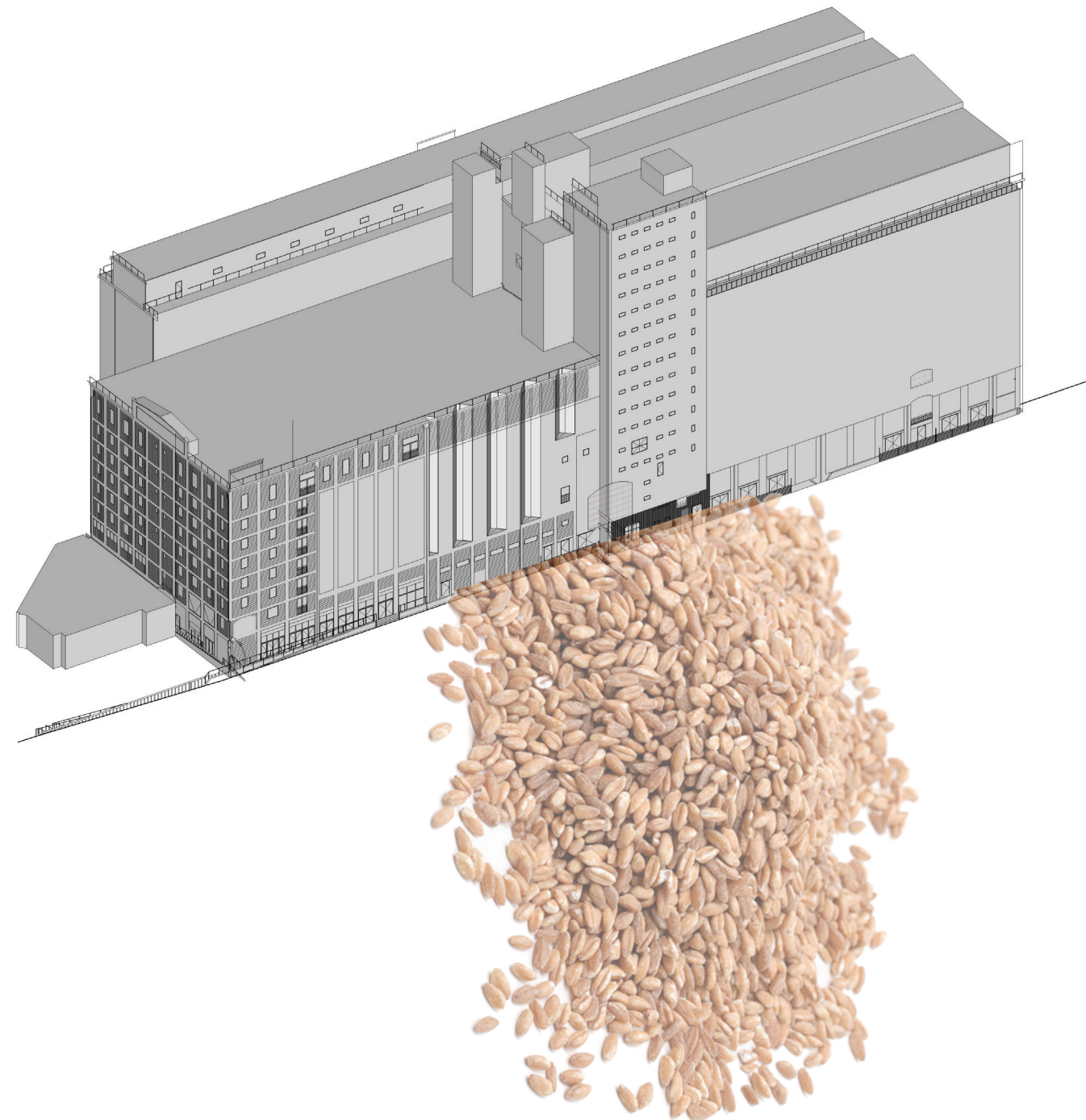


Studio Heritage & Architecture | AR3AR111
Harbor Rotterdam | Maassilo
Giel Leunissen 4386256

The Urban Silo

Redevelopment of the Maassilo



Tutors: Lidy Meijers (Arch.),
Suzanne Fischer (His.)
Frank Koopman (Bt.)
Sisi Zlatanova (2nd)



The Urban silo

Redevelopment of the Maassilo

Content

Introduction

What? (Heritage & Architecture)

Problem statement (studio Rotterdam Harbor)

The Maassilo

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Program

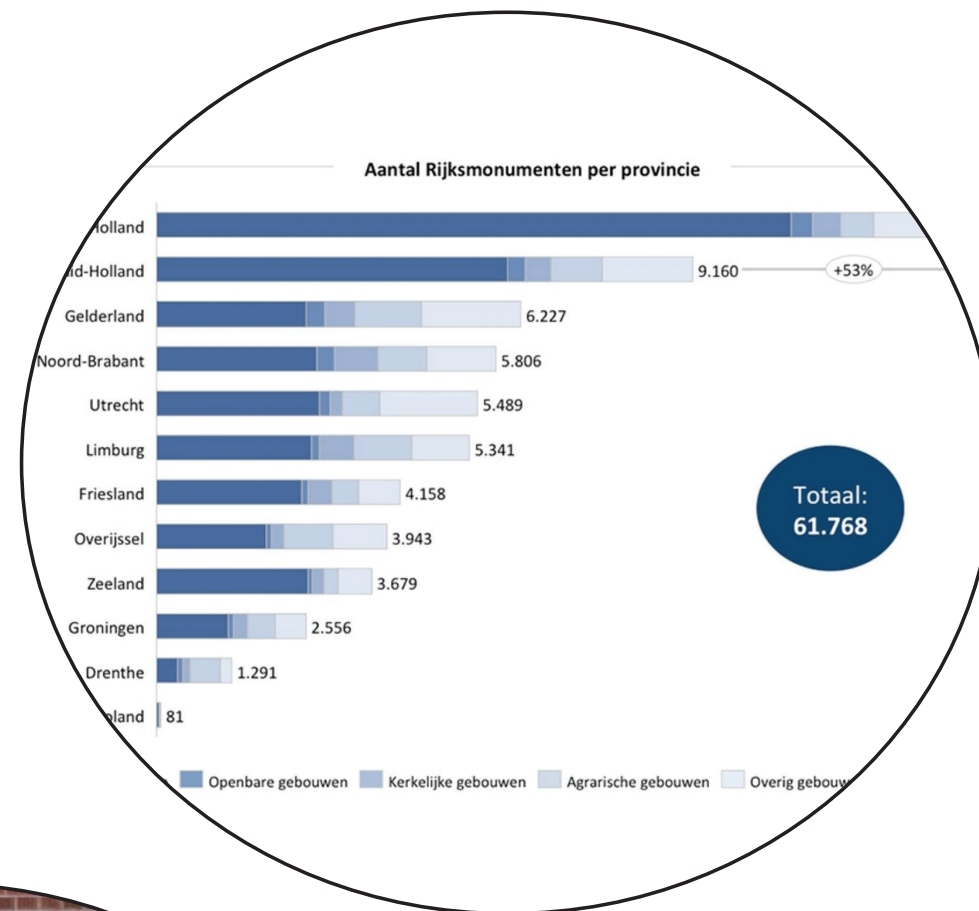
Design

City > Context > Building > Building part > Fragment > Details

Reflection

Questions

What?



Globalization
Industrial heritage
Vacant offices

Heritage & Architecture



Problem Statement

Studio Harbor Rotterdam

scale

scale

scale

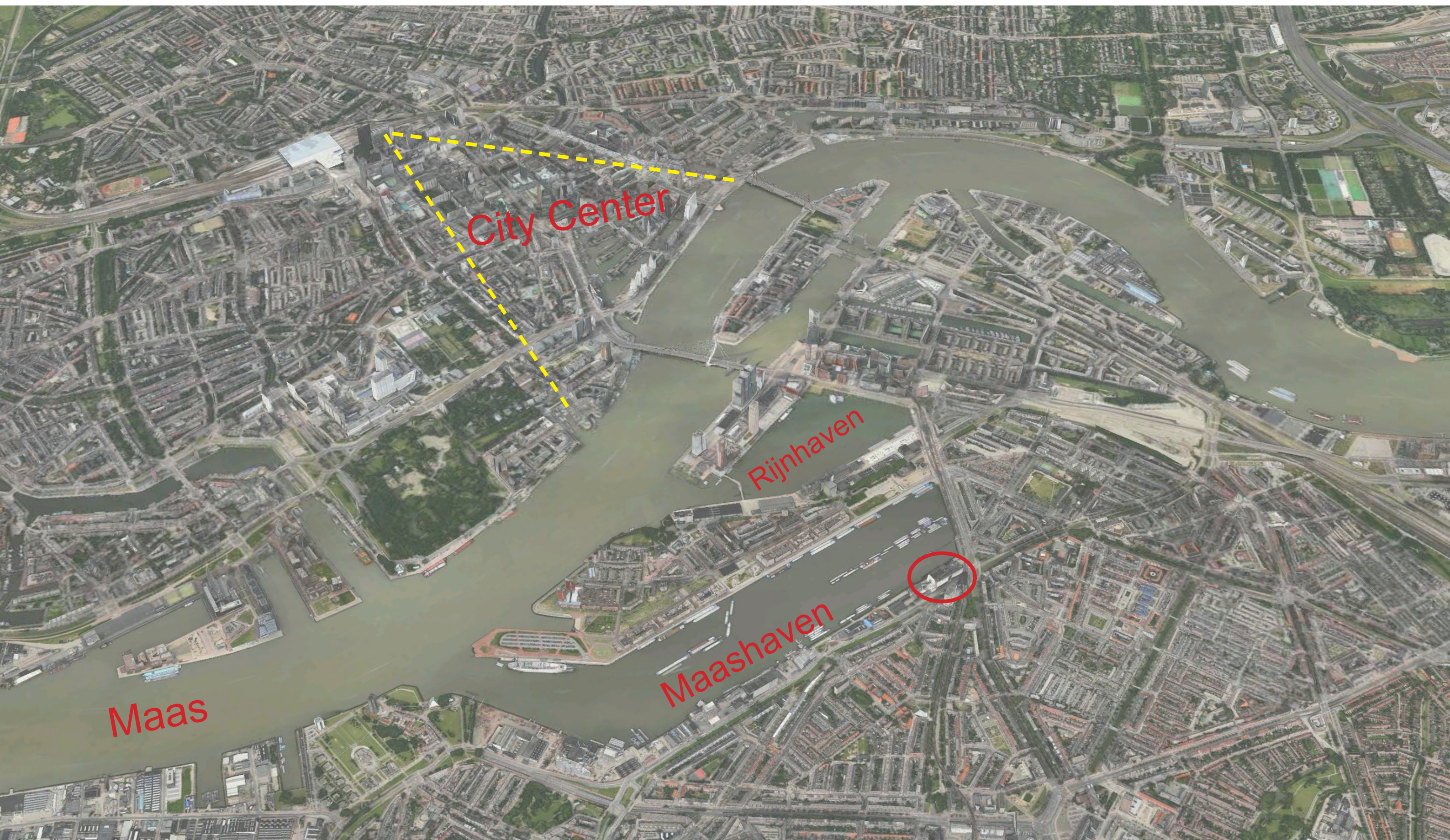
Scale

Scale

Rotterdam



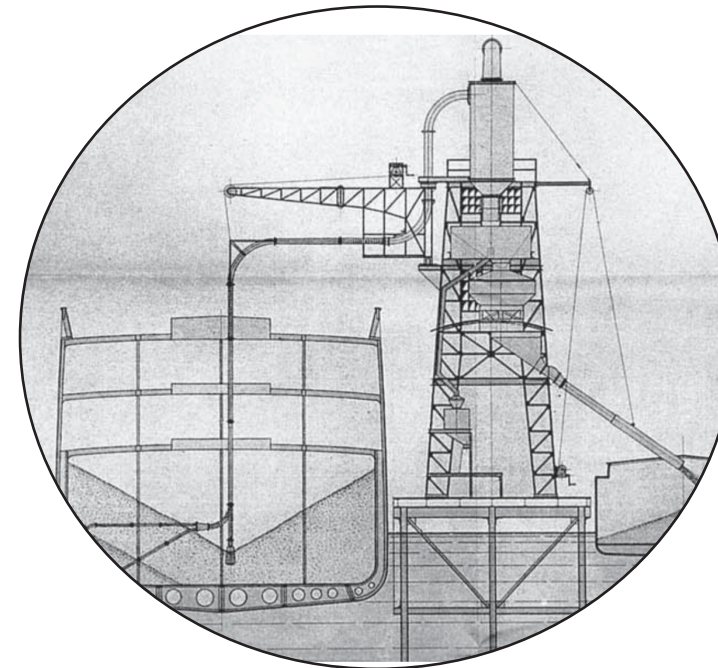
Maassilo



Rijnhaven 1895
Maashaven 1905
“Op stroom” transshipment for bulk



Transshipment Maashaven ca. 1905-1910



Transshipment Maashaven ca. 1935
Meneba
Quaker
Maassilo



Flower factory

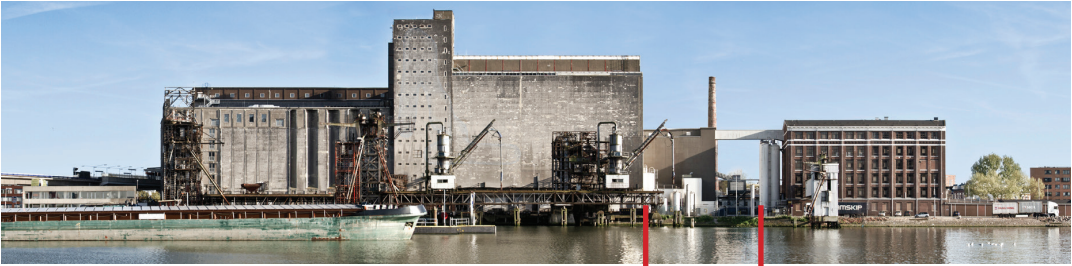
Grain Elevator company (floating)

Wood storage

Grain silo (GEM) Graan Elevator Maatschappij)
Maassilo complex

Map Harbor (Cito, 1921)

Maassilo | Quaker (Michel de la Vieter)



Flouer factory | Meneba (Michel de la Vieter)



Fenix Warehouse

SS Rotterdam

Ventilation Building



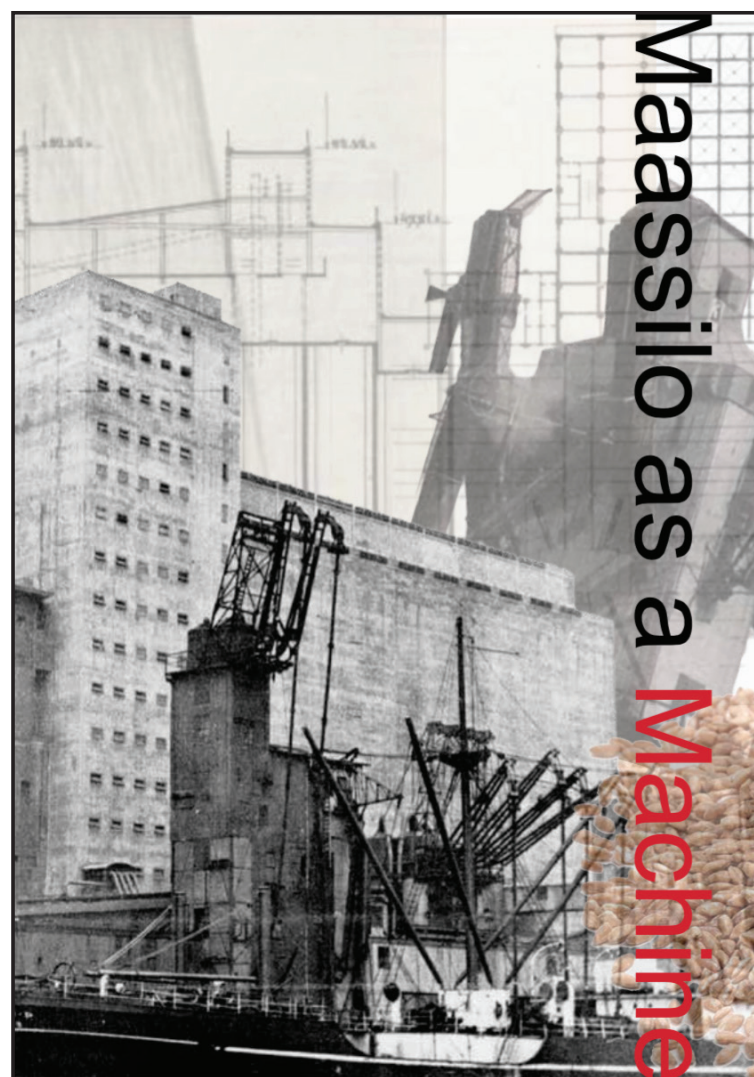
Codrico (Michel de la Vieter)





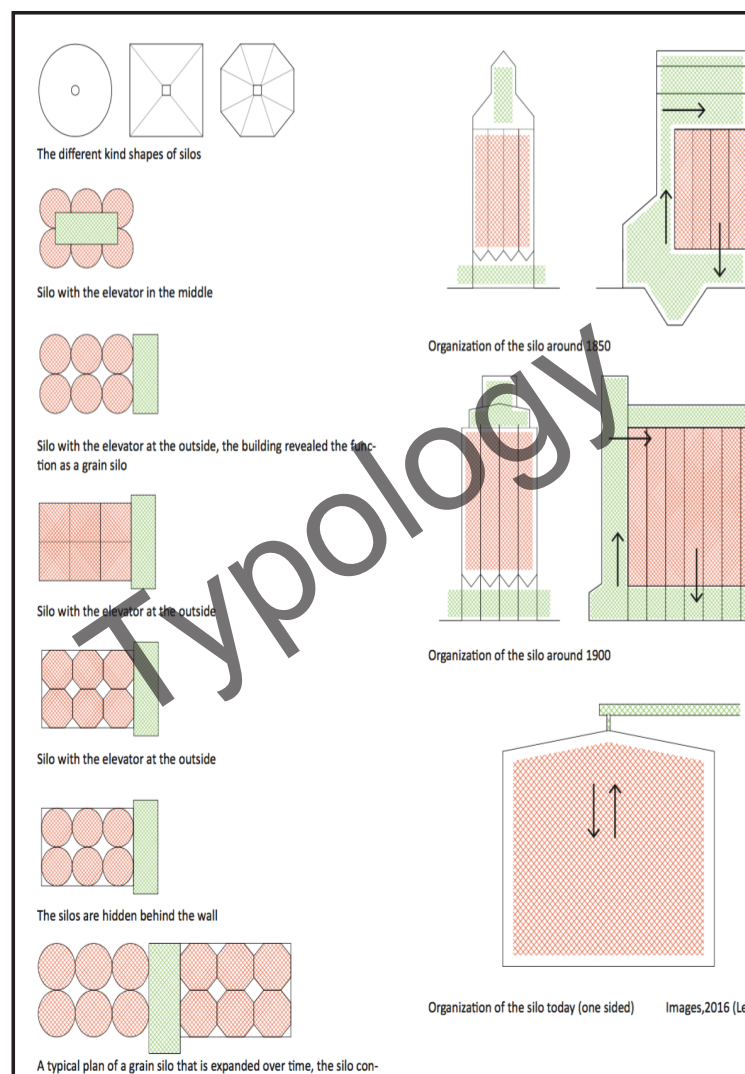
Maashaven | Maassilo and the Quaker factory (Michel de la Vieter)

Analyse



Maassilo as a Machine **Personal**

Fascination, what are the characteristics of the building?



Typology **Technical**

What can you do with this type of typology?



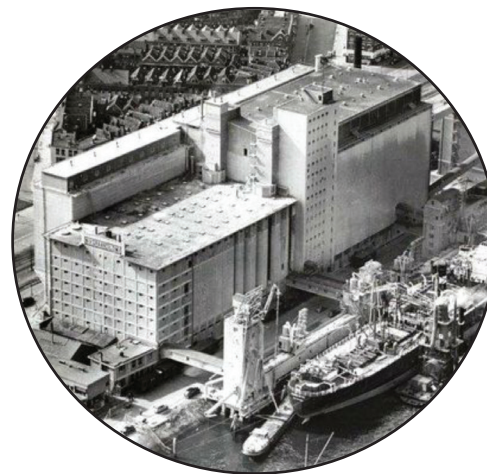
Different Approaches on Heritage Buildings and sites **Theoretical**

How can you embed the project in their surrounding, especially socially?



1898-1905

Maashaven constructed

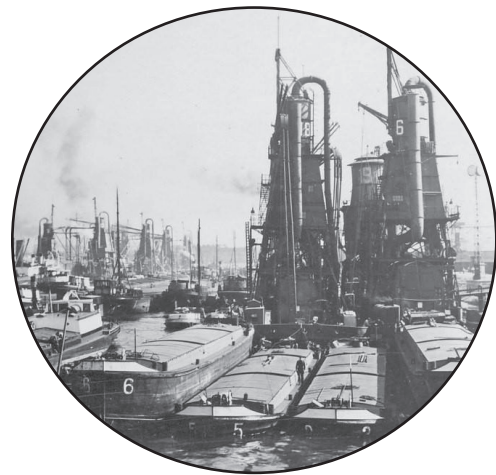


1945

WWII is over

1951

Last extension by Architect J.D. Postma



1905-1910

Maashaven set up as a bulk transshipment harbor



1983

Maassilo company moves to the botlek



1910

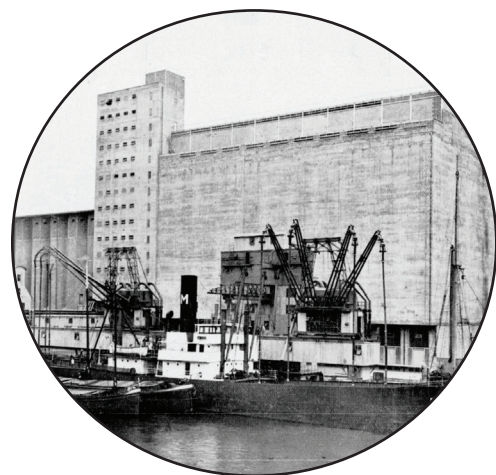
First silo made by architect J.P. Stok



2003

Maassilo stops functioning as grain storage

Ground floor gets redeveloped into a event hall



1930

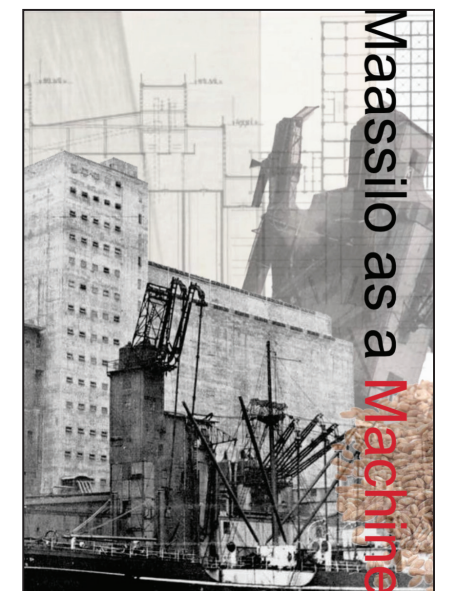
Second silo made by architect Brinkman & van der Vlucht

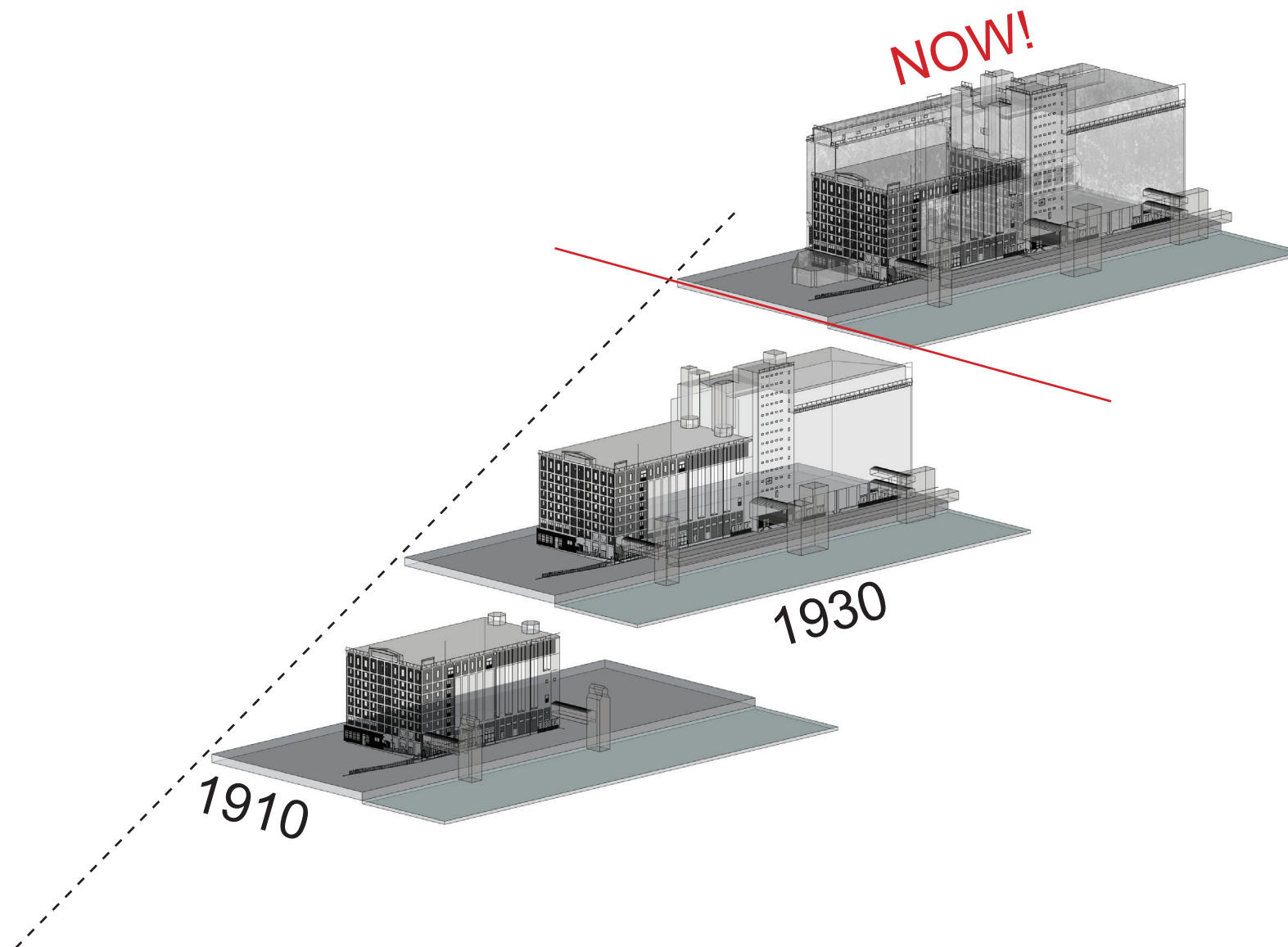


2008

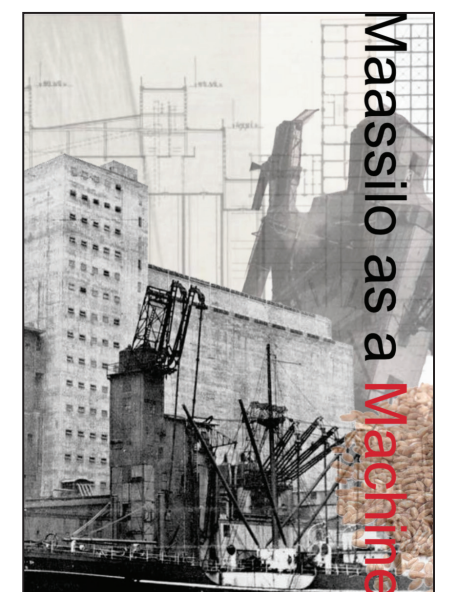
Attic and factory get transformed into offices for start-ups

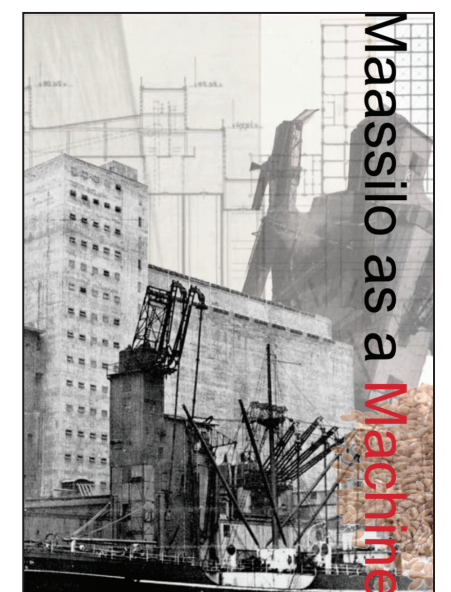
2017

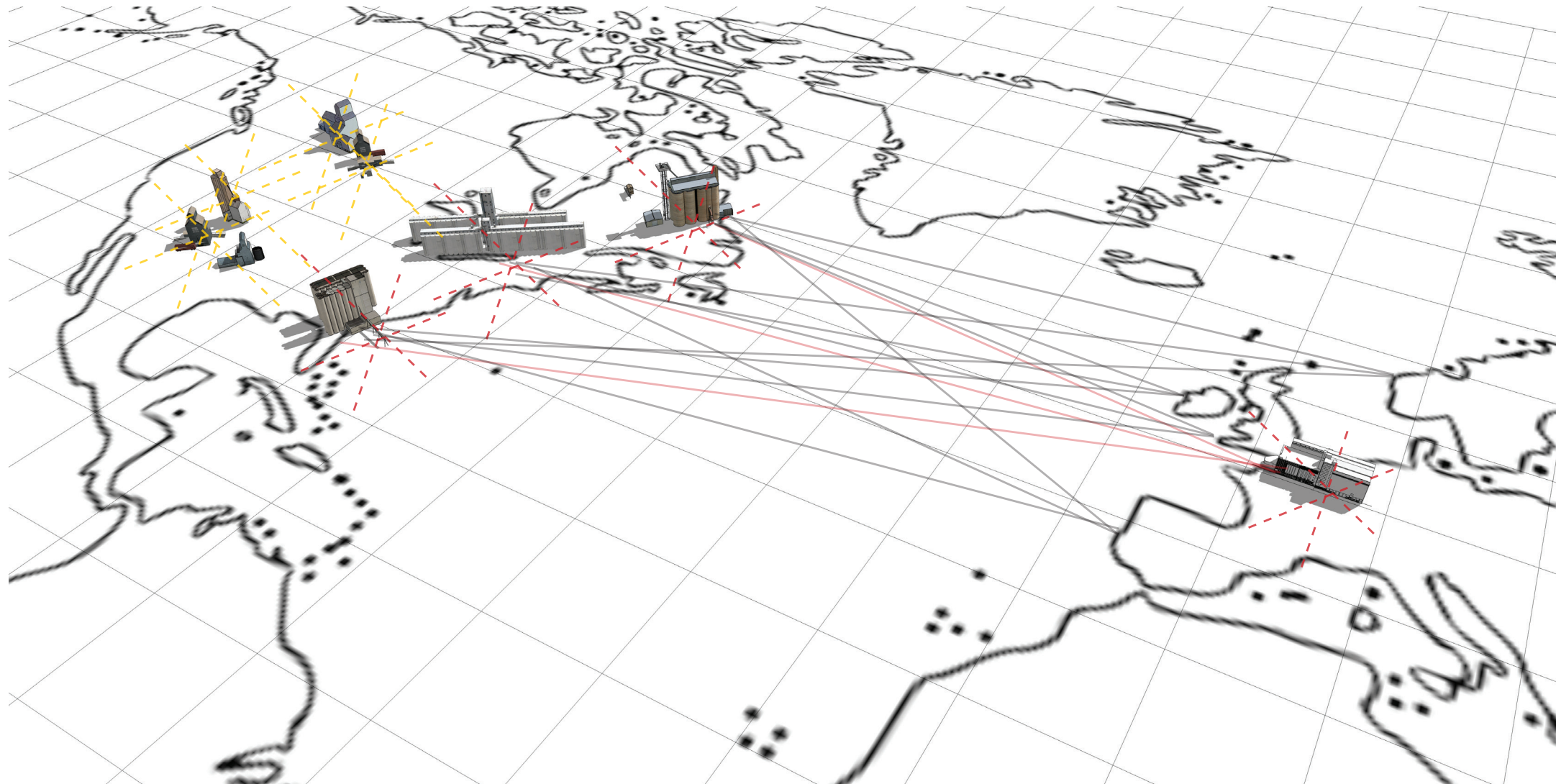




Layers of time (Leunissen G.)







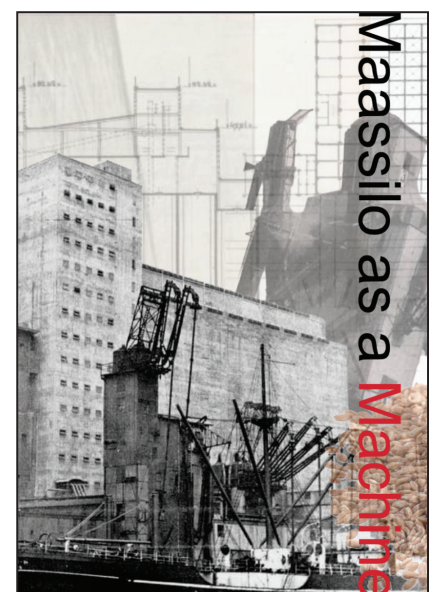
■ New York
 New Jersey
 Savannah
 Virginia
 Houston
 Tacoma
 Charleston
 Montreal

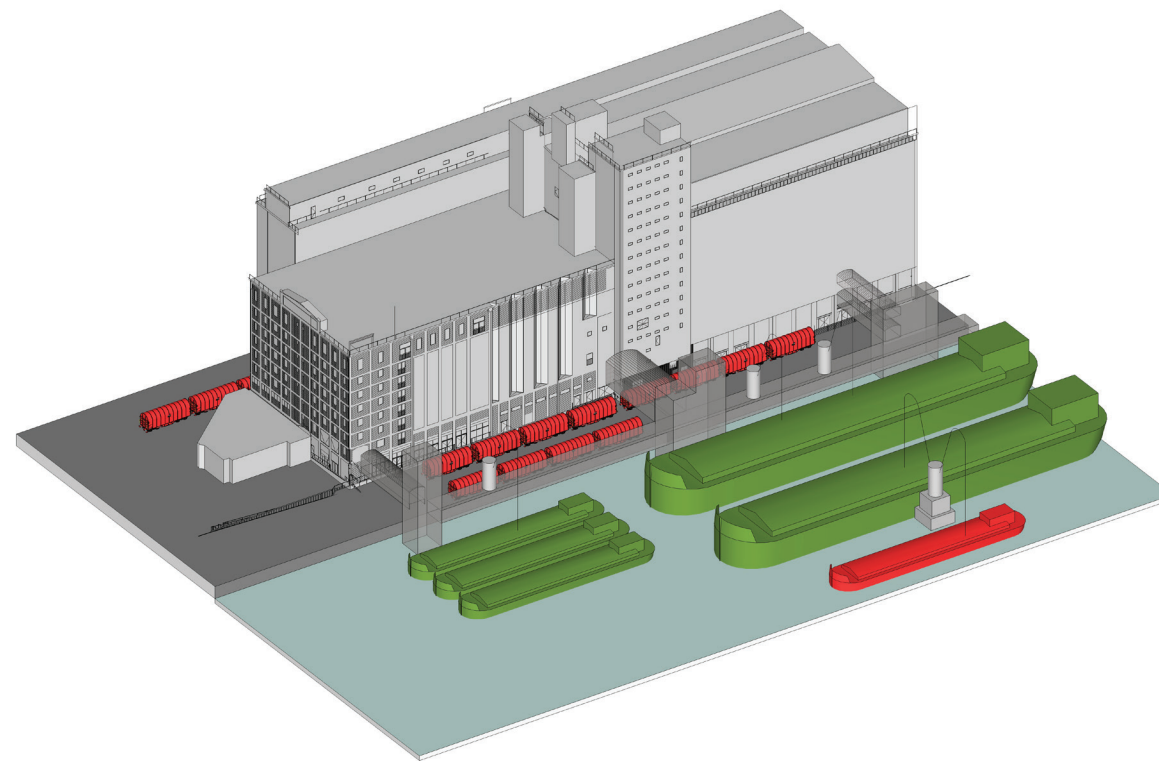
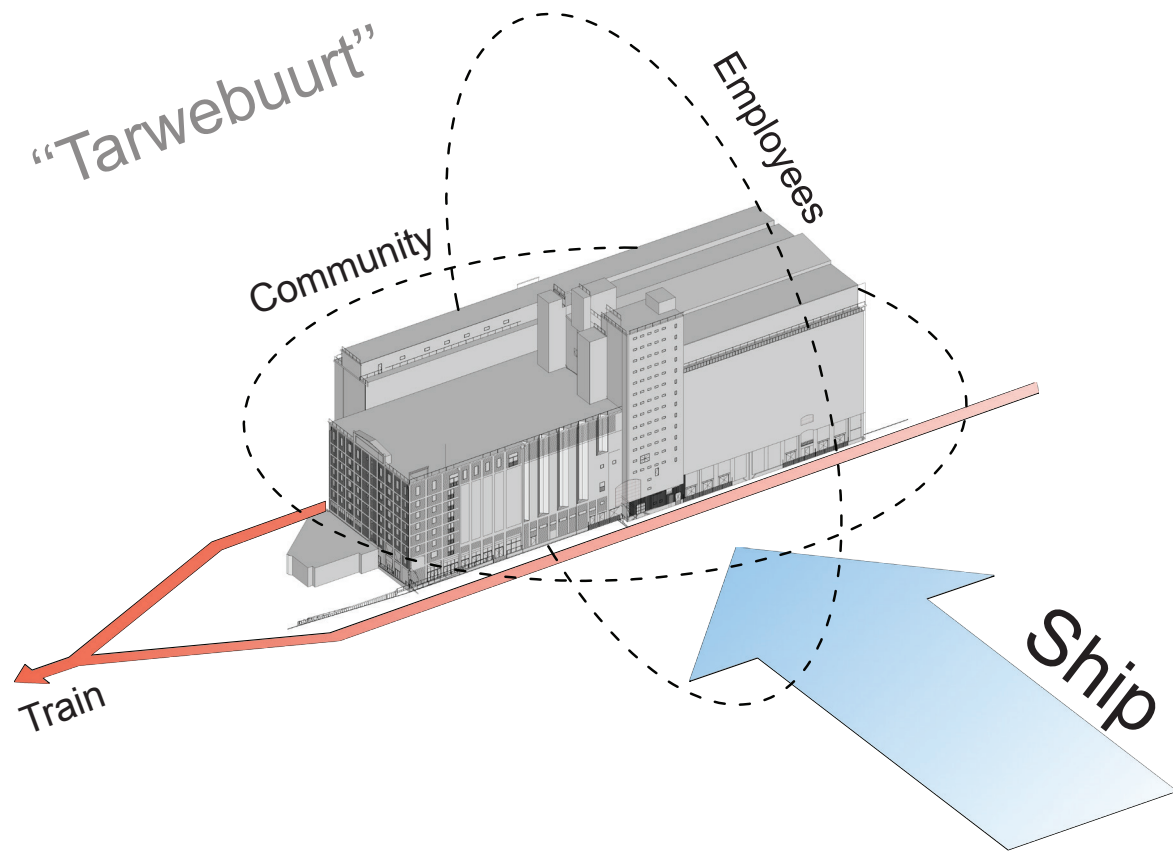
Churchill
 Quebec

■ Antwerp
 Bremen
 Hamburg
 Amsterdam
 Rotterdam
 Lisbon
 Le Havre
 Genoa

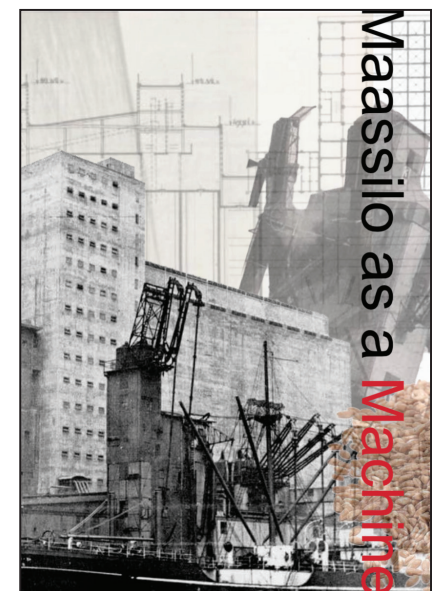
Dublin
 London
 Saint Petersburg
 Southampton

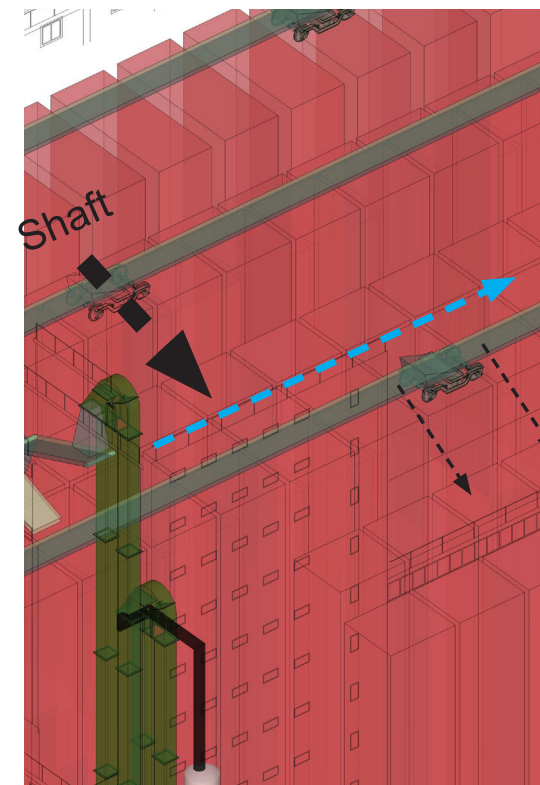
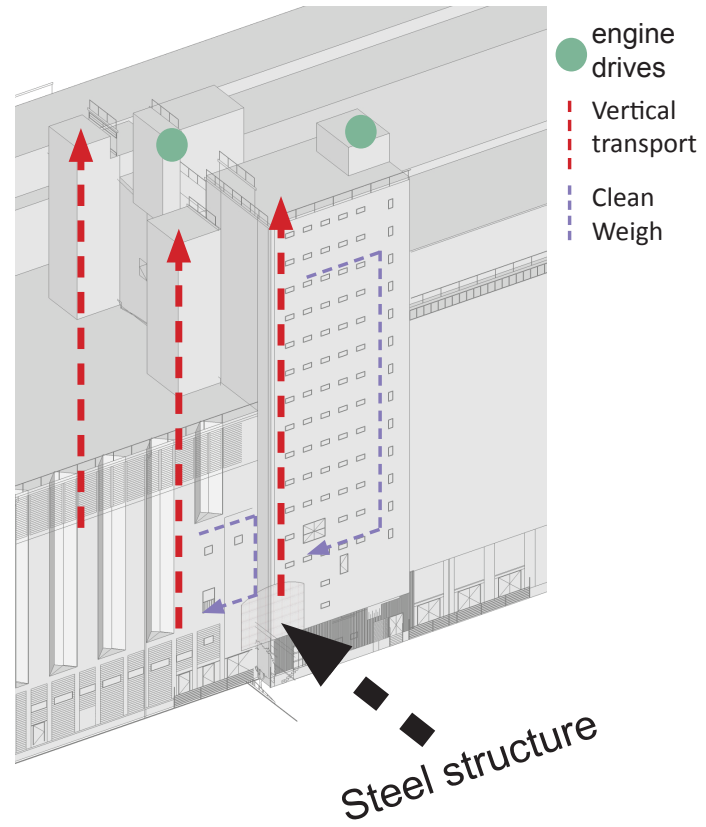
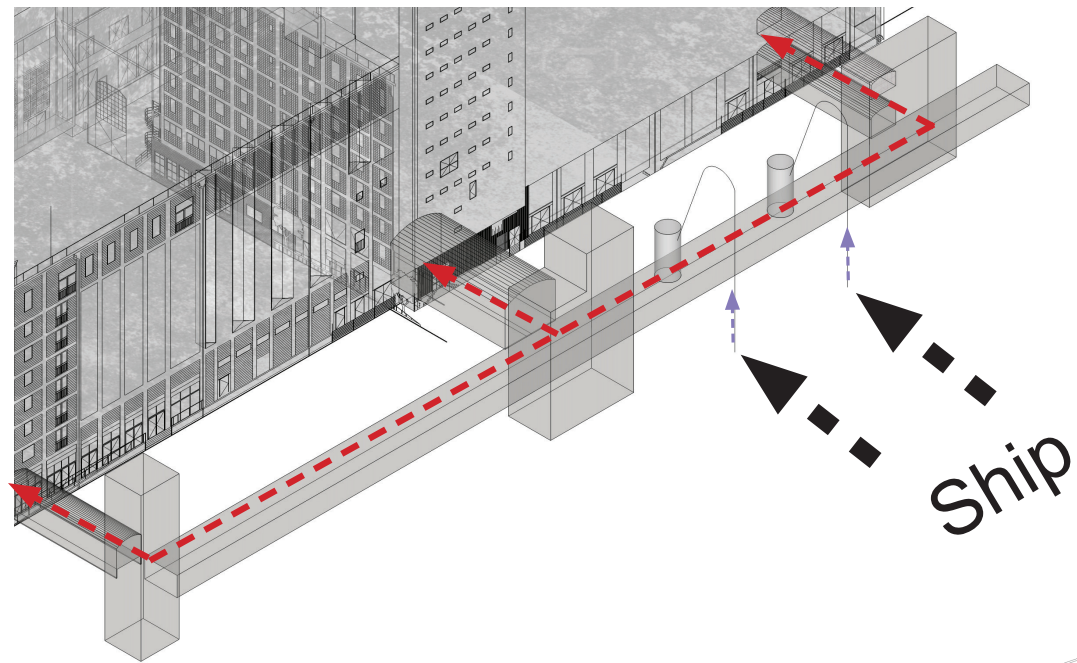
Maassilo on world scale (Leunissen G.)



