



Amsterdam



[Tri] Angles

A Sustainable and Dynamic Flow City

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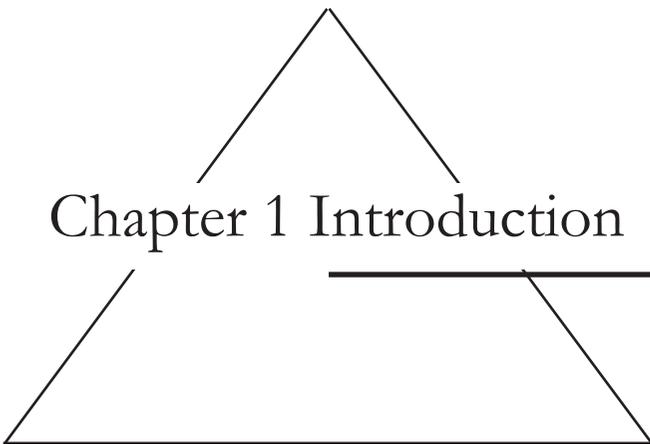
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Chapter 1 Introduction

1.1 Motivation

Built environment is considered to be an integration of different layers, land or landscape characters, public realm, building forms, program and trends and fashion (B.A Sandalack 2000). When individuals or groups become familiar with a particular space and link it with their cultural values, social meanings and personal experiences, it becomes a place for them (Tuan 1977). The city, as the big environment interacting with the people in it, gradually forms its own unique sense of place, and continue on its long term process.

As Ellin said in 1999, "The city, ancient or modern, has some characteristics that define it forever: the street, the square, the

public buildings, the residences, have established between them, through a slow and uninterrupted process, laws of composition... If such compositional laws are forgotten, as in recent years, the City, deprived of measurement and proportion, corrupts the architectural components within it, creating a monstrous medley which can never be called a true City".

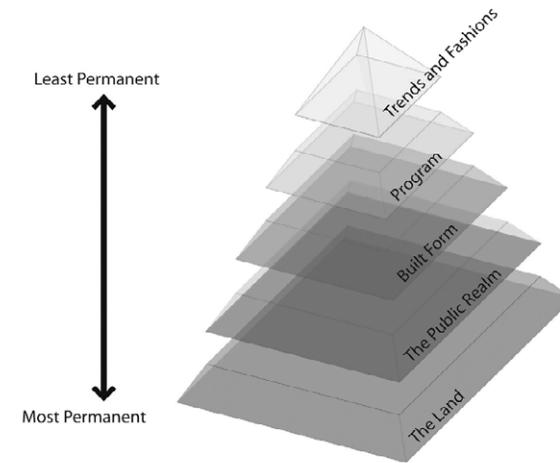
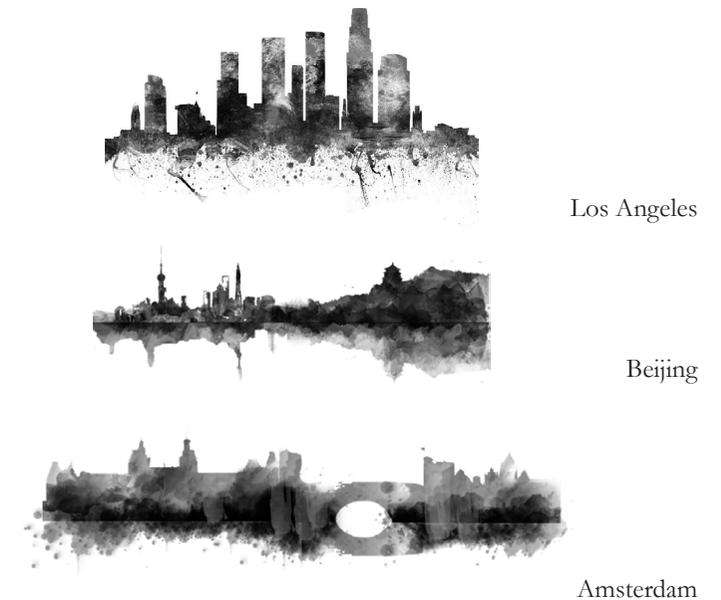


Figure 3. Framework for built environment, concept by B. A. Sandalack, 2000, re-drawn by Francisco Alaniz Uribe, 2005



Los Angeles

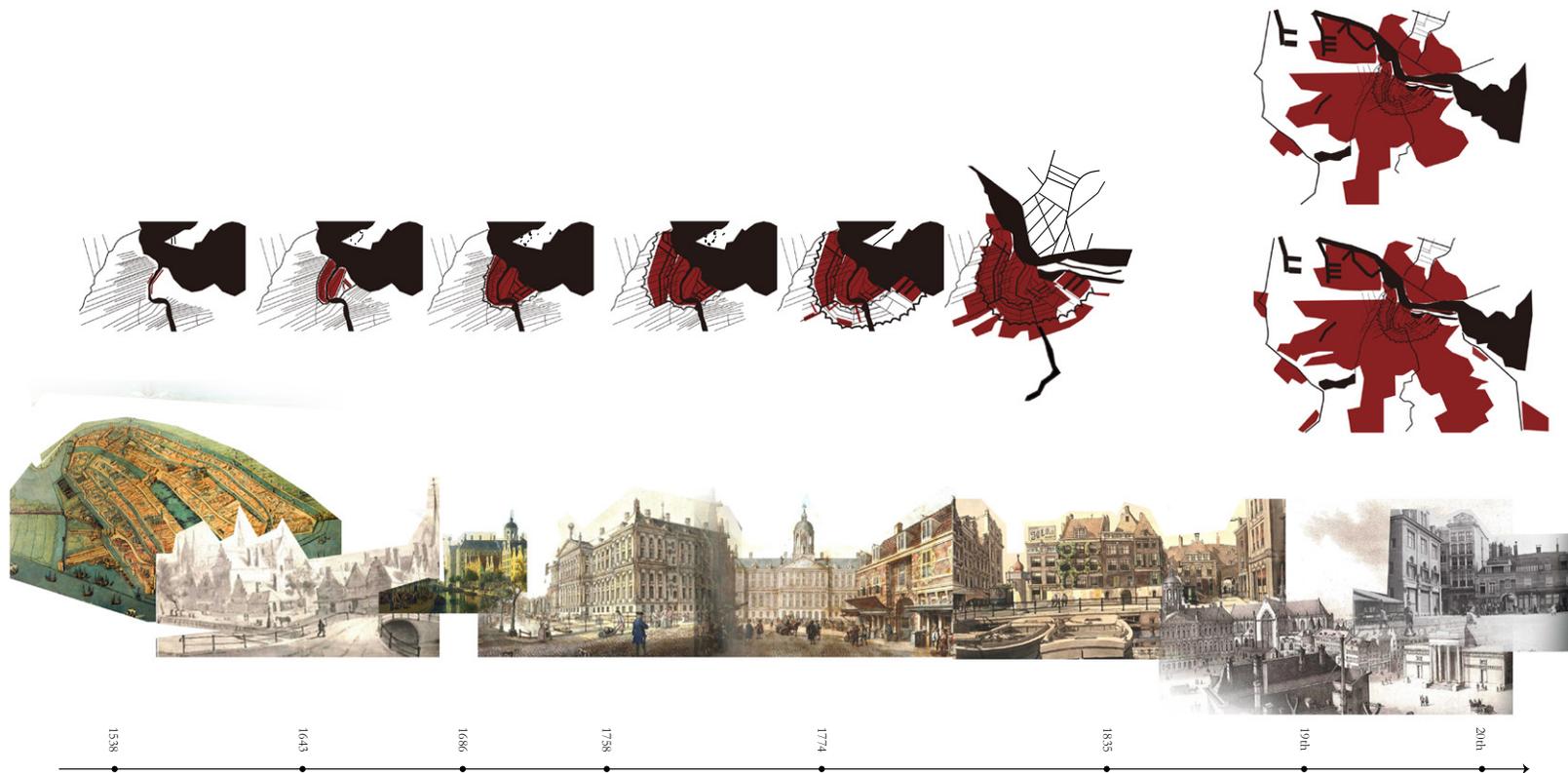
Beijing

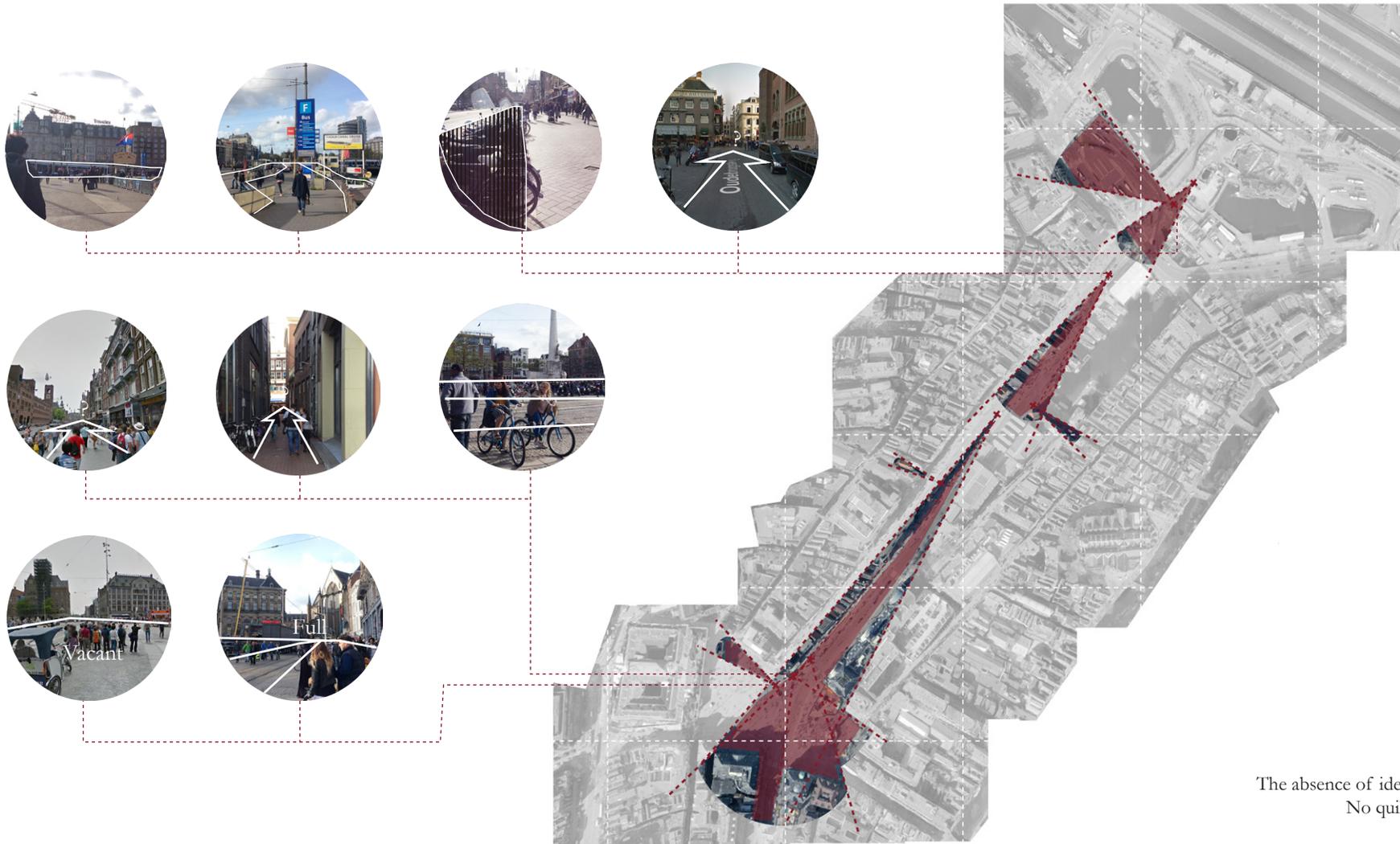
Amsterdam

As a foreign student in the Netherlands, the beautiful canal landscape and rich culture illustrated on books and Internet about Amsterdam really give me a strong image of Amsterdam.

From the succession of the city, I can imagine that Amsterdam was a village starting from two sides of Amstel, people built dam across it for defending, made ditches and canal for drainage. Then, people made use of these water traffic for trade and in

17th Century, Amsterdam reach it golden age. The city expanded with new canals, round by round and finally form its nowadays famous canal landscape. From the image of city from 16th century to 20th century of the centre of Amsterdam, although the form changes, we still can see a continuing sense of place that is the free atmosphere of daily life and trade closely combined with water.



