

Sophie Soenen

Project Journal

Interiors Buildings Cities
0 - Introduction

Academical year 2021 2022

A Bank of Opportunities

A sheltering bank for people

Interiors Buildings Cities

Sophie Soenen
5392594

Main mentor (architecture) *Mark Pimlot*
Second mentor (research) *Jurjen Zeinstra*
Building technology tutor *Matthijs Klooster*

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0 / Acknowledgements

Studies are an important part of one's life. It is a period of learning, discoveries, personal and intellectual growth. The master's degree is designed to lead us students to become architects. The graduation project is an opportunity to research and design a project from start to finish. Taking into account the context, history, theoretical background, architecture, climate and engineering. The project was slowly formed over the course of the year. As one's personal experiences form our perspective on architecture, the interactions and common ordeal with fellow students helped to develop the project.

I would like to express my deepest gratitude to my tutors, Marc Pimlot, Matthijs Klooster and Jurjen Zeinstra for their support, guidance and encouragements throughout the year. I would like to extend my sincere thanks to Daniel Rosbottom, Sam De Vocht, Amy Thomas, Birgitte Hansen for their advices and tutoring.

This project would not have been possible without the support of the whole Interiors Building city's studio. As the project was complex and extensive, the support and encouragement provided by the group made the accomplishment of the Bank of opportunities project possible as well as gratifying. Special thanks to Aneesh, Renske, Julia, Robin, Ebrina and everyone else. I am also thankful to other studios and close friends in the faculty who made this year enjoyable and instructive. Many thanks to Sophie for the affection and solidarity during this project.

I am indebted to Stef, for supporting and encouraging me as well as reviewing my work during the entirety of this master's degree.

Lastly, I would like to thank my family for their unwavering love, support and understanding at any time in my life.

The National Bank of Belgium.

This project, as it is going to be explained at length in this introduction chapter, is quite complex and encompasses various subjects within one design.

As a Belgian citizen who has lived in Brussels for three years, the title of the studio "Palaces" intrigued me. Brussels is the capital of Belgium, but also Europe. As a result of this, the city profits from an abundance of languages, cultures and religions. The city is filled with palaces, places of power and wealth, from present or past times.

The title of the studio "Palace" refers to a large public building, a building open for people. The National Bank of Belgium was not intended for the public. The building is indeed "open" but only in a very contained way and exclusively for business purposes. The Bank is not, nor tries to be a social space.

Conceivably, the bank could change and become, as a civic institution, the representative of all social, economic and cultural classes and thus a space where these very different worlds could meet.



Areal view of Brussels's pentagon
Google Earth

2 / Introducing The National Bank Of Belgium

This project arose from a real-life architectural competition initiated by the National Bank, with the aim to renovate their facilities. The building in question is located on Boulevard Berlaimont in Brussels, the capital of Belgium. The building was designed by Marcel Van Goethem in the 1940s.

It was designed to replace and modernise the previous bank designed by Henri Beyaert during the second half of the 19th century. The original bank was located in the 1860s in the Saint Gudula's neighbourhood, right next to the cathedral. The building was incorporated into the urban fabric of the time. It started by occupying only one small building which is the old governor's hotel, to which the banking hall was expanded onto over time. By the 20th century, the National Bank of Belgium's building was occupying the entire urban city block.

Before World War II, the Governor decided to renovate the National Bank. The building was decaying and was too crowded for the need and operations of the Bank. The project was offered to Marcel Van Goethem, an architect from Brussels, who had previously worked on other buildings in the capital. Unfortunately, the war started in 1939 and the project had to be stopped for the duration of the conflicts. The project resumed after the war but was considerably changed. By popular outrage, it was decided to keep the Governor's Hotel and build the project around it.

The Bank we see today was completed in 1952 and was a very modern office building for its time. A lot of light, security and the most innovative features were included in the design. With time passing on, the Bank went through different phases of its life. The project for the renovation of the Bank will start a journey for the coming decades. I chose to open the Bank back to the public, reopening the doors to the community.



National Bank Of Belgium in the 19th century and in 1980
Source : *NBB photosurvey*

We have evolved into a capitalist society. Banks and money play an important role in our world. National Banks have a particular place in the system as they represent their countries and they coordinate their financial regulations.

When the National Bank of Belgium introduced an architectural competition for the renovation of their building Boulevard de Berlaimont, the objective was to refurbish of the office buildings for the bank. As the number of the bank's employees is diminishing each year, the need for a change was necessary. However, the brief of the competition was very centred around the bank itself and its employees. The bank showed little indications for the building to be more open towards the public or to have other functionalities.

The renovation of the National Bank of Belgium, beyond the renovation of the building and refurbishment of the offices, is a great opportunity to renew the Bank as an institution. The image of the bank towards the public is conveyed by its actions and communication throughout the country but also by its building and connection to the public.



National Bank of Belgium's public banking hall
Source : Nbb.be

Brussels

North-south connection
Capital of Europe
Belgium
Linguistic conflicts
Cosmopolitan city
Immigration
Bruxelisation
Homelessness

Bank

Future bank/bank of the future
Financial system
National bank
Financial education
Public space
Social plinth

Workspace

Future of the workplace
Durable Offices
Place & relationship in the city
Sustainable work place
Interactivity
Flexibility



Berlaimont Boulevard's facade of the NBB
Source: Bma, brussels

5 / *National Bank of Belgium's project*

The project of the National Bank of Belgium's renovation is quite complex. With it come a lot of challenges and opportunities.

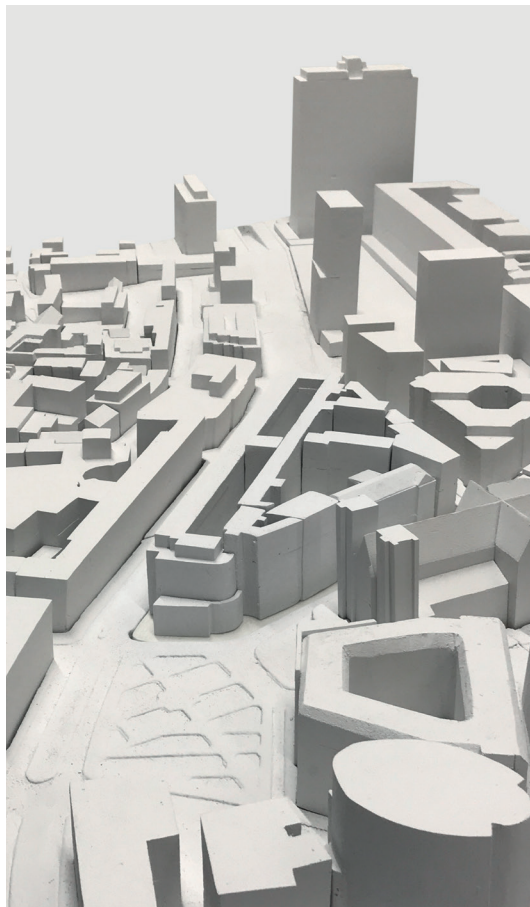
The picture on the right shows the model of the National Bank in its context (groupwork). It very clearly shows the scale of the building and therefore the project. From this, challenges are rapidly becoming more obvious.

The first one, and personally the most important one, is how closed-off the building is. The bank was built as its own entity. Other buildings for the National Bank were built in immediate proximity to the main building. The first one of these to be built was the printing press, also designed by Marcel Van Goethem. The second one is the building just across the Boulevard, hosting a part of the available offices for the bank. Outside of an underground tunnel connecting the employees entrance, no obvious connection is apparent above ground. The National Bank should be open its doors to the public. To be more connected to the community and neighbourhood it is located in. The main question resides in choosing the manner use and the consequences it will bring.

The scale of the building also poses a big challenge. The competition's brief includes a list of vital functions to be required and taken into account. Some of these are: a banking hall, spaces for the employees and obviously offices for the employees. The surface-area required for all of the bank's necessities doesn't equal the area available. What to do with all of this leftover room? As space like this is very valuable in the city centre of Brussels. By introducing other functions into the building, there is a way to give purpose to the unused space.

The next challenge the project brings is the revision of the office spaces. Since the 2020 Coronavirus pandemic, the world had to seek other ways to operate than going to the work every day. People were confined to their homes for an extended period of time. Employees and companies realised there were other ways to work and offices were an expensive commodity. The goal is therefore to design flexible and comfortable offices spaces for a variety of people and scenario's. Offices that can withstand the various challenges of the future with minimal intervention or changes.

These are only a few challenges arising from the project. more will be added and elaborated in later chapters



1/500 context and bank model
Source : *Group work*

The project of the National Bank of Belgium is complex. It combines various subjects relating to architecture, the financial field, the social context and the history of the bank and its situation.

As these subjects diverge and get distinct, at some point of the project, it is easy to lose grip on the project. The diagram presented on the right page is showing my thought process to work throughout this complicated project.

This project was considered as a linear evolution. It started by the social problem that I encountered in Brussels during the first semester. Poverty encompasses a lot of diverse issues but is primarily due to the lack of wealth. The bank's objective is to generate wealth, to create a more wealthy society in general. The office workers of the bank are working towards creating this wealth. These two worlds are opposite in essence. This project might be the starting point for these two worlds to meet.

During the entire project and with the help of this diagram, I will try to understand the implications, causes and effects of the different problems and realms shows implicated.



Facade of the National Bank of Belgium
Source : Bas Leemans

Deblon, V. (2012). Banque nationale : Une architecture moderne. Sous La Loupe .

Antoine, S., Antoine, S. (2021, August 13). Marcel Van Goethem, architect of the National Bank's Headquarters. NBB Museum. Retrieved November 22, 2021, from <https://www.nbbmuseum.be/en/resources/marcel-van-goethem-architect-national-banks-headquarters>

Banque Nationale – Inventaire du patrimoine architectural. – Inventaire du patrimoine architectural. (n.d.). Retrieved November 22, 2021, from https://monument.heritage.brussels/fr/Bruxelles_Pentagone/Boulevard_de_Berlaimont/1/33445#gid=nullpid=2

Brion René, & Moreau, J.-L. (2005). La Banque Nationale de Belgique 1939-1971. Banque nationale de Belgique.

Chlepner, B. S. (1926). La Banque en Belgique: étude historique et économique.

Delvaux, Y. (1996). La préparation de la Belgique à l'union économique et monétaire. *Courrier Hebdomadaire Du CRISP*, n° 1536-1537(31), 1. <https://doi.org/10.3917/cris.1536.0001>

Gubin, E., Nandrin, J.-P., & den, D. P. V. (2010). La Belgique libérale et bourgeoise, 1846-1878. Le Cri édition.

Kauch, P. (1964). Les bâtiments de la Banque Nationale de Belgique à Bruxelles.

Mabille, X. (1993). La société Générale de Belgique: Éléments pour une histoire de la Banque Mixte 1822-1934.

National Bank of Belgium iconography . (National Bank of Belgium.). Official documents handed in by the National Bank of Belgium

National Bank of Belgium photo survey . (National Bank of Belgium.). Official documents handed in by the National Bank of Belgium

Tart, L. (1898). La Banque Nationale de Belgique: historique et organisation.

Vincent, A., Tulkens, C.-X. (1998). La Société Générale de Belgique et la générale de Banque. *Courrier Hebdomadaire Du CRISP*, N° 1613-1614(28), 1. <https://doi.org/10.3917/cris.1613.0001>

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1- The Bank of Opportunities

- 1 | Project statement
- 2 | Program of the National Bank
- 3 | Diagrammatic programming
- 4 | Distribution of the functions
- 5 | Opening the Bank to the city
- 6 | Sections through the project
- 7 | People's café
- 8 | Community halls
- 9 | The garden of the bank
- 10 | The National Bank's offices
- 11 | The refuge

The renovation of the National Bank of Belgium is a significant opportunity to revise the position the institution has in the country, city and its communities. What if banks were working for and with the community? In the capitalist world we live in, National Banks have an important representational role in which they carry the values of their countries to the world and the nation. By opening its door to the public, the National Bank of Belgium could become the precursor of a social change in the economical and financial field.

The public plinth's exercise triggered the base for this National Bank of Belgium's project. This exercise required us to think about the social relationship between the building and the public. As a Belgian citizen who has lived in Brussels for a few years during my bachelor's degree, I am acquainted with Brussels' social issues. The homelessness and refugee's problem always personally touched me. Considering these issues, I introduced a food bank into the main hall of the National Bank of Belgium as it is currently not in use. With it, giving these spaces to the city and to the ones who need them the most is a gesture from an institution that is usually distanced by a social gap.

This project was initiated by the research question. Is there a way to associate the banking and economic side of our society with the people and community surrounding it?

What would change to the Bank's operation if different kinds of public were to be introduced in the building of the bank? How would it change the dynamic? What would be implied for the workers? These new interactions between the bank, its employees and the community surrounding it will generate a new meaning to the institution that is the National Bank of Belgium.

The National Bank of Belgium established its headquarters in the Saint Gudula's neighbourhood very soon after its constitution in the 1850's after the creation of Belgium as a country which happened in 1830. Before the second world war, it was decided to build a new structure to accommodate the growing number of clients and employees of the bank in a more financially active society including women. Saint Gudula's neighbourhood was prominently very religious and hosted various religious orders and establishments from the Middle Ages onwards. Religious orders were an important part of society in the past. They sheltered people in need but also the communities. The National Bank of Belgium has been located under its shadows since its creation. Opening its doors to the public and communities, the National Bank of Belgium is taking on this heritage of caring for the ones in need but also the community it sits in. The location of the bank is quite strategic in the city as it stands now, alongside the North-south train junction. In the 1950's it was decided to build an underground connection, linking all of the train stations of Brussels and revolutionising public transport in the city. This connection was part of the modernist view of the city and its prosperous future. The National Bank of Belgium's building was part of this vision. Modern technologies for a brighter future.

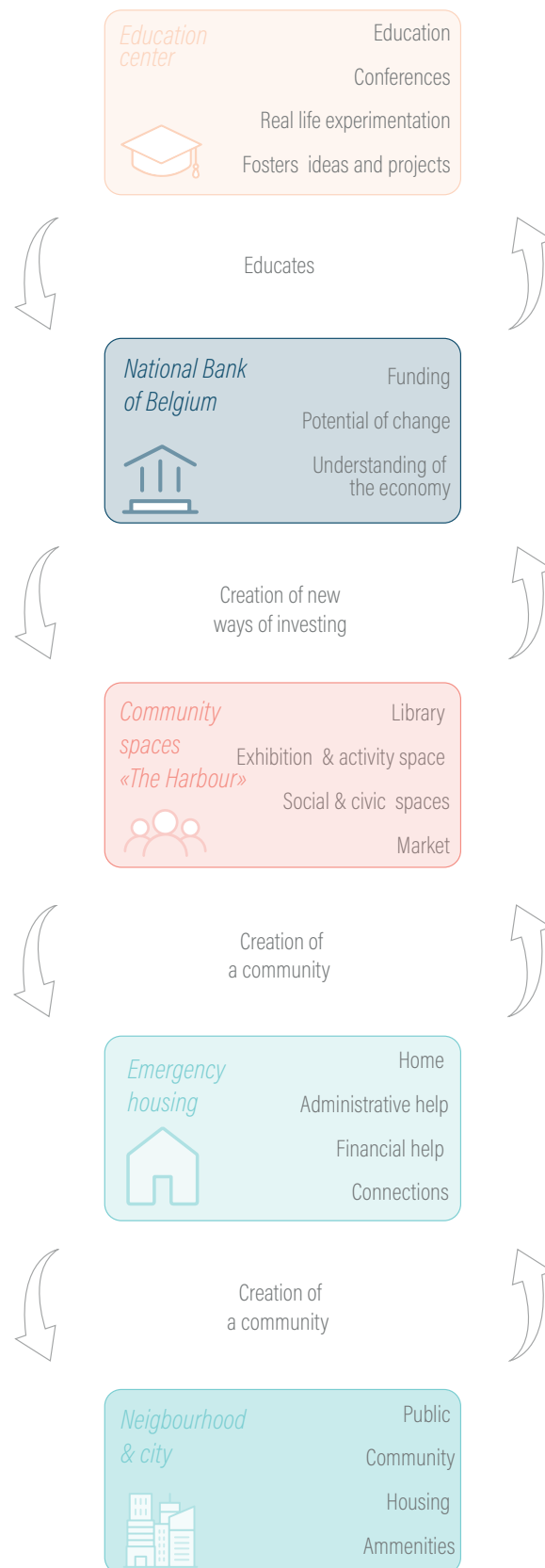
The building reflects the values the bank wanted to convey to the public. The building is monumental and imposing, the banking halls were open to the public, and very elegant. The institution wanted to convey a trusting, solid and open image to the public. After a few decades, centralization of European banks and a reduction of workers in Belgium's capital changed the image and functioning of the bank drastically. Today, it is seen as a closed-off, intimidating, unwelcoming, outdated and empty bank. The National Bank of Belgium's project is the perfect opportunity to change the public image, but also the way it interacts with the public.

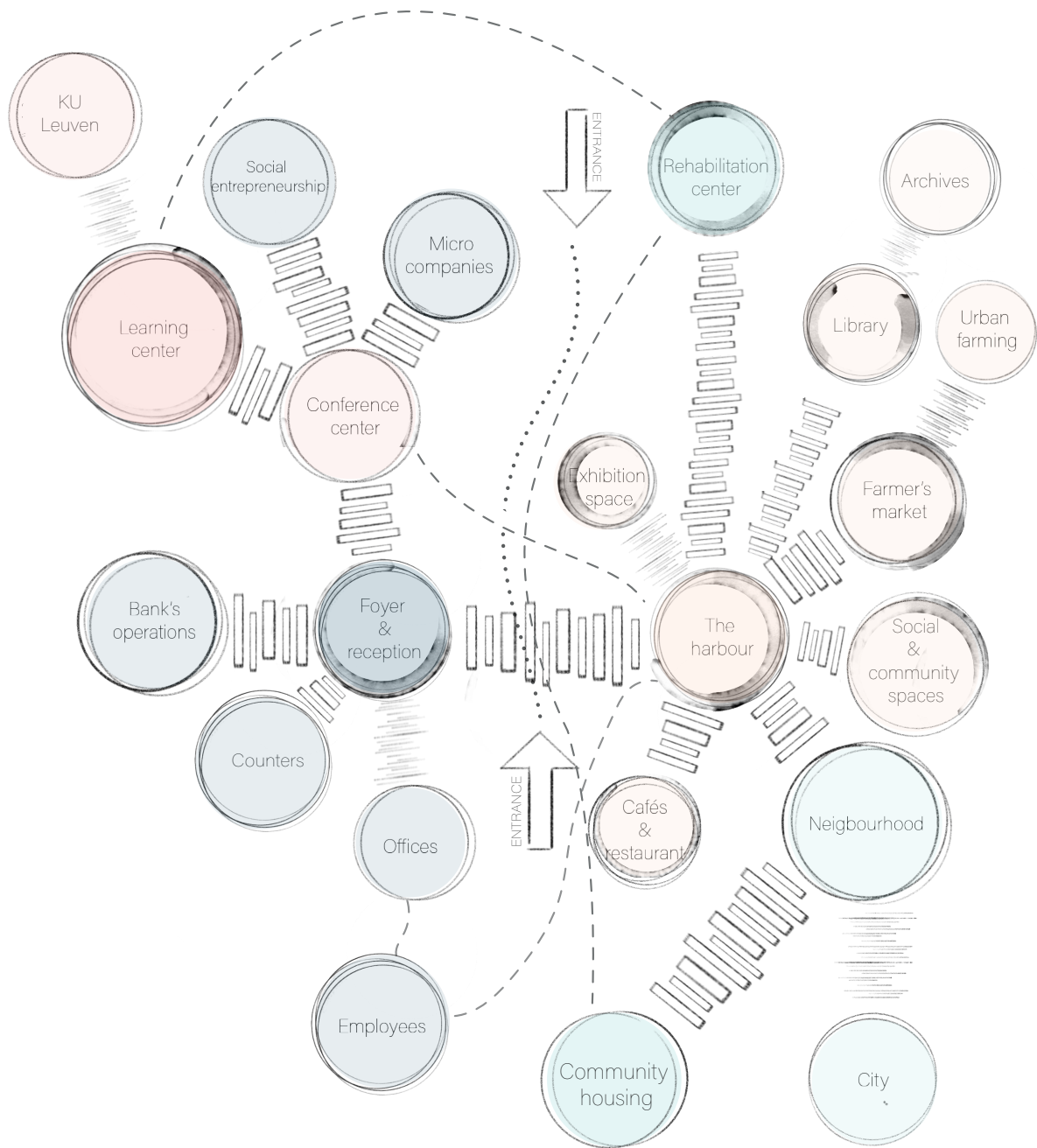
The base of the project is the opening to the public. Two main routes now go through the entire building, opening it to the street and the city. The first connects the original entrance of the old bank and monumental staircase with the monumental entrance to Boulevard Berlaimont. The second is the link between the Porte cochère with the monumental entrance of the Boulevard de Berlaimont. These two routes are framing the newly opened courtyard and are enclosed by two new circulation cores, servicing the National Bank on the upper floors. This courtyard is a new public space and is open to the street and the community. It is also the entrance for the bank's employees. These two worlds collide and connect inside this space. The majority of the ground floor has been given to the public in extension with the courtyard. The banking halls, now mainly unused for the bank, are also given to the city. One side contains the food-related spaces such as a farmer's market, restaurant or food stalls and the other one hosts more culture-related activities like the library, exhibition space and also the bank's counters. The upper floors are hosting the Bank's offices and facilities.

The Governor's Hotel and its extension are transformed into emergency housing and communal spaces. Brussels is the centre of the European Union and welcomes a variety of people seeking a better life, but Brussels is also the capital of Belgium. Despite the country's wealth, it counts an absurd number of people in need. It was important for me to provide some space to disadvantaged people in this project. They occupy the beautiful spaces of the Governor's Hotel, and the rooms are located in the extension of the Hotel, where the rooms are sized better for housing.

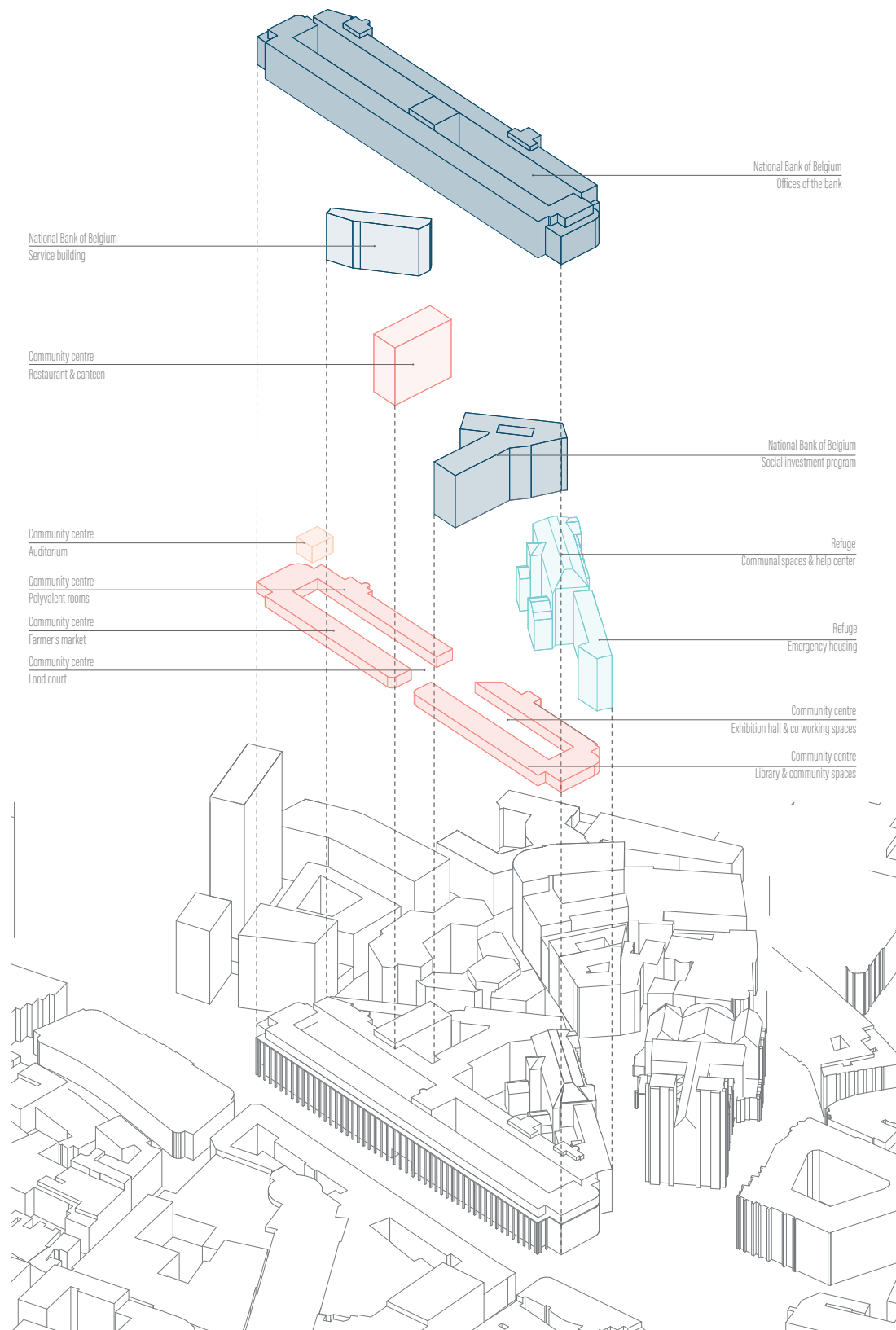
The employees of the bank are also very much involved in the deep change of the National Bank of Belgium. The ground floor has been given to the public, but the bank's workers are free to enjoy these spaces as well. The public meeting rooms, the library, the food court, the farmers' market and even the auditorium are accessible for activities during and outside of work hours. Deep changes are made within the existing fabric of the offices, while reusing the furniture and partition system. The previously closed-off layout is changed into a semi-open plan where new spaces are included along with the circulations. A few meeting and closed workspace are added as well within the new layout. The central core has been completely transformed. Two new circulation cores have been added alongside the inner courtyard giving access to the individual floors of the Bank. The central core accommodates the internal circulation and lounge areas for the public visiting the bank but also for the employees. On each of the extremities of the building, some other lounge and break areas are more private and reserved for the employees. A wing of the National Bank of Belgium will focus on social investments, they are investments for the community and the city rather than investments in fossil fuels or other big lobbies. This wing is placed in the building bordering the new courtyard for ease of access. This also brings a strong connection with the bank from the new circulation cores.

The Bank has been completely transformed from the inside with minimal intervention on the outside. From Boulevard de Berlaimont, only the entrance has visibly changed. The fences surrounding the building have been removed and have been replaced with a combination of stairs and pedestals, welcoming the public along its monumental facade. The change is within the building, transformed by the creation of the courtyard and the publicness of the scheme. With this project, The National Bank of Belgium is completely renewed from within. The Bank is more open to the public and better connected with the city and its people.

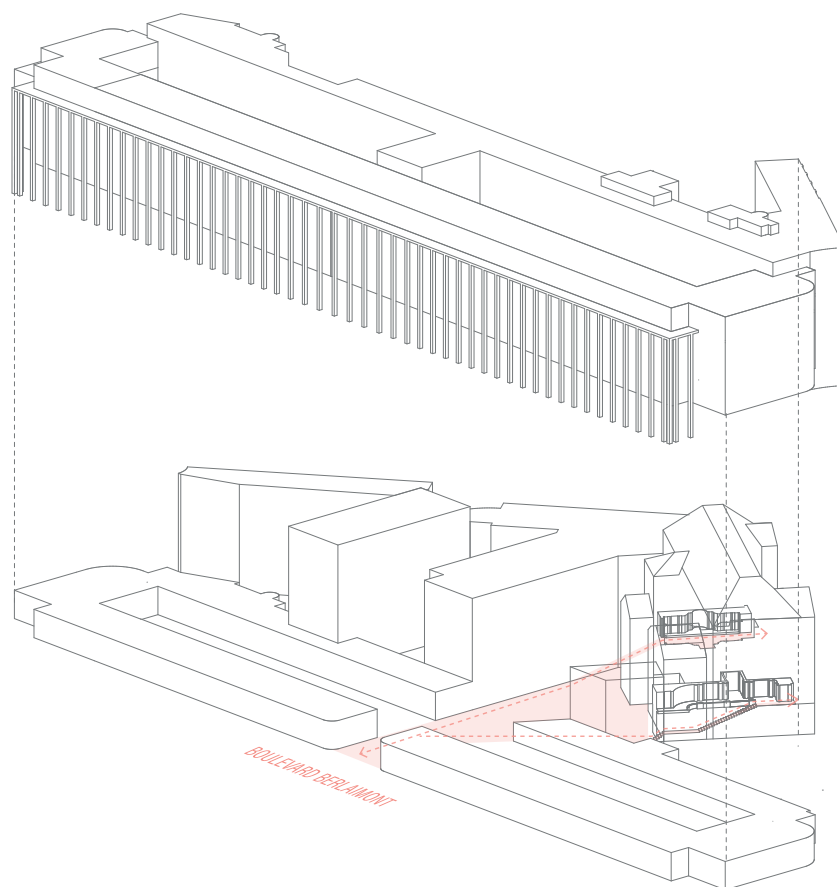
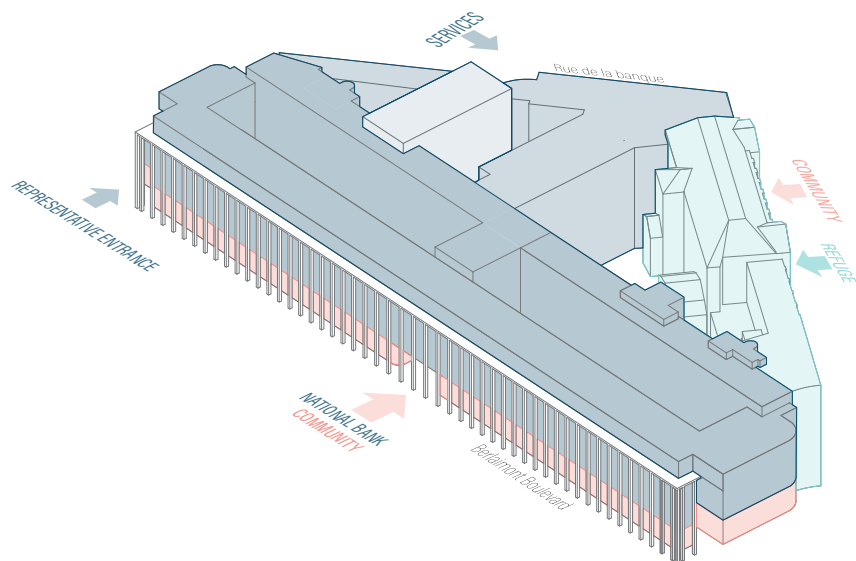




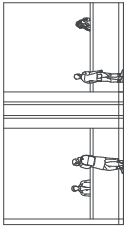
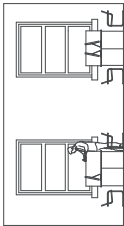
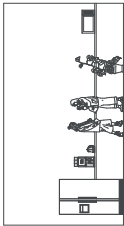
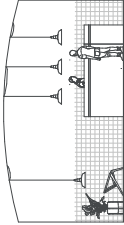
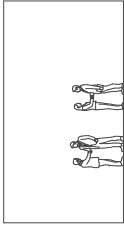
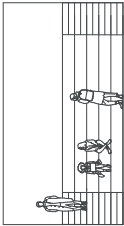
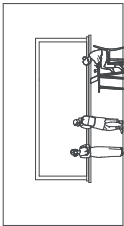
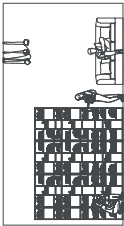
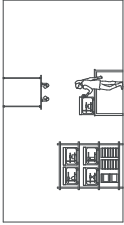
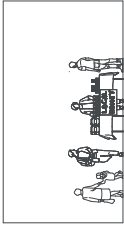
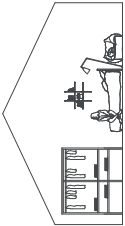
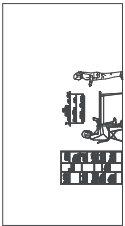

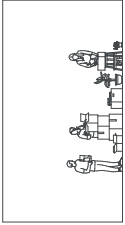
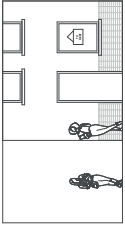
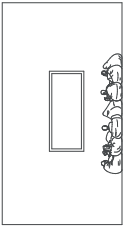
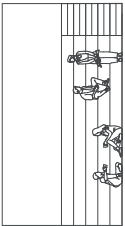
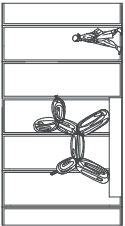
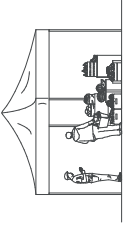
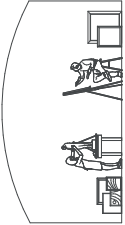

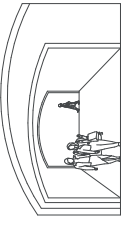

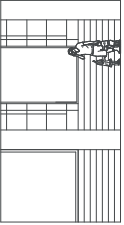
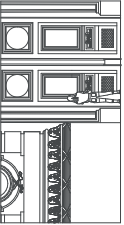
4 | Distribution of the functions

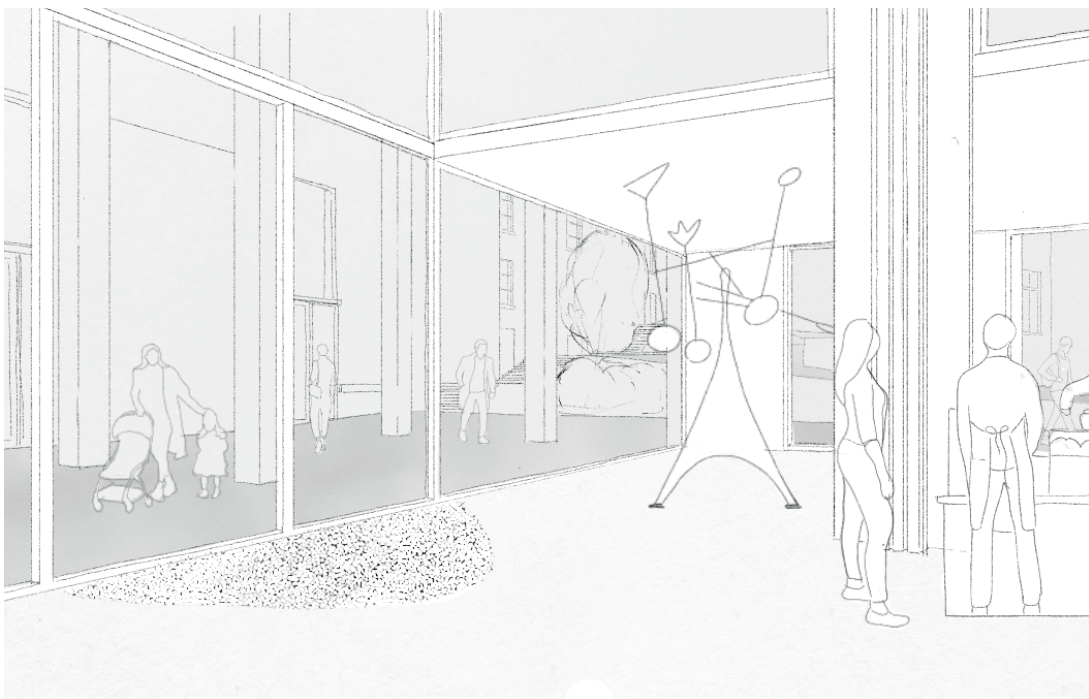


5 / Opening the Bank to the city



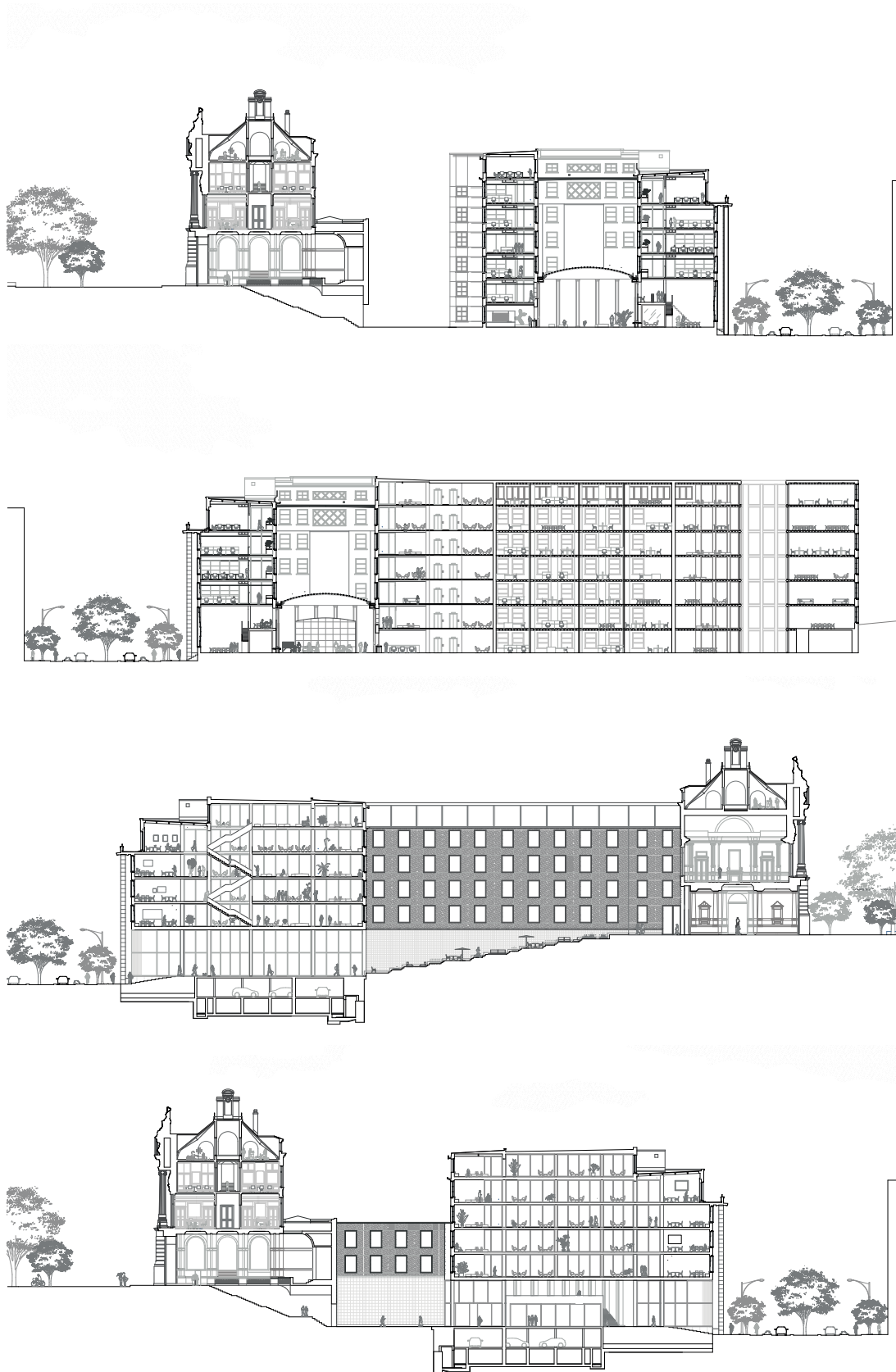
Entrances of the Bank and opening to the city
Source : Personal work

