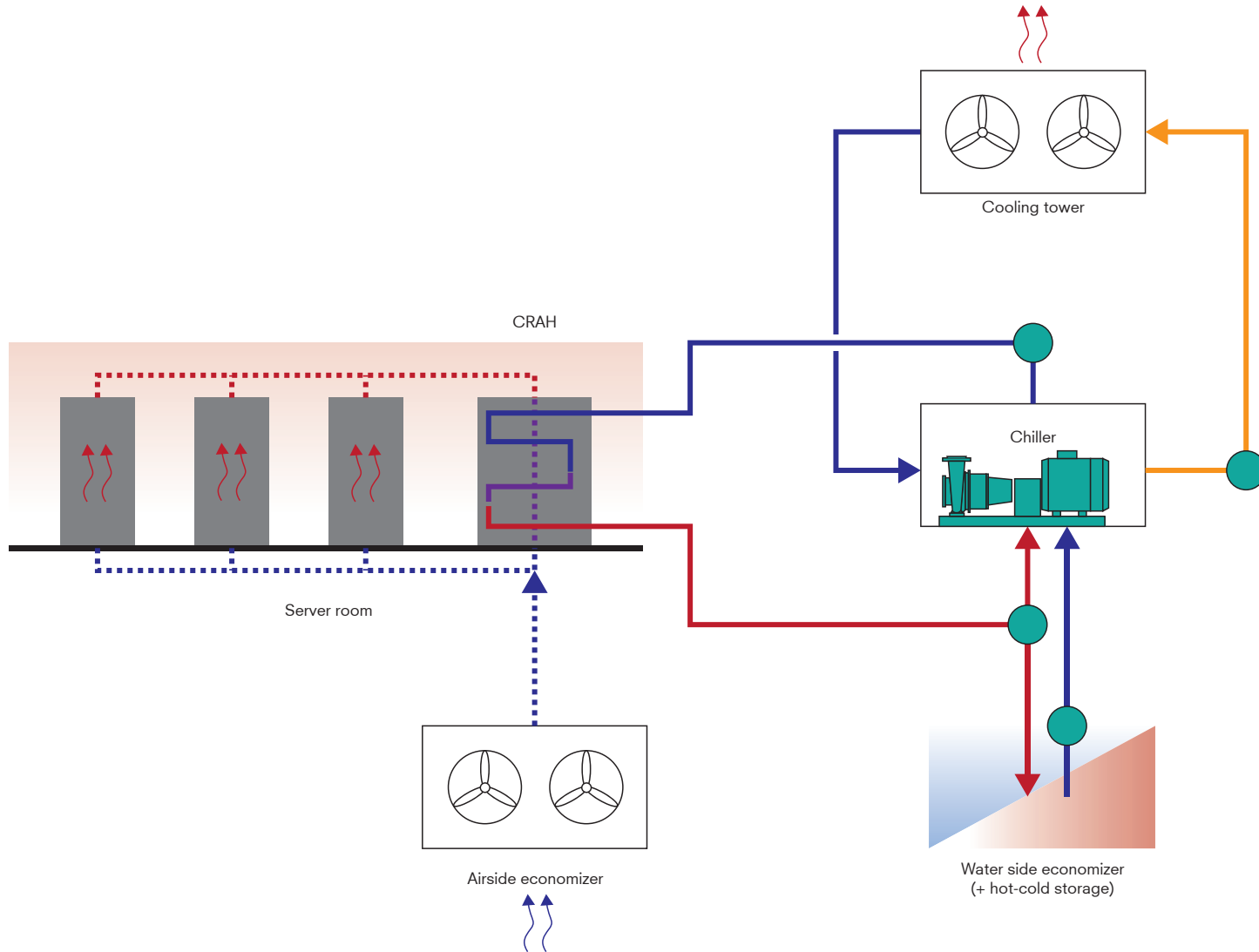


Development CLIMATE WINTER



Development

DATA CENTER



Introduction

Research

Design Brief

Concept

Implementation

Development

Conclusion

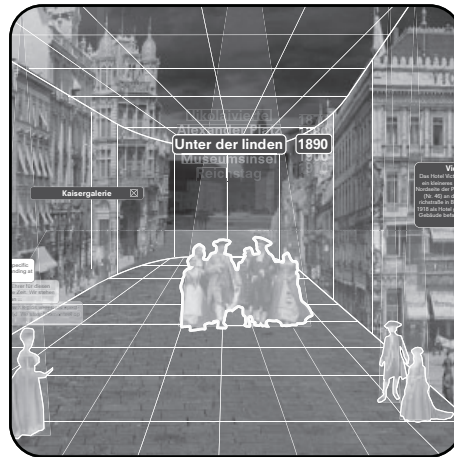
Conclusion OVERVIEW

Client



**Federal Government
BKM & BMVD**

Program



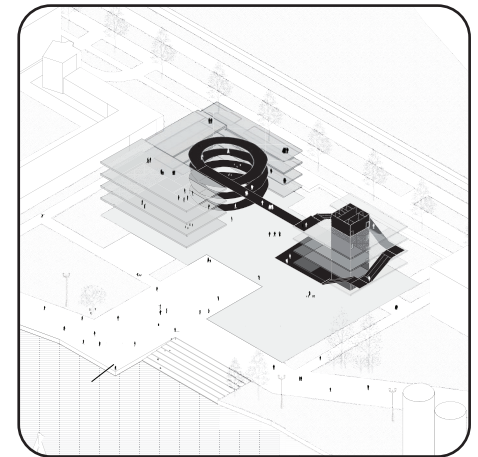
**Digitalized history
museum**

Site



**Klingenberg
Berlin**

Concept



**Time
machine**

RESEARCH QUESTION

In which ways can digitalization impact the design for the next generation state-history museum of Berlin, benefitting the re-engagement with the young?