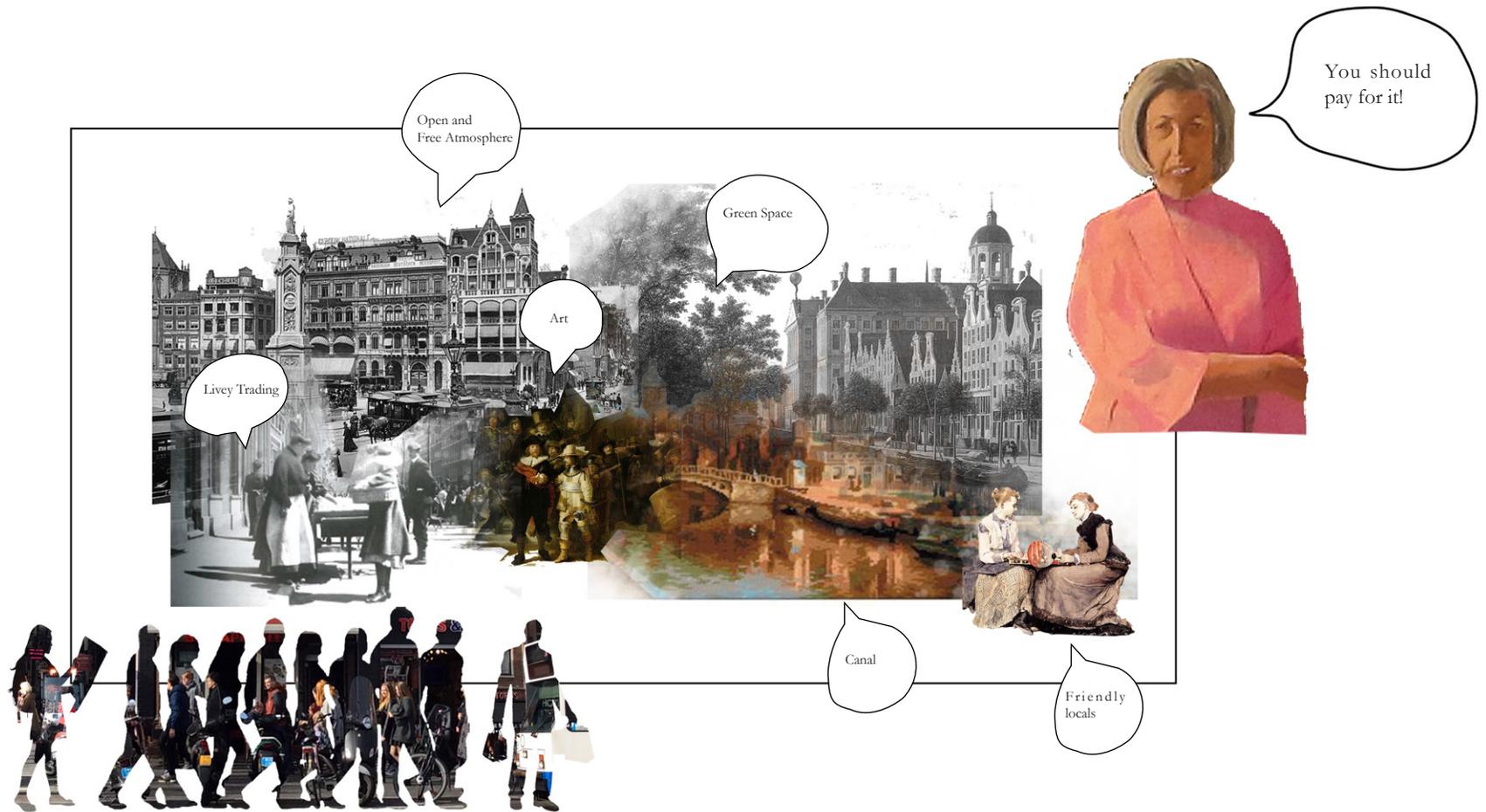


However, when I was walking from central station to Dam Square, which should be the magnificent birthplace of this millinery city, the first things I saw are chaotic tram lines and cars. Where is the river? Where are the canals? Then I have no choice, just followed the crowded people to Damrak Street. The

street was quite confusing. No visual focus, same commercial shops, thousands of bicycles and some dark lanes. Trams, cars, crazy bicycles and tourists occupied the street so I gave up going across the street and felt more and more stressful and impatient. Finally, Dam Square was in front of me,

but, nothing special. It was just a crowded and dirty square surrounded by traffic with

- Messy traffic
- No visual guide
- The absence of identifiable elements
- No qualified public space



The first experience of Amsterdam Heart is quite disappointed. I feel there is a loss of friendly relationship with people, remind of trade on the water and the free atmosphere.

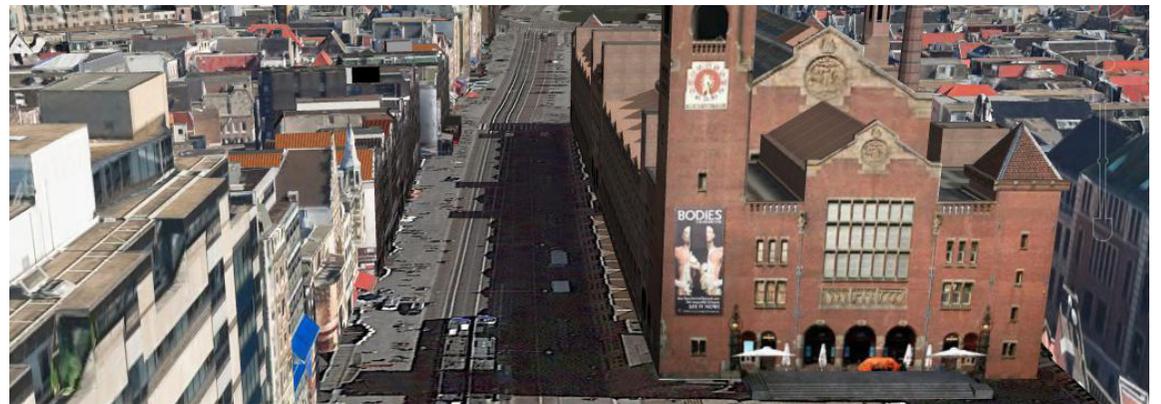
From the two pictures of Damrak Street in different ages, we can see the “Damrak Streets “are totally different things. The sense of place is gradually vanishing during the nowadays succession of city. But why?

feeling of relaxation? During the whole year of graduation project, I think it is worthy try to reveal the real image of Amsterdam and give the identity of Amsterdam back to people.

Why can this excellent city in history make me feel there is a loss of friendly relationship with people, free trade atmosphere and



Damrak,1900



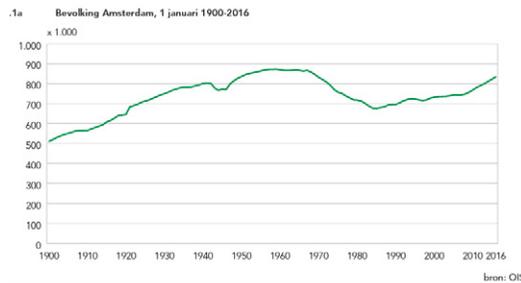
Damark,2016

1.2 Problem Statement

From the statics, there are more and more people living, working, visiting and travelling in Amsterdam. “According to the Dutch tourist board more than 5.2 million tourists descended on Amsterdam last year, a fifth of whom came from Britain. That’s a lot of visitors for a diminutive city like Amsterdam, which has a population of just 800,000.”

As we can see now, in the city center, there are more and more facilities serving for tourists, more

and more public space aiming at monotonous commercial usages. The poor small amount of residents still struggling in the city center have no privacy, no facilities for daily life, no space for relaxation and even no quite environment for staying alone. The value of streets, squares, public buildings and residents which define the characteristics of the city (Ellin, N., 1999) become victims for the city economic. Amsterdam now is separating itself from past context, from the basic components of city.



Drug trafficking is gaining ground in Amsterdam

Liquidations, radicalization and tourism make matters to the Amsterdam police.

© April 13, 2017



'Amsterdamse binnenstad kan de drukte niet meer aan'

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'The city did not see the dangers in time'

Interview Professor Jan van der Borg Tourism also supplies a lot, says professor Jan van der Borg. But residents do not take advantage of that.

© Miriam Remie © April 12, 2016



Amsterdam, tourism, the dirt and the full city

Amsterdam comes in its own filth. The new college must act quickly to prevent further slipping," said Wim Pijbes.

© Wim Pijbes © August 1, 2014

This season, Amsterdam is the first time in full measure, meaning it is an attractive city for visitors from home and abroad. With the reopening of the museums, the city has nowadays an unprecedented attractive cultural infrastructure. Amsterdam benefits from world-wide cultural tourism.

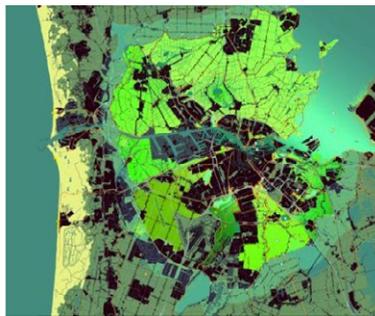
Furthermore, the Municipality of Amsterdam made the plan “Amsterdam 2040”, from the strategy we can see Amsterdam will keep on expanding and residents will be moved out of centre to accommodate more residents and make more space for tourists in the city centre. It will inevitably accelerate the “Disneyfication” of Amsterdam.

population between tourists and residents, the heart of Amsterdam will be a Theme Park or party town especially for tourists, and the people live in, maybe Amsterdam Ring 20, maybe no difference form living in the villages. And then, under this trend, the tourist will leave with disappointment because they will soon realize there is nothing behind this Disney stage. The Amsterdam will lose its vitality forever.

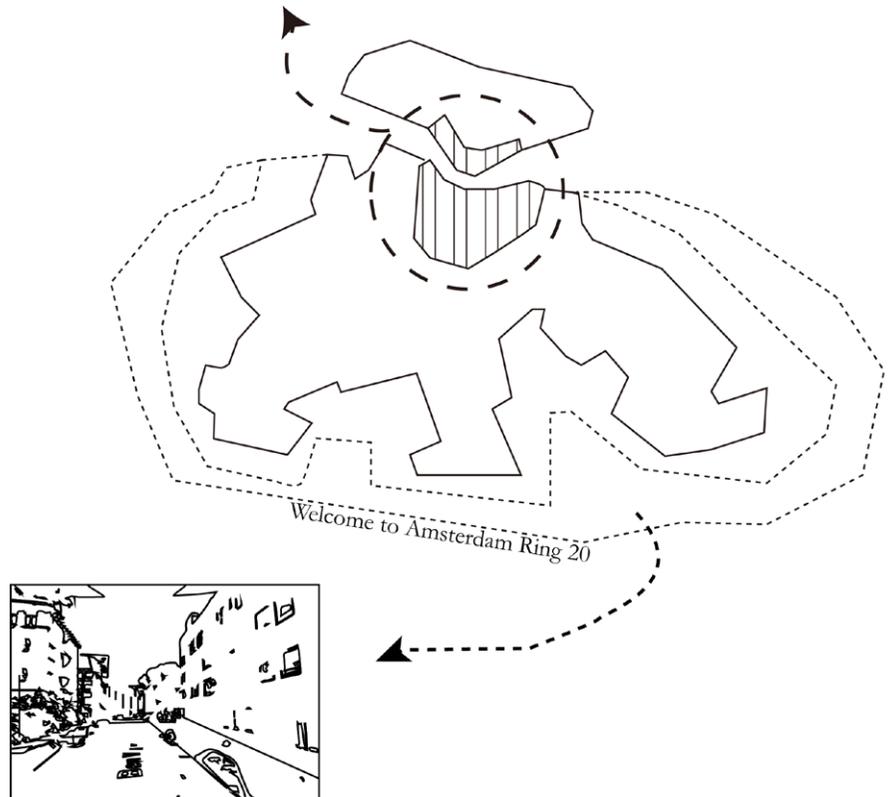
In the future, with the big contrast of



Amsterdam Theme Park



- | | |
|--------------------------------------|---|
| 1. Rolling out city center | 2. Interweaving the metropolitan landscape and the city |
| 3. The rediscovery of the waterfront | 4. Internationalization of the Southern Flank |



1.3 Research Objective

The Amsterdam heart as the starting point of Amsterdam, where most of the historic value are lying, which contains the strongest identifiable elements of the city, needs a design to, enable the city continue on its own process as a complex ensemble with different flow, different elements, structuring different orders to reveal its beauty.

Considering the problem, my research objective is “Find a balance between crowds and limited city space to enable the city continue on its own process as a complex ensemble with different flow, different elements, and structuring different orders to reveal its beauty”.