National Bank of Belgium		Counters		Office spaces		Social spaces		Reception spaces		Social investment
Conference and learning center		Amphitheatres		Classes		Library		Micro companies		Real life experiment
Rehabilitation center		Emergency housing		Administrative help		Listening/ expression spaces		Resources		Reintegration in society
Community center "the harbour"		Social spaces		Gathering spaces		Exhibition spaces		Market		Activity spaces
Other spaces		Rooftop garden		Physical connection		Outdoor spaces		Boulevard Berlaumont		Rue du bois sauvage

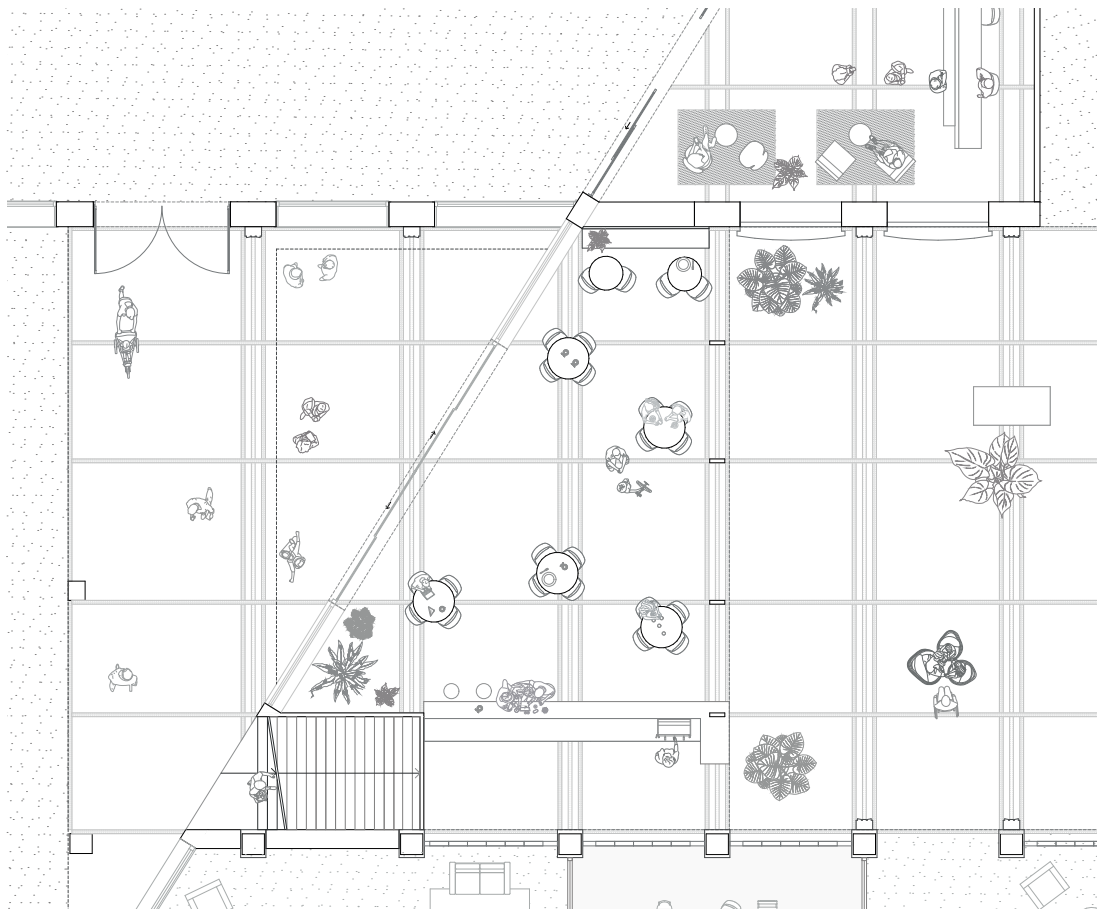
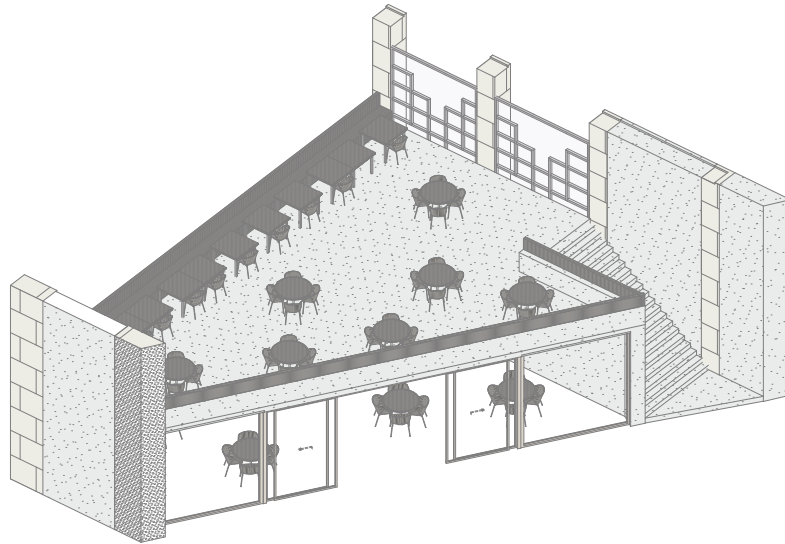




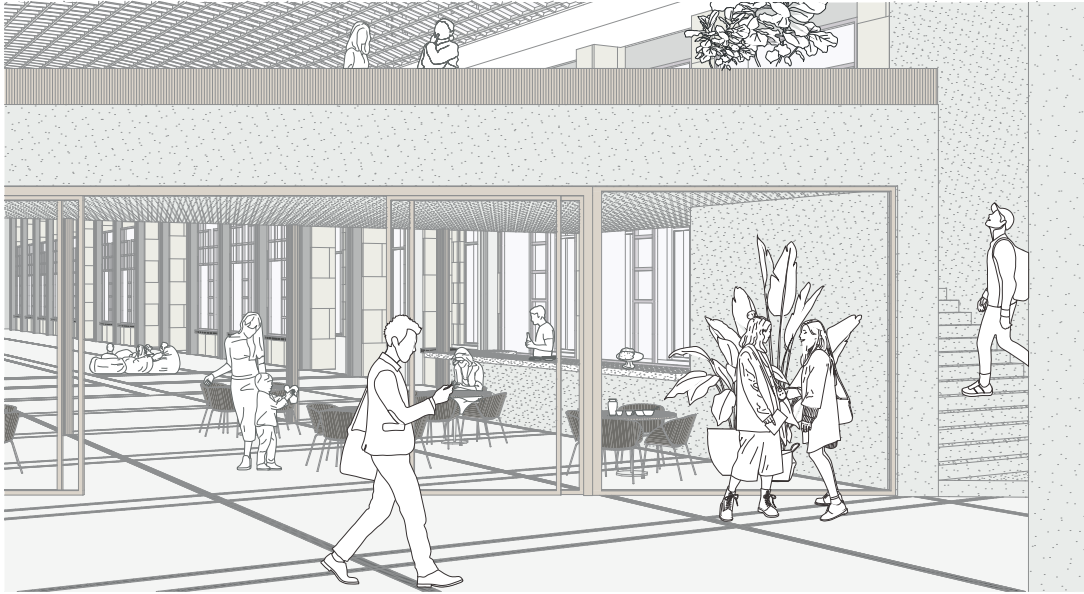
6 / Sections through the project

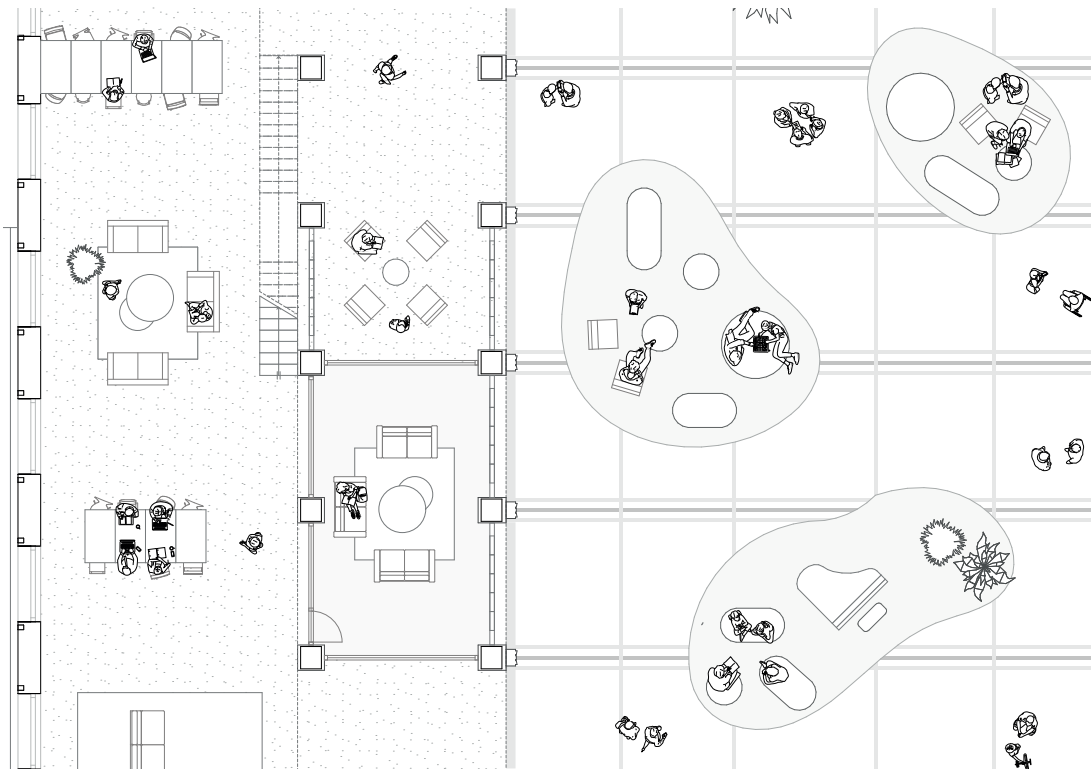
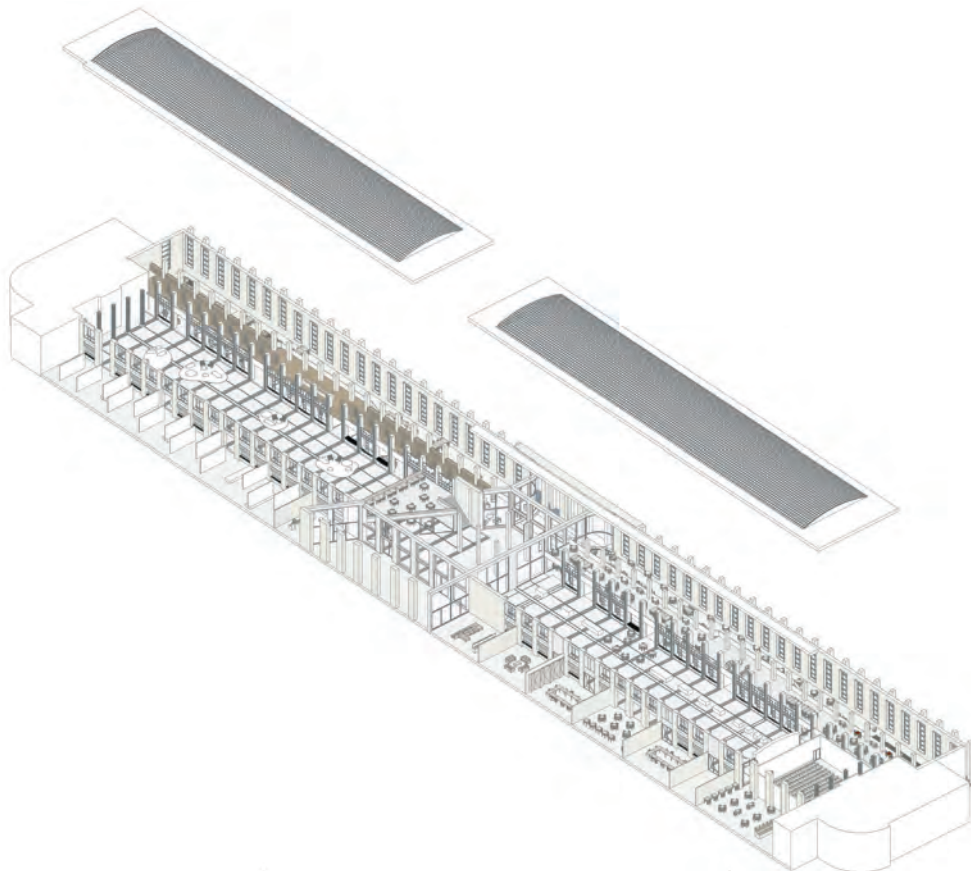


Facades and sections of the Bank
Source : Personal work



People's café. Plan and axonometry
Source : *Personal work*

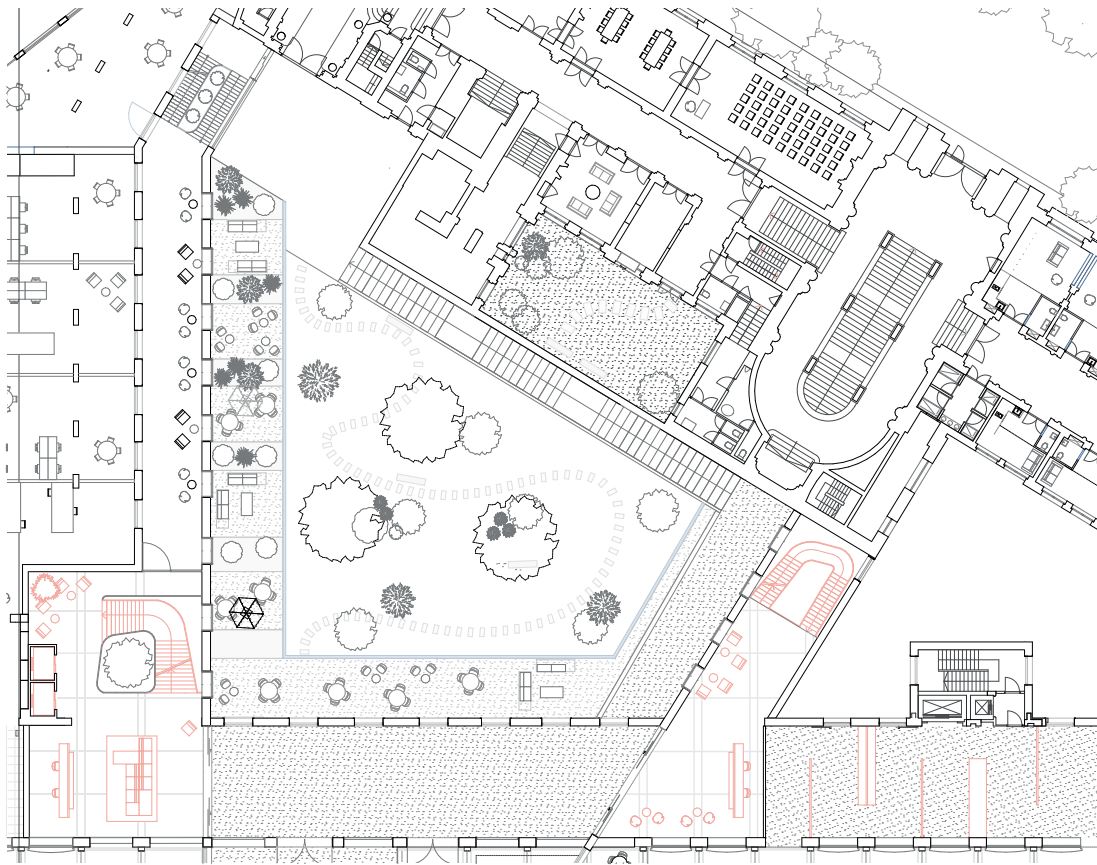




Community halls. Plan and axonometry
Source : Personal work



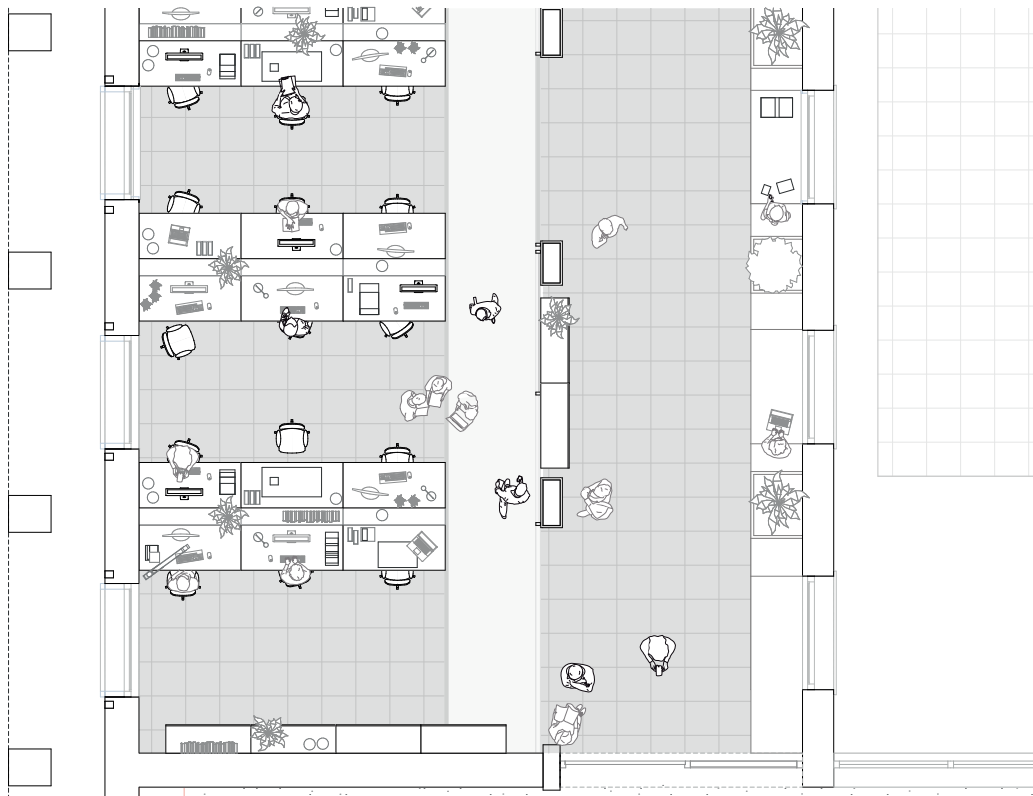
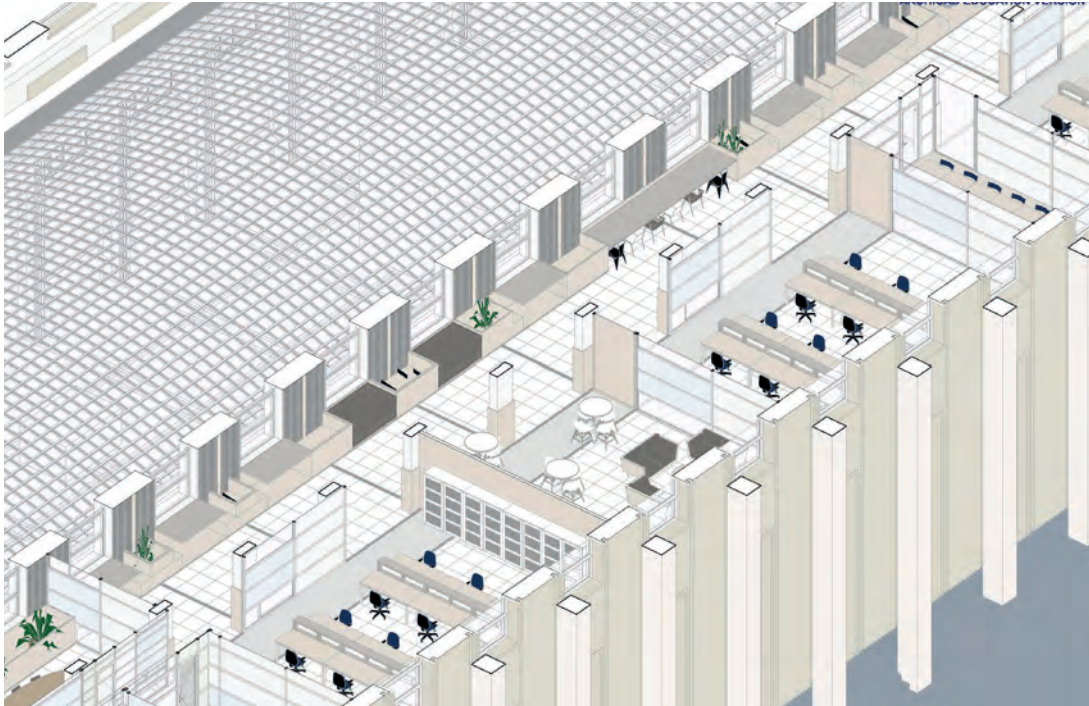
View of the community's hall
Source : *Personal work*



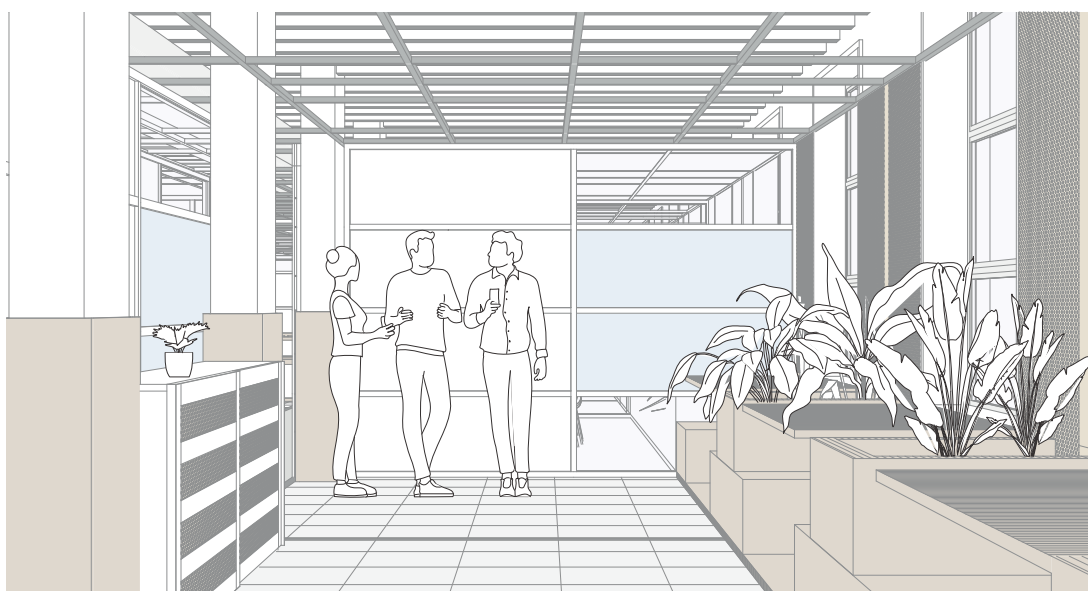
The Bank's garden. Plan and axonometry
Source : *Personal work*



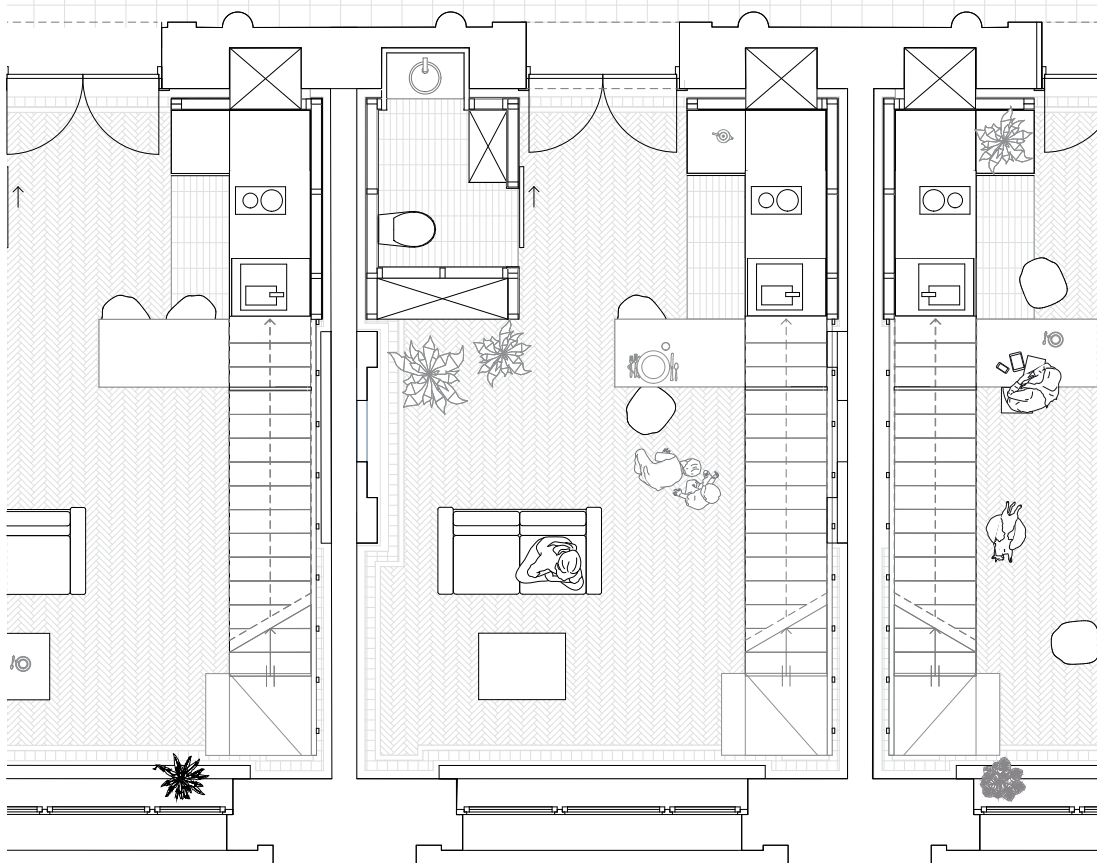
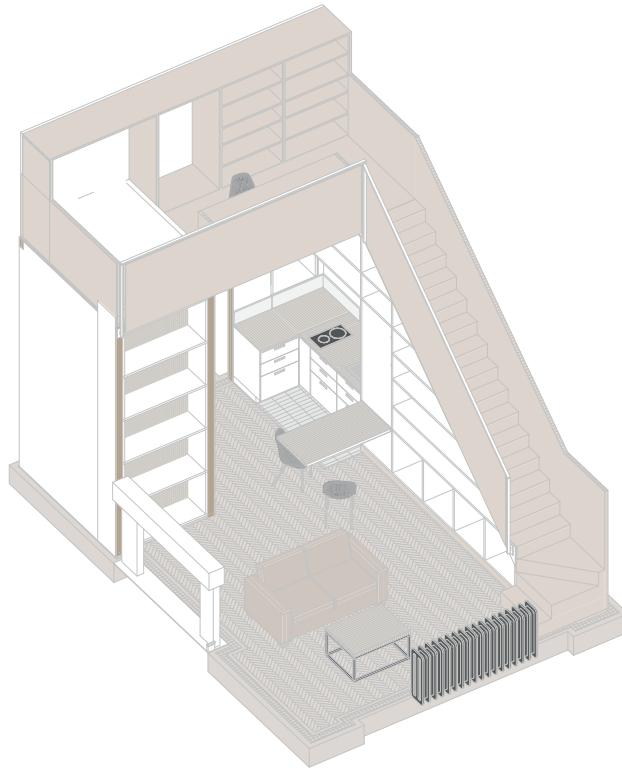
Views of the Bank's garden.
Source : *Personal work*



National Bank's offices. Plan and axonometry
Source : *Personal work*



Views of the National Bank's offices.
Source : *Personal work*



The refuge. Plan and axonometry
Source : Personal work



Sophie Soenen

Project Journal

Interiors Buildings Cities
2- A new vision on the
National Bank of Belgium

Academical year 2021 2022

A Bank of Opportunities

A sheltering bank for people

Interiors Buildings Cities

Sophie Soenen
5392594

Main mentor (architecture) *Mark Pimlot*
Second mentor (research) *Jurjen Zeinstra*
Building technology tutor *Matthijs Klooster*

2-

A new vision on the National Bank of Belgium

- 1 | Introduction
- 2 | Changing the way the Bank invests
- 3 | Opening the bank to the public
- 4 | Creating a new system
- 5 | The values of the new bank
- 6 | New way to practice banking
- 7 | Bibliography

We live in a capitalist world. Banks and money rule the world. The economy is controlled by a small percentage of people and corporations. In Belgium, the National Bank has remained a strong power because of its capacity to print money and the monopoly it has on controlling other financial agencies. The creation of Europe at the turn of the second millennium changed this hierarchy. The European Central Bank, located in Frankfurt, is the Bank coordinating an ensemble of nineteen national European Banks. They issue the laws, and are in charge of the general regulation. The National Banks relating to each country are in charge of their respective nations, under the direction of the Central Bank. They operate under a certain umbrella principle, common to all participating countries. However, each individual bank has the control over their country's banks and rules in order to achieve the European targets.

The National Bank of Belgium has a powerful representative influence. Half of The National Bank's capital is detained by Belgium. By the way the capital is invested by the bank, it reflects the country's values and preoccupations. Shifting the way the bank operates starts with an economical model. It is also important to connect the Bank with the public, with its environment. A social scheme is intertwined with the financial plan to achieve a new way of banking.



National Bank of Belgium's counters in the 80s
Source : *NBB Photo survey*

How can we create a more sustainable and durable way to live, buy and create ?

How does one create an economical plan, or at least the outline of a program which would work in a very short amount of time? This was the main question I was trying to answer.

After reading Yona Friedman's "Architecture de survie", I discovered micro finance.

-Micro finance are defined as *"financial services especially in the form of micro loans provided to impoverished individuals and groups in poor and developing regions"* merriam-webster. This is a type of finance developed by Muhammad Yunus in Bangladesh to support impoverished people to get loans and get out of poverty.

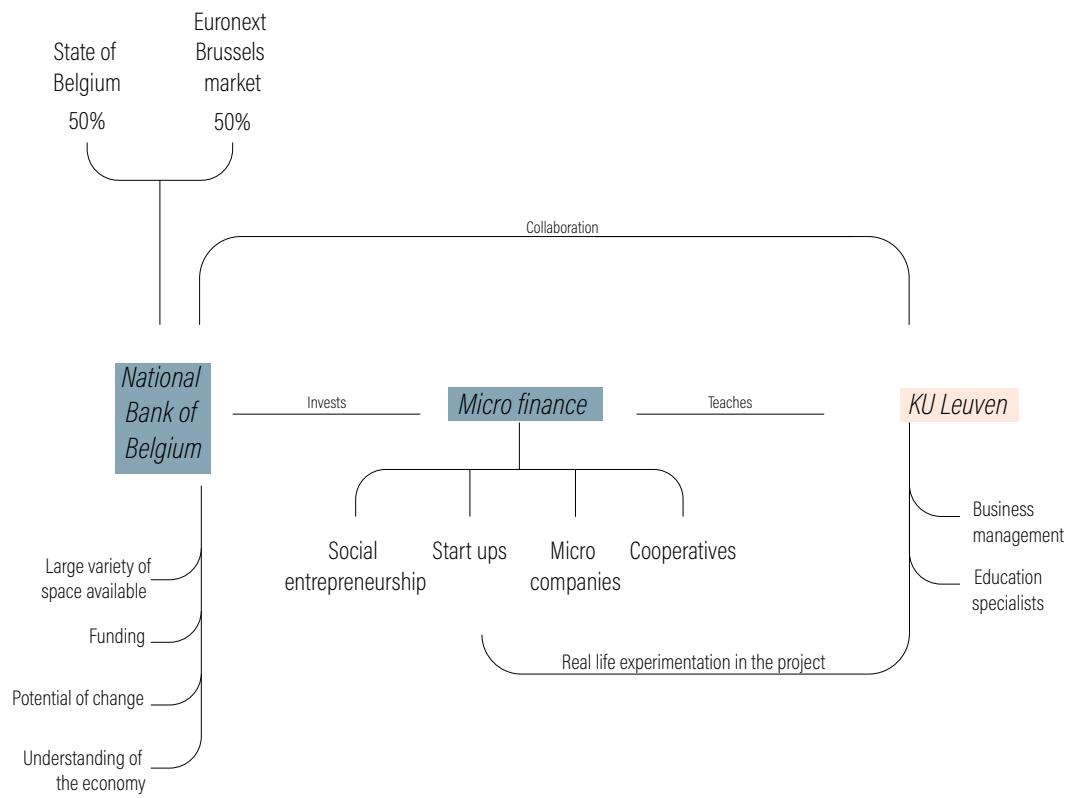
The rate of repayment attained more than 95%.

Could this be a solution? Micro loans would be granted by the National Bank of Belgium to help micro companies or start ups to begin to operate in their facilities and with their professional and expertise.

-The National Bank of Belgium: provides the space, the micro loans/finance, but also the knowledge on how to create sustainable wealth.

-KuLeuven : is a university which has facilities in the urban block on the other side of Berlaumont Street. The curriculum proposed there is business management. The school could be connected to the program by teaching their knowledge about how to conduct a profitable business. It could also become a real-life laboratory for the school to try new ways of doing business.

The design of the scheme is based on existing structures present in the capital which have been proven to work long term. Infrastructure such as Coopcity, Platformcoop, European Microfinance are working in Belgium and in Europe and promote fair and social entrepreneurship. Exploring the way they bring enough finance to operate on a stable level and bring a new kind of wealth and knowledge to the population.