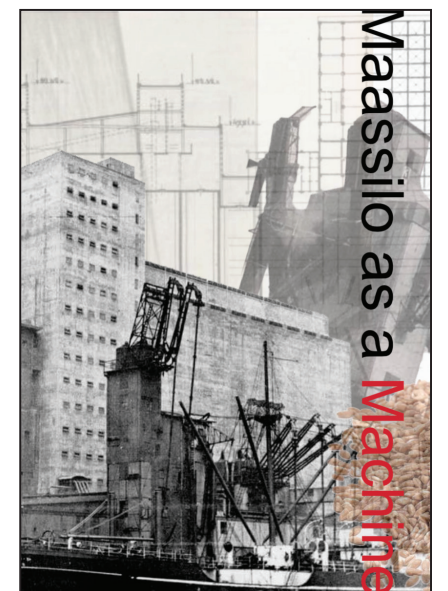


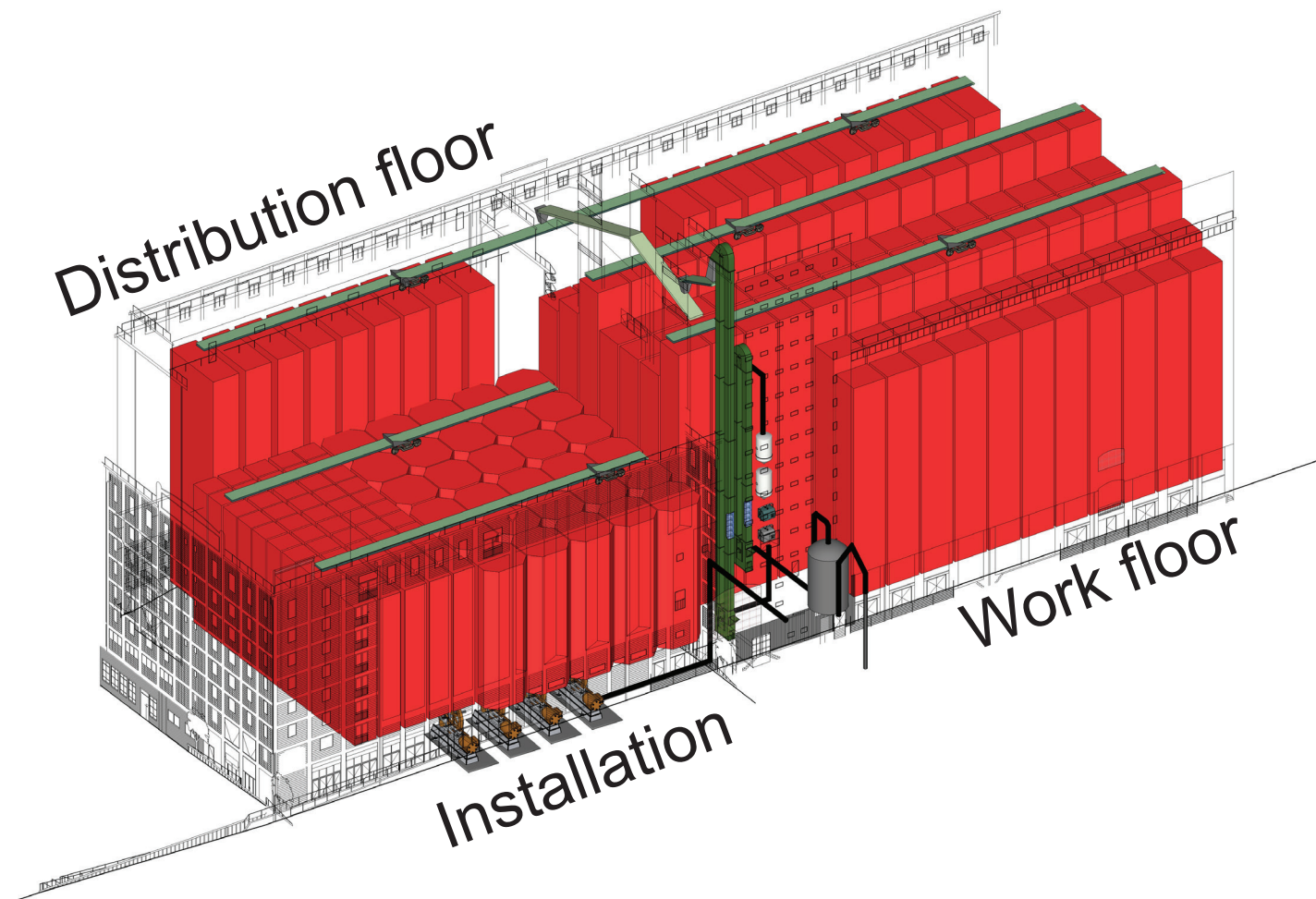
Maassilo and infrastructure (Leunissen G.)



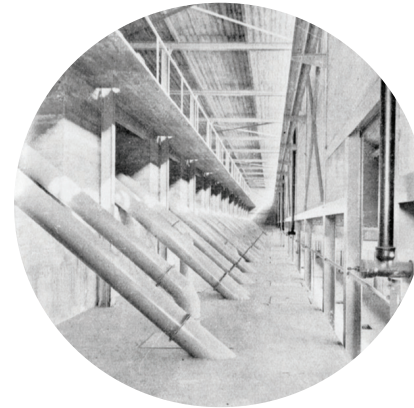


Maassilo as a machine (Leunissen G.)

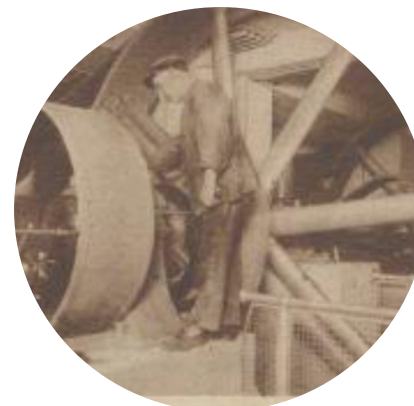




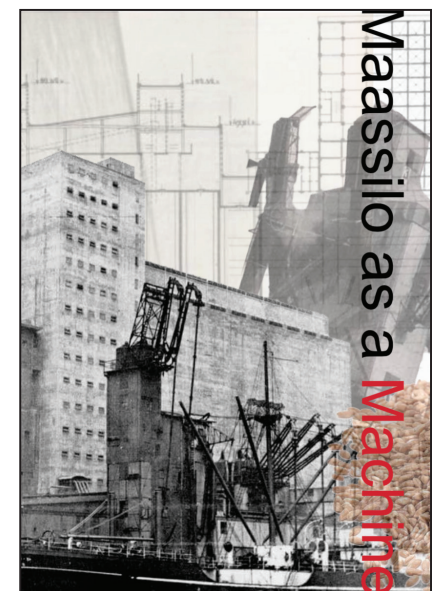
Distribution floor



Work Floor

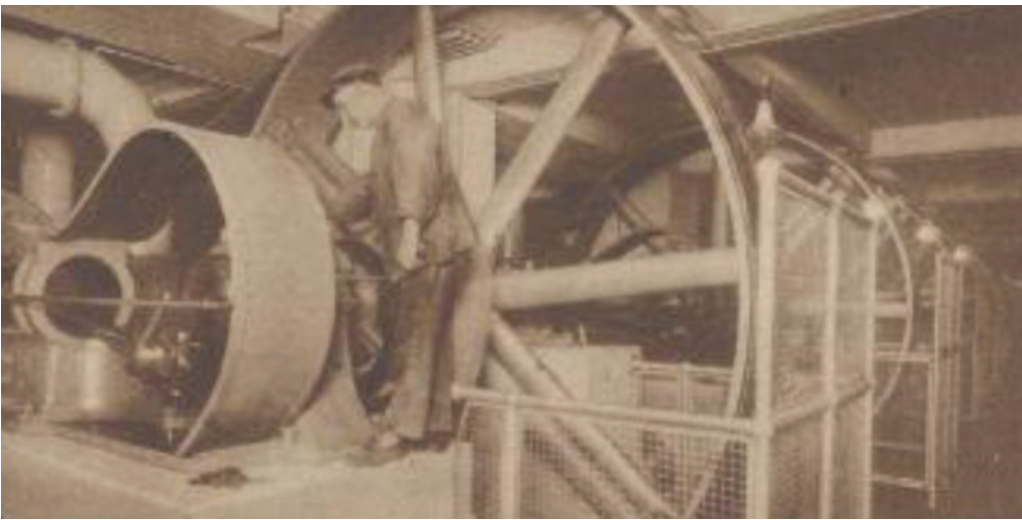


Installation (shaft/basement)

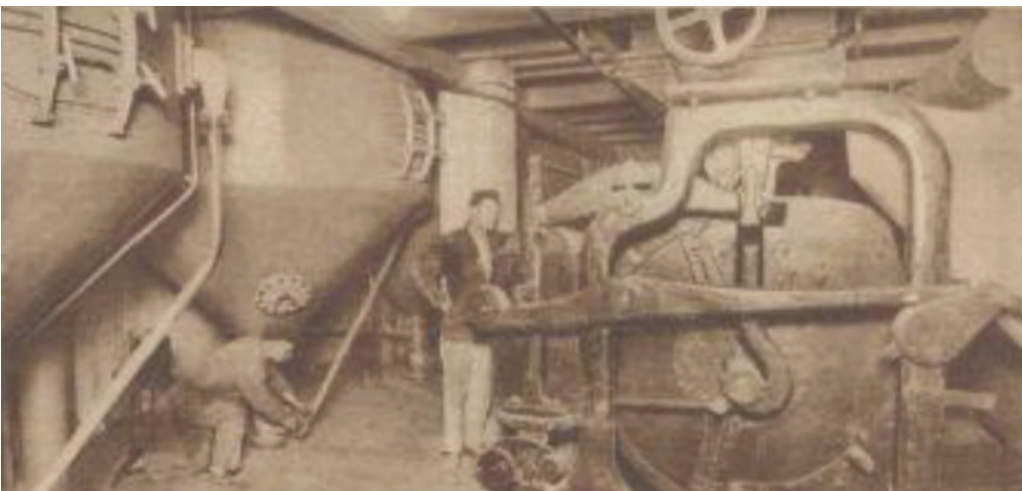




Distribution floor (Maaslandse Courant 1930)



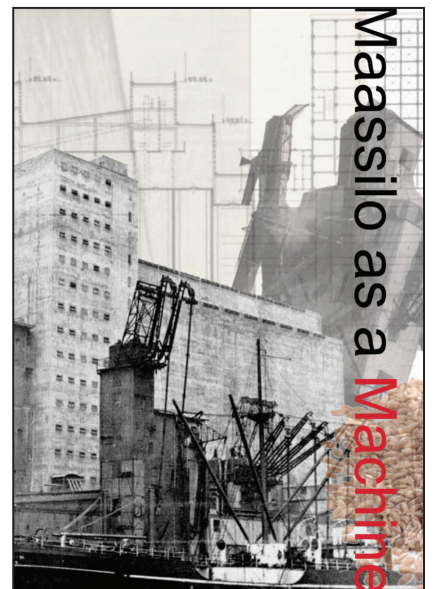
Pneumatic pump (Maaslandse Courant 1930)

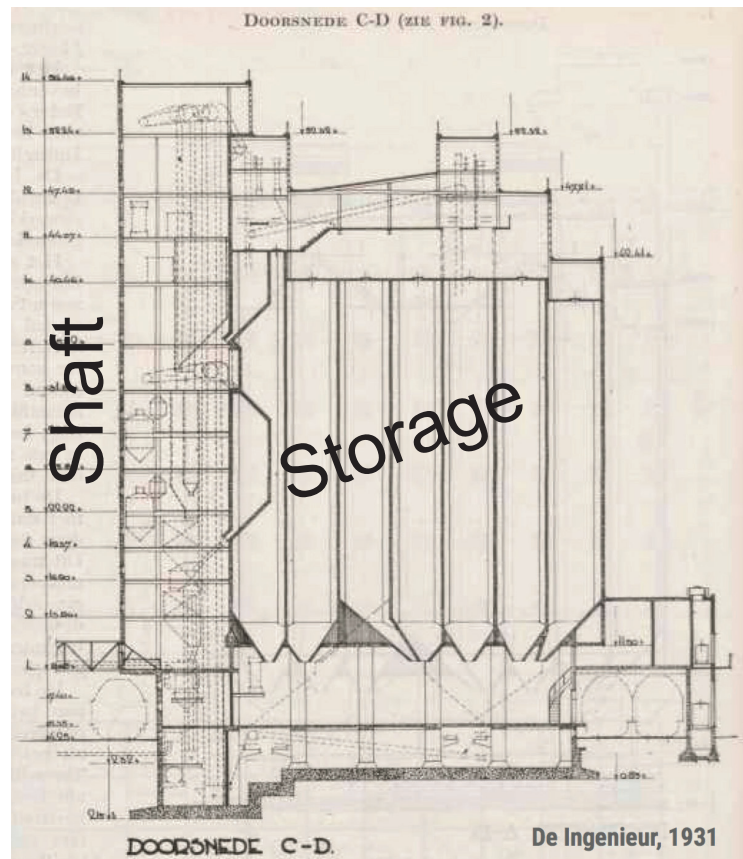


Weighting machine (Maaslandse Courant 1930)

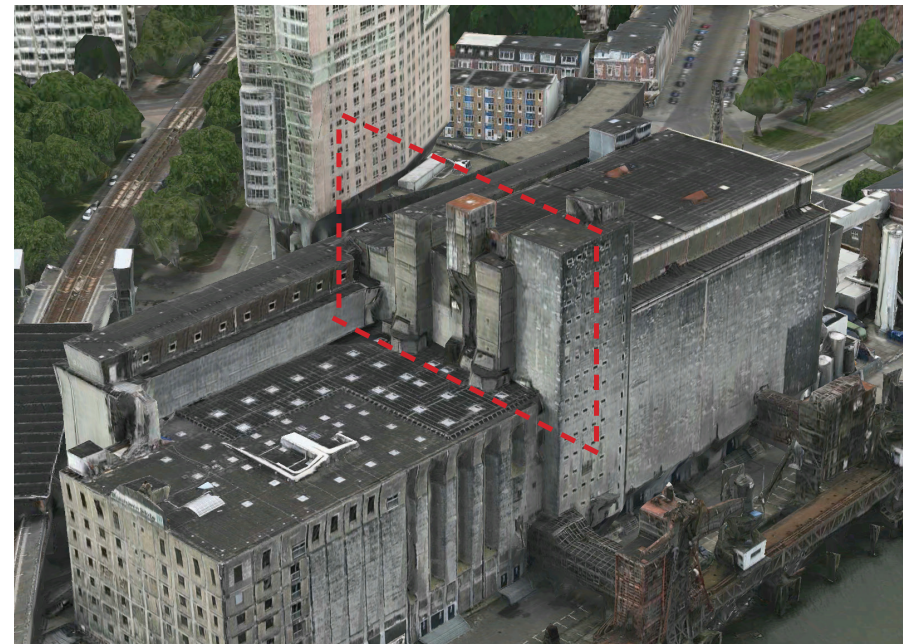


Work floor (ground floor) (Maaslandse Courant 1930)

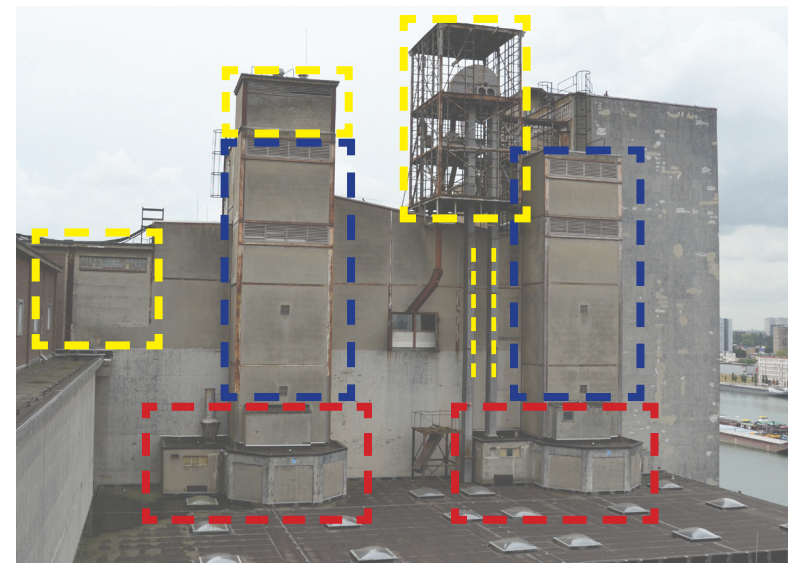




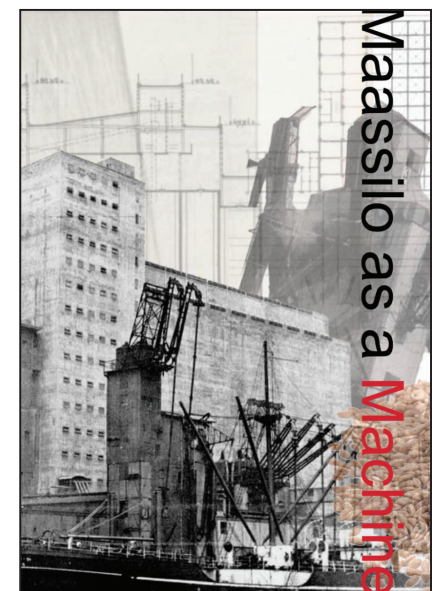
Section of the Maassilo (Maaslandse Courant 1930)

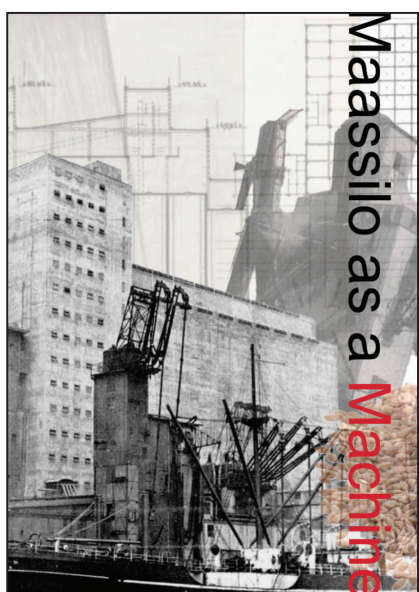
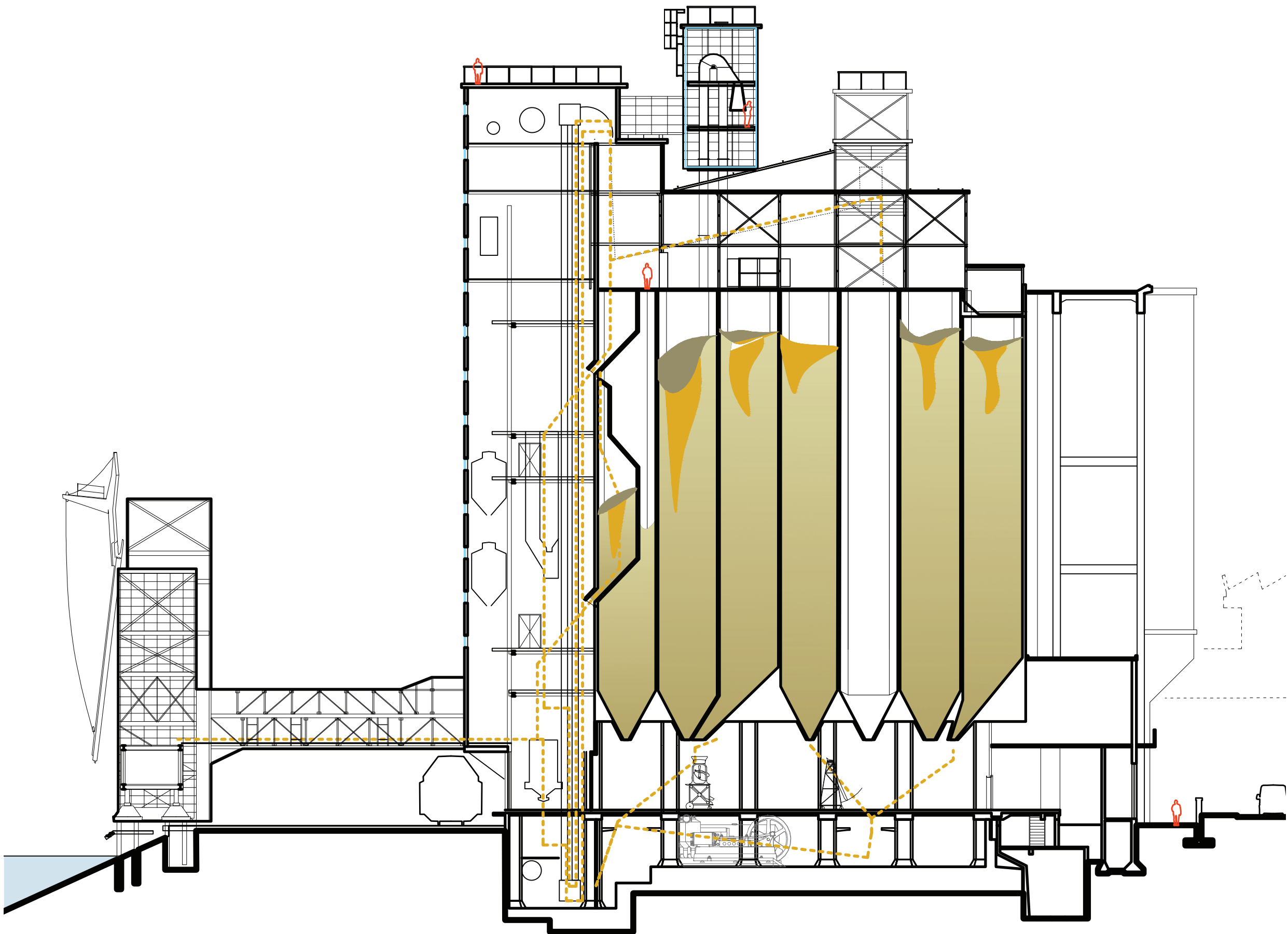


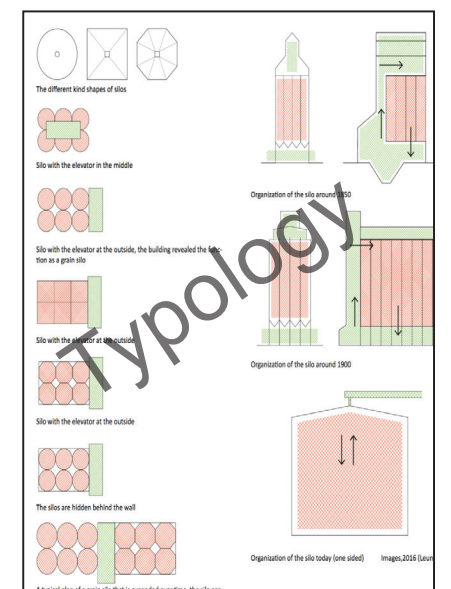
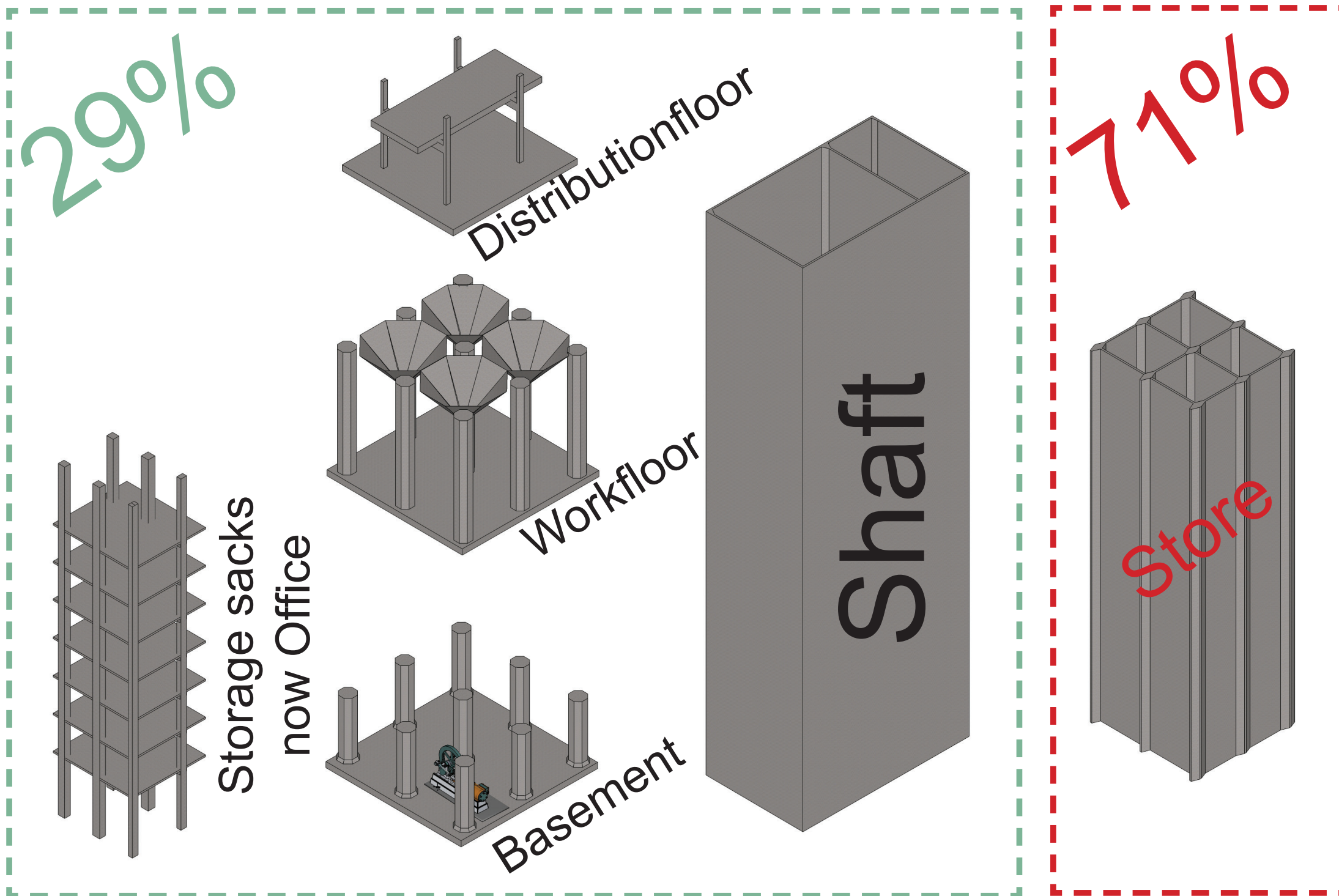
The roof landscape of the Maassilo (Apple Maps. 2016)

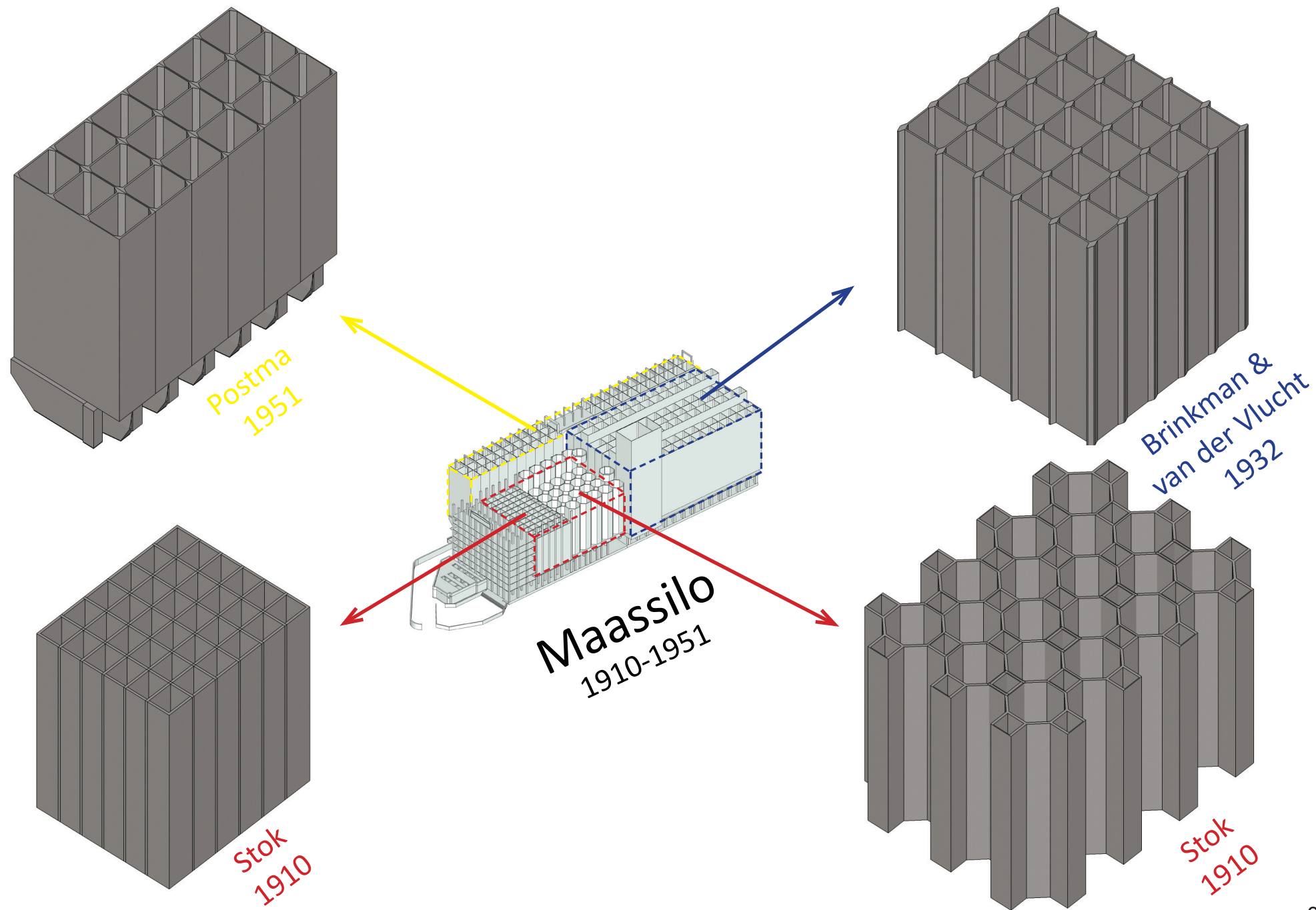


The roof landscape of the Maassilo with the different building parts (Leunissen, G.)



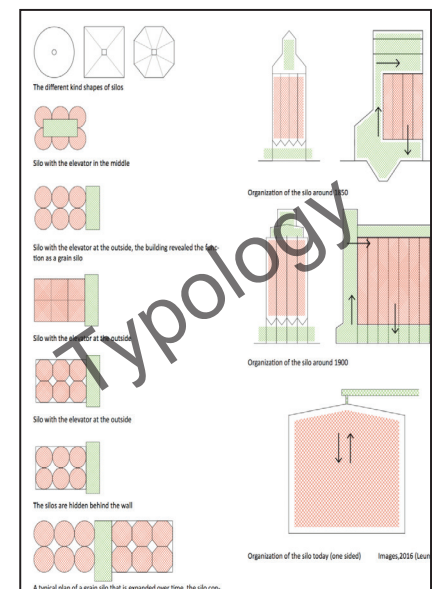






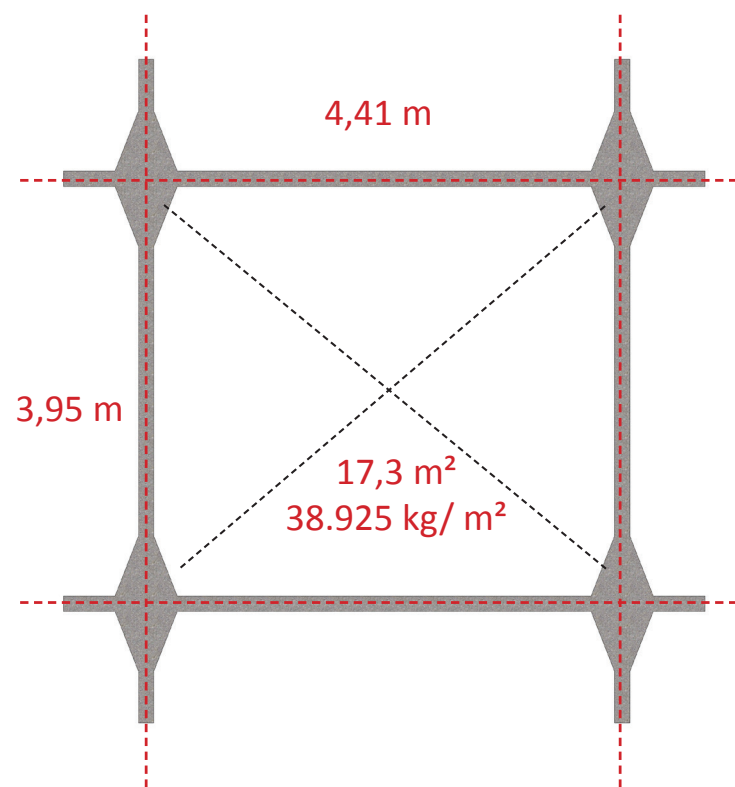
33

Maassilo as a machine (Leunissen G.)

