

# The Future is Yesterday

Regenerating Amsterdam's city center  
through traditional urban design principles  
& human experience

*Master Thesis - Niels Samuels*

Colophon

## **The Future Is Yesterday**

Regenerating Amsterdams' city center  
through traditional urban design principles  
& human experience

Master Thesis  
Urbanism 24/25  
Msc Architecture, Urbanism and Building Sciences  
Department of Urbanism  
Faculty of Architecture and the Built Environment, TU Delft

Author: Niels Samuels | 5858402

Research Studio: Design of the Urban Fabrics

First Mentor: Ir. L.P.J. van den Burg

Second Mentor: Dr.ir. M.G.A.D. Hartevelde

30-10-2025  
Delft, The Netherlands

## Acknowledgements

First and foremost, I would like to express my sincere gratitude to my mentors Leo van den Burg: Thank you for your guidance, design inspirations and critical insight; and Maurice Harteveld. Thank you for the philosophical conversations, motivation and theoretical support. Their expertise and encouragement have been invaluable in shaping both the research and design process.

I also wish to thank my friends and family for their patience and motivation, and everyone who contributed their time and local knowledge during the soft-mapping sessions and provided special access to the site visits. This work would not have been possible without their generosity and perspective.

## Motivation

My fascination with health and well-being has always guided my approach to design. Through my background in landscape architecture, I developed a deep interest in environmental psychology, understanding how the built environment influences human behavior, comfort, and perception. This awareness led me to explore how urban design can actively contribute to a healthier, more meaningful daily experience.

At the same time, I am drawn to the morphological and historical development of cities, how layers of time shape identity and create places that feel both familiar and resilient. Concepts such as livability and sense of place form the foundation of my design philosophy, where spatial quality and social interaction go hand in hand.

This thesis brings these interests together by examining how traditional urban design principles and human experience can guide the regeneration of the contemporary city. It reflects my belief that timeless urban environments arise from understanding both people and place.

## Abstract

This thesis explores how the principles of traditional urban design can enhance the user experience by regenerating degraded urban tissue in the city center of Amsterdam. The project focuses on the Stopera block, a site that symbolizes the loss of urban identity following large-scale redevelopment. The research bridges the gap between design and experience, arguing that urban identity, an often-overlooked dimension of sustainability, is essential to both timeless and social resilience.

Traditional urban design principles were examined for their capacity to withstand time and support adaptable, identity-forming urban structures. The block was partly redesigned using its existing construction, introducing a diversity of plots and building types to foster spatial flexibility and socio-economic resilience. A balanced degree of public accessibility and active ground-floor uses promotes permeability and everyday interaction within the block, strengthening its relationship with the surrounding city.

From the perspective of user experience, insights from environmental psychology—such as legibility, mystery, coherence, and complexity—were implemented to shape the spatial and visual composition of the design. Combined with findings from local soft-mapping, which revealed a need for improved public spaces, local programs, and stronger canal connections, these strategies create a renewed sense of place.

Ultimately, the thesis demonstrates that uniting design principles with human experience can restore identity and generate lasting urban vitality within a contemporary context.

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**1.0**

**Introduction**

# 1.1 Problem Statement

The emergence of modernism coincided with an era of technological revolution, introducing innovative materials such as glass, steel, and reinforced concrete. These advancements enabled unprecedented architectural forms and urban developments, addressing pressing needs like housing shortages. Although, this provided many solutions, it later became clear that it also had its downsides. Buildings became larger, sterile and homogenous of character, eventually resulting in a lower quality and livability of the environment that overlook the deeper human connection to place.

Today's pressing needs remains housing. However, it seems that we still face similar crossroads. Contemporary urban development's prioritize speed and scale to meet growing housing demands, frequently overlooking the impact on the livability, aesthetics, and social quality of the urban fabric. Housing has become a commodity rather than a place to live. This results in generic urban environments without character and identity.

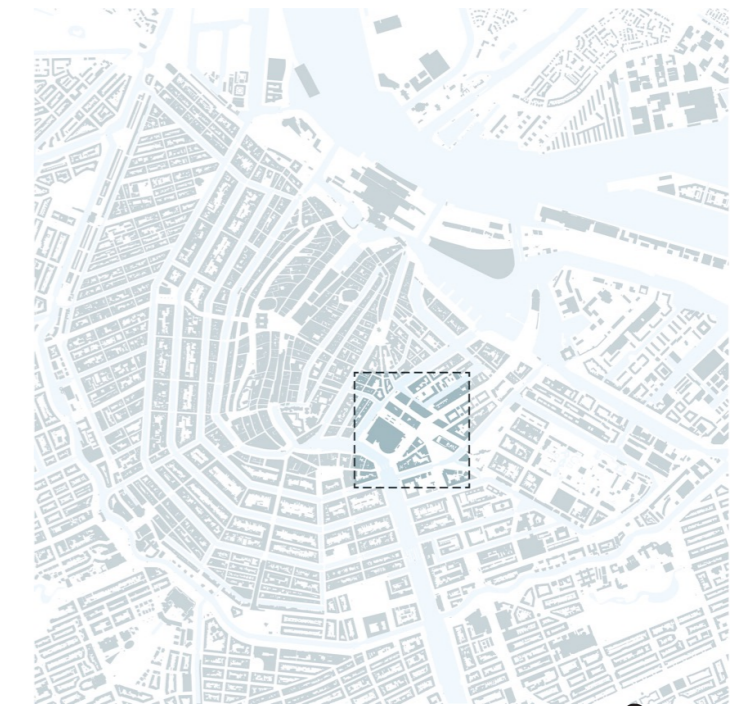
The general term sustainability, alongside housing, dominates the current urban agenda. Yet the core of sustainability, timelessness, is often overshadowed by other aspects of sustainability that focus more on physical environmental aspects. The most sustainable buildings and urban designs are those preserved and cherished by their communities, yet achieving this quality requires more than technical solutions; it demands a deeper understanding of the human experience.

The Waterlooplein neighborhood in Amsterdam provides a clear example of lost identity in the urban environment. Modernist interventions at the time completely changed the place resulting in a high contrast with its surrounding 'traditional' urban fabric. Eventually these drastic changes created controversial opinions on the place questioning its livability.

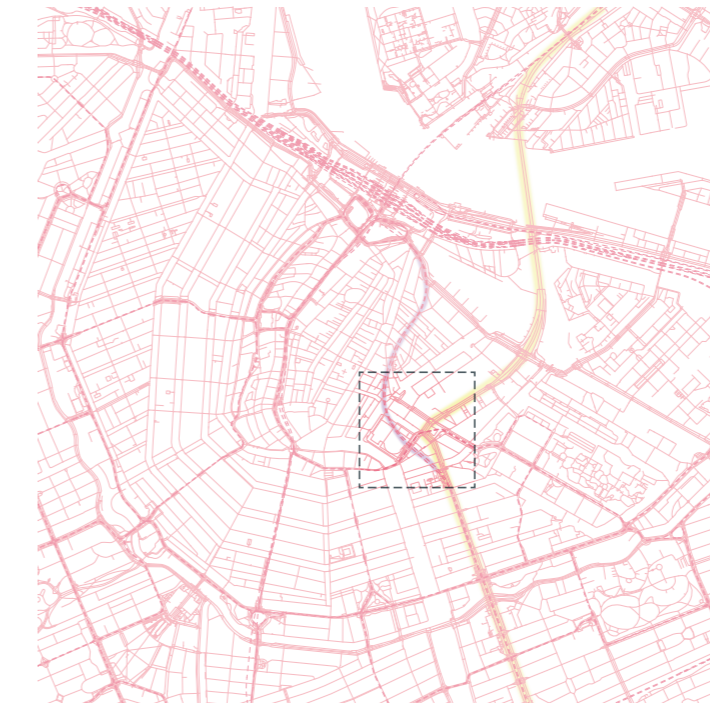
## 1.2 Location

### Waterlooplein Neighborhood, Amsterdam

Located in the middle of Amsterdam's city center, there is Waterlooplein with a rich (urban) history. Over time, various major events have changed the place in such a way that its identity was lost which resulted in a high contrast with its surroundings, ultimately causing a fragmented urban fabric. Particularly, the Stopera block which will be a central focus for design intervention. In the research area, the adjacent 'traditional' urban fabric serves as a valuable urban laboratory.



Scope



Change



Contrast

## 1.3 Research Questions

In this research, the gap between (traditional urban) **design** & (user) **experience** is examined in order to (re)contribute to the urban identity of urban environments with timeless/ social sustainability as the main driver and goal.

### Main Research Question:

How can the principles of traditional urban design improve the user -experience in degraded urban tissue in the city center of Amsterdam?

### Sub-Research Questions:

#### *Regarding 'Design'*

1. What principles define traditional urban design?
3. How do the principles of traditional urban design contrast with modernist and con-temporary design approaches?

#### *Regarding 'Experience'*

2. How does environmental psychology explain the user-experience in urban spaces?
4. What impact do sociocultural factors have on the user-experience?

## 1.4 Theories

The following key concepts serve as the foundation for the analysis, each grounded in theories and literature:

### Traditional Urban Design

Traditional urban design principles prioritize human-scale development, walkability, and mixed-use neighborhoods. These principles, often found in pre-modern cities, focus on creating environments that foster community interaction and livability. Jane Jacobs' work, *The Death and Life of Great American Cities* (1961), critiques modernist urban planning for neglecting the social and experiential aspects of urban life. Traditional urban design provides a framework for addressing current urban challenges while drawing lessons from the past.

### User-Experience

The concept of user experience in urban design emphasizes designing environments that prioritize the needs and behaviors of people. Jan Gehl's *Life Between Buildings* (1971) highlights the importance of creating spaces that encourage social interaction, walkability, and engagement. The success of a city is defined, not based on its physical form, but on the spaces between the built form. Gehl's approach aligns with human-centered urban design, advocating for environments that are not only functional but also enjoyable and meaningful for users.

### Urban Identity

Urban identity reflects the unique character and sense of place that defines a city or neighborhood. It emerges from the interplay between physical structures, cultural heritage, and the collective memory of its inhabitants. Edward Relph's concept of place attachment (Relph, 1976) emphasizes the emotional bonds that people form with their environments. Urban identity is critical in fostering social cohesion and creating spaces that resonate with both residents and visitors.

### Timeless Sustainability

Timeless sustainability integrates environmental, social, and cultural dimensions to create urban spaces that endure and remain meaningful across generations. Kevin Lynch, in *The Image of the City* (1960), emphasizes the role of place, legibility and identity in fostering enduring connections between people and their environment, underscoring the value of preservation and social cohesion as central to sustainable urban design.

### Environmental Psychology

Environmental psychology examines the relationship between individuals and their physical surroundings, providing insights into how (urban) environments influence behavior, well-being, and social interaction. Rachel and Stephen Kaplan's *Attention Restoration Theory* (Kaplan & Kaplan, 1989) highlights the psychological benefits of environments that balance complexity and coherence. Their work underscores the importance of aesthetics and natural elements in fostering positive emotional responses and a sense of connection to place.

*Gehl, J. (1971). Life Between Buildings: Using Public Space. Danish Architectural Press.*

*Jacobs, J. (1961). The Death and Life of Great American Cities. Random House.*

*Kaplan, R., & Kaplan, S. (1989). The Experience of Nature: A Psychological Perspective. Cambridge University Press.*

*Lynch, K. (1960). The Image of the City. Cambridge, MA: MIT Press.*

*Relph, E. (1976). Place and Placelessness. Pion Limited.*

# 1.5 Methods

## SRQ1: Defining traditional urban design principles

### Historical Analysis

With mapping throughout time, the historical analysis of the city center of Amsterdam provides insights of how the city was created and helps selecting the areas for further typomorphological analysis.

### Typomorphological Analysis

Through various types of drawings, the typomorphological analysis of the city center looks at a preselected set of 'traditional' built blocks in which comparisons are made to define the traditional urban principles.

## SRQ3: Contrast to Research Area

### Site Analysis

In the local context of the research site, mapping events throughout time and the comparing the associated photos create a clear image of what has exactly happened to the location the way it is now.

### Local typomorphological Analysis (site)

The site analysis creates a clear image of the current situation in the context of the local research site. Mapping the Stopera block and Waterlooplein in comparison to the traditional surroundings explains the contrast of the site.

## Additional methods

### Literature Study Urban Theorie

The urban theory in relation to the combination of traditional urban design principles and user-experience explains what to look for in the design interventions.

### Reference Projects

A case study on reference projects in relation to the topic will provide practical design solutions in today's urban needs in the context of the site of intervention.

### Conceptual Model Building

The conceptual model, both physical and digital, searches for the initial integration of the defined traditional urban design principles into the site of intervention.

## SRQ2: Environmental Psychology

### Case Study on Mental Maps (Kevin Lynch)

Comparing 300 mental maps of Amsterdam creates a collective image of the city which showcases the important elements and qualities to look for.

### Visual Series through the City (Gordon Cullen)

The visual series highlight the elements shown in our perception of the city on eye level as one moves through space. In here, the important elements of the environmental psychology are revealed.

### Façade Perceptual Comparison (Kaplan & Kaplan)

Filtering the elements of the facade provides a deeper understanding of what makes the human eye more drawn to one than the other.

## SRQ4: Sociocultural Factors

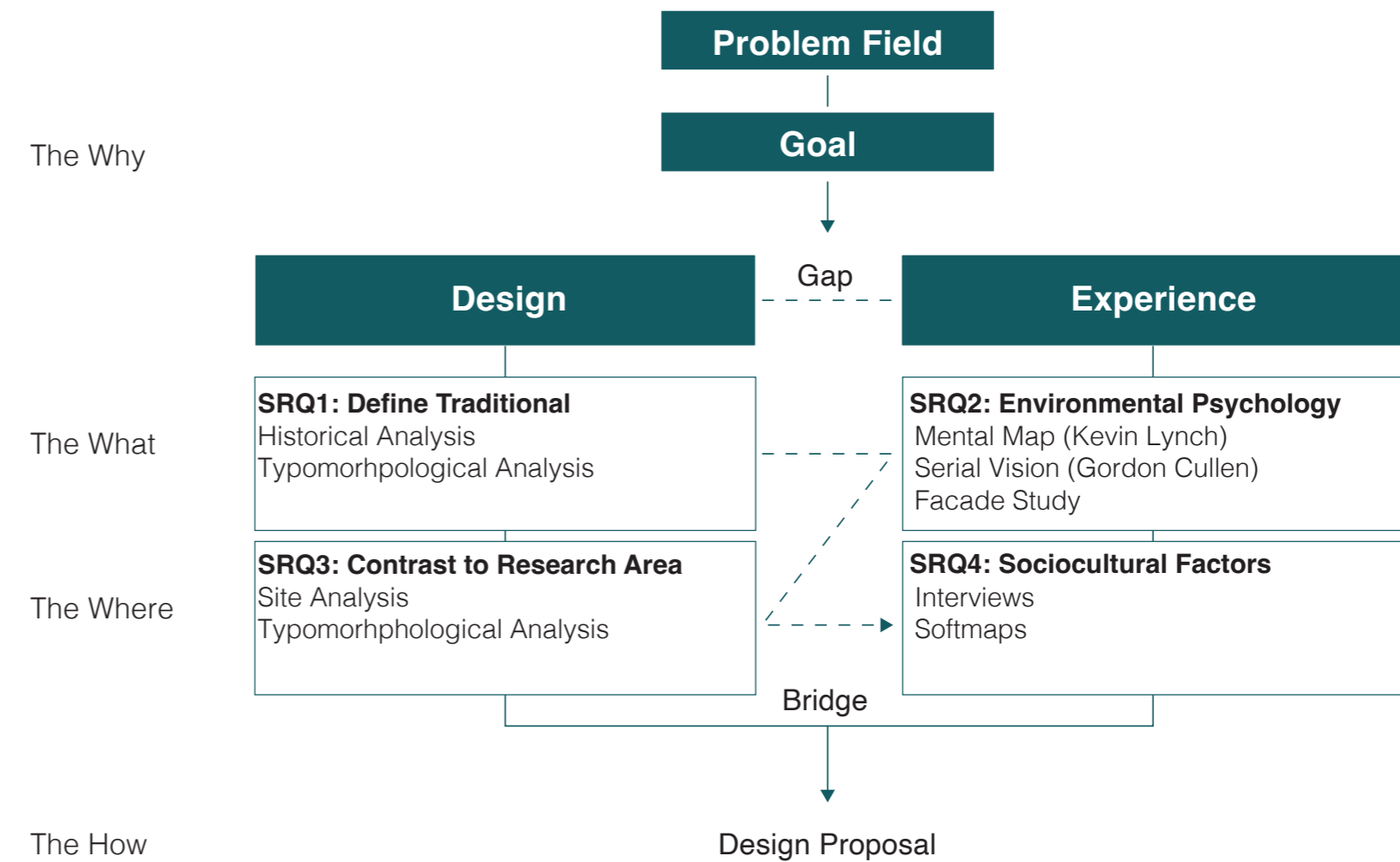
### Site Visit & Interviews

The site visit in combination with short interviews (tourists, locals and experts) provides the 'soft data' such as certain activities and opinions that are usually not seen in regular mapping.

### Soft Mapping (Jan Rothuizen & Nadia Pepels)

By mapping the social structures from the soft data, the design intervention will respond to the existing dynamics. The map reveals where activities and interactions are concentrated, highlighting the need for collective action.

# 1.6 Methodological Framework



# Timeline Site

Origin of the Stopera Block



**Vlooienburg** 1926  
Started as its own neighborhood



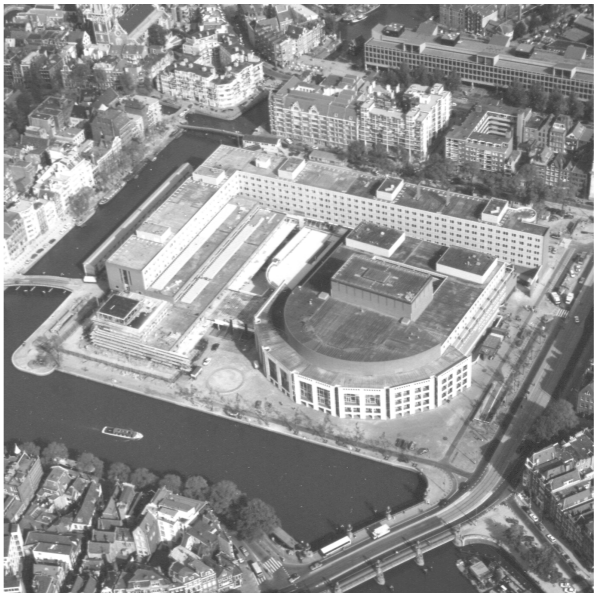
**Market** 1900  
Draining out the canal allowed for the Waterlooplein



**Post-war** 1945  
After WWII, the neighborhood degraded



**Construction** 1980  
New plans for a metro line removed Vlooienburg completely



**Stopera** 1986  
De Stopera was introduced as Townhall & Opera



**Protest** 1982  
The significant transformation threatened the neighborhood its identity

# Oh Waterlooplein

Local Anthem

Local song by Johnny & Rijk  
Inspired by 'Les Champs Élysées'

Oh Waterlooplein

Ik liep een beetje door de stad  
Ik had geen doel, ik deed maar  
wat

En toen ineens, ik stond er weer  
Als iedere keer

**Dat ouwe stukkie Amsterdam**

Waar ik al duizend malen kwam

En waar ik altijd weer zal zijn

Het Waterlooplein

Oh Waterlooplein

Oh, Waterlooplein

**'t Is mooi en lelijk tegelijk**

**Argmoedig en toch ook weer  
rijk**

't is weemoed met 'n scheutje  
gein

Het Waterlooplein

Een vogelkooi, een manke stoel

Een naaimachine zonder spoel

Een oud bureau, 't kost bijna niets

Een roestige fiets

De koopman zegt 't is echt antiek

Je zeurt en pingelt om een piek

**Zo hoort het ook, zo moet het  
zijn**

Op 't Waterlooplein

Oh Waterlooplein

Oh, Waterlooplein

't Is mooi en lelijk tegelijk

Argmoedig en toch ook weer rijk

't is weemoed met 'n scheutje  
gein

## Het Parool

Niet meer van alle markten thuis: waarom de ene Amsterdamse markt veel beter loopt dan de andere



→ De markt op het Waterlooplein heeft het al jaren moeilijk. Na de renovatie moet het gros van het aanbod vintage of tweedehands zijn. Beeld Eva Plevier

Amsterdamse markten hebben het moeilijk, zeker sinds de pandemie. De uitzonderingen vallen op. Waarom overheerst op het Waterlooplein het chagrijn, terwijl de Siermarkt juist bloeit?

[Anna Herter](#) en [Hannah Stöve](#) 26 november 2022, 03:00

## The struggle of the Market

New conditions & regulations negatively impact the atmosphere of the flea market, while other markets seem to have more succes

**2.0**

**What principles define  
traditional urban design?**

## 2.1 Historical Analysis

### Urban expansions

Amsterdam is considered as one of the largest cities in the Netherlands with a rich history. This history expresses itself in its urban fabric and architecture and is now known for it world wide. However can be history considered a major factor for defining traditional urban design?

Originally, the city of Amsterdam started as a small settlement along the Amstel river. Later on, this settlement expanded beyond its dykes which resulted in the city of today.

These expansions, however, were gradually throughout time and were shaped at the time by major historical and socio-economic events such as wars, economic growth and housing shortage.

Up until 1750, Amsterdam grew slowly and formed its famous canals. This form is known as the inner city of Amsterdam and will be used as research area for this thesis.

After 1750 the city expansions radically changed multiple times with the coming of the industrial revolution. This eventually resulted in exponential growth and a larger different city layout.

This new layout became less recognizable in comparison to its inner city.

Most of the surface today is relatively young in which modern and larger scale urbanism changed the city forever.

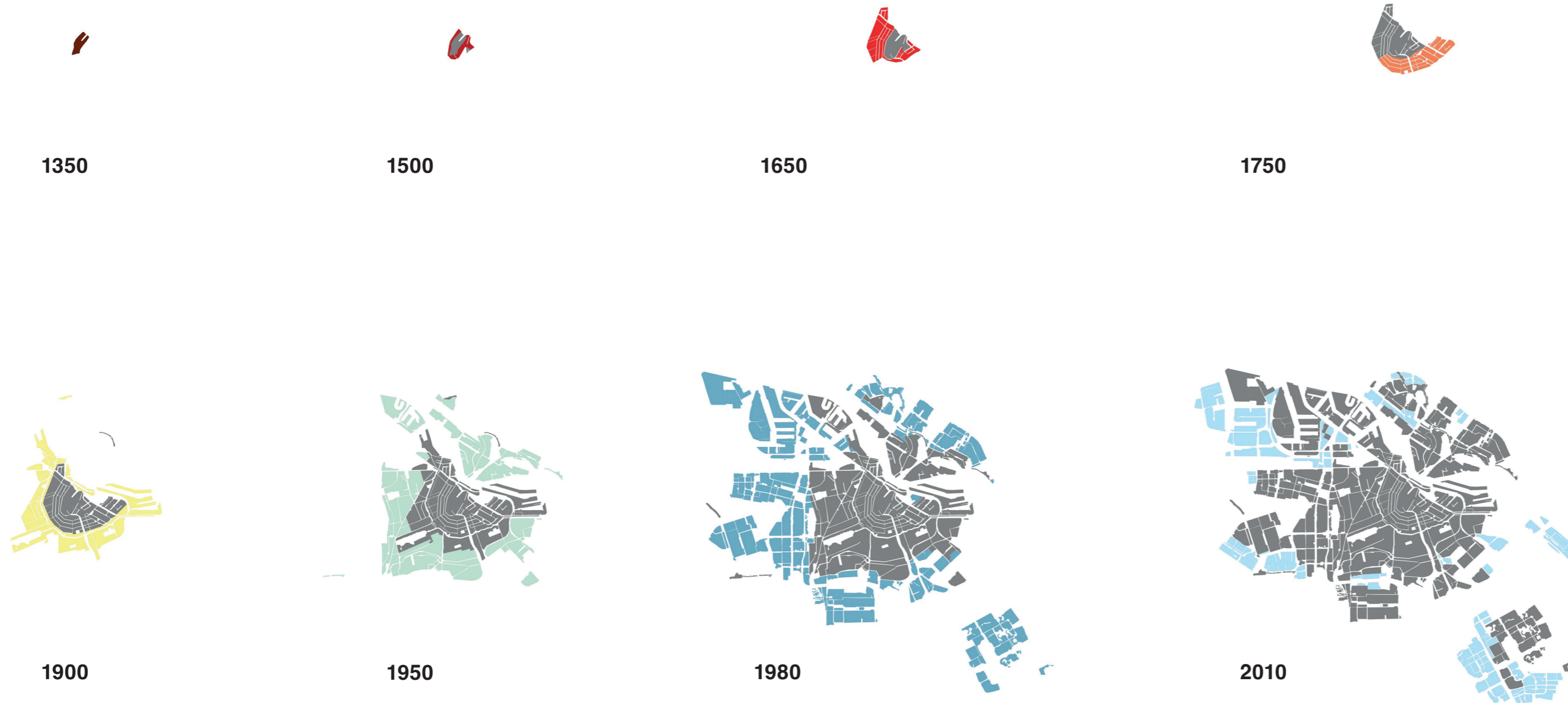
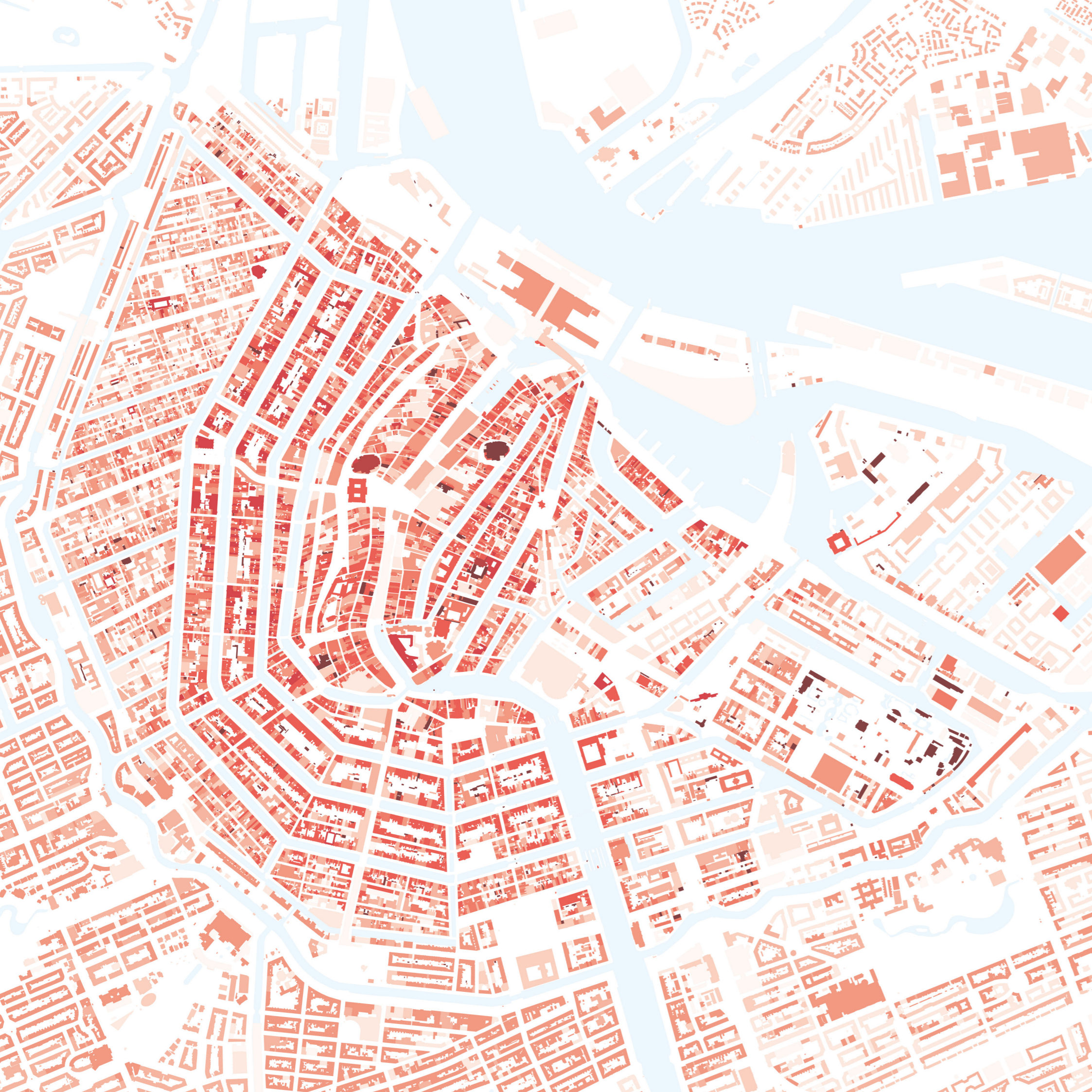


Figure by The Netherlands in the 17th century. Source: Reinout Rutte, Historical Atlas of the Netherlands: How Our Country Has Been Shaped Over 2,000 Years.



- Before - 1350
- 1350 - 1500
- 1500 - 1650
- 1650 - 1750
- 1750 - 1850
- 1850 - 1900
- 1900 - 1950
- 1950 - 1980
- 1980 - 2000
- 2000 - After

## Changes within the city center

### Variety in built years

Is traditional urban design bound to specific times? Or is there more to it?