The National Bank was implanted in a historically dynamic neighbourhood. After the reconfiguration of the North-South Junction, the area was occupied with office buildings and governmental buildings. The Bank was completely cut off of its context.

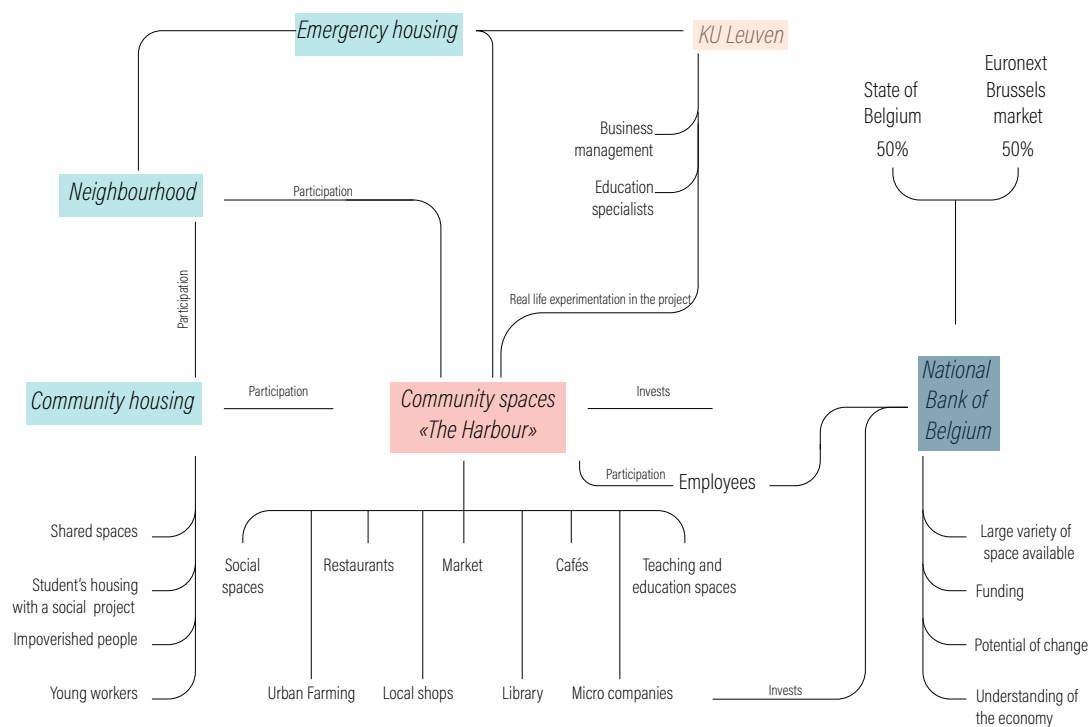
The development of a financial scheme is the first step towards the creation of a new bank, but the most substantial stake is to bring a new public into the Bank.

-Emergency housing: the rooms were the starting point of this project. This provides spaces for people in need for temporary housing solution. The rooms are fitted with everything someone needs for a short period of time.

-The community centre: is the second notable piece of the program. The empty and lifeless bank halls, were once filled with employees and clients. I wish to bring back the public into the bank, but in another form. By providing various services for the public and the community, this will attract people and give momentum to the social investment program. It would also contribute to the strengthening of the community.

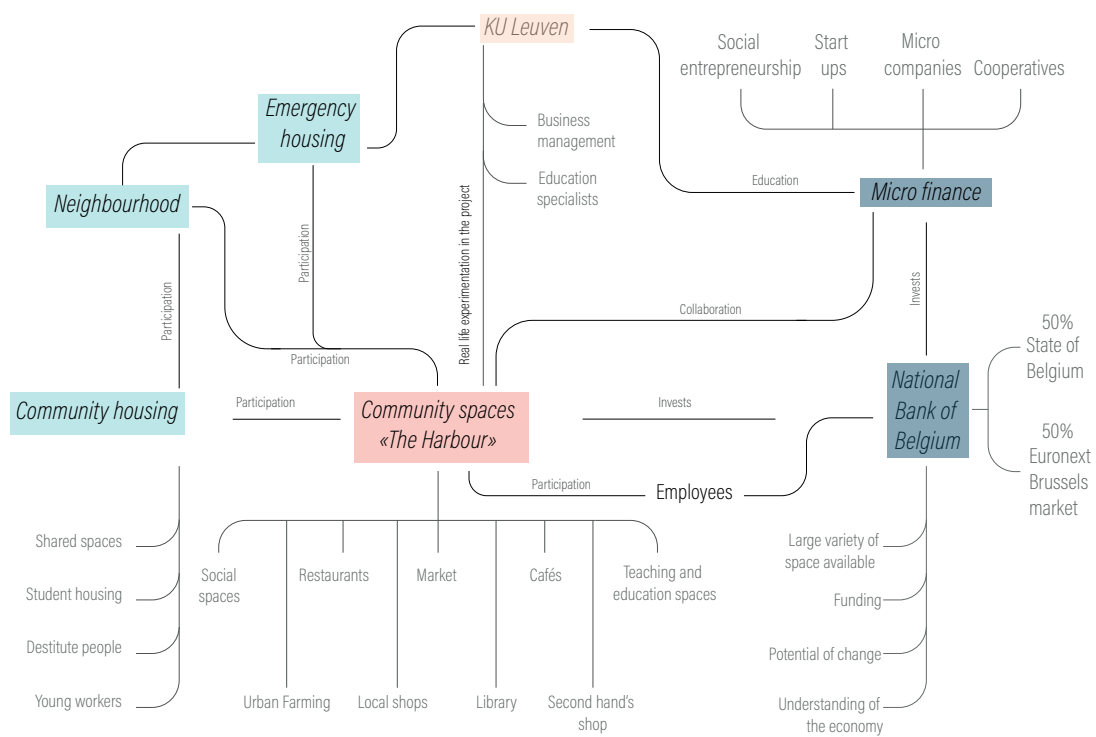
-KULeuven: a learning centre is included into the scheme. This was translated by an auditorium on the extremity of one of the banking halls. These can host programs for the community, but also be independently rented for external events or even used by the Bank.

-The National Bank Of Belgium: The bank is giving all of the ground floor to the public. However, in order to maintain contact with the public, the institution is keeping a few counters in the public halls.



By combining the micro finance with the social aspect of the project, the scheme becomes viable and durable. The National Bank of Belgium has a large variety of empty space available, and it is a good opportunity to open the space for the public. This is where both sides of the project collide. The social side, including the emergency housing and community space, is working with the financial side of the project, including the Bank but also the social investment, in order to complete the scope of the project. This will be possible by phasing the workload. The first phase would be to build the social and community project, based on the neighbourhood and community. This will establish the start of the economical stability. Local shops, cafés and restaurants will be the first commerce to be integrated as well as local market and the library. The financial scheme will be launched at the same time, but the community aspect will make it grow faster once the site is active and busy with people. More people attending the community project means more publicity for the financial project and vice-versa. The other way around will also be true: the community spaces will be visited and used by the people involved in the financial project.

The goal of the project was to create a sustainable project: the social, financial and environmental aspect should be involved and interconnected to create a durable project, fair for everyone, contributing to everybody involved.



5 / The values of the new bank

Create a community

Caring for everyone in the society and creating opportunity

Being fair

Building a project fair for everyone involved

Caring for the environment

Creating a project respecting the environment and short circuit

Sustainable project

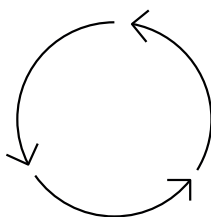
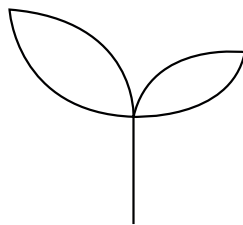
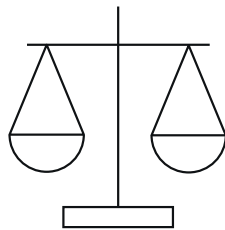
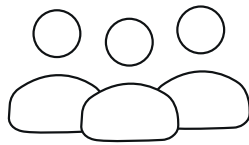
A project that can operate for a long period of time with the same quality

Financially profitable

Creating wealth for the community

Self regenerative project

A variety of different operation feeding on each other



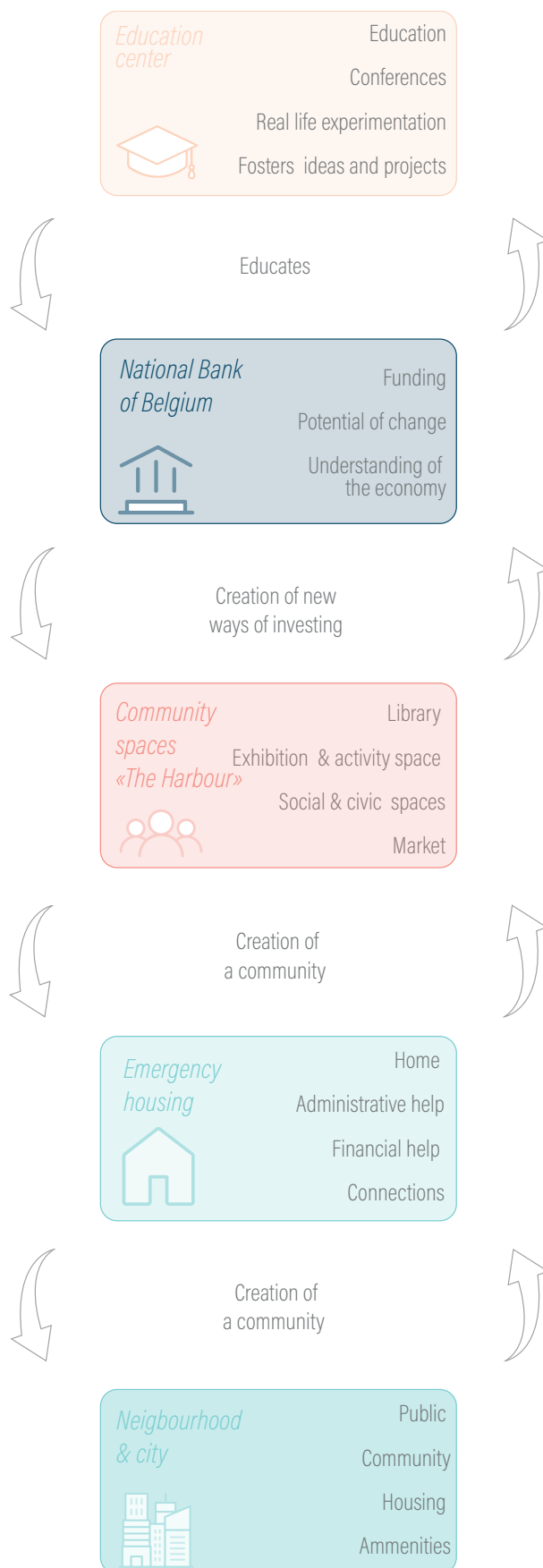
All of the pieces of the project were combined to develop the scheme, which were then worked into the design.

Every separate aspect of the program is an substantial piece of the puzzle and combined with the others, will establish a socially focussed bank.

The entire scheme, explained in the previous pages in detail, can be summarized in a very simple diagram, presented on the right.

The bank was the centre of the project, as well as the starting point. The National Institution would be working hand in hand with the community space and the emergency housing centre for the benefit of the community. The neighbourhood would support and be supported by the community centre that is created. The learning centre is a branch of the KULeuven and has access to some spaces in the bank, connected to the community centre.

All of these functions and program are working together to create a new bank, but also support the community and the people in need.



7 / Bibliography

- Boonstra, W. W., Goor, L. V. (2021). The basics of money and banking: From ancient coins to credit and Cryptos. VU University Press.
- Brugiswebapp. (n.d.). Retrieved June 26, 2022, from <https://gis.urban.brussels/brugis/>
- Dovey, K. (1992). Corporate towers and symbolic capital. *Environment and Planning B: Planning and Design*, 19(2), 173–188. <https://doi.org/10.1068/b190173>
- Google. (n.d.). Brussels. Google Earth. Retrieved June 26, 2022, from <https://www.google.com/intl/fr/earth/>
- King, A. D. (1980). *Buildings and society: Essays on the Social Development of the Built Environment*. Routledge & Kegan Paul.
- Korsch, S., Decaudin, M. (n.d.). *Market Landscape: Speaking between Financial Districts and The Planet*.
- National Bank of Belgium iconography . (n.d.).
- National Bank of Belgium photo survey . (National Bank of Belgium.). Official documents handed in by the National Bank of Belgium
- Pevsner, N. (1976). *A history of building types*. Princeton University Press.
- Rendell, J., Penner, B., & Borden, I. (2000). *Gender space architecture: An interdisciplinary introduction*. E; FN Spon.

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Brussels
& The National Bank of Belgium

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Brussels is a city that is intricate and complex in many ways. From its eventful history, linguistic conflicts and the diversity of cultures to the urban planning issue. The city has had its fair share of intricacy.

The National Bank of Belgium is implanted in the city centre of Brussels and was part of the modernist vision of the early 50's. It is important to understand the context of its location and its creation. The location and its history significantly influence the development of a building such as the National Bank. The history of the Bank as an institution and the changes it went through need to be considered in order to understand its current state.



View over the North of Brussels
Source : Bas Leemans

2/ Introducing Brussels

Brussels is the capital city of Belgium. It is divided into 19 different municipalities home to 1,2 millions inhabitants. The location area was inhabited by humans since the 6th century, but the city was founded during the 10th century.

At the time, Belgium was not a country yet, but rather a conglomerate of provinces claimed either by the Roman Empire, France or The Netherlands. During all of its history Brussels was an prominent city. It was the city of numerous great rulers and other significant characters of history.

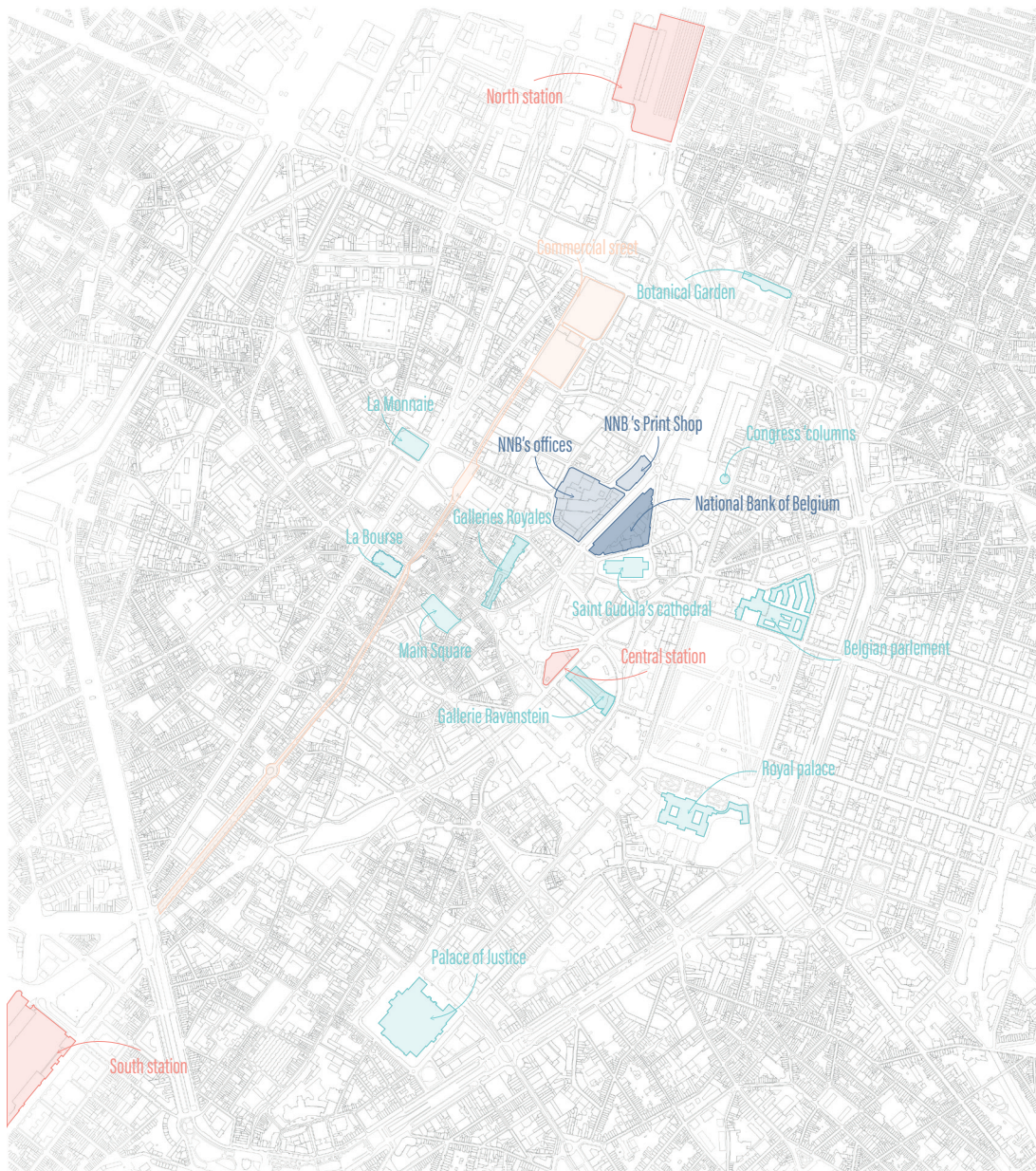
Belgium was created as a country in 1830 after the Revolution Bourgeoise. Brussels became the capital of the country. The linguistic barrier was not officially in place. Nonetheless, the provinces in the south of the country have historically been French speaking and the north were Dutch speaking. This linguistic division was present from the start. The Bourgeoisie, the elite of the country and the rulers were French speaking, as it was deemed a "superior" language from the Dutch and Flemish the northern peasants were speaking. This division led to many problems throughout time. The official linguistic barrier was put in place in 1962. The south was officially and legally French speaking as the north was Dutch speaking.

As for Brussels, the city is located in Flanders, the Dutch-speaking part of Belgium. it is however mainly French speaking, even though the city is officially bilingual.

The city, as the capital of Belgium hosts the most important buildings of the country like the Royal Palace, the Parliament, the province's Parliaments, the Palace of Justice and obviously the headquarters of the National Bank of Belgium.

After the second world war, the European Union was created. Brussels was chosen as a capital of the new Union because of its central location. As such, the city includes a variety of spaces relating to the European Union like the European Parliament or Le Berlaimont.

The status of capital city of Europe attracts a large variety of people from diverse nationalities, social, political, and cultural backgrounds, which make the city a truly cosmopolitan city.



The city of Brussels is a large conglomerate of municipalities which form the «Brussels capital region». The city centre and historical centre is at its very centre and is called « the Pentagon», referencing the shape of its historic town. The city inherits this shape from the second fortifications, which was built from the 14th century. The city rapidly outgrew these fortifications and expanded outside of the city wall. When the fortifications were demolished, the route taken by this landmark was converted into a street and later a boulevard. The metro system was implanted in the 1960's reusing the same route. Besides the outline of the fortifications, the only remaining trace of this wall are a few small ruins and Porte de Hal, the last standing defensive tower.

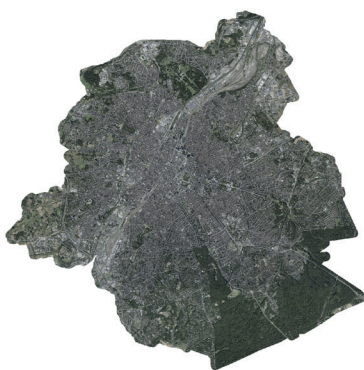
The pentagon is where the administrative, political and representative heart of the city is.

The city centre is the municipality with the lowest population density within the Brussels capital region. Very few people live in the centre as it is mainly occupied by shops, retails, offices, representative buildings.

It is therefore a strategical place to establish such an institution as the National Bank of Belgium.



Location of Brussels in Belgium



Region Brussels Capital

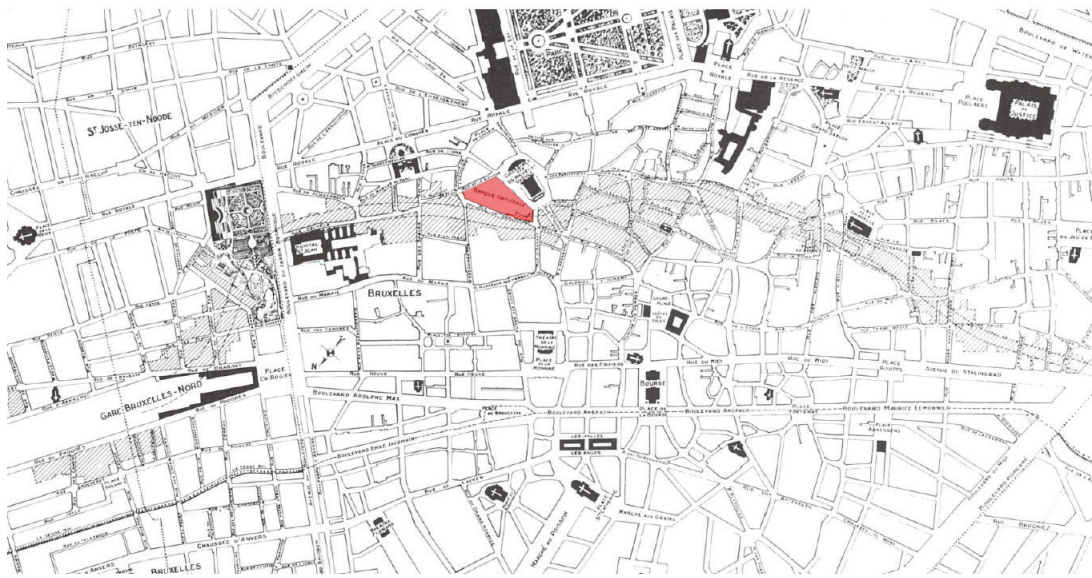


The Pentagon

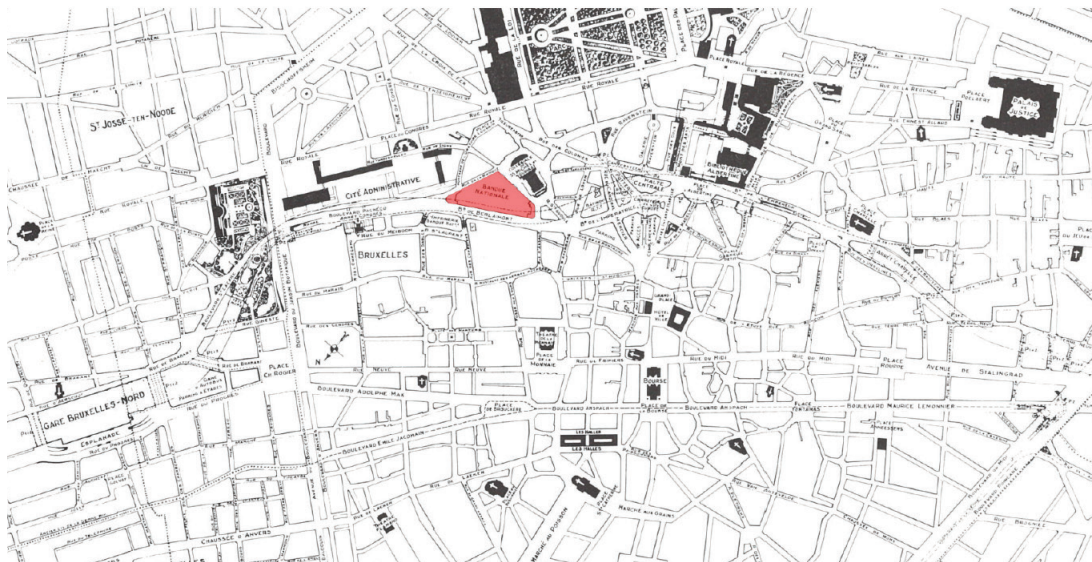
The idea of an underground connection which would connect all of Brussels' train stations is not new. In fact, the intention to develop such an infrastructure dates from the middle of the 19th century. Indeed, a decade after the creation of Belgium as a country, a connection, but above the ground, was linking South station and what would later become the North station. This infrastructure was dividing the city into two parts and was causing circulation problems as the personal transport was becoming more and more prominent.

To remedy this problem, a commission was established at the beginning of the 20th century to propose alternatives. The project of an underground connection between North and South emerged.

Construction work started beginning of the 1910s. A vast trench was opened in the city for its construction. The government promised the project would be achieved by 1915. Unfortunately, the first world war started in 1914, delaying the operations. The conflicts left the country's finances in bad shape and the delivery was postponed before being resumed. A second commission was appointed in order to carry out the work. With the help of the American investment plan, the North South junction was finally finished in 1952.



Brussels before the junction



Brussels after the junction

The project was vast and complex to implement as it was traversing the whole city. North and South stations were demolished and reconstructed in a more modern manner. Central station, as its name indicates, was built in the middle of this route, serving the city centre. Some neighbourhoods completely disappeared in the process. The idea of the government was to create a boulevard tracing the connection, to but modernise and refresh the buildings along this route. The intentions were to create a better city and modernize it for the future. Even though the connection is an necessary axis of the city today, the cost, financial and urban, was heavy. The city struggled to repair the financial wounds left by this intervention. To this day, some scars are still visible.

At this day, more then 1200 trains ride along the north-south junction, which makes a up for a vital piece of infrastructure for the city. The National Bank of Belgium is quite conveniently located right next to the connection's path. Even though the connection is an important axis of the city today, the cost, financial and urban, was heavy. The scars left by the complete remodelling of the city centre are visible on certain pictures. The void left by the construction but also the contrast between the historic fabric of the city and the modern buildings are quite striking.



View of the construction work with the Beaux-Arts palace in the background



View of the construction work with Saint Gudula's cathedral in the background



Aerial view of the newly constructed facade, contrasting with the existing historic urban fabric

The National Bank of Belgium is located next to Saint Gudula's cathedral. A church was first built during the IXth century and was devoted to Saint Michiel. A few centuries later, another more spacious church was built and Saint Gudula's relics were placed in the church. The cathedral visible today was built in the 13th century, designed in a Brabant Gothic style. The church was officially named Saint Michiel and Gudula in honour of its past. The Saint Gudula's neighbourhood does not exist as an official entity. Because of the importance of the church on the area, it is easiest to refer to this locality by this name.

In its past, this neighbourhood attracted various religious orders in its proximity. As religion was more prevalent at the time, they were more numerous and visible than today. The neighbourhood around Saint Gudula was particularly attractive because of the space unoccupied and its location. During Elizabeth's I reign in England, Catholics were unwelcome in the country. They fled the country to be able to exercise their faith. A few of these institutions ended up in the vicinity of Saint Gudula.

The National Bank of Belgium established its first headquarters under the shadows of the church. I found an importance in relating it to the history it is placed in.



Illustration of the cathedral , painted in 1480. Unknown painter
Source : srab.be

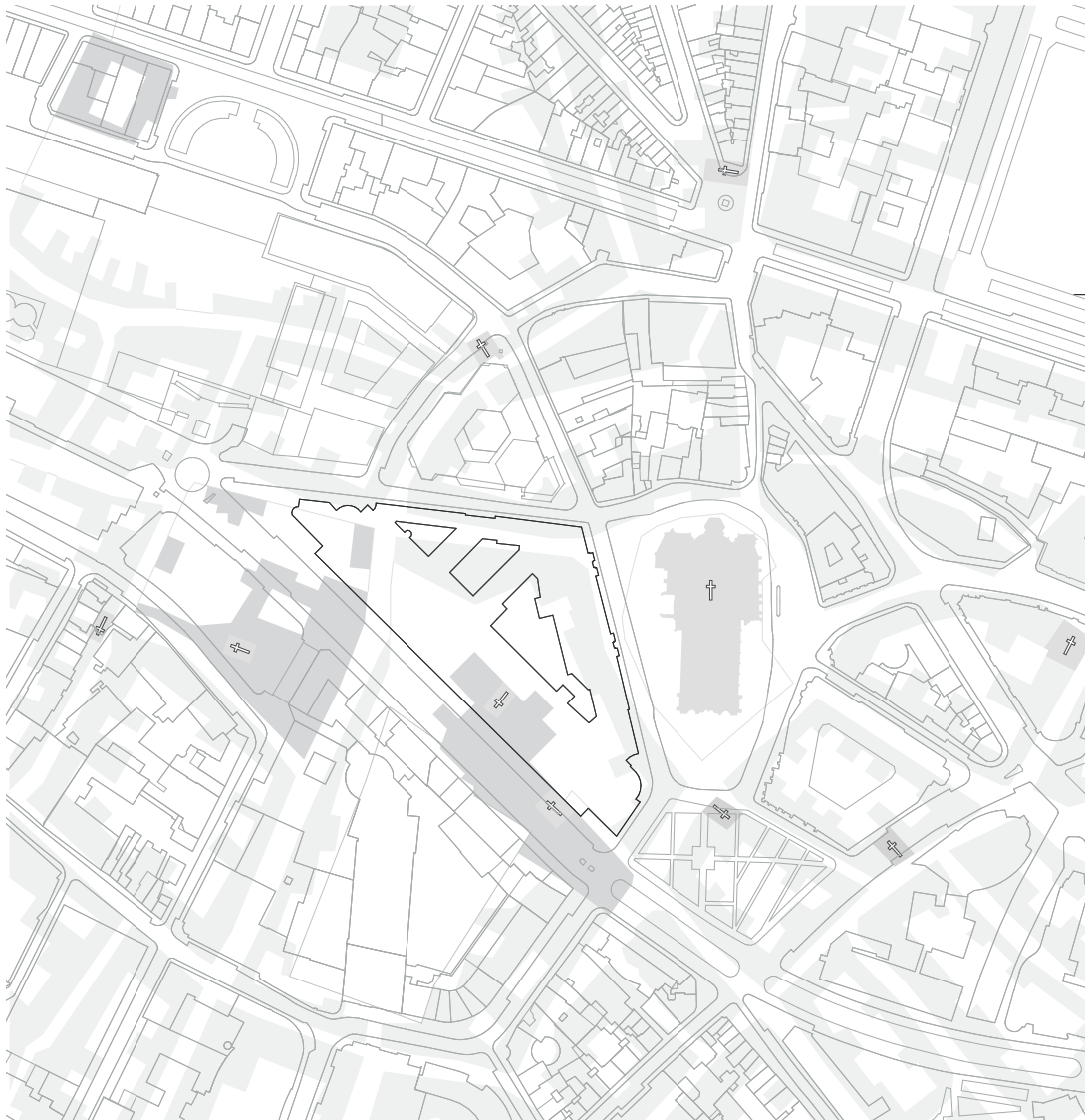
Religious establishments and orders were an significant part of society as they were taking care of the people in need and the destitute people of the communities. Religion was also extremely prevalent in the other spheres of the society back then as most of the population was extremely devoted to god. Within their communities they cared as much for the poor, the rich and everyone in between. Churches were giving asylum to the people in need, but also outlaws. They were considered as a sanctuary, a place where violence is not permitted.

Sanctuary is derived from the latin word "sanctuarium" meaning a container. The sanctuary in a church is where the Christ is considered to be physically present during the mass and Eucharistic. The word "sanctuary" come from Latin but the concept has existed since much longer. Religions always gave a shelter to persecuted people.

Sanctuary :
"a place where someone or something is protected or given shelter"
(merriam-webster). This is a modern signification of the term derived from the ancient practice of sanctuary in religion.

Asylum
"It is a protection from arrest and extradition given especially to political refugees by a nation or by an embassy or other agency enjoying freedom from what is required by law for most people."
(merriam-webster)

The bank established its premises in this neighbourhood with a deep history. Currently, the bank's buildings are not used to its full potential and has room to develop a civic institution, drawing from its past and maintaining the legacy. Nonetheless, human life and human rights should be the priority and everyone deserves a roof as other human rights.



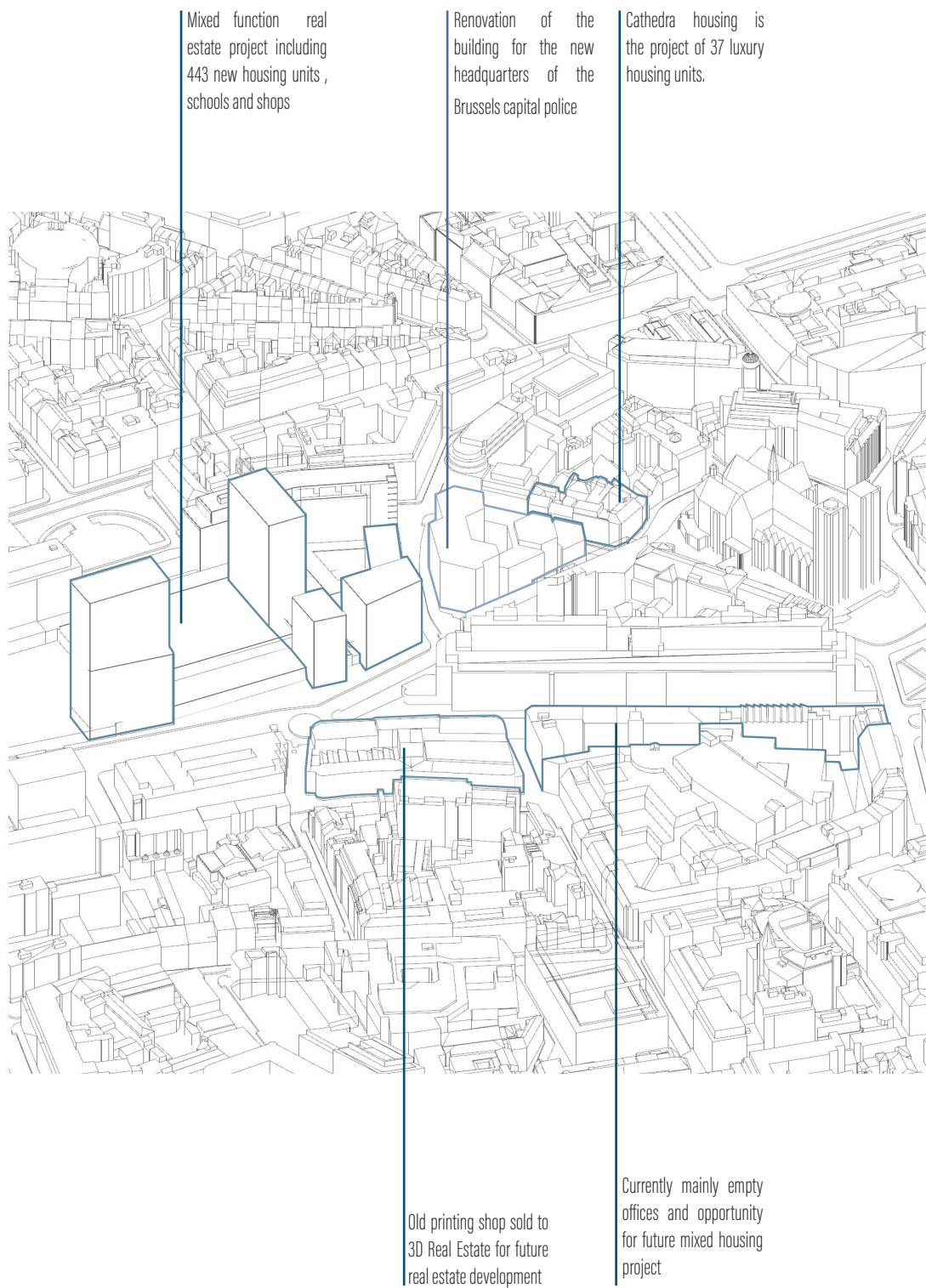
This map shows the historical urban fabric around 1700 in Saint Gudule's cathedral and the current urban fabric overlay. This shows the number of chapel and churches around the current bank.

The area where the Bank is located has a rich history. During the beginnings of the city, the area was composed of orchards and fields to feed the population of Brussels. As the city grew and an increasingly large number of people lived within the first fortification walls, some districts grew very quickly. With time, the neighbourhood around Saint Gudula's cathedral became an influential area. It was populated by religious institutions as said previously, but also a lot of people from the bourgeoisie and the Royalty, because of its proximity with the places of power.

The first National Bank Of Belgium's headquarters was built in this neighbourhood. It was embedded into the urban fabric and grew into the urban block.

At the beginning of the 20th century, the city decided to build the North South junction, which had a significant impact over the city's fabric. The National Bank also evolved at this time and a new building was constructed. The plan was to primarily build office buildings along the junction and to create an administrative centre. This change meant that the previously very densely populated area was rid of its inhabitants and replaced with office workers.