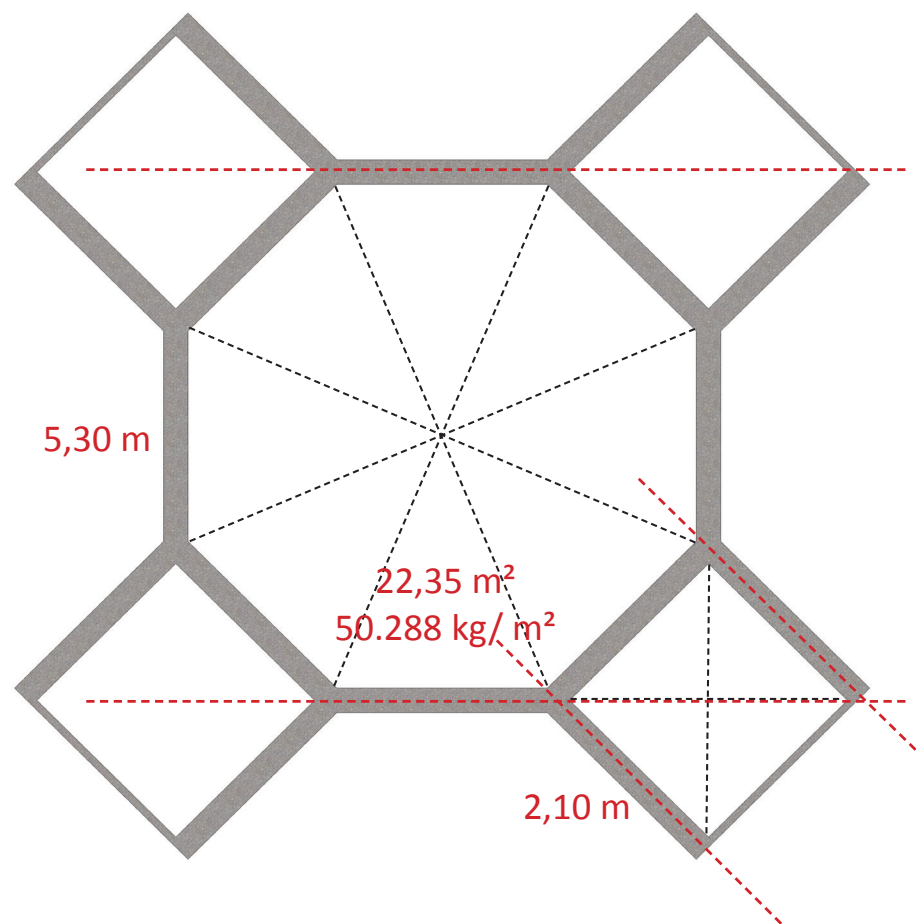




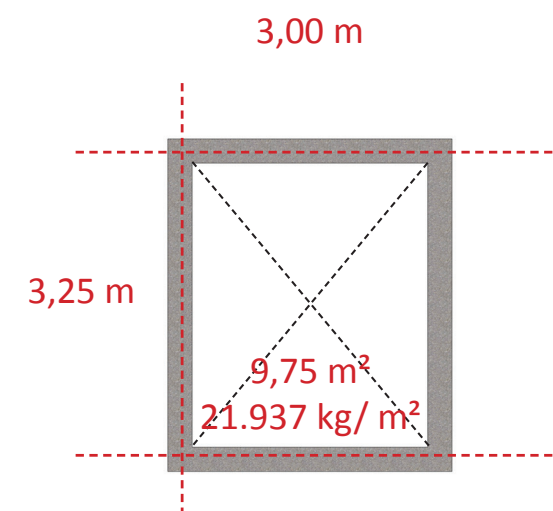
Scale 1,78



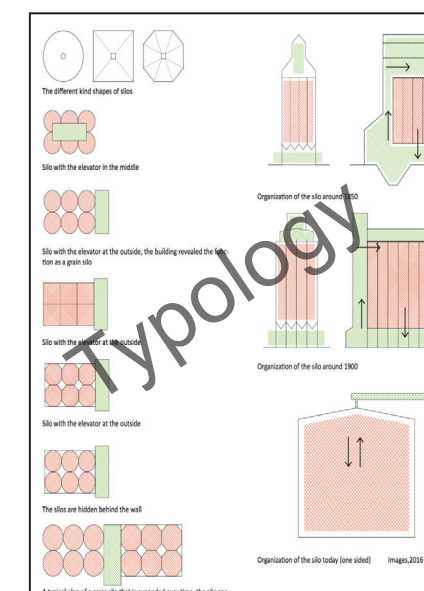
Scale 1,78

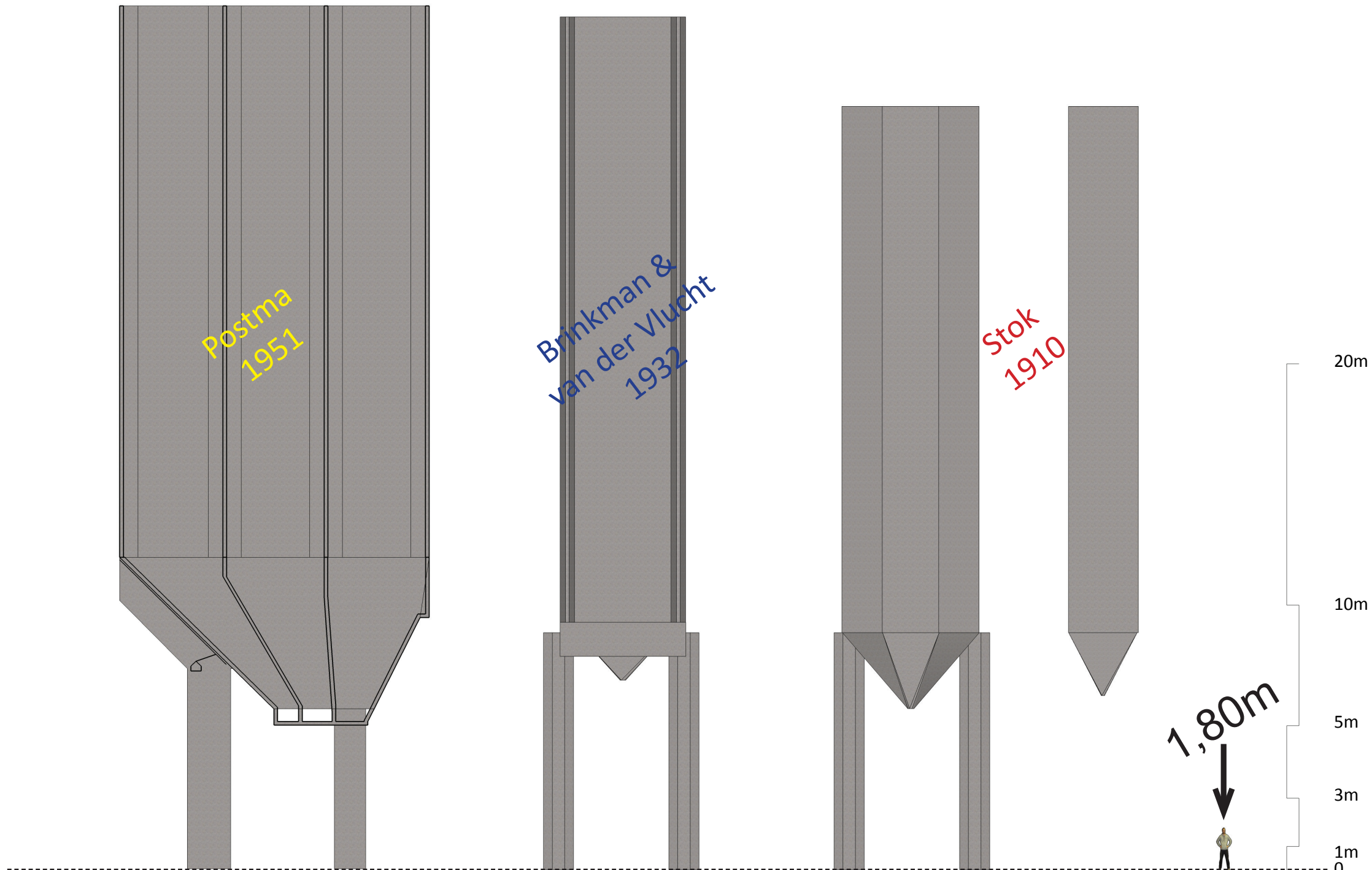


Scale 1,78

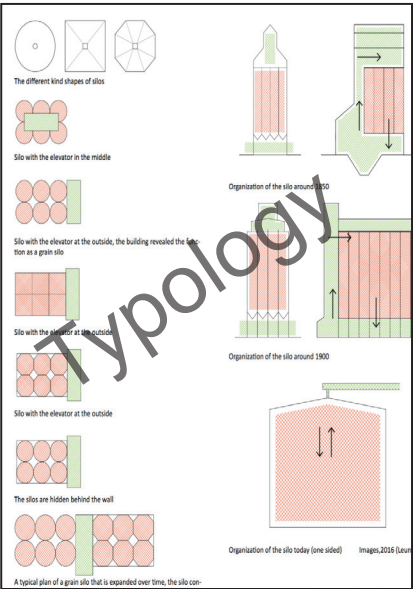


Maassilo as a machine (Leunissen G.)





Maassilo as a machine (Leunissen G.)



Rotterdam Never
as popular as now!

NRC, January 8th 2017

The Poor Rotterdammer
will be scared away!

Leo de Kleijn, town councilor SP, 2016

Residential vision
2030!

Demolition of 10,000 low-cost housing!
36.000 new houses with high income

NOS, November 28th 2016

Make neighborhoods
in the south strong and
diverse!

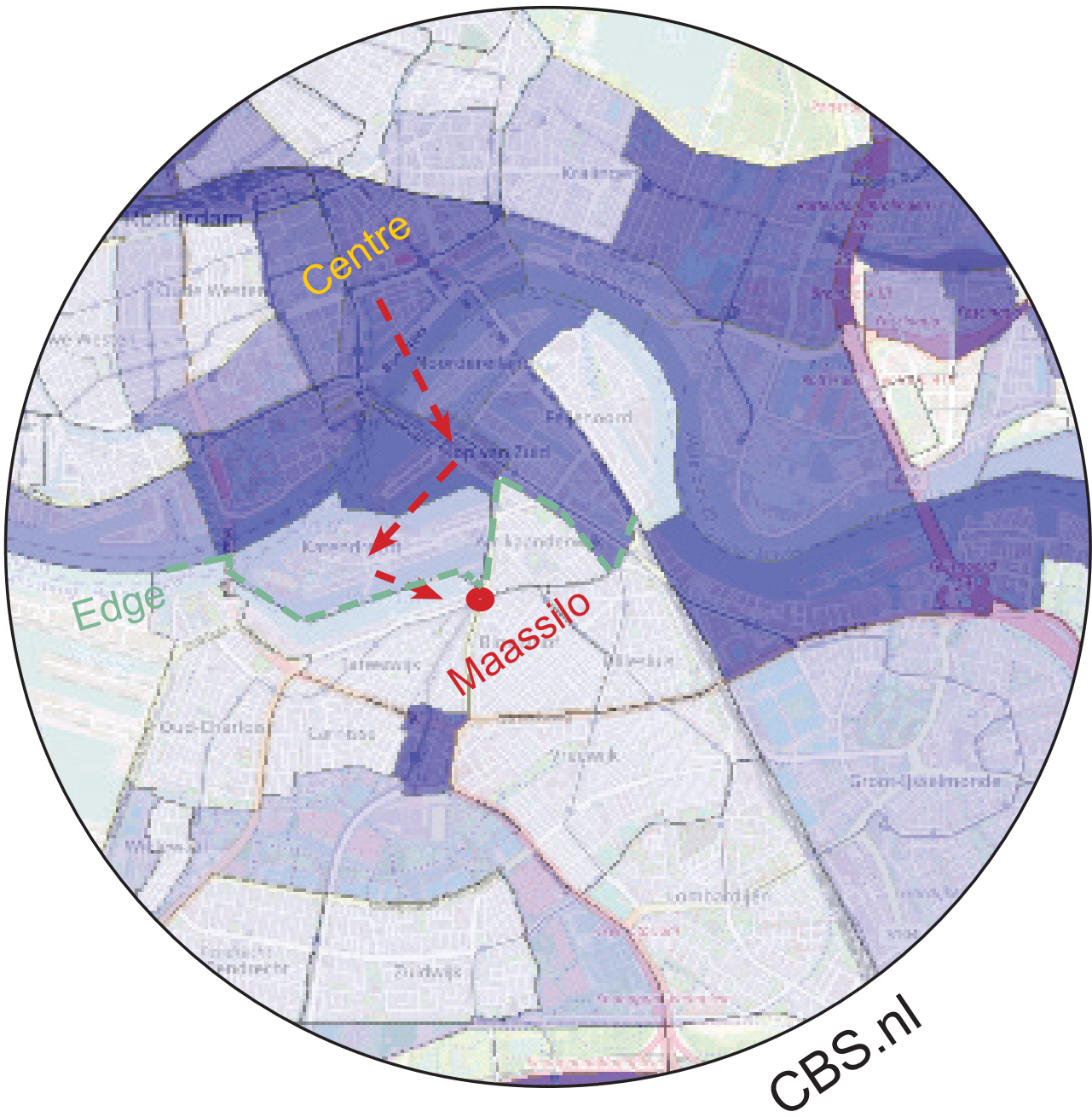
High educated young people leave the south

Ronald Buijt, town councilor Leefbaar Rotterdam, 2016



Shifting Income

The maassilo is positioned between two different social groups

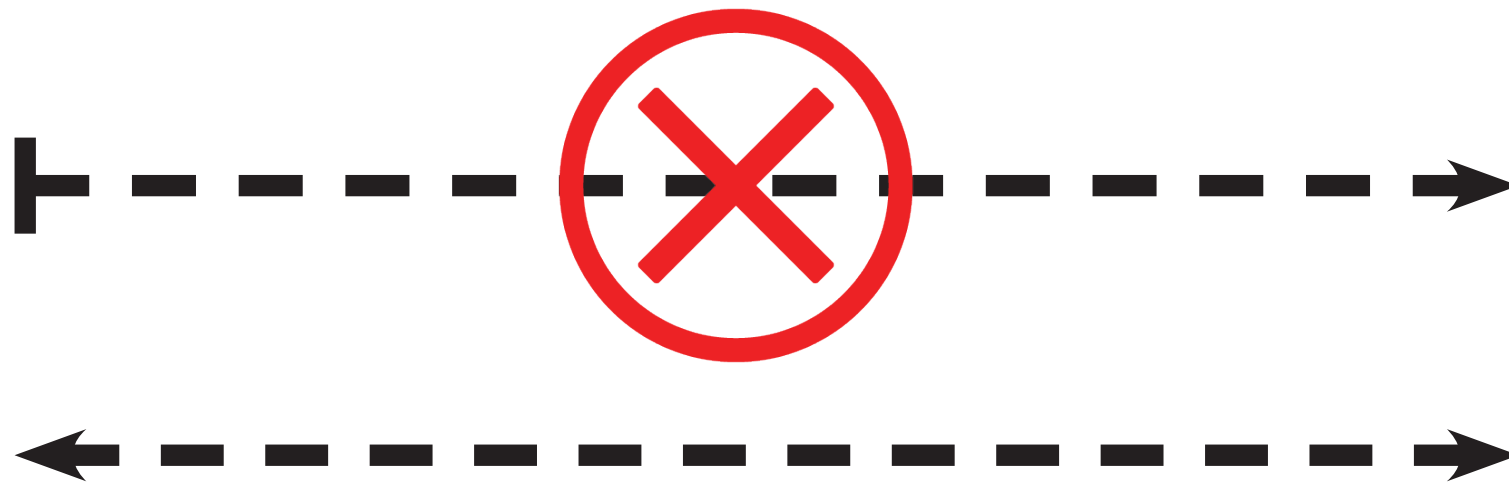


Theoretical
Office

Practical
Workshop

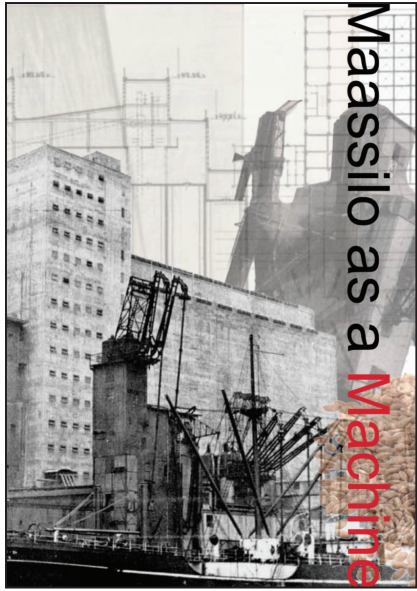


High



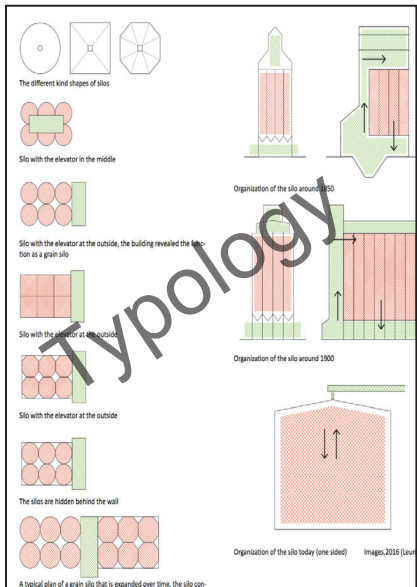
Low





Value conditions

The shaft is the crucial link of the “Machine” between the different floors



Module system

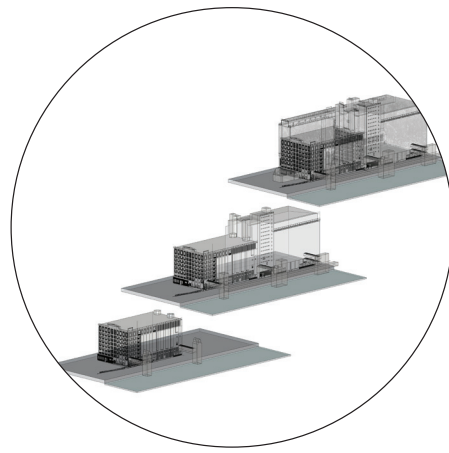
The maassilo consist 71% out of silos (not accessible) with different dimensions



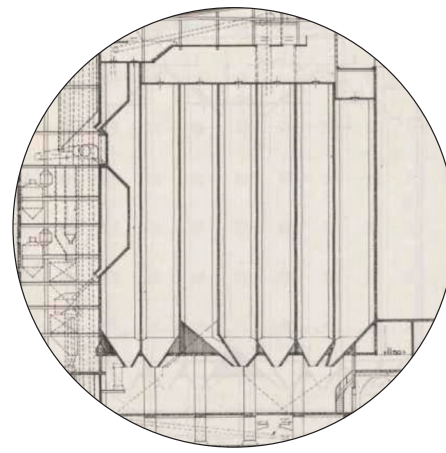
Social program

The maassilo is positioned between two different social groups

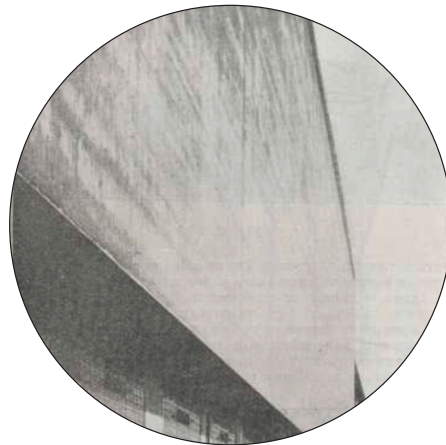
Valuation



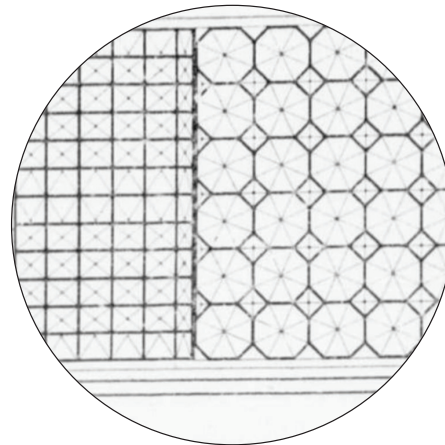
Layers of time



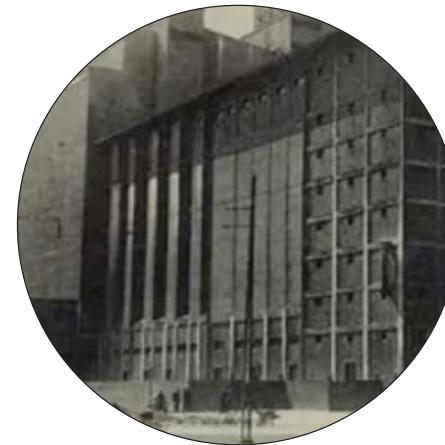
Strict (vertical) silo organization



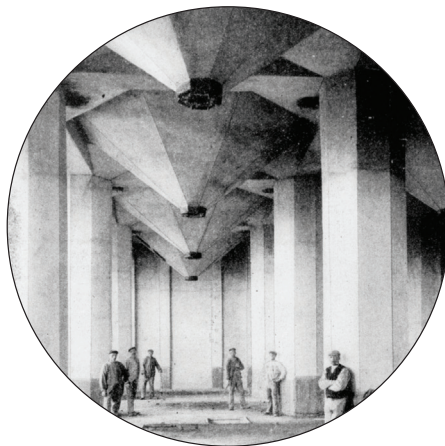
Introvert character



Silo structure



Rhythm in the facade



Scale



Patina of the materials

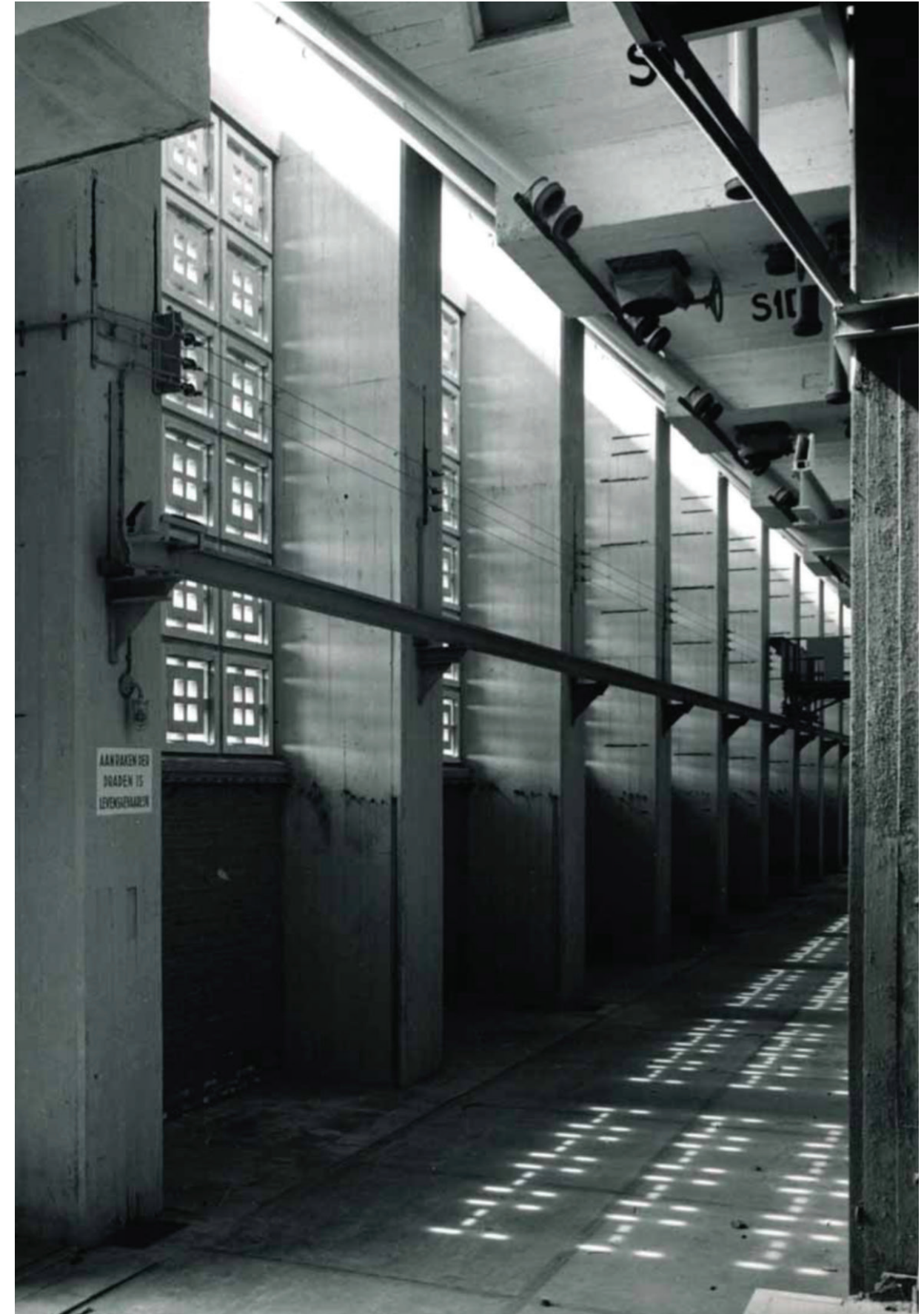
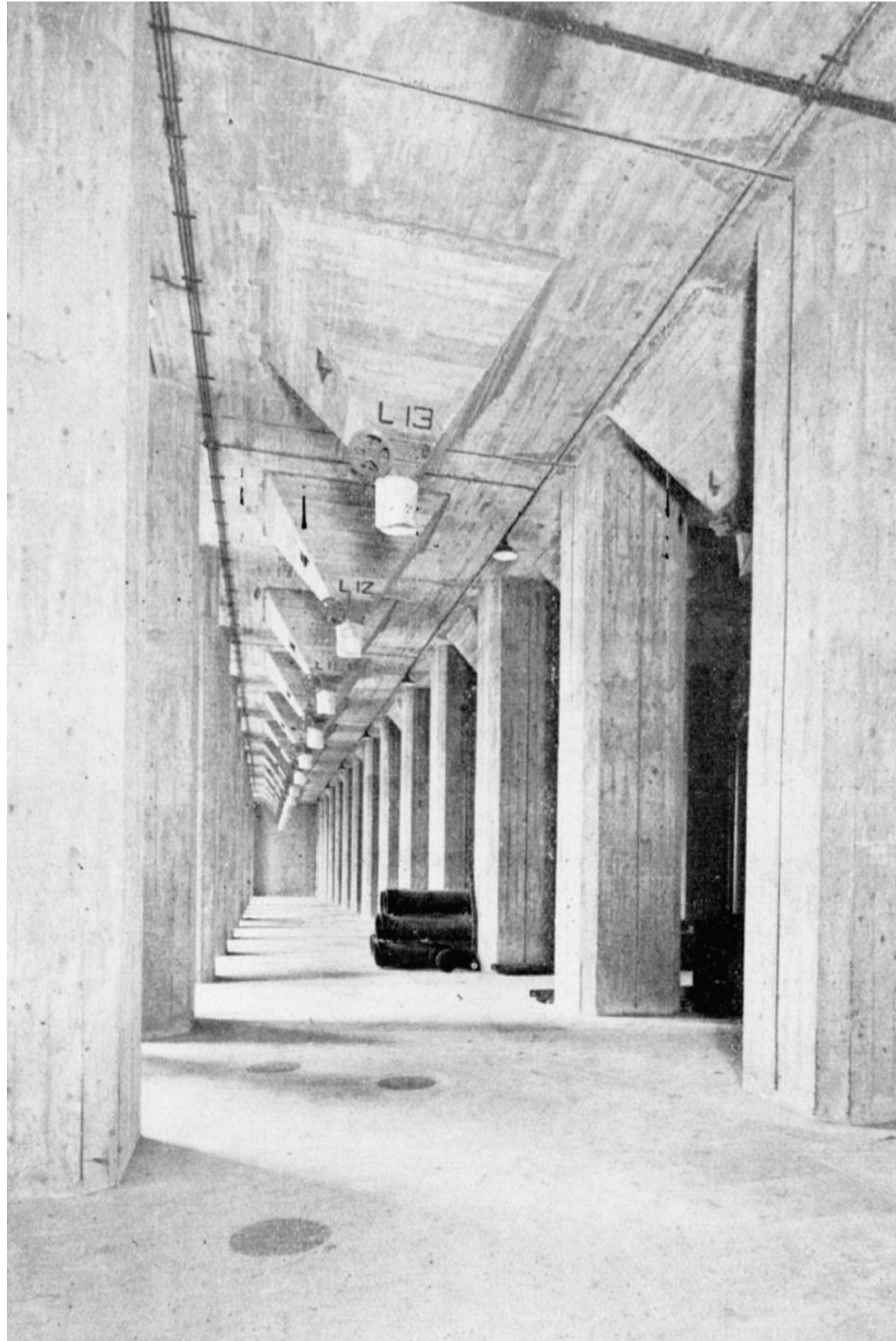


Machinery



Relation with the harbor (water)



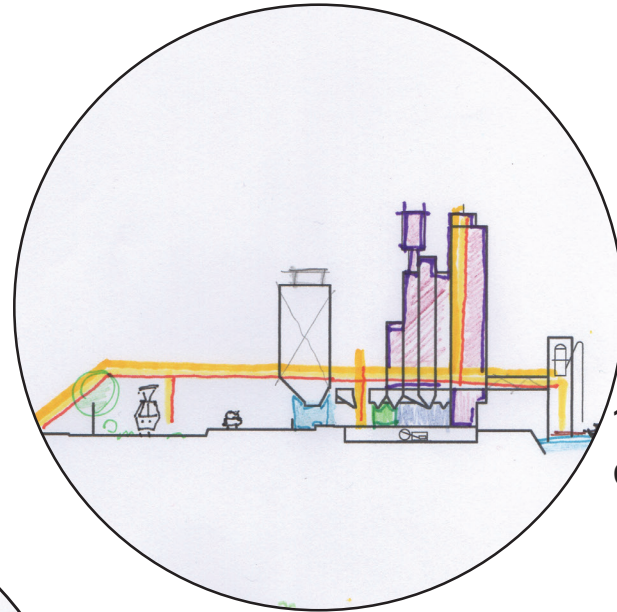


Research Question

How can the Maassilo complex be reused to accommodate new functions and at the same time keep its identity/character?

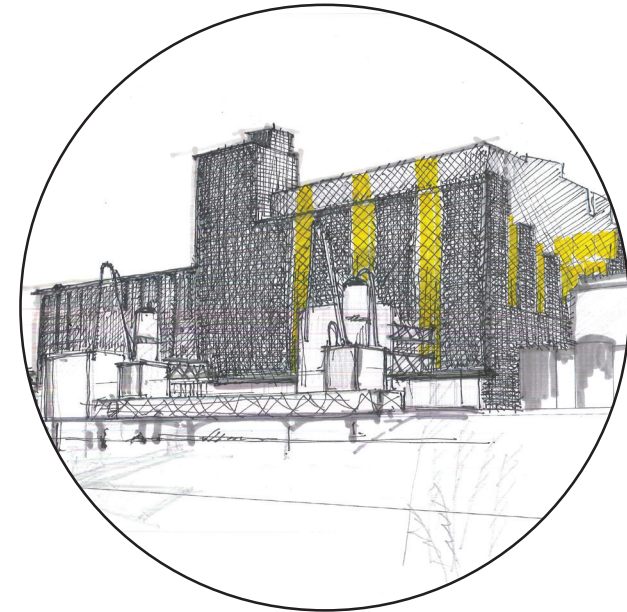
How can the remaining 71% of empty space (silos) in the building be redeveloped?

Starting points



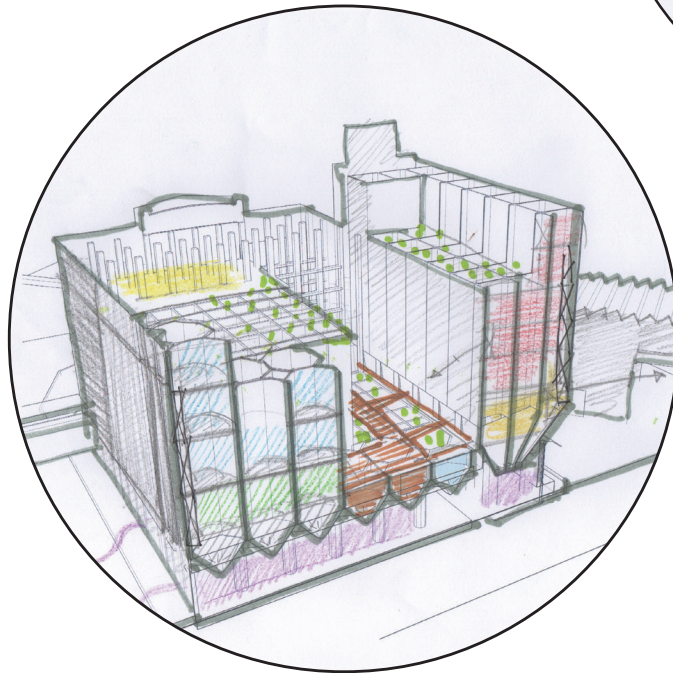
1. Accessibility and circulation

Connection with the infrastructure around, public transport



3. Identity

Create a strong identity that will attract people and then become an important node for Rotterdam south



2. Public space

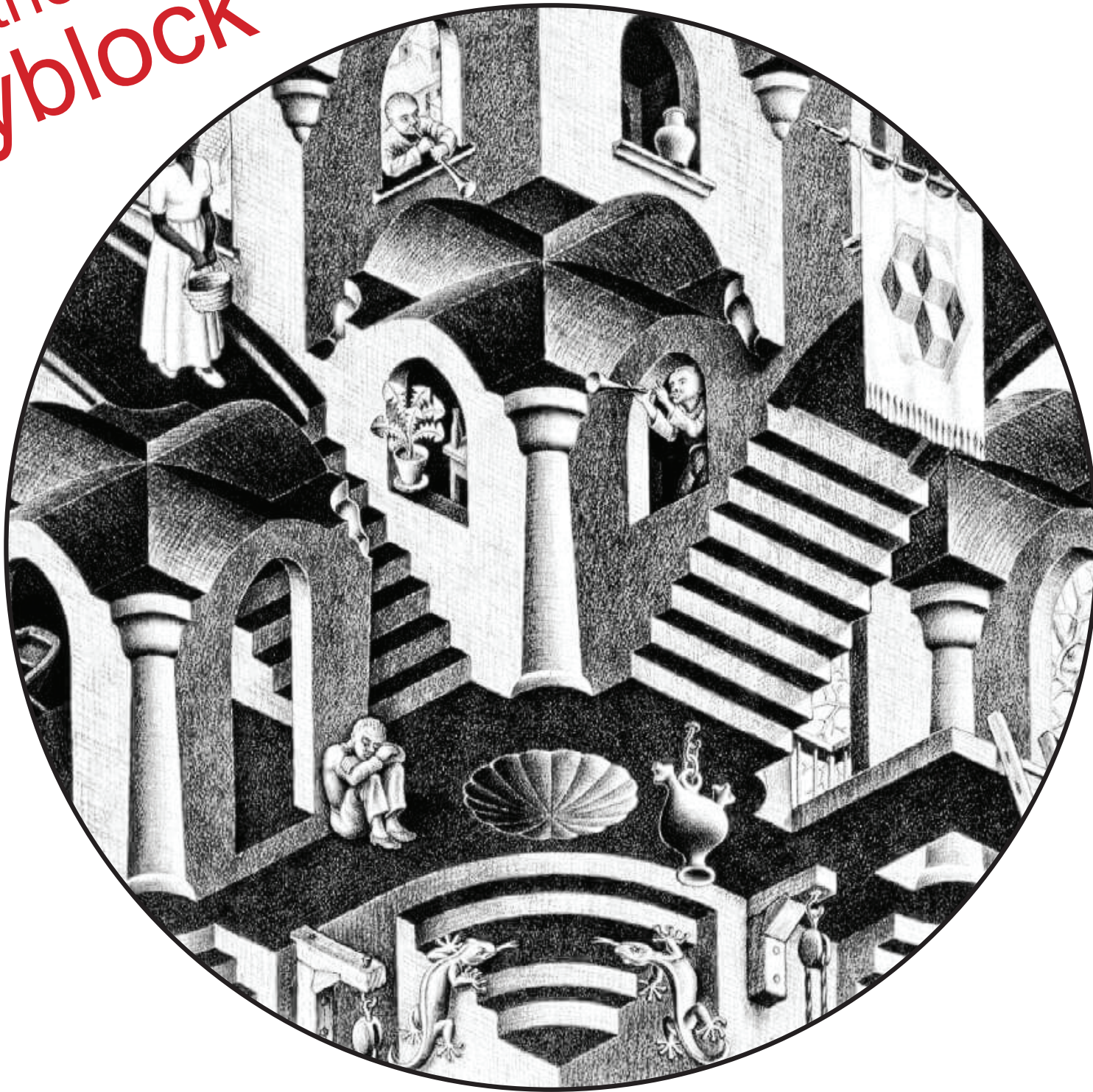
Create a gathering area and distribution point to connect all facilities in the building complex



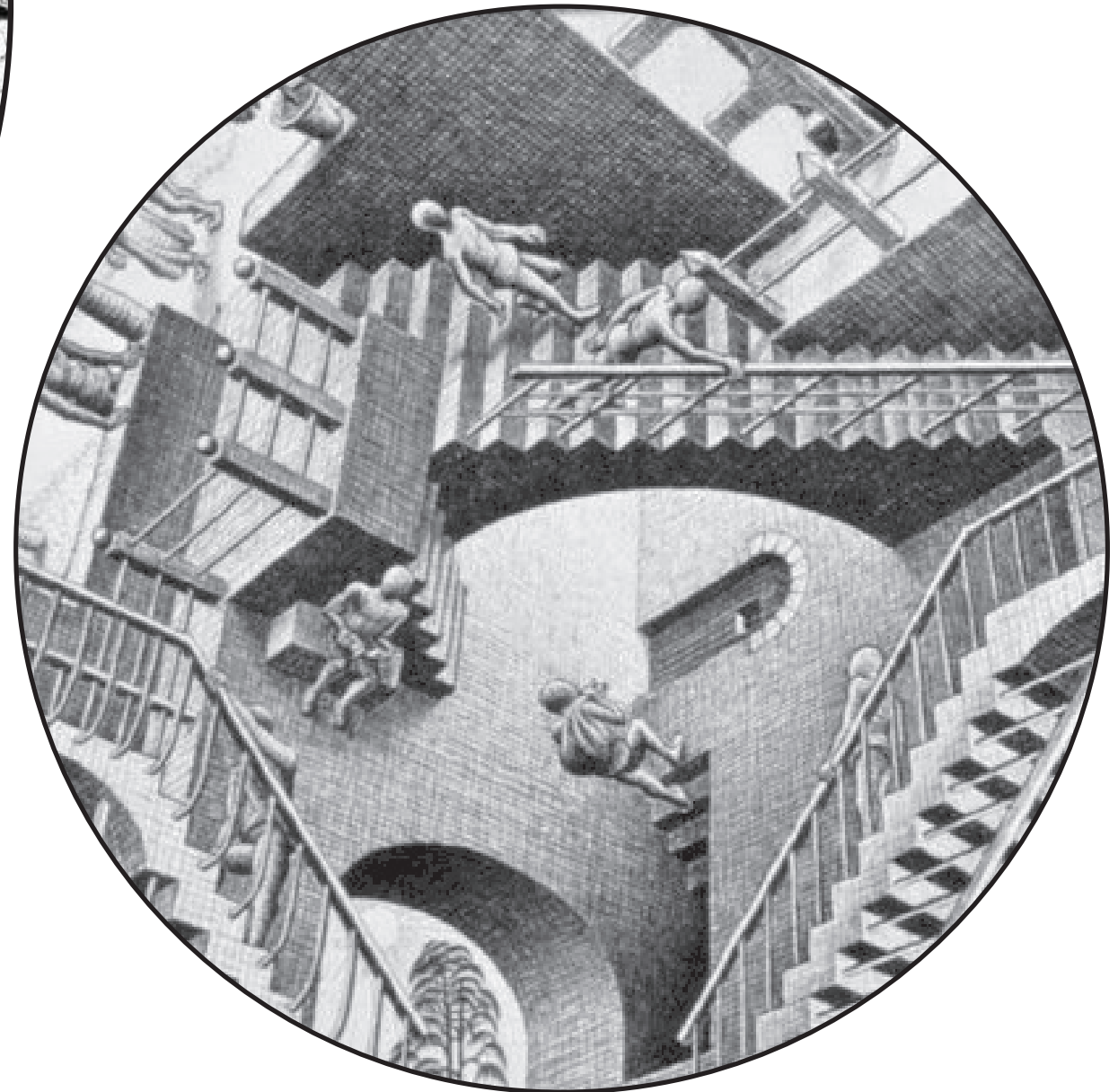
4. Cultural Value

Retain as much as possible of the character of the building, experience the building as a machine from the inside!

