

TIME AND THE UNFINISHED

The gradual transformation of an industrial site in
Anderlecht, Brussels

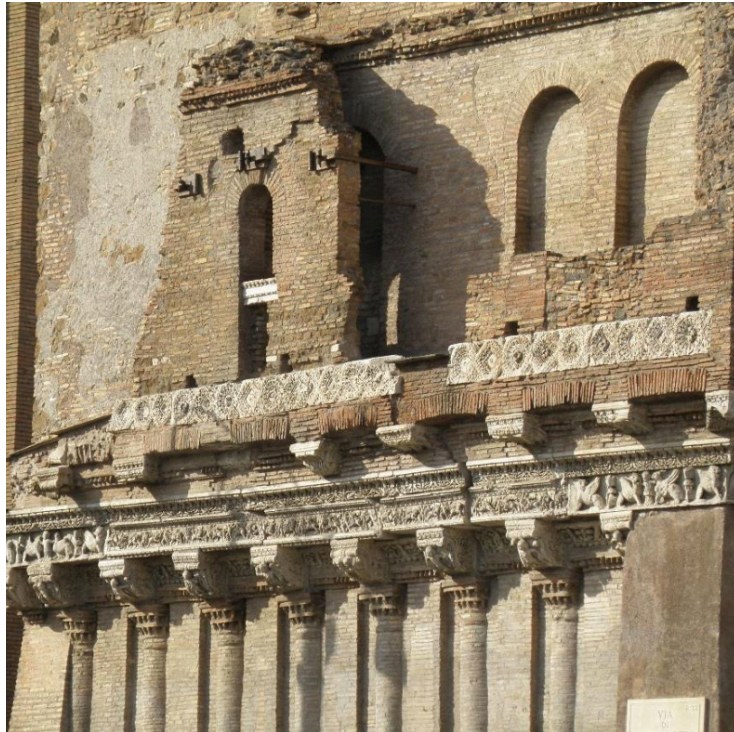
P5 Presentation
Urban Architecture: Spolia

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4802934

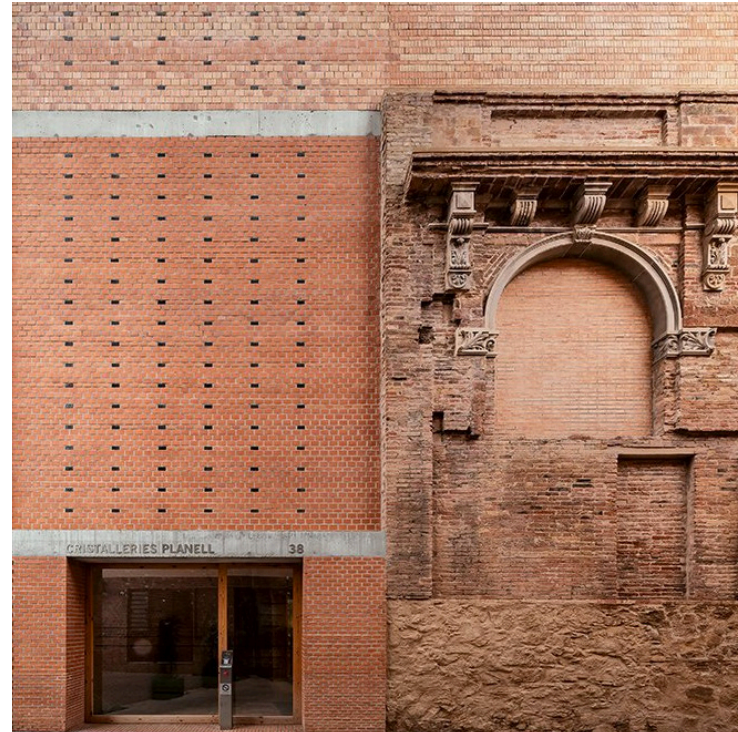
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 - 2. Site
- 3. Urban Plan
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Casa dei Crescenzi. Rome, 11th century



Cristalleries Planell by H Arquitectes. Barcelona, 2016

SPOLIA

Spolia is about reuse, finding value in what is there, and how it can acquire new meanings by being transformed. It is also about stratification, of adding layers to a story that continues when the spolia is given a new life.

1. RESEARCH



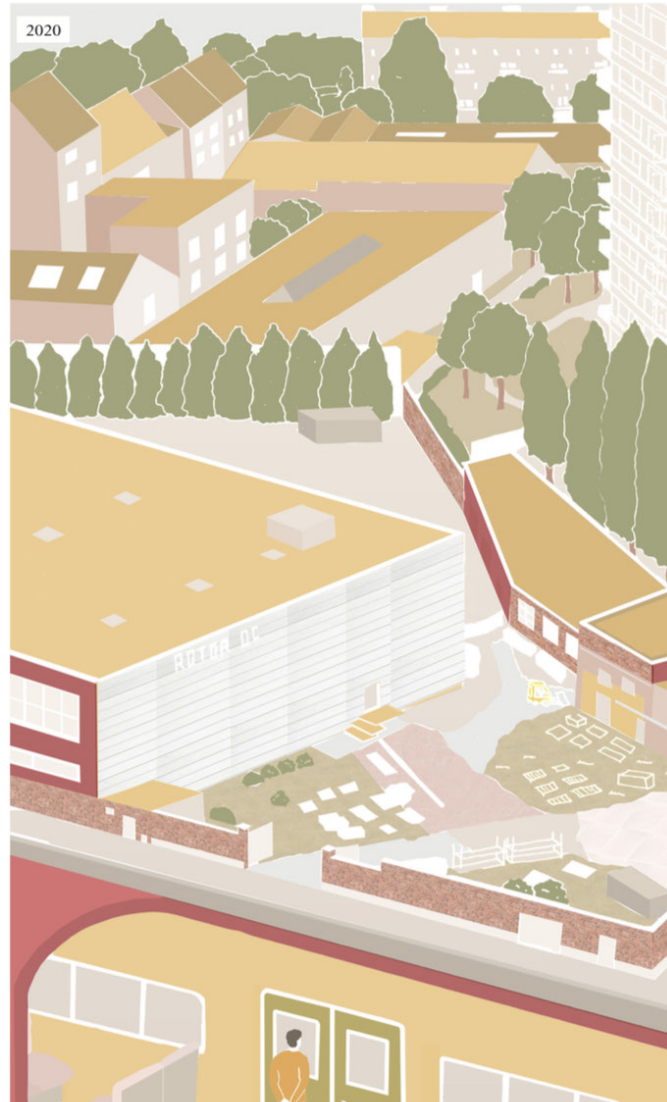
THE ARCHITECTURE OF THE UNFINISHED

How can a building respond to the change of users
and functions over time?

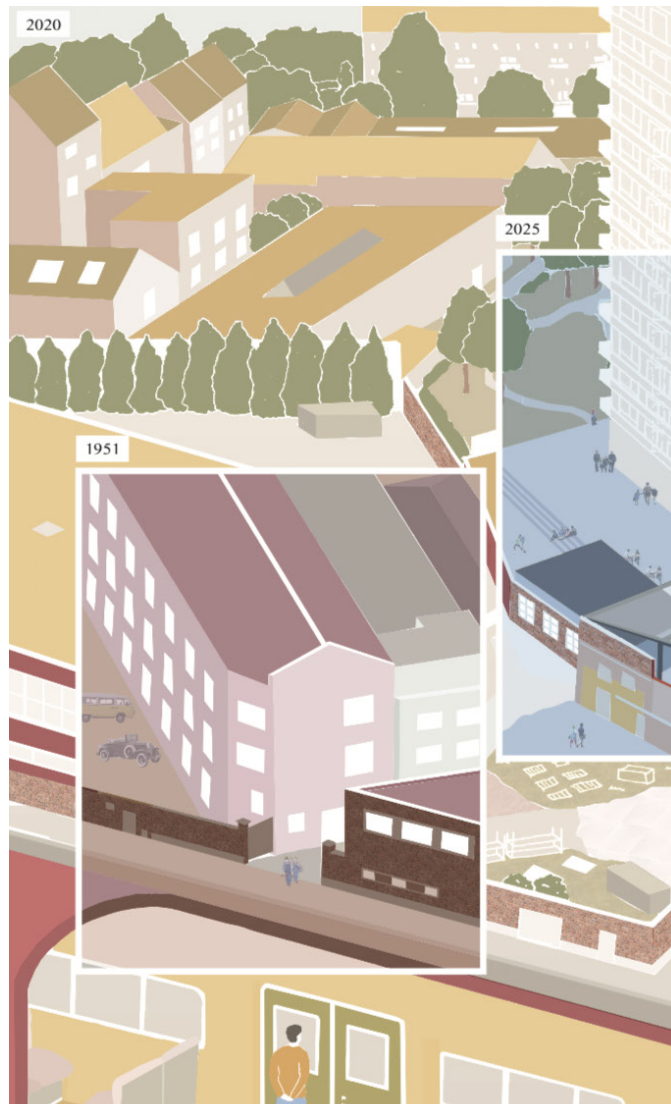


AN UNFINISHED STORY

Stories as a tool to project future possibilities while also documenting the past



When approaching Gare du Midi by train, passengers can observe the different fragments that compose the site: A strong industrial past, an uncertain future, social and spatial fragmentation...



1951 - Fromagerie Bel

What now looks like a collage of patches on the open courtyard, were the floors of Fromagerie Bel, built in 1948, and demolished in 1992.

2025 - New public spaces

The former warehouses could be opened up and turned into public spaces, linking the space around Les Goujons with the former industrial courtyard, creating open, visible spaces that can be used and appropriated by the neighbours.

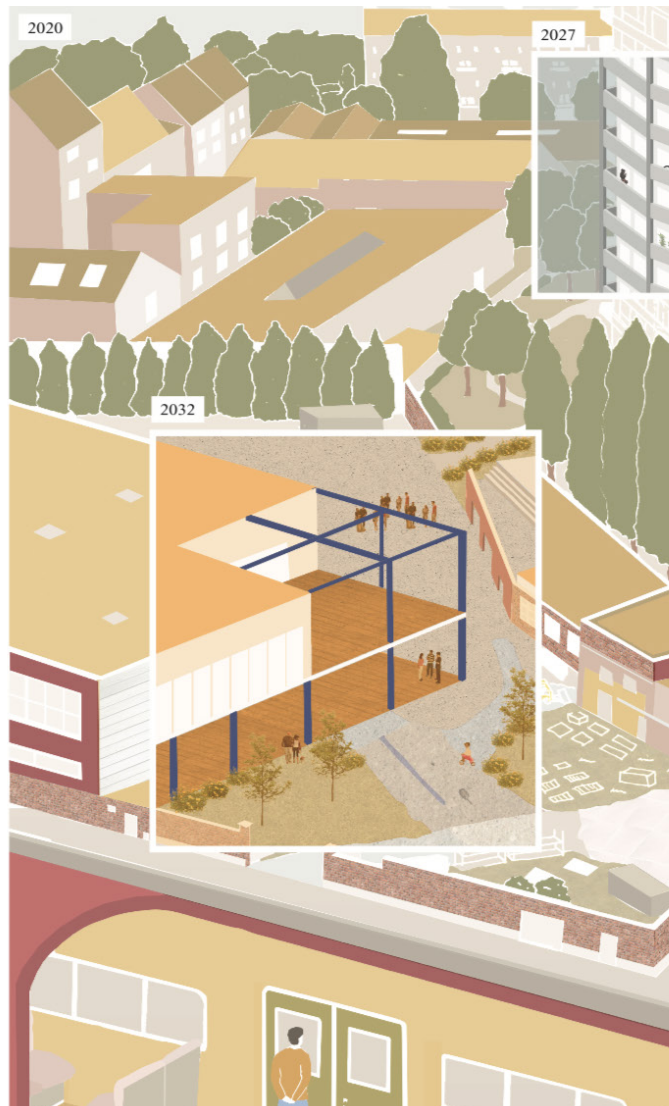


1992- The construction of the new Leonidas chocolate factory begins

In 1992 the Fromagerie Bel was demolished to give place to the Leonidas factory. The new construction started before the demolition of the former industrial complex was complete.

1930 - The Senne

The river Senne used to pass through the site, surrounded by a large number of industrial buildings and activities. It was later covered, but its shape defined the shape of Les Goujons social housing block.



2027 - A renovated facade for Les Goujons

The replacement of the existing balconies, which are in a poor state currently, is predicted to be finished before 2027, which will give Les Goujons a more attractive appearance, providing a new layer of exterior spaces for new uses.

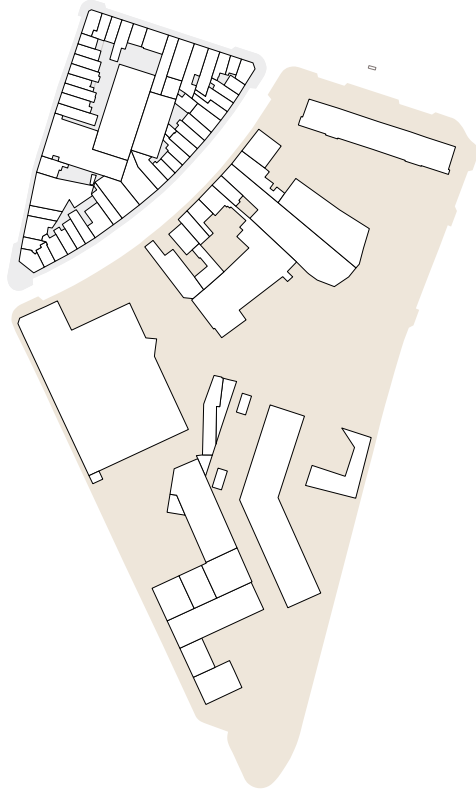
2032- The former Leonidas factory is transformed

The building could be transformed, opened up and potentially turned into a civic center. The transformation of the surroundings into active public spaces would contribute to the development of the site towards a safe, active and visible part of the city.

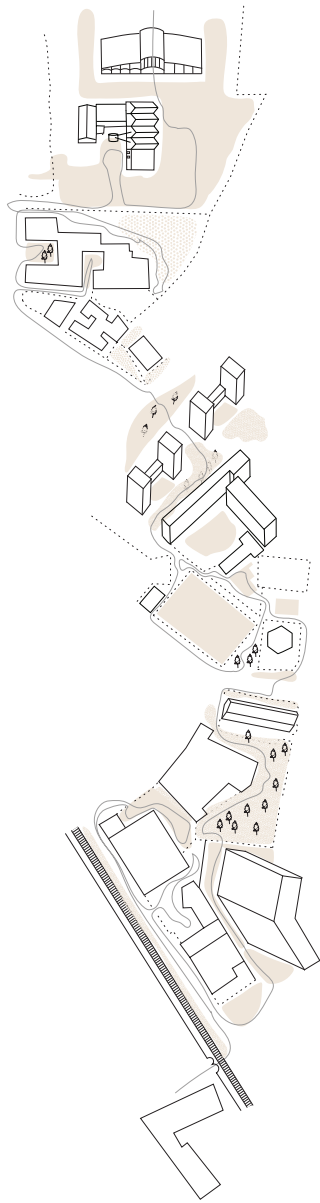
2. THE SITE



The industrial strip



Typical block vs. industrial block



Loose fabric / fragmentation

1930



1971



2020



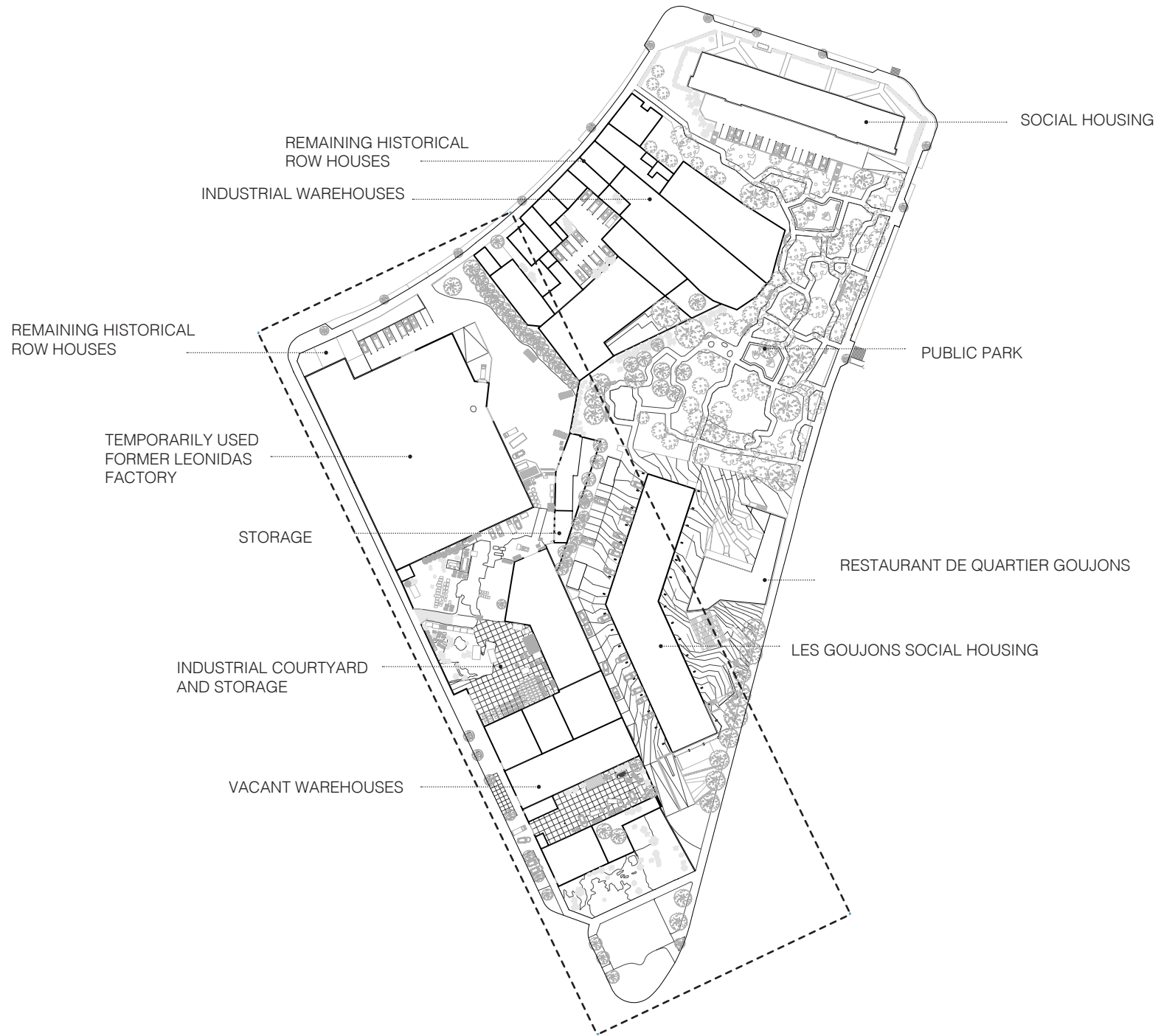
A process of adding and removing, responding to changes in society.