There are current development plans to bring new inhabitants in this area. The map on the right shows the project with immediate proximity to the Bank. A diversity of projects in development is going to bring a new population to the area. From higher class apartments to social and mixed housing, the neighbourhood will be revitalised. The project of the National Bank of Belgium will be part of this development, accommodating the growing number of inhabitants in the area and establishing a new social centre for them.



This project interested me for multiple reasons. The first one being that I am Belgian and I lived in Brussels for a few years.

I started my bachelor's degree at LOCI-UCL, which is located in the city. My school is located in Sint Gillis, in the North-East of the city. This neighbourhood was developed in the 19th century, when the residential neighbourhood was rapidly constructed to meet the demand.

I lived for a couple of years in the north of the city, in Koekelberg. I used to live right next to the Koekelberg's basilica. It is a very different neighbourhood from the one my school was located in. The North of the city is on average poorer than the south. A lot of people coming from the previous decades of immigration are established in this neighbourhood. The area was very lively and dynamic. I met a lot of different people, from various backgrounds with different life stories than mine.

I come from the country side in the South of the country. It is a very rural place and very limited in terms of diversity. Everyone has known everyone for generations. It was a deep cultural shock when I moved to Brussels. I really appreciated living in the northern part of the city, but it was located very far from the school, especially when using the public transport system. The last year of my bachelor's degree, I moved to Sint Gillis, five minutes away from the school. The neighbourhood was also very lively but visibly less diverse and richer than in the North of the city. Each neighbourhood is profoundly different. Diverse kinds of people are established, neighbouring each other, mixing, getting used to a Belgian way of life but keeping their roots and culture. All of this creates a very fascinating way of living in Brussels. After a few years living out of the city, I still remember its atmosphere fondly and think about going back there to live and work.



Picture of Place Rogier



Picture of the neighbourhood "Barrière de Saint Gilles"



Picture of the Saint Gillis municipality

After pursuing my Bachelor's degree in Brussels, I left the city to work for a year and then moved to Delft in order to do my Master's degree. I came back often to Brussels, but as a visitor, not an inhabitant.

The city changed quickly. Still recognisable, but completely different at the same time.

For this project, I went back to Brussels in the beginning of the year and visited the National Bank of Belgium. Even after living in Brussels for three years, I never saw the building. Even if I happened to have walked past it, it did not make a profound impression on me. The institution is closed and does not offer anything specific to the public. I walked along the boulevard Anspach, the commercial streets and very animated parts of the city. I took the metro and went back to the neighbourhood of Saint Gillis, where I studied for years. I took the metro back to the station.

I was familiar with all of the places I visited that day, excepted the National Bank. I did not know the building but I am familiar with the neighbourhood around it. It is situated close to the Royal Palace, but also the Grand place and the Galleries Royales are not far away. They are all places I used to go back to when I was living in Brussels.

This project represents a good opportunity to know more about this important institution for the population, that quite often stays in the shadows. I find it important, as a Belgian citizen, to be in contact with the National Bank.



The National Bank of Belgium was previously introduced in the introduction chapter to present the project.

It is important to acknowledge the past, and the reason things are as they are to construct a project which will last for the next few decades.

Marcel Van Goethem designed the building of the National Bank of Belgium we can see today. He designed it during the conflicts of the second World War as the project came to a halt. He conceived a modern building with a monumental facade of two hundred meters facing Berlaumont Boulevard. This main building includes the public banking halls. There are two hundred meter long halls with a glass roof that were used to receive the clients of the bank. The rest of the urban block is composed of similar-looking buildings and is where the rest of the offices, the cafeteria for the employees and the printing press are located.

Van Goethem designed this building to represent the value of the National Bank in its design. Values such as stability, durability and modernity are on display through the statues on the side of the building and the bas relief above the entrance, but also in the rest of the design. With time passing, the bank went through different renovations and refurbishments. The National Bank of Belgium was also grouped with other National Banks of Europe after the creation of Europe. The institution lost its independence since then, but the National Bank of Belgium remains a notable representative of the country and the values of the nation. However, the bank is quite detached from the public eye and the community. This project, as it will be explained and detailed in the next chapter, was an opportunity for me to open the National Bank to the community and work with it rather than closing its doors to the outside.



Aerial view of The National Bank of Belgium
Source : gis.urban.brussels

The National Bank was built right after the war. The builders employed the most recent techniques to build the Bank. They utilized reinforced concrete structure filled with bricks. The construction of the building had to be carried on while the rest of the bank was operating. The demolition and construction process was happening at the same time and allowed the Bank to be open during the whole duration of the project.

Marcel Van Goethem designed a very modern Bank with all of the most recent facilities and innovations for its time. On the right are some pictures depicting the in- and outside of the Marcel's bank design. Very modern, bright, organised and glamorous.

There is a stark contrast between these images and the ones from the current bank. Where the old one looks lively, the new looks aged and uninhabited. The multiple refurbishments that the bank went through between these times focussed on very local solutions without taking into account a global plan for the building's renovations, making the building incoherent. With this project, I tried to stay true to the initial concept of the project and respecting the changes it went through. Keeping as much as possible of the original building and the various layers was the main strategy to work on the building. Initiating a modest change to radically modify the National Bank of Belgium.



Historical picture of the NNB dating from around the 80s
Source : NBB iconography

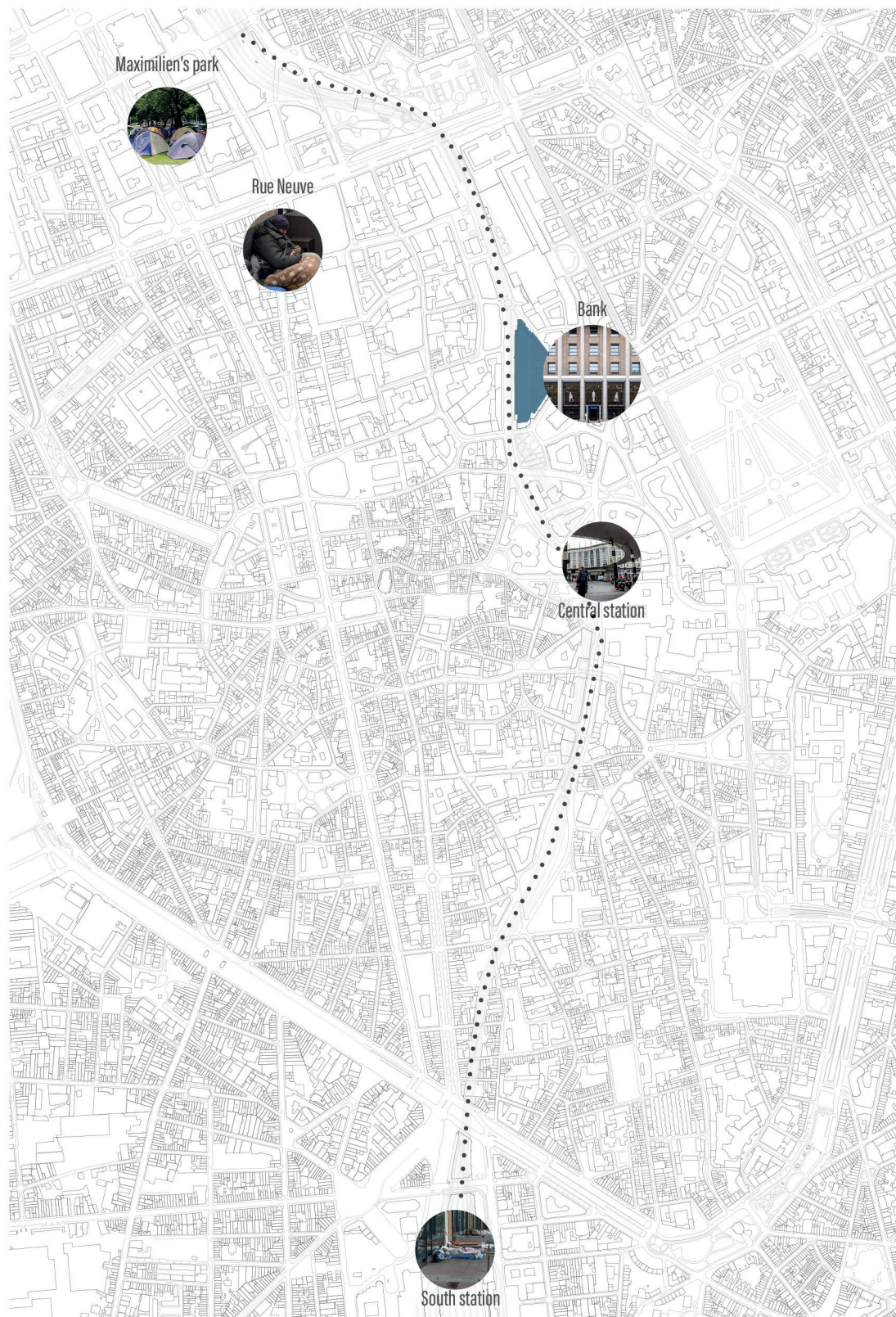
Brussels is a complex city. It is also a city of extremes. A part of the population is very rich and the other is very poor. The city, as every notable city in the world, is touched by poverty and homelessness. Brussels is no exception. Because of its status as the capital of Belgium but also as the capital of Europe, people come to Brussels to find a better future. Drawing from my personal experience, every district of the city is equally touched by homelessness, even if they are considered as "richer districts". Destitute people gather along the streets, asking the passers-by for a few coins. They are very visible in the city, but why is the government enabling this to happen? Why don't they take better care of the more precarious part of our society?

"(...) the most vulnerable remain invisible. This fact poses a major challenge for future planning and the future of social policies." (Helmut P. Gaisbauer & Clemens Sedmak, 2014)

The National Bank is located in a quite strategic place. The building is placed in the Pentagon, but close to the "small belt" the ring road replacing the fortifications. The building enjoys easy access. It also benefits visibility, partly due to the size of the building but also because of the institution as a whole. Homeless people tend to gather in places where the traffic is dense such as train stations, commercial streets, places of power. The police tries to remove them from the public eye, whether it will be to remove a torn in the foot or to keep the streets safer, these people are ushered away.

The area around the National Bank is filled with these places; Central station down the street, North station and Maximilian park where migrants are packed, Rue Neuve and the commercial centre of the city. Metro stations are also a place of choice for these people as they can move in the city and be protected from the elements.

The site of the National Bank of Belgium is a central location and important places are situated around the building. The leading principle of this project consisted of creating a space to welcome the people in need combined with a community centre. It was a great opportunity to revitalize the building and bring the community together.



The National Bank of Belgium is located in a potentially strategic place in the city: proximity to the stations, Rue Neuve and Maximilian park. Especially with the new developments of the neighbourhood and thus the arrival of new inhabitants.

Concentration of homelessness near the National Bank
Source : *Personal work*

Brussels is located in the north-centre part of Belgium along the river Senne. The city was founded on the lower part of the area, right next to the river. The places of power were placed on the upper part of the valley, overseeing the rest of the city. This elevation difference is showing the differentiation between the upper class, who reside on the most elevated part of the valley and the lower class residing down in the valley. With time, the city expanded on all sides of its original borders. In the 19th century, extensive housing developments arose on the southern part of the city and populated the upper part of the city more extensively than in the past.

The difference in altitude between the highest and lowest part of the city is significant. The city is based at an average of 57 meters but the difference between the highest level and the lowest is about 15 meters. The work with this elevation difference, diverse solutions have been put in place to ease the communication between the two parts. Some roads are gradually descending from one level to the other, some other roads are relatively steep. For the pedestrians, a series of urban staircases are connecting these levels.

The National Bank of Belgium is located at close proximity of the Rue Royale, which is demarcating lower and higher grounds. The terrain around the bank is very steep, a difference of around 8 meters is recorded between the highest point, which is around the Porte cochère located Rue du Bois Sauvage and Boulevard Berlaimont on the other end. The courtyard within the bank is where the height difference is the most obvious. It is going to be explained later at length, as the courtyard became a significant part of my project. The question of how to deal with this height difference became extremely important. How to access the different buildings around the courtyard whilst dealing with the slope?



This map shows the demarcation between the lowest and highest parts of town. A few of the staircase connecting the two levels are pointed in this map. Other might exist but these ones are the most notorious ones.

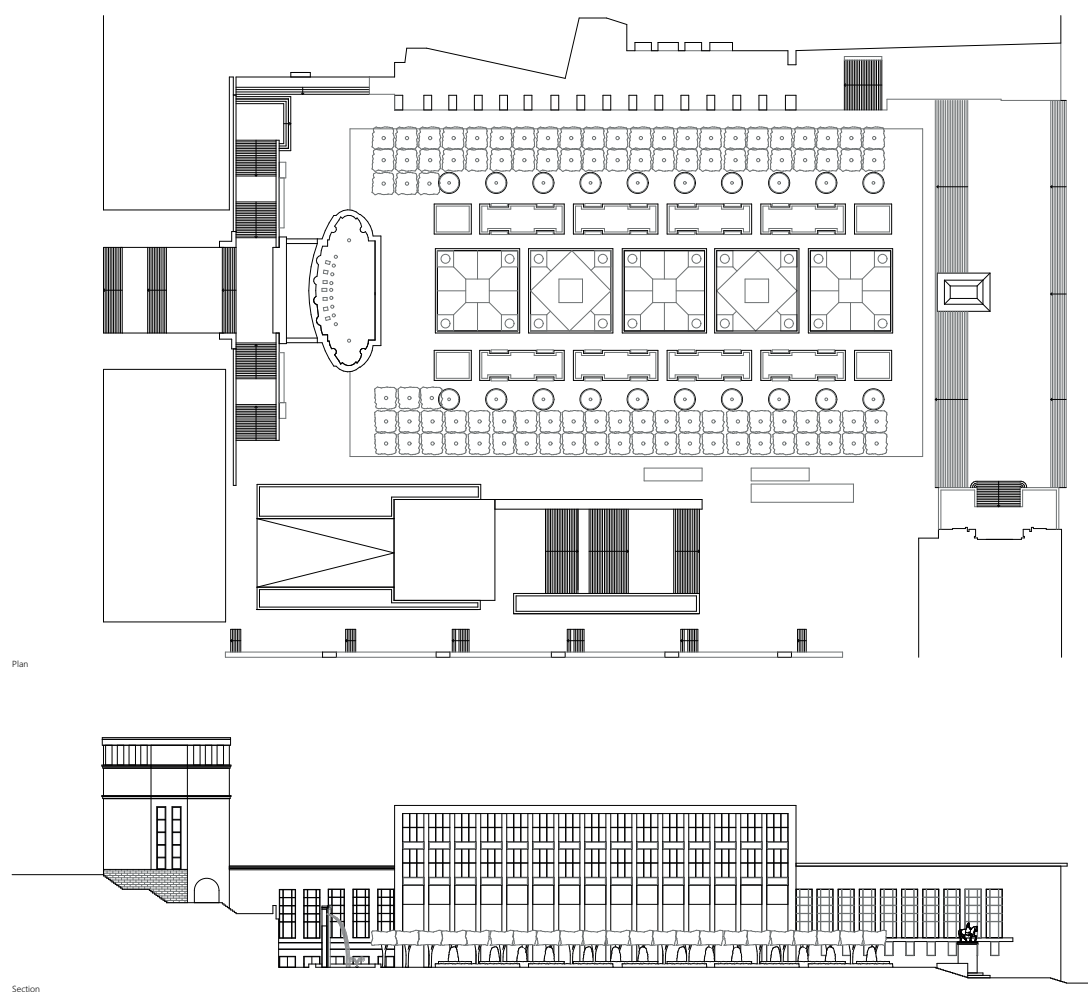
How to deal with the difference of level - a precedent study

The first staircase is *Mont des Arts*. This is a monumental square surrounded by the Royal Library. It is located in between the two main levels of the city and therefore, two monumental staircases are part of the design. Mont des Arts connects Cantersteen and Rue Royale. Mont des Arts space was always a difficult place for urban planning as it was such a large area and with a very big elevation difference.

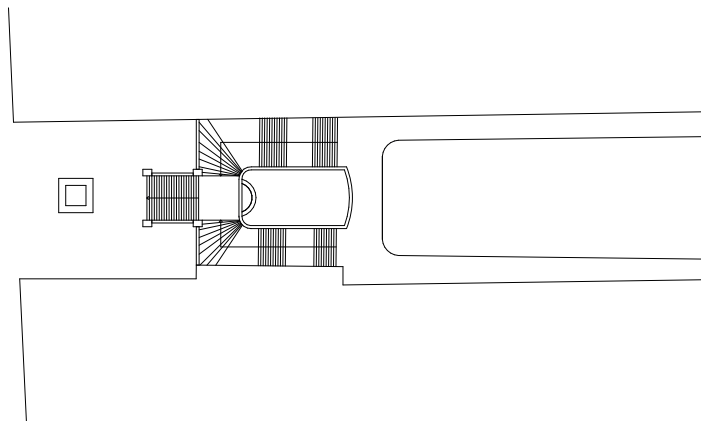
The staircase visible today is a project of the 2000s. Monumental, it contains a garden but also gives access to the National Library and the conference centre as well as a café.

The second one is the staircase *Rue du Baron Horta*. It is accessed from Rue Royale and located next to the Bozar, previously called the Beaux Art palace by Victor Horta. This is the reason why the staircase carries this name now. Built in the 19th century, it is a simple staircase in between two buildings. It was designed to access Rue Ravenstein downstairs. No shops or specific planning on the sides of the staircase but is still used quite a lot because of its location.

The third precedent is the *Gallerie Ravenstein*. It is not a staircase on its own but a commercial gallery connecting two levels and accompanied by a monumental staircase. It was designed as the continuation of the Rue du baron Horta's staircase and would link to rue Ravenstein to Cantersteen to the Central station. Shops accompany the passer-by all the way down the stairs from one entrance to the other. Offices were established on the floors above. At the time of its construction, it was a really elegant and fashionable gallery. Nowadays, half of the shops are closed or not well maintained, but it is nonetheless a very touristic place.



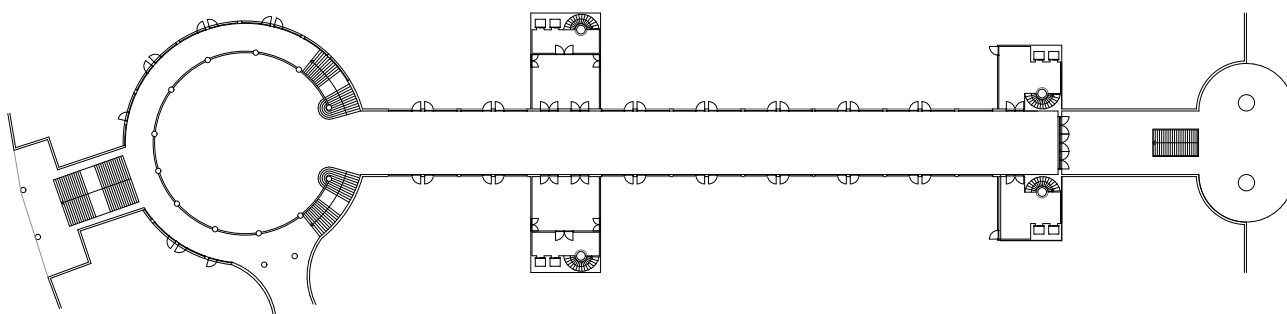
Rue du Baron Horta



Plan



Section



Plan



Section

9 / Bibliography

Brugiswebapp. (n.d.). Retrieved June 26, 2022, from <https://gis.urban.brussels/brugis/>

Culot, M., Pesztat, Y., Vandenbreeden, J. (2019, June 28). Save: Change the city – unbuilt brussels . C.I.I.I.III.IV.A. Retrieved June 26, 2022, from <https://civa.brussels/nl/expo-events/save-change-city-unbuilt-brussels-01>

Galerie Ravenstein – inventaire du Patrimoine architectural. Inventaire du patrimoine architectural. (n.d.). Retrieved June 26, 2022, from https://monument.heritage.brussels/fr/Bruxelles_Pentagone/Galerie_Ravenstein/1/30692

Google. (n.d.). Brussels. Google Earth. Retrieved June 26, 2022, from <https://www.google.com/intl/fr/earth/>

Mont des Arts – inventaire du patrimoine architectural. Inventaire du patrimoine architectural. (n.d.). Retrieved June 26, 2022, from https://monument.heritage.brussels/fr/Bruxelles_Pentagone/Mont_des_Arts/10001065

National Bank of Belgium iconography. (National Bank of Belgium.). Official documents handed in by the National Bank of Belgium

National Bank of Belgium photo survey . (National Bank of Belgium.). Official documents handed in by the National Bank of Belgium

Rue baron Horta – inventaire du patrimoine architectural. Inventaire du patrimoine architectural. (n.d.). Retrieved June 26, 2022, from <https://monument.heritage.brussels/fr/streets/10001004>

Sophie Soenen

Project Journal

Interiors Buildings Cities
4- Social engagement

Academical year 2021 2022

A Bank of Opportunities

A sheltering bank for people

Interiors Buildings Cities

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SUBTITLE

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Social engagement

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Architecture is a social field. The first focus of architecture is to provide a shelter to the population. We as architects design buildings with the people who will inhabit or frequent it in mind. The drawings we produce are executed and built by the workers. Architecture touches people and their lives. The world around us is completely fabricated and designed by architects, designers and planners.

As designers, we have the possibility and even the duty to think about the life cycle of the things we create. What is the message they send? Who is going to utilize it and for what period of time? Will it suffice their needs? Is this building going to add a positive value to their lives, or on the contrary, is going to influence people negatively? All sides of the discourse need to be examined.

The public plinth is the part of a building connecting the private and public realm. This strip of the city fabric belonging to both worlds. Sometimes closed, sometimes open, sometimes private and some other times public. But what are the concrete possibilities of this space?

I reinterpreted the social plinth, which is described more as a physical space previously, as an intention.

As an inhabitant of Brussels, I know that homelessness and poverty are an extremely visible issue. This project provides me the space to explore this theme that is very significant to me. The National Bank of Belgium will have a resolutely social future in this design.

This chapter will explore poverty in the city, the infrastructure in place to help the people in need, and my proposal to this problem, which will eventually then evolve into this graduation project.



Picture of the city centre of Brussels
Source : *Personal picture*

In this day in age, access to resources, technology and more generally comfort is more easy than ever. Unfortunately, this is only for a part of the world and a part of the population. A portion of the world, even in "developed" countries are still struggling to meet the most basics of needs, like a roof above their heads, sufficient food, hygiene or even safety.

The problem of poverty is even more present in cities, where more people are concentrated and the inequalities are more visible. It is a world-wide issue, but it is sometimes more noticeable in wealthier countries. In my few years of living in Brussels, poverty became, unfortunately, something reoccurring. Homeless and poor people are very visible, along the streets, in public parks or metro station. The Covid 19- pandemic of 2020 affected the underprivileged people more than the rest of the population and precipitated people in precarious situation in poverty.

Homelessness is a wide and complex problem. It encounters more than simply being poor and not having a stable home.

"Experiencing homelessness means not having stable, safe and adequate housing, nor the means and ability of obtaining it." (ohchr.org)

It also includes people in precarious situations or living in a non- conforming housing solution.

Poverty is a problem that can be addressed and improved if the government and the people in power, in general, would focus their efforts and resources on the issue. Needless to say, the issue is complex. Some people don't want to be helped, but it is undoubtedly not the majority of people. Many people need and want help, but simply cannot get it.



The population of Brussels expands every year. Unfortunately, the number of underprivileged people increases every year as well. The Covid pandemic did not relieve those already in precarious situations and who were relying on certain sectors of employment.

Every two years, Bruss'help, which is an organisation focussing on helping homeless and badly housed people in Brussels, counts the number of homeless people in the city of Brussels. Unfortunately, these numbers are rising every time, and the pandemic didn't reverse this progression.

The numbers for 2020 are
5313 people in a precarious situation including
719 sleeping in the streets or public spaces
808 in emergency housing
498 in ciVIC platforms, meaning with civilians housing them
622 in crisis housing solutions
706 in transition housing
335 in non-authorised housing situation
161 in negotiated housing situation
999 in squats
31 in hospitals
Among the 5313 destitute people, 933 were under-age and 12 sleep in the street.

These numbers keep increasing. Life is getting more expensive and it is more challenging for underprivileged people to get back on their feet by themselves.



The problem is widespread. It affects every country, every city. The difference might be in the way some cities and governments deal with the issue compared to others. Some countries have implanted what is called the "housing first" method. It consist in starting by providing a home to every destitute person. Once they have a home, it is easier for them to focus on other issues and gradually put their life back together. (housingfirstbelgium)

Dealing with homelessness and helping the people in need is renowned for being expensive. Some counties, however, have run some different calculations.

Finland, for example, has looked into this problem for a few decades. The number of destitute people decreased drastically even though the problem did not disappear.

Long term, housing homeless people is less expensive than supporting them on the streets momentarily, as The Finnish National Homelessness Strategy proved it.

The savings can go up to €15.000/ person/ year when homeless people get to possess a house. Scaling the numbers with Brussels's population of homeless, it amounts up to 79 695 000€/year. This is a considerable amount of money that could be used for another cause. (CBC.ca)

Evidently the initial investment to house everybody is heavy but eradicating the housing problem and helping people to get out of the streets is a long-term vision.



Homelessness is a complex problem and is connected to a variety of issues. Living on the street or in a homeless shelter carries a lot of struggle. They have to deal with unsafely, substance addiction, lack of hygiene, weather conditions, limited education, lack of resources to get out of poverty and discrimination. There are only a few regular struggles they encounter to overcome the adversity they are facing.

Even though there is no governmental oversight trying to reduce poverty, many independent actions are carried to support people on the streets. These operations are only containing the damages. They help people on a daily basis with the most pressing issues it doesn't in fact help people to get their life back on track long term. They are definitely necessary, but a more engaging assistance is needed. More and more people live under the threshold of poverty. The humanitarian associations and non-profit organizations are overwhelmed without being helped by a global governmental action.

In order to try to apprehend the reality of homelessness, I accompanied Douchefflux, a non-profit organization providing affordable shower and washing machines to people in difficulty. They also organize "maraudes", walks around the city every morning to bring essentials to people in the streets. Coffee, tea, biscuits, socks and hygiene kits are given to assist them to survive. They bring the very basic to the people in need, but these actions will not get people out of the streets. They just better the underprivileged's daily life.



The fight against homelessness is not unilateral but requires to tackle and take into consideration a range of related issues. One problem is linked to the other and it becomes impossible for the person to get out of poverty or homelessness by themselves.

Diagrams of different fields impacting homelessness
Source: Personal work

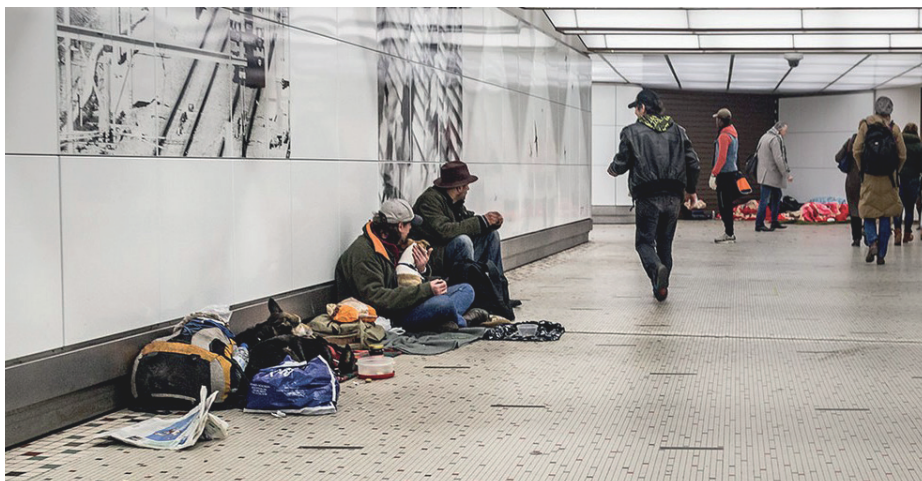
The lack of governmental and global action to reduce poverty and homelessness is concerning. Belgium is considered as a civilized, developed and rich country. As such, it is required to follow a chart of humans right. Housing is a human right. Having enough food, relative safety and stability should be high on the list of priorities. The country should be in charge of caring for the poor, making sure everybody has a roof above their heads and enough food to survive.

Unfortunately, the government doesn't provide a national plan to reduce the poverty. The work is delegated to a multitude of private organizations and institutions which are working on a regional level. There is an apparent lack of coordination between all of these separate organizations. The help they provide, although vital, is unfortunately not enough to assist everyone in need.

Poverty is a mainly invisible issue. We, as a society, choose to turn a blind eye. It is an uncomfortable vision to witness poverty, especially in a country which could work to resolve this issue.

Many destitute people are lost in the complex system. Either it is because they are illiterate, don't speak the language, don't understand the legal and governmental paper work or because of addiction and mental illness. People cannot get out of poverty by themselves. It is not laziness or negligence. The system is not made for them to navigate easily. Poverty and homelessness remove the hope for people to evolve into society.

The National Bank of Belgium offered ideal spaces to cater to people in need. The rooms in the Governor's hotel are the ideal size for emergency housing. Placed in a pleasant space with all of the facilities they need, the rooms give people in need the dignity and comfort they need to have a second chance at life.



There are multiple levels of destitution and poverty. The scale goes from the difficult end of the month to living on the street. It can be a single mother raising two children by herself, a freshly immigrated person or even a retired person without life savings and a meagre pension. Precariousness can happen to everyone. Unfortunately, the poorer you are, the less visible you become to the eye of the government as state Gaisbauer and Sedmak in their critique of the European agenda on poverty.

"Poverty deprives the person of understanding and realizing her potential, from grasping potentials and possibilities". (Helmut P. Gaisbauer & Clemens Sedmak, 2014)

Poverty also encompasses various other issues like marginalization and precariousness. It is important to understand all of these terms to perceive the extend of poverty.

Poverty:

«Poverty is defined relative to the standards of living in a society at a specific time. People live in poverty when they are denied an income sufficient for their material needs and when these circumstances exclude them from taking part in activities which are an accepted part of daily life in that society.» (BBC)

Precariousness:

"A precarious situation or state is one which may very easily or quickly become worse" (Longman dictionary)

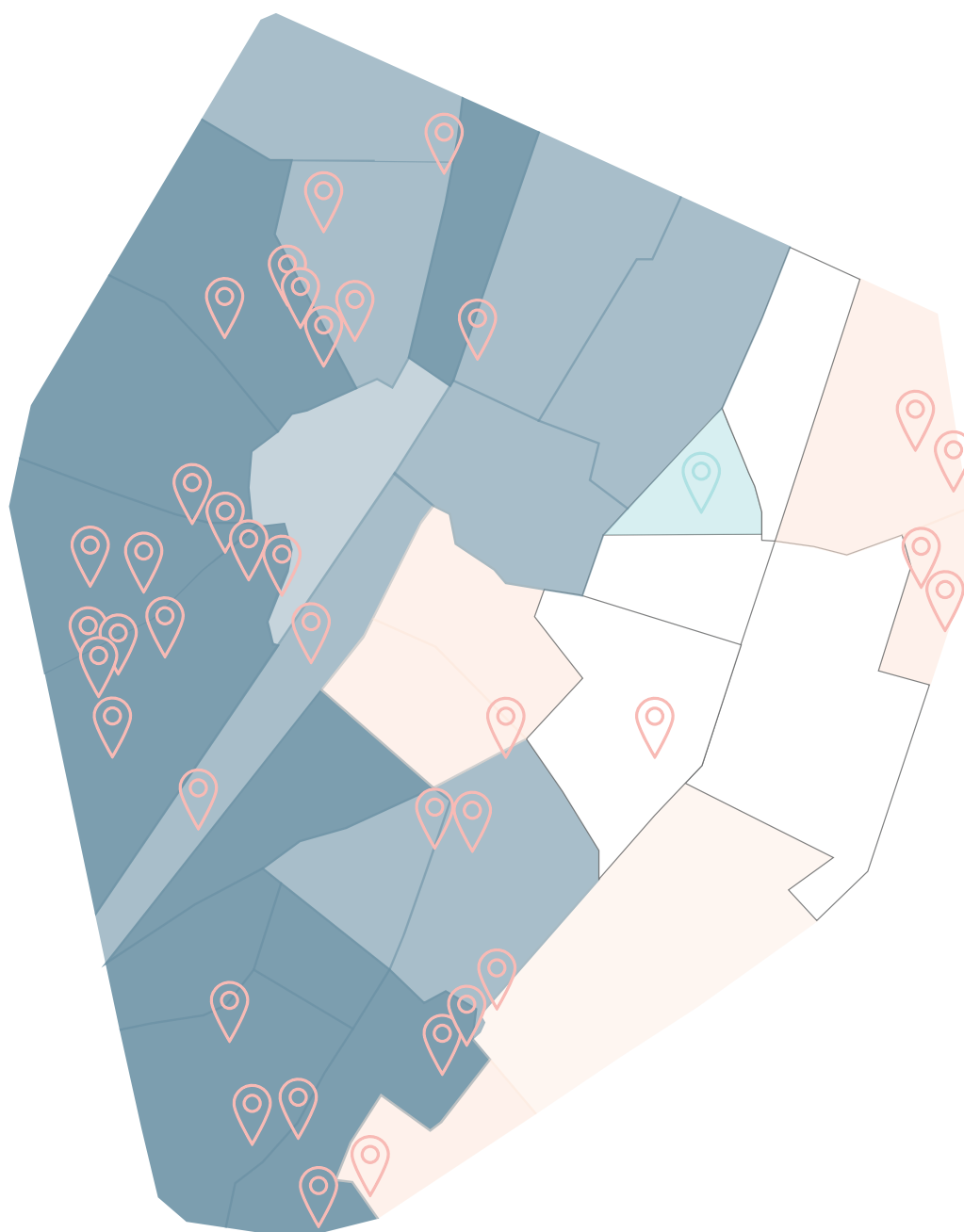
Marginalization:

To marginalize is the process of relegating or confining to a lower or outer limit or edge, as of social standing. Marginalization at the individual level results in an individual's exclusion from meaningful participation in society. (Sadybrook education/ unbound)

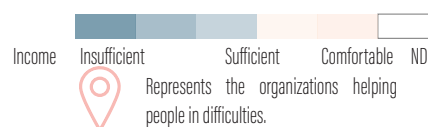
Homelessness

Experiencing homelessness means not having stable, safe and adequate housing, nor the means and ability of obtaining it. (ohchr.org)

"The increasing inequality between rich and poor country and within country, it is the most important socio economic determinant of our future." (Serageldin, I (1997)), The architecture of empowerment p38



The income of Brussels' communes inhabitant. As it can be seen, the West side of the city is significantly poorer than the east. This is a poverty that can be measured. The survey only captures the population who gains an income. Homeless people and destitute people fly under the radar and are not considered in these surveys and studies. The marked points represent the non-profit organization present in the city.



In order to have a deeper understanding in social space and their role in our cities, I read "Palaces for the People: How Social Infrastructure Can Help Fight Inequality, Polarization, and the Decline of Civic Life" written by Eric Klinenberg in 2018. This book describes the importance of social infrastructures and the role they have in our society. Where can elderly people meet in the city? Where can deprived people go to find help? Where do young people gather to socialize?

Brussels is the capital of Europe, and it is also one of the most multicultural cities in the world. Many people came and still are coming to Belgium with the hope of finding a better place to live and creating a new start for themselves. The population comprises a variety of languages, cultures and religions, social classes and political opinions.

"To serve and connect such a diverse city, important public and social spaces are needed. Spaces that invite people to meet, exchange and connect on different levels." (Klinenberg, E. (2018))

As I discovered during my research on precarious people living in the capital, more than the absence of money and material wealth, homeless and destitute people are lacking social connections. This is equally true for more elderly people who sometimes spend their days without encountering anyone.

The bank is a very large and underused building. Some spaces are ideally suitable to establish public spaces where young people can gather, where an older generation meet or where people can connect and exchange without any other obligations.

How could public architecture be a social mediator and a representative of all social, economic and cultural classes? What is the role of a public building in the city? How could this building become a stimulator of meeting, growth and social connections, and a civic institution?



