

An aerial architectural rendering of a city. The central focus is a large, multi-story building complex, likely the national library of the Netherlands, highlighted in a light green and white color. The surrounding city is rendered in a muted, greyish tone, showing various high-rise buildings and urban structures. The overall scene is viewed from a high angle, looking down on the city.

BREAKING THE ICE

**Reimagining the national library of the Netherlands (KB):
enhancing informal learning for the local community**

Introduction



Koninklijke Bibliotheek (KB), the national library of the Netherlands

Google Map, 2025



Site Functions

Google Map, 2025



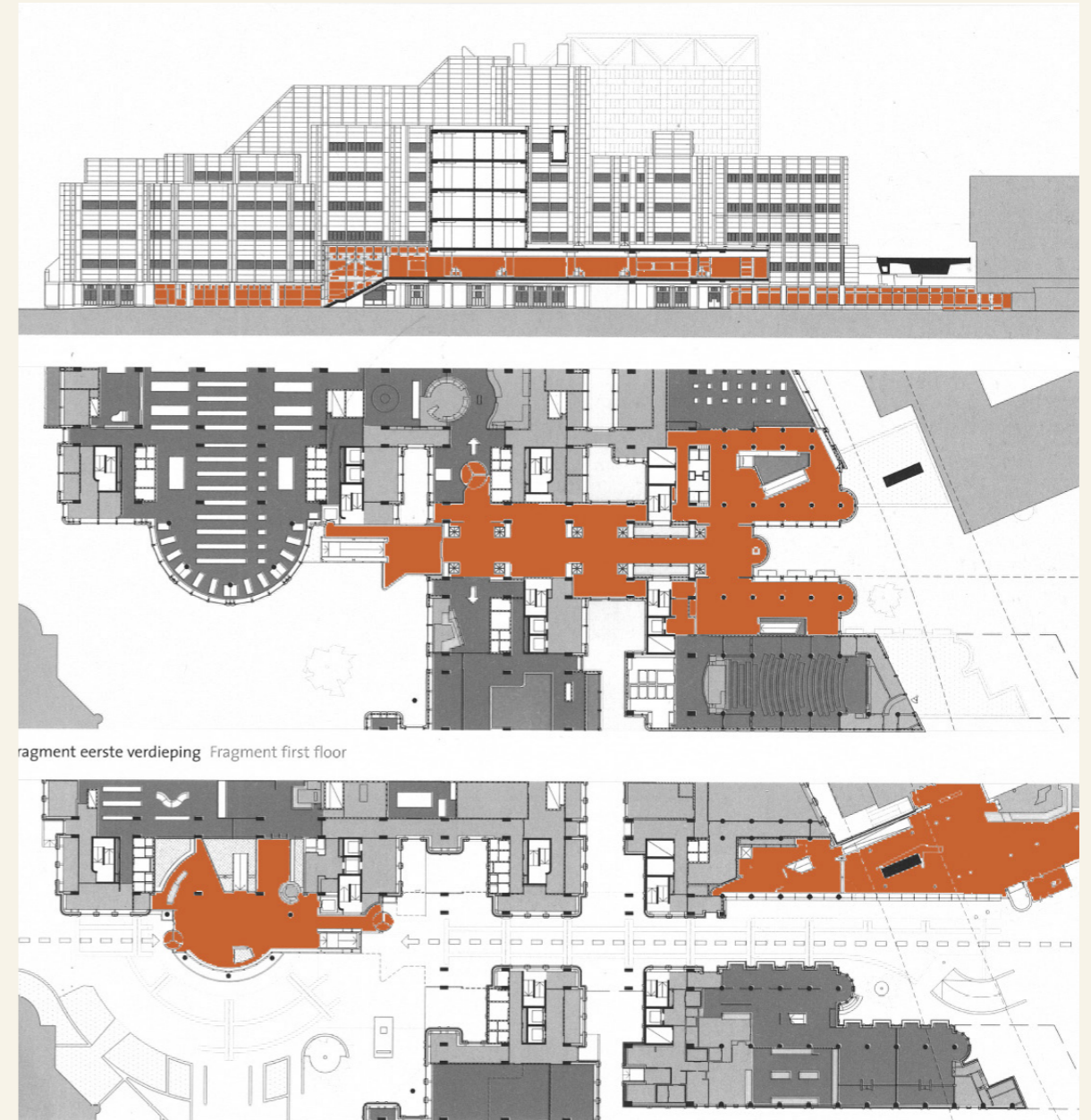
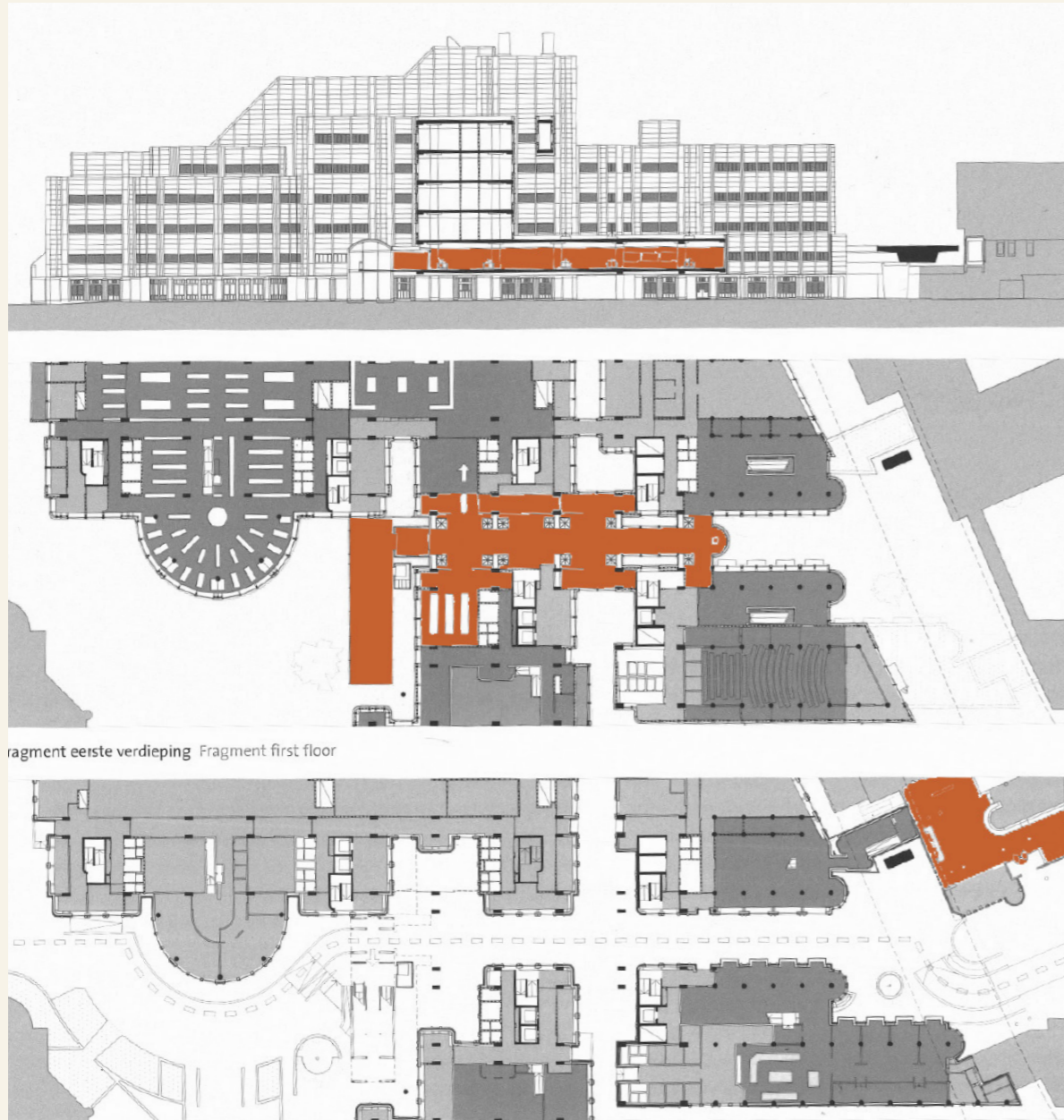
KB's Identity in 20th Century

Overview of KB, 1997, Cautious Dynamism



KB's Identity in 21st Century

Facade of depot expansion, 2006, Cautious Dynamism



Section, First Floor, Ground Floor

1982, *Cautious Dynamism*

2007, *Cautious Dynamism*

*“ KB aims to make the National Library collection visible, usable and sustainable for **all Dutch people**, for any purpose... We enable **everyone to read, learn and do research**... We approach changes and developments actively and with optimism. Our 3 guiding principles are: **value to society is central**, digital at the forefront, thinking in networks.”*

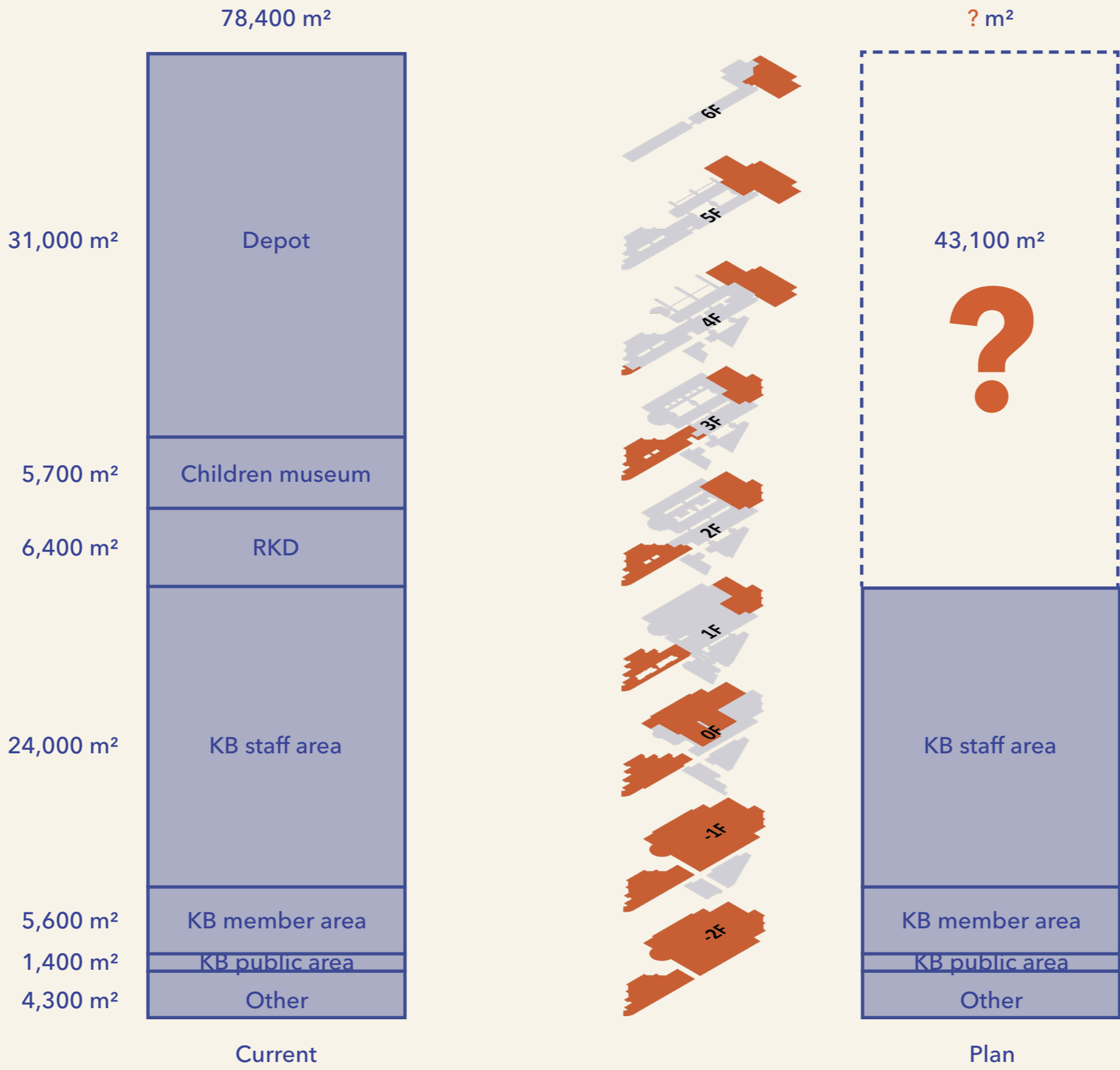
— Mission of KB from website



NOT accessible



NOT welcoming

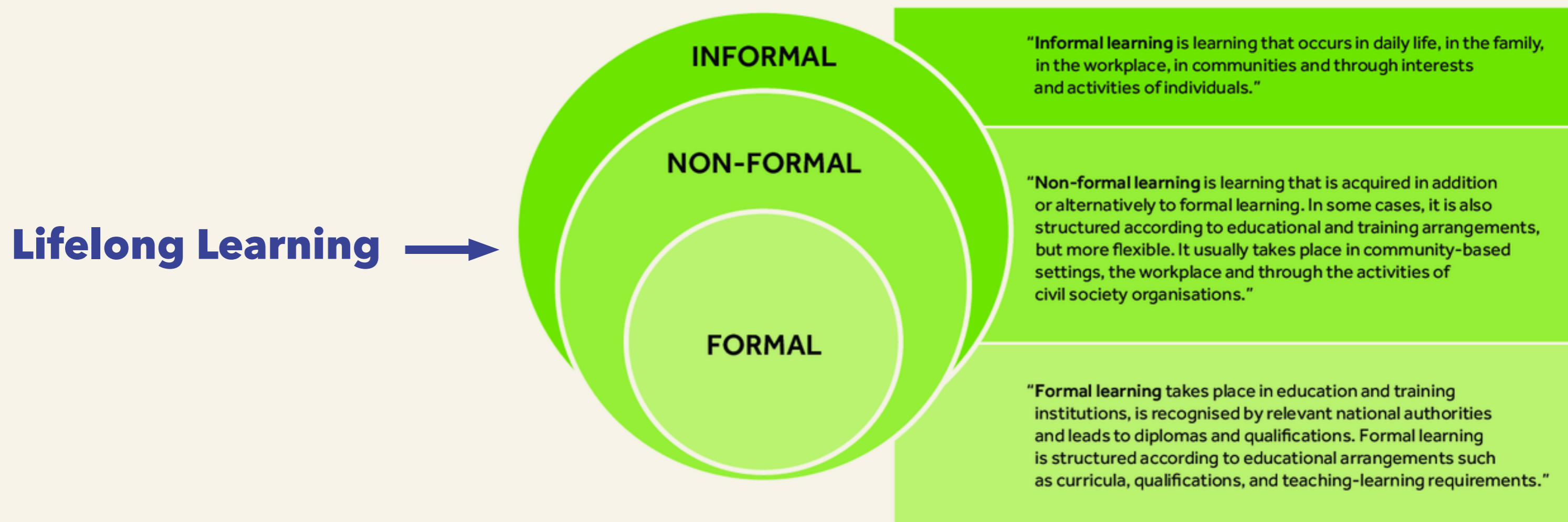


Research

Library is an important place for informal learning.

Informal learning, referring to learn that occurs in daily life, workplace, communities through interests and activities.

Informal learning, non-formal learning and formal learning constitute of **lifelong learning**, which is a focal point of dutch policy in relation to innovation, economic growth and social-cohesion.



Type

Definition



self-directed learning

learning initiated and regulated by the individual through observation, repetition, and personal curiosity.



collaborative learning

emerges through shared activity, dialogue, and negotiation of meaning among participants.



situated learning

occurs through participation in real-world practices, rather than through formal instruction.

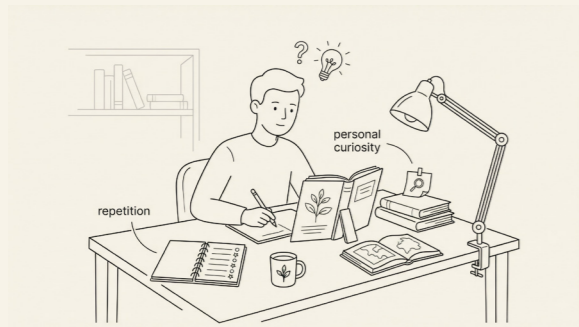


incidental learning

occurs unintentionally as a by-product of everyday activity.

Type

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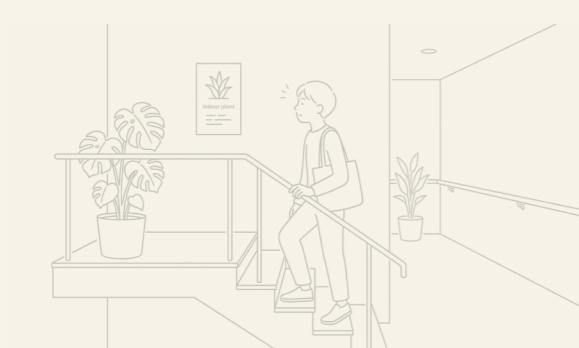
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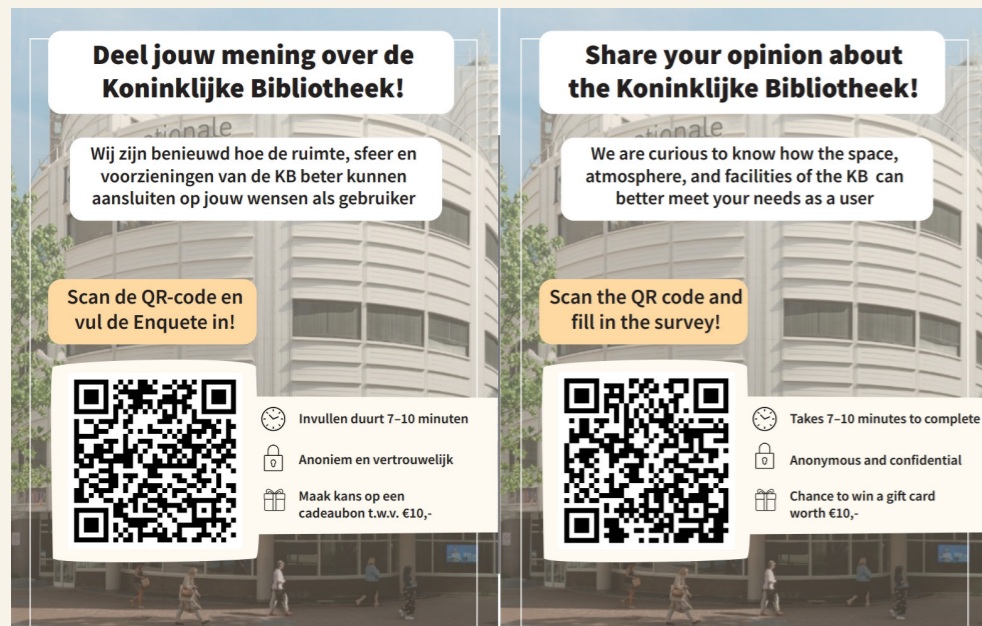
no physical books



demand for different way to get knowledge

“ How can the transformation of the National Library of the Netherlands (KB) integrate more locals by **introducing a variety of informal learning spaces?**”

User group's survey



The survey is mainly made by group of users.

Social media research



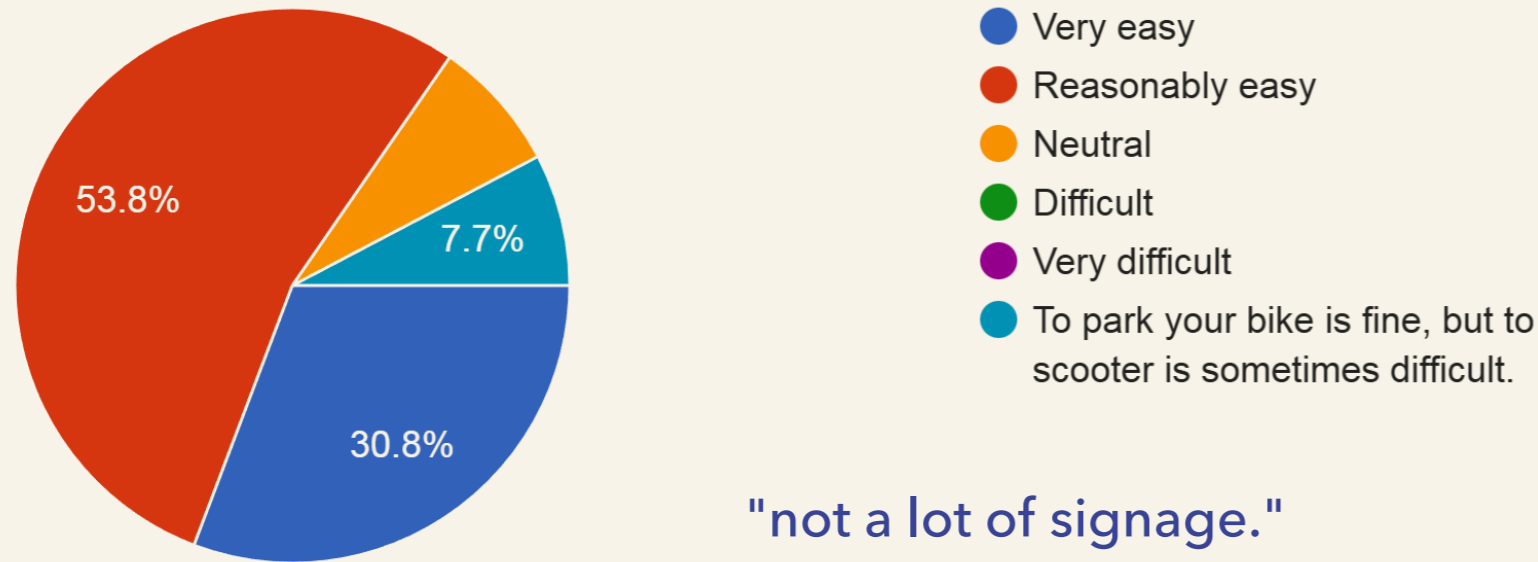
The research is made by group of social media.

Literature and archive



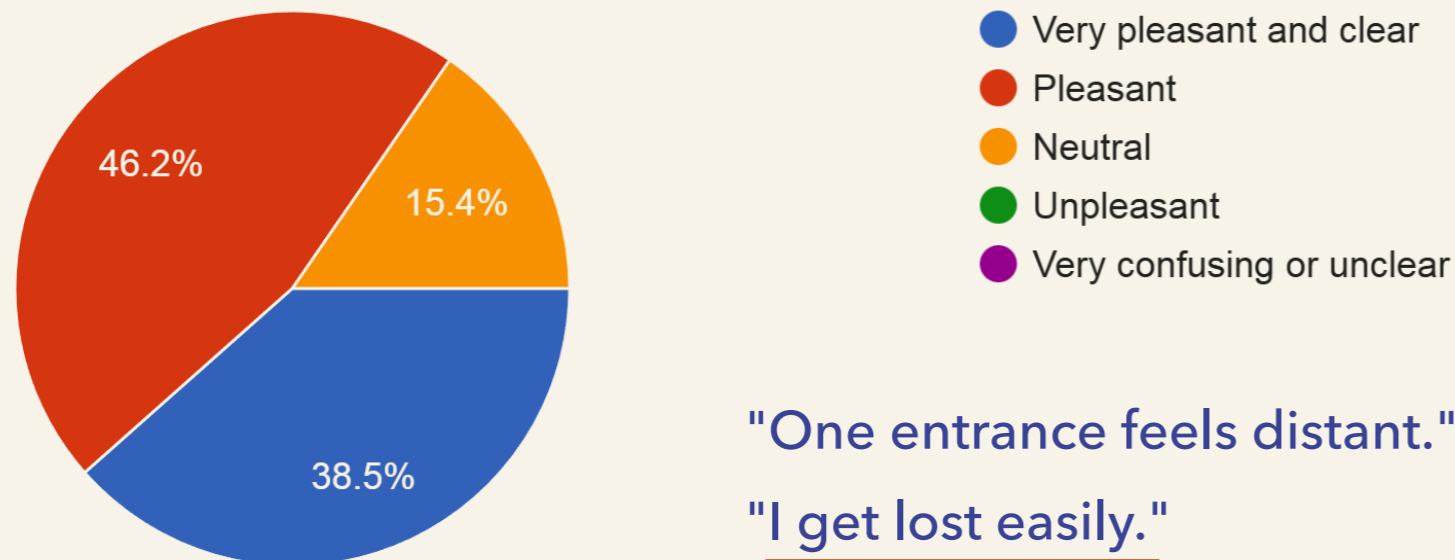
Most respondents were members of KB.

How easy do you find the KB to reach and access?



"not a lot of signage."

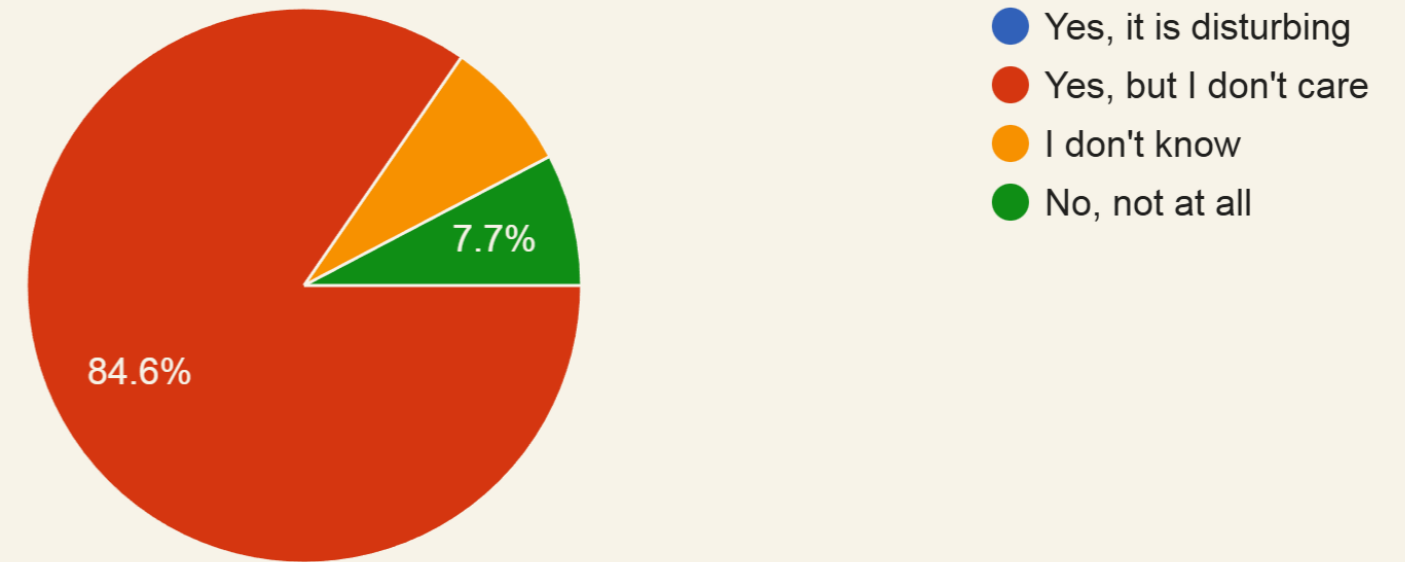
How do you experience the entrance, reception and orientation in the building?



"One entrance feels distant."

"I get lost easily."

Do you feel cut off from the outside world when you are inside the KB building?

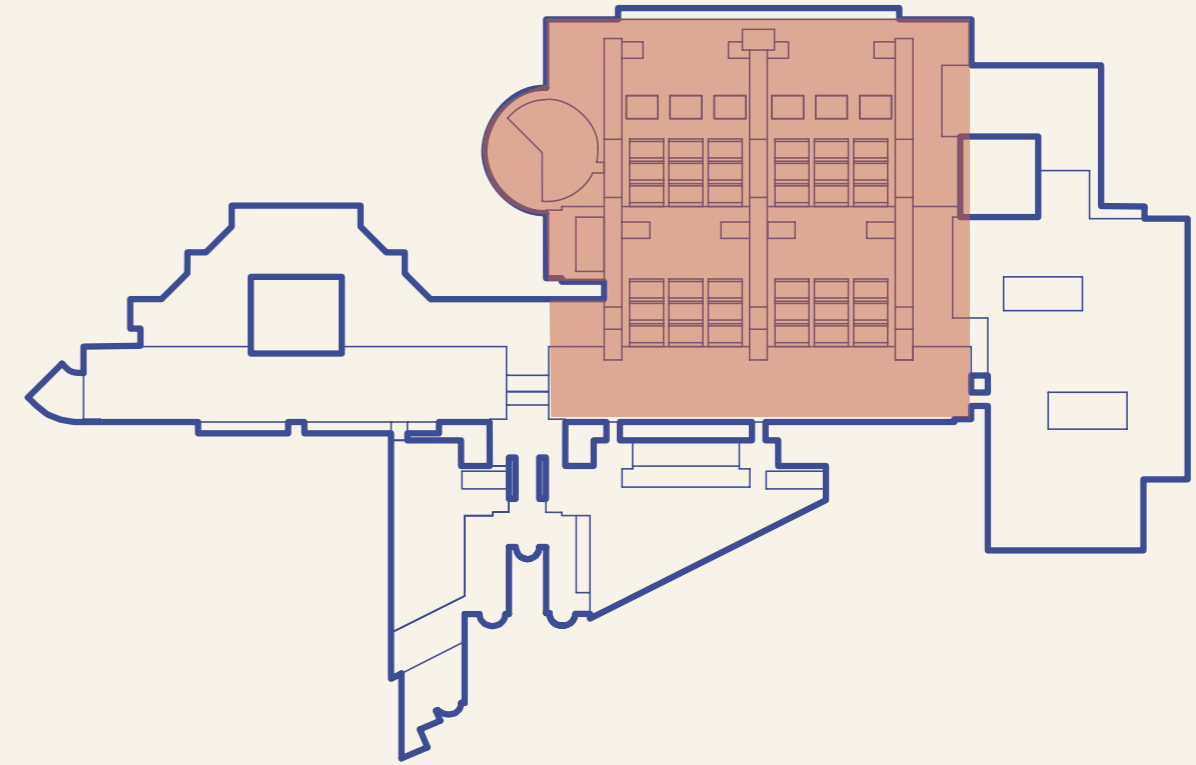
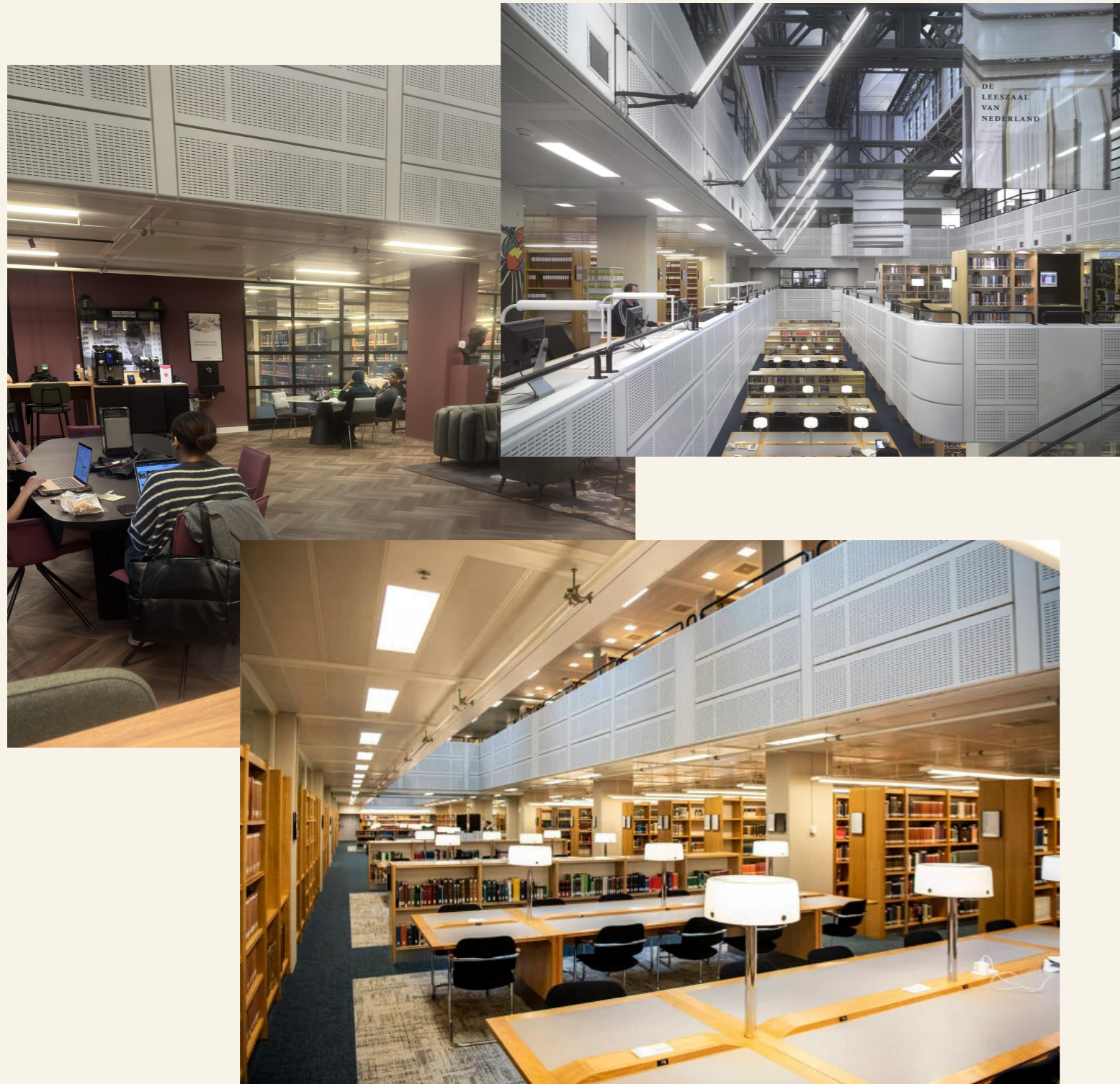


"I think it is better because it can allow you to have more focus on your work."

"Working atmosphere us what I am Looking for. KB provides."

