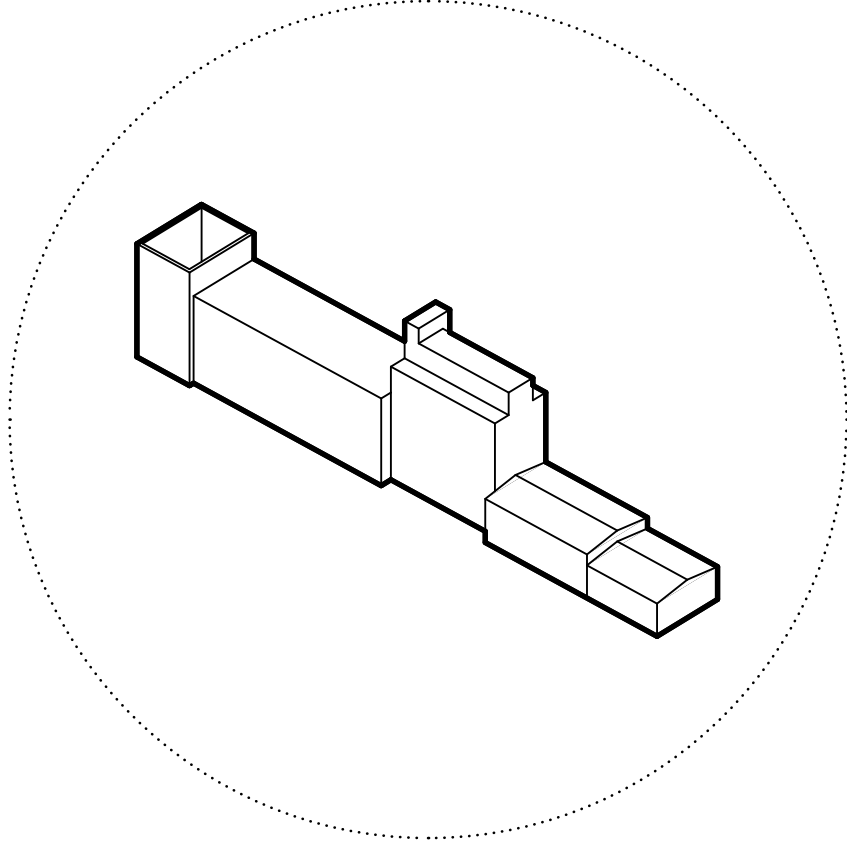


PAROMLIN

ADAPTATION OF AN URBAN RUIN

TIN JELAVIĆ





DIPLOMARBEIT

Paromlin - Adaptation of an Urban Ruin

ausgeführt zum Zwecke der Erlangung des akademischen Grades eines Diplom-Ingenieurs/Diplom-Ingenieurin unter der Leitung von

Univ.Prof. Dipl.-Ing. M.Arch. (Dist) AA Tina Gregorič Dekleva

Institut für Architektur und Entwerfen
E253/1, Gebäudelehre und Entwerfen

eingereicht an der

Technischen Universität Wien

Fakultät für Architektur und Raumplanung

von

Tin Jelavić

01228343

Wien, Januar 2021



*Take a little walk to the edge of town
And go across the tracks
Where the viaduct looms
Like a bird of doom
As it shifts and cracks
Where secrets lie in the border fires
In the humming wires
Hey man, you know
You're never coming back*

Red Right Hand *by*
Nick Cave & The Bad Seeds

ABSTRACT

GO ACROSS THE TRACKS

The place described in the first verse of Nick Cave's 1994 song Red Right Hand is one that can be found in many European cities. The rise of the railroad and the industrial revolution have left a lasting impact on our cities, Zagreb among them. What once was the edge of town is the edge of town no more, and now a large scar in the shape of an industrial belt blemishes the face that is the capital. It is here where the old steam mill known as Paromlin shifts and cracks.

By using Paromlin as a case study, this project aims to explore adaptation, communication and production in an urban setting. Adaptation, by reprogramming the Paromlin complex for the needs of a contemporary city. Communication through a program that strives to demystify art and design, for both professionals and laypeople. Production, by returning industry on a small scale to the city.

Paromlin has been on the wrong side of the tracks for the past thirty years. It is high time that changes.

Der in der ersten Strophe von Nick Caves 1994er Song Red Right Hand beschriebene Ort ist in vielen europäischen Städten zu finden. Der Anstieg der Eisenbahn und die industrielle Revolution haben einen bleibenden Einfluss auf unsere Städte, unter ihnen auch Zagreb, gelassen. Was einst der Rand der Stadt war, ist es nicht mehr, und jetzt verunstaltet eine große Narbe in Form eines Industriegürtels das Gesicht der Hauptstadt. Hier verschiebt sich und bricht die alte Dampfmühle Paromlin.

Anhand von Paromlin als Fallstudie soll die Anpassung, Kommunikation und Produktion in einem städtischen Umfeld untersucht werden. Anpassung durch Neuprogrammierung des Paromlin-Komplexes an die Bedürfnisse einer zeitgenössischen Stadt. Kommunikation durch ein Programm, das Kunst und Design sowohl für Profis als auch für Laien entmystifizieren soll. Produktion durch Rückführung der Industrie in kleinem Maßstab in die Stadt.

Paromlin ist seit dreißig Jahren auf der falschen Seite der Stadt. Es ist höchste Zeit, dass sich etwas ändert.

INTRODUCTION 10

**I WIDER
CONTEXT 12**

Situation	14
Green spaces	18
Prominent locations	20
Historical overview	30
Previous users	36
Competitions	38

**II A CLOSER
LOOK 44**

Plans, elevations, sections	46
Construction and ornamentation	54

**III ADAPTIVE
REUSE 64**

Shearing layers of change	66
Adaptive reuse typologies	68
An obsession with ruins	72

**IV REFERENCE
PROJECTS 78**

Lobe Block	80
Joanneumsviertel	82
FRAC Nord-Pas de Calais	84
Higher School of Fine Arts	86
Fondation Cartier	88
Tate Modern	90

**V PAROMLIN
ADAPTED 92**

Project aim and strategy	94
Flour warehouse and the transmission building	102
Silo	116
Warehouse and drying room	122
Plans, elevations, sections	132

APPENDIX

Sources	152
Acknowledgments	156

INTRODUCTION

GIVE US SIX MONTHS AND WE'LL FIX UP PAROMLIN.

- MILAN BANDIĆ, MAYOR OF ZAGREB, 2005

*Paromlin (cro.) - Steam mill
A steam mill is a type of grinding mill using a stationary steam engine to power its mechanism.*

Paromlin is one of those neuralgic spots in the city. Once the spearhead of the industrial revolution in Zagreb and Croatia as a whole, it now stands as a literal shell of its former self, a constant reminder of wasted potential. It is one of many such buildings in the capital - large, empty, ugly and dangerous. Some are the result of megalomaniacal large-scale projects that completely mishandled their funding while trying to outdo similar projects from neighboring countries. Examples include the University Hospital on the western edge of town and the Maksimir Stadium. Others are the result of years and years of neglect, land disputes and ~~corruption~~ politics. These are large industrial complexes, like the Badel-Gorica cluster, the rolling stock factory Gredelj, and its neighbor, the main star of this project, Paromlin.

Cultural property is any property of national interest that enjoys personal state protection. Broadly speaking, cultural property is a cultural heritage belonging to a group or society, i.e. something that has been and will be preserved as a cultural value.

The 100-year-old industrial mill might be the most mishandled place out of all of them. With its location and place in the city's memory, it is one of the most important monuments of industrial architecture Zagreb has. It functioned as an industrial building until the 80s, when a devastating fire destroyed the mill's machines, roof, and floor constructions. Even before the conflagration there was discussion of adapting the building. After it, a new discussion arose: is the building safe or should

it be demolished? The prospect of demolishing the historic mill attracted investors, but an appropriate solution wasn't found, and no progress had been made. Declaring it protected cultural property in 2004 has done the industrial complex no favors. The City of Zagreb acquired it in 2005, and now, unable to demolish it, but unwilling to do anything else about it, Paromlin has been left to fend for itself, slowly but surely losing the war with time. Brick by brick, it inches closer to the ground. For

years it was used as a garbage dump. The building survived two more fires when the garbage inside was set aflame. Finally, in 2013, a storm shook the already weakened construction and the mill building came tumbling down. The transmission building, the flour warehouse and the silo remain standing, waiting for their turn to fall. A year later, a construction company associated with the mayor came unannounced, and illegally bulldozed the rubble away. That's how things are done in the capital.

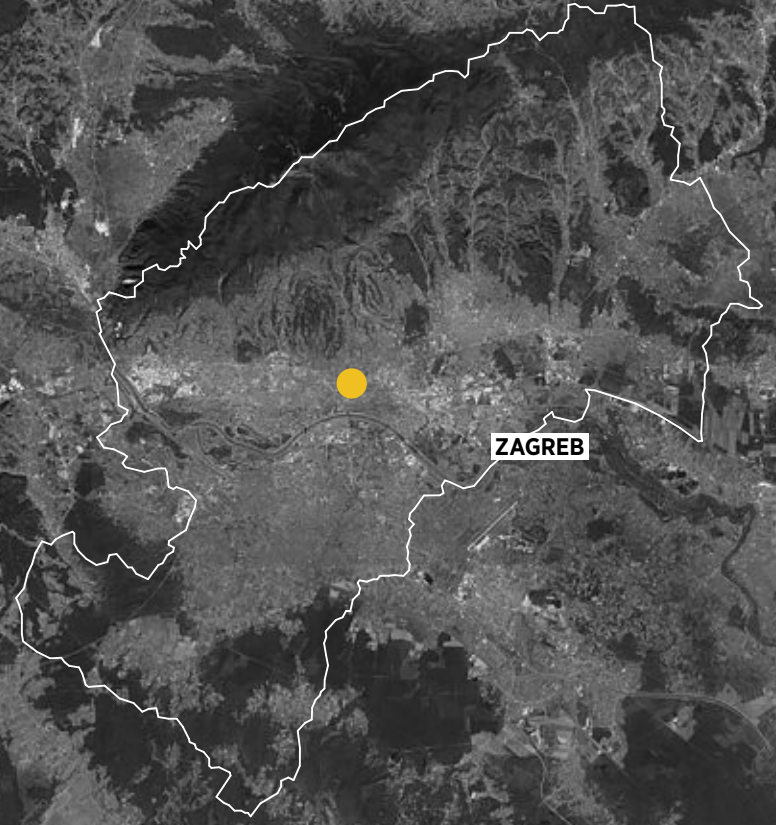
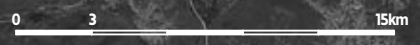
Let something decay for years, then allow it to collapse because it became a dangerous ruin. Our heritage? We lose it. A large parking space in the middle of the city? That, we gain.

(above) Paromlin's western side - the side seen from City Hall.



WIDER CONTEXT

In order to fully explore all of the possibilities offered by the Paromlin complex, it is necessary to understand its location, surroundings, and the interconnectedness of the two. Its history, the people who previously occupied the premises, and all the attempts at transforming the complex need to be examined so an informed design can be delivered.



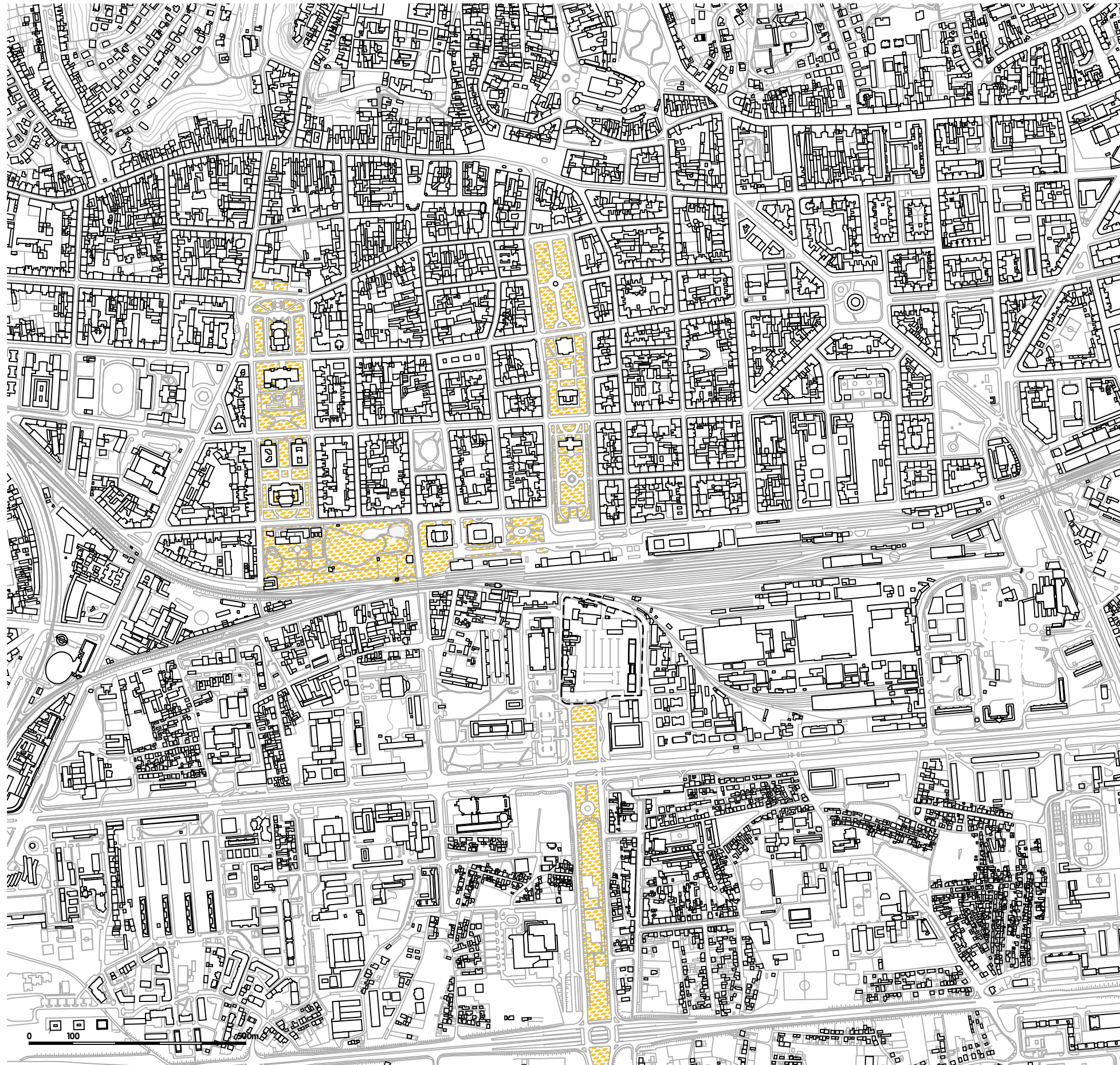
ZAGREB



Set in an exceptional location between Paromlinska and Trnjanska Road, the Paromlin industrial complex has a lot going for it. Located on the border of two city districts, Donji grad (Lower Town) and Trnje, it is only 1,1 kilometers away from the main square and, more importantly, it is set dead-center in what is to become the new main hub of the city. State and city government institutions, as well as important cultural and public buildings are all close by.

Its proximity to major city roads, the main railway station, the intercity bus station, two public transportation hubs (bus and streetcar), and even the airport, guarantees accessibility and a great connection. The effect of the railway tracks that have divided Zagreb for the past 150 years is also slightly mitigated here by the Importante Centar underpass (for pedestrians) and Miramarska Street (for vehicles and pedestrians).

- 1** Paromlin complex
- 2** Zagreb Main Station
- 3** Importante Centar underpass
- 4** Ban Josip Jelačić Square
- 5** Zagreb Bus Station



GREEN SPACES

FROM HOT PAVEMENT AND INTO THE GRASS

The second half of the 19th century brought about the rise of social and cultural awareness that viewed the city as a representative and urban center, which in turn determined that Zagreb would leave its status as a place in the periphery behind and work towards becoming a modern city. The most important urban project of the time was the planning of Donji grad. The **Green Horseshoe**, a U-shaped frame of verdant city squares and parks, was designed there. The efforts to rebuild the city after the 1880 Zagreb earthquake greatly helped in the construction of the squares, and in 1889 the entire horseshoe was finished.

Starting from northeast and going clockwise, the horseshoe is formed by Nikola Šubić Zrinski Square, Josip Juraj Strossmayer Square, King Tomislav Square, Ante Starčević Square, Lenuci fitness park, Zagreb Botanical Garden, Marko Marulić Square, Antun, Ivan and Vladimir Mažuranić Square and Republic of Croatia Square.

Just south of Paromlin begins another green strip that reaches the Sava river and Liberty Bridge. It consists of Stjepan Radić Square, which sits between the City Hall and Vatroslav Lisinski Concert Hall, and the University Meadow, now infamous for its fountains.

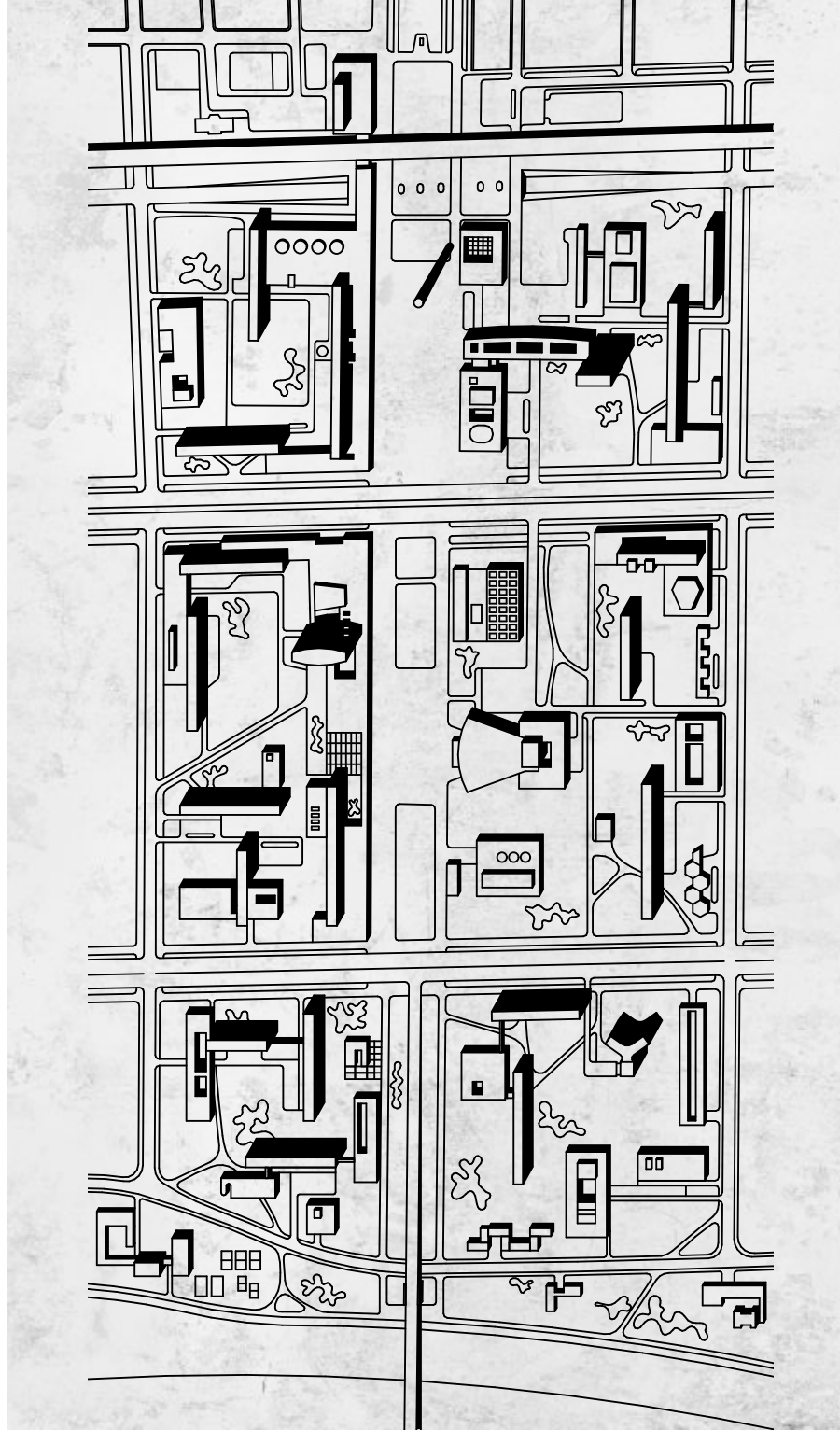
The frame is also known as Lenuci's Horseshoe, named after Milan Lenuci, the chief urban planner of Zagreb at the end of the 19th century. Because of his position, he was attributed the authorship of the project, even though the idea wasn't his. However, he did have an active role in the development of the project.



PROMINENT LOCATIONS

LET'S GO FOR A DRIVE AND SEE THE TOWN TONIGHT

- 1** Paromlin
- 2** City Hall
- 3** Zagrebačka Banka office building
- 4** Kooperativ residential buildings
- 5** Zagreb Main Station
- 6** Vatroslav Lisinski Concert Hall
- 7** Gredelj
- 8** Strojarničko settlement
- 9** Municipal Civil Court of Zagreb
- 10** National and University Library
- 11** Zagreb Bus Station
- 12** Zagreb Cathedral
- 13** Ban Josip Jelačić Square

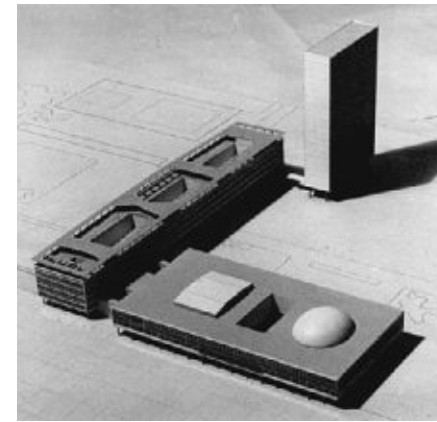


Pictured above is the radical development plan proposed by Ostrogović in cooperation with Zdenko Kolacio and Zdenko Sila. Notice the removal of the Central Station, most of the railway, and Paromlin.

In the 1950s, Croatian architect Kazimir Ostrogović got the opportunity to define the **new administrative center** of Zagreb, encompassing the area from the Zagreb Main Station in the north to the Sava in the south. The first phase of the competition was already an immensely complex undertaking that required a complete urban-development-plan and the architectural design of the National Committee building. Ostrogović himself wrote about the project:

«The complexity of the task, which arises from the underdevelopment of Zagreb's master plan and insufficiently programmed social belt, requires competitors of special urban ability, great routine and creative strength in designing such a complex structure.»

He proposed a framework that would allow for future-proof development. A simple solution consisting of three types of building volumes, public spaces, and



parks set in an orthogonal matrix. Low, wide volumes were intended for public facilities, halls and cinemas, elongated ones for residential and office use, and the vertical ones, the solitary high-rises, would serve as spatial accents.

The same modernistic approach was used in the design of the National Committee building, which serves as the **City Hall** in present day. It was intended to consist of a low structure with council halls, dressing rooms and associated facilities, an elongated administration building perpendicular to it, and finally, as an accent to the site, a high-rise that accommodates governing bodies. Only one of the three structures was ever realized.



Ostrogović's initial proposal for the complex (left), the completed building in the late fifties, (middle) and the building in its current state (below).





„Kooperativ“ residential buildings (above). Ostrogović's bank before any major additions (below) and the bank in 2020, after being picked clean by scavengers (middle).



To the immediate north of the City Hall, Ostrogović worked on two more projects: the „Kooperativ“ residential buildings and the Communal Bank. The „Kooperativ“ buildings, built in 1956, still serve their purpose. The bank, built in 1964, is a ruin. As the bank transformed over the years and the need for more space arose, the building was clumsily upgraded and added upon until it barely resembled Ostrogović's original vision. Its last occupant, Zagrebačka Banka (Bank of Zagreb), commissioned Croatian architects 3LHD to conduct a study and develop a project to show future investors the potential of the space. In 2012, they envisioned the construction of a shopping center with a bus terminal, an underground garage and office space. The building was bought and resold a couple of times but very little actual work had been done since then. Years passed, and the building fell into a state of disrepair.



The neoclassical palace of Zagreb Main Station was built in 1892 because of the need to expand Zagreb's railway capacity, which proved to be insufficient shortly after the completion of the railway line between Budapest and Rijeka in 1873, as an extended network of railway lines gravitated to the Zagreb railway hub. According to urban plans, a completely unregulated and unoccupied area on the south side of the city has been selected as the most suitable space for the construction of a new station

and accompanying facilities. The project of the station reception building was signed by Ferenc Pfaff, the then esteemed Hungarian expert in railway station design. The building was designed according to strict architectural regulations that were used in the construction of stately buildings.

Postcard depicting Zagreb Main Station with Paromlin in the background, 1940.



If you look closely at the left-hand side of the photo above, you will notice the southern wall of Paromlin's silo. The temple of music and a ruin, side by side.

The **Vatroslav Lisinski Concert Hall** (named after Vatroslav Lisinski, the composer of the first Croatian opera „Ljubav i zloba“) is often called the Zagreb temple of music. The construction of this multifunctional space and protected cultural property began in 1961 according to the conceptual design of Marijan Haberle, Minka Jurković and Tanja Zdvořak, but with the construction lasting for as long as twelve years, it wasn't until 1973 that the official opening took place. From then on, Lisinski is the de facto center

of music and concert activity in Croatia, and a synonym for top musical experiences. The building itself has two halls, the large one with 1847 seats and the small one with 304. Since the space is designed with multifunctionality in mind, beside the primary purpose of housing concert events, the Concert Hall also organizes movie premieres, stage events, exhibitions and hosts a wide variety of professional congresses and gatherings, among them the symposium of architecture „Dani Orisa“. The concert Hall has featured a

star-studded line-up of performers over the last fifty years, both ensembles and soloists. Besides reputable names associated with „serious“ music like the Vienna Philharmonic, Leonard Bernstein, the Royal Philharmonic Orchestra, Luciano Pavarotti, and Joře Carreras, Lisinski has hosted some of the biggest stars in jazz and popular music: Nick Cave, Ella Fitzgerald, Sting and Tina Turner to name a few.



The engine room of the Royal Hungarian State Railway, which is presently a disused plant of the **Gredelj Rolling Stock Factory**, is an achievement of highest quality for the industrial architecture in Zagreb. The emergence of the engine room reflects the social, economic and industrial development of the capital in the second half of the 19th century, which, with the intro-

duction of the Zidani Most-Zagreb-Sisak railway line in 1862, grew from a city on the outskirts of the Austro-Hungarian Monarchy into the center of economic and cultural events. Built in 1894 in the then peripheral village of Trnje, along the railway line to Budapest and the Main Station building, it is an integral part of the railway's industrial landscape and forms



a complete urban-architectural ensemble of the late 19th century with its associated workers' settlement. This facility, occupying an area of 13 hectares in the heart of the city, has been protected as a cultural property and abandoned since 2011, and its re-urbanization and revitalization are one of the burning problems in Zagreb's development.