Traces of transformation on the site



Informality on the use of space



3. URBAN STRATEGY



How can the existing structures connect the fragments and integrate to the public sphere?

Connecting the fragments, allowing circulation within the block and revitalizing the strip

WHAT TO KEEP?

The approach towards the existing is to keep as much as possible. Why?

ENVIRONMENTAL VALUE

Reuse as a sustainable practice: it consumes less energy, requires less materials and produces less waste



HISTORICAL VALUE

The diversity of typologies and traces of old buildings found on the site are representative of the history of the city



AFFECTIONATE VALUE

Buildings are meaningful to their users, who often see qualities of the building that are not too evident from the point of view of an outsider.

POTENTIAL FOR TRANSFORMATION

While taking a close look of what is there, discoveries are made, and the not so apparent value starts to emerge, suggesting possibilities of how it can be transformed.



How can the existing be transformed to benefit the neighbourhood?

	CURRENT USE	PROPOSED USE
	Historical row houses now transformed into small apartments	<u>Rotor Shop</u> <u>Rotor Office</u>
	Parking lot	Coworking
	Print shop <u>Workshops</u> <u>Rotor Shop</u> <u>Rotor Office</u> <u>Rotor Deliveries</u> <u>Indoor Football</u>	Civic Center <u>Indoor Football</u> <u>Workshops</u> <u>Rotor Deliveries</u> <u>Rotor Storage 1 & 2</u>
	<u>Rotor Storage 1</u>	Café
	<u>Rotor Storage 2</u>	Covered Plaza
	Vacant Warehouses	Housing Collective Spaces Childcare Facility



Young professionals



New residents



Les Goujons residents



School kids



Working people



Social entities



The elderly



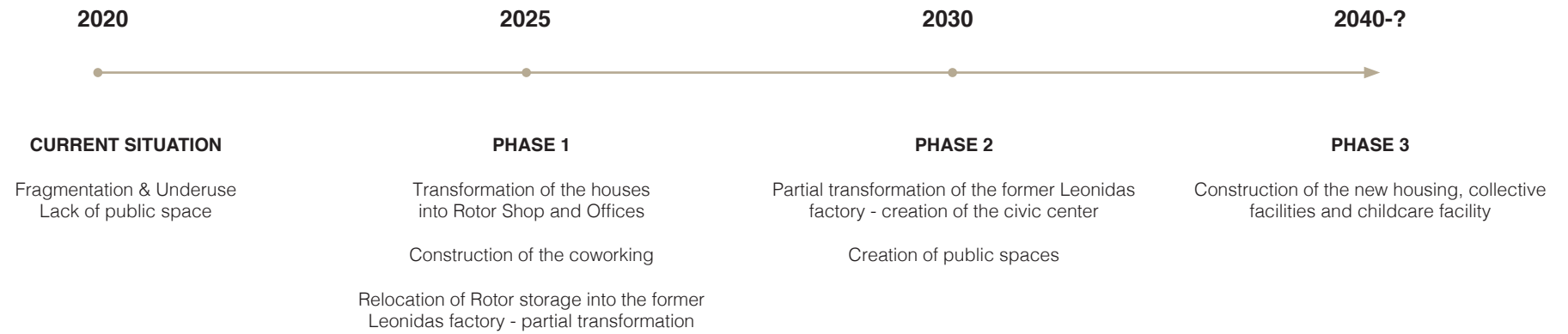
Rotor Deconstruction



URBAN PLAN

TRANSFORMING THE EXISTING IN PHASES

WORKING WITH TIME: A GRADUAL TRANSFORMATION



2020

CURRENT SITUATION

Fragmentation & Underuse
Lack of public space



2025

PHASE 1

Transformation of the houses into Rotor Shop and Offices

Construction of the coworking

Relocation of Rotor storage into the former Leonidas factory - partial transformation



2030

PHASE 2

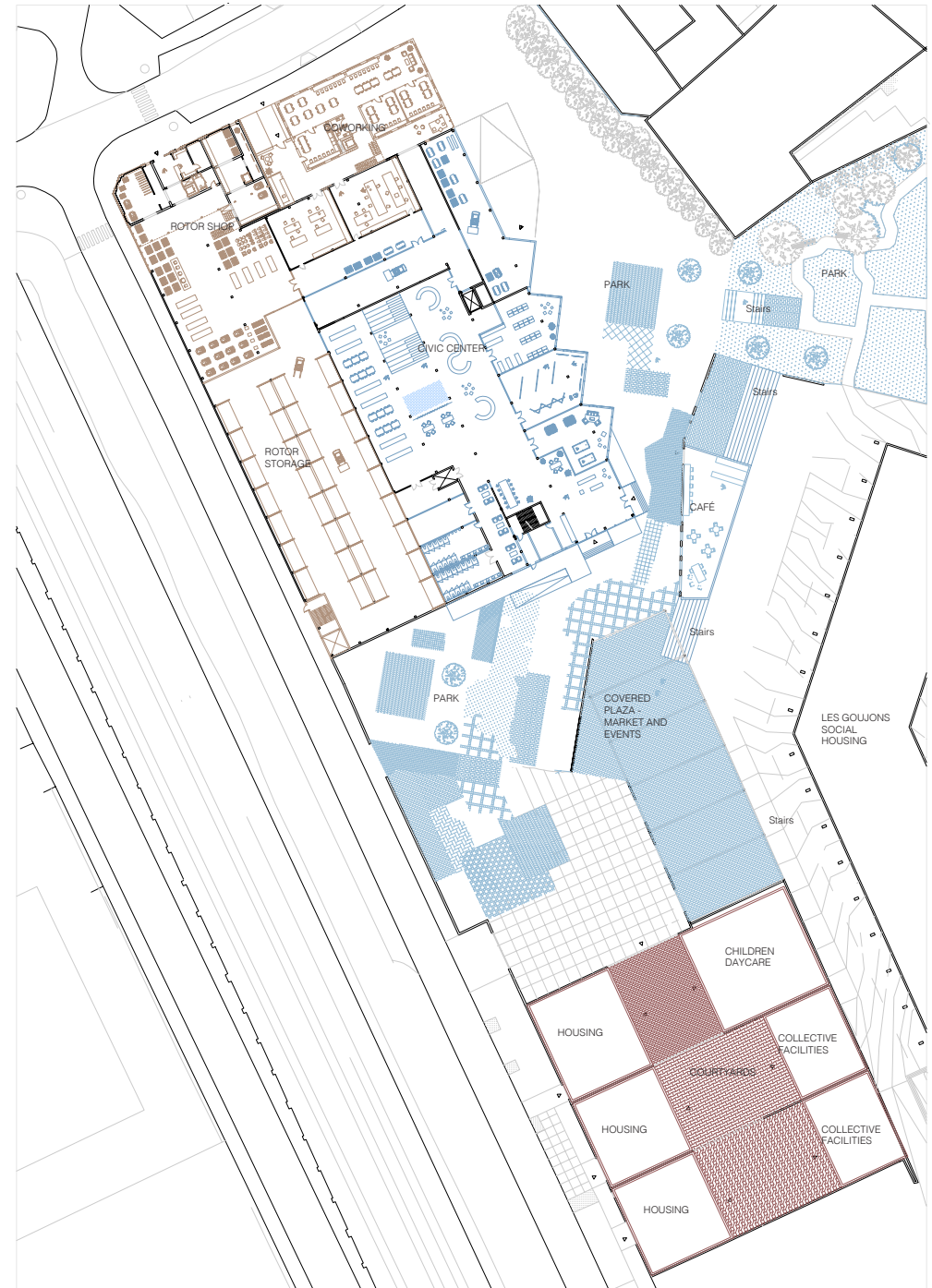
Partial transformation of the former Leonidas factory - creation of the civic center

Creation of public spaces

2040

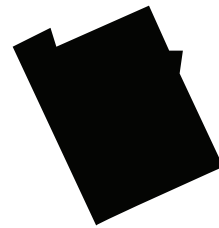
PHASE 3

Construction of the new housing, collective facilities and childcare facility

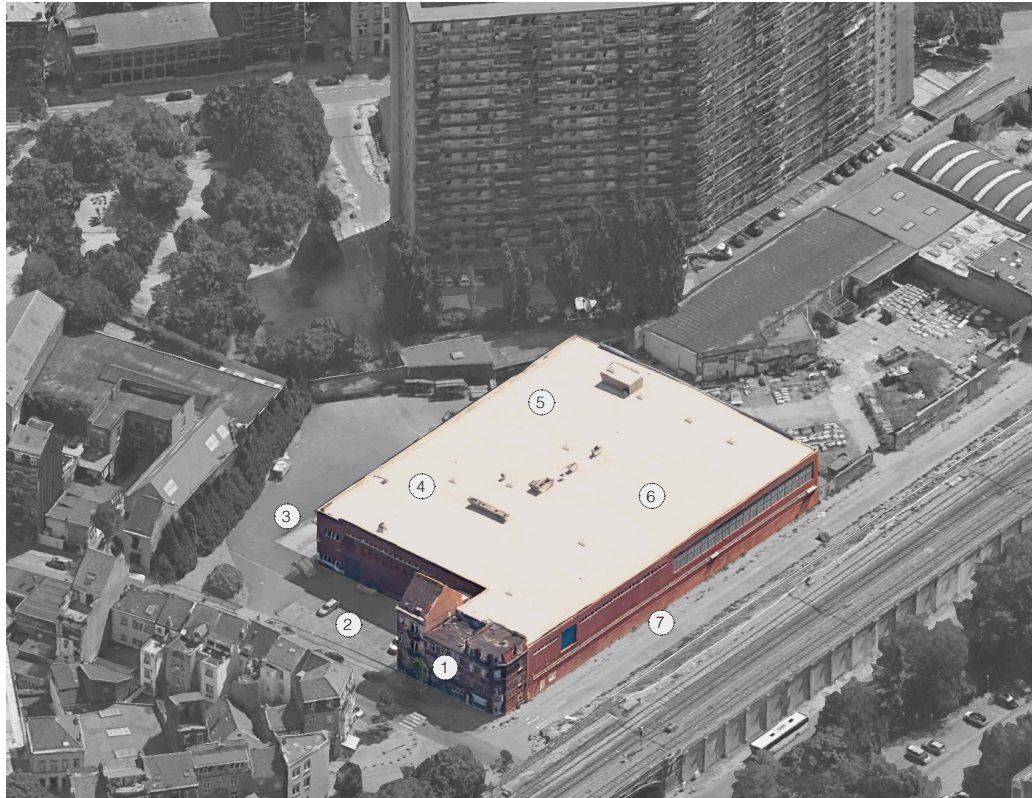


4. ARCHITECTURAL PROPOSAL

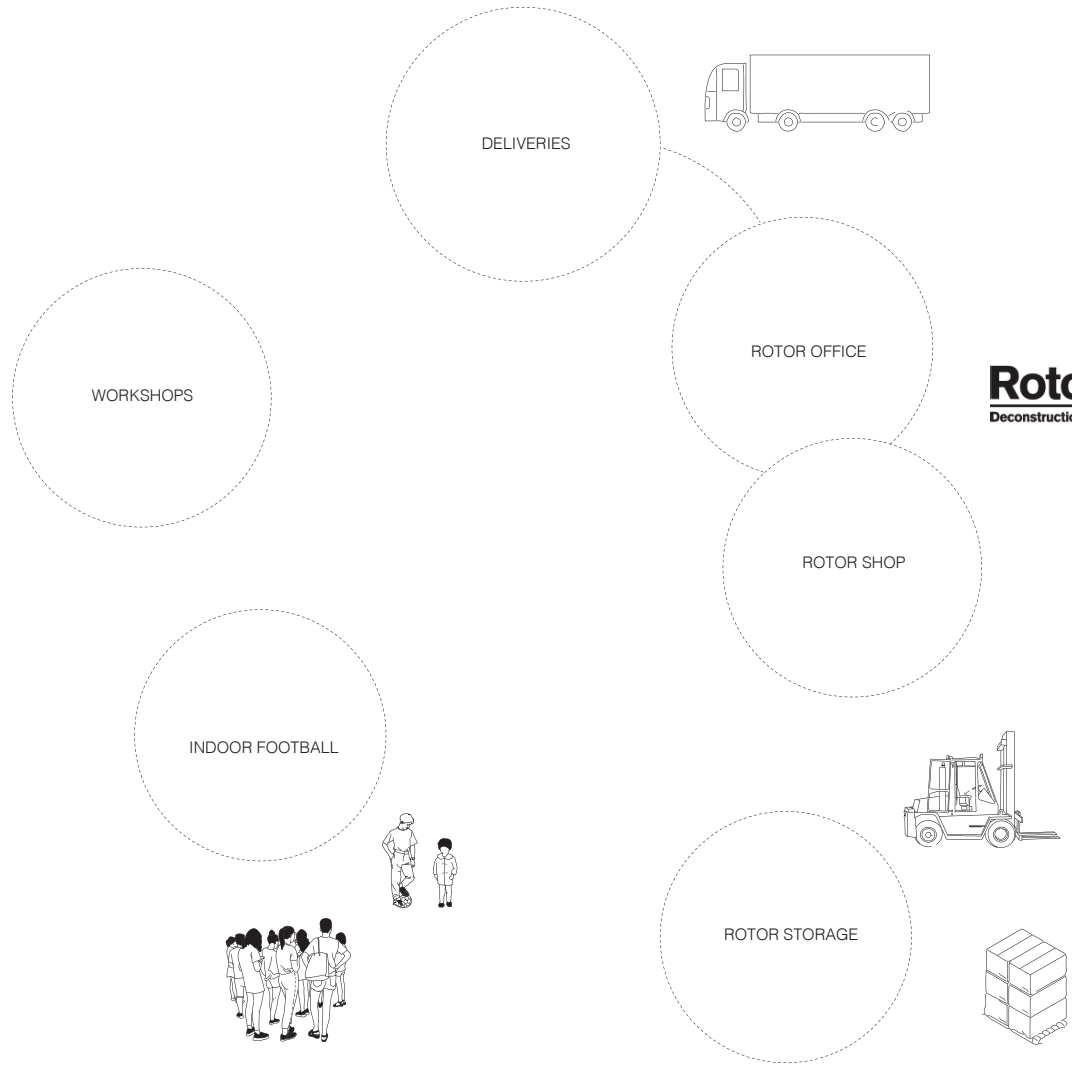
Transforming the former Leonidas factory