How can we decentralize and intergrate data centers into our public built environment?

Conclusion

AMBITION

BKM

Federal level



Re-engage the youth with history by making it cool

BKM

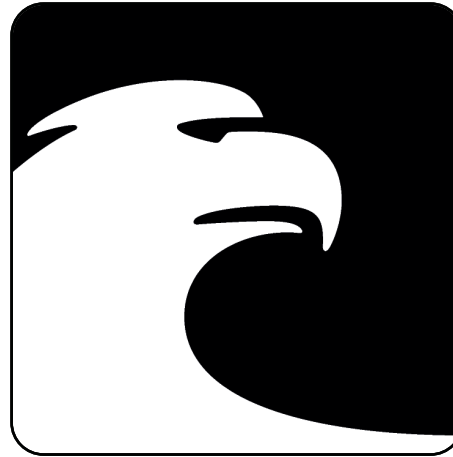
City/ state level



Preserve the cultural heritage and give an impulse to the city

SMB

(part of SPK)



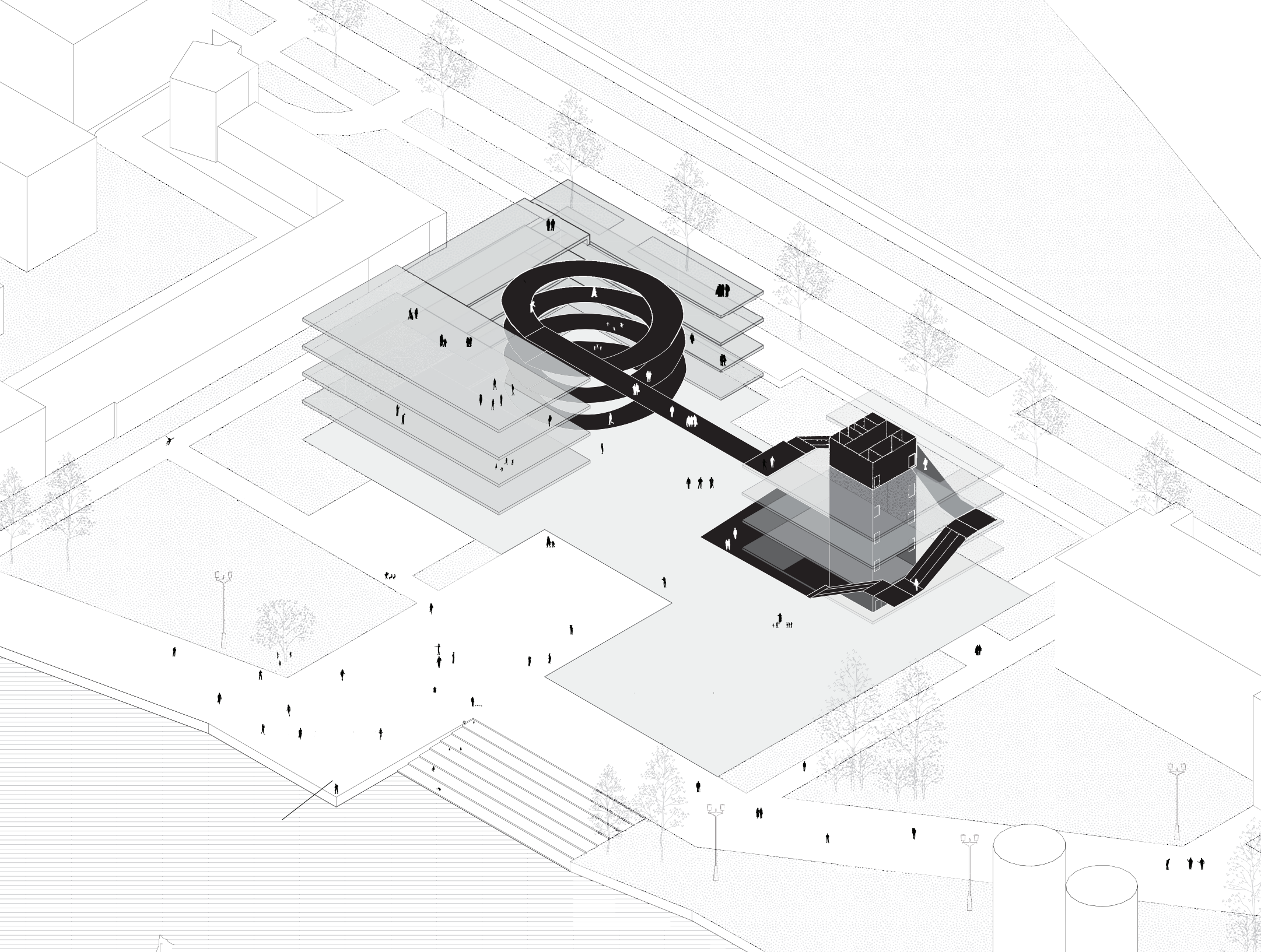
Create the next generation history museum

BMVD & CDO

Federal + state level



Intergrate data centers into public buildings





ZEIT
RAUM

THANK YOU / BEDANKT / DANKE!