

BRICOLAGE OF TIME

R E S E A R C H P L A N

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Urban Architecture Studio
Msc. 3/4

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INTRODUCTION

ARCHITECTURE TIME AND SPACE

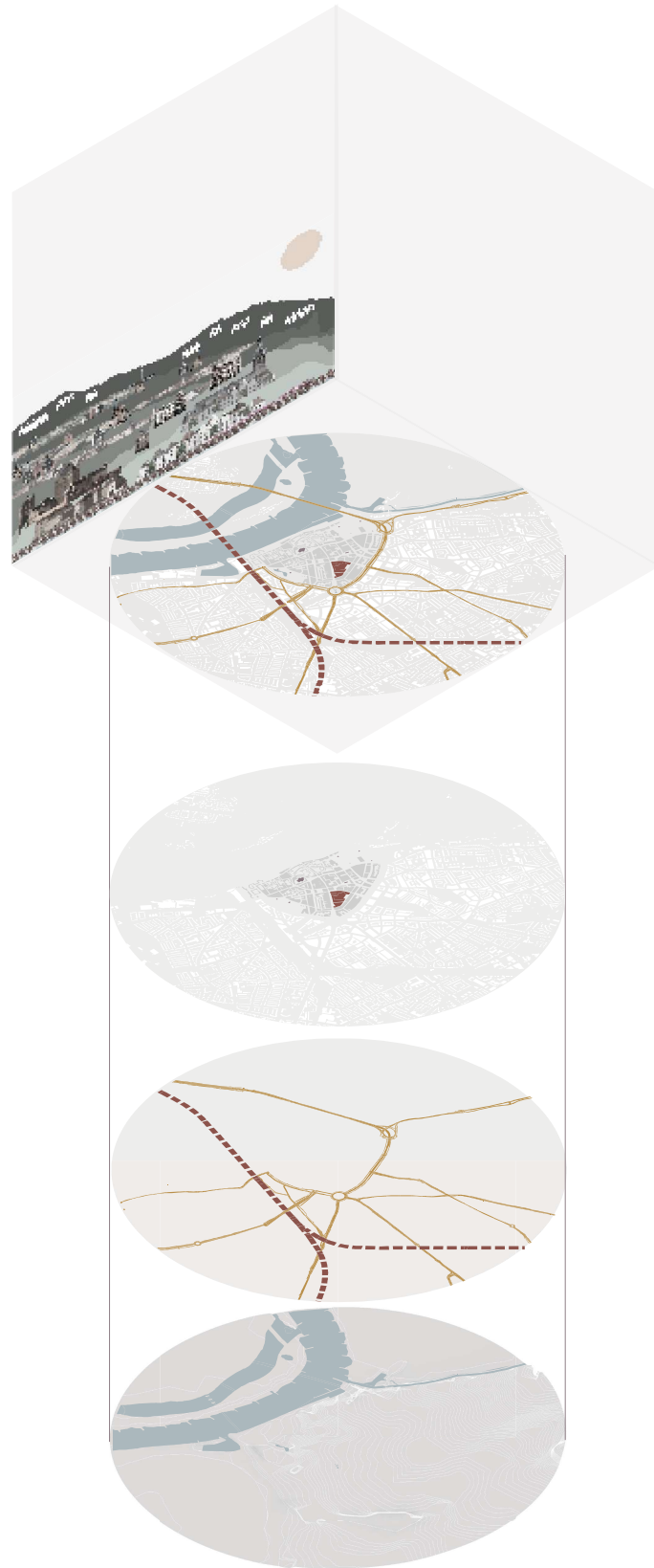


Figure 1.
Abstract view of the decomposition of the city of Nijmegen
Drawing by the author.

Time:

"Nonspatial continuum that is measured in terms of events which succeed one another from past through present to future."

Merriam-Webster (n.d.)

Past, present, future, reflect the linear conception of time. Seconds, minutes, hours, the progression of the clock shapes our schedules. Day and night, weeks, months, years, rhythm, seasons, calendar the cyclical time in continuous repetition.

We can conceive time as much more than the hands of the clock endlessly moving. The origins of the word come from the Old English *fīma*, that comes from Germanic origin related to the word *tide*, related to temporal senses. The earliest version of the term as a verb means "do something at a precise moment"¹. Time is about events that happen under specific conditions related to the location where they take place. Space, the stage that offers the conditions for actions to happen. Many cultures described both terms, time and space, even by the same word ². Nothing exists isolated in the map or in a moment in time.

People experience a hybrid of cyclical and linear time intimately linked to the senses, stimulated by the characteristics of the environment and the meaning given by the culture we belong. This experience is a constitutive element of architecture. Cities, buildings, streets, the built and unbuilt environment are changing in continuous metamorphosis. Changes never emerge on the vacuum; physical changes are responses to events, things that can be or not under control, consequences of decisions made by individuals or collectives.

Architects, in the aim of the design and bring the best possible solutions for cities, buildings and people are in continuous research during the design process; studying cause and effects of becoming shapers of the future but also being shape by themselves and traveling in time and space going to the roots of history, making relations with society and the surroundings of different times, understanding the way our cities take form, and how the people and experience this phenomenon.

In this document, the relation of architecture, time and space will be explored in three different forms. First, studying the past and decomposing it's historical layers. The second form will be trough the experience of the site and its relation to the city and surroundings, analyzing present conditions, context and dynamics to identify problems and current needs. Finally, experimenting with different possibilities to discover the potential of the site and selecting themes, concepts and theories to consider in future proposals.

The research will take place in Nijmegen, a city on the east side of The Netherlands in front of The Waal River. Is considered the oldest in the country. A unique characteristic is its topography, conformed by seven hills, is one of the reasons why the place was so attractive for different cultures that settled there. The plot is located in the south border of the historical city center, now occupied mainly by The Molenpoort, a shopping mall built in 1970. The name was inspired in the old city gate of the antique walled city, considered for a long time as the main entrance until it was demolished in 1879³.

Nowadays, the Molenpoort is disconnected whit its surroundings in form, scale and activities. The typology is a hybrid between a passage and a shopping. Too dark and empty for a shopping, too big for a passage. Is easy to lose the sense of orientation; large columns interrupt the views, and low ceilings give the impression of a close space. The parking on the roof covers the state entirely, blocking the views and light of other constructions. The plot also includes diverse commercial spaces, including restaurants, retails, and coffee shops. A highlight is a church with columns in the front which were built after the bombing as a symbol to recall the Roman origins of the city.

Getting closer to the heart of the city centre, one can recognize the richness of culture, identity and archi-



Figure 2.
Location of the city of Nijmegen and The Molenpoort
Drawing by the author.

ecture, especially in the oldest houses and ruins. Even though it is easy to get lost in the city being distracted by unexpected stairs little courtyards and old buildings, the topography gives even more charming to the discovery of the city. Pedestrian streets have enhanced an active life on the streets, restaurants and cafes inviting to stay. It seems that this atmosphere fades once one is closer to the border on the historical centre. According to municipality plans, the area will be the subject of urban renewal. They intend to build new houses and facilities to make it more attractive and reduce the current vacancy of offices and stores⁴.