The **Strojarničko settlement** is set along Trnjanska road, between Paromlin in the west and the Rolling stock factory Gredelj in the east. Developed as an addition to the Gredelj industrial complex, it stands as one of the first planned worker settlements in Zagreb. The plans were signed by Ferenc Pfaff in 1897, but the project was developed by Hönigsberg & Deutsch. The stylistic design of the façades correspond to the design of the engineering buildings of the Gredelj complex. Although the plans bear Pfaff's signature, similar buildings can be found all across the territory of the former Empire. This suggests that they were designed following a template and adjusted to the individual sites as needed. Nevertheless, it was built humanely, which is evident by the generous green area surrounding the buildings.

View of the Gredelj grounds and Paromlin in 2019 (left) and around 1930 (above). One of the working-class houses in Strojarnička Street (below).

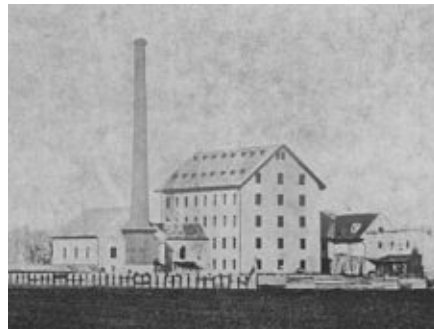
HISTORICAL OVERVIEW

BURNING DOWN THE HOUSE

1862 // Acceleration of urban and industrial development after the construction of the Southern Railway. The most important industrial complexes in Zagreb will emerge along the newly constructed railway line by the end of the 19th century.

A group of merchants from Zagreb led by Vatroslav Egersdorfer pays a fee for the construction of the steam mill on behalf of the company 'Družtvo Paromlina'.

1863 // The main two-storey building of the Paromlin industrial complex is built according to the designs of architect Janko Jambrišak.



1895 // Reorganization of the complex according to the designs of architect Gjuro Carnelutti. A single-storey administrative building is added to the complex.



1906 //

The first conflagration breaks out and lasts eight days. Everything except the Jambrišak/Carnelutti designed directorate building sustains heavy damage. That same year begins the construction of a new mill complex according to plans by Hönigsberg & Deutsch, with Ivo Štefan in the role of project leader. The old mill is converted into a warehouse. The building is finished a year later.



1908 // The silo built according to the designs of Josip Dubski is the earliest structure made out of reinforced concrete in Croatia.

1911 // A single-storey office building is built according to designs by architecture firm Štefan & Kalda.

1916 // A new, 45-meter-tall steam chimney is built according to the designs of the Viennese company P. R. Heinicke. Architects Štefan & Kalda build the warehouse and drying room.

1921 // A residential one-storey building is built on the northern edge of the complex, with attic apartments according to designs by architect Janko Holjac.

1925 //

The second conflagration occurs in the warehouse building.

1928 // Construction company 'Pionir' builds a wall towards Trnjanska road.

By 1945 // A number of smaller ground-floor auxiliary facilities, warehouses and workshops are built.






1980 // The Regional Institute for Preventive Protection makes Paromlin a cultural monument, i.e. a monument of industrial architecture.

1988 //

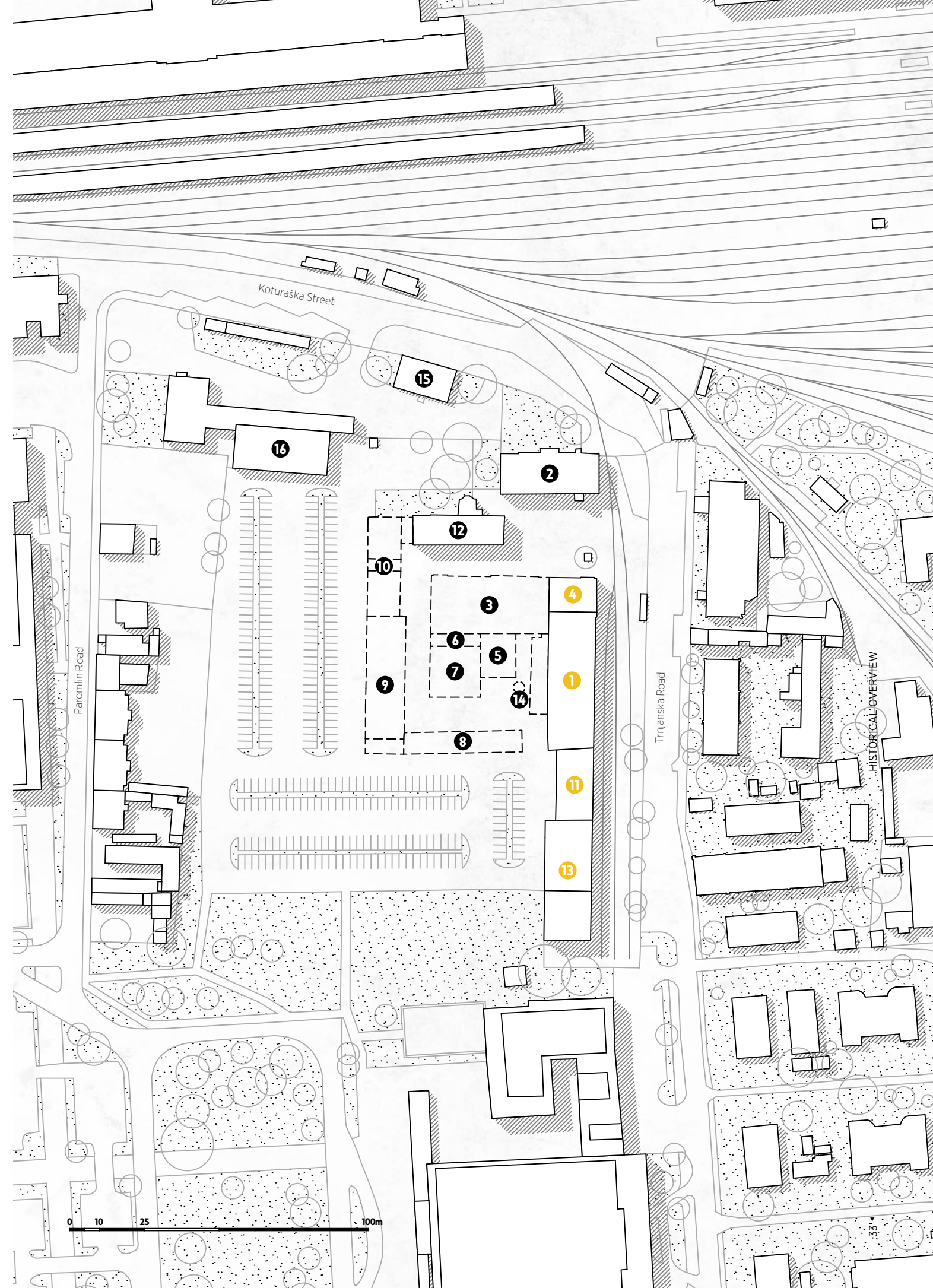
The third conflagration significantly damages the mill and transmission buildings, especially the roof, floor constructions and machinery. Paromlin is out of service and the long process of deciding its fate begins.

2013 // The southern wall of the main mill building collapses due to a storm. The rubble is removed a year later.



-  surviving buildings, not addressed in the project
-  surviving buildings, addressed in the project
-  demolished buildings

- | | |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>1 blt. 1863, remodelled 1907
 Flour warehouse (old mill)
 J. Jambrišak/Hönigsberg & Deutsch</p> <p>2 blt. 1878, remodelled 1895
 Directorate building
 J. Jambrišak/G. Carnelutti</p> <p>3 blt. 1907, demolished 2014
 Mill
 Hönigsberg & Deutsch</p> <p>4 blt. 1907
 Transmission building
 Hönigsberg & Deutsch</p> <p>5 blt. 1907, demolished 2014
 Engine room
 Hönigsberg & Deutsch</p> <p>6 blt. 1907, demolished 2014
 Drying room
 Hönigsberg & Deutsch</p> <p>7 blt. 1907, demolished 2014
 Boiler room
 Hönigsberg & Deutsch</p> <p>8 blt. 1907, demolished 2011
 Warehouse
 Hönigsberg & Deutsch</p> | <p>9 blt. 1907, demolished 2011
 Flour warehouse
 Hönigsberg & Deutsch</p> <p>10 blt. 1907, demolished 2011
 Stables
 Hönigsberg & Deutsch</p> <p>11 blt. 1908
 Silo
 J. Dubski</p> <p>12 blt. 1911
 Office building
 Štefan & Kalda</p> <p>13 blt. 1916, remodelled 1925
 Warehouse and drying room
 Štefan & Kalda</p> <p>14 blt. 1916, demolished 2014
 Chimney
 P. R. Heinecke</p> <p>15 blt. 1921
 Residential building
 J. Holjac</p> <p>16 blt. 1922, partly demolished 2011
 Commercial building
 J. Holjac</p> |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|





Paromlin's eastern facade with the transmission building in the foreground.



Paromlin's western facade. After the demolition of the mill building, the chimney and several other smaller structures, the parking lot was swiftly extended. Since then, the complex remains unchanged.



PREVIOUS USERS

WE ARE NOT YOUR KIND OF PEOPLE

Despite not being in use as a facility for the production and storage of flour since the catastrophic fire of 1988, Paromlin wasn't completely empty in the past thirty years either. Like many buildings of its kind (large, industrial, borderline dangerous) the site drew an alternative crowd. A prime location, unique and cavernous spaces, and what must be incredibly low rent, has ensured that at least some parts of the complex see use.

Although even today there are organizations operating on the grounds of the complex, namely the House of Aikido which is located in the office building built in 1921, much more interesting are the users who dared to, however briefly, settle the industrial buildings. The organization GRUNPF (also known as Krivi Prut) has inhabited both the northern and southern warehouses at some point between 2010 and 2013. On their Facebook page they wrote:

«The non-profit organization GRUNPF operates in the premises of the old Zagreb Paromlin, right next to the Vatroslav Lisinski Concert Hall. We raise funds by organizing concerts, cultural events (alternative theater), renting for the purposes of filming and everything else that such a unique space allows.»

In 2013, the nomadic nightclub „Sirup“ started the first of its three seasons in the flour warehouse. In 2016 they had to leave for safety reasons. During their stay in Paromlin, they embraced its unique look and feel. Interestingly enough, after Sirup's time in the complex, another nightclub (or several nightclubs with the same name) operated on the premises right up until the summer of 2020, despite the aforementioned lack of safety within the building.

It is both funny and tragic to think about this burgeoning alternative scene that tried to establish itself right next to a cultural giant like the Vatroslav Lisinski Concert Hall, but one can only bemoan the unwillingness of the city to invest even a dime in the space that would transform the district into a truly eclectic cultural center.

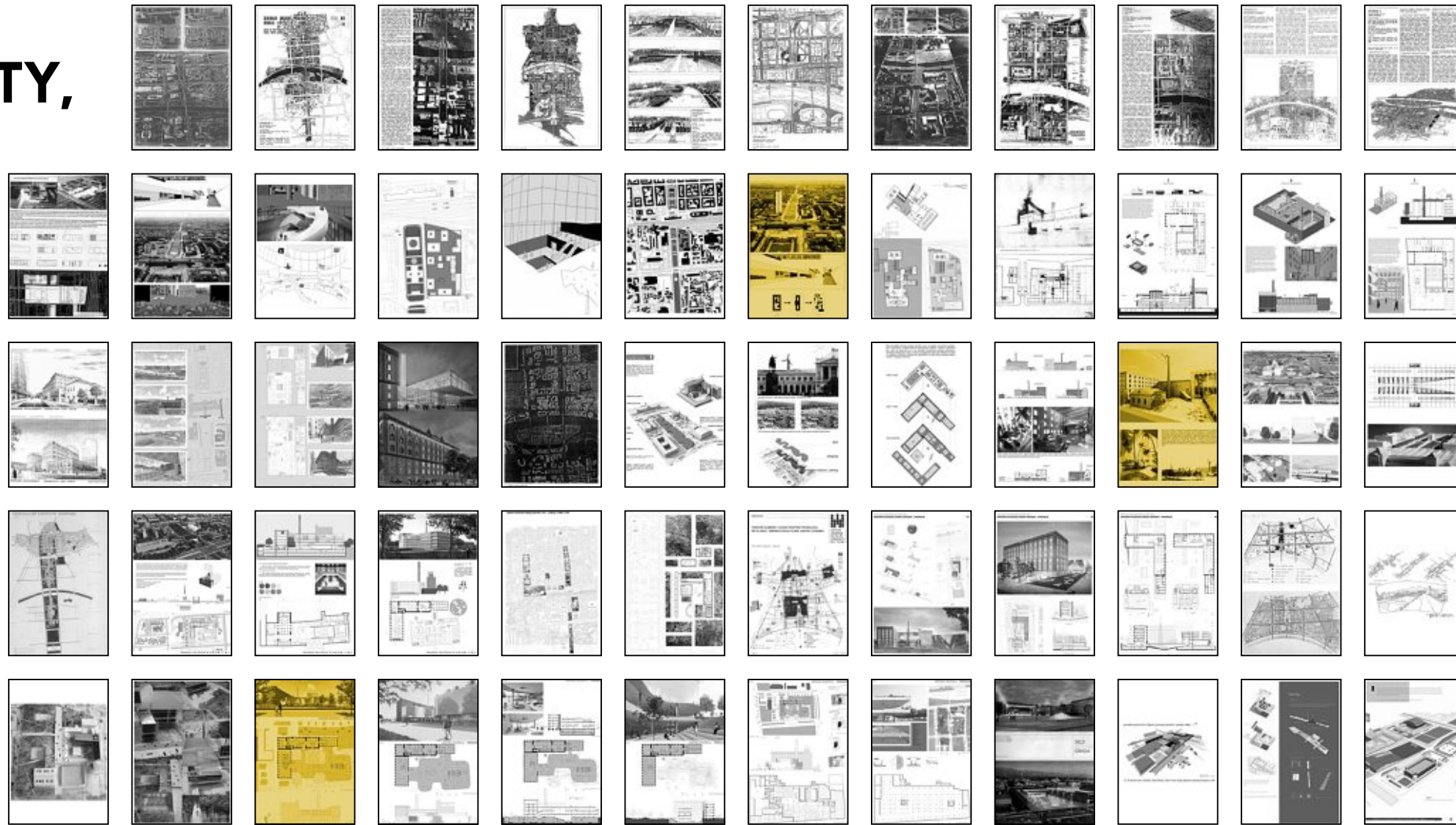


The fading signs above the entrances of the GRUNPF headquarters and the „Sirup“ nightclub.

COMPETITIONS

LATE TO THE PARTY,

...



Architects, politicians and other professionals have been trying to adapt the Paromlin complex for nigh 40 years. Even before trying to reprogram the building itself, city planners were devising solutions for the wider city space, aiming for it to become the new city center. In 1980, there were talks of converting the mill into the Home of the Labor Movement and the Revolution. Another proposal saw the building transformed into a technical museum, and yet another into a gallery.

Incomprehensibly, at a meeting between museums and cultural representatives, after extensive discussion, it was concluded „that the museum and gallery sector is not interested in the space”. In 1986, the competition for a monument to Josip Broz Tito and the arrangement of the Square of Revolutionaries imagined the building as a “multimedia” space. Then, one day before the fire of '88, it was decided that Paromlin would house the Croatian National Archive. That (of course) did not come to

pass. For the longest time, architects and art historians fought to turn Paromlin into the Museum of Contemporary Art. That fell through in '98, when it was decided that the Museum would be constructed in Novi Zagreb. Then, in the scope of a competition, Canadian investors proposed a luxury hotel and business center. After that, yet another competition was announced, revisiting the idea of a grand square, but since no project met the criteria, no one received the first prize. In 2006, Paromlin was the

subject of European 8. The winning project was revisited six years later, during the Paromlin District event, but with no progress in the realisation.

European is a biennial international architectural and urban planning competition that encourages architects to address social and economic changes occurring in towns and cities. The winners of European 8, Tom Cortoos Architecten, proposed a highrise next to the old mill, and a bold underpass connecting the industrial site with the Lower Town.

Snješka Knežević is a prominent art historian whose work is focused on architecture, city planning and preservation.

The most recent attempt at adapting Paromlin is the **competition for the architectural and urban development of the City Library** from late 2018, the winners of which were announced at the end of February of 2019. The winning project by the office UPI-2M is of little relevance for the arguments about to be made, though, as the competition itself failed to address crucial issues related not only to the building itself, but also to the larger urban environment.

Since the demolished mill was the most representative and recognizable symbol of the assembly, the competition brief concludes that “protective measures determine facsimile restitution of the building volume with restoration of facade details and metalwork, in materiality and figuration (format, masonry bond and brick color) modeled on the original facades.” In short, it is to be a soulless copy of something we lost due to negligence. An attempt to hide past crimes behind a familiar facade, while being fully aware that failing to examine the missteps can only lead to history repeating itself.

Competition for the City Library,
3rd prize - ZDL Arhitekti

The omission of any requirement for a city-conscious design is also very peculiar, with the competition brief viewing Paromlin’s site narrowly as an entity detached from its surroundings. In her 2014 article „Why did Paromlin fall“, art historian Snješka Knežević wrote:

«The solution for Paromlin could not be found separate from the issue of re-urbanization and regeneration of the entire historic industrial zone to which it belongs. All ideas for conversion, especially for public, cultural, and even commercial purposes, are simply not achievable in a chaotic, neglected and partially slummed area. How, for example, can you imagine the Museum of Contemporary Art in that environment? Or the City Library, which would, according to the initiators, even preserve the memory of Paromlin - in volume, in dimensions and, perhaps, with a 'reconstruction' (a copy!) of the characteristic, northern facade that is gone? Alas, good intentions and regrets for the state of the monument cannot conceal the naivety of such fantasies, which are so close to kitsch.»



Competition for the City Library,
2nd prize - Polak



Competition for the City Library,
1st prize - UPI-2M



Examples include: the National and University Library, which is situated only 600 meters away from the Paromlin site, and the building that houses the Croatian State Archives, which is, ironically, the old National and University Library.

The program of the building, the City Library, was politically imposed by the mayor's office. Discussions of a library at that location date back as far as 2010, but it wasn't until 2014, in the spirit of election promises, that this ambition was announced. Architects warned that no real research had been done to warrant the move to Paromlin, and that other venues need exploration. Six years and another competition later, a path seems to be set for the future of Paromlin. With reports of lack of financing, it is proving to be an uncertain one. Stop me if you've heard this one before.

Ten years earlier, a different kind of competition was held; one without a prescribed program for the building. **"Changing the face"** was a series of architectural research competitions, held in several European countries and sponsored by

the multinational company DuPont, with the desire to encourage architects to find new, high-quality solutions for objects like Paromlin, that are controversially present in the city's image and fabric. The competition was of theoretical nature, but that allowed a more critical dissection of the building and its surrounding space. It enabled architects to find a more out-of-the-box solution for this old problem, unhindered by political machinations.

Looking at the winning project by the office NFO, one can see that they didn't confine their project to the Paromlin site. They took note of the wider context, and not only did they try to establish a hub for the new city centre, but they also tried to connect it to the Lower Town, effectively extending the green axis from the National and University Library and connecting it with Lenuci's Horseshoe. The decision



of the architects to set up baths in Paromlin is debatable, but with its project the office pointed out the importance of this location for the citizens of Zagreb. In an interview with Jutarnji list, partner Kata Marunica said:

Paromlin and its site have the potential to become physical representations of their functions, adding to the city's identity, connecting with its people, and outwardly showing its values.

«As the topic was completely free, the first thing we agreed on was that we would not examine traditional purposes. The matter of the bathing area, besides being generally lacking in the city, gives the whole story a civil element, which is perhaps lost in Zagreb.»

They envisioned the space as a green oasis in the middle of the city, with photovoltaic cells and solar collectors on the roof, and a wind turbine in place of the chimney. This puts the issue of ecology and sustainability in the forefront. That's the point of that space.

... BUT WITH THE POWER OF HINDSIGHT



NFO's visualizations of the interior of Paromlin, reimagined as a swimming pool and spa.

|| A CLOSER LOOK

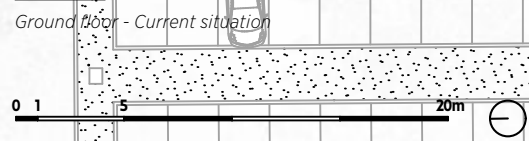
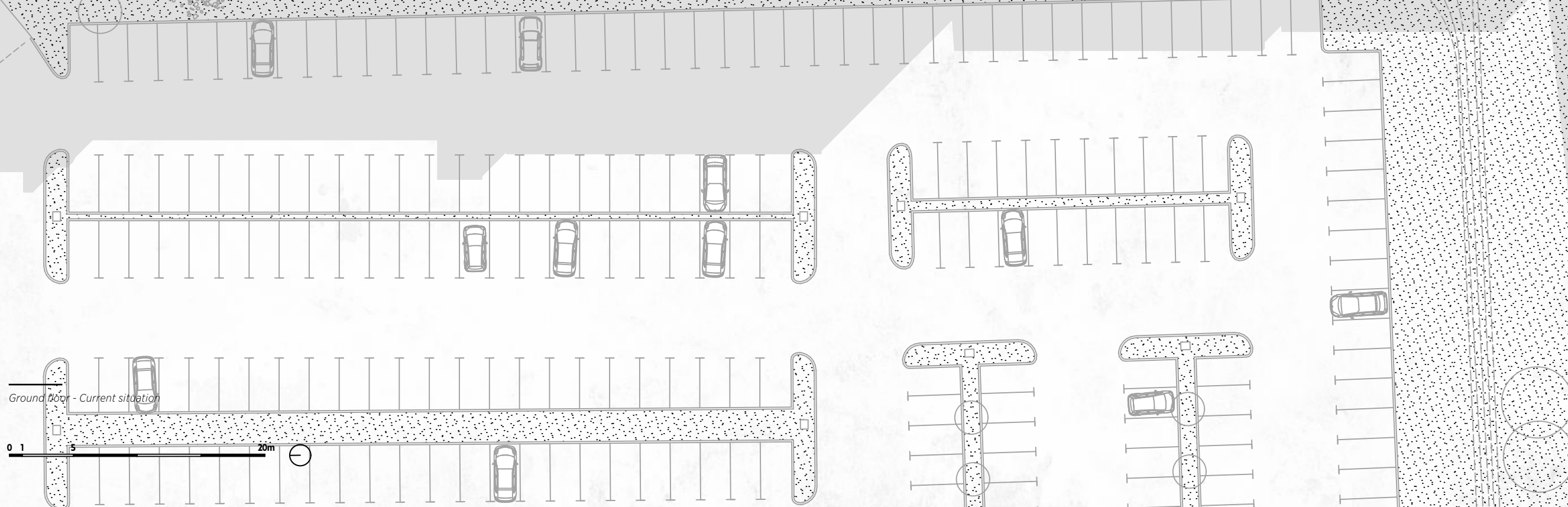
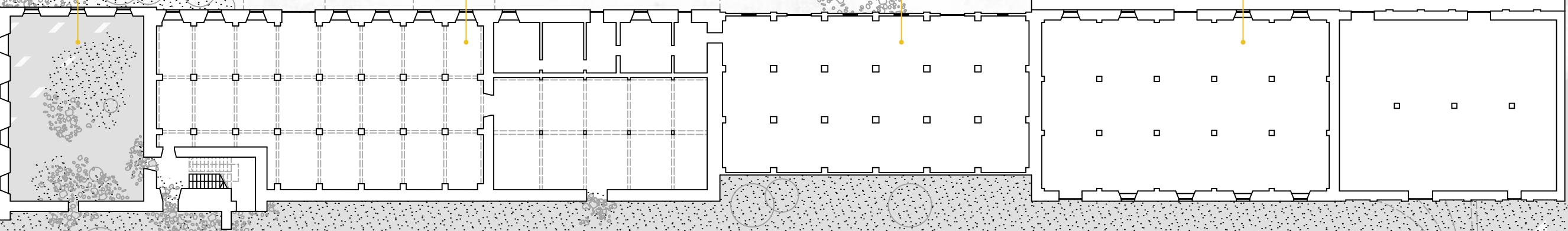
A closer look at Paromlin, at the way it was constructed, at the materials that were used, at the details and ornamentation that adorn the facades, and at the special qualities of the buildings that form the complex.

blt. 1907
4 Transmission building
Hönigsberg & Deutsch

blt. 1863, remodelled 1907
1 Flour warehouse (old mill)
J. Jambrišak/Hönigsberg & Deutsch

blt. 1908
11 Silo
J. Dubski

blt. 1916, remodelled 1925
13 Warehouse and drying room
Štefan & Kalda







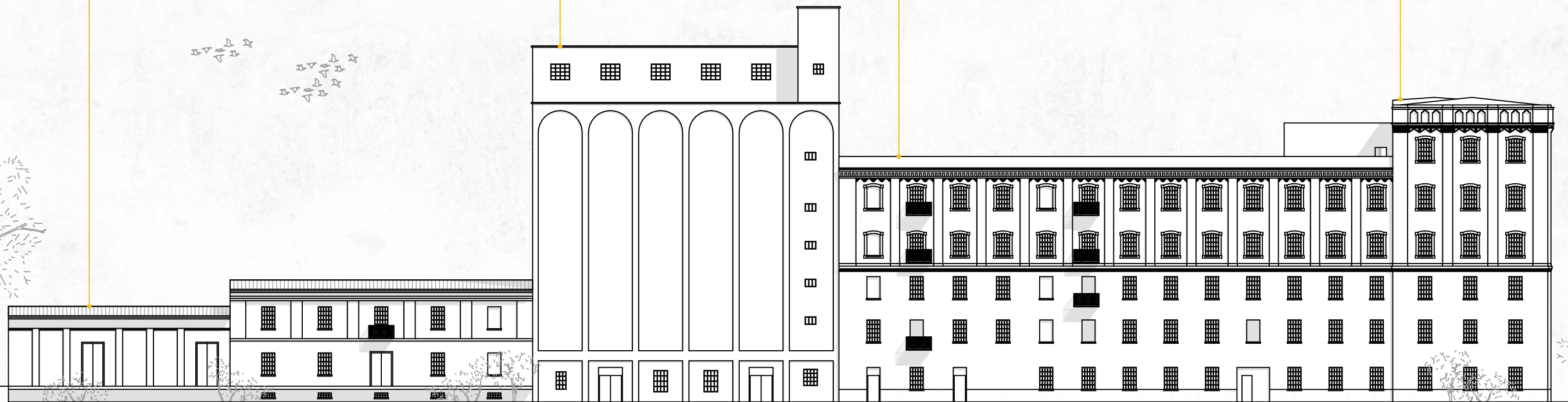
blt. 1916, remodelled 1925
13 Warehouse and drying room
Štefan & Kalda

blt. 1908
11 Silo
J. Dubski

blt. 1863, remodelled 1907
1 Flour warehouse (old mill)
J. Jambrišak/Hönigsberg & Deutsch

blt. 1907
4 Transmission building
Hönigsberg & Deutsch

+28.33m
+23.83m
+18.21m
+14.41m
+10.65m
+7.22m
+3.77m



Elevation East - Current situation

0 1 5 20m

CONSTRUCTION AND ORNAMENTATION

LIVING IN THE MATERIAL WORLD

(below) The internal load-bearing structure of the northern part of the flour warehouse.