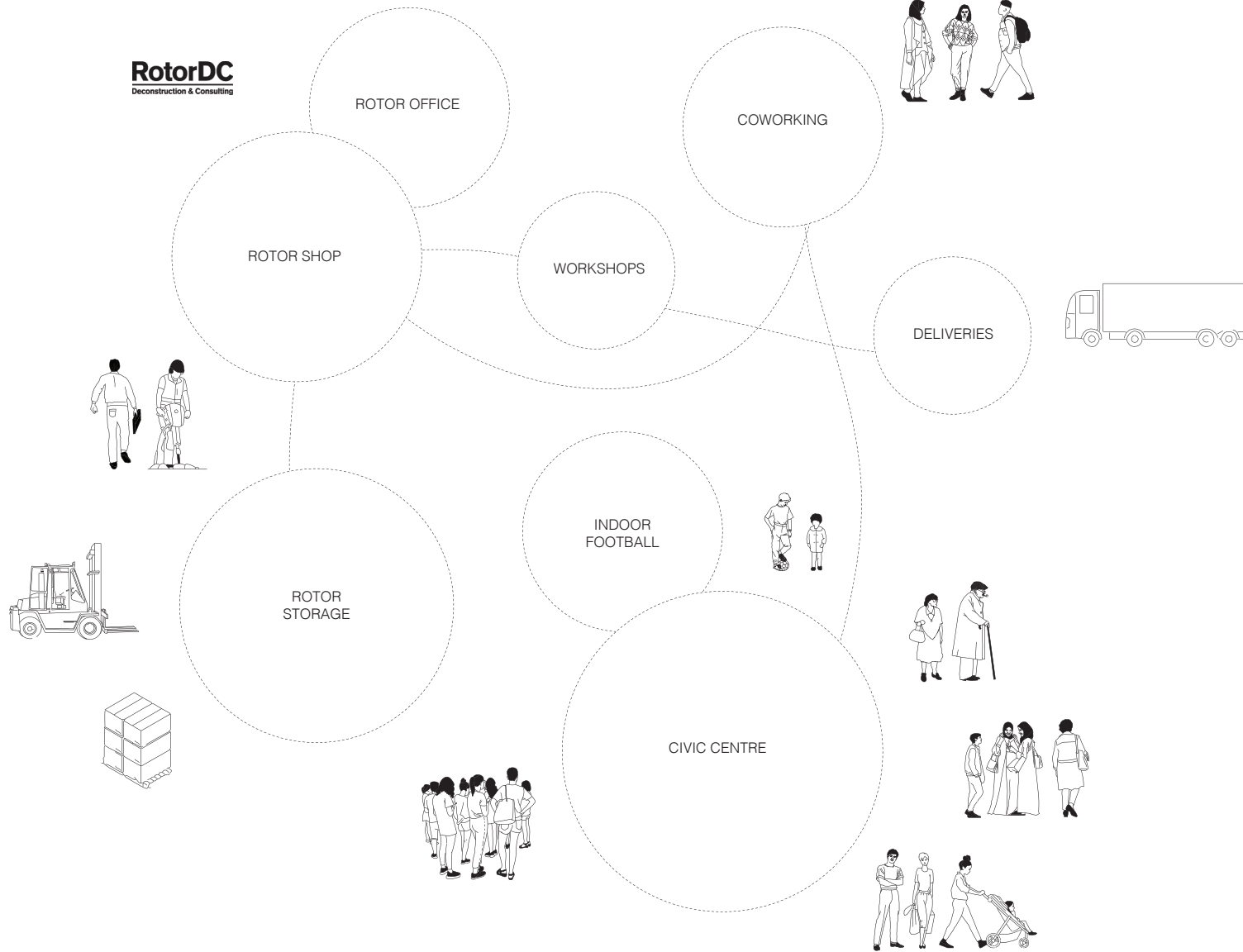


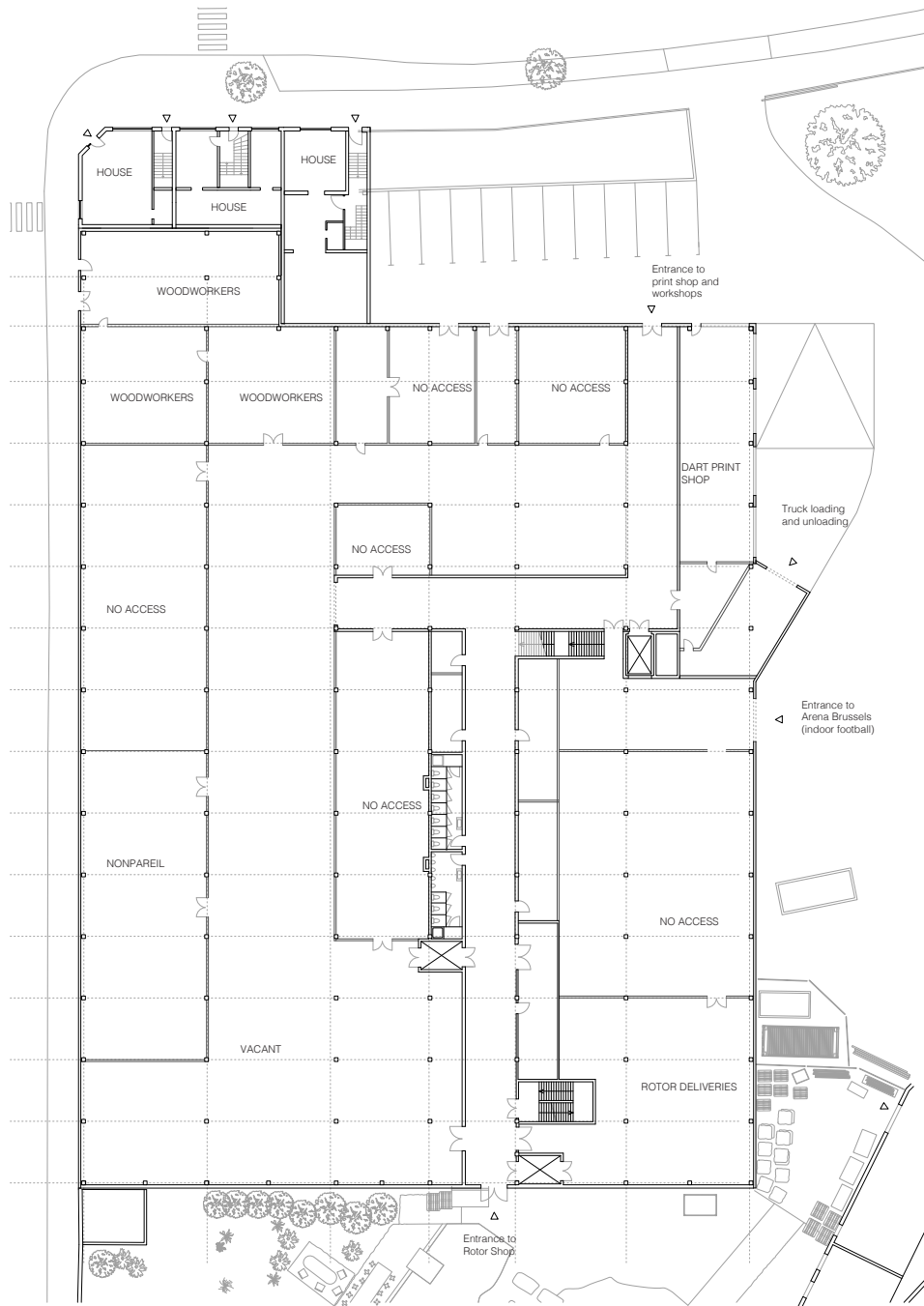


1. Houses
2. Parking lot
3. Deliveries
4. Rotor Office
5. Rotor Shop
6. Indoor Football (Arena Brussels)
7. Workshops and vacant space

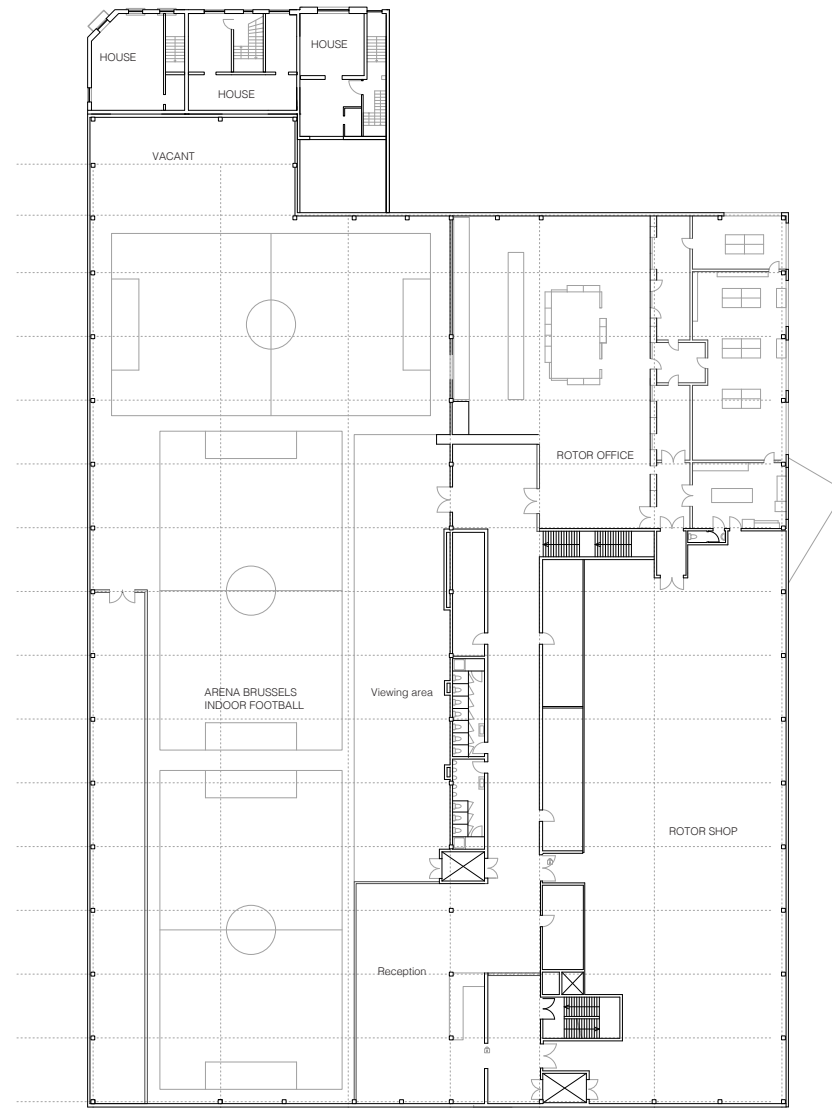


RotorDC
Deconstruction & Consulting

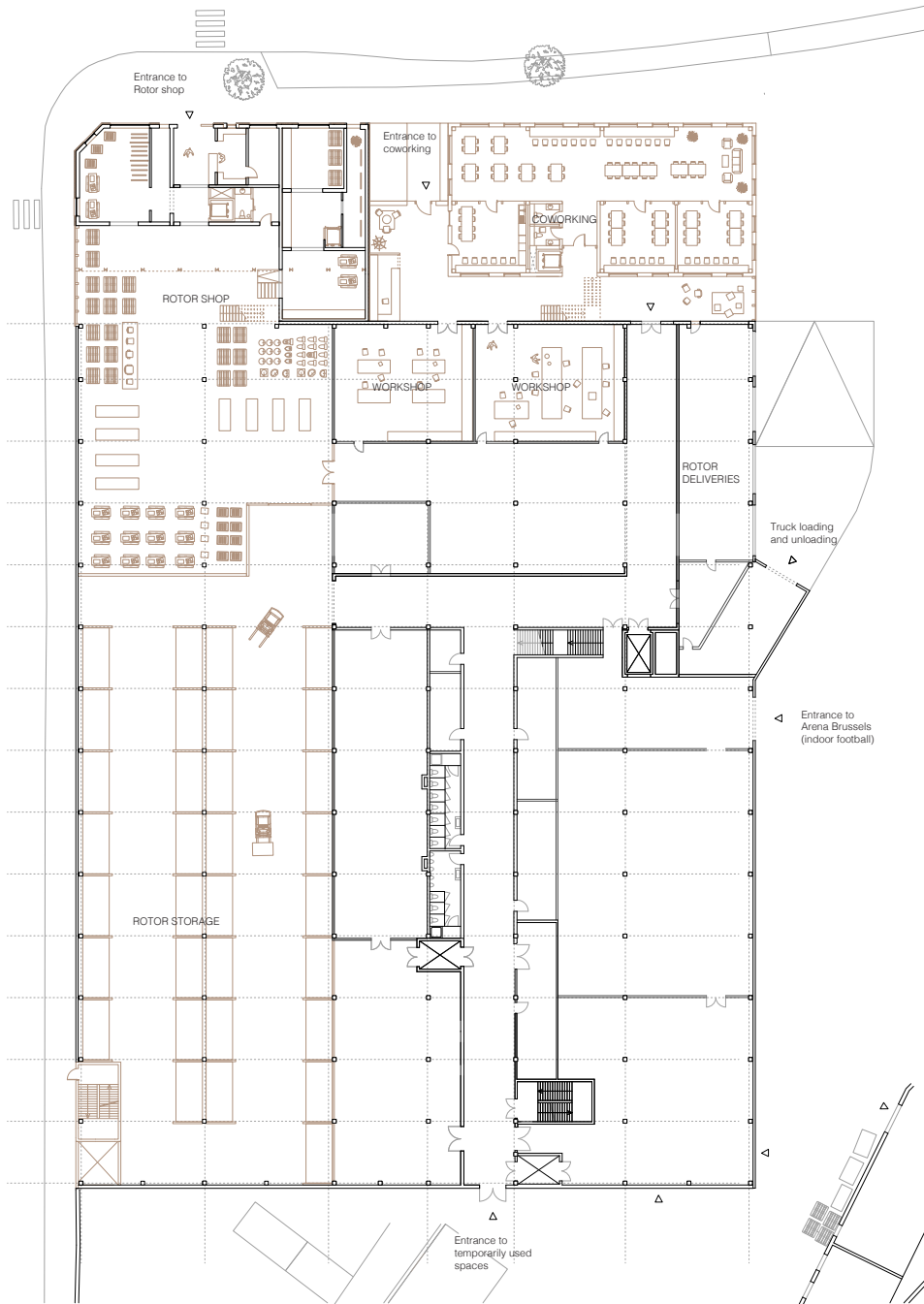




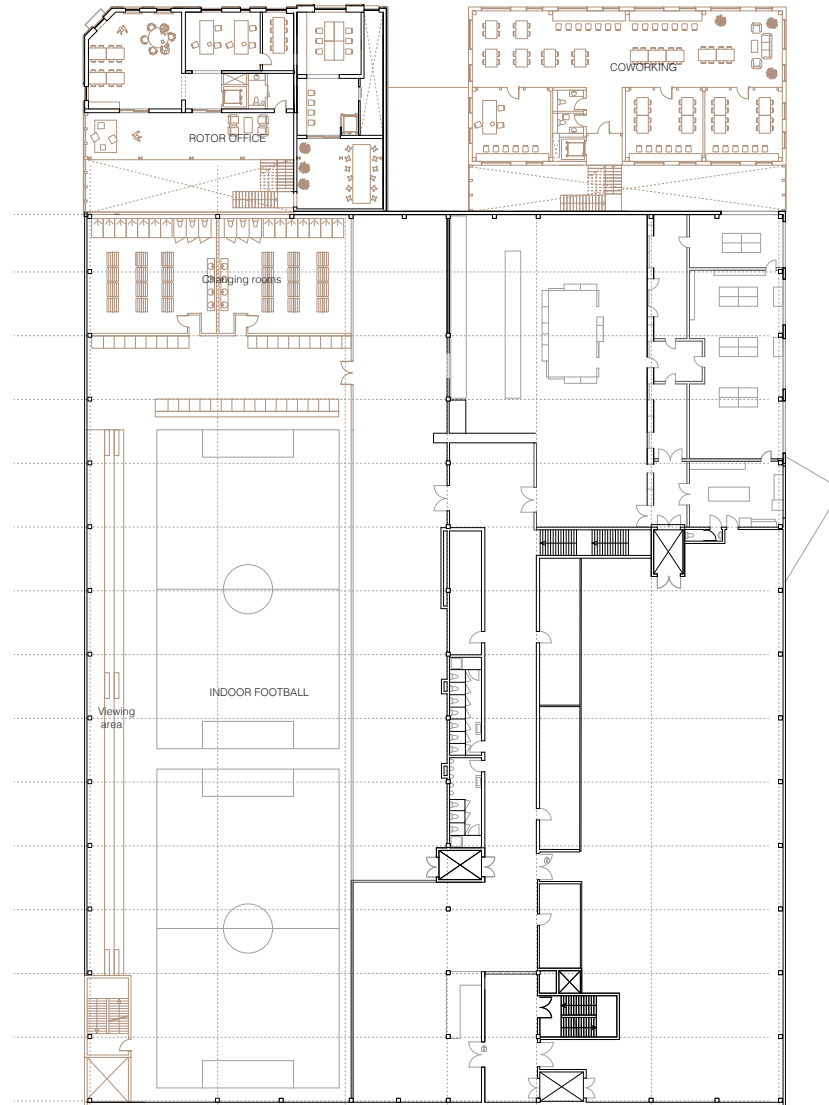
2020
GROUND FLOOR



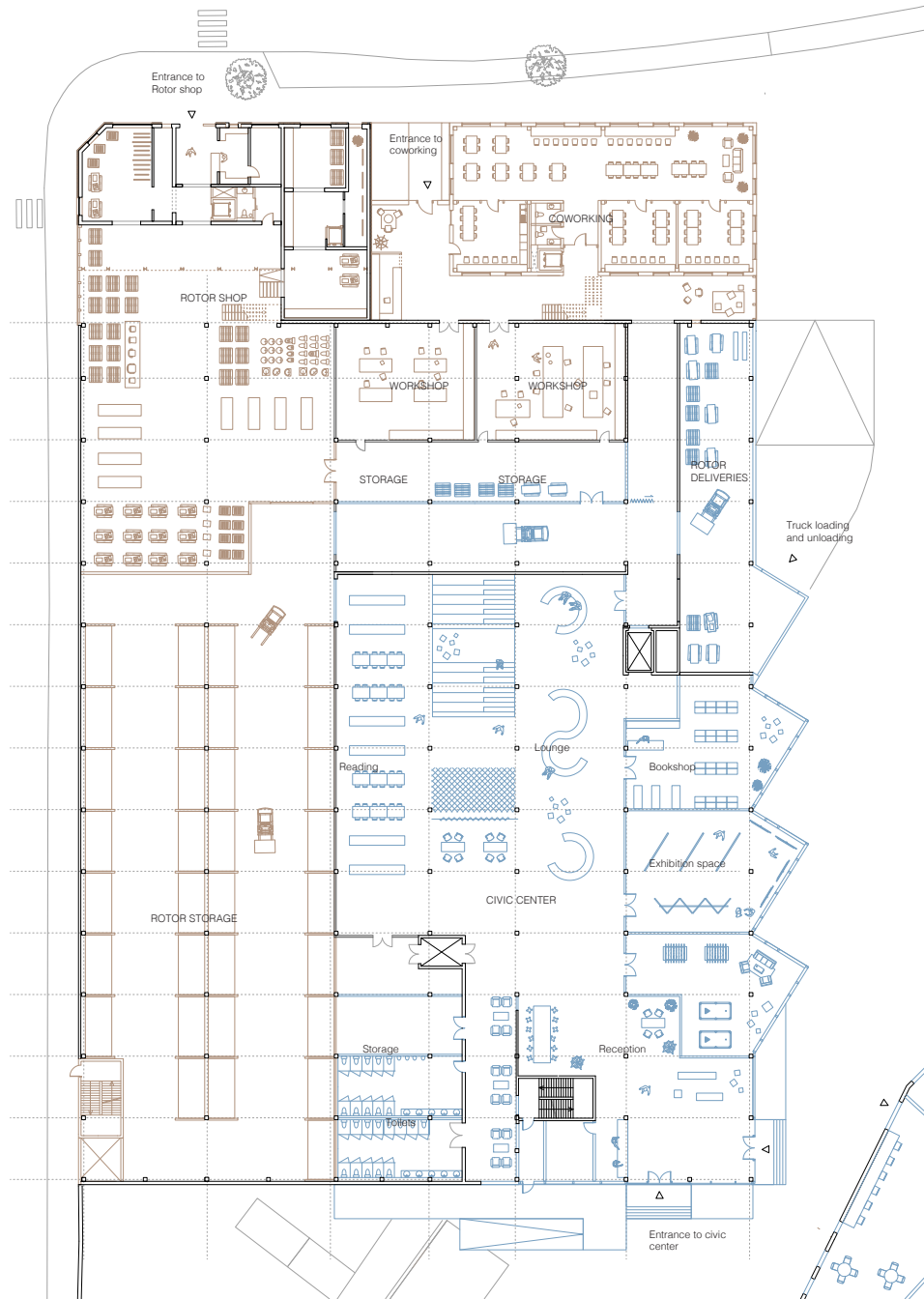
2020
FIRST FLOOR



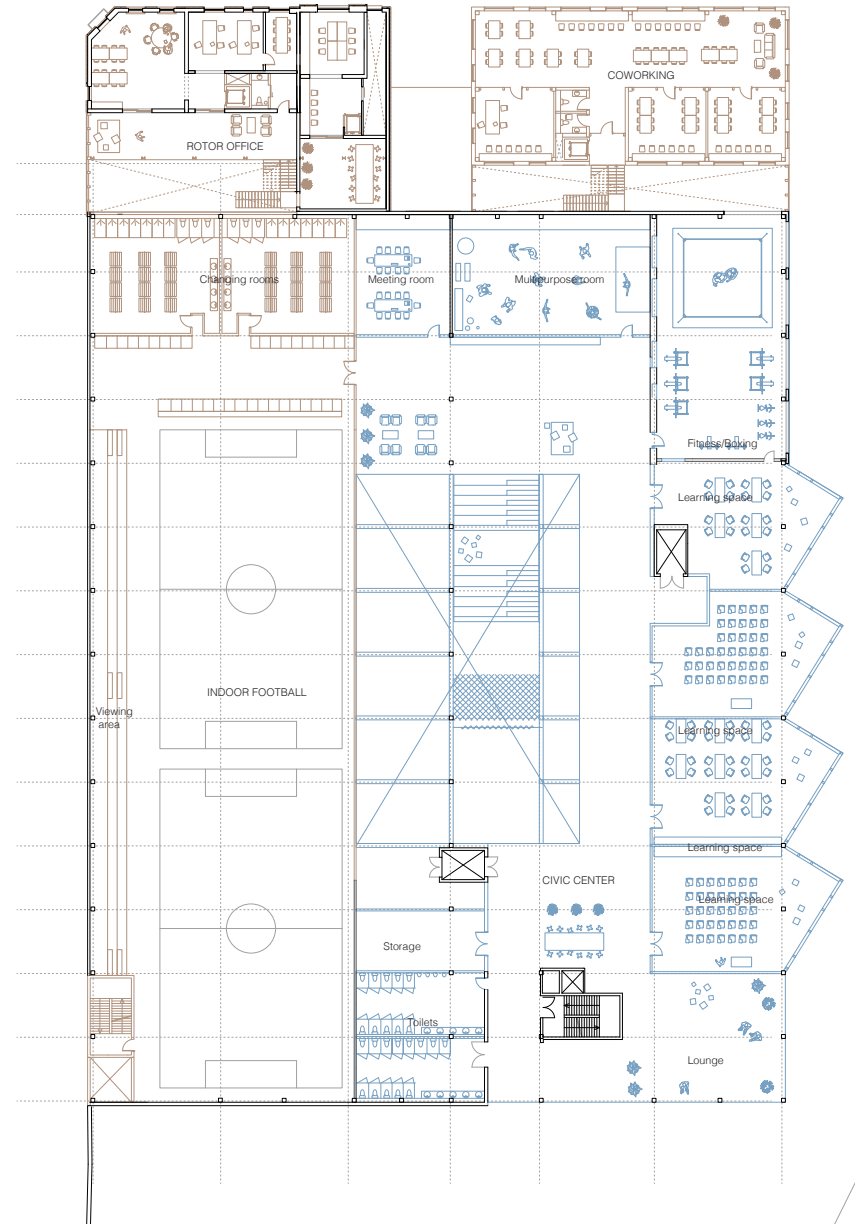
2025
GROUND FLOOR



2025
FIRST FLOOR



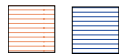
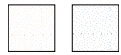
2030
GROUND FLOOR