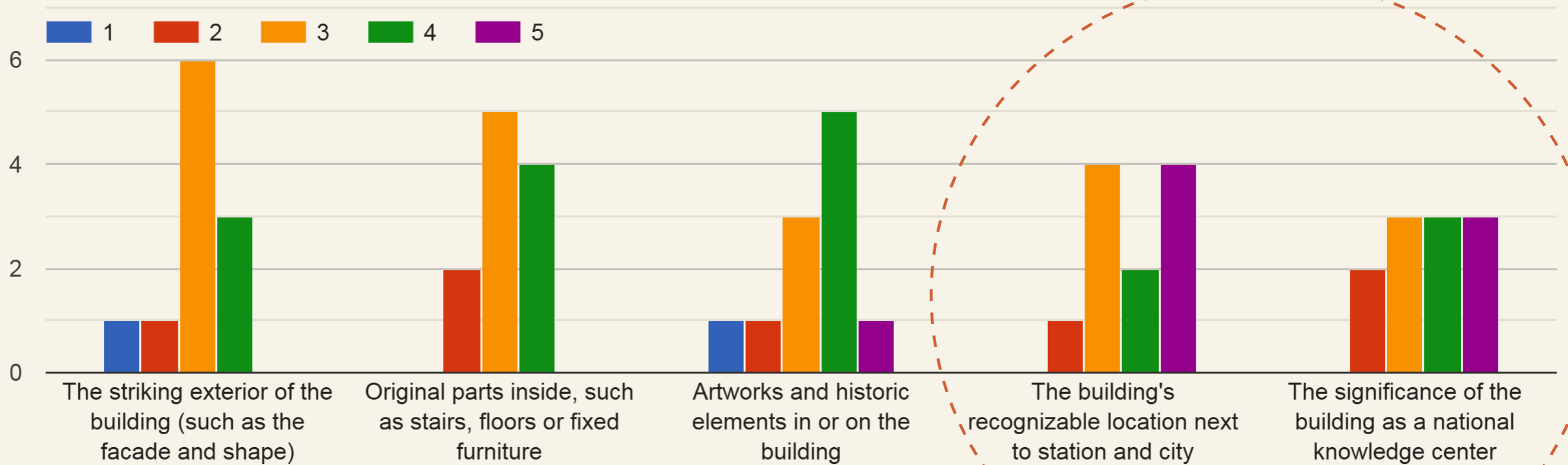
"actually: Yes, and I love it! that's why i come here! it's just me and my work."

Members are satisfied with the existing entrance, reading room, quiet and closed atmosphere.

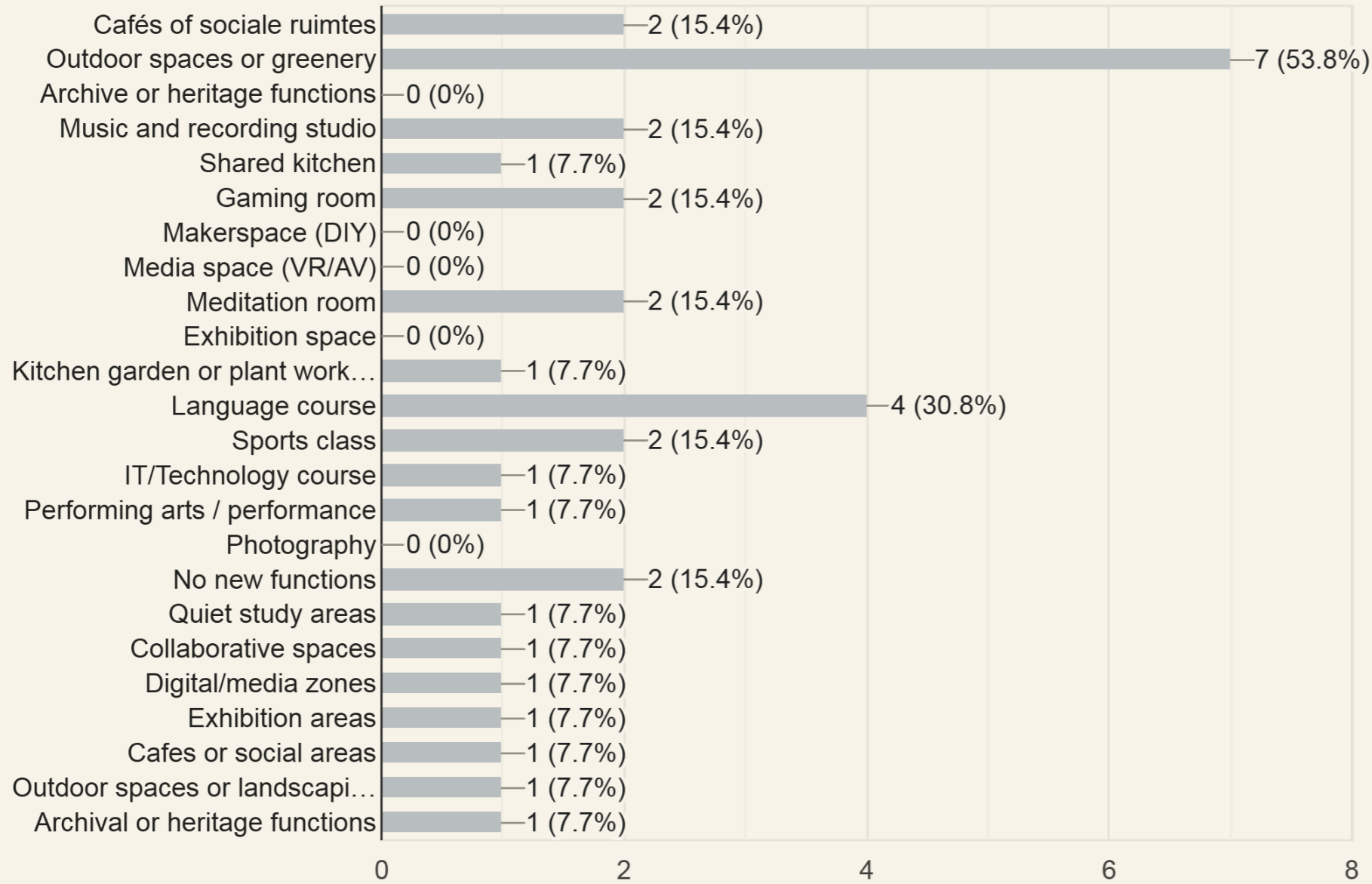


How important are the following aspects for the redesign of the KB?

1 = very unimportant 2 = unimportant 3 = neutral 4 = important 5 = very important



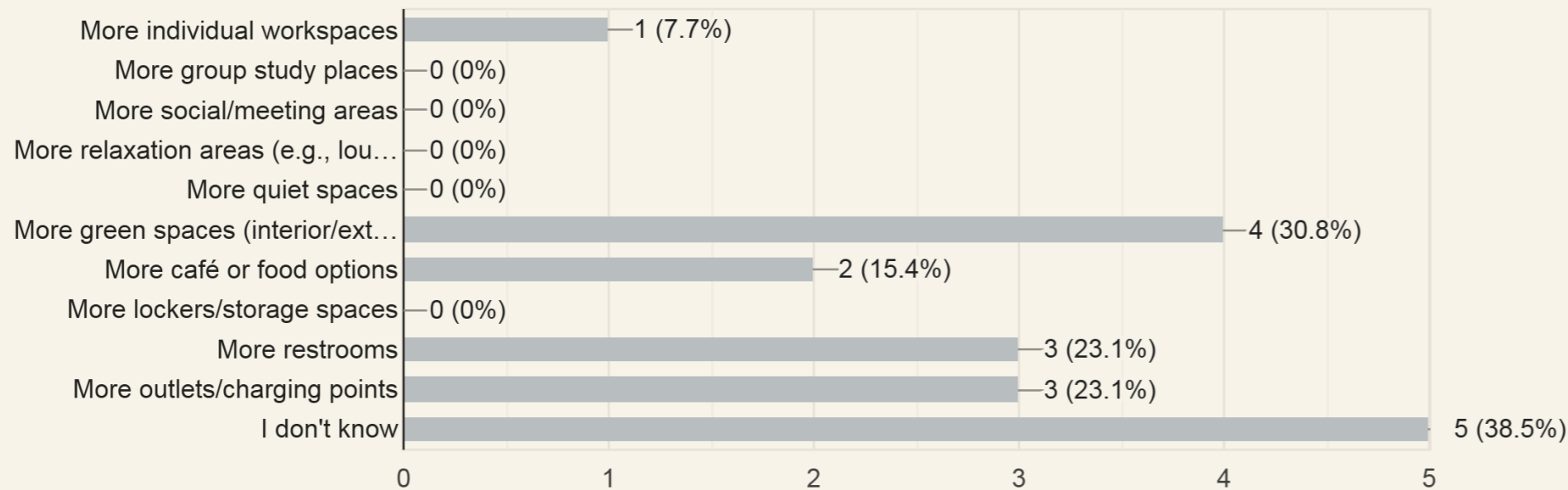
What spaces/functions would you like to see in the redesigned KB?



What features are important to you in the KB?

What spaces do you usually use in the KB?

What are you missing in the current spatial arrangement of these spaces?



Programmatic priorities



Instagram and website



Instagram is KB's platform for showcasing behind-the-scenes workflows and its exquisite book collection.



Workshop

Workshop onderzoeken: kennismaken met digitale bronnen en zoeksystemen

Over dit evenement

- KB, kenniskwartier
- 15 januari 2026
- 10:30 - 12:00

Aanmelden

Wil je weten hoe je snel en effectief betrouwbare informatie vindt voor jouw onderzoek? Meld je dan aan voor een workshop onderzoek doen. Tijdens deze interactieve sessie leer je werken met de KB-Catalogus, WorldCat Discovery, Delpher en DNL, en het webarchief. Je oefent met zoekhulpmiddelen en filters en leert handige tips om jouw onderzoek een vliegende start te geven.



Over dit evenement

- KB
- 16 januari 2026
- 14:00 - 17:00

Aanmelden

21 August 2023

News

KB launches video series: Journey of a medieval manuscript



For its 225th birthday, the KB created a special video series about the journey a medieval manuscript undertakes when it reaches our library. The 6-part series visits various involved experts and thereby provides a glimpse of what happens behind the scenes at the KB.

02 August 2022

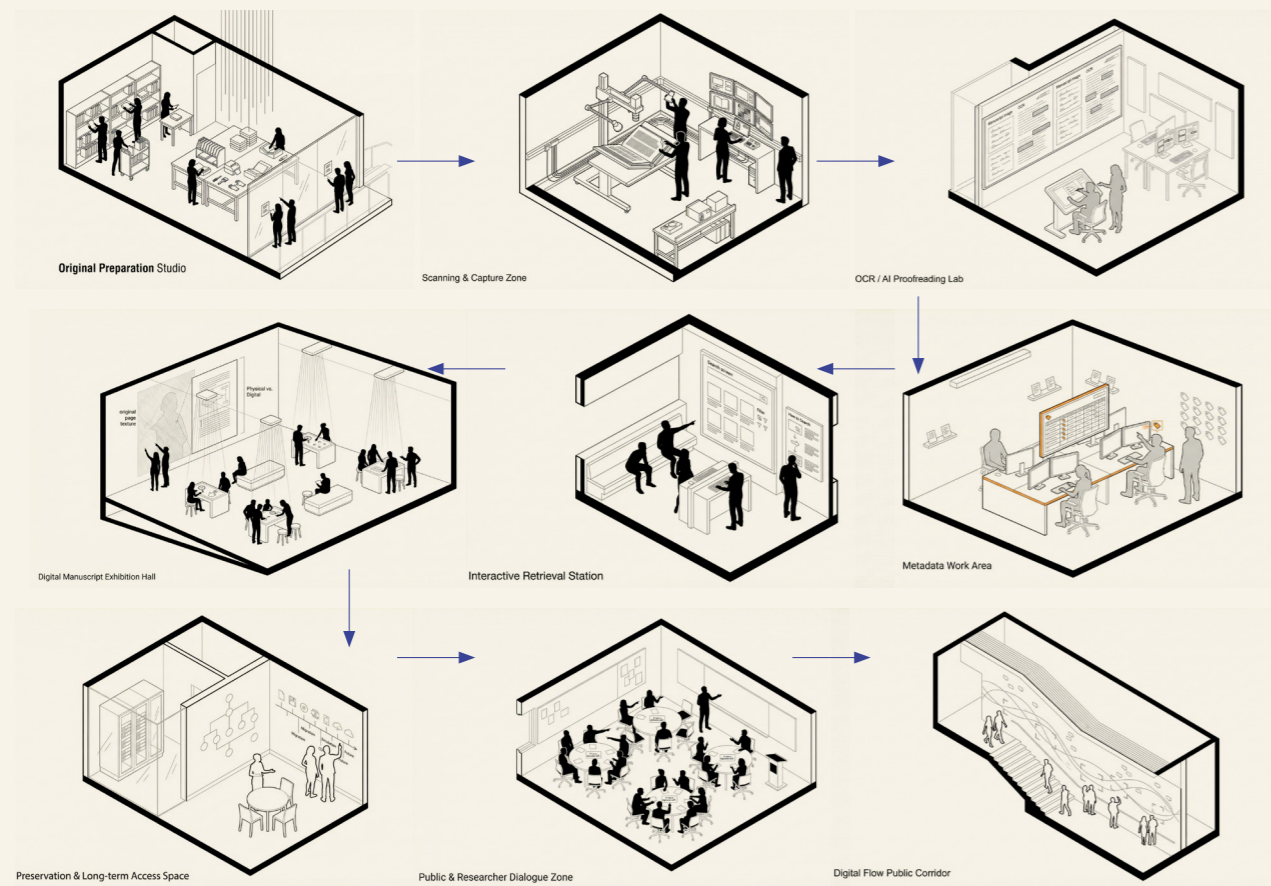


17th century newspapers in KB collection now easy to read online

What was written in 17th century newspapers? We now know thanks to a collaboration between the KB and the Dutch Language Institute.

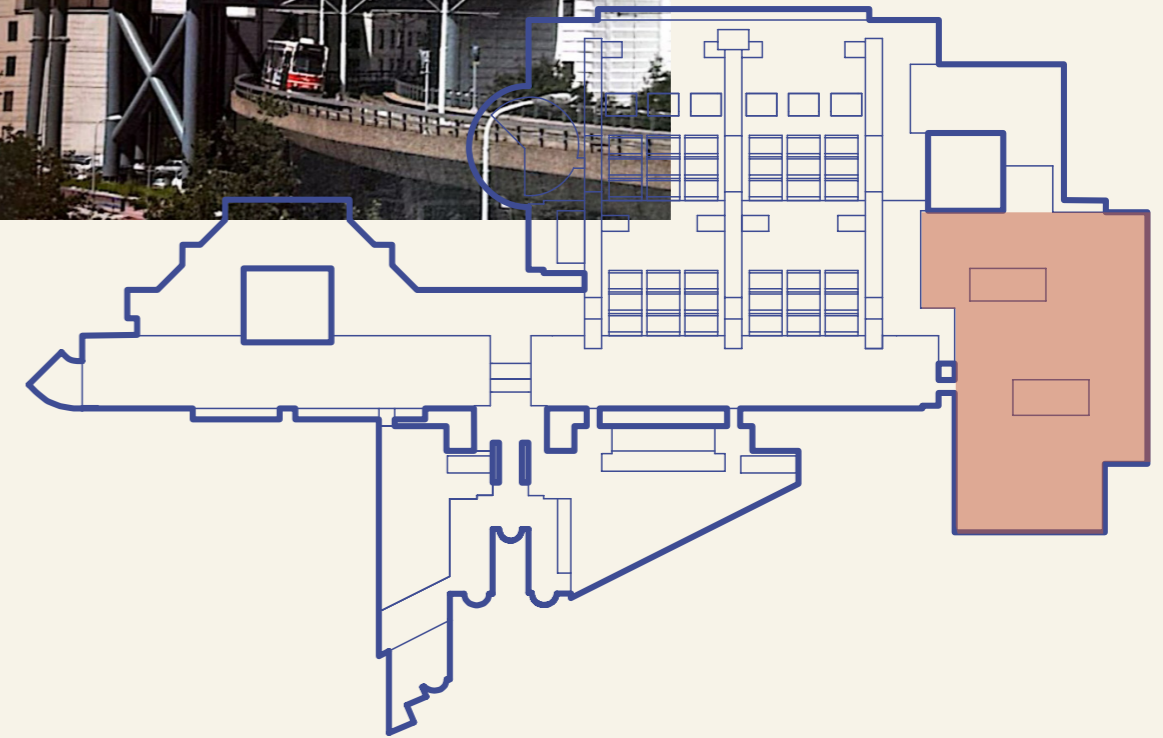
KB lectures and events on digitalization

Propose new program



situated learning

Digital Manuscript Museum



old, texture, material

information, meaningfulness

information, meaningfulness

form, beauty, rhythm

AGE

HISTORY

ART

USE



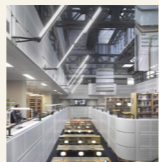
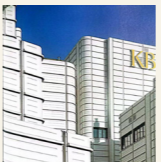

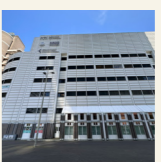
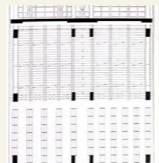


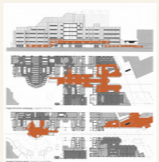
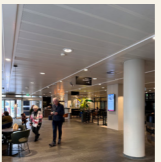
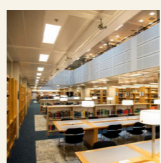

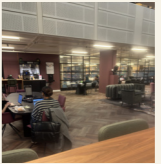

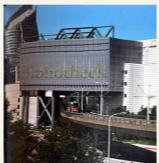
NEWNESS

RARITY

AESTHETIC

CONFLICT

OTHER

CONTEXT									
SITE			 two corridors has to be kept for slow traffic					 invisible entrance & outstanding entrance	
SKIN			 atrium create a suprising inner world in KB			 detail of corner, not right angles	 rhythm of aluminium panel and bricks	 closed facade & attractive facade	
STRUCTURE			 dimensional grid follows the dimensions of bookcases	 steel structure over tram track					
PLAN			 human-scale design, confusing route from entrance to central hall	 higher connection of the ground floor				 quiet space & welcoming space	
SURFACES							 color, aluminum panel		
SERVICES				 digital archive service				 membership & everyone	
STUFF									
SPIRIT	 iceberg in the city huge and closed				 cool grey box hanging over the tram track				

preserve and conserve
 redevelopment
 opportunities and new values

USE

NEWNESS

SITE



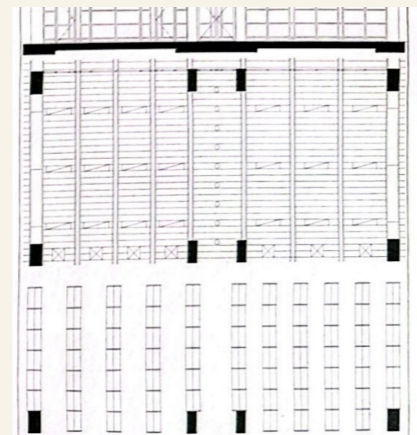
two corridors has to be kept for slow traffic

SKIN



atrium create a surprising inner world in KB

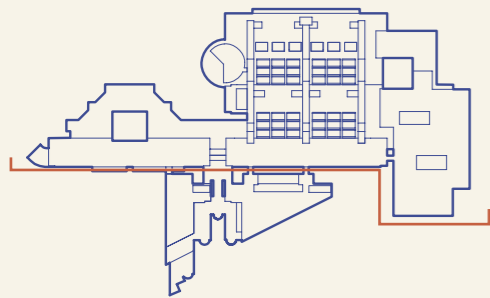
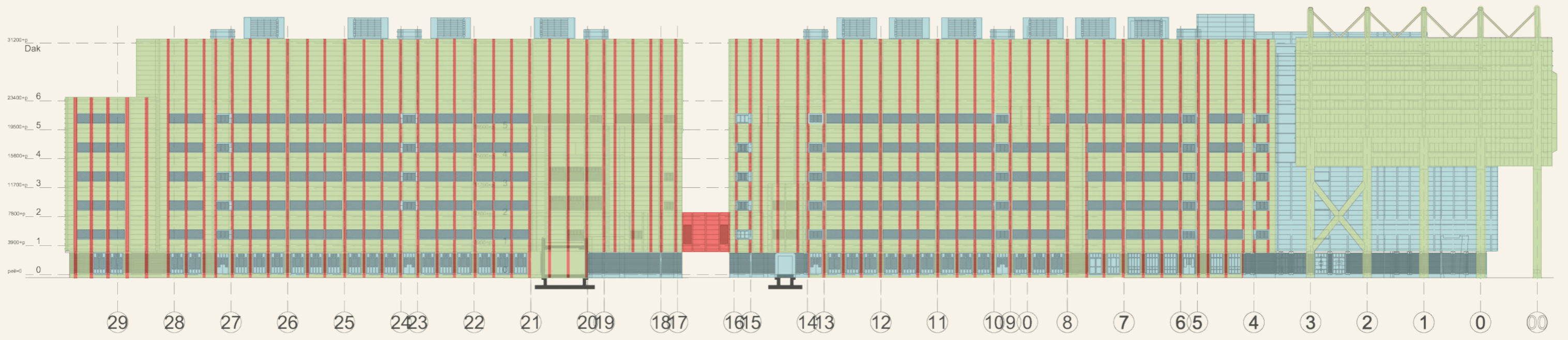
STRUCTURE






dimensional grid follows the dimensions of bookcases



steel structure over tram track



-  preserve and conserve
-  redevelopment
-  opportunities and new values

Urban dimension

1. Entrance is recognizable when exiting train station
2. Activities in the building are visible in the urban field

Social dimension

1. Support multiple informal learning: new program proposal, such as digital manuscript museum, event space etc.
2. New public route rather than reorganizing the existing route
3. Vertical circulation is centralized to ensure equal accessibility to all levels

Ecological dimension

1. Better indoor climate: more natural light, ventilation
2. Lower energy consumption

Concept

Arie Hagoort

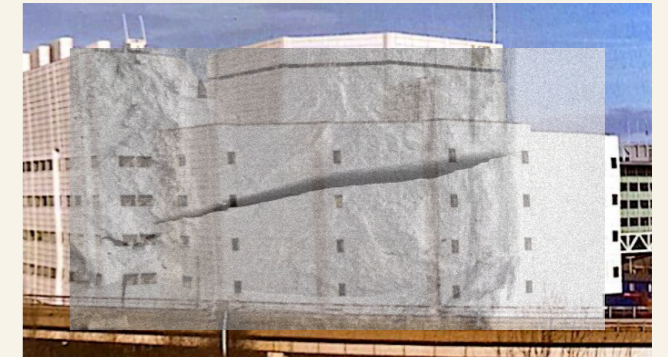
white and closed facade
building as a city
routes through building
dimensional grid

1982

Herbert Van Bruggen

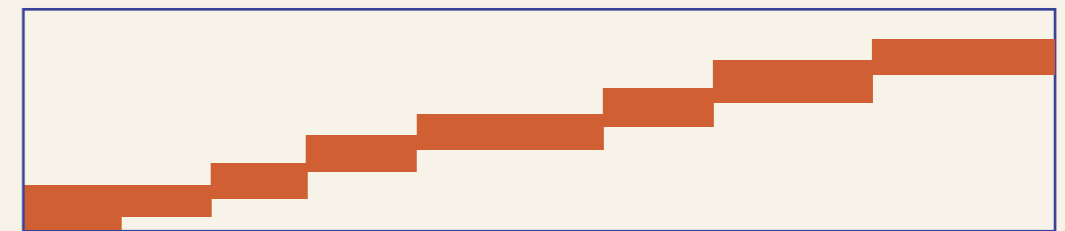
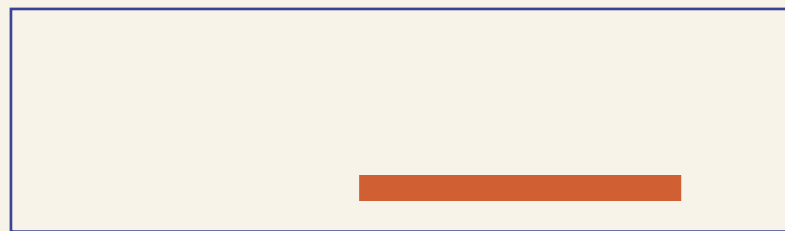
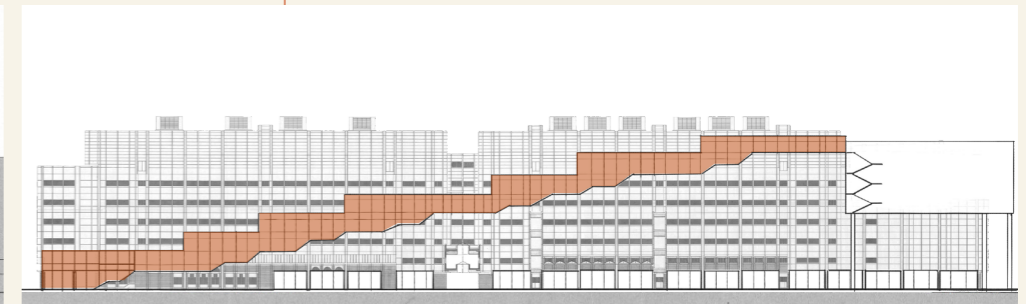
entrance
expansion depot
connection of two floors
more public spaces

2005

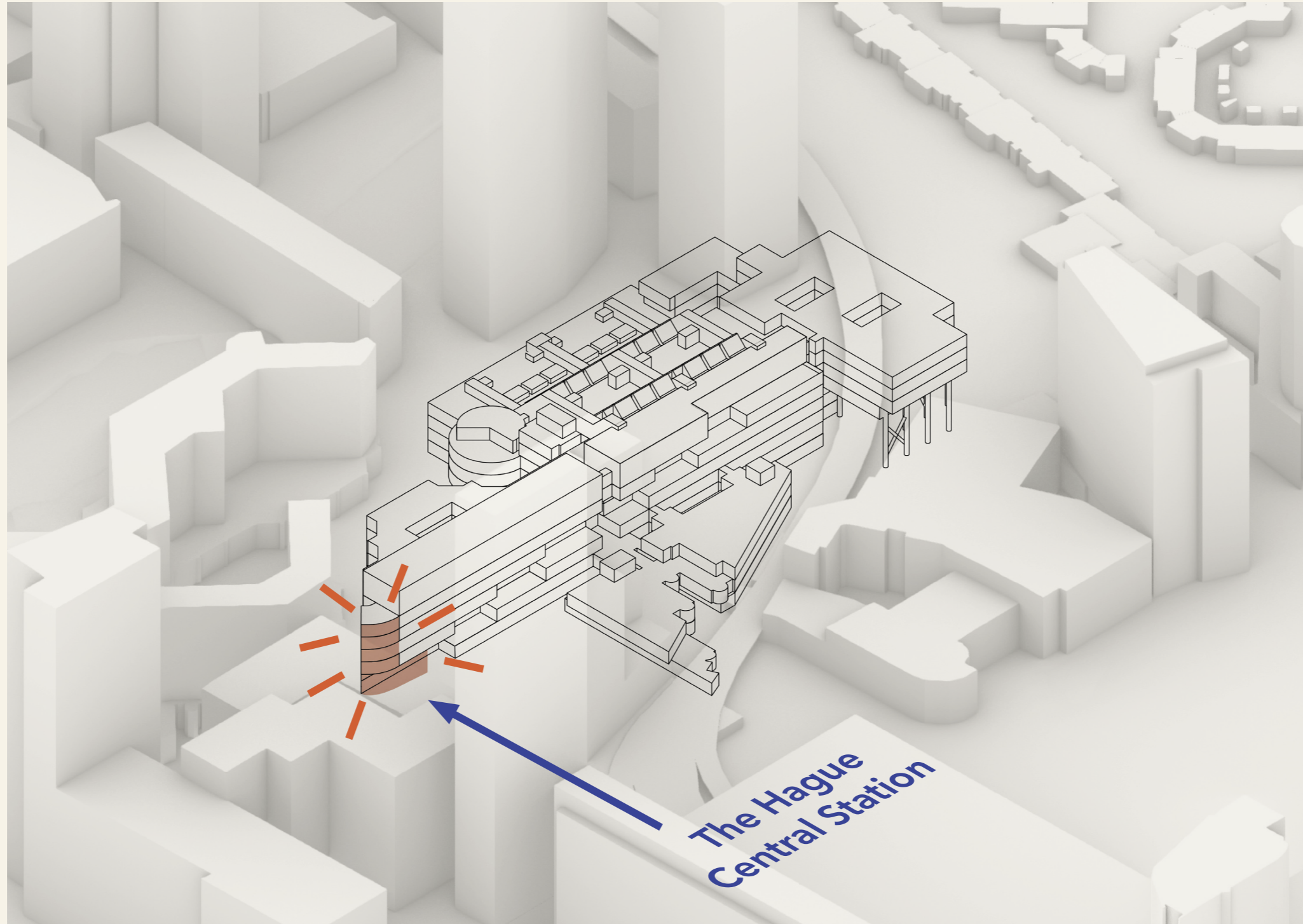


breaking the ice

2025

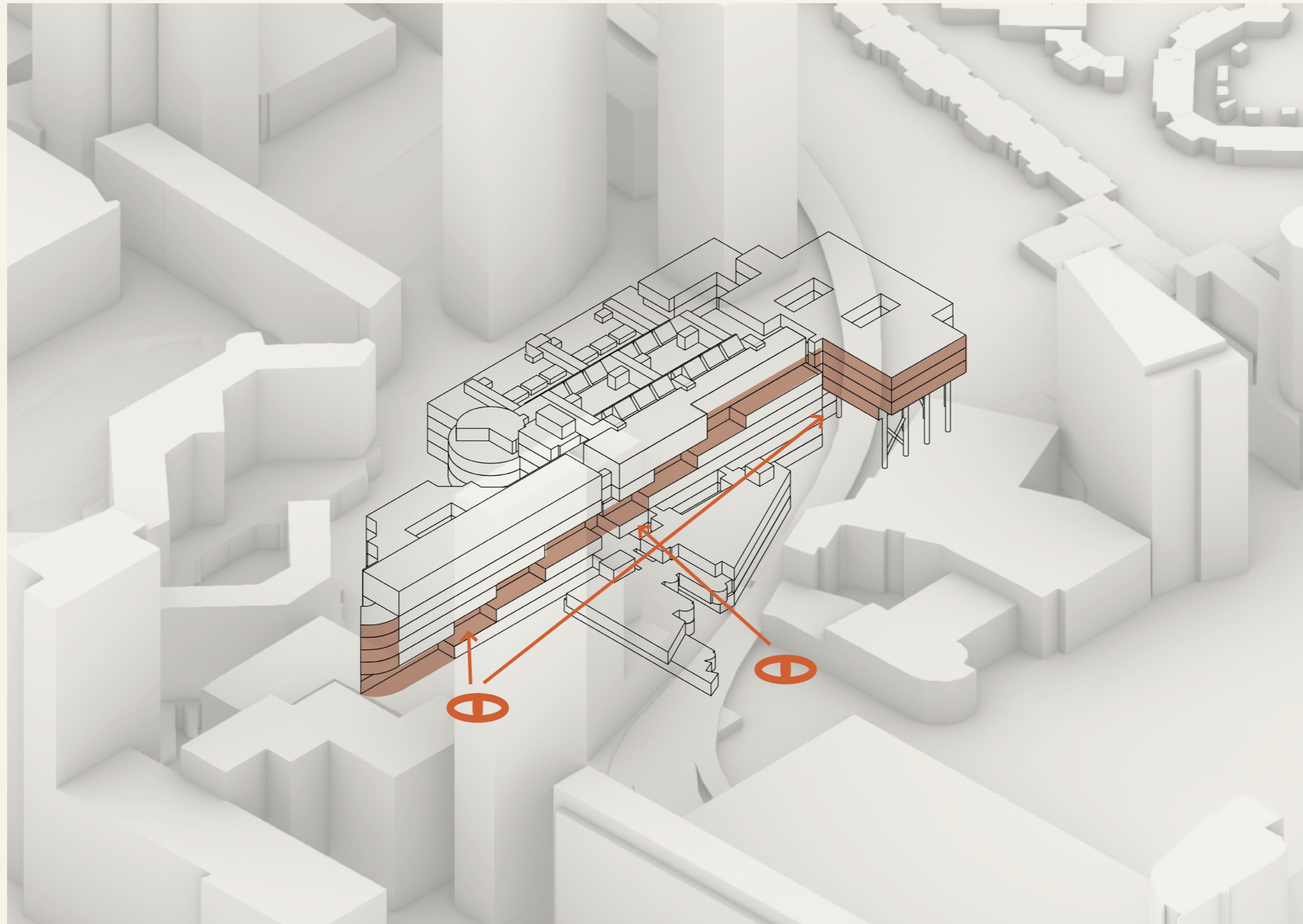


Urban



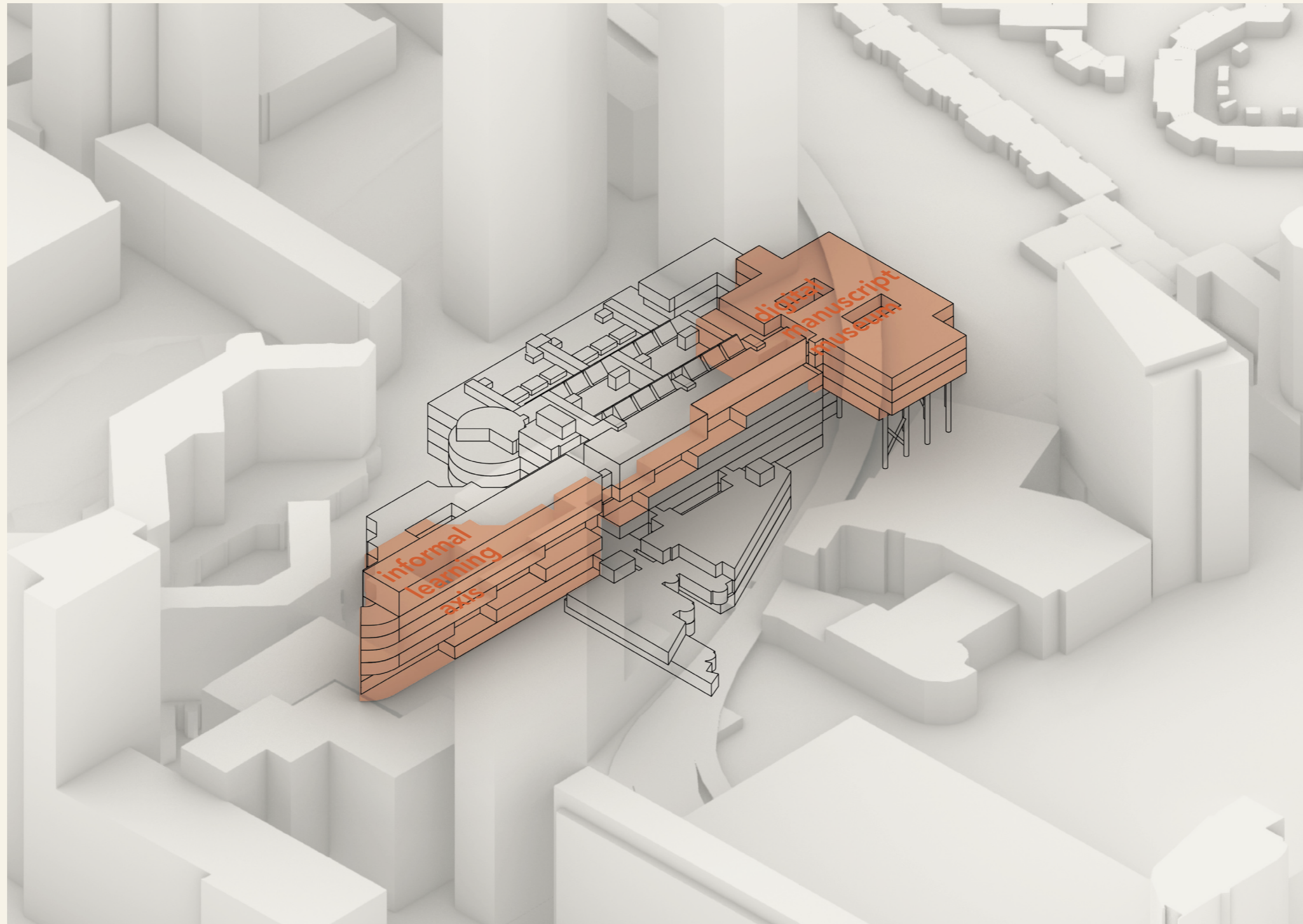
Entrance is recognizable when exiting train station.