Besides changes in urban expansions, time also effects the existing city itself. When looked at the current map of building years within the inner city of Amsterdam, a mosaic like image is formed. It shows a large variety and therefore high diversity in building years.

It is still visible that most older buildings are located within the oldest cores. However, many buildings from recent periods are introduced to these cores, showing that the (existing) urban fabric always changes when time passes.

Yet the famous inner city of Amsterdam is still considered as “traditional urban design”, which raises the question if traditional urban design is more than just about time and that it could be more about form when looked at the diverse urban block.



Different times allow for different styles

# Urban Core Transformations

Overlaying the past and present

Looking at both the past and present situations of Amsterdam's city center can provide valuable insights of what exactly has changed. In here, overlaying the map of circa 1825 with the present shows major morphological changes in the research area relative to its surroundings.

It explains the scope of the research area and why it has lost its identity. Changing the morphology resulted in significant changes in the urban block, while the rest of the city mostly had changes within the block itself.

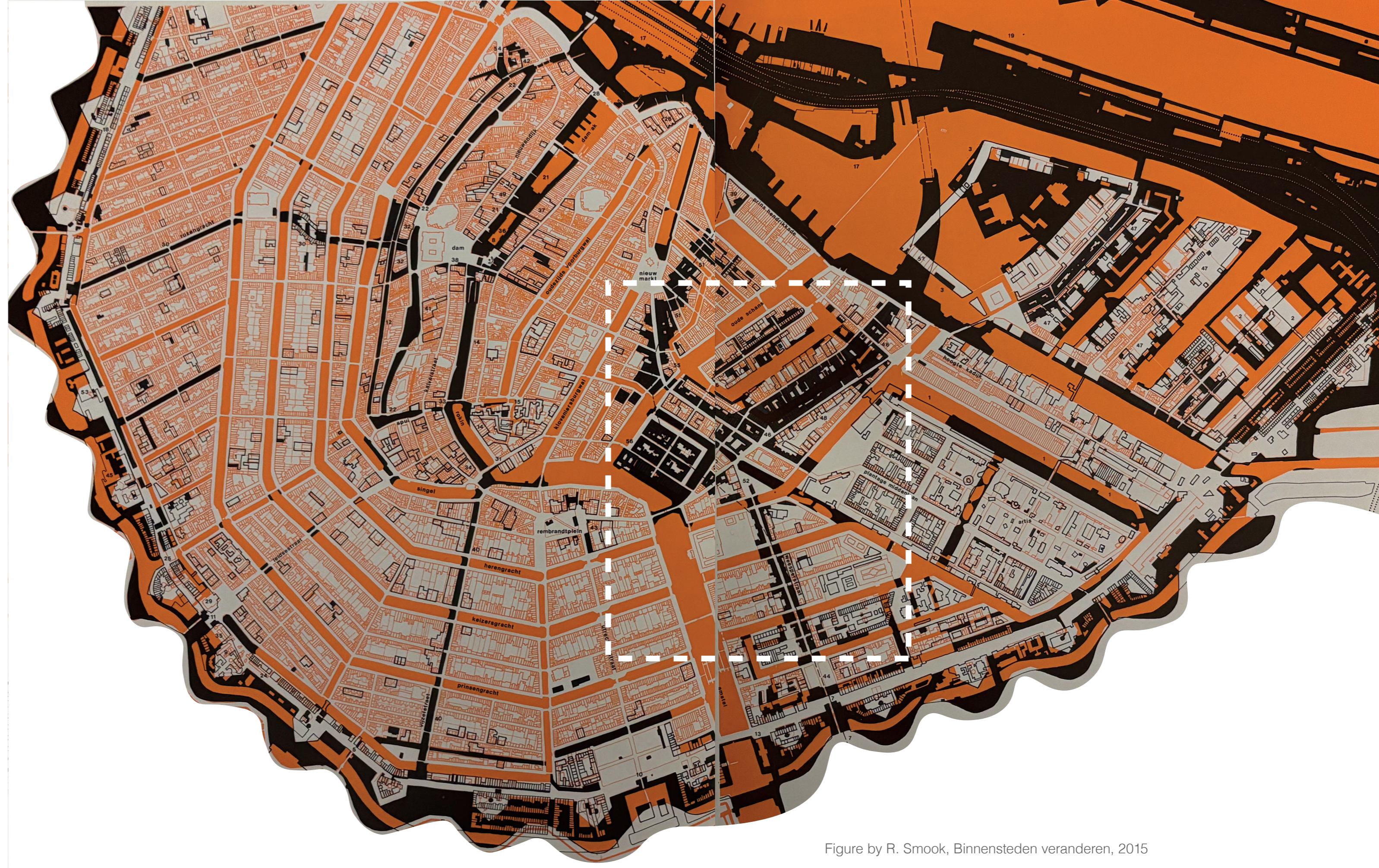


Figure by R. Smook, Binnensteden veranderen, 2015

## 2.2 Typomorphological Analysis

### Form over time

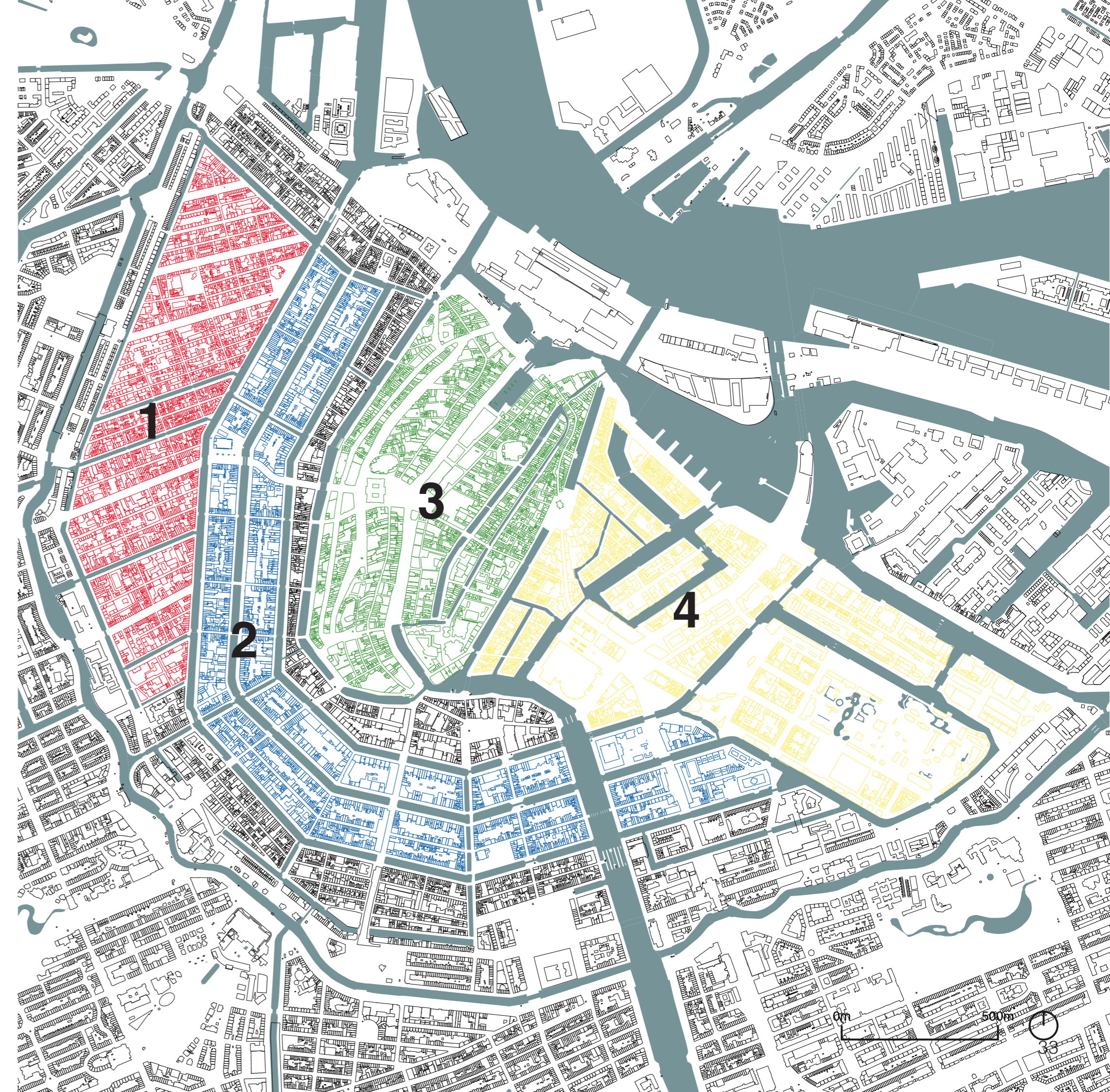
In order to define the principles of traditional urban design, a typomorphological analysis will be conducted. In here, the goal is to look at the traditional urban blocks and their similarities. But before that, the morphology needs to be studied as it influences the block.

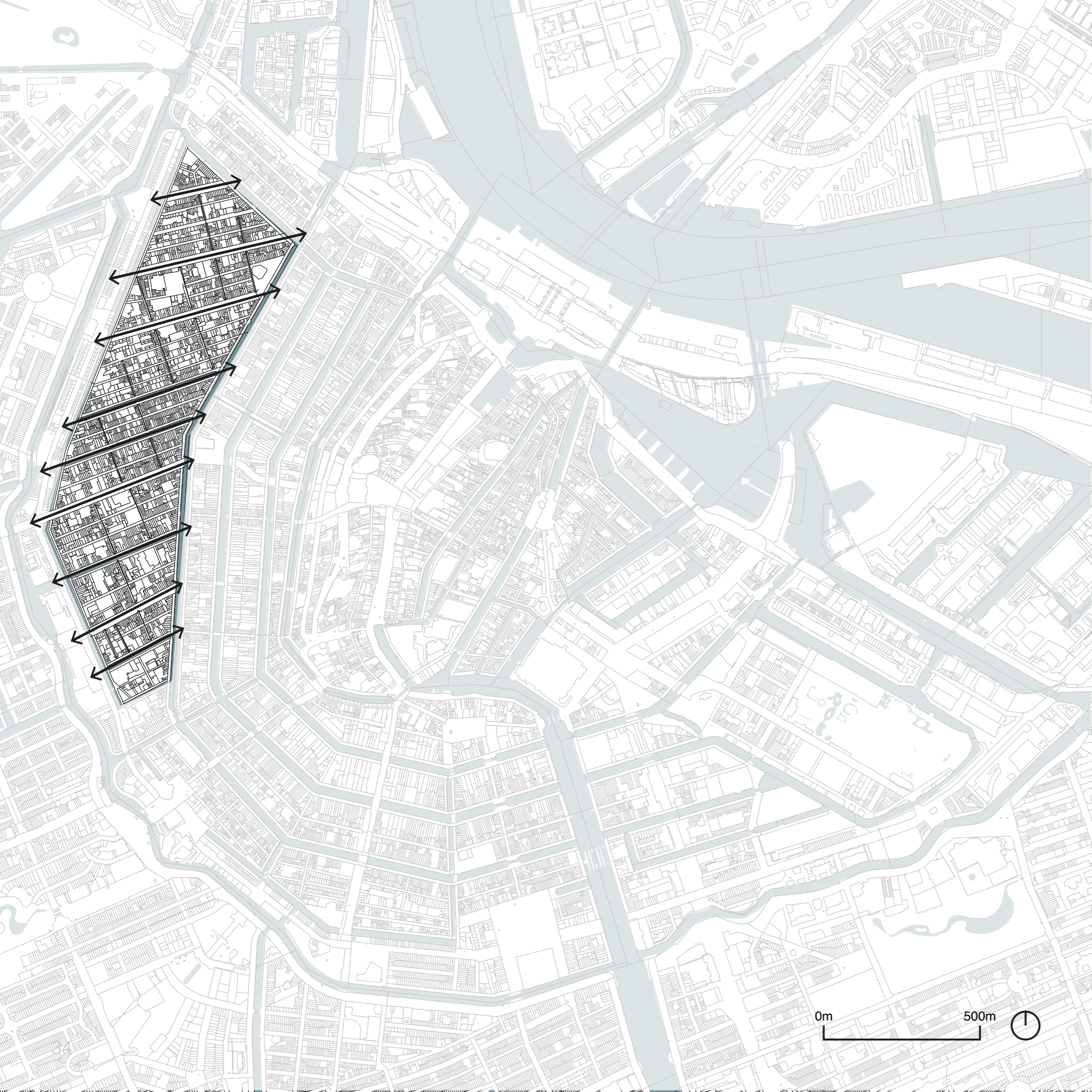
As the city center of Amsterdam has experienced a lot of changes throughout time, defining the morphology just based on their time period would not be appropriate and accurate enough. Therefore, the types of morphology will be defined by their characteristics.

Four types of city structures are defined:

1) Jordaan 2) Canal Belt 3) Historic Core 4) Easter Islands

-  1 Jordaan
-  2 Canal Belt
-  3 Historic Core
-  4 'Eastern Islands'



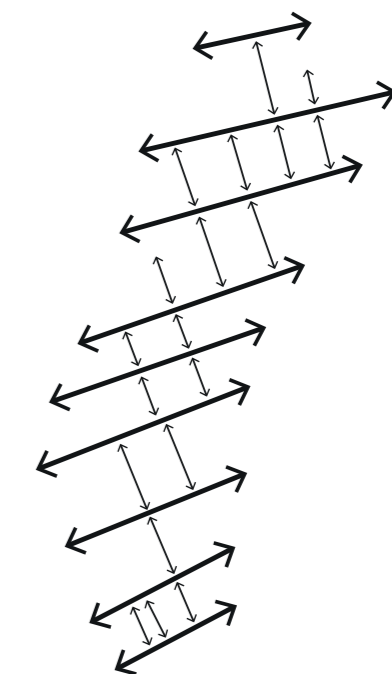


## Jordaan

### The influence of the agriculture

The Jordaan, a historic neighborhood in at the edge of the city center in Amsterdam, is known for its dense, intimate and human scale character. Although its street patterns look straight and thought through in design, its morphology is based on organic urban growth.

Originally built in the 17th century on former agricultural parcels, its street layout reflects the irregularity of these earlier land divisions. Characterized by narrow streets, canals, and densely packed row houses, the Jordaan exemplifies mixed-use, small-scale urbanism. It combines residential, commercial, and cultural functions, creating a vibrant and walkable community. Its evolution from a working-class district to a trendy, desirable neighborhood highlights the interplay between heritage preservation and contemporary urban living.

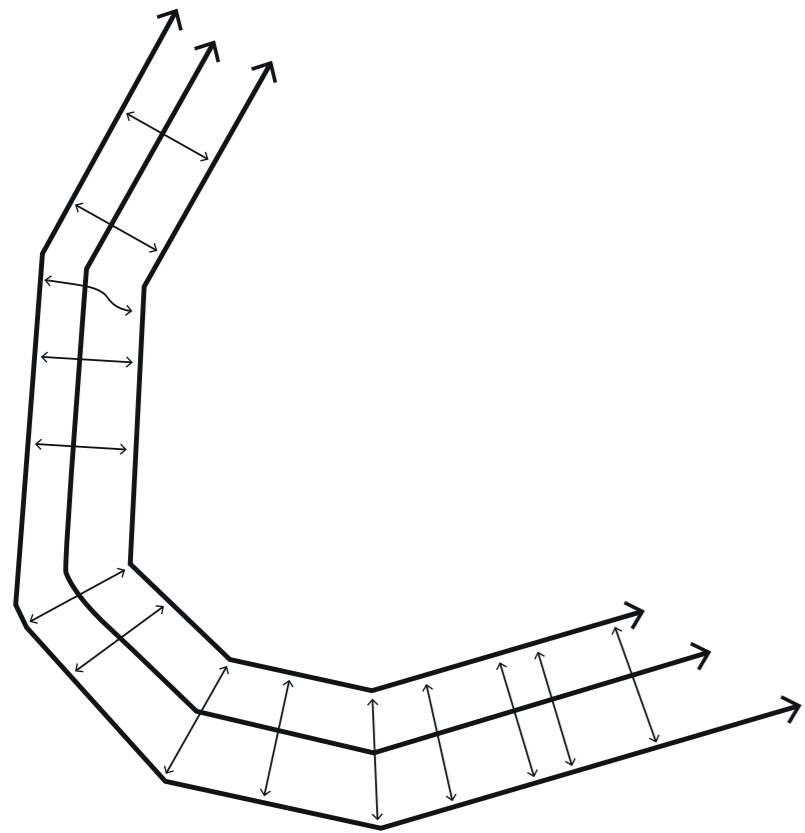
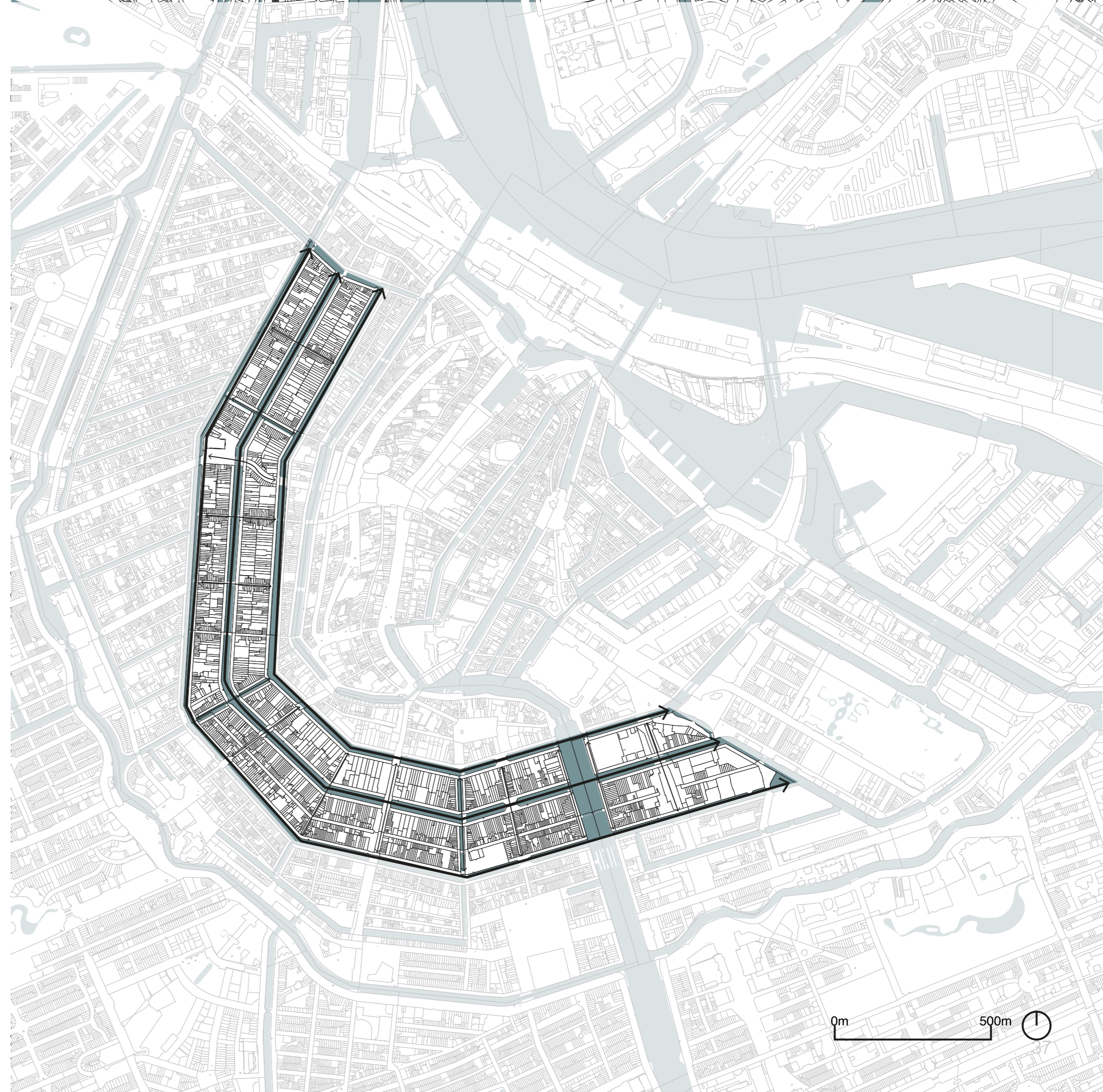


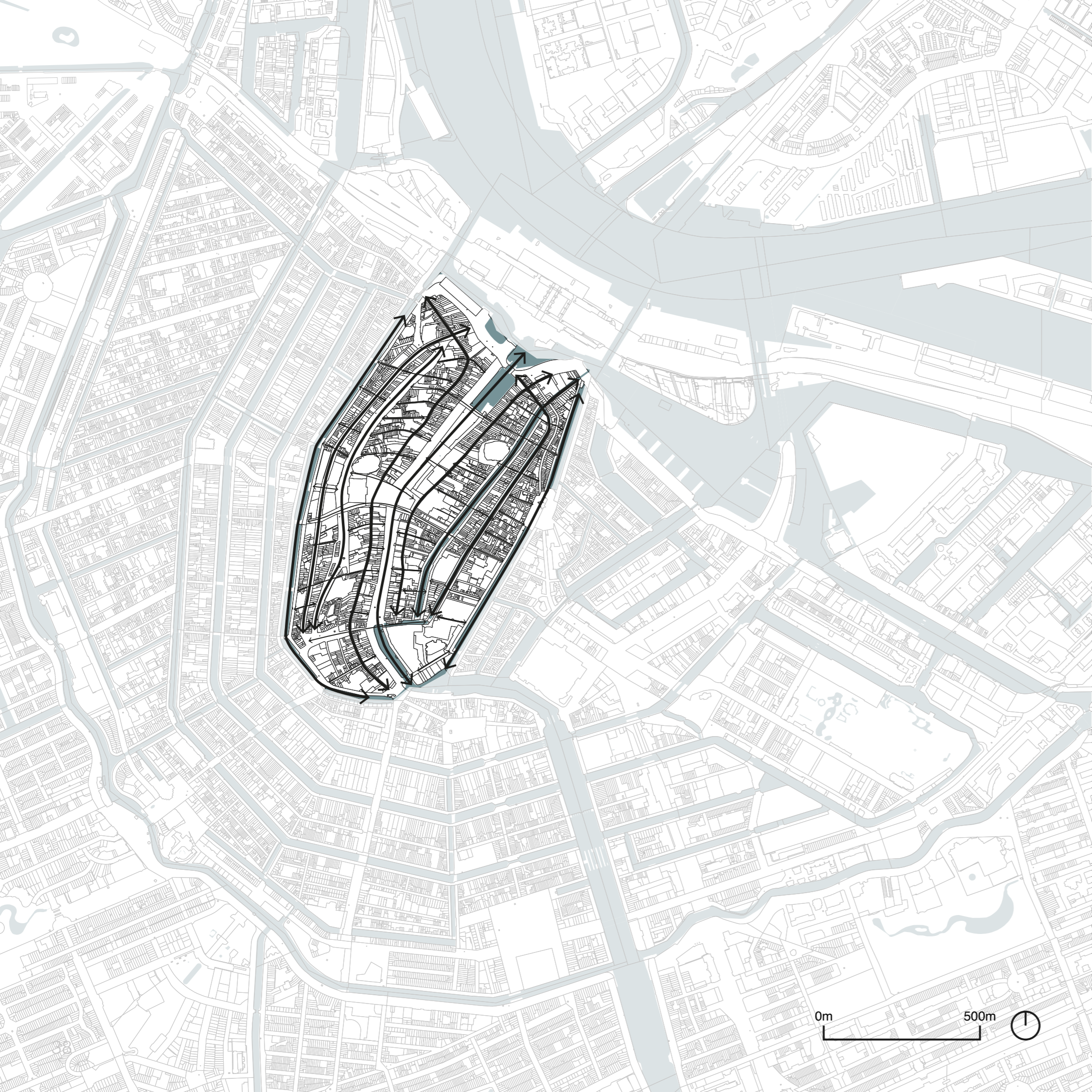
## Canal Belt

An iconic urban expansion that became world heritage

The Canal Belt in Amsterdam, known as 'Grachtengordel' in Dutch, is an iconic urban area known for its elegant, concentric canal layout and refined 17th-century houses (Herenhuizen).

Designed as part of a planned expansion to accommodate the city's growth, the canals reflect a rational, grid-like morphology emphasizing order and symmetry. This UNESCO World Heritage site demonstrates early urban planning principles, balancing functionality for transport, water management, and aesthetics.



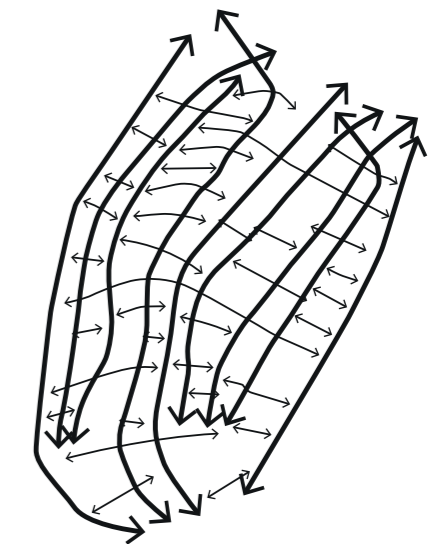


## The Historic Core

### Organic development

Amsterdam's oldest historic inner core, centered around the Amstel River, represents the city's earliest and most organic urban development. Its irregular street patterns and compact layout reflect medieval growth, shaped by trade and defense needs.

Unlike the planned symmetry of later expansions like the Canal Belt, the inner core features winding streets, small squares, and narrow buildings, creating an intimate and dynamic urban character.

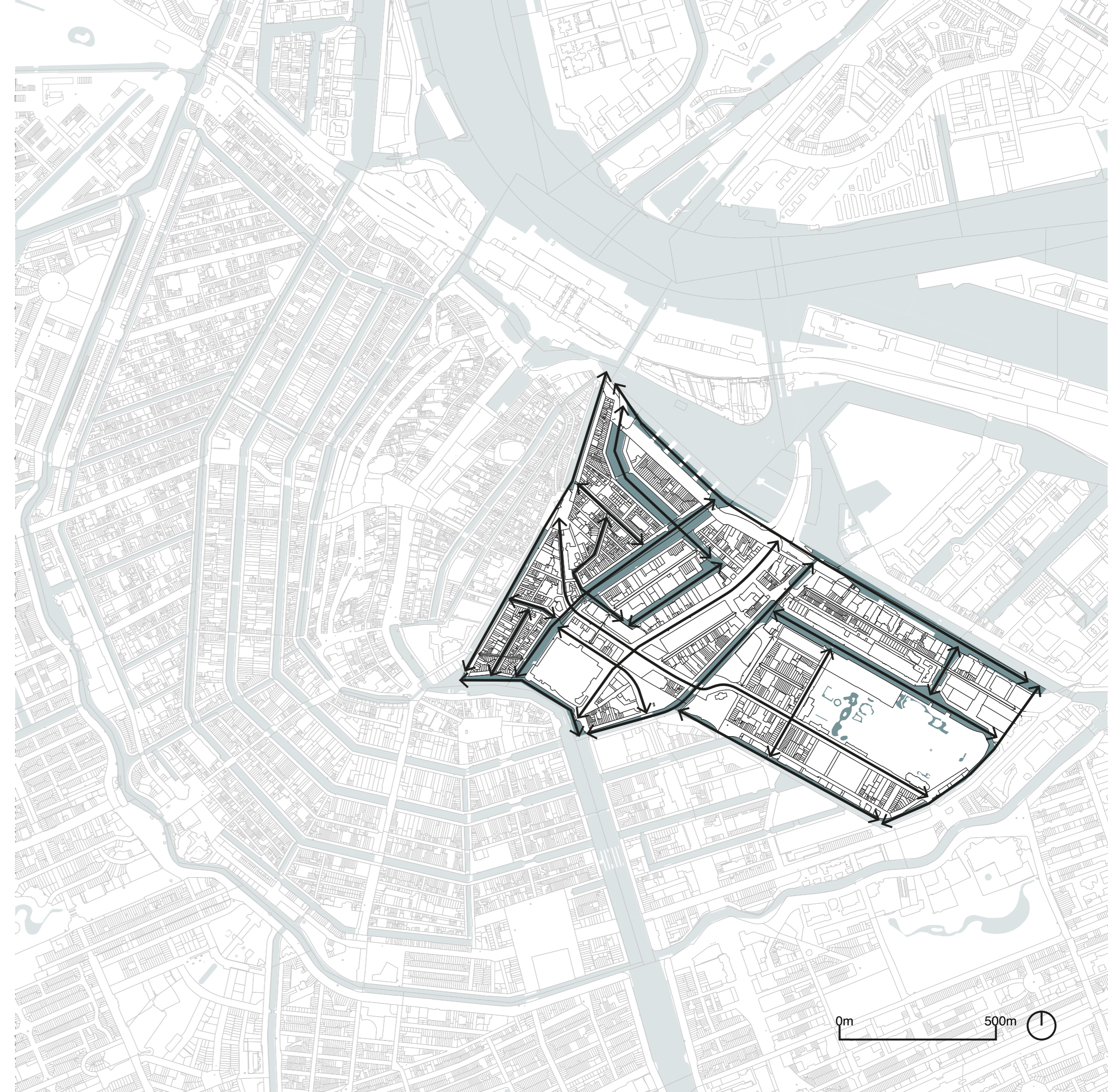
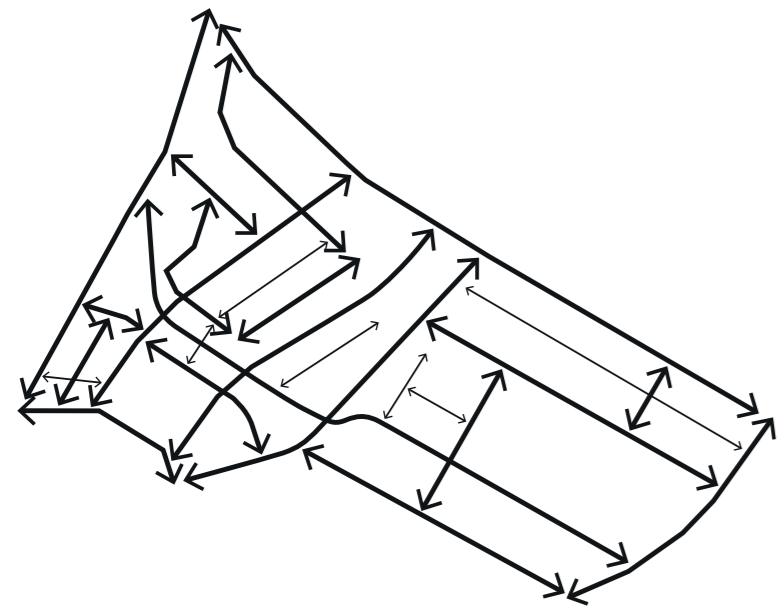


## Eastern Islands

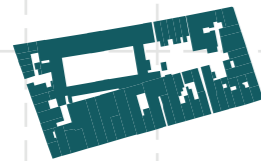
### Morphological change

The eastern part of the city center distinguishes itself from the other types of city structures as it originally was located behind one of the older dykes. Its wetland soil was harder to prepare compared to the rest which was mostly peat soil.