The objective of the research is to provide concrete and meaningful tools for the development of a design proposal for the Molenpoort area. The technique of Bricolage will be applied by using what the city has to offer in terms of concept, program and materiality. Those elements will discover trough research, analysis and experimentation to answer different questions. Can fragments of history be used in a project that

responds to current needs? How can they be composed and decomposed to shape the future of the city, bringing identity to the site, activities and support the goals for sustainability, affordability and functions?

On the experience of temporality in architecture, questions related to urban planning, public space conservation and heritage. These topics will be studied trough literature reviews, case studies and site visits. Cycles in architecture show that new movements are in constant rejection of the one they precede. We should also be aware of how much do we destroy. Maybe what we consider ugly today will be a loss for future generations not only in terms of what is demolished but also considering the resources we need for the new constructions. The intention is to call for awareness not only to reflect on the impacts of our decision for the future but to understand the past that led us here in the first place. To go beyond what is obvious, questioning things that are not easy to see.

FIELD

LAYERS OF TIME

"A city is more than a contemporary and passing phenomenon. It is the product of many differentiated cultures in many different periods."

(Giedion, 1982)



Abstract view of historical layers in the city of Nijmegen
Drawing by the author

The present is a combination of the fragments of the past. Over time, the city of Nijmegen has changed its form and evolved due to different factors. This timeline shows the layers of history that shaped the city we know today. Plans, buildings, construction, reconstruction and demolitions. What is behind of the identity of Nijmegen? What is still present and what is gone? What remains in the citizen's memory?

The story is told with a list of events was classified into three categories: Culture and people, architecture and maps, in combination with an abstract interpretation of the period represented by images, sections and objects.

The timeline was divided into six main periods that represent the evolution of the city:

- Topography
- The Roman Empire
- Middle ages
- The walled city
- Modern Nijmegen
- Metamorphosis

TOPOGRAPHY

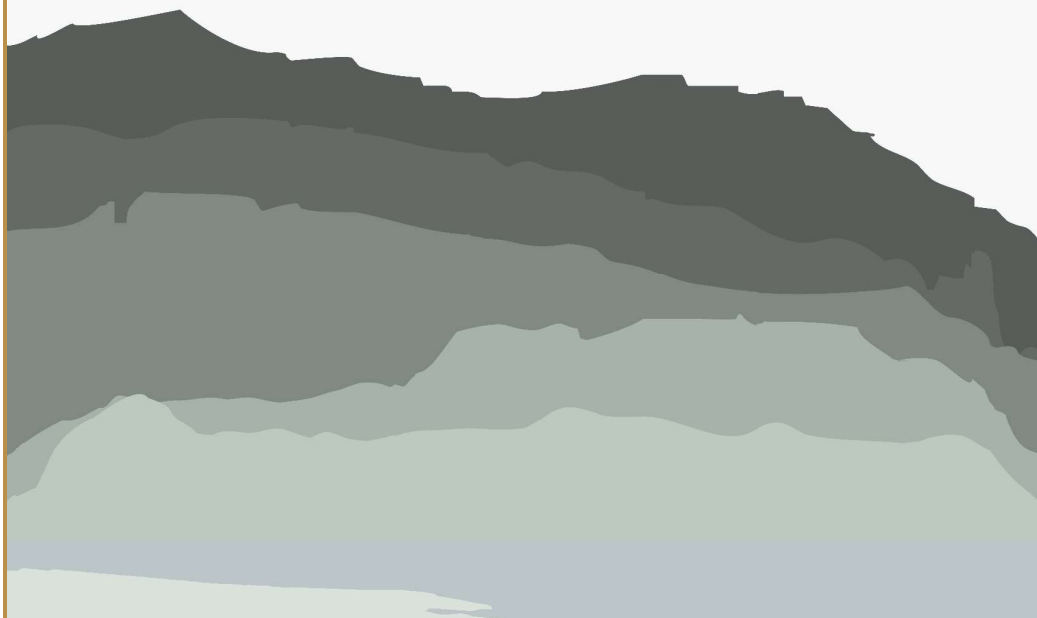
We will start 25 million years ago. The Netherlands looked very different back then. The rivers Rhine and Maas were once combined into one big river. Those two rivers and another one in the north called Eridanos brought soil and stones with them. After millions of years, the sediment resulted in the growth of the land. One hundred thirty thousand years ago during the Salinan period, glaciers from Scandinavia covered half of The Netherlands, pushing the ground up. Seven thousand years ago there is a beginning of the Netherlands as we know it today. The rivers still bring nutrients to the soil and clay, used for the production of bricks.

-25 Million Rivers Rhine and Maas combined into one big river. Together with the river Eridanos brought soil and stones.

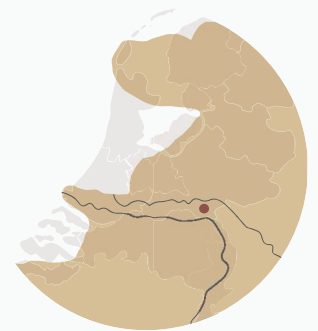
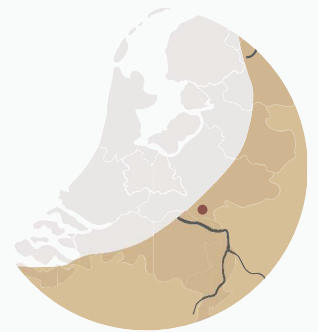
-130,000 The Salinan period