Urban



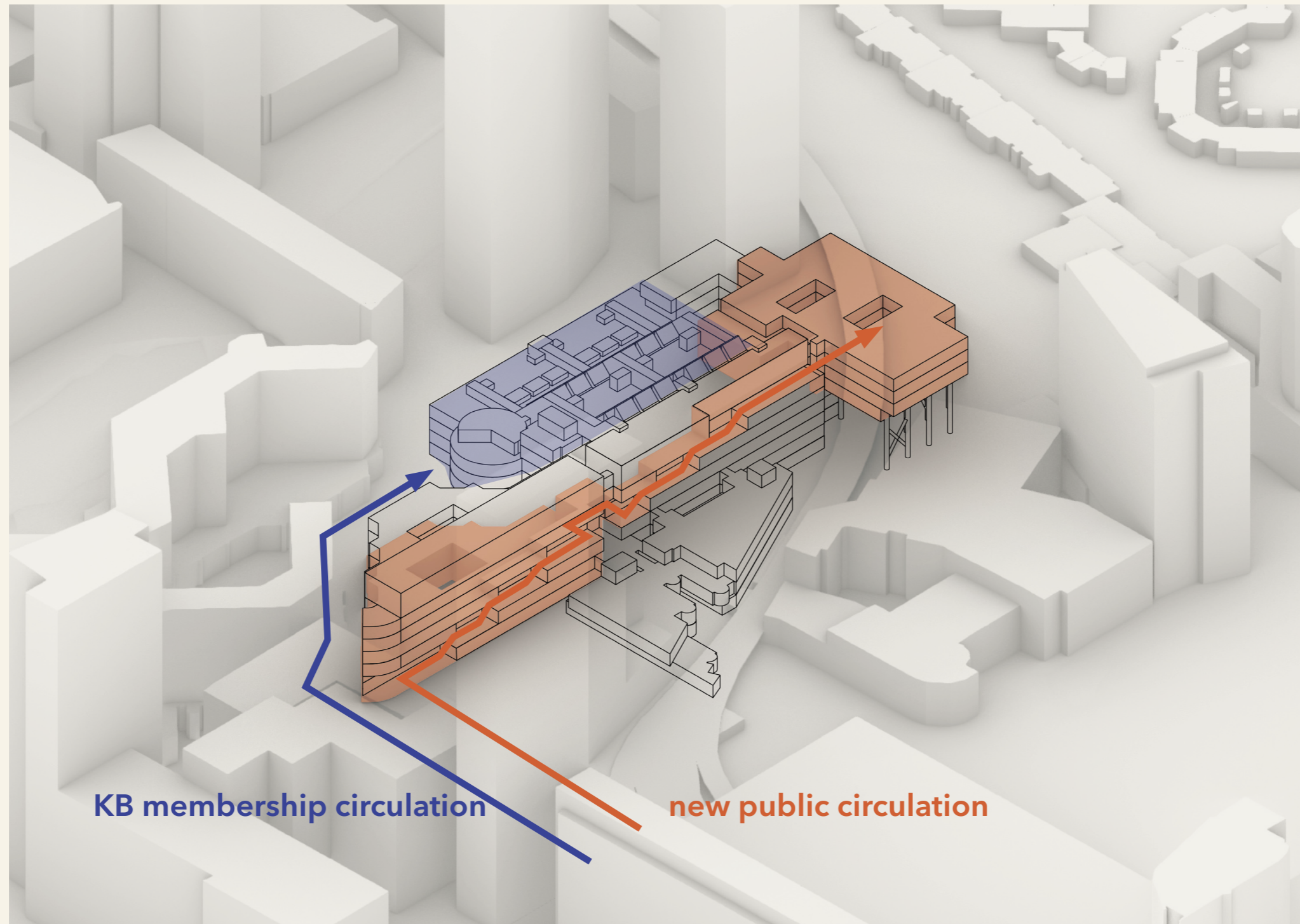
Activities in the building are visible in the urban field.

Social



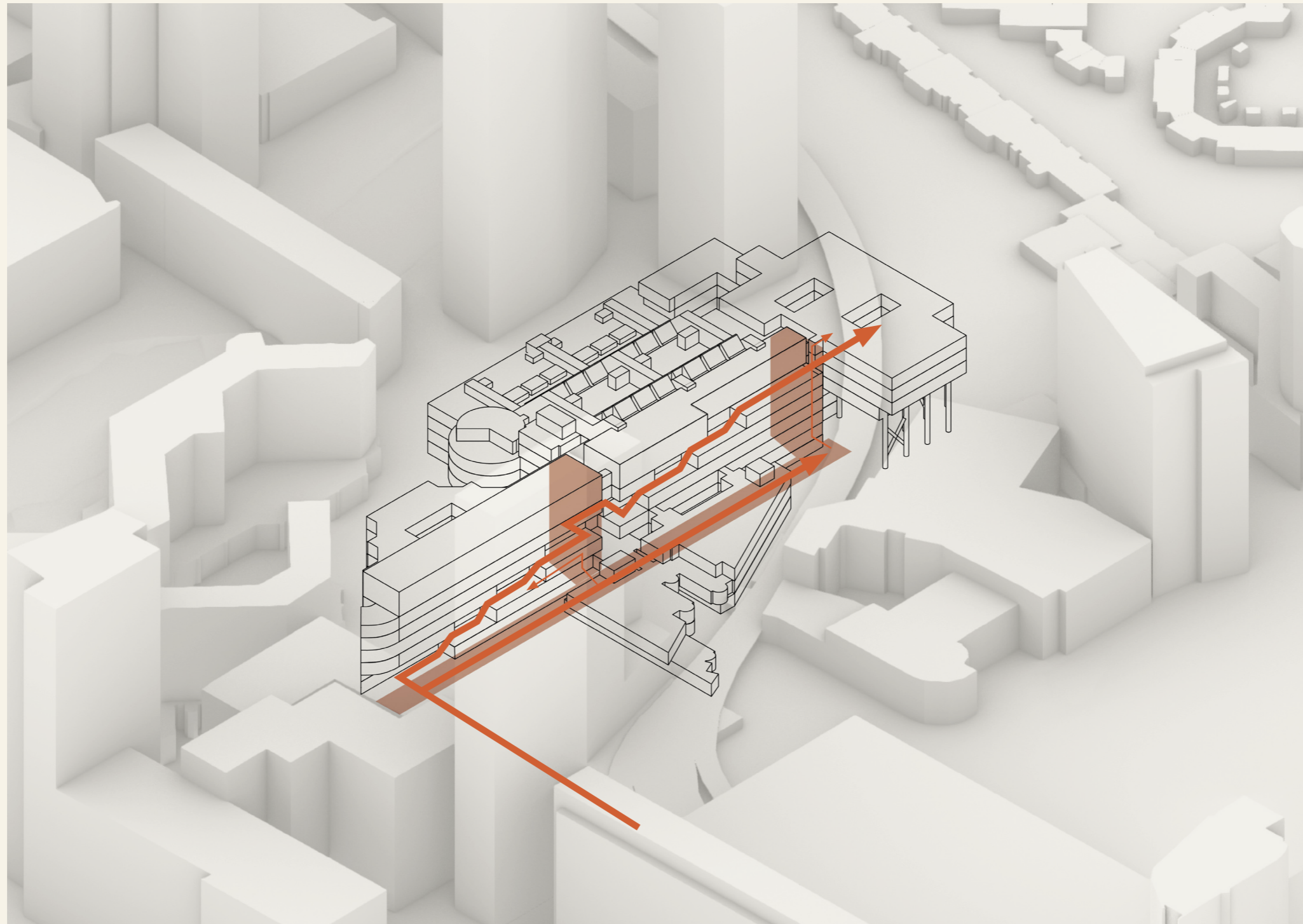
Support multiple informal learning: new program proposal, such as digital manuscript museum, event space etc.

Social



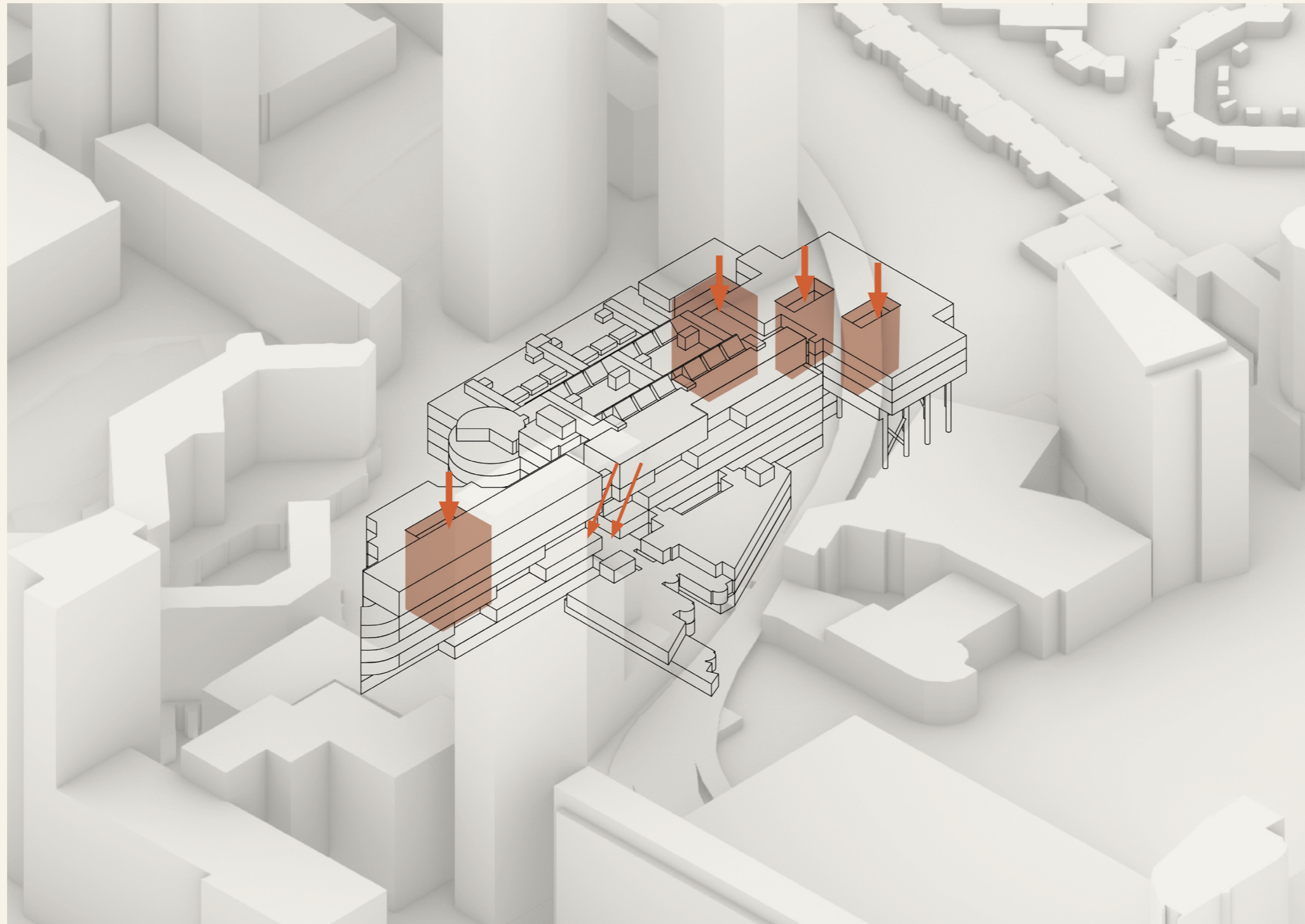
New public route rather than reorganizing the existing route.

Social



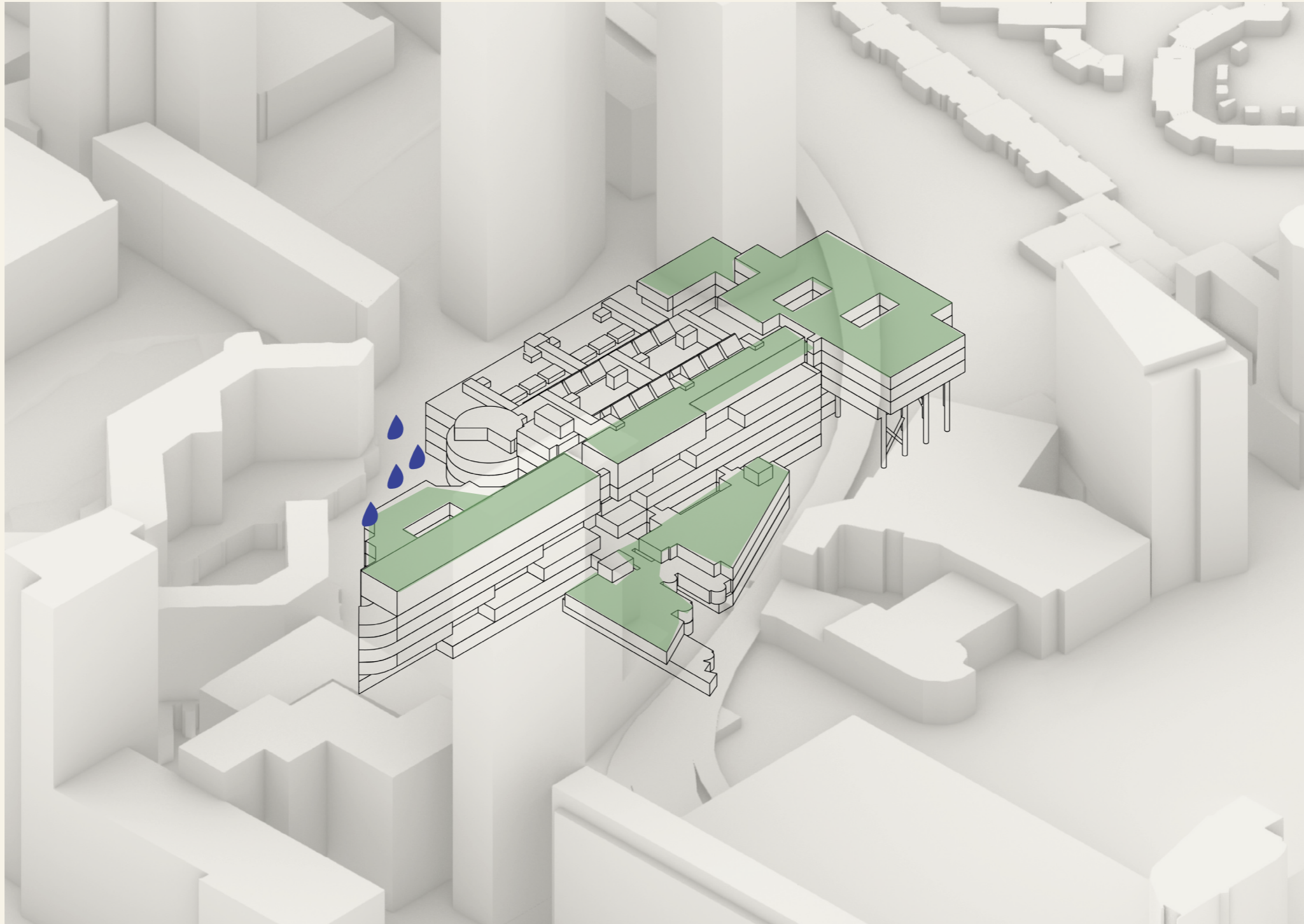
Vertical circulation is centralized to ensure equal accessibility to all levels.

Ecological



Better indoor climate: more natural light, ventilation.

Ecological

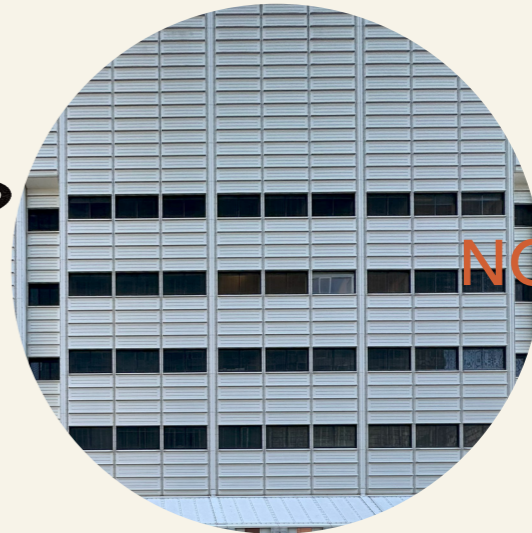
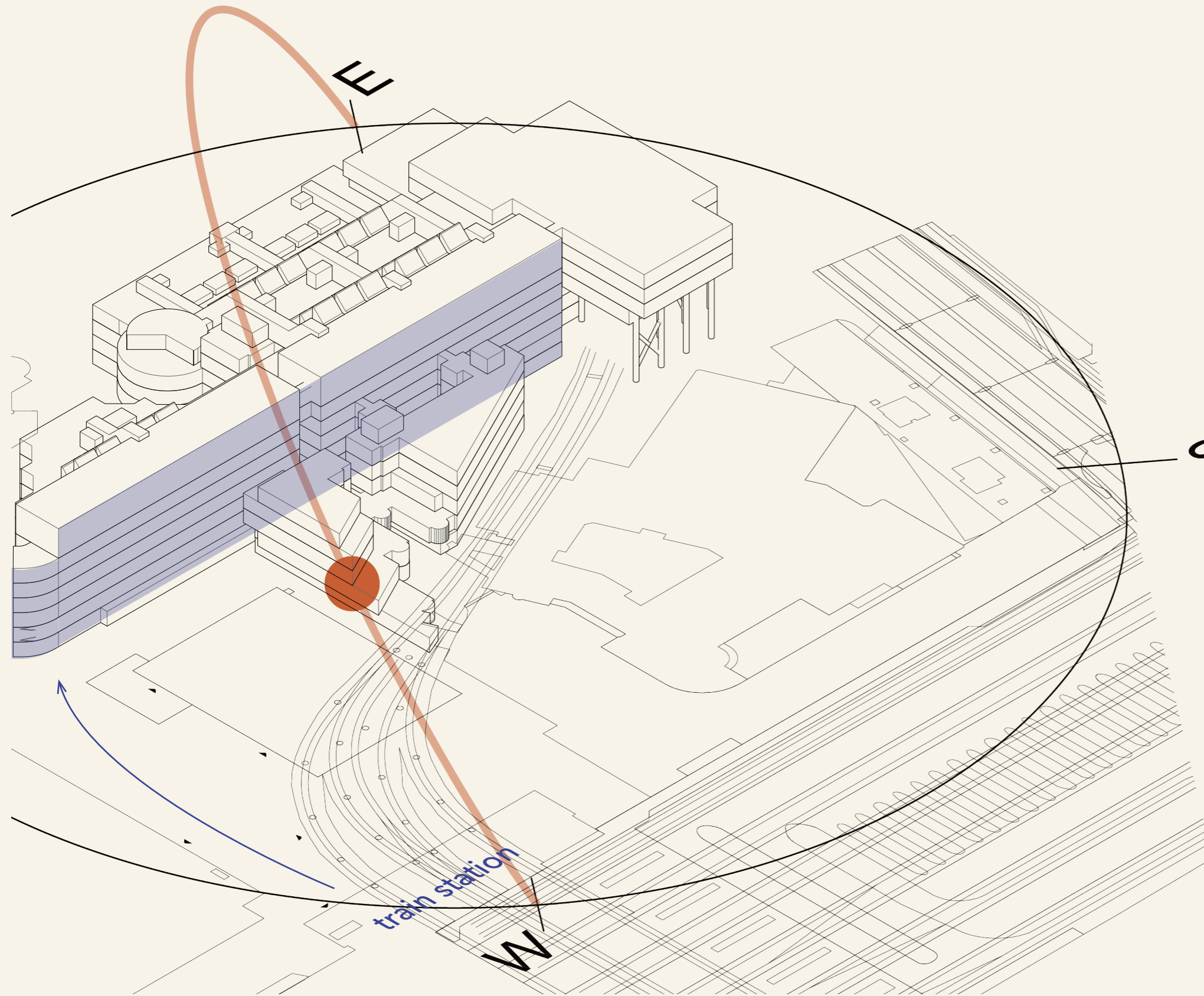


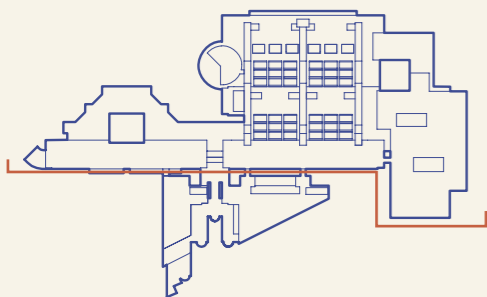
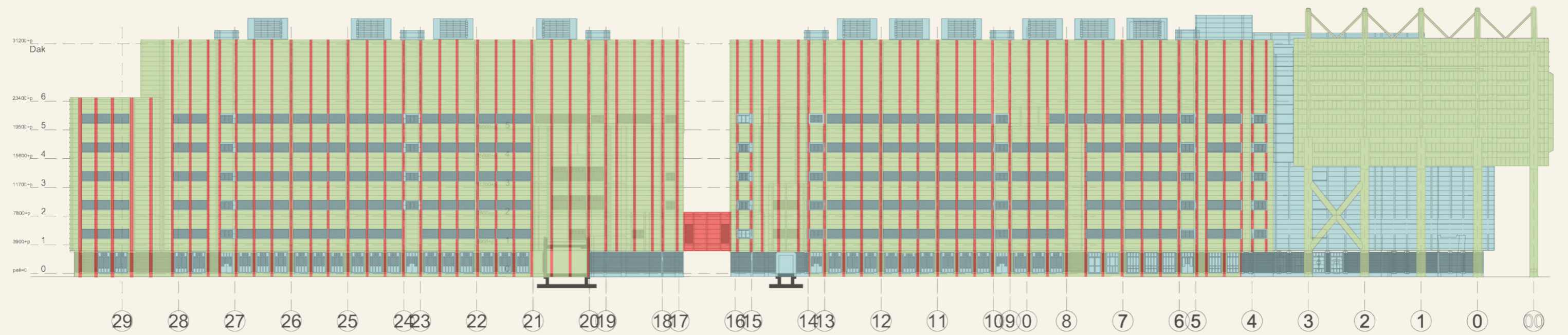
Lower energy consumption.




Building Intervention

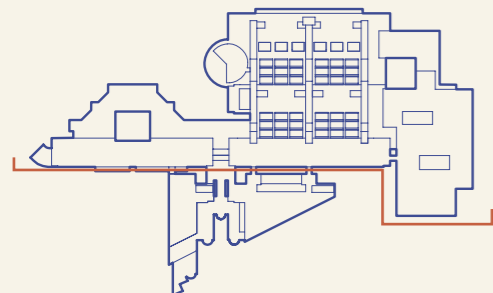
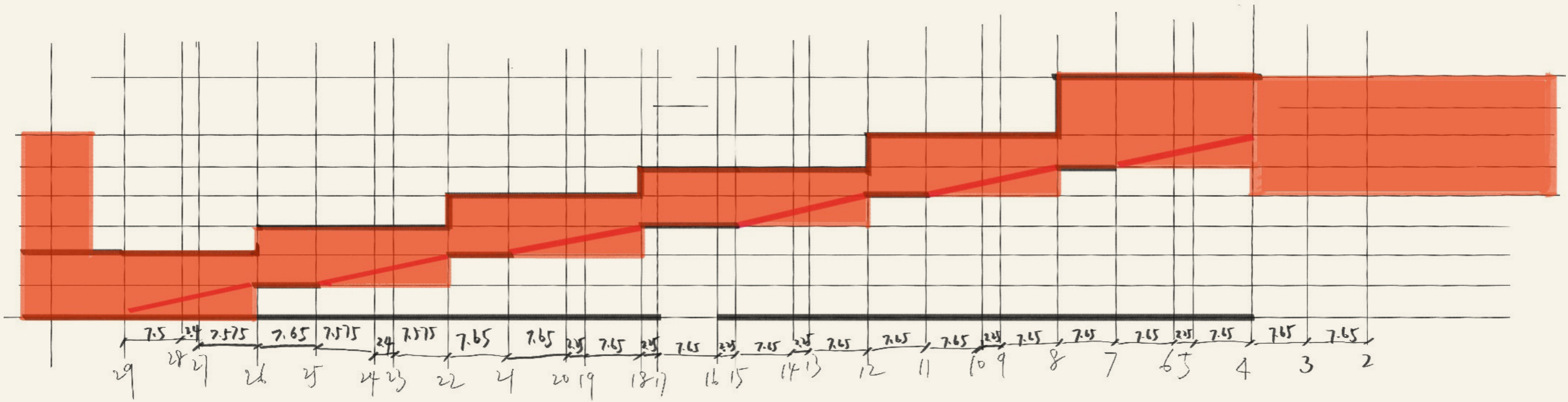
- A. Facade (facing to the train station)
- B. Passage
- C. Interior
- D. Program

A. Facade

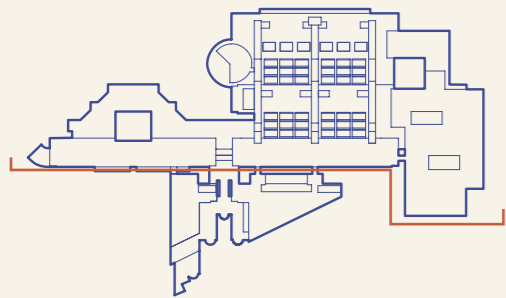
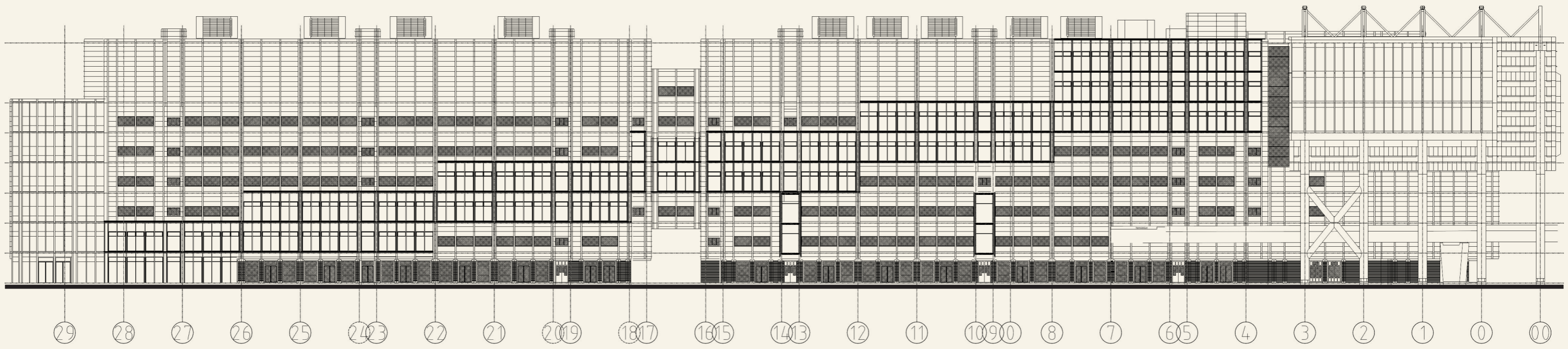
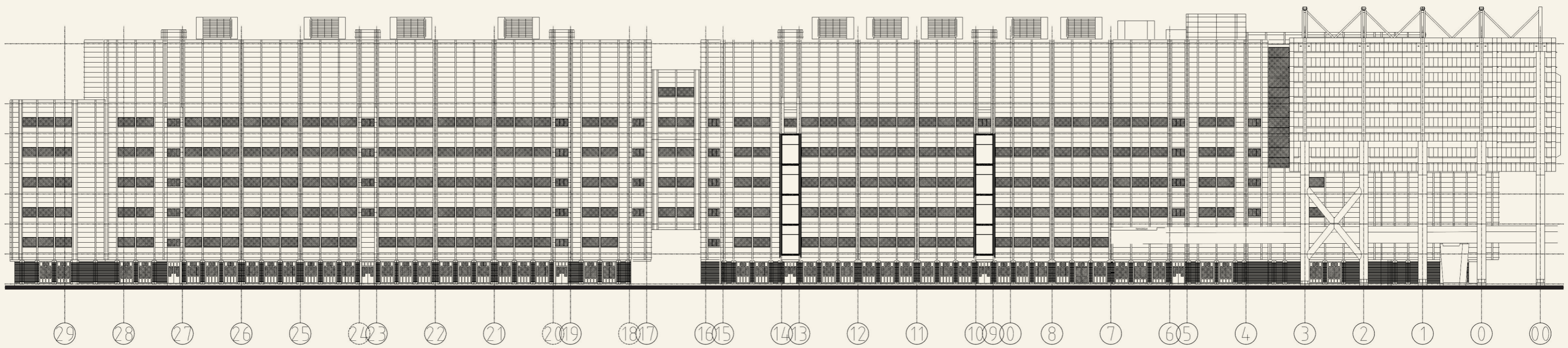


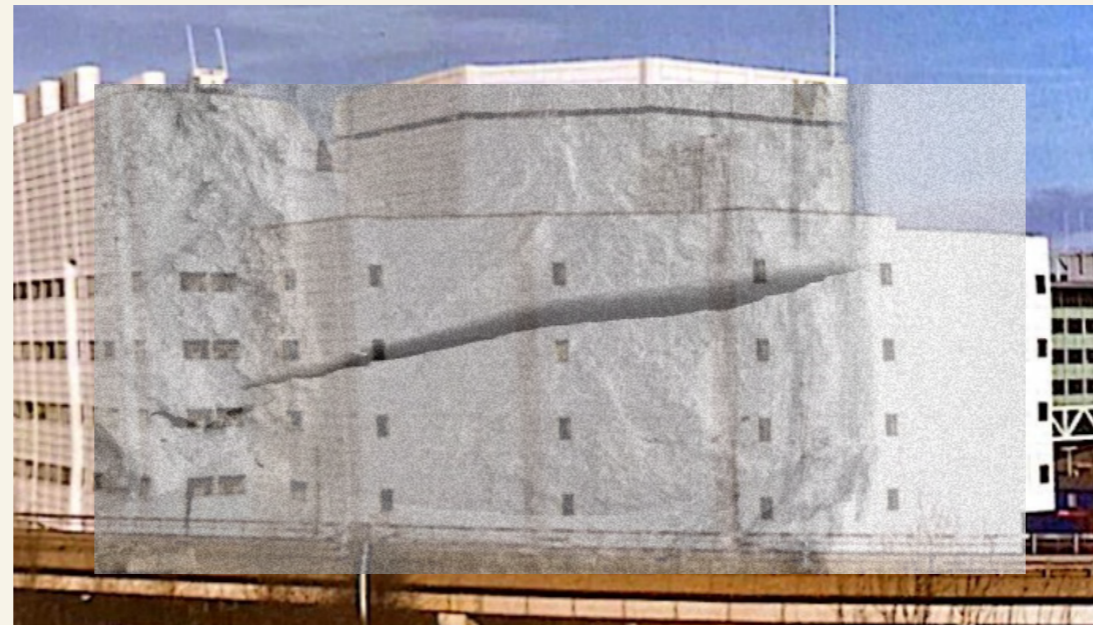


-  preserve and conserve
-  redevelopment
-  opportunities and new values



A. Facade





white aluminium

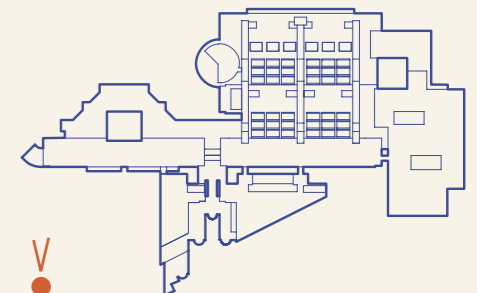
closed
cold
artificial
sterile
institutional