The transmission building is a six floor high masonry structure, of which, apart from the facade walls, only remnants of the internal load-bearing construction of cast iron pillars and steel profiles remain. The walls are made of brick bonded with lime mortar. Facade walls lie on strip foundations, but it is not known whether they were built with brick or lean concrete. The southern, newer warehouse and drying room seem to be constructed in the same way, with the exception of wood

being used for the internal construction in the southern-most, lowest building.

The oldest building of the complex is the old mill, and in 1907, its remains were adapted into a flour warehouse. The north wall of the warehouse became a common wall with the transmission building. Inside, a reinforced concrete structure was subsequently assembled with four rows of pillars outside the walls of the building. Continuous beams go over the pillars, and



a 15 centimeter thick reinforced concrete slab sits on top of them. The beams go over the pillars and enter the walls, thus connecting the reinforced concrete structure and the walls to some extent. In the southern, newer part of the warehouse, the ceiling panels are supported by rolled steel girders that lie on steel columns of varying cross-sections composed of riveted steel elements.

In terms of construction, the silo is the biggest outlier of the complex. It is a structure made entirely out of reinforced concrete and it contains a basement, a ground floor with funnels, silo cells and a staircase leading to the rooms atop the cells.

The warped remains of the steel and iron load-bearing construction inside the transmission building (above) and the interior of the southern part of the flour warehouse (middle).

—



The three buildings designed by Hönigsberg & Deutsch (the mill, the transmission building and the flour warehouse) stand unified in their aesthetics, material choice, and ornamentation. With the demolition of the mill in 2014, the most elaborate ornament, namely the Paromlin sign that stood atop the building, is lost. However, since the transmission building acted as an extension of the mill to the east, at least in a visual sense, parts of the ornamentation featured on the demolished edifice are still

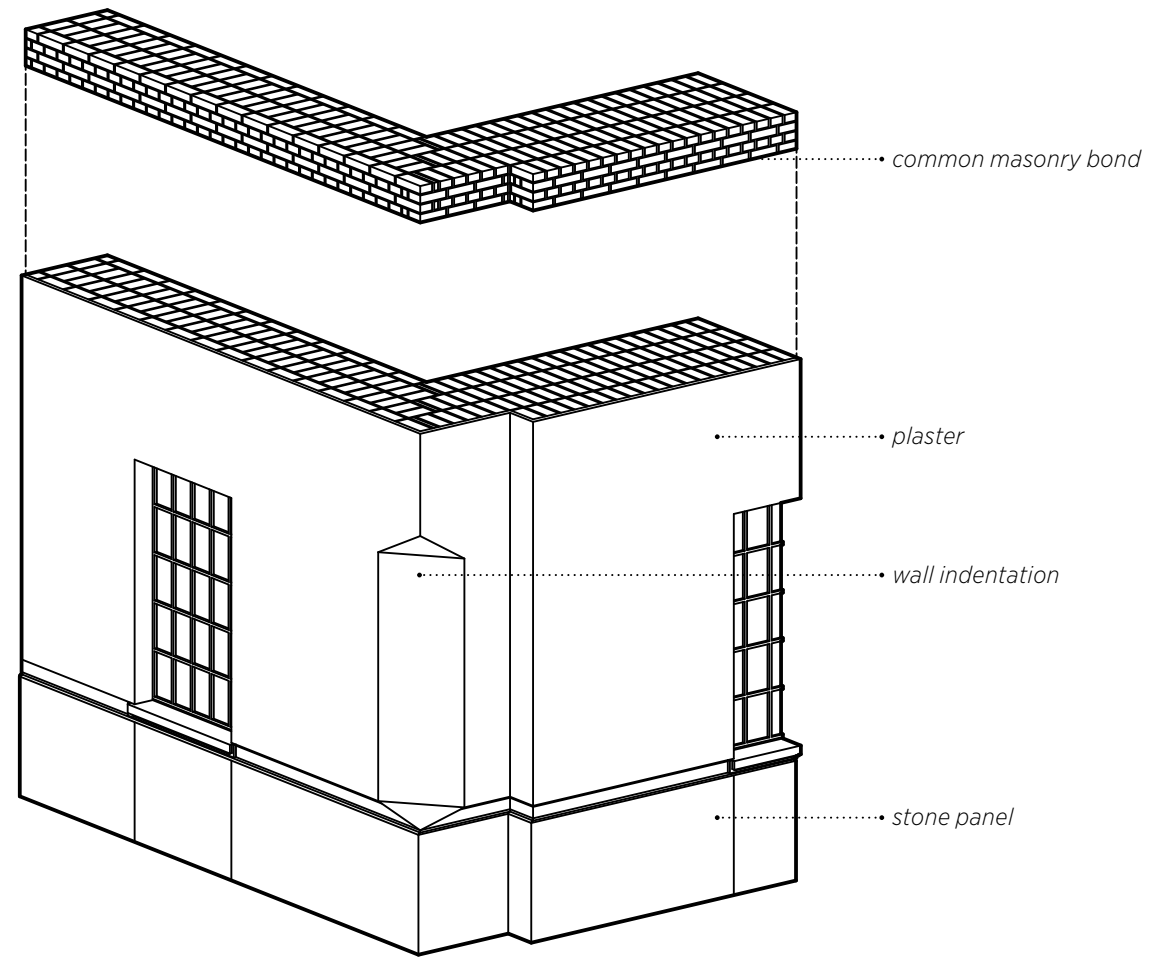


preserved on the transmission building. By observing cracks in the plaster and the bare brick walls on the western side of the complex, it is possible to discern the type

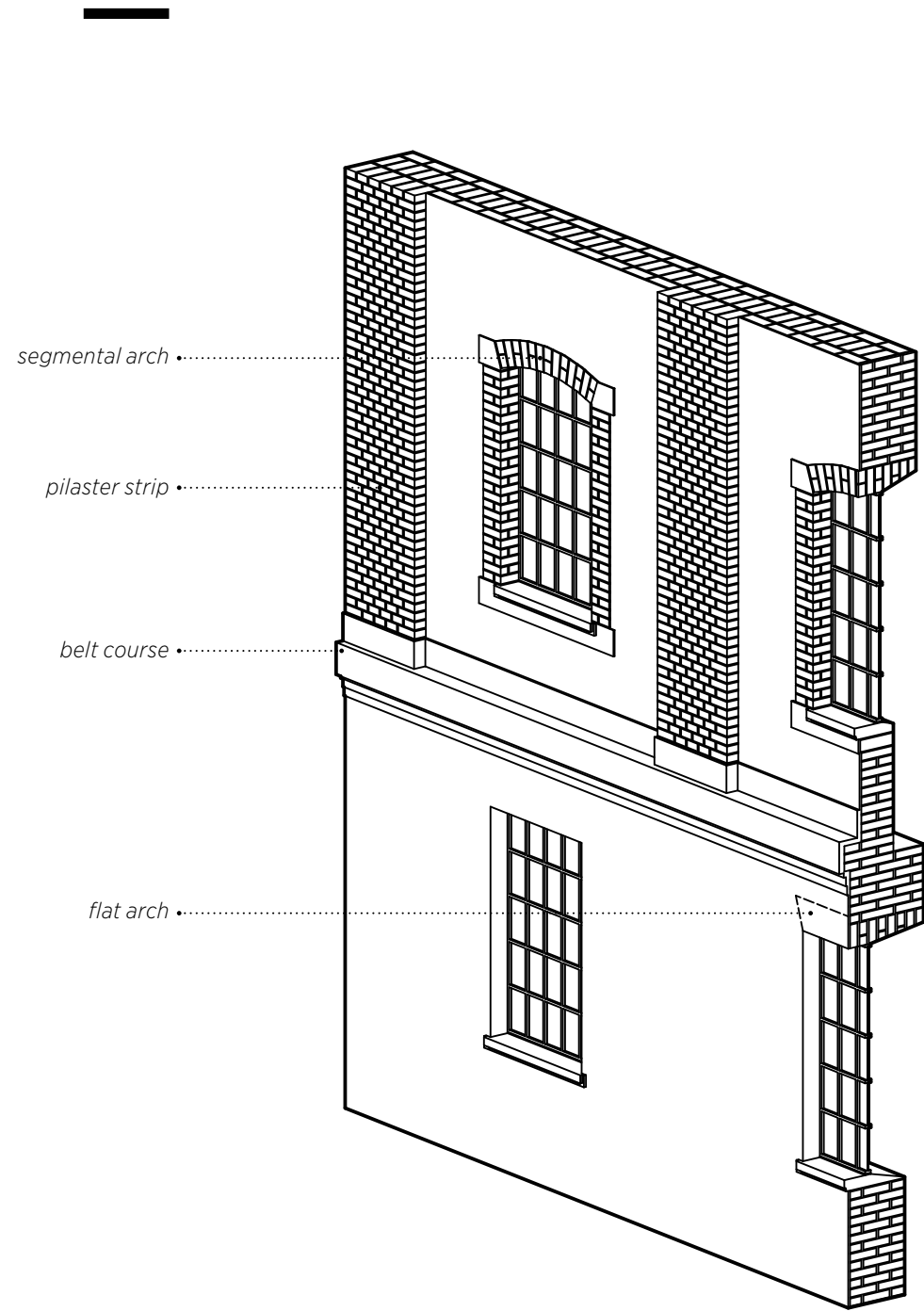
of masonry bond used in the construction of the buildings. The pattern is formed by laying alternate courses of stretchers and headers. The butt joints of all stretchers are centered on the headers in the layer below. The walls of the buildings designed by Hönigsberg & Deutsch adhere to this pattern for the most part, but there are some places where, out of necessity or because of mistake, the rhythm is broken. At first glance, the ground floor seems completely devoid of ornamentation - the



brickwork is hidden behind a layer of plaster, and the base of the wall is obscured by dirt and vegetation. In reality, the base is covered by stone panels that are at level with the carved stone window sills. Not only are the panels used as decorative elements, but they also protect the base of the building from rainfall.



Axonometric view of the north-eastern corner of the transmission building at ground level.



Axonometric view of the eastern wall of the flour warehouse. Slice of the 2nd and 3rd floor.

Separating the facade in two, a plaster covered belt course juts out between the second and third floor. It, like the other ornaments of Paromlin, is made out of brick. This separation signals a change in the frequency and type of ornamentation, but also in the type of materials that can be seen on the building. Dividing the facade of the upper floors into individual plaster covered zones are brick pilaster strips. From the belt course upward, brick is used not only in construction, but also in ornamentation.



All of the windows have the same dimensions, regardless of the floor they are on. They also share the same stone window sill, and their metal casements are divided into a five by five grid of glass panes held in place with lead. What differentiates the windows above and below the belt course are their arches - below the belt course they have a flat brick arch that is hidden by plaster, while the ones above it have a segmental arch that is propped up by stone springers on both sides. This arch acts as the top of a frame that surrounds the upper windows.



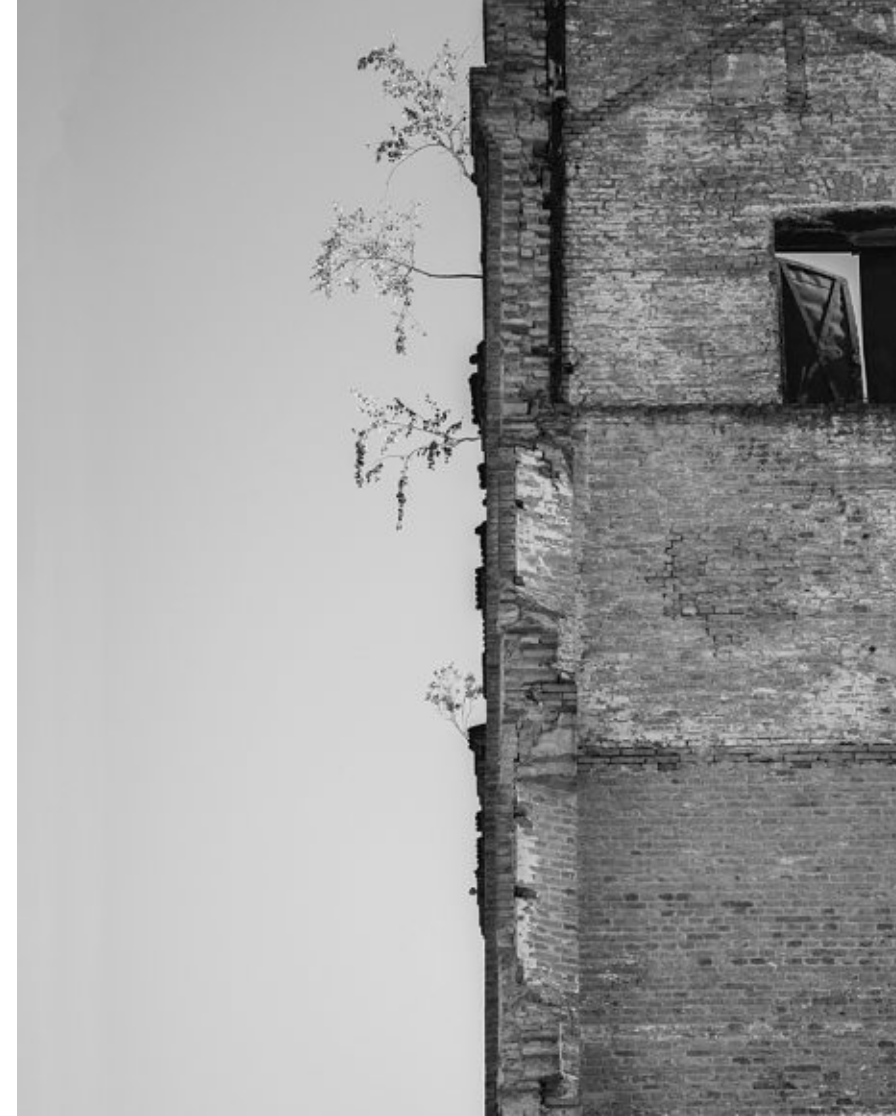
Top to bottom: the north side of the transmission building, the east side of the flour warehouse and the west side of the flour warehouse.



The tops of both the flour warehouse and the transmission building feature a decorative brick belt. The one atop the transmission building is more elaborate, which is to be expected, since the northern face of the complex used to be the one that looked over the tracks and towards the city proper. The transmission building is also a story higher.

The two lower buildings on the south side of the complex, the warehouse and drying

room, only have brick pilaster strips as a decorative feature. At one point in time, the warehouse was two floors higher and resembled the northern warehouse much more, but after a catastrophic fire and subsequent restorations, most of the ornamentation was lost, especially on the western side of the building, which is completely covered with plaster.



Paromlin's western facade is devoid of ornamentation in general. Apart from the aforementioned brick belt atop the flour warehouse, there isn't much to look at in terms of decoration. However, what is special about this face of the building is the story it tells. It is a cornucopia of textures, materials, surfaces and architectural elements. The ghosts of demolished buildings remain on the western facade in the form of fragmented walls, bricked up windows and doors, and hanging ceilings.

There are holes that were put there by design, and there are holes that definitely weren't done purposely. Shadows of old metalwork remain on the brick walls, showing what once was.

(above) The western wall of the transmission building, which was a shared wall between it and the mill.



The parking lot facing western facade of the silo is just a bare concrete wall. Currently it is the home of the 2017 art installation „The (in)applicability of applied art“, which was created as part of the 52nd Zagreb Salon, an exhibition of visual expression.



As the only structure in the complex that is fully made out of concrete, the silo definitely stands out. The bare concrete walls stand in stark contrast with other buildings whose appearance is more in line with the architectural expression of the early 20th century. That's not to say the silo is completely devoid of ornamentation, at least on the eastern side. A thin layer of plaster divides the facade in six vertical strips with arches on top, forming a frame around them and further accentuating the

verticality of the building. The placement of the plaster corresponds to the location of the interior columns. A small detail are the three horizontal lines cut into the plaster just below the arches where the capital of a column would be.

A view from Trnjanska Road. The eastern facade of the silo and its plaster arches.

||| ADAPTIVE REUSE

Adaptive reuse is an architectural strategy that refers to the process of reusing an existing building by doing work on it that is above maintenance in order to change its program, performance or volume. It is both a sustainable economic strategy and a sensible environmental approach to prolonging a building's lifespan. The following chapter explores different typologies of adaptive reuse with a focus on reusing ruined or decommissioned buildings.

SHEARING LAYERS OF CHANGE

TIME MAY CHANGE ME

Stewart Brand is an American author, photographer and activist.

In his book and subsequent 6-part BBC miniseries "How Buildings Learn: What Happens After They're Built", Stewart Brand delivers a scathing critique of the modernist approach to architecture. He claims that the central problem of all architectural designs is the fact that architects don't want change in their buildings, so they make it as difficult as possible for change to happen. The simple truth is that change, intentional or unintentional, is inevitable - some systems decay, programs evolve, and adaptation becomes necessary.

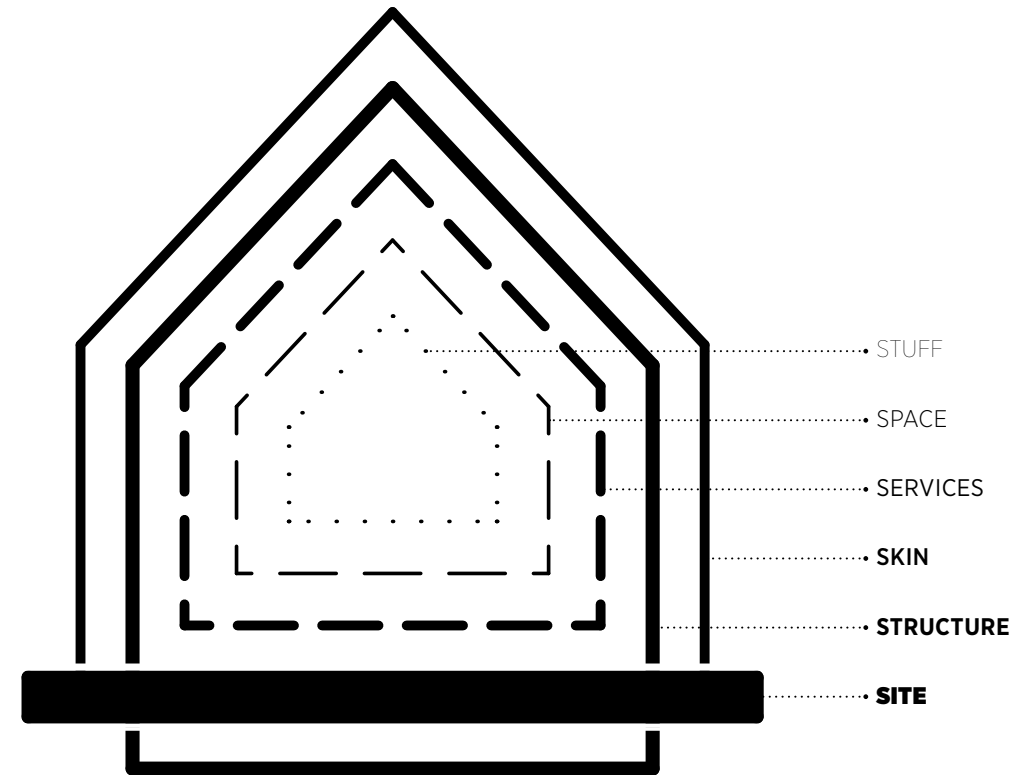
«Almost no buildings adapt well. They're designed not to adapt; also budgeted and financed not to, constructed not to, administered not to, maintained not to, regulated and taxed not to, even remodeled not to. But all buildings (except monuments) adapt anyway, however poorly, because the usages in and around them are changing constantly. When we deal with buildings we deal with decisions taken long ago for remote reasons.

(...)

Some of our more arrogant and careless buildings are at war with time and change, and they always lose.»

In his book, Brand also introduces "shearing layers of change", his six S's: site,

structure, skin, services, space and stuff. These concepts can be observed in the example of Paromlin. Site indicates the geographical location, the urban setting of the building. The site is eternal, and it will transcend Paromlin. Structure is the foundation and all load-bearing elements. They are usually too expensive and dangerous to change, so they don't. Skin is the facade, the exterior surface, the face with which the building fakes permanence. In the case of Paromlin, the skin still stands, damaged as it may be. Services are the working guts of the building - the wiring, the plumbing and other systems the building needs to function. Services get outdated quickly, and if embedded in the building too deeply, they are the reason some buildings are demolished. In Paromlin, the services were destroyed in the fire, and subsequently stolen by scavengers. Even if they hadn't been, their replacement would be necessary. Space is defined by the interior layout, and its longevity depends largely on the use of the building. Commercial space can change every three years, while a home setting can go unchanged for over thirty years. Paromlin's space plan changed with every new expansion, but the core buildings that were named after their function (the mill, silo, the engine room) had the same space plan until the building was closed. Finally, stuff is everything we bring into a building that changes on a monthly or



even daily basis - from furniture to everyday utensils. Even the users of the building are, in essence, just stuff.

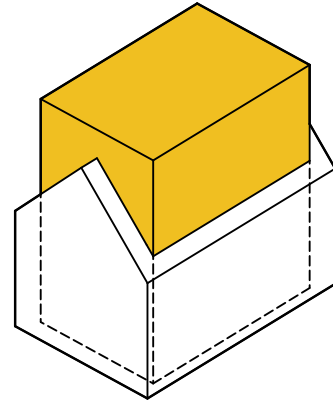
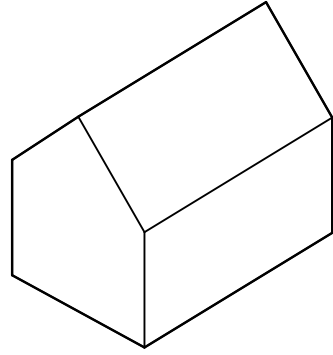
The layers and their differentiations are important to note when adapting any building. Buildings are best able to adapt when the faster layers (for example, services, which have a shelf life of approximately fifteen years) aren't intrinsically linked or obstructed by the slower ones, such as structure, which last for much longer.

The concept of shearing layers lead to an architectural design principle known as pace layering:

«The fast parts learn, propose, and absorb shocks; the slow parts remember, integrate, and constrain.»

(above) Diagram depicting Stewart Brand's shearing layers of change.

ADAPTIVE REUSE TYPOLOGIES



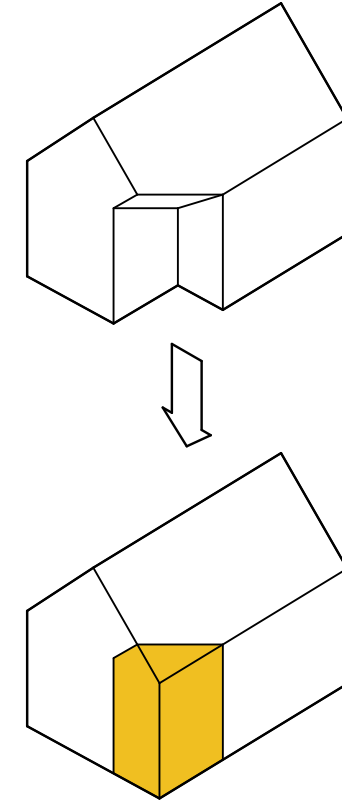
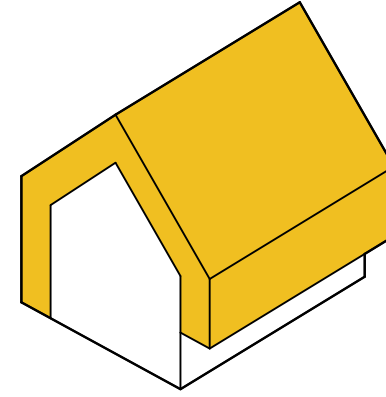
Françoise Astorg Bollack is an architect, educator, preservationist, and writer on architecture and preservation.

There are several ways to go about adaptive reuse. In her book “Old Buildings, New Forms: New Directions in Architectural Transformations”, Françoise Astorg Bollack conceptualizes adaptive reuse typologies.

«An old building is not an obstacle but instead a foundation for continued action.»

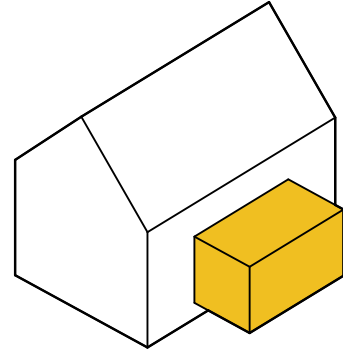
By analysing successful and interestingly built instances of adaptive reuse, she categorized them in five distinct forms: insertions, wraps, weavings, parasites and juxtapositions. However, this isn't an iron-clad system, and many buildings don't fit into one single category. In most cases, a few different strategies are used to bridge the gap between old and new. Therefore, Bollack's categories can be adjusted and expanded upon.

Insertions can be used when only the structure and the skin of the old building are available (or in cases where the preservation of only the structure and the skin are desirable). New spaces are inserted into the old volume, thus enabling the survival and continuation of the existing building. The newly adapted building can draw from history, memory and emotion using the facade of the old building, while the insertion actually dictates and defines the new space. This strategy is particularly effective in historic districts, as the perception of the old forms, materials and proportions preserves the atmosphere, while the new spaces and functions allow the building to live on in a more time appropriate manner.

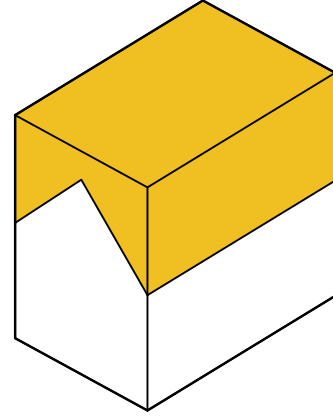


Wraps are additions that envelop, encase, or wrap around the old structure. This ensures the protection of the original materials and forms. The original volume stays intact, but the drawback in some cases is the concealment of the old facade and the separation of the original building and its context. Preservation plays a big part in the appeal of this kind of intervention, and there's a possibility of conserving all layers of the old building. The historic building can be adapted, without the need for weatherproofing or having to meet contemporary building standards.