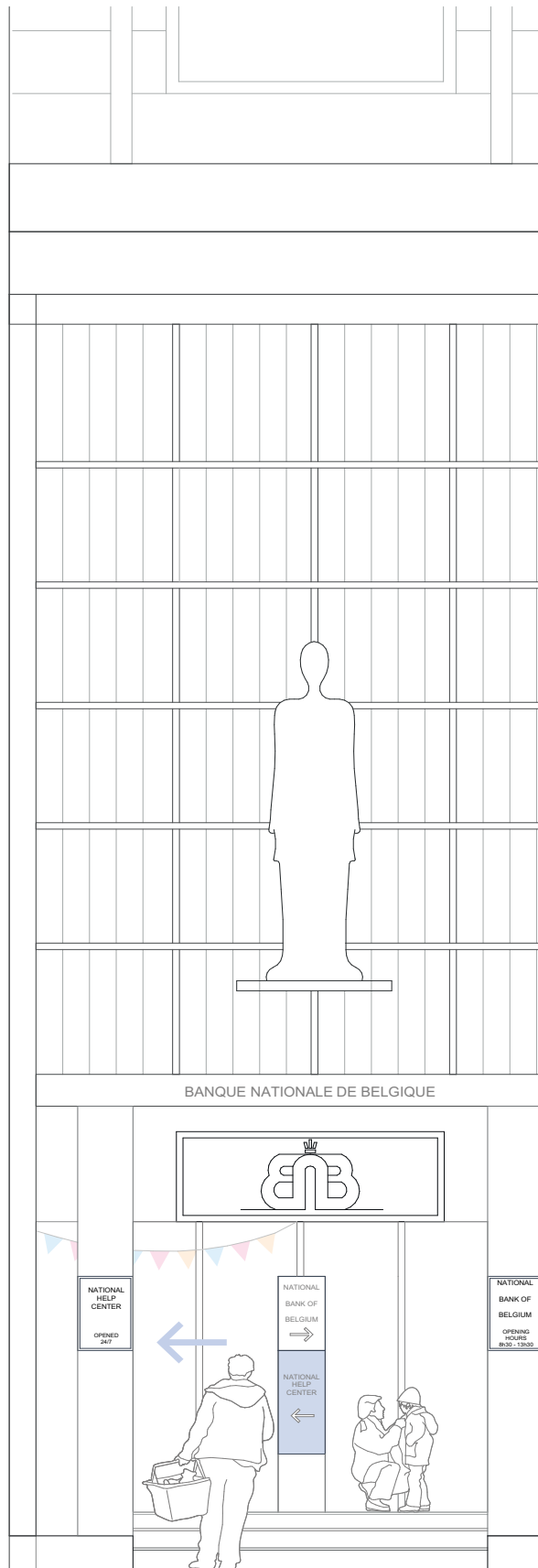
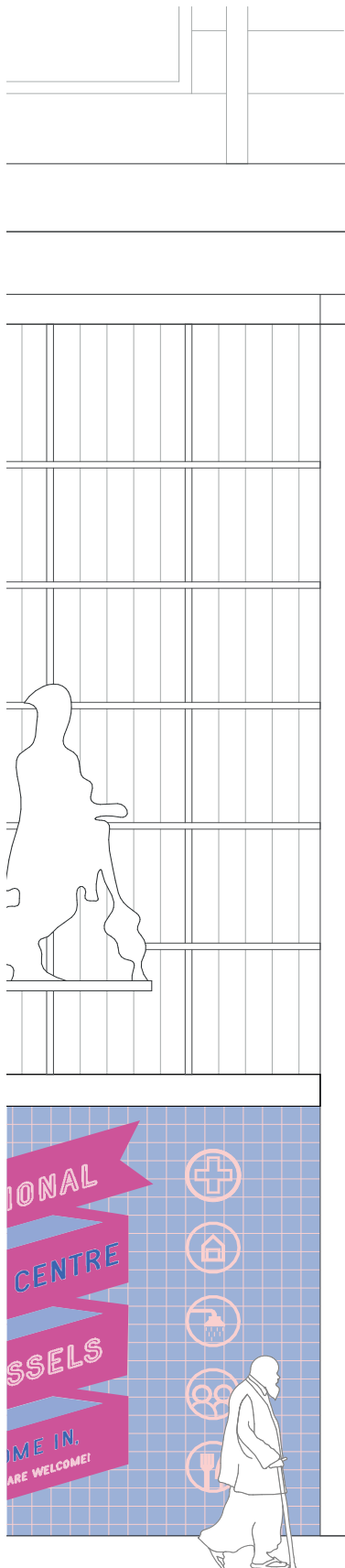
Precariousness is a problem concerning an increasing number of people in our society. Everybody can be affected. We often look down on these people, hoping to never be in their position or we wonder how they ended up there. In Brussels alone, around 5313 homeless people were counted in 2020. With proper care and support, anybody can be reinserted into society. The necessary associations and resources are available within the city as well as the workforce but are dispersed. What if they were to be centralized to encourage collaboration and give people in precarious situations a place to go to? A central space in the city, easily accessible and large enough to decently accommodate all people. A space they wouldn't feel ashamed to frequent and a space people seek the help they deserve.

The National Help Centre is a space for everybody needing help in Brussels. It is a safe zone. By taking over an underused space of the National Bank of Belgium. I wanted to offer a decent space for the people that need it the most. A social plinth that connects the most precarious people of our society. Whether it is to speak to somebody, get a warm meal, grab some groceries, see a psychologist, health specialist or finance advisors, every service would be available in this building. You can get a coffee, speak to people, take a shower, learn how to cook and speak another language without judgment. Every citizen is welcome to occupy this space. It would become a social plinth for the city. The establishment would be accessible at all times, and its open doors would be an invitation to a fairer world.

Thinking about the Public Plinth exercise made me realize the importance of taking into consideration every layer of society. Maybe the bank could evolve into a palace for the people?

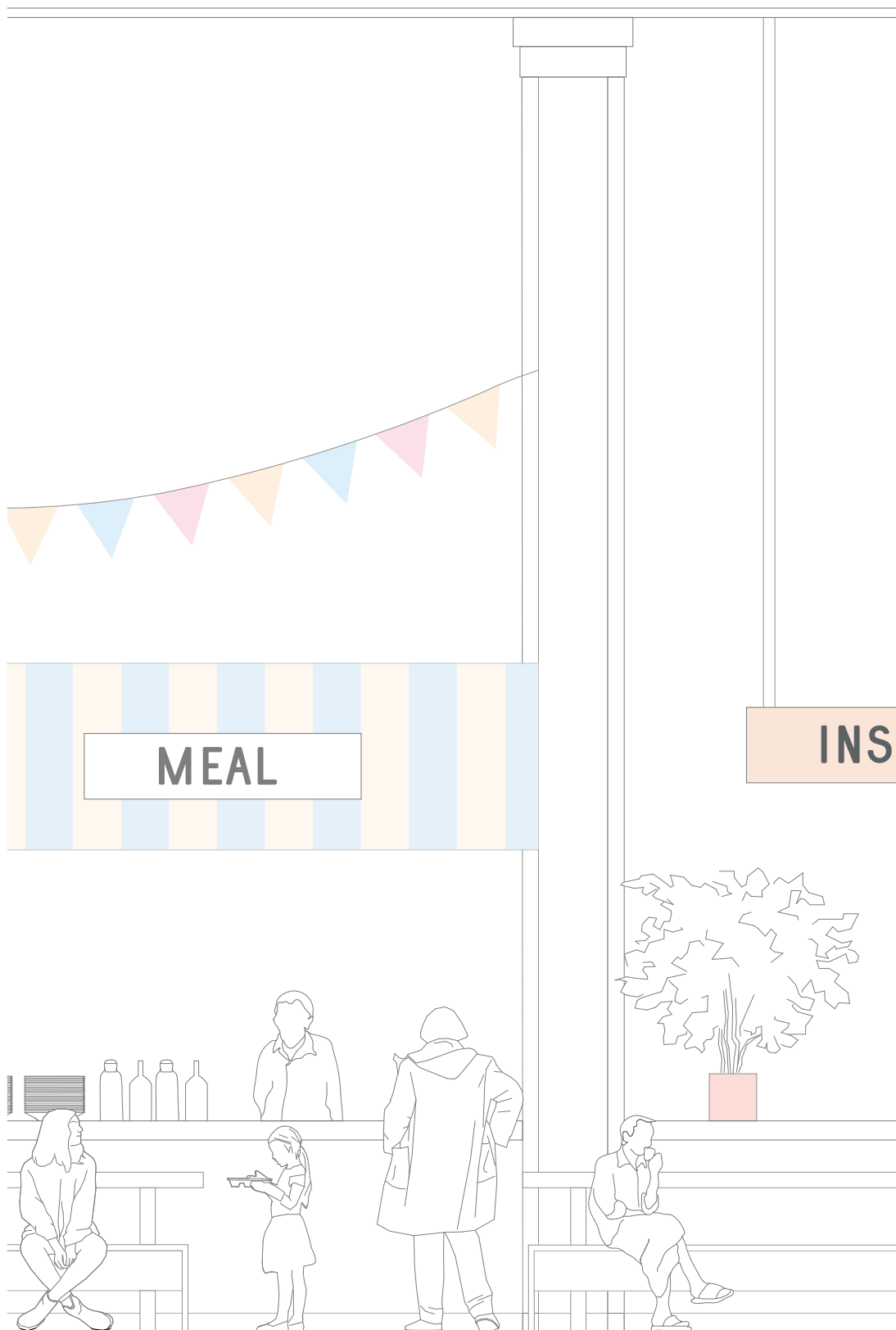
The National Bank of Belgium could be the start of a new kind of bank, a mediating monument, a space for empathy and opportunities.







Going to the food bank
Source : Personal work



Eating in the main hall
Source : Personal work



The social plinth should also relate to the city

It is about creating a space without stigma, people should not be judged to ask for help

Schedule of the bank/ schedule of the help centre : how do they coexist, or not ?

How to show that the space is open and available from the street

How are the users ? Homeless people but also the lower classes need help to get by everyday

Legitimate viability

Destigmatization

Public rooms

How can I create a **meaningful space**, a space that is needed and viable ?

It is about going further than only furniture in a space, it is also **the functioning of the National Bank** that needs to be re thought of.

The role of a central bank is actually to act on a social level and reduce poverty in its country. What role the National Bank of Belgium can play in society and help it can offer to Brussels' citizens?



The courtyard is geographically approximately in the centre of the National of Belgium's buildings. It was an evidence for me than the National Bank's project would be designed around this courtyard. It would become the heart of the project. Every part of the program would revolve and transit through this hollowed-out space in the Bank.

As of today, it is a service courtyard. The bins are located in this space and the delivery trucks transit in it. The previous bank's banking hall was located roughly in this area, but has since been demolished. The remaining building was cut to allow light and air to flow in the newly constructed space. This courtyard is surrounded by offices. Unfortunately, the current view from the offices onto the courtyard is unpleasant as it is only serving purpose as a functional courtyard.

The picture on the right shows the state of the courtyard

The question is therefore becoming: How to create a central space, where everything revolves around it and becomes the heart of the project?

I wanted to design a garden, a piece of greenery in the bank. This garden related to the previous garden of the Hotel. It also connects the Boulevard and the square Rue Du Bois Sauvage as well as the square in front of the Saint Gudula's cathedral.

By connecting the existing entrances from the Bank, the ones from the Governor's Hotel and the monumental entrance Boulevard Berlaimont, the courtyard is framed. The major circulation nodes are built around it. The various parts of the programs are located all around the garden. It quickly became the focus of the design.



The courtyard's existing situation
Source : NBB Fotosurvey

Giving potential to the courtyard and its garden

Designing a garden with a balance of the natural elements is not an easy task. Designing an intriguing and pleasant space in the courtyard was proven difficult. As I am not a landscape architect, I researched into landscape architecture. I read about Italian gardens to have an historical reference. I also looked into Carlo Scarpa's work to have a modern view onto the world of landscaping.

About gardens, Alberti wrote: "The construction will give pleasure to the visitor if, when they leave the city, they see the villa in all its charm, as if to seduce and welcome the new arrivals. Toward this end, I would place it on a slightly elevated place. I would also have the road climb so gently that it fools those who take it to the point that they do not realize how high they have climbed until they discover the countryside below."

The way Alberti describes garden makes you imagine your perfect garden in your head. A perfect garden, a relaxing and pleasant space. Always considering the natural terrain, Alberti makes a feature out of the slope.

The National Bank is located on the flank of a hill in Brussels. The difference in elevation between one side and the other is more than seven meters. This difference is very visible in the courtyard. How to deal with this declivity in the courtyard while creating an interesting and monumental space?

In "*Italian garden of the renaissance JC Shepherd & GA Jellicoe*", the authors talk about the drama of gardens, how it acts like a theatre. I couldn't agree more. In the case of the bank, the courtyard, being surrounded by building and mainly semi-public circulation, creates a scene. The buildings looking into an other world.

"Pattern is the architectural prototype of the formality of life, and in the same way it is modified by circumstances of the moment, principally those governing the relation of formality to informality. First consideration. (*Italian garden of the renaissance JC Shepherd & GA Jellicoe, 1993*)

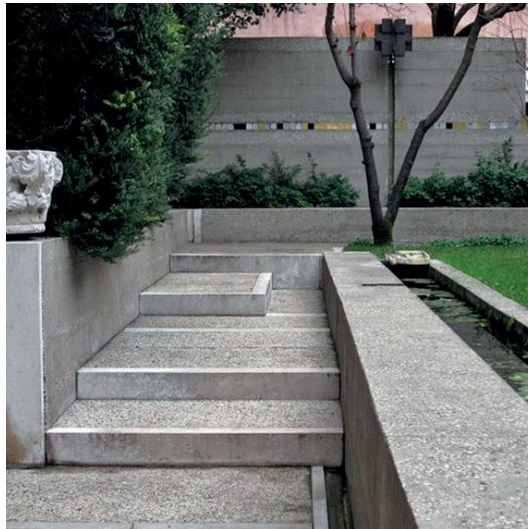
There needs to be a transition between structure and nature. The new wings including the circulation core are demarcating the new public courtyard. It is completely surrounded by buildings. The inside needs to translate an opposition to structure by being nature. The transition between the two needs to be layered

"Water was essential to the garden to suggest coolness both in sight and sound. Reflecting pools are designed solely for peace and rest, in surroundings beautiful enough to be mirrored." (*Italian garden of the renaissance JC Shepherd & GA Jellicoe, 1993*).

Water is an important to gardens as it brings peace to a space. The sounds, the vision of the streaming water are calming

A essential reference for gardens is Carlo Scarpa for the Querini Stampalia Foundation in Venice. The ways the architect intertwines water, nature and structure creates a peaceful, but interesting contrast. The balance between the elements is achieved.

Another inspiration is EASTOP ARCHITECTS another world within that garden. CHENIER. In their project, nature gets very close to the structure. The building enhances the garden, and the garden enhances the architecture. They operate hand in hand to achieve a balance.



Carlo Scarpa, Querini Stampalia Fondation, Venice.



Carlo Scarpa, Querini Stampalia Fondation, Venice.



EASTOP ARCHITECTS, Chenier 2020

Title : Areal view of Brussels's pentagon
Source : *Google Earth*

I designed the new National Bank of Belgium as a place of shelter, a reachable bank. In a similar spirit I wanted the newly created garden in the courtyard, to reflect this process. Brussels is a dense city. Nature is limited to what is called the "green belt" around the city, parks and private gardens. This courtyard, transformed in a garden is also a refuge for plants. A few native species have been registered as engendered by the Brussels environment's organization. It is in a governmental platform caring for the quality and diversity of the fauna and flora of Brussels. They have listed 12 species of plants engendered in the capital. Ranging from oaks to ferns or even flowers.

Native trees and plants, in general, contribute to a more qualitative environment, a more breathable air and a altogether better climate. It is vital for us, as a society, to foster places in cities where the local and native nature can thrive and redevelop, to better the environment surrounding it.

The courtyard will create a pocket of green space in the city centre. It is also connected with the renovation of the boulevard and the "Rue du Bois Sauvage" square which is also redesigned to correlate more to its given name. The square next to the church had been transformed into a parking lot. Rue du Bois Sauvage means "wild woods." The parking lot didn't look anything like wild woods anymore. By replanting and establishing a square instead of the parking lot, the entrance to the Governor's Hotel is reinvented as well.

«A garden, perhaps the highest, most difficult art form, is best conceived as a series of planned relationships of human to human, human to structure and human to some facets or facets of nature, such as the lichen-encrusted tree bole of an ancient ginkgo tree, a springily sun flecked magnolia clump, a trickle of water, a foaming cascade, a pool, a collection of rare tree peonies, or a new New Hampshire upland meadow view. A garden is best conceived as an environment in which human life patterns can be ideally related to natural, man-made elements within the garden space. In such an idea garden, the user is seldom conscious of the specific plan forms, but rather the myriad pleasant relationship induced by the planned environment" (*Italian garden of the renaissance* JC Shepherd & GA Jellicoe, 1993)



La reine des prés (*Filipendula ulmaria*)



L'orchis de Fuchs (*Dactylorhiza fuchsii*)



Le hêtre commun (*Fagus sylvatica*)



Le populage des marais (*Caltha palustris*)



La marguerite commune (*Leucanthemum vulgare*)



La grande prêlé (*Equisetum telmateia*)



La fougère aigle (*Pteridium aquilinum*)



L'Ail des ours (*Allium ursinum*)



La centaurée jacée (*Centaurea jacea*)



L'anémone sylvie (*Anemone nemorosa*)



La callune (*Calluna vulgaris*)



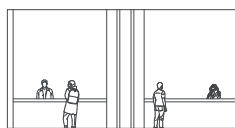
Le Chêne sessile (*Quercus petraea*)

The project of the bank was slowly but undoubtedly becoming more than a social project. It grew into a into a political design.

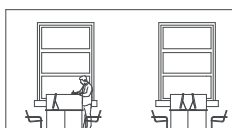
By welcoming everyone from the communities, public, workers and destitute people, the Bank is conveying a message to the outside. It gives another image of their institution. A more welcoming, open, helping and conscientious part of the society.

Belgium hosts many refugees, legal or illegals. The recent declaration of war From Russia onto Ukraine leads many Ukrainian to leave their country in search for safety. A new wave of migrants arrived in the country. These events showed once again how important to have spaces available for people in need. Social spaces are an important part of our society. They help communities to socialize, to communicate, to share, to learn.

Humans are social creatures. We do need social contact and communications. In a vast city, people can feel isolated and alone. These spaces are vital. The National Bank of Belgium participating and encouraging these types of space provides a changes interaction with finance and the economical world.



Counters



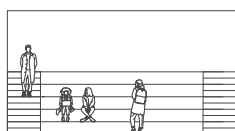
Office spaces



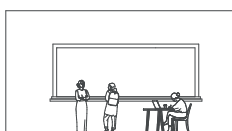
Social spaces



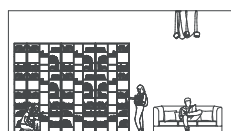
Reception spaces



Amphitheatres



Classes



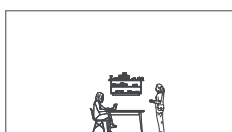
Library



Micro companies



Emergency housing



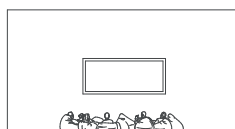
Administrative help



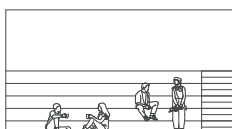
Listening/ expression spaces



Resources



Social spaces



Gathering spaces



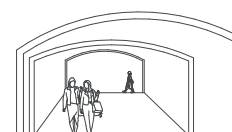
Exhibition spaces



Market



Rooftop garden



Physical connection



Outdoor spaces



Kindergarden

7 / Bibliography

2022Striano, M. (2022). Citoyens de l'ue sans-abri À bruxelles : Rapport. <https://www.feantsa.org/>. Retrieved June 26, 2022, from https://www.feantsa.org/public/user/Resources/reports/2022/Mobile_EU_Citizens_Brussels_FR_v2138637.pdf

By the redaction. (2021, February 10). Face au froid, La Gare du Midi Ouverte aux sans-abris durant la nuit. Vague de froid: seule Bruxelles-Midi restera ouverte la nuit pour les sans-abris dans la capitale. Retrieved June 26, 2022, from <https://bx1.be/categories/news/face-au-froid-la-gare-du-midi-ouverte-aux-sans-abris-durant-la-nuit/>

DoucheFlux. DoucheFLUX. (n.d.). Retrieved June 26, 2022, from <https://doucheFlux.be/>

Gagner la lutte contre le sans-abrisme par le logement. Housing first belgium. (n.d.). Retrieved June 26, 2022, from <http://www.housingfirstbelgium.be/fr/>

Gaisbauer, H. P., Sedmak, C. (2014). Neglected futures. considering overlooked poverty in Europe. European Journal of Futures Research, 2(1). <https://doi.org/10.1007/s40309-014-0057-2>
Homelessness and human rights. OHCHR. (n.d.). Retrieved June 26, 2022, from <https://www.ohchr.org/en/special-procedures/sr-housing/homelessness-and-human-rights>

Johnston, J. (2020, October 26). Les sans-abri bruxellois reçoivent un laissez-passer pour expliquer la rupture du couvre-feu. Bruxelles.News. Retrieved June 26, 2022, from <https://bruxelles.news/les-sans-abri-bruxellois-recoivent-un-laissez-passer-pour-expliquer-la-rupture-du-couvre-feu/>

Kesteloot, C., Roesems, T., Vandenbroecke, H. (2002). (rep.). Pauvreté et quartiers défavorisés Dans la Région de Bruxelles-Capital .

Klinenberg, E. (2019). Palaces for the people: How social infrastructure can help fight inequality, polarization, and the decline of civic life. Broadway Books.

Legrand, M. (2018). Sans-Abrisme et féminisme Des enjeux à croiser. Alter Echos. Retrieved June 26, 2022, from <https://www.alterechos.be/sans-abrisme-et-feminisme-des-luttes-a-croiser/>

Purdon, N., Palleja, L. (2020, March 7). Housing first: How One Canadian city is tackling homelessness | CBC News. CBCnews. Retrieved June 26, 2022, from <https://www.cbc.ca/news/canada/edmonton/homeless-solutions-housing-first-1.5486779>

R., J. (2019). Toujours plus de Sans-Abri à Bruxelles: Où dorment-ils, Combien de mineurs Parmi Eux? lavenir. net. Retrieved June 26, 2022, from <https://www.lavenir.net/regions/2019/05/08/toujours-plus-de-sans-abri-a-bruxelles-ou-dorment-ils-combien-de-mineurs-parmi-eux-JTBSIALLRCKVM4PQXMJWBXOL4/>

Serageldin, I. (1997). The architecture of empowerment: People, shelter and livable cities. Academy Editions.

Shepherd, J. C. Jellicoe, G. A. (1965). Jardins de la Renaissance en Italie (1925) = Italian gardens of the Renaissance = Italenische Gärten der Renaissance.

Striano, M., Horvat, N. (2020). Personnes sans-abri et mal logées en région bruxelles-capitale. Brussels Studies. <https://doi.org/10.4000/brussels.3944>

Xavier, V. O. (2013, April 11). Les travaux à bruxelles-central vont-ils Chasser Les Sdf de la Gare? RTBF. Retrieved June 26, 2022, from <https://www.rtbf.be/article/les-travaux-a-bruxelles-central-vont-ils-chasser-les-sdf-de-la-gare-7969469>

Sophie Soenen

Project Journal

Interiors Buildings Cities
5- Offices & work environment

Academical year 2021 2022

A Bank of Opportunities

A sheltering bank for people

Interiors Buildings Cities

Sophie Soenen
5392594

Main mentor (architecture) *Mark Pimlot*
Second mentor (research) *Jurjen Zeinstra*
Building technology tutor *Matthijs Klooster*

5- Offices & work environment

- 1 | Introduction
- 2 | Recreating offices spaces
- 3 | Working from precedents
- 4 | Technology and climate strategy for durable working spaces
- 5 | Office spaces in the Bank
- 6 | Bibliography

My project of the National Bank of Belgium has two main axes. The first one is to open the building and institution to the public and the second is to create durable and pleasant office spaces. Currently, the number of employees of the Bank is diminishing and the building is clearly underused. Maybe in the future the number of employees is going to increase again. The certainty is that after the pandemic of 2020, society had to adapt and workers in general had to adapt. Workers had to find a way to work from home in good conditions and in ways that were working for them. This challenge, in my opinion, has changed the way we work and design offices deeply. Office buildings nowadays need to be flexible, durable and be able to withstand the future changes possible easily. As the National Bank of Belgium was built in the 50's, the building was already refurbished multiple times to evolve with the time period and work environment needed. These changes demonstrate that the building is actually quite flexible and the capacity to be adapted further along the line when necessary.

In order to find the ideal work environment, it is important to understand the history of offices. Precedent studies and in depth study of office spaces of the past were defining to design new flexible and future proof offices for the bank.



In order to discover more about working spaces and their history, the group reproduced a picture of the main working space in the Johnson Wax headquarters by Frank Lloyd Wright.

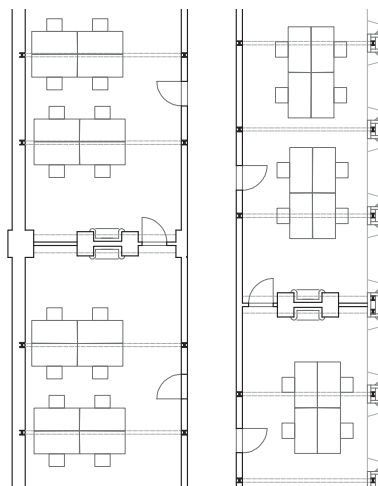
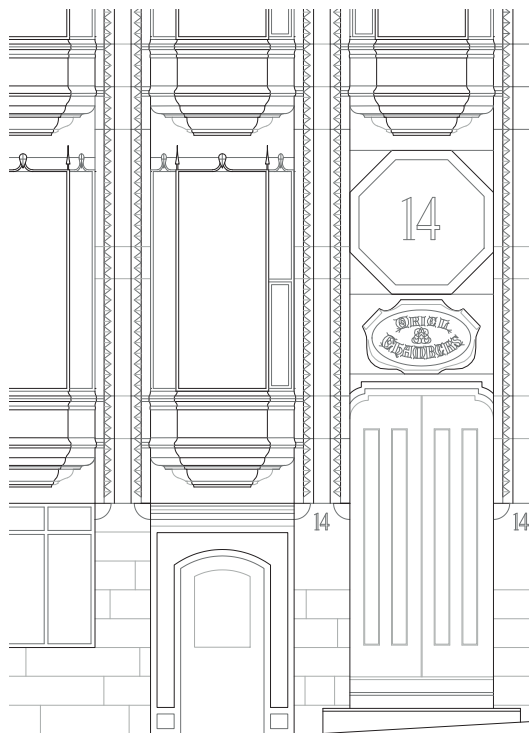
By selecting a certain image, we were tasked to figure out the point of view, the height. After carefully examining the image in depth, we reproduced the furniture, structure, the materiality, the light, the details. Every detail needed to be right to resemble the initial image. To achieve the final picture, a "set" was created. Only the elements in the frame were built. The second picture shows the outside of the "set" that was created. The third picture shows the inside and approximately the point of view needed. It is very visible that the apparatus needed to reproduce the picture is considerably larger than the actual scene. It was so fascinating to play with light, the frame, the perspective in order to achieve a set picture. In recreating this picture, we had to understand everything in detail, from the function of the building, the history of the company, the architect, his decision, aesthetically and structural. The process was labour-intensive and time consuming but the finished image looked very close to the original image. A few glimpses give the set away, mainly in the "transparent" elements, as everything is made out of paper.



At the same time as we were recreating the picture of the Johnson wax offices, we were re-drawing some other historical office buildings. The Oriel Chambers building, in Liverpool was our second work. The building consists in a series of small offices, hence the name of the building "Oriel Chambers." The small offices were and still are to this day, rented by individual small companies requiring very little space. Each office is lit by a large oriel window and heated via a chimney.

The construction is deemed to be the ancestor of the first curtain wall.

This building was the inspiration for the social investment part of my project Social disinvestments are usually micro-companies and are employing maximum nine people. These companies require very little space to be able to operate. The wing created for this kind of office offers various types of spaces and is ideal for flexibility. Some social investment and micro companies involve more desk work, some other ones are production focussed. Different companies have diverse needs. They also require different accommodation when they are developing. These types of offices are the ideal solution for the specific needs of a growing business.



Nowadays, climate design is a very important part of designing any building and offices are not any different. Ventilation and heating techniques are crucial for the proper functioning and use of the building. In the past, ventilation in office buildings was naturally achieved via cross ventilation and the opening of windows. Heating was first done via fireplaces and later with central heating. Regulations have evolved over time to the point where central mechanical ventilation is almost a requirement. The issue with these automated and centralised systems is that they offer very little, or no control for the individual.

The study "Evolving opportunities for providing thermal comfort" carried out by Hui Zhang and Edward Arens demonstrates the variety of factors but also the subjectivity of these factors in the workspace.

According to an article from Resilience.com, climate control and more particularly heating takes up around 20 % of the energy use of the building. This is a substantial portion of the total consumption, especially considering that we live in a temperate climate.

The same approach as for the rest of the project was taken for the climate design as well as for building technology. Working from what already exists and building onto it. My research for climate design was focussed on ways to reduce energy consumption for office buildings. As stated previously, climate control requires a considerable portion of the building's consumption.

I started by researching about the systems currently in place, and how to take advantage of them. I then researched alternative methods of ventilation, such as mixed ventilation. Then the cooling and heating part of climate design were explored. Office buildings have a reputation for being quite uncomfortable to work in. What if each individual worker had the power to control the climate of their environment? These unconventional ways of heating an office space might be a solution for the reduction of energy consumption in such a building.



Drawing of the window's design
Source : *NBB Iconography*

The ventilation installed in the Bank's offices is a fully mechanical central ventilation system. The ventilation ducts are concealed above a suspended ceiling. The windows could be opened in the the past, but the construction of the second roof in the courtyard paired with the noisy Boulevard street made natural cross ventilate in the office space unviable.

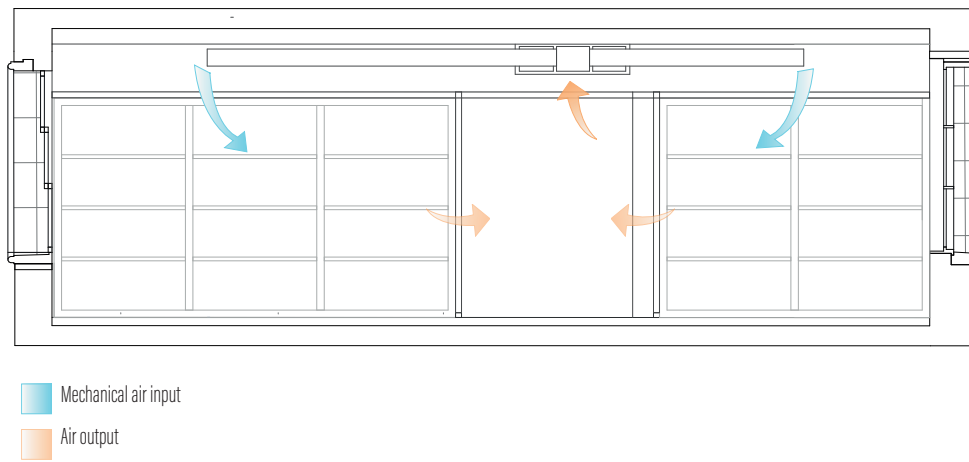
A solution combining mechanical and natural ventilation, also called mixed ventilation was, in my opinion, the optimal solution for the bank.

Climate comfort is a complex subject as it is extremely subjective and depends on the season, personal preference and sometimes culture.

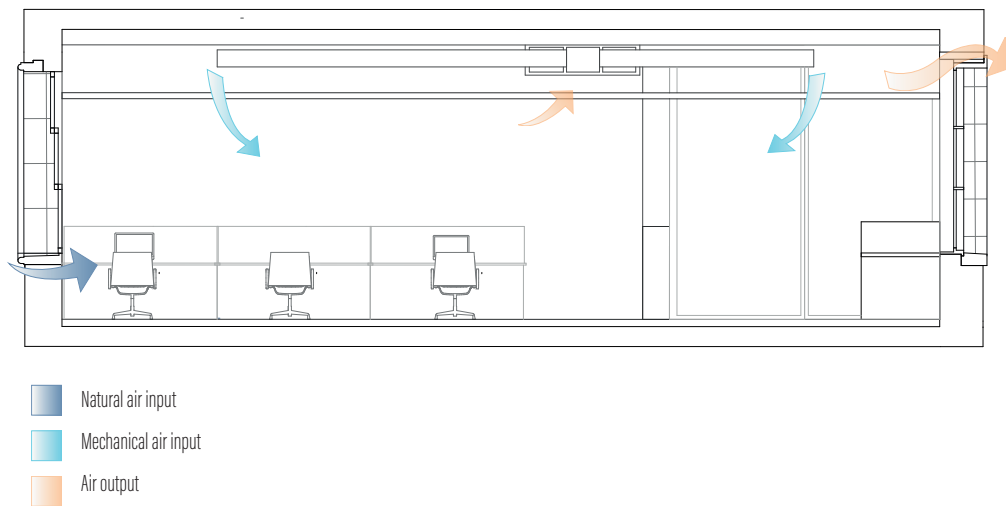
As the authors demonstrated in their books "Adaptive thermal comfort : principles and practice" and "Adaptive thermal comfort: foundations and analysis", climate comfort is also impacted by the "adaptive opportunity it affords to the occupants". In other words, people, in general, feel more comfortable when they have a possibility to change their conditions by themselves. This implies that the action of opening windows is significant. Even though the fully mechanical ventilation is conditioning and tempering the space following the regulations in terms of air flow, air pollution and temperature, a space where a window can't be opened will be more uncomfortable for the people using this space.

Because of the bustling boulevard, opening the windows of the main facade is complicated. For this reason, ventilation grids, fitted with pollution filtering and noise cancelling are installed in the front facade. Ventilation grids are also installed in the facade facing the courtyard. These opening on the walls are allowing a natural cross ventilation. This ventilation, combined with the mechanical venting, which brings the required airflow, produce a fully functional but adaptable solution.

Existing situation - mechanical ventilation



New situation - mixed ventilation



The existing heating system consists of heaters placed underneath each window and fuelled by oil boilers. These boilers will be replaced by heat pumps, which are more energy sufficient and have a lower carbon footprint.

In order to produce the energy required by the bank, solar panels will be placed on the vast roof of the buildings.

Climate control in offices is difficult as it is a subjective matter. The mechanical ventilation is providing a stable airflow, quality and a reliable temperature.

Local and personalized heating practice is a field currently highly researched as this system has proved to reduce the energy consumption as well as increasing the user satisfaction.

In the article "Heating people not places: how to keep warm in a cool house" written by Kris De Decker and published in Low-Tech Magazine, local heating solutions are described. They were explicitly written for a domestic environment, but can be utilized in a work environment as well. Unfortunately, as it is stated in the article, the current comfort standards are not built to allow the control autonomy by the user, even though it is proven to be more energy efficient than a fully mechanical system.

Some solutions are based on convection, some on radiation or even on conduction and provide a certain range of autonomy by the user.

The first option is a desk heating pad. It consists of a heating sheet, a waterproof layer and a PMC layer providing warmth on the desks. This solution is extremely flexible as it can be placed on any desk and can be regulated by each user. It is also energy efficient as it warms directly the user via conduction.

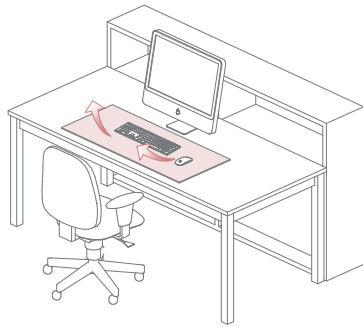
The second solution is a radiant panel. These heaters are composed of a thin metallic surface and therefore don't have very little thermal mass. They are quickly responsive to produce heat. These panels can be attached to any surface and are therefore highly flexible to use. They can be placed vertically on a wall or even horizontally on the ceiling.

The third solution is a hydronic radiant panel. These function similarly to the previous radiant panel but work with water. These, often used in a suspended ceiling system, is capable of providing heat but also cool. The need for warmth is more important than cold is more important in our temperate climate but the buildings are required to provide a way to cool the spaces for the few days in the year when temperature is high.

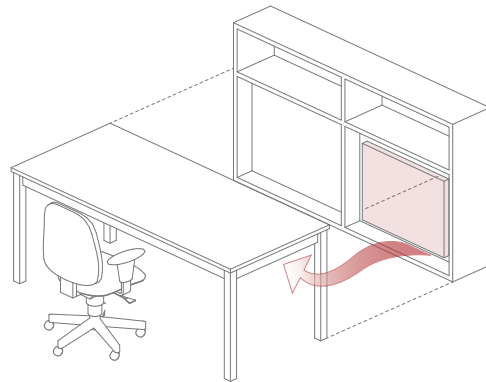
The fourth solution is a radiant heater. These can be placed on any surface and are energy efficient. It was a particularly interesting option for me as I wanted to use furniture in combination with heaters.