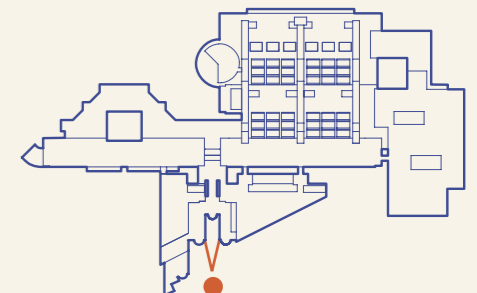
STRONG COMPARISON

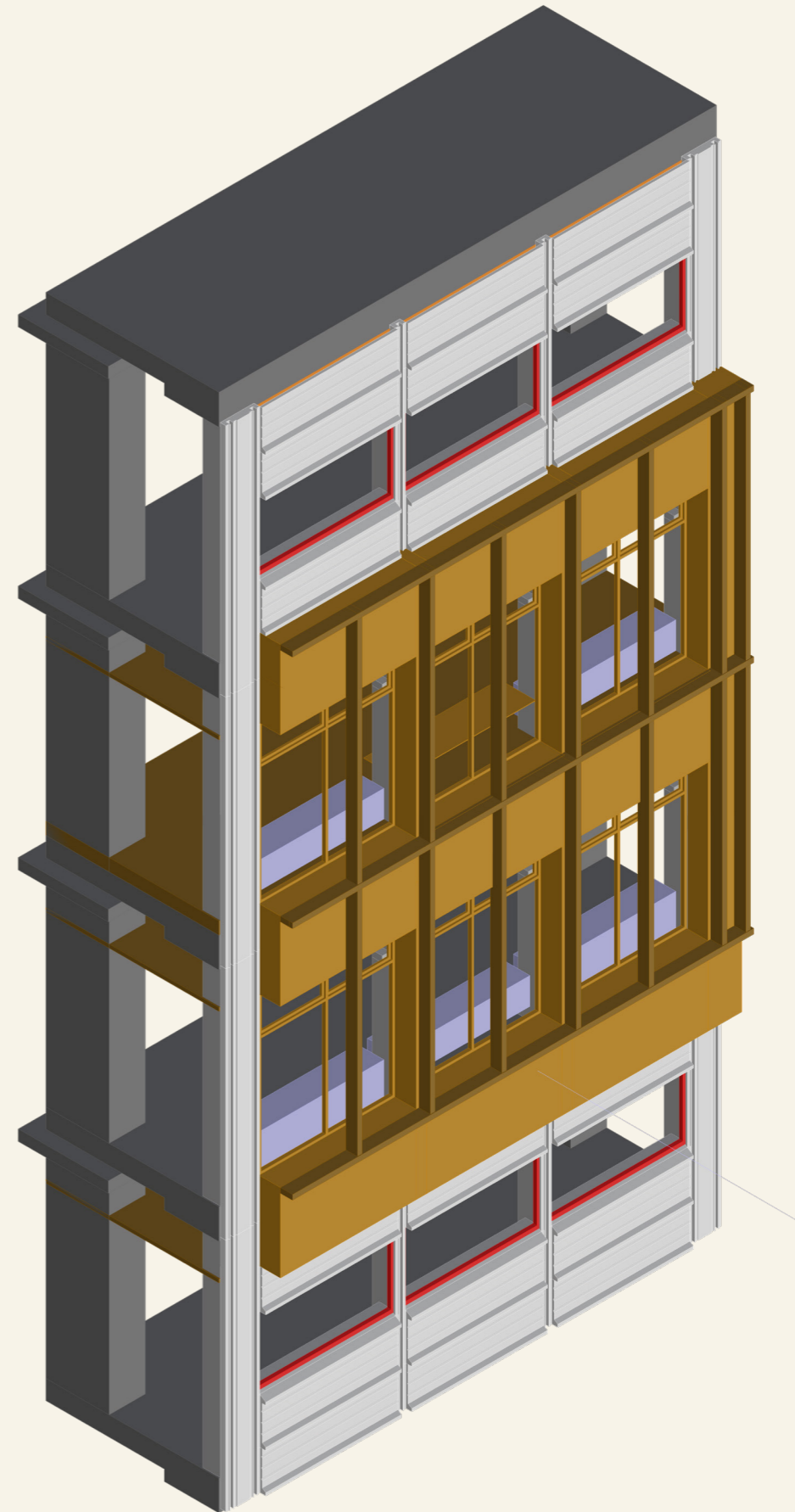
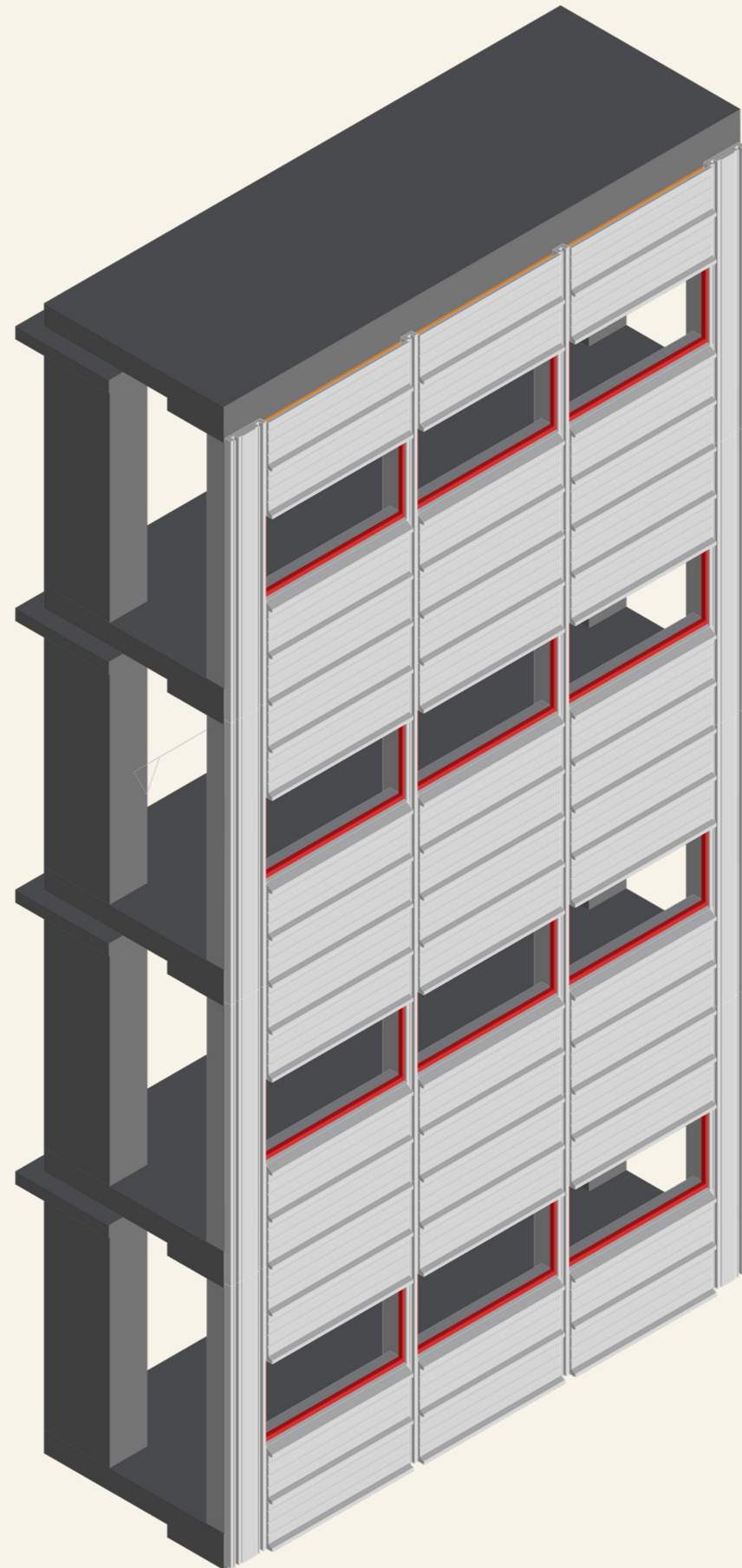


brown accoya wood

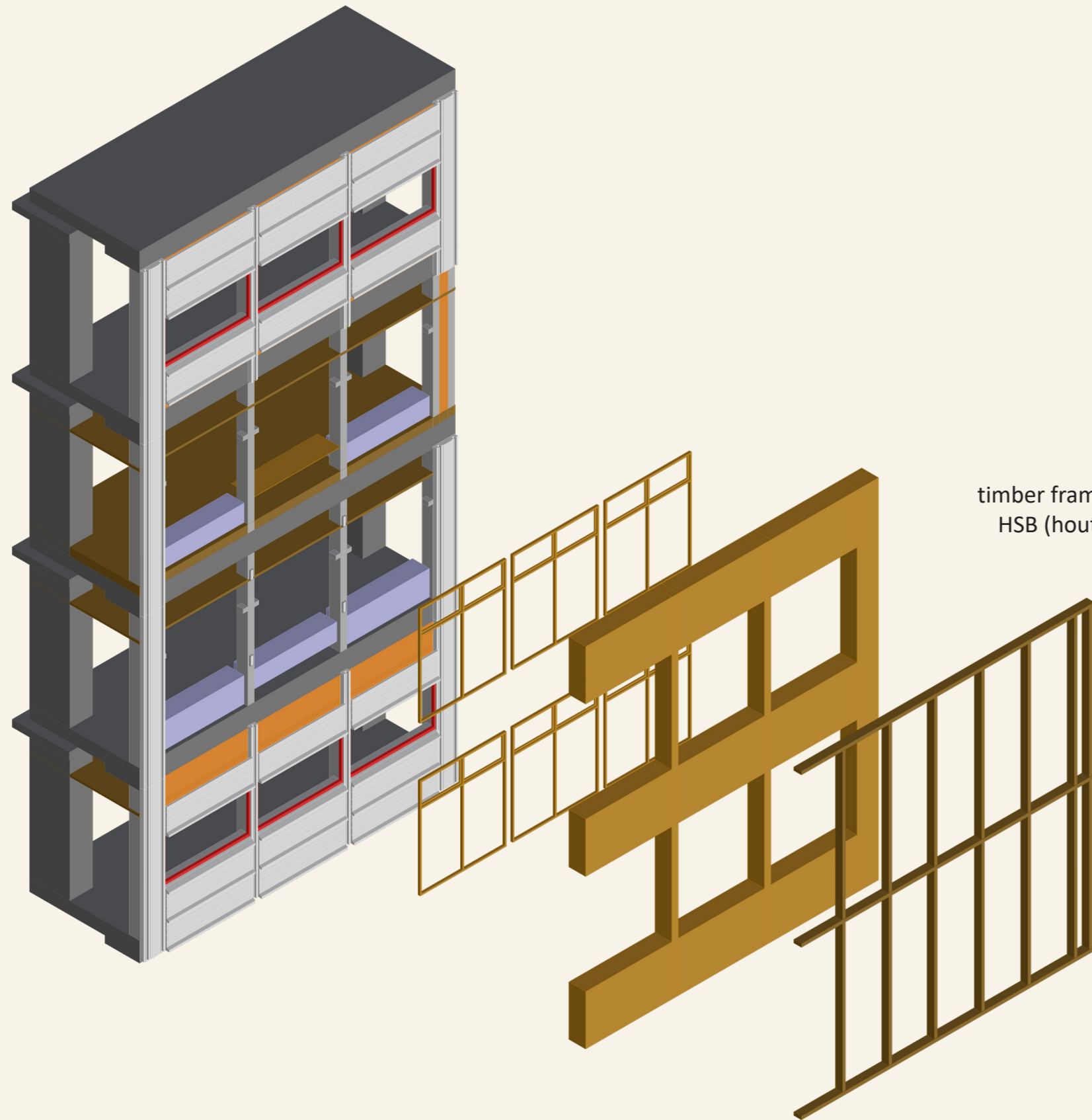
welcoming
warm
natural
tactile
biophilic







New system to existing structure

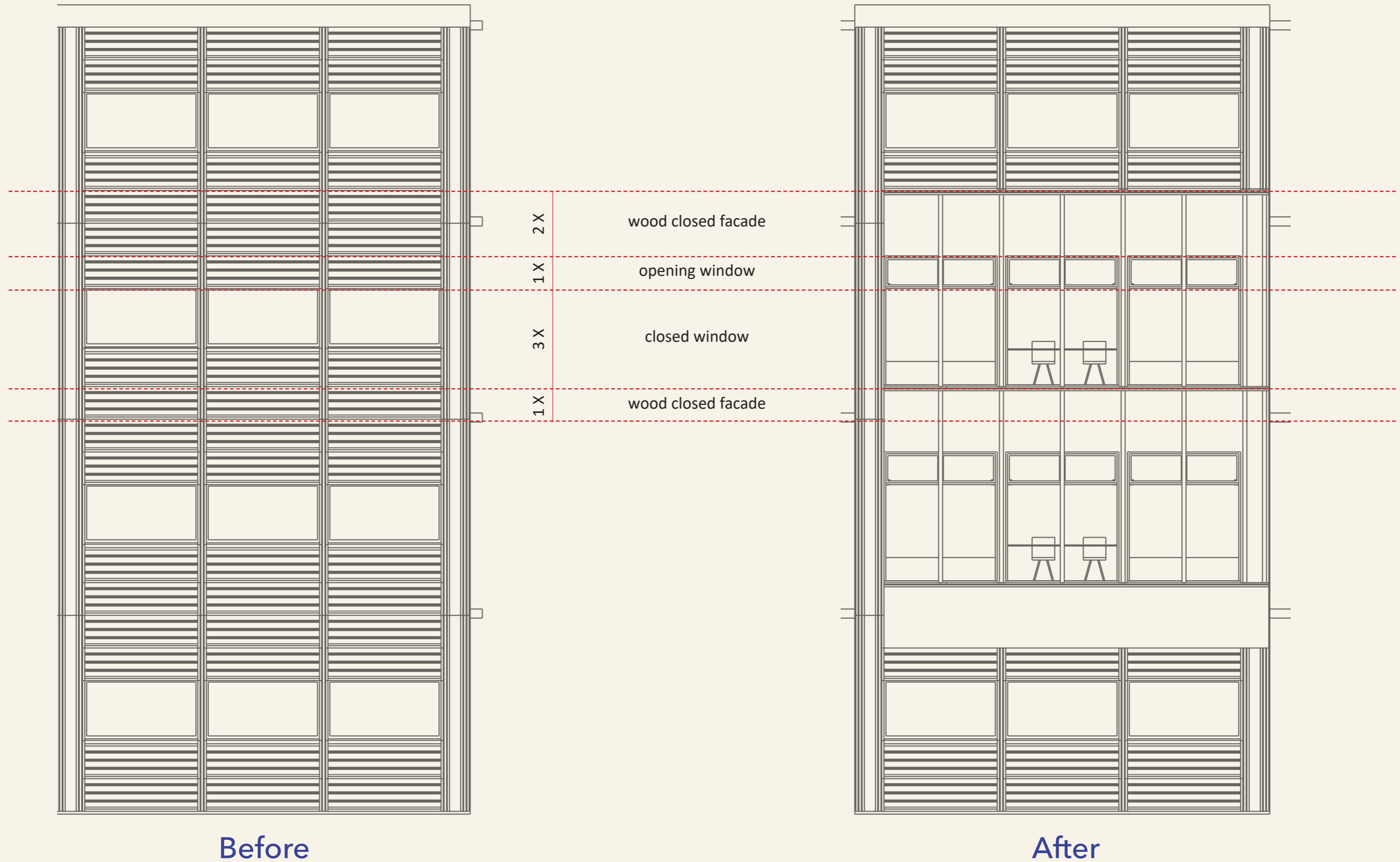


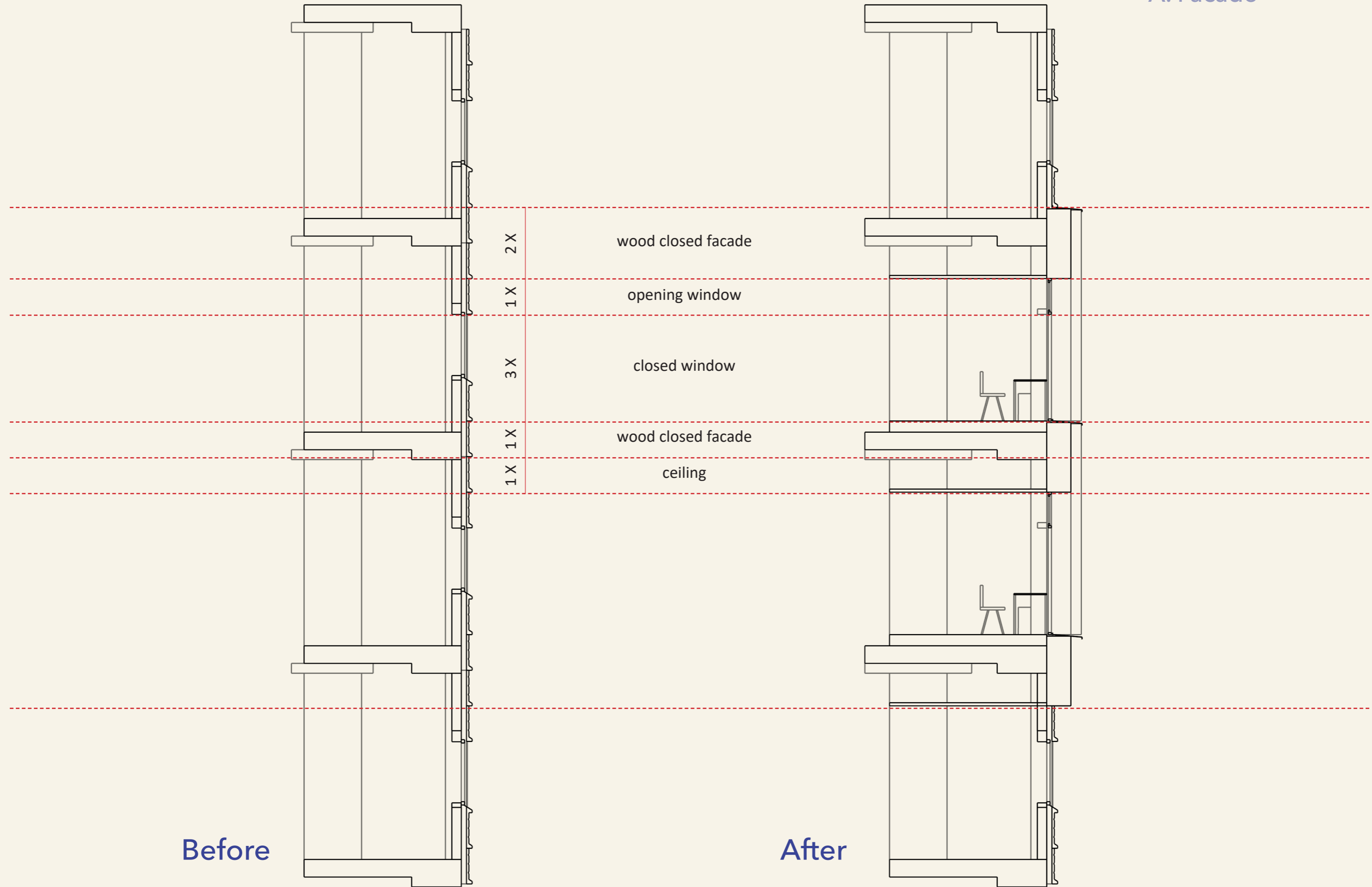
timber frame construction
HSB (houtskeletbouw)

Building Intervention

A. Facade

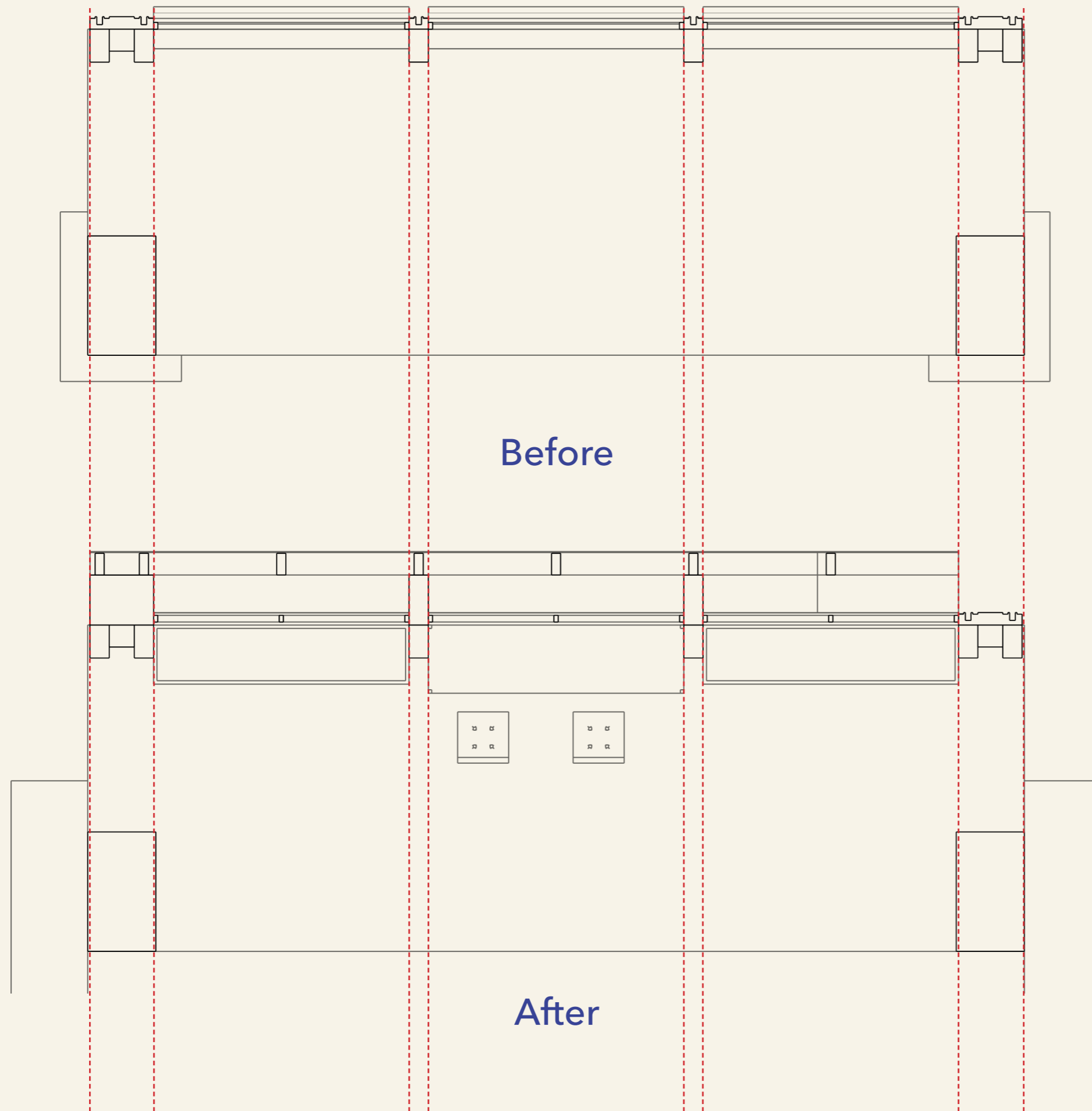


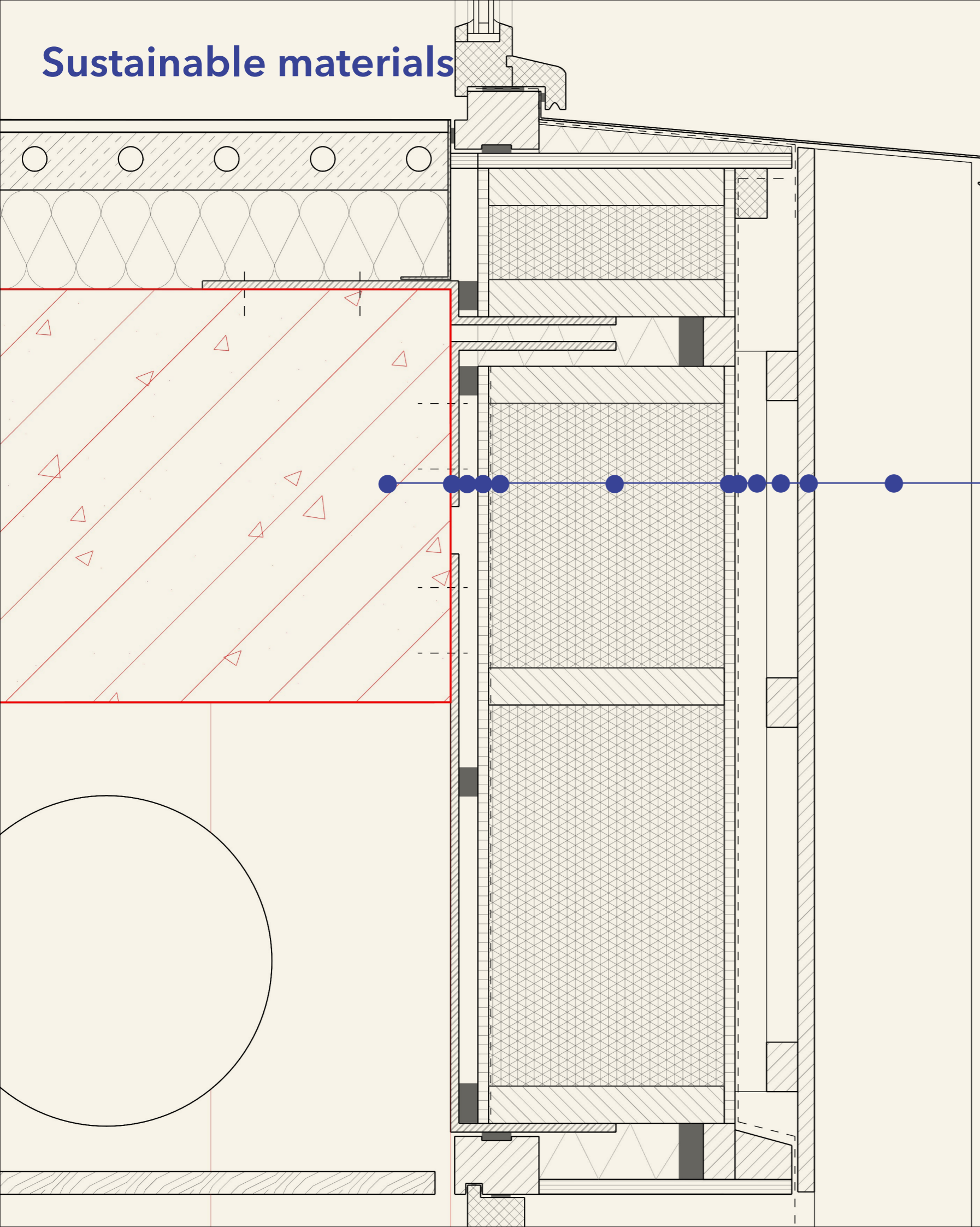




Before

After

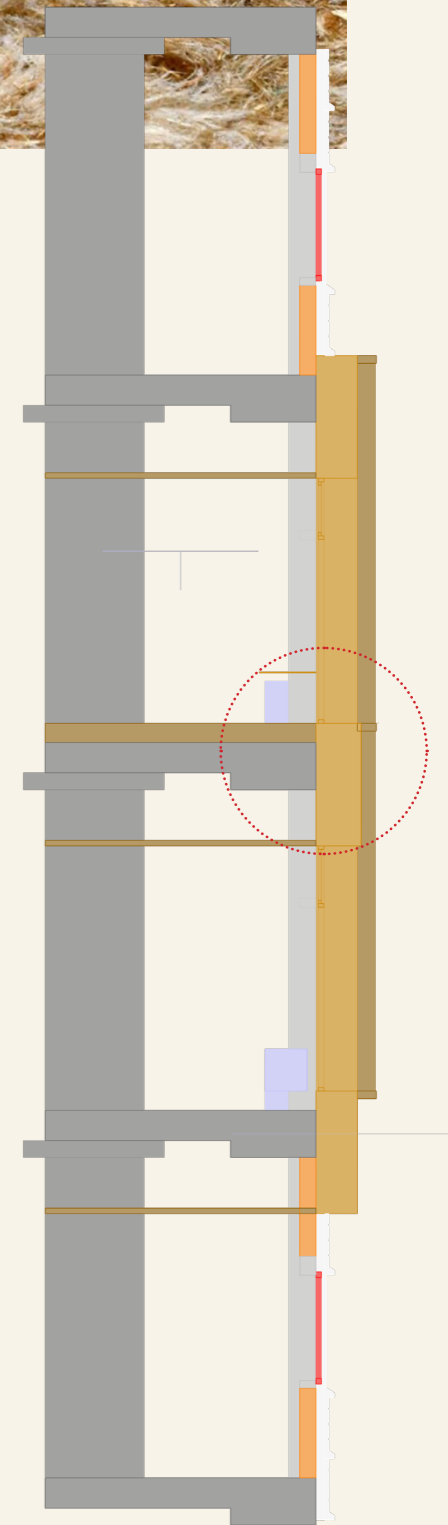




existing concrete beam 500mm
metal plate
cavity for compression tape 33mm

HSB element:
gypsum board 12.5mm
vapor barrier
flax insulation (natural) 286mm
gypsum board 12.5mm

water resistant layer
wood battens 2x38 mm
accoya facade panel 20mm
accoya slat, pressure treated 190mm