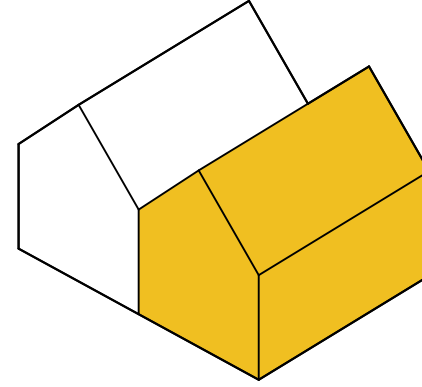
Bollack explains weavings as a strategy that weaves additions and the original building. A more appropriate name might be **plugs**, as this is a strategy most commonly used in the reconstruction of ruins of the post-war era, where the additions are 'plugged into' the missing parts of the old structure. The old elements and the original facades are reused as much as possible, while the new additions mimic the existing materials, proportions, or the composition. Yet this isn't a method for a perfect restoration or preservation, because both old parts and the new have distinct characteristics.



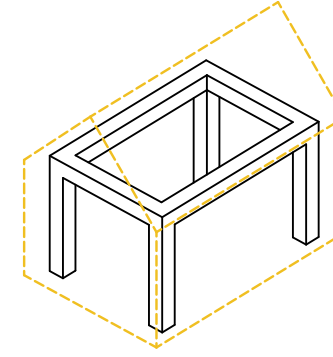
Parasites are the most widespread strategy in adapting an old building. This category has examples that have vast differences between them - their size, placement and contact point to the existing structure can vary from parasite to parasite, but it is of the utmost importance that the relationship between the addition and the original is positive and beneficial. Because of that, a more apt name would be **symbiote** - an organism living in symbiosis. Using this strategy, the original building keeps its form and materiality, allowing it to hold onto its history, while the addition breathes in new life into the overall complex, and carries it into the future.



Bollack puts **juxtapositions** in their own category, but I'd argue that in reality, they are a symbiote subset. She highlights the importance of clearly defined boundaries between the old and the new, and this is true for the definitions of both symbiotes and juxtapositions. We can redefine juxtapositions as symbiotes that are placed side by side to the original structure in order for them to be contrasted, compared or to create an interesting effect. This way, juxtapositions become a strategy that finds itself between symbiotes and weavings. They are essentially weavings for buildings that aren't missing any original parts, and they present a what-if scenario for the original structure.



A valid supplement to Bollack's five original typologies may be **stripping** or flaying. This is a strategy in which the building's skin is removed, and only the structure is further adapted. Compared to other adaptive reuse strategies, it is more radical, as the removal of the facade isn't exactly preservation friendly. However, it can yield great results when trying to easily fabricate public spaces, or when the facade actually diminishes the value of the original building.



Stripping may function well with transference. This is the act of transferring materials and facade compositions from an old building to a new one being built. While transference isn't intrinsically an adaptive reuse typology, (since it isn't the original building that's being adapted) it does offer interesting options when developing a new structure.

AN OBSESSION WITH RUINS

RUIN, REBUILD, RINSE, REPEAT

(middle) Babylonian Map of the World (Imago Mundi)

A great fascination with ruins emerged over recent years, as many enthusiastic ruin watchers started exploring dilapidated hospitals, ramshackled ghost towns and derelict industrial complexes. While this phenomenon makes perfect sense for this moment in time and for this generation, it isn't altogether new.

An artifact of Babylonian origin, a world map from the sixth century BCE shows how old this obsession is. The clay tablet is inscribed with the map of the known world, or at least, with the imagining of it. Gods and monsters lurk in dark corners of the Earth, in ruined cities where the sun is never seen. In reality, there were no ghosts. There were no evil spirits guarding magical places. Those were just ruins that belonged to mighty civilisations that preceded the Babylonians: remnants of Sumer and Assyria.

The practice of associating ruins with the occult would continue well into the Middle Ages, and their worth also played a big part in the poetry of the Arabic-speaking world. However, it wasn't until the Renaissance when their artistic and historical value became truly evident. They were regarded as repositories of knowledge, as a materialisation of history, but they also spoke of something primal that exists within each and every human: *memento mori*. Remember that you will die. They

were reminders of our own fleeting and fragile lives. Great buildings must one day fall to ruin, and so must you.

Painters flocked to paint the overgrown ruins of Rome, and once they got bored with that, they started imagining their own fantastical landscapes filled with crumbling classical architecture. British artists enjoyed depicting wild, verdant abbeys, where nature has crept back in after man has left. It was a perfect blend



a state of decay. It was meant as a compliment: what you built will last forever. But it also promised that London, Paris, Vienna and other great cities might soon join Rome and Babylon.

This fixation on ruins really spiraled out of control when wealthy landowners started constructing follies on their estates. Follies (so called because they displayed the foolishness, or folly, of the people who commissioned them) are extravagant and costly buildings whose sole purpose is decoration. They come in many different shapes and sizes, with differing architectural influences, from grand Egyptian pyramids to small hermit huts that included an actual hermit. The most popular ones were made to resemble Greek and Roman ruins. These manufactured ruins would give the upper class an even more inflated feeling of importance.

of man-made and natural. Our own ornamentation now completed by that of Mother Nature. However, the connotation wasn't always romantic. Many must have asked themselves: "If Rome is no more, could the same happen to us?" Artists, chief among them the French painter Hubert Robert, returned to their homes and imagined them in ruins. The trend caught on. Soon, painters were commissioned by the architects themselves to depict their newly completed projects in

Albert Speer, the Nazi Party's chief architect, developed a concept he named ruin value (Ruinwert). He proposed that buildings should be designed in such a way, that when they inevitably crumble, they leave an aesthetically pleasing ruin. That way, the building isn't just projecting might when it is used, but it also shows grandness to the generations that follow. But how grand can a building be when it is specifically designed to intimidate the user? How grand can it be when it gives



Hubert Robert (*Robert des Ruines*)
- Imaginary view of the Gallery of
the Louvre as a Ruin, 1796

more importance to those who will not be using the building, than to those who will. As Frank Chimero said: people ignore design that ignores people.

As in the 18th century with the excavation of Pompeii, ruins have now reentered the cultural zeitgeist. Finding the destroyed Roman city was a warning from the past about what might happen in the future. Modern ruins (ruins of buildings built in the past century which have, not unlike Paromlin, failed because of redundancy or neglect) send an even clearer message. The fall will come, and it will come sooner than you expect. Millennials, who have lived through the Great Recession and the technological explosion of the internet, are finding comfort in the impermanence of those ruins. But they could offer more than just comfort. They could be a symbol of new beginnings. While it

may be tempting to proclaim Paromlin a monument and only a monument, and leave it in its current state (especially if it became something in the vein of “The Monument to Corruption”), its value and the message it would send would be far greater if it were adapted. It would be a story about falling, but also a story about picking yourself up, and soldiering on.

Adapting buildings, especially ruins, isn't only good practice from an economic and environmental standpoint. It is a necessity if we want to prolong their lifespans, and ultimately, if we want them to survive. That doesn't seem to be the case if we look to ancient Roman and Greek buildings, whose ruins still stand today for tourists and historians to explore, but the truth is, those that still survive in a state that isn't merely three columns and an architrave, have been adapted. We have



The number of photos on Instagram tagged with #ruin, #ruinporn, #abandonedplaces, #lostplaces etc. ranges in the tens of millions.



Jakob Alt - The Pantheon and the Piazza della Rotonda in Rome, 1836. Pantheon's twin bell towers, nicknamed „the ass's ears“ teach us that adaptations need to be carefully considered and implemented with a deft hand. They were removed in the 19th century.

been much less precious with what we now consider ancient monuments a millennium and a half ago.

Take Rome as an example - with the rise of Christianity, most temples had to be closed because the funding for their maintenance had run dry. As more people converted to the new religion, more money went to building new churches, and increasingly less money went to the upkeep of the old temples. They were then torn down, and their materials were used in new buildings. In a way, that is adaptation. But more importantly, buildings like the Pantheon are also adaptations. The Pantheon's function shifted from being a temple to being a Catholic church. Pagan symbols have been removed, and over the years, new additions have been installed. It is because of its continuous use that the building is as preserved as it is, but its fate

might have been the same as the one of countless other structures.

An example that shows more evident signs of reuse is Teatro di Marcello. Constructed in the waning years of the Roman Republic, the theatre was based on Greek amphitheatres, but instead of being built into a hillside, it was made on a substructure of arches and barrel vaults. It had three levels of arches and a semicircular seating area that went upward from the stage and its large decorative backdrop. Some five centuries after its construction, the building lost its original function. During the Middle Ages it was used as a fortress and after that it became a palace. The upper floor, which is still in use as a residential building today, was constructed atop the ruins in the sixteenth century. Its surroundings are being used as venues for small concerts. Both tourists

and locals profit because of the strategy used on this particular building.

As Instagram can attest, there is interest in modern ruins in their dilapidated state, but for the locals who actually get to live in the vicinity of abandoned buildings, they are nothing but an eyesore. Monuments and ruins always put the tourist first, and the local second. Adaptive reuse allows us to bring real change to forgotten areas of our cities. It allows us

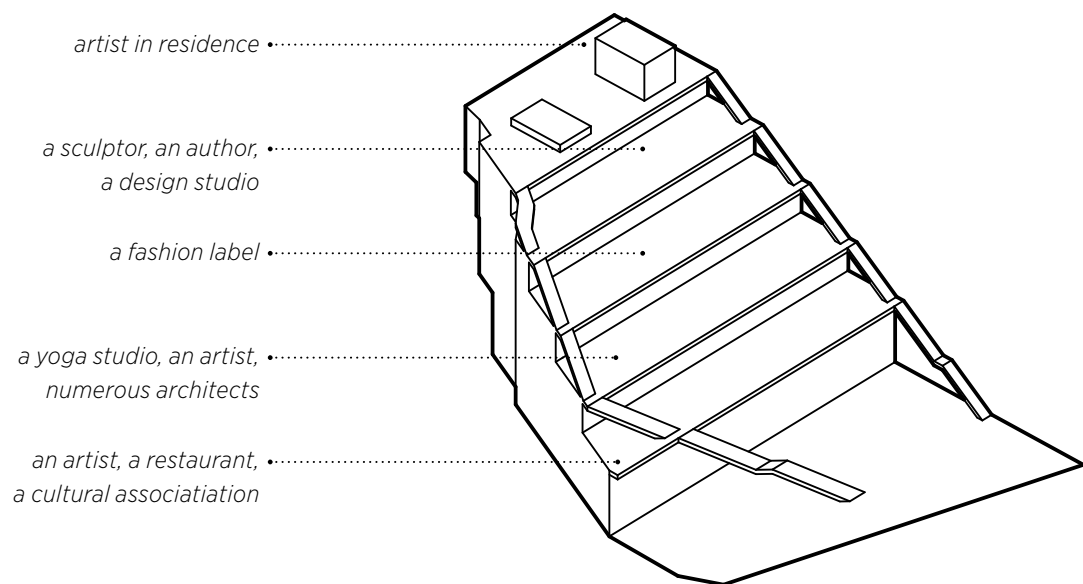
to fashion programs for locals and visitors alike. Why build buildings that will make pretty ruins, when true greatness and longevity can be achieved by continually reusing and restoring what is already available to us.

Both the Pantheon and Teatro di Marcello retain their names even though they don't serve the function they were named after. The identity and history of the original buildings haven't been erased by the adaptations.



IV REFERENCE PROJECTS

The following chapter is an exploration of various projects that have dealt in a successful or interesting way with one or more of the following topics: adaptive reuse and the adaptability of buildings, the meld of interior and exterior spaces, creative exchange.



LOBE BLOCK

Brandlhuber + Emde, Burlon
 Muck Petzet Architekten
 Berlin, Germany
 2016-2018

The mixed-use building is located on a parcel that has no binding land-use plans, but an old regulation permits only the construction of commercial buildings on it. At the same time, a still active grandfather clause ensures that the area remains essentially a residential zone. The architects have leaned into the ambiguous parameters and regulations of the land and designed a building that won't fight change. It is a commercial building now, but it could become a residential one later. Further reinforcing that idea is the choice of materials and construction. Built entirely in concrete and plywood, it only includes central cores with elevators and bathrooms. Any other additions, such as spatial partitions, are tailored and positioned according to the needs of the users. Moreover, the raw state of the building allows the interior and exterior to flow. The back side of the building is shaped



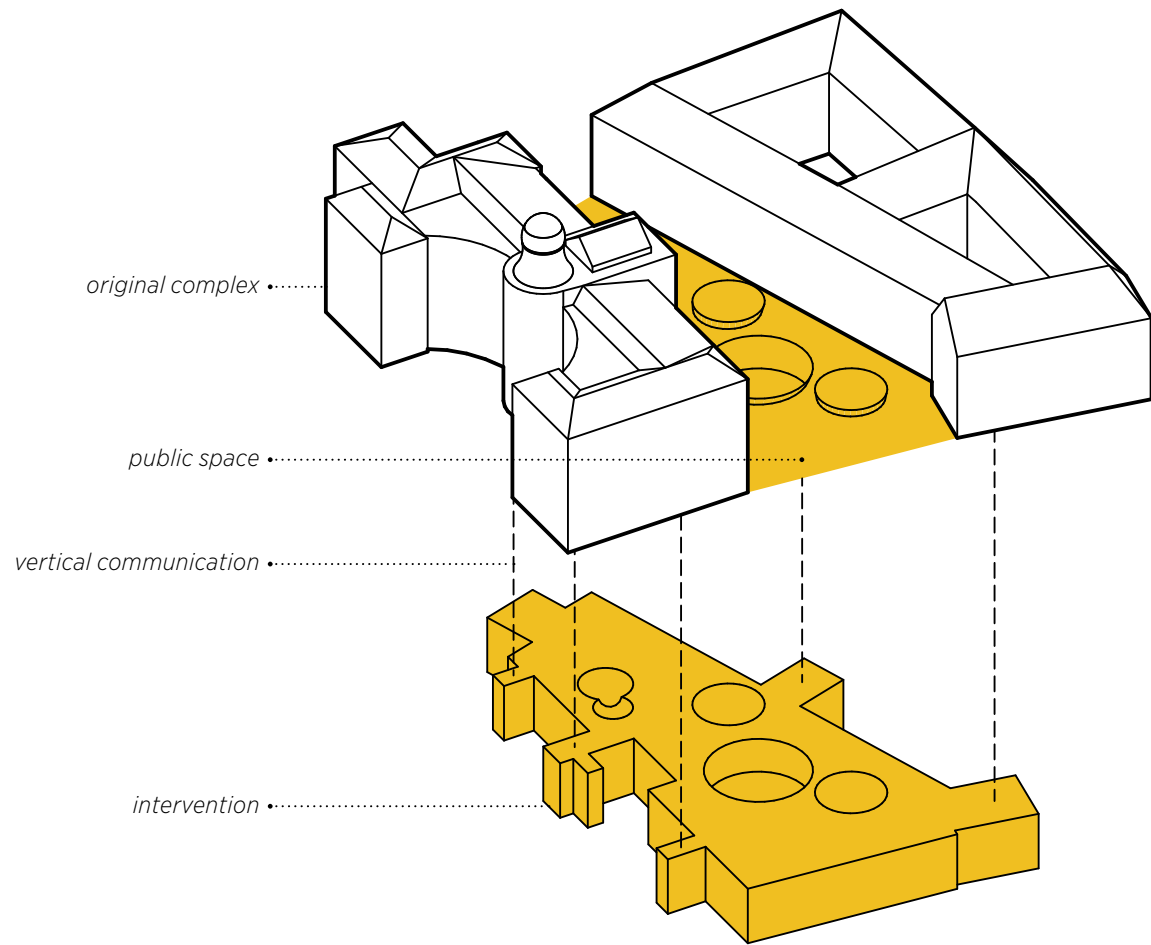
by its wide terraces, and when the large, floor-to-ceiling glass fronts are opened, the interior space extends both visually and physically.

The building is an experiment in creative exchange and cohabitation. The tenants are an eclectic group: a restaurant, a yoga studio, several architects, a sculptor, fashion designers, and an artist-in-residence among others. The terraces and the garden are shared spaces, open not only to the tenants, but also to the neighbors, especially to children, who can come and help tend the garden and chase after the chickens that roam there.

—

adaptability
 creative exchange
 interior-exterior
 city regeneration





JOANNEUMSVIERTEL

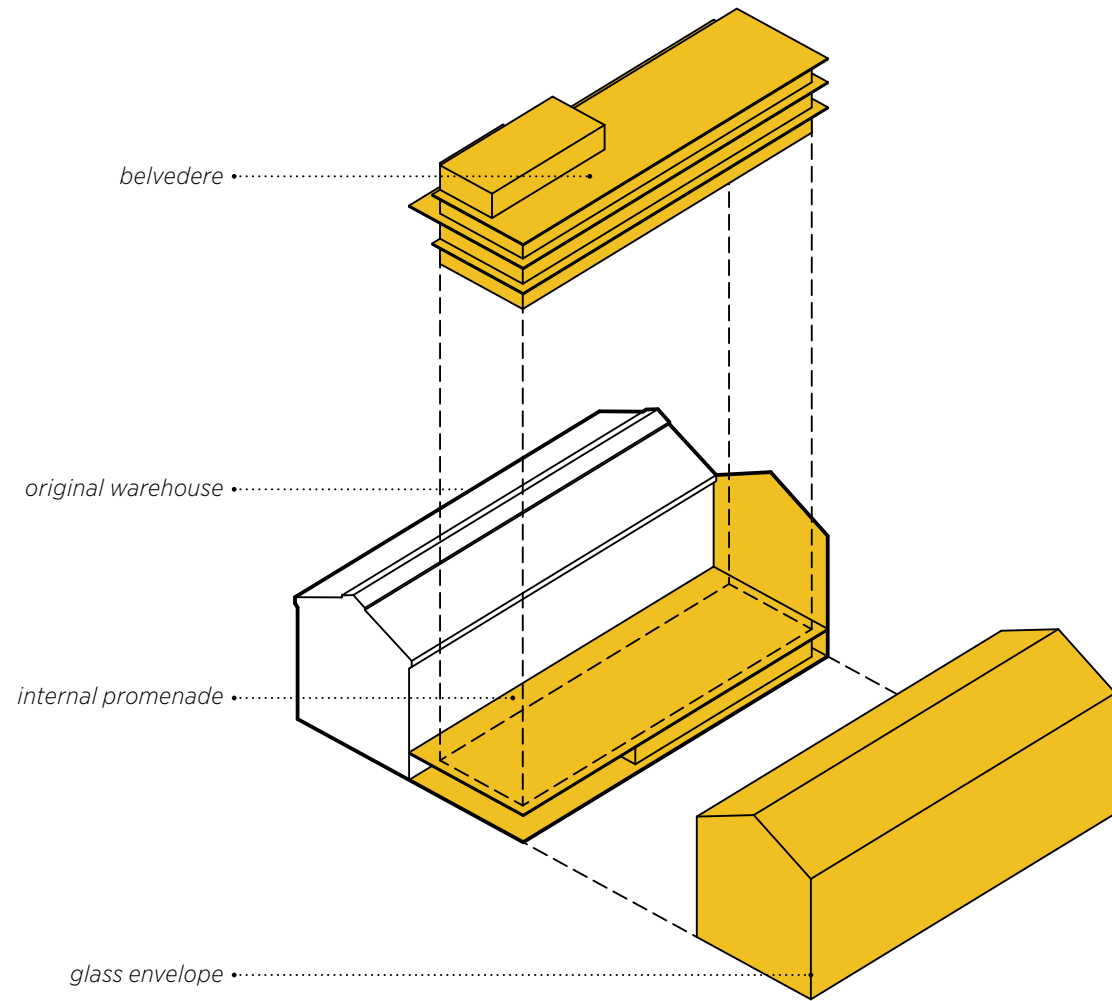
Nieto Sobejano Arquitectos
Graz, Austria
2009-2011

The Joanneum Museum Quarter consists of three historical buildings, all built in different time periods with different functions, but belonging to the same institution. The project dealt with the renovation of all three museums, but more importantly, the architects had to deliver a solution for a sensible connection of the buildings which have had, up until that point, their backs turned toward one another. The complex needed a common entrance, a conference hall, reading areas, and space for archives



and storage. Instead of placing the volume at ground level, the new addition was designed to bridge the gap between the buildings underground. Because of it, the extension isn't fighting for an identity, and the relationship between it and the older structures is a symbiotic one. The roof of the intervention became a new and improved public space. A similar intervention can be found under the Louvre Museum. However, the smaller scale and the placement of the circular atria in this project make Joanneumsviertel at the same time more intimate, and more communicative than the Louvre. Typologically, this addition is a symbiote, albeit a hidden one. It doesn't significantly spread out under the historical buildings, and the small overlaps of the old and the new serve only to establish vertical communication.

—
adaptive reuse
hidden connection



FRAC NORD-PAS DE CALAIS

Lacaton & Vassal
 Dunkerque, France
 2013-2015

The FRAC is a building that serves both as an archive and as a public exhibition space, with the added function of being an initiator for the redevelopment of the port in Dunkerque. The original building was a boat warehouse, a singular volume with a pitched roof and a cavernous, bright interior. The basic concept of the adaptation was to implant a new gallery into the warehouse complex without disturbing the warehouse, i.e. keeping the warehouse in its entirety.



Instead of tearing down the existing boathouse, the architects opted for a modest approach and elected to build another just like it, at least in volume, right next to it. The new structure, attached to the existing building, is typologically speaking a symbiote, but it is also a juxtaposition. The two volumes, one opaque, one transparent, complement each other. The addition, which houses the FRAC programme, is crafted with such sensibility, that it is hard to imagine the original without it. It



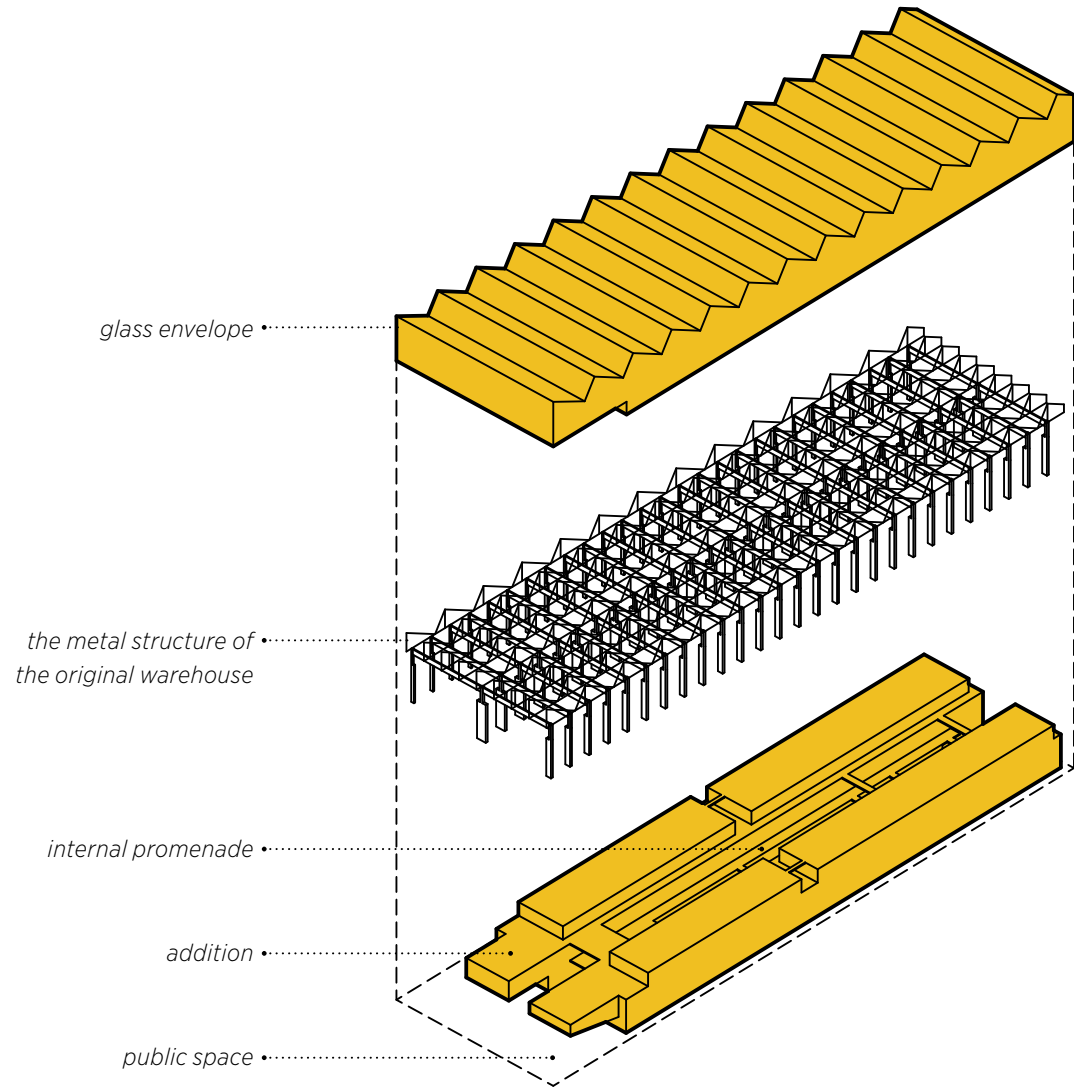
feels almost as if there have always been two identical volumes, standing side by side, and one of them was destroyed in some natural disaster.

—
adaptive reuse
interior-exterior

Furthermore, the addition plays with interior and exterior. Since the new gallery spaces don't physically connect to the old exterior wall of the boathouse, a road is formed in the interior going between the two buildings. That same boathouse wall stays intact, and acts as the interi-



or wall of the newly formed promenade. On top of all the exhibition spaces and under the glass roof is a belvedere. This greenhouse-like space commands a view of nature and of the horizon, where the sky meets the misty North Sea.



HIGHER SCHOOL OF FINE ARTS

Franklin Azzi Architecture
 Nantes, France
 2011-2017

The project is the beginning of a large redevelopment proposal that aims to transform the Île de Nantes district, which houses 26000 square meters of warehouses, into a cultural campus. The finished buildings, the arts esplanade, new pedestrian streets and passageways all contribute to the creation of large public spaces where the different users can meet and exchange. The school marks the first step towards the rehabilitation of the area, and it shows how the architects plan to handle a site with a strong industrial past.