2030
FIRST FLOOR

CLIMATE ZONES

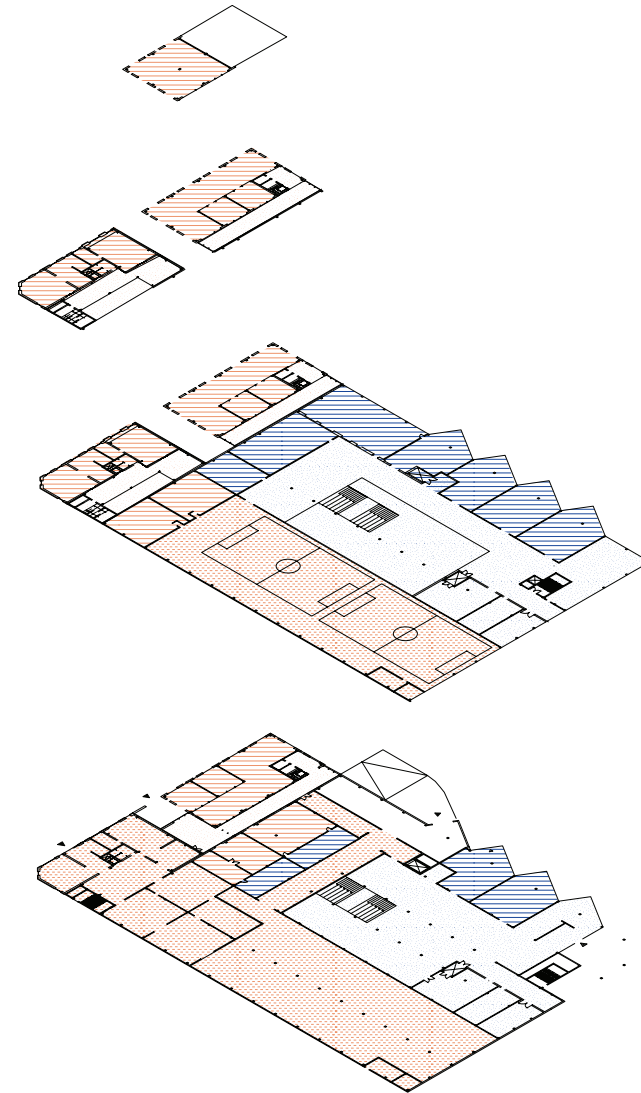
The division of the building allows for a transformation in phases, while also creates separate climate zones with different degrees of thermal comfort, based on the intensity of use:



Type 1 the intermediate zones, where users do not spend much time on. These zones will be regulated with exclusively passive systems.

Type 2 Spaces where people spend about a couple hours, and do not need the highest thermal comfort. These spaces will be regulated with both passive and mechanical systems.

Type 3 The classrooms and working spaces, that will be regulated through hermetic, mechanical systems.



HEATING

Type 1 | The spaces get heated from the heat captured from the sun through the skylights.

Type 2 | Mechanical heating and ventilation

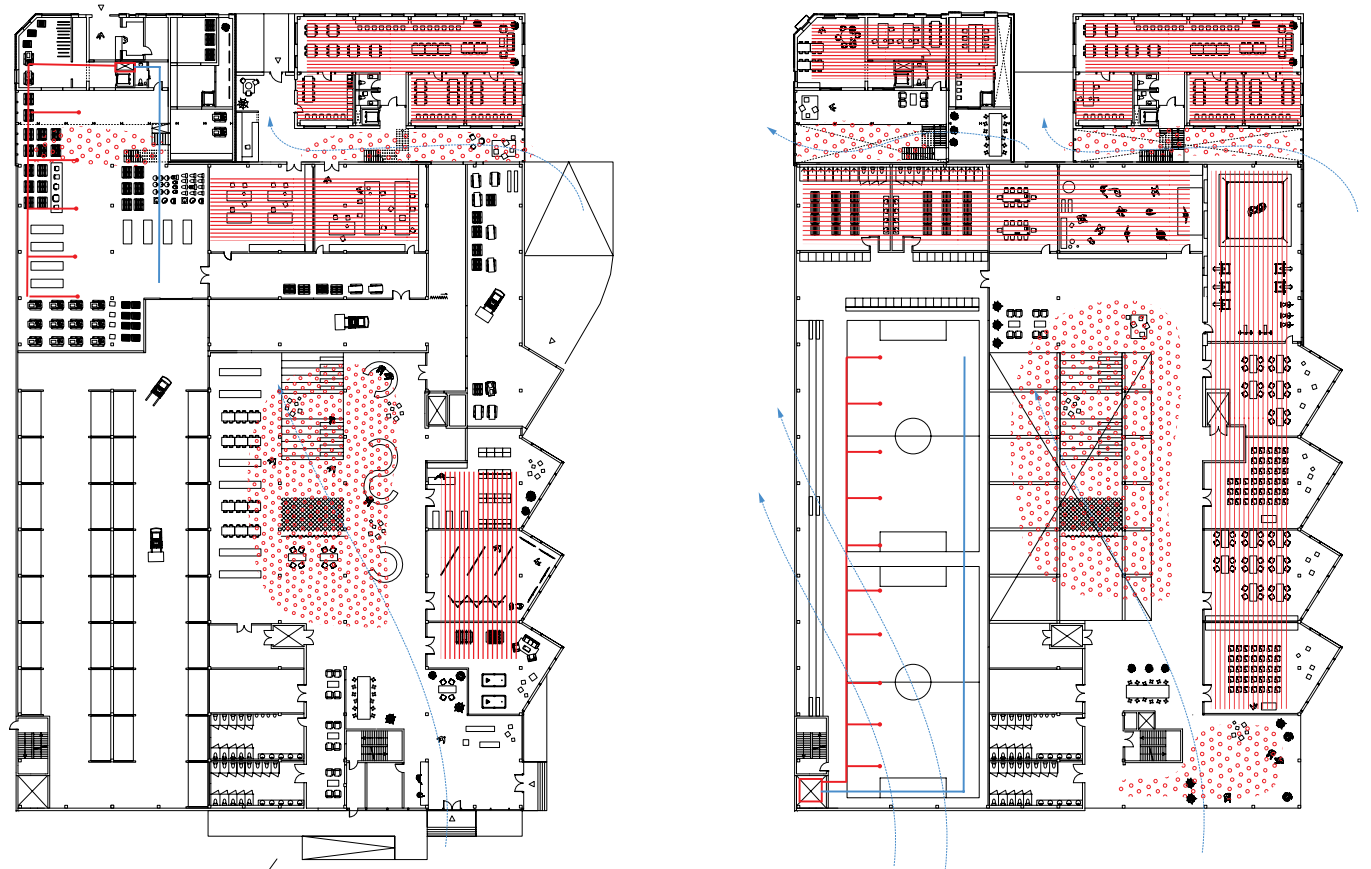
Type 3 | Radiant floor heating

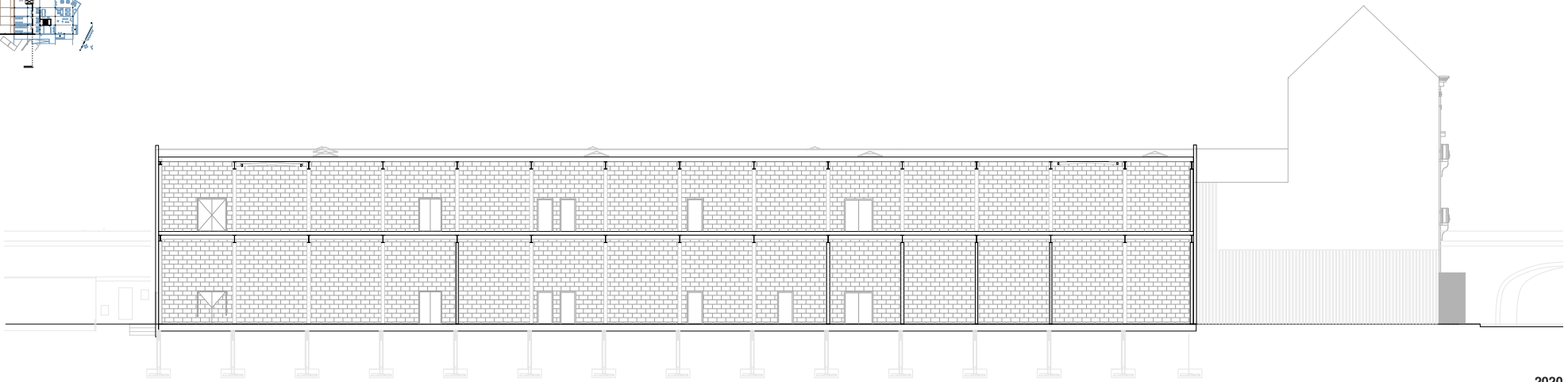
COOLING

Type 1 | The atriums provide natural ventilation to the interstitial spaces. The excess hot air escapes the building through the skylights.

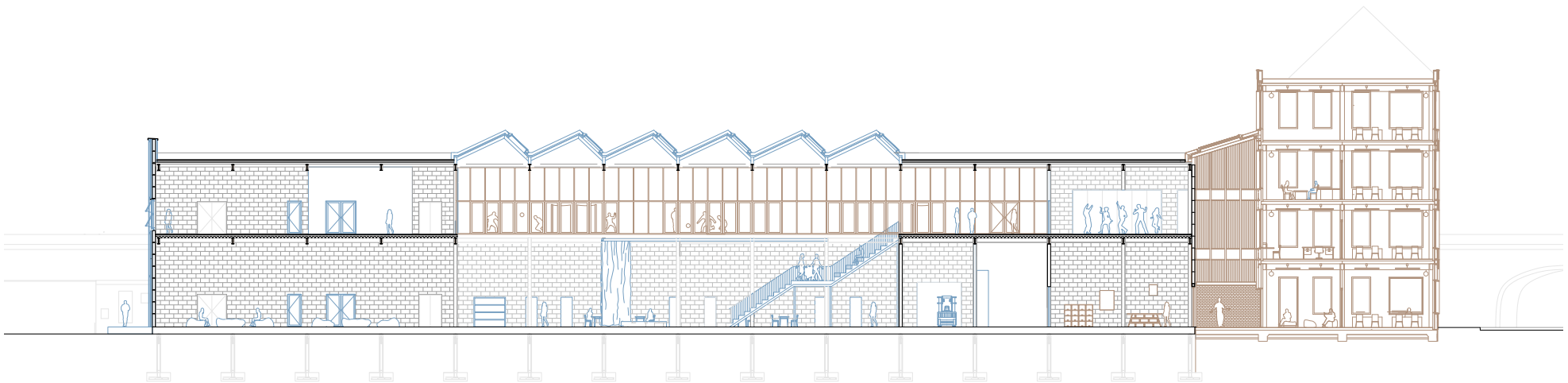
Type 2 | While the heating in the winter would be mechanical, in the summer the football pitches could be opened up and ventilated naturally with the prevailing winds from the west and south.

Type 3 | Mechanical ventilation.