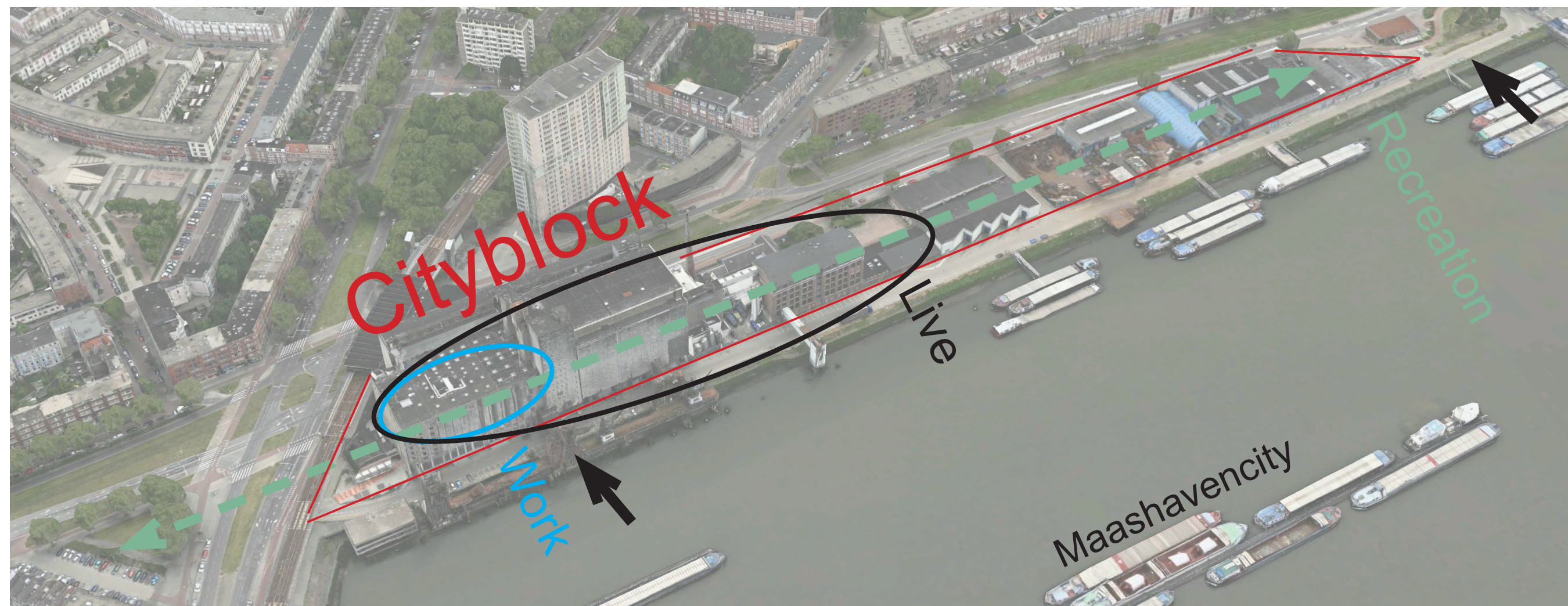
Geometric
Cityblock

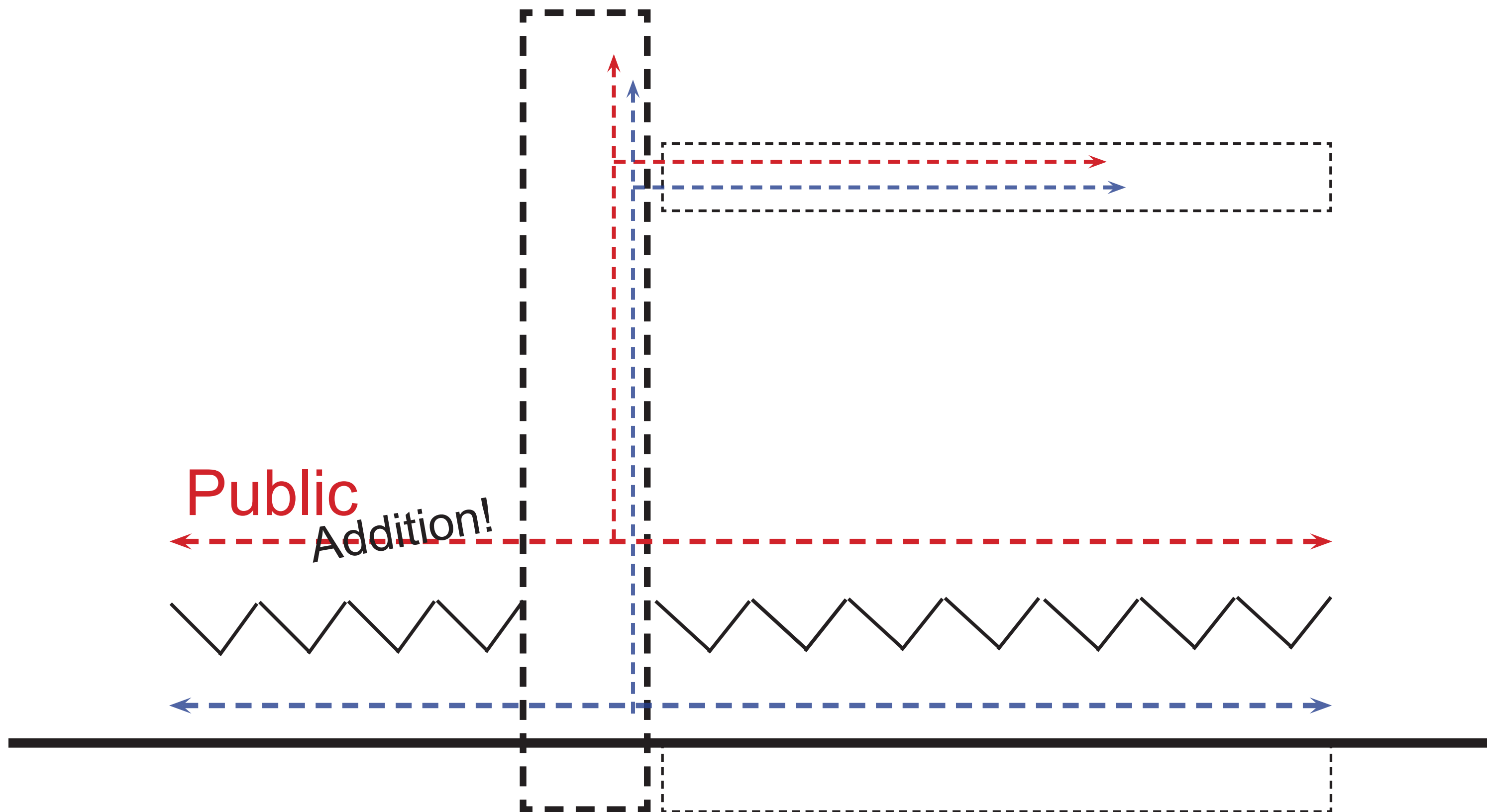


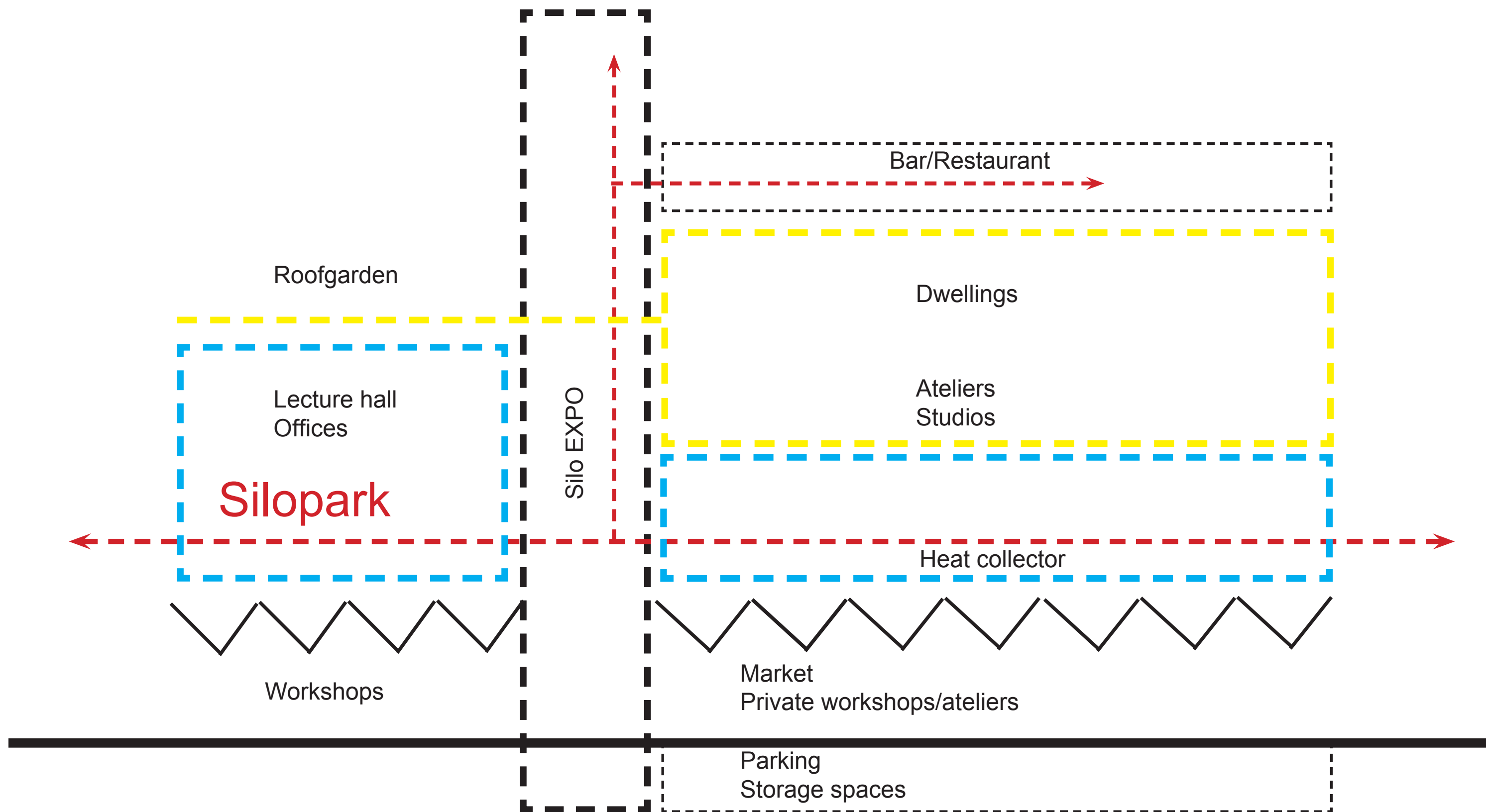
The
Urban
Silo

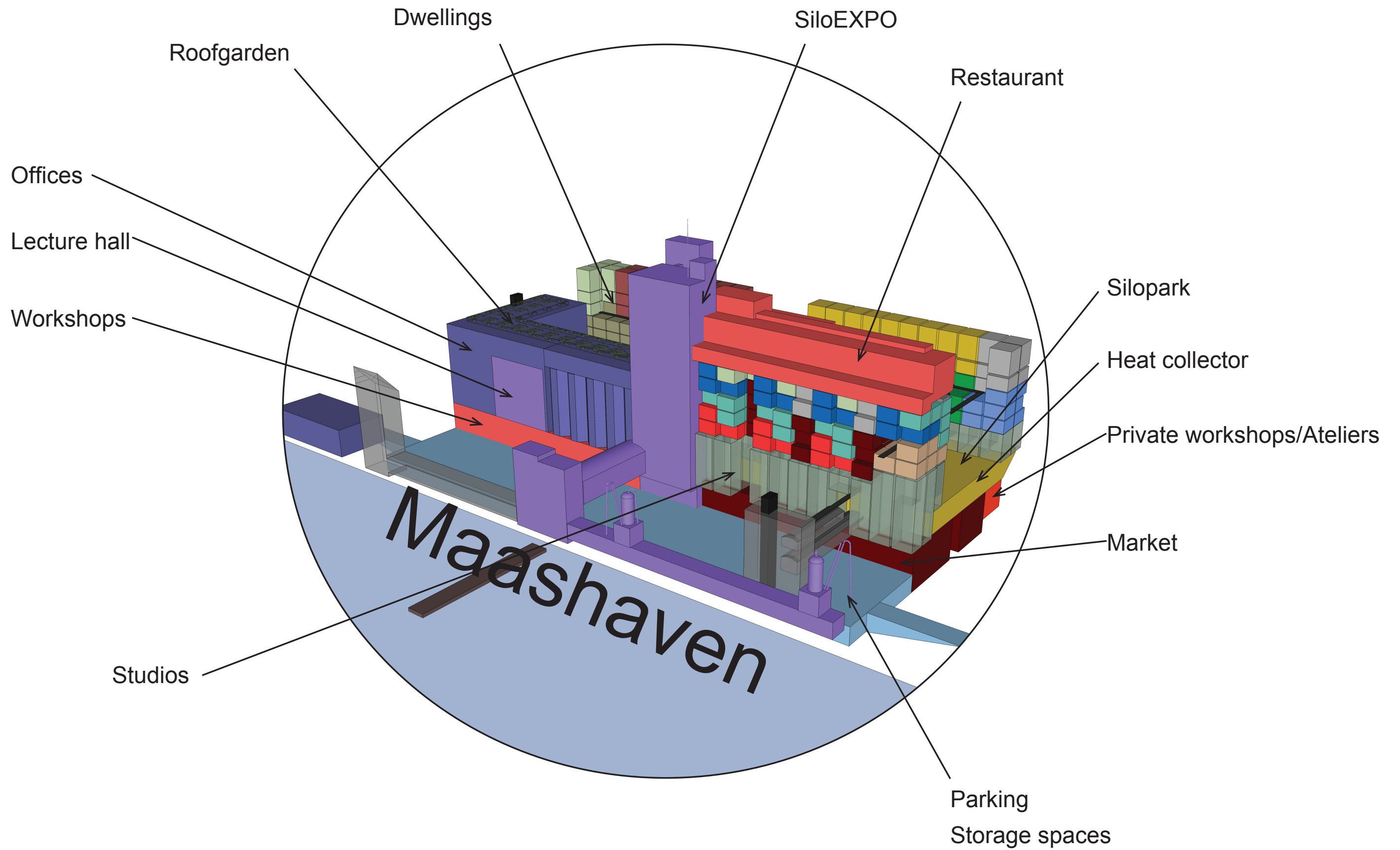


Program









Existing

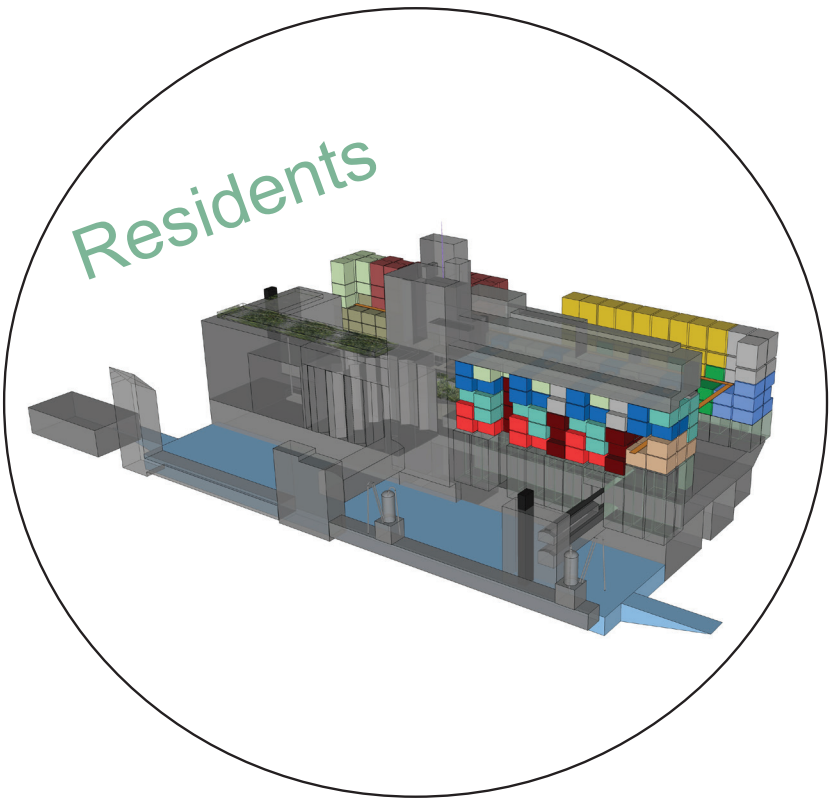
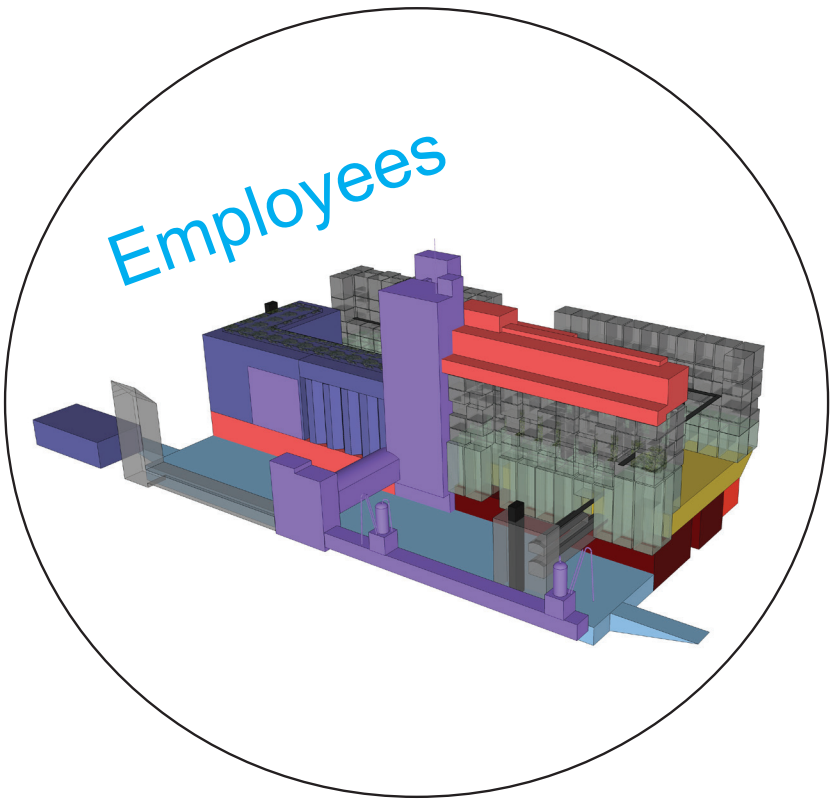
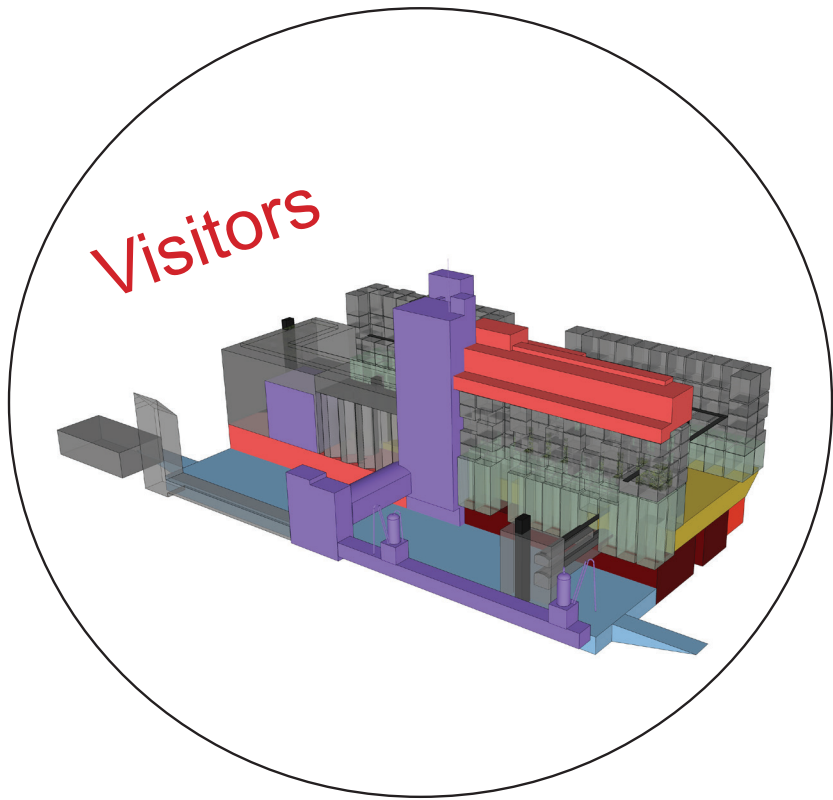
Basement	1.000 m²
Ground floor	5.500 m²
Office space	2.000 m²
Shaft	800 m²
Attics	5.000 m²

Total: 14.300 m²

New

Parking	75 cars	2.000 m²
Bicycle storage	100 bikes	165 m²
Storage spaces	1.500 m²	
Market	800 m²	
Workshops	1.000 m²	
Private workshops/ateliers	20 x 25 m²	
SiloEXPO	1.200 m²	
Heat collector	1.500 m³	
Silopark	2.400 m²	
Studios	175-270-130 m²	
Atelier dwelling	4 x 85 m² 6 x 110m²	
Lecture hall	275 m²	
Offices	4.250 m²	
Dwellings (casco)	42 x 100-160 m²	
Roof garden	1.000 m²	
Bar	180 m²	
Restaurant	400 m²	

Total: 27.800 m²



Parking
Bicycle storage
Market
Workshops

Parking
Bicycle storage
Workshops

Parking
Bicycle storage
Storage spaces
Market

SiloEXPO
Silopark

SiloEXPO
Silopark

SiloEXPO
Silopark

Ateliers

Lecture hall

Bar
Restaurant

Lecture hall
Offices

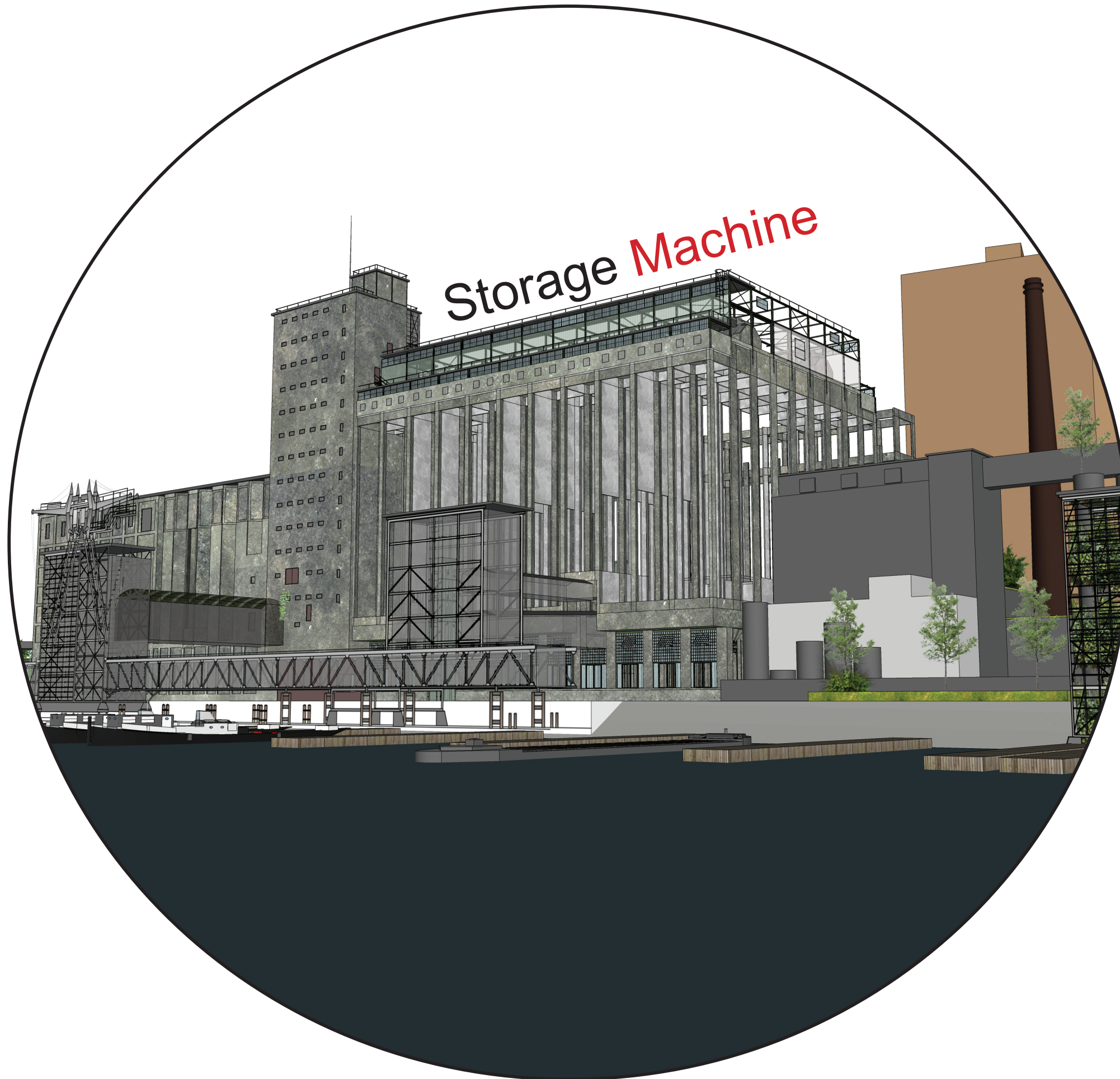
Bar
Restaurant

Ateliers

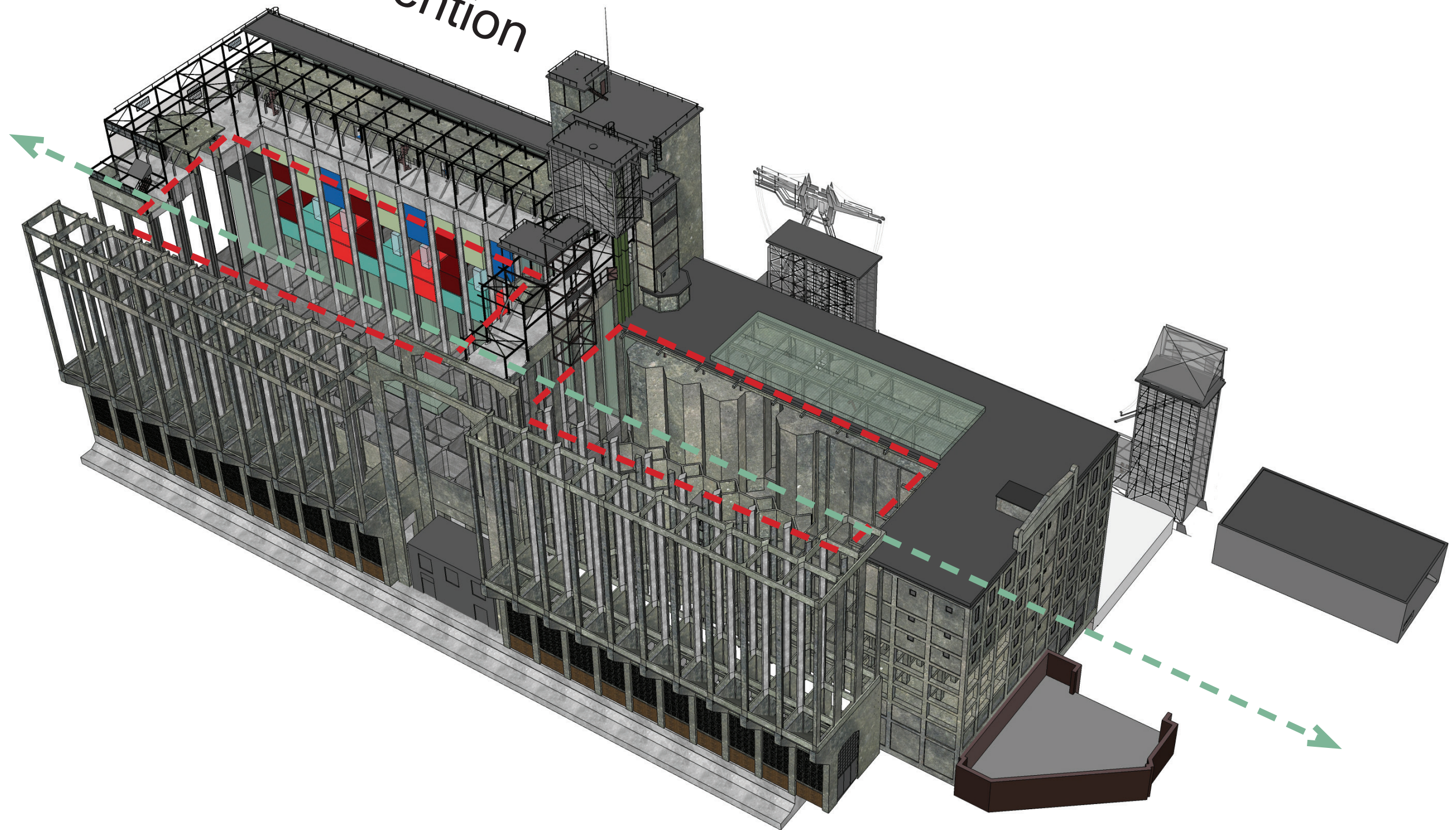
Lecture hall

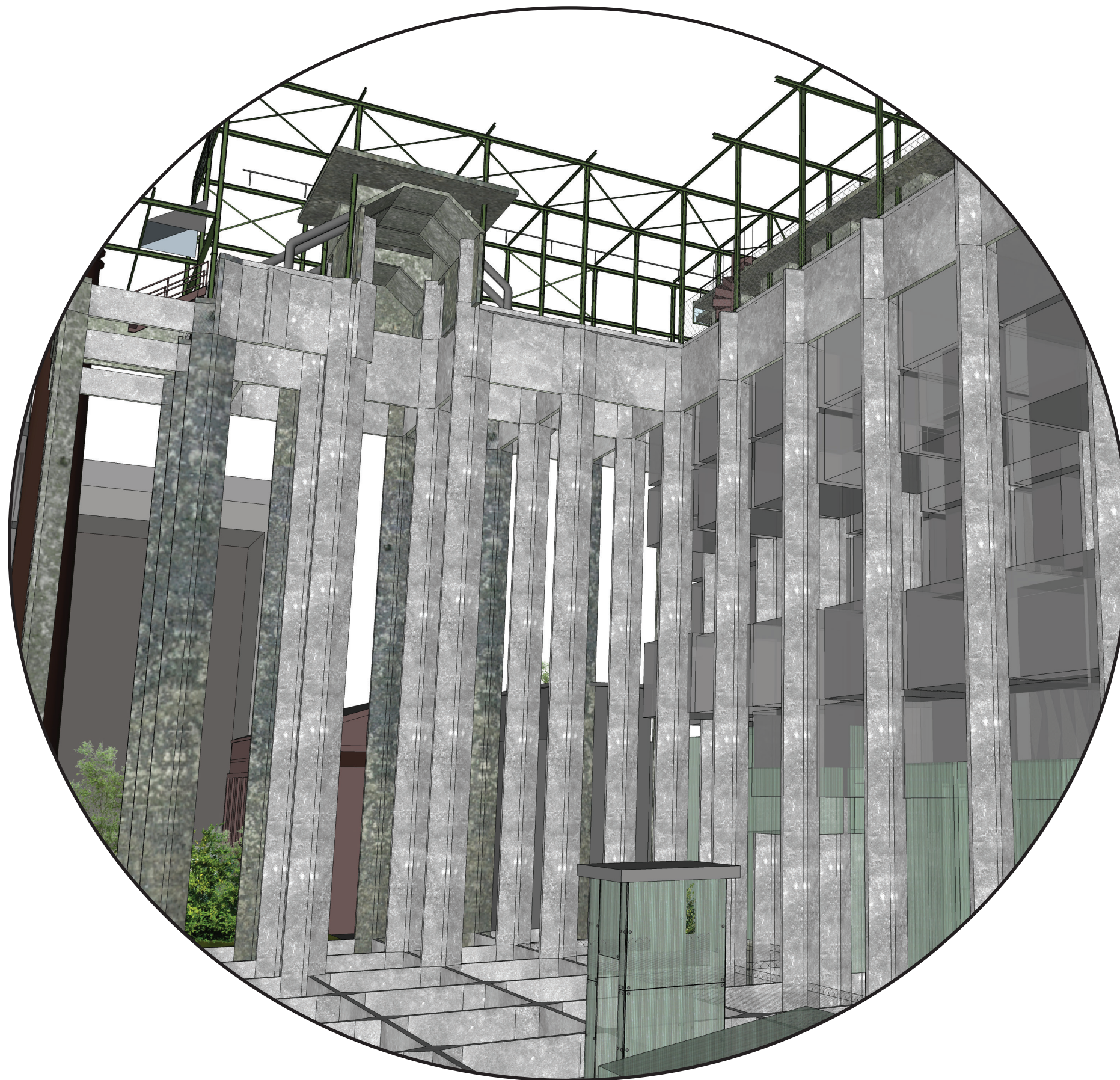
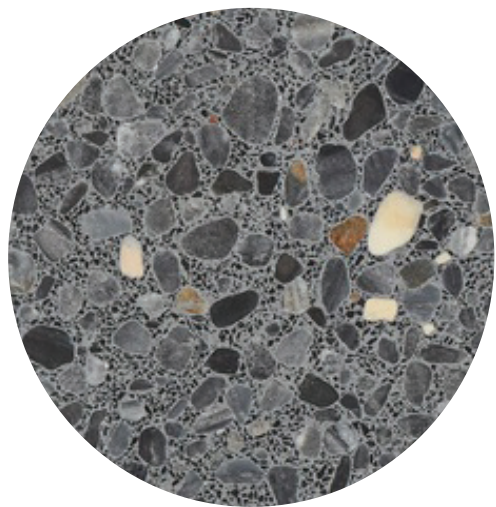
Dwellings
Roofgarden
Bar
Restaurant

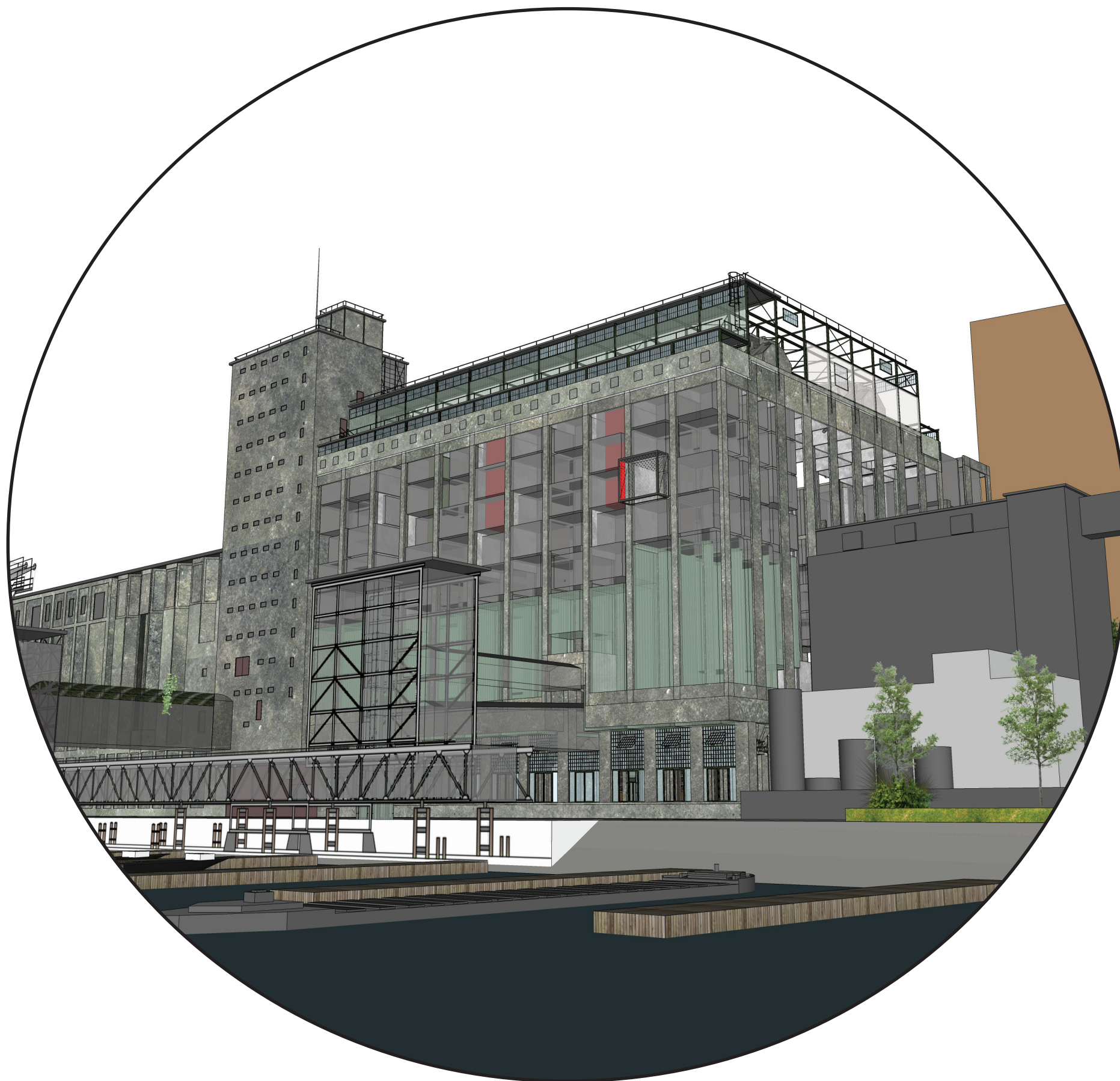
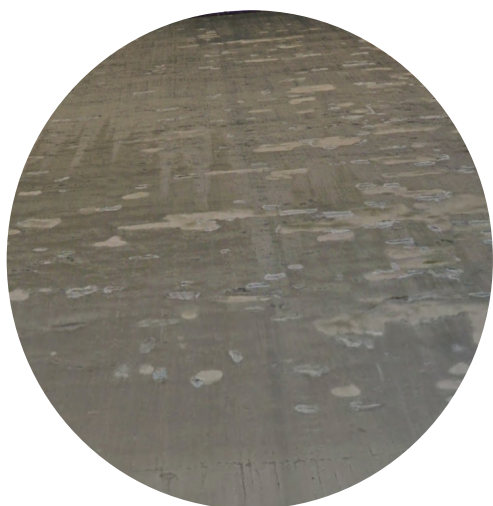
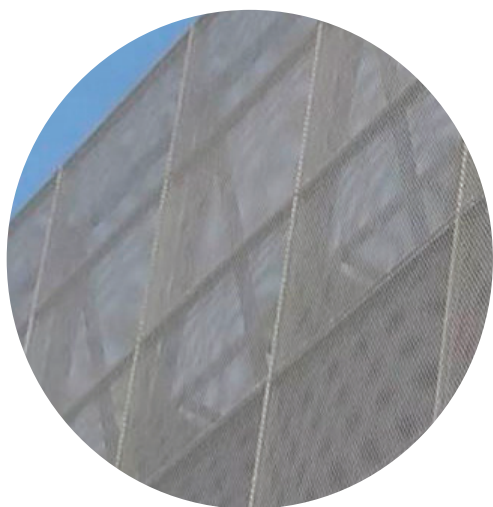