-7000

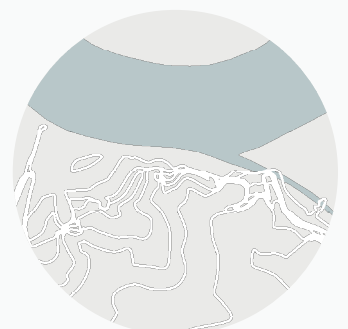
Clay for brick production



Formation of the soil

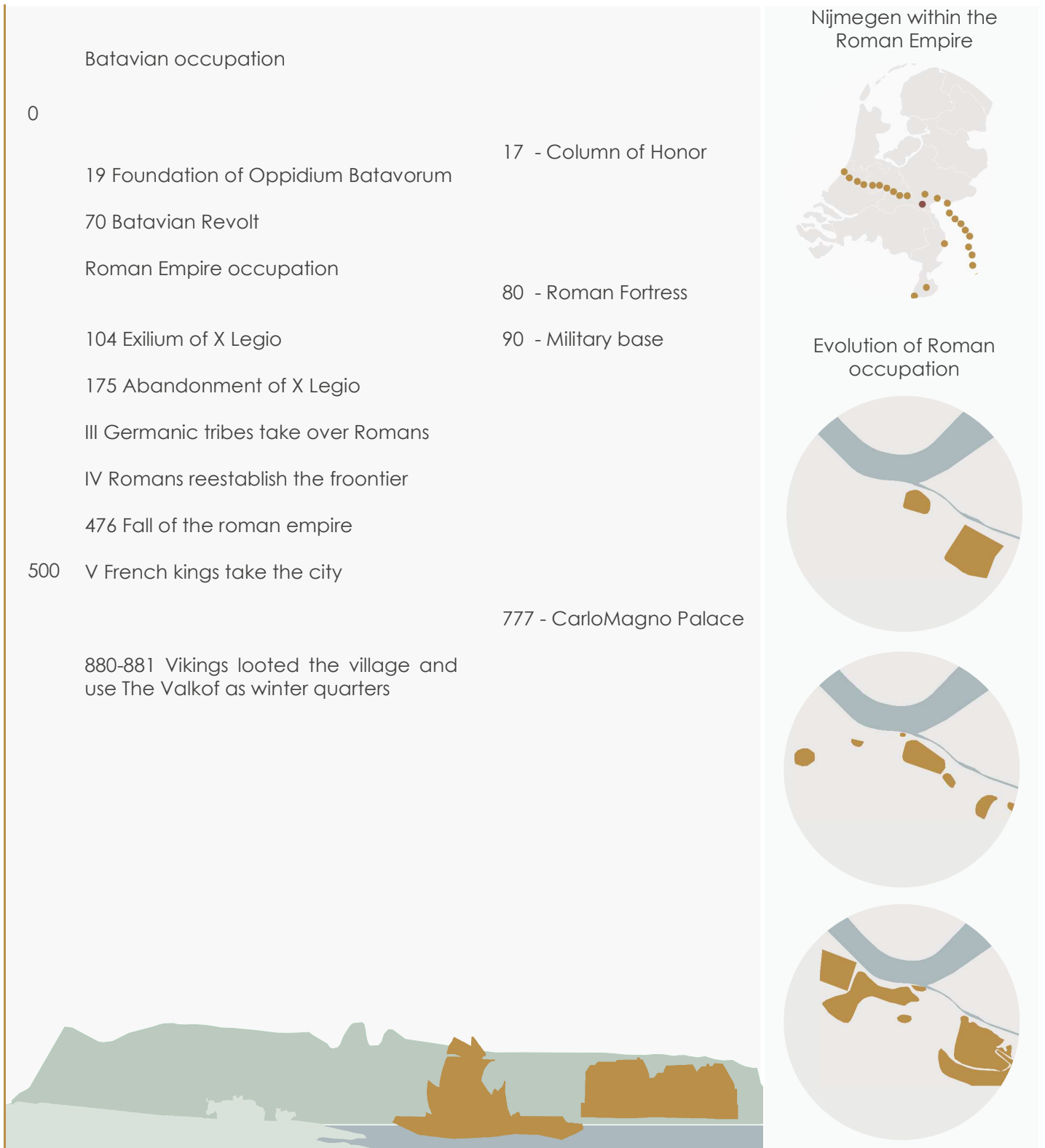


Topography of the city



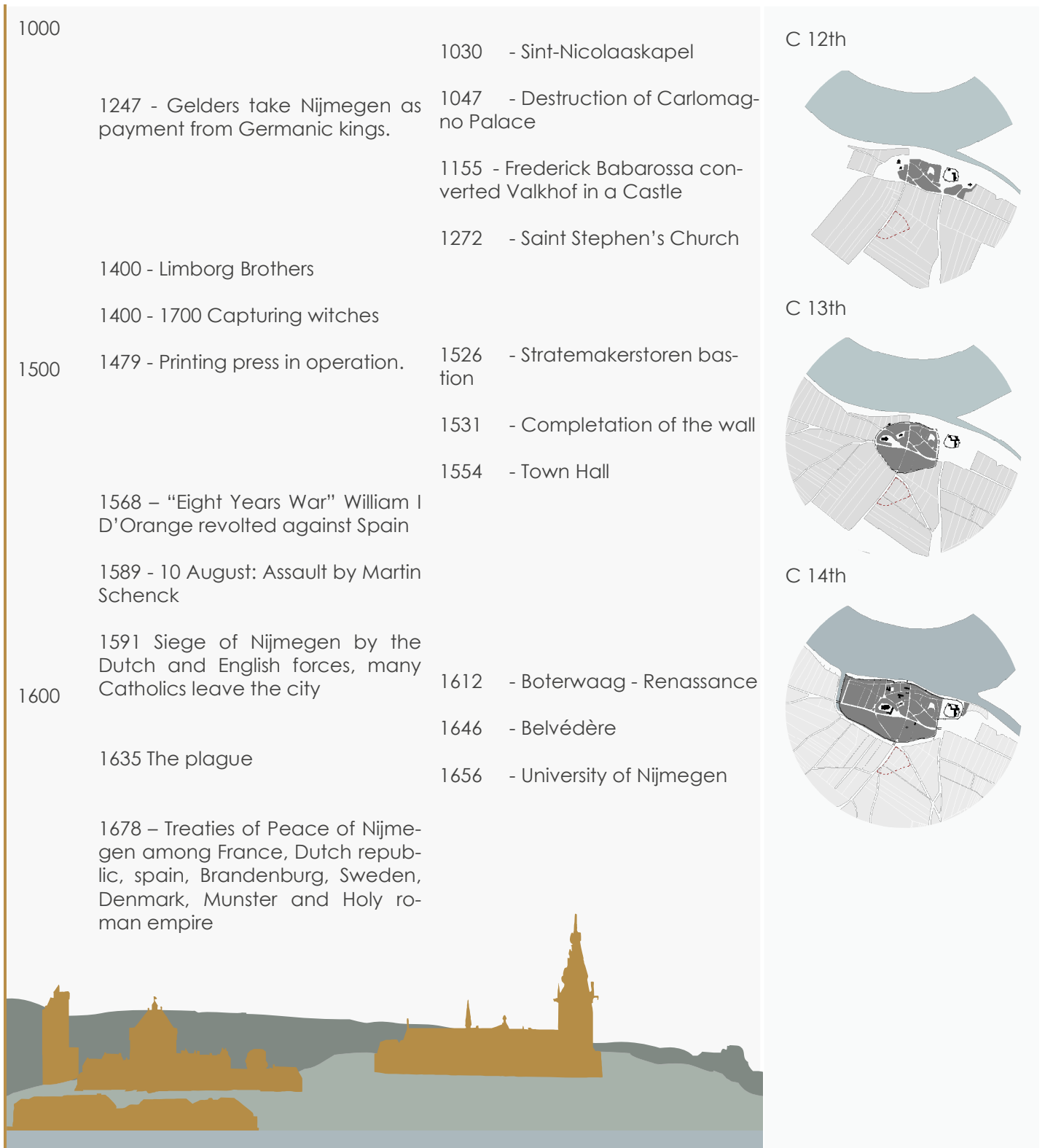
THE ROMAN EMPIRE

The town's written history goes back to the first century B.C. when The Roman Empire established a Military base because of its strategic geographical position. The aim was to prepare for the conquest of Germania. Before The Romans, the first settlers were The Batavians who lived spread in a network of small agricultural settlements. The Batavian revolt took between 69-70AD against the pressure of the Romans. The revolt was controlled by the empire, and the patterns of occupation changed drastically, starting with the constant development of a previously almost empty area.⁵



MIDDLE AGES

Frankish Kings came after the Romans. They built a new fort in The Valkhof area to give protections to the citizens. The city was regularly visited for the kings imposing respect and loyalty. The palace was used also as a military base, and hosted Parliament meetings. Small houses appear next to the river. The people had to give part of their harvest and work on the rulers land as taxes. In return they were granted with protection and law. With the death of Carlomagno, the city became part of the Germany, and from 1247 to The Gelders territory as it is today. In this time the city grew organically following the traces of paths and agricultural fields.