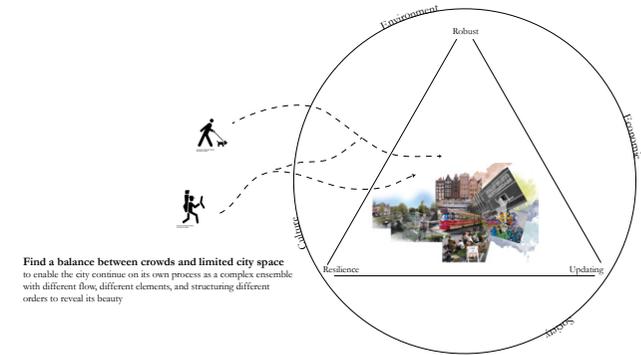
The city should be able to contain multiple dynamic overlapping processes within a real ur-

1.4 Research Question

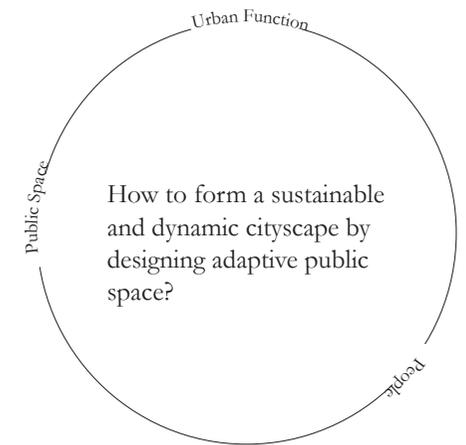
To achieve this objective, my research question is “How to form a sustainable and dynamic cityscape by designing adaptive public space”. The adaptive public space is like the space in sponge city which can absorb and divert water. Here, the space is also multi-functional, working as a container for the interweaving of different flow of people, in this way, the cityscape is able to distribute and gather people quickly to ensure the public space can be well used. Then, the city can be sustainable in four

ban spatial connective context and update itself under the changing. In terms of the society, the urban space as an important layers of built environment is a route for people walking from place to place, a meeting place for conversations, a playground for relaxation, a shopping location for trading, a stage for entertainment, etc. It must be designed in such a way that all peoples are encouraged to use it. (Hajer, 1989)

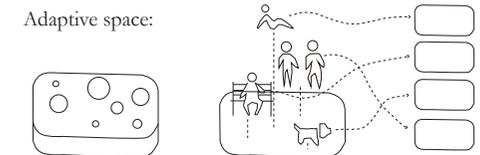
aspects: environmental, economic, social and cultural, involving with legible sense of place, providing and collecting memory.



Find a balance between crowds and limited city space to enable the city continue on its own process as a complex ensemble with different flow, different elements, and structuring different orders to reveal its beauty



Sustainable and Dynamic:
The sense of place is legible during the succession of cityscape.



I will reach my goal with these sub-question:

Sub Questions:

Basic Information

- Where do people go in Amsterdam centre?
- What should be the real image of Amsterdam centre?
- What are the components of Amsterdam centre?
- What may be the possible future for Amsterdam centre?

Theoretical background

- How to categorize the built environment and people?
- What influences people's movement or social behavior?
- What influence the sense of place perceived by people?

Application

- How can adaptive cityscape distribute people?
- How can limited space provide legible sense of place?

Reflection

- How to make it feasible?

1.5 Relevance and Scope

Amsterdam, a city on water, with marvellous history behind it should have a strong city image that enable everyone who lives here, visits here, studies here, passes here to feel the rich context and strong urban spirit. Nowadays, the beauty of Amsterdam is buried under the chaotic modern infrastructure and disorganized people, sacrificed for the economic. The city images is blurred. The democracy of the city is vanishing. The capacity of limited urban space is reaching its peak. If we let this urban process go, the Amsterdam will lose its distinction and vitality forever. It is urgent that a project should be tested to a new propose of organizing urban flows in order to release the pressure of public space and

a new idea of integrating landscape with urban context to show images of city revealing the city spirits and as a result, to find back the liveability and vitality.

As a student in landscape architecture, from the review of previous works, at the mention of cityscape design for people, most of us choose to design public space. However, the space is designed for what? Can this space help people read the city? The public space, as the important patches in the city, can it provide different sense of place according to different urban palimpsest?

The project starts from the scope of a series of public space in Amsterdam. Although the specificity of my design proved a possibility for Amsterdam centre, many other conclusions, methods and principles have the potential to be applied to other similar location in metropolitan area.

1.6 Reading Itinerary

The report firstly starts from the contrast between illustrated city image and my personal experience in Amsterdam Centre in chapter1, making this as the basis of what problems the Amsterdam Centre is faced with. Secondly, the problem that the city image is blurred is pointed out under the support of statistic, policy and site observation. Thirdly, considering the problem, the research objective and question is addressed and I then explain the relevance of my project in three aspects: the society, the landscape as profession and myself.

In chapter2, the methodology is exhaustively elaborated in three steps. It begins with the theoretical

framework related to my project and the research approach. Finally, research model will be formed.

The design principle is made in two ways in chapter 3: case study of Barcelona and relevant book about urban design and place making and from chapter4, I starts to answer the research questions. Firstly, I starts with the analysis of location through scales to gather basic information of Amsterdam Centre. Secondly, the theoretical support is applied to specific site problems and used for further design.

Finally in chapter5, with the design project, I concludes the model and strategy for the cities faced

with same problems and tries to test if it is suitable in order to find potential of my project.



Chapter 2 Methodology

2.1 Theoretical Framework

As Nadia Fava said in 2012, starting from the 1970s, as a response to some of the results of the modern movement, new research about the imagery of the city begins at the MIT in Boston, with a different focus. Kevin Lynch's studies, which called for the necessity to find principles of orientation in the city based on two principle qualities and which in some manner had to encompass the entire structure: the legibility –which is essentially the ease with which people understand the layout of a place–, in other words the pattern of the city, and the 'imageability' which is the quality in a physical object that gives it a high probability of evoking a strong image in any given observer, points in the memory. (Lynch 1960).

Keeping the problems in Amsterdam in mind and considering what Balibrea argues in 2004: the city image is important to draw because tourists require a coherent representation/meaning of the city, one that is easy and pleasant to consume in order to be oriented in a new map, to build clear and attractive city image, we as designers should:

Reveal legibility to provide qualified orientation;

Evoke identity and sense of place which give imageability and finally,

Find back disappearing dynamic vitality.

I will elaborate my theoretical framework from these three aspects:

2.1.1 Legibility

Lynch's ideas can be linked to more recent arguments, where it is observed that city authorities have adopted strategies that aestheticize cities by stressing the visual consumption of public space in order to improve tourism (Lash and Urry 1994, Zukin 1998). There are five important components building the image of city: path, landmark, edge, node and district. (Kevin Lynch, 1960). By providing identifiable visual quality on districts, landmarks and pathways, the users are able to structure and identify the environment. Besides, with Tunnard & Pushkarev (1963, p. 140) in mind, a landmark lifts a considerable area around itself out of anonymity, giving it identity and visual structure.

Cullen(1971) also analyses the experiences we have of urban space from the perspective of the person in the street, and seeks to establish the fundamental components of that experience, noting particularly the importance of serial vision, of places or centres, and of the content of those places.

Furthermore, the designers should make urban context as the basis in order to provide a continuing , harmonious and legible urban space as Lynch said in 1960, the image of such a small place can reflect on the whole district when it is well embedded in the context.



Figure 2.3. Two representations of existential space.

Norberg-Schulz (1971, chapter 2) gives a more formal analysis of the structuring of existential space, and identifies both a vertical and a horizontal structure—basing the latter very much on Lynch's analysis.

First he identifies several levels of existential space (figure 2.4A). The widest and most comprehensive of these is that of 'geography'—the level at which meaning is given to nations, continents, and regions beyond our direct experience (it therefore has a cognitive character). The next level is that of landscape, the background to man's actions and a reflection of his interactions with environment on a major scale. Below this is an urban level, differing from that of landscape in that it is almost entirely a built space created through human effort and purpose. The next level is that of the street, the basis of our experience of cities; and below that is the house, or more precisely the home, the central reference point of human existence; Finally there is the level of the object—a material space in which the value of objects is determined by their significance as utensils, or a symbolic space in which the objects or things represent other spaces and experiences.

At each of these levels there is a more or less clearly identifiable horizontal structure (figure 2.4B). This comprises three major elements. First there is a set of districts or regions of particular significance, defined by the interests and experiences of the groups concerned: "these various realms of relevances are intermingled, showing the most manifold interpenetrations and enclaves", they

are not clear-cut, disparate regions (Schütz, 1962, Vol.2, p.126). These are organised and opened up by paths or form at all the levels of existential space. Sometimes it corresponds directly to the physical features of the landscape—roads, buildings, vistas (figure 2.3B); sometimes it corresponds to mythical phenomena, such as paths to heaven and hell or the sites of mythical events (figure 2.6B); and sometimes it reflects particular intentions or biases, such as an architect's concern with buildings. In short, the structure has no fixed orientation or scale, but reflects the interests and concerns of the cultural group of which it is an expression.

Places in existential space can therefore be understood as centres of meaning, or focuses of intention and purpose. The types of meanings and functions defining places need not be the same for all cultural groups, nor do the centres have to be clearly demarcated by physical features, but they must have an inside that can be experienced as something differing from an outside. For many religious peoples places are holy and within the context of a powerful symbolic and sacred space. For the contemporary European or North American most places have a much weaker symbolic content than this, and are defined largely by the meanings or significant associations attached to buildings, landforms, or areas in specific locations. But in both cases places constitute significant centres of experience within the context of the lived-space of the everyday social world.

Reference:
Relph, E. (1976). *Place and placelessness* (Vol. 1). Pion.

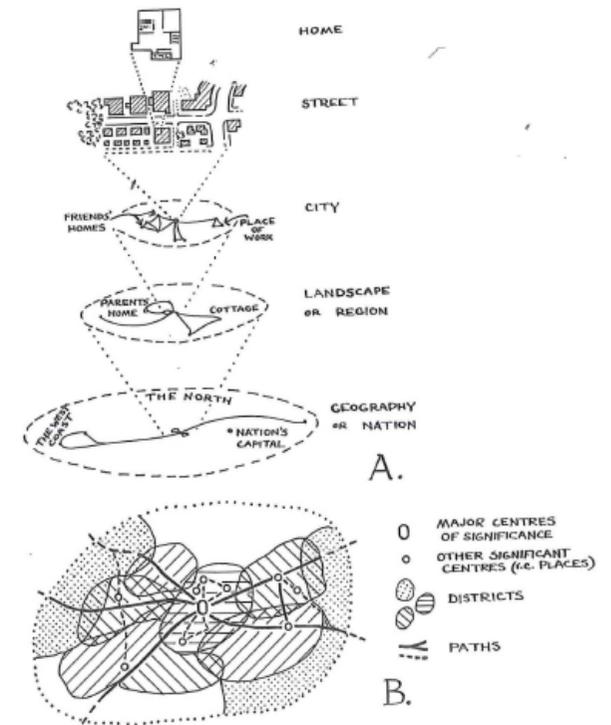


Figure 2.4. Vertical and horizontal structures of existential space. (A) Levels of the vertical structure, especially as they apply to urban spaces (based on an analysis by Norberg-Schulz, 1971). (B) Components of the horizontal structure of existential space.

2.1.2 Imageability

Kevin Lynch (1960, p. 9) defines imageability as a quality of a physical environment that evokes a strong image in an observer: “It is that shape, color, or arrangement which facilitates the making of vividly identified, powerfully structured, highly useful mental images of the environment”. A highly imageable city is well formed, contains distinct parts, and is instantly recognizable to anyone who has visited or lived there. It plays to the innate human ability to detect and remember patterns. It is one whose elements are easily identifiable and grouped into an overall pattern.

There are two key factors creating imageability,

The first factor is **identity** that distinguish and qualify the space. Each city is historically determined and the context is a system of meanings interacting continuously with the urban system. Its existence is bound, therefore, with its capacity to develop in step with the times and with the reality surroundings it. For when any system loses this capacity and has no future prospects, it risks total disintegration and the loss of its own identity. Identity is not a property but a relationship (or system of relations) between different evolutive stages in the development of a system. This identity is what enables us to identify one city compared with another, and what distinguishes it and represents the element in which its inhabitants are reflected. When, generally speaking, harmony is felt in living in a city, this is nothing more than feeling in harmony with the identity it expresses. Identity, understood in this sense, is the element that guides

every urban project. All project structures that contradict the identity of a city, and therefore its organisation, are rejected to avoid these running the risk of disintegrating it. (Nicola Sisti, 2008) What we as landscapers should do is achieving intergration between environmental system and urban processes with sepecific features.