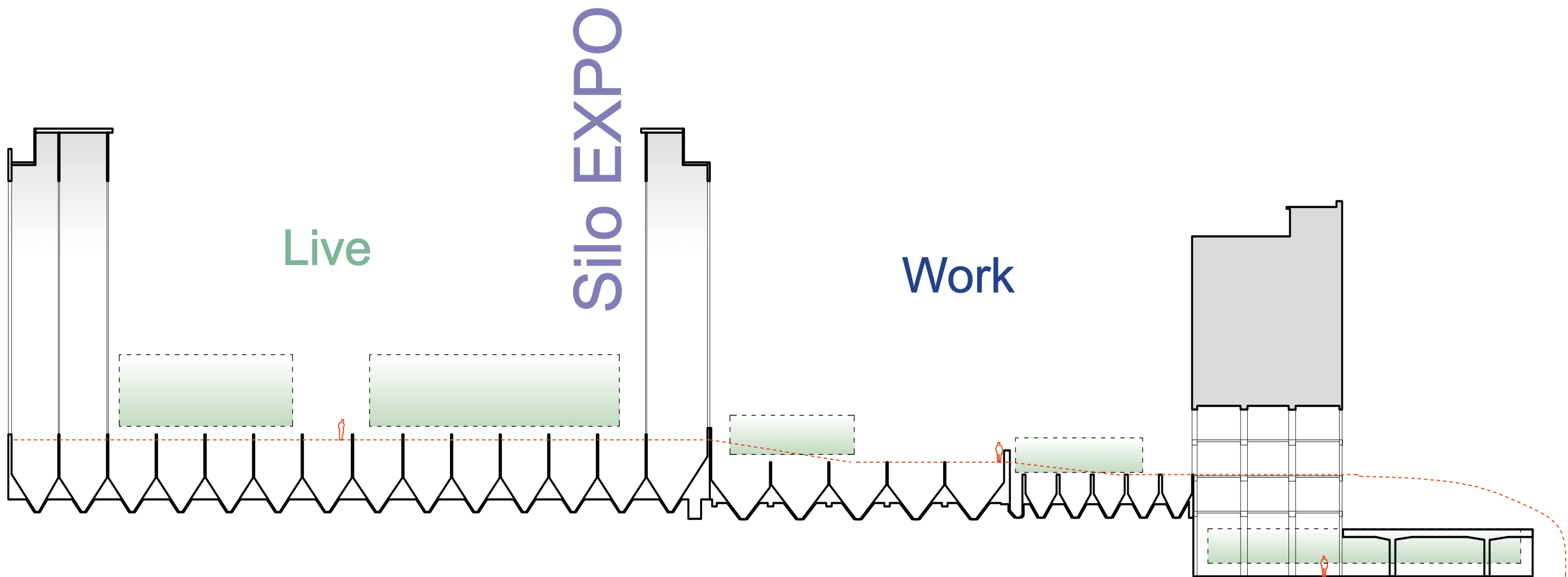
Intervention

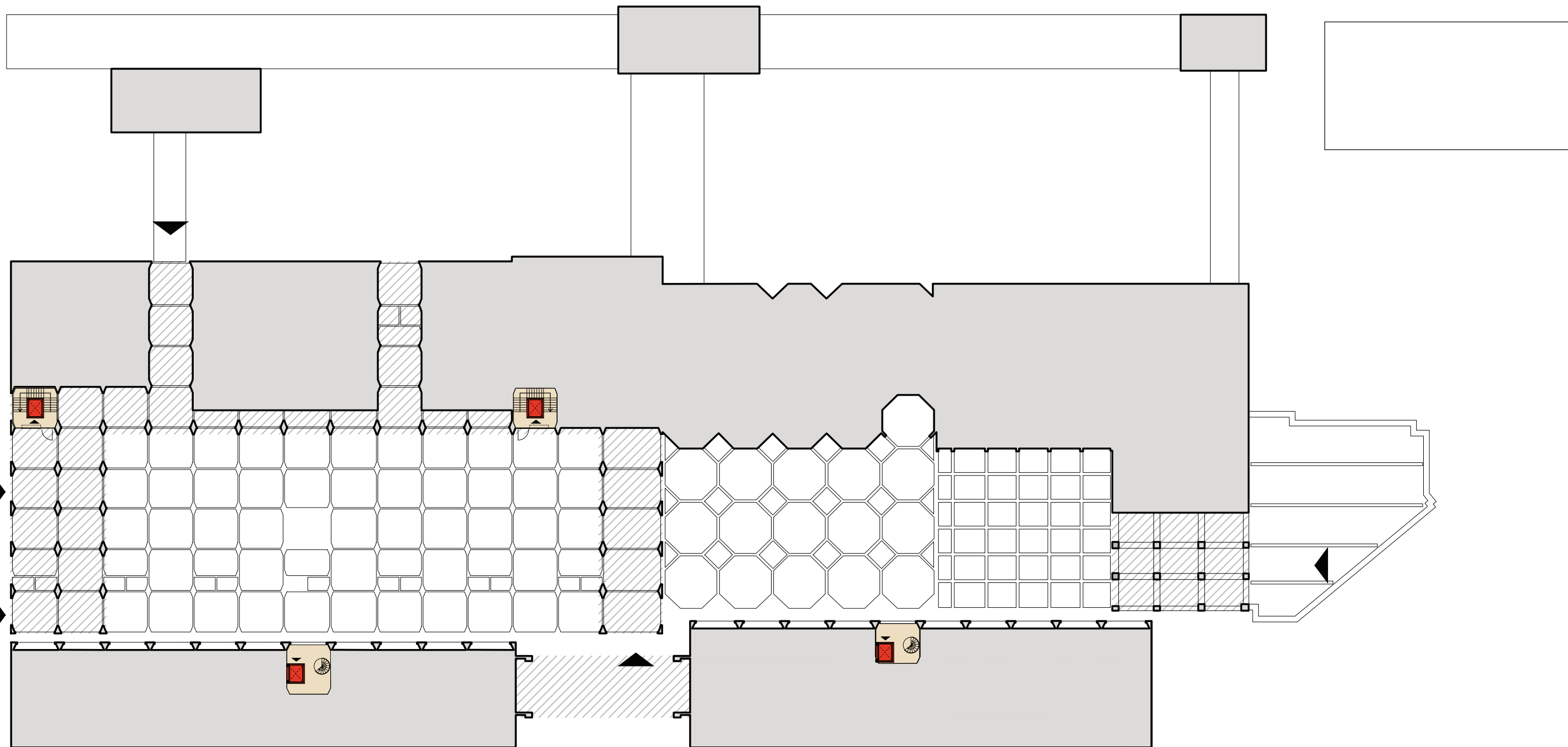


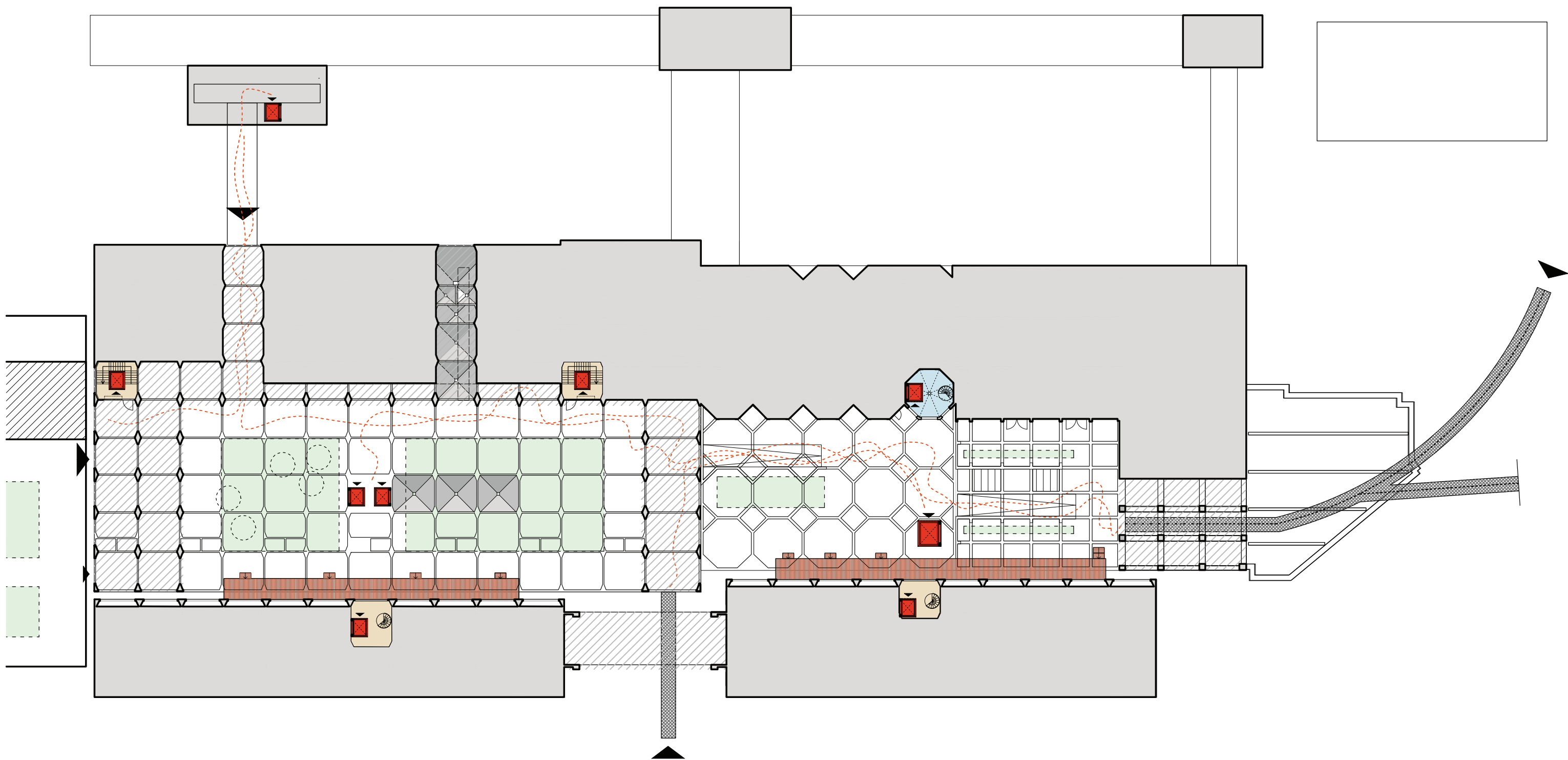




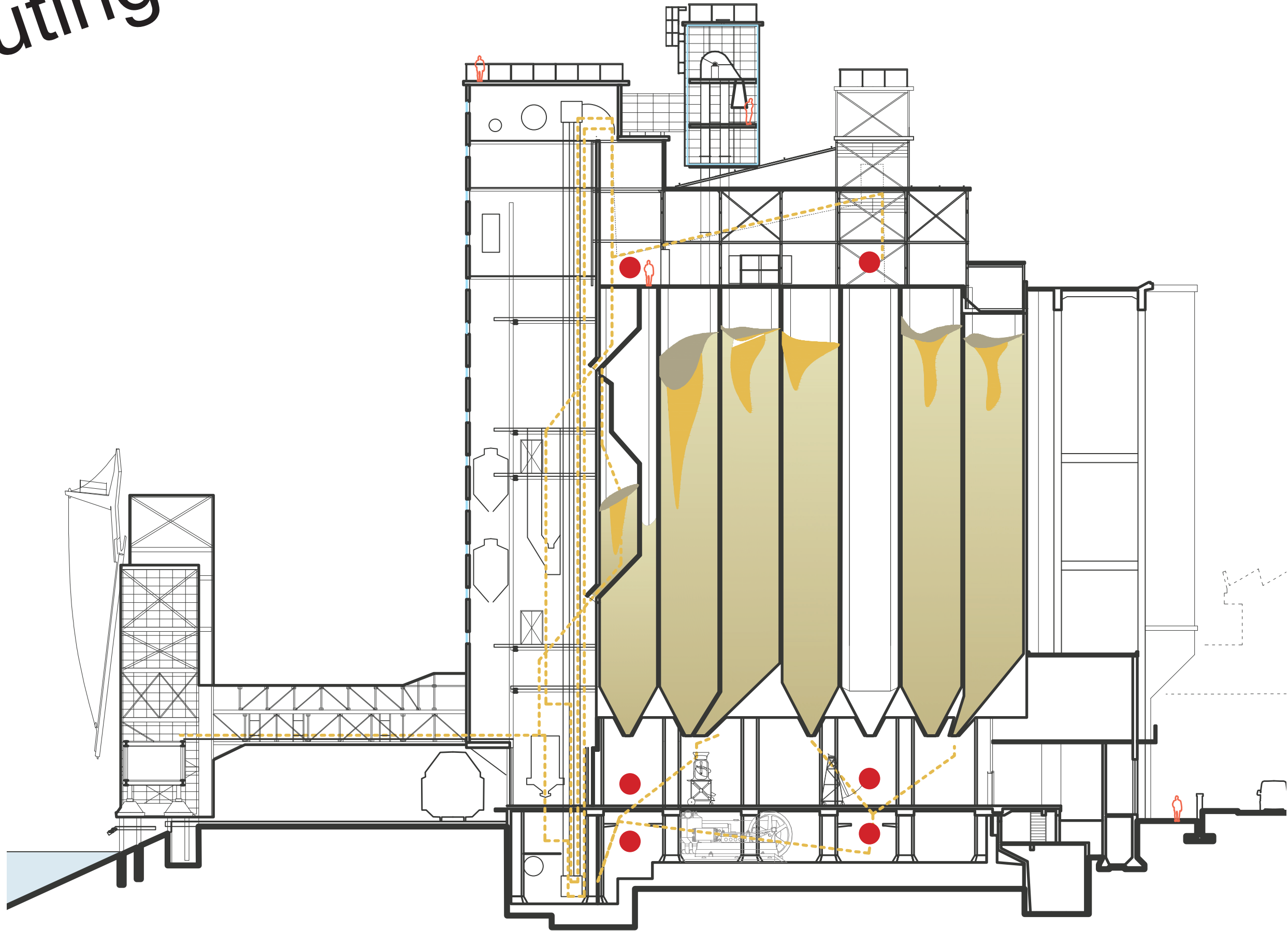


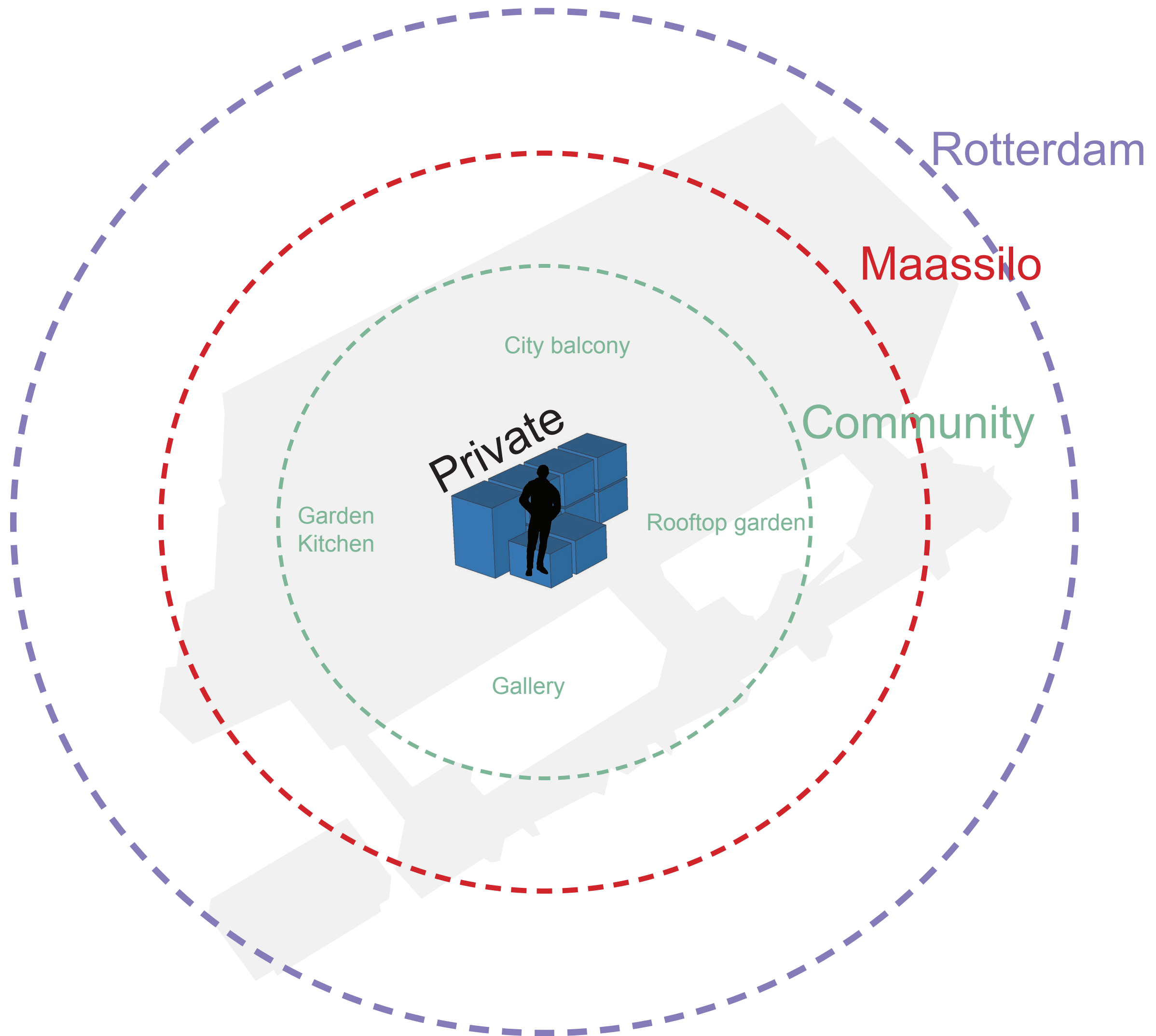


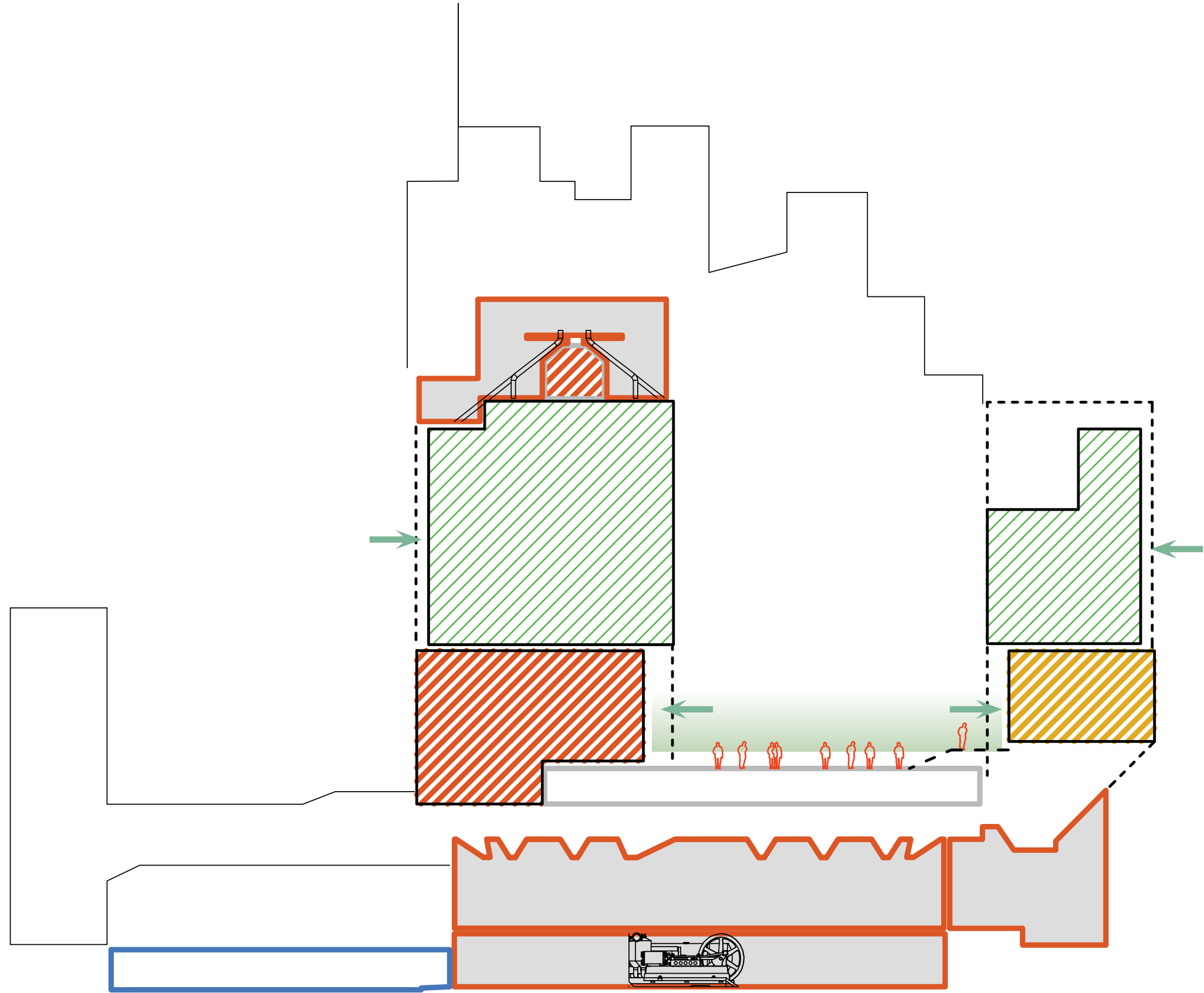


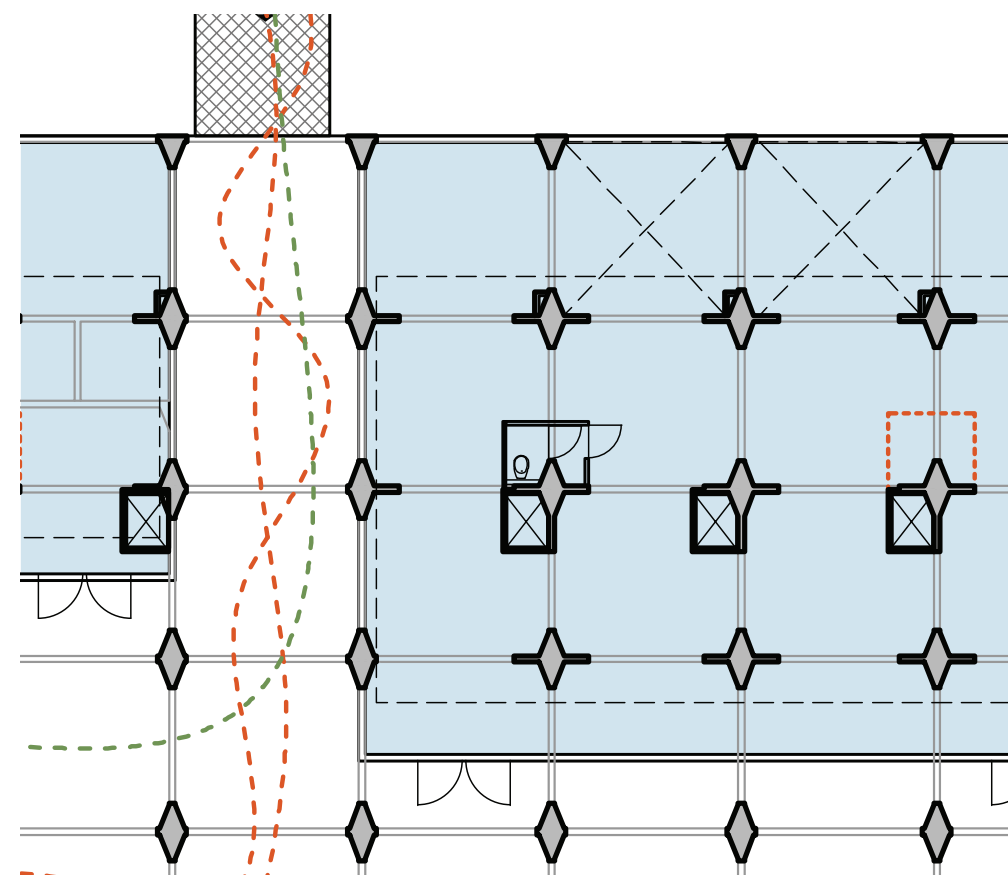
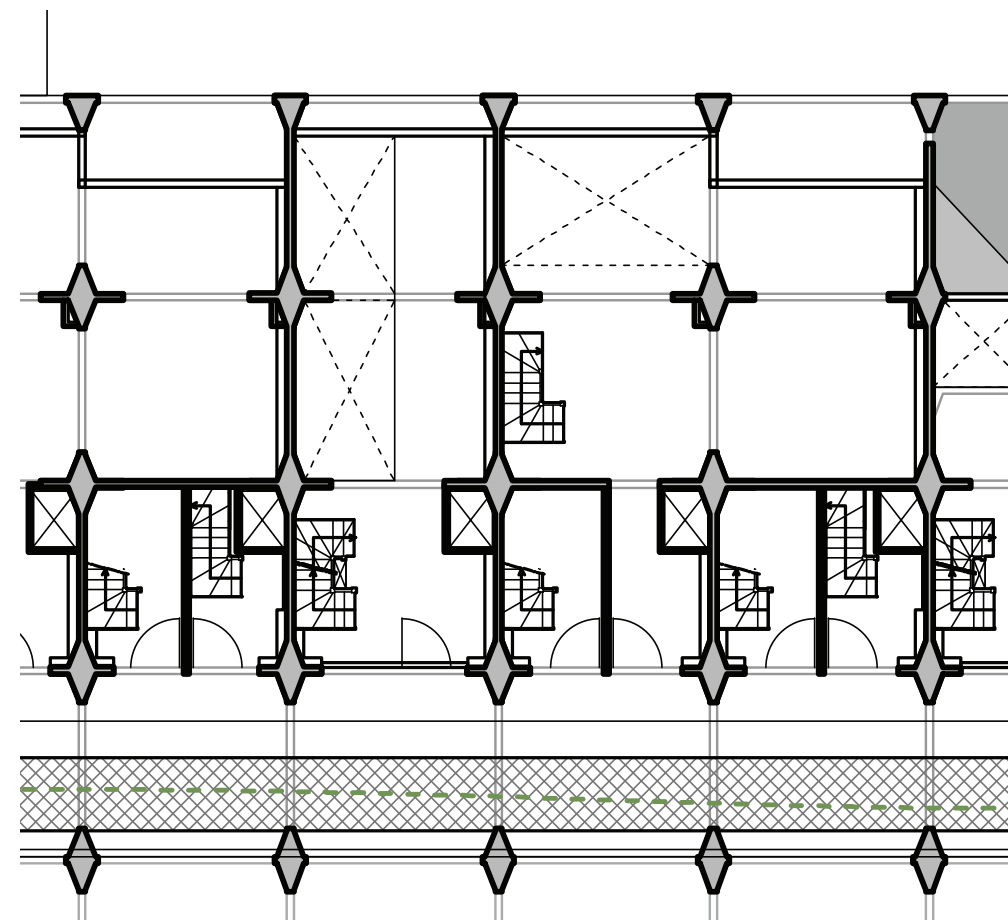
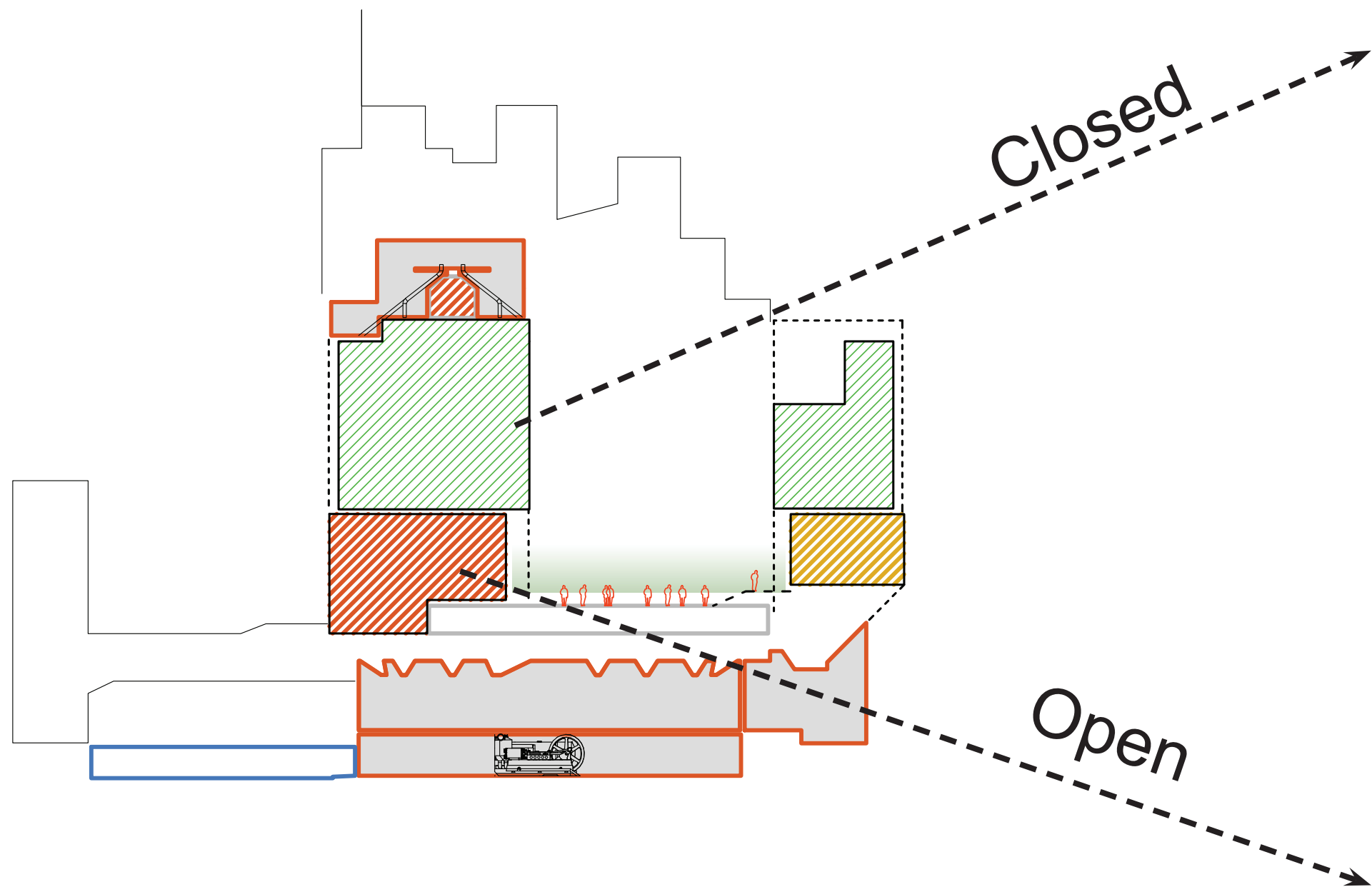


Routing

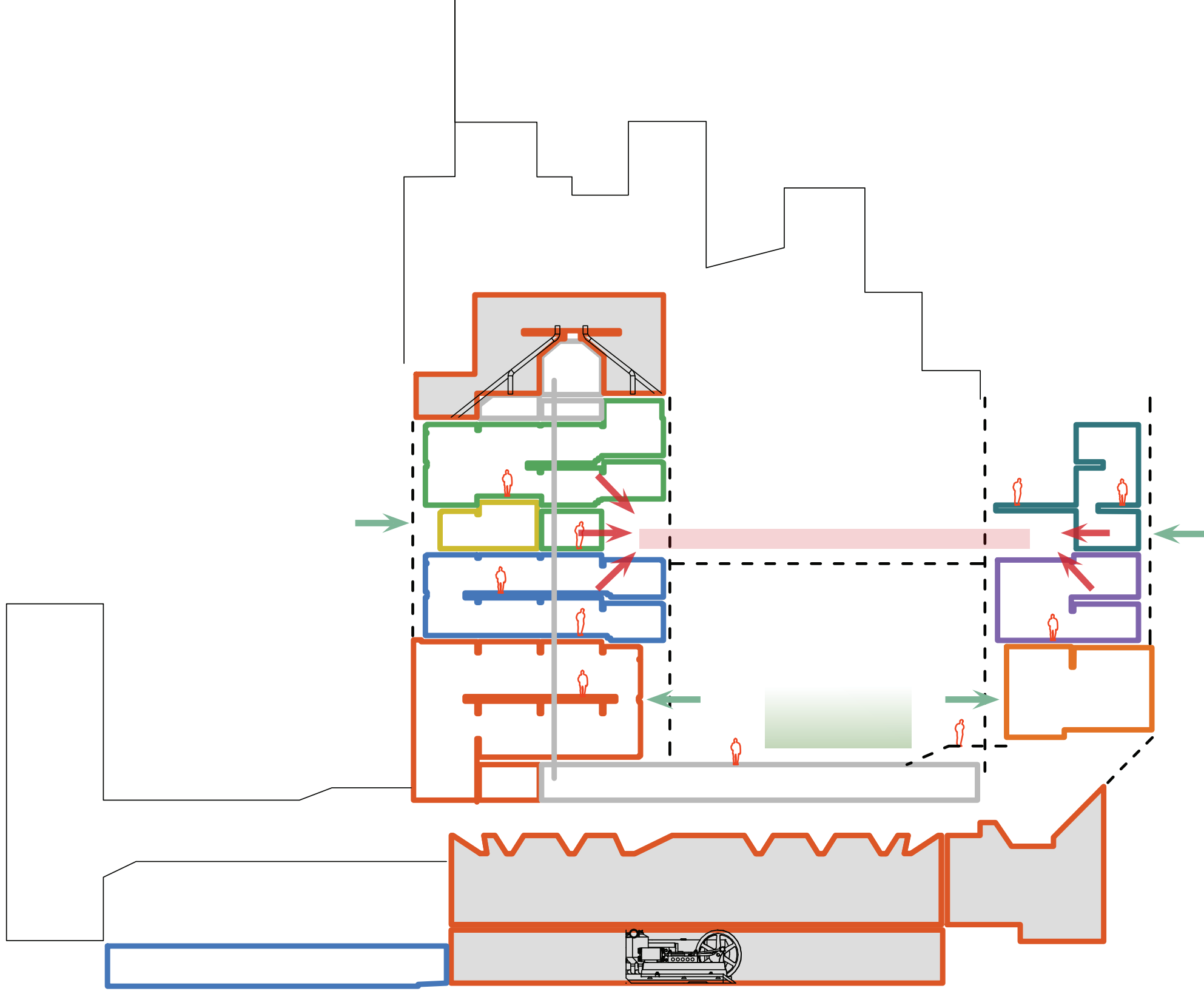








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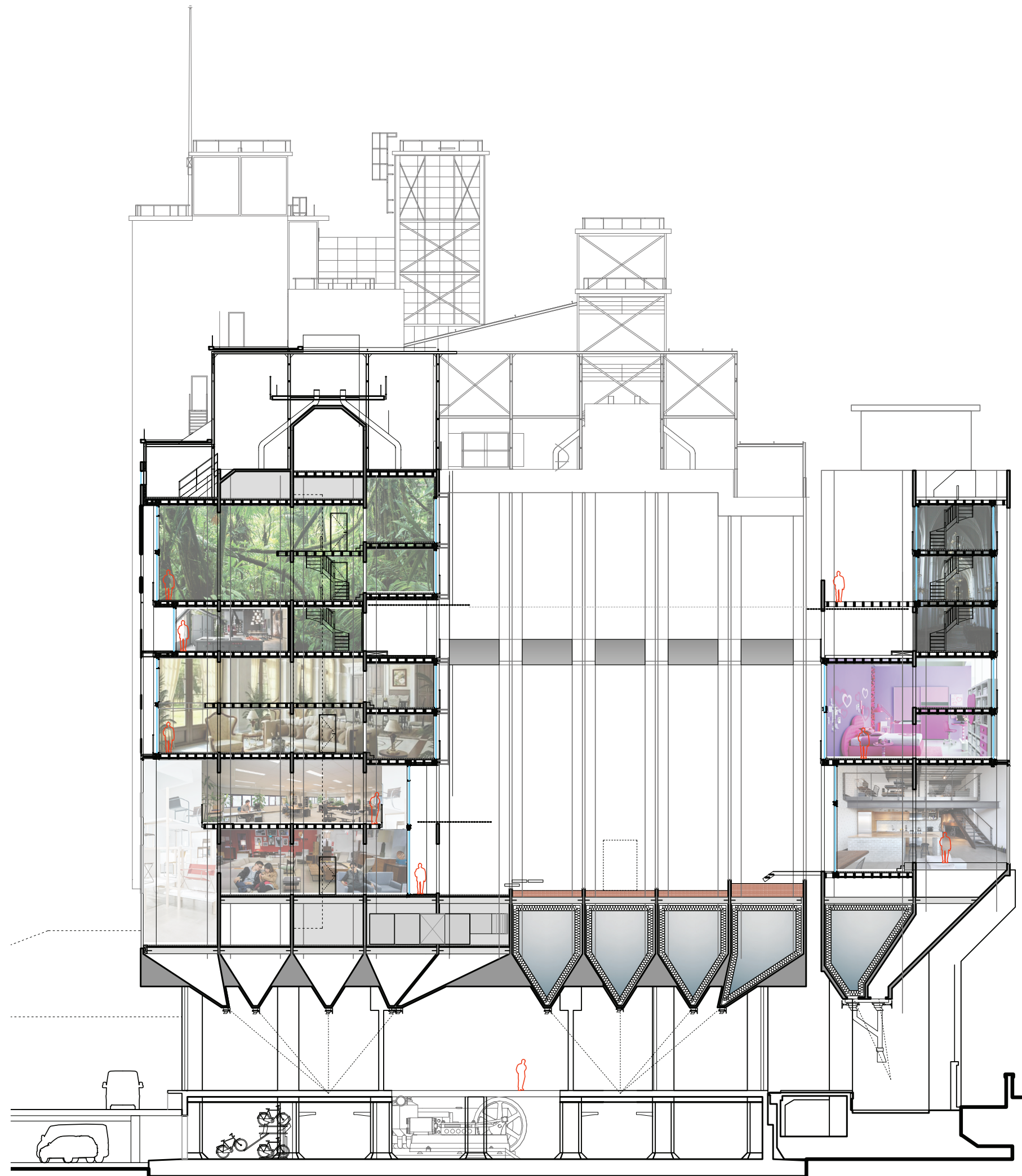


Restaurant

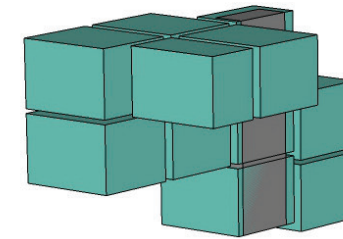
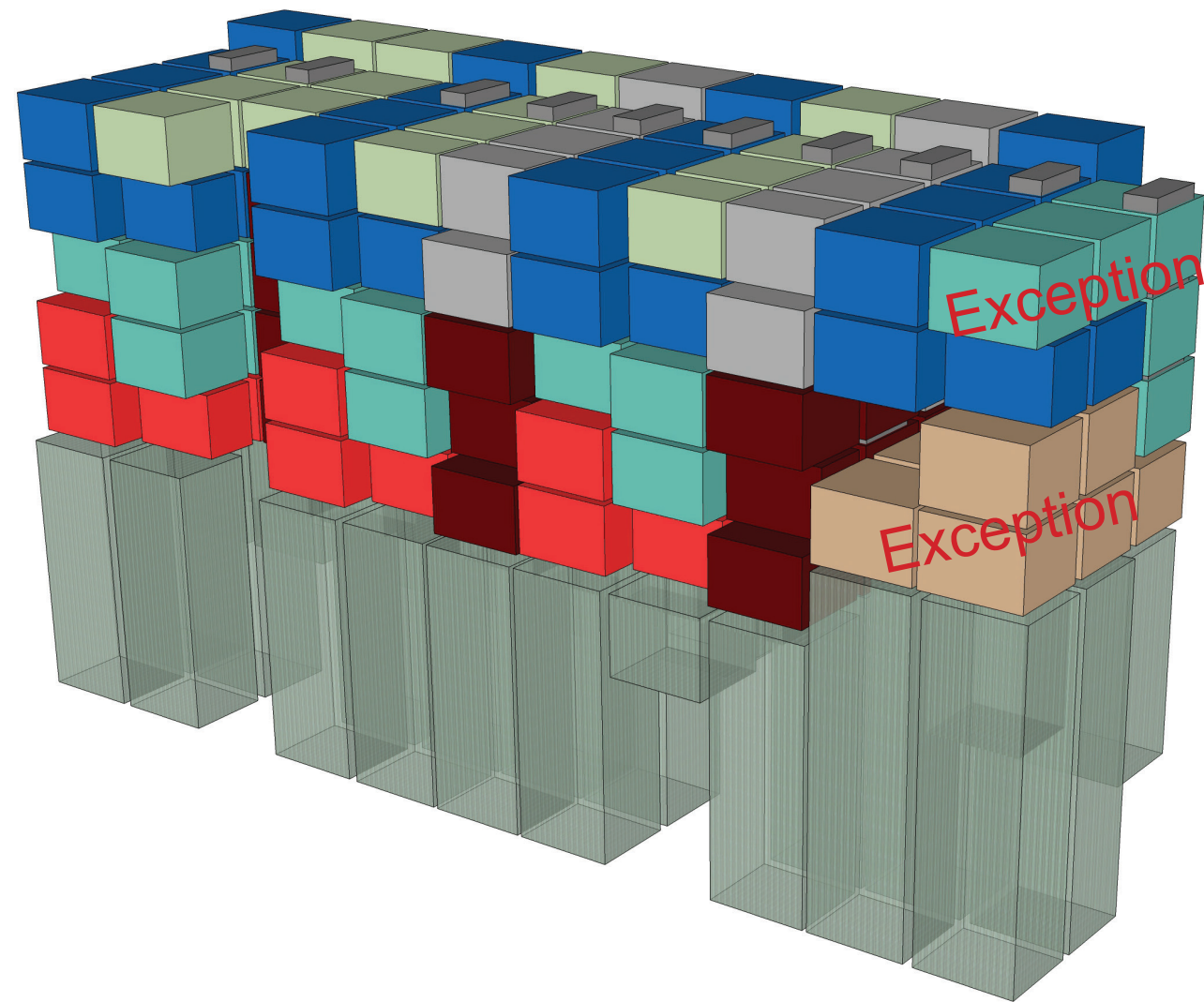
Lofts