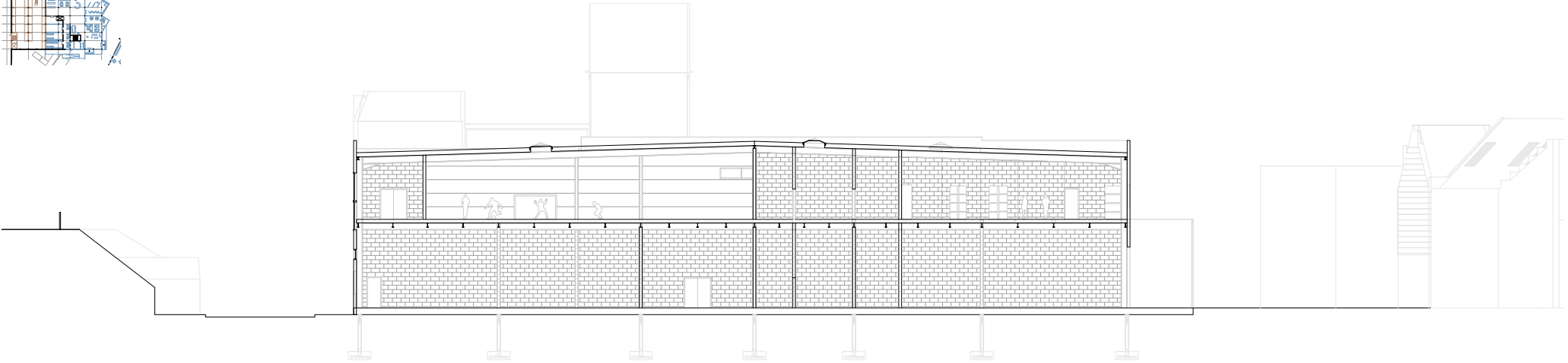




2020
LONGITUDINAL SECTION



2030
LONGITUDINAL SECTION



2020
CROSS SECTION



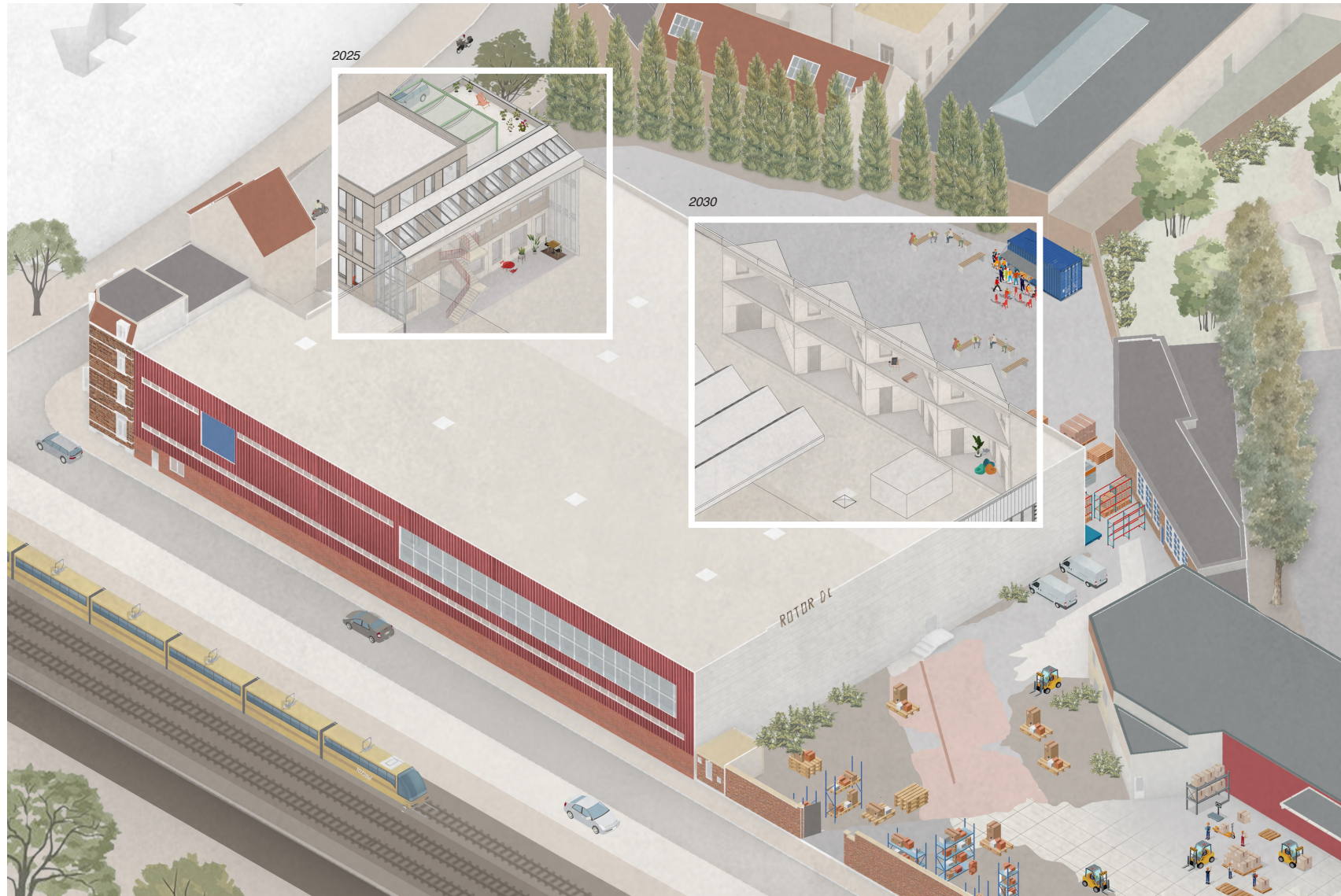
2030
CROSS SECTION

5. STRATEGIES OF INTERVENTION



ADDITION OF VOLUMES TO ENHANCE THE RELATIONSHIP WITH THE SITE

2020



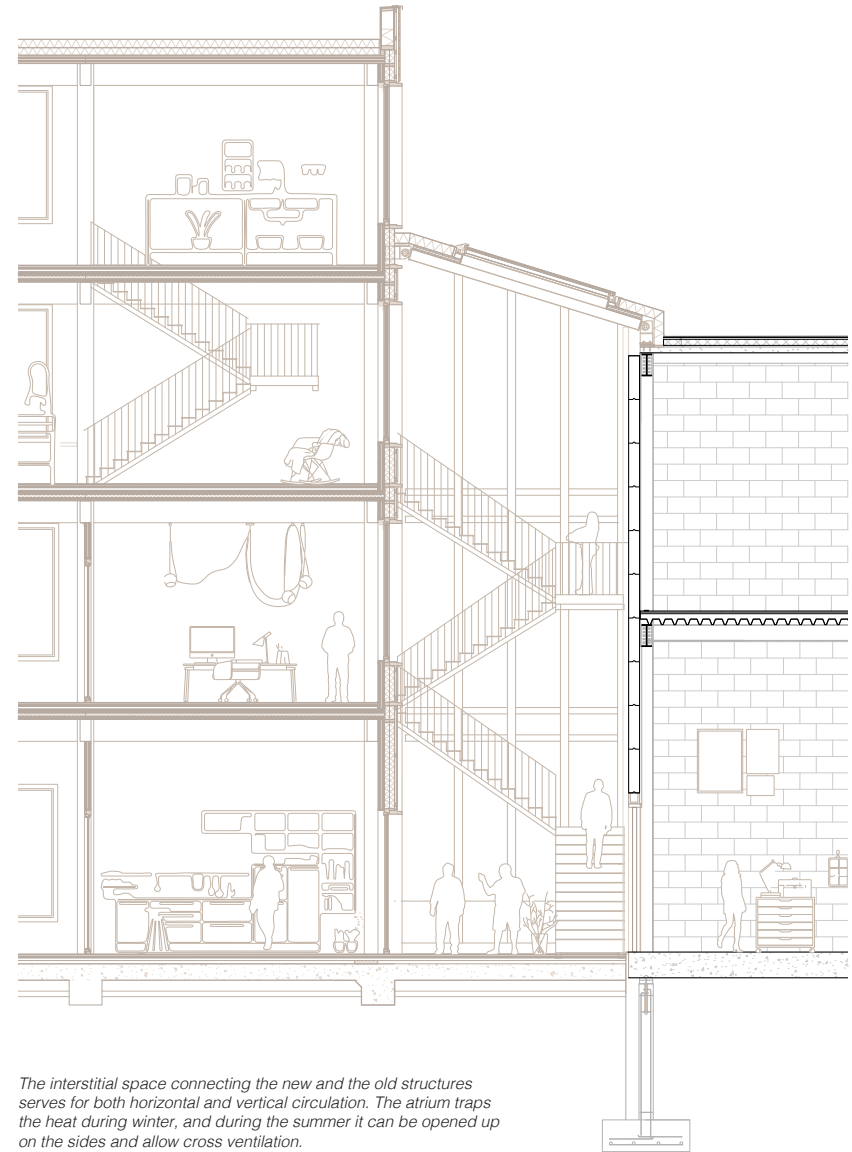
2025 - The new coworking

A new volume will be added on Rue des Bassins to create street continuity, which is currently interrupted by an open parking lot. The new coworking will offer spaces for the young professionals and freelancers that are in need for affordable working spaces.

2030 - The alcoves

These volumes will provide extra space in the building, establishing a dialogue with the park and creating a dynamic rhythm to the facade, engaging with the public space

2025



The interstitial space connecting the new and the old structures serves for both horizontal and vertical circulation. The atrium traps the heat during winter, and during the summer it can be opened up on the sides and allow cross ventilation.

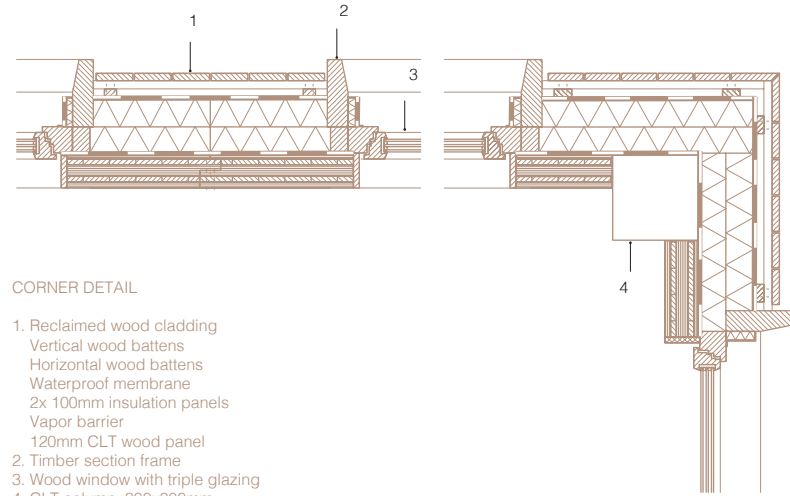
2025



The existing exterior facade becomes part of the interior

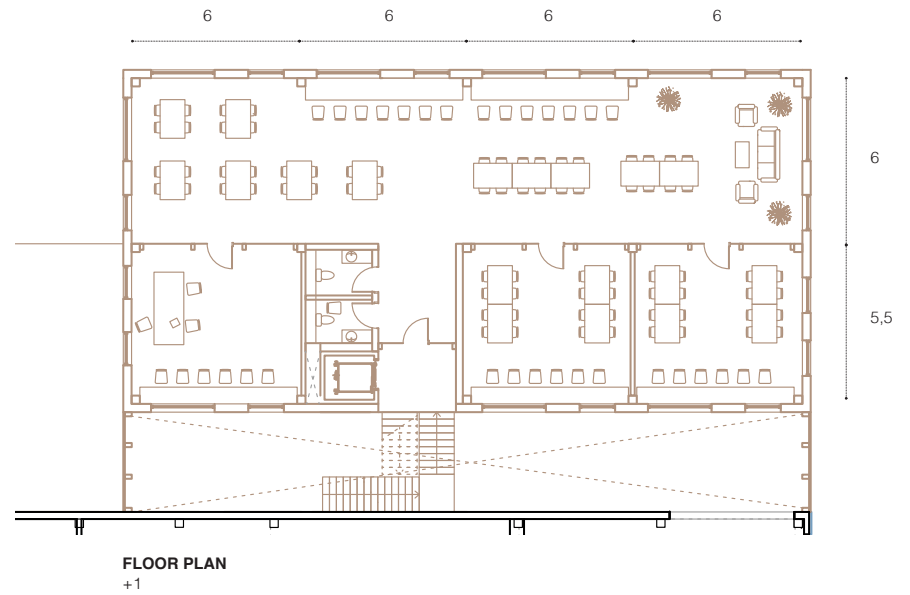


2025



CORNER DETAIL

1. Reclaimed wood cladding
 - Vertical wood battens
 - Horizontal wood battens
 - Waterproof membrane
 - 2x 100mm insulation panels
 - Vapor barrier
 - 120mm CLT wood panel
2. Timber section frame
3. Wood window with triple glazing
4. CLT column 300x300mm



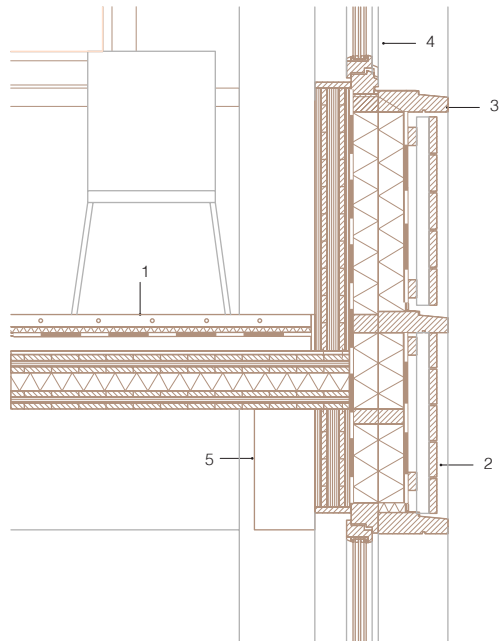
2025



The exposed CLT panels on the walls and the ceiling provides the space with a warm, cozy feeling. The longitudinal open space facilitates interaction between the users.



2025



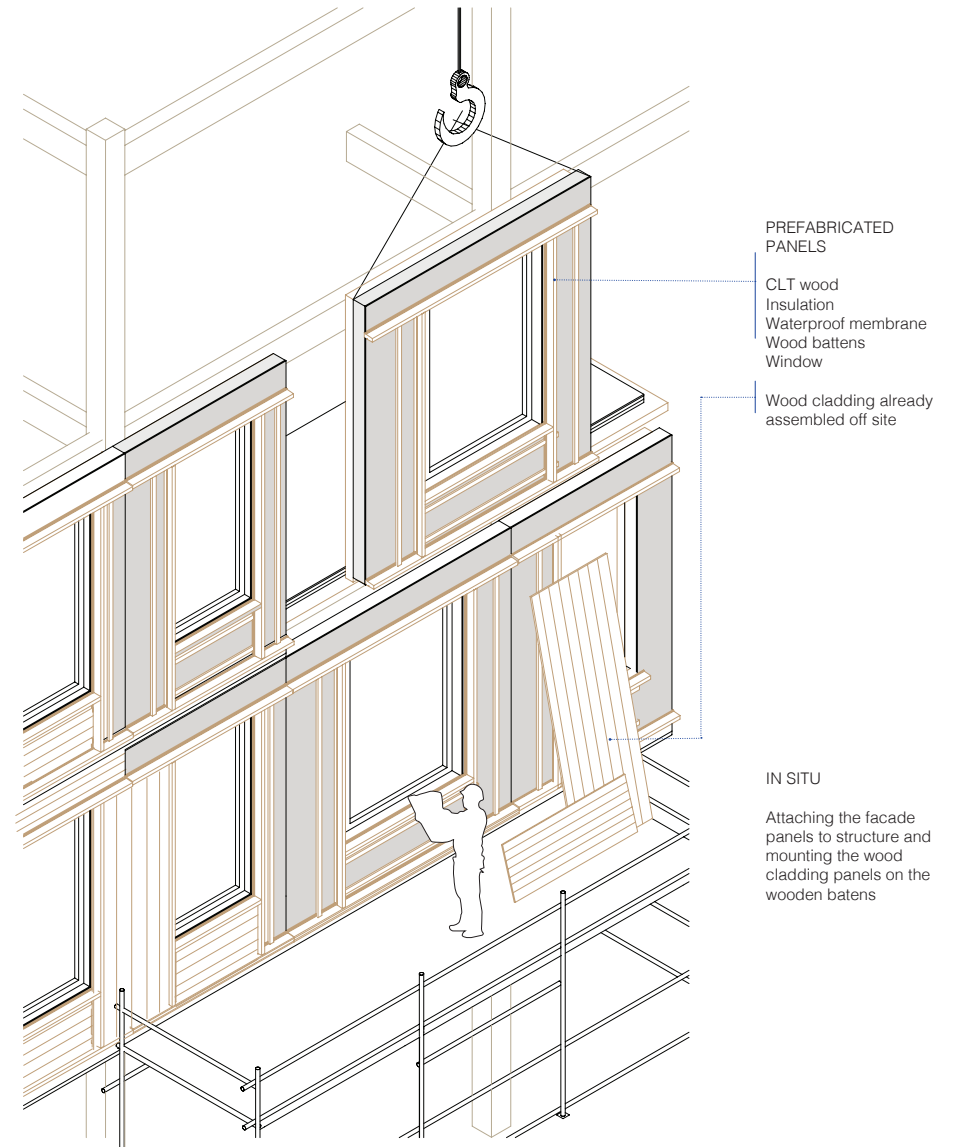
1. 80mm polished screed with radiant heating
 30mm impact sound insulation
 Vapor barrier
 60mm bed of chippings
 60mm CLT wood
 70 mm mineral-wool thermal insulation
 60mm CLT wood

2. Reclaimed wood cladding
 Vertical wood battens 30mm x 30mm x 550mm
 Horizontal wood battens 30mm x 60mm x 1500mm
 waterproof membrane
 2x 100mm insulation panels
 vapor barrier
 120mm CLT wood panel

3. Timber section

4. Wood window with triple glazing

5. CLT beam 400x200mm



PREFABRICATED PANELS

CLT wood
 Insulation
 Waterproof membrane
 Wood battens
 Window

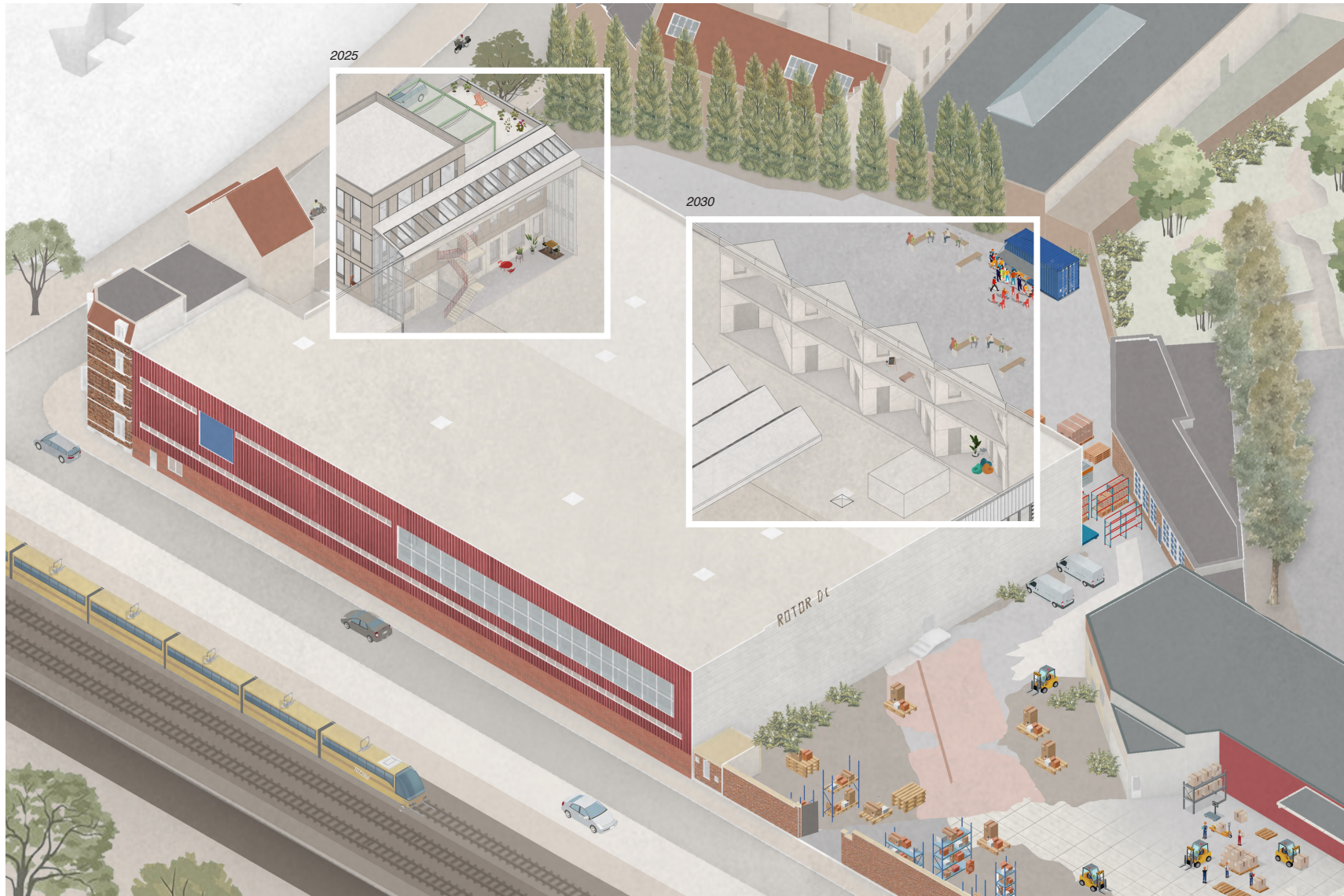
Wood cladding already assembled off site

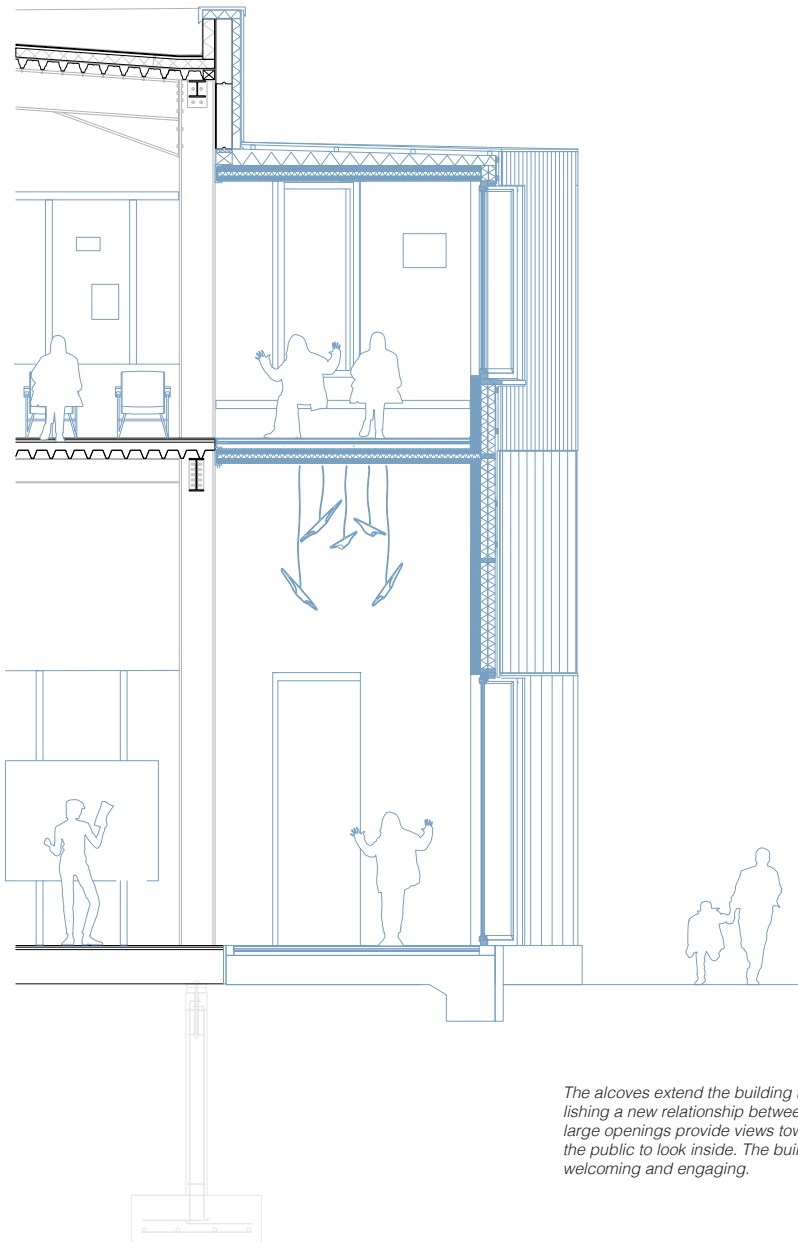
IN SITU

Attaching the facade panels to structure and mounting the wood cladding panels on the wooden battens

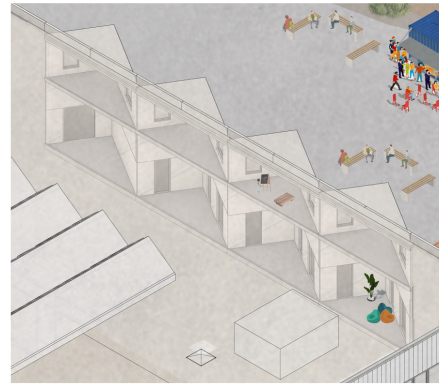
The new structure is designed to facilitate deconstruction and reuse in the future, when the building does no longer serve its purpose, while also using reclaimed wood for exterior cladding.