As Nicola (2008) said, the meanings of a city are therefore never unambiguous but depend on the elements and on the relations between the elements that are taken into consideration each time. In the same way, the relationship between city and territory may take on meaning variables depending on the “dominants” that are considered each time. So in the case of meanings of relationships between city and territory, there will be a situation where, depending on the dominants taken into consideration, certain relationships will be selected rather than others.

To guide the organisation of urban life in an environmental sense (re-centring organisation of the city on the environmental components of a territory) and to nurture the development of city and territory identity, it is therefore important to see in the context the structures and relations between the elements. For creativity lies in seeing similarities where there are none, making them be seen and imposing them on common sense by selecting what is significant and what is not. Similarity, therefore, is not immediately present; it is important to highlight it. (Nicola, 2008)

Landmarks are believed to be a key component of imageability. The term ‘landmark’ does not necessarily denote a grandiose civic structure or even a large object. In the words of Lynch, it can be a doorknob or a dome. What is essential is its singularity and location, in relationship to its context, background and the city at large. Landmarks are a principle of urban design because they act as visual termination points, orientation points and points of contrast in the urban setting. Tunnard & Pushkarev (1963, p. 140) attribute great importance to landmarks, stating: “A landmark lifts a considerable area around itself out of anonymity, giving it identity and visual structure”.

Distinctive buildings are the most common type of landmarks. Memorable buildings are characterized by complex shapes, large sizes, and high use (Appleyard, 1969; Evans et al., 1982). Additional elements that may enhance building recall are natural features around them, ease of pedestrian access, and uniqueness of architectural style.

Reference:

1. Sisti, N. (2008). The Influence of the Landscape on the Identity of Urban Space. In *Urban Landscape Perspectives* (pp. 79-91). Springer, Berlin, Heidelberg.
2. Lane, R. (2006, April). Urban Design Qualities Related to Walkability. In *American Planning Association's 2006 National Planning Conference*, San Antonio, Texas (pp. 22-26).

Second, imageability is related to **'sense of place'**.

Sense of Place usually is defined as an overarching impression encompassing the general ways in which people feel about places, senses it, and assign concepts and values to it. Jan Gehl (1987, p. 183) explains this phenomena using the example of famous Italian city squares, where "life in the space, the climate, and the architectural quality support and complement each other to create an unforgettable total impression". When all factors manage to work together to such pleasing ends, a feeling of physical and psychological well-being results: the feeling that a space is a thoroughly pleasant place in which to be.

There are different forms of space and Norberg-Schulz (1971, p.11) suggests that "pragmatic space integrates man with his natural, 'organic' environment; perceptual space is essential to his identity as a person; existential space makes him belong to a social and cultural totality; cognitive space means he is able to think about space, and logical space ... offers him a tool to describe the others". Yi-fu Tuan (1977) also said when individuals or groups become familiar with a particular space and link it with their cultural values, social meanings and personal experiences, it becomes a place for them.

Place, in association with space, also has a multiplicity of interrelated meanings. Place is not a simple undifferentiated phenomenon of experience that is constant in all situations, but instead has a range of subtleties and significances as great as the range of human experiences and intentions. Thus

Aldo van Eyck (1969, p.209) writes that "a village (town or city) is not just one bunch of places; it is many bunches at the same time, because it is a different bunch for each inhabitant. For a Bostonian answering questions about the significant elements of the city's identity the distinctive places are the obvious tourist features: Boston Common, the Old North Church, Paul Revere's House; but for a Bostonian going about his daily routine the significant places are his home and his place of work.

Heidegger (cited in Norberg-Schulz, 1971, p.16) has written: "Spaces receive their being from places and not from 'the space'... . Man's essential relationship to places, and through them to space, consists in dwelling ... the essential property of human

existence." . If a place conveys no meaning, conveys no meanings anymore and people suffer from a sense of 'placelessness'. Relph (1976) explained that 'placelessness' refers to the settings which do not have any distinctive personality or sense of place. Relph (1976) claimed that when places cannot be culturally recognized, they suffer from lacking a sense of place; in this case people are faced with placelessness.

According to Thwaites and Simkins come out a chronology that distinguished the dimensions of visual, psychology and spiritual directly tell a place is a way of seeing and perceiving. (Mohammad, 2013)

Table1: the concept of place

Landscape elements in cultural context	Buildings	Landscape (as an icon)	People's perception	People's experience	People's response	Cultural attractions	Transportation	Climate	Value	Accessibility	Social interaction	Notion of Place	Space	Image ability	Identity	Sense of place
	P h y s i c a l															
	Visual ← → Spiritual															
Authors:																
1. Matthew Carmona, Tim Heath, Taner Oc, Steve Tiesdell (2006)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
2. Kevin Lynch (1988)	✓		✓	✓	✓		✓		✓	✓	✓	✓	✓	✓	✓	
3. Kevin Thwaites, Ian Simkins (2007)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
4. Christian Norberg-Schulz (1985)		✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓		✓	✓
5. Gordon Cullen (1971)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
6. Yi-Fu Tuan (Seventh printing, 2011)			✓	✓	✓	✓			✓	✓	✓	✓	✓		✓	✓

Psychology is referred to how do people perceive, experience and respond to the environment. Some of environmental psychologist also argue the experience of place is one the most important factors in the sense of place. The ideas of spirit within the place or character of place make up the sense of place, and how feelings like stimulated, excited, joyous are an example of this experience. A place is just not an object, but through the area and experience of meaningful activities.

The table 1 on the previous page show the visual dimension such as buildings has become very popular topic to bring up the character of the place. In regards to personal history, person's image by experiencing the visual attributes of localities.

This knowledge provide an insight about how people receive and perceive their built environment and how the spatial settings stimulate people's behavior . By taking that in mind, the designer can reveal a distinctive and imageable city to the receivers.

Reference:

1. Relph, E. (1976). *Place and placelessness* (Vol. 1). Pion.
2. Najafi, M., & Shariff, M. K. B. M. (2011). The concept of place and sense of place in architectural studies. *International Journal of Human and Social Sciences*, 6(3), 187-193.
3. Mohammad, N. M. N., Saruwono, M., Said, S. Y., & Hariri, W. A. H. W. (2013). A sense of place within the landscape in cultural settings. *Procedia-Social and Behavioral Sciences*, 105, 506-512.

2.1.3 Urban Vitality

There are several ways people use common city space: purpose walks from place to place; promenades; short stops; longer stays; window shopping; conversations and meetings; exercise; dancing; recreation; street trade; children's play; begging and street entertainment... As a design, we should consider the walking traffic, pedestrian streams, sidewalk capacity and crossing the street safely to achieve good urban quality with human dimension.

Four objectives are mentioned by Jan Gehl (2013): lively, safe, sustainable and healthy cities. "Lively" means people walk, cycle and stay in city space. "Safe" means more people move and stay. "Sustainable" means green mobility & walking or cycling. "Healthy" means walking or biking can be natural part of the pattern of daily activities. In this way, the walking is more than walking and city is a meeting place.

Considering the public space features in Amsterdam Center, the streets take a dominant role. Since the movement of "Pedestrianization" took place, considerable design and research work has documented the impact, both positive and negative, of pedestrianization efforts (Breines, Dean, 1975; Brambilla, Longo, 1977) and one of the weakness is the qualities such as public access and street life are ignored. Another important movement is "Livability", recognizing the importance of the street environment for the social life of cities. It emphasizes opportunities for greater safety, security, and social contact,

particularly on residential streets, where traffic and street quality directly affect residents' satisfaction (Appleyard, Lintel, 1977).

Nowaday, a significant focus of street design is democracy. Planner and political scientist Maarten Hajer parroted Sennett by stating that "the public space of cities must be designed in such a way that all peoples are encouraged to use it" and urban designer and planner Riek Bakker echoed him by stating that public space should be an "objective and neutral space" designed for all people. (Harteveld, M. G, 2017)

Kevin Lynch, another keen observer of urban life, argues in *A Theory of Good City Form* (1981) that we have five basic public space rights: presence, use and action, appropriation, modification, and disposition.

These rights, simply stated, are that people should not only have access to a public space, but also freedom to use, change, and even claim the space, as well as to transfer their rights of use and modification to other individuals. Lynch's spatial rights provide an effective measurement of the street's publicness and democracy. (Francis. M, 2016)

These can all be considered to be supporting theories to give the urban vitality back to Amsterdam Centre by designing active urban space, in this case, mostly the streets.

Reference:

1. Gehl, J. (2013). *Cities for people*. Island press.
2. Harteveld, M. G. *The Quest for Public Space: Changing Values in Urban Design The City as Learning Lab and Living Lab*.
3. Francis, M. (2016). The making of democratic streets. *Contesti. Città, territori, progetti*, (1-2), 192-213.

2.2 Research Approach

Research by Design

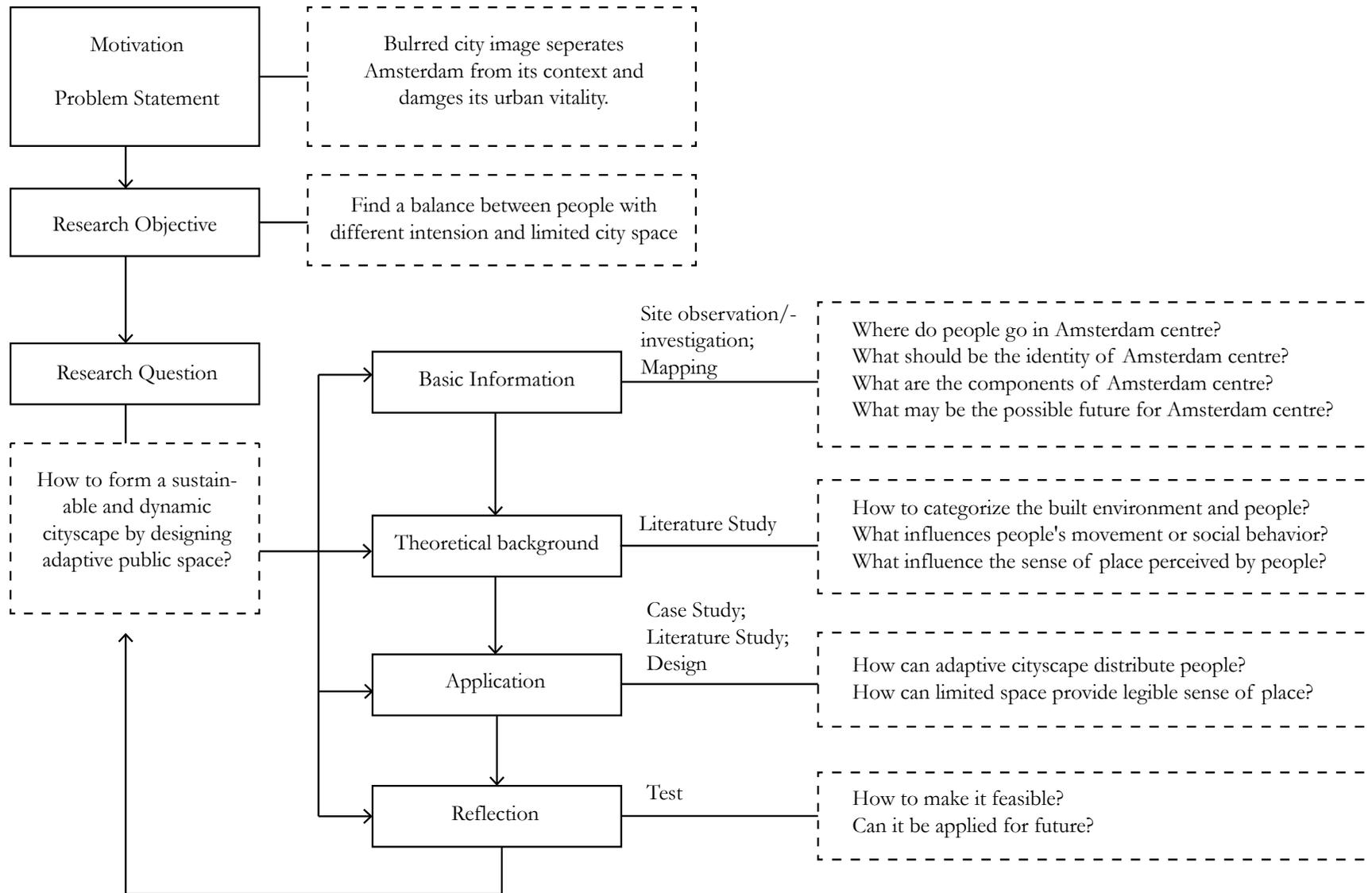
Design is the means by which the architect poses a question and develops complex solutions. It is a reflective practice in which critical assessment, comparability and evaluation takes place through sketching, through the continual weaving between problem and solution in an iterative movement between inquiry and proposal (Thomsen and Tamke, 2009). In my project, a research by design model is formed, achieving new knowledge about landscape design through the act of designing.