Offices

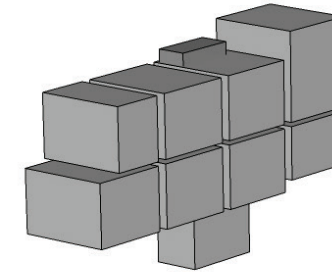
Showroom



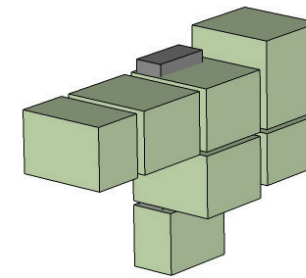




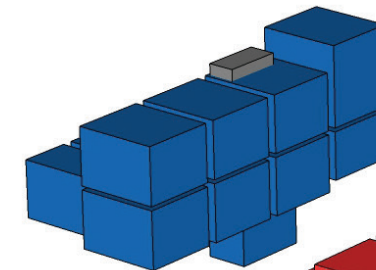
x3 100-120m²



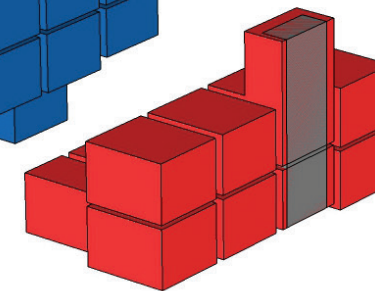
x2 100m²



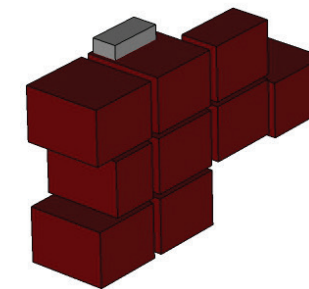
x3 100m²



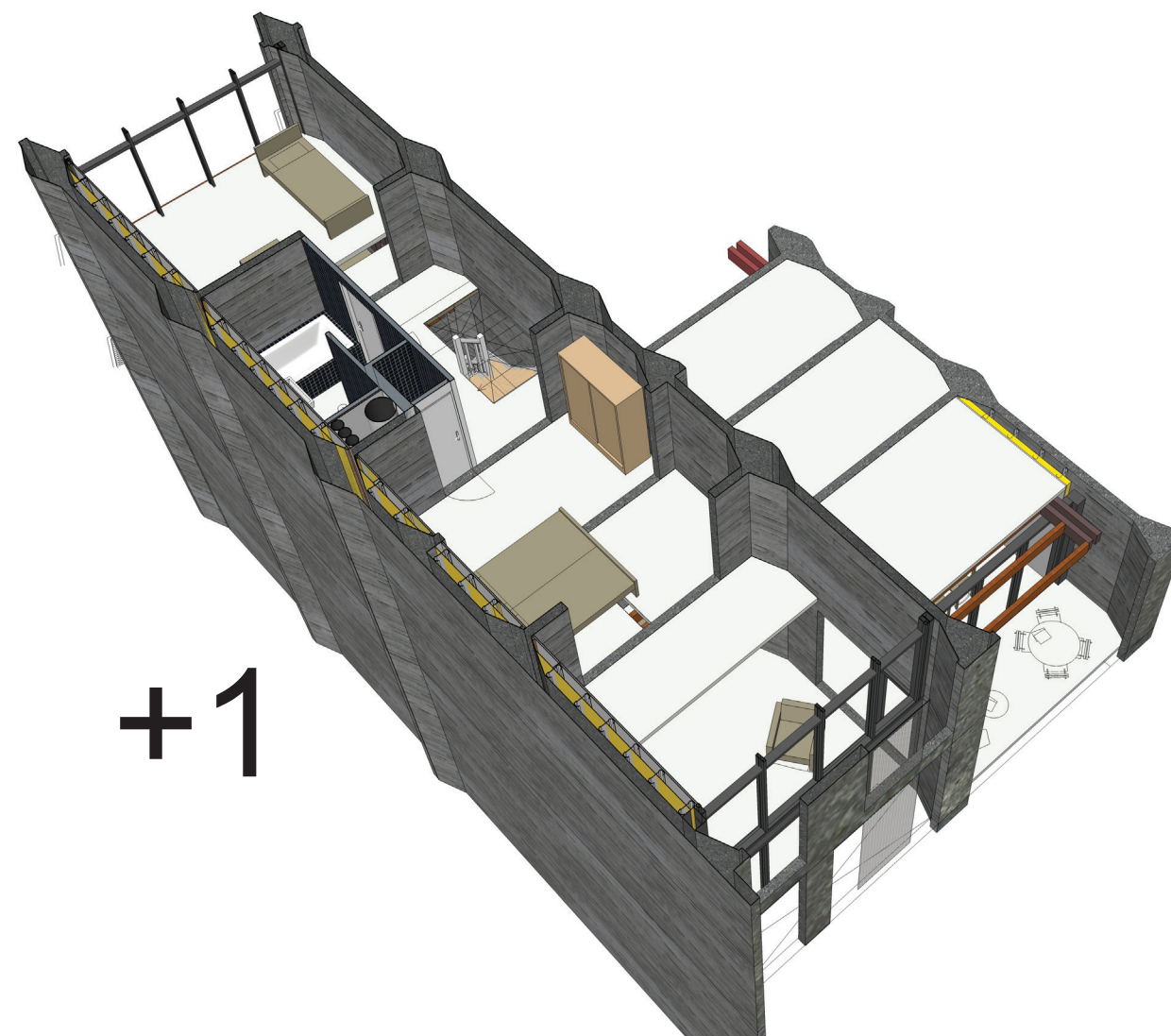
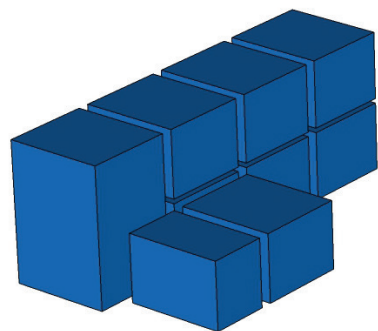
x4 120m²



x3 120m²



x3 120m²

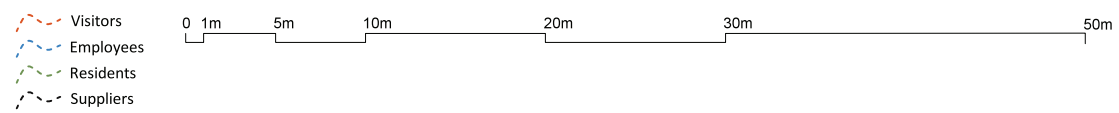
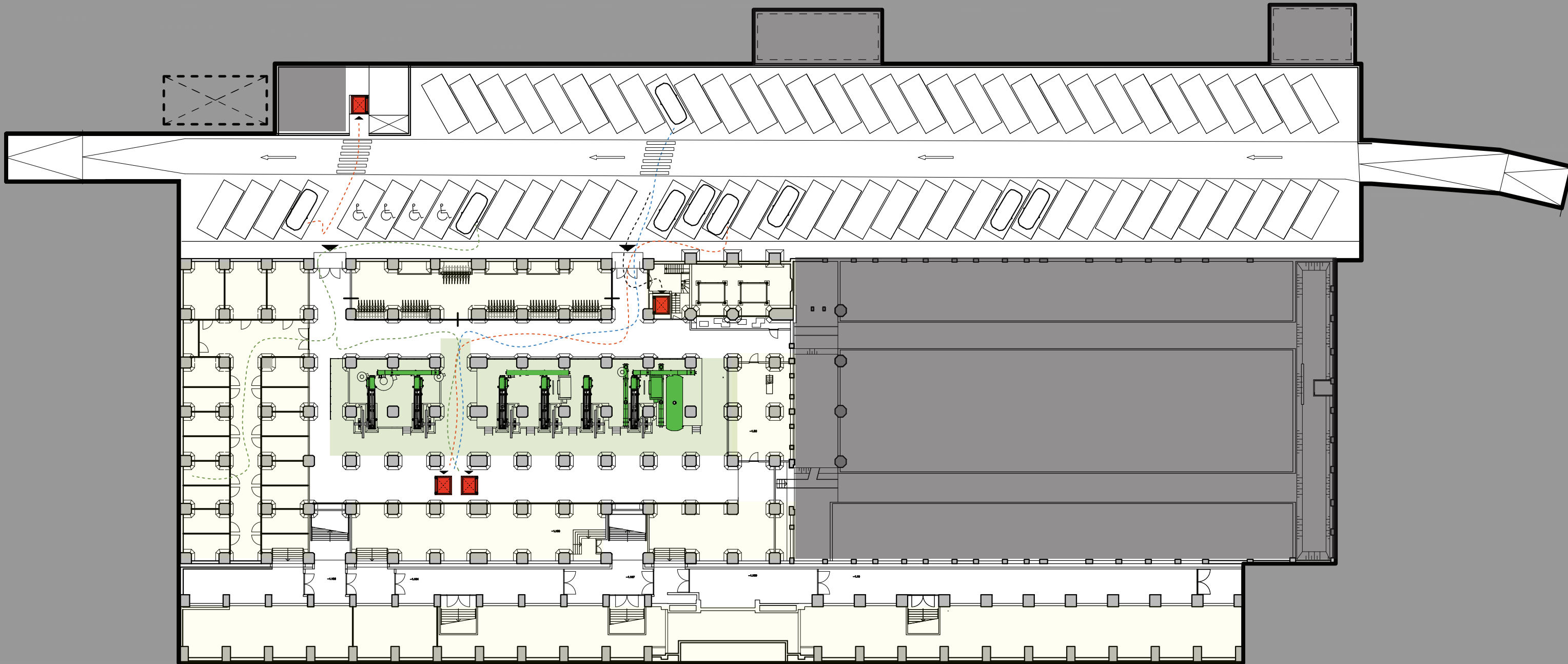


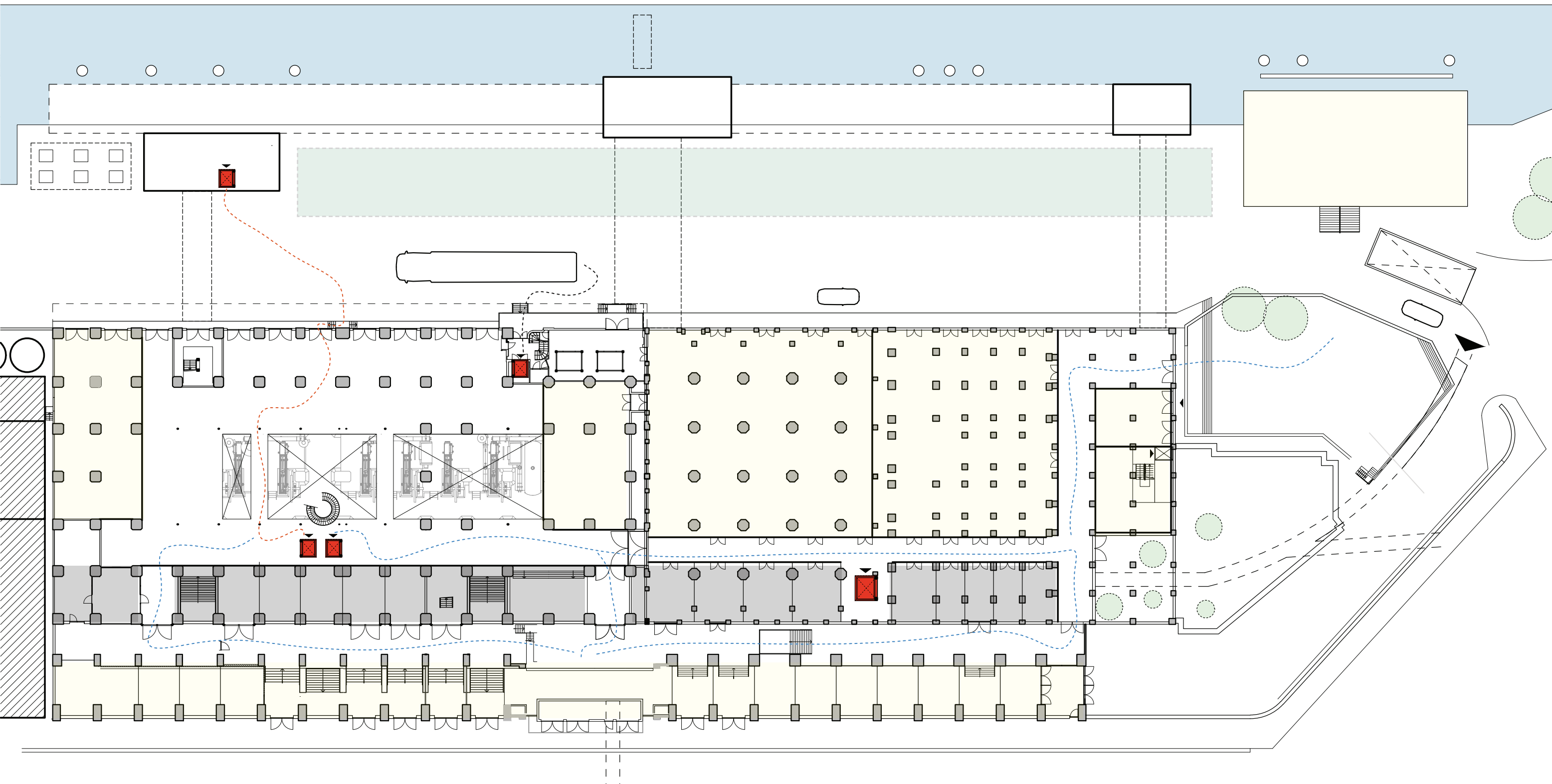
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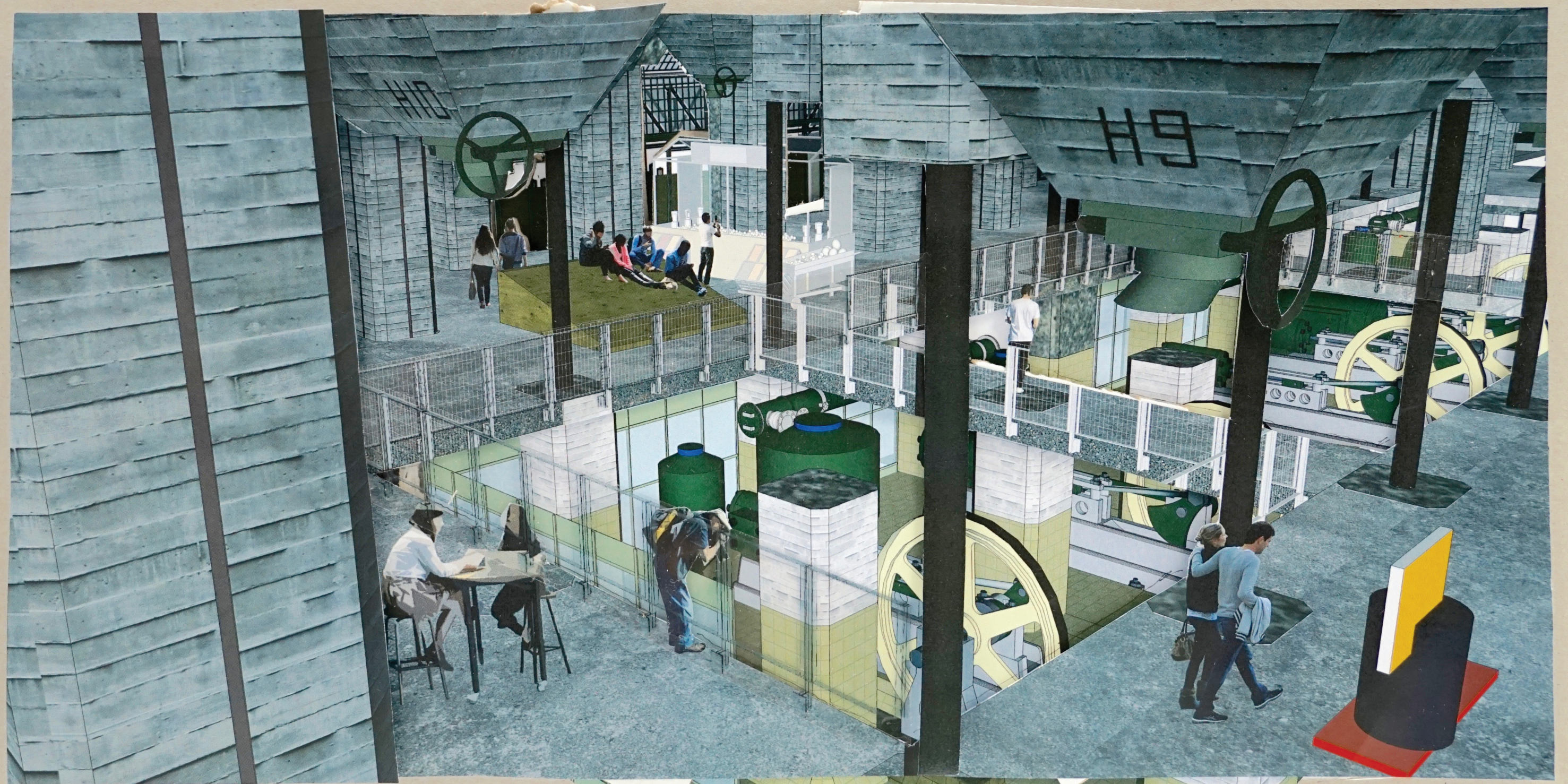


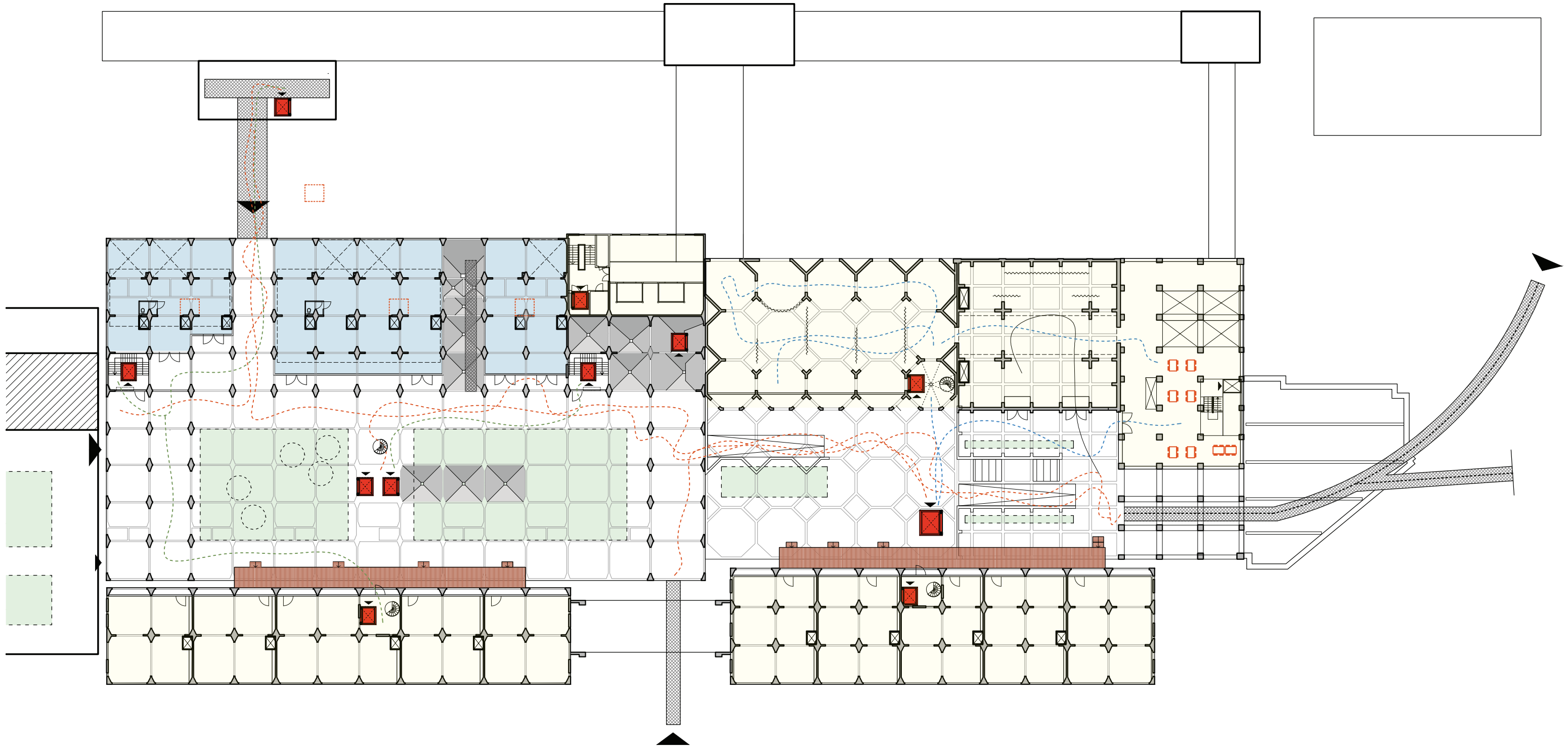




- Visitors
- Employees
- Residents
- Suppliers

0 1m 5m 10m 20m 30m 50m

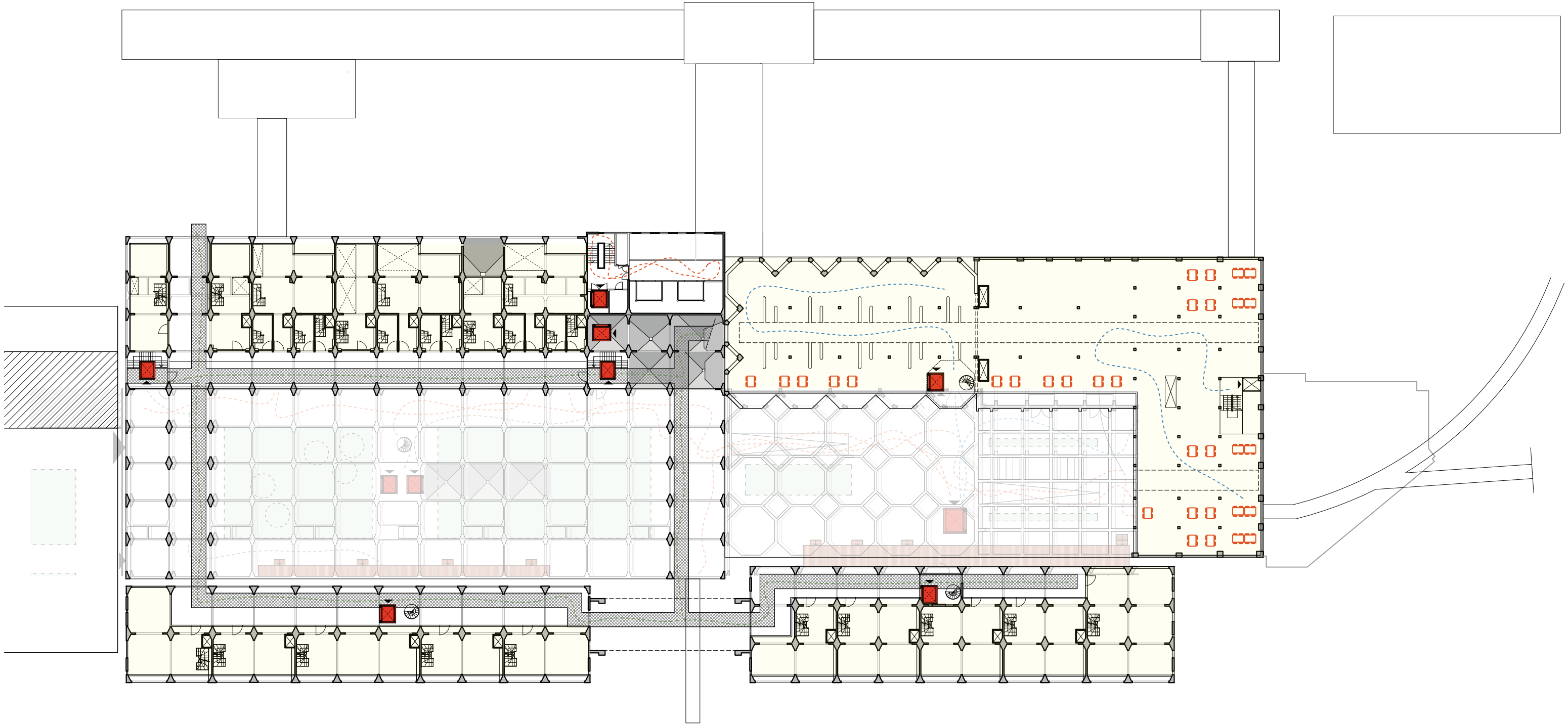




- Visitors
- Employees
- Residents
- Suppliers

0 1m 5m 10m 20m 30m 50m

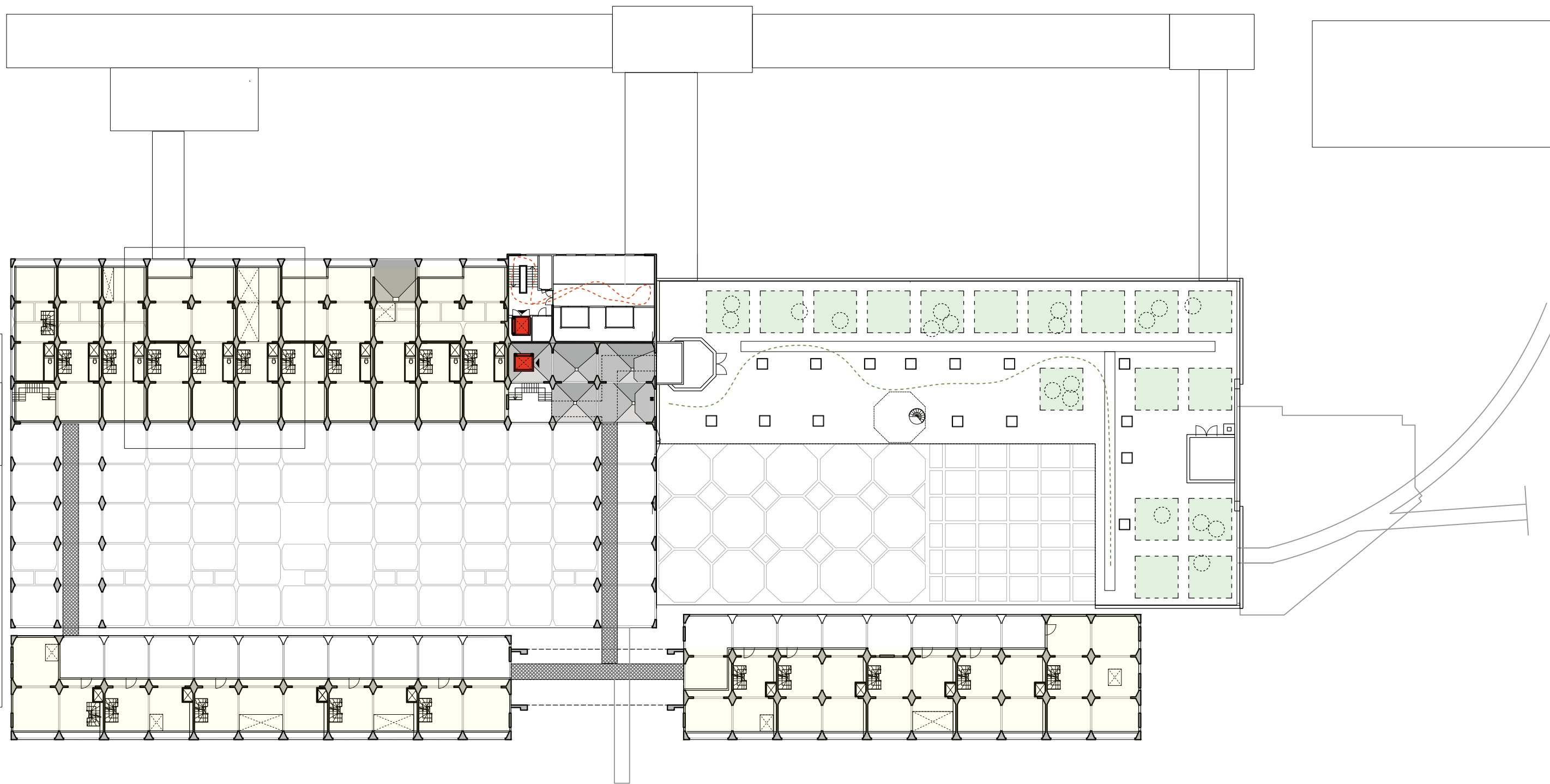




- Visitors
- Employees
- Residents
- Suppliers

0 1m 5m 10m 20m 30m 50m



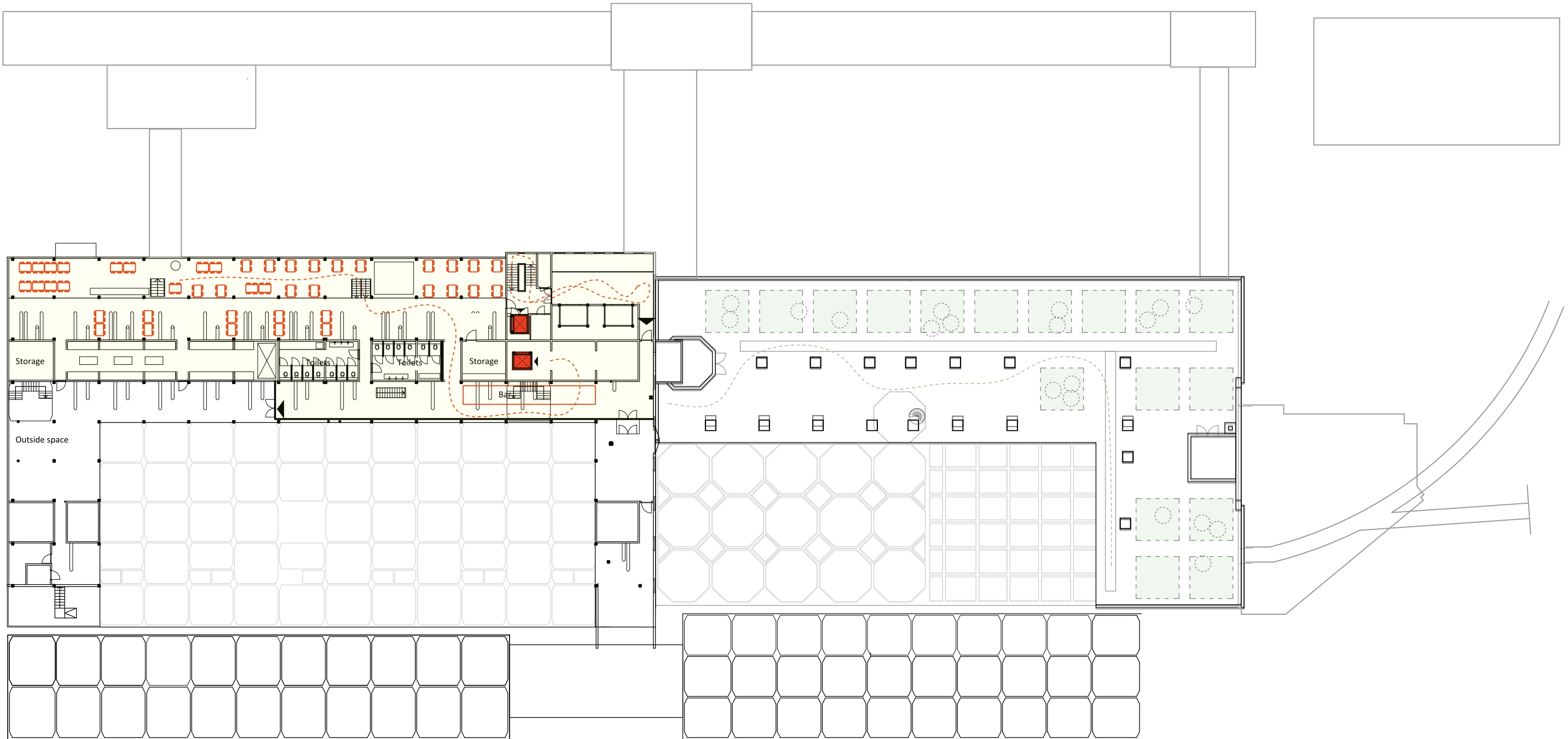


- Visitors
- Employees
- Residents
- Suppliers

0 1m 5m 10m 20m 30m 50m

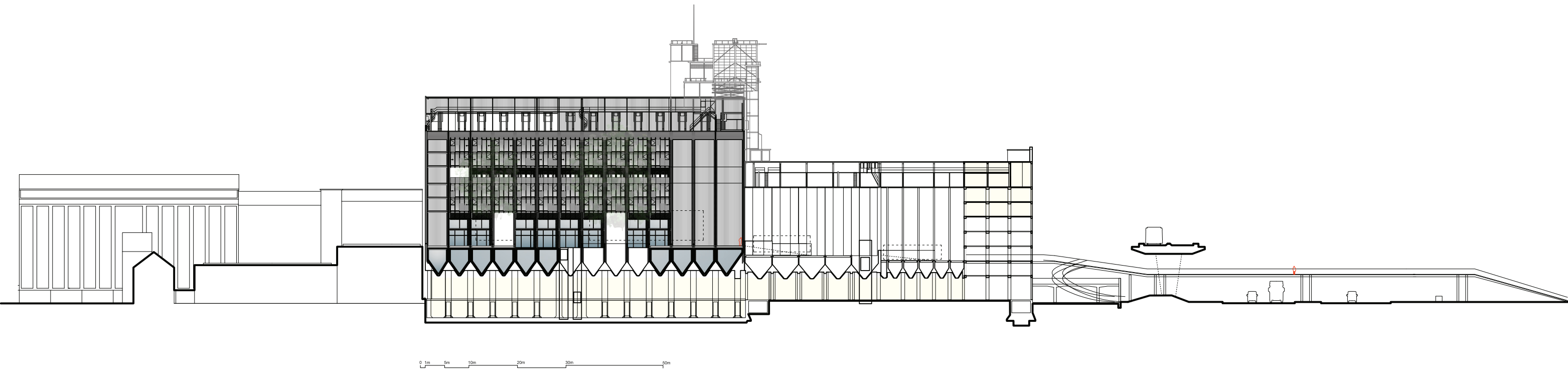


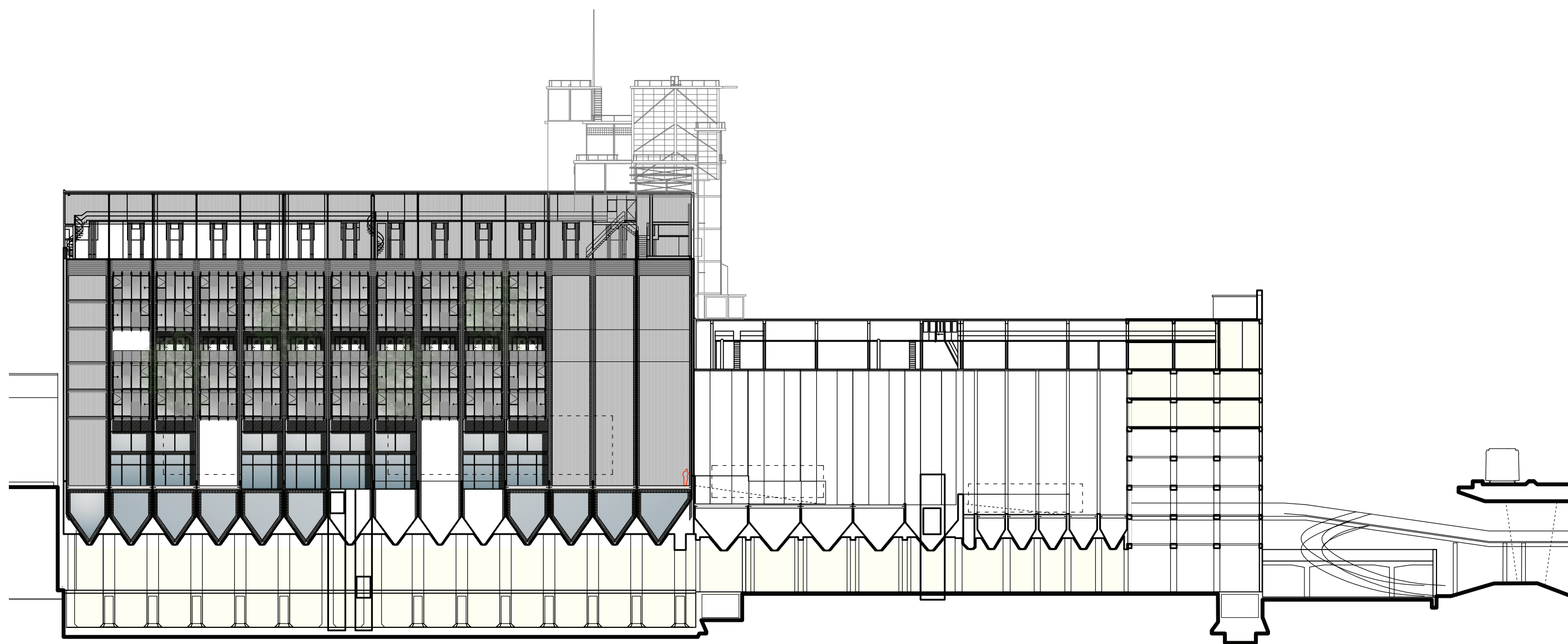




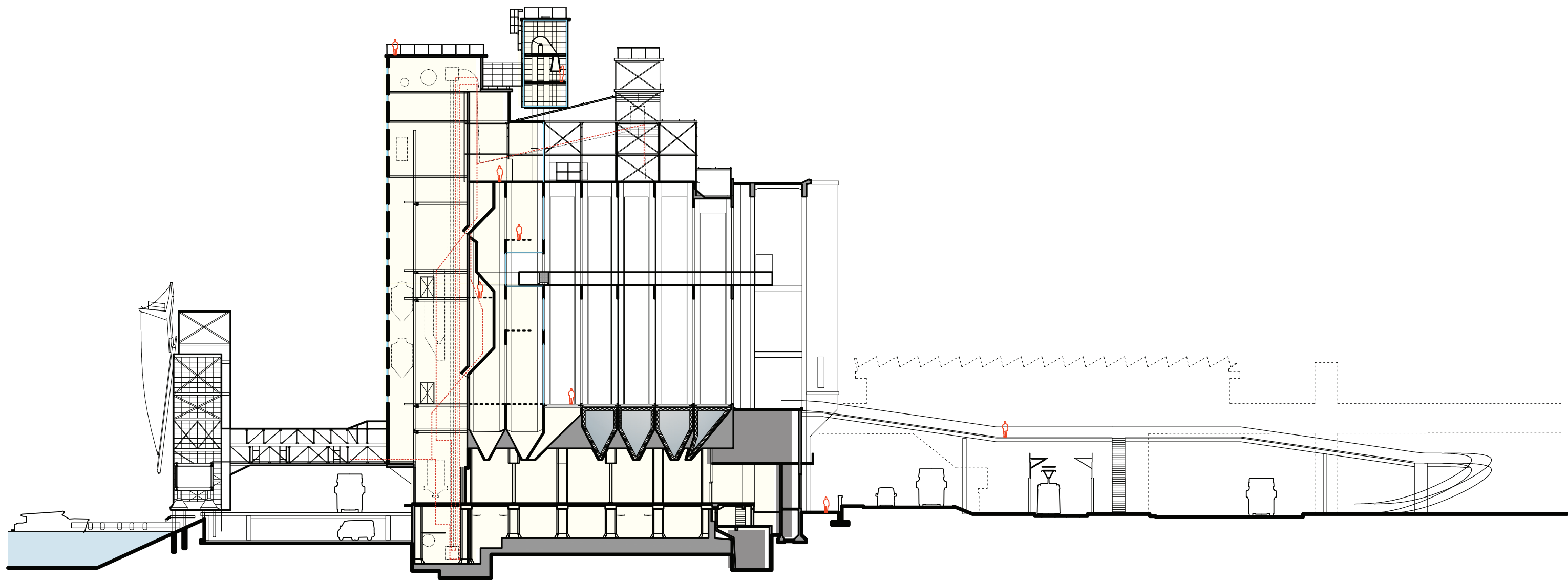
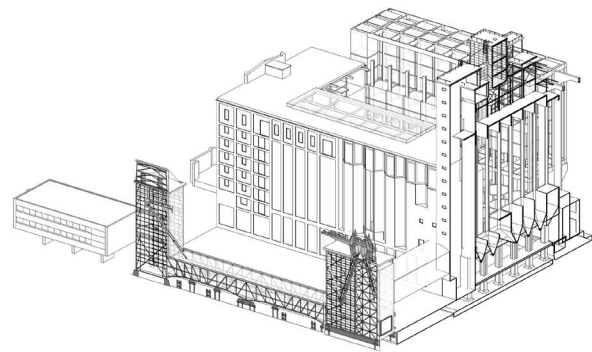
- Visitors
- Employees
- Residents
- Suppliers

0 1m 5m 10m 20m 30m 50m

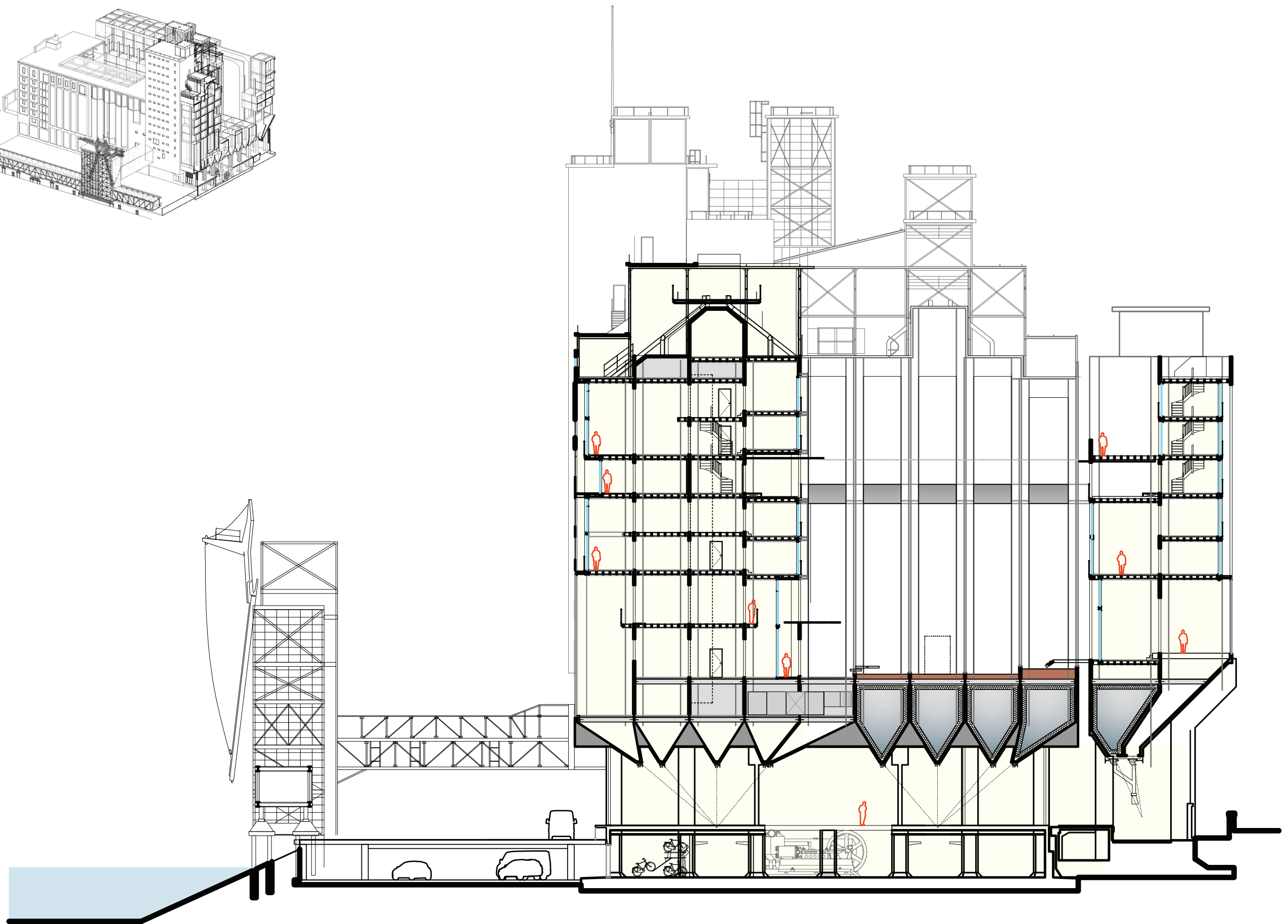
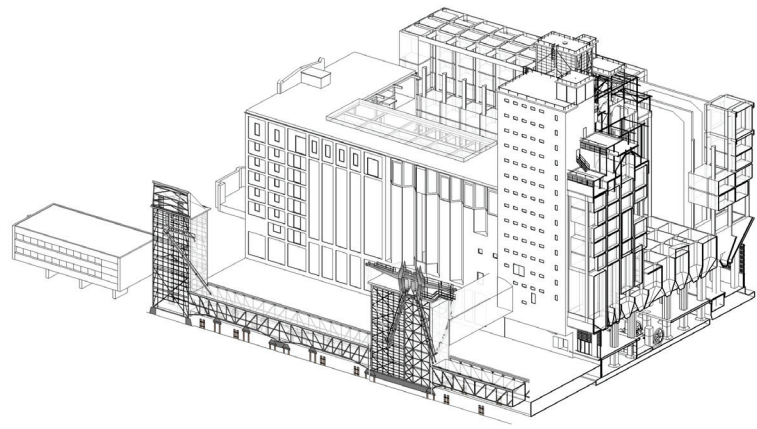