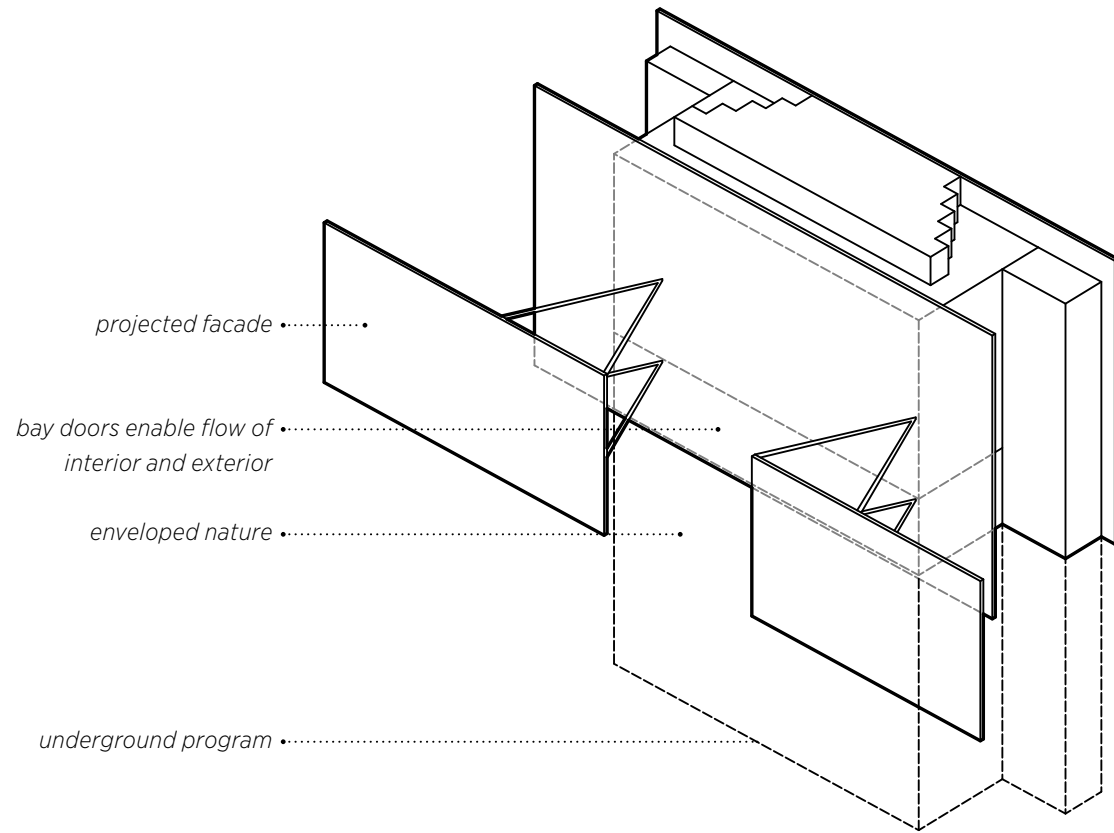
It occupies two large warehouses whose masonry has been completely removed. It is a radical example of adaptive reuse which focuses on what makes the building special. By stripping away everything except the metal construction and encasing it in a glass envelope, the building went from being completely opaque, to being completely transparent. Not only does this show the new insertions and the



programs they contain externally, it also bathes the interior in light. Furthermore, the envelope retains the form of the original building - the silhouette and typology of the industrial site remain intact.

Part of the metal structure now resides completely outside the building, forming a large public space with a roof that blurs the hard line between interior and exterior and flows seamlessly into the internal promenade.

—
 adaptive reuse
 creative exchange
 interior-exterior



FONDATION CARTIER

Jean Nouvel
 Paris, France
 1991-1994

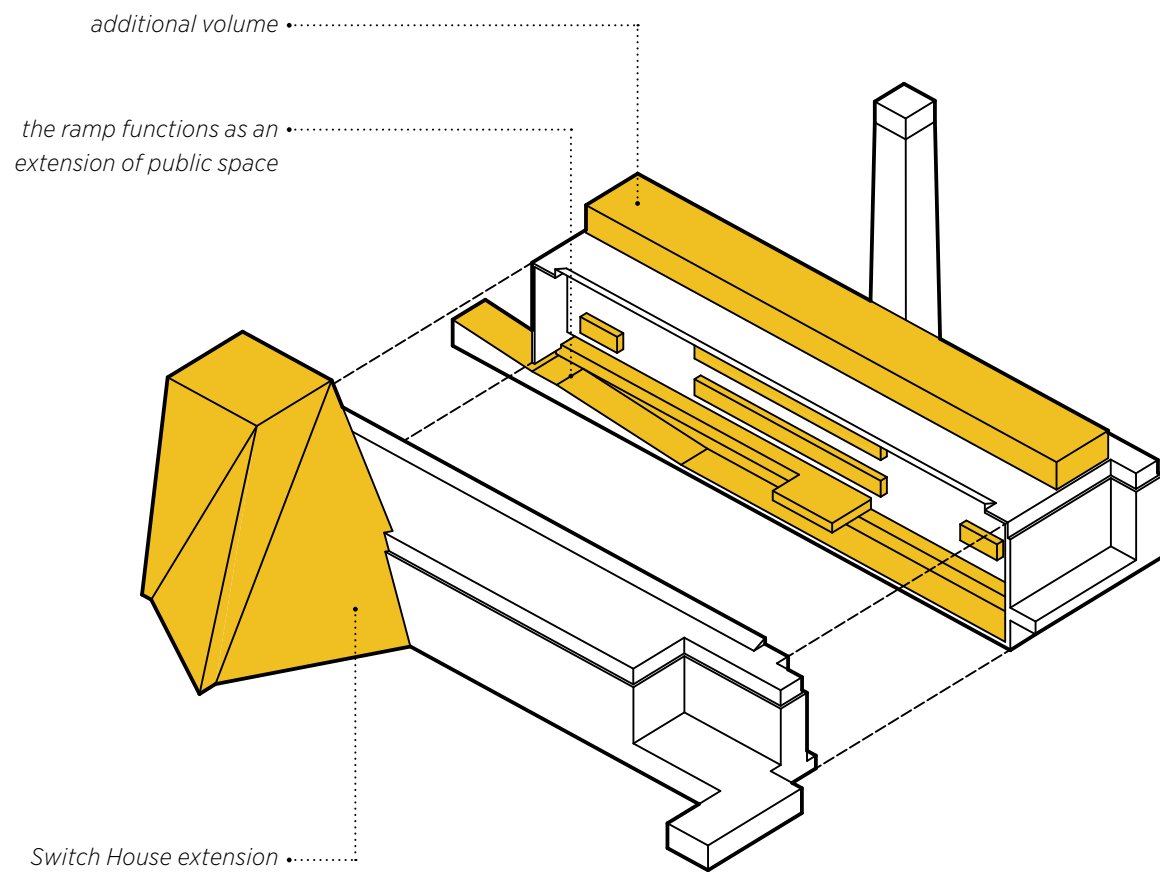
The Cartier Foundation for Contemporary Art is a building that is a complete representation of its concept. Its dedication to being transparent and blurring the lines between interior and exterior is fitting, since it is a space that houses contemporary art and graffiti exhibitions. The facade extends beyond the boundaries that actually define the exhibition space. After passing the first set of glass walls that are aligned with the Foundation's historic neighbors, one finds themselves facing another facade. The garden between the two boundaries highlights the interplay of structure and nature, as it is both separated from and connected to the city. The concept is furthered by 8-meter-high sliding glass doors, which, when opened, merge the interior and the exterior.

The deconstructed nature of the building and the choice of materials, namely glass and steel, make it feel like a ghost, a shimmer among the trees. Nouvel himself explains it best:

«The architecture is about lightness, (...). Architecture where the game consists in blurring the tangible boundaries of the building and rendering superfluous the reading of a solid volume amid poetics of fuzziness and effervescence.»



interior-exterior



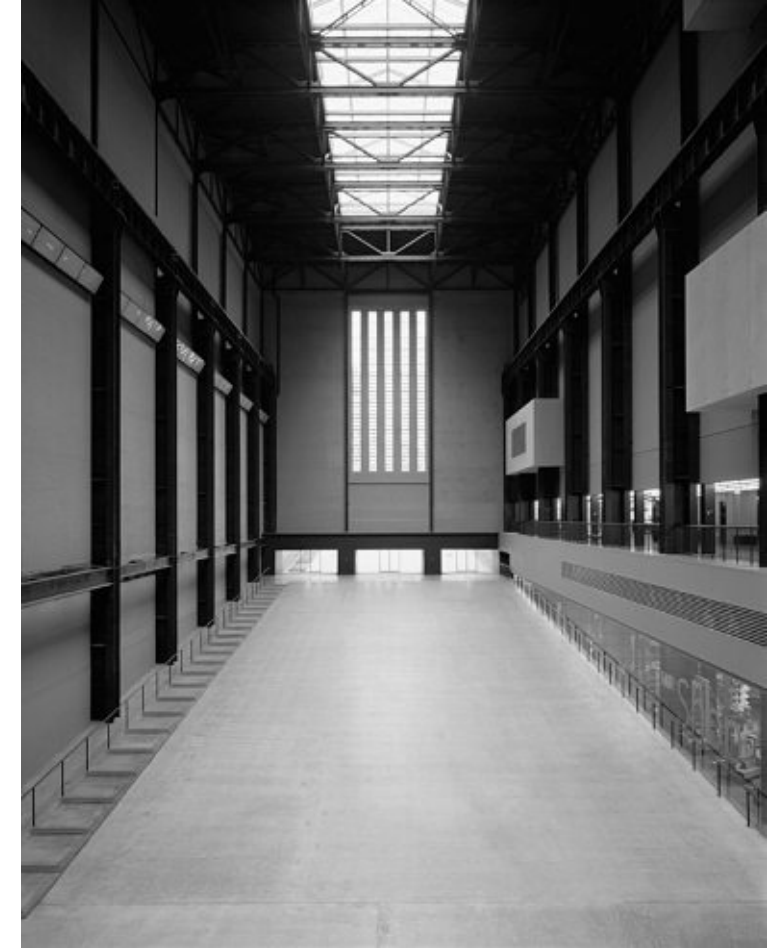
TATE MODERN

Herzog & de Meuron
 London, England
 1998-2000, 2010-2016

Tate Modern is quite possibly the poster child of adaptive reuse projects. Before they revisited the gallery in 2010 with their Switch House extension, architects Jacques Herzog and Pierre de Meuron exercised immense restraint and were almost radical in the simplicity of their design. The former Bankside Power Station by Sir Giles Gilbert Scott looks largely the same as when it was fully operational, its defining features intact. If it wasn't for the huge body of light sitting atop the building, one would be forgiven for thinking it was still in use as an industrial building, what with its imposing brick walls and tall chimney towering over the Thames. The light-handedness of the conversion was a statement.

«(...) when you don't start from scratch, you need specific architectural strategies that are not primarily motivated by taste or stylistic preferences. Such preferences tend to exclude rather than include something. Our strategy was to accept the physical power of Bankside's massive mountain-like brick building and to even enhance it rather than breaking it or trying to diminish it.»

Another problem that had to be addressed was the integration of the gallery into the urban fabric of Bankside and London, and how this integration may benefit and



regenerate both Tate and the neighborhood. The issue was partially solved by the adaptation which turned the former power station into a building of the people, with the Turbine Hall acting as an extension of public space and actively inviting people inside. To ensure the regeneration doesn't stop with the completion of the gallery, further measures had to be taken. Donald Hyslop, the Head of Regeneration and Community at Tate Modern, had the following to say:

«(...) we had to ensure that the opportunities offered by the regeneration were developed in a spirit of consultation and partnership rather than imposed on the established communities living in the area. This led to the development of the 'social model' - a distinct form of community urbanism that we established as a framework for the project. The model remains the cornerstone of much of our work and our philosophy that culture can stimulate and activate new approaches in the development of cities and communities.»



adaptive reuse
 city regeneration

V PAROMLIN ADAPTED

Armed with extensive research, it is finally time to tackle the beast that is Paromlin. Knowing the industrial complex and the individual eccentricities that each building showcases was essential for the redesign and adaptation of the urban ruin.

WHY DO MILLENIALS BAKE CAKES?

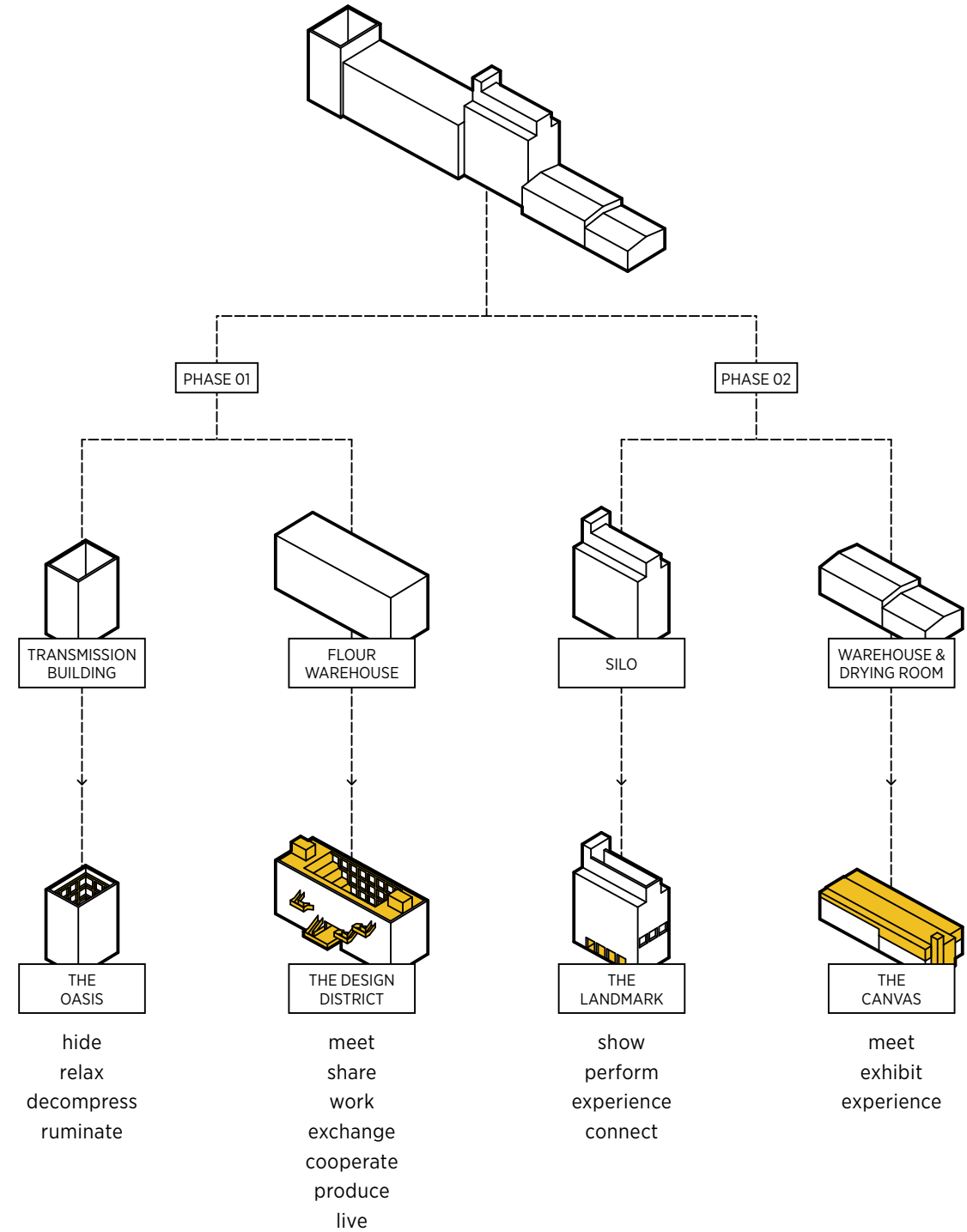
Finding a new program for Paromlin was not an easy task. There were many proposals over the past forty years and yet none of them were realized. Of course, there were other factors at play here, economical and political in nature, but still, how is it possible that nothing happened in forty years?

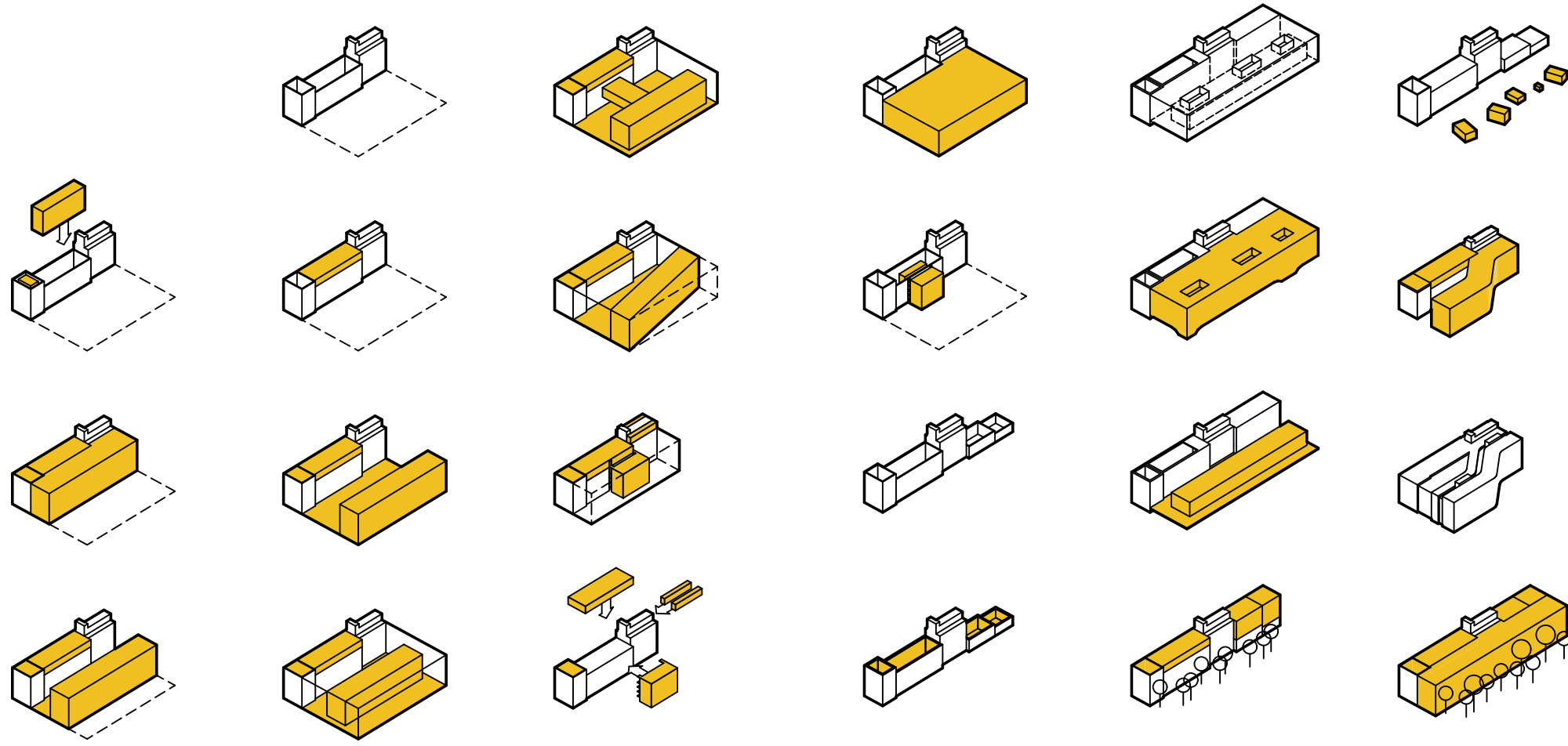
The new program needs to deserve its location in an area that has the potential to become a new city center. It makes sense to do something related to culture. After all, ever since the fifties there was talk of the area becoming an administrative center - when the Vatroslav Lisinski Concert Hall opened in the seventies, it lay the groundwork for a cultural center as well. But where Lisinski is grand and imposing, featuring grand and imposing artists and performers, Paromlin should feature a different kind of people. People like... well... me.

It wasn't until I talked to Tina, my mentor on this project, about my own fears of finishing the diploma and setting out into the world as a young architect, that I realized what I wanted to do with Paromlin. My generation is a peculiar one, often derided for being weak and entitled, sometimes completely justifiably, often-times through no fault of our own. We are a generation stuck between the analogue and digital. We grew up with modern

technology, but still remember a time before it. Why do Millennials bake cakes? Because it is analogue, and we long for an analogue experience in this digital age. Baking cakes, tending to plants, working with our hands - they all give a direct, observable result of our work in a world that seemingly does not care about what we do. This wish for the analogue extends to the way we interact with people, which is especially apparent in 2020 amidst the COVID pandemic. Most architecture students will remember working on projects in university drawing rooms, not because we like cold, cramped, rat-infested spaces, but because we are not alone there. Even if you work on your own and don't interact with other people, you can see them struggling, the same way you are struggling. You can draw solace, inspiration and motivation from that. And if you decide to chat someone up, ask for their opinion, who knows what you might create in the end.

Paromlin can embody the analogue. It can be a melting pot of crazy ideas that gives a voice to newcomers of their respective industries. It can be a neighborhood meeting place that demystifies art and design. It can outwardly show that Zagreb, as a city, values creativity, hard work and human interaction.

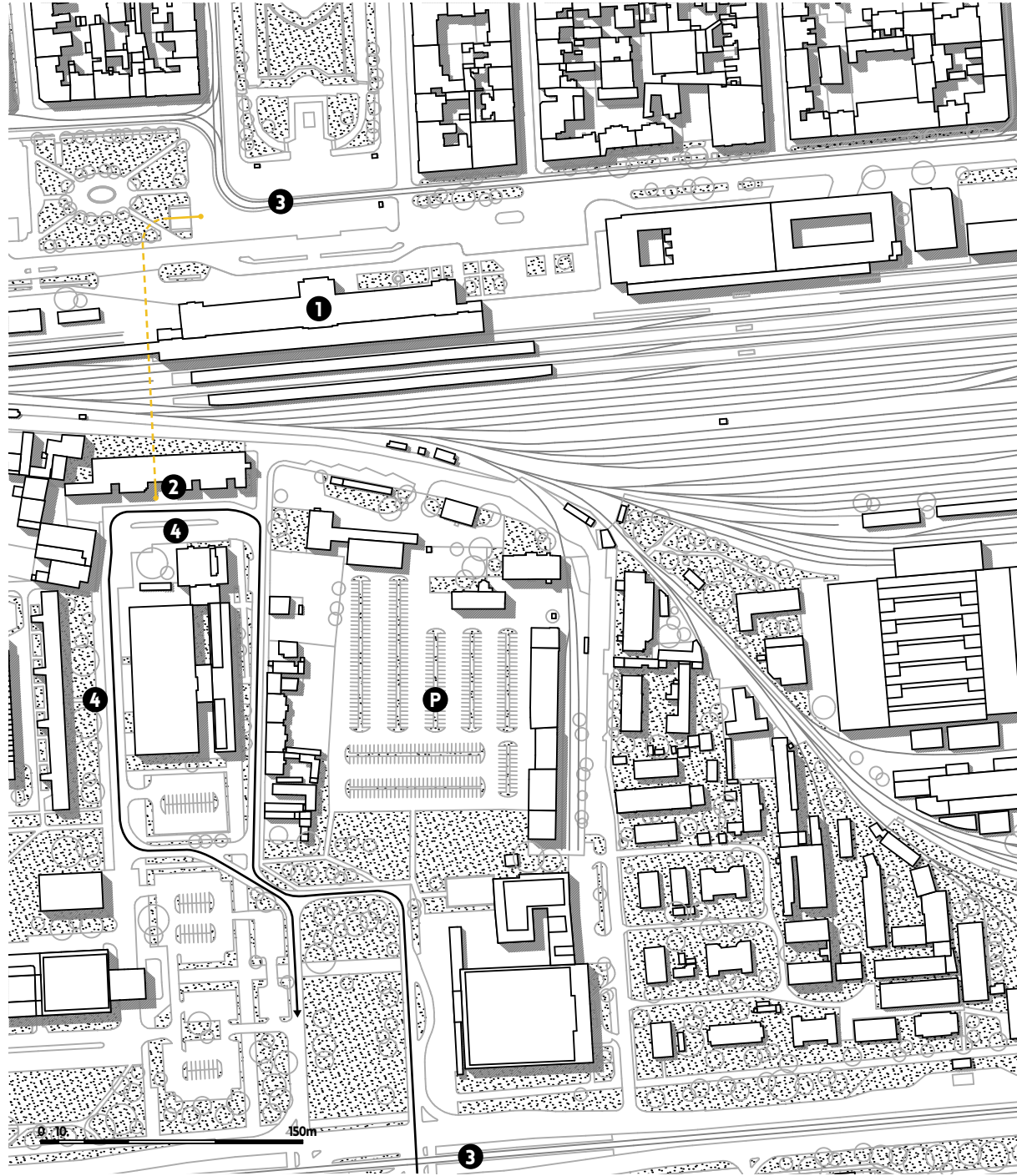




Finding a form for the new Paromlin was a journey filled with pitfalls and I stumbled into the same one on multiple occasions. I adhered too much to the brief of the City Library competition, and too little to my own research. It is not that I didn't question the brief. I questioned the decision to completely reconstruct the mill building, a fantasy which is, as Snješka Knežević deftly put it „so close to kitsch“. I questioned the program of the building: making a library in such close proximity

to the National and University Library, a building that has spaces that have not been used since the day the structure was completed, and of those that have been, some were used for concerts that disturb anyone trying to use the building as a library. What I failed to question is the need for additions. I felt I needed to replace what was lost. All of my early designs have a commonality: a huge addition on Paromlin's western side. Not a symbiote; a parasite. The addition would always

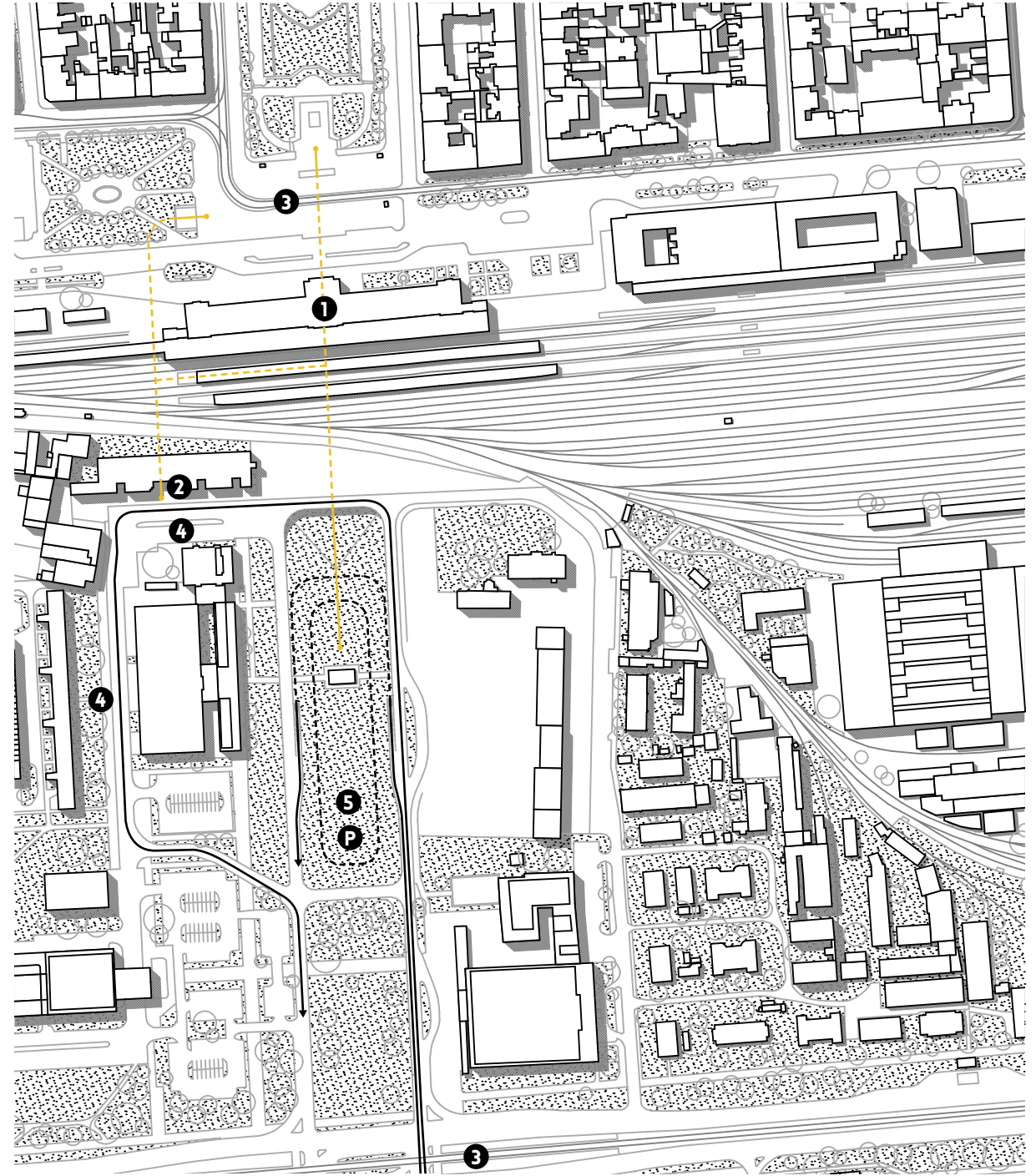
hinder the existing structure and hide the special qualities of the individual buildings of the complex. With this project I wanted to showcase adaptive reuse as a viable (and arguably best) option in the revitalization of old buildings. Focusing solely on what is left of Paromlin sends a much stronger message and makes for a much better project.