This resulted in larger clumps of land which were considered awkward for urban design as its infrastructure would not be convenient. Plots became larger than the usual standard in Amsterdam which is seen in the architecture. In here, buildings became wider and larger in general. Later on, infrastructural changes resulted in changes again for the architecture.



Jordaan



Canal Belt



Historic Core



“Eastern Islands”



# Differences between the Blocks

Form creates function?

Organizing the blocks per type of city structure, highlight the differences between the urban blocks in which it becomes clear that morphology heavily influences the expression of the urban block.

As shown in the comparison, the Jordaan has smaller rectangular blocks while the canal belt made use of more space. The oldest core shows irregular and curvilinear blocks while the eastern part has larger straight blocks.

Yet, being part of Amsterdam's city center, any of these blocks can still be considered as traditional urban design. The goal now is to see what happens within the block itself and what the differences and similarities are between them.

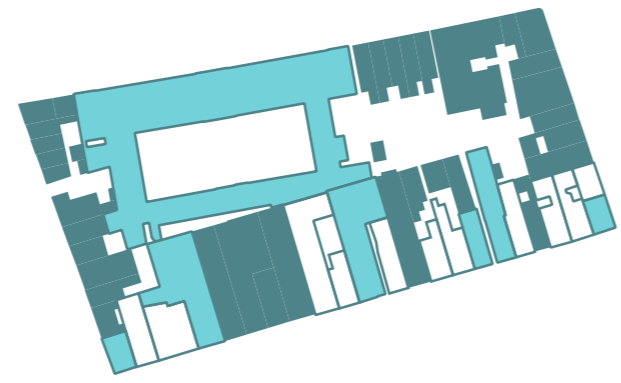
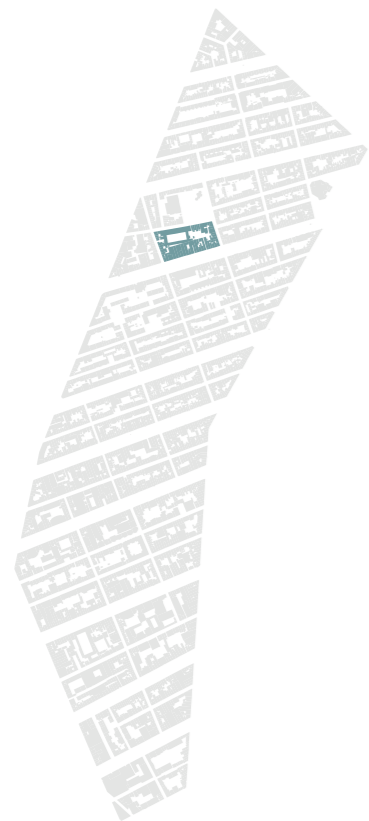
Therefore, the average and most hyperdiverse block (with interest to the research area) per city structure is selected as sample to dive deeper into its activity.

# Jordaan

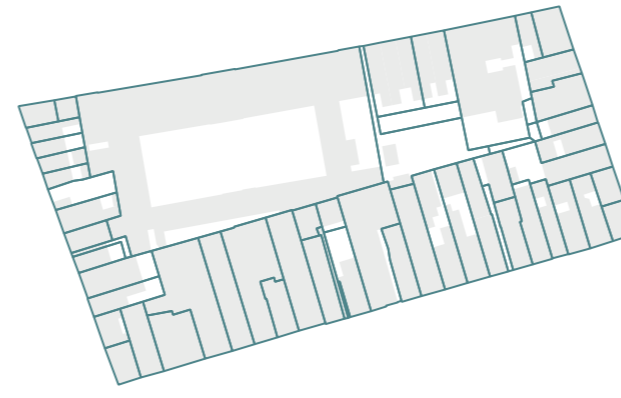
## The small but charming block

It is clear that the Jordaan exists of the smallest blocks out of all the city structures. With the blocks also being placed closely to each other it becomes a high density neighborhood that makes use of smaller yet highly effective plots. It results in a high diversity of uses that does not always limit itself because of its size. Throughout the Jordaan, larger functions are still possible with occasional larger plots within the block. In this example, we speak of the classic courtyard complex that blends in with the rest of the adjacent buildings.

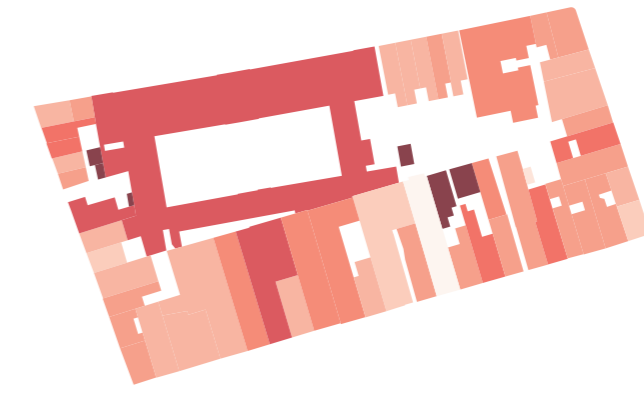
Since these high density blocks are placed closely to each other, its average height is lower in order for enough natural light in the streets. This however, impacts the diversity in uses above the plinth level. Besides that, the general courtyards of the blocks are still valued but become more private.



Degree of Public Access



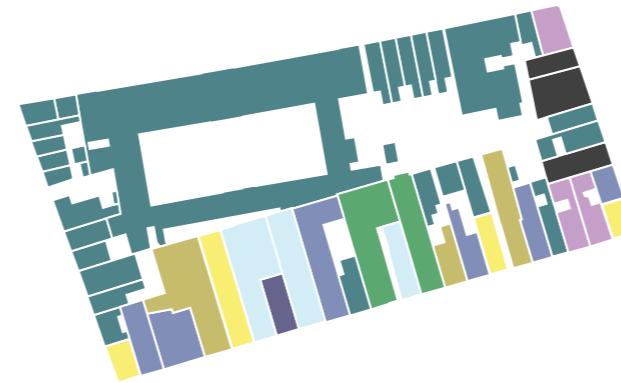
Parcel Infill



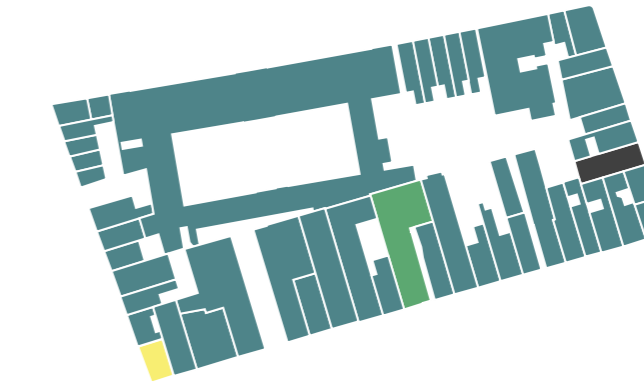
Building Year



Internal Block Circulation



Building Use 1st Floor



Building Use 2nd Floor

- Before - 1350
- 1350 - 1500
- 1500 - 1650
- 1650 - 1750
- 1750 - 1850
- 1850 - 1900
- 1900 - 1950
- 1950 - 1980
- 1980 - 2000
- 2000 - After

- Building
- Plot

- Cafe & Bars
- Restaurant
- Commercial Retail
- Local Retail
- Storage
- Hotel
- Residential
- Cinema & Culture
- Parking
- Healthcare
- Sport
- Personal Wellness
- Office & Studio
- Research Institute
- Religion

- Public Building
- Semi Private
- Private

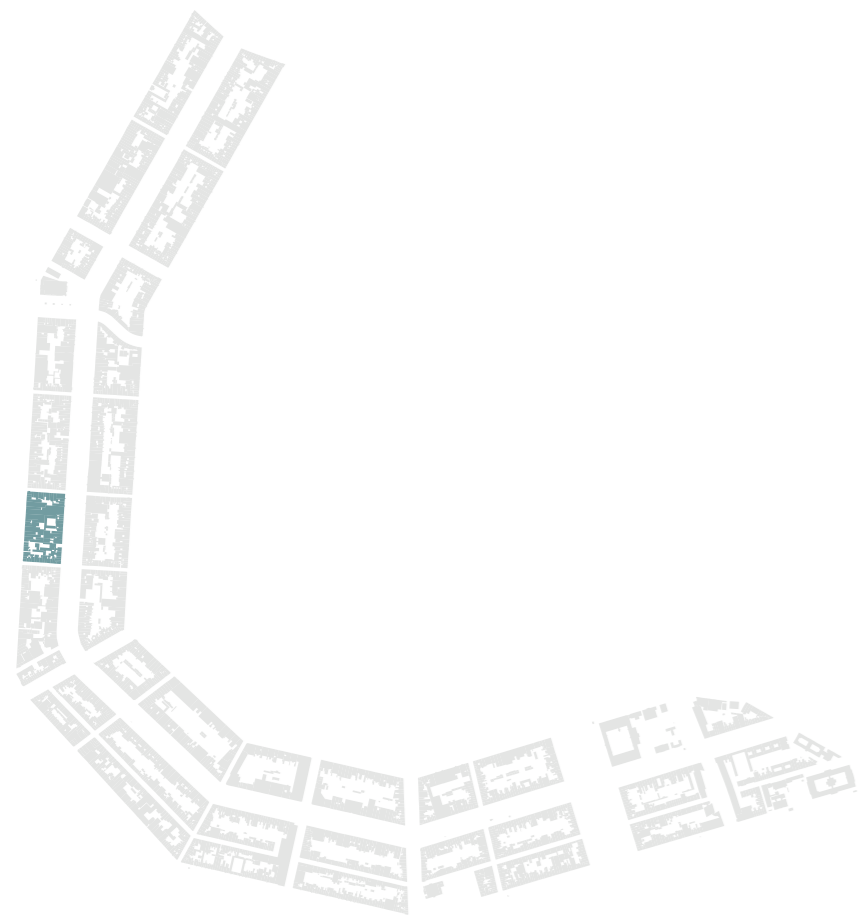
- Infill Building
- User Flow

# Canal Belt

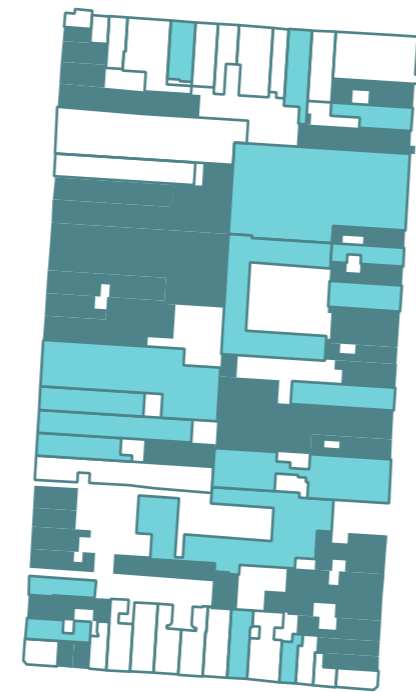
## The luxurious spacious blocks?

The blocks of the canal belt were designed larger and higher because of the wealth and possibilities back then. Throughout time, however, this space was lost when the courtyards were gradually filled with new buildings and uses. This is seen in this example where the parcel infill is high.

It allows for a high diversity in uses throughout the whole block, also above the plinth but especially more within the block itself. A result of this is that the degree of public access is higher and the internal circulation of the urban block becomes better where the flows of people reach more of the block footprint.



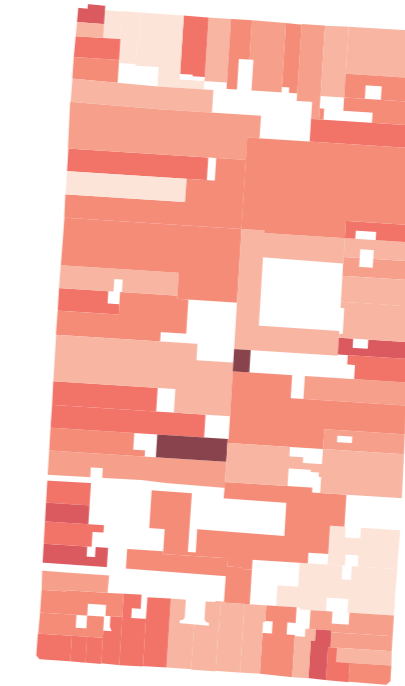
Traditional Urban Design



Degree of Public Access



Parcel Infill



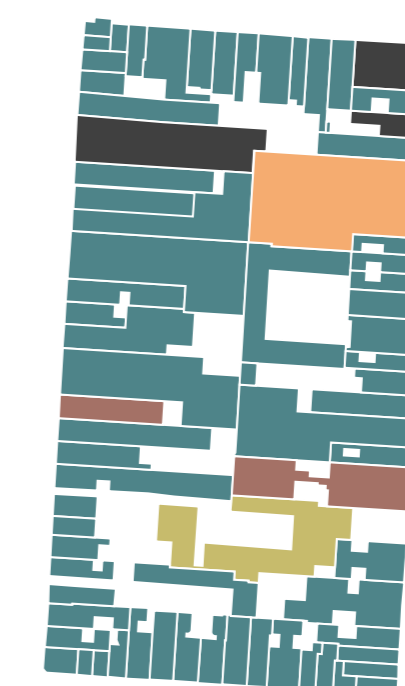
Building Year



Internal Block Circulation



Building Use 1st Floor



Building Use 2nd Floor

- Before - 1350
- 1350 - 1500
- 1500 - 1650
- 1650 - 1750
- 1750 - 1850
- 1850 - 1900
- 1900 - 1950
- 1950 - 1980
- 1980 - 2000
- 2000 - After

- Building
- Plot

- Cafe & Bars
- Restaurant
- Commercial Retail
- Local Retail
- Storage
- Hotel
- Residential
- Cinema & Culture
- Parking
- Healthcare
- Sport
- Personal Wellness
- Office & Studio
- Research Institute
- Religion

- Public Building
- Semi Private
- Private

- Infill Building
- User Flow

Traditional Urban Design

# Historic Core

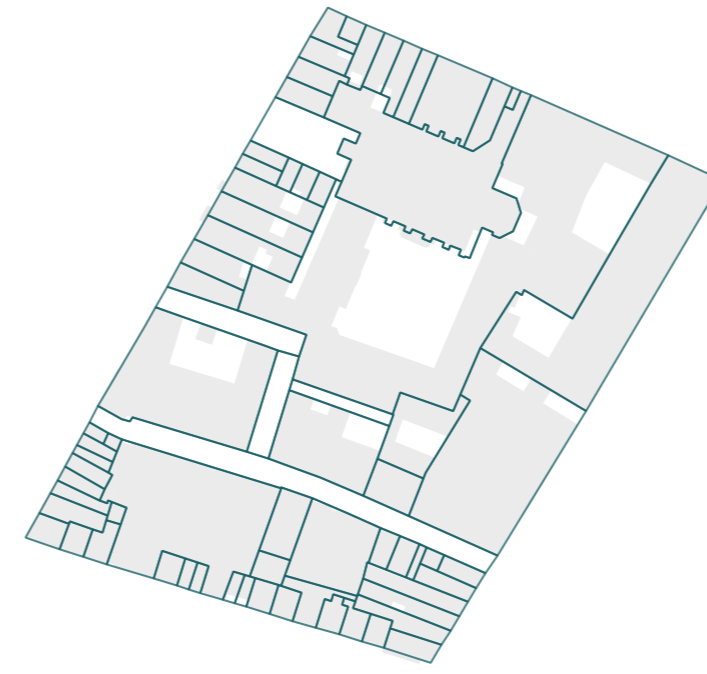
## An example of the hybrid block

The individual blocks of the oldest core could differ a lot from each other due to its rich history. Within this block there is a high diversity of plots, building years, types and uses. Making it a highly interesting example of a hybrid block as it shows the possibilities of how it could be used and was developed throughout time.

It also has an classic alley going through it which creates a good internal circulation and high degree of public acces throughout the block which could come over as different dimensions of public space.



Degree of Public Access



Parcel Infill



Building Year



Internal Block Circulation



Building Use 1st Floor



Building Use 2nd Floor

- Before - 1350
- 1350 - 1500
- 1500 - 1650
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- 1750 - 1850
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# Eastern Islands

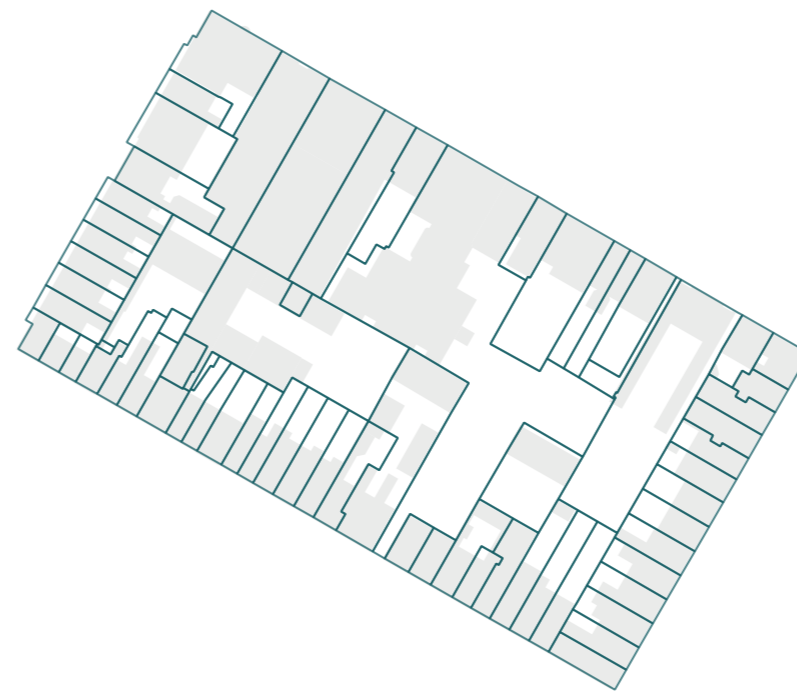
## The expression of larger plots

The blocks of the so called 'Eastern Islands' within this research could differ a lot from each other as major modern urban developments have impacted them.

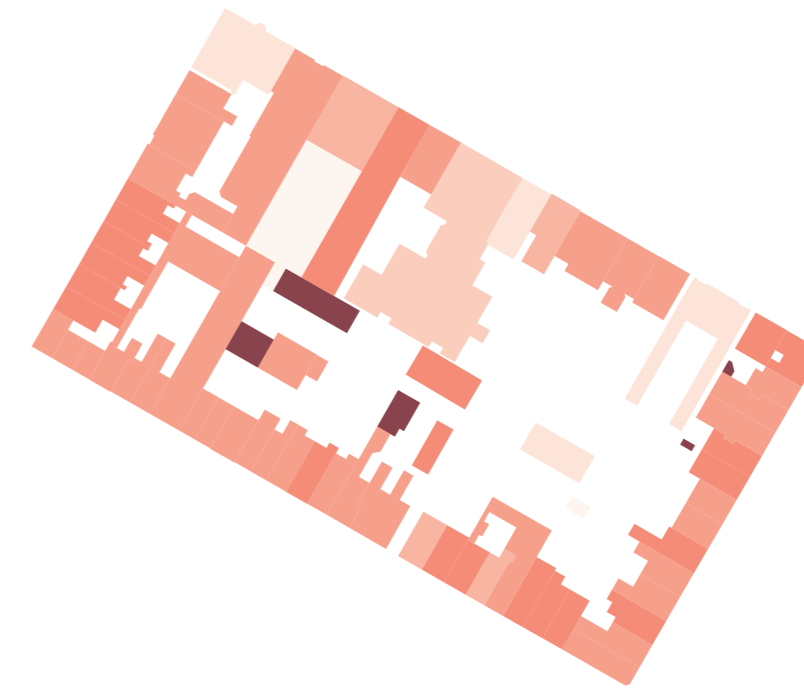
This block shows a diversity of plots but a low parcel infill. Most of these were built around the same time at a later stage and are oriented more towards the street. It does show some unique building uses while having a relatively low diversity in uses and a low degree in public access. It looks like an earlier stage of the canal belt block which has a lot of potential for gradual urban development.



Degree of Public Access



Parcel Infill



Building Year



Internal Block Circulation



Building Use 1st Floor



Building Use 2nd Floor



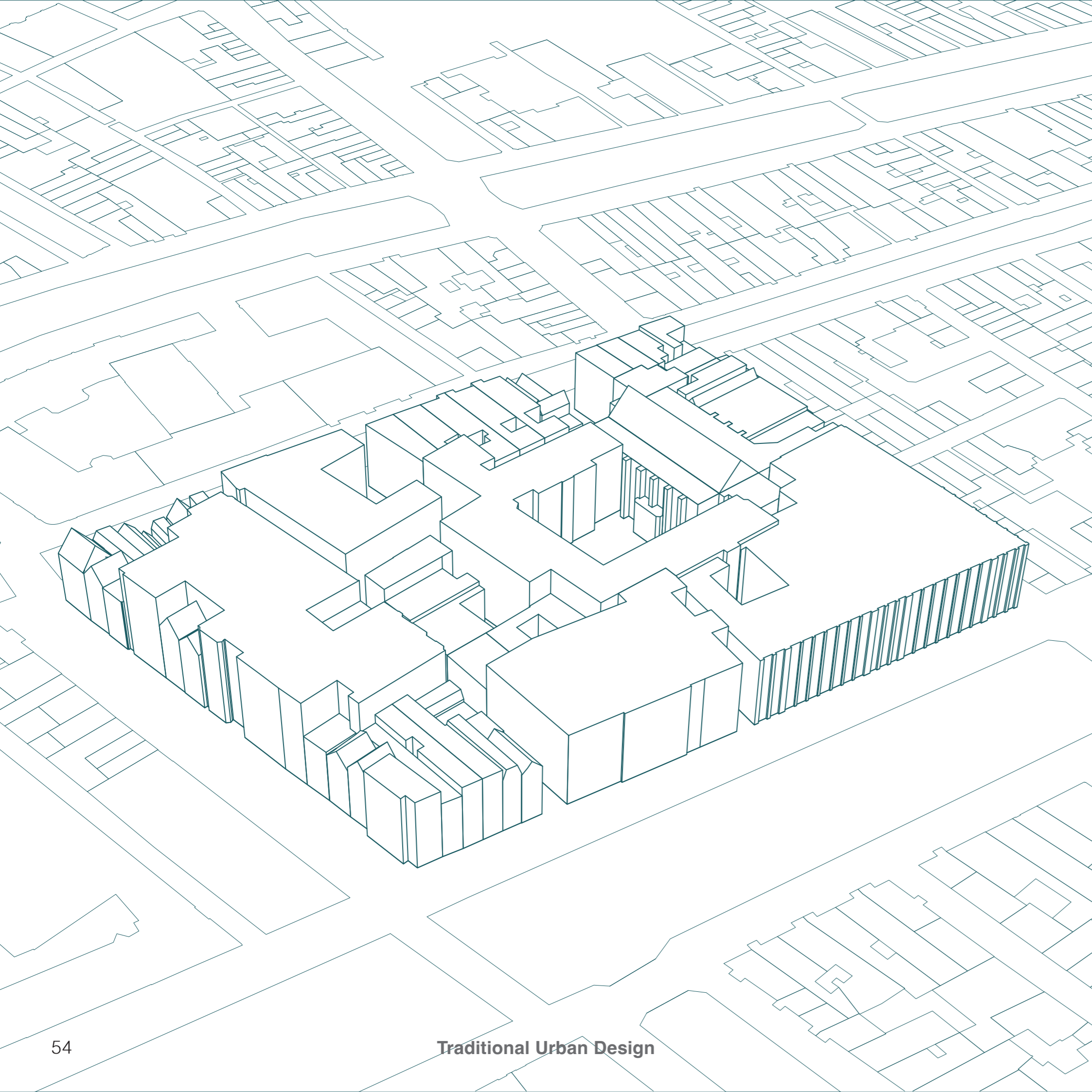
- Before - 1350
- 1350 - 1500
- 1500 - 1650
- 1650 - 1750
- 1750 - 1850
- 1850 - 1900
- 1900 - 1950
- 1950 - 1980
- 1980 - 2000
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- Infill Building
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# The Hybrid Block

## Block Volume

The hybrid block exemplifies how rich layering, variety, and adaptability can coexist in a compact urban fabric. It shows that urban life thrives where scale, history, and use are balanced: a place where everyday activity, commercial use, and cultural memory overlap, making the block both lively and resilient. Its seemingly chaotic diversity ultimately produces an organic harmony—a block that works because it embraces complexity rather than uniformity.



# Hybrid Block is an Evolutionary Block

The story of Tuschinski

In the early 19th century, the block consisted mainly of residential housing and narrow alleys, with a few small shops at street level. Abraham Tuschinski gradually acquired plots to realize his vision, culminating in the 1921 opening of the Art Deco Tuschinski Theater, later Pathé Cinema. Over time, extensions, a supermarket, and a restaurant were added, demonstrating how incremental development and diverse uses can make a historic block dynamic, resilient, and vibrant while preserving its character.

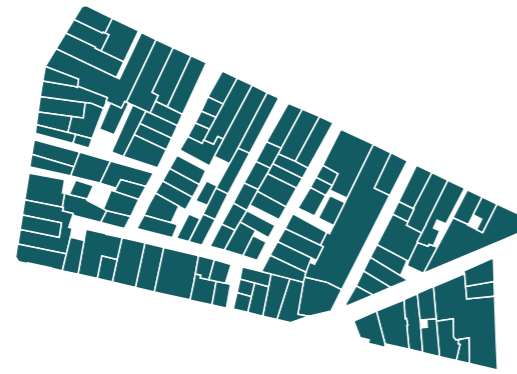


Tuschinski Theater, Amsterdam



# Tuschinski Block

Evolution of the hybrid block



**1832**

In 1832, the block consists mostly of **residential housing** and narrow alleys. The ground floor program contains some local retail establishments.



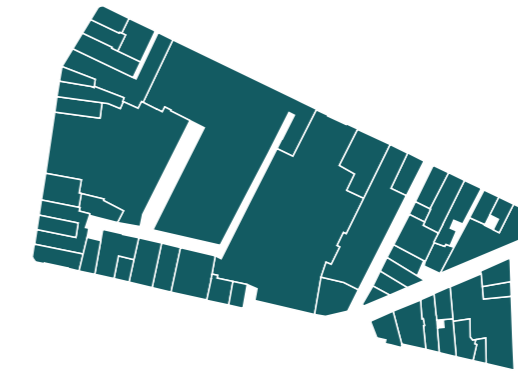
**1921**

1921 marked the opening of the **Tuschinski Theater**, which later became the Pathé Cinema. This Art Deco-style building has since become a cultural monument.



**1988**

By 1988, on the other side of the block, '**Pathé De Munt**' was built as an extension of the cinema due to the growing demand for film.



**2014**

Later on, a **supermarket** for convenient groceries was added to the block, which was renovated to include a new restaurant.

## Conclusion

What principles define traditional urban design?

Besides time being an important factor in traditional urban design, it is not the deciding factor as building years and styles cannot define the traditional urban design. It is rather about the evolutionary framework of the urban block itself that allows for change over time. Therefore it actually becomes timeless and makes the initial term traditional urban design paradoxical within the research.

Traditional urban design is more about its timeless design principles that distinguish themselves from certain time periods or styles. In here, the typomorphological research of the city structures and their blocks do show similar characteristics besides some of their unique differences which are influenced by their neighborhood.

These shared characteristics show and define the principles of traditional urban design within this research.