2020





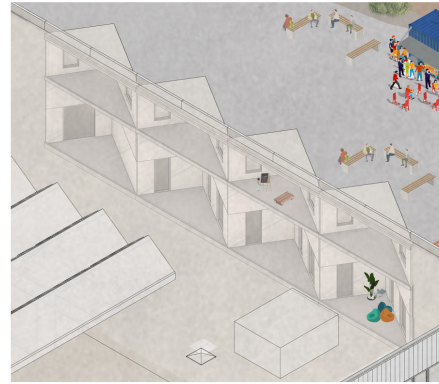
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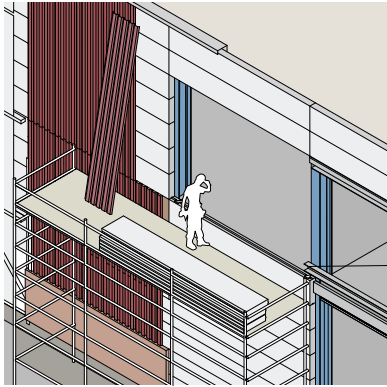
The alcoves extend the building towards the public space, establishing a new relationship between the building and its context. The large openings provide views towards the park, while also allow the public to look inside. The building becomes more transparent, welcoming and engaging.



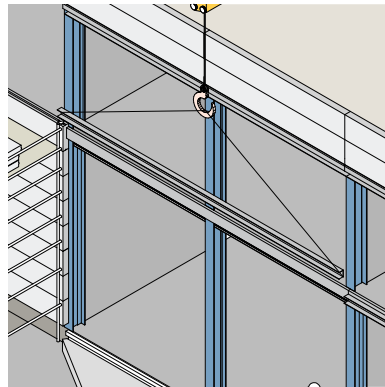
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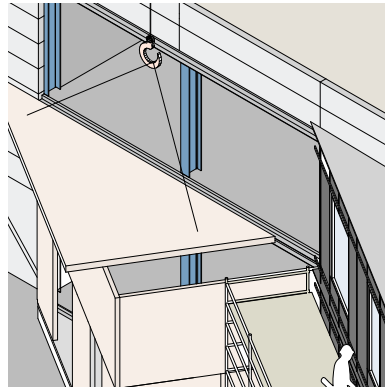
1.



2.



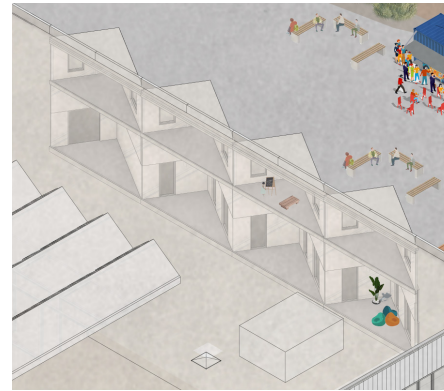
3.



4.

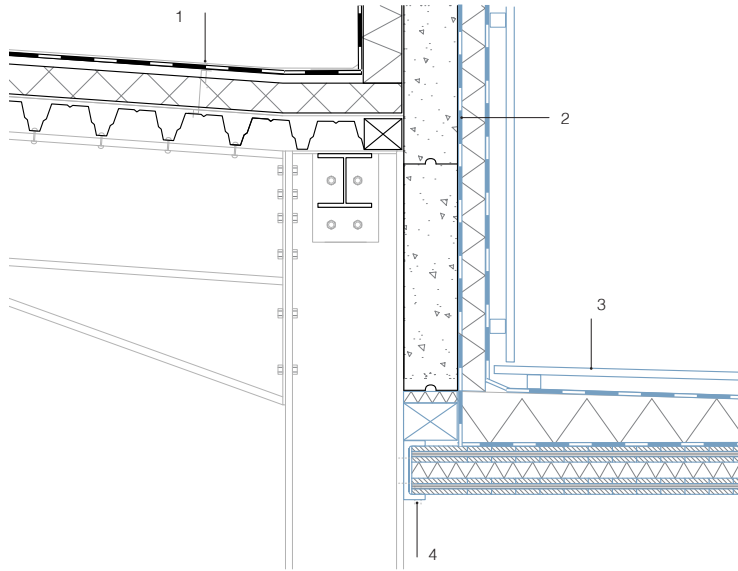


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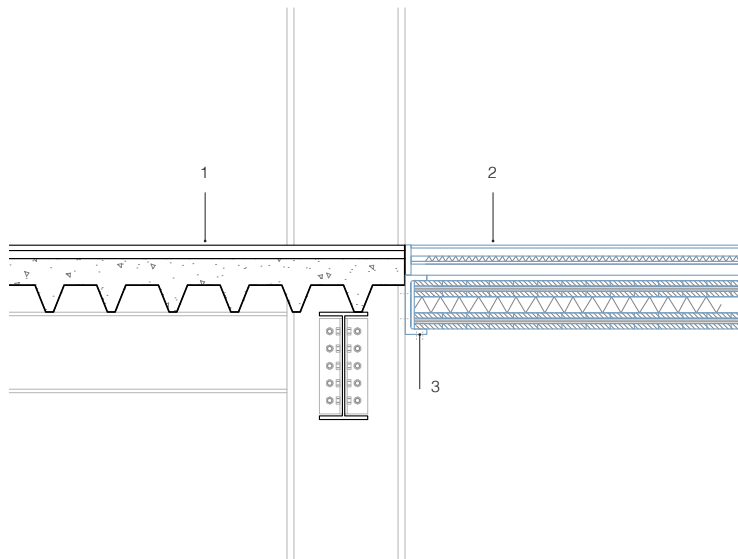
ASSEMBLY

1. Removing the existing red metal cladding and the aerated concrete panels to create openings
2. Installing the steel C profiles that will attach the new CLT structure to the existing one
3. Mounting the CLT panels
4. Mounting the windows, adding the insulation, waterproof membrane, aluminium brackets and the corrugated metal sheeting.

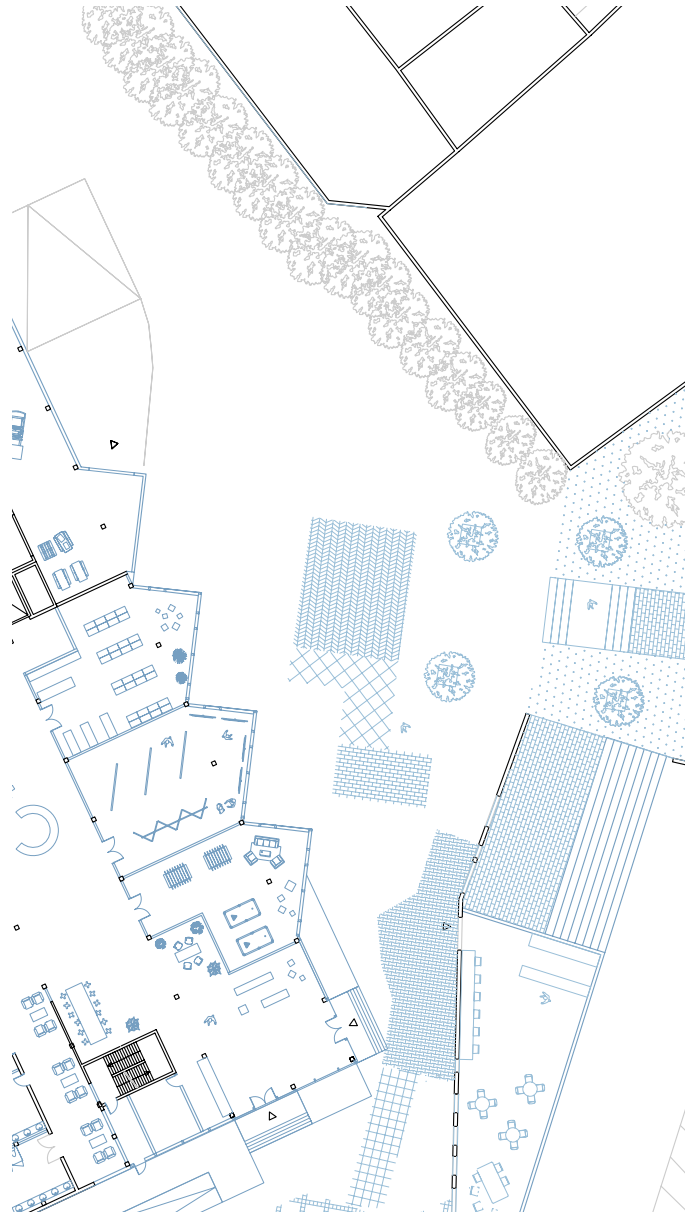


- 1. Existing roof
Rubber membrane
100mm Insulation
120mm concrete on metal deck
Steel structure
- 2. 12mm fiber cement panel
Supporting structure: Aluminium brackets and rails
Waterproof membrane
100 mm rigid insulation
Vapor barrier
Existing aerated concrete panel
- 3. Metal decking
Wood Batens
Waterproof membrane
180mm insulation
Vapor barrier
60mm CLT wood
70 mm mineral-wool thermal insulation
60mm CLT wood
- 4. 200mm C profile to attach the CLT structure to the existing steel structure

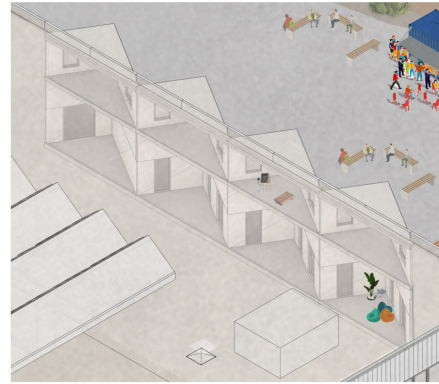
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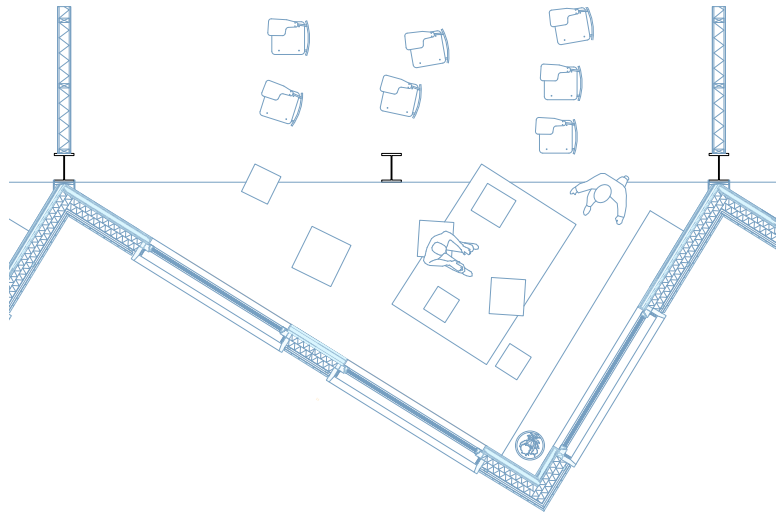


- 1. Existing concrete on metal deck slab 250mm
- 2. Wood flooring
30mm impact sound insulation
Vapor barrier
60mm bed of chippings
60mm CLT wood
70 mm mineral-wool thermal insulation
60mm CLT wood
- 3. C steel profile - connecting CLT alcove modules to the existing steel structure horizontally



2030





A place for socializing and relaxing after a lesson... with views to the park

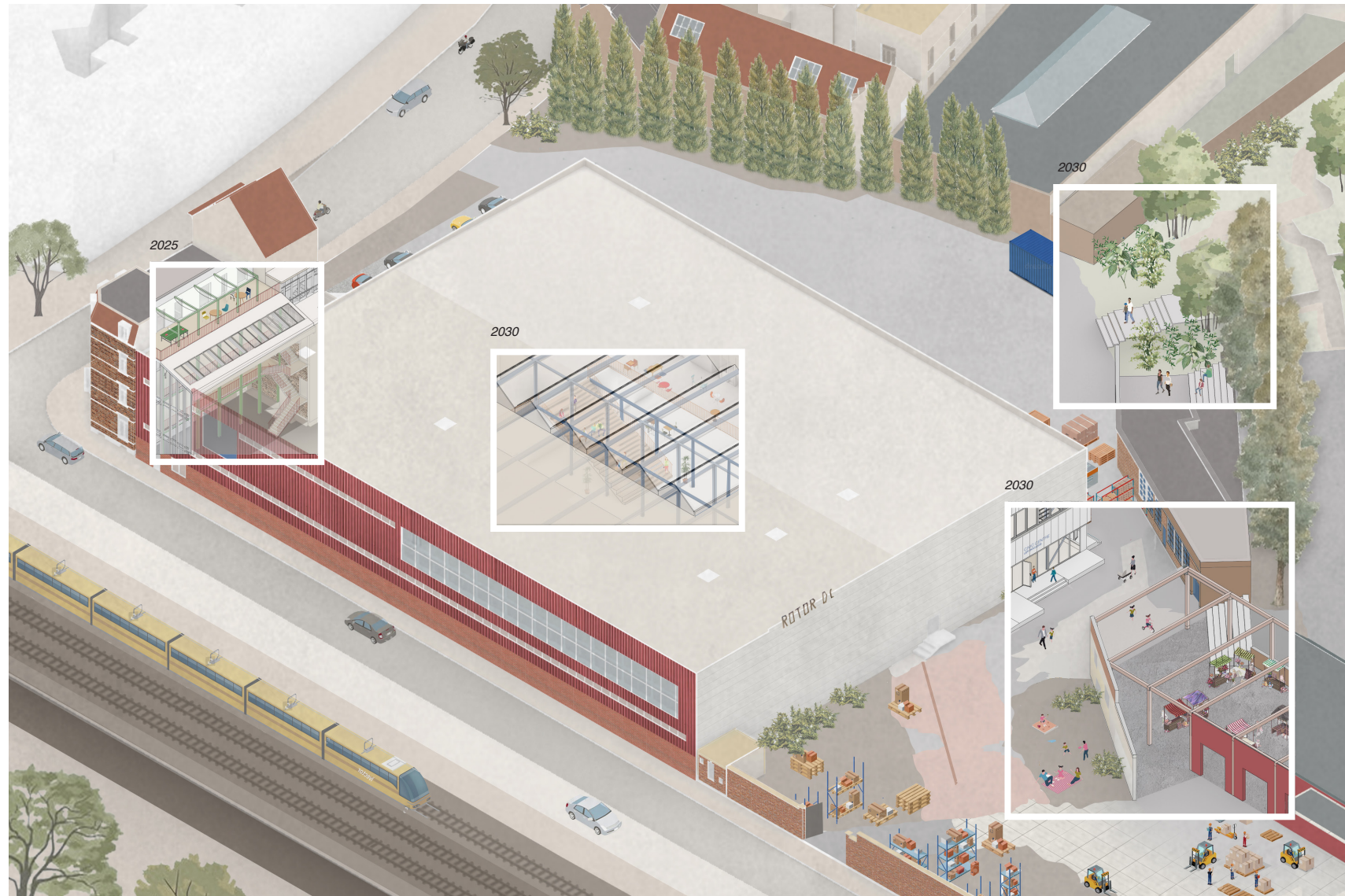


2030



REMOVING TO CONNECT

2020



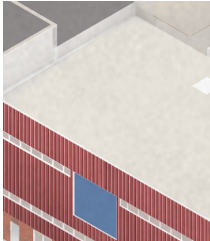
2025 - The Rotor Shop and offices

The Rotor shop will be moved to the street, making it more visible to the public. An atrium space will connect the historical houses to the large part of Rotor shop, which will be located on the ground floor of the former Leonidas factory. The shop will be directly connected to the storage and the workshops.

2030 - The atrium and public spaces

The void created at the center of the former Leonidas factory will be the meeting point of all the different programs of the building, while providing natural light from the skylights. This process of removing to connect also happens at the urban level, with the removal of walls and the addition of staircases to connect fragments.