THE WALL

Walls were symbols of independence in medieval times. The first wall in Nijmegen was built after 1247. The population grew inside and outside the border, and in 1450 a second wall was needed. Another expansion took place in 1530. The complex was the most impressive construction of the city, unfortunately it's maintenance had high costs and even with reparations started, they were never completed.

1700

1788 - Henriette Pressburg, mother of Karl Marx born

1825 First city walk maps
Tourism development because of railway improvements, landmarks and cycle ways in the city

1848 - De Gelderlander newspaper begins publication.

1800

1851 - catholic council favour

1876 - starts the walls demolition and expansion of the city by WJ Brendera Brandis, and Bert Brouwer

1940 - Germany invades and occupies the Netherlands

1755 - Demolition of Belvedere Castell

1756 - Nijmegen Synagogue

1824 - Nijmegen arsenal

1839 - Theatre

1848 - Architect P. van der Kemp designed a partial new building for Oud Buren Gesthuis in neoclassical style

1861 - Last intervention on city wall

1865 - Nijmegen railway station

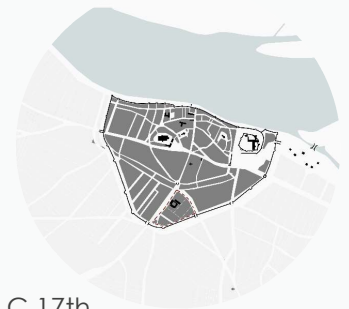
1879 - Nijmegen railway bridge

1883 - Kolpinghuis

1884 - City wall dismantled

1885 - Hunnerpark by Liévin Rosseels Parkarchitect

C 16th



C 17th



C 18th



MODERN NIJMEGEN

After pressure from the population, in 1874 the parliament abolished the Nijmegen status of a fortified city. After that, the wall and gates started the process of demolition. The committee in charge of the city expansion was known as "The triumphviaret". W.J. Brender à Brandis, produced the first proposals. He intended to deal with the hygienic issues and transform the Nijmegen into a beautiful city with canals, parks, and large mansions for the wealthy citizens. The first plans, consisting of a grid of small streets were criticized. The commission asked for advice from Bert Brouwer architect in The Hague. The new urban plan consisted on two wide boulevards connected with a roundabout, the big Keizer Karelsplein. The construction started with the west side and by 1910 the area was completely build up.

1900

1914 - World War I begins. The Netherlands remains neutral.

1911 - Gemeentetram

1915 - Concertgebouw de Vereniging

1916 - Bibliotheek

1923 Katholieke Universiteit

1936 - Waalbrug bridge

1944

22 February: Bombing of Nijmegen.
September: as part of the Allied Operation Market Garden, the Battle of Nijmegen takes place.
October: Charles Hustinx becomes mayor.

Proposals for the urban expansion

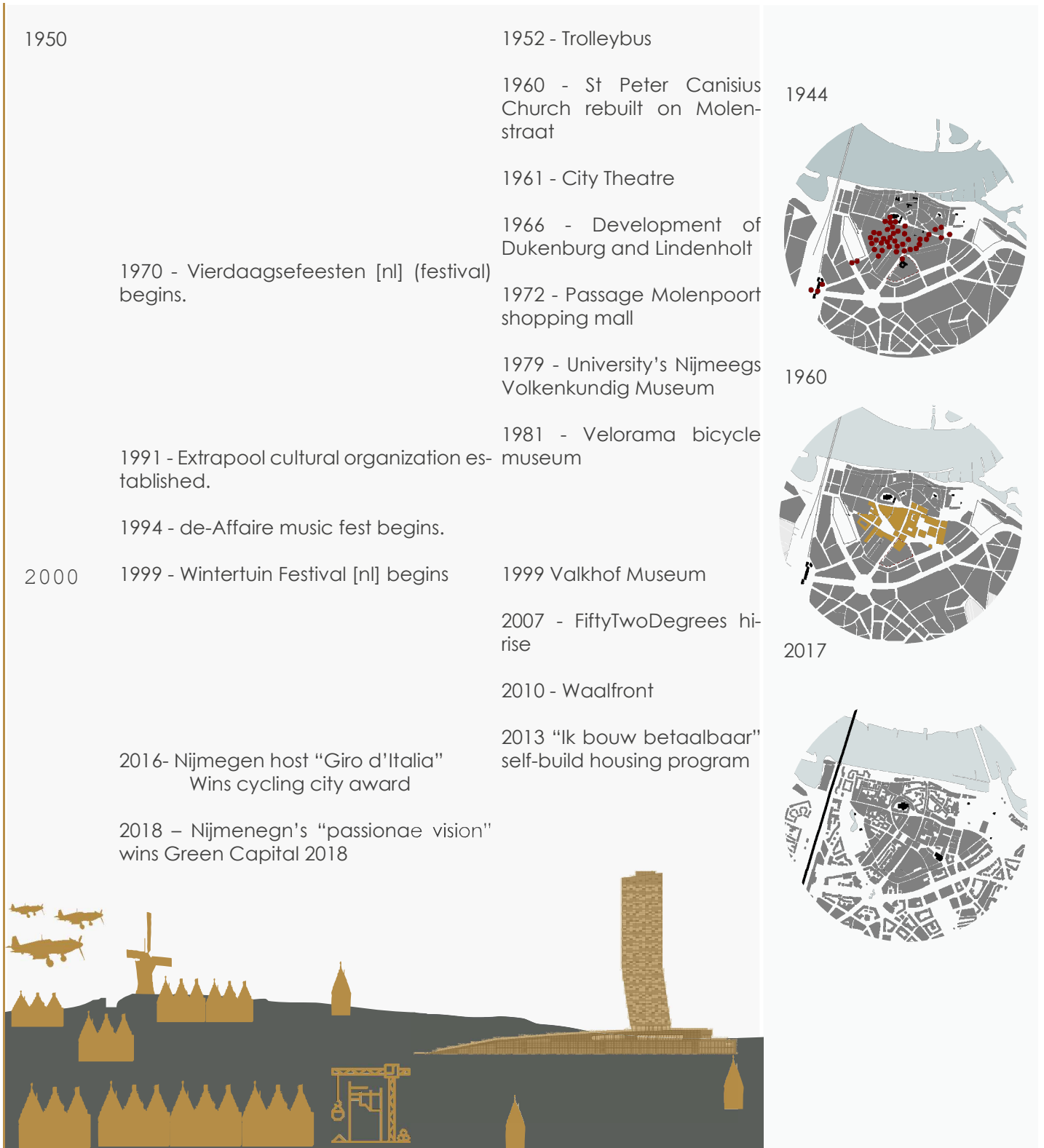


1897



METAMORPHOSIS

Nijmegen has been in a continuous process of reconstruction. Wars, reclaim of territories from Romans to Vikings, and the most recent one the bombing in 1944, has forced the citizens to reinvent spaces and give new uses adapting to present conditions. But nothing has proved to be more destructive than the human mind in urban planning. Maps show that from old city suffer mayor changes to bring modernity. Some of the most meaningful things remained; others might have been erased in the physical world but stay in the collective memory of people.⁶



EVOLUTION OF THE PLOT

Our site appear in the map the first time during the Roman period. It was occupied by civilians and military troops. The site was mainly use with agricultural purposes. In 1250, the plot was outside of the first city wall. The Molenstraat was the main access route to the Wilhempoot, the south gate of the wall.