After researching these types of heating solutions, a combined use of the systems might be the ideal solution to warm the offices.

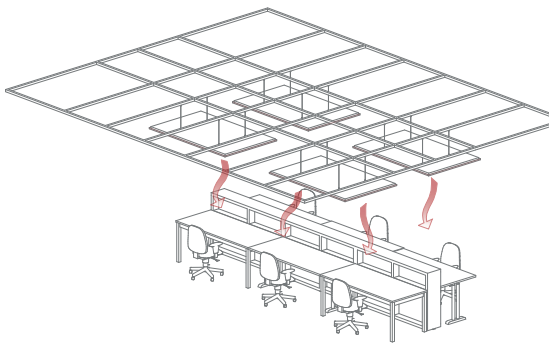
By combining the mechanical ventilation for a stable warmth in the offices with local and personalised heating solutions, the user will be provided with a high level of thermal comfort to work.



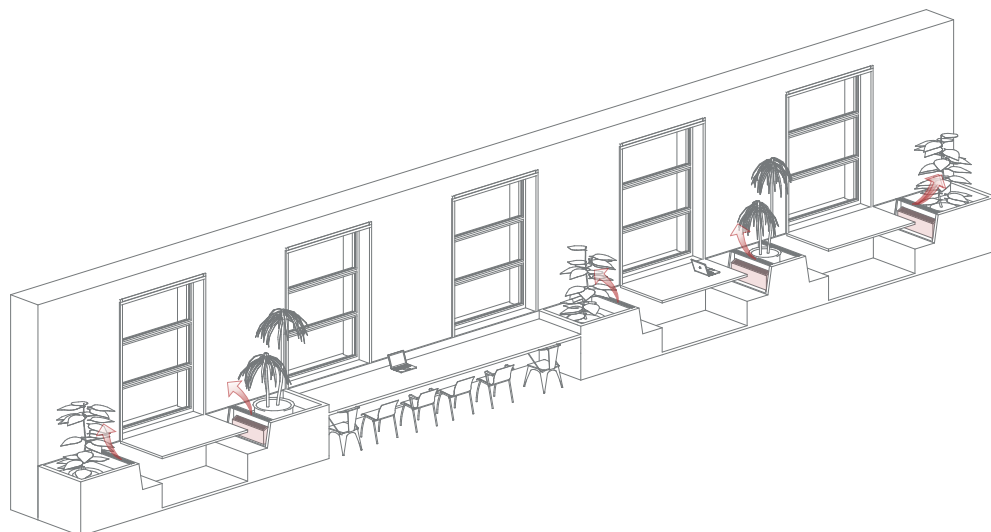
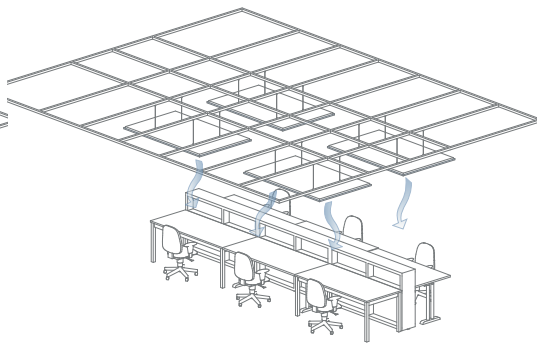
Heating pad - conduction heat



Radiant heater - radiation heat



Hydronic radiant panel - radiation heat & cool



Radiant heater - radiation & convection heat

5 / Office spaces in the Bank





6 / Bibliography

Brager, G., Zhang, H., Arens, E. (2015). Evolving opportunities for providing thermal comfort. *Building Research & Information*, 43(3), 274–287. <https://doi.org/10.1080/09613218.2015.993536>

De Decker, K. (2015). Radiant & conductive heating systems. *LOW-TECH MAGAZINE*. Retrieved June 26, 2022, from <https://www.lowtechmagazine.com/2015/03/radiant-and-conductive-heating-systems.html>

De Decker, K. (2015, March 17). Heating people not places: How to keep warm in a cool house. Retrieved June 26, 2022, from <https://www.resilience.org/stories/2015-03-17/heating-people-not-places-how-to-keep-warm-in-a-cool-house/>

Gibson, E. (2021, March 10). Frank Lloyd Wright designed the Johnson wax offices like a forest open to the sky. *Dezeen*. Retrieved June 26, 2022, from <https://www.dezeen.com/2017/06/14/frank-lloyd-wright-johnson-wax-administration-building-headquarters-racine-wisconsin-open-plan-office/>

National Bank of Belgium iconography . (n.d.).

National Bank of Belgium photo survey . (National Bank of Belgium.). Official documents handed in by the National Bank of Belgium Nicol, F., Roaf, S., & Humphreys, M. (2017). *Adaptive thermal comfort: Principles and practice*. Taylor Francis Ltd.

Oriel Chambers. *Engineering Timelines* - Oriel Chambers. (n.d.). Retrieved June 26, 2022, from <http://www.engineering-timelines.com/scripts/engineeringItem.asp?id=713>

Sophie Soenen

Project Journal

Interiors Buildings Cities
6- Reusing the resources

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A Bank of Opportunities

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Main mentor (architecture) *Mark Pimlot*
Second mentor (research) *Jurjen Zeinstra*
Building technology tutor *Matthijs Klooster*

6- Reusing the resources

- 1 | Introduction
- 2 | A recent issue
- 3 | Strategy to reuse the existing
- 4 | Adaptative reuse of the built heritage
- 5 | Fragments of another kind
- 6 | Emerging from the demolition
- 7 | Terrazzo and reused concrete
- 8 | Bibliography

The construction industry is responsible for a major part of the CO₂ emission and the extraction of resources from the ground. According to a study conducted in effort with UN Environment program estimates up to 36 % of the final energy use. It is important to specify that these numbers account for the building industry as a whole. It encompasses the fabrication of building material, transport, set up of these materials but also the emission produced by the generation of heat and cool in building, residential and others.

The increasing number of humans on earth requires an increasing amount of housing to support this growth. The repartitions of the resources, both financial and material is uneven.

The fact that we have a finite amount of resources on earth and the implication it has on the construction industry is fairly recent. The sector of reuse is currently developing rapidly. A few companies started to develop concepts and literature on the subject.

I have been interested about the reuse of material and buildings for a few years now.

Throughout my studies I have been in contact with a lot of people that are implicated in the reuse of material. Using the earth resources has many consequences on different scales; human, as often these materials are harvested in appalling conditions, environmental, as we either dig holes in the ground or deforest entire areas for our own consumption.



Storage room in the National Bank of Belgium
Source : NBB photo survey

Throughout history, reuse of materials and resources was common. Resources were limited, expensive and hard to acquire. During the vast majority of human history, resources were manually harvested by people. Building an edifice was, therefore, a luxury. The quality and durability of the building created reflected on the social status of the owner. When a building became vacant or unused, the people of the community or the area used the edifice as a carrier to build other constructions.

For example, in France, when a large castle or abbey was abandoned, its stone were used to build the almost entirety of the village nearby. As these resources was precious, they were valued are given a second life.

According to Alan Solomon and Klaas Armster, who wrote "reclaimed wood, a guide field", the terminology for what we now call reuse, was second hand. It implied that the material was going from one hand to the other, and its life-cycle was not ending with the first owner.

The industrial revolution and the rise of mechanisation allowed the rapid production and harvest of material. Progress in sciences also permitted the industry to produce new materials. Materials that was found to be harmful and/or polluting. The rate to which we produce and collect materials is increasingly rapid. The rate to which buildings are torn down because they are not attaining our standards is alarming.

The resources of our planet are finite and the precarious equilibrium we rely on as a society needs to be preserved.

Coming back to a more thoughtful and respectful way of building is, in my opinion, the only way we can move forwards in the construction industry.



Repurposed wood

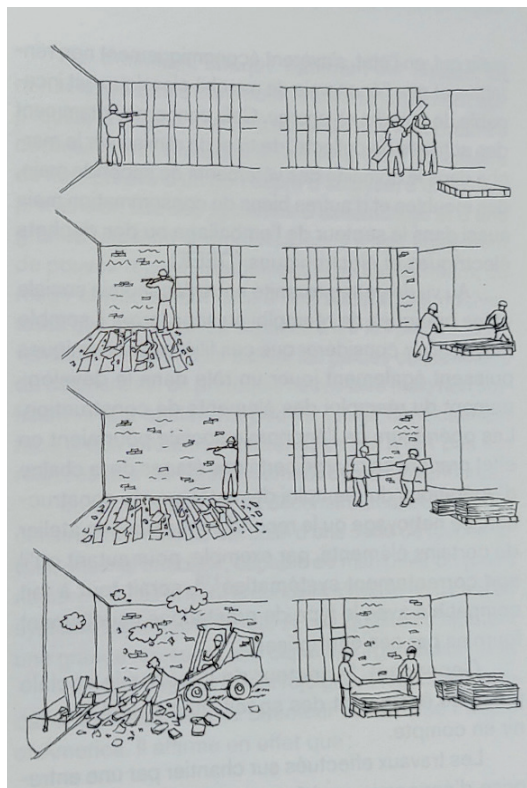
Source : Solomon, A., Armster, K., Arnaud, M. (2019). Reclaimed Wood: A field guide. Abrams.

While we were visiting the National Bank of Belgium, I was struck by the size of the building. This bank is a labyrinth. It was built in different phases, each with different styles. They were connected to each other. The interiors also bear the signature of the various periods of remodelling of the bank.

There is a tremendous number of materials available on site. The majority of this building is actually functional as it is, only a few interventions are needed in order to maximize the use of the buildings and spaces. If the renovation of the National Bank of Belgium is limited to a remodelling of the interior, keeping the structure and features intact, there is still a fair amount of material to be treated.

I think that as architects, we have a responsibility to limit the amount of material we use and we retrieve from the ground to construct new buildings. The materials and buildings present are an opportunity for us to revise the past and give it a new future.

How to make the biggest impact with the smallest intervention?



Dismantlement & storage of material

In order to use and reuse as much of the buildings as possible, an assessment on the quality, quantity and utility has to be made.

What is historically important ?

What is structurally important ?

Which parts of the building have a value to be reused ? One way or another

Which parts of the building arrived to the end of their " cycle of life" ?

" Deconstruction and reuse," by the Rotor team, is a great source of information. The group is one of the top references in Belgium for the reuse of material. Originally a project of Brussels capital region, the program evolved into a company working towards the dismantlement and distribution of these materials.

Is the reuse of material a viable strategy to work on the whole building, and if yes, how do I implement it?

1. Preserve as much of the structure as possible.
If the structural parts are kept, less additional work has to be done in order to keep the building standing.

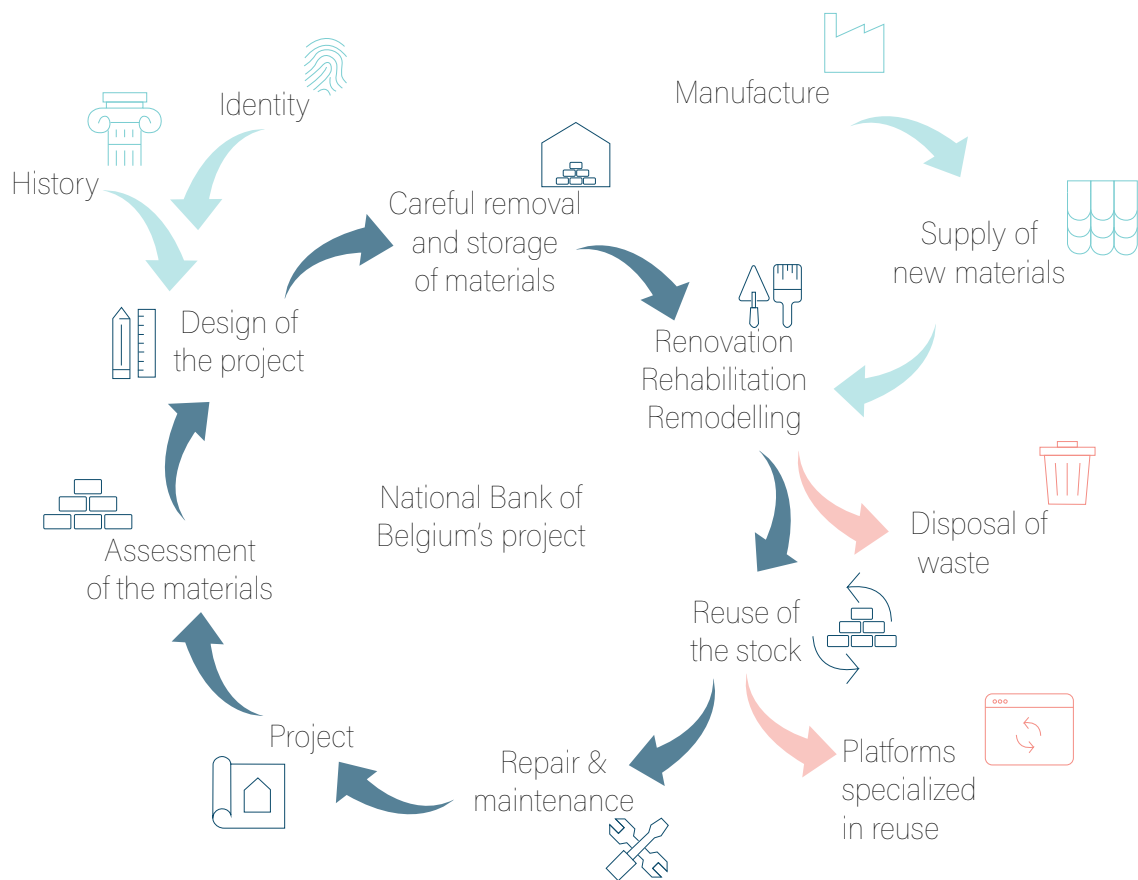
2. Historically important elements have to be kept in place, if feasible.

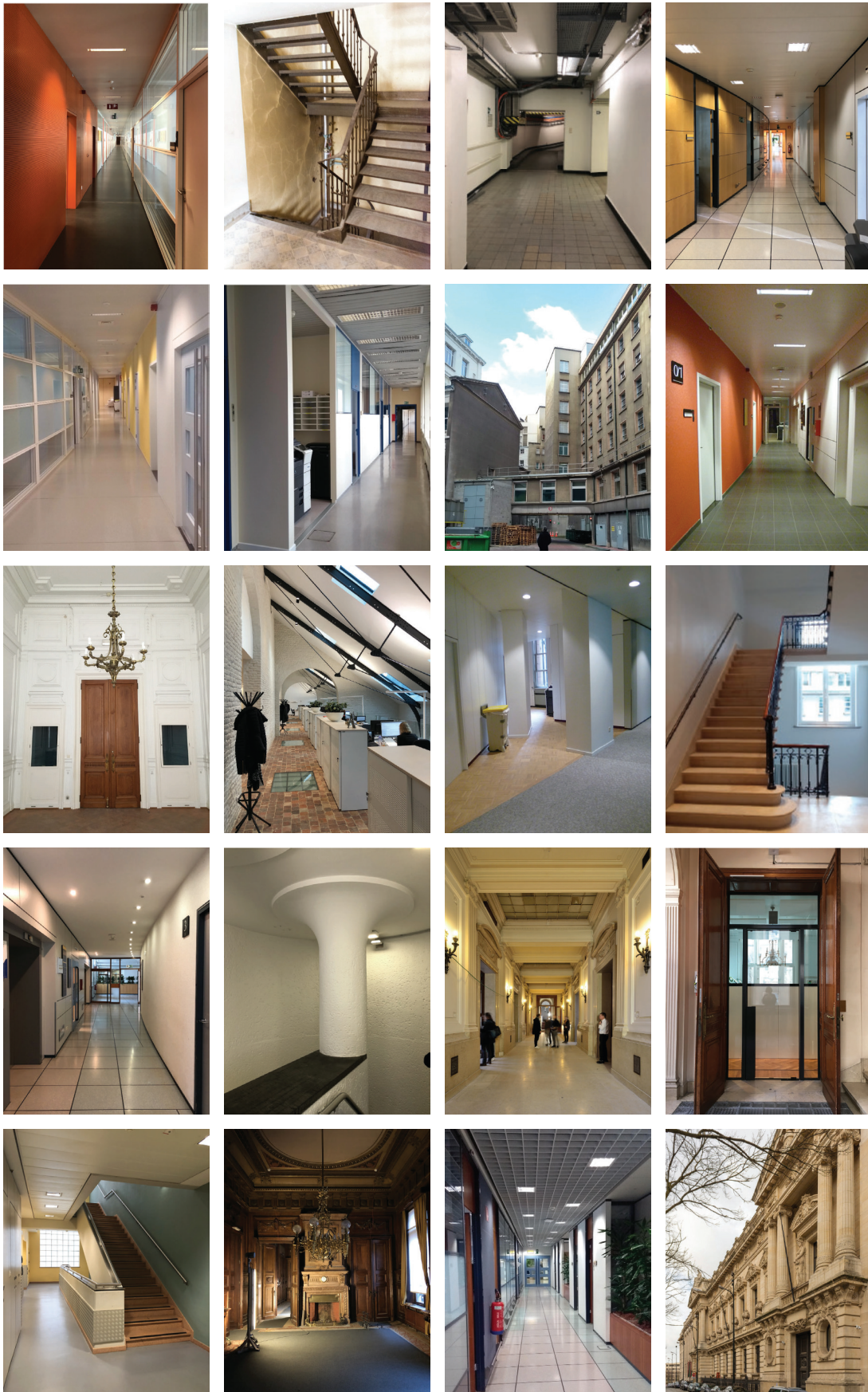
3. Partitions and filling elements have to be assessed to see where they are in their life-cycle and to understand how and if they can be reused.

4. Which parts of the building have been recently renovated?
The newest parts of the buildings or certain recent elements have to be used at their full potential as they are new.

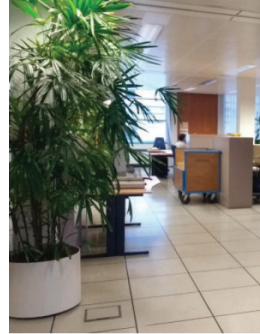
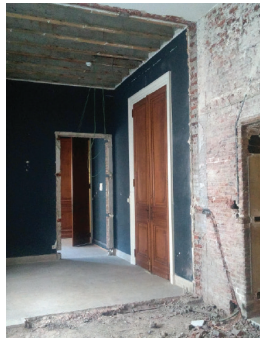
5. Changes can be made to enhance the use of the building of make it more functional.

6. All material that has to be deconstruction will be listed with a lot of care to be re-employed in other places in the building. If this is not possible , the materials will be made available to the public and different platforms of material reuse present in Belgium. (Rotor Dc, réemploi construction. be, Madaster ...)





Variety of spaces in the bank
Source : NBB photo survey



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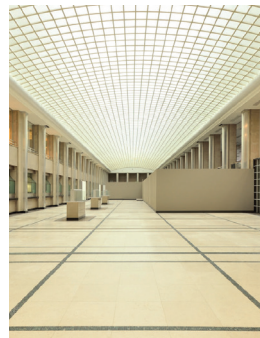
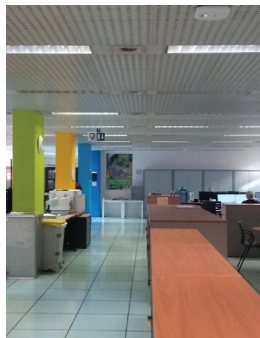
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Variety of spaces in the bank
Source : NBB photo survey

When working on existing buildings, a few different approaches can be taken to the design.

Monument versus palimpsest

What is worth keeping as a whole, still functions as it should, what is of historical importance? What can be used another way?

"the conservation of monuments is always facilitated by making use of them for some socially useful purpose" *Plevoets, B; Cleemphael, K. V. (2019) p 29.*

Reversibility

This notion that the intervention can be fully reversed to the original situation is interesting. Not leaving any trace or as little as possible of the interventions. It also means that the building becomes a palimpsest. It positions itself in a series of interventions and doesn't stand by itself as a monument.

Materializing the different layers of the building might give it a new life and transpose the building for the next generations. Each intervention adds a new layer and another complexity.

Renovation, adaptation, alteration, remodelling, refurbishment & rehabilitation

Renovation comes from the Latin *re* (again) and *novare* (make new) and has two meanings: the first one being to make in good condition again and the other one means to take back from a previous stage. These two definitions gave two distinctive ways of envisioning renovation.

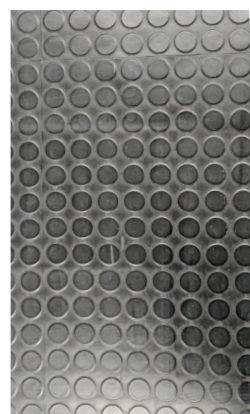
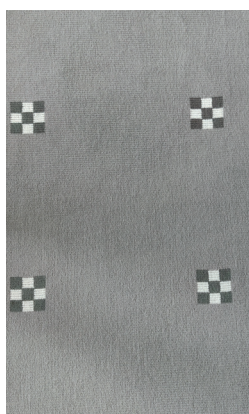
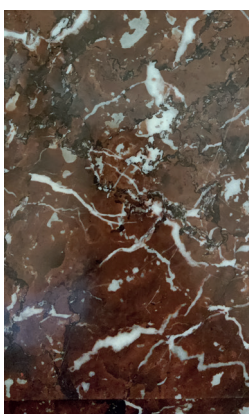
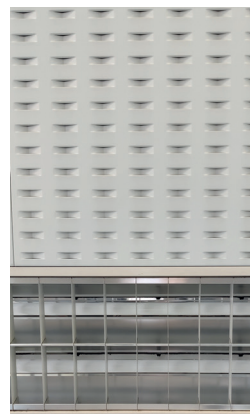
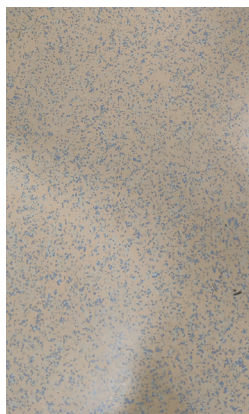
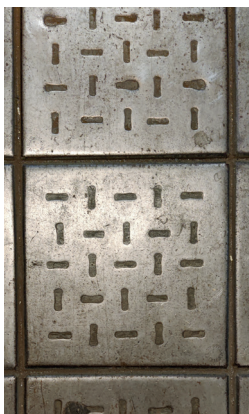
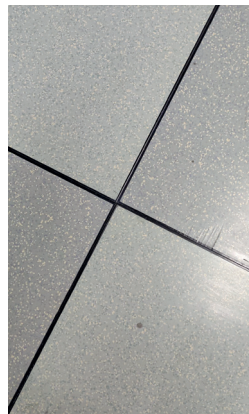
Adaptation involves a very small amount of changes and the building usually maintains its function.

Alteration is a deeper change of function, use, architecture and design.

Remodelling stays on the physical and aesthetic interventions without touching the structure, function or fundamentals of the building.

Refurbishment means upgrading its appearance and functions. This means technical changes rather than aesthetic ones.

Rehabilitation has an effect on the deeper level of construction. Rehabilitating a building means to make it usable again, it can be structural or aesthetic but preserves historical, cultural and architectural features.



Variety of material present in the buildings
Source : Personal pictures

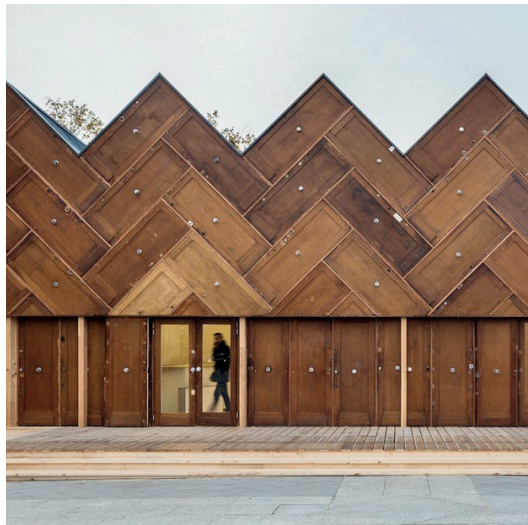
As discussed in the "reuse" chapter, the construction sector is one of the most polluting sectors on this planet and also requires a very large quantity of resources. Sand and water for concrete, which is the primary constructive materials for modern buildings. Bricks require clay, which is only found in certain places. Metal is extracted from the ground and ultimately is a non-renewable material. It is reusable and recyclable. Wood is harvested and contributes to the degradation of the all forest, contributes to the increase of CO2 and warming of the earth. For a certain time now, architects are starting to understand and take into consideration the planet's limit as a resource provider. Logically they turned to what has already been harvested. These used resources are everywhere and very valuable. As the architect's job is to design buildings that will be constructed. They will then be used for a certain period of time and then demolished when deemed not useful anymore. This cycle can vary in time and some buildings defy time and are kept, sometimes for historical value, sometimes artistic value or because they are still used. Back in history it was very common and logical to use materials which were not used anymore. The Roman buildings for example where used to build churches and castles after the Roman empire collapsed. It was a very important source of resources. When a house was abandoned, very commonly people came to harvest its material for their own use. As the materials were expensive, not easily accessible and requires often hard labour to get, they were valued. As the industrial revolution came and mechanical and technological advances were made, materials became cheaper to make and to extract. Back in the day, people gave more value to things, resources and materials. The construction of building also rose as the number of people was quickly increasing. The mechanisation of the process also diminished the value of objects and therefore the value of reusing them. This processes was not only in the construction sector but with everything we touch today. Everything is replaceable and the product life-cycle has drastically diminished.



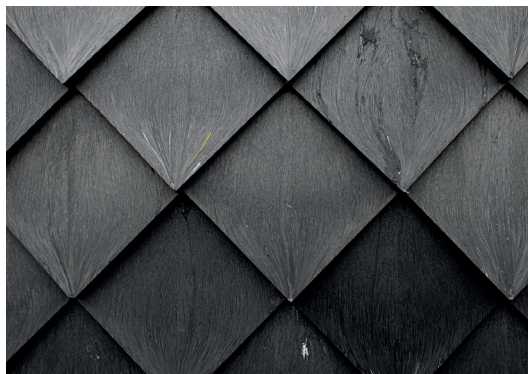
Kolumba museum - Peter Zumthor



MOMA Lotus Resort / Lacime Architects



The Circular Pavilion - Encore Heureux Architectes

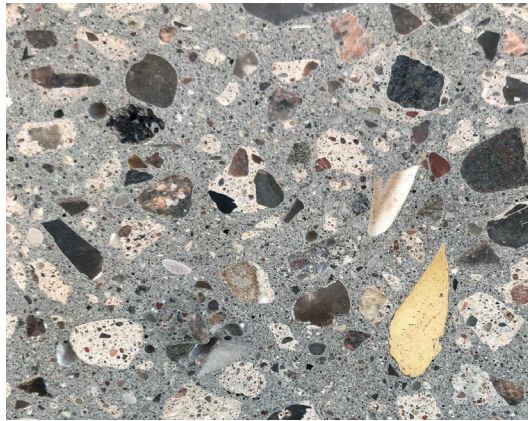


People's Pavilion - pretty plastic tiles

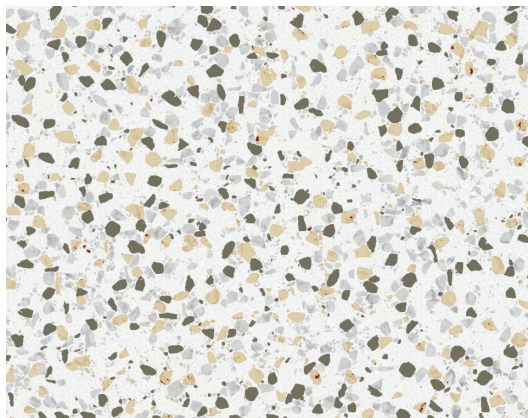
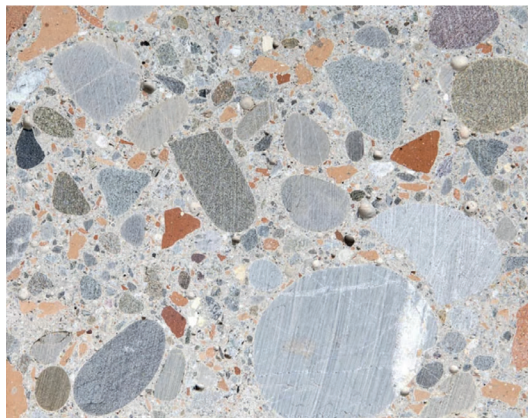
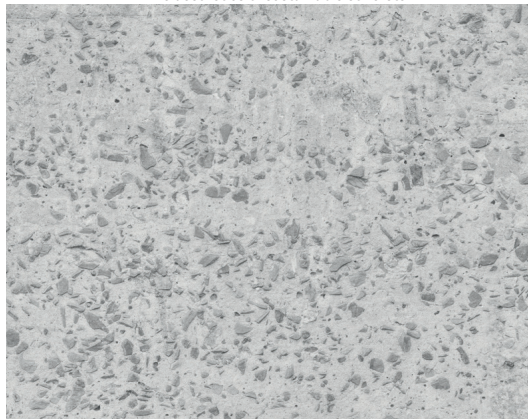
The demolition/construction of these building processes brings interesting questions. As everyone knows, concrete is extremely polluting and requires a considerable amount of resources. The National Bank of Belgium was built mostly out of on site concrete and brick. As the projects implies to remove the central part of the building, it will impact a big part of the core as well as more structural parts than elsewhere in the building where I try to work with the existing. This gesture will therefore bring a lot of demolition rubble. Could it be the primary materials to re-construct in this space? Finding a way to use the materials present on- site will tie the old and new together. The new is made out of the old. It connects the existing, the demolished and the reconstructed. The cycle continues inside the building. Fragments of it continue to be reused in a new way. Reusing this old technique and reusing the materials at their own value.

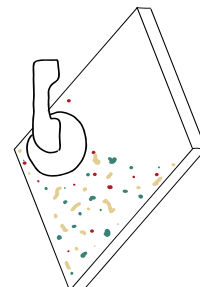
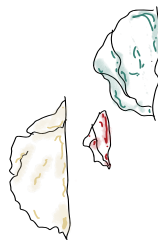
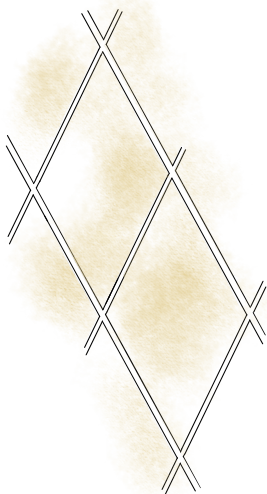
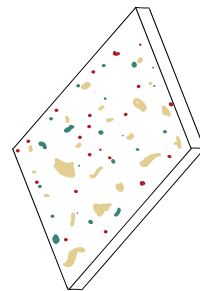
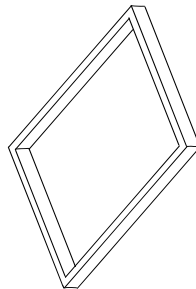
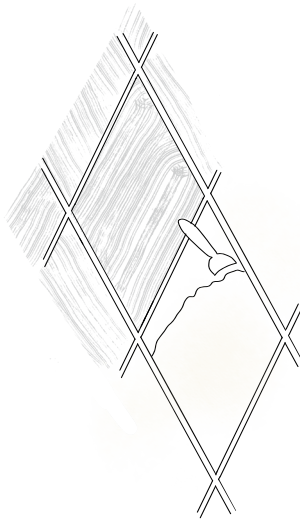
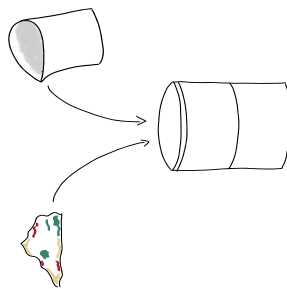
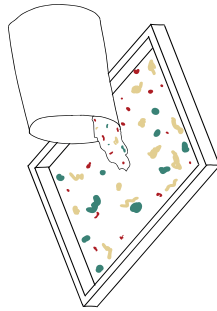
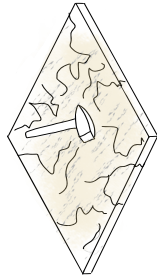
The materials chosen for the new constructions are concrete and terrazzo. Both materials consist premaritally of particles of demolition. These fragments of the existing building will be part of the new project. We worked with fragments in the sense of working on a small portion of the building, diving into the details of the space more than we had done before. The particles used in the new materials are other kinds of fragments, these tell the story of the architecture of a space, its past and its uses. Rather than throwing these away I found importance in placing them in the new project.

The same goes for the glass bricks for that matter. They belong to the staircase which is for now a central circulation space for the bank. On the wall facing the Hotel, a large glass brick wall brings a tamed light inside the staircase. It will be demolished to leave space to a large circulation space. They will be reused in the new facades by bringing the public in the heart of the project : the courtyard.



The aesthetics of sustainable concrete







8 / Bibliography

The aesthetics of sustainable concrete, research and development. Djernes&Bell. (2019). Retrieved June 27, 2022, from <https://djernesbell.com/The-aesthetics-of-sustainable-concrete-Research-and-development>

Cilento, K. (2010, August 6). Kolumba Museum / Peter Zumthor. ArchDaily. Retrieved June 27, 2022, from <https://www.archdaily.com/72192/kolumba-museum-peter-zumthor>
 Environment, U. N. (2021). 2021 global status report for buildings and construction. UNEP. Retrieved June 27, 2022, from <https://www.unep.org/resources/report/2021-global-status-report-buildings-and-construction>

Frearson, A. (2018, April 12). Encore heureux uses recycled materials to build Paris Pavilion. Dezeen. Retrieved June 27, 2022, from <https://www.dezeen.com/2015/12/18/circular-pavilion-encore-heureux-paris-france-recycled-materials-doors/>

Ghyoot, M., Devlieger, L. (2018). Déconstruction et réemploi. Comment faire circuler Les éléments de construction. PPUR - Pr Poly & Uni Romandes.

Maiztegui, B. (2020, July 21). Recycling tiles: 15 examples of repurposed tiles in walls, facades, flooring, and furniture. ArchDaily. Retrieved June 27, 2022, from <https://www.archdaily.com/943890/recycling-tiles-15-examples-of-repurposed-tiles-in-walls-facades-flooring-and-furniture>

National Bank of Belgium iconography . (n.d.).

National Bank of Belgium photo survey . (National Bank of Belgium.). Official documents handed in by the National Bank of Belgium

Neuer Nachhaltiger Beton für genf. Holcim Suisse - votre partenaire pour des ciments, granulats et bétons. (n.d.). Retrieved June 27, 2022, from <https://www.holcim.ch/de/neuer-nachhaltiger-beton-fuer-genf>

Plevoets, B., Cleempoel, K. V. (2019). Adaptive reuse of the built heritage: Concepts and cases of an emerging discipline. Routledge.

Pretty Plastic. (n.d.). Retrieved June 27, 2022, from <https://www.prettyplastic.nl/story>

Solomon, A., Armster, K., Arnaud, M. (2019). Reclaimed Wood: A field guide. Abrams.

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A sheltering bank for people

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Sophie Soenen

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Building technology tutor *Matthijs Klooster*

7-
Furniture & materiality

1		Introduction
2		Furniturization
3		Courtyard analysis
3		Strategy to reuse the existing
4		The community centre
5		Office spaces
6		Emergency housing
7		Bibliography

The National Bank of Belgium's building is a very large and complex office building that has undergone multiple phases of construction as well as refurbishment.

Working on the bank from a different scale than the whole, trying to construct the project from a smaller scale, from the occupation of the building. By working on the bank with a different perspective then to take the bank as a whole, and focussing on smaller spaces, a different vision of the project arose. People are the driving force of the project and the spaces should be designed for them. Designing the bank from the small scale and working our way up towards a coherent project made more sense.

As I constructed my project around the existing, the occupation as well as materiality became an important aspect of my research and therefore my project. Using what is already there, while adding layers to create new spaces.



My position on the renovation of the bank now gets more clear. I work with the existing rather than designing a new project, a new opportunity is emerging for habitation rather than iteration.

How to create different atmospheres for different kinds of public in this large building, without remodelling it entirely? How can I, with the smallest interventions, give the building a new life and purpose ?

The main intervention consists of piercing through the building to open the courtyard and with it, connect Berlaimont Street and Rue du Bois Sauvage. The two directions cutting through the bank to open up the entrance. For the rest of the project, I work with and within the space and building.

Interventions are minimal and work with the existing fabric, material and spatiality of the building.