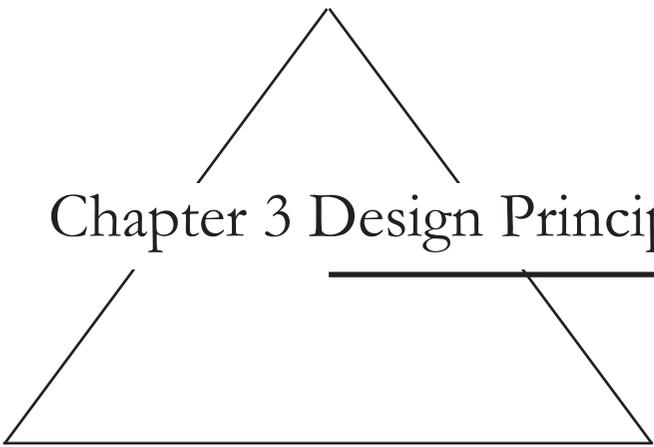
According to the definition from a working group under the research committee at EAAE 1: Research by design endeavors to incorporate and develop the working method of architects – the searching spatial sketching in a specific material - in the environment of academic research and development. Through research by design, concordance is sought between the methods of research and a form-giving, experimental design practice.

In my project, research and design are not irrelevant aims. Instead, research is arose form design. As Borgdorff elaborated in 2005, the artistic practice itself is an essential component of both the research process and the research results.

Reference: Hauberg, J. (2012). Research by Design—a research strategy. *Revista Lusófona de Arquitectura e Educação*, (5), 46-56.

2.3 Research Model





Chapter 3 Design Principle

3.1 Case Study

3.1.1 Project 1020

The Amsterdam city centre has a romantic image. But behind the exciting, unconventional, ‘anything goes’ image of the city centre lurks a different reality; a reality consisting of sex trafficking, forced prostitution, and money-laundering operations; a reality caused by the concentration of brothels, smart shops, coffee shops, souvenir shops, foreign exchange bureaux, gambling halls, minimarts, peep shows, massage parlours and low-quality hotels, bars and restaurants.

Proposals for increasing the diversity of the centre are currently being carried out. We are working towards achieving a better balance between different types of businesses and emphasising the area’s best aspects. This approach creates opportunities to showcase the new context of the area, with the development of both banks of the river IJ, the North/South metro line and the so-called ‘Red Carpet’.

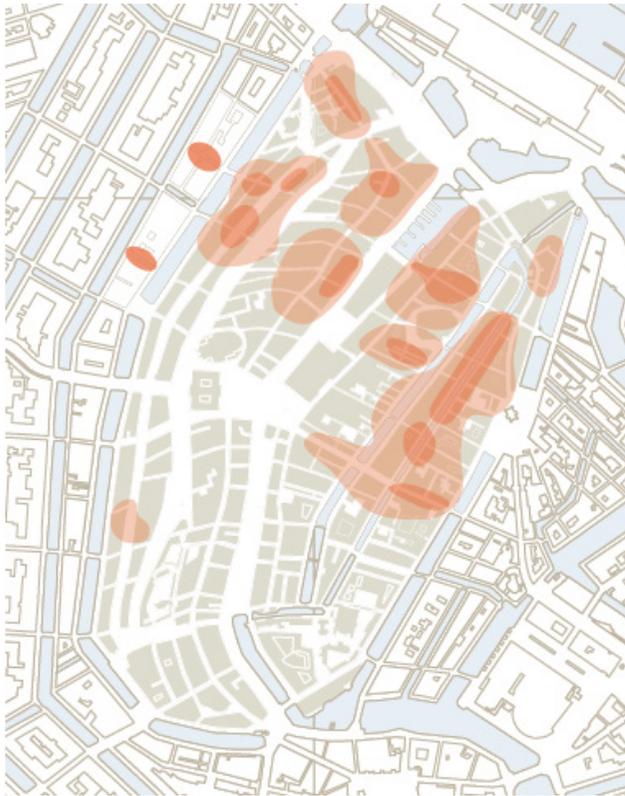
The Wallen area will retain its special character – with its network of canals and lanes – but without the darker side. The neighborhood will remain a mix of living, working and nightlife. It

will be an appealing cocktail of style and excitement, so partly ‘red-light district’, but at the same time an inviting neighborhoods for everyone who wants to explore the shops, galleries, museums, restaurants, trendy eateries and old-style ‘brown cafés’. The existing ‘pioneer’ businesses and the positive qualities already present in the area will be enhanced. Tempting new visitors to the neighborhood will create further opportunities for other business proprietors

To showcase the area’s new vitality, we zoom in on the developments in the following seven areas within the 1012 postcode:

1. Area around the Dam, Damrak, northern part of Nieuwendijk and the lanes in between
2. The Rokin, the Nes, Oude Turfmarkt and the lanes in between
3. Damstraat, Pijlsteeg, Oude Doelenstraat, Oude Hoogstraat and Nieuwe Hoogstraat
4. Warmoesstraat, Oudebrugsteeg, Lange Nieuzel and Nieuwebrugsteeg
5. Oudezijds Achterburgwal and side streets
6. Oudekerksplein and environs
7. Zeedijk and Geldersekaade





Possible areas of development:

- 1. Living on the canals
- 2. Small red-light district
- 3. Nightlife on the Spuistraat
- 4. Fashion & gadgets
- 5. Travel
- 6. Wide range of high street shops
- 7. Nightlife, residential, good quality daily shopping
- 8. Chinatown, 21st century style
- 9. Up-market shopping, attractive street cafés
- 10. Window dressing, culture, Dutch Design Center, cuisine
- 11. Fashion and cuisine, living in the lee of the city centre
- 12. Red-light district: adventurous but humanised
- 13. Speciality shops, front office for Amsterdam Knowledge City
- 14. University Library, World Book Capital City 2008

Nuit Blanche Amsterdam: The Nuit Blanche, originally from Paris, is a high-profile initiative. This yearly night-time journey of discovery through the cultural centre of Amsterdam, between the Dam and Central Station, led its audience from works of art, performances, installations, demonstrations and exhibitions to interactive and musical projects in unconventional places.

The plan for the Nes, the Lange Brugsteeg/ Grimburgwal and the surrounding areas is to emphasise the cultural and theatrical functions of

the street and also to promote activity during the day. The Nes will be an attractive, dynamic street for theatre and culture with innovative theatres, accessible but good-quality hotels, bars and restaurants, and interesting shops.

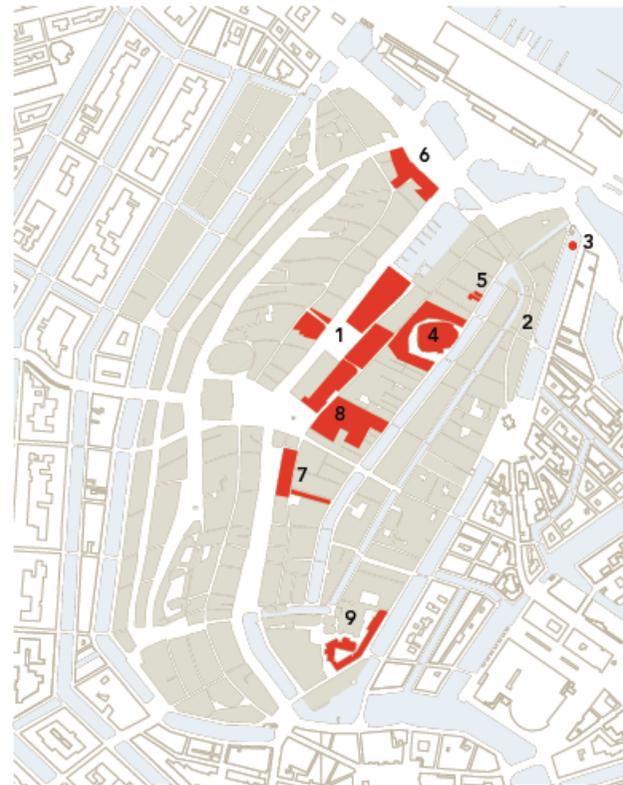
The changes in the area are being implemented from the point of view of spatial planning: by means of a streetlevel approach, by paying attention to public space and by stimulating key projects. In addition the area is seeing active measures being taken administratively, legally and in terms of healthcare.

First strategy: Key to improvement

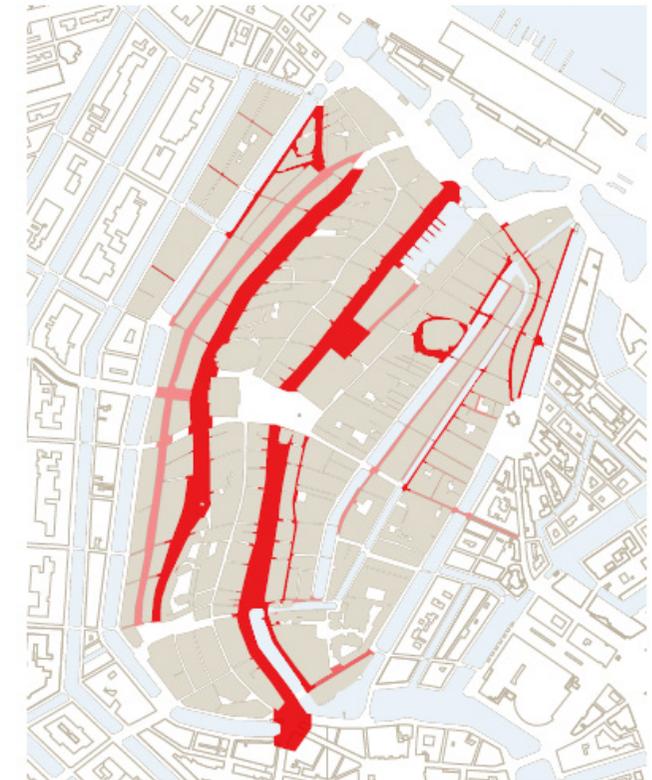
Nine city centre locations will be the focus of the so-called key projects. These are projects that have been instigated by different parties in each area. They are supported by the municipal council. These projects provide the driving force for economic development in the area.

The nine key projects are listed below, followed by further details of two of the projects.

1. Beursplein
2. Chinatown
3. Parking garage Geldersekade / Oosterdokseiland
4. Oudekerksplein
5. Ons' Lieve Heer op Solder museum
6. Victoria Hotel and the Kadasterpand
7. Fortis building Rokin
8. Krasnapolsky
9. Binnengasthuis grounds (University of Amsterdam)



Nine key projects



- Planned improvements to public space
- Completed improvements to public space

The fact that window prostitution is so widespread throughout the area makes the situation somewhat unclear and unverifiable. The proposal is to preserve but reduce window prostitution to two clear areas: 1. The Oude Nieuwstraat and 2. The Oudezijds Achterburgwal and side streets. This would allow about half of the windows to remain, leading to more effective and efficient enforcement by police and other regulators

According to Els Iping, chairperson of stadsdeel Centrum (Amsterdam's Center City borough) window prostitution will be allowed only in the direct vicinity of the Oude Nieuwstraat and the Oudezijds Achterburgwal — and then only under strict new rules.

Source: <https://www.amsterdam.nl>

3.1.2 Red Carpet

Amsterdam invests heavily in her historic entrance to make it ready for the future. The Rode Loper project contributes to the realization of a high quality environment where you would like to stay: pleasant squares, walkways and rich shopping streets. With the renovation of public space from Damrak to Cornelis Troostplein, the Red Carpet brings back the charm and grandeur to the city.

By 2015, Damrak was the first part of the Red Carpet. In September 2017, the Rokin and Muntplein, and in the autumn of 2017, will follow the Ferdinand Bolstraat. By the end of 2017 a part of the Beursplein is ready. In the summer of 2018 we will provide the entire Fair Area (including underground bicycle storage) and the renewed Vijzelgracht.

The red carpet is rolled out through the historic center, the 17^e century canals and 19^e century pipe. The area runs from Damrak, via the Beursstraat, the Beursplein, the Rokin, the Old Turfmarkt, the Mint to the Vijzelstraat, the Vijzelgracht, the Nieuwe Vijzelstraat, and so on to the Ferdinand Bolstraat. In the Zuid district, the Red Runner

follows the Ferdinand Bolstraat to the Van Ostadestraat.