In the 15th century the city expanded and the second wall was built letting the site within its limits. In this period the block took the form we see today shaped by small houses. A new main entrance was built with the name of Molenpoort. Another important building was built during this time, Regulierenkerk. The church was small and narrow at the beginning, but it changed and expanded many times over the course of the next 500 hundred years, including the addition of a Monastery.

In the 17th century the Molenstraat became part of an important transit route, This change resulted on an increase of building activities along the street. For about 200 years everything remained within the walls. In 1817, the Oud Burgeren Gasthuis opened, in the former Regulieren monastery. In 1848, the architect P. van der kemp designed a new building three story high, with a Neoclassical facade. Already at this time the proportions were bigger than the surrounding constructions in the street.

In 1874 when the fortress started the demolition big changes came for the plot with a of building activity. New regulations were established to improve the hygienic conditions. Forcing the farmers to leave the urban area. The Regulierenkerk was rebuild in Gothic style in 1897 and changed it's name into St Ignatiuskerk. In 1944 big parts of the city were destroyed by bombs. The plot was hit on its north corner. St. Ignatiuskerk was badly damaged. The reconstruction preserved only the back abide and the front was replaced by a sequence of columns in the memory of the Roman period.

Nowadays the side has a commercial character. In 1970 the Oude Burgeren Gasthuis moved and the building was demolished, instead the Molenpoort passage was build. With the increase of new shopping areas in the city, the area has been loosing it's former activity.

The municipality has plans for a future renovation that includes opening the building creating small internal streets with space for gardens and courtyard. The area will also be revitalized with mixed use building that will include housing and affordable working spaces for small companies.

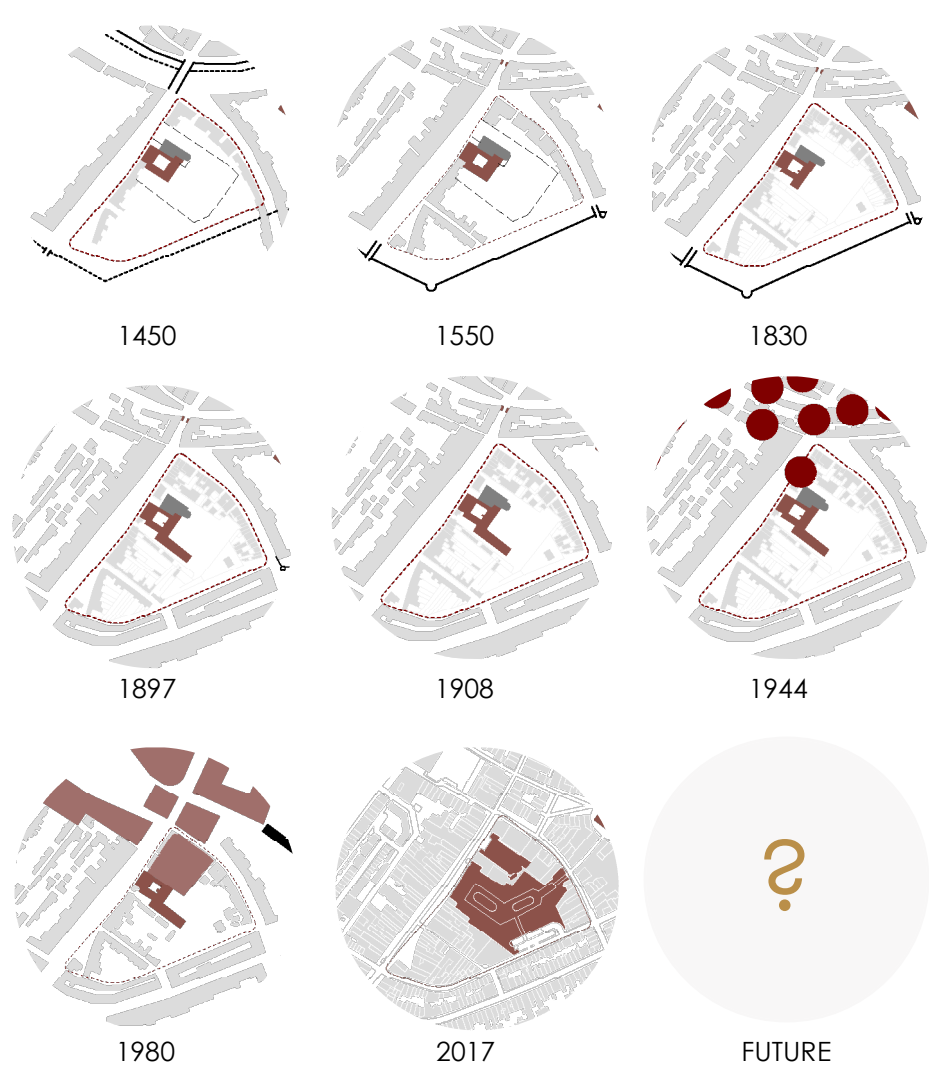


Figure 3.
 Evolution of the plot
 Drawing by the author.

LAYERS OF SPACE



Infrastructure



Building age



Main routes



Lights and shadows

Figure 4.
Site analysis - current conditions
Drawings by urban plan group.



Figure 5.
 Site analysis - Potentials for the future
 Drawings by urban plan group.

To understand current conditions of the site different analysis were made. First identifying what is already there in terms of infrastructure. Also looking at the current conditions of the buildings, which ones worth keeping and what we can use from them. After that looking at the conditions that can be use on the design of the urban plan as routes, lights and shadows, masses etc.