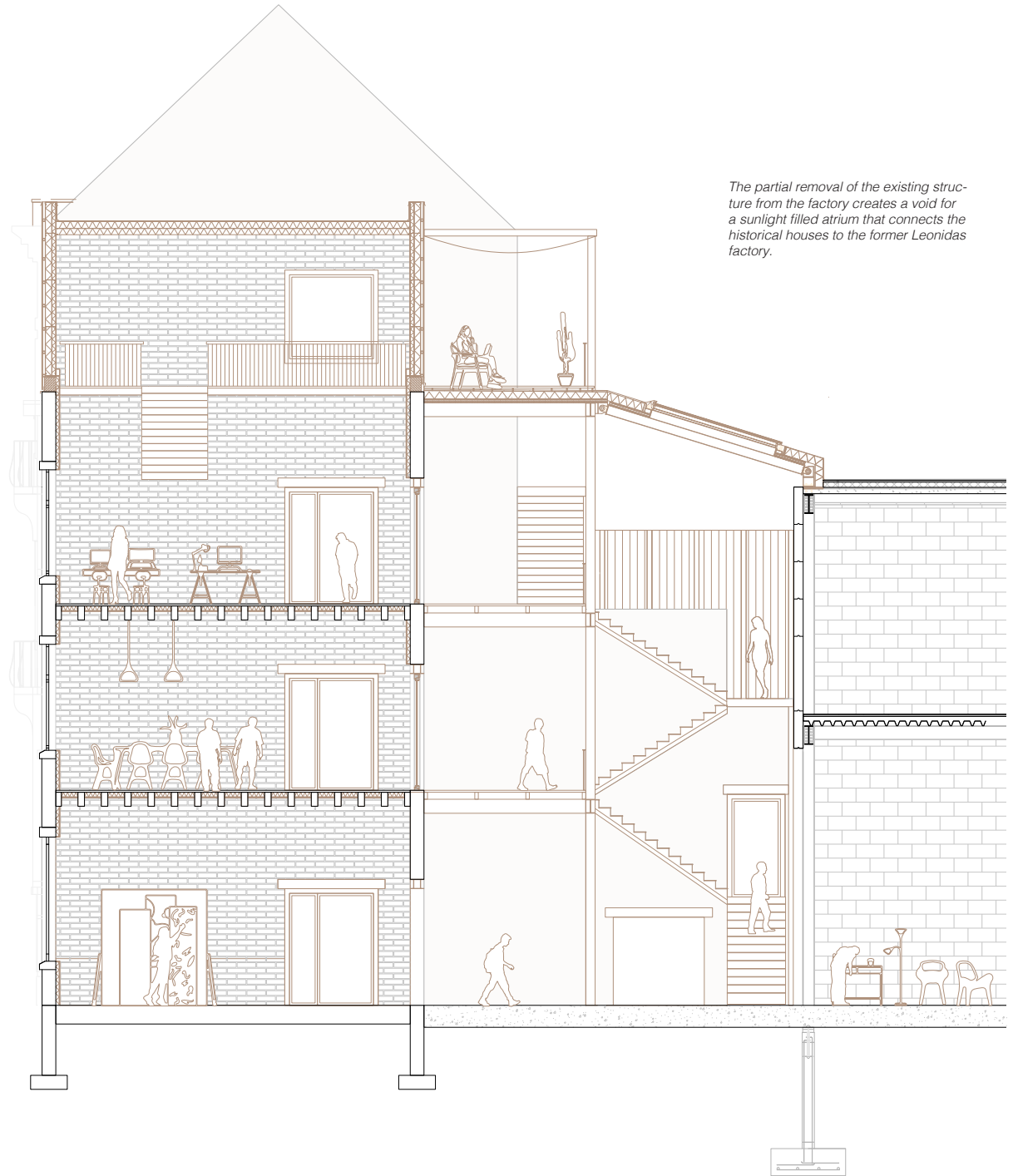
2020



2025



Originally single family houses, they have deteriorated and evolved into small, dark apartments. The transformation will connect them and give back the sunlight on the south facing facade that they used to receive.

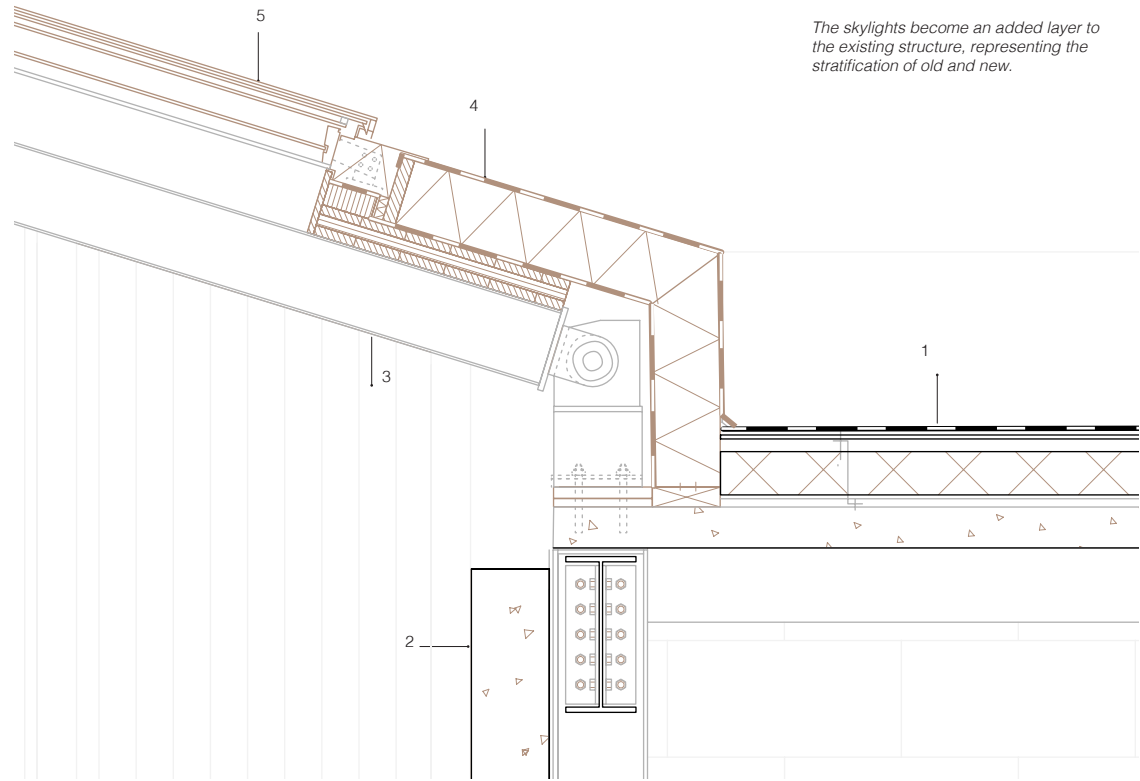


The partial removal of the existing structure from the factory creates a void for a sunlight filled atrium that connects the historical houses to the former Leonidas factory.

2025



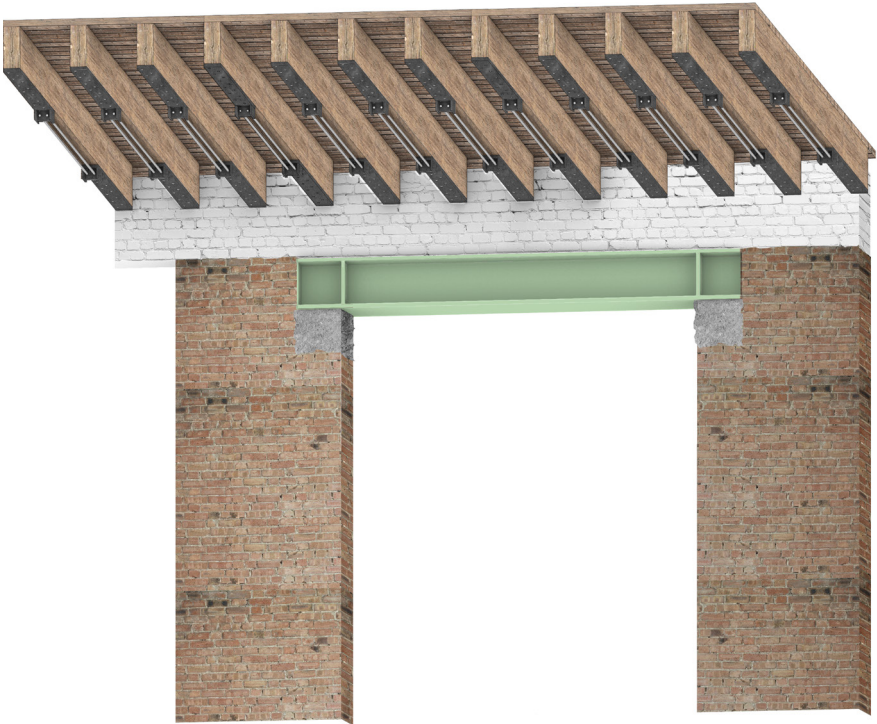
1. Existing roof
Rubber membrane
100mm Insulation
120mm concrete on metal deck
Steel structure
2. Existing aerated concrete panel
disassembled from the removed back
facade and mounted back on the
structure
3. 240 mm IPE steel beam with hinge
connection
4. Sealing layer synthetic roofing foil
200 mm thermal insulation
Vapour barrier
80 mm Cross
laminated timber
5. Modular roof-light system thermal
glazing module size 3000x1000 mm



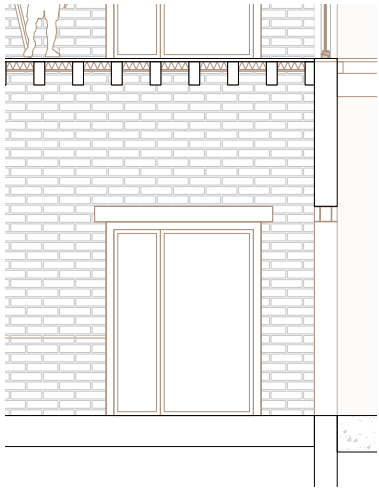
The skylights become an added layer to the existing structure, representing the stratification of old and new.

To original wood structure of the floor slabs is kept, adding reinforcement to the handle the extra load of an office space compared to a house.

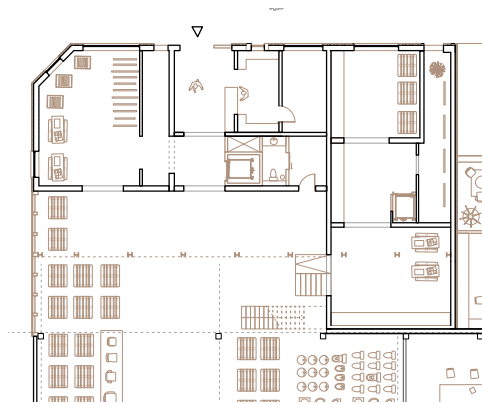
2025



To connect the houses, openings are made on the existing, load bearing masonry walls.



2025



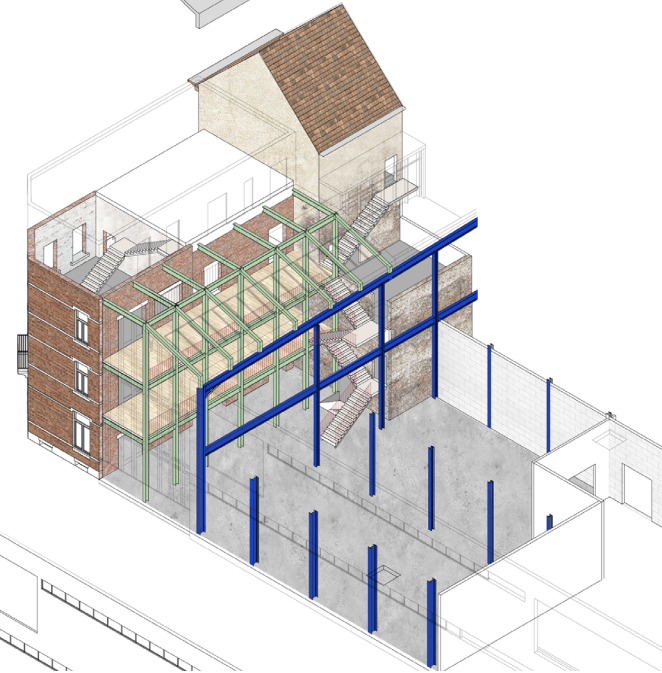
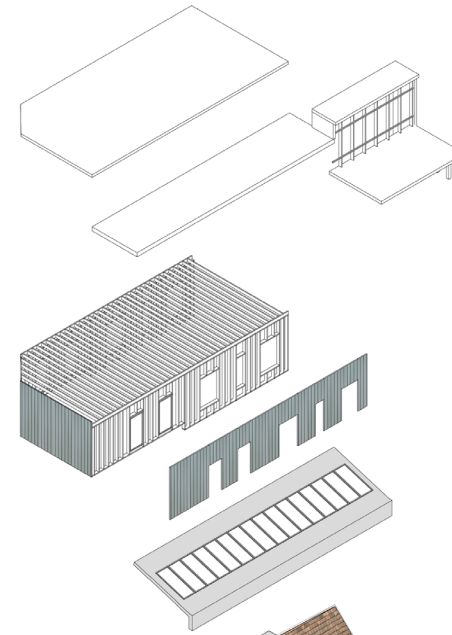
The existing masonry walls, the new structure on the atrium, and the characteristic blue columns of the former Leonidas factory all have different characters. The layers of history are visible.

A characteristic typical of the urban blocks around the neighbourhood also happens in the new Rotor shop. While the exterior appearance on the street is of a row house, there is an almost hidden use and succession of spaces happening in the back...

2025

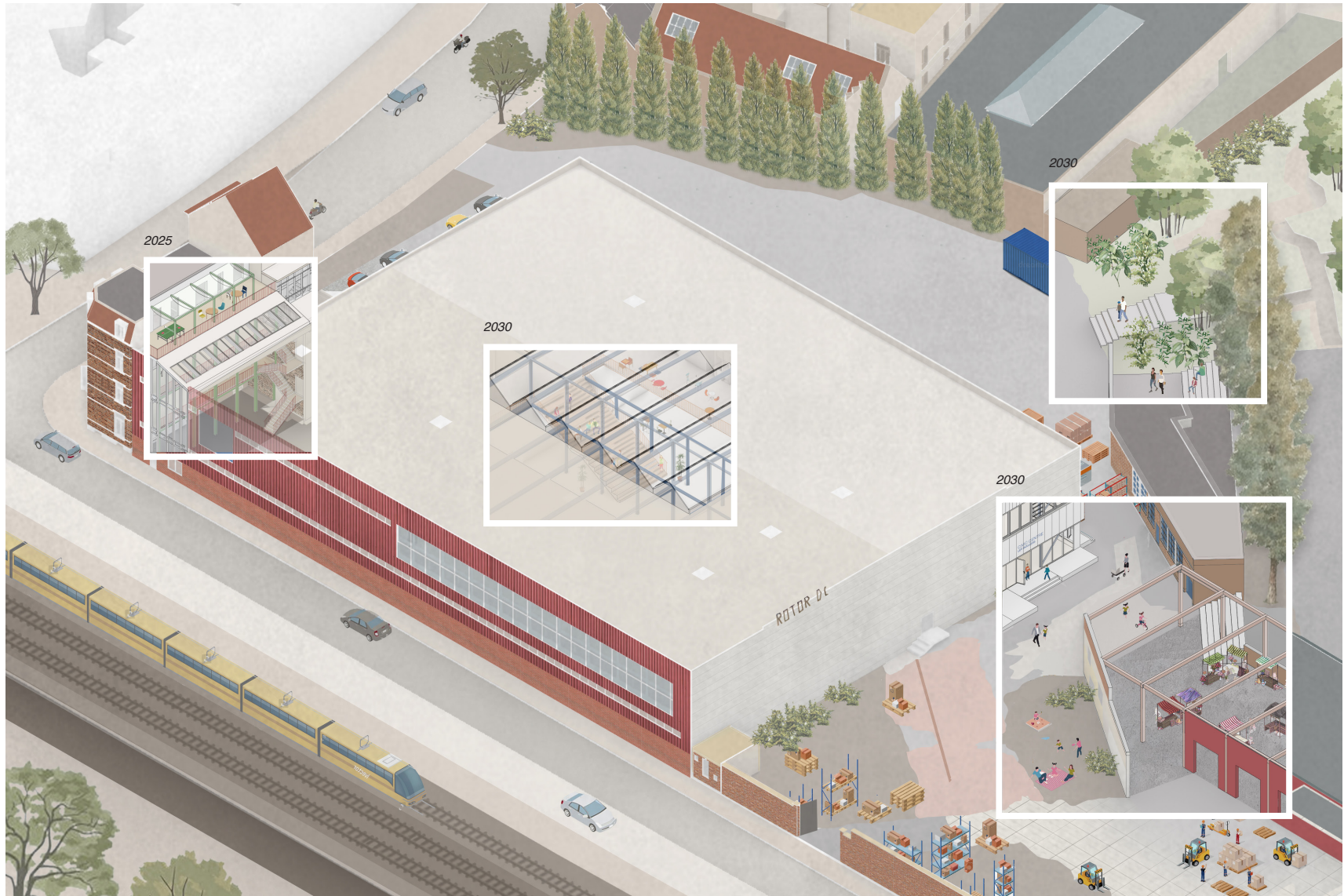


The front



The back

2020





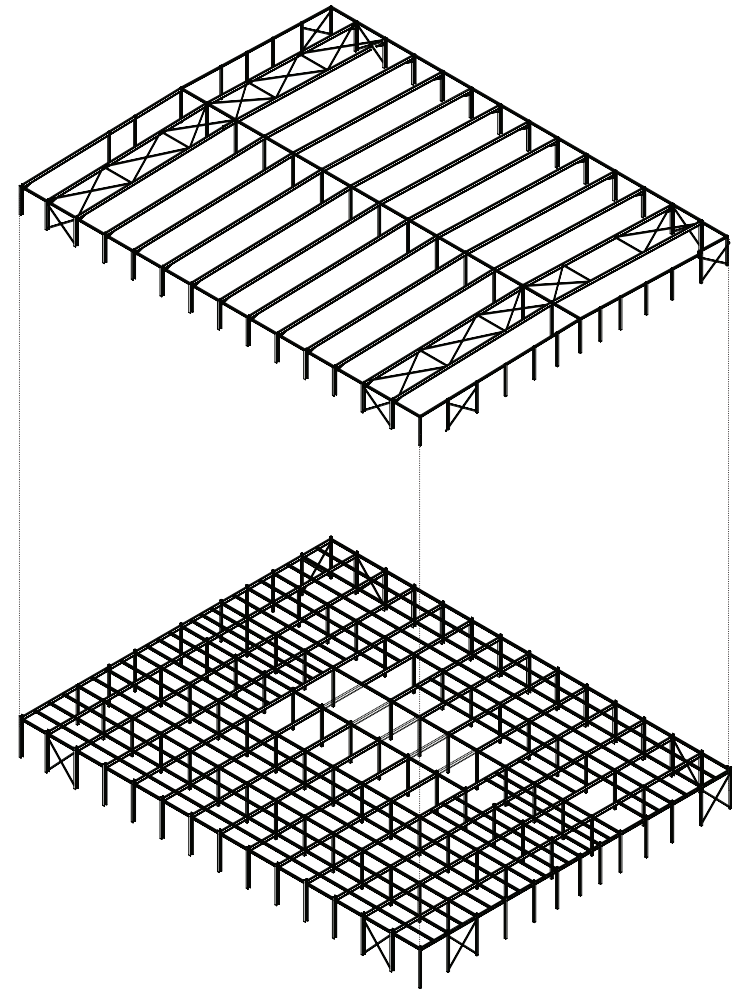
2030



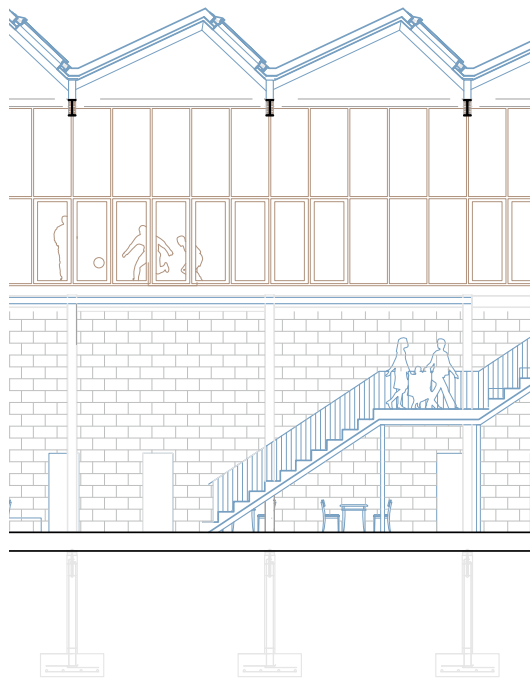
The interior of the former Leonidas factory lacks sunlight and does not have a welcoming atmosphere. The creation of a central atrium with skylights will fill the building with diffused sunlight.