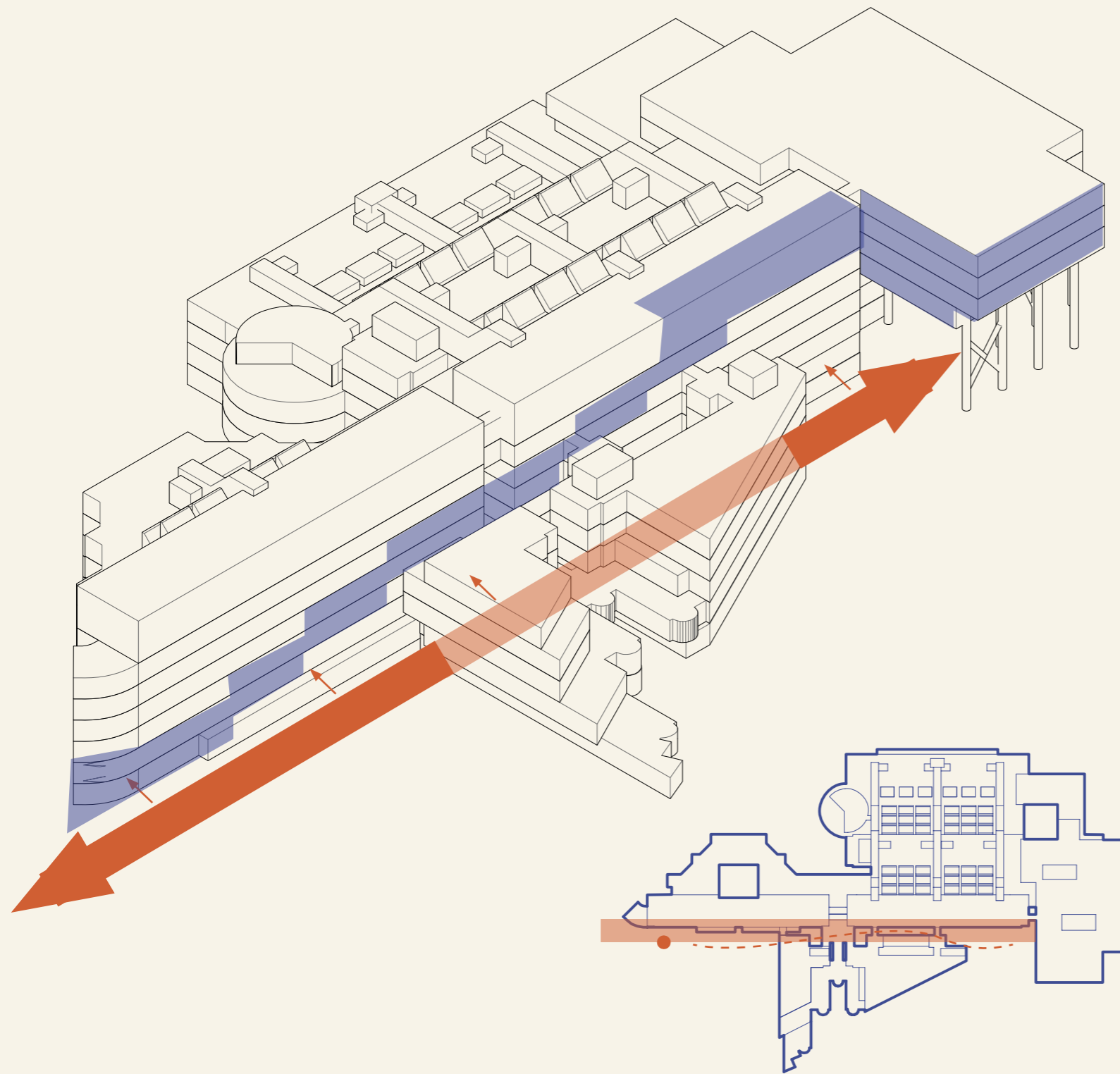
V1

B. Passage

Current limitations of the passage

Building Intervention

B. Passage



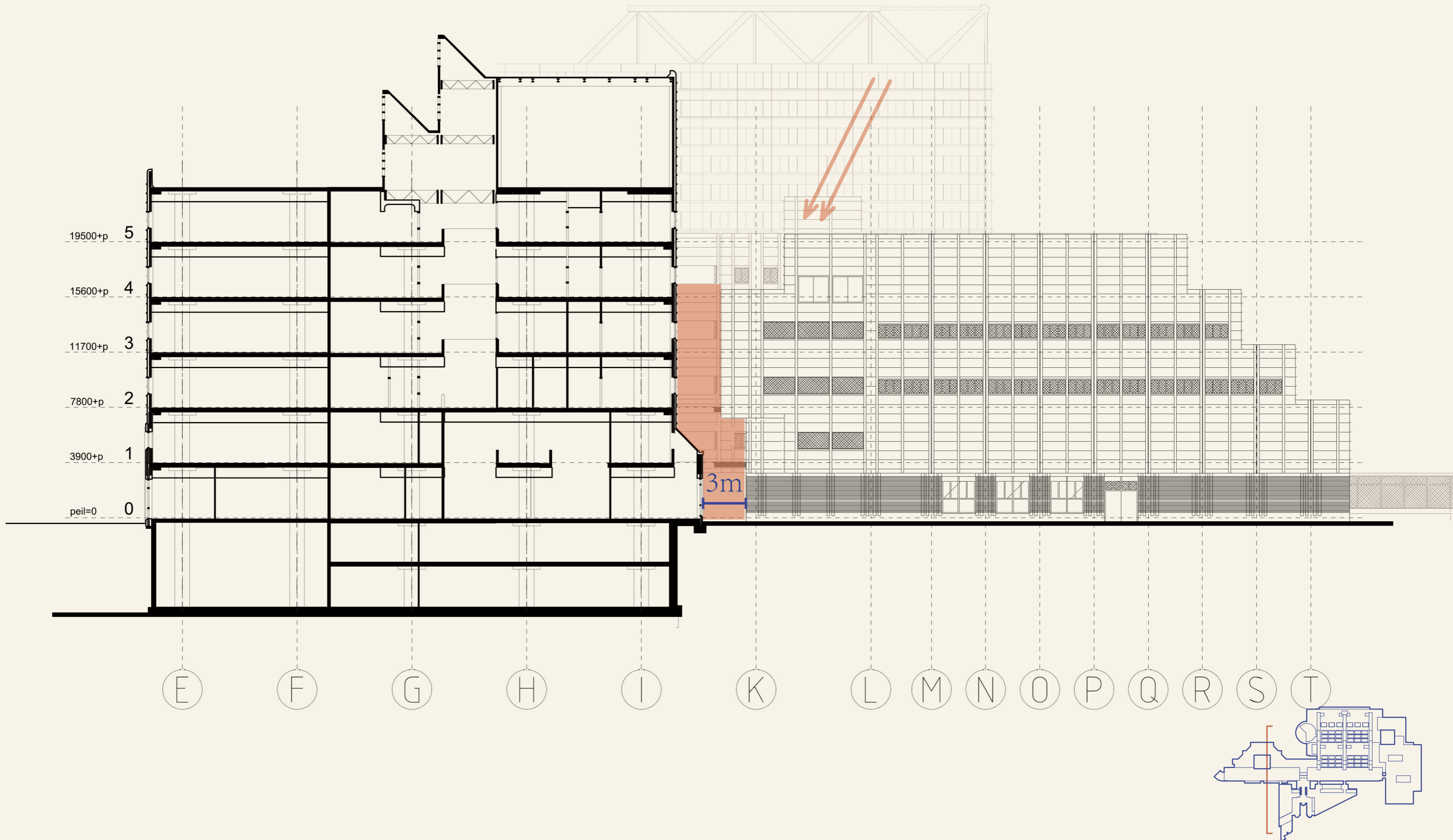
NOT inviting



NO natural light



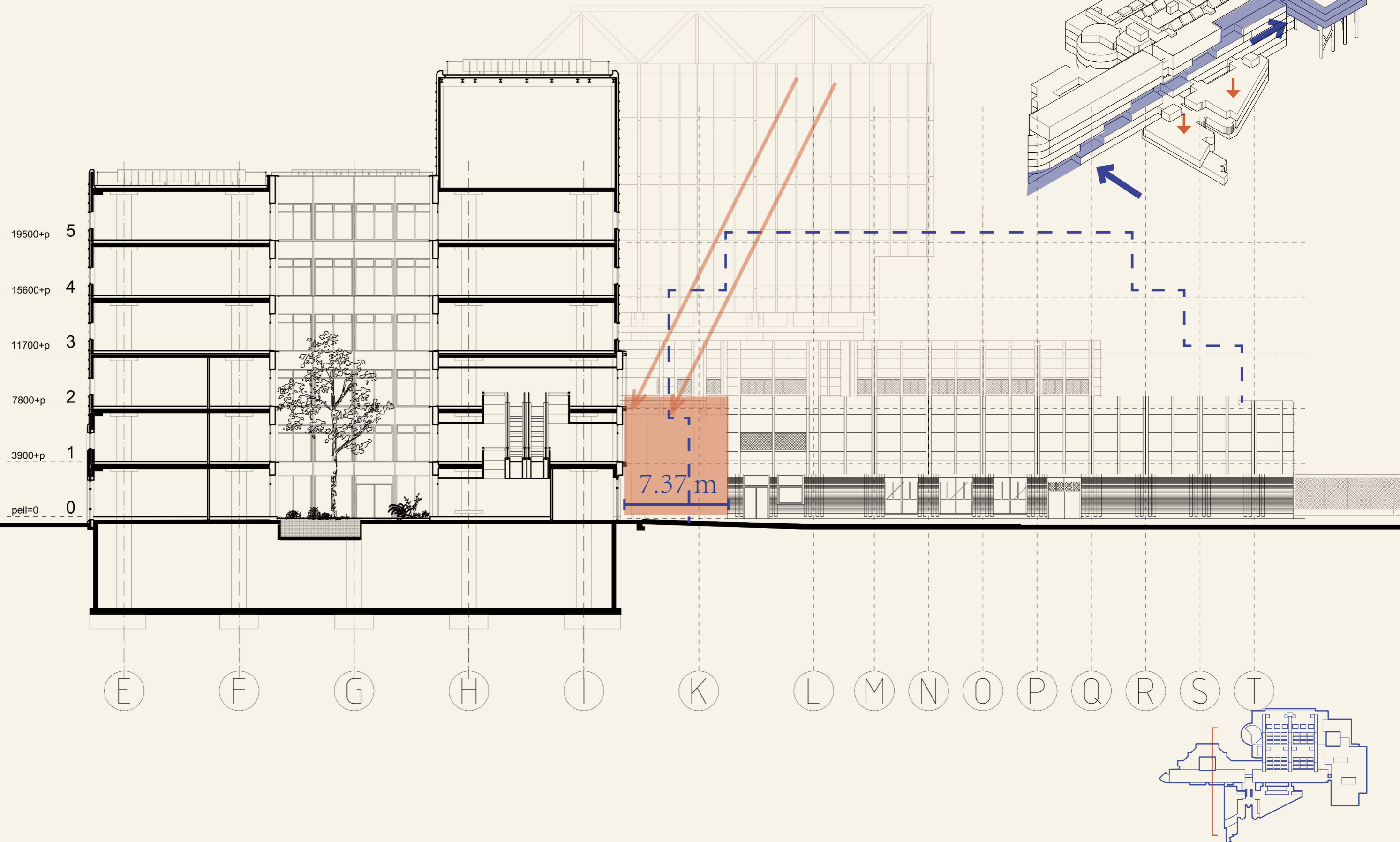
NOT activated

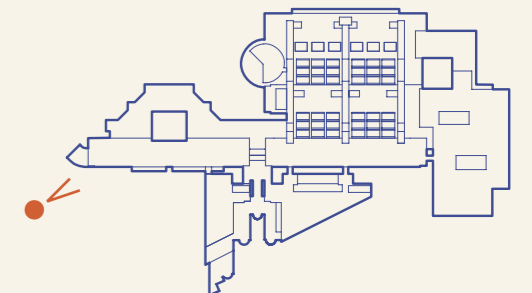
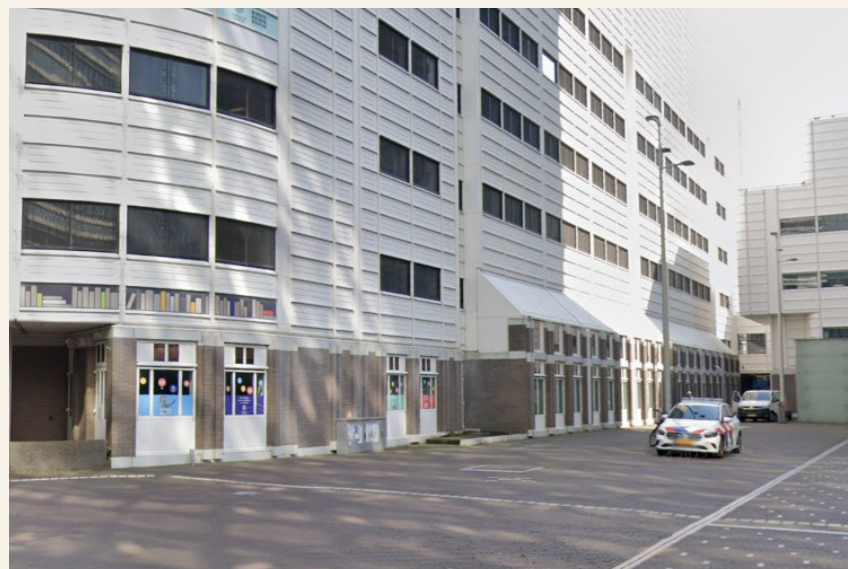


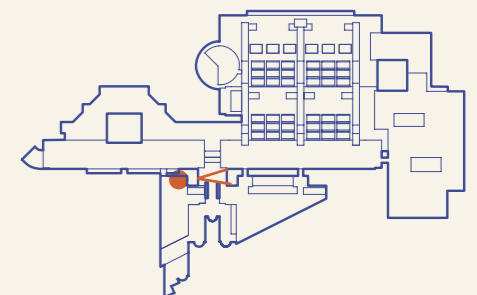
Passage after

Building Intervention

B. Passage

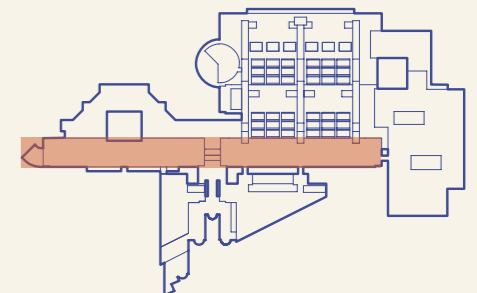
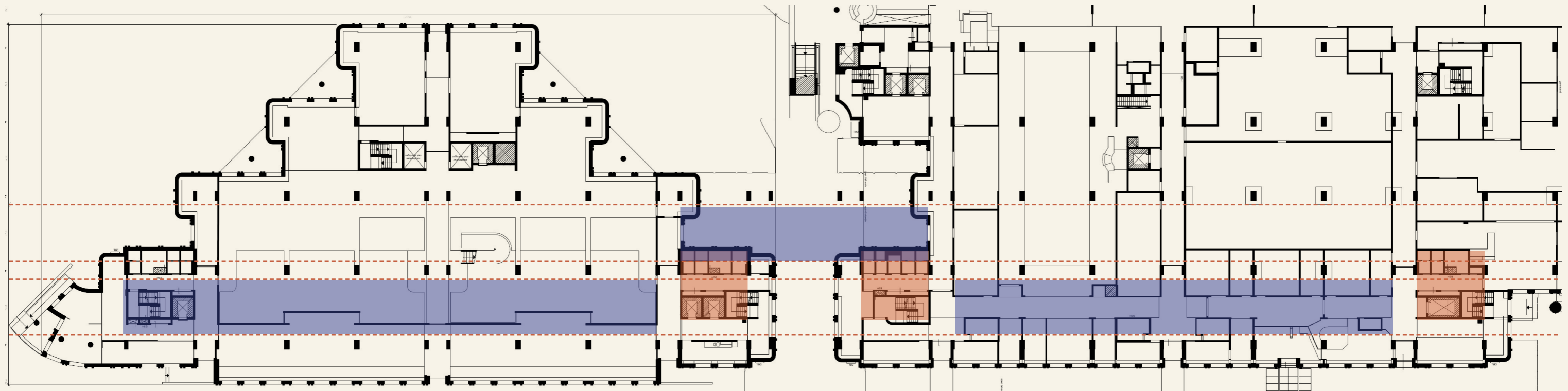
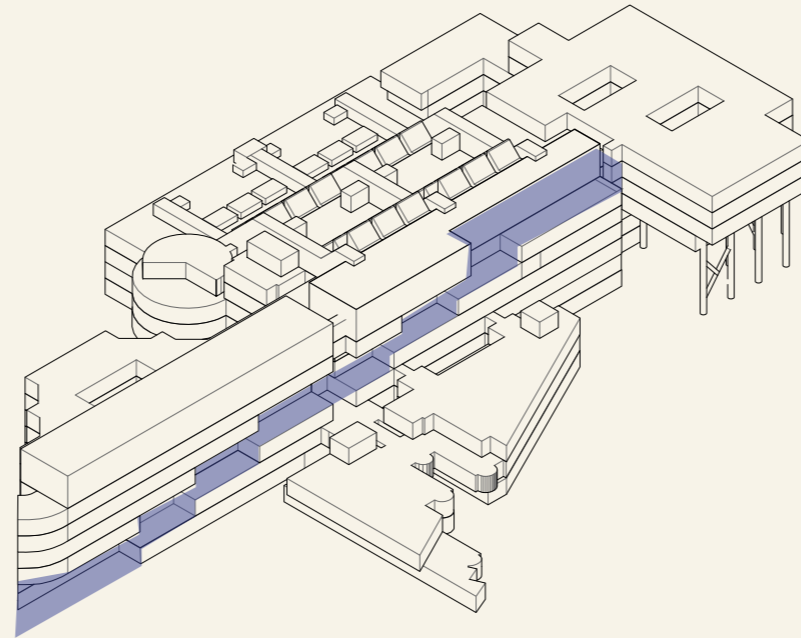






C. Interior

C1: Vertical circulation
C2: Inner courtyard



Overview of the new vertical circulation insertion

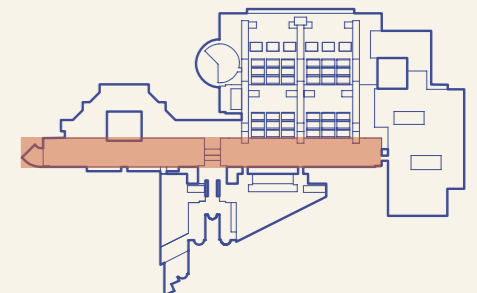
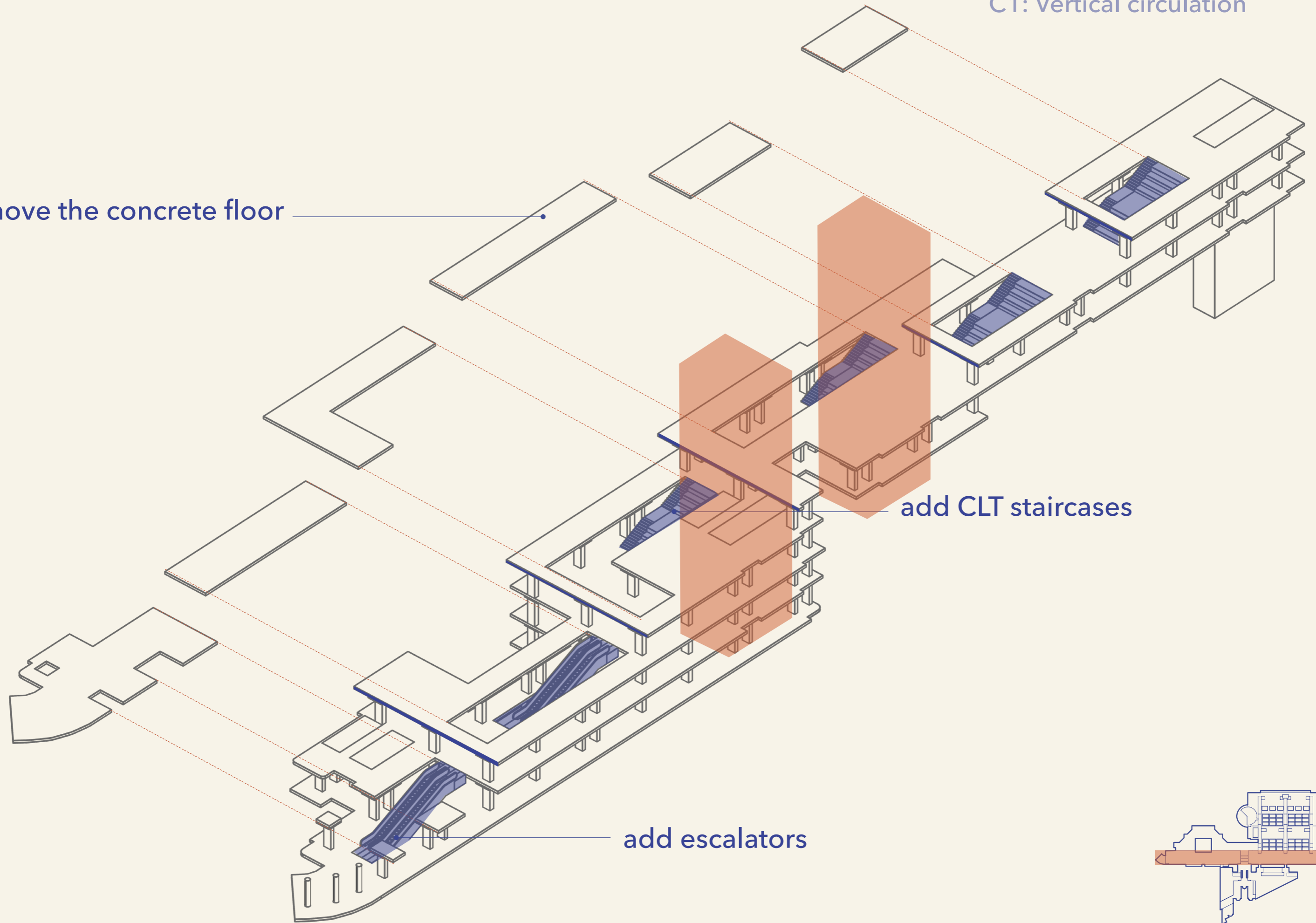
Building Intervention

C1: Vertical circulation

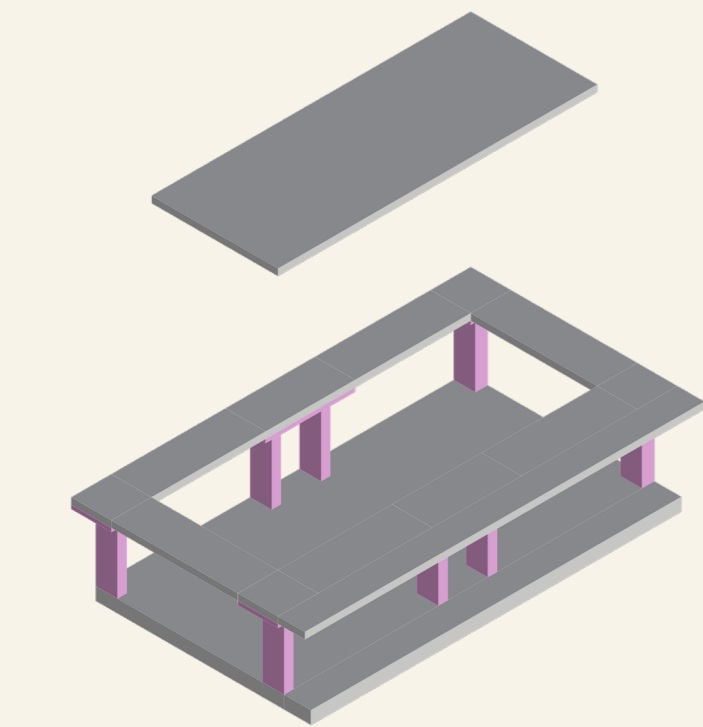
remove the concrete floor

add CLT staircases

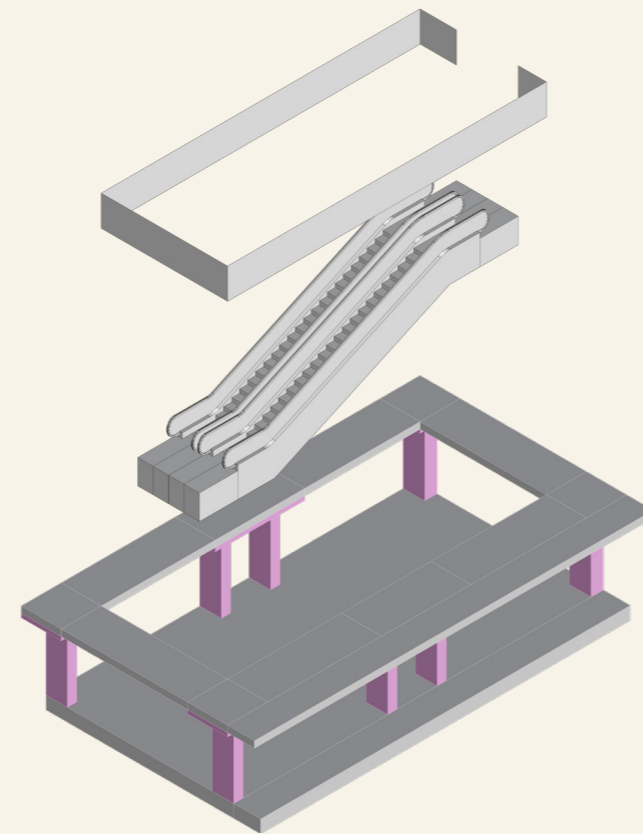
add escalators



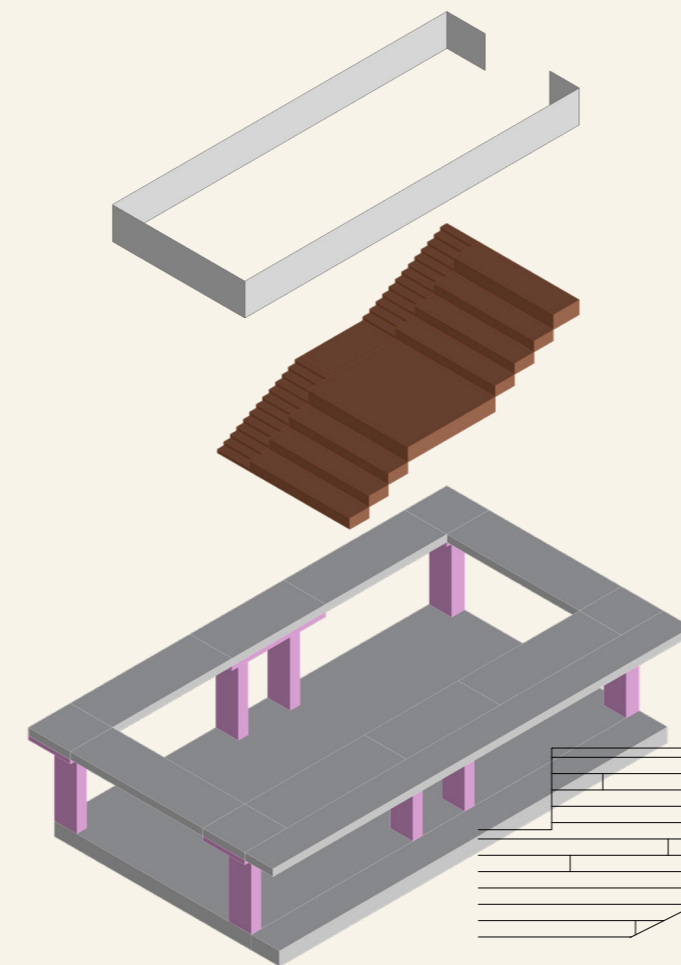
Detailed steps of vertical circulation insertion



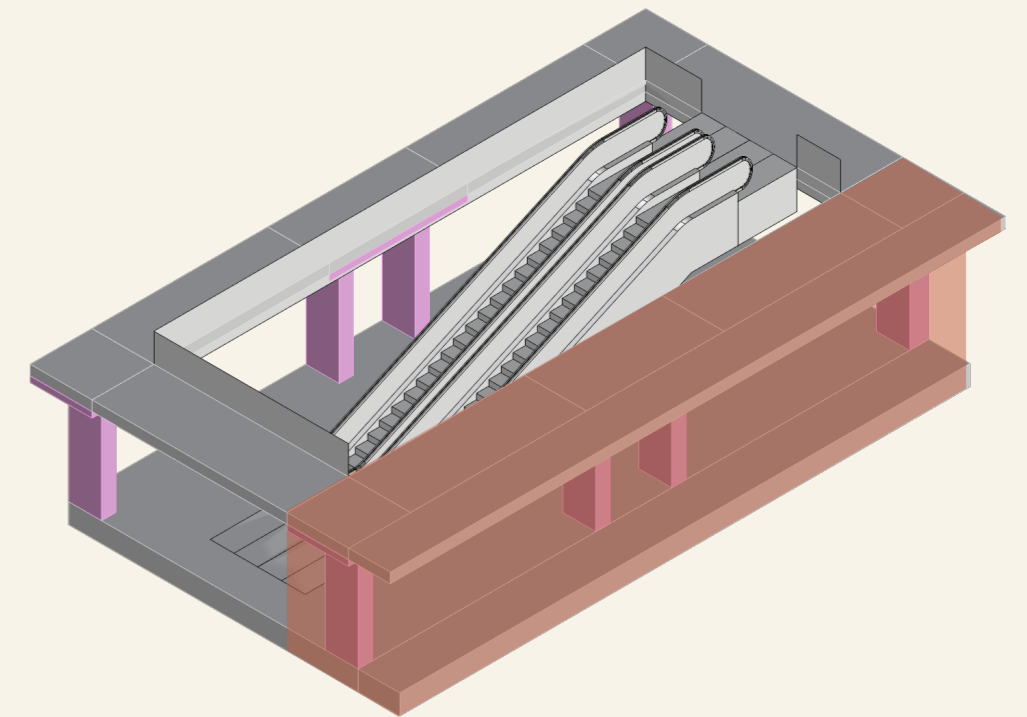
1. cut the concrete floor



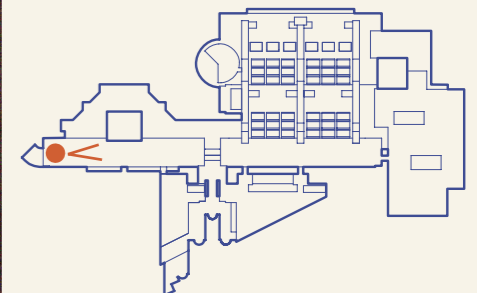
2.1 add escalator



2.2 or add CLT staircase



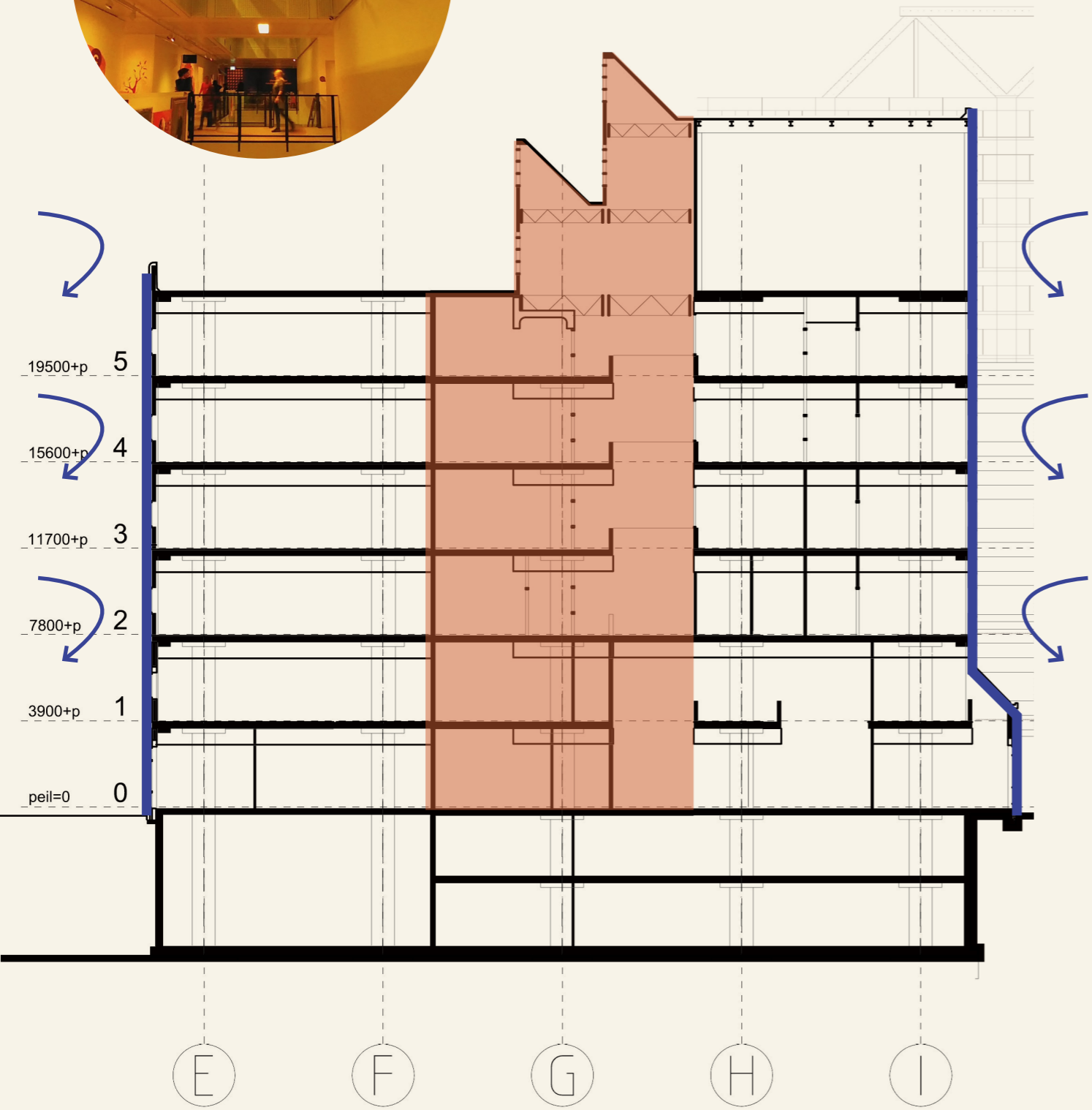
3. corridor spaces connect to the new facade



Current problems of this building

Building Intervention

C2: Inner courtyard



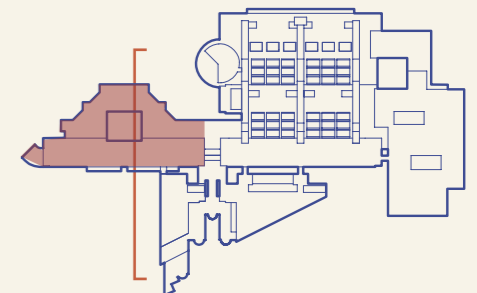
NO natural ventilation



NO natural light



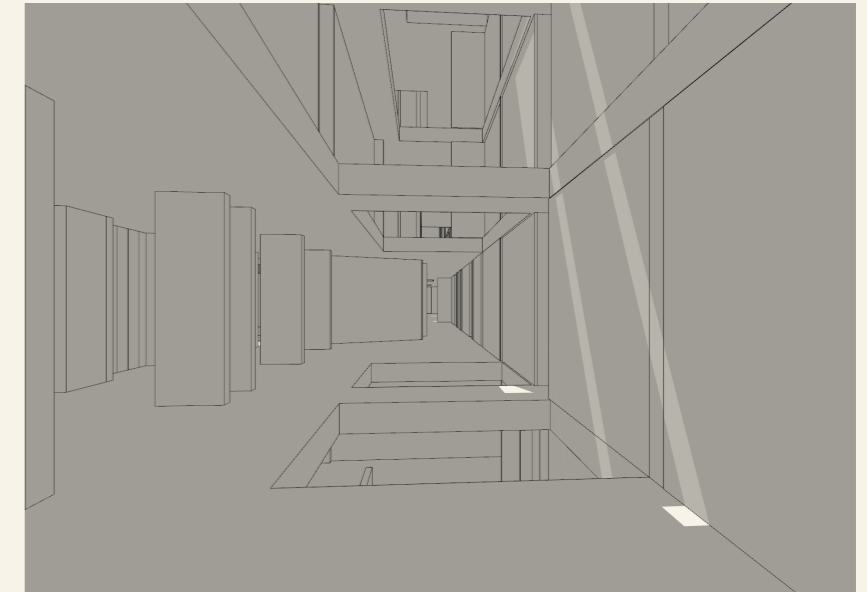
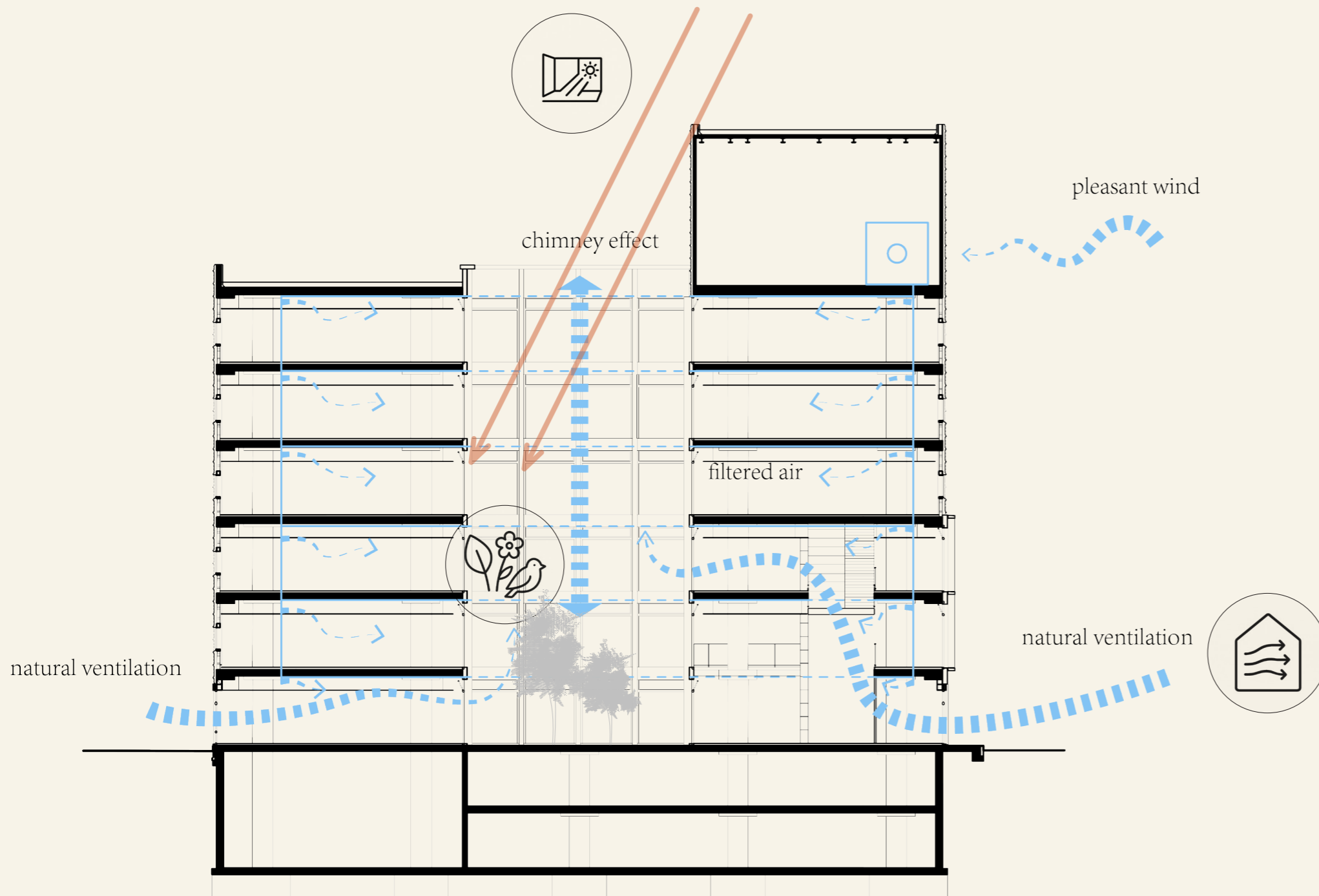
NO green



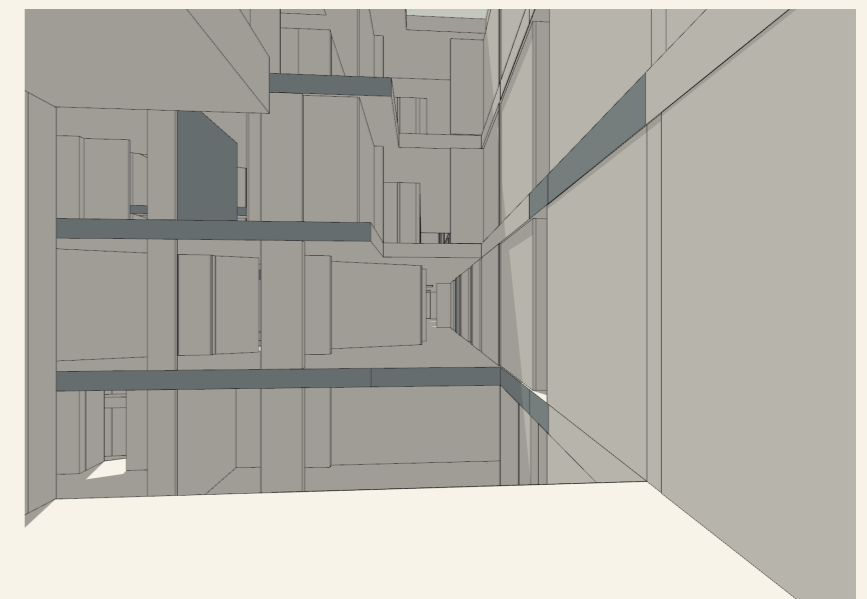
Transformation from atrium to inner courtyard

Building Intervention

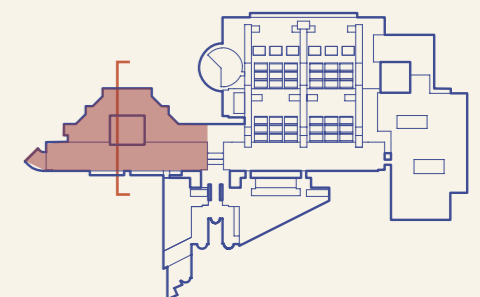
C2: Inner courtyard



Before

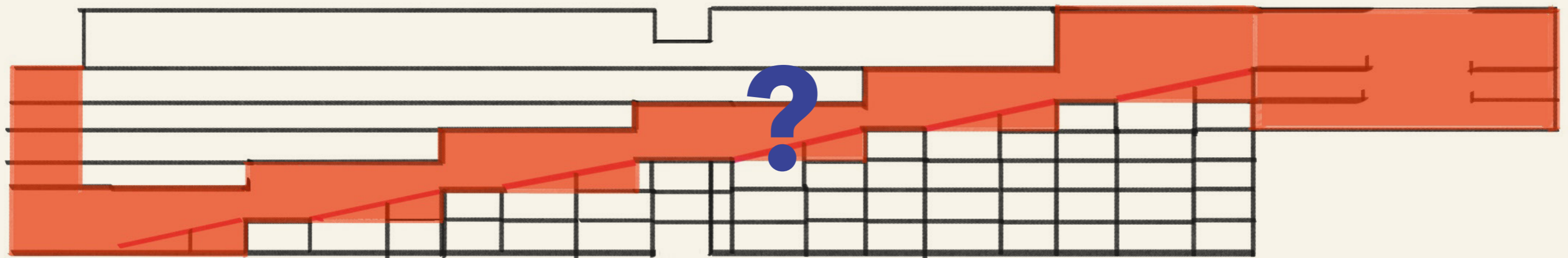


After



D. Program

What kind of activities can keep visitors engaged?