EXPLORING THE FUTURE

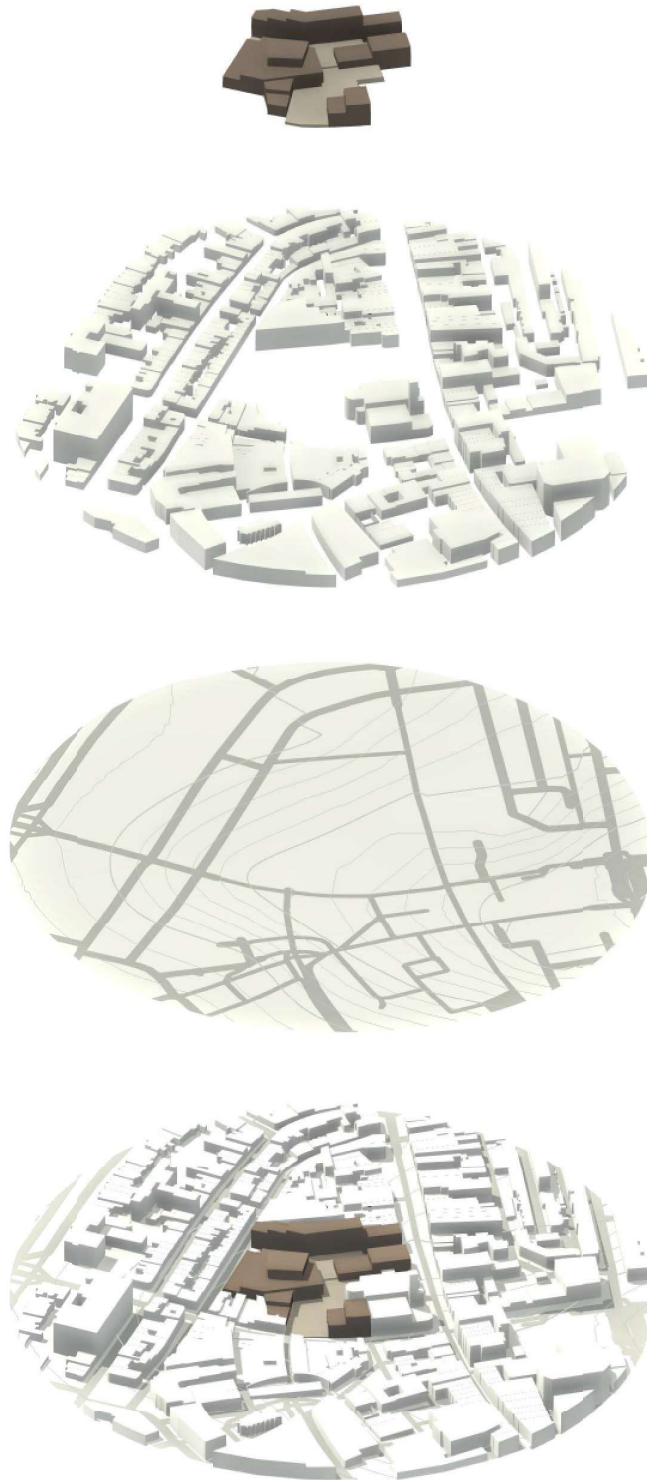


Figure 6.
Urban proposal
Drawings by urban plan group.



Figure 4.
Site analysis
Drawing by the author.

The urban plan proposal is based in different platforms to get advantage of the topography and enhance this characteristic of the city. A complex of plazas, streets, gardens and buildings that merge with the surrounding as the eight hill of the city

THEMES

BRICOLAGE OF TIME AND SPACE

“Bricolage: construction (as of a sculpture or a structure of ideas) achieved by using whatever comes to hand.”

Merriam-Webster (n.d.)

What is Bricolage and how can be interpreted and applied in the architecture field nowadays? Inspired by the book Robinson Crusoe, answers to these questions started to appear. He lived on an island for around 30 years. Isolated from the rest of the world, he had to find out ways to survive. His tools, where only some remainings from the ship he traveled and what the nature around him had to offer. As he did, a new proposal for The Molenpoort started to take form.

Bricolage can be interpreted in many ways and can be applied according to different needs. In the case of the Molenpoort site this concept was applied in a way that every component should be rooted and supported by the conditions offered by the city and the site. Every step starts with the question: what the city has to offer? Giving this framework, explorations of composing and decomposing elements available in the city are an invitation to spark the imagination, to see beyond the skin and discover what is hidden.

The bricoleur explores the potential of whatever is available. There is some feeling of freedom as there are no manuals to produce new ideas; possibilities are endless. A particular characteristic of this approach is that it always has to come up with something meaningful, that solves a problem or satisfies needs. Bricolage is a combination that balances creativity and purpose.

EXPERIENCE OF TIME



Figure 3.
Demolition process of the Molenpoort gate.
Source: Nijmegen archive.

GOING FAST FORWARD

Reuse of space has been present in the DNA of all times and all cultures. Palaces and temples on top of each other, recovery of materials from one building to a new one, big and small cities were built layer over layer in long periods.

During the last 200 years, the world has experienced an intense process of transformation. Modernity came up with new technologies that affected the urban configurations. Exponential expansions of cities and internal modifications on existing built areas developed to host the highest productivity. Cities couldn't grow and adapt organically anymore, especially in the 20th century when society started to experience a break from the past. The experience of time was accelerating, and old structures seem to don't be able to adapt. On one side, new developments in the peripheral areas, demanding the construction of bigger infrastructure networks creating higher pressure on the environment, on the other vacancy and degradation in city centers, losing the value and potential of everything that was already built. There was no intention to preserve old structure and demolitions were the most applied solutions for the reuse of urban space.

The car was now the primary user. Wider streets and parking transform the built environment to drive and move faster, displacing the pedestrians. In the process spaces for the social activities of communities were degraded.

TIME TO SLOW DOWN

Reuse of space has been present in the DNA of all times and all cultures. Palaces and temples on top of each other, recovery of materials from one building to a new one, big and small cities were built layer over layer in long periods.

The society reacted, showing to be against massive demolitions. The rediscovery of existing inner cities was and is now an international ambition. The goal is to bring innovation, based on social and physical conditions that are unique in every site. In the Netherlands Urban renewals had been possible thanks to grants within the Monument Act. Private housing associations, the squatt movement and individuals have transformed abandoned constructions into unique spaces. The main challenge is to adapt old structures sites to contemporary requirements and needs, and at the same time create spaces that will be attractive for people to inhabit. To achieve that goal, architects and urban planners have to combine artistic and technical skills, embracing the statement of Aristoteles having as a main goal should be make people feel secure and happy at once.⁷

Invitation to stay outdoors instead of only walk should include protection and security reasonable space, not too big not too small, furniture and visual quality. Comfortable conditions for people are also a prerequisite for a financial success.

A RECALL FOR THE PAST

Nijmegen also experienced the process of modernity starting with the demolitions of the wall, world wars and a constant construction and transformation of the city centre. Traces from the past can provide new opportunities for imagining the future. Heritage is an integral part of society and should be integrated into the plans for the future.

Behind the identity of cities, there is much more than the built environment. The feeling of nostalgia and relations with the past is always there. Nijmegen is a city proud of being called the oldest in The Netherlands and also to have a unique topography. These memories can also become an inspiration. In that way, even new constructions will enhance the identity of the place. How can we achieve that also new buildings can become appreciated for society?

The respectful relationship between old and new is critical for the future of our cities. Is there a balance between modernity and antiquity? Can we merge both in a way that enhances the well being of humans and protects nature?

THE NEW WALL

The wall is the most significant construction ever build in Nijmegen. It is told that used to be the most impressive. We can still see some remainings in the parks of the city center as well as other ruins. This places nowadays are always attracting the attention of people, residents and visitors, areas of activity and leisure were people meet and enjoy the surroundings.

Walls are in every day of architects, an element that divides or connects, frames and defines. Closings and openings, textures and transparencies. There are endless possibilities to explore. In history the wall in Nijmegen was used as a base for different house typologies, retaining the soil of the irregular topography. The second wall had towers to get better views of the horizon. Passages and monumental doors defined the entrances of the city, opening and closing during day and night defining rituals.

Can the wall be the starting point to create a place that not divides but frames, shaping the path of the human experience on something that might seem as simple as a street but is really where people meet daily, where a sense of belonging starts?