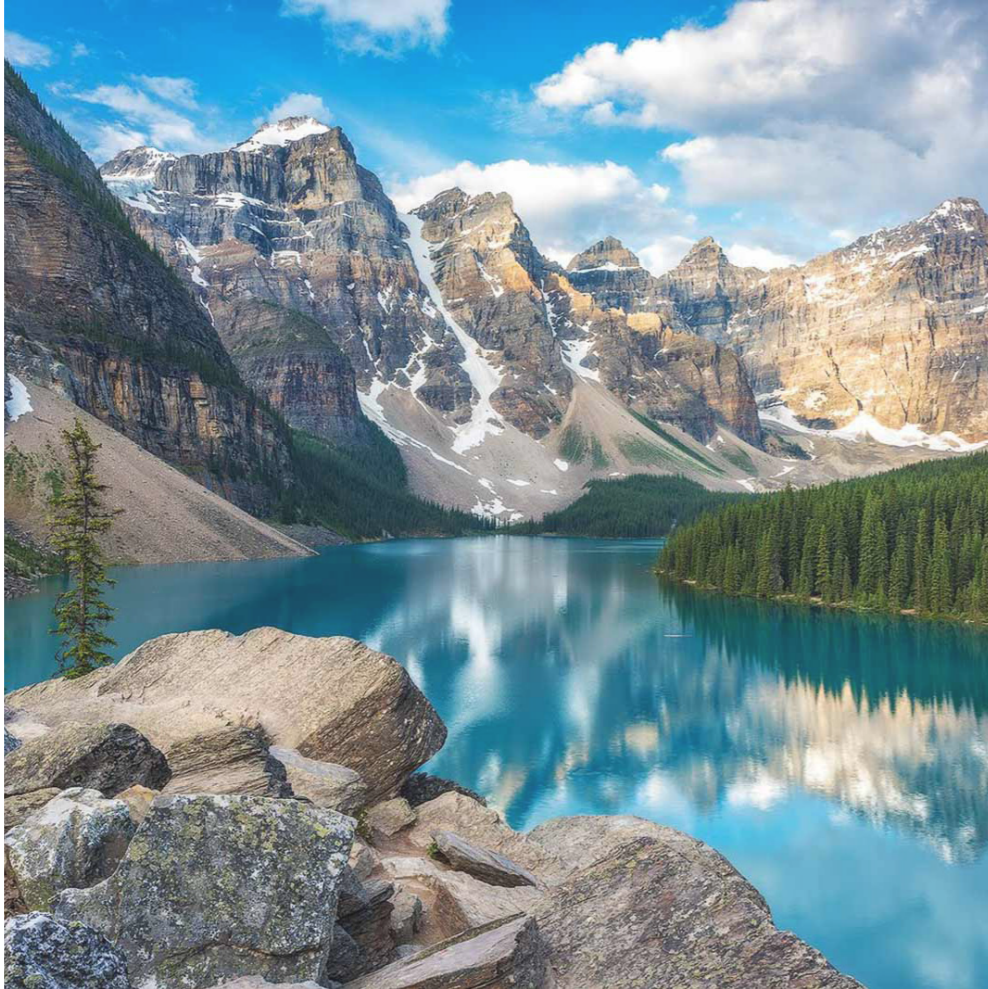
The traditional urban block that has always evolved throughout time contains:

- A high diversity in plot and building type
- A high diversity in uses spread out over the block
- A balanced degree of (semi) public access (while private spaces are still preserved and valued)
- Optimized internal block circulation so that the block can be used to its potential by different people
- A high adaptability and socio-economic resilience



**3.0**

**How does environmental psychology  
explain the user-experience  
in urban spaces?**



Banff National Park, Canada

## Environmental Psychology

Why do we consider environments to be attractive?

The Banff National Park in Canada is often regarded as one of the most beautiful landscapes in the world. While beauty is typically seen as a subjective quality, the universal appeal of such places suggests something deeper - an instinctive human response to nature itself.

This connection can be explained through biophilia, derived from the Greek words bios (life) and philia (love or affinity), describing our innate tendency to seek connection with the natural world.

In design, this understanding is often explored within environmental psychology, a field commonly applied in landscape architecture but equally valuable in urban design. By integrating these principles into the city, designers can create environments that support well-being, evoke positive emotions, and ultimately make people happier and healthier in the spaces they inhabit.

# The Preference Matrix

## Environment & Attraction

The Kaplan & Kaplan Preference Matrix explores why certain environments feel more appealing and supportive to people based on cognitive and emotional responses. Rooted in environmental psychology, the matrix identifies four key qualities that influence environmental preferences: Coherence (how well the elements of a scene fit together), Legibility (the ease of understanding and navigating the space), Complexity (the richness and variety within the environment), and Mystery (the promise of further exploration) (Kaplan & Kaplan, 1989).

These dimensions reflect a balance between providing immediate understanding and encouraging curiosity. Environments that score highly on these attributes tend to feel engaging, manageable, and meaningful, supporting both psychological comfort and interest. The Preference Matrix underscores the role of human cognition and perception in shaping how spaces are designed and experienced, aiming to align urban and natural environments with innate human needs for understanding and exploration (Kaplan & Kaplan, 1989).

This preference matrix forms the base of the theory in this chapter to explain the influence of environmental psychology.

For this chapter, the following methods are used:

- Mental Mapping (Kevin Lynch)
- Visual Series (Gordon Cullen)
- Facade Comparison

	UNDERSTANDING	EXPLORATION
Immediate	<b>Coherence</b> Organization – Ease in which the environment can be read or understood	<b>Complexity</b> Richness – Variety of objects [rather than the number of objects]
Inferred	<b>Legibility</b> Wayfinding – Ease of understanding orientation	<b>Mystery</b> <sup>s</sup> Sustained interest – Potential for more information

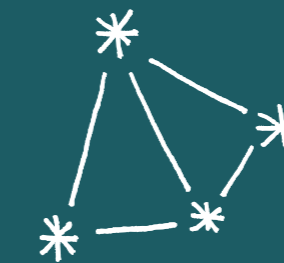
Kaplan & Kaplan Preference Matrix Model



Coherence



Complexity



Legibility



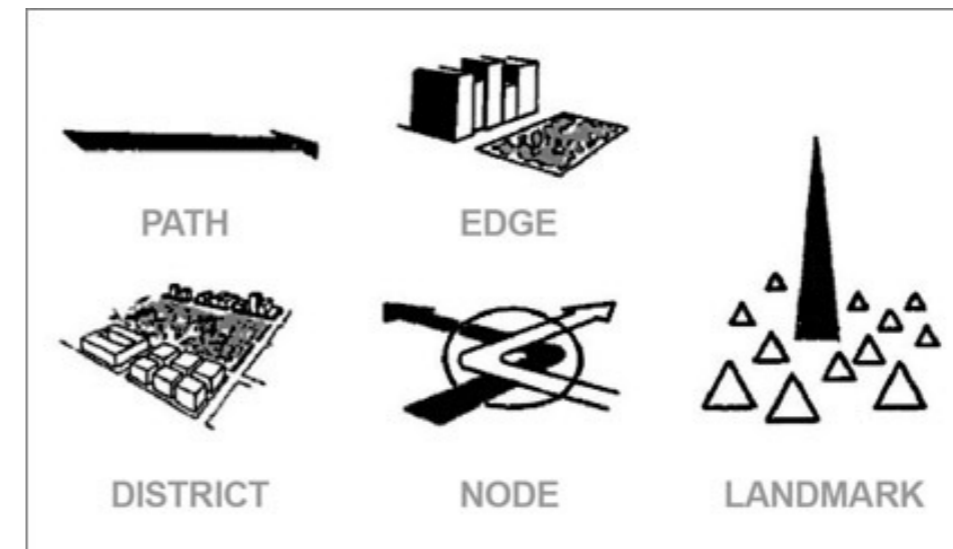
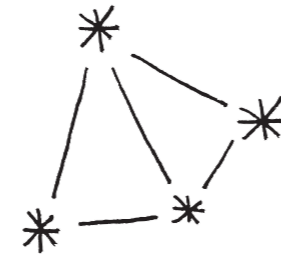
Mystery

# 3.1 Legibility

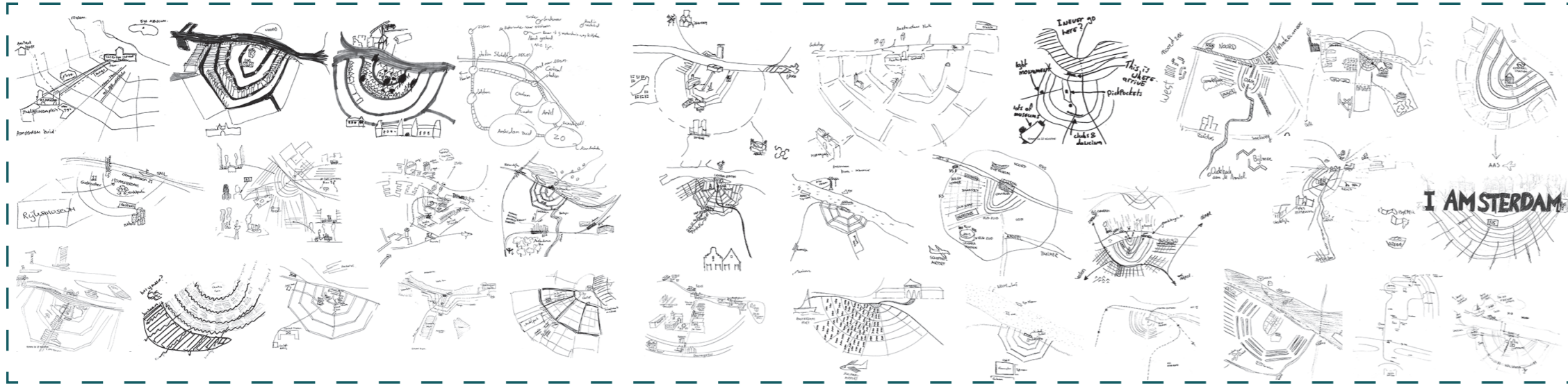
## Personalized Mental Mapping

In *The Image of the City*, Kevin Lynch introduced the concept of mental maps—how individuals perceive and organize the urban environment in their minds. He argued that a city’s legibility, or how easily its layout can be understood, shapes the quality of people’s experiences within it. Lynch identified five key elements that structure these mental maps: Paths (routes people travel), Edges (boundaries or transitions), Districts (areas with distinct identities), Nodes (focal points or intersections), and Landmarks (easily recognizable reference points).

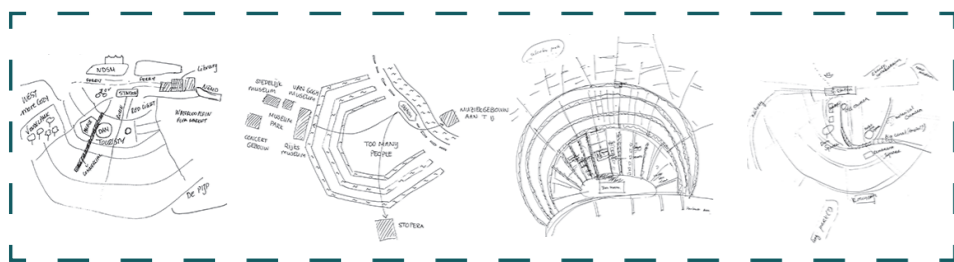
Lynch’s work highlights the importance of designing cities that are not only functional but also intuitive and memorable. By improving legibility through these elements, urban planners can create environments that foster a stronger sense of orientation, identity, and connection for inhabitants. Mental maps, in turn, become the cognitive framework through which people navigate and relate to their urban surroundings.



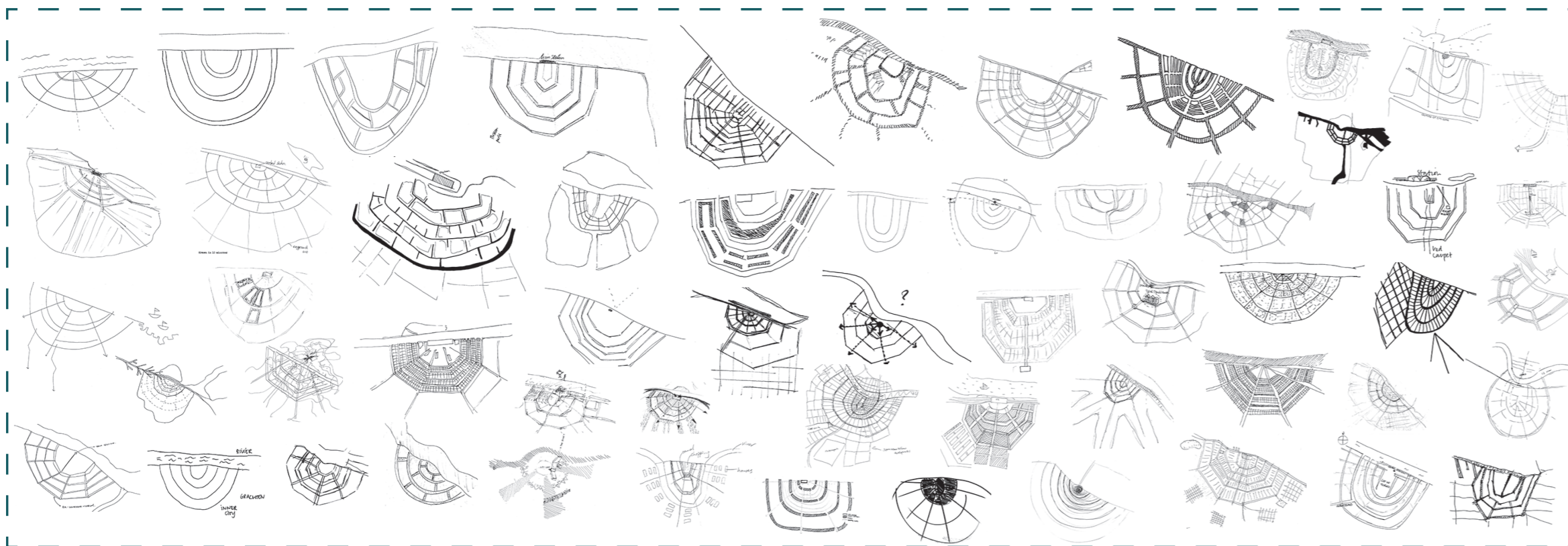
Lynch, K. (1960). *The image of the city*.



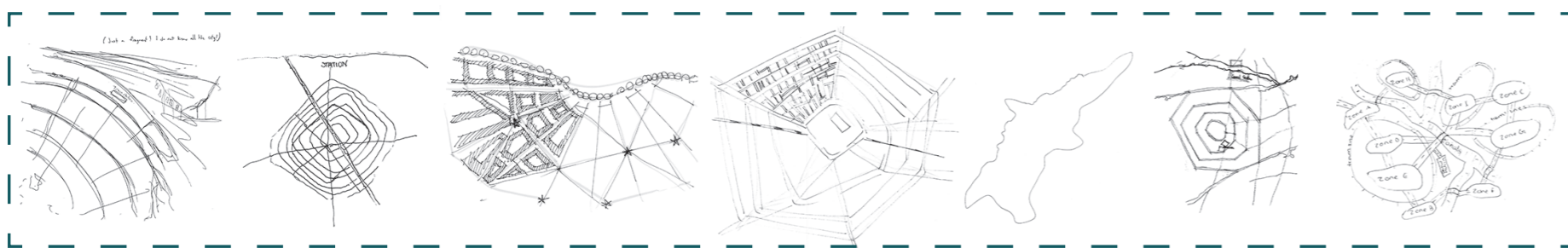
Use of landmarks mostly by Dutch students



Stopera + study area mentioned by students



Concentric semi-circles recognized by mostly international students



Different structures drawn by students less familiar with Amsterdam

### Mental Map Case Study

In this small study, students of the TU Delft have each drawn their own image of the city through mental mapping. The students vary in study background and nationality and had 10 minutes to draw what the city of Amsterdam looks like for them based on just their imagination and experiences. In total 100 mental maps are compared which are similar in scale and image quality. (Database of mental maps are provided by Maurice Hartevelde).

The results showed a hierarchy in accurateness in which mostly Dutch students were able to draw more accurate drawings of Amsterdam. International students tended to show the recognizable concentric semi-circles.

The difference between these two groups is the use of the Lynch method in which especially landmarks seem to play a large role in creating a more accurate mental map. In here, the Dutch students could have a higher sense of place since they may have been more exposed to the city throughout their life which makes them able to make use of the landmarks.

In relation to the study area, the students did not often mention the the Stopera or the Waterlooplein in their drawings in which one could speak of a mental invincibility.

## 3.2 Mystery

### The potential for more Information

Gordon Cullen's approach, often referred to as the "serial vision" method, emphasizes the experiential quality of moving through urban spaces. He believed cities should be designed to engage the senses and create emotional resonance. His method involves analyzing how elements like buildings, streets, and open spaces combine to form a sequence of visual impressions, called "scenes." By studying these transitions—such as contrasts in scale, texture, and light—designers can craft environments that are visually stimulating and cohesive (Cullen, 1961).

Cullen categorized these experiences into three key principles: Optics (how the physical environment is perceived), Place (the character and identity of spaces), and Content (the interaction between urban elements). His work encourages designers to consider how people emotionally and visually interact with the urban fabric, creating places that inspire connection and delight (Cullen, 1961)



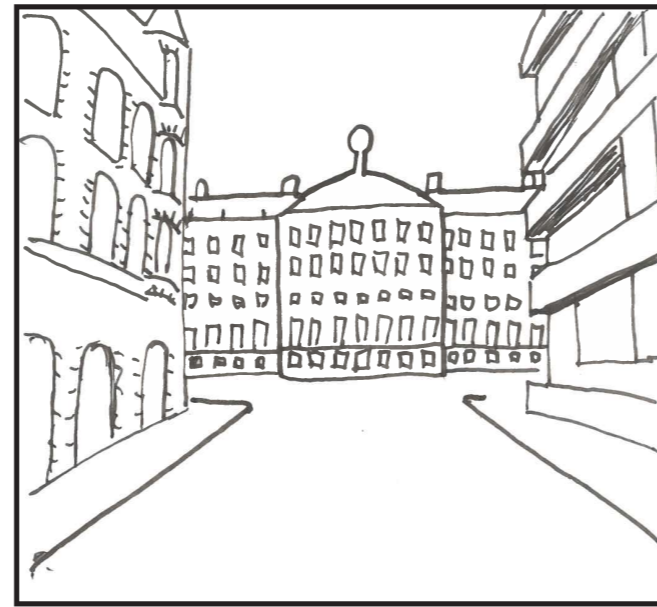
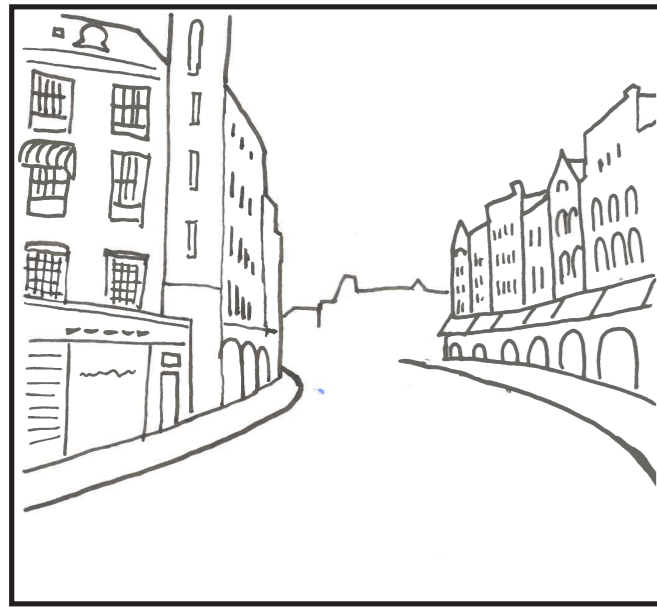
Cullen's method allows to explore and perceive the place from an eye-level, providing a better insight of how the viewer experiences place.

It explains and builds up further what was discussed in the mental maps and image of the city by Lynch which is more about the mapping from above.

In the method of the visual series, both the traditional and modernist built environments are tested to try to explain why these are perceived differently. To do this, two similar types of routes are selected which are different in their style.

Both routes were affected by important transformations of the inner city and pass the (former) townhall / municipality which both impacted their current built environments in different times each.





## Traditional Urban Route Moving through the 'Picturesque'

The visual series of the traditional route seem to align with the principles of the preference matrix (Kaplan & Kaplan).

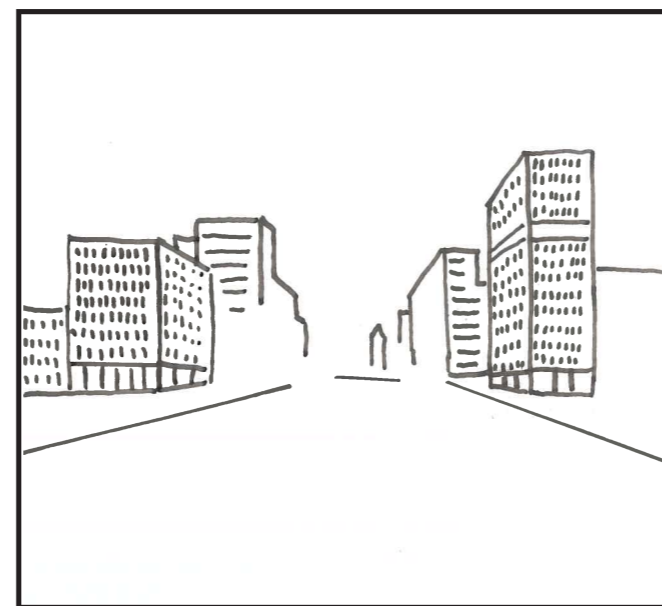
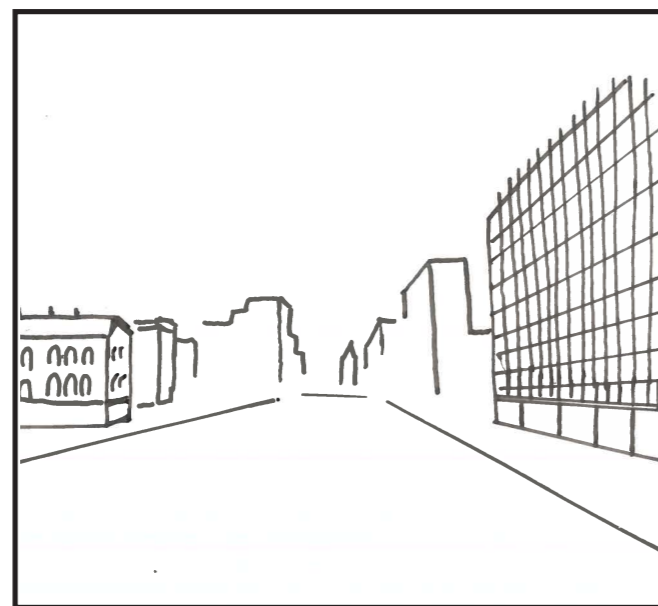
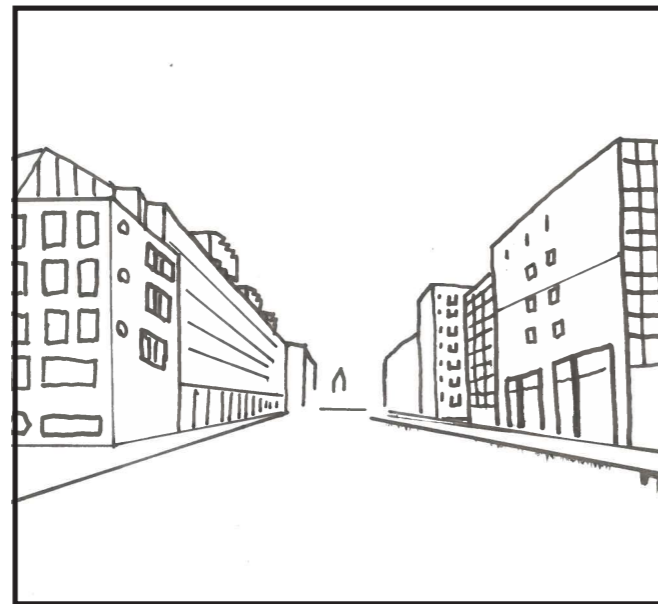
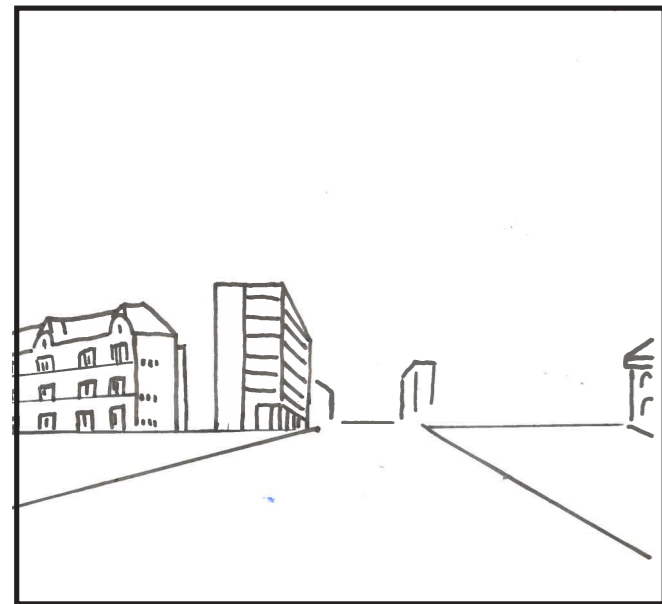
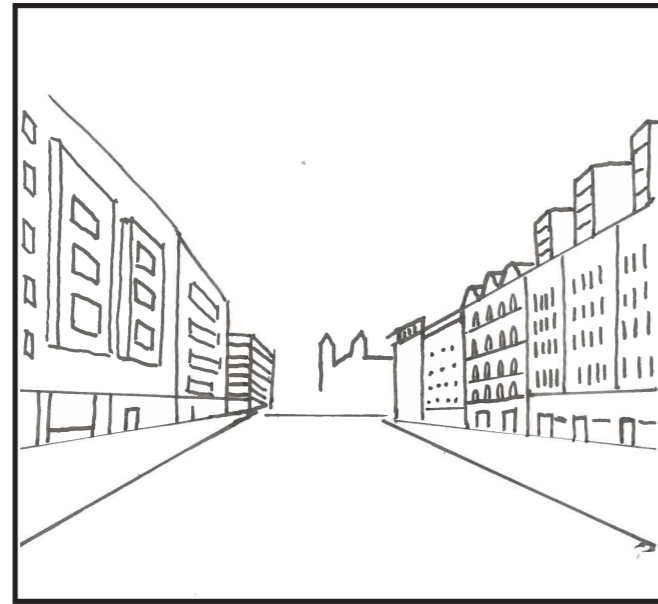
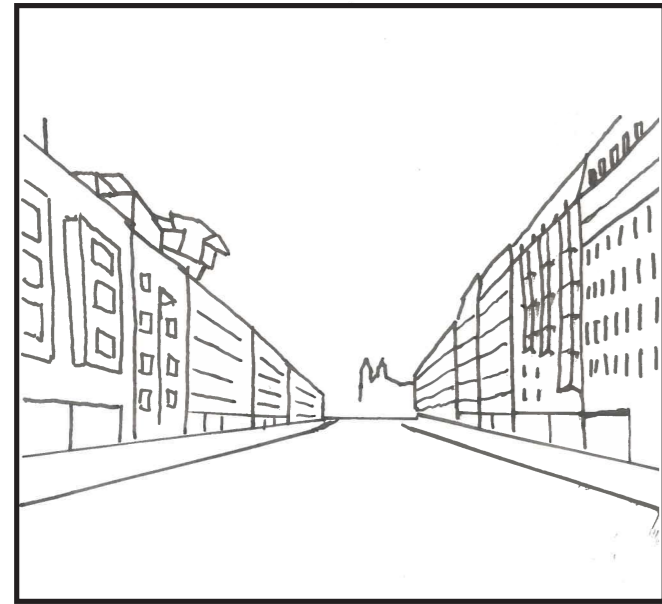
When moved throughout space the viewer is exposed to a variety of landmarks (Legibility) while the next one is teased at the end of the street.

The curvatures and openings of the street give the desirable idea that there is new promised information (Mystery).

Along the street, the buildings themselves are rich in texture while not contrasting with each other too much (Complexity & Coherence).

The elements within the visual series match with the Townscape Principles of Gordon Cullen. The traditional built environment here anticipates the human scale, enclosure and aesthetics, evoking positive emotional qualities.





## Modern Urban Route

### Moving through the 'Repetitive'

The visual series of the modern route contains some significant differences in comparison of the traditional route.

Here, when moved throughout space, the viewer is exposed to a landmark from far. When approaching this landmark, little new information is given as the streets are straight and feel longer.

This is because the street is homogenous in its built environment. Along the street the buildings are rather smooth and sterile, causing the viewer to forget individual buildings more which has to do with the information processing.

The program of the street does not evoke positive emotions but rather negative. Therefore, the modernist route shown within this visual series do not match the Townscape Principles of Gordon Cullen.



### 3.3 Coherence

#### The harmony of the elements

Coherence is about the organization and ease in which the environment can be read or understood. It is about making sense of a specific scene on both a visual and cognitive level.

Our brains are wired to like patterns and structure so that we can understand what is going on in our direct environment. Things like rhythm, symmetry and harmony play an important role in this view.