Programmatic priorities

Digital Zones

Study Areas

Collaborative Spaces

Reading Rooms

Performing Arts

Exhibition

Outdoor Spaces

Sports Class

Cafe or Food

Individual Workspaces

Green Spaces

Gaming Room

Archival

Restrooms

Meditation Room

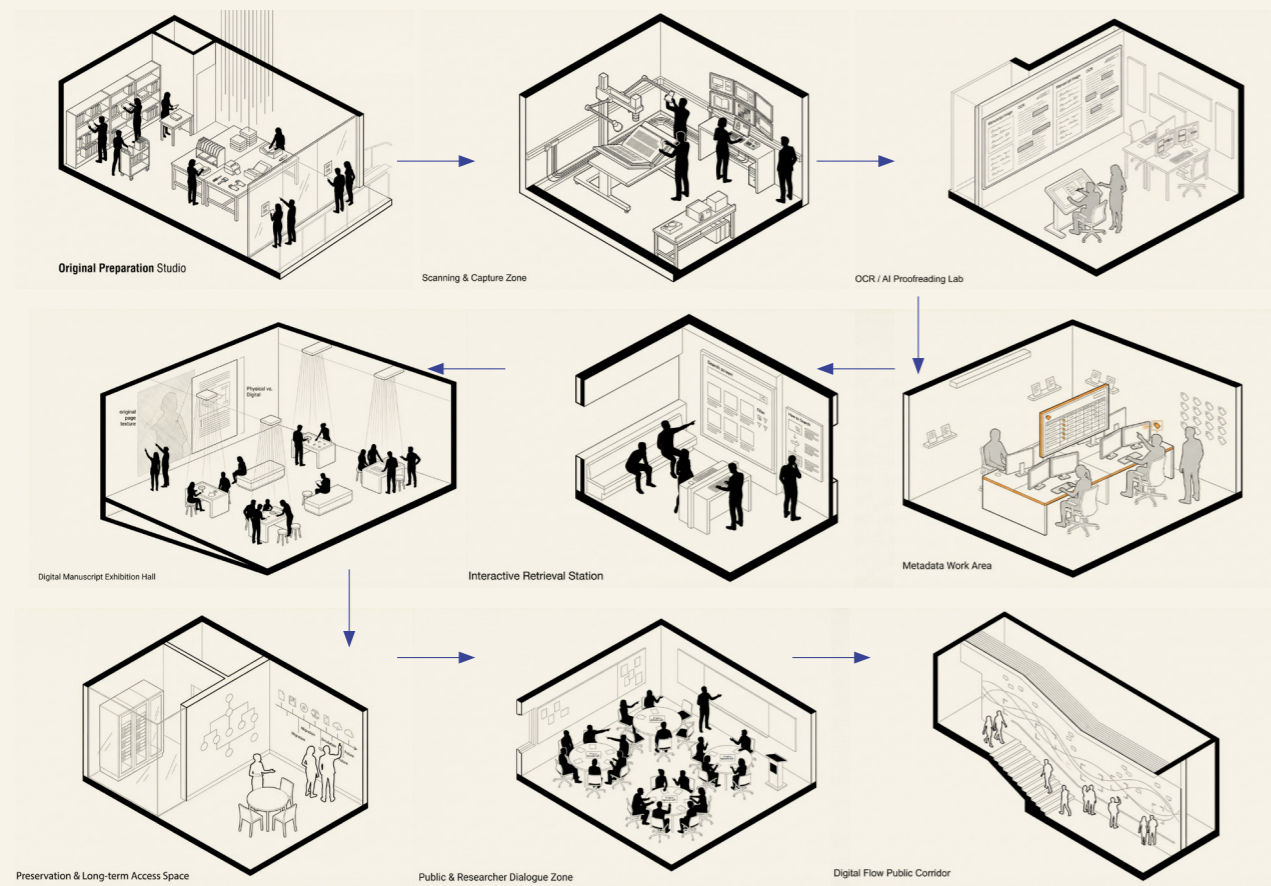
Music and Recording Studio

Language Course

Planting Course

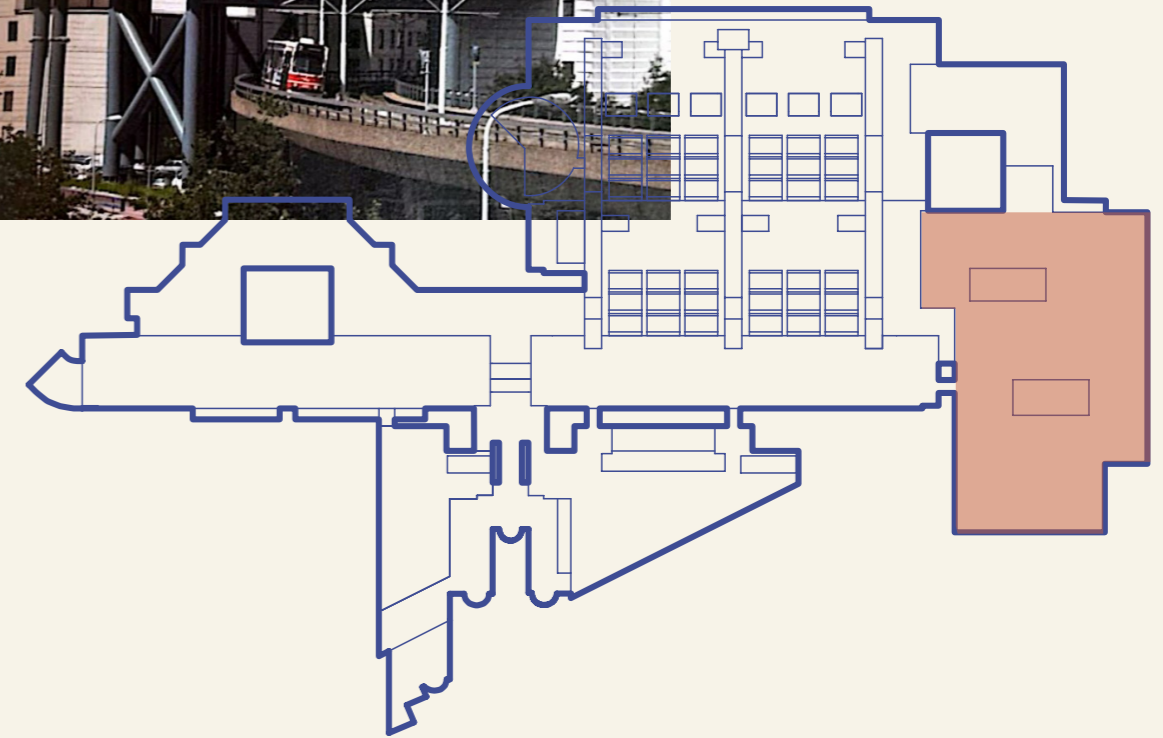
Shared Kitchen

Propose new program



situated learning

Digital Manuscript Museum



Social

Cafe

Gallery

Giant chess

Table tennis

Magazine zone

Gaming zone

Participation

Shared kitchen

Makerspace

Digitallab

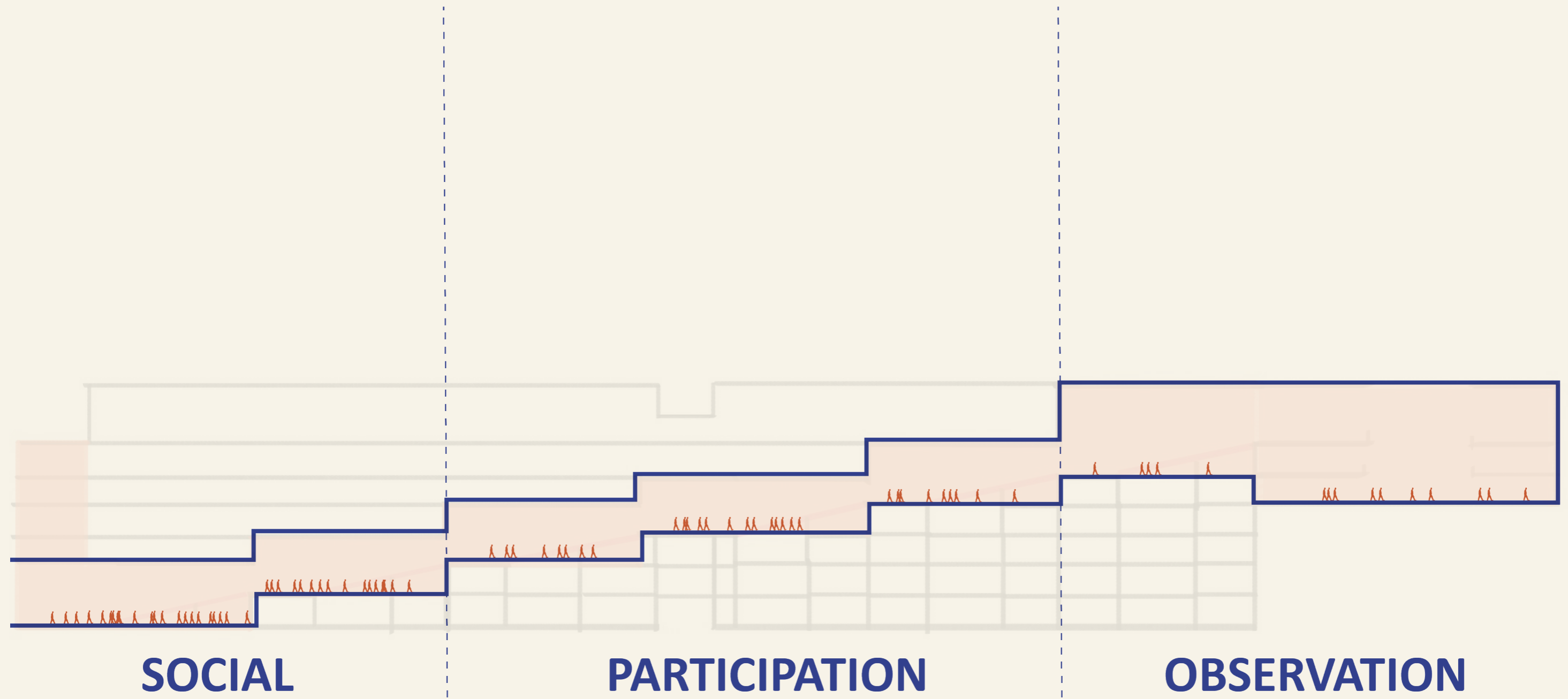
Event space

Tumo center

Observation

KB material heritage display

Digital manuscript museum

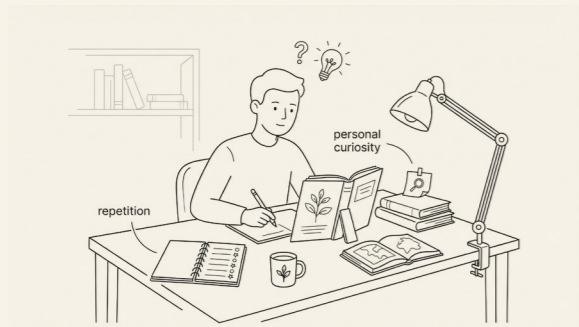


Surface Learning
Noise
Fast
Short
Isolated

Deep Learning
Quiet
Slow
Long
Integrated

Type

Definition



self-directed learning

learning initiated and regulated by the individual through observation, repetition, and personal curiosity.



collaborative learning

emerges through shared activity, dialogue, and negotiation of meaning among participants.



situated learning

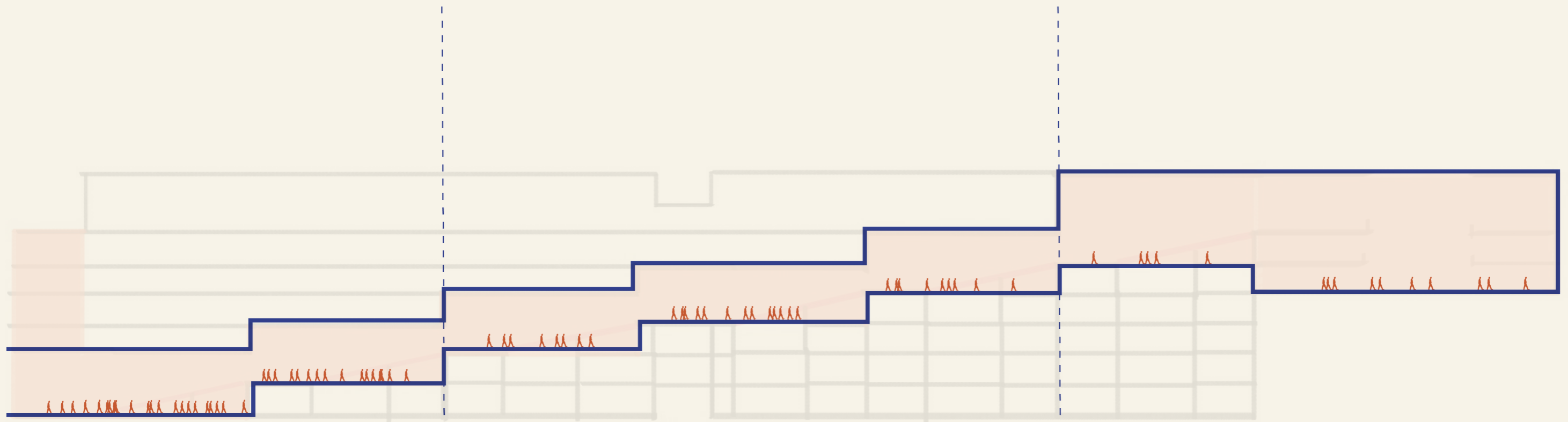
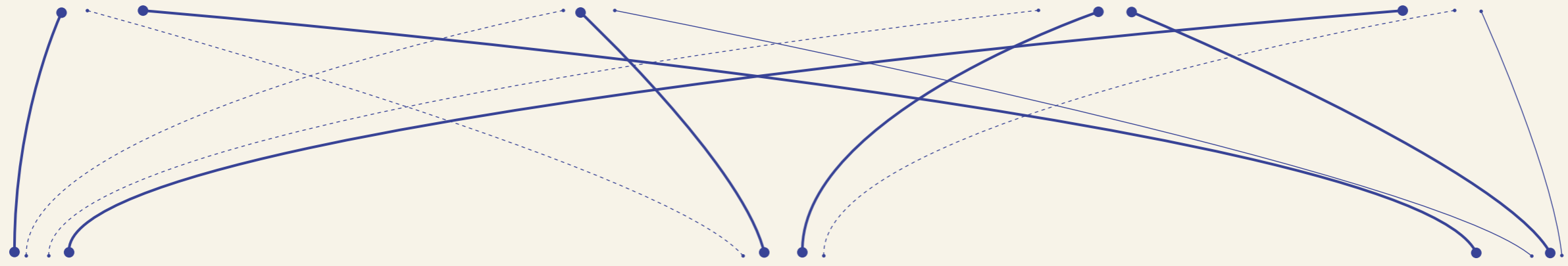
occurs through participation in real-world practices, rather than through formal instruction.



incidental learning

occurs unintentionally as a by-product of everyday activity.

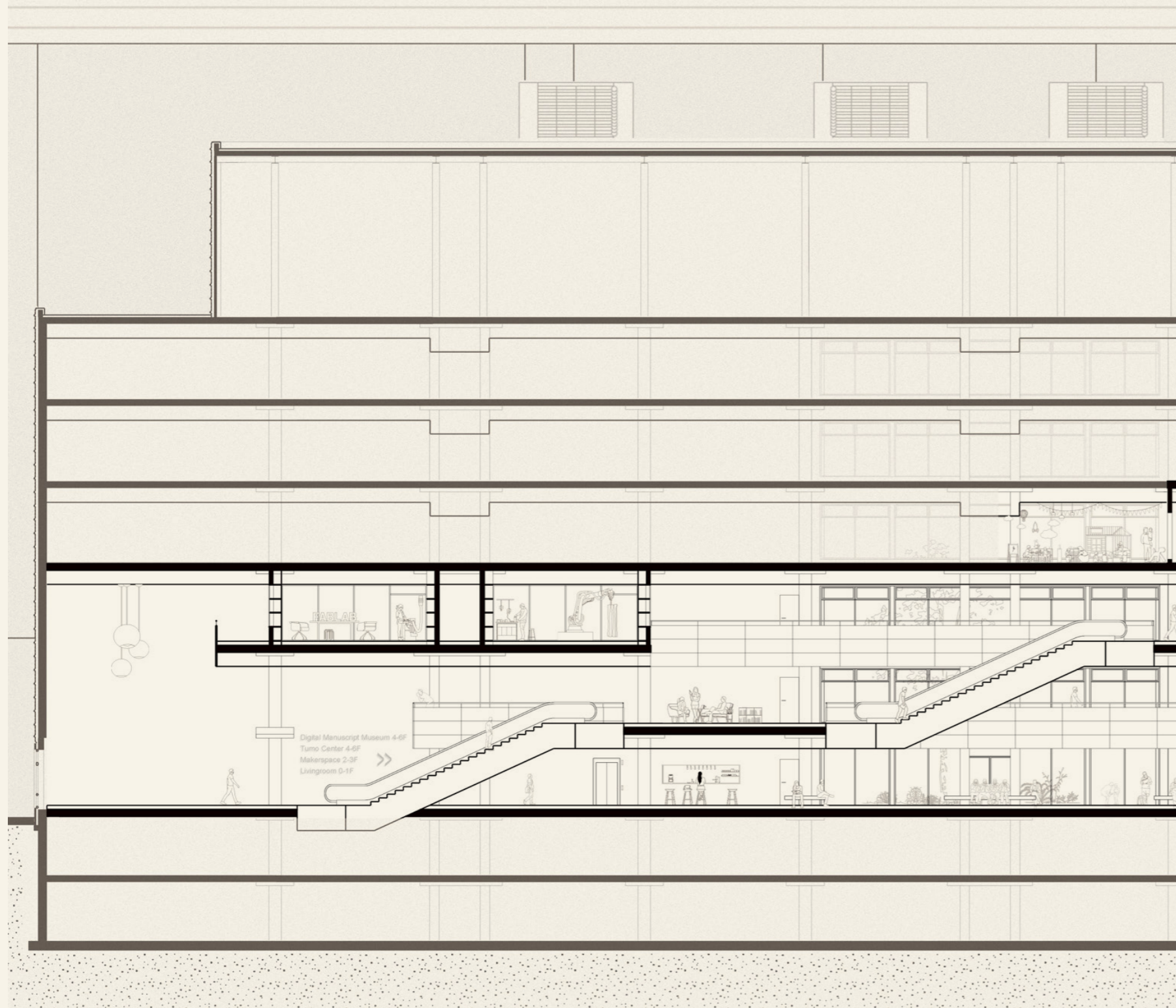
self-directed learning collaborative learning situated learning incidental learning



SOCIAL

PARTICIPATION

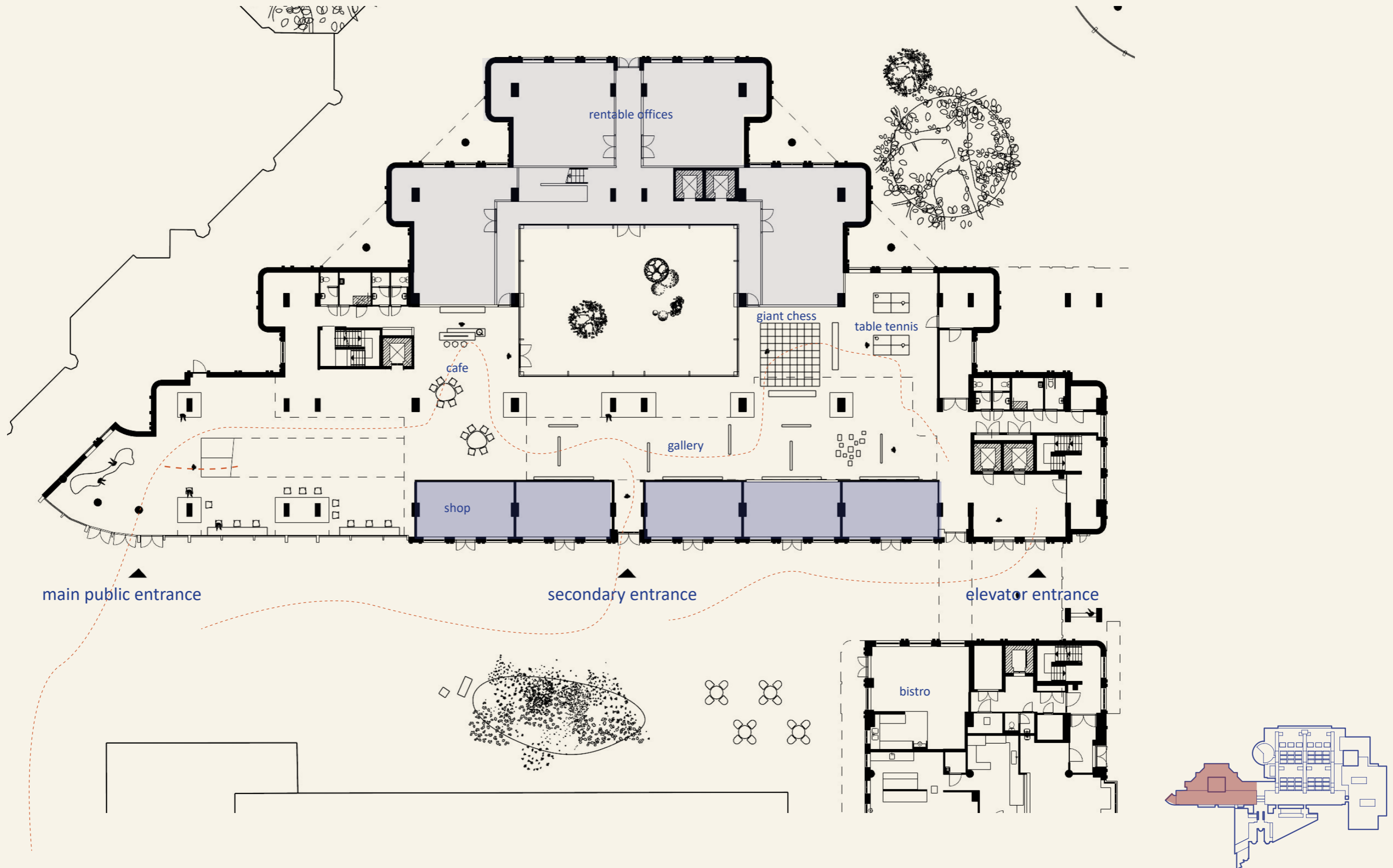
OBSERVATION

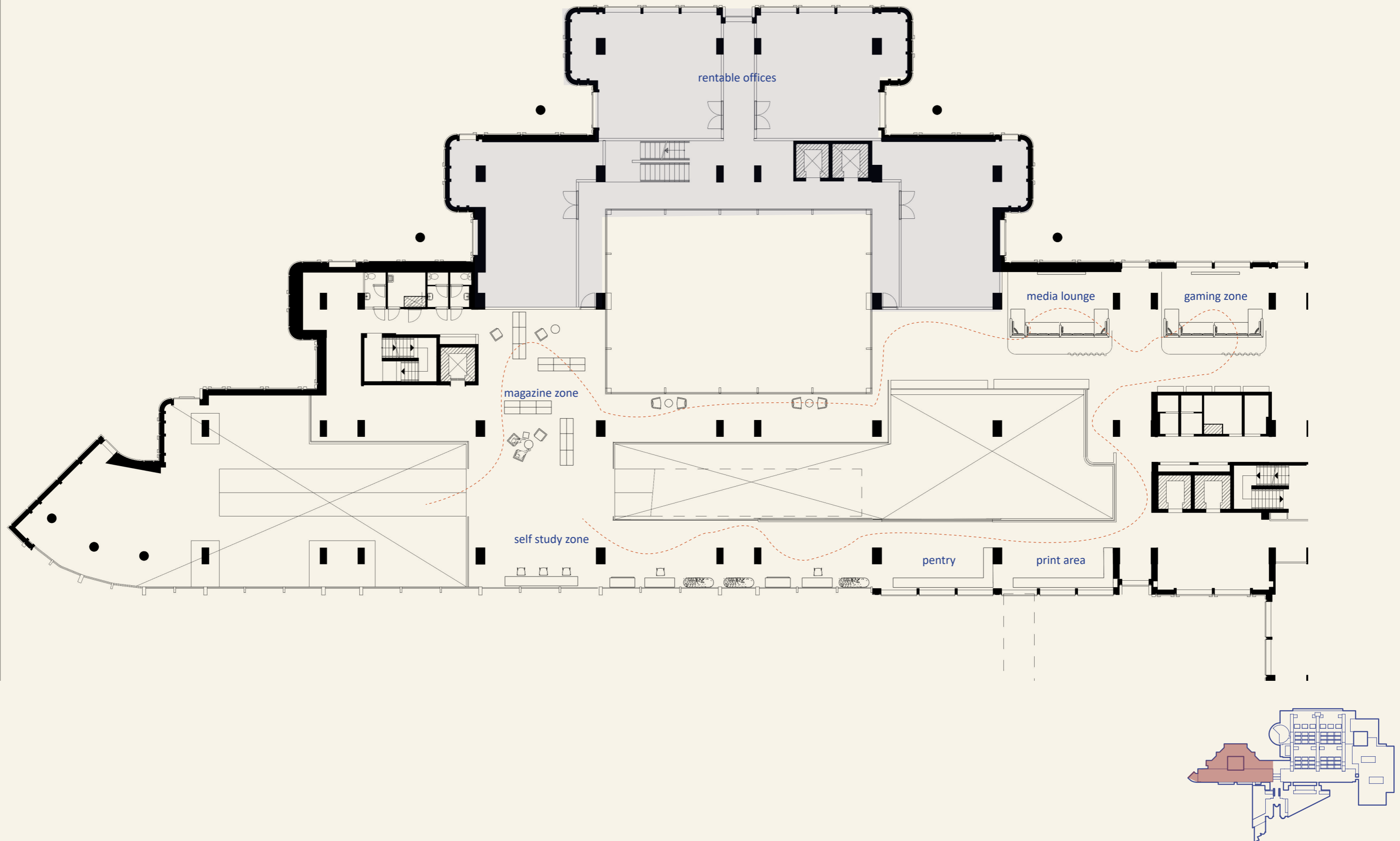


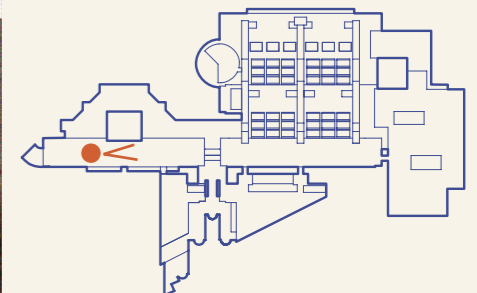
Purpose:
attract everyone
lower threshold
easy to join

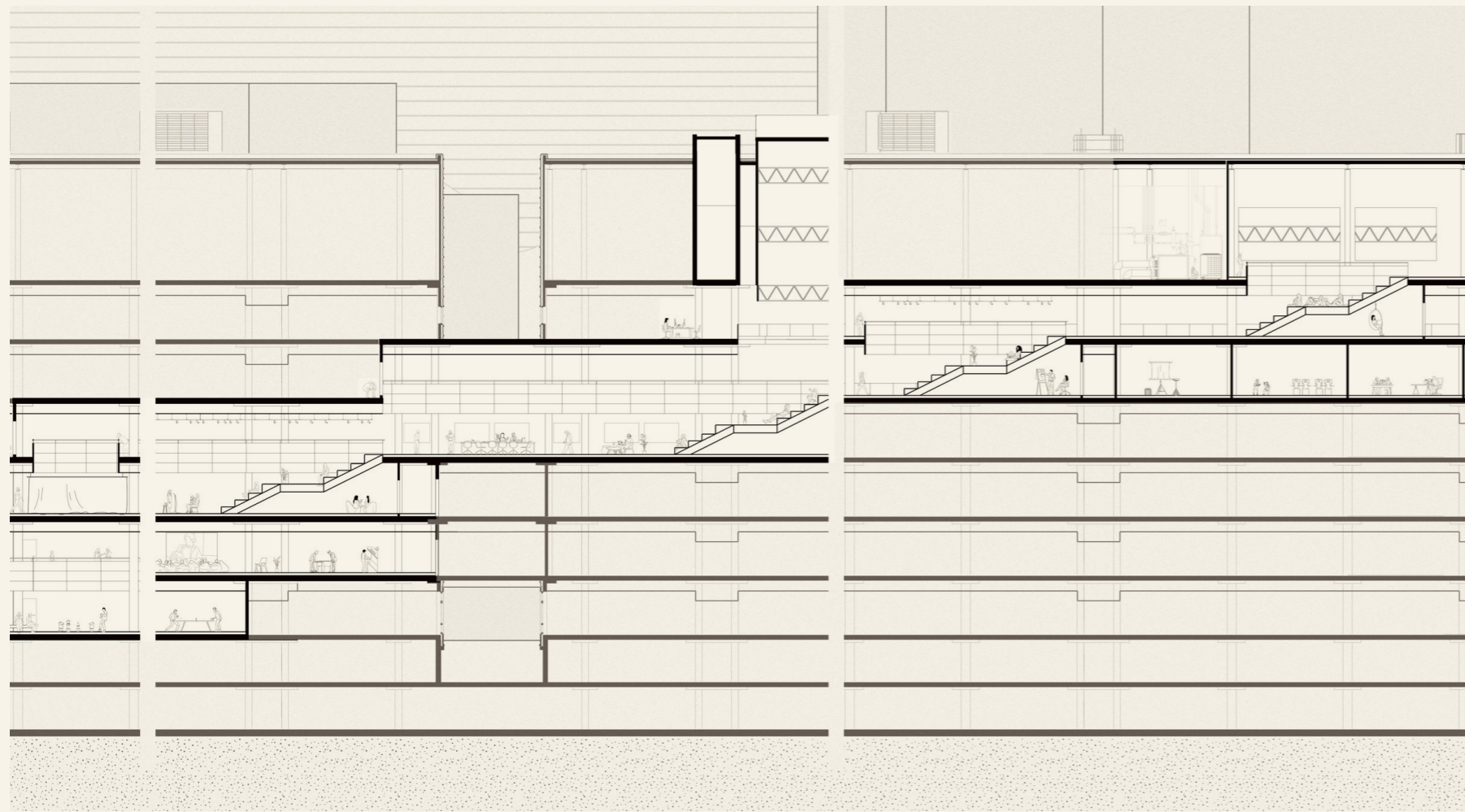
Main informal learning types:
Incidental learning
Self-directed learning

People are not expected to learn, but learning happens through exposure, visibility, and curiosity.









Purpose:

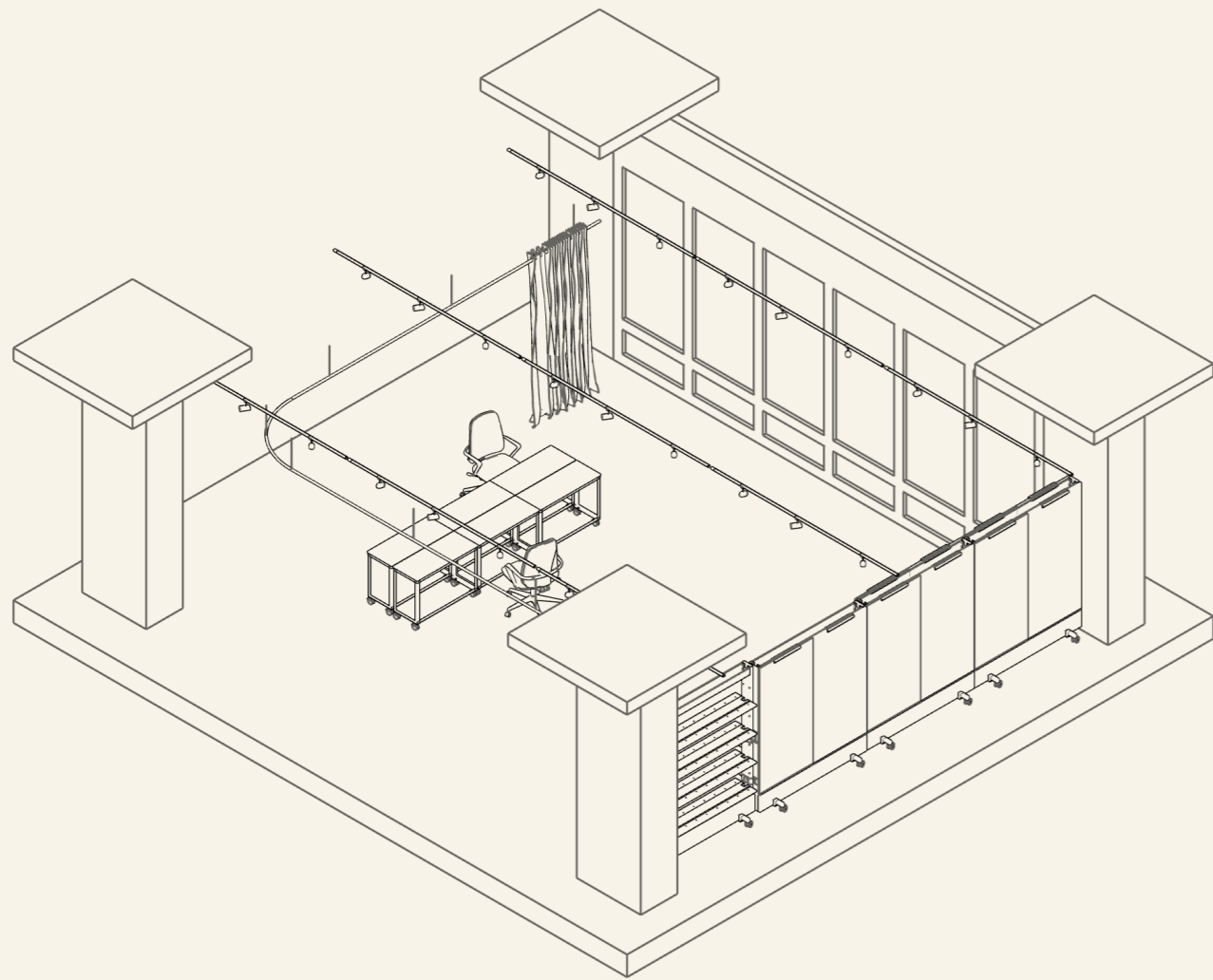
Encourage staying, effort, and shared attention

Main informal learning types:

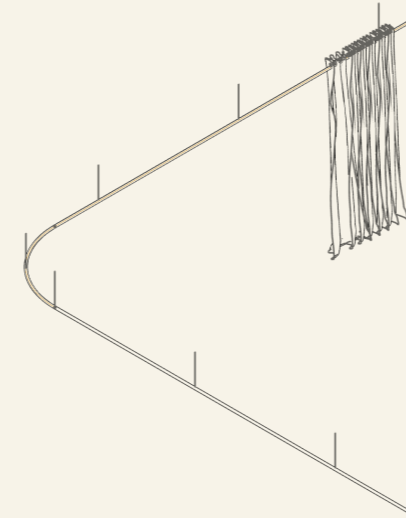
Collaborative learning

Situated learning

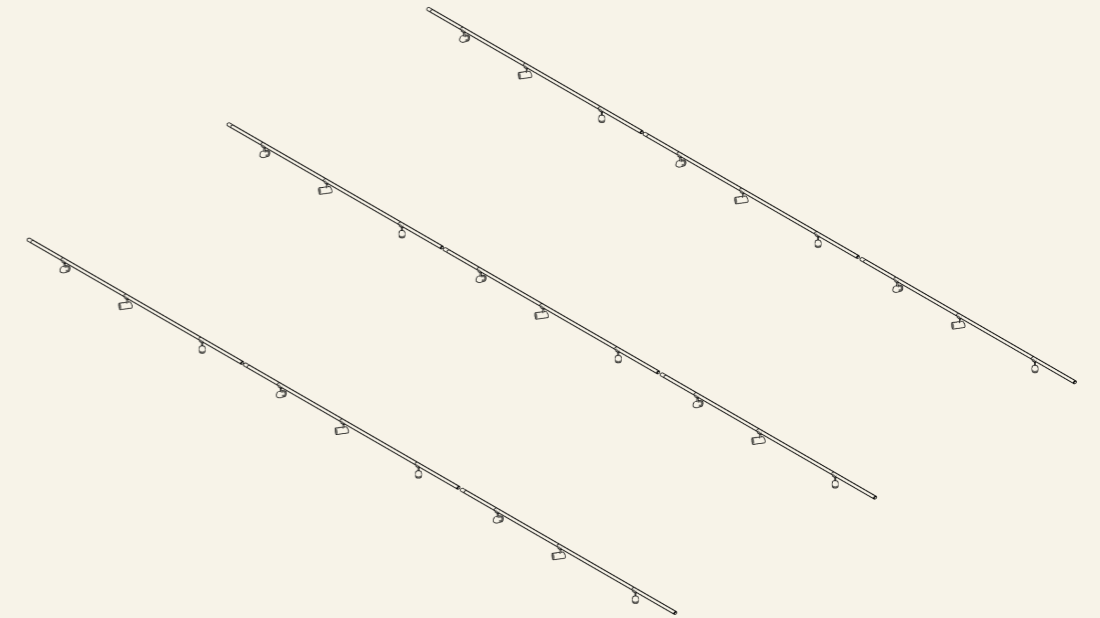
Informal learning becomes more active through visible practices, shared activities, and participation at different levels.