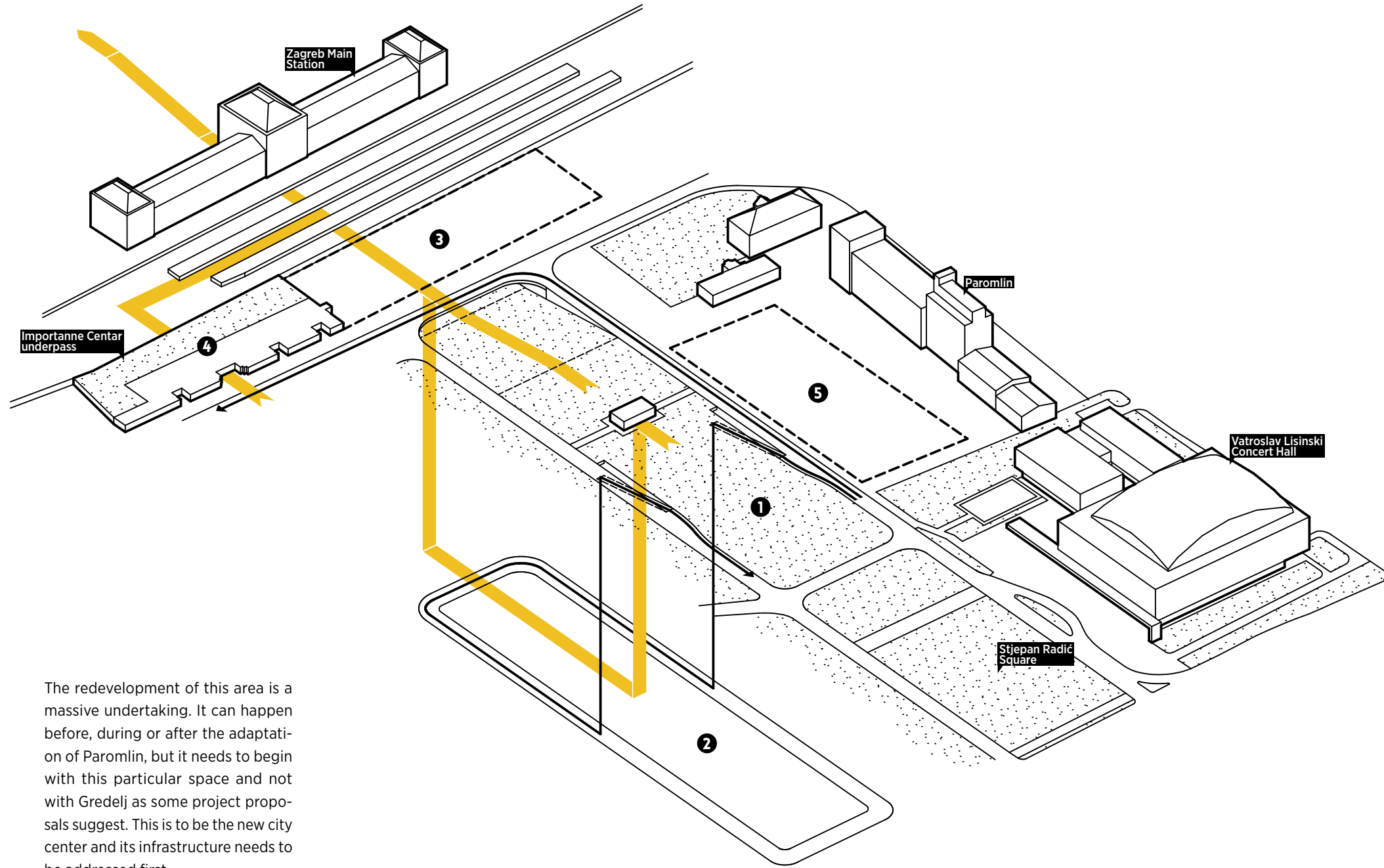
(above) Current situation.
 (right) Possible adaptation
 of the area.

However, focusing solely on what is left of Paromlin is a complicated matter in itself. As soon as I started to unpack and analyze the building, problems of its surroundings quickly arose. The gigantic parking lot at the entrance of Donji grad and the run-down shacks that frame it. The pillaged bank building overlooking a dingy underground shopping mall which is the only passage for pedestrians. And then there was Gredelj. Gredelj with its large empty warehouses and a 200 meter wide

area of nothing but railway tracks. The scope of the project changed from a set of industrial buildings to an area of nigh 37 hectares. My attention was spread too thin and any message I wished to impart with the project was watered down. I made the decision to focus my efforts on Paromlin and address the urban context of the complex only with an overview of what the first phase of this massive redevelopment could look like.



- 1 Zagreb Main Station
- 2 Importante Centar underpass
- 3 Tram station
- 4 Public bus station
- 5 Intercity/international bus station
- P Parking lot
- Vehicular traffic
- Pedestrian traffic

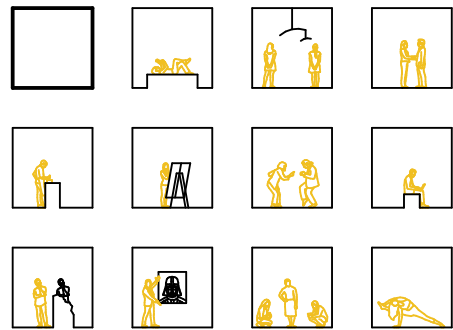
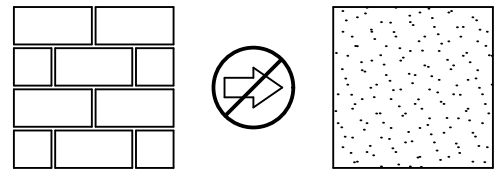


The redevelopment of this area is a massive undertaking. It can happen before, during or after the adaptation of Paromlin, but it needs to begin with this particular space and not with Gredelj as some project proposals suggest. This is to be the new city center and its infrastructure needs to be addressed first.

- 1 The new green area is a natural urban gesture that follows the logic of Stjepan Radić Square and the University Meadow to the south. It also connects to Donji grad and the south-eastern corner of the Green Horseshoe via an underpass.
- 2 The space underneath can be used in a variety of ways. Paromlin's parking lot can be moved here, freeing up a large piece of land. Furthermore, it can house the international bus station. This would truly transform the space into a transportation hub - railway, international and public buses, and trams all within a 100 meter radius. The move would also reroute the airport shuttle buses to this more central location.
- 3 By starting the removal of redundant train tracks that lead to Gredelj, space is freed for a new Main Station building (or a general transportation building). The access to the individual train platforms would remain in the underground, but the new underpass would offer a less claustrophobic experience.
- 4 In its current state, the roof of the Importante Centar is accessible, but it offers little incentive to be accessed. By including it in the design of the Main Station building it can become a nice terrace for travellers and citizens alike.
- 5 The removal of the parking lot allows for the design of a companion building to the Paromlin, or an extension of its square.

FLOUR WAREHOUSE AND THE TRANSMISSION BUILDING

THE DESIGN DISTRICT AND THE OASIS



The first phase of Paromlin's redevelopment focuses on the flour warehouse and the transmission building. The aim is to create an eclectic mixed-use space for creatives, artists and artisans who want to strike out on their own, but be surrounded by like-minded peers. **It is the compression of a design district into a design building.**

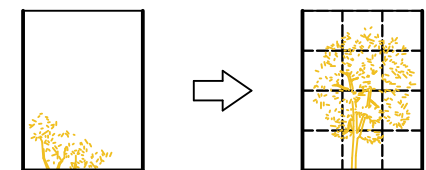
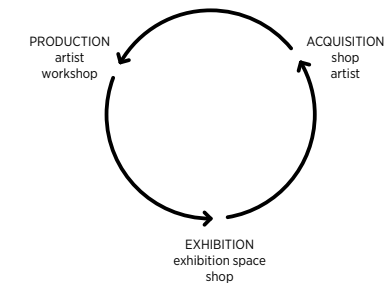
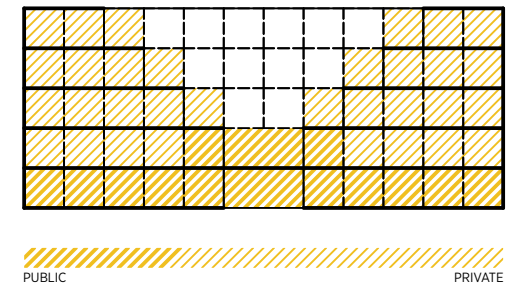
The brief of the competition for the City Library asked for wall reinforcement in both the flour warehouse and the transmission building. This was done to ensure the integrity of the building, but the proposed method requires that the interior walls be completely covered with a layer of concrete. In order **not to lose the materiality of the original building**, another method needs to be found.

Stewart Brand claims almost no building adapts well. That may very well be true, but the challenge of this particular program, i.e. a space for a group of eclectic individuals who have different requirements for that space, is its **adaptability**. Paromlin will be adapted, but it also needs to stay adaptable. The key here is the simplicity of the individual units and the implementation of a plan libre.

Since the internal load-bearing structure must be replaced due to severe damage, there's an opportunity to redesign the floor layout and make it more appropriate for the new program. By opening the building up and pushing the individual units away from each other, semi-public meeting spaces are created on every floor of the building. The units themselves can then be further divided into **areas that are more private and areas that are more public**, depending on their proximity to the large bay doors and terraces.

Since this division works vertically as well as horizontally, the lower floors should have a completely public program. A workshop and a restaurant/shop hybrid offer something to the city, but they also enable the artists and designers who work on the premises to restore **production** to Paromlin, even if it's **on a smaller scale**.

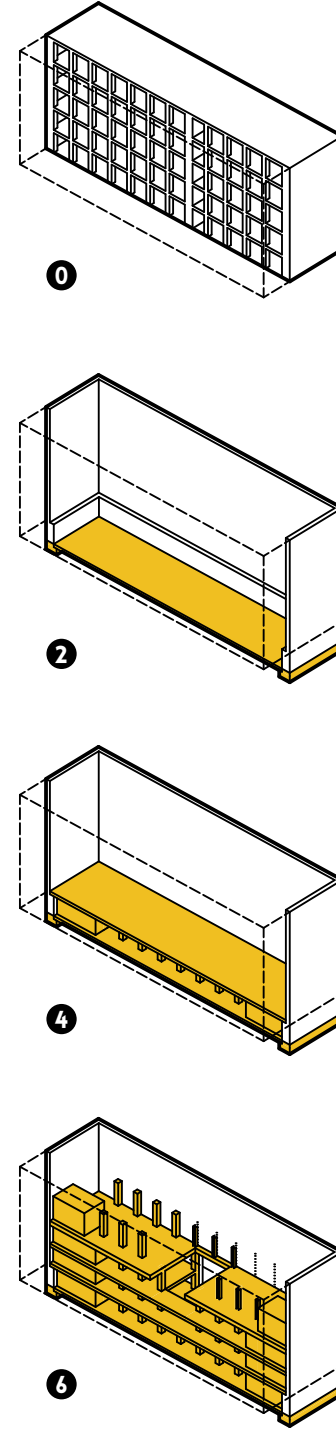
Of all the buildings of the complex, the transmission building is in the worst shape. The fire that ravaged the mill has also destroyed everything but the exterior walls of the northernmost building. Nature has already reclaimed it. Nature should keep it. The only thing that needs to be done is the reinforcement of the walls. Once the building is safe it can be used as a hidden garden. **An oasis**. A place for thought. The truly analogue part of Paromlin.



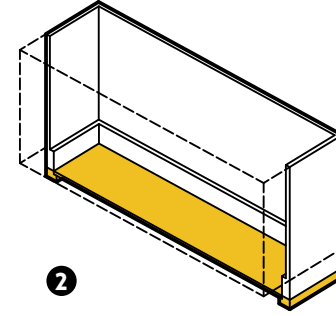
- 0** The flour warehouse is the oldest building of the complex. Before it was adapted and extended for the first time, it used to be the mill. It comes as no surprise then that the structure is in bad shape, especially in the southern part of the building where some of the load-bearing steel beams have been removed by unknown people. Before any further construction work is done, the plaster needs to be removed from the masonry so the damage can be examined more closely and subsequently repaired.
- 1** What follows is the complete removal of the interior concrete and steel construction, including the ground floor slab. In their current state, they are damaged too severely for the building to function properly.
- 2** The foundations are unearthed and underpinned. A new slab is constructed making it the floor of the basement level.
- 3** Since the foundations are thicker than the walls that stand above them, grooves need to be cut into the brickwork in order to facilitate the new concrete columns that will extend towards the very top of the building.

- 4** A concrete core is constructed on both the northern and southern side of the building. Columns and the ground floor slab are put in place.
- 5** The masonry walls are pre drilled before the concrete columns are poured. Bolts are screwed in and welded onto the H-beams.
- 6** The concrete is poured around the H-beams. Steel plates are placed on the exterior side of the brick wall. The bolts are fastened to the steel plate. This ensures a strong connection between the old brickwork and the new concrete structure.
- 7** The process is carefully repeated for each floor of the building.

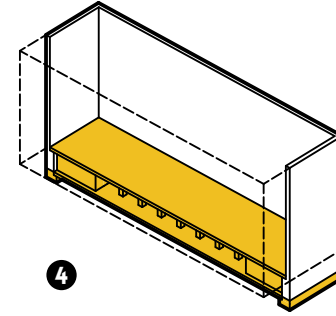
In the case of the transmission building, the foundations and the walls are reinforced, but no additional substantial construction is needed.



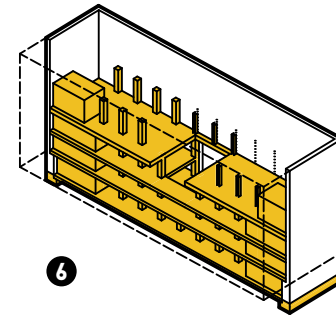
0



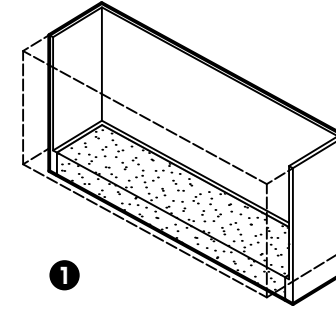
2



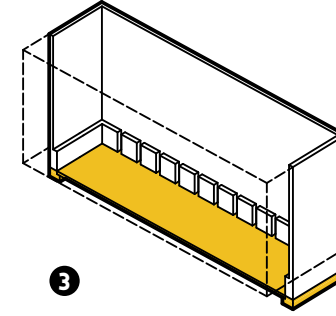
4



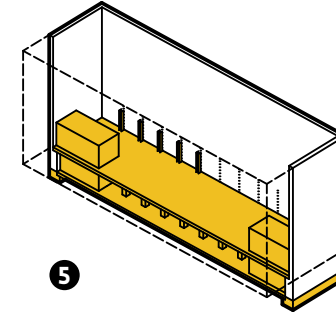
6



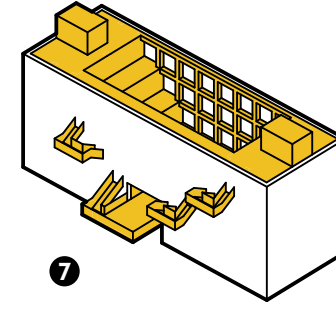
1



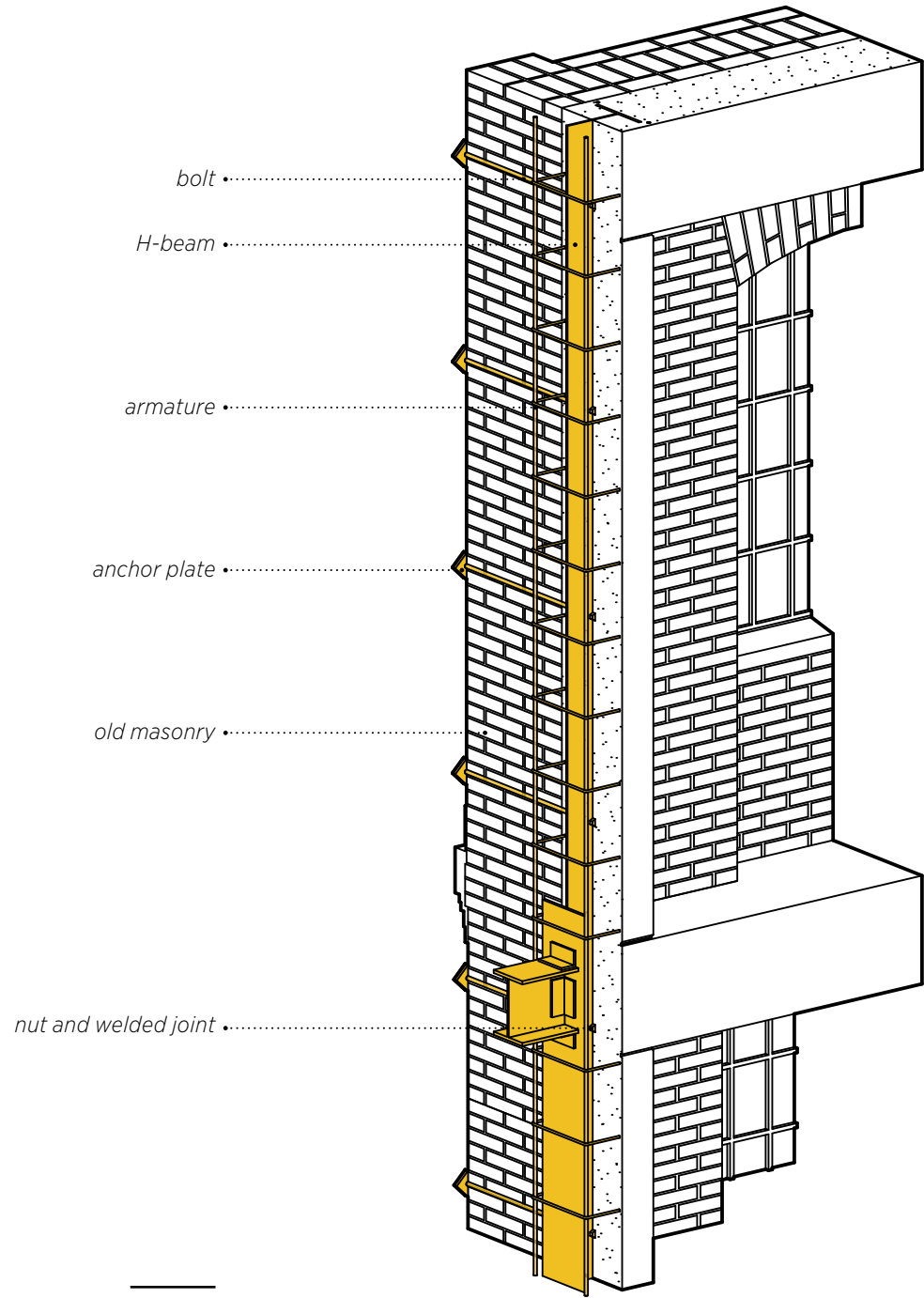
3



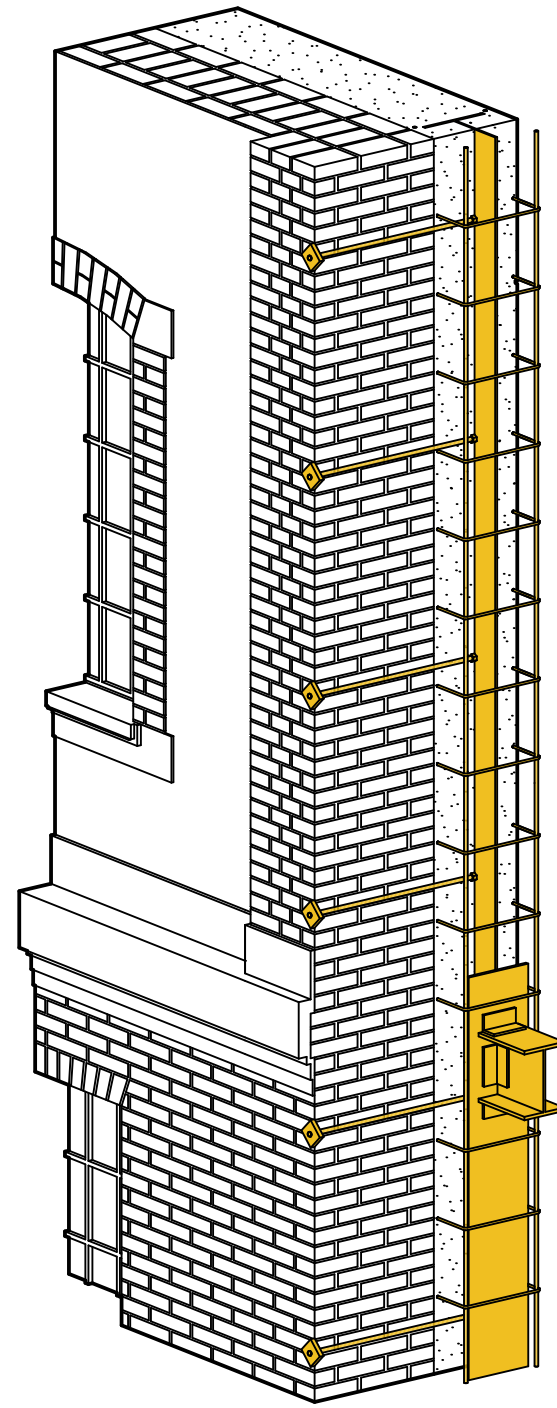
5



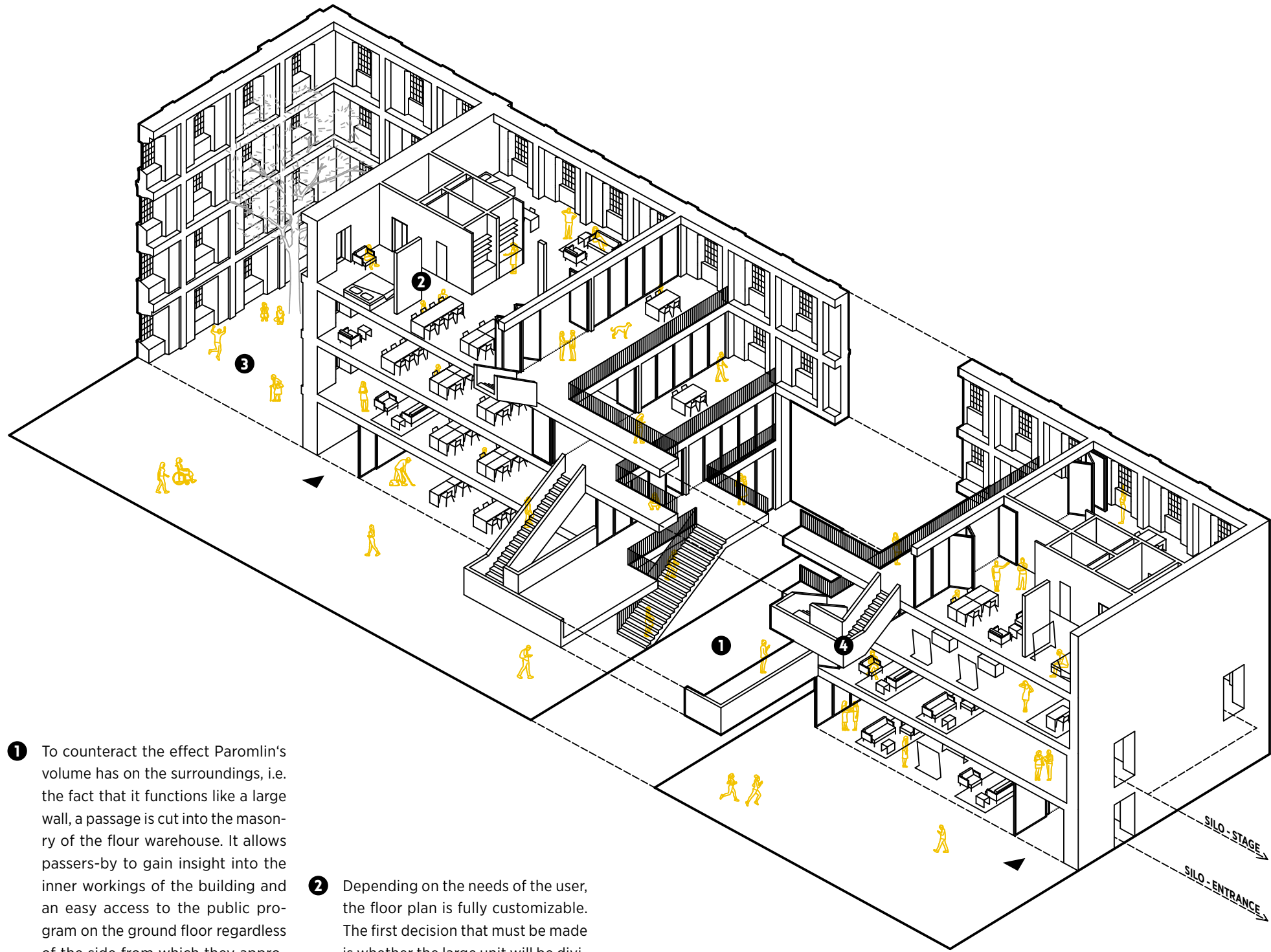
7



Axonometric view of the eastern wall of the flour warehouse (interior). Slice of the 2nd and 3rd floor. Connection of old and new.