When a certain element is completely out of context, it evokes a small stress response in the brain as the harmony is disrupted by this element. The human desire to constantly trying to make sense of things in which we rely on environmental cues for orientation and safety, results in a higher cognitive load.

Within the research site, the Stopera building may be considered out of place considering its direct surroundings. This is because it is different in scale and style. When looking at the Zwanenburgwal, the other side of the canal gives a complete different image. Therefore, this other image across the canal is investigated by filtering the elements of the facades.



Location: Zwanenburgwal



Zwanenburgwal facades in harmony

## Coherence

The image quality of the block is influenced by the facades of the buildings. By filtering the most important elements of the facades, differences and similarities become clear.

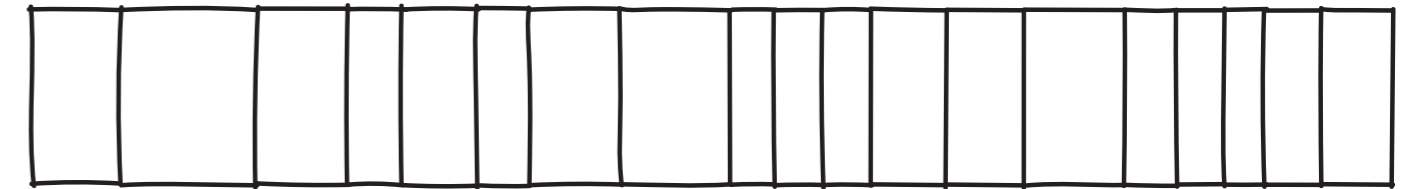
These elements are the dimension, height, color, rhythm, roof and plinth of the building.

Height, dimension and color could all be different from each other while they all have a readable roof and plinth to easily understand the buildings. In this case, both the differences and similarities working together are what make the image pleasant to process.

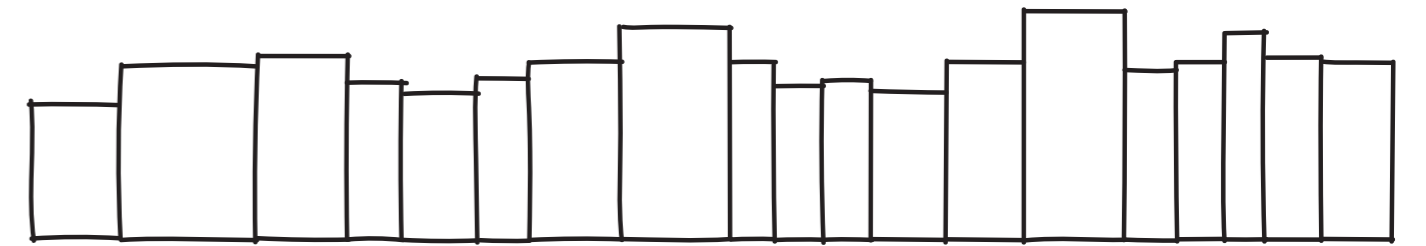
The image quality becomes coherent.



Dimension



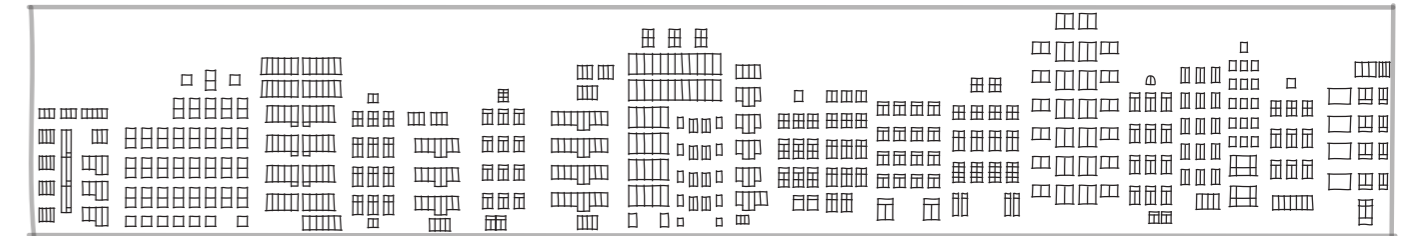
Height



Color



Rhythm



Roof



Plinth



## 3.4 Complexity

### The level of Detail

The complexity is about the level of richness and detail within an environment. In here, the variety of the elements are more important than the amount. The theory comes down to the image processing happening in our brain. While too little elements can be considered boring, too many (different) elements could cause stress (think of a desert environment versus a highly dense city such as New York). Therefore a balance between order and chaos is preferred by the brain.

In a study by Brandon R. Ro & Xavier Parareda (2024) human visual behaviour was examined on different types of building facades with a different level of complexity. Any potential bias between the images were filtered in order to demonstrate a clear representative image of our visual behaviour. Through eye tracking technology, the results showed the gaze sequence and heat map of the people in the test.

The study concludes that architectural facades with higher fractal qualities attract a greater visual attention which highlights the importance of complexity in design. Certain architectural principles such as proportionality and fractal scaling stimulate visual engagement in the human brain which goes beyond aesthetics and are grounded in perceptual and cognitive processes. Because of this, deeper visual and emotional connections can be found more in traditional architecture in comparison to minimalistic contemporary design.



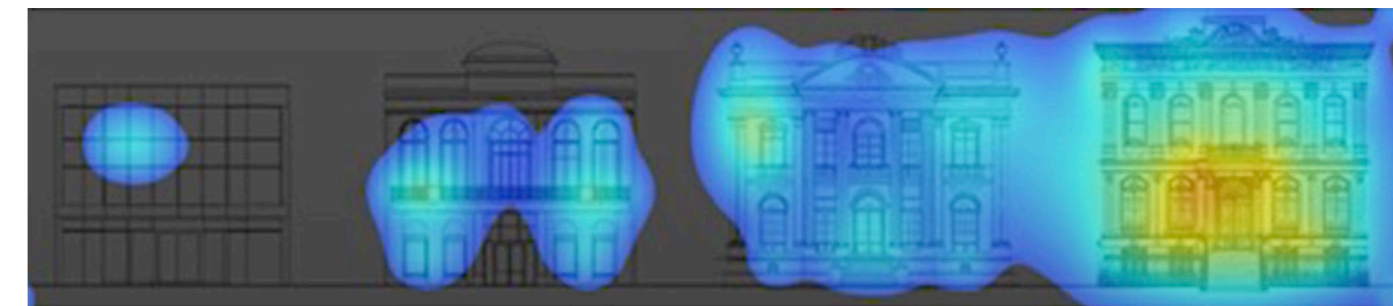
Detail



Gaze Sequence



Eye Tracking Results



*Figures by Ro & Parareda (2024), Exploring the Beauty of Tradition.*

# Complexity in the Public Realm

## Stopera vs. Zwanenburgwal

The contrast between the Stopera and the opposite side of the Zwanenburgwal highlights the role of complexity and detail in urban experience. The Stopera's large, minimalist forms offer limited visual stimulation, while the historic facades, varied plots, and active street elements along the Zwanenburgwal create a richer, more engaging environment. This demonstrates how layered detail and variation in both buildings and public space draw attention, guide movement, and foster deeper visual and emotional connections.



Zwanenburgwal, across the canal



Zwanenburgwal, Stopera

## Conclusion

How does environmental psychology explain the user-experience in urban spaces?

The user-experience in urban spaces is influenced by the direct environment. In here, the quality of the urban fabrics and the human perception of a place are strongly connected. The environmental psychology, in this situation, speaks of a universal attraction that impacts our emotions and perception of place. Positive emotions and perception of a place enhances the user its connection to a place and therefore it enhances the identity.

The kaplan & kaplan theory speaks of four elements in the preference matrix: Legibility, Mystery, Coherence and Complexity. These elements are bound to our biophilia and affection to a place.

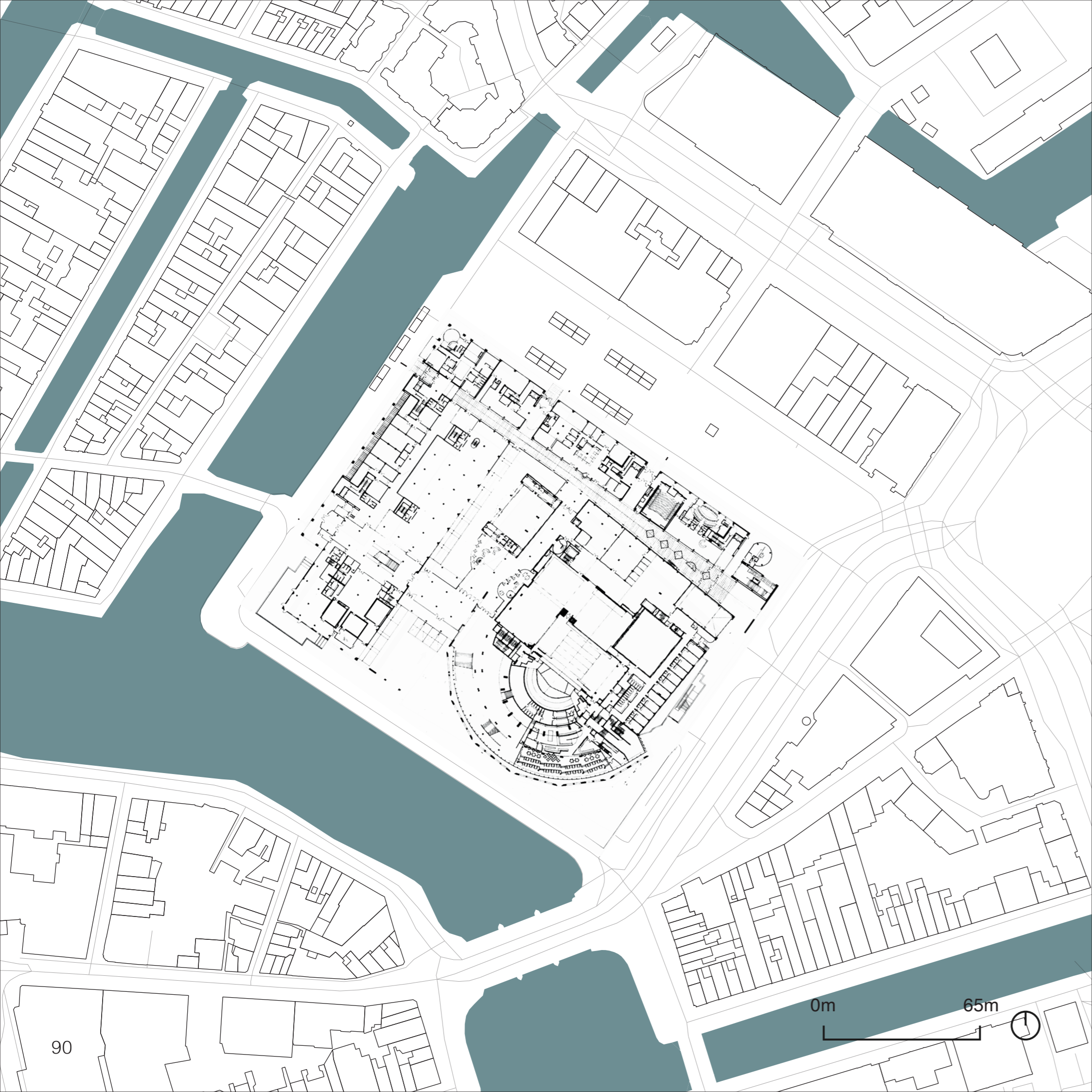
With identity as goal for the design assignment, being aware of these elements and their balance in the design is important for making the place memorable. Creating conditions for users to connect with the place is crucial.

Zwanenburgwal across the Stopera block



**4.0**

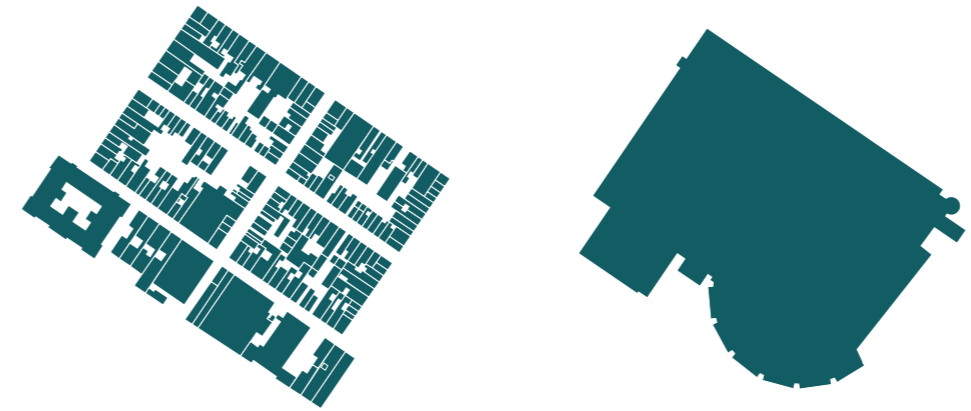
**How do the principles of traditional urban design contrast with modernist and contemporary design approaches?**



# Site

## The Stopera as Isolated Block

The Stopera stands as a single, monolithic building within the city fabric, with internal passages that remain hidden from public view, making permeability difficult to perceive. Its closed façade and limited active edges create a barrier between the building and its surroundings, reducing visual and social interaction. Streets around the Stopera are dominated by traffic, contrasting sharply with historical conditions, such as Vlooienburg, where lively squares and open public spaces once encouraged movement, gathering, and appropriation. The building's inward focus and minimal engagement with the street contribute to a sense of detachment, highlighting the impact of architectural form on public life, urban vitality, and perceived accessibility.



Vlooienburg (left), Stopera (right)



Image of the blauwbrug towards waterlooplein where there used to be a tree-lined avenue of Dutch Elms, "Hollandse Iep"



The Waterlooplein market used to be in front of the church. Now it has changed to a street dominated by traffic



Dead Facade of the Stopera towards the Market

## 4.1 Block Comparison

### The underestimated size of the Stopera Block

The Stopera block covers an area of roughly 27,500 m<sup>2</sup>, making it significantly larger than many of Amsterdam's traditional urban blocks. When compared to nearby neighborhoods, entire blocks, even small sections of districts, could easily fit within its footprint. This scale highlights how the Stopera's size and singular mass differ from the city's finer-grained urban fabric, where diversity in plots, buildings, and uses naturally fosters liveliness and human scale. The comparison reveals how oversized urban form can disrupt spatial rhythm, permeability, and everyday street life.



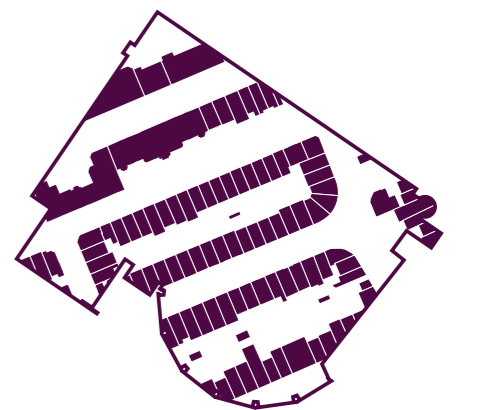
Kalverstraat



Rozenstraat



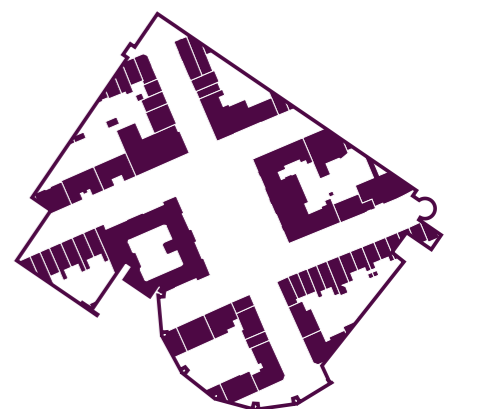
Weteringstraat



P.C. Hoofstraat



Albert Cuypstraat



Oosterpark

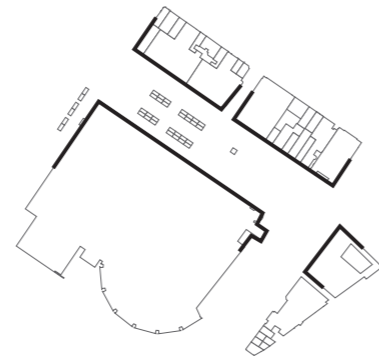
## 4.2 Public Spaces

### Comparing Waterlooplein and Traditional Squares

Compared to traditional squares like the Spui or Dam, Waterlooplein feels larger, more modern, and less attuned to human scale. Traditional squares benefit from finer urban grain, with a diversity of building types, active edges, and well-connected street patterns that encourage movement, exploration, and social interaction. These characteristics align closely with principles from environmental psychology, supporting legibility, engagement, and a sense of place. In contrast, Waterlooplein's uniform scale and limited accessibility reduce opportunities for appropriation and everyday activity, highlighting how spatial design and fine-grained urban fabric are crucial for lively, inviting public spaces.



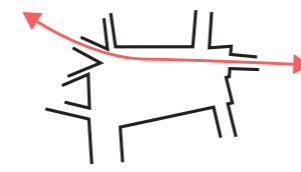
Defined by traditional built environment



Defined by modern built environment

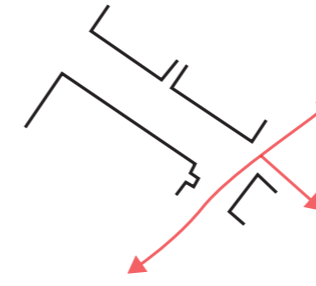
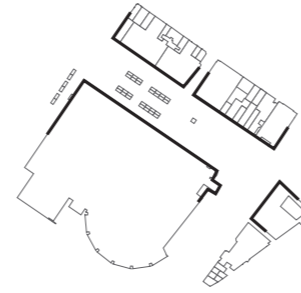
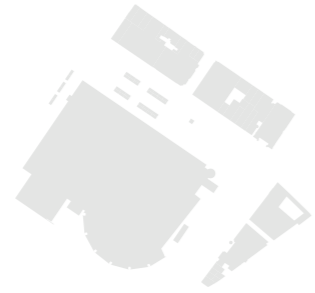


Rembrandtplein



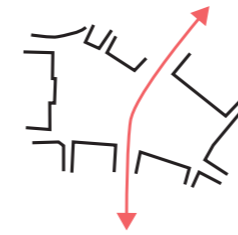
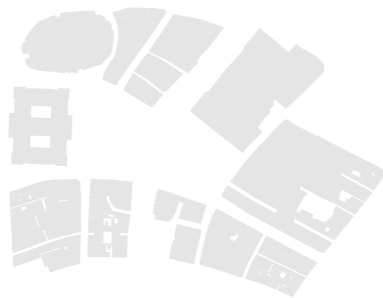
**Main Program:** Hospitality & Nightlife  
**Visual/Physical Entrances:** 8 Entrances  
**Surface:** 8.500 m2  
**Diversity Streetfront:** 29 Buildings

Waterlooplein



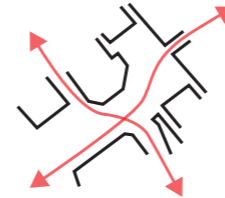
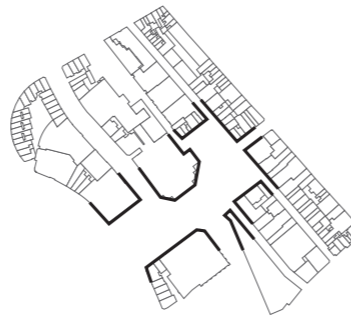
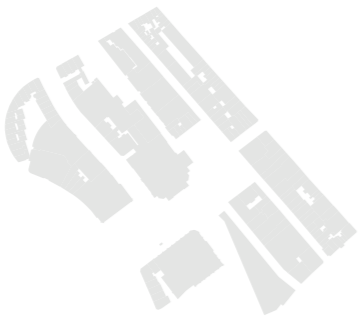
**Main Program:** (Flea)Market & Culture  
**Visual/Physical Entrances:** 4 Entrances  
**Surface:** 9.500 m2  
**Diversity Streetfront:** 14 Buildings

De Dam



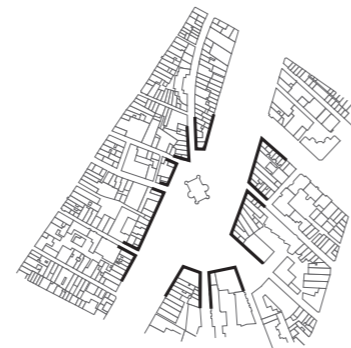
**Main Program:** Democracy & Tourism  
**Visual/Physical Entrances:** 10 Entrances  
**Surface:** 15.000 m2  
**Diversity Streetfront:** 25 Buildings

Leidseplein



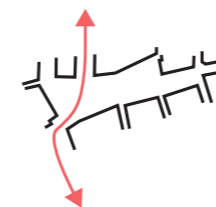
**Main Program:** Nightlife & Culture  
**Visual/Physical Entrances:** 8 Entrances  
**Surface:** 10.000 m2  
**Diversity Streetfront:** 25 Buildings

Nieuwmarkt



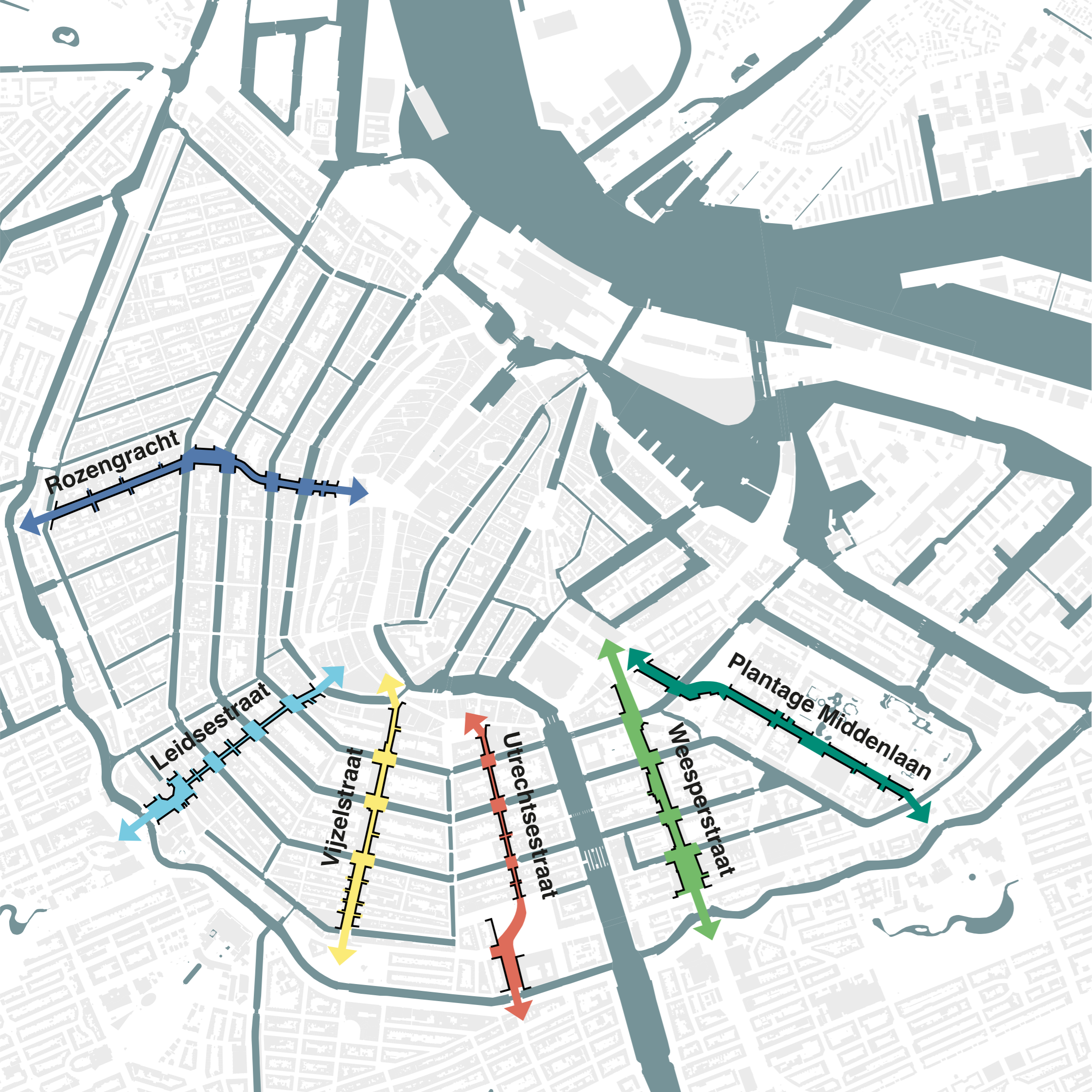
**Main Program:** Hospitality & Market  
**Visual/Physical Entrances:** 9 Entrances  
**Surface:** 10.500 m2  
**Diversity Streetfront:** 50 Buildings

Spui



**Main Program:** (Book)Market & Hospitality  
**Visual/Physical Entrances:** 10 Entrances  
**Surface:** 6.500 m2  
**Diversity Streetfront:** 32 Buildings

Overview of main squares in Amsterdam

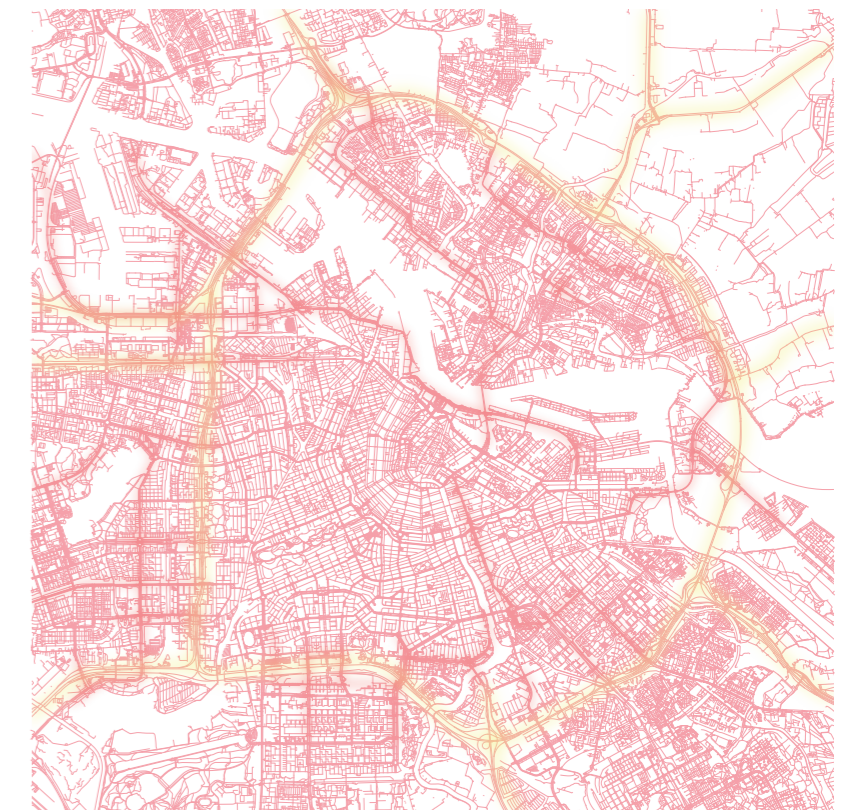


## 4.3 Street and Scale

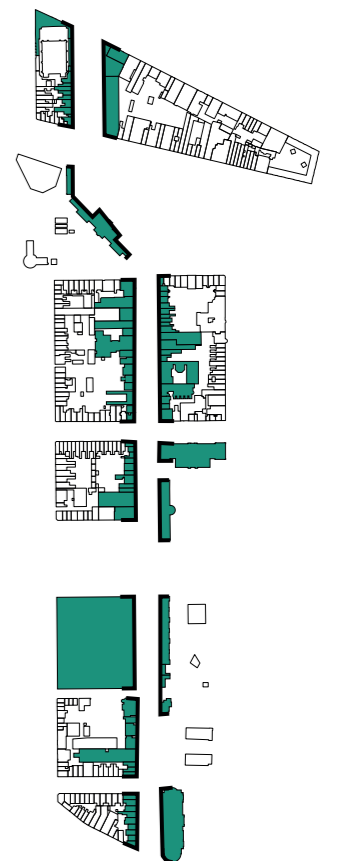
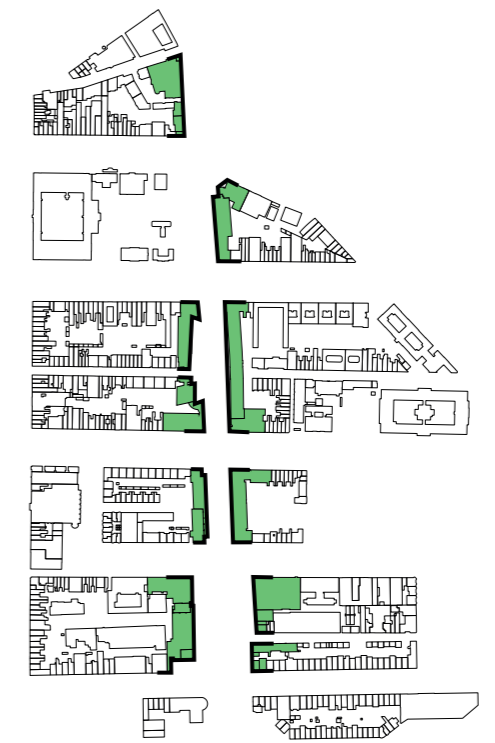
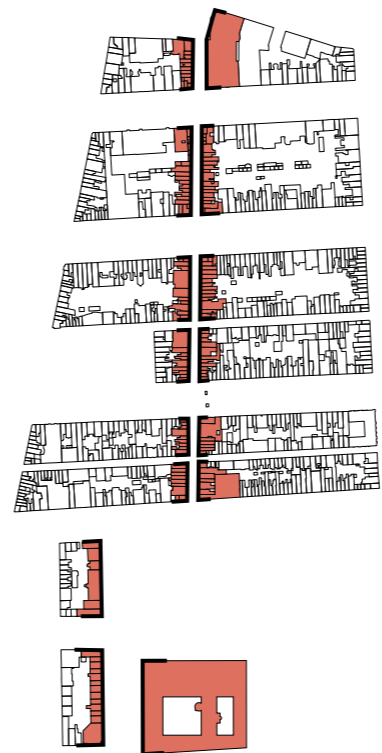
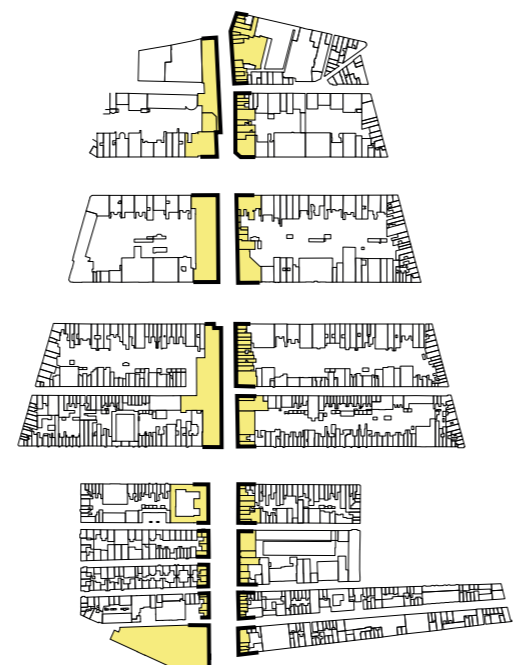
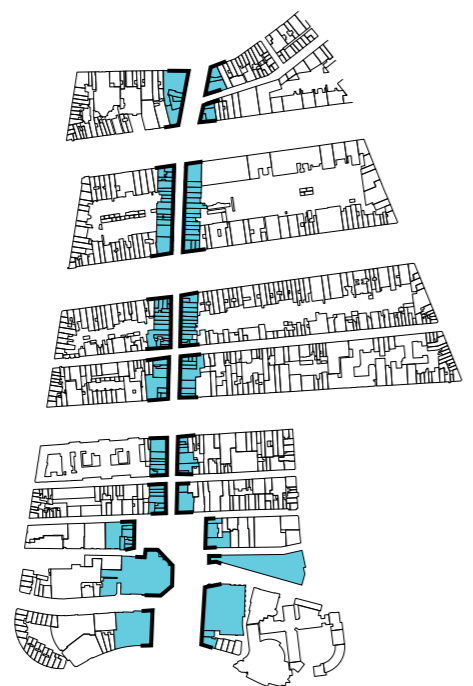
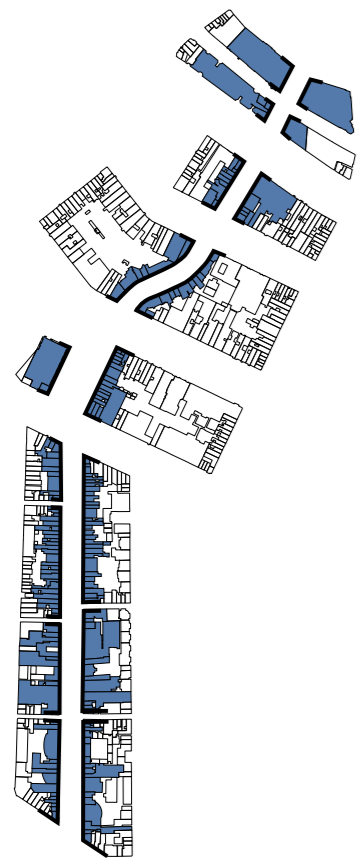
### The lost identity of the Weesperstraat