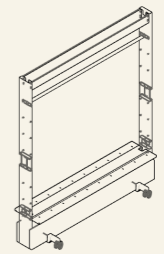
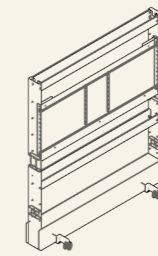
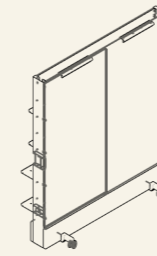
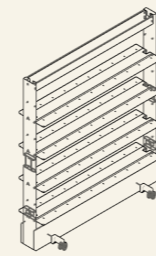
collaborative learning



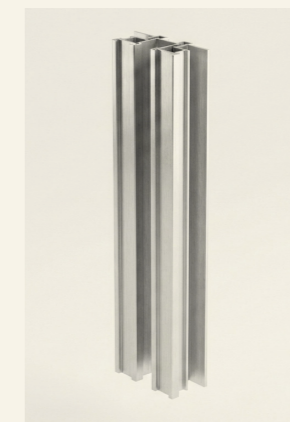
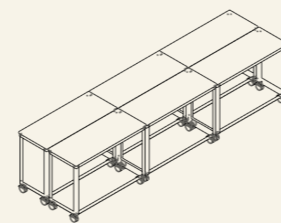
Curtain



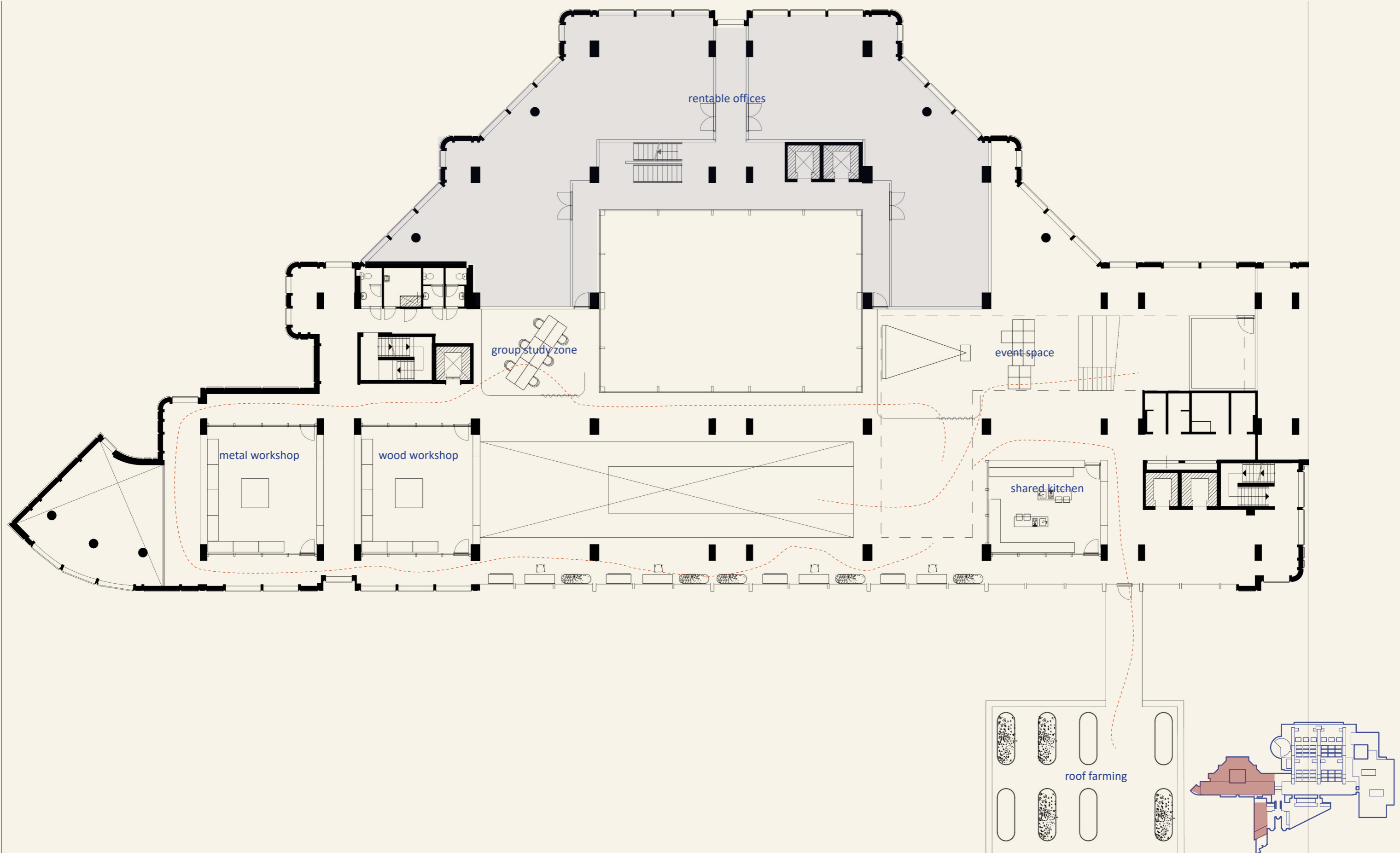
Sliding lights

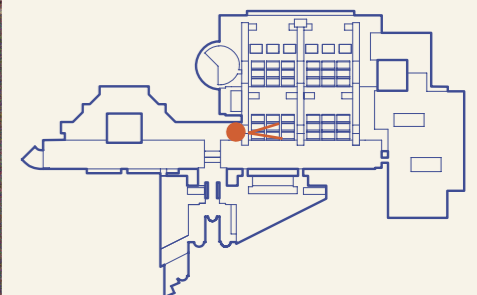


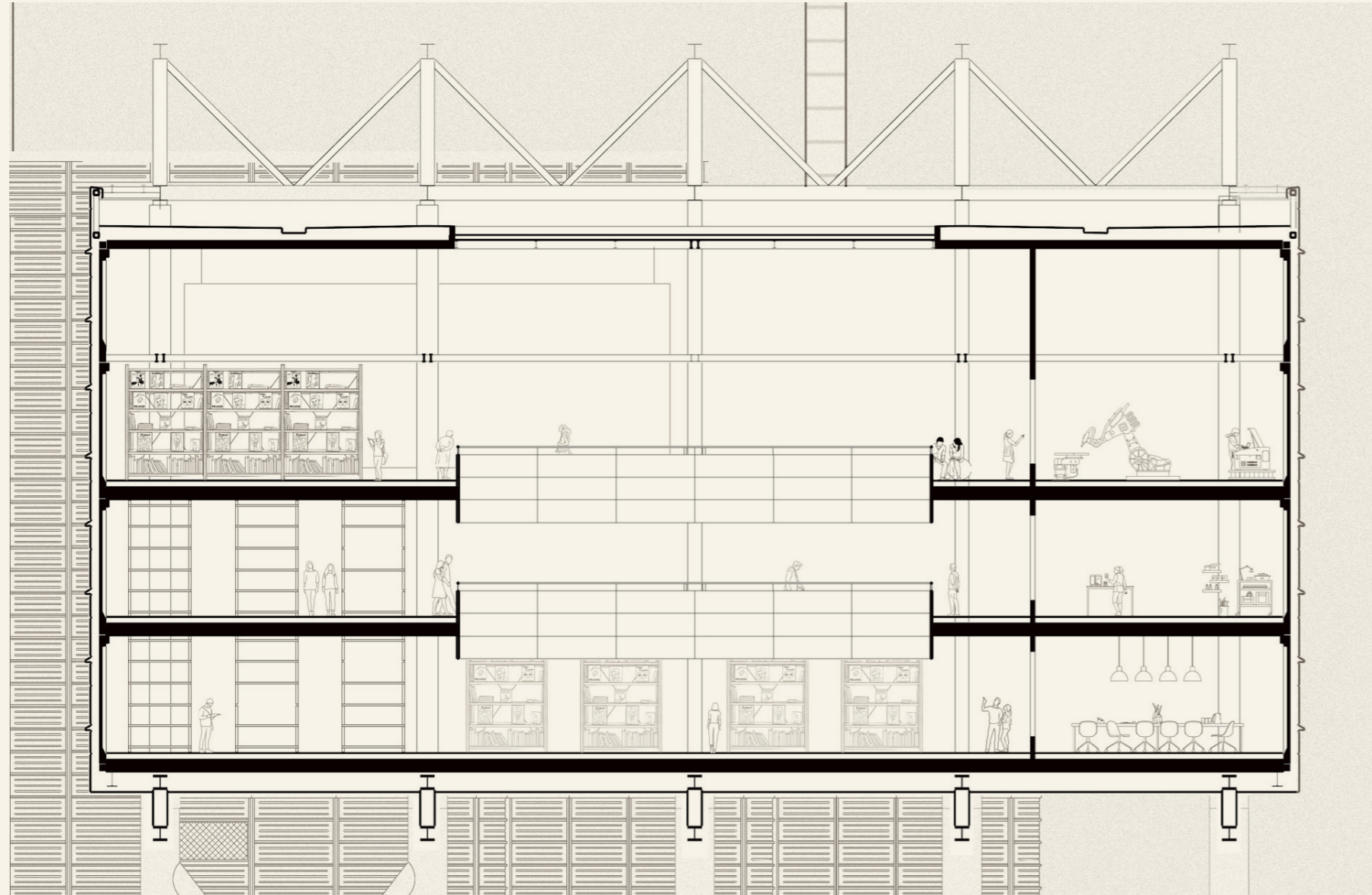
Moving walls with different use



Moving tables and chairs



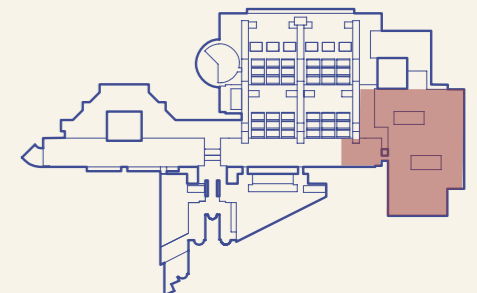
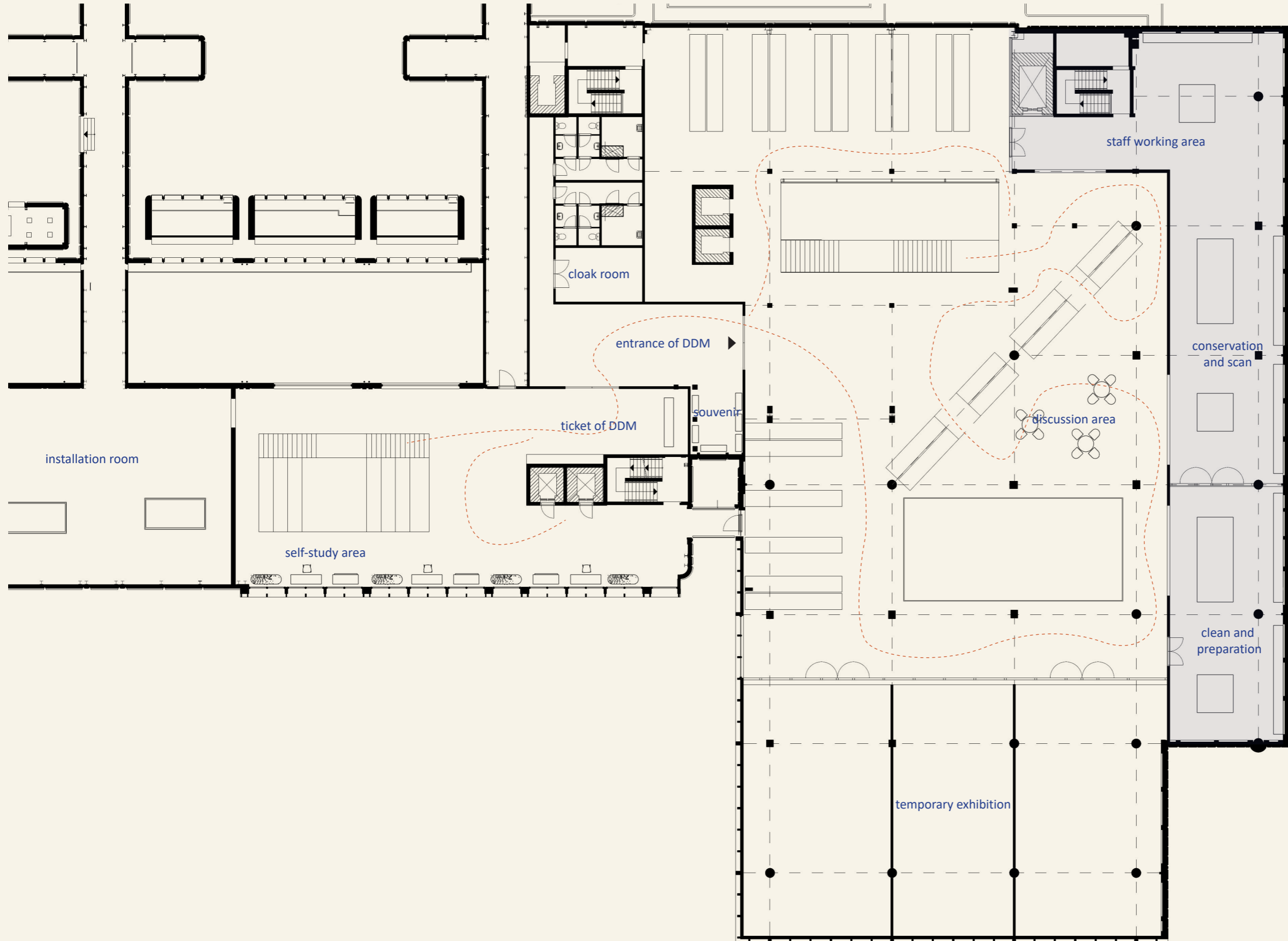


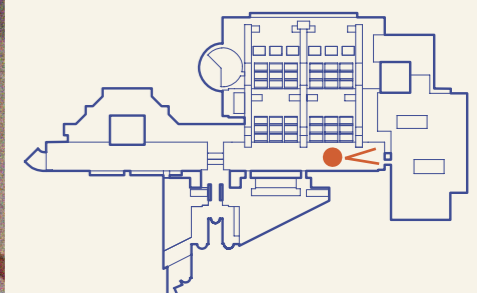


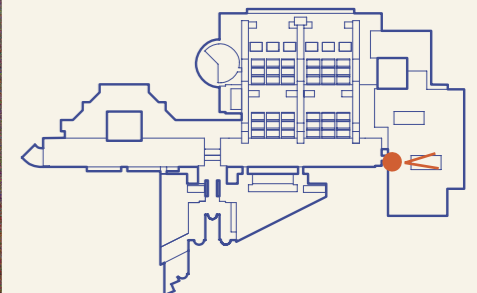
Purpose:
Slow down
Reflective and interpretive
Concentration

Main informal learning types:
Situated learning
Self-directed learning

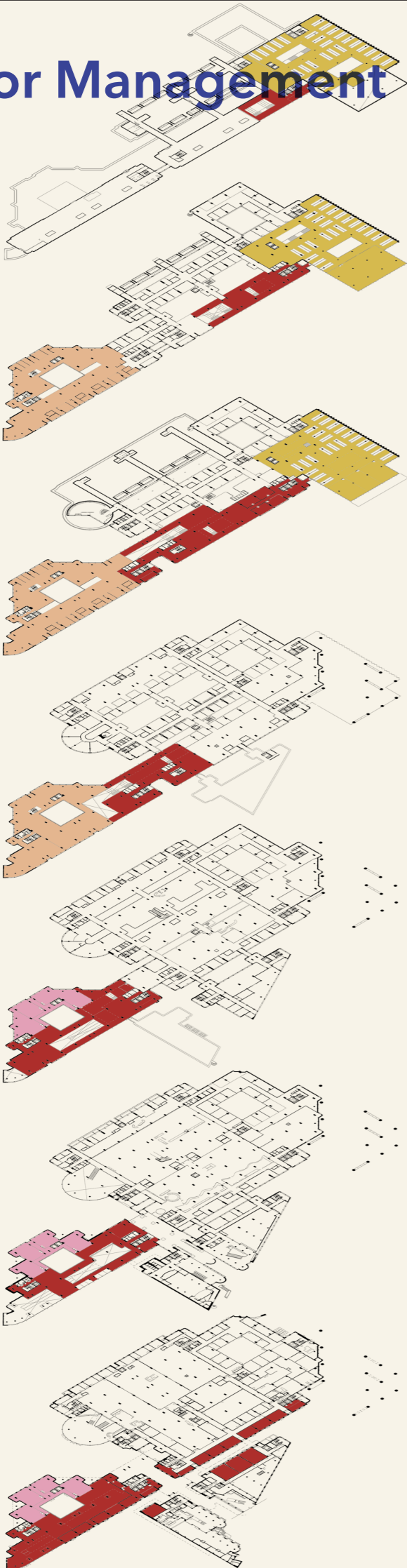
Learning becomes deeper—people begin to understand systems, processes, and meanings rather than isolated activities.







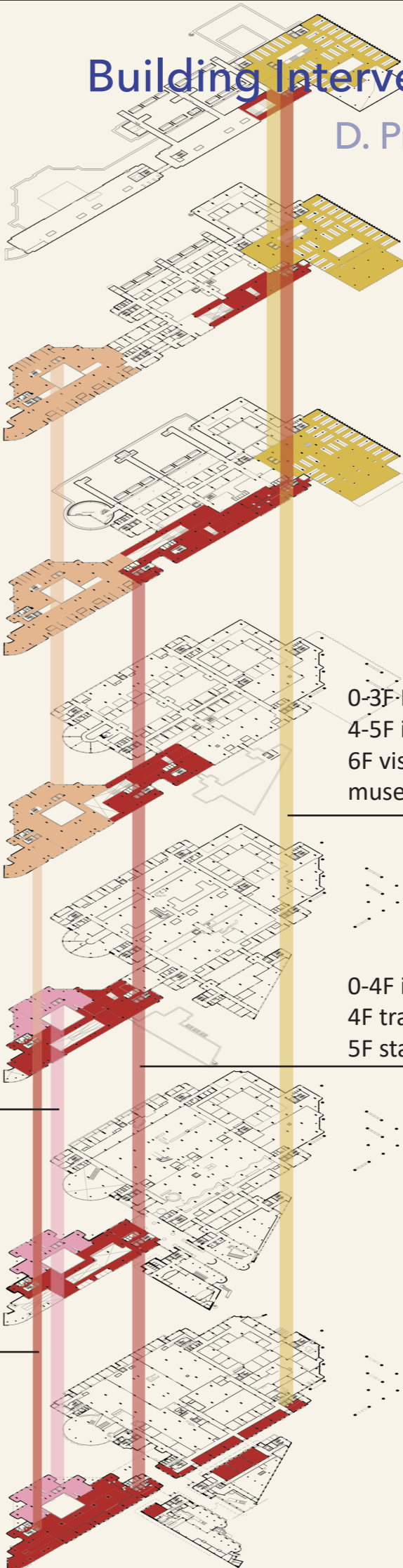
Elevator Management



- informal learning axis
- rentable offices
- children museum
- digital manuscript museum

Building Intervention

D. Program



0-2F rentable offices
3-5F visitors to children museum

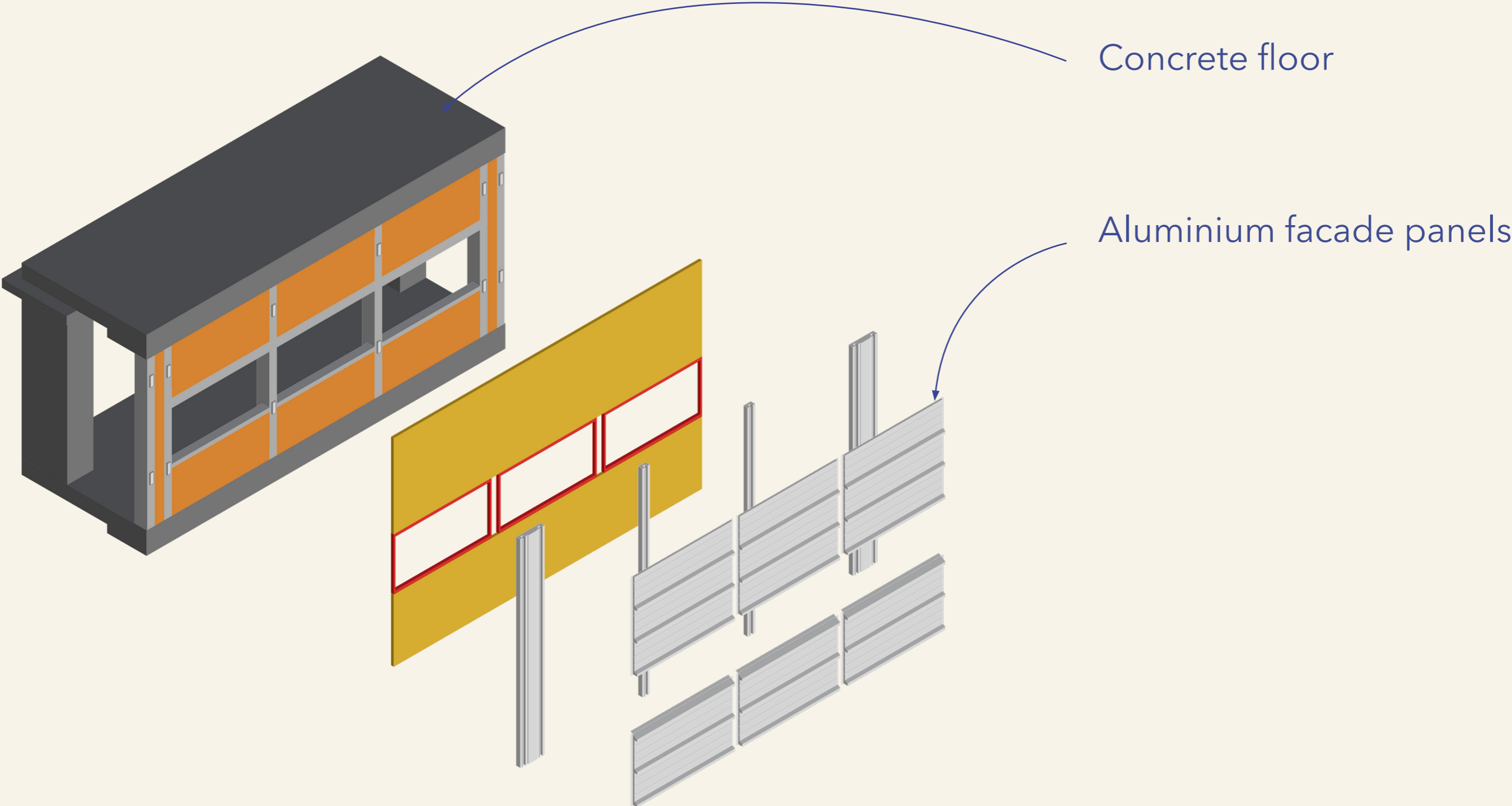
0-2F informal learning axis
3F visitors to children museum
4-5F staff in the children museum

0-3F NO STOP
4-5F informal learning axis
6F visitors to digital manuscript museum - main entrance

0-4F informal learning axis
4F transfer to th other lift
5F staff in the children museum

Circularity

- A. Reuse materials
- B. Clean energy



Concrete floor



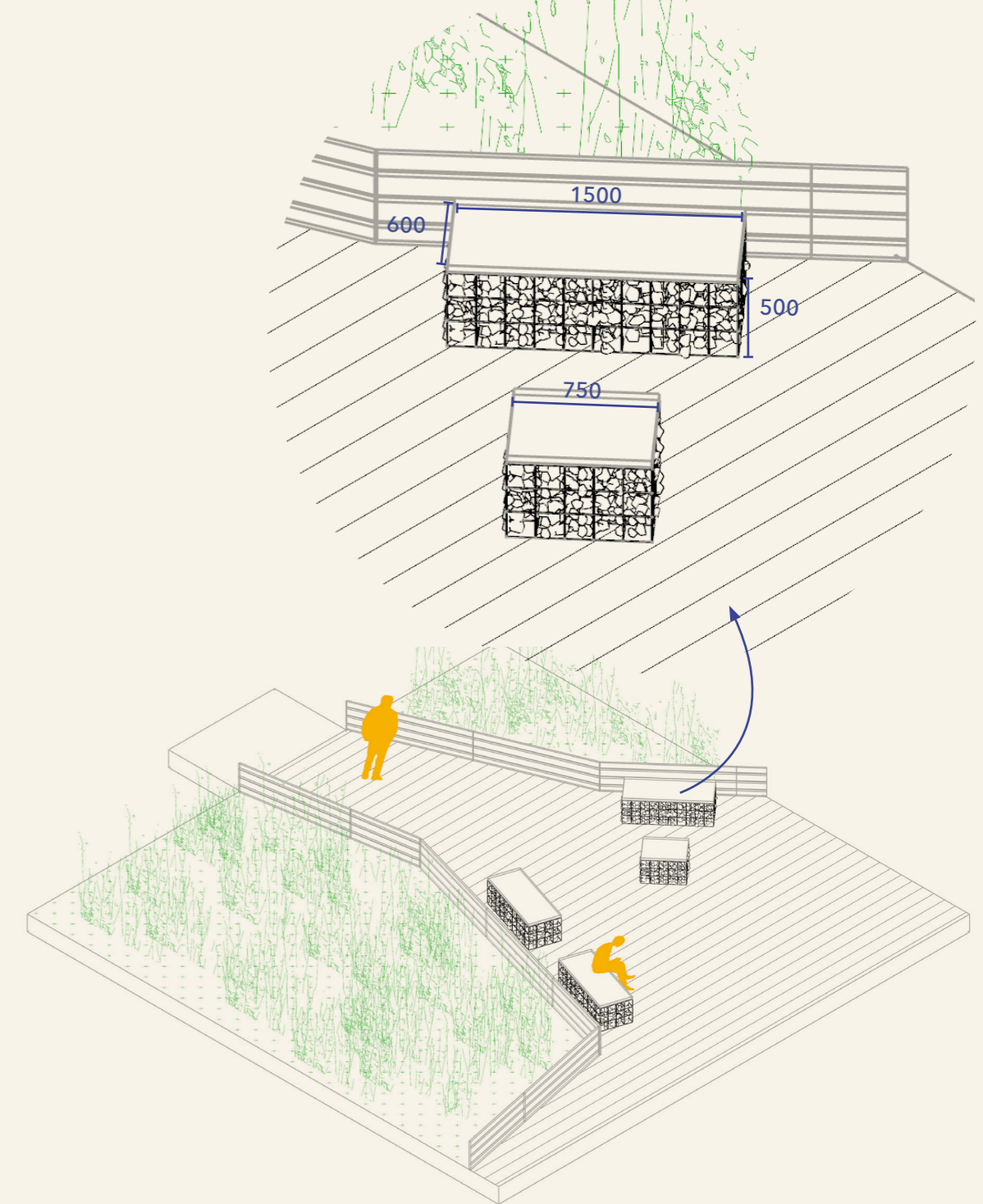
remove 5931 m²
≈ 1950 m³



crush it into small pieces

Circularity

A. Reuse materials



gabion bench / gabion coffee table
one gabion bench: 0.315m³ ≈ 6,200 units
one gabion table: 0.16m³ ≈ 12,380 units

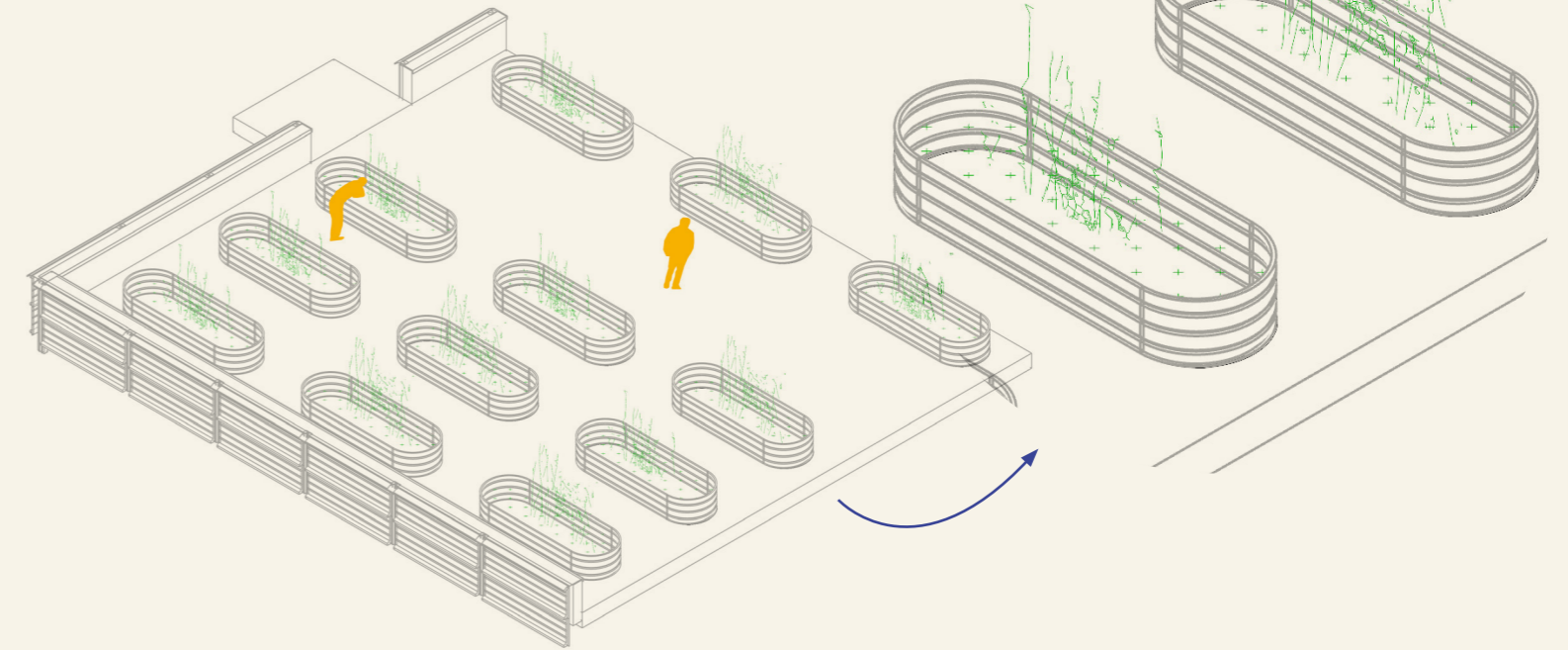
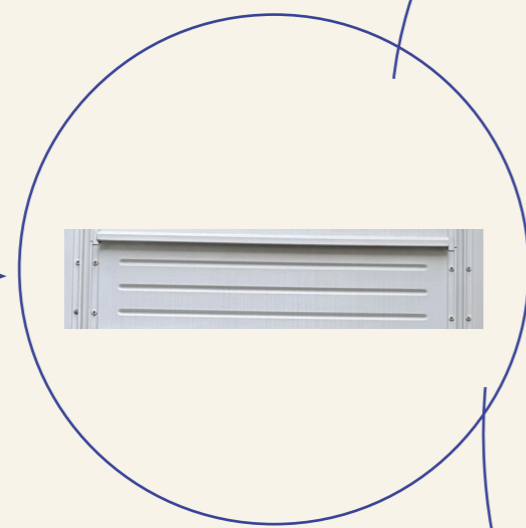
Aluminium facade panels