2030



Removal of 5 steel
beams to create a
central atrium



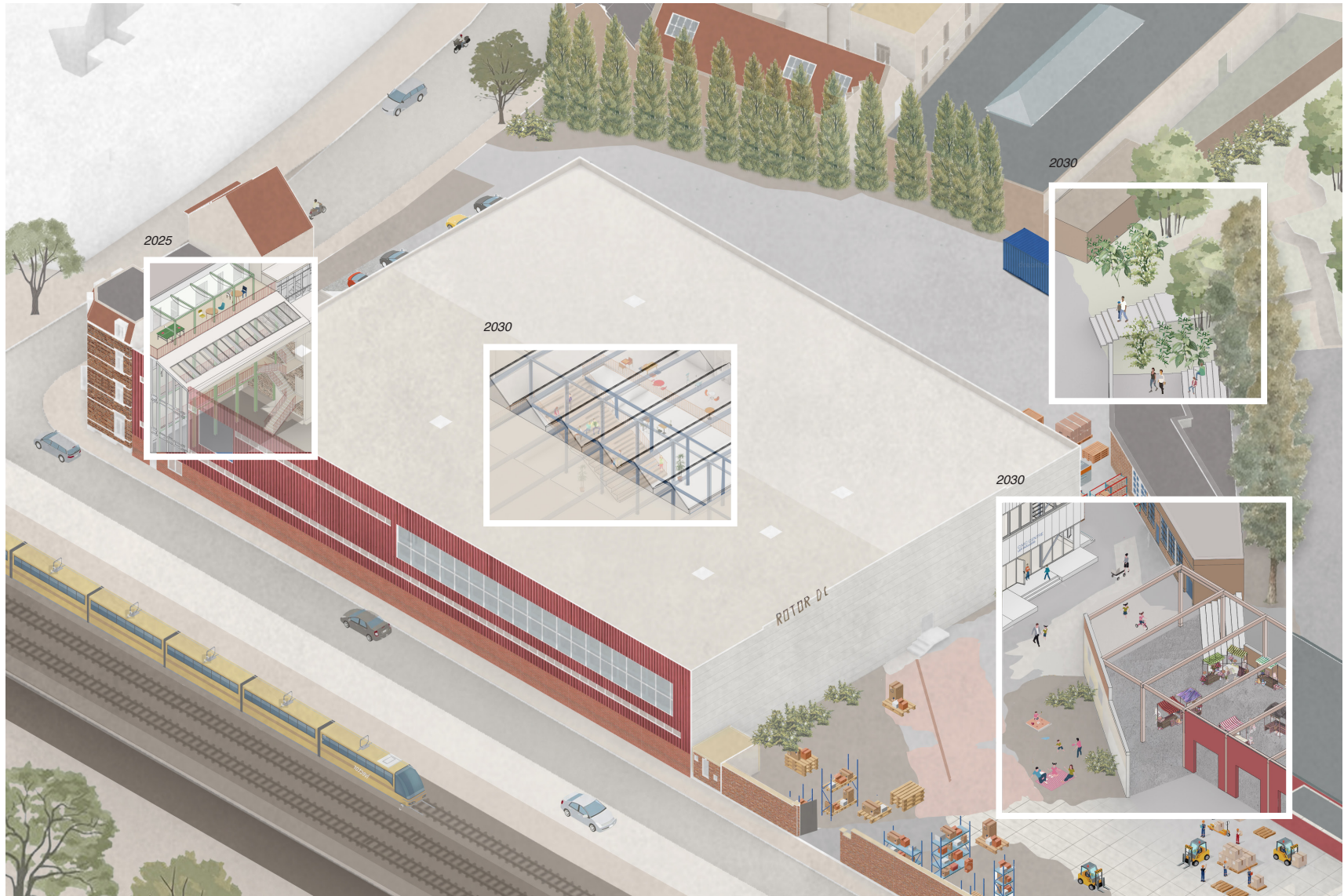
2030



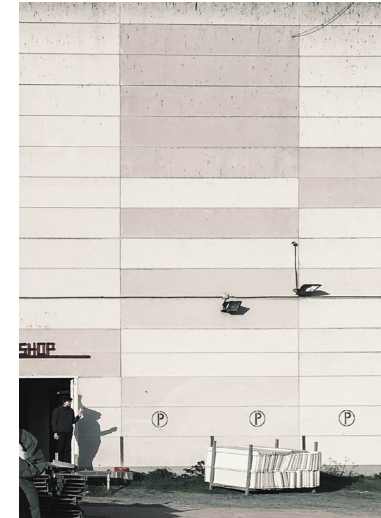
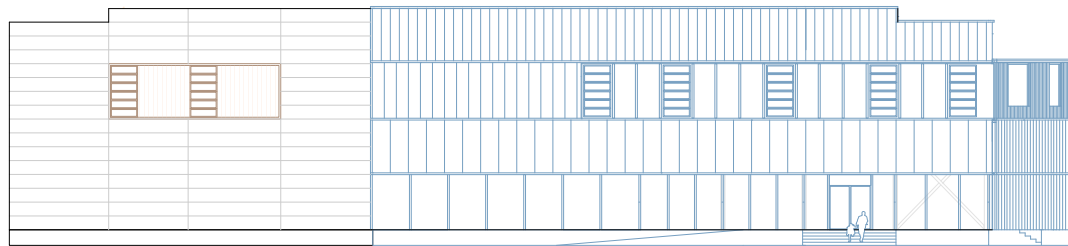
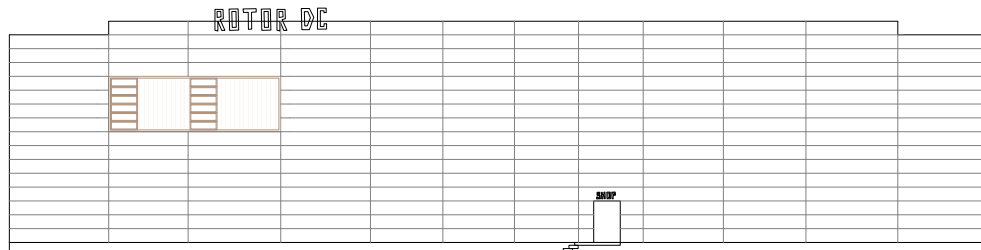
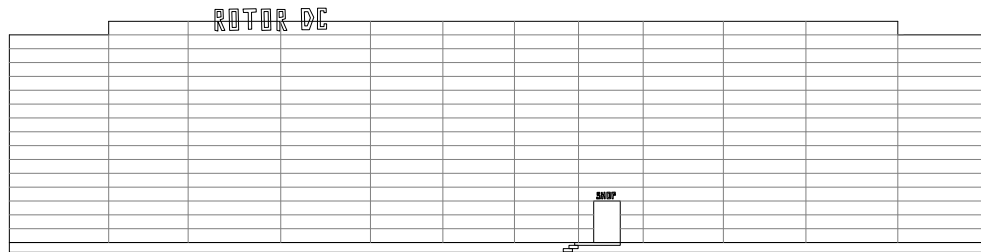
Transparency and connectivity become a key quality for the character of the civic center. The interior walls on the program surrounding the central atrium have windows, which create visual connections and allow the sunlight to filter everywhere.



2020

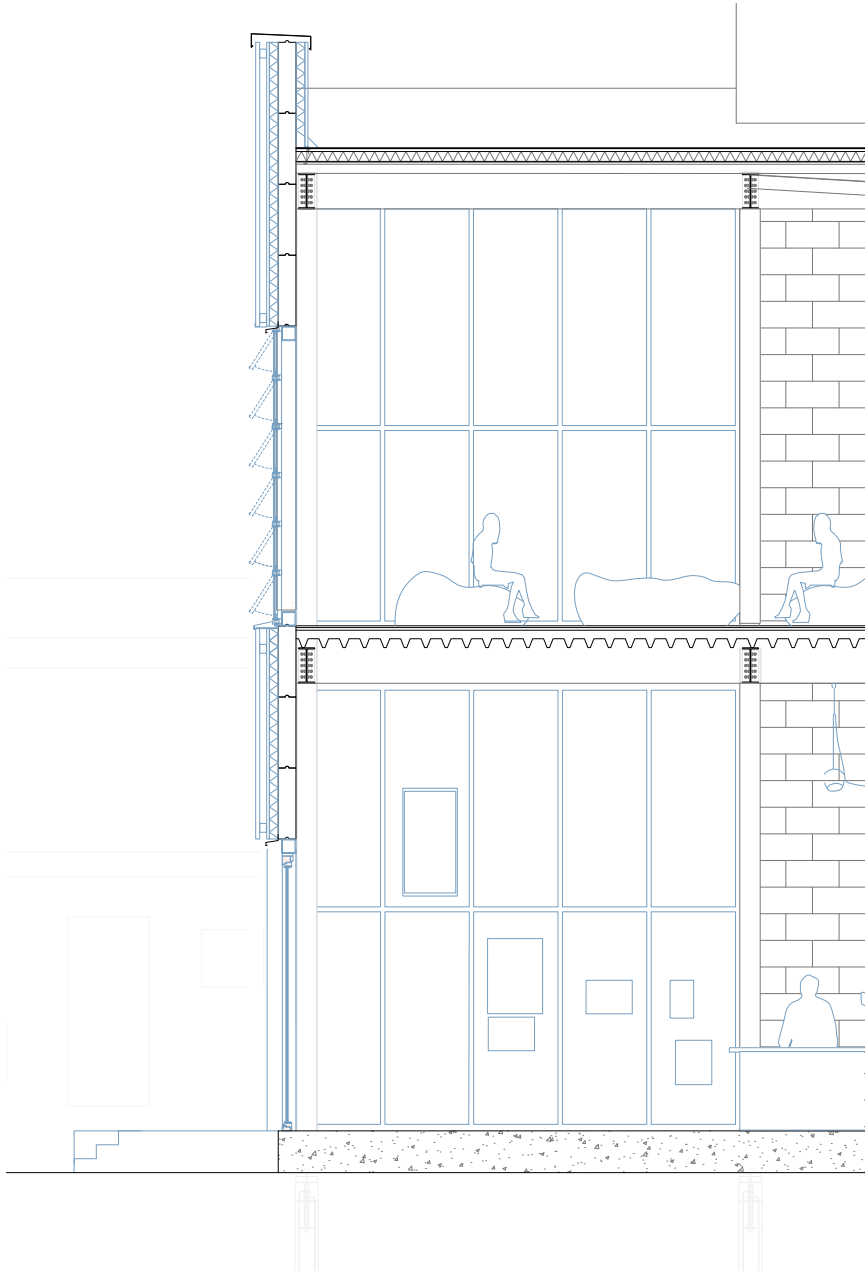


The facade facing the courtyard will be transformed over time in different phases, going along with the changes of program inside the building. From a completely closed off facade, to a more open, engaging facade.



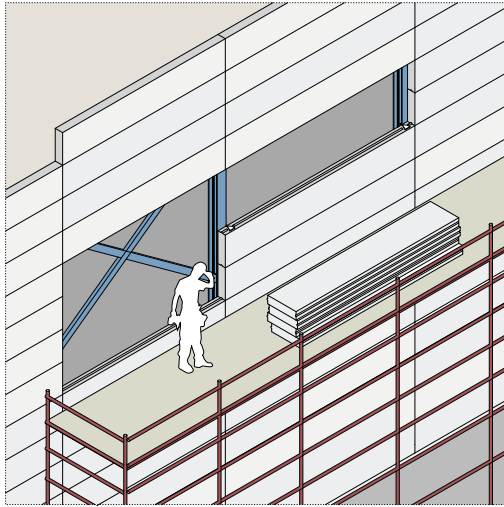
2030



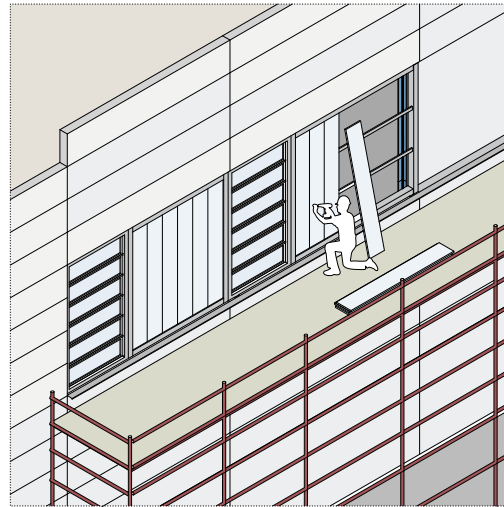


2030





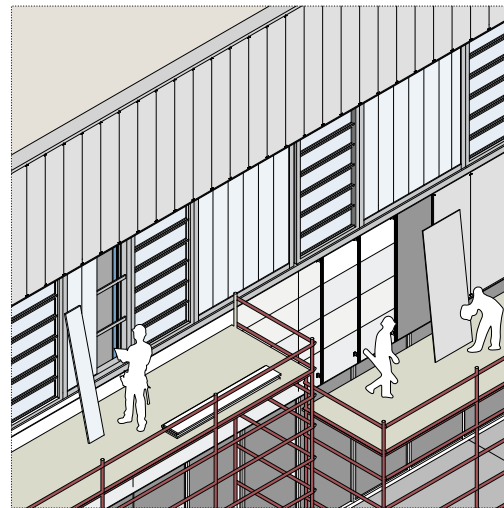
1.



2.

ASSEMBLY

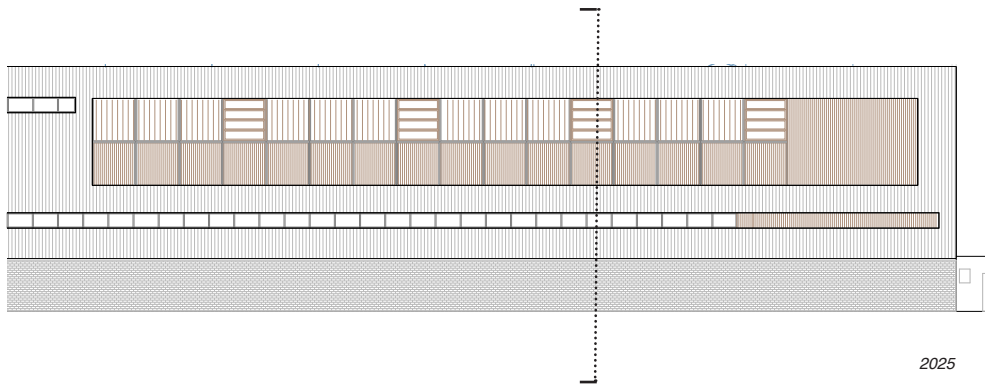
1. Removing the existing aerated concrete panels to create openings
2. Installing the windows and polycarbonate panels
3. Adding insulation and cladding with fiber cement panels



3.

2030

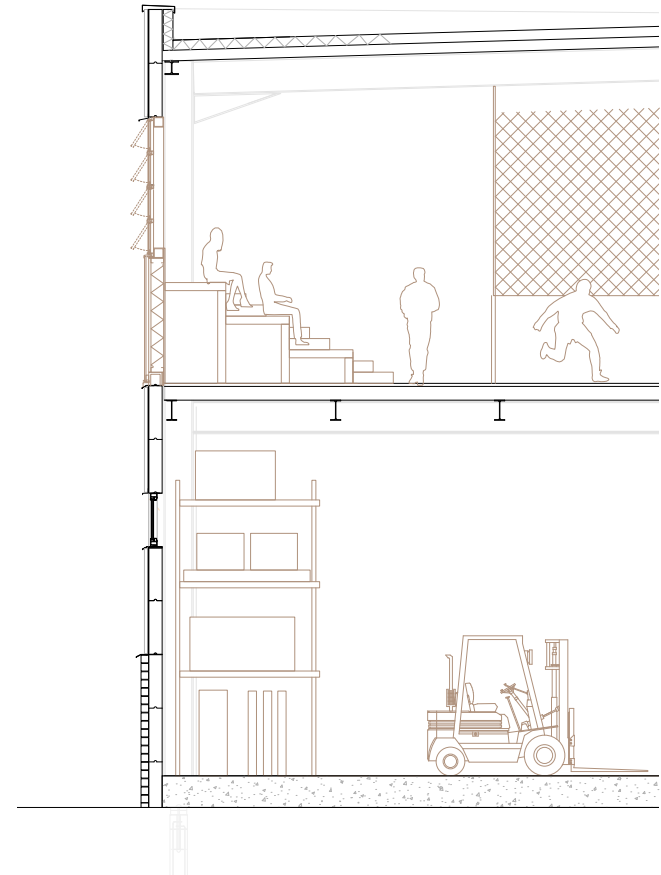
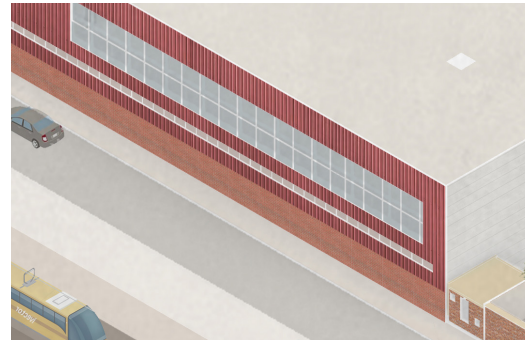




The intervention on the facade facing the train tracks is minimal, only with the addition of windows using the opening that is already there, which used to provide ventilation for the mechanical room. A wall is added on the bottom part of the opening to close off the viewing area.

The same strategies applied for the facade renovation on 2030 could be applied to this facade in the future in case the new use requires it.

2020





2030



From an industrial courtyard with closed off warehouses to valuable, open public spaces that embrace the traces of history on the site.



2030