Amsterdam has six main streets that connect the city center to the wider city: Rozengracht, Leidsestraat, Vijzelstraat, Utrechtsestraat, Plantage Middenlaan, and Weesperstraat. Over time, many of these streets have been shaped by major infrastructural changes, but few have been as dramatically transformed as Weesperstraat.

Once a vibrant, locally animated street, Weesperstraat has become fast-paced and dominated by short-stay activities. Its scale and proportions drive speed, which in turn shapes the architecture, street life, and ultimately its urban identity. What remains is a street whose original character has been overshadowed, offering an opportunity to rethink how scale, speed, and design can restore connection and meaning.



Region of Amsterdam: Fast paced traffic going through the city Center in Weesperstraat



**Rozengracht**

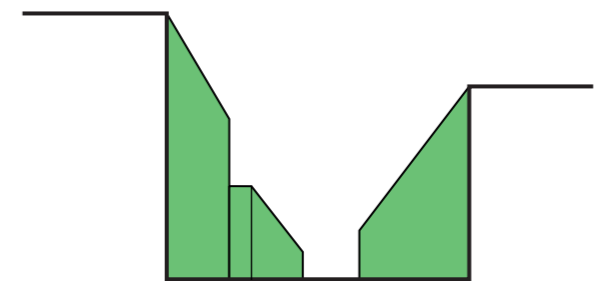
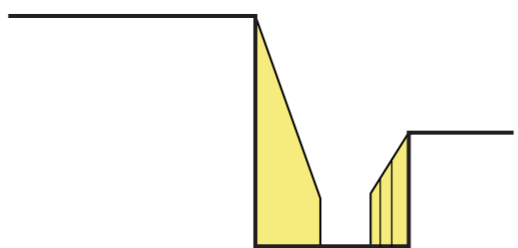
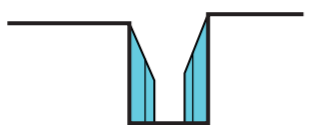
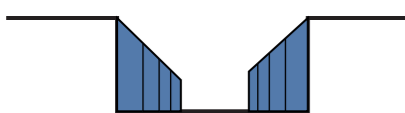
**Leidsestraat**

**Vijzelstraat**

**Utrechtsestraat**

**Weesperstraat**

**Plantage Middenlaan**



30 km/h

30 km/h

30 km/h

30 km/h

50 km/h

30 km/h

## Conclusion

How do the principles of traditional urban design contrast with modernist and contemporary design approaches?

Traditional urban design emphasizes human scale, fine-grained fabric, permeability, and diversity of plots, building types, and uses. Streets and squares evolve incrementally, creating rich spatial experiences, multiple dimensions of public space, and opportunities for appropriation. Examples like the historic Weesperstraat, the Spui, and the Dam combine legible circulation, social interaction, and visual complexity, supporting engagement and a sense of place.

Modernist and many contemporary approaches, such as the Stopera or Waterlooplein, favor large, monolithic structures, uniform façades, and traffic-focused streets. These designs often prioritize efficiency or monumentality over diversity, reducing public interaction and diminishing the urban identity. The Stopera's inward-focused block and Waterlooplein's lack of varied building types and playful edges illustrate these effects, as does the widened, fast-paced Weesperstraat.

This comparison shows that traditional, incremental, and context-sensitive principles create environments that are more engaging, resilient, and socially vibrant, while modernist approaches can unintentionally undermine human experience and city identity.



Figure: Beeldbank Amsterdam. Weesperstraat 2-40

**5.0**

**What impact do sociocultural factors have on the user experience?**

# 5.1 The Controversy of the Stopera

## Mapping the conversation

The experience of the city is defined by the quality of the urban fabric as discussed in the chapter of environmental psychology. However, this is mostly about the physical domain that influences the perception of the city. The socio-cultural domain happens mostly between the urban fabric itself: the interaction between the buildings.

This is where anything happens, experiences are made and opinions are formed. These perceptions are unique to each person as they have different backgrounds and relations to the place. Therefore socio-cultural factors are considered more subjective rather than a universal truth.

Yet these perspectives are crucial in the understanding of the place. Socio-cultural factors can be studied by collecting the opinions and experiences through interviews. Through participation social structural elements can be placed in a map and create a collective image of experiences.

This is done through softmapping, a method that is used by both Nadia Pepels and Jan Rothuizen. With Pepels focussing more on the participation process and Rothuizen more on the individual perception.

Collective problems and needs of the site can be discovered through combining the perspectives.

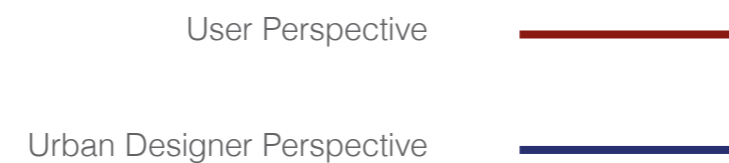
The following questions were asked in the ‘soft interviews’ which resulted into a conversation and storytelling:

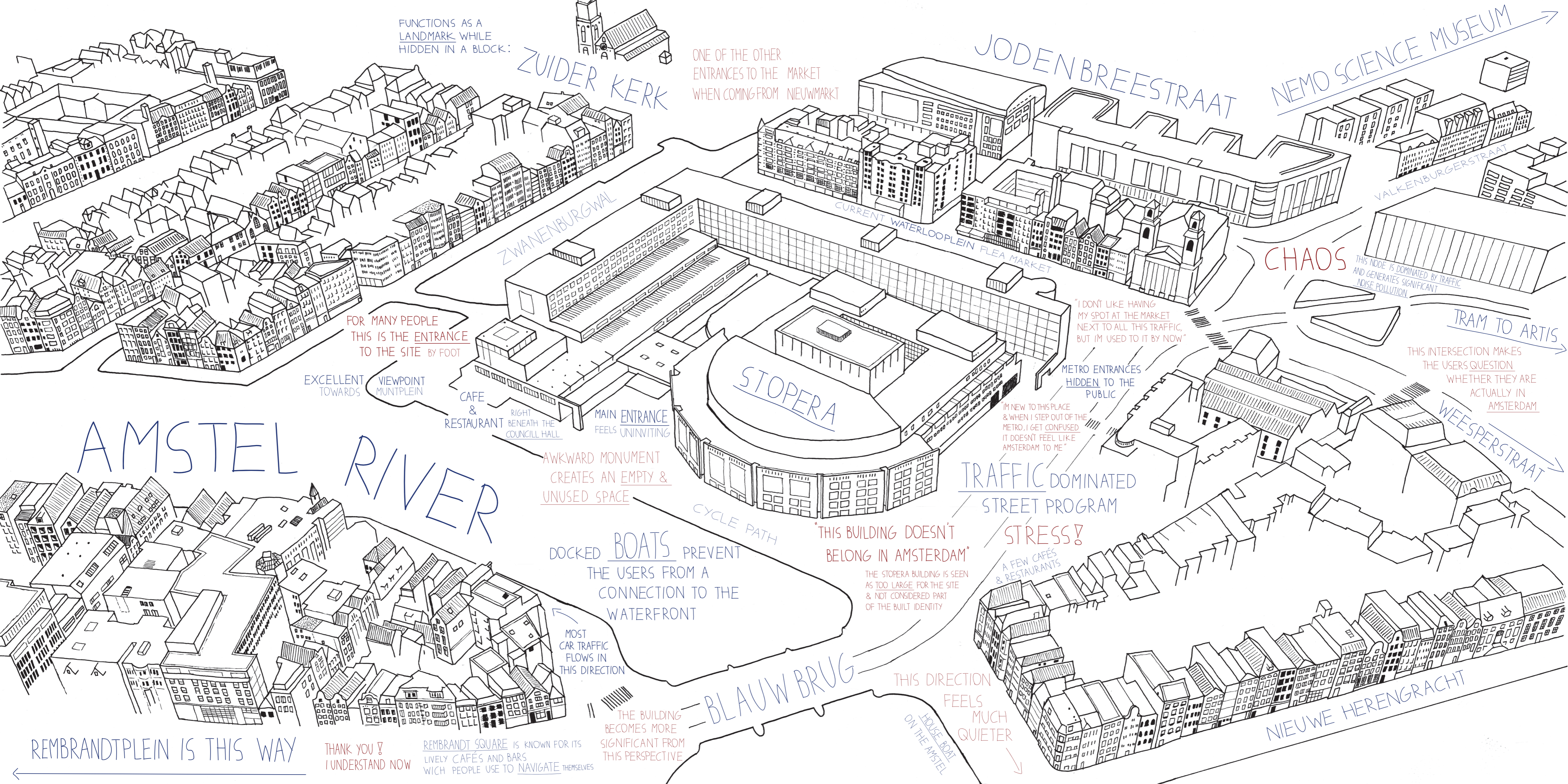
1. What brings you here today? What is your background?
2. If you had to describe this place in one word, what would it be?
3. Can you elaborate on that feeling through an experience?
4. What do you appreciate about this place, and what would you miss if it were gone?
5. What could be different? Or what do you think is missing here?

In the softmaps, on different scales the interviews and perspectives are projected onto the map in red. While the personal perspectives and findings from a urban design point of view are showcased in blue.

**“First we shape the cities, then they shape us”**

(Gehl, 2010)





FUNCTIONS AS A LANDMARK WHILE HIDDEN IN A BLOCK:

ZUIDER KERK

ONE OF THE OTHER ENTRANCES TO THE MARKET WHEN COMING FROM NIEUWMARKT

JODENBREESTRAAT

NEMO SCIENCE MUSEUM

VALKENBURGERSTRAAT

ZWANENBURGWAL

CURRENT WATERLOOPLEIN FLEA MARKET

CHAOS

THIS NODE IS DOMINATED BY TRAFFIC AND GENERATES SIGNIFICANT NOISE POLLUTION

FOR MANY PEOPLE THIS IS THE ENTRANCE TO THE SITE BY FOOT

"I DON'T LIKE HAVING MY SPOT AT THE MARKET NEXT TO ALL THIS TRAFFIC, BUT I'M USED TO IT BY NOW"

TRAM TO ARTIS

THIS INTERSECTION MAKES THE USERS QUESTION WHETHER THEY ARE ACTUALLY IN AMSTERDAM

EXCELLENT VIEWPOINT TOWARDS MUNTPLEIN

CAFE & RESTAURANT RIGHT BENEATH THE COUNCILL HALL

MAIN ENTRANCE FEELS UNINVITING

METRO ENTRANCES HIDDEN TO THE PUBLIC

"I'M NEW TO THIS PLACE & WHEN I STEP OUT OF THE METRO, I GET CONFUSED IT DOESN'T FEEL LIKE AMSTERDAM TO ME"

WEESPERSTRAAT

AMSTEL RIVER

AWKWARD MONUMENT CREATES AN EMPTY & UNUSED SPACE

TRAFFIC DOMINATED STREET PROGRAM STRESS!

"THIS BUILDING DOESN'T BELONG IN AMSTERDAM"

THE STOPERA BUILDING IS SEEN AS TOO LARGE FOR THE SITE & NOT CONSIDERED PART OF THE BUILT IDENTITY

DOCKED BOATS PREVENT THE USERS FROM A CONNECTION TO THE WATERFRONT

A FEW CAFES & RESTAURANTS

MOST CAR TRAFFIC FLOWS IN THIS DIRECTION

CYCLE PATH

BLAUW BRUG

THIS DIRECTION FEELS MUCH QUIETER ON THE AMSTEL

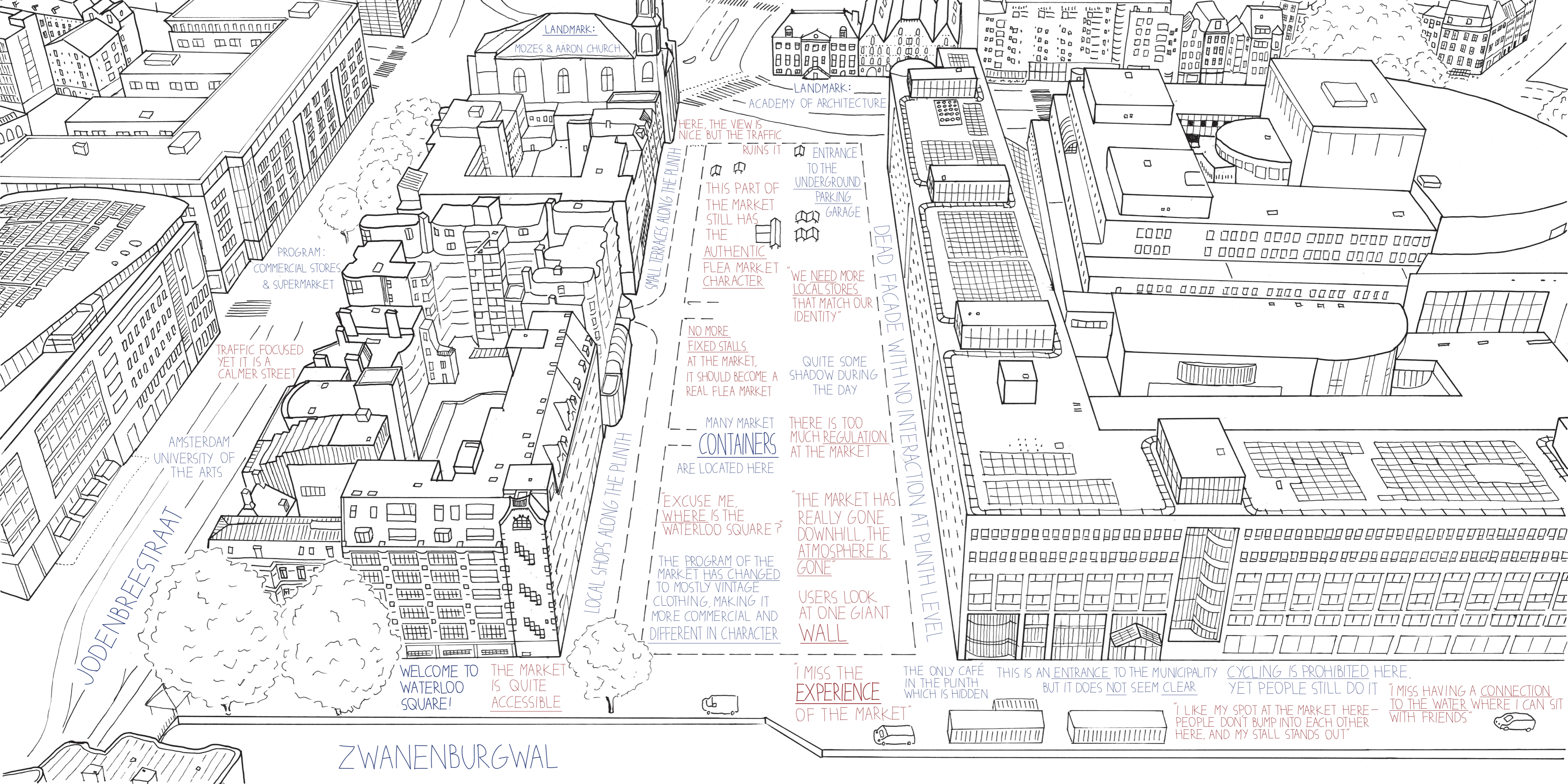
THE BUILDING BECOMES MORE SIGNIFICANT FROM THIS PERSPECTIVE

NIEUWE HERENGRACHT

REMBRANDTPLEIN IS THIS WAY

THANK YOU! I UNDERSTAND NOW

REMBRANDT SQUARE IS KNOWN FOR ITS LIVELY CAFES AND BARS WICH PEOPLE USE TO NAVIGATE THEMSELVES



LANDMARK:  
MOZES & AARON CHURCH

LANDMARK:  
ACADEMY OF ARCHITECTURE

PROGRAM:  
COMMERCIAL STORES  
& SUPERMARKET

TRAFFIC FOCUSED  
YET IT IS A  
CALMER STREET

AMSTERDAM  
UNIVERSITY OF  
THE ARTS

JODENBREESTRAT

LOCAL SHOPS  
ALONG THE PLINTH

SMALL TERRACES  
ALONG THE PLINTH

DEAD FACADE WITH NO INTERACTION AT PLINTH LEVEL

HERE, THE VIEW IS  
NICE BUT THE TRAFFIC  
RUINS IT

THIS PART OF  
THE MARKET  
STILL HAS  
THE  
AUTHENTIC  
FLEA MARKET  
CHARACTER

ENTRANCE  
TO THE  
UNDERGROUND  
PARKING  
GARAGE

"WE NEED MORE  
LOCAL STORES  
THAT MATCH OUR  
IDENTITY"

NO MORE  
FIXED STALLS  
AT THE MARKET,  
IT SHOULD BECOME A  
REAL FLEA MARKET

QUITE SOME  
SHADOW DURING  
THE DAY

MANY MARKET  
CONTAINERS  
ARE LOCATED HERE

THERE IS TOO  
MUCH REGULATION  
AT THE MARKET

"EXCUSE ME,  
WHERE IS THE  
WATERLOO SQUARE?"

"THE MARKET HAS  
REALLY GONE  
DOWNHILL, THE  
ATMOSPHERE IS  
GONE"

THE PROGRAM OF THE  
MARKET HAS CHANGED  
TO MOSTLY VINTAGE  
CLOTHING, MAKING IT  
MORE COMMERCIAL AND  
DIFFERENT IN CHARACTER

USERS LOOK  
AT ONE GIANT  
WALL

WELCOME TO  
WATERLOO  
SQUARE!

THE MARKET  
IS QUITE  
ACCESSIBLE

"I MISS THE  
EXPERIENCE  
OF THE MARKET"

THE ONLY CAFÉ  
IN THE PLINTH  
WHICH IS HIDDEN

THIS IS AN ENTRANCE TO THE MUNICIPALITY  
BUT IT DOES NOT SEEM CLEAR

CYCLING IS PROHIBITED HERE,  
YET PEOPLE STILL DO IT

"I MISS HAVING A CONNECTION  
TO THE WATER WHERE I CAN SIT  
WITH FRIENDS"

"I LIKE MY SPOT AT THE MARKET HERE -  
PEOPLE DON'T BUMP INTO EACH OTHER  
HERE, AND MY STALL STANDS OUT"

ZWANENBURGWAL

## Conclusion

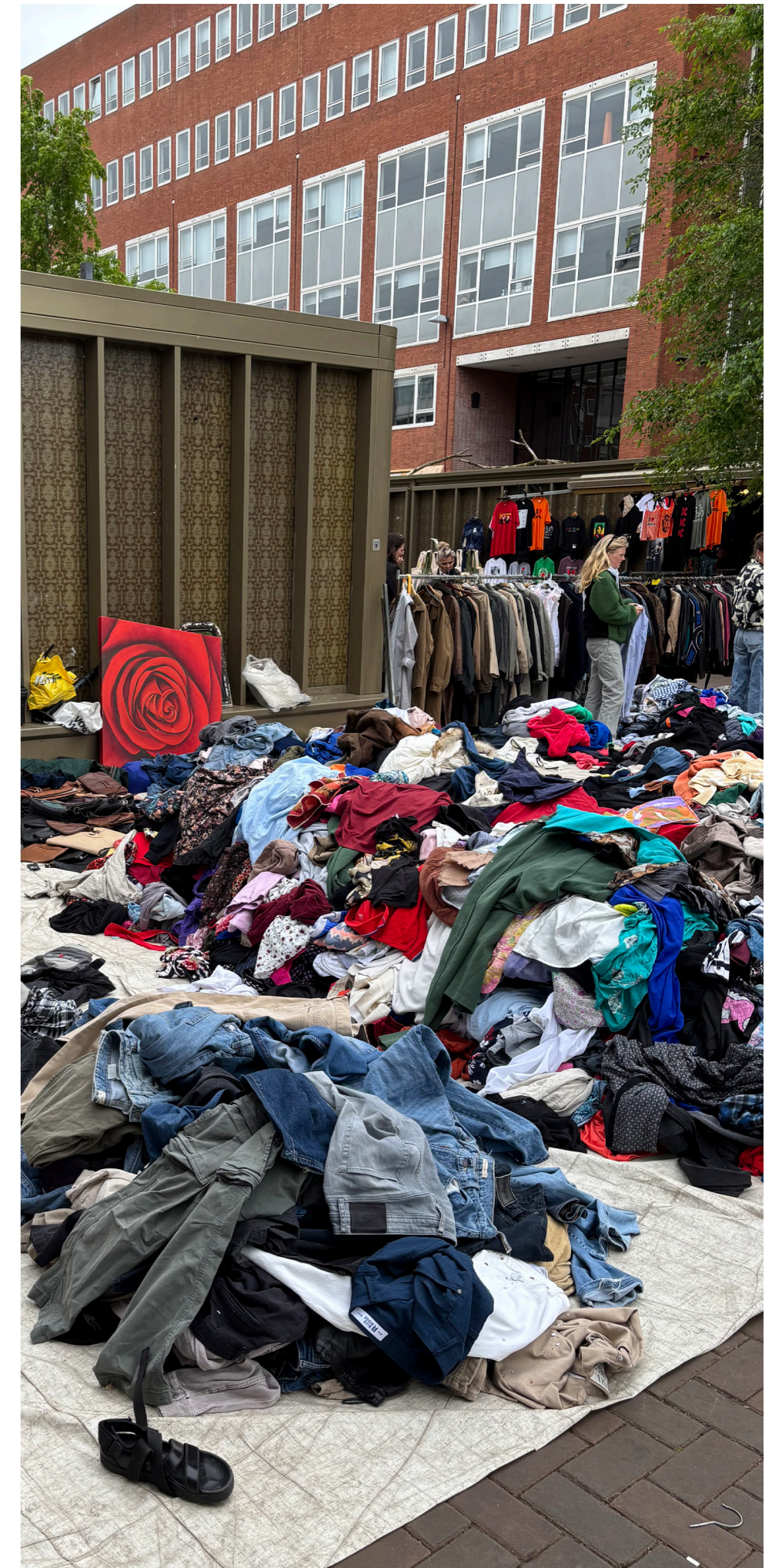
What impact do socio-cultural factors have on the user-experience?

As the user-experience of a place cannot only be affected by universal theories, the local experiences of people and the culture bound to the site become just as important.

Experiences and opinions of people with different backgrounds highlight the problems and opportunities of the site through the eyes of the user. Combining this with the personal perspective of the urban designer produces a collective map of opinions and needs.

These socio-cultural insights reveal how daily practices, local customs, and collective memory shape the way people perceive and inhabit the urban environment. They allow the design to respond not only to functional requirements but also to the emotional and social dimensions of the place. By integrating these perspectives, the project fosters a stronger connection between users and their surroundings, creating spaces that are meaningful, engaging, and reflective of the community's identity.

Ultimately, acknowledging socio-cultural factors ensures that the urban design does more than organize space—it enhances the lived experience, strengthens local identity, and builds a resilient social fabric.



Flea Market at Waterlooplein

# 6.0

## Design Assignment

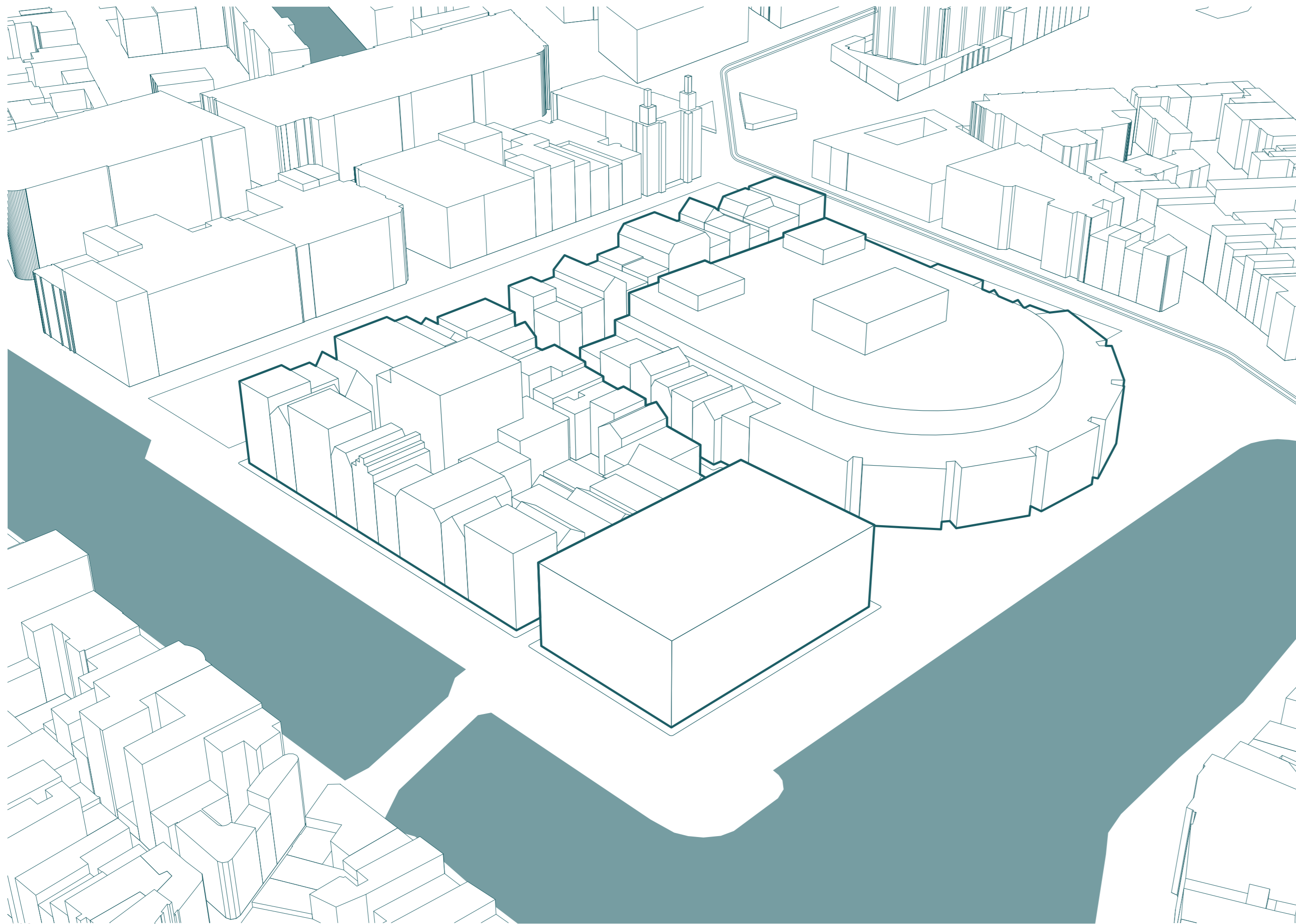
### Assignment

The goal of this design assignment is to apply the principles of traditional urban design to regenerate degraded urban tissue in Amsterdam's city center. Specifically, the Stopera block is reimagined as a hybrid block, integrating timeless urban principles identified in this research. This approach aims to improve the block's interaction with Waterlooplein, the surrounding streets, and the broader urban fabric, while creating a flexible framework that can evolve over time alongside the city.