In 2013, the implementation of the Red Runner started with the renovation of the Damrak. By 2015 this first part of the Red Carpet was finished. We are currently renovating the public space of the Rokin and the Ferdinand Bolstraat, the Muntplein and the Vijzelgracht. In the summer of 2017, Rokin and Muntplein are ready, and in the autumn also the Ferdinand Bolstraat. De Vijzelgracht is ready in early 2018, together with the stock market whose execution starts in the first quarter of 2017.





Damrak

In March 2015, the completely renovated Damrak was delivered. A renewed and full city entrance. The redeveloped Damrak is the starting point of the Red Runner.

The Damrak is the oldest part of Amsterdam. A small thousand years ago, the city was at the mouth of the Amstel. Damrak is still the most important gateway for millions of visitors and residents of the city. A revaluation of this area was one of the main reasons for launching the Red Carpet project.

Decision

A comprehensive process of decision-making took place for the refurbishment of the Damrak. After several rounds of contest, the city council and city council in Amsterdam in early 2012 established a final draft. The design and all accompanying documents can be downloaded from our publications.

Performance

The work of the Damrak began in September 2013. During the work, Damrak remained accessible and the entrepreneurs held their shop open. This made the job a complex job done in parts.

The area was delivered on time without too much

trouble for entrepreneurs and visitors.

Kademuur Damrak and residual points

In addition, during the redevelopment of the Damrak, the hundred-year-old quayside was also replaced by the cruise ships. In order to prevent freight traffic from driving the sidewalk and damaging the structure of the quay wall, a shield was made in the autumn of 2016, consisting of long natural stone benches combined with natural stone ballers. In the autumn of 2016 we also performed



Your bike is parked under a stylishly decorated Beursplein

The Beursplein, the Beursstraat and the Oudebrugsteeg are refurbished. Under the Beursplein is a bicycle storage room for 1,700 bicycles. The new look of the Beursplein is based on Berlage's original design. We restore the drinking fountains, the bull and the monumental lampposts and put them back in their old place. The trees come back on and around the Beursplein. For the Beursplein and the sidewalks in the Beursstraat and Oudebrugsteeg we use natural stone. This is why the new equipment closes nicely on the Damrak.

The stock market area is the area that consists of the Beursplein, the Beursstraat and a part of the Oudebrugsteeg. It is located between Damrak and Dam Square. The area 'embraces' the Berlage Fair

and borders the west side of Damrak and on the east side of the wall area.

In May 2017, the preparatory work of electricity and gas cables began to replace. In August, the construction of the bicycle storage room was started. In the first few weeks, the sheet walls are pushed into the ground, then we build underground further. At the same time, the refurbishment of the Beursplein starts. At the end of 2017 a part of the Beursplein is ready. The bicycle parking will be completed in mid 2018.

The refurbishment of the Beursstraat started in August 2017 and is ready by the end of 2017.

During the work, parts of the area are periodically unavailable for, for example, (freight) cars and cyclists. Redirects will be issued with signs and, if

necessary, we will set up traffic controllers.



Source: <https://www.amsterdam.nl>

3.1.3 Amsterdam Is Flooding, On Purpose

Article Source: <https://www.citylab.com/solutions/2017/02/amsterdam-central-station-construction-redesign-water-canal/517908/>
<https://www.amsterdam.nl/projecten/entree/vernieuwing-entree/>



In Amsterdam, asphalt is out and water is back.

Thanks to a redesign of the area around the Dutch capital's Central Station, road space will be cleared away to allow for wider waterways. This will strip away some of the area's concrete cladding to make the terminus site look once more like what it actually is—an island in the city's harbor. The revamp should help to restore a little of Amsterdam's maritime char-

acter—especially as this site, known locally as The Entree, has long been a key arrival point for Amsterdam.

1. More water, low quays and scaffolding

A large part of the Prins Hendrikplantsoen is excavated at the Victoriahotel. This way the water of the Open Havenfront will increase and the old, historic quay will be visible again. The station island

gets a bit of its island look back. On the south side of the Open Havenfront there will be lowered quays with a few scaffolding. There are no quays at the station side of the water, but there are scaffolding.

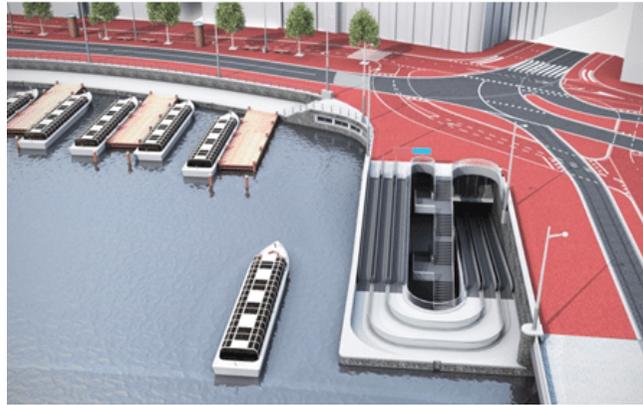
On the other side of the water, the Central Station's island location will be emphasized in a subtle but ingenious way. The station's forecourt will be repaved with stone flags, while the short bridges leading to it from the direction of the city core—due to be widened—will be covered with darker granite surfacing. This will, the city hopes, provide a visual reflection of the move from (relatively) dry land to island.

2. Bicycle parking under water

The extra water is just the tip of the iceberg; it really will contain much more beneath the surface. The ground beneath the station is being excavated to accommodate a new metro stop, which will extend into chambers under the canals and lake that surround it. In what could be the most Dutch urban twist ever, these chambers won't solely be used for metro lines, shops, or storage. Mainly, they'll be filled with bikes.

The intriguing plan, which CityLab first reported on back in 2015, sees Amsterdam struggling to make up for its lack of bike parking spots.

In a city where 63 percent of citizens cycle daily, you can't just leave people to chain their bikes to railings or lampposts without clogging the streets. Last year, Amsterdam confiscated almost 64,000 bikes, many of which (although not the majority) had been left in places where they obstructed the footpath or the roadway. To make space for commuters' bikes, the already densely built city has to find more space. The answer, they've decided, is to create floating bike parking pontoons around the central station, as well as to excavate below the canals to create more places to stow two-wheelers. By 2023, when the Central Station revamp is complete, there will be space for 17,500 bikes here, rising to 21,500 in 2030 when the bike islands are complete.



3. Mobility

Bus lines will be stripped away, quaysides narrowed or removed to allow more space for water, with extra jettied landing stages being added to encourage boat traffic. A major stretch of road on the city side will be off limits to cars to create a large pedestrian

plaza threaded with a new cycle lane.

On the Prins Hendrikkade and the Stationsplein, the entire traminfra - tracks, switches and overhead wires - will be renewed. What is now there is "up", and is replaced by a more robust system that requires less maintenance. The track layout, catenary and switch control are optimized and vulnerable parts of the track are made of extra wear-resistant material. There will be an extra connection track between east and west, so that trams can also travel to and from the station if the regular track is temporarily unavailable. On the Stationsplein the stops on the west and east side will be renewed. The platforms will become higher and wider, making them more visible, safer and more accessible for disabled travelers.



Artist Impression De Entree
© Municipality of Amsterdam

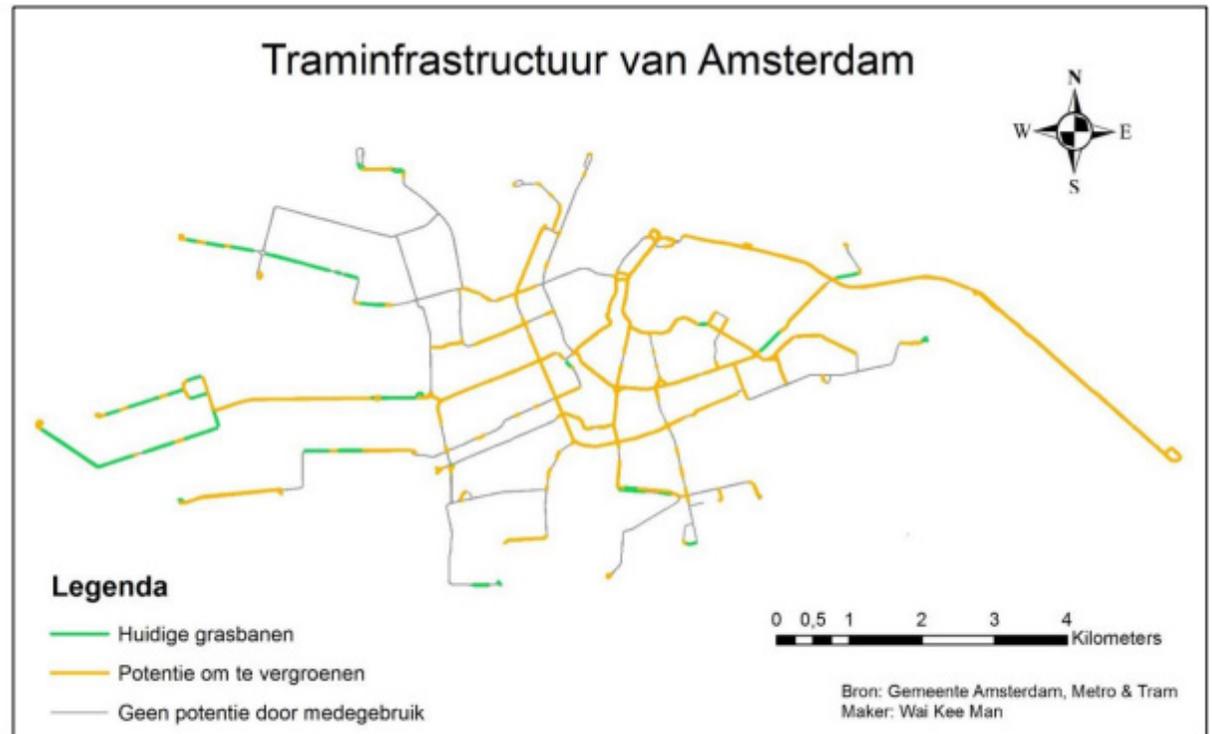
3.1.4 Tram line with grass in Amsterdam

Due to climate change, more frequent and heavy rain showers will occur in the Netherlands in the future. Amsterdam will therefore have to adapt in order to be able to deal resiliently with resilience rainwater. There are various solutions to increase the infiltration capacity of the city. One of this is the construction of grass between the tram tracks.

The testable lines of the tram network in Amsterdam is over 188 kilometers long. First was looked at which parts of the grid are already grass tracks. Here came a result that indicated that there a total of just over 19 kilometers in green tramway constructions in Amsterdam. Approximately 10% of the Amsterdam tram network already consists of grass track constructions. Subsequently, it was analyzed on which parts no co - use takes place of the tram infrastructure. This is the most important criteria for creating a clear grass track. On about 99 kilometers of the total tram network does not use bus or other traffic. Obviously, there are already a grass runway in some places where there is no co-traffic.

This relates to 18.1 kilometers of tramways. This means that there are still more than 80 kilometers potential tramlines lie in Amsterdam that can be greened. Almost 43% of it tram network has the potential to become greener. Figure 2 shows the results of this spatial analysis.

The main tram lines in Amsterdam cenral area are assessed to be potential grass runways. This conclusion can be used for further plan and design.



Afbeelding 1. Traminfrastructuur van Amsterdam. Totale lengte tramnet: 188691 meter. Lengte grasbanen: 19105 meter. Lengte tramnet geen grasbaan en geen medegebruik: 80789 meter. Bron: Gemeente Amsterdam dienst Metro en Tram, gebaseerd op Inventarisatie grasbaanmogelijkheden 2016 tbv MET.

3.1.5 Inspiration from Barcelona

3.1.5.1 Barcelona Model

The Olympic Games of 1992 launched Barcelona as one of the most fashionable and appealing cities in the world. In preparation for the Games, the city experienced during the 1980s a deep symbolic, political, and architectural transformation which turned Barcelona into a prosperous global city, but also aimed to reconcile this modernization trend with the recovery of her rich historical past and cultural heritage.

Bohigas, who exposed in various books his program to foster urban compactness and multifunctionality, proclaimed a precise slogan that summarized his plan: «ens cal higienitzar el centre i monumentalitzar la perifèria» [«we must clean up the center and monumentalize the periphery»].

On the one hand, his project stipulated minimal but conscientious interventions that would «esponjar» the city, that is, that would sponge the urban fabric and open up public spaces in densely populated areas. No overall demolition was necessary — only a sensitive intervention in concrete points.

On the other hand, to monumentalize the periphery referred to two specific things.

First, high-speed roads and expressways had to be integrated into the city fabric instead of letting them

tear it up and alienate entire neighborhoods.