Axonometric view of the eastern wall of the flour warehouse (exterior). Slice of the 2nd and 3rd floor. Connection of old and new.



1 To counteract the effect Paromlin's volume has on the surroundings, i.e. the fact that it functions like a large wall, a passage is cut into the masonry of the flour warehouse. It allows passers-by to gain insight into the inner workings of the building and an easy access to the public program on the ground floor regardless of the side from which they approach Paromlin. The passage in tandem with the large bay doors also ensures access for delivery trucks that arrive from Trnjanska Road.

The passage will only become more important with the redevelopment of Gredelj, which will surely bring more foot traffic from the east.

2 Depending on the needs of the user, the floor plan is fully customizable. The first decision that must be made is whether the large unit will be divided into two smaller ones or not. The two units can operate independently from each other and have their individual entrances. They can then be further divided with partition walls, curtains and furniture. The space can accommodate living quarters, ateliers and offices, even a shop - it all depends on the user.

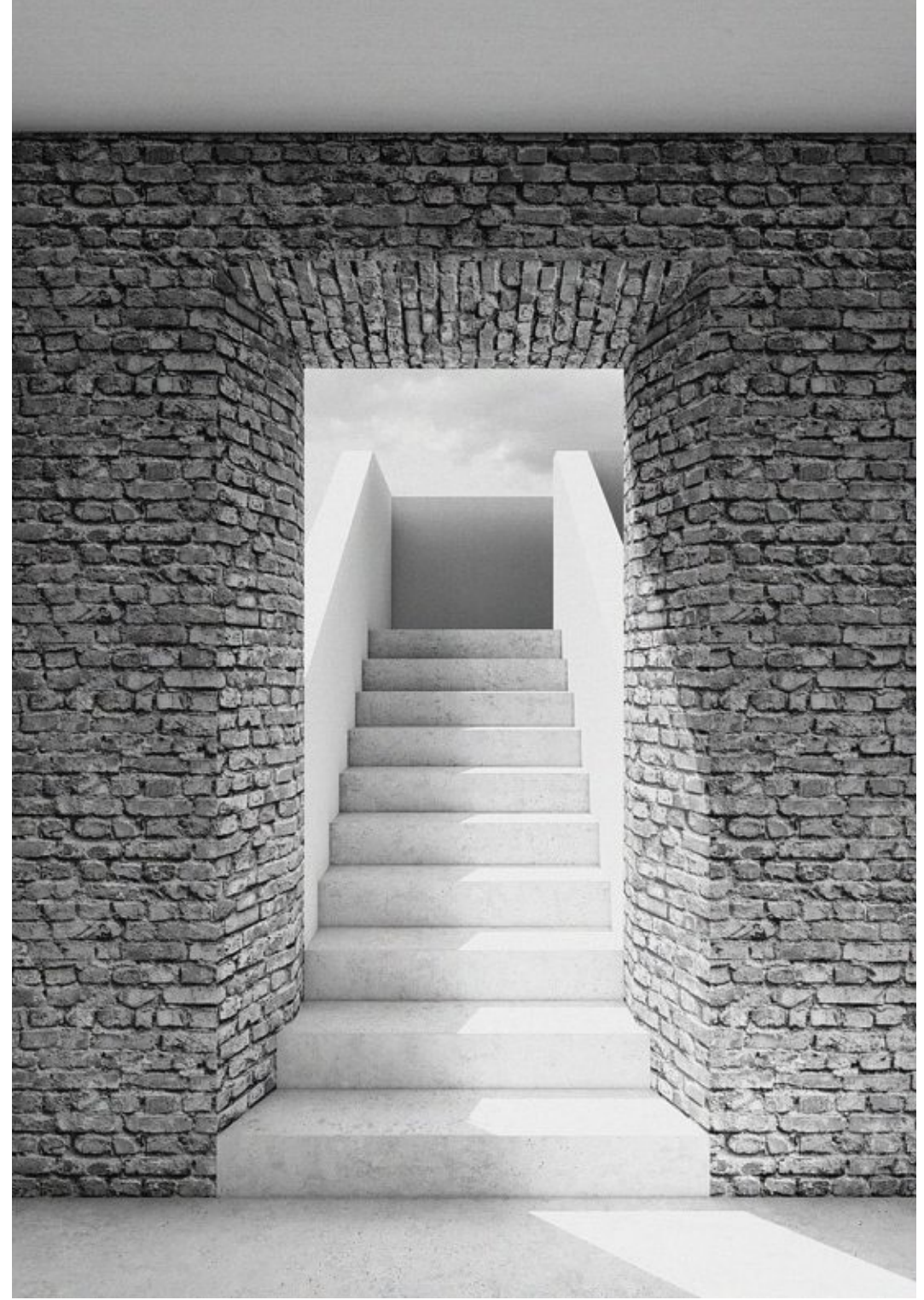
3 The transmission building draws on a long history of ruin appreciation and becomes a unique urban oasis. It offers an escape from the hustle and bustle of the flour warehouse.

4 The exterior staircases are an extension of the terraces, made to stand out from the brickwork of the old building. Aside from vertical communication, they offer a closer look at the historic wall that would have otherwise been covered up.

With the doors open, the interior
and exterior meld together.



*A place for work, a place for
interaction, a place for creation.
The place to be.*



*Blue skies above. Vertical
communication that extends the
space for communication.*



Cut through the flour warehouse
and see what the artists are up to.



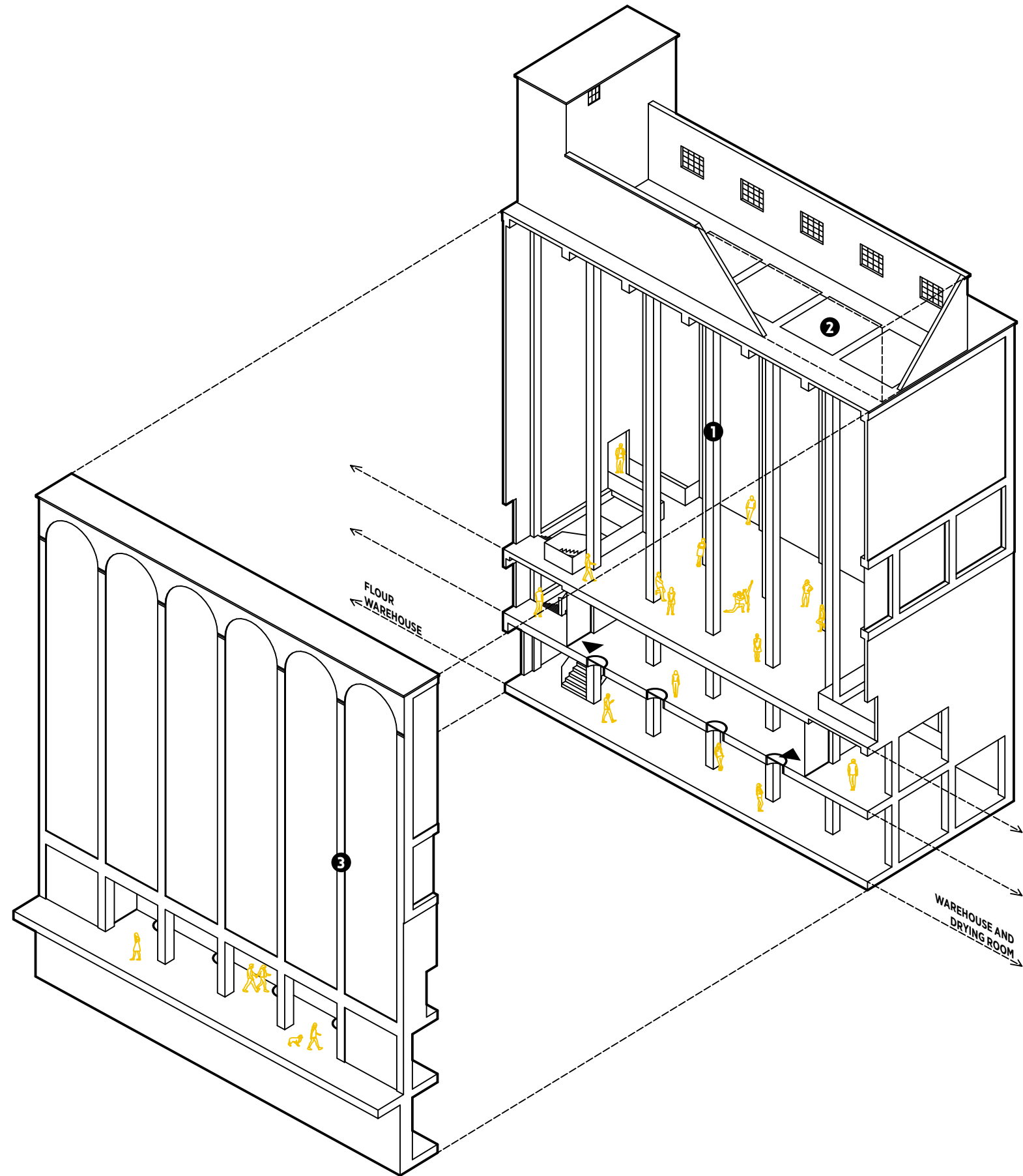
Relax, decompress, ruminate.
Slow down and escape the speed
of modern life.

SILO

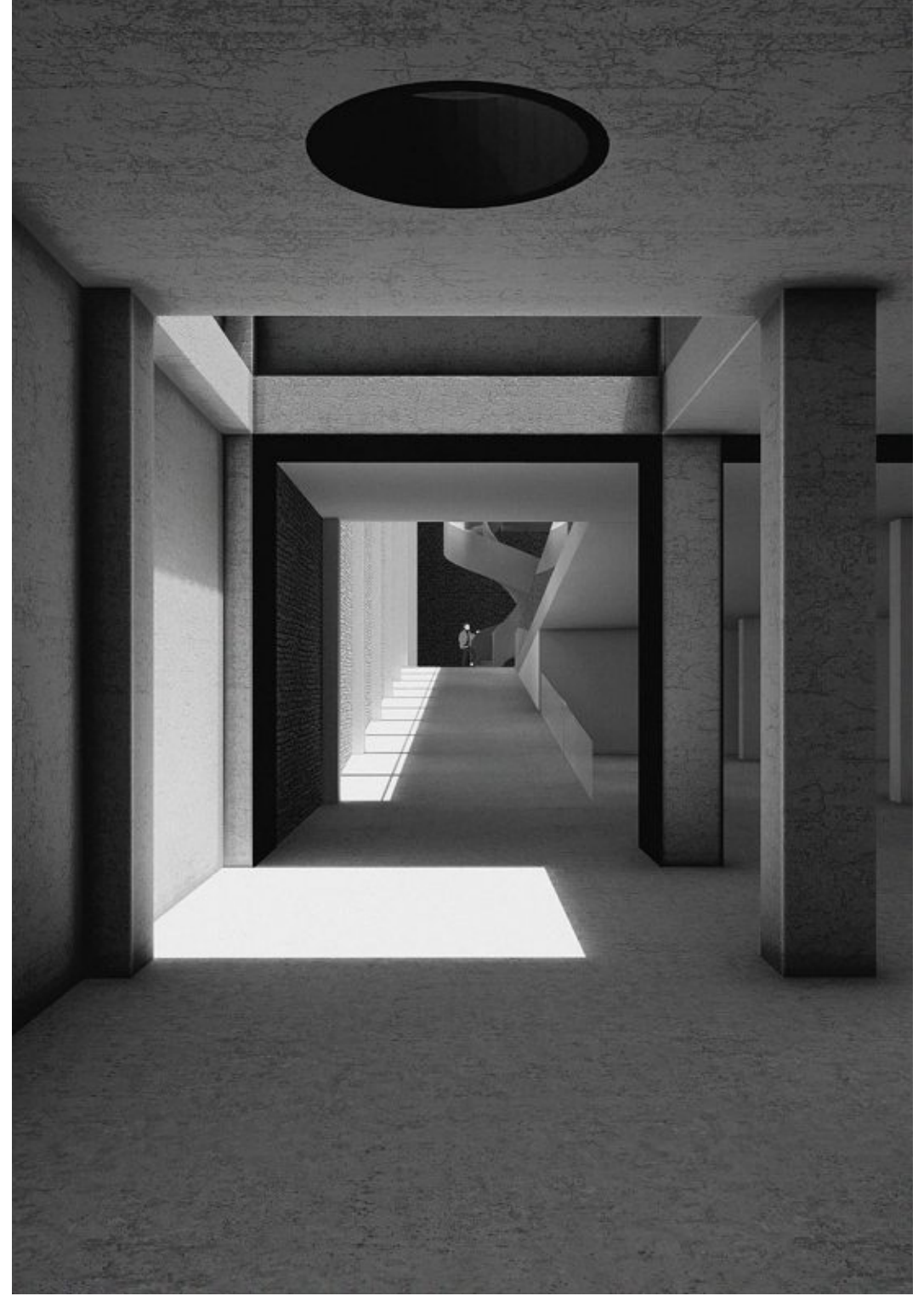
THE LANDMARK

With the destruction of the mill building and the chimney, Paromlin has lost its two trademark structures, but the silo can replace them both. It is a building that stands out from the brickwork, with its dimensions, materiality and subtle ornamentation. It will be **the central hub** that unites Paromlin.

- 1 The building is in good shape for the most part, but the biggest challenge of its renovation is the removal of the cells that held the grain. Once they are gone, the verticality of the space shines as the defining feature of the interior. It is a space that the building gives freely, and very little is required to make it completely functional. The silo's passage mirrors the one in the flour warehouse, additionally breaking the wall that is Paromlin.
- 2 The new skylights accentuate the verticality of the space, which gets an almost cathedral-like aesthetic.
- 3 There is visible damage on the exterior walls of the silo which need to be repaired. Decorating the eastern facade with the subtle plaster arches of the western facade would break up the monotony of the current look, accentuate the verticality of the building and unify the whole under the same design principles.



Whether it's for a performance or
for an exhibition, the silo always
has room for you.



Under the oculus. A view from
underneath the silo.



—
*Around the silo, under the silo, in
the silo. A view of the
main entrance.*

WAREHOUSE AND DRYING ROOM

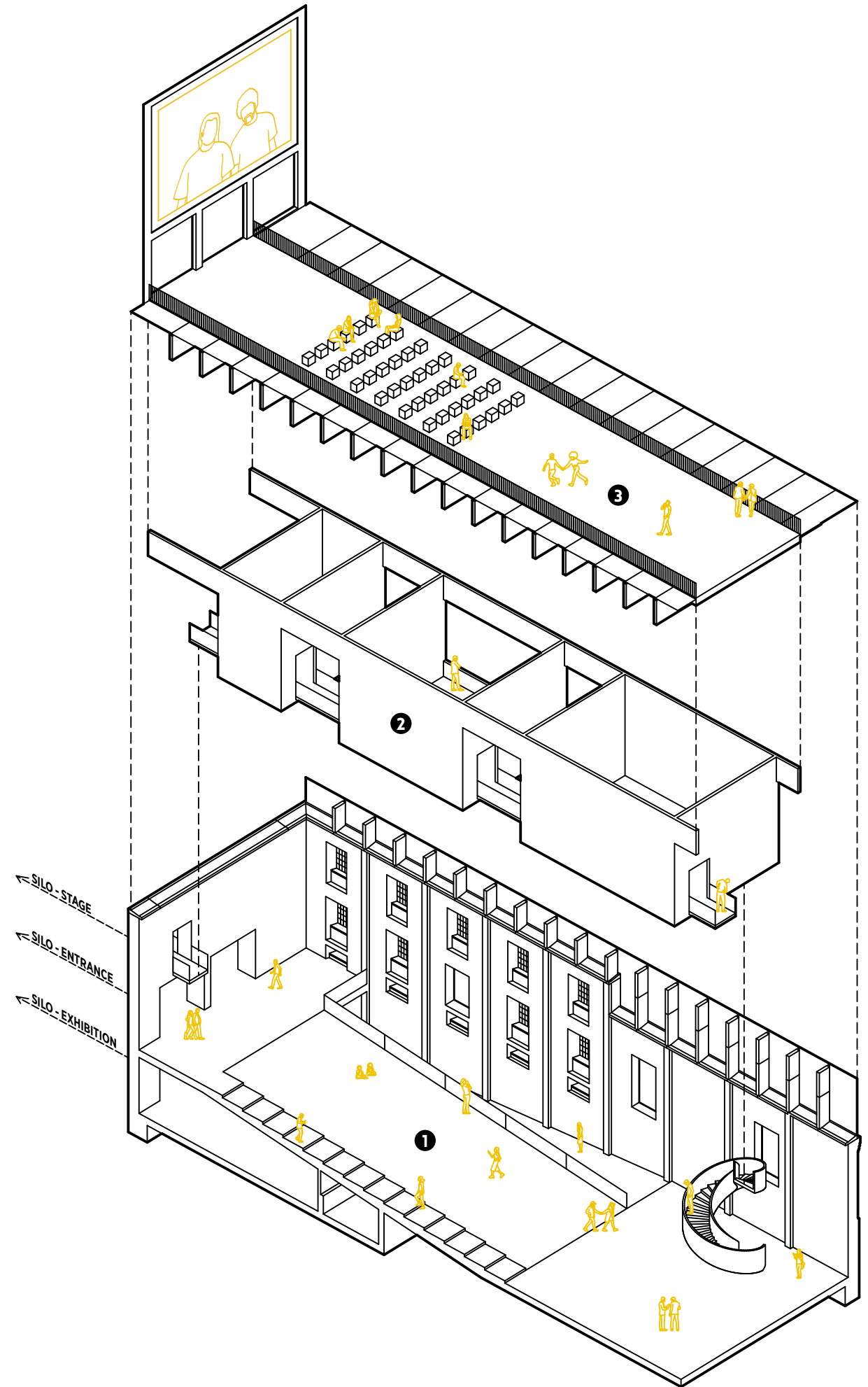
THE CANVAS

The two southernmost buildings of the complex, the warehouse and the drying room, are seemingly the red-headed stepchildren of Paromlin. After the warehouse burned down in 1925, its top two floors have never been rebuilt. The drying room was at one point twice as big as it is today, but its southern part was demolished in order to make more room for the Vatroslav Lisinski Concert Hall. Today, seemingly, they are worth even less than back then, because according to the competition for the City Library from 2018, they are only good for one thing - demolition.

For the purpose of this project, both buildings will be adapted. Whereas the floor warehouse was redesigned with production and the interaction between artists in mind, the warehouse and drying room focus on **exhibition and the interaction between artists and the wider public in order to demystify art and design.**

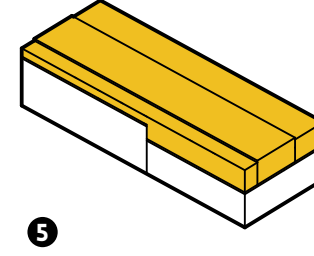
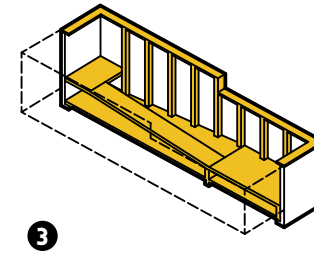
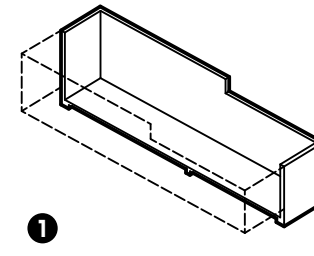
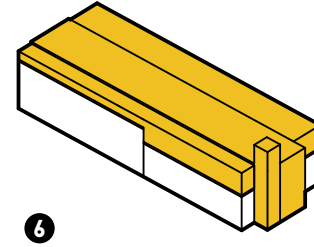
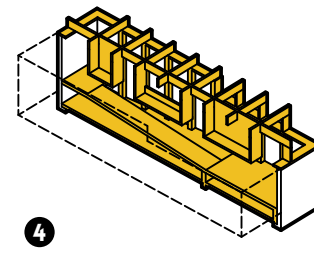
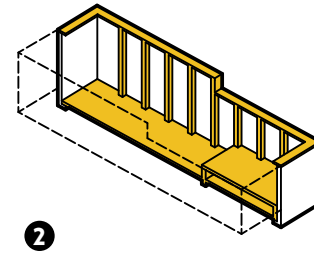
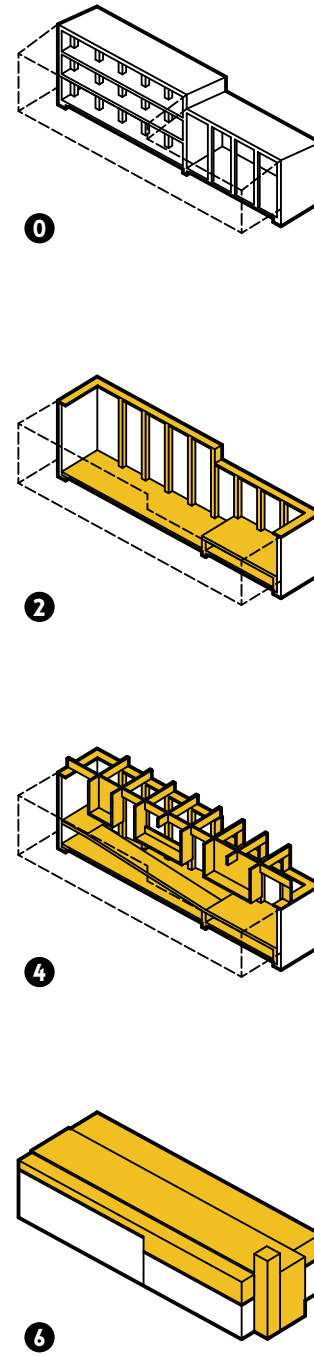
1 The two buildings have a basement level that was used over the lifetime of the complex. This allows the placement of a ramp which then connects all the buildings of the complex on both the ground floor and the basement level. The space also gains in flexibility and can host a wide variety of events, among them lectures and exhibitions.

- 2** Above this large space are three floating rooms connected by bridges. The spatial features of the individual rooms vary - their size and openness to the larger structure are different. This, combined with the intercutting of the floating rooms and the large space below leads to an interesting spatial flow.
- 3** The last piece of the puzzle is the roof, which is fully accessible from both within the building and from the outside. Windows on the side of the silo offer a view of the space below.



- 0** What differentiates the warehouse and drying room from other buildings addressed in this project is the fact that they aren't considered protected cultural property. As a result, they were slated for demolition in the competition for the City Library. However, this project will see them both adapted.
- 1** Similar to the flour warehouse, the interior construction, ceilings and the wall separating the two small buildings are removed. Both structures have basement floors, which will connect to each other and to the rest of the building via the silo.
- 2** Using the same method as in the flour warehouse and the transmission building, the brick walls are reinforced using concrete columns and tie anchors. Atop this new construction and the existing masonry come ring beams to tie them all together.
- 3** At this point, the two slopes that connect the basement level with the ground floor can be constructed.

- 4** Atop the ring beams comes a light-weight steel construction that will be encased in concrete. The structure consists of beams that run horizontally and vertically along the length of the building, and that hold the floating exhibition chambers under the roof. The individual chambers are connected via bridges.
- 5** With the beams in place, the roof can be finished and the glass panes can be installed.
- 6** What remains is the completion of the vertical communication: the spiral staircase that connects the large hall and the floating chambers, the exterior staircase that leads to the roof, and the elevator.





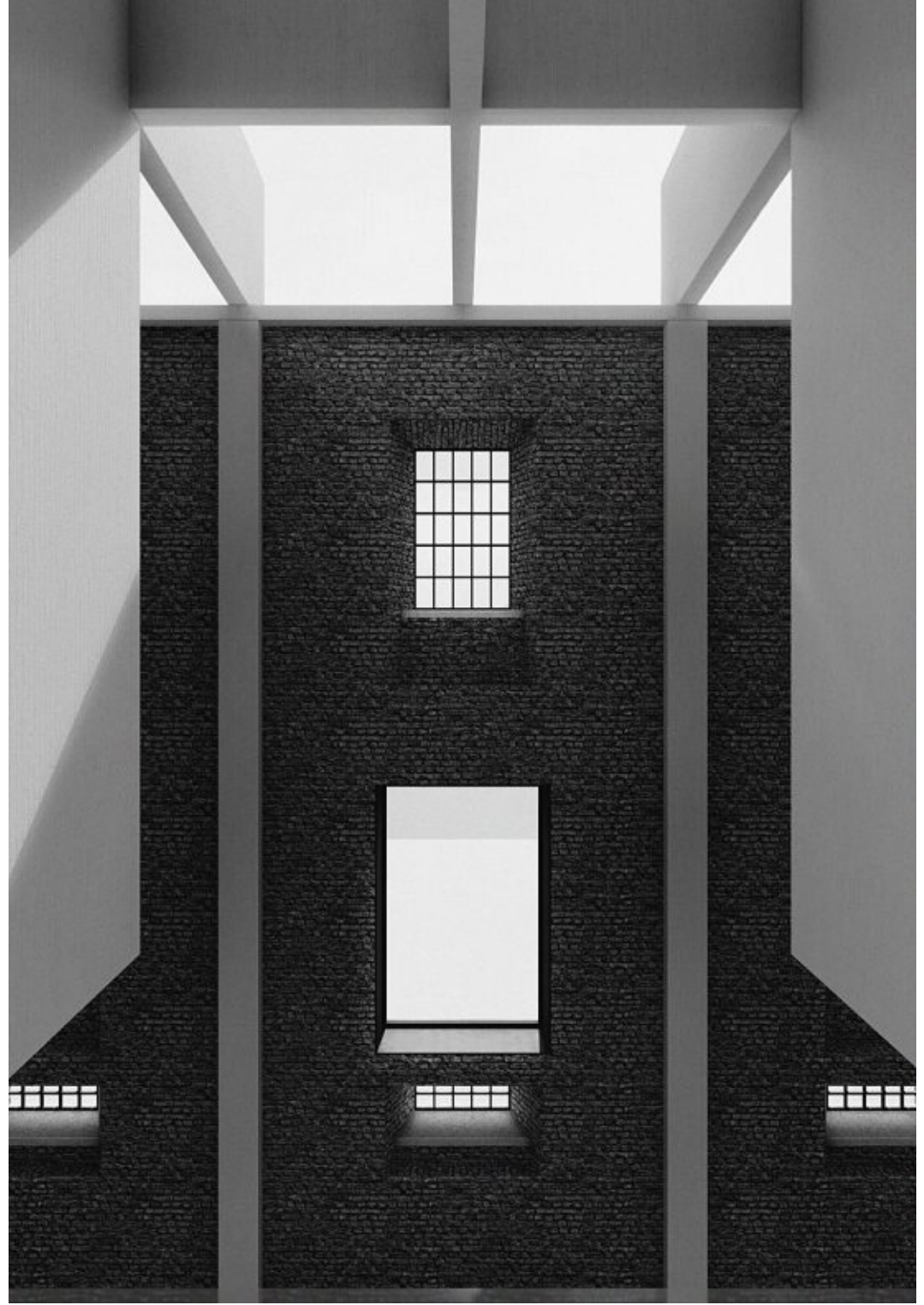
Old and new, face to face.
Inside one of the floating
exhibition rooms.