Based on the research conclusions, the following strategies guide the redesign:

- The opera building remains as a landmark and anchor for identity.
- The municipality building is reconfigured into a finer-grained urban fabric, supporting diverse plots, scales, and building types.
- A variety of functions and programs are introduced, including active ground-floor uses to animate public space.
- Buildings are designed to engage with adjacent public spaces, streets, and the waterfront, creating layers of semi-public and public space.
- The block incorporates permeability through alleys, internal streets, or semi-public courtyards, breaking down its mass into smaller, human-scaled segments.
- Attention is given to visual richness, complexity, and human scale, drawing from environmental psychology to make the environment inviting, legible, and engaging.

Through these interventions, the Stopera block becomes a dynamic, adaptable, and socially resilient urban structure, reflecting the balance between tradition and contemporary needs, and demonstrating how a hybrid block can enrich both public life and city identity.



## 6.1 Design Concept

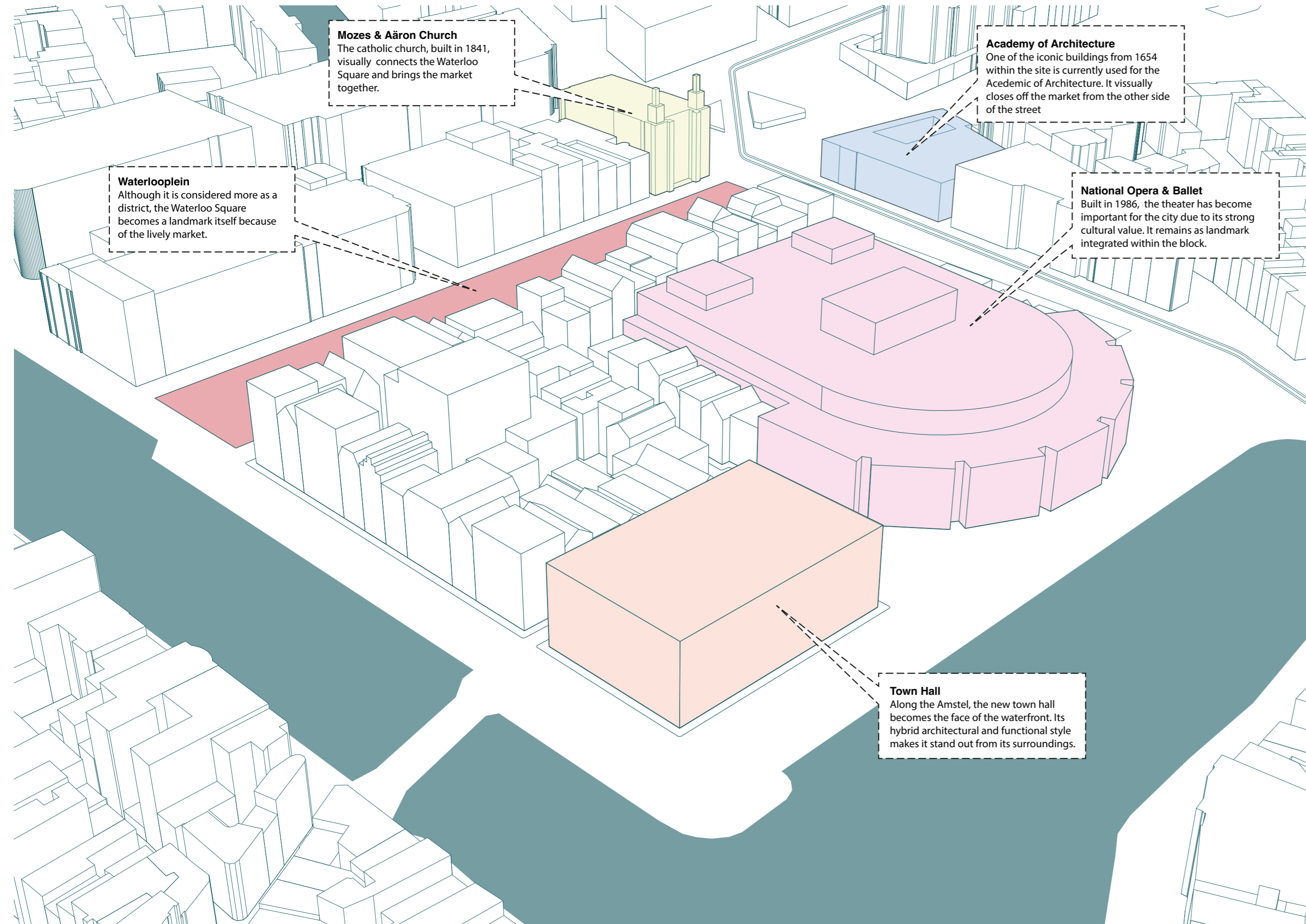
### Framework of the Block

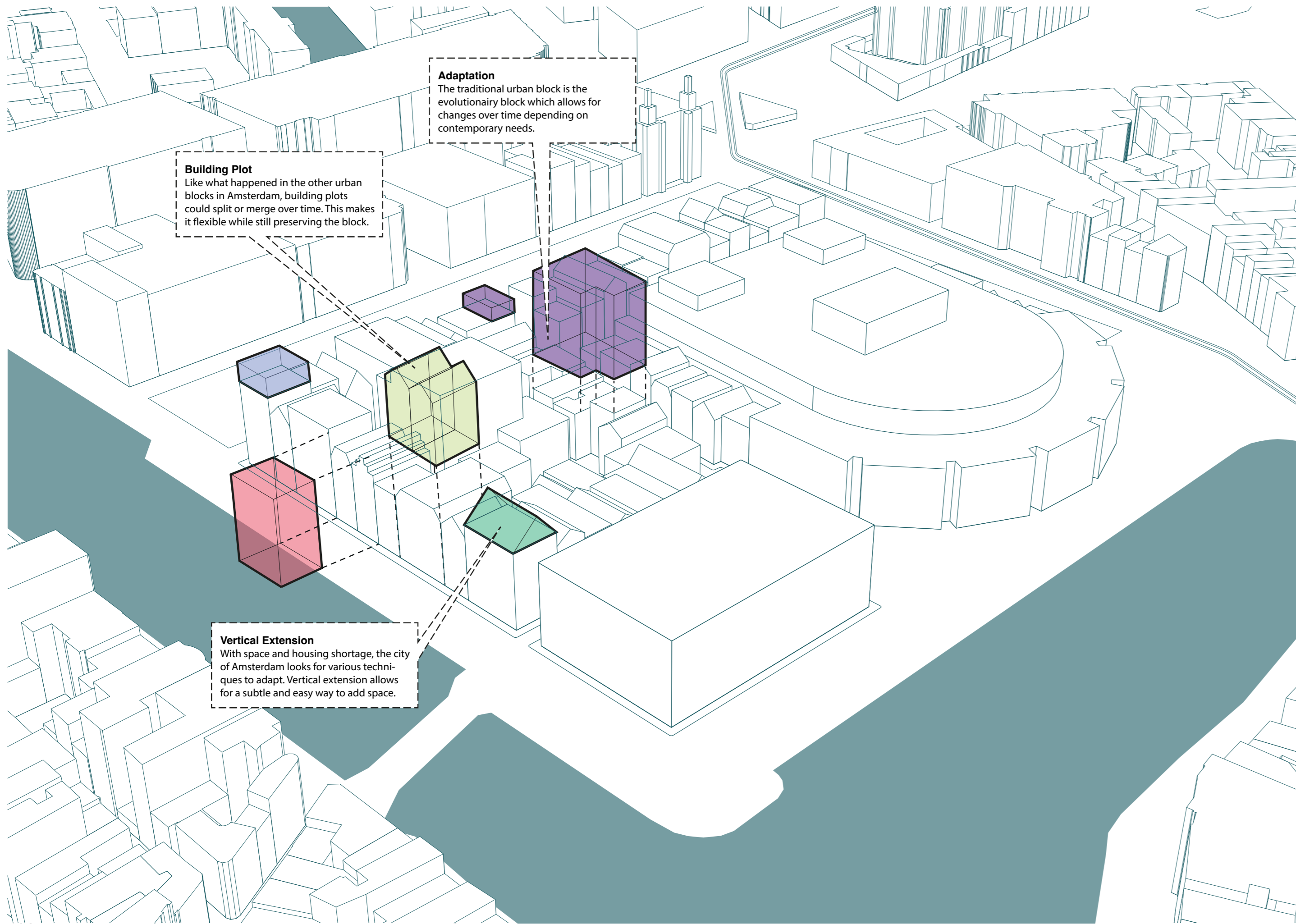
The design envisions the Stopera block as a hybrid block, guided by traditional urban design principles rather than a fixed form. It acts as a flexible framework that allows for diverse building types, plot configurations, and volumes, providing room for future adaptation and gradual evolution. The emphasis is on rules and principles, human scale, permeability, diversity of uses, active edges, and layered public space, rather than predetermined architecture. By applying these principles, the block enhances the user experience, strengthens connections with the surrounding streets and waterfront, and ensures that the urban fabric can grow and change over time, creating a timeless and socially vibrant city environment.

**7.0**

**Urban Conditions for the Block**

Urban Condition 1  
**Integration of Landmarks**



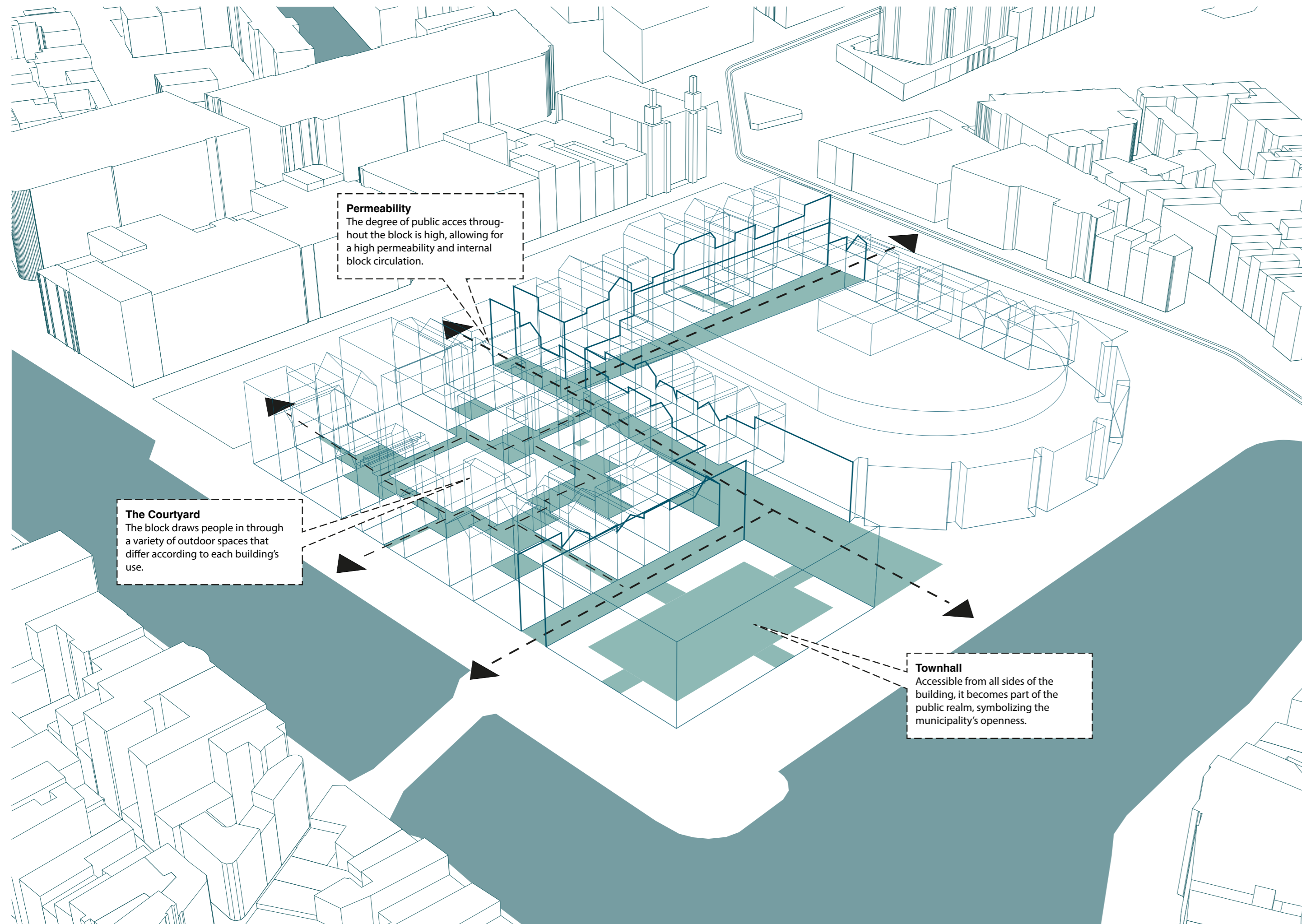


**Adaptation**  
The traditional urban block is the evolutionary block which allows for changes over time depending on contemporary needs.

**Building Plot**  
Like what happened in the other urban blocks in Amsterdam, building plots could split or merge over time. This makes it flexible while still preserving the block.

**Vertical Extension**  
With space and housing shortage, the city of Amsterdam looks for various techniques to adapt. Vertical extension allows for a subtle and easy way to add space.

Urban Condition 4  
**Permeability through  
the Block**

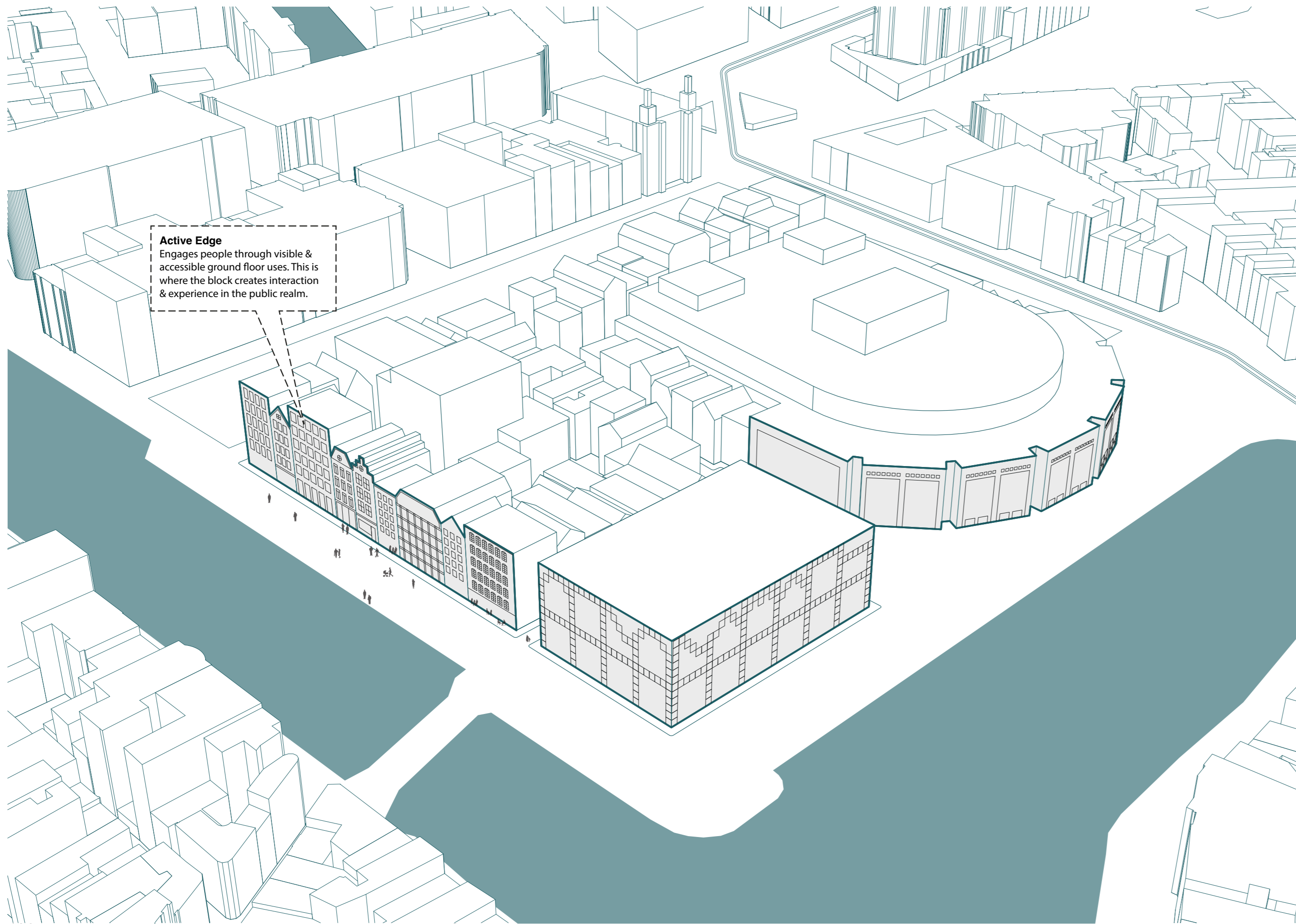


**Permeability**  
The degree of public access throughout the block is high, allowing for a high permeability and internal block circulation.

**The Courtyard**  
The block draws people in through a variety of outdoor spaces that differ according to each building's use.

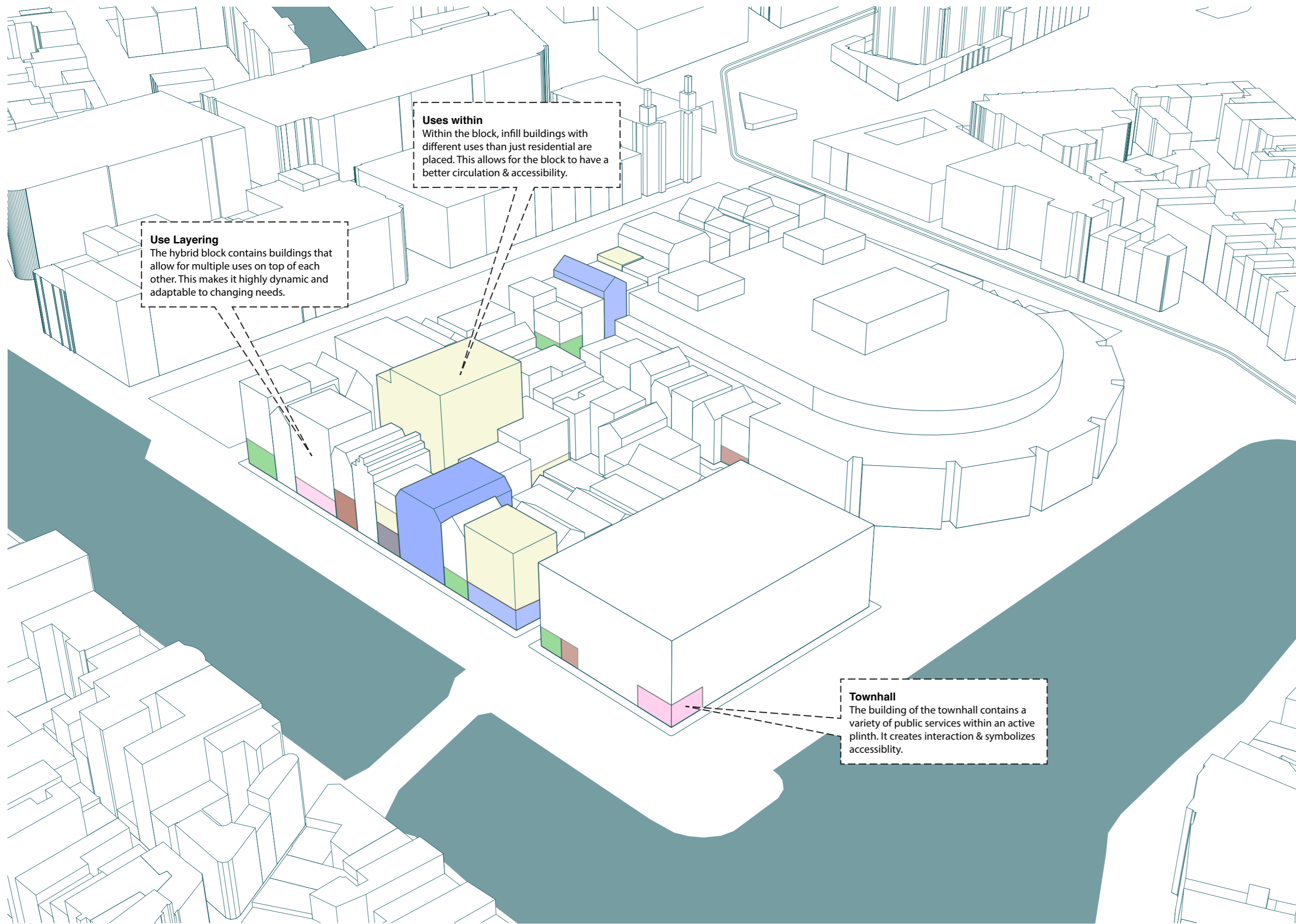
**Townhall**  
Accessible from all sides of the building, it becomes part of the public realm, symbolizing the municipality's openness.

Urban Condition 3  
**Active Edge**



**Active Edge**  
Engages people through visible & accessible ground floor uses. This is where the block creates interaction & experience in the public realm.

Urban Condition 5  
**Diversity of Building Use**

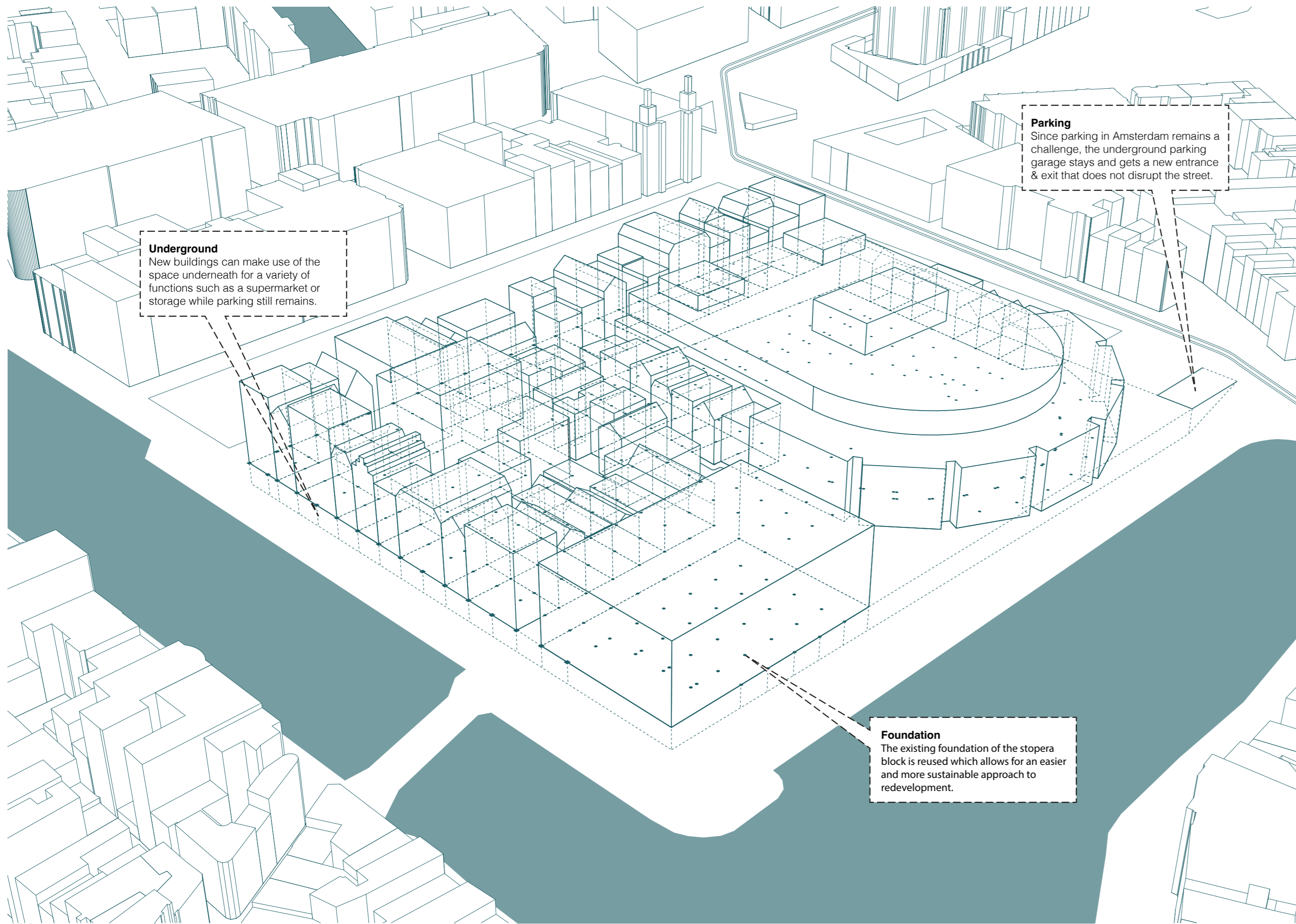


**Uses within**  
Within the block, infill buildings with different uses than just residential are placed. This allows for the block to have a better circulation & accessibility.

**Use Layering**  
The hybrid block contains buildings that allow for multiple uses on top of each other. This makes it highly dynamic and adaptable to changing needs.

**Townhall**  
The building of the townhall contains a variety of public services within an active plinth. It creates interaction & symbolizes accessibility.

Urban Condition 6  
**Structural Adaptability**



**Underground**  
New buildings can make use of the space underneath for a variety of functions such as a supermarket or storage while parking still remains.

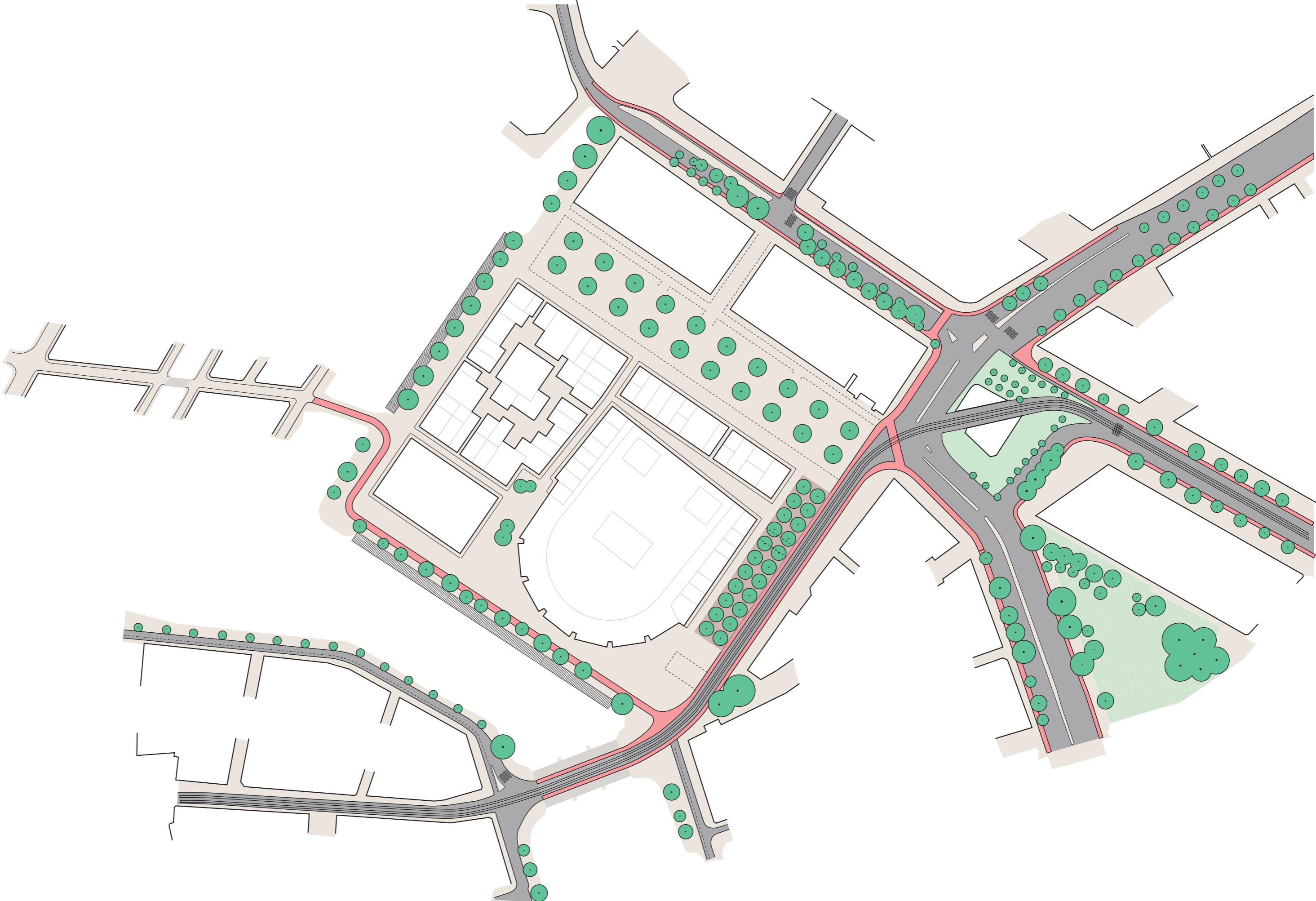
**Parking**  
Since parking in Amsterdam remains a challenge, the underground parking garage stays and gets a new entrance & exit that does not disrupt the street.