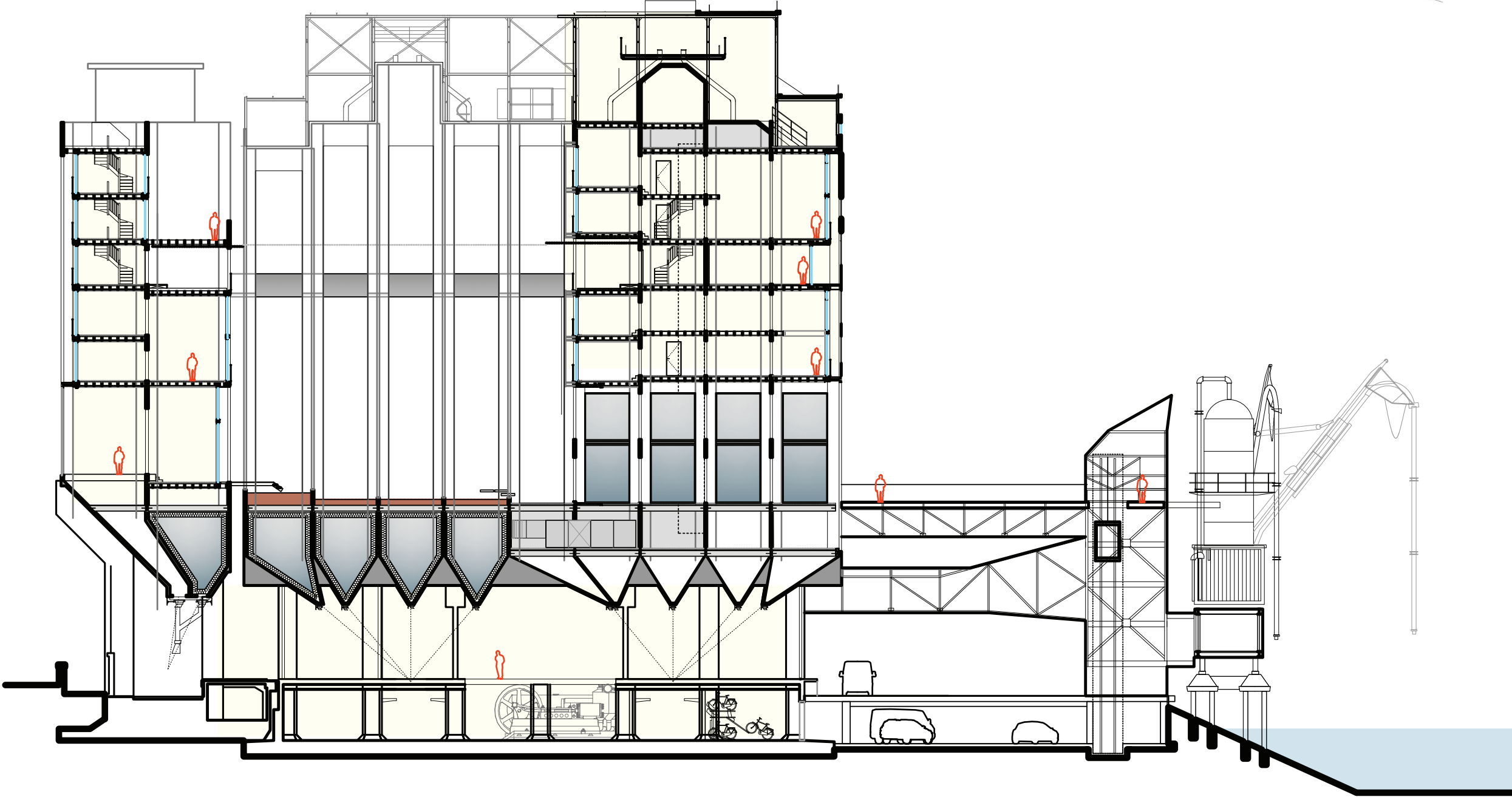
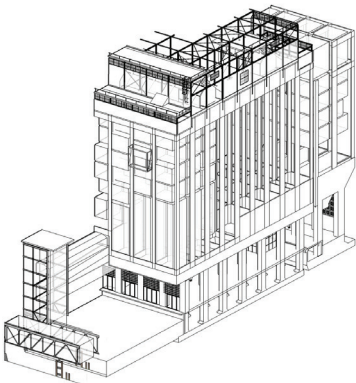
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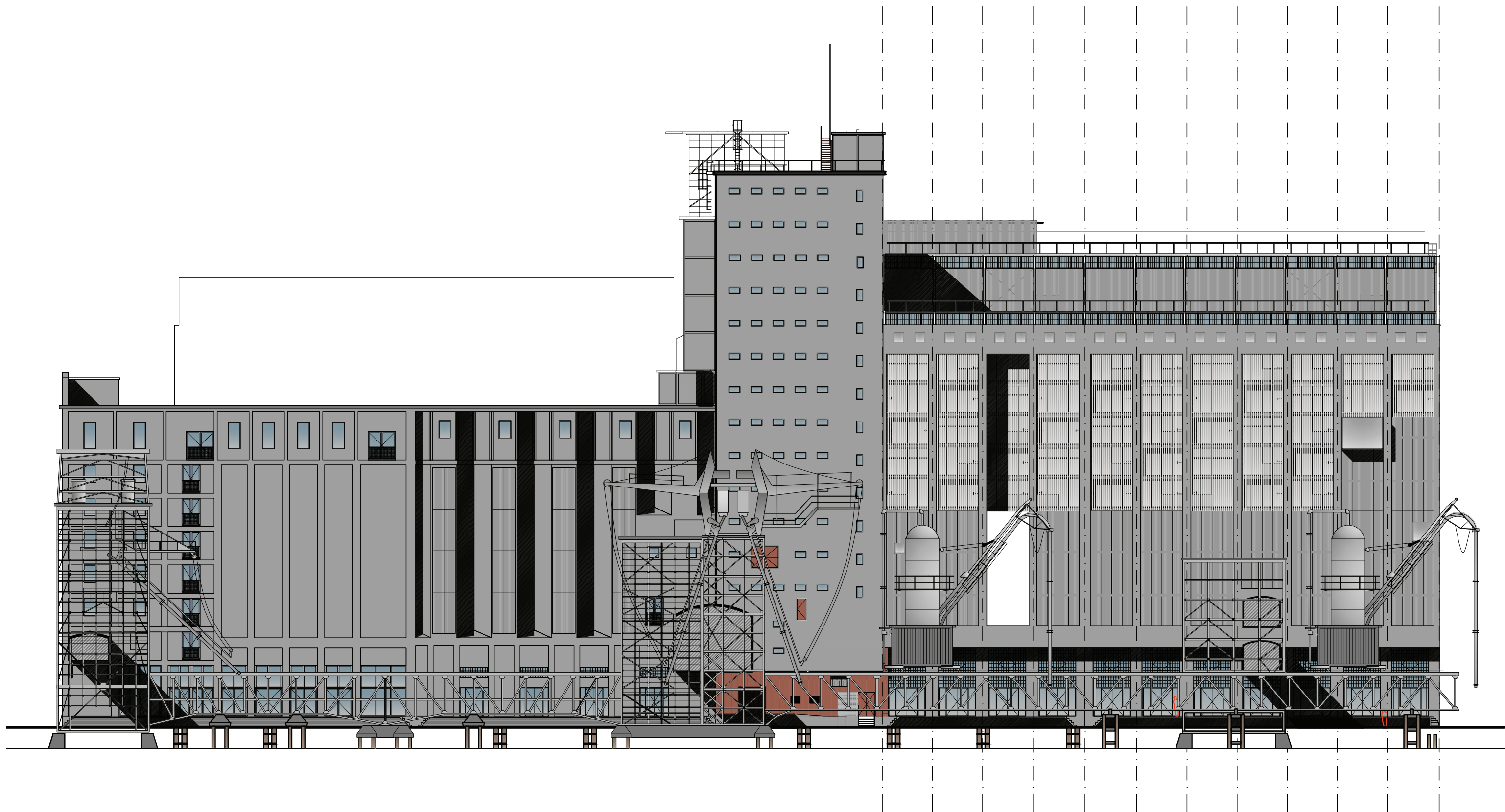
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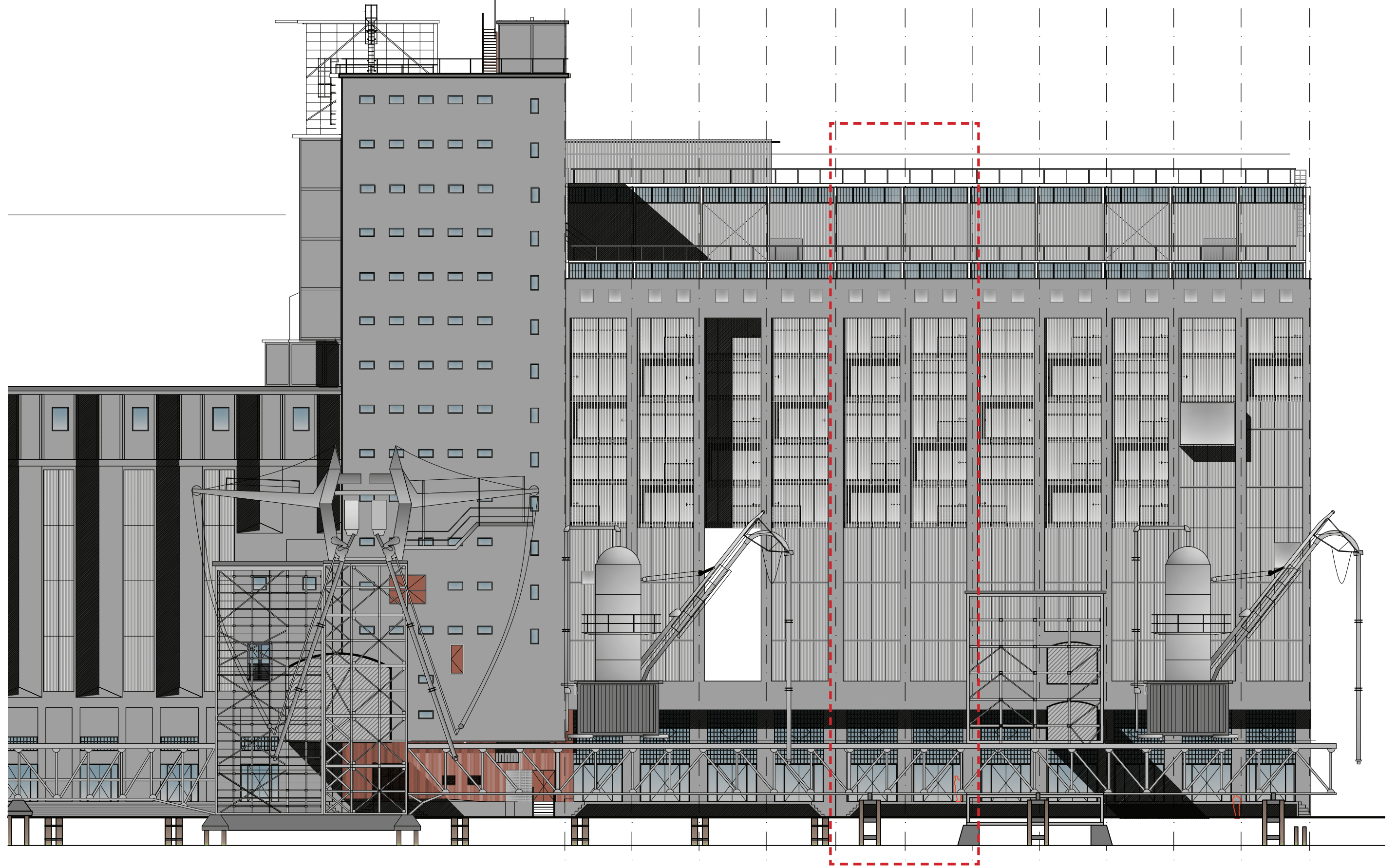


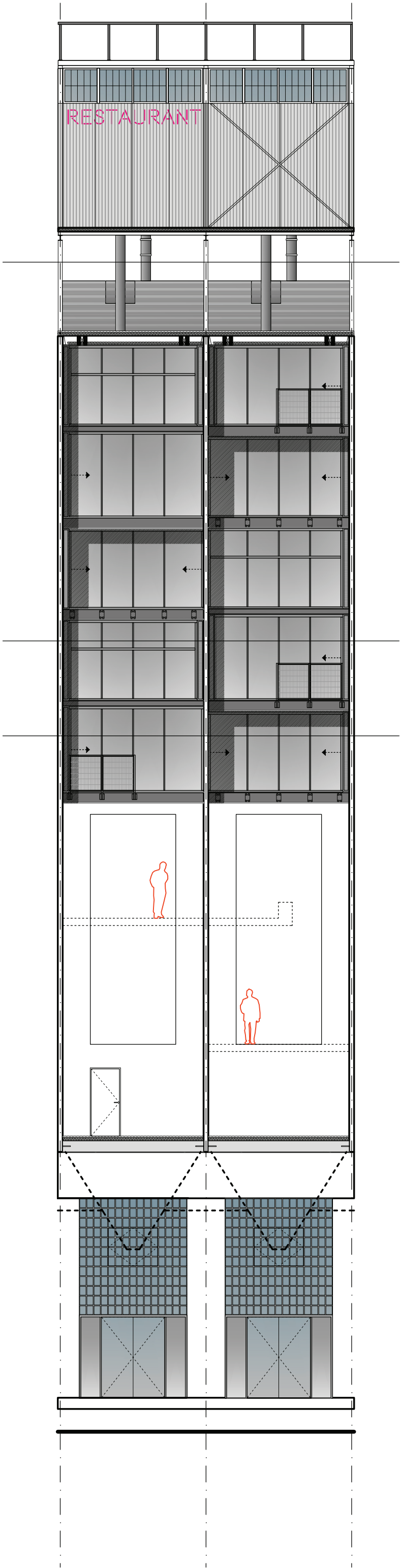
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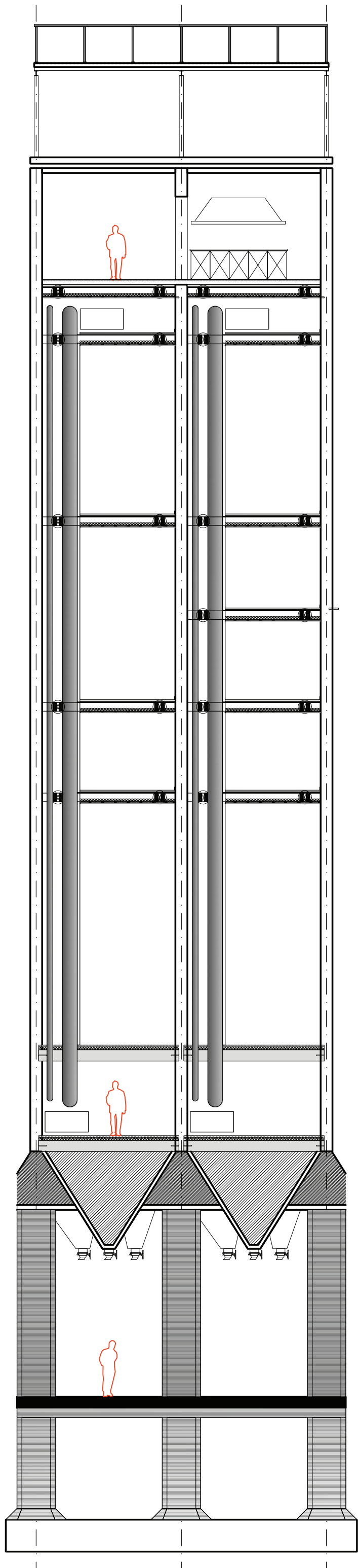
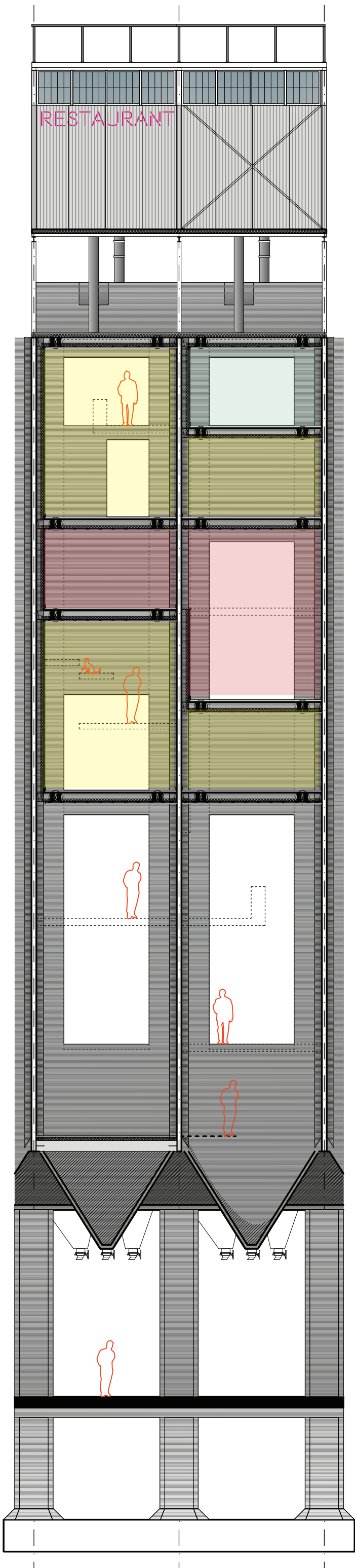


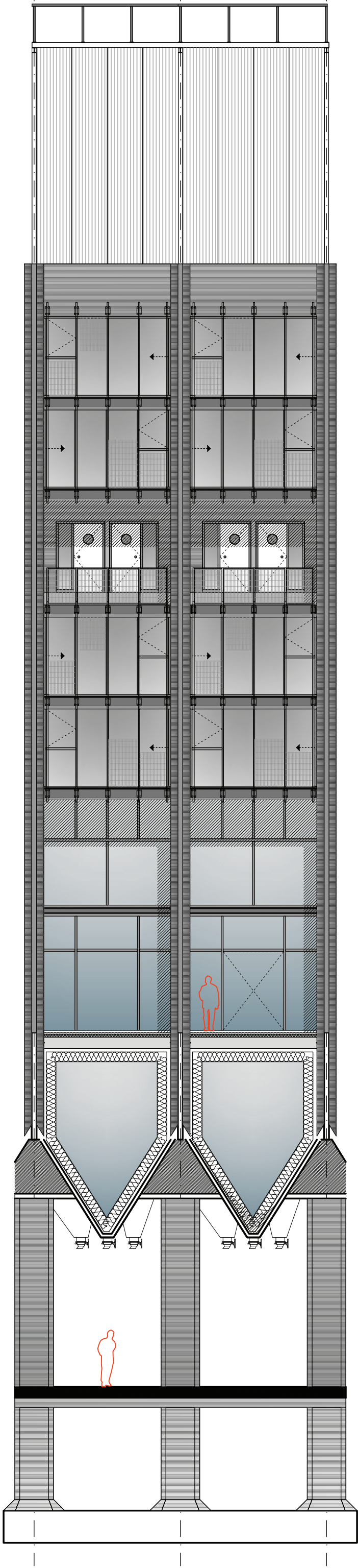
0 1m 5m 10m 20m 30m 50m











Bar/Restaurant

Apartments

Gallery

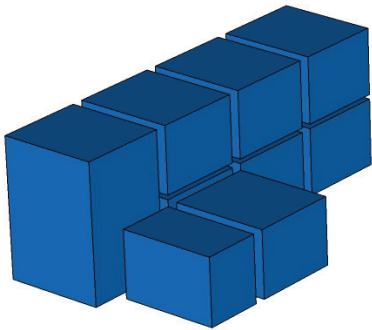
Apartments

Silopark

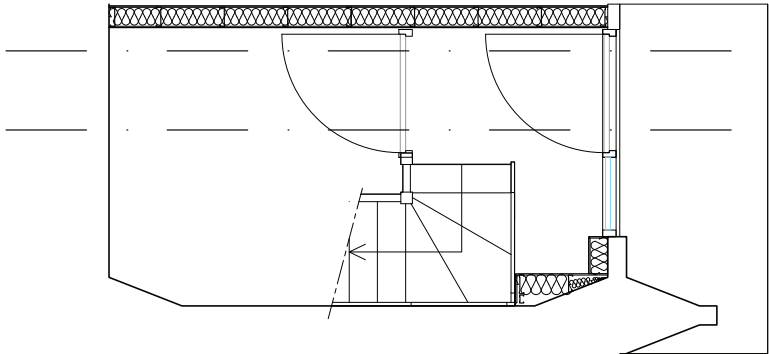
Ground floor

Basement





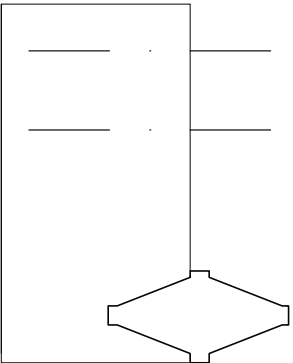
A
B

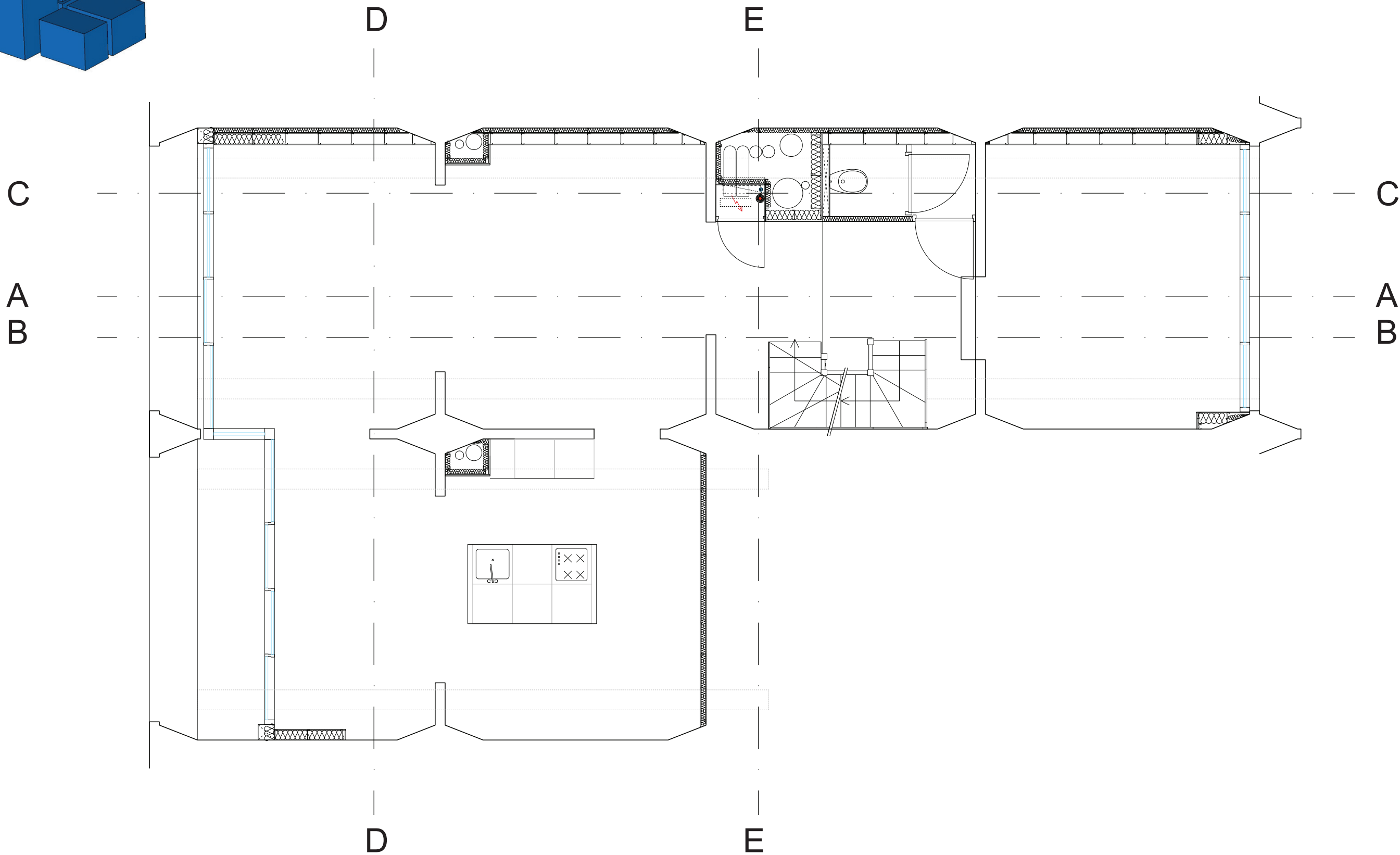
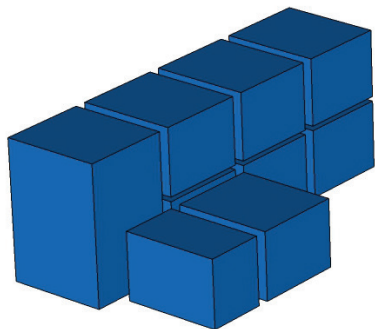


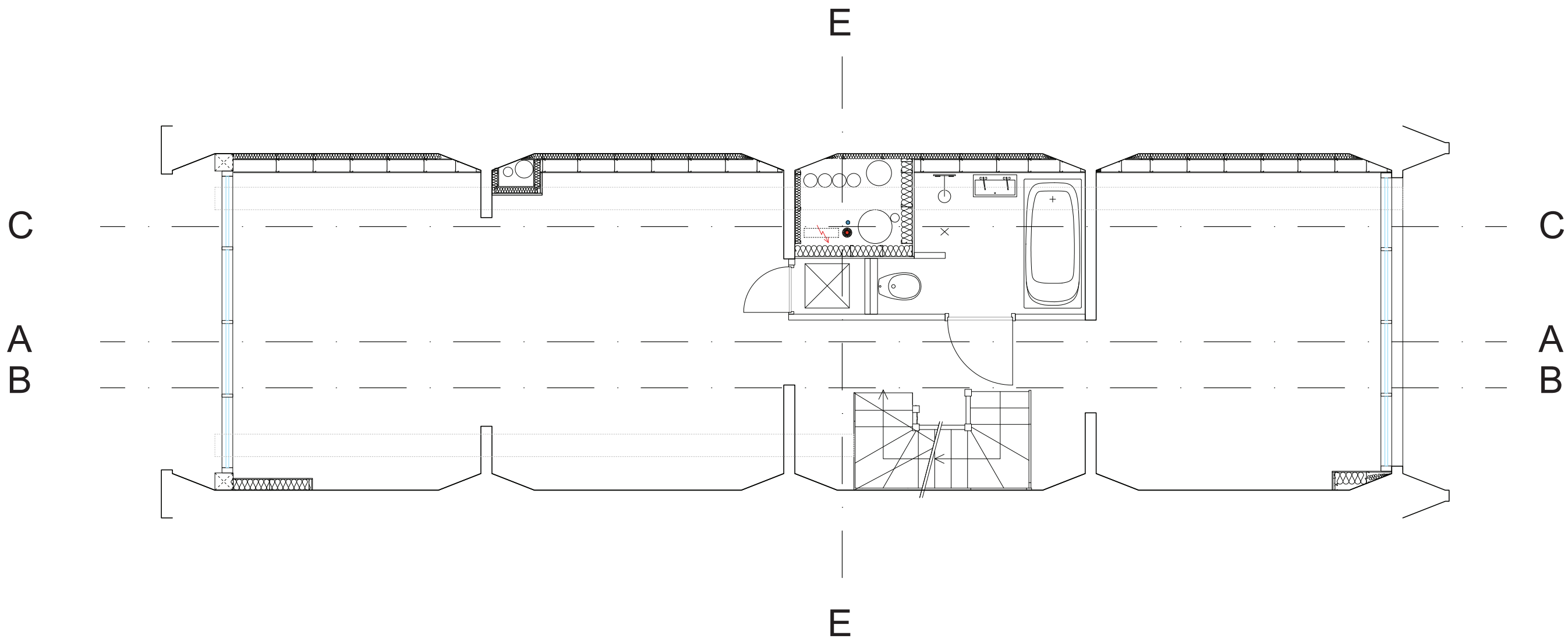
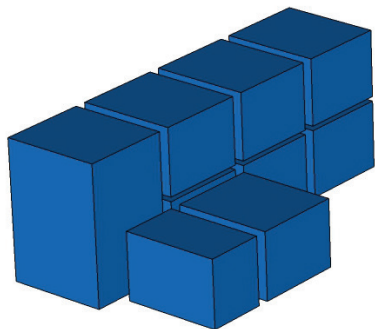
Gallery

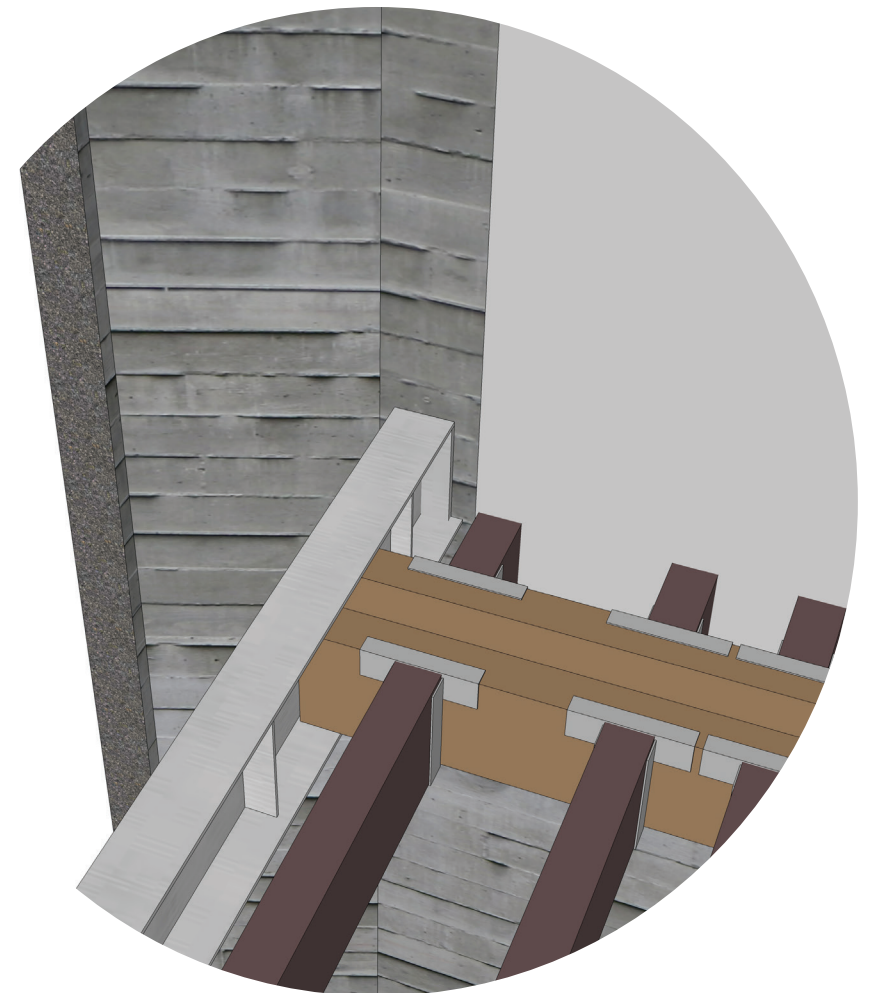
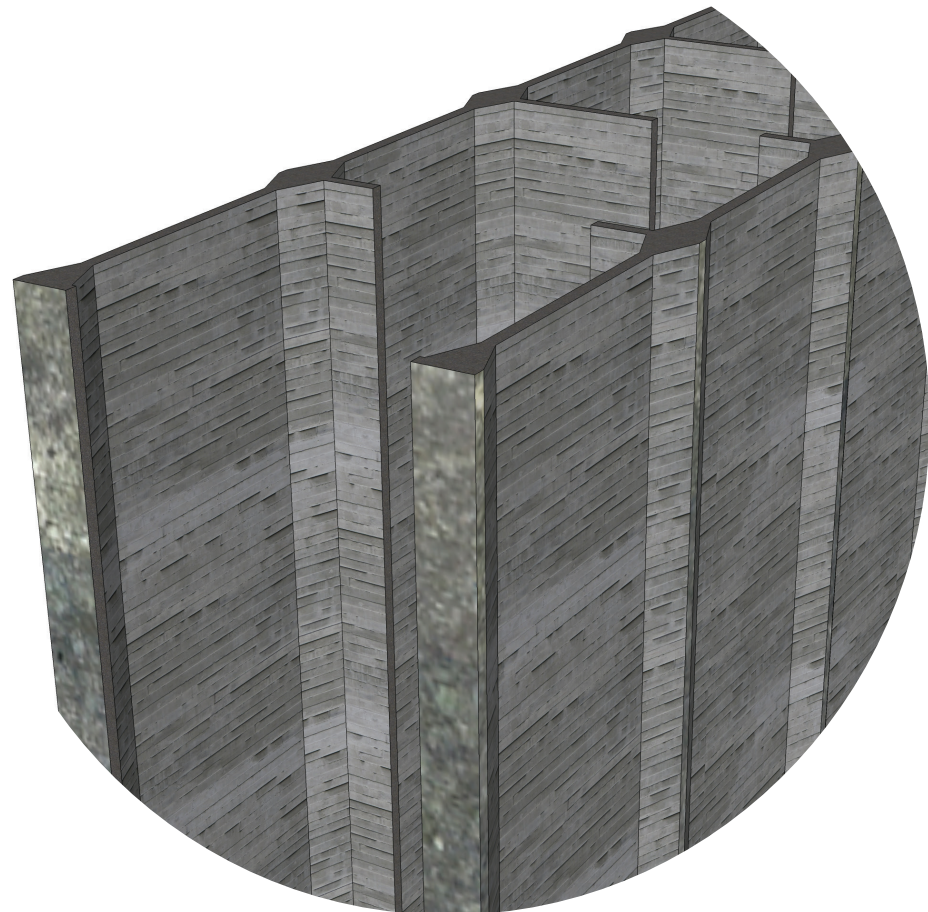
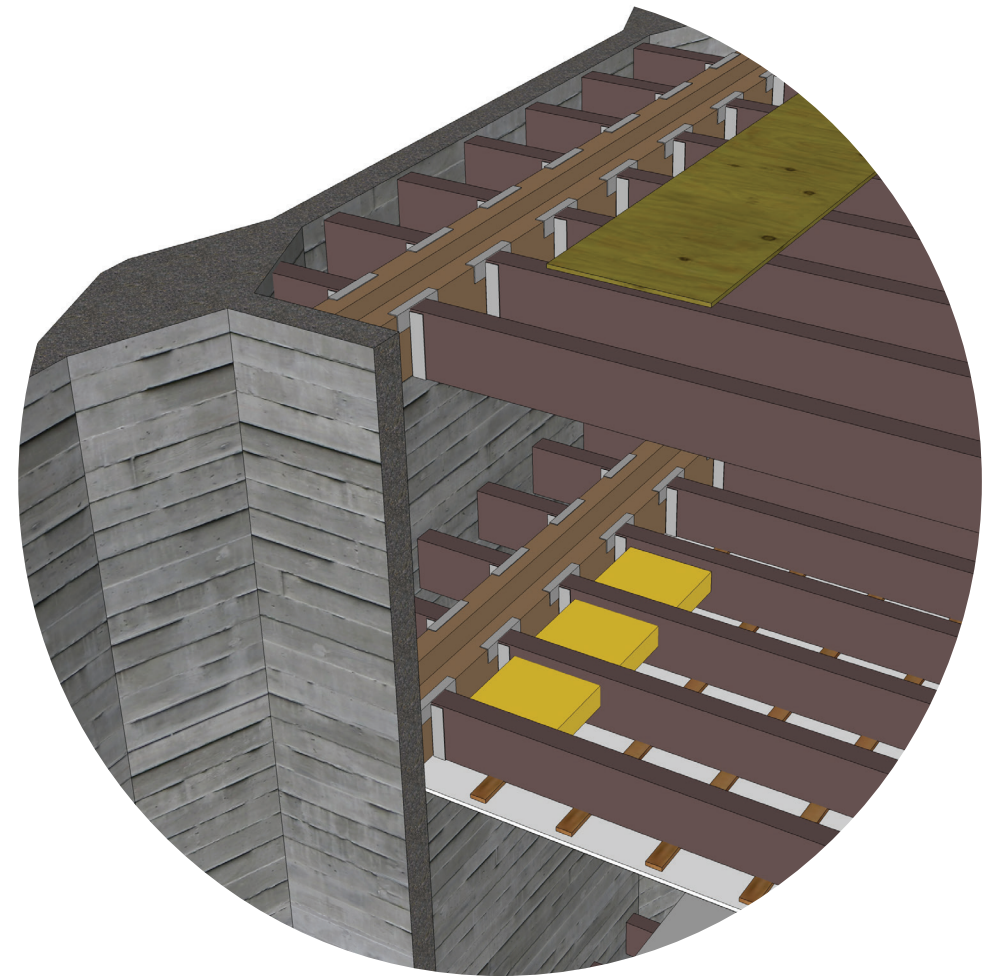
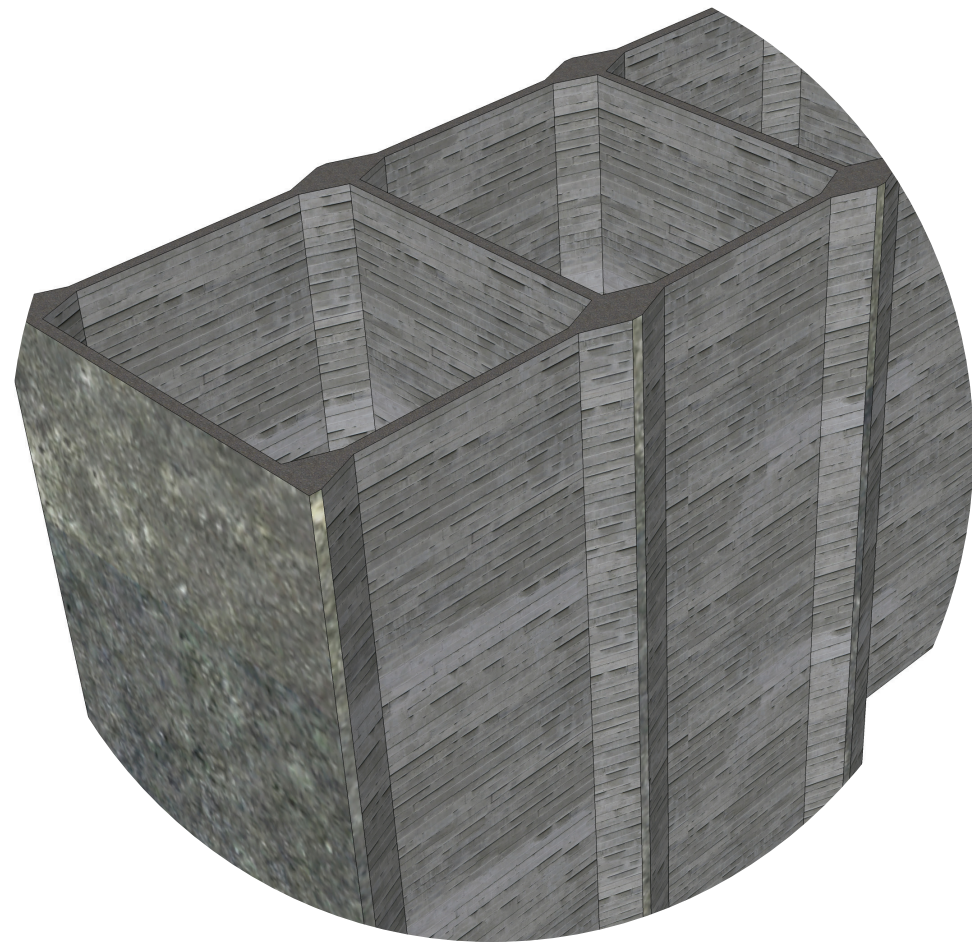