Look up. A view of the transformed interior of the warehouse and the drying room.



Upwards and onwards. Climb the stairs and enter the upper exhibition spaces.

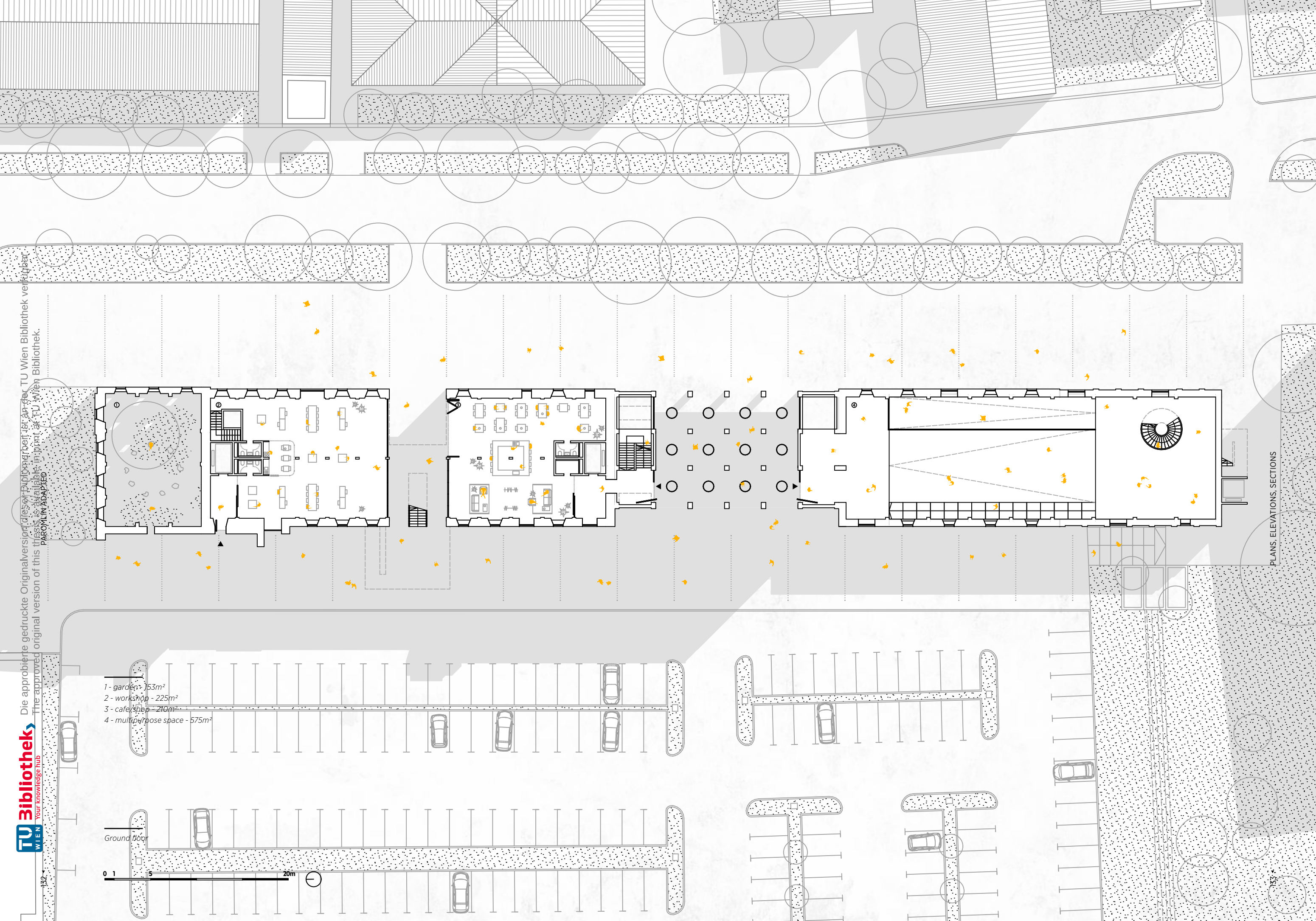


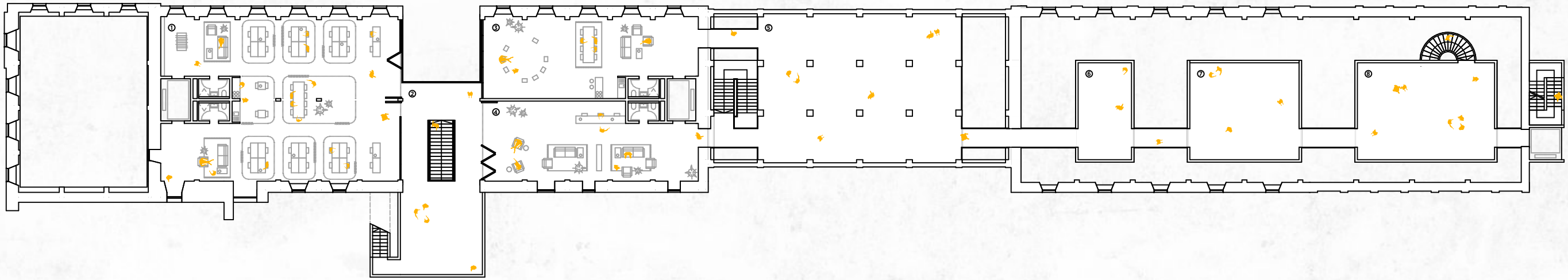
The space between spaces. A view from a bridge connecting the exhibition halls.

- 1 - garden - 153m²
- 2 - workshop - 225m²
- 3 - cafe/shop - 210m²
- 4 - multipurpose space - 575m²

Ground floor

0 1 5 20m





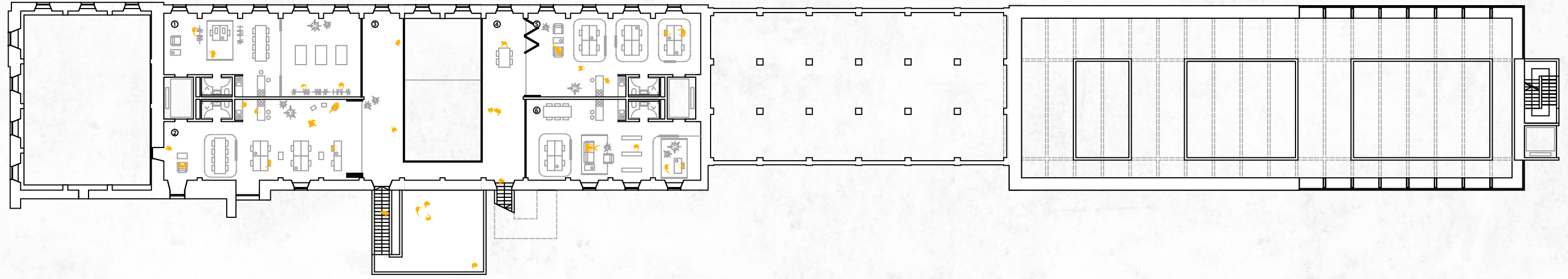
- 1 - coworking space - 240m²
- 2 - terrace - 95m²
- 3 - performance studio - 105m²
- 4 - lobby - 105m²
- 5 - stage - 200m²
- 6 - exhibition (small) - 33m²
- 7 - exhibition (medium) - 69m²
- 8 - exhibition (large) - 86m²

1st floor



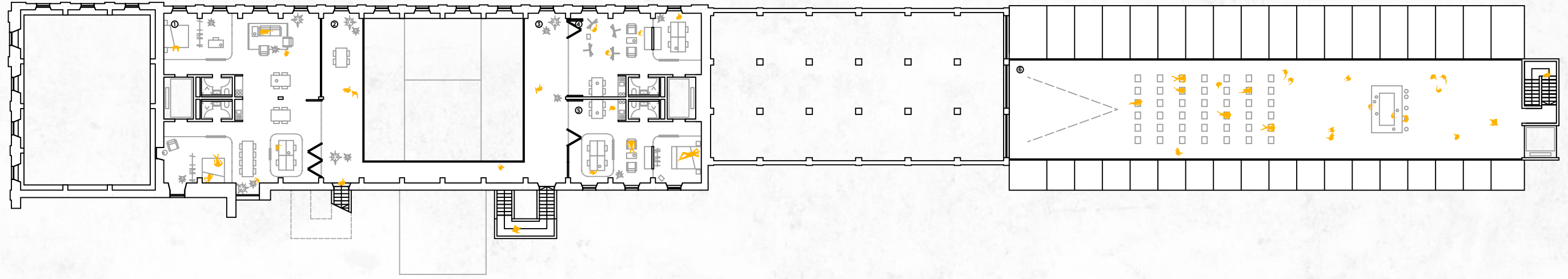
- 1 - atelier - 98m²
- 2 - atelier - 98m²
- 3 - terrace - 45m²
- 4 - terrace - 45m²
- 5 - atelier - 87m²
- 6 - atelier - 87m²

2nd floor



- 1 - atelier - 160m²
- 2 - terrace - 45m²
- 3 - terrace - 45m²
- 4 - atelier - 65m²
- 5 - atelier - 65m²
- 6 - terrace - 340m²

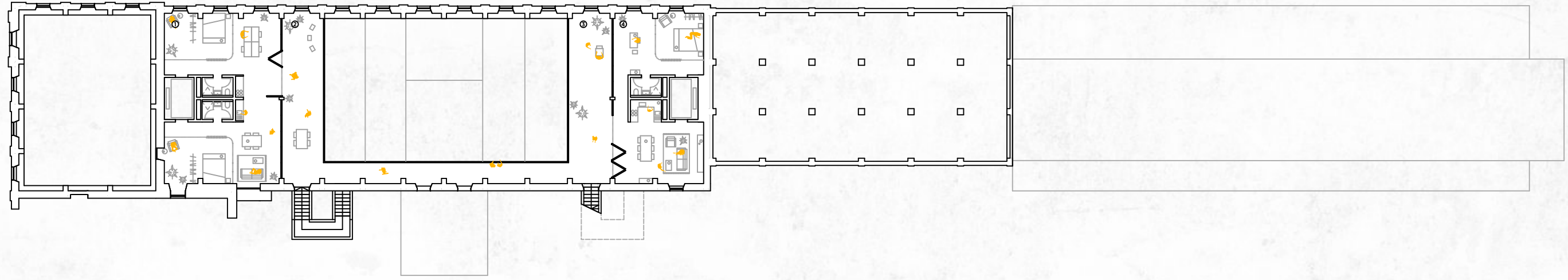
3rd floor

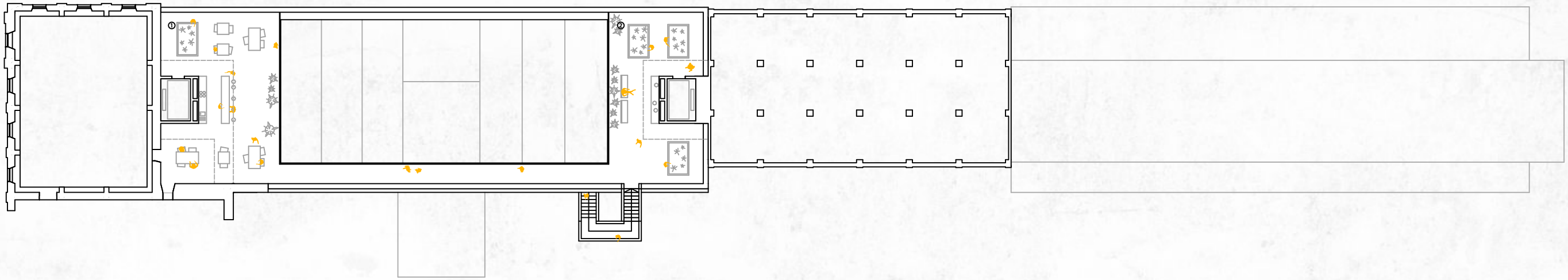


- 1 - atelier - 110m²
- 2 - terrace - 45m²
- 3 - terrace - 45m²
- 4 - atelier - 85m²

4th floor

0 1 5 20m

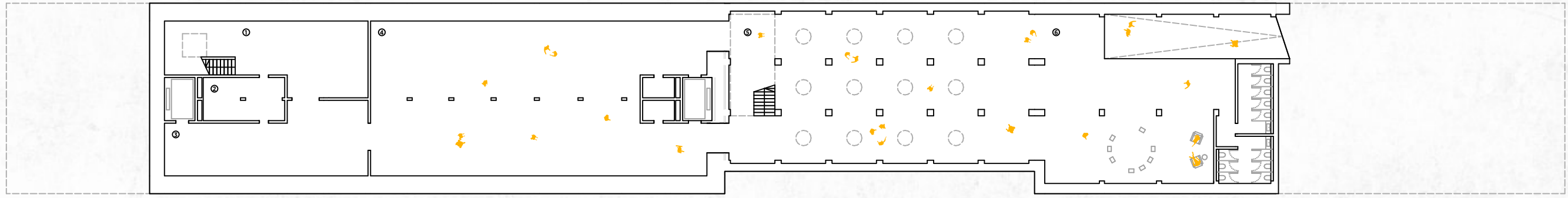




1 - terrace - 122m²
2 - terrace/garden - 92m²

5th floor

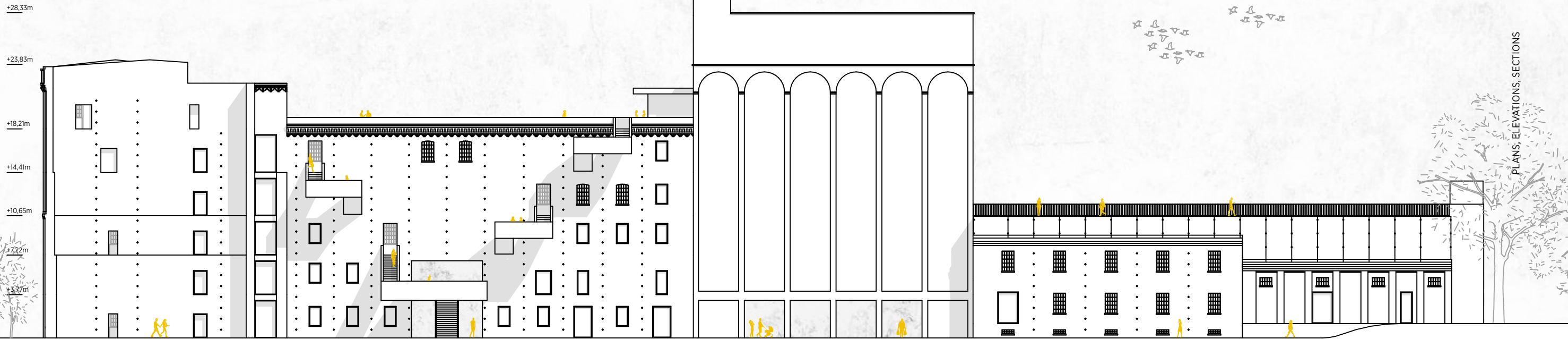




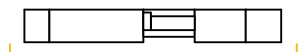
- 1 - storage/utilities - 56m²
- 2 - technical room - 22m²
- 3 - storage/utilities - 79m²
- 4 - exhibition - 303m²
- 5 - exhibition - 290m²
- 6 - exhibition - 147m²

Basement





Elevation West

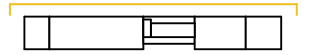
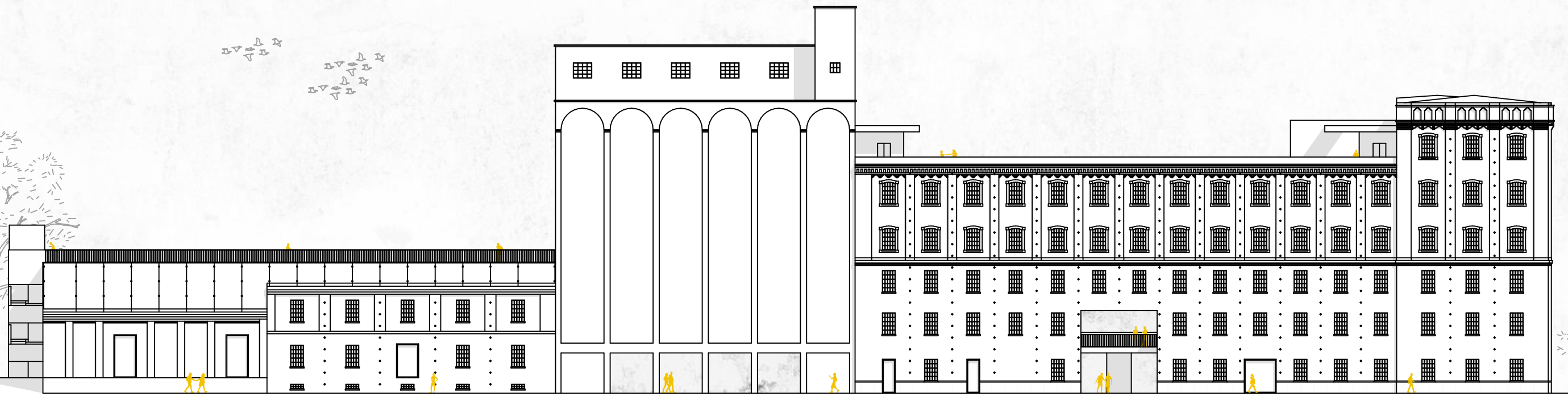




Section



Elevation East



SOURCES - LITERATURE

- p. 10-11 24sata (2012): „Planulo nagomilano smeće u napuštenoj zgradi Paromlina“. URL: <https://www.24sata.hr/reporteri/planulo-nagomilano-smece-u-napustenoj-zgradi-paromlina-268131> [Stand: 2. Deceंबर 2020].
- Matejčić, Barbara (2013): „Paromlin se (ne)planski ruši“. URL: <https://pogledaj.to/drugestvari/paromlin-se-neplanski-rusi> [Stand: 2. Deceंबर 2020].
- Matijević, Ivana (2014): „Bandić opet kumuje? Paromlin pod buldožerima ide u prašinu“. URL: <https://www.24sata.hr/news/bandic-opet-kumuje-paromlin-pod-buldozerima-ide-u-prasinu-373973> [Stand: 2. Deceंबर 2020].
- Žapčić, Andreja (2015): „Industrijska baština u Hrvatskoj propada“. URL: <https://pogledaj.to/arhitektura/industrijska-bastina-u-hrvatskoj-propada> [Stand: 2. Deceंबर 2020].
- p. 19 Knežević, Snješka (1994): *Lenuci i Lenucijeva potkova*. Zagreb: Sveučilište u Zagrebu, Institut za povijest umjetnosti.
- p. 22-23 Turato, Idis (2013): „Izvedena trećina“. URL: <https://vizkultura.hr/izvedena-trecina> [Stand: 2. Deceंबर 2020].
- p. 24 3LHD (2012): „Projekt Paromlinska - studija mogućeg razvoja“. URL: <https://www.yumpu.com/en/document/read/54232710/projekt-paromlinska-studija-moguceg-razvoja> [Stand: 2. Deceंबर 2020].
- p. 25 Klečina, Ante (2012): „120 godina Zagreb Glavnog kolodvora“. URL: <https://www.szz.hr/120-godina-zagreb-glavnog-kolodvora> [Stand: 2. Deceंबर 2020].
- p. 26-27 Boltužić, Ana (/): „Koncertna Dvorana Vatroslav Lisinski - Neprocjenjiv doživljaj - Zagreb“. URL: <https://www.lisinski.t-com.hr> [Stand: 2. Deceंबर 2020].
- p. 28-29 Sopta, Pia (2016): *Nastanak i nestanak industrijskog krajolika TŽV Gredelj u Zagrebu*. Zagreb: Sveučilište u Zagrebu, Odsjek za povijest umjetnosti.
- p. 29 Radović Mahečić, Darja (1993): *Socijalno stanovanje međuratnog Zagreba*. Zagreb: Sveučilište u Zagrebu, Institut za povijest umjetnosti.
- p. 30-33 Galović, Krešimir (2013): „Kraljevski povlašteni Zagrebački parni i umjetni mlin“. URL: <https://kgalovic.blogspot.com/2013/02/kraljevski-povlasteni-zagrebacki-parni.html> [Stand: 2. Deceंबर 2020].
- p. 30-33 Veselić Bruvo, Jadranka et al (2013): *Paromlin 2013*. Zagreb: Gradski ured za strategijsko planiranje i razvoj grada.
- p. 38-39 Šimičić, Nika (2014): *Konzervatorsko-restauratorski projekt za zgradu Kraljevskog povlaštenog Zagrebačkog parnog i umjetnog mlina*. Zagreb: Sveučilište u Zagrebu, Odsjek za povijest umjetnosti.
- p. 40 Knežević, Snješka (2018): *Zagreb u škarama*. Zagreb: UPI-2M BOOKS.
- p. 42 Sutlić, Korana (2019): „Neprežaljeno kupalište na mjestu starog Paromlina“. URL: <https://www.jutarnji.hr/domidizajn/interijeri/neprezaljeno-kupaliste-na-mjestu-starog-paromlina-9445139> [Stand: 2. Deceंबर 2020].
- p. 66-67 Brand, Stewart (1994): *How Buildings Learn: What Happens After They're Built*. New York: Viking Press.
- p. 68-71 Astorg Bollack, Françoise (2013): *Old Buildings, New Forms: New Directions in Architectural Transformations*. New York: Monacelli Press.
- p. 72-73 The British Museum (2020): „Object: The Map of the World“. URL: https://www.britishmuseum.org/collection/object/W_1882-0714-509 [Stand: 2. Deceंबर 2020].
- Chou, Kelly / Liu, Sheree Y. (2018): „Hubert Robert: Painter of Ruins“. URL: <http://omeka.wellesley.edu/piranesi-rome/exhibits/show/hubert-robert/robert-earlylife> [Stand: 2. Deceंबर 2020].
- p. 76-77 Romano Impero (2012): „Teatro Marcello“. URL: <https://www.romanoimpero.com/2009/12/teatro-marcello.html> [Stand: 2. Deceंबर 2020].
- p. 89 Nouvel, Jean (2017): „Real/Virtual“. URL: <https://www.jeannouvel.com/en/projects/fondation-cartier-2> [Stand: 2. Deceंबर 2020].
- p. 91 Herzog, Jacques / de Meuron, Pierre (2000): „Herzog & de Meuron - Eleven stations at Tate Modern“. URL: <https://www.herzogdemeuron.com/index/projects/complete-works/126-150/126-tate-modern.html> [Stand: 2. Deceंबर 2020].
- Hyslop, Donald (2012): „Culture, Regeneration and Community - Reinventing the City“. In: *Gateways: International Journal of Community Research and Engagement* Vol 5, S. 152-165.

SOURCES - PHOTOGRAPHY

p. 4	Tedeško, Sara
p. 14-15	Google Earth
p. 22	Turato, Idis*
p. 23	Turato, Idis (tl, tr); 3LHD (b)
p. 24	Blaga&misterije (m); 3LHD (b)
p. 25	Lisac, Andrija Ljubomir
p. 26-27	Wikimedia Commons, Flammard
p. 28	Grupa Krenimo
p. 29	Galović, Krešimir (t); Tadić, Krešimir (b)
p. 30	Lisac, Andrija Ljubomir
p. 31	Lisac, Andrija Ljubomir (l)
p. 34	Croatia Infiltration
p. 35	Klindić, Ivan (b)
p. 37	Tedeško, Sara
p. 40	ZDL Arhitekti
p. 41	Polak (t), UPI-2M (b)
p. 42-43	NFO
p. 54	Croatia Infiltration
p. 55	Croatia Infiltration (b)
p. 56	Tedeško, Sara
p. 59	Croatia Infiltration (l); Tedeško, Sara (tr, br)
p. 60-63	Tedeško, Sara
p. 67	Brand, Stewart*
p. 72-73	The British Museum
p. 74	Wikimedia Commons, Louvre
p. 76	Wikimedia Commons, Albertina
p. 77	Colosseum Rome Tickets
p. 81	von Becker, David
p. 83	Universalmuseum Joanneum
p. 85	Ruault, Philippe (t); Ghinitoiu, Laurian (bl, br)
p. 87	Boegly, Luc
p. 89	Suzuki, Hisao
p. 91	Tate (t); Shearing, Daniel (b)

All uncredited images and drawings belong to the author.

Images marked with an asterisk (*) belong to their respective owners but have been recreated by the author because of the poor quality of the originals.

Tina, thank you for guiding me through this project and other projects before it. I want to especially thank you for all the comments and critiques you gave me that I did not want to hear at the time. Ultimately, they always made the project better. I told you before: you are brutal, but I like that. I owe my vision of what architecture can be to you.

Kathi, thank you for your insightful observations on both the book and the project itself. Heike, my commiserator, I want to thank you for your remarks as well, but more importantly, I want to thank you for saying you knew how I felt and actually meaning it.

Luka, thank you for reading and rereading this book. We can both agree that your eagle-eyed observations elevated the quality of the final product. Above all else, thank you for being my friend.

Sara, thank you for getting me those amazing photos. I believe the results speak for themselves.

Fran, what can I even say? You have supported me unconditionally and without fail your whole life. I couldn't ask for a better brother. Thank you.

Mom, dad, thank you for your continuous support over all of my life basically, but especially during my university years. And thank you for being patient.

And thank you Ela, for everything above and so much more. For listening to my ramblings, for humoring me when I showed you drawings with minimal differences and asking you which was better, for helping out whenever you could and sometimes when you couldn't. Thank you.

Thank you all.



Die approbierte gedruckte Originalversion dieser Diplomarbeit ist an der TU Wien Bibliothek verfügbar
The approved original version of this thesis is available in print at TU Wien Bibliothek.