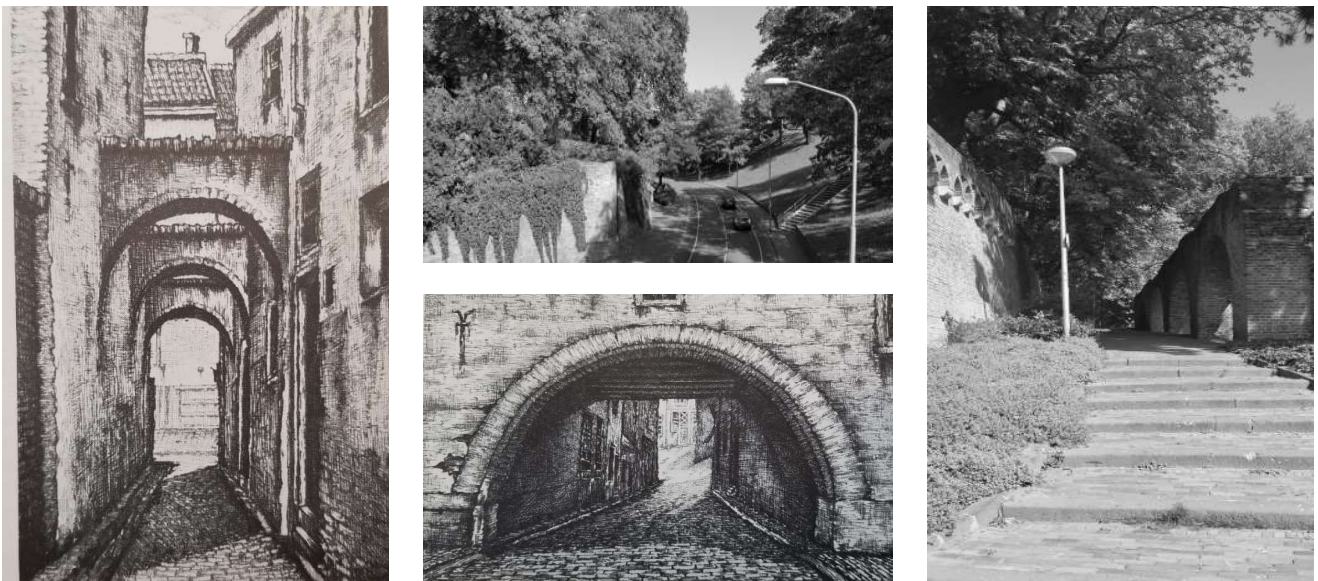


Figure 3.

Impressions of the wall.

Source: Drawings from Nijmegen atlas and photographs

METHODOLOGY

THE ROLLER COASTER

“The way a designer addresses challenges and constrains can drive a project in ways that make it unique”

(Alma-nac, 2013)

Inspiration doesn't come from the sky, is the result of research, analysis and deep reflections. It is a process that should be thought and organized to get the most relevant elements of a chosen topic without losing the focus.

The research developed on this thesis was far from being linear; it can be compared with a roller coaster that splits into different paths and converges again finding intersection and connections between topics. In this thesis, the process was developed by using the concept of time decomposed in tree forms or phases: past, present and future. Each one of them is related to exploration, analysis and design, respectively.

Phase 1: Past

The first phase was developed in a group which theme was *Traces or What time is this place?* The research started by creating a timeline to discover what has shaped Nijmegen as the city we know today. Decomposing the layers of history gave a better understanding of the reasons behind every action and its spatial consequences. In this phase, different sources were explored as archives, books, photographs, articles and visits. A particular fascination for the wall as the central concept as well as other elements in the future proposal

Phase 2: Present

The analysis started experiencing the site and its relation with the surroundings. Mapping, drawing and visits were needed to understand the city dynamics, identifying problems and possibilities for the future design. Ideas of the program also started in this phase considering the need for green areas, flexible workspaces for starters and housing for students, immigrants, and homeless.

Phase 3: Future

Some design exercises were developed to get a sense of the site and the scale. In the beginning, in an intuitive way to identify the potentials and ambitions for the future project, which were mainly related to the public space. After that, doing more in depth research was developed in this topic by doing a literature review and case studies.

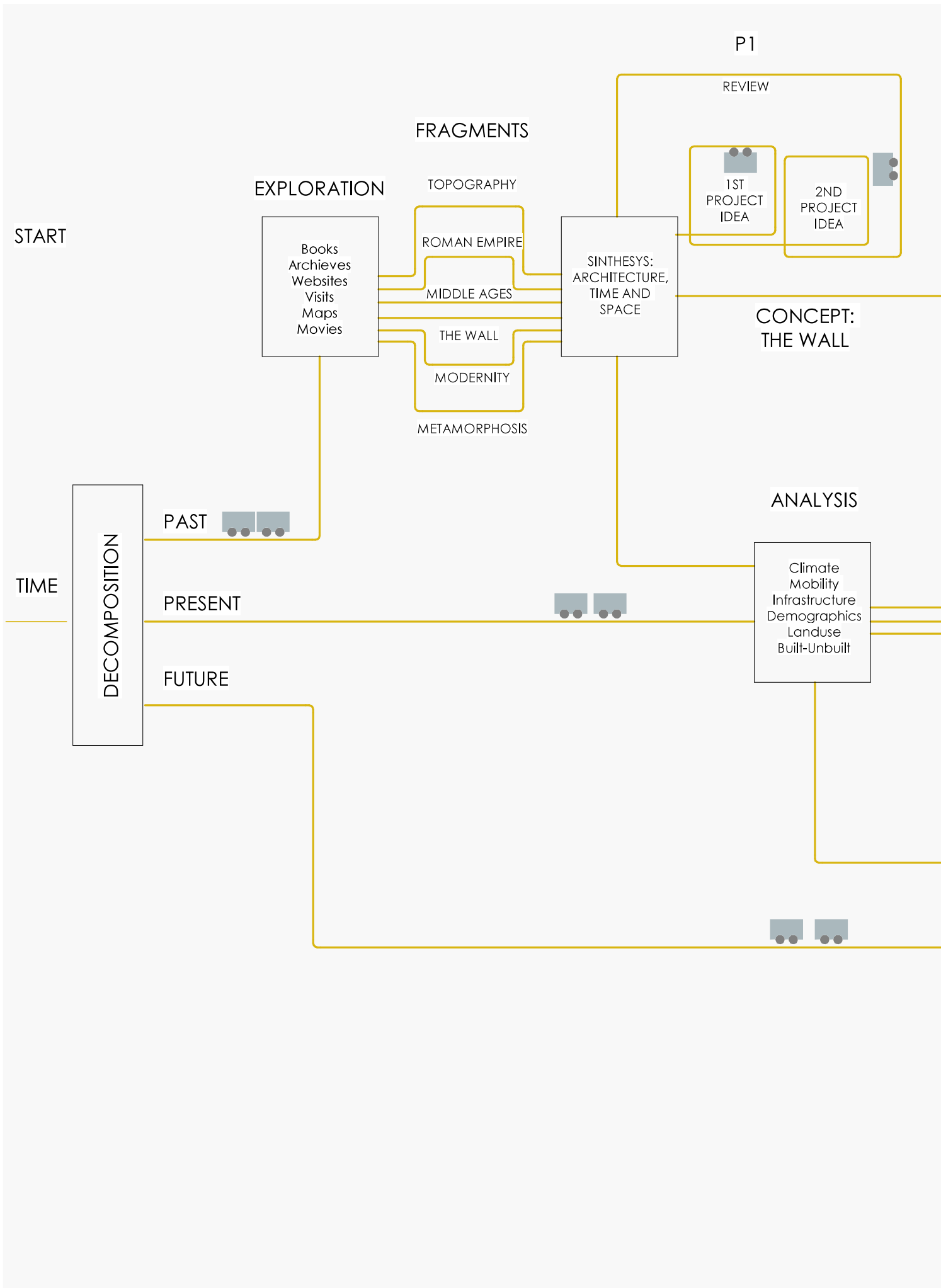
Combining the outcomes of historical research, context analysis and experimental urban design were found interconnected topics: Time and space relations, public space, urban planning and heritage (built and unbuilt). Special attention was given for the Urban Architecture Studio central theme: *Bricolage*.