The furniture is merging with the architecture, creating a space of its own. A space within a space. A different atmosphere relating to its creates . An atmosphere that invites the public in the project .

By reusing what is already present in the building, making use of the features, furniture and such in the space creates an interesting bridge between past, present and the future of the bank and the building. Keeping the legacy of the bank and Van Gothen's ideas by preserving the main concepts and the majority of the building intact. The entrance in the middle, the monumentality, the symmetry of the facade, which is broken in the inside by the diagonal.

The spaces created are in between architecture and furniture. These spaces combine the human scale with the architectural. Using the interior design language as well as the architectural one, bridging the two. Made for the users in the building. New ways to inhabit the spaces. More than regular furniture design to put inside a space, this is the kind of furniture which creates the space by itself. Reyner Banham theorised the concept as the "furniturisation" of architecture.

It can also be related to small architecture and large furniture kind of design. As a student in architecture, I am very much interested in creating spaces for people. Bridging the architectural and interior design scale to design new kinds of ambiances. These new pieces show a new way of thinking about architecture and space in general.



KKI Sweets and the little Drom Store by Produce Workshop.



U Shape Room by Atelier tao+c.



Reactor Films / Brooks + Scarpa Architects

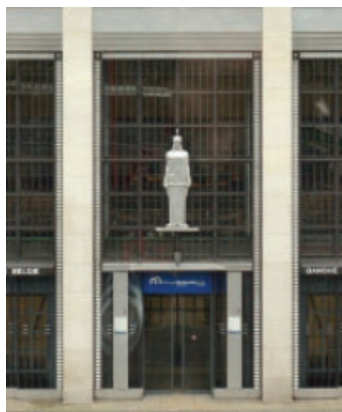
Work with and work within. This is the strategy I applied for the design of the project. The National Bank of Belgium is a functional building. It is messy sometimes, the successive refurbishments can be seen in the building's fabric and spaces.

As an architect, I position myself as one in a succession of other people who will touch this building and give it a new impulse. It is important in this project to peel the layers, to let the life of the building to shine through the new interventions.

One part of the building I think is key to reconfigure the bank as well as the way it operates is the entrance. The connection Boulevard Berlaimont to Rue du Bois Sauvage via two ways: porte cochère and the original entrance to the bank are vital in my project. These two axes meet in a focal point which is the central entrance in Boulevard Berlaimont. These two axes open the courtyard to the street, the street into the courtyard and ultimately the public in the project. All parts of the project are linked via this courtyard. It connects the general public from the city, the employees and visitors of the bank as well as the people living in the emergency housing.

The bank was always designed as an inward-looking institution. By opening the bank halls and the courtyard to the public, the bank changes the way it communicates with the public and the bank. They still have their offices on the upper floors, but give back space to the city. This gesture makes the bank more accessible and understandable.

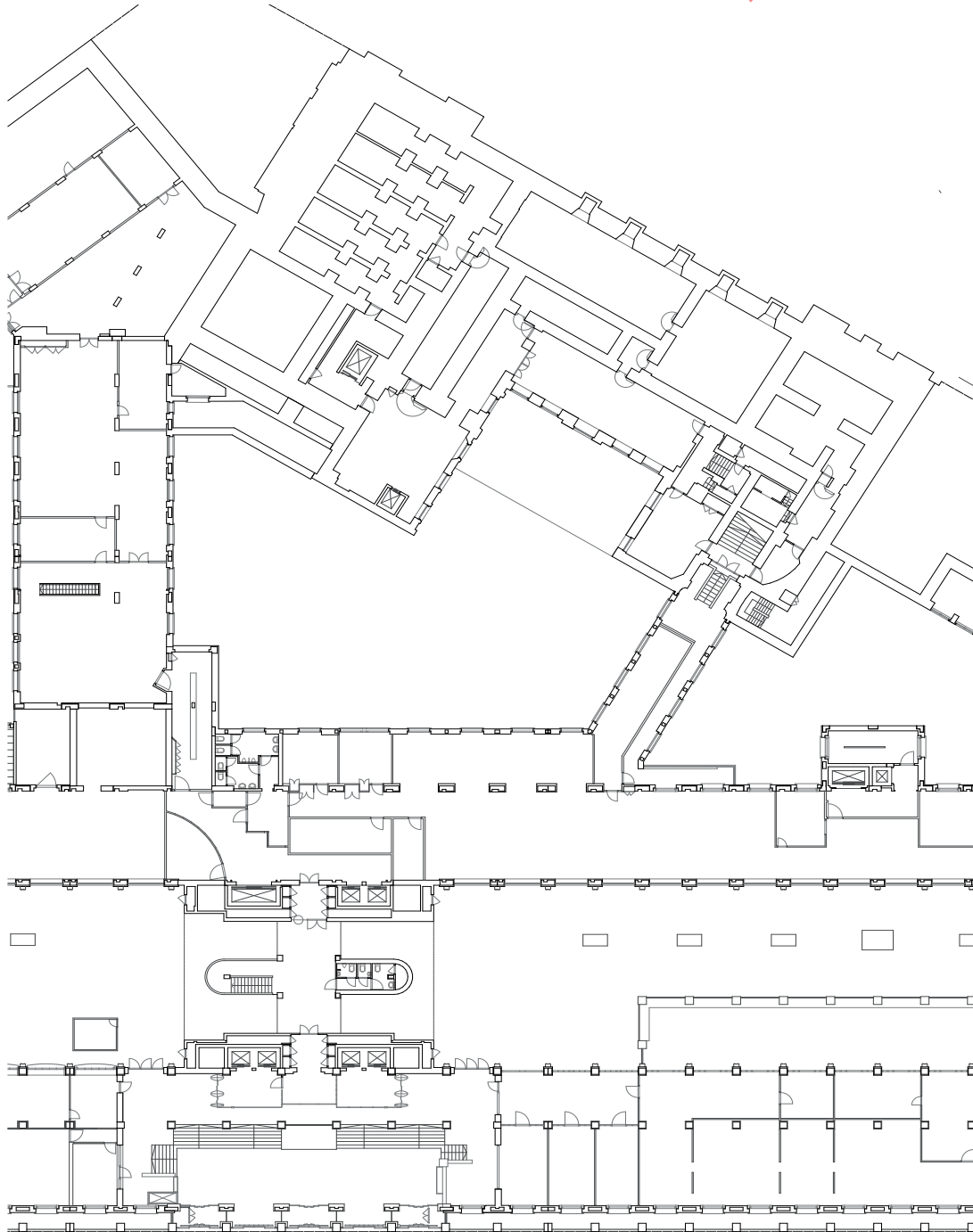
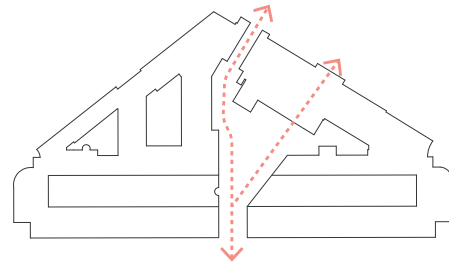
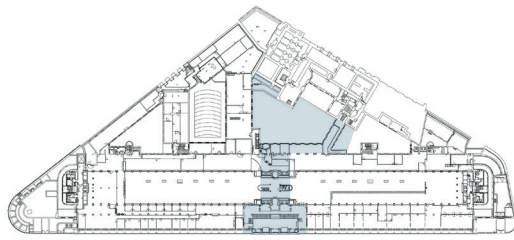
Existing situation of the entrance sequence



Pictures of the existing situation in the courtyard
Source : NBB Photo survey

SUBTITLE

Courtyard analysis

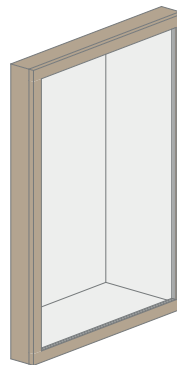
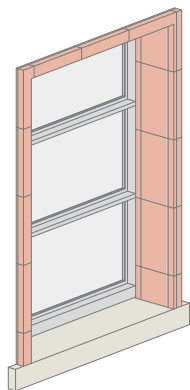
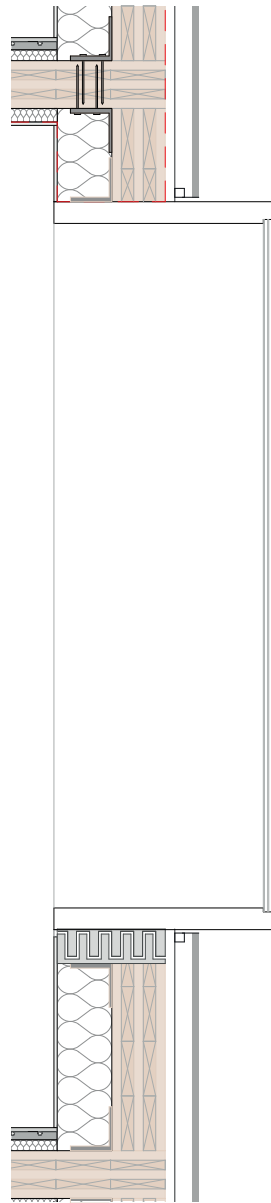
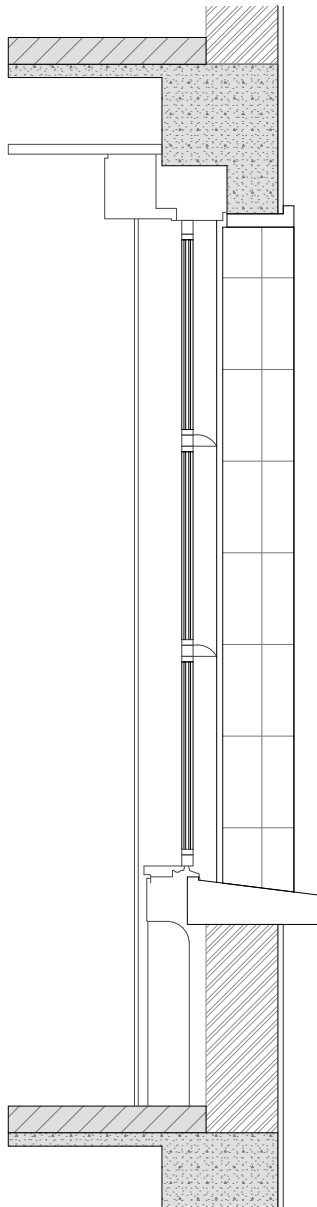


Opening the courtyard to follow the axes
Source : *Personal work*



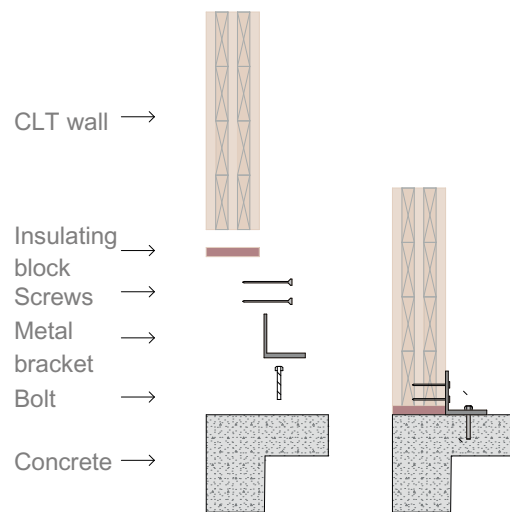
SUBTITLE

Study of the windows

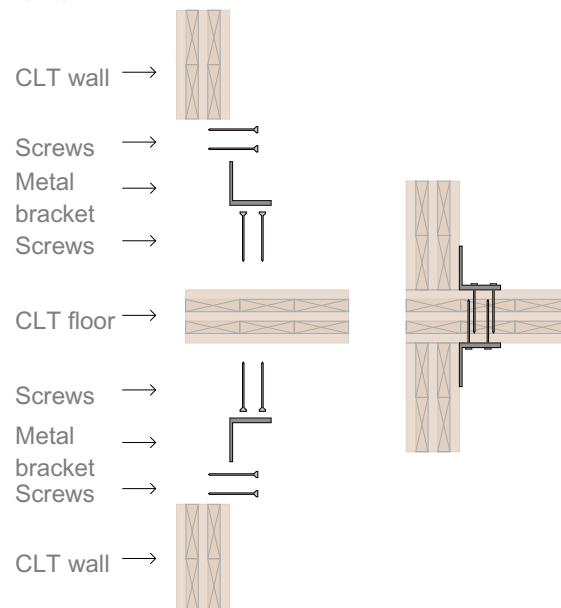


Existing and new window's design
Source :Personal work

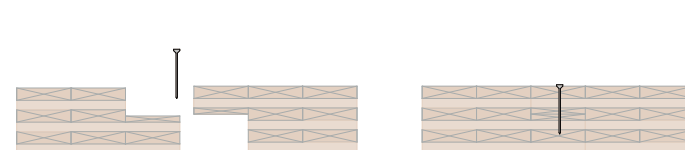
Constructive node
Concrete floor - wall



Constructive node
wall-floor



Constructive node
Concrete floor connection

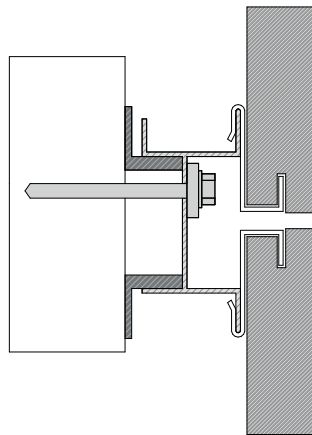




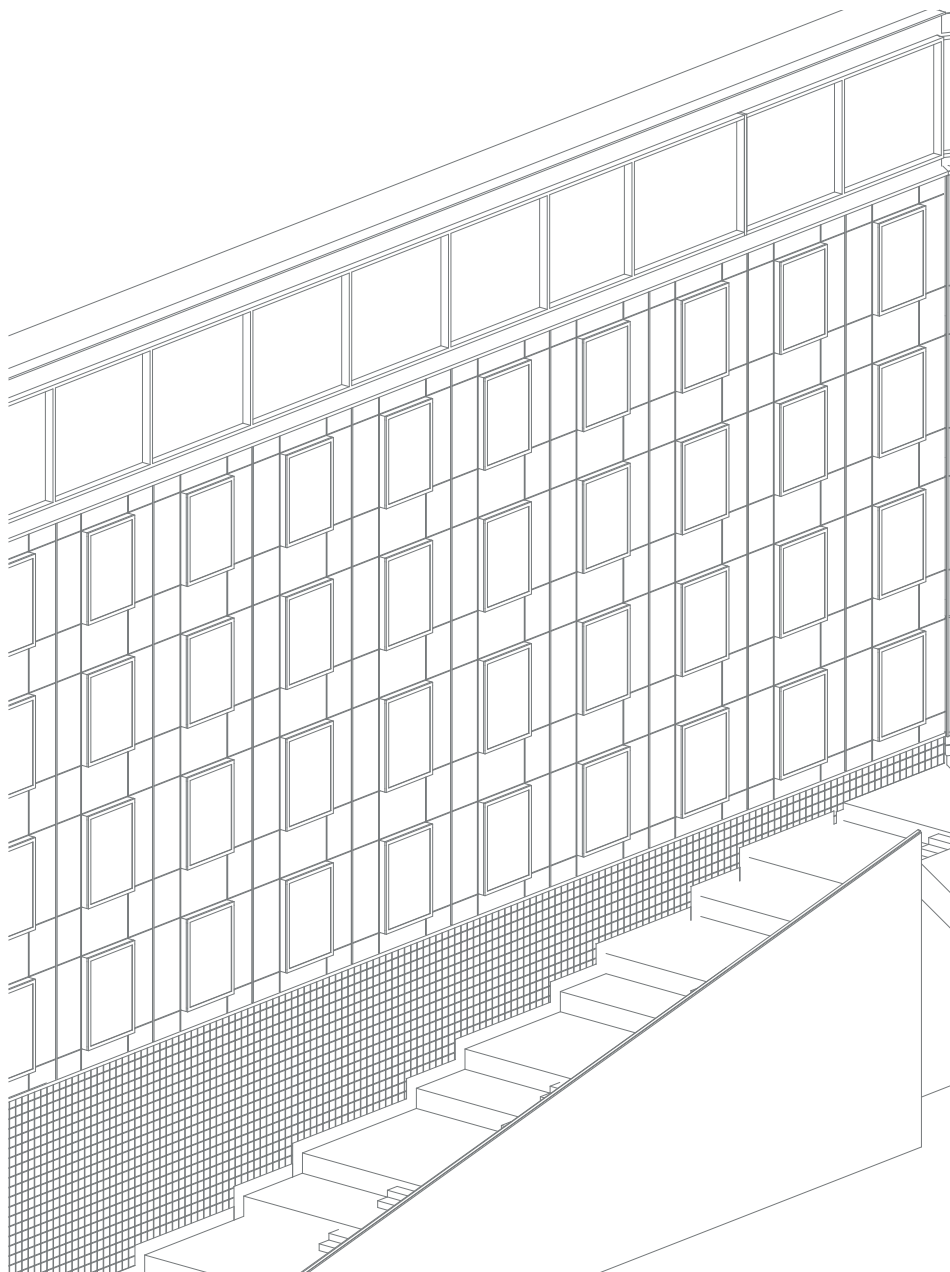
Reused concrete (Seramco: Secondary raw materials for concrete precast products 2018)



Invisible fixation of the stone(V-CLIP -LABELFAÇADE)



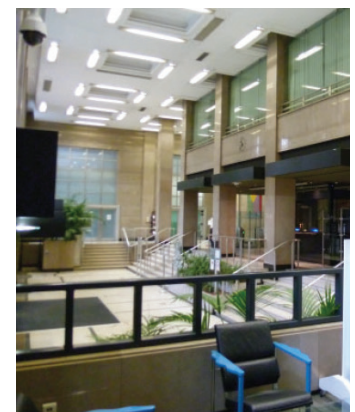
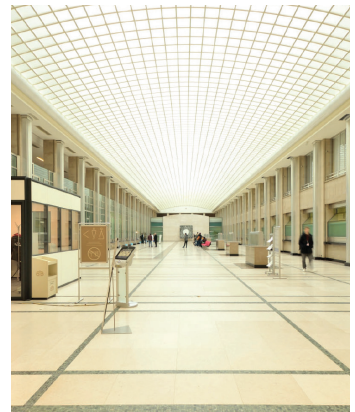
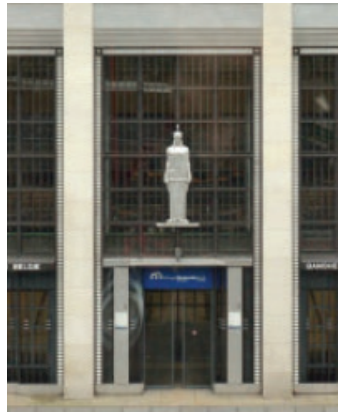
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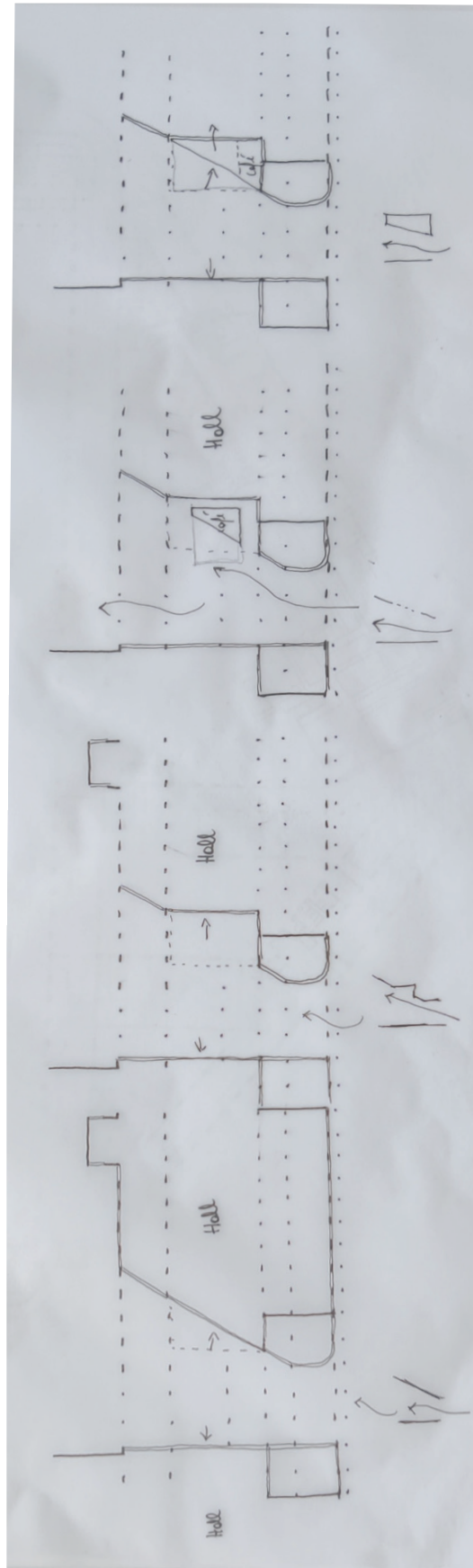
4 | *The community centre*

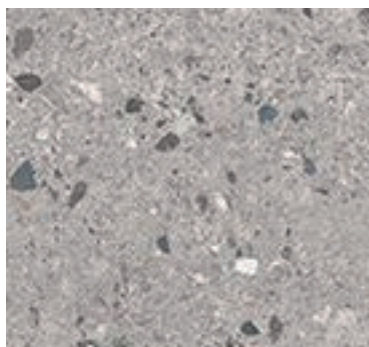
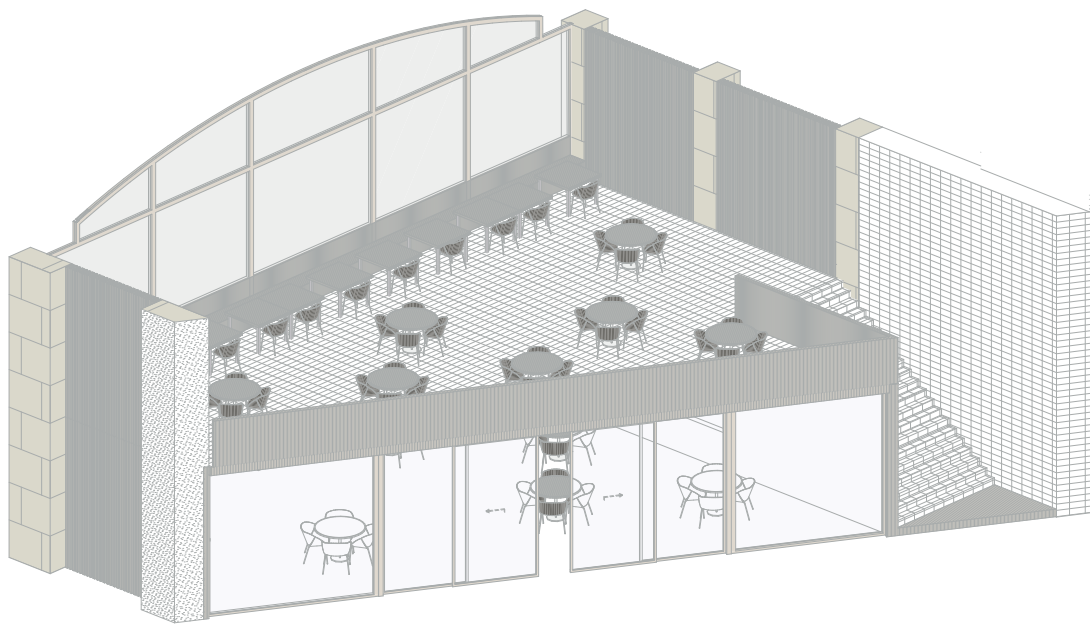
As the neighbourhood welcomes more inhabitants, the need for a public and community centre is rising. The National Bank of Belgium's buildings is a central location for the North of Brussels's Pentagon . Two large halls containing various functions like a theatre, café, restaurant, bank's counters, library, communal and exhibition spaces as well as co working areas. The entrance of one of these halls is composed by a café, welcoming the public into the premises. The line of the building is bringing you inside. The space is formed by a furniture like piece with a café area on the ground floor and a terrace with a view in the main hall on the first floor.





Pictures of the existing situation in the hallway
Source : NBB Photo survey





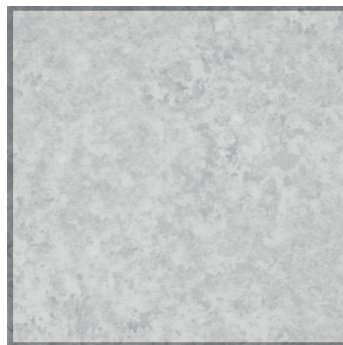
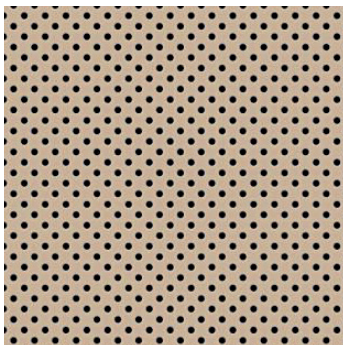
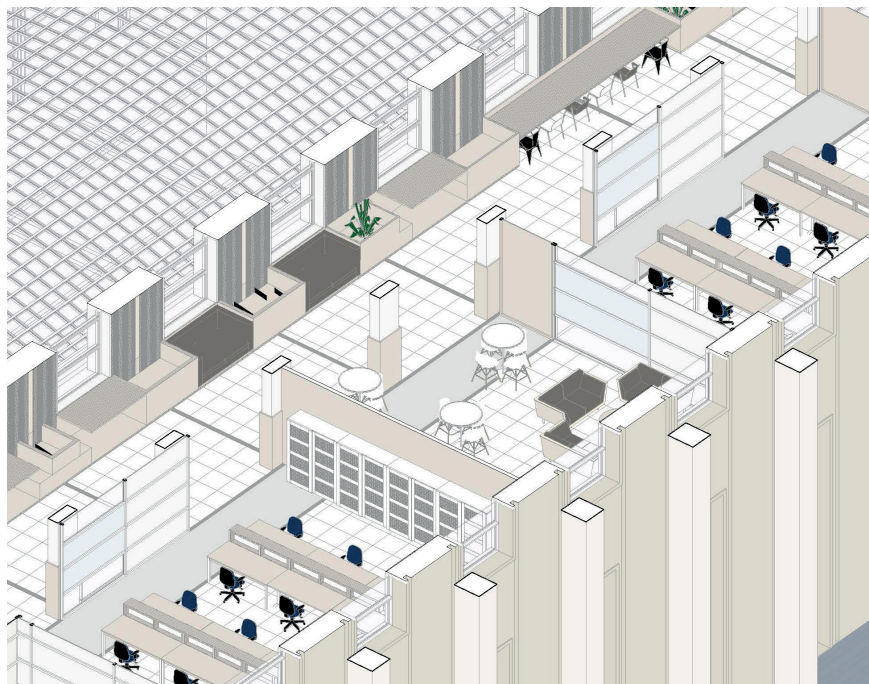
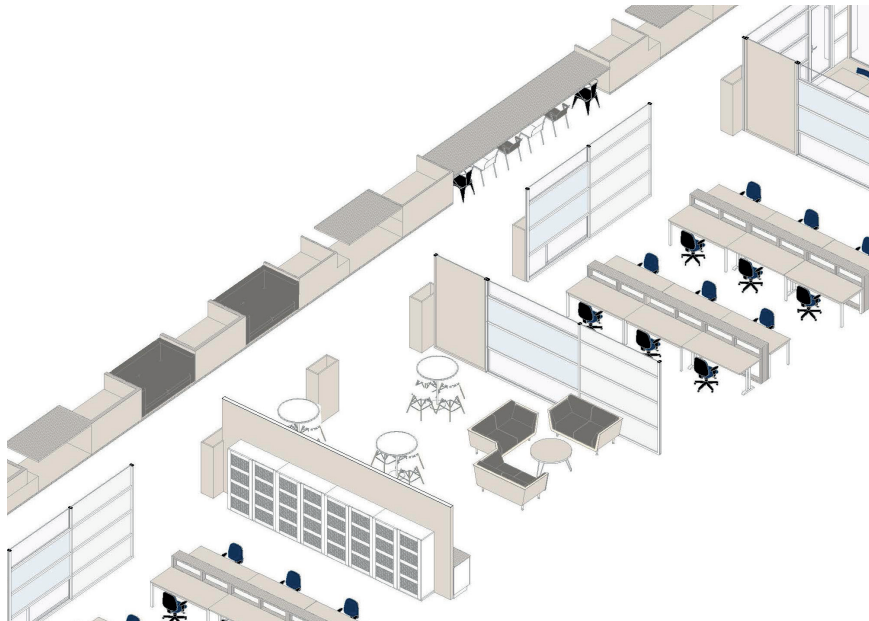
The café as a piece of furniture
Source : *personal work*

The National Bank of Belgium is a large entity employing around 1500 people. Designing the office space for these employee is also crucial for the project to succeed. The same attitude is used to design the refuge rooms and the entrance section of the community centre is applied to the offices. The existing is used as a base for the project. Reusing the partitions, furniture, ceilings and flooring allowed me to keep atmosphere of the original bank in tact, while adding a new layer to it. The spaces don't need extensive work. The goal is to open up the space to make working more communal. There will be a common working space, individual desks and meeting spaces. By creating furniture to accompany the existing, protecting the structure and creating new from and with the old.





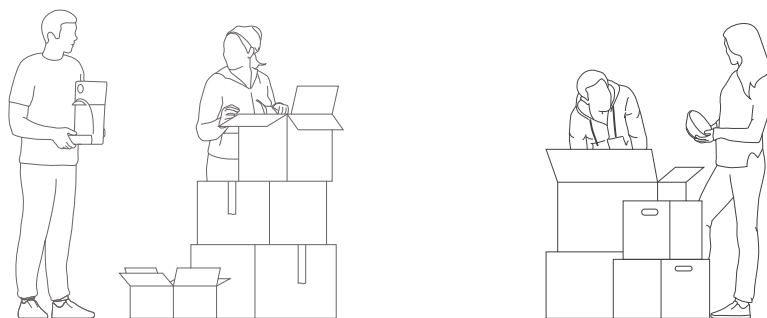
Pictures of the existing situation in the offices
Source : NBB Photo survey



The office floor as a piece of furniture
Source : *Personal work*



Housing should be considered as a human right, whatever their situation. The former Governor's Hotel, in the shadow and protection of Saint Gudula's cathedral will be a refuge for people needing a long or short term housing solution. The size of the rooms varies, but are meant to accommodate a single person or a couple. As discovered in my research on poverty in Brussels, homelessness encompass more than sleeping on the street. It includes also people with a precarious or non-conform housing . Offering small apartments at a small price, well located in the city and connected to public transport is a very useful solution. The room is located in the extension of the Hotel. In a room of around 25m² you will find everything you need. A kitchenette, a small sanitary, living room, a bedroom and office space as well as quantity of storage. The room is constructed as an insert. It can be placed in the room like a piece of furniture to protect the heritage of the building, but also add new value to it.





Pictures of the existing situation in the offices
Source : NBB Photo survey

Everything needed, compacted into a small space.

In monasteries and religious institutions, individual rooms -or cells- are known to be small. Because monks swear three vows: stability, obedience and fidelity. Vows that imply poverty in a lot of congregations.

Monk cells are notoriously small. They just possess a few personal items, the rest is the property of the monastery. Therefore they don't need a large intimate space. A bed, a desk, an altar, bookcase and a cross. Everything they need to live they have, nothing more and nothing less.

The three examples I took inspiration from are the monastery de la Vilette by Le Corbusier, Saint Benedict's abbey by Dom Hans van der Laan and the typical rooms from the Carthusian institution in France. All have different ways of dealing with small space. Some are relying on minimalism, others on having different kinds of space and connection to the outside or even a solid piece of furniture integrating everything needed. The refuge took from all of them in various ways.

The need of a personal space is as important as its quality.

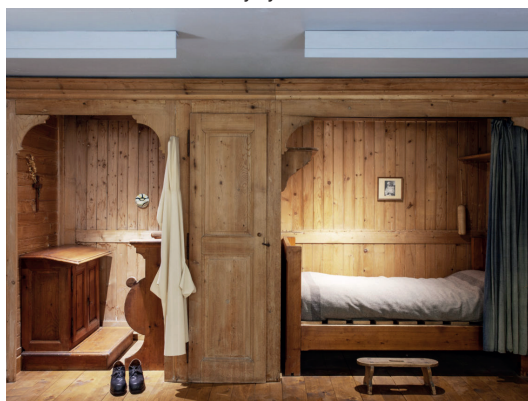
In the same spirit, the refuge rooms are fairly compact but complete. Everything people would need to live comfortably is in the room. As much free space as possible and everything compact. Kitchenette, sanitary, bed and desk with as much sunlight as possible. The rooms are very beautifully decorated and participate to the atmosphere of the space. A certain distance to the walls and some protective surfaces will ensure the integrity of the room while still being used for something else.