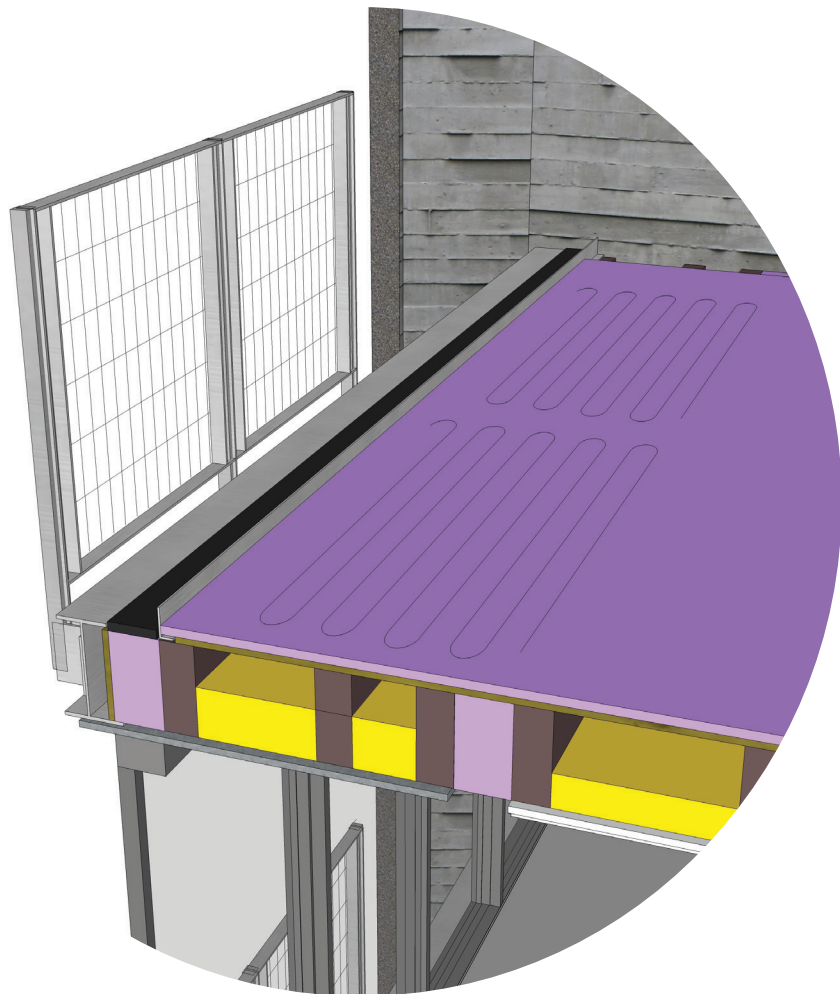
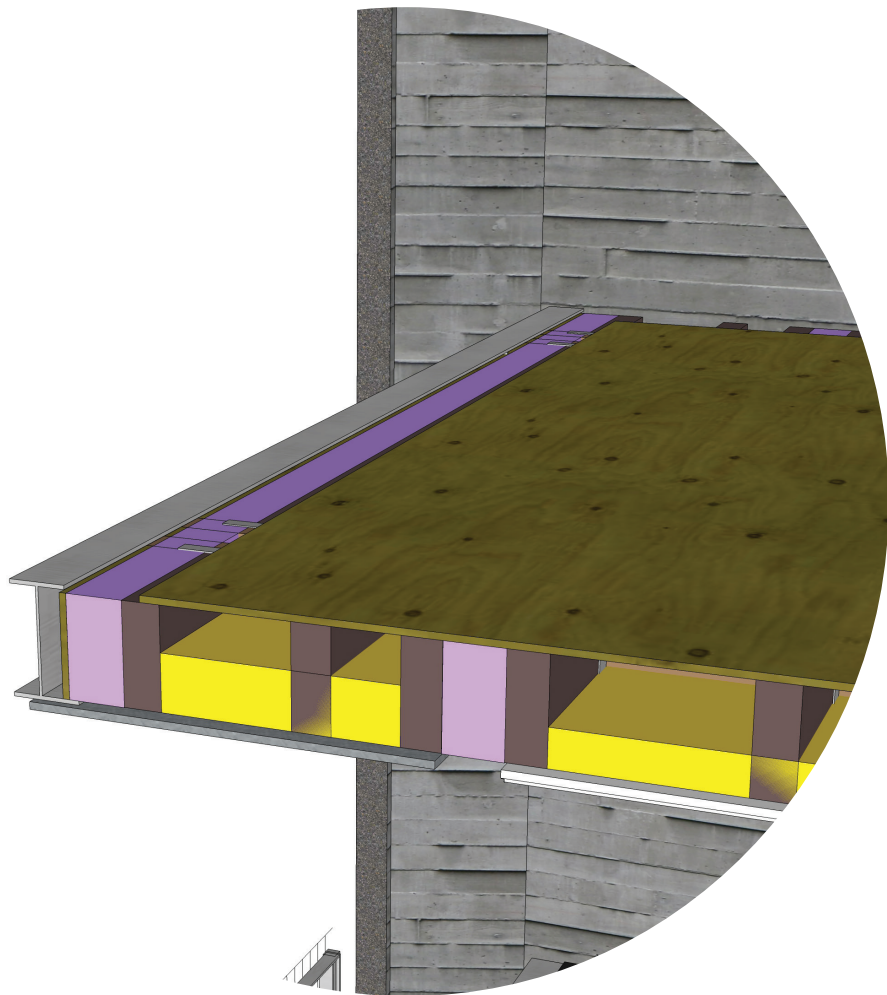
A
B

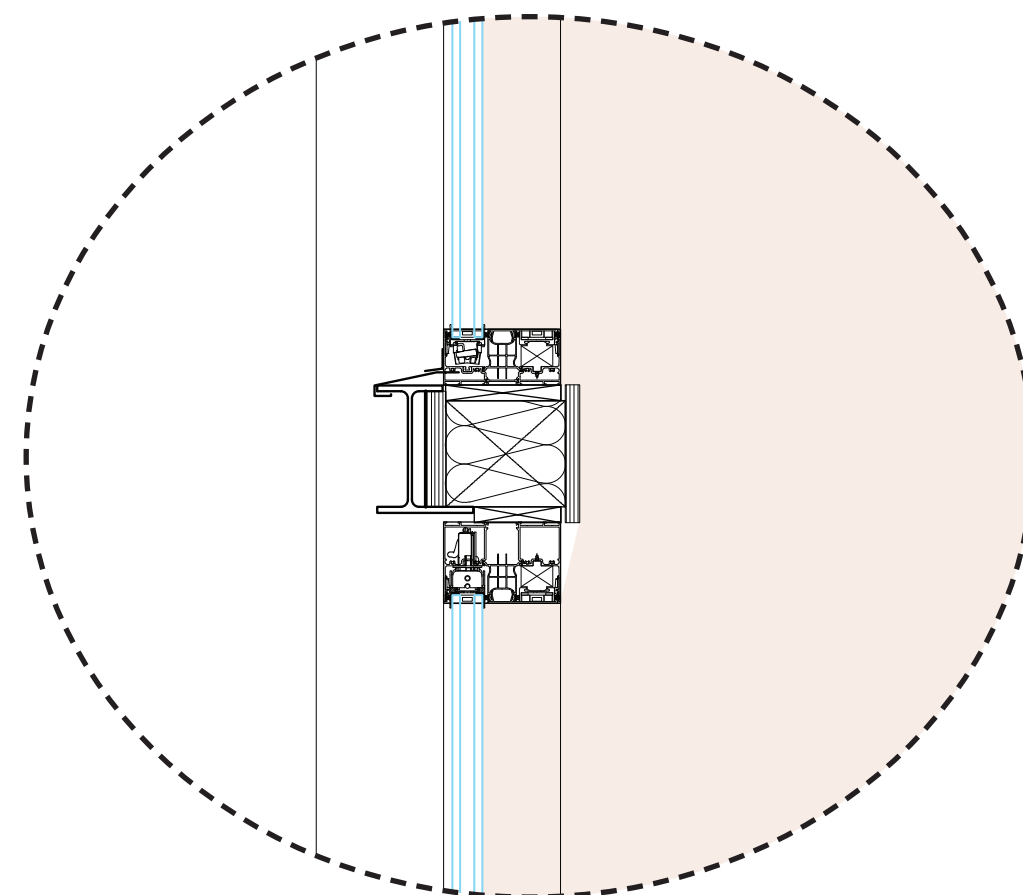
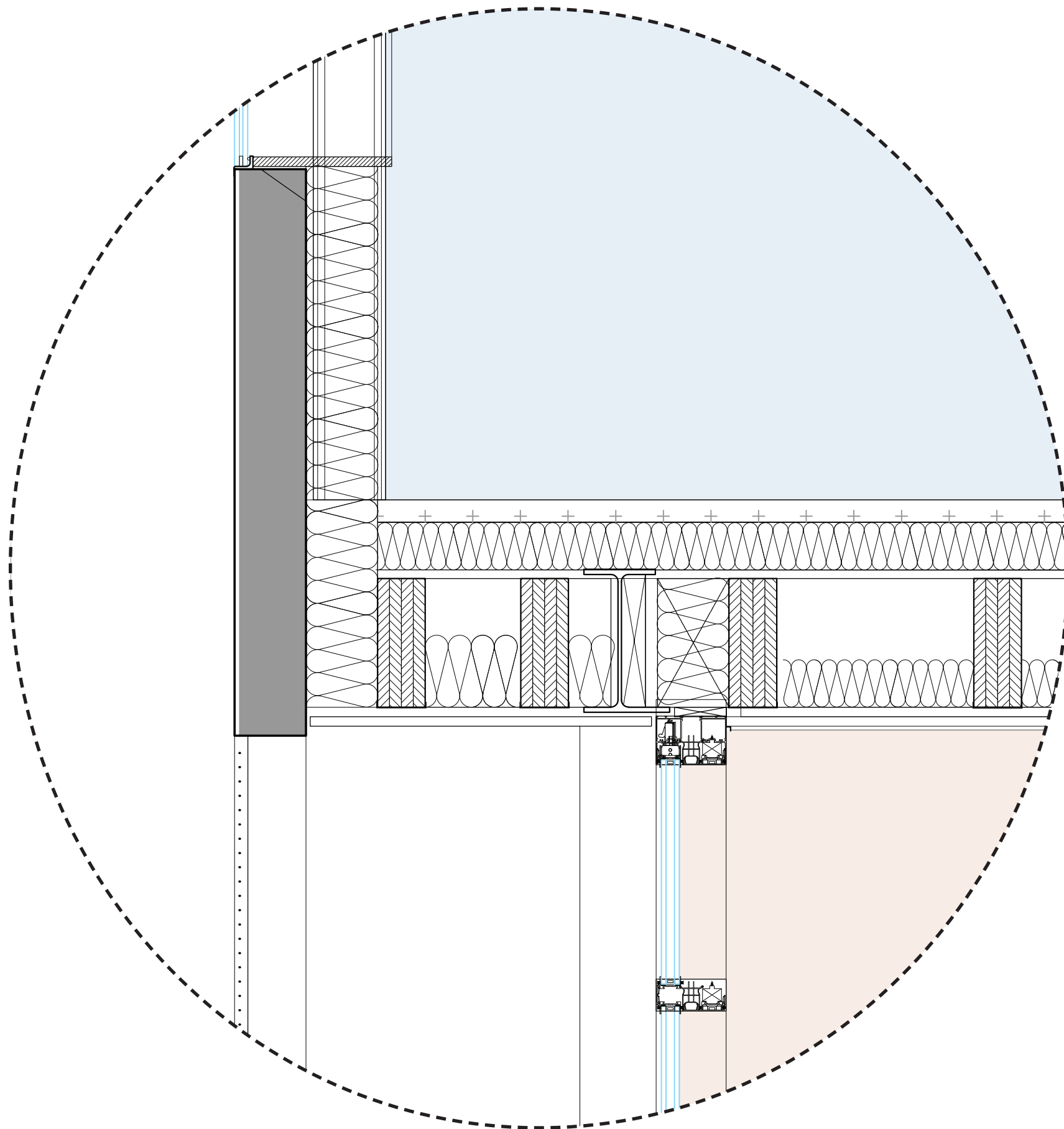


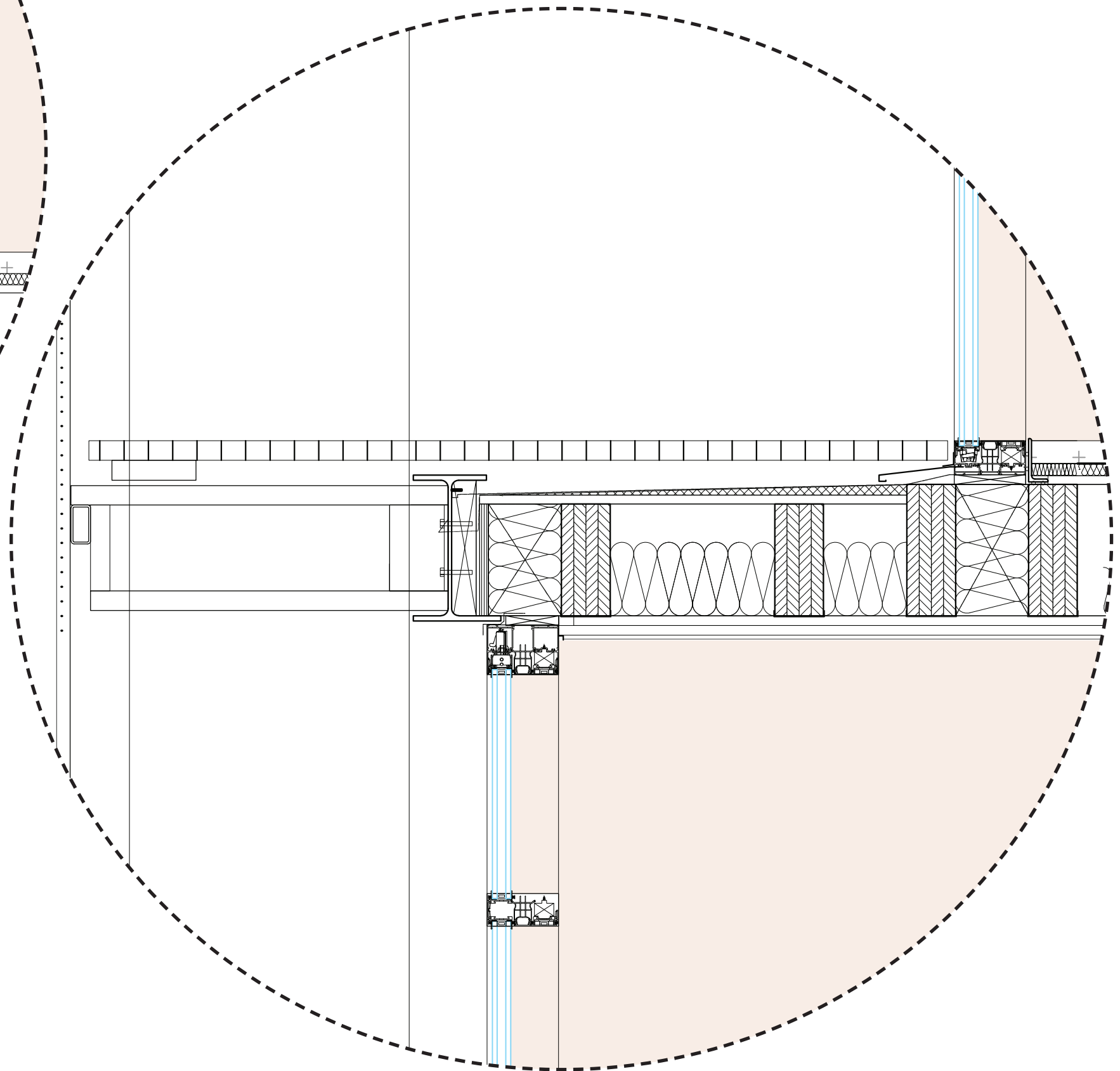
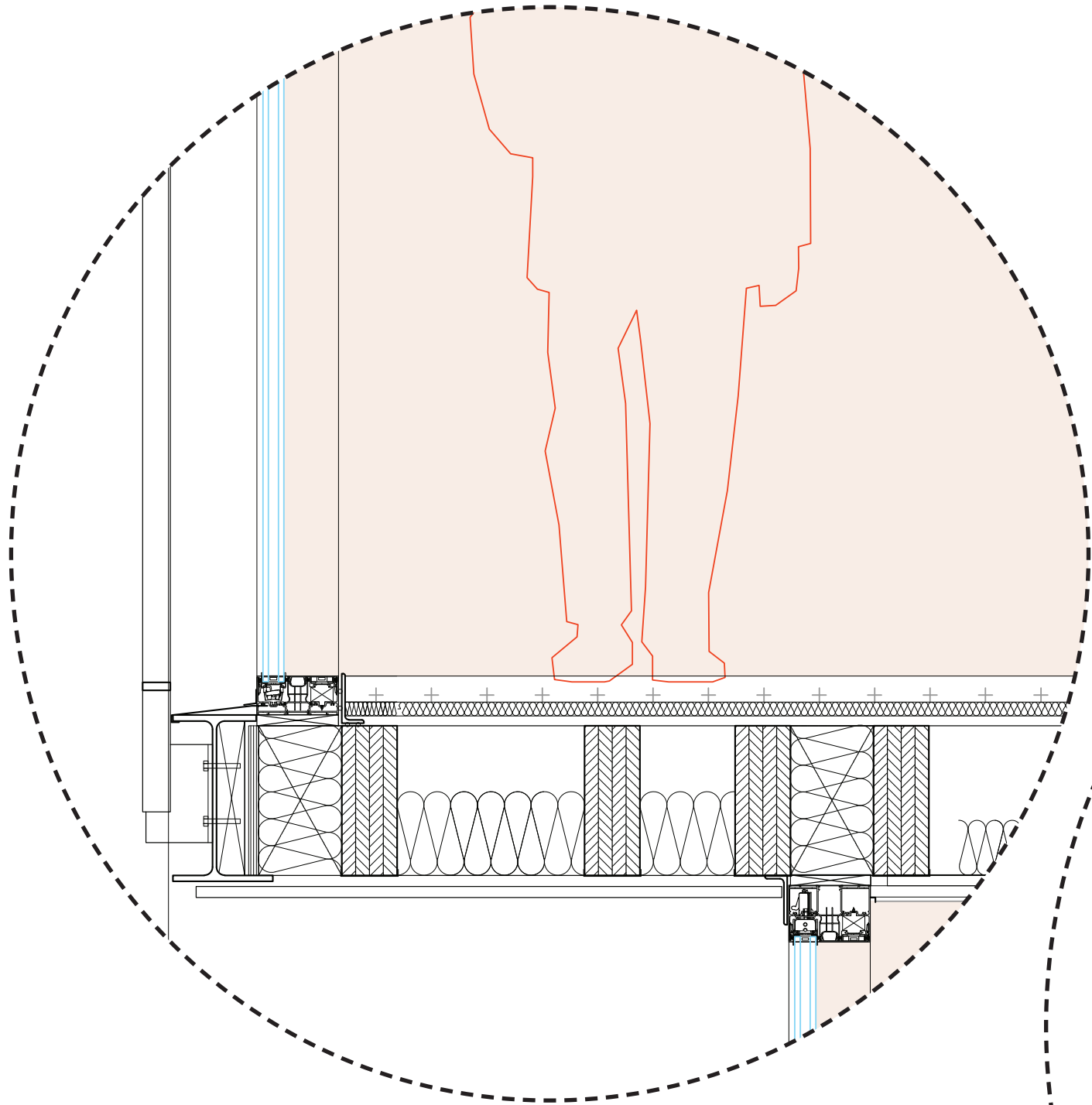


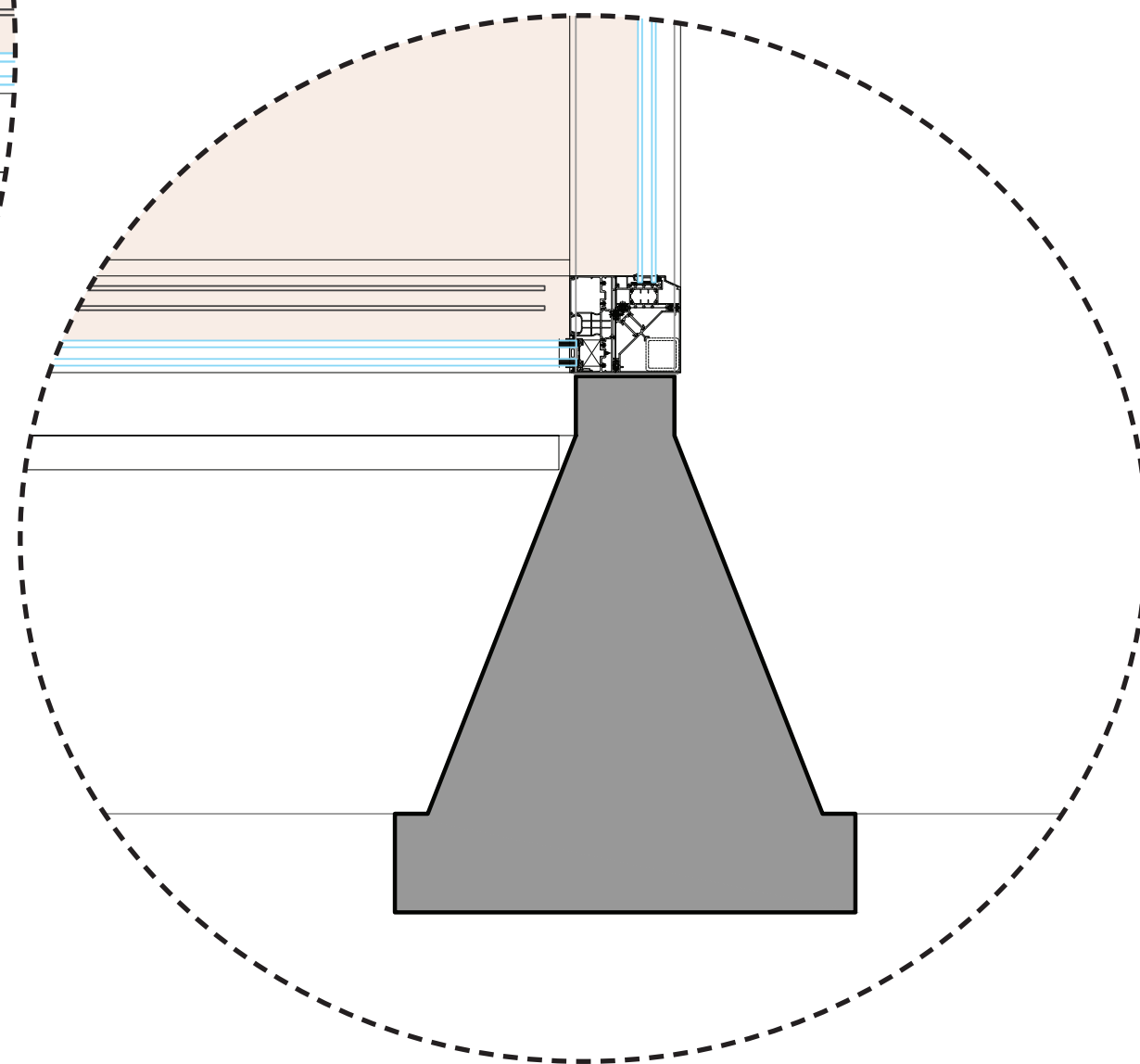
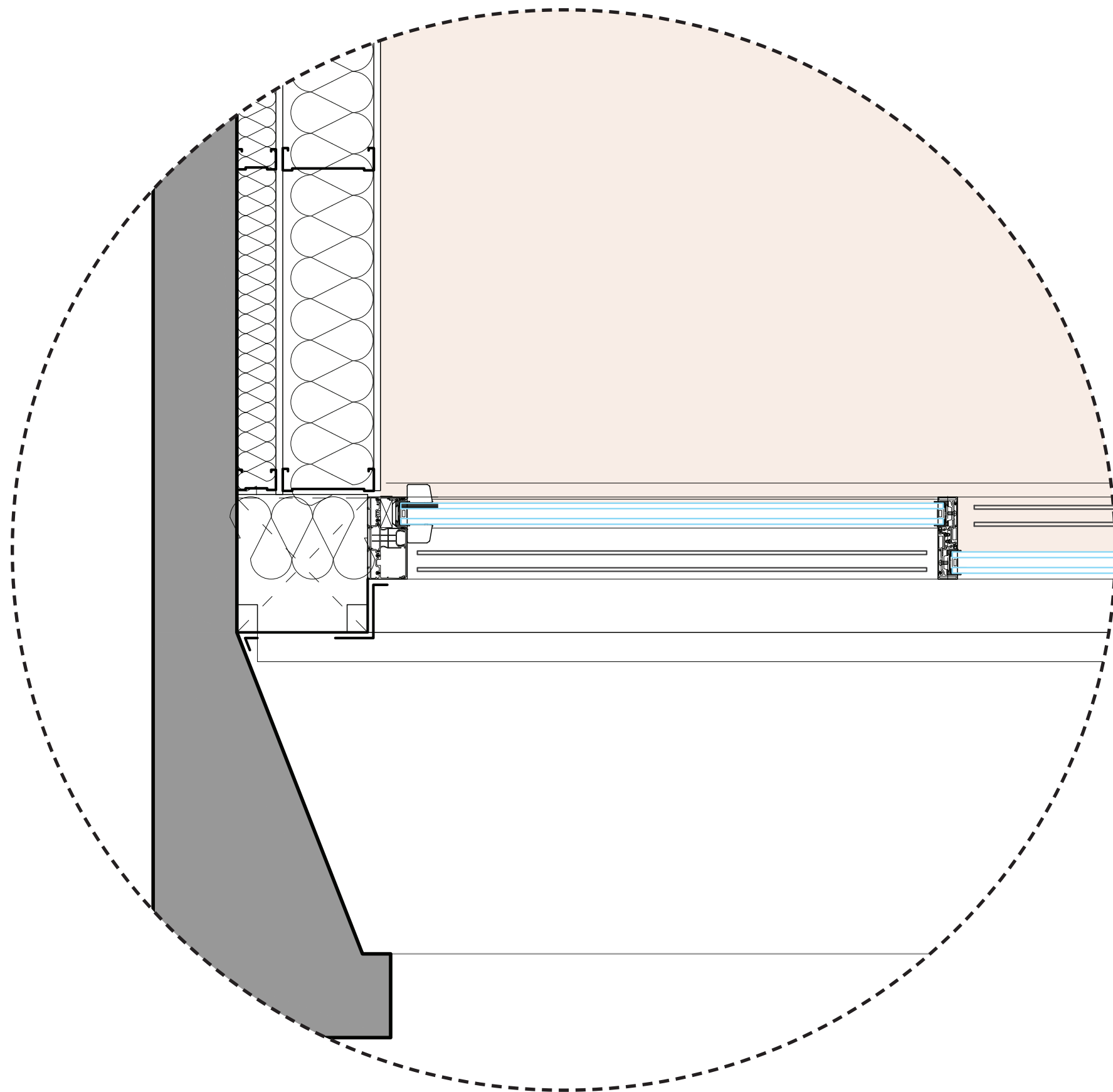


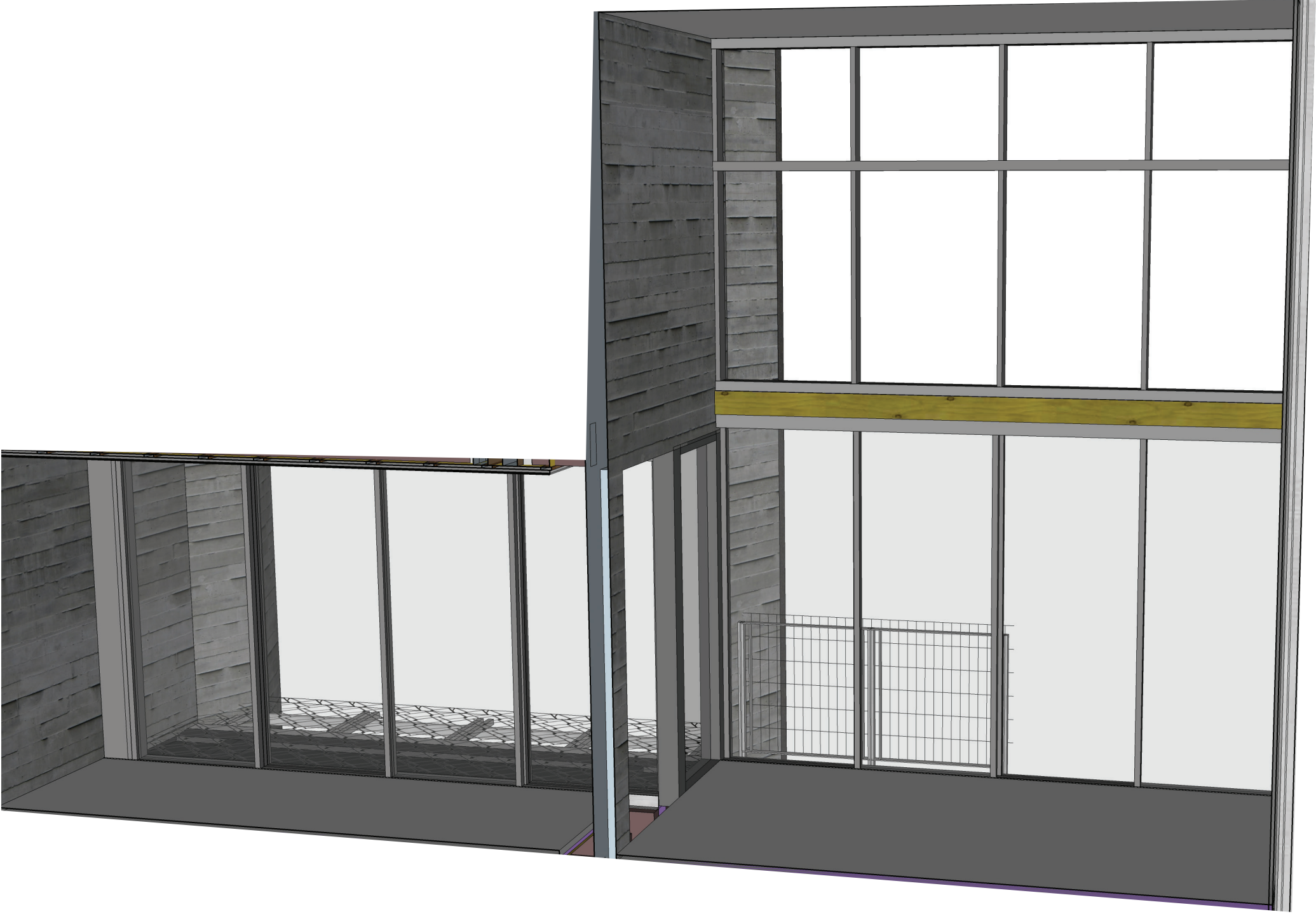


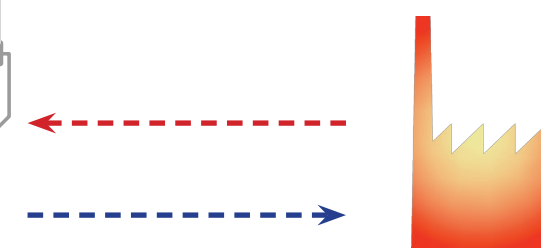
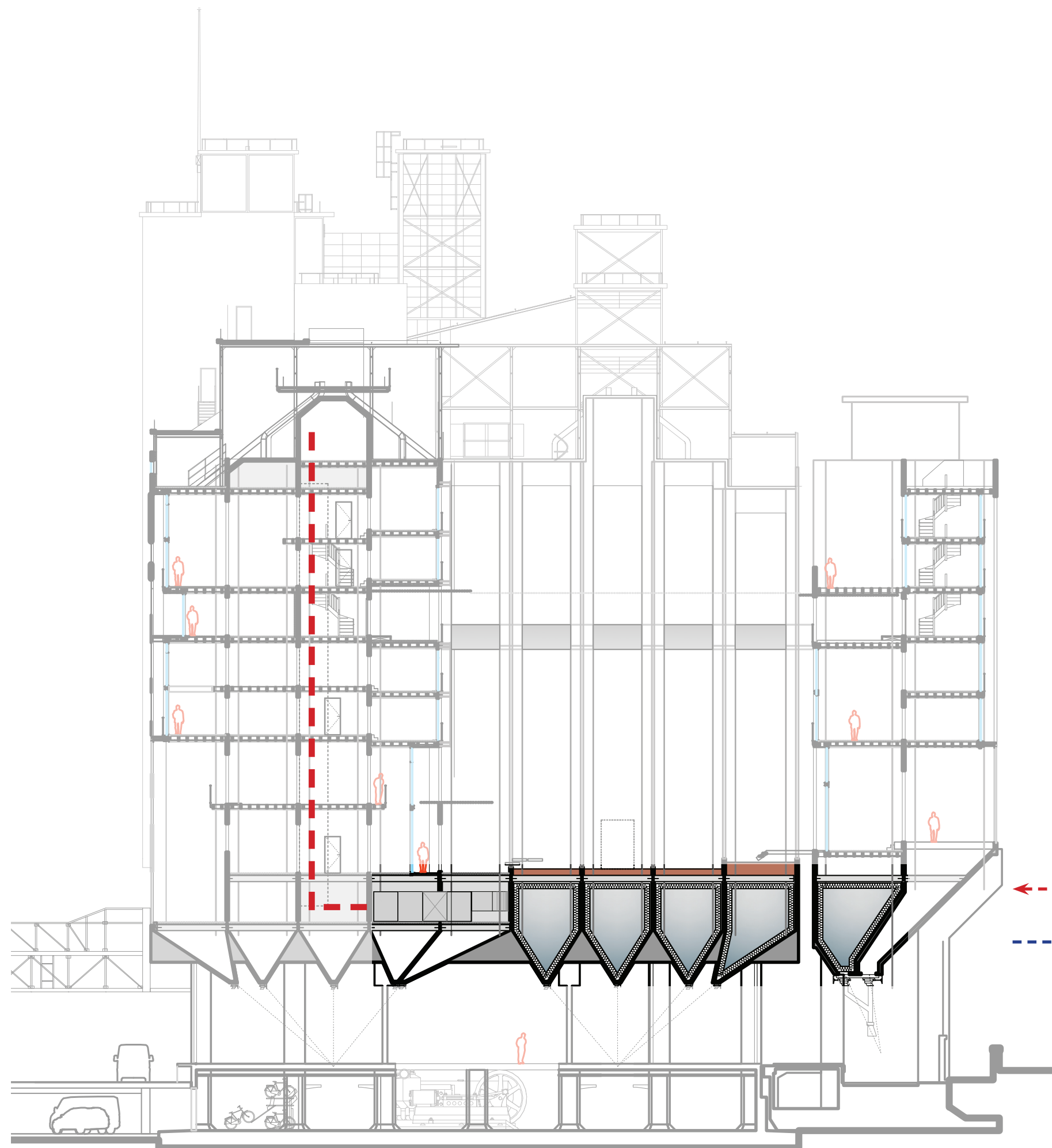




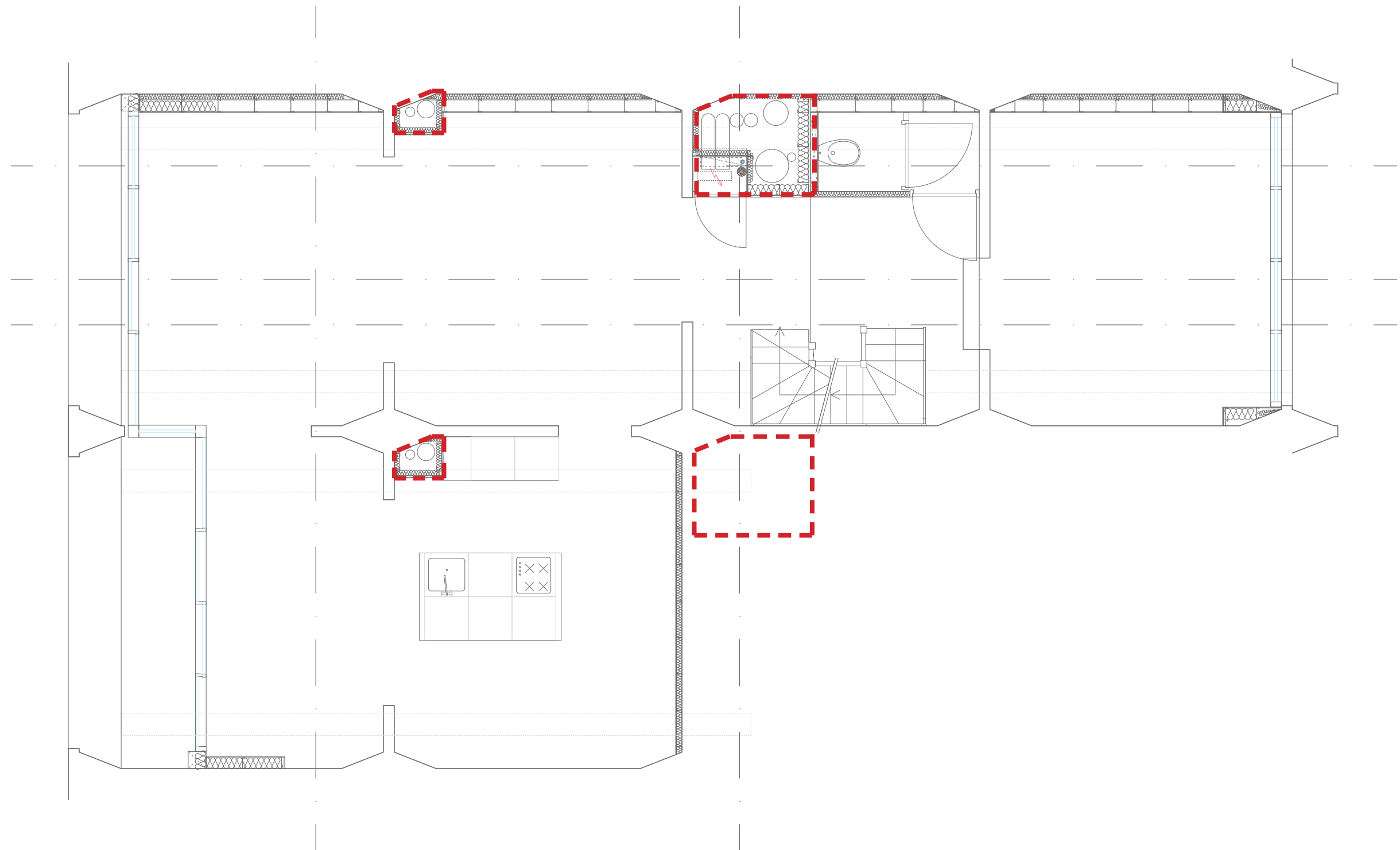








AVR Rozenburg



Conclusion

To transform this Maassilo complex into a urban silo I found the logic system of the grain storage Machine

Use the shaft as an transportation node

Use the silo as measurement from the ground floor till the attic

The Maassilo can improve the social sphere in the direct context



Reflection

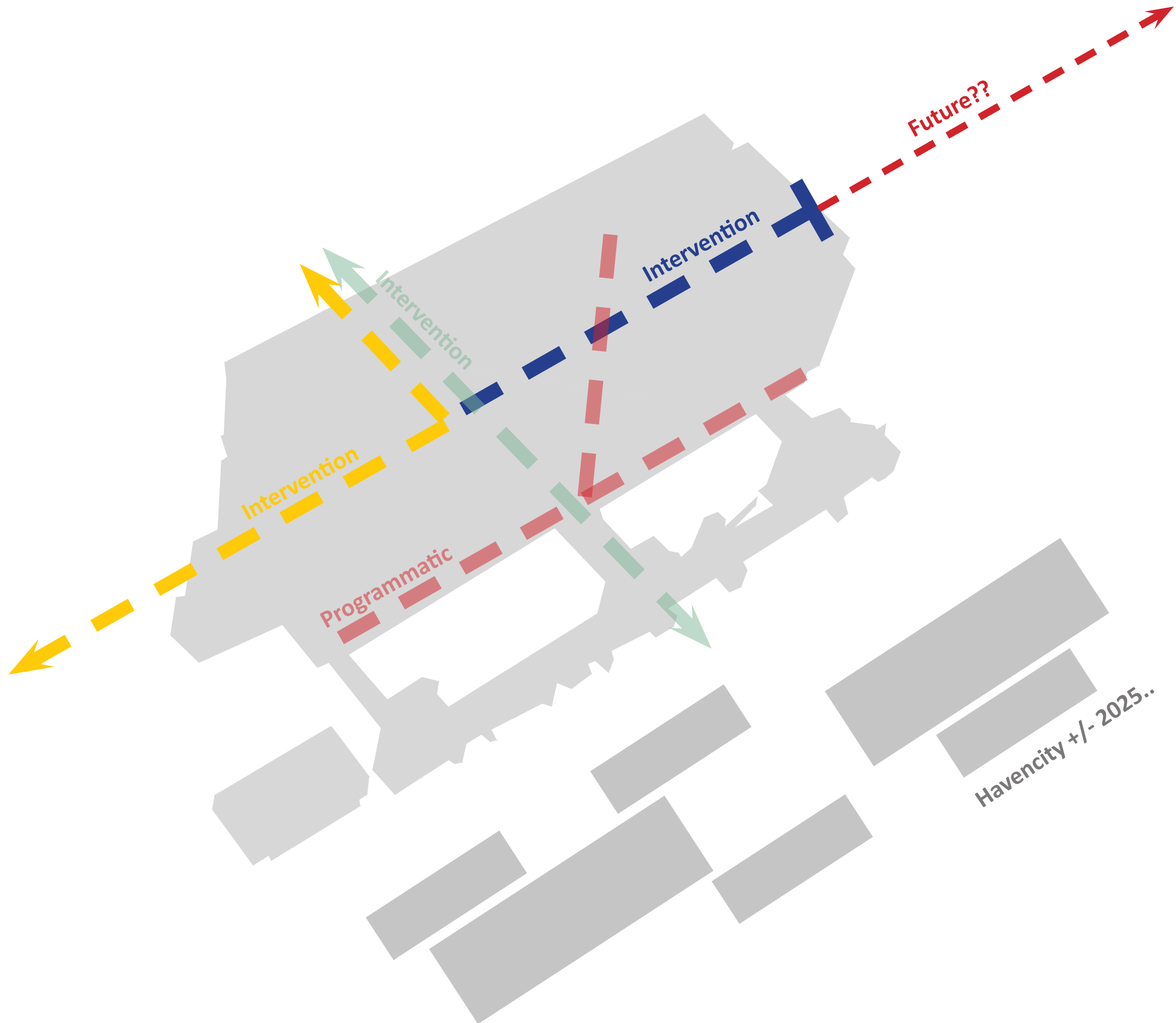
Questions?

Planning



① 2018-2023

② 2023



3

2024

4

>2025