**Foundation**  
The existing foundation of the stopera block is reused which allows for an easier and more sustainable approach to redevelopment.

**8.0**

**Design Approach**










**Context**  
Map



# 8.1 Public Life through the Urban Block

Detail Map

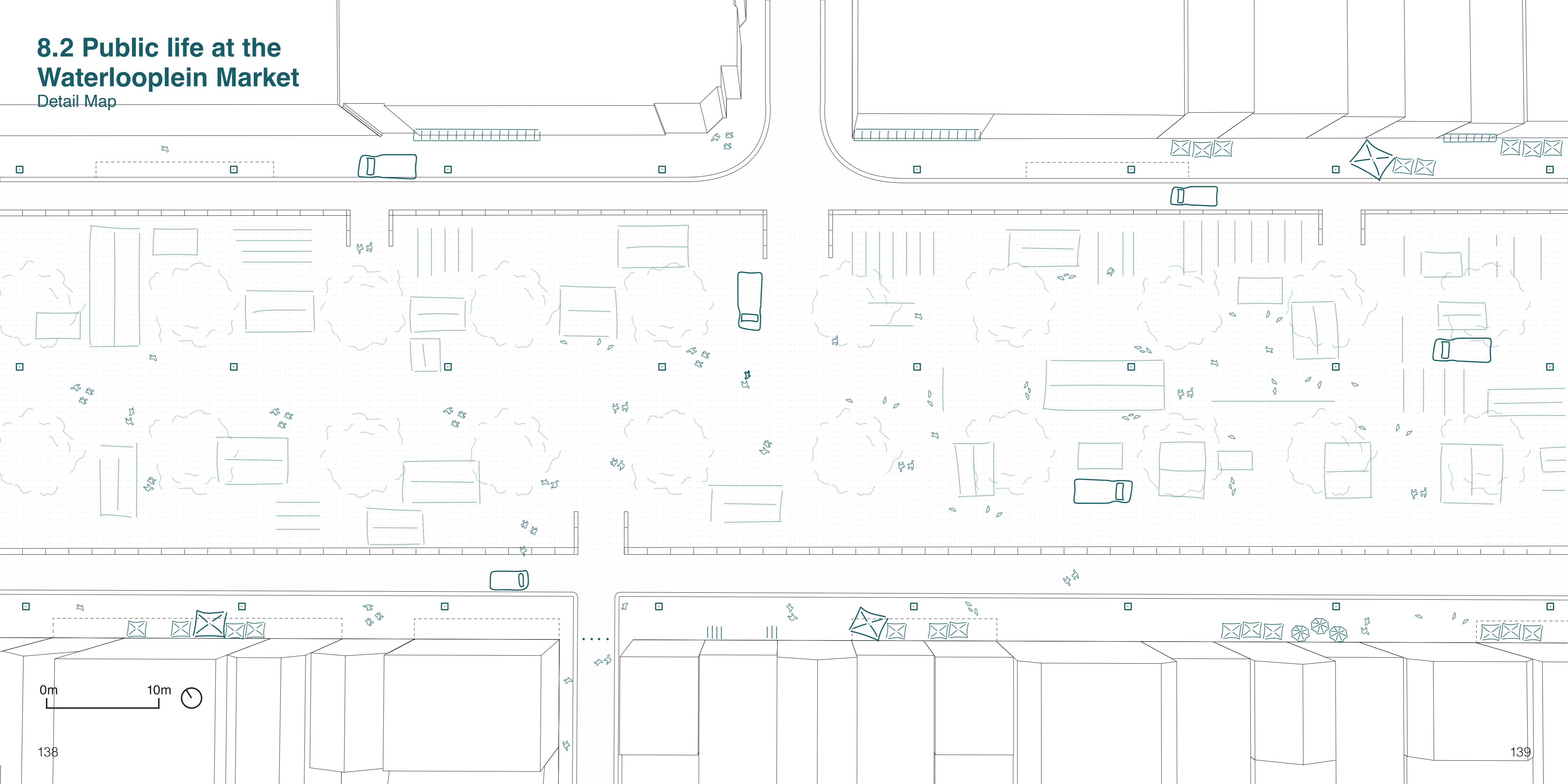
## Legend

-  Tree
-  Market Stand
-  Boat
-  Car
-  Terrace
-  Users
-  Street Light
-  Block Acces
-  Space Allocation



# 8.2 Public life at the Waterlooplein Market

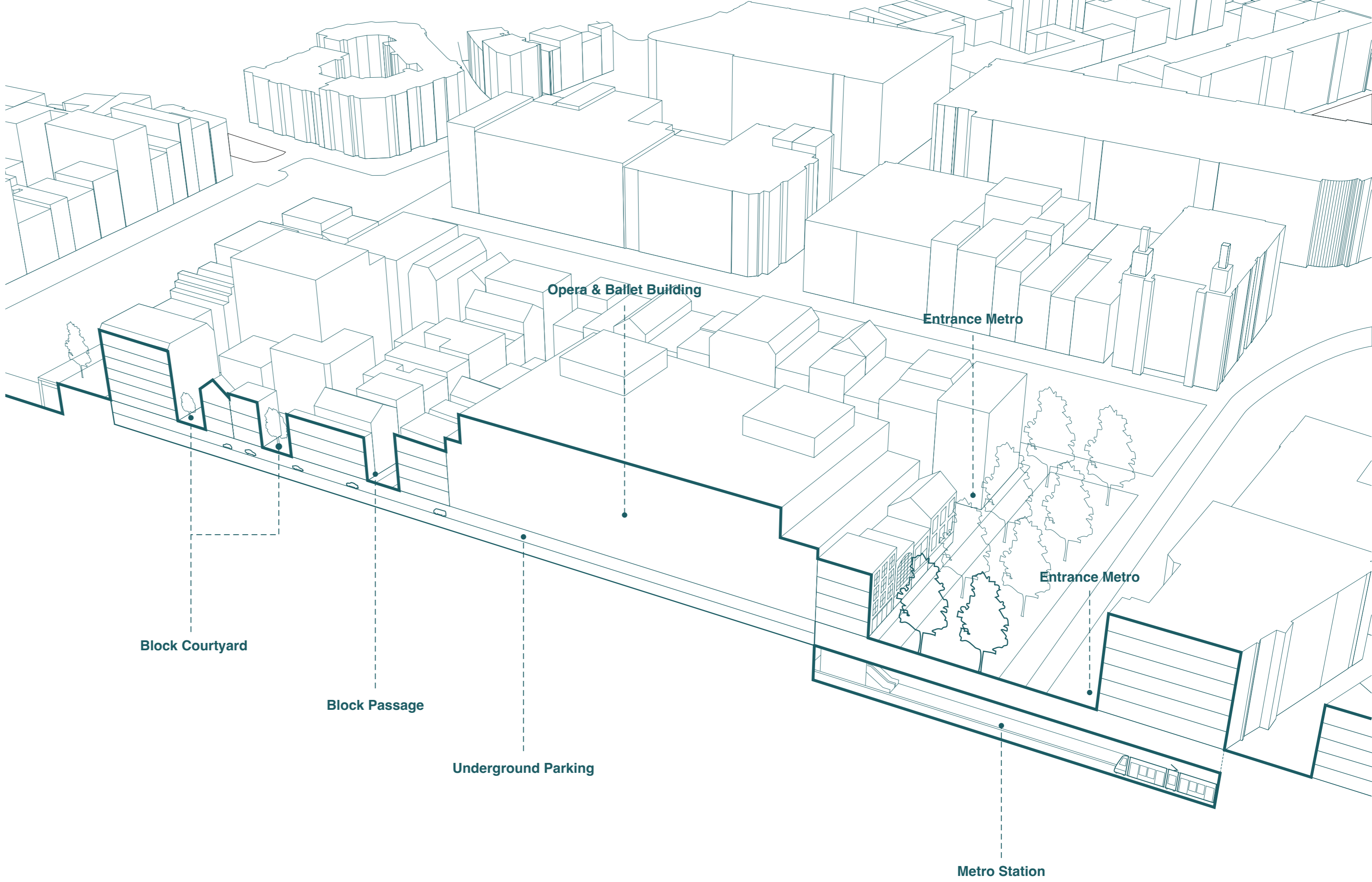
Detail Map



0m 10m

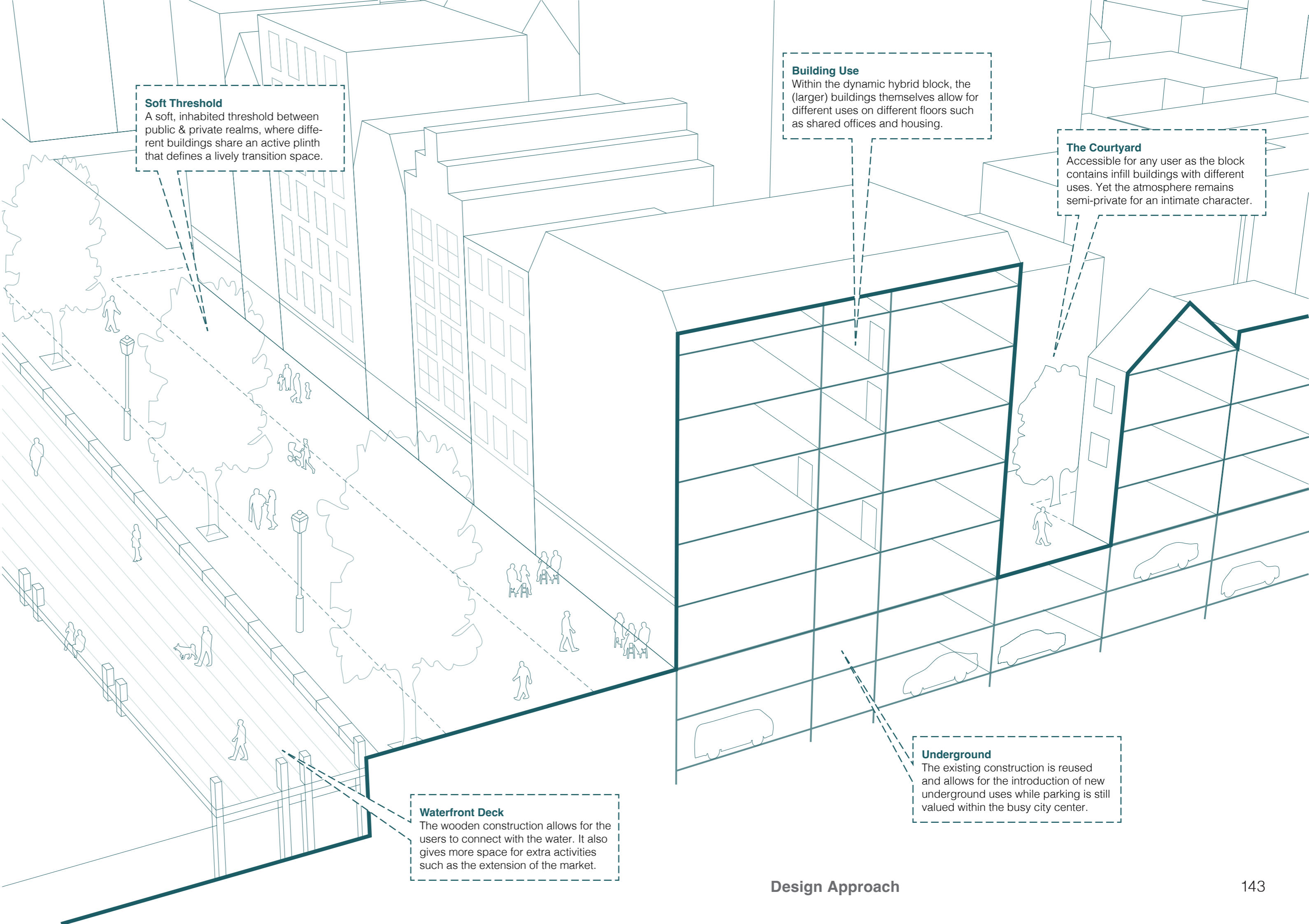
# 8.3 Integration of the Block

Perspective Section



# 8.4 Public - Private Transition

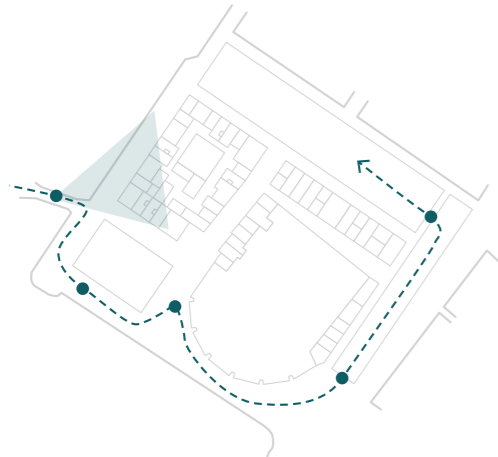
## Perspective Section



9.0

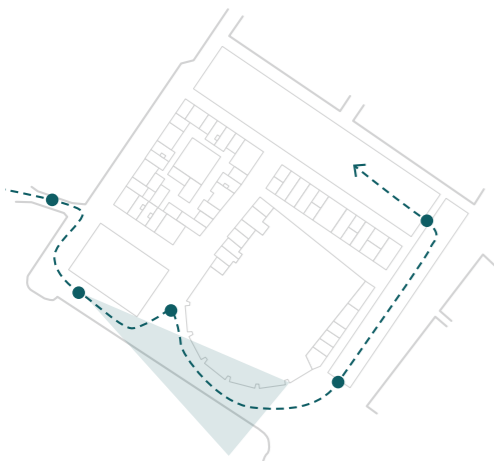
Experience: A Walk around the Block

**Active Edge**  
Building diversity



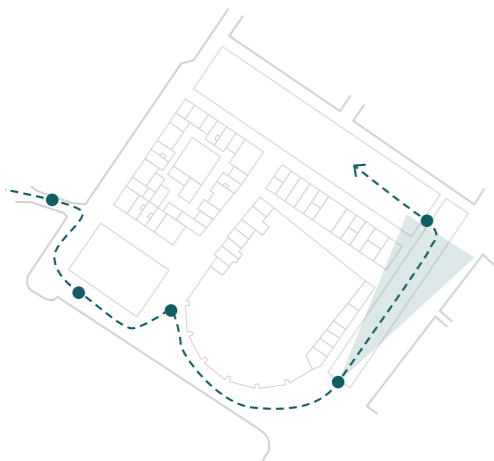
# The Waterfront

Face of the block

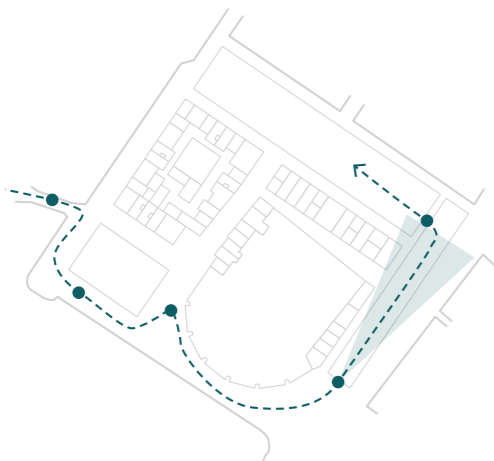




**Avenue**  
Market day

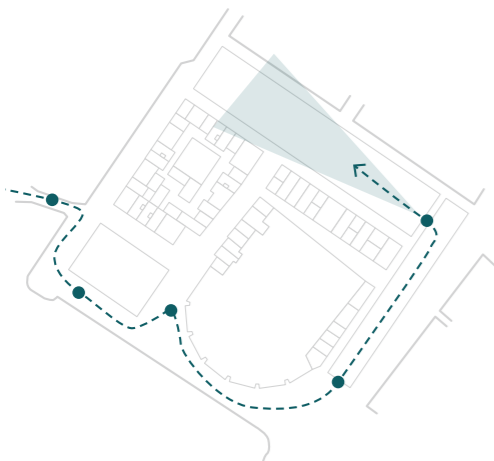


**Avenue**  
Open terraces



# Flea Market

Along the active plinths



**10.0** Conclusion

## 10.1 Final Conclusion

How can the principles of traditional urban design improve the user-experience through regenerating degraded urban tissue in the city center of Amsterdam?

This thesis report bridged the gap between design and experience. Its assignment was to create a design that allows for conditions to recontribute to the lost identity after the introduction of the Stopera building in the city center of Amsterdam. Timeless and social sustainability are the main driver and goal in this. In here, urban identity is an overlooked aspect of sustainability.

Therefore, bridging the gap of design and experience is crucial as the consequences of design choices are impacting our behaviour and well being. The sub research questions were divided among these two aspects.

Regarding design, traditional urban design principles were examined as they withstand time and contribute to a strong identity. The principles themselves are not bound to time periods but are rather timeless. It is more about the block that is created by the city its morphology and should be seen as an evolutionary framework in which gradual changes are desired throughout time. Therefore, the Stopera block was partly redesigned, using its existing construction, in which a high diversity of plot and building types were introduced. This allows for a higher diversity of building uses and impacts the directly surrounded public space through spatial appropriation and public program. Spread out over the block itself, there is a balanced degree of public access which promotes a healthy block circulation in which people could move through it. Ultimately, the design allows for a high adaptability and socio-economic resilience, which are considered ideal within the traditional urban design principles.

Regarding the user-experience, environmental psychology plays a crucial role in our perception of space. In here, there are universal values (legibility, mystery, coherence and complexity) that naturally draw our attention. Implementing these into the design such as making use of the landmarks in the area, creating more depth within the block, and balancing visual elements within the buildings all contribute to a pleasant experience and use of the site. This is important for creating a strong connection to the place. A strong urban identity.

Besides the universal values of environmental psychology, local experiences and opinions should be taken account as well. Softmapping the site showcased the negative view of the stopera building and the need for changes in public space as the streets were considered empty yet chaotic. People wanting local stores, more storage for their market place, a better connection to the canals and a new program for public space were all considered in the design as local problems became more specific.

Designing and the experience of place should go hand in hand in order to create successful places in the long term. The redesign of the Stopera block shows that changing the urban fabric through the lens of the (local) users create a realistic and desirable urban environment.



## 10.2 Reflection

What is the relation between your graduation topic, the studio topic, your master track (Urbanism), and your master programme (MSc AUBS)?

My graduation topic focuses on the regeneration of the Stopera block in Amsterdam's city center, integrating traditional urban design principles to enhance the user-experience and therefore urban identity.

It relates to the studio choice 'Design of the Urban Fabrics' as it is about the physical built environment in response to relevant and current urban needs and trends: how we live in the urban environment. Here, the tangible scale is addressed through the lens of design but also the user.

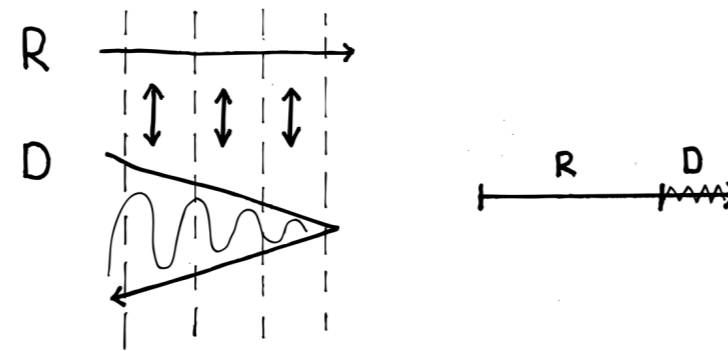
In relation to the master track Urbanism, the topic, while still focussing on the neighborhood scale, does seem to make use of the different scales and relevant socio economic topics. It explores the history and development of Amsterdam on a large scale which is then used to explain the current situations of the urban block and the needs.

In relation to the master as a whole, the topic makes use of various disciplines throughout the project. The idea came from the landscape theory (which has been my own background). As this project moves through the scales, eventually this project will also look at the architecture within the block. Although these are not the focus of the project, they do influence and enrich the design, making it more substantiated. In here, it becomes clear how Urbanism brings both landscape architecture and architecture together.

In conclusion, the project topic is relevant to the philosophy of TU Delft in which it aligns with all the fields and programs within the master.

How do you see the relation between research and design in your graduation project?

The feedback I received during the start of the project highlighted my use of a linear approach to the presentation and design process. This learning experience changed the way I view the relation between research and design, although I thought to already understand it. By focusing too narrowly on research and trying to frame the narrative before moving into design, I found myself constrained by time and unable to allow these two aspects to inform each other. The linear approach left me with limited flexibility, preventing iterative feedback between research and design, ultimately making my narrative somewhat fragile (See figure below: parallel vs linear).



Iterative Feedback between Research & Design

In contrast, I've come to understand the value of a cyclical and iterative process where research and design progress in parallel. This realization has been important: integrating research and design allows for continuous feedback, where choices can be tested and refined early on. For example, by incorporating design experiments alongside theory, I can identify what works and what doesn't much earlier in the process, therefore preventing me from being stuck in the thought process.

What do you see as the value (and limitations) of your way of working: your approach, your used methods?

My approach, which integrates a variety of methods such as historical analysis, typomorphological with soft mapping and mental mapping offers a comprehensive and holistic perspective on contributing to urban identity. By combining both qualitative and quantitative methods, my research ensures a deeper understanding of the current urban fabric, its history, and the social dynamics that shape user-experiences. This allows for the development of design solutions that are not only root-ed in the interesting theories but also responsive to the needs of the local community.

While my approach is of value, it also has its limitations. One potential challenge is the reliance on historical data and existing urban principles, which may not always be fully correct in its accurate-ness as the information is harder to find and understand.

Additionally, my approach emphasizes the human experience in which qualitative data is used. In this case I need to be aware of what I find and share is true, if there even is a truth in subjectiveness. What I decide to draw or to leave out impacts the way I communicate and make design choices. For example, interviews and soft mapping may provide valuable insights but can also be subjective and difficult to generalize across larger urban contexts. Especially with limited time and smaller sample sizes.

Finally, the most important lesson I have learned, is that I became aware that I may have wanted to imply too many methods because of enthusiasm and curiosity. However, this could make the graduation project to messy and overwhelming, lacking comprehensiveness. Limiting some of the methods can sharpen the communication within the thesis.

What is the relevance of your graduation work in the larger social, professional and scientific framework?

Socially, my graduation work responds to the ongoing need for sustainable urban development and addresses the overlooked aspect of cultural identity in complex urban environments. By focusing on the user experience and liveability in the Stopera block, the project aims to foster a sense of community and belonging in an urban context. By emphasizing the importance of traditional urban principles in contemporary contexts, this research not only addresses current urban challenges but also aims to inspire a collective vision for future urban development that aligns with the values and needs of society as a whole.

Professionally, the project aligns with current urban design trends that emphasize the importance of sustainability as a holistic approach. However, in here, the emphasis on timelessness as a core of sustainability offers a refreshing perspective that extends beyond just environmental concerns. Modernist technological advances brought unintended consequences, offering a basis for discussing parallels today. It provides a practical example of how urban regeneration can be approached while considering both contemporary needs and historical context, which is valuable for urban designers, but planners and policymakers as well. Referencing the Waterlooplein neighborhood and its controversy around its quality adds specificity and grounds the discussion in a tangible case.

Scientifically, my project adds to the growing body of research on urban identity, user experience, and environmental psychology (a topic that has not been linked to urbanism enough). It draws on interdisciplinary theories to bridge the gap between traditional urban design and user-experience in contemporary urban challenges, offering new insights into how we can enhance the quality of urban life through thoughtful design. The integration of social sustainability and the focus on timeless design principles also contribute to ongoing academic discussions about the sustainable urban futures that we envision.

## How do you assess the transferability of your project results?

Although my results are context specific, I also aim on their applicability to urban contexts beyond the specific case of the Stopera block in Amsterdam. As the project tries to answer the context specific case with sharp & unique design proposals, there are some universal topics that should be considered and taken as a lesson for future urban design:

### Universal Principles of Traditional Urban Design:

The foundational principles of traditional urban design, such as the block framework, human scale, and mixed-use developments, are adaptable to various urban settings. These principles are not location-specific but address fundamental aspects of urban identity and liveability, making them applicable to cities with similar challenges, such as fragmented urban fabrics, loss of identity, or degraded user experiences. Even when designing new places from ‘scratch’.

### Emphasis on User Experience:

The integration of environmental psychology and sociocultural factors ensures that the project’s outcomes prioritize human needs and perceptions, which are universal considerations in urban design. While specific design solutions may vary based on local contexts, the methodology of centering user experience can be applied widely. Especially the preference matrix of the environmental psychology.

### Timeless Sustainability as a Framework:

The focus on timeless sustainability, including the preservation of cultural identity and community engagement, is relevant across urban areas aiming for long-term resilience and community-driven urban regeneration. It is a value and part of the current urban trend of sustainability that is often overlooked but needed in terms of a holistic approach to sustainability.

## How does your design intervention contribute to identity while it speaks of traditional urban design principles, putting the site at risk to blend in with the rest of the area and rather lose its identity?

The principles of traditional urban design, defined within this research project, do not seek to copy the environment as it would not come across as authentic. The principles, created from an urbanist perspective, should be seen as general guidelines and not architectural rules as that is not the focus of the project. It leaves room for the designers of our generation to use their own perception of the guidelines and their own imagination.

Each generation has the right to express itself in time.

Copying the direct built environment would only erase the identity of the waterlooplein as that would make it blend in with the rest of the city. Within the given framework, the design is open for new styles as that is exactly what gives it a unique edge. It is about the balance of matching with the environment as on the other hand the current Stopera block is too disturbing and isolated.

Subtle controversial styles or accents in the design are desirable as it can remind the users of where they are and make the place more memorable. This balance in uniqueness while still matching the environment is what enhances the identity.

## How can a design intervention that seeks to reintegrate traditional urban principles avoid repeating the tabula rasa approach it critiques, particularly when proposing significant transformations to the Stopera block?

The challenge lies in the paradox of proposing significant changes while advocating for the preservation and evolution of existing urban identities. This tension requires a philosophical and methodological convincing approach that respects the continuity of place while addressing contemporary needs.

The Stopera block is a product of modernist tabula rasa thinking, which erased layers of historical and sociocultural significance in favor of an abstract vision of progress. To prevent a (‘hypocritical’) repetition of this approach, the proposed intervention emphasizes incremental evolution over radical transformation. This means working with the existing urban fabric—not erasing it—but adapting and layering new elements that resonate with the site’s history and social context.

Philosophically, this approach aligns with the “collective memory” of the city, where architecture and urban spaces embody shared experiences. In practice, this can be achieved by retaining key elements, such as the opera building, and designing with permeability and adaptability to allow for future changes rather than imposing a rigid, definitive solution.

The intervention also acknowledges that tradition is not static but a dynamic framework that can accommodate change. By embedding traditional principles into a framework that prioritizes human scale, diverse functions, and contextual harmony, the design seeks to honor the past while embracing the future. This method ensures that transformations are not imposed but emerge as a dialogue between the existing site, its historical layers, and contemporary urban needs, thus avoiding the pitfalls of another tabula rasa.

## References

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**The Future is Yesterday** explores how traditional urban design principles can guide the regeneration of Amsterdam's city center through the lens of human experience. Focusing on the Stopera block, the project reimagines a place where urban identity was once lost, transforming it through spatial diversity, adaptability, and local engagement.

By bridging design and experience, the research shows that sustainable cities are not only built but *felt*. Drawing from environmental psychology and the voices of local users, the design creates a flexible framework where public and private life intertwine, and where identity evolves through the city's existing morphology.

Ultimately, the thesis reflects on how the past can inform the future of urban form — not through nostalgia, but through continuity, experience, and the quiet resilience of timeless design.