Second, landmarks were necessary to give a distinctive personality to streets and neighborhoods. Hence, public sculptures by internationally recognized figures were placed in the less glamorous areas of the city. Richard Serra, Claes Oldenburg, Roy Lichtenstein, Joan Miró, Ellsworth Kelly, Eduardo Chillida, Bryan Hunt, Jannis Kounellis, Jaume Plensa, Rebecca Horn, Frank Gehry, Fernando Botero, Antoni Tàpies, or Joan Brossa, among many others, provided works at unusually reasonable prices because of the public and revitalizing function they would fulfill.

Bohigas' plan aimed to create new and diversified centers throughout the city. The strategic re-equipment of specific spaces intended to have "efectes osmòtics" [osmotic effects] over larger areas. New parks, museums, restored monuments, street sculptures, renovated old squares, and, most notably, pristine beaches were devised to regenerate degraded zones, provide more public spaces, and help citizens map the city easily. These centers, or also called "areas of new centrality", would divide the city in well-defined, understandable sections most of which would coincide with the limits of historical neighborhoods. Thus, the plan intended to bring back a sense of place or, as Mayor Pasqual Maragall put it, to help the city recover itself.

The transformation would make the city more distinctive, more compact, more public, easier to read, and, not least, prettier, to quote the municipal slogan advertising the renewal "Barcelona, posa't guapa" [Barcelona, make yourself pretty]. And, according to the amount of attention and awards that the city received, among them the Gold Medal from the Royal Institute of British Architects in 1999, the municipal government did achieve the goals of Bohigas' plan, which soon became known as "**the Barcelona model**" of urban transformation.

(Source: Illas, E. (2007). Short Stories against Barcelona's Urban Transformation. *Transtext (e) s Transcultures . Journal of Global Cultural Studies*, (3), 84-97.)

There are three main characteristics in the “Barcelona model”:

Firstly, “the urban project versus the urban plan”. The urban project refers to design on an intermediate scale, to ensure the quality of architecture and public space and to improve the conventional urban planning at large following a technocratic pattern in order to define zoning and uses, standards and measures.

Secondly, in this new and social city, the emphasis was put on public space as the urban linking device. The opening of the city to the sea front, with new kilometres of public beach, was of paramount importance, because, despite being a Mediterranean and coastal city, Barcelona had gradually lost

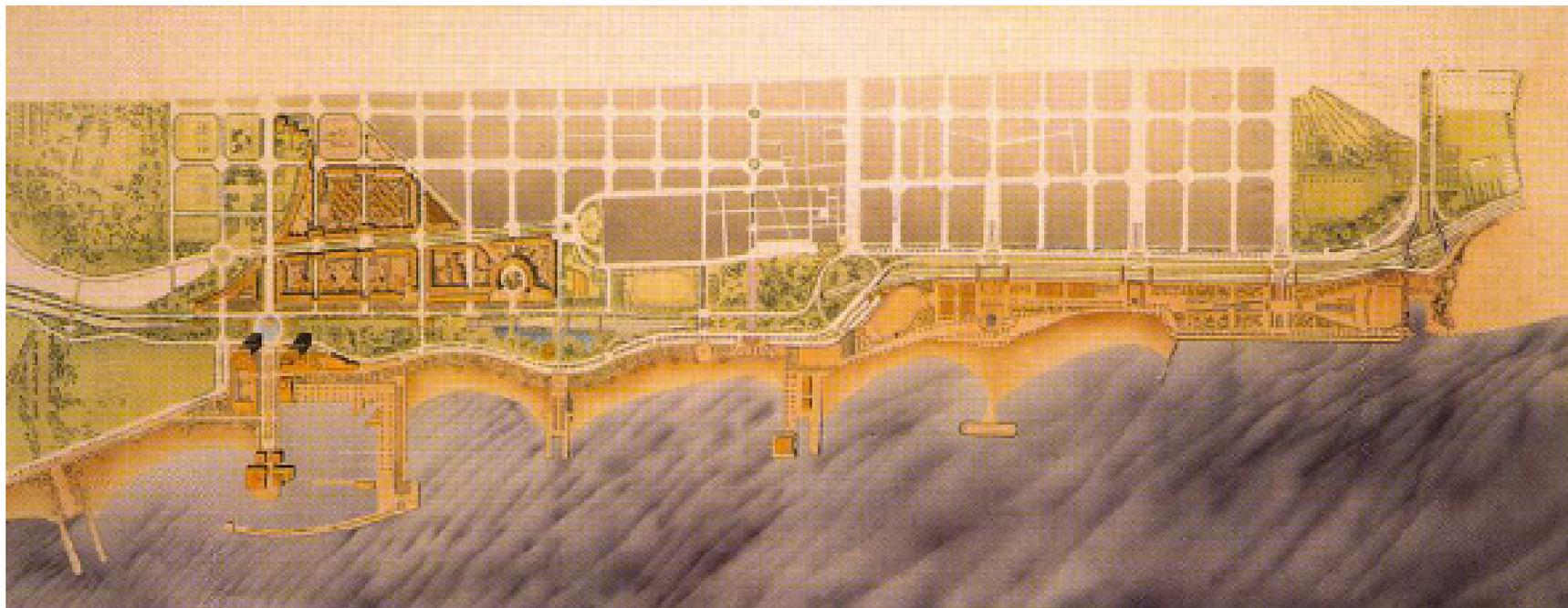
contact with the sea, owing to the process of industrialisation that has been under way since the second half of the 19th century. This tendency changed from the nineteen eighties.

And the last main characteristic is the agreement between the public administration and the private sector. Barcelona aimed to form a new alliance between the political power of the socialist administration, in the social democratic tradition, and private investments. If the two previous points came from the urban project, created by the architects, this third one was elaborated by Pasqual Maragall himself, mayor of Barcelona from 1982 to 1997. From his experience in Barcelona and his training in the United States (in the New School of Social Research in New York and in the Johns

Hopkins University in Baltimore), he began to look for ways in which both business and public funding could be used to regenerate the city into capitalism.

From a social perspective, the main objective of the Barcelona model was to achieve a balance, that is to say, an even distribution of facilities and installations to ensure a better quality of life for the city as a whole. The final objective was to reinforce the feeling that every individual was sharing urban life; the feeling that everyone was taking part in the new city.

(Source: Martorell, J. M. M. (2012). The Barcelona Model reviewed. Transfer: journal of contemporary culture, (7), 48-53.)



Source: <https://www.smartcitiesdive.com/ex/sustainablecitiescollective/barcelona-and-journey-urban-transformation/57461/>

3.1.5.2 Transformation Strategy

There are two parts of the transformation: Old city protection and renovation and Seaside area renovation.

3.1.5.2.1 Old city protection and renovation

The renovation of the Old City, on the basis of maintaining the texture and scale of the original block, does not change the style of the building itself but replaces the functions of the building to meet the requirements of the times while reforming the surrounding infrastructure and environment. The core of the old city's protection and renovation is to pay attention to the quality of public space and enhance the quality of urban landscape. It is divided into two parts: **the transformation of public areas and the transformation of residential areas.**

Public areas:

The renewal of public areas focuses on increasing the number of leisure area. At the same time, it will also stipulate the color matching of surrounding facilities and the height of buildings so as to ensure the harmony of the entire urban area. The emphasis is transforming parks, squares, and roads.

Parks renovation: Adding different public space for different groups of people including playgrounds, playgrounds, and recreational areas along with suitable planting. This does not only increases the public space but also beautify the urban landscape.

Roads renovation: Transformation of the

original road in the historic district, the increase of the pedestrian area and the reduction of the motor vehicle lane. The most typical one is the reconstruction of the Ramblas. By opening a 12-m-wide central pedestrian walkway in the center of the street, the motor vehicle lanes on both sides have been reduced to 6 m and independent street-side pedestrian zones have been set up along the street to rectify the historic building along the street and restore the history of Gothic style and modernism.

Despite the reduction of motor vehicle lanes in historic districts, measures such as building new roads have also been taken and therefore, urban traffic has not been significantly hindered. The reduced pedestrian space has become a place of activity for nearby residents, humanizing urban street spaces and improving the urban landscape. In addition, more than 100 small squares and parks have been completed in the historic district during the Olympic Games. Together with the converted streets, the city's "**street-square - park**" pedestrian system has been completed.



Residential area:

The renovation of the residential area is based on a gradual updating method, using the existing neighborhood as the basic unit for public space construction, converting the occupied inner courtyard of the neighborhood into a small park or a small square, which will regain vitality of the old community and achieving the continuity of the original urban texture, spatial form, neighborhood and community. The expansion project started in 1996 is that the government of Barcelona organized a multi-party joint investment model to renovate the interior spaces of the neighborhoods so that every nine neighborhoods will have a high-quality public inner space with 200 m community service radius. Through the transformation of community public space, not only a multi-piece green space had been put into the hard urban landscape but also injected new vitality into the development of the Old City.

3.1.5.2.2 Seaside area renovation

The renovation of the seaside area will focus on the renovation of various public spaces, including the coastal circuit and promenade, plazas and parks, marina and beach.

The construction of the new city of Barcelona is a huge, regular grid, with the new overpass and spacious roads dividing the new city into "Seda Cube" areas and extending the road network to the sea south. The ring road of the main street of the city is subsided and the motor lane is set underground so that the ground is converted into a pedestrian space, and the old urban area is connected with the coastal area by walking. The

rest of the roads are reconstructed through the reconstruction of street scenery by making use of topography and planting vegetation to reduce the interference of motor vehicles on the pedestrian space.



The plaza space is generally small in scale. It is mainly set along the loop or attached to the ground floor of the building. It is often combined with park green space as a pedestrian space node to enrich the urban landscape for people to stop. Near the Olympic Village, there is a 2km long marina park consisting of a series of small theme parks. These parks are green belts between the city and the ocean, isolating the hustle and bustle of the city and giving the walkers another space to choose from. The trees are planted in 1.5m deep organic soils and different trees are chosen for the different landscape.



Through the transformation and utilization of these different public spaces, the coastal waterfront of Barcelona is formed as an urban waterfront interface starting from the old port. The urban waterfront area has become the most distinctive city image.

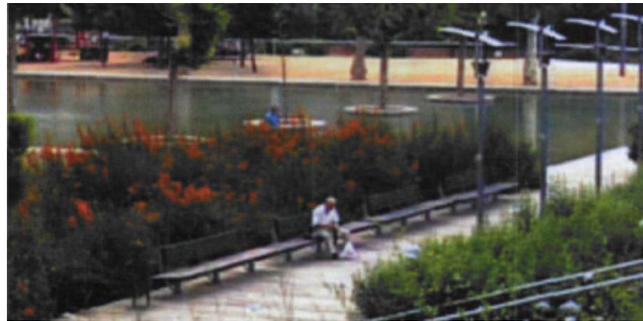
3.1.5.3 Inspiration: cultural protection and humanistic care

As the old town is a product of long-term social, economic, cultural and environmental accumulation, it accommodates a rich and varied community life, with different neighborhoods and communities having different needs and expectations. Therefore, the government of Barcelona uses the old neighborhood as the basic unit to construct the public space, reconstructing the occupied inner courtyard of the neighborhood into a small park or a small plaza which brings new vitality to the old neighborhood. This small-scale public space development has a strong focus and flexibility to effectively avoid the blind and destructive large-scale transformation.

One of the problems faced by urban renewal is the gentrification of the central district. "Gentrification" is a common practice in many European cities, that is creating new communities through the remodeling of the old quarter, to enable high-income people to live in. But Barcelona restores the quality of public space, improves the quality of life so as to stay young people and neighborhood in the city center. This not only restores and improves community productivity, making the whole area prosperous but also protects the interests of indigenous people. This progressive and sustainable idea of urban renewal is of extraordinary significance: first, it avoids the violation on public interests under the control of a purely market economy and guarantees the social democracy. Secondly, it avoids the consequences of all demolition and reconstruction,

giving the original urban pattern, spatial form, neighborhood, and community best protection and achieving the continuity of urban context.

In the view of urban plan scholars in Barcelona, the protagonist of public spaces in cities is the people who use public spaces, and the various activities and wearing of people bring vitality and vigor to space. Therefore, the space itself should be simple and avoid complex spaces, shapes and materials.



Public space for humanistic concern is also reflected in the humane scale of streets. With the popularization of cars, the urban public space is increasingly being changed into cars and traffic spaces. In order to return the road to pedestrians, Barcelona narrows the lane and forms a sidewalk in the center of the lane, which is complemented by well-designed rest seats and children's playgrounds to make it a venue for residents in the neighborhood. The humane design of the streets not only improves the quality of life of the citizens but also greatly improves the urban landscape.