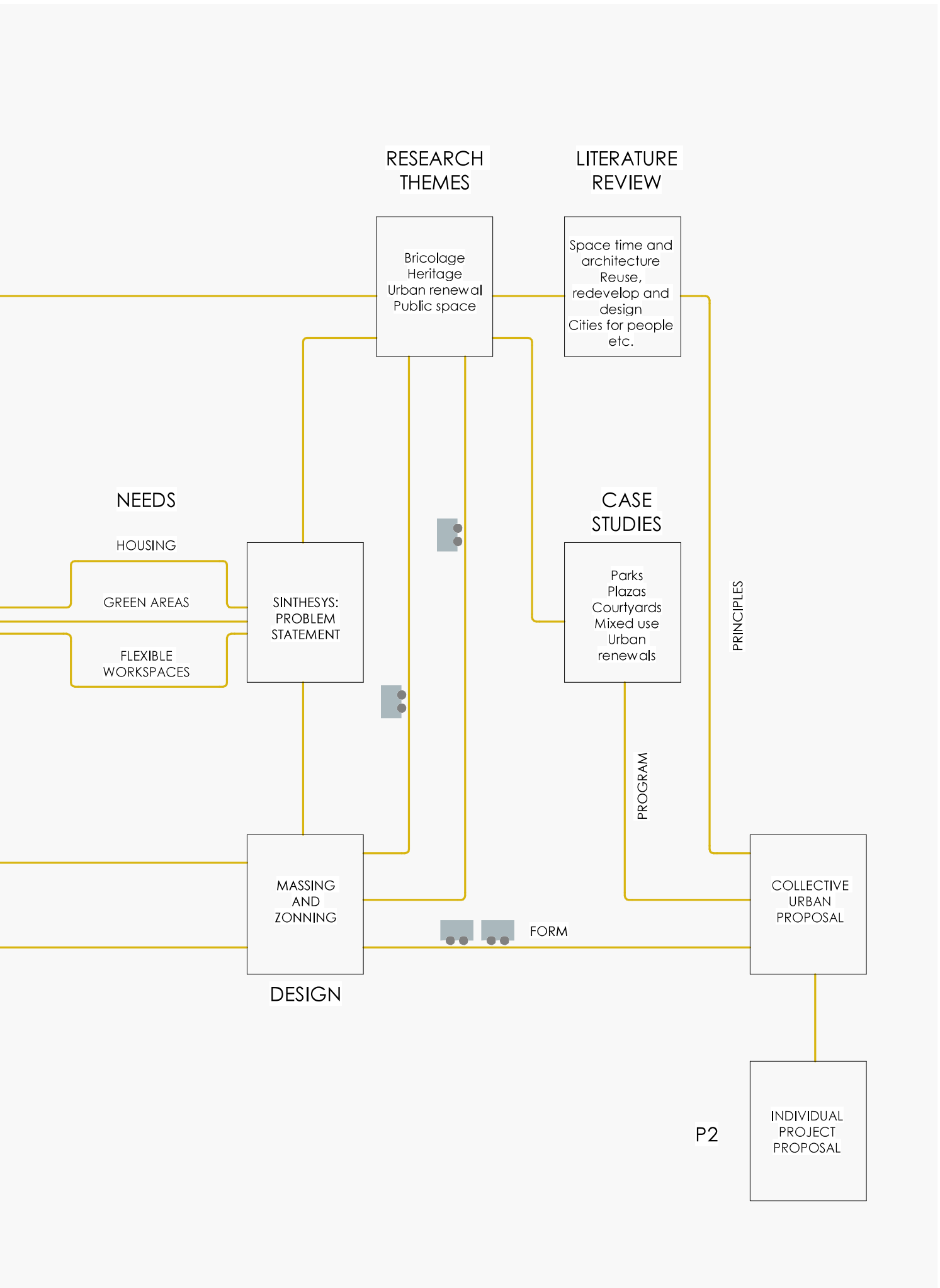
Phase 4: Definition

During the process of exploration, different project ideas came to mind; to find one that could be meaningful and integrated research, fascinations and space was the most challenging step. The proposal came as a result of the three phases combined in the process of constant reviews and reflections.

Phase 5: Development

For the upcoming period, more research will be done about the mentioned topics using different methods as literature, case studies, visits, and if the conditions allow surveys and interview. The theme *ob bricolage* will be implemented by using the results of research and analysis as well as the material found on site, the city and close surroundings. The idea of the wall will be explored trying to find different possibilities and for old structures had been used in Nijmegen, and other cities as well. How to design considering the memory of an unbuilt heritage object will also be considered for further research.





RESEARCH THEMES

LITERATURE REVIEW

Bricolage
Heritage
Urban renewal
Public space

Space time and
architecture
Reuse,
redevelop and
design
Cities for people
etc.

NEEDS

HOUSING

GREEN AREAS

FLEXIBLE
WORKSPACES

SINTHESYS:
PROBLEM
STATEMENT

CASE
STUDIES

Parks
Plazas
Courtyards
Mixed use
Urban
renewals

PRINCIPLES

MASSING
AND
ZONNING

DESIGN

PROGRAM

FORM

COLLECTIVE
URBAN
PROPOSAL

INDIVIDUAL
PROJECT
PROPOSAL

P2

REFERENCES

REFERENCES

- 1 Merriam-Webster. (n.d.). Time. In Merriam-Webster.com dictionary. Retrieved December 13, 2020, from <https://www.merriam-webster.com/dictionary/time>
- 2 Baggini, J. (2019). *How the World Thinks*. Granta Books.
- 3 User, S. (2020). English. Retrieved 17 December 2020, from <https://regionaalarchiefnijmegen.nl/english>
- 4 DPG Media Privacy Gate. (2020). Retrieved 17 December 2020, from <https://www.gelderland-er.nl/nijmegen/bekende-nijmeegse-winkelpassage-molenpoort-wordt-dakloos~a282bbdd/?referer=https%3A%2F%2Fwww.google.com%2F>
- 5 Nijmegen, from Oppidum Batavorum to Ulpia Noviomagus, civitas of the Batavi: two successive civitas-capitals. Retrived from: <https://journals.openedition.org/gallia/1577>
- 6 Historische @tlas Nijmegen. (2020). Retrieved 17 December 2020, from <https://kaart.nijmegen.nl/historie/>
- 7 Nai Publishers. (2020). *Reuse, Redevelop And Design How The Dutch Deal With Heritage (2Nd Ed.)*. [S.l.].
- 8 Makstutis, G. (2018). *Design Process in Architecture*. London, United Kingdom. Laurence King Publishing Ltd.
- 9 Brinhoff, Dr. J.M.G.M. (1971). *Nijmegen vroeger en nu*. Unieboek N.V.