Circularity

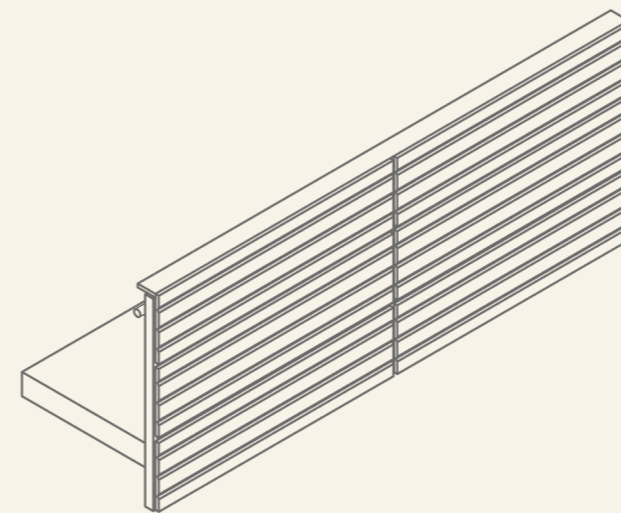
A. Reuse materials



remove the aluminium panels



planters (on the roof and in the city)



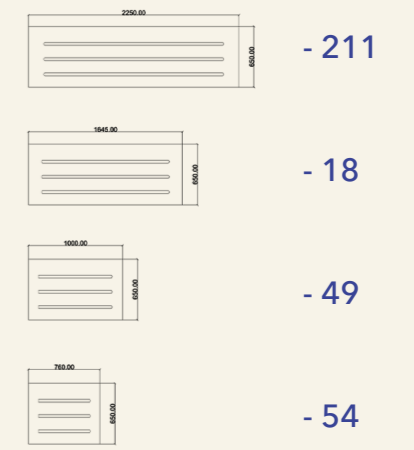
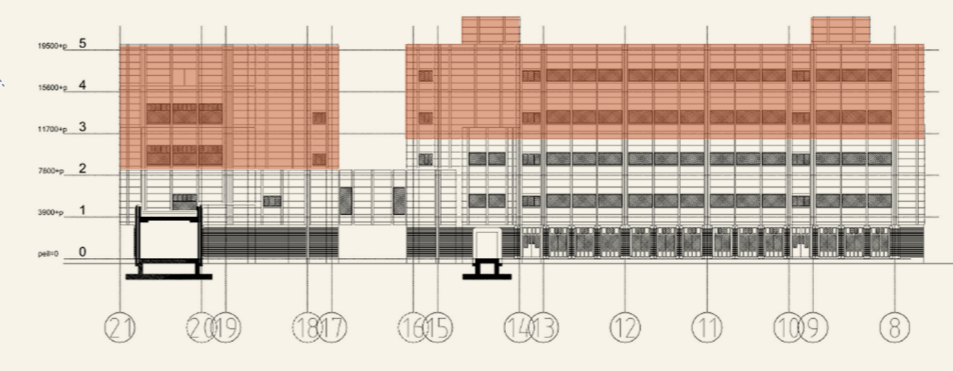
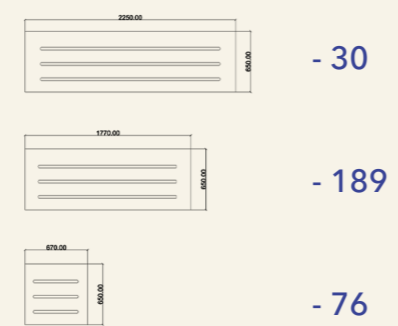
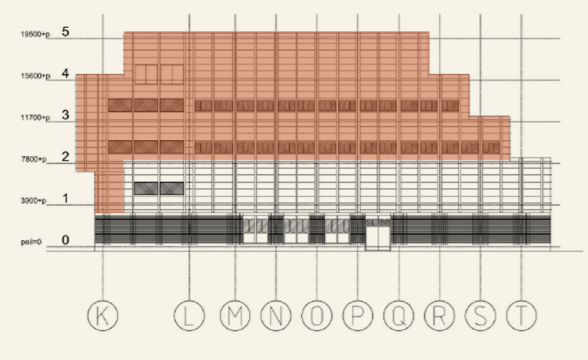
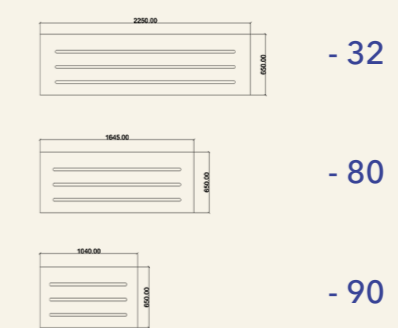
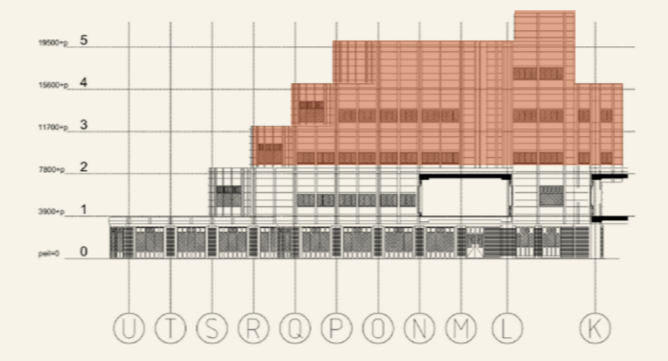
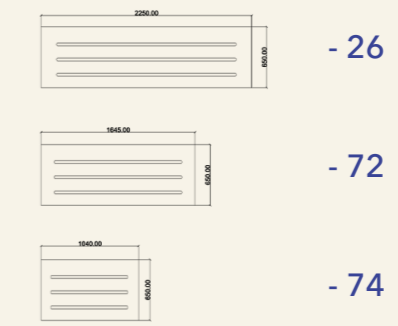
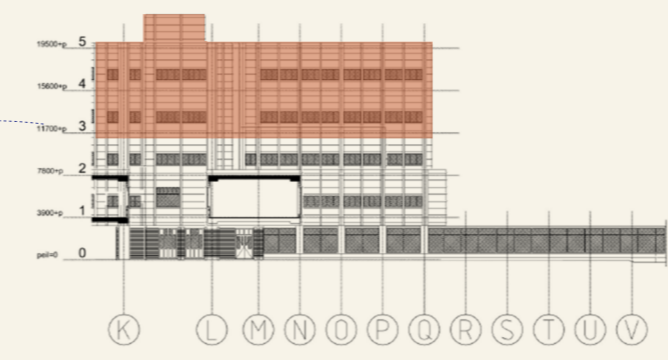
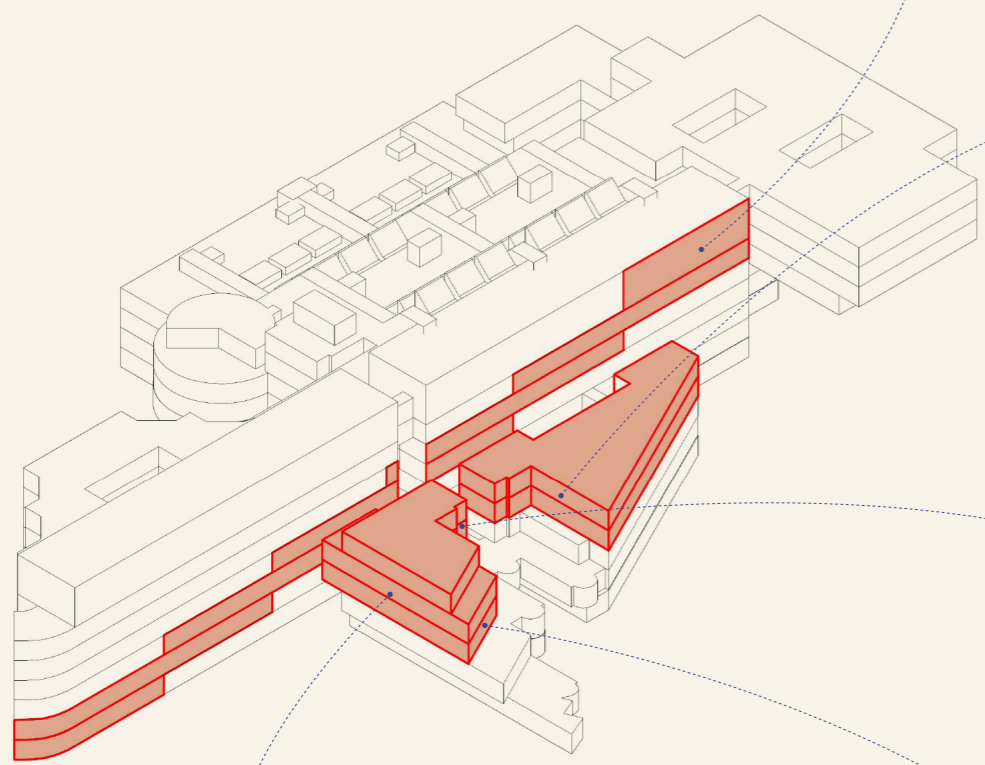
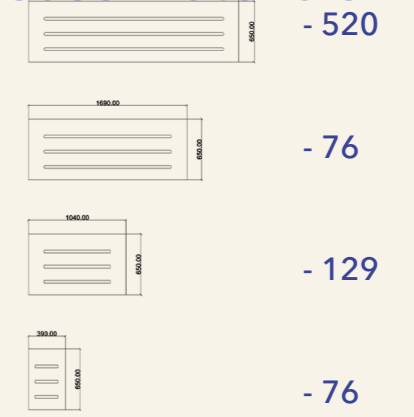
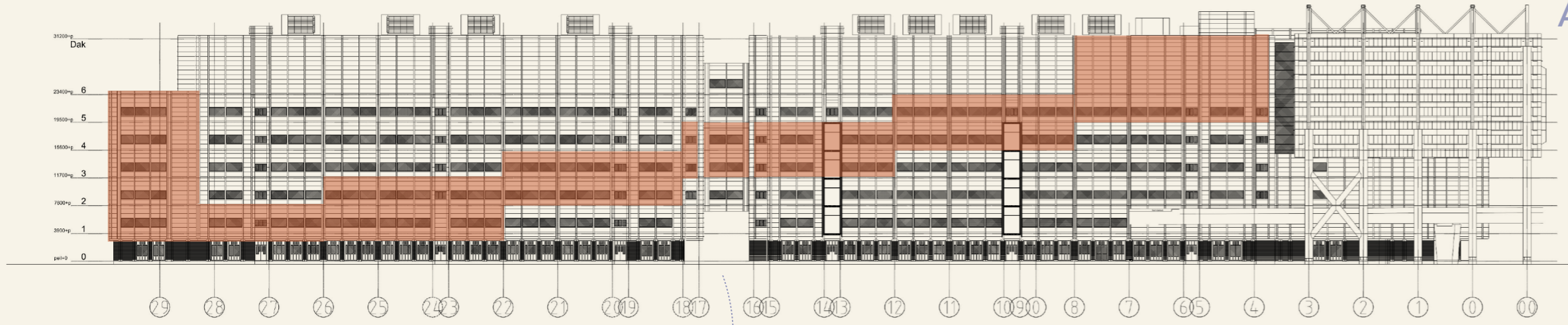
balustrades (indoor and outdoor)



Harvest map

Circularity

A. Reuse materials



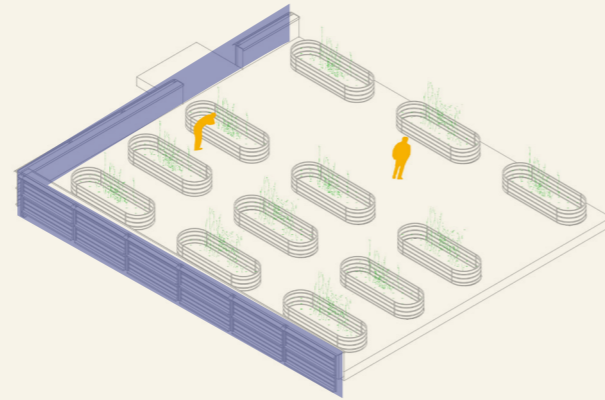
Harvest map

A. Reuse materials

In total

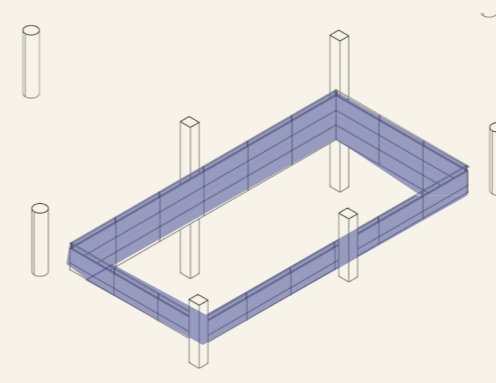
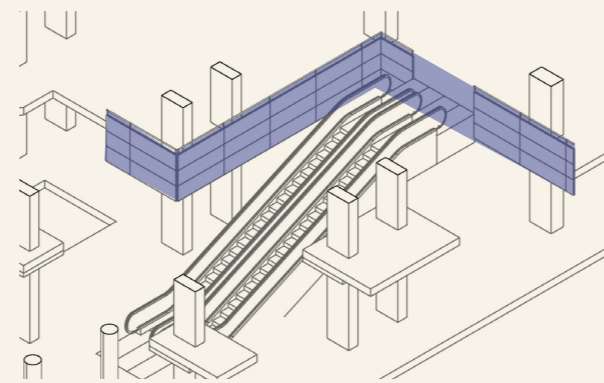
A		- 819
B		- 189
C		- 76
D		- 170
E		- 293
F		- 49
G		- 54
H		- 76
I		- 76

Outdoor balustrade



- A +69
- B +31
- D +36
- E +33
- F +12
- G +13
- H +12

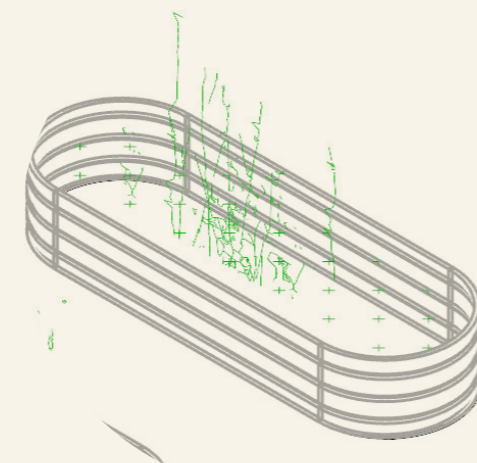
Indoor balustrade



mainly reuse A +591

Planter

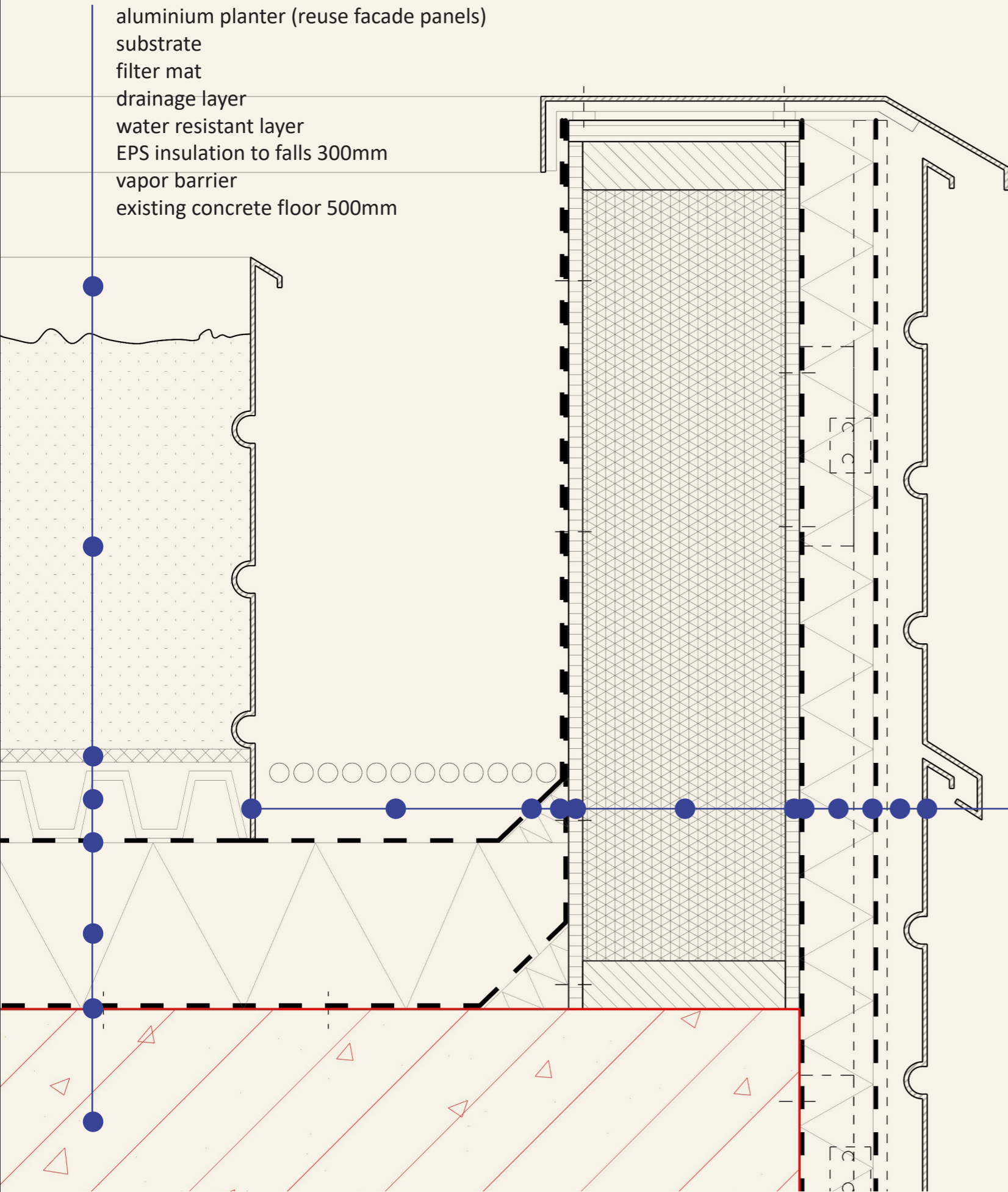
one planter = 4 pieces
The rest = 1005 pieces ≈ 251 units



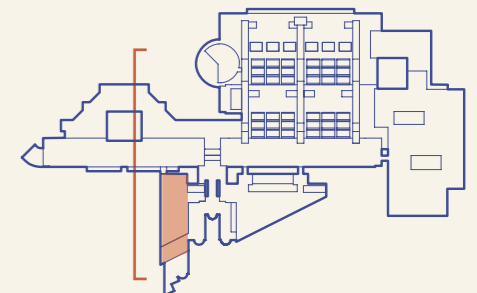
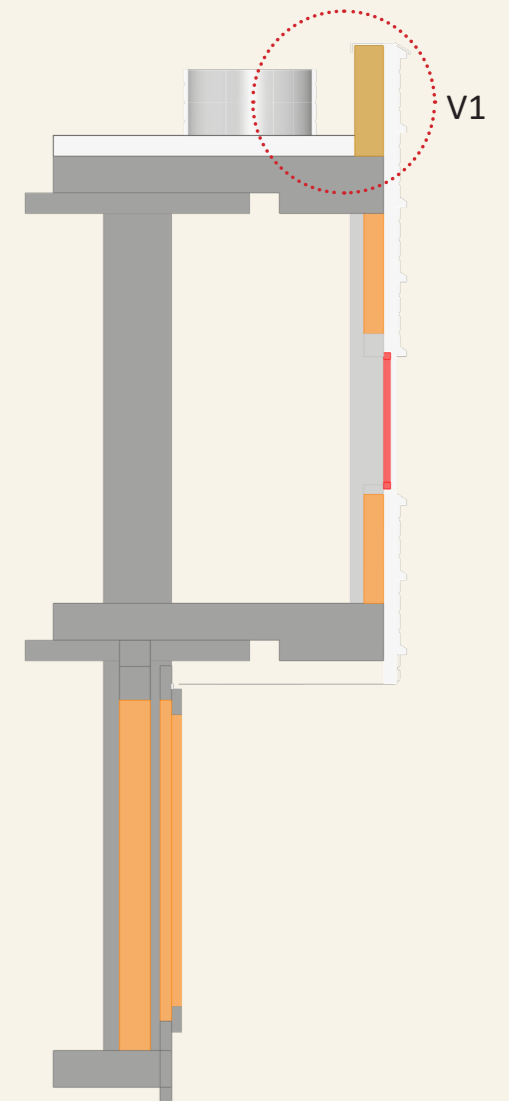
distribute them to the streets of the hague

Detail of reuse materials

A. Reuse materials



- aluminium planter (reuse facade panels)
- gravel (recycle concrete aggregate) 80mm
- water resistant layer
- vapor barrier
- gypsum board 12.5mm
- flax insulation (natural) 220mm
- gypsum board 12.5mm
- vapor barrier
- insulation with vertical metal support 80mm
- water resistant layer
- void 50mm
- white aluminium panels 5mm

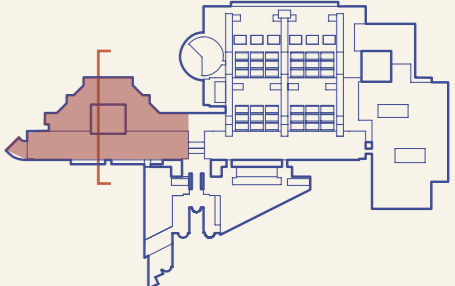
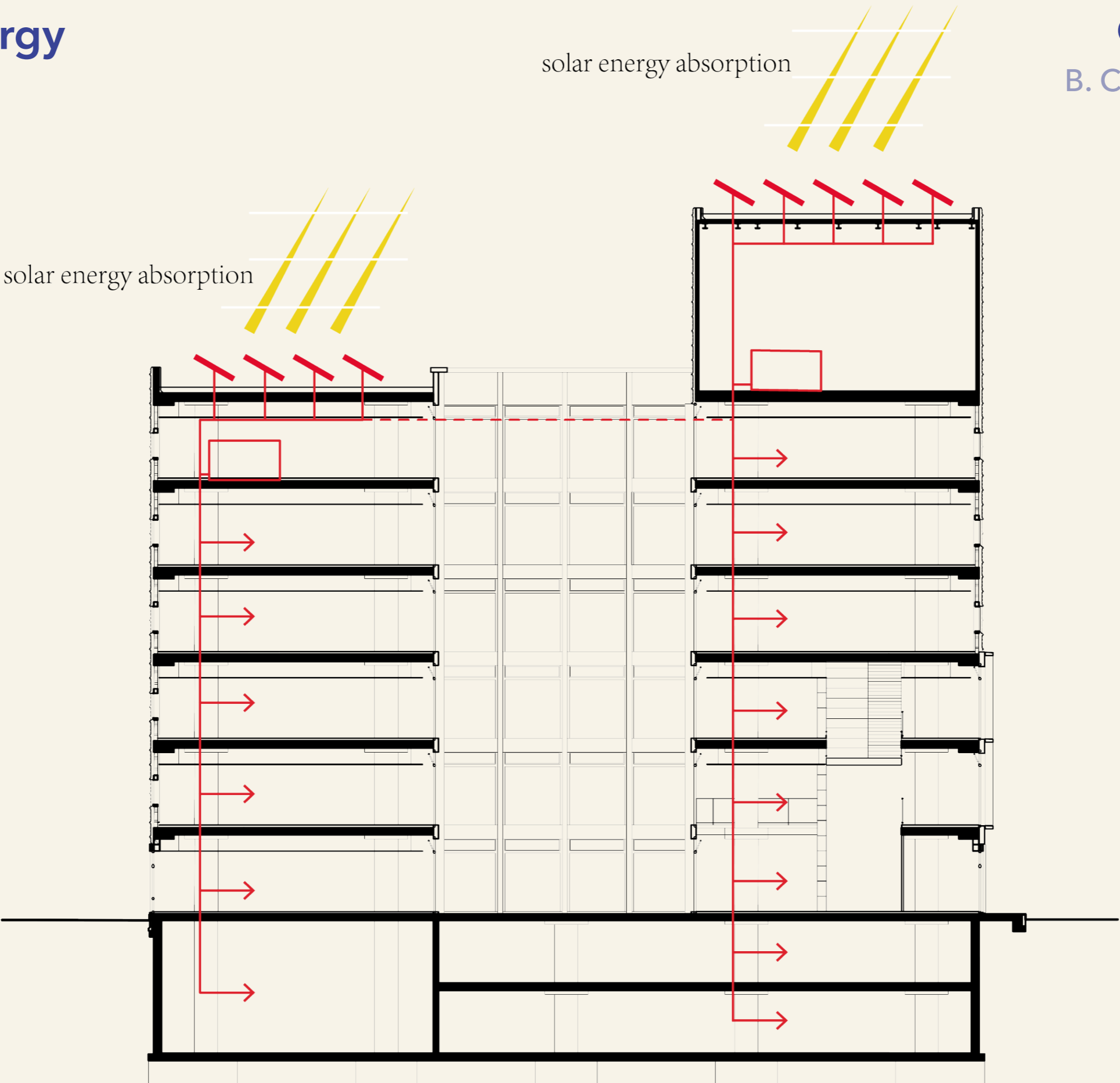


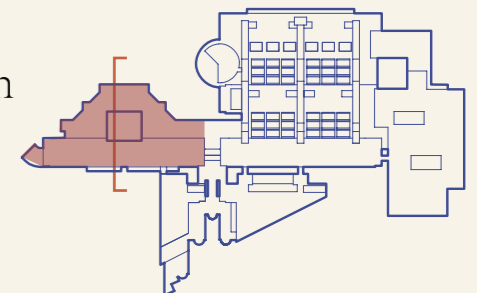
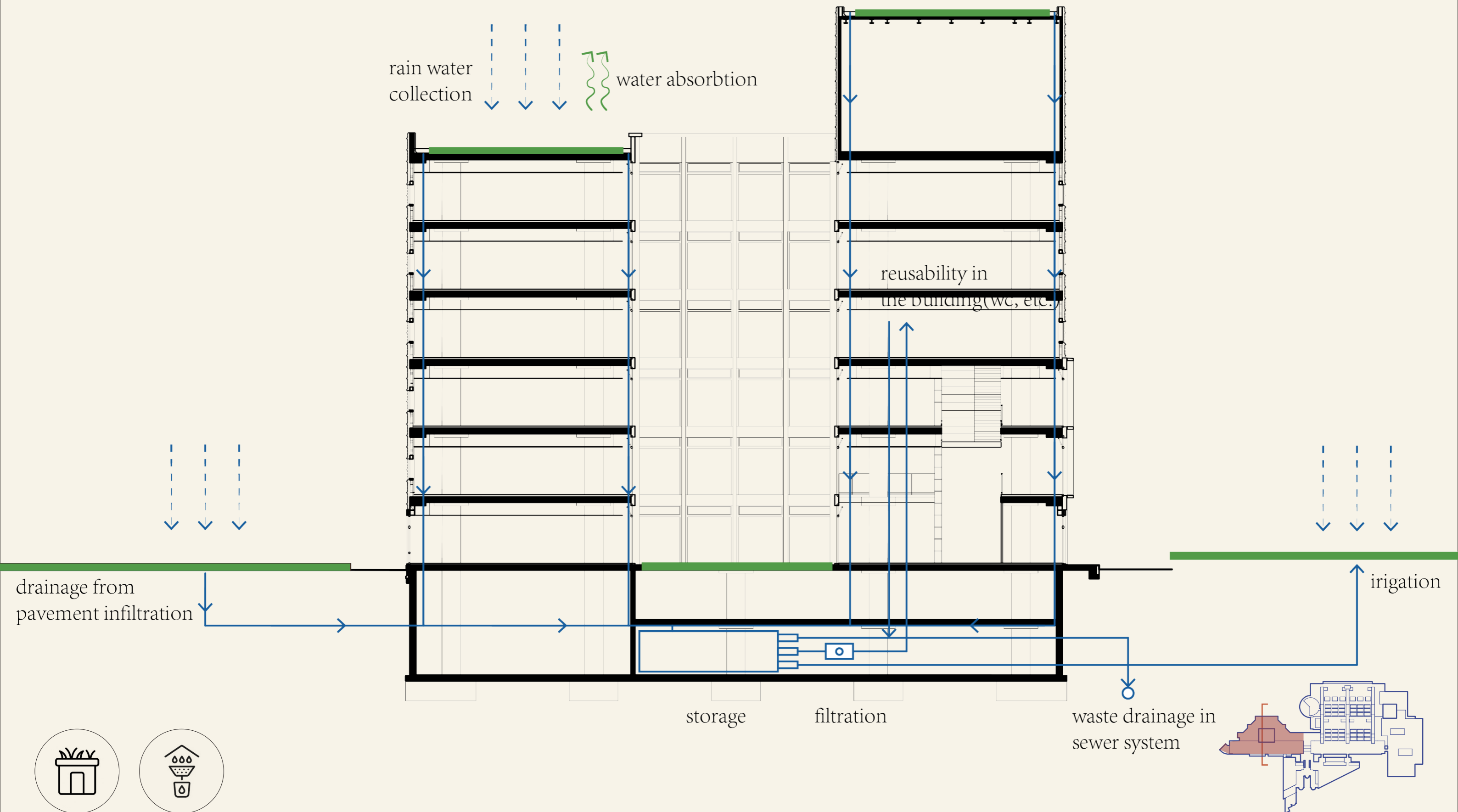
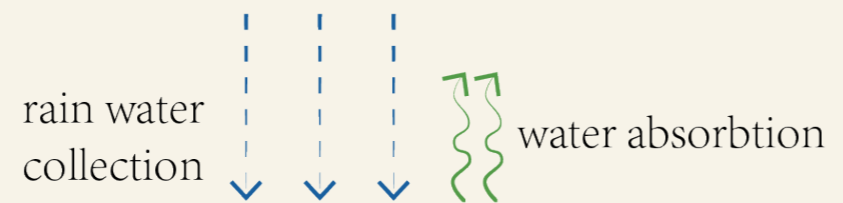
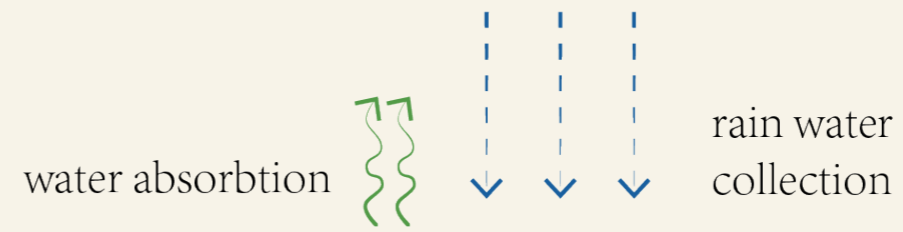


Green roof + solar panels

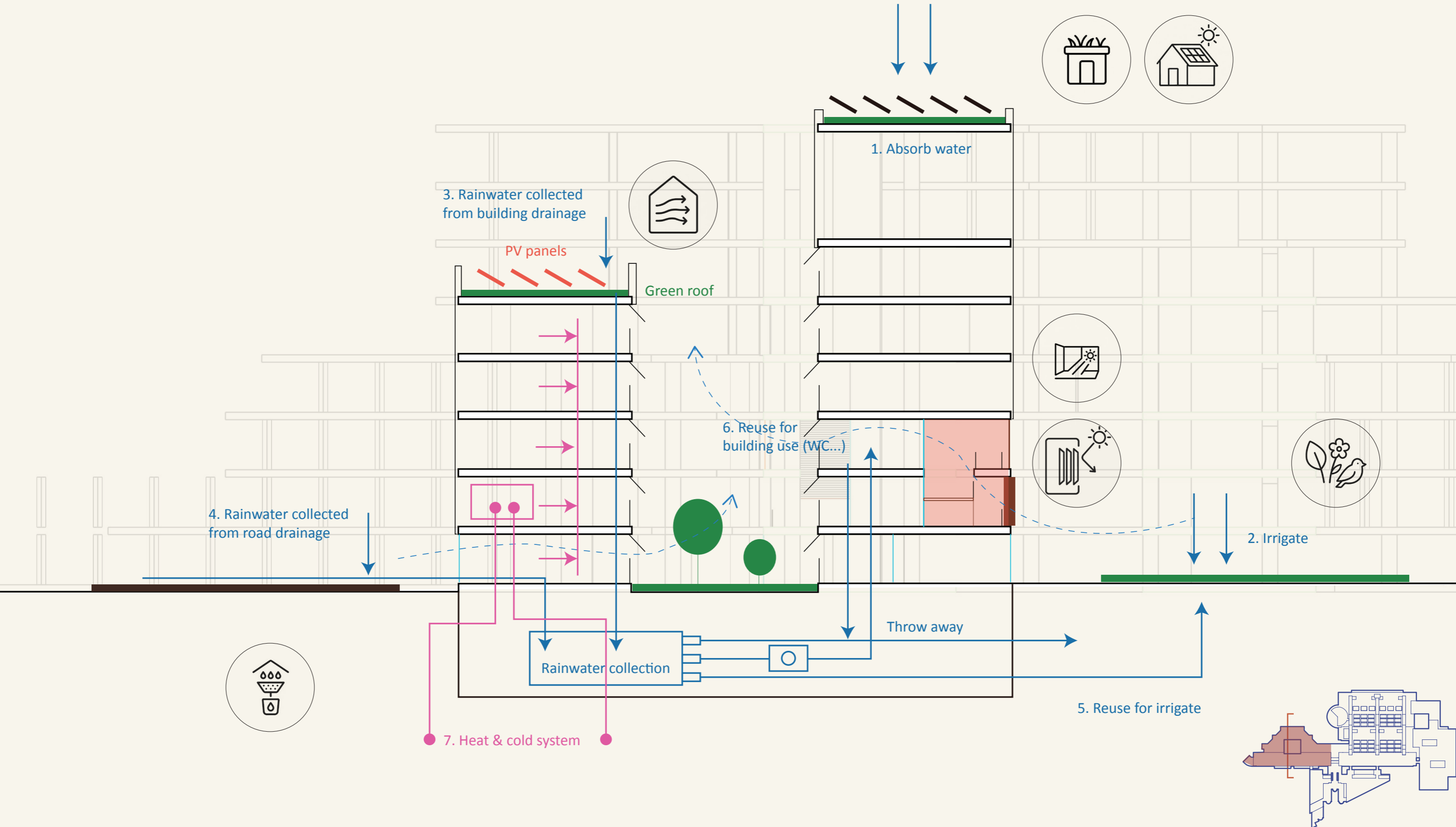
Roof farming

Roof garden





Overview of different systems



Sustainable Transformation

Sustainable Development Goals



Aligned with some goals



Urban

Between building and city

The opening transforms the library from a closed object into a visible and accessible public interface.

Social

Among people

A sequence of informal learning spaces along the public route creates low-threshold opportunities for interaction and shared activities.

Ecological

Between human and nature

The opened façade introduces natural light, air, and environmental exposure, transforming the building from a sealed object into a breathable and inhabitable space.

An aerial photograph of a city with a semi-transparent architectural model overlaid. The model shows a large, multi-story building complex with a central courtyard and a prominent white structure. The surrounding city buildings are rendered in a light, faded grey tone. The text "Thank you for listening!" is overlaid in a bold, dark blue font on the left side of the image.

Thank you for listening!