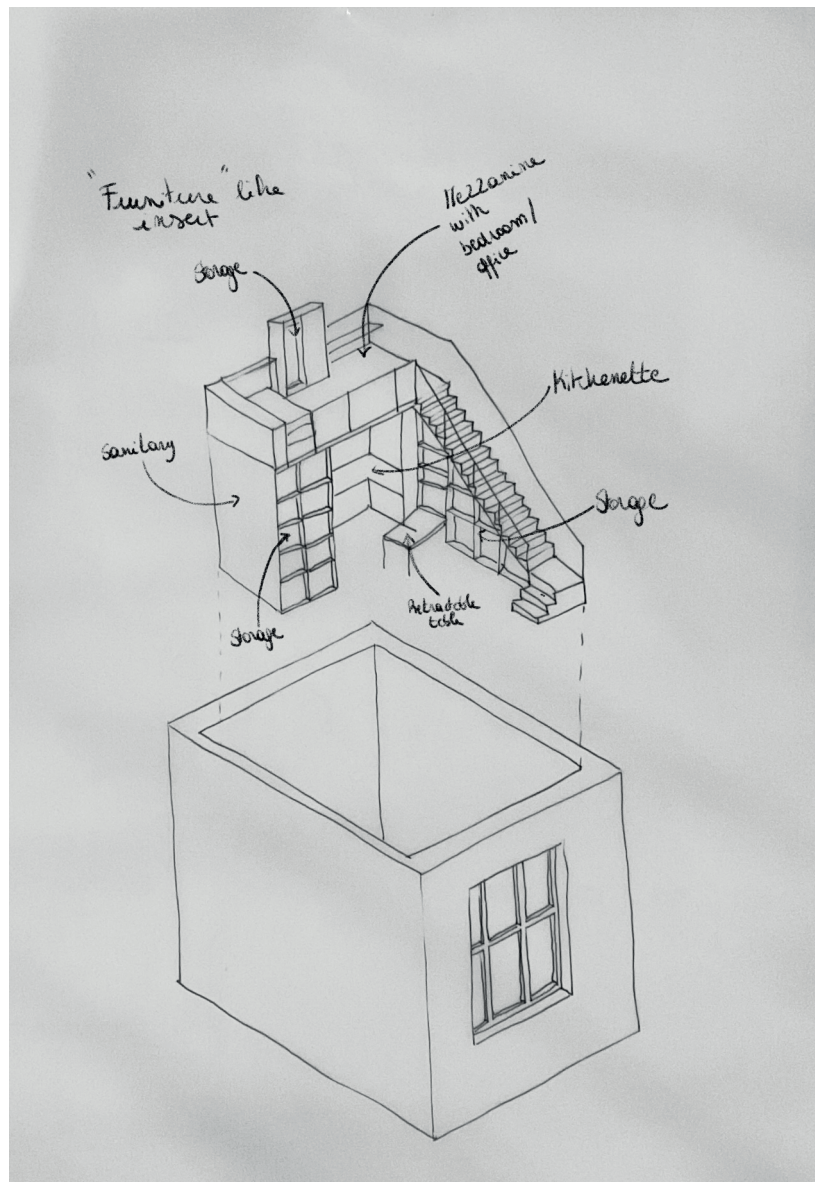
Monastery de la Vilette by Le corbusier,

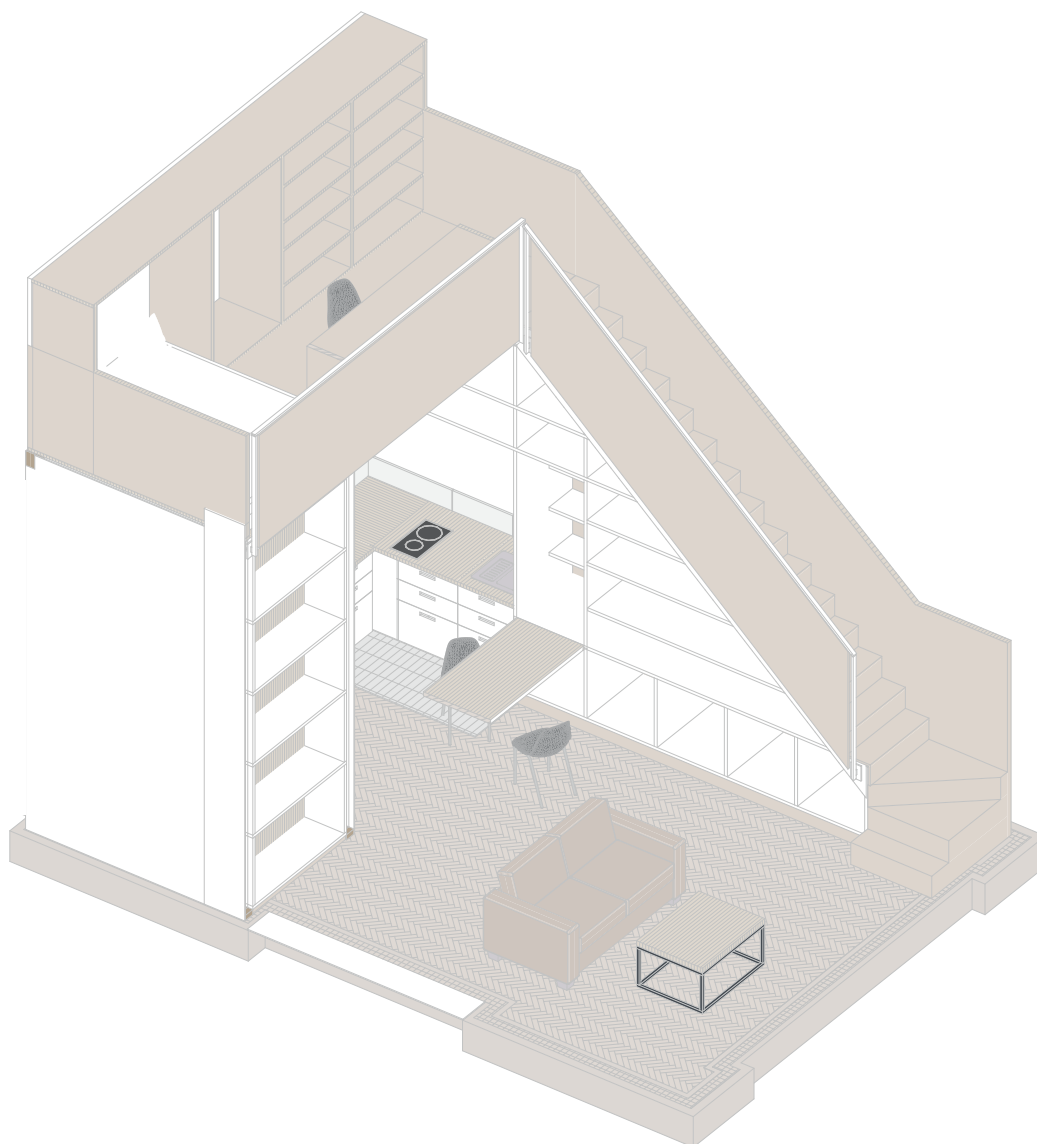


Saint Benedict's abbey by Dom Hans van der Laan



Typical Cartusian monastery in France





The refuge as a piece of furniture
Source : *Personal work*

7 / Bibliography

Archive. Dom Hans van der Laan. (2019, March 15). Retrieved June 27, 2022, from <https://domhansvanderlaan.nl/archive/>

Banham, R. (2009). The architecture of the well-tempered environment. Architectural Pr. CLT wall to roof/floor. CLT wall to roof/floor Comments. (2015, June 27). Retrieved June 27, 2022, from <http://www.cltcrosslaminatedtimber.com.au/products/connectors-brackets-fixings/clt-wall-rooffloor>

Cutieru, A. (2020, September 18). Blurring the line between architecture and furniture. ArchDaily. Retrieved June 27, 2022, from <https://www.archdaily.com/947911/blurring-the-line-between-architecture-and-furniture>

Les Moines Chartreux. Le cadre de vie – Les moines chartreux. (n.d.). Retrieved June 27, 2022, from <https://chartreux.org/moines/le-cadre-de-vie/>
Mohsen, A. (2018, January 3). Seramco: Secondary raw materials for concrete precast products. facadeworld. Retrieved June 27, 2022, from <https://facadeworld.com/2018/01/19/seramco-secondary-raw-materials-for-concrete-precast-products/>

National Bank of Belgium iconography . (n.d.).

National Bank of Belgium photo survey . (National Bank of Belgium.). Official documents handed in by the National Bank of Belgium

V-CLIP - système de pose façade Ventilée ou vêtue - LABELFAÇADE. Labelfaçade. (2022, April 15). Retrieved June 27, 2022, from <https://labelfacade.fr/v-clip/>

Winston, A. (2016, August 5). Le Corbusier's La Tourette is a UNESCO World Heritage Site. Dezeen. Retrieved June 27, 2022, from <https://www.dezeen.com/2016/07/22/le-corbusier-la-tourette-monastery-grass-roof-france-unesco-world-heritage/>

Sophie Soenen

Project Journal

Interiors Buildings Cities
8- Representing the Bank

Academical year 2021 2022

A Bank of Opportunities

A sheltering bank for people

Interiors Buildings Cities

Sophie Soenen
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8-

Representing the Bank

- 1 | National Help centre
- 2 | National Bank of Belgium & its context - 1/500 model
- 3 | National Bank of Belgium - 1/200 model
- 4 | The New Bank
- 5 | The Bank of opportunities
- 6 | People's café
- 7 | Changing the dynamic in the office
- 8 | The refuge



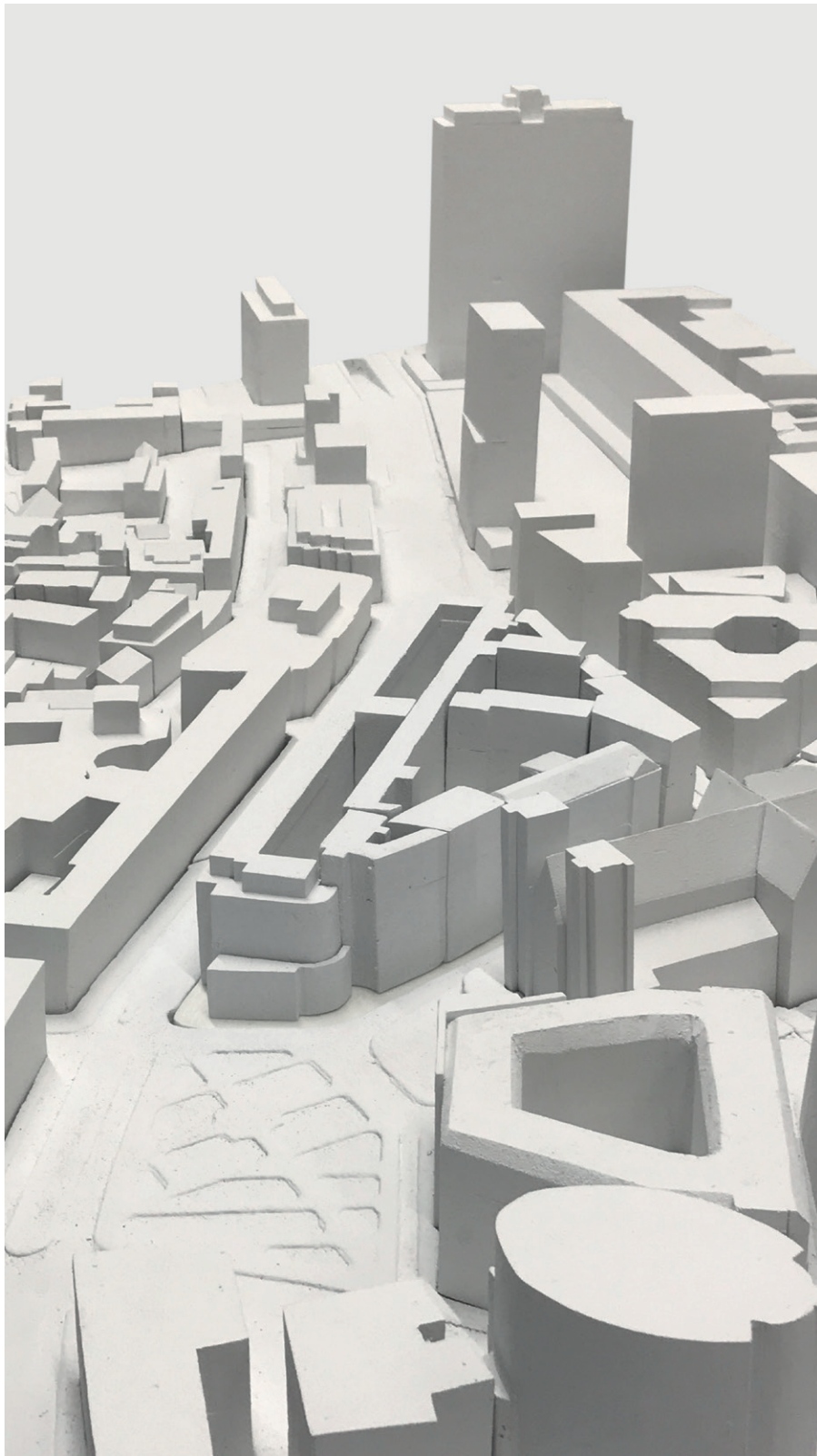




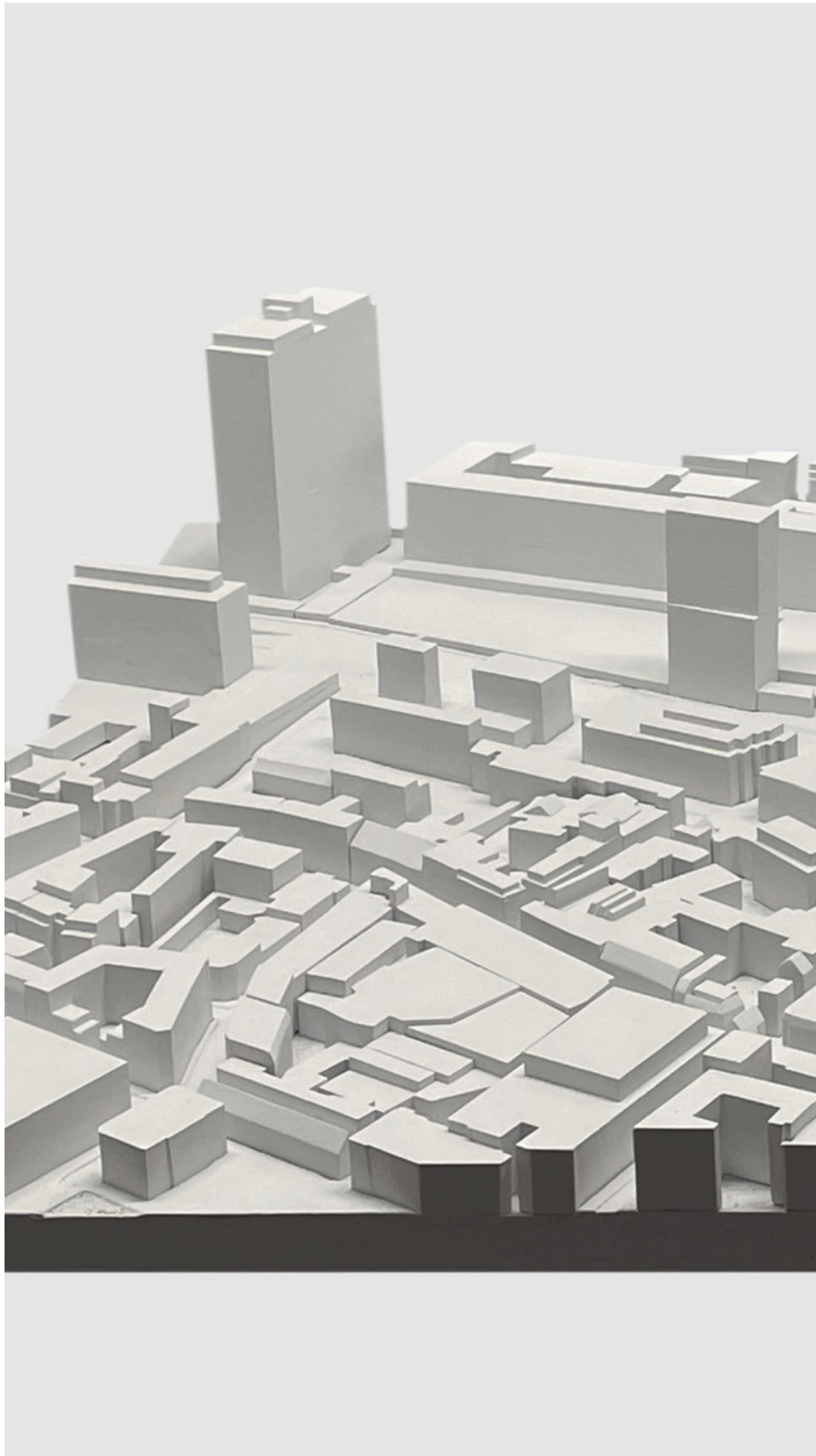


2 / National Bank of Belgium & its context - 1/500 model

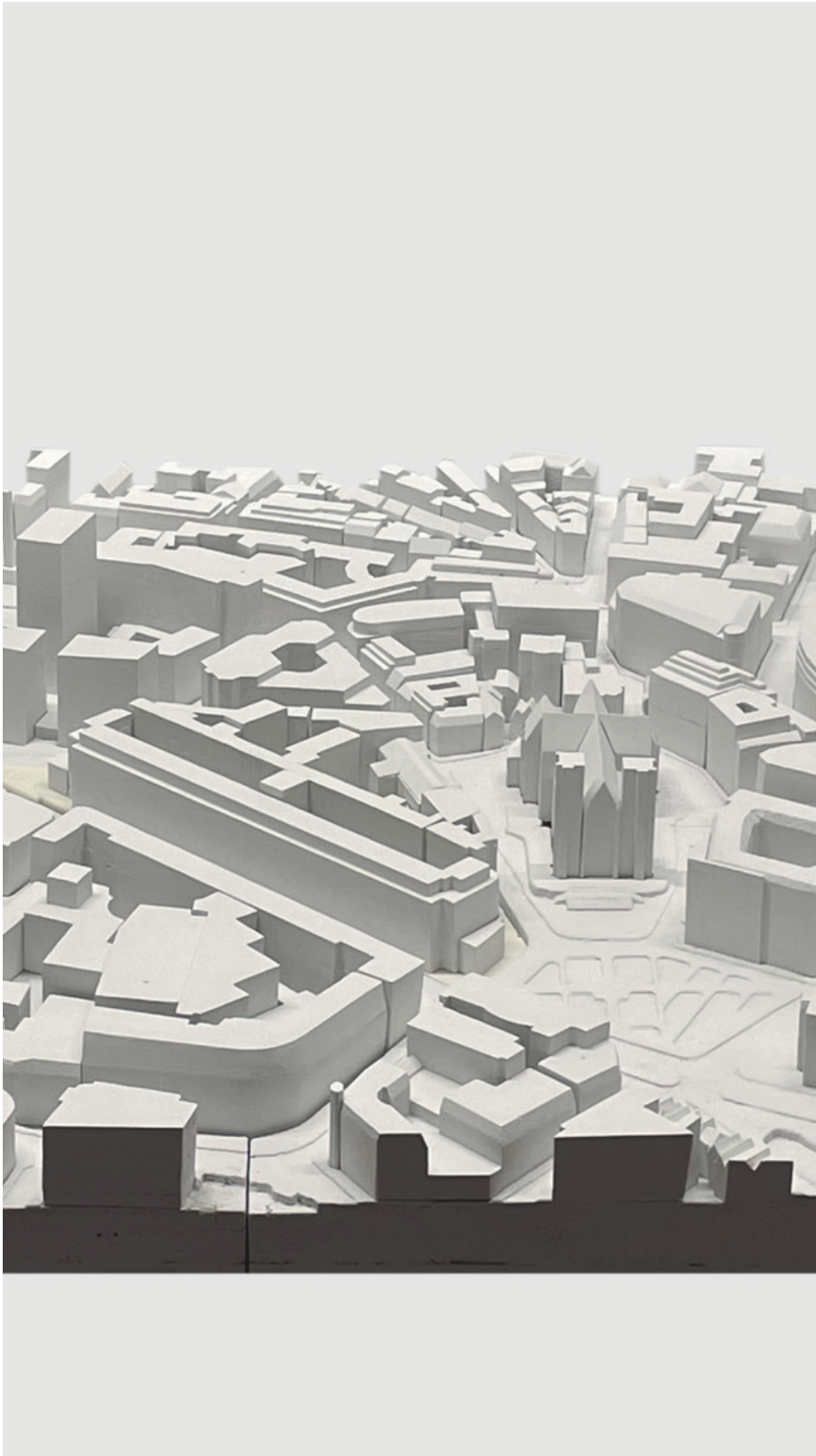




Group work - picture by Laurens de Munck



Group work - picture by Laurens de Munck



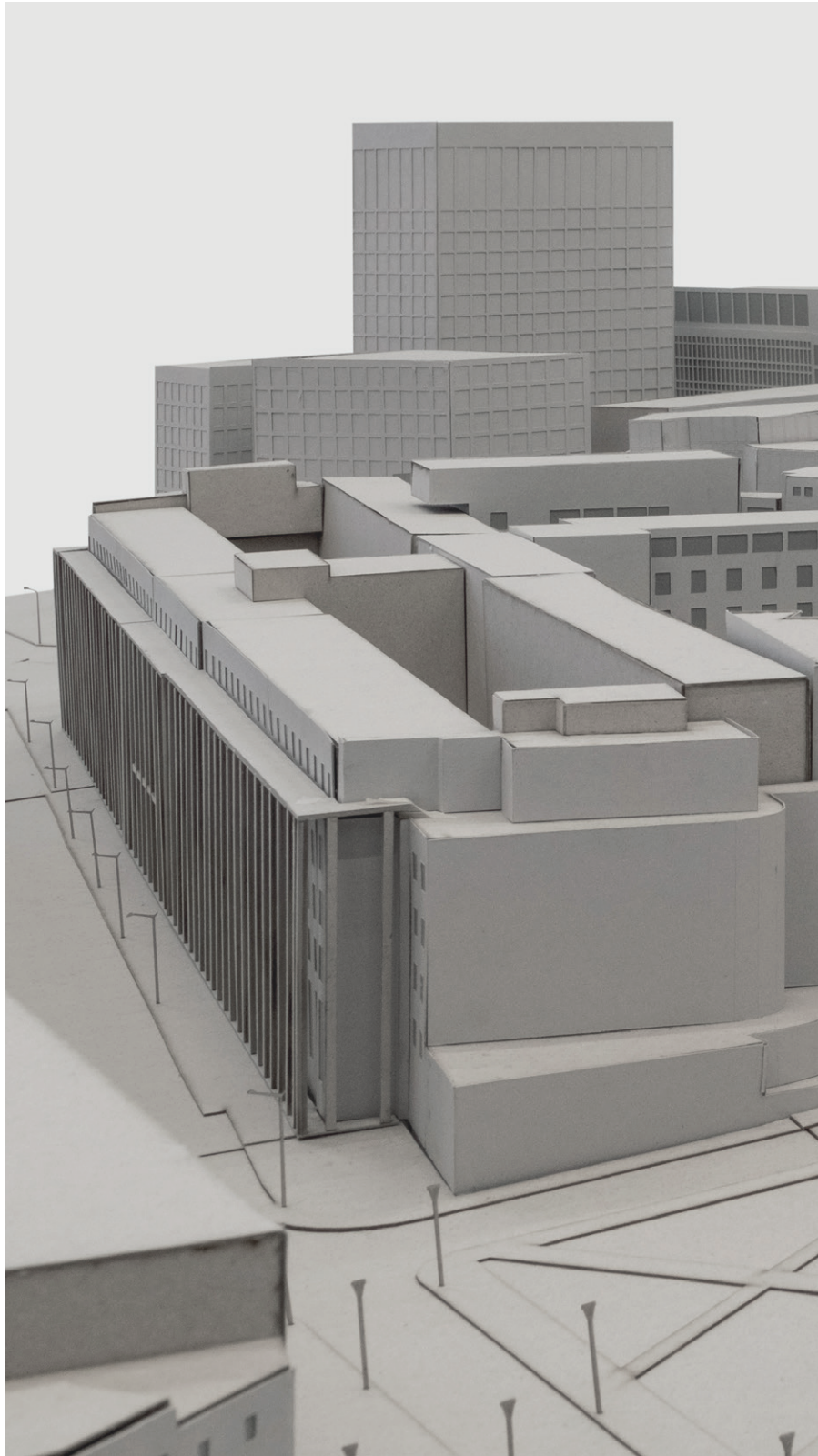
3 / *National Bank of Belgium - 1/200 model*



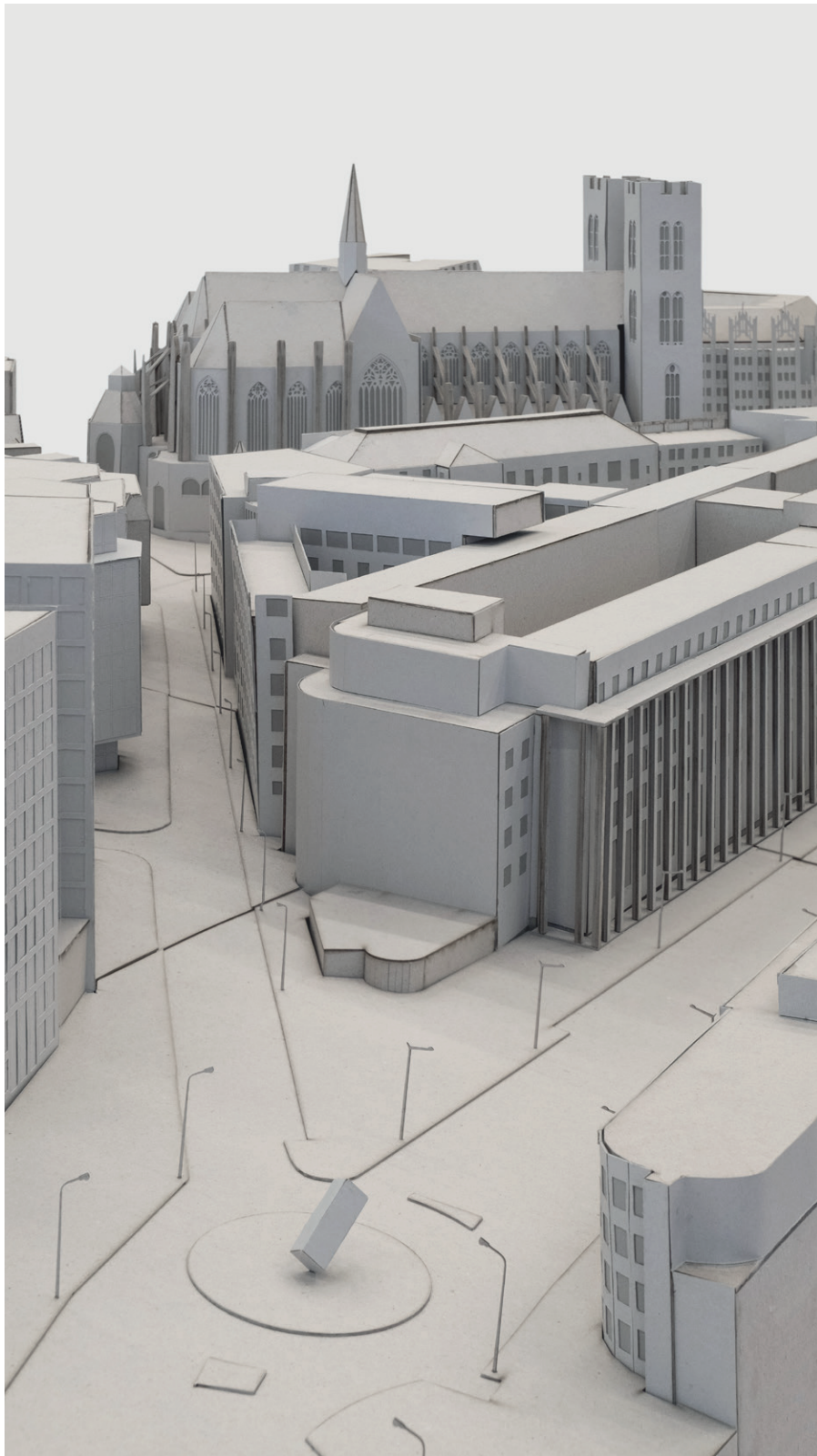
The monumental facade of the bank
Group work - picture by Ron Bartens, Bas Leemans & Laurens de Munck



The monumental facade of the bank
Group work - picture by Ron Bartens, Bas Leemans & Laurens de Munck

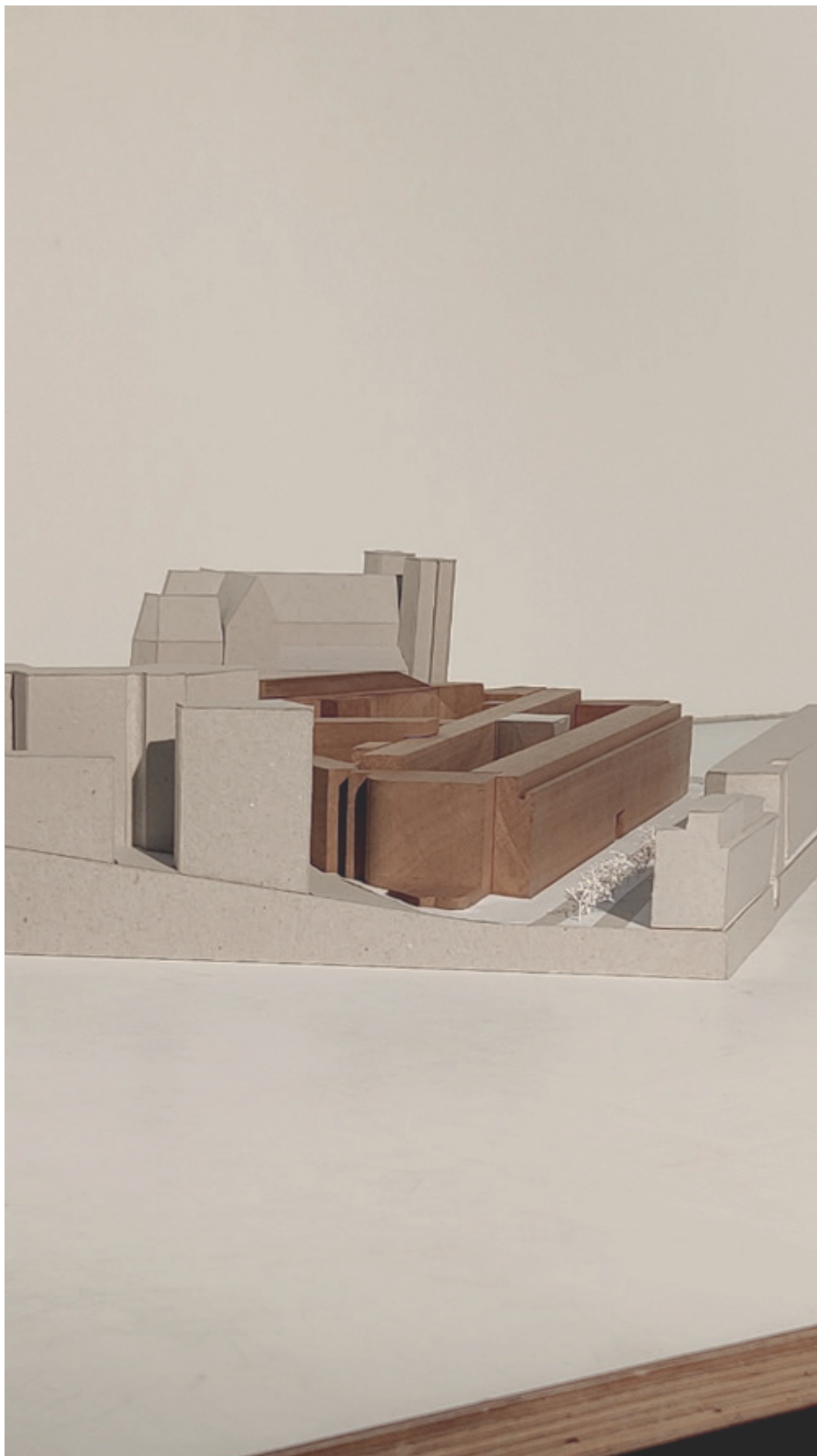


The Bank, neighbouring the high rises
Group work - picture by Ron Bartens, Bas Leemans & Laurens de Munck



The Bank, closed to the city's history
Group work - picture by Ron Bartens, Bas Leemans & Laurens de Munck



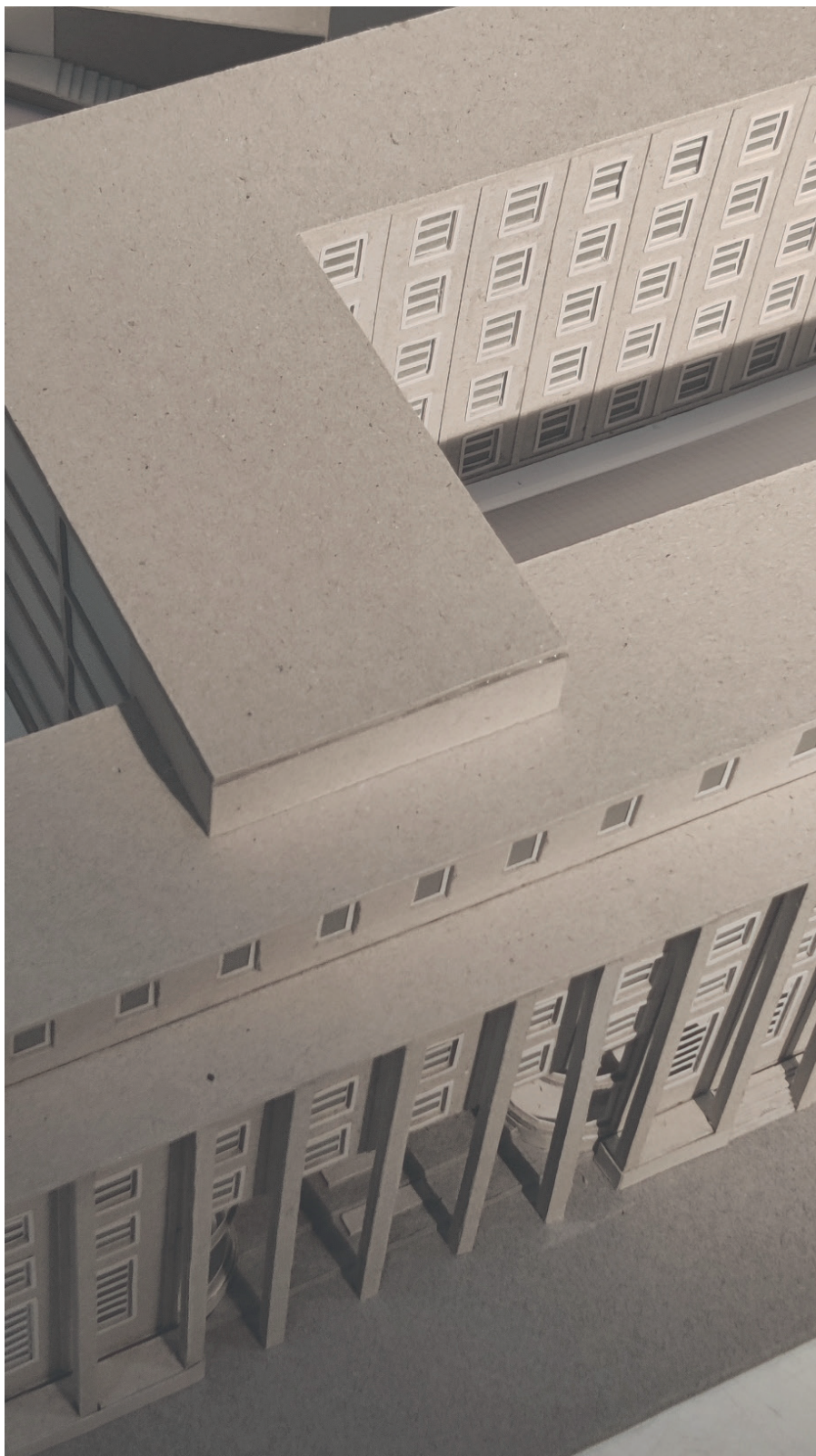




Personal work



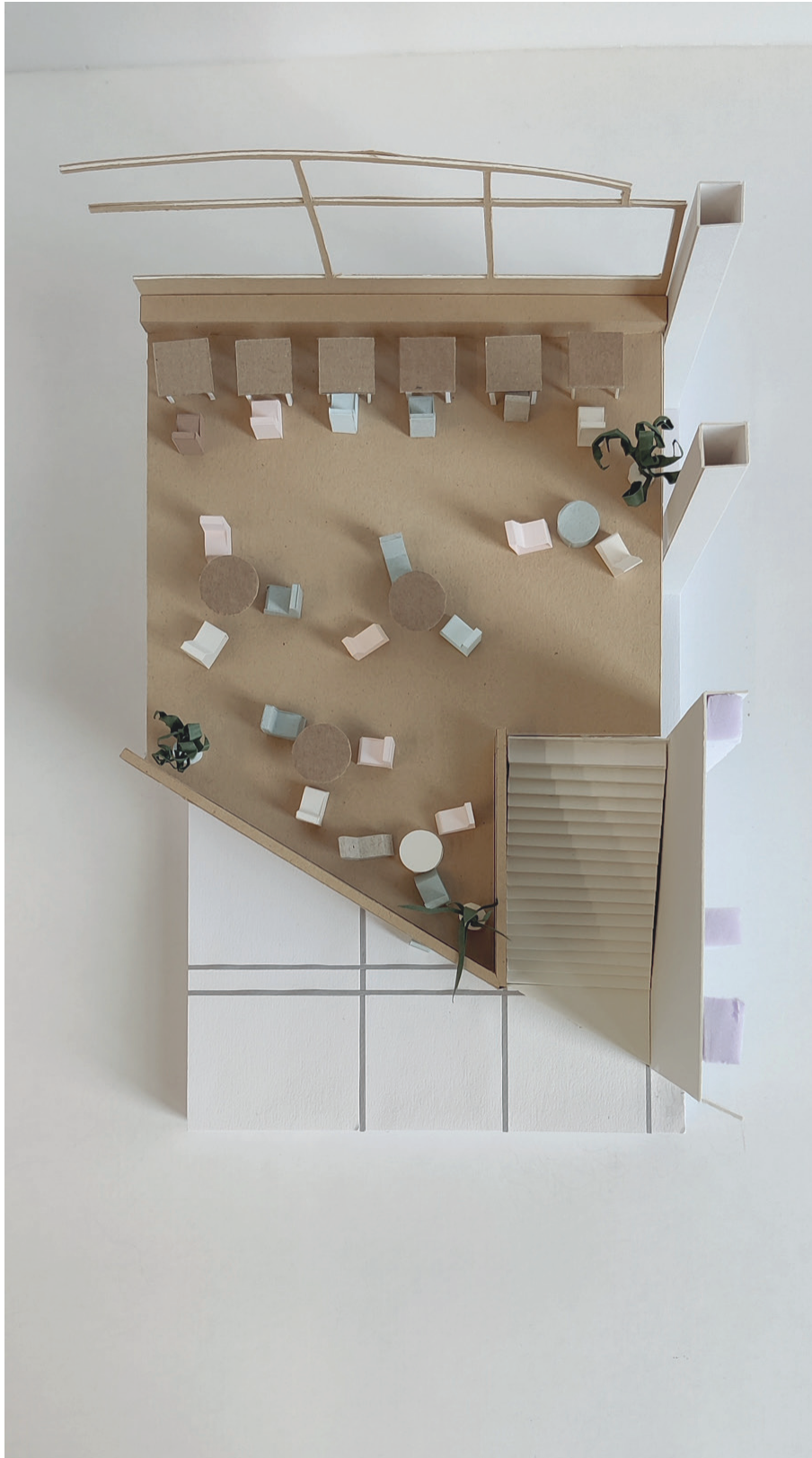






Personal work









Personal work









Personal work









Personal work