Barcelona's love of art is perfectly represented by the combination of public art and urban space. A successful work of art must be compatible with the characteristics of the urban space, as well as the inhabitants of the neighborhood can understand and recognize the artist conception. Therefore, public works of art also have two main functions: First, create a space. A public artwork placed in the right public space will create space; Second, to strengthen the community's identity. A rich distinctive public artwork gives the community a character which is distinct from the rest of the community, and residents gain a sense of identity and belonging.



3.2 Relevant Book

3.2.1 Barcelona: the urban evolution of a compact city

Busquets, J., & Hyde, T. (2008). *Barcelona: the urban evolution of a compact city*. *Journal of the Society of Architectural Historians*, 67(1), 134.

In this book, the methods to recover the Barcelona cityscape give me a lot of inspiration. The evolution starts from the urban improvements to strategies combined with urban services: water, drainage, transport and waste disposal.

The way projecting the city is also an urban reclassification program aiming at infrastructures and central area. It works from small schemes (squares and parks) to large intervention, from mono-graphic projects (squares, parks, schools) to complex projects (streets, buildings and green area), from public projects to partnerships, from normal to exceptional. It involves dynamic of context and capacity of social and economic agents.

The process is divided into three groups:

1. Urban rehabilitation (urban space, green area) small scale direct intervention
2. Urban restructuring (road next work, new centrality)
3. Morphological organization

1. Urban rehabilitation

The urban rehabilitation includes two parts: urban space and green areas and sectoral plans.

1.1 Urban space and green areas

a) The urban space and green areas intervention is a kind of open space management compensation. The urban park is set in urban fabric to provide

permeable urban elements to people and solve the problems of land pollution.

b) The squares and gardens works as residential fabrics surrounded by systematic traffic and the abstract order of their geometry is used to establish



a new reading of the residential context, like Placa soler.

c) On the other hand, the squares and gardens are interconnected open spaces in urban realm represents the itinerary of major facilities (market, district, authority, church, station).

d) Moreover, the gardens with facilities are also transformed from former estates to a new use of public space, like a gateway to larger park.

e) Urban axes systematise the intermediate road network and increase the protagonist of pedestrian space. These linear dimensions form lively dialogue with road and public transportation system, involving with car parking, ground floor business.

f) The last one is large scale park working as buffer zone in the city.



1.2 Sectoral Plans

These need the planners understand urban differences but also take coherent forms of intervention. The method should be compatible.



a) The Barcelona first recover the Ciutat Vella. These urban part is divided into three areas: Raval, Santa Caterina and Barcelona and different hypotheses of intervention happens. In large scale, the three areas share a series of elements that give them a general coherence, though not identical in method and in detail: structure of ownership, typological classification, sociological characteristics give them own reading and interpretation.

b) In traditional districts like high streets, it acquires new contents, but maintains a hierarchy of value in terms of its central and commercial uses.

c) The courtyard inside street blocks is also recovered.

2. Urban restructuring

2.1 Reorganizing the road system

The road is structured to improve the capacity to redress the balance and configure the image of compact city.

Streets section is divided equally between pedestrians and vehicles. Repertory of junctions and squares is made clearly to improve traffic efficiency. The goal is reached by the following ways:

i) Adjust the differential nature according to specific road systems, at the same time, seeking a general scheme to interconnect them

ii) Road connections between urban sectors took place on four levels

a) Maxi-network (ring roads)

b) Secondary network (main streets, boulevards)
fundamental value is increasing distribution to local streets

c) Internal streets (gain characteristics varied from one to another)

d) Urban pedestrian spaces diversify activities



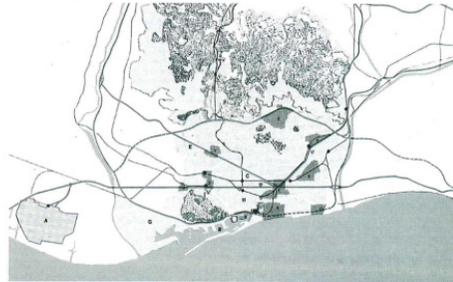
2.2 Areas of new centrality

9.j Areas of New Centrality.

9.82
Areas of New Centrality.
Sectors with potential within
the urban fabric. The Olympic
programme included four such
sectors.



9.83
The Areas in the new urban
structure.



9.84
Large shopping centres.
9.85
Density of offices in 1985.



3. Other structural keys in the shaping of Barcelona

It involves four parts:

a) The diagonal down to the sea

b) The city's big containers : large scale monographic uses

c) The role of Ciutat Vella in the metropolitan system

d) Seafront

3.2.2 Exploring the visual landscape

Nijhuis, S., Van Lammeren, R., & van der Hoeven, F. (Eds.). (2011). *Exploring the visual landscape: advances in physiognomic landscape research in the Netherlands* (Vol. 2). TU Delft.

As a landscape architect, the focus of my project is not only recovering the urban structure but also researching the delicate relationship between people and their surroundings, how people perceive environment and how environment captures people.

As Harris and Fairchild Ruggles (2007) put it: “For most human beings, the primary way of knowing the material world is through vision; the simple act of opening ones eyes and looking at an object, a scene, a horizon. The physiological processes engaged when the lid retracts from the eye are, when not impeded by pathologies, universal among humans. Because vision is an embodied experience, it is altered by the infinite range of the possibilities presented by corporeal performance. The body moves in space – quickly or slowly, the head still or moving side to side, up or down – the eyes view a scene, and a cognitive process begins in which particles of light are assembled by the brain to create an ordered image”. This quote exemplifies that the identifying character of rural and urban environments is, to a large extent, built upon visual perception, which is a key factor in behavior and preference, and thus important for landscape protection, monitoring, planning and management and design.

How environment captures people

As is mentioned before, when individuals or groups become familiar with a particular space and link it

with their cultural values, social meanings and personal experiences, it becomes a place for them (Tuan 1977). The visual perception can be divided into physiology of perception (colour) and psychology of perception (shape, size, spatial arrangement, color discrimination meaning, defining relations, classifying information and memorization) This whole psychological process is individual and thus essentially subjective and determines the experience of the

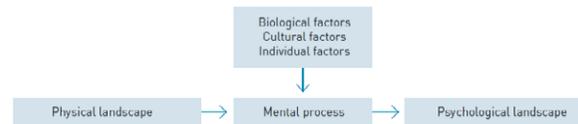


Figure 1
A default pre-disciplinary landscape perception research model

landscape (Jacobs, 2006; Bell, 1999; Coeterier, 1987). Finally, this will affect our behaviour and actions.

There are three factors influence our perception and our action: biological factors, cultural factors and individual factors.

Biological Factors:

Generally, preferences are manifestations of emotions (LeDoux, 1996: 53; Jacobs, 2009): we tend to like objects or situations that invoke positive emotions (e.g. happiness), and tend to dislike objects and situations that invoke negative emotions (e.g. fear). Gaining knowledge of a landscape depends on four factors: coherence, legibility, complexity and mystery

(Kaplan and Kaplan, 1983, 1989: 53; Kaplan, 1987). According to Kaplan and Kaplan, we prefer those landscapes that score high values on all four factors. Coherence and legibility facilitate understanding a scene. Enough complexity makes a scene interest-

	Understanding	Exploration
Immediate	Coherence	Complexity
Inferred	Legibility	Mystery

Figure 12.2
The preference matrix

ing, and mystery raises the expectation that there is more to learn about the scene.

Kaplan and Kaplan (1989) report eleven empirical studies that have tested their theory: coherence and mystery appeared significant predictors of landscape preferences in most of these studies, while complexity and legibility were significant in only one study.

we prefer those landscapes that offered our primitive ancestors the best chances of survival (Appleton, 1975; Orians, 1986). We like to see without being seen: we prefer landscapes that allow us to hide, as well as to survey the environment. Thus, half open landscapes would be preferred over open landscapes or closed landscapes, an assertion that

is corroborated by empirical findings. In addition to half-openness, an abundance of vegetation and an abundance of water are thought to be landscape properties for which we have an innate preference (e.g. Schroeder and Daniel, 1981; Ulrich, 1981, 1983, 1993; Yang and Brown, 1992). These innate preferences are easy to explain: we need water to survive, and the presence of vegetation often indicates the presence of food, water and a place to hide. Some scholars have suggested that we have an innate preference for nature (e.g. Herzog, 1989, 1992; Schroeder, 1991; Ulrich, 1993; Zube, 1991)

Cultural Factors

The individual mind is permeated with culture. Historical, sociological, and anthropological studies into landscape have demonstrated cultural influences on the way people perceive categories of places (e.g. natural places) and particular places (e.g. a specific region). Individuals are members of different cultural communities on different levels. As members of a global western culture they might be socialised into a general appreciation of nature, as historians have shown. As members of a national culture, they might be influenced by national discourse, e.g. the Dutch discourse of fighting against water, or the Polish discourse in which the forest is given a specific nationalistic connotation since the forest was the place where resistance to foreign powers started (Schama, 1995). As members of a local culture, people might gradually adopt a specific way of assessing the place they inhabit. Cultural influence, then, is a multi-layered set of influences.

Individual Factors

The way a person perceives landscapes also depends on individual factors: mental dispositions that result from individual previous experiences or differences in personality traits.

In human geography, the study of the meanings that people assign to places is often labeled the concept of sense of place (Manzo, 2005; Patterson and Williams, 2005). Sense of place – understood as the total collection of meanings that people assign to a particular place (Jorgensen and Stedman, 2001) – is thus an overarching concept (Hay, 1998; Shamai, 1991) that includes all meanings an individual assigns to a place.

Importantly, place meanings are properties of subjects; the meanings are assigned to places, or features of places, by people (Manzo, 2005). Some scholars consider sense of place a holistic concept, and are therefore reluctant to distinguish between its components or dimensions (e.g. Relph, 1976; Tuan, 1980). Others have distinguished sense of place dimensions, such as cognitive, affective, and behavioral or conative meanings (Altman and Low, 1992). A compatible distinction between attachment to (emotional bonds with the place), dependence on (perceived behavioral advantage of a place), and identification with (the role of the place in overall self-identity), is used to develop and test a psychometric scale for quantitative measurements of sense of place (Jorgensen and Stedman, 2001, 2006).

Jacobs and Buijs (2010) adopted a different approach to reveal various dimensions of sense of place. Instead of a theoretically determined cate-

gorisation, they formulated dimensions on the basis of an open, in-depth account of people's place meanings as elicited in two studies.

Five categories of abstract place meanings emerged from the data-driven analysis:

Beauty (place meanings related to aesthetic judgments),

Functionality (place meanings that express ways of using the landscape),

Attachment (place meanings that convey belonging relations between subjects and the place),

Biodiversity (place meanings pertaining to species and nature), and

Risk (place meanings that articulate worries about current or expected problems).

These categories of abstract place meanings, that considerably overlap with categories revealed by other studies (e.g. Tunstall et al., 2000; Davenport and Anderson, 2005), represent aspects of place that stand out to people.

How people perceive environment

Landscape architecture consists of a basic attitude that involves four principles of study and practice. These are: anamnesis (palimpsest), process, three-dimensional space and scale-continuum (relational context) (Nijhuis, 2006; Prominski, 2004; Marot, 1995). The three-dimensional space is a crucial aspect in landscape design and comprises of the representation, realisation and apprehension of outdoor space. Moreover, the visible form: appearance of the landscape (perceived space), is about the perceptual space addressing the sensorial experience that emerge only by movement and is affected by at-

mospheric conditions. It is an important aspect of a design's three-dimensional composition. This visible form derives from the act of perceiving (especially seeing), which is linked with the sequential unfolding of information as our bodies pass through space (Frankl, 1968; Psarra, 2009).

Visible form in landscape architecture is about the visual manifestation of three-dimensional forms and their relationship in outdoor space, expressed by its structural organization (e.g. balance, tension, rhythm, proportion, scale) and ordering principles (e.g. axis, symmetry, hierarchy, datum, transformation) (Bell, 1993; Hubbard and Kimball, 1935). It refers to the appearance of objects; it is about the 'face' of the spatial composition. However, the meaning attached to it is referred to as semantic information, and is dependent on the receiver (Haken and Portugali, 2003; Blake and Sekuler, 2006). Thus there is a subjective part containing symbolic, cultural and personal elements which finally determine the experience of landscape architectonic space (see e.g. Kaplan and Kaplan, 1989).

visual space has dimensions that are very different from the geographic or measured space and each dimension has different affordances. This perceptual space consists of an up-down and left-right (sideways) dimension (the retinal image or picture plane) and a distance dimension (depth) (Blake and Sekuler, 2006; Ware, 2008).

The information from the up-down and sideways dimension is basically a matter of visual pattern processing and colour discrimination and is the basis for recognition of objects and their relationships.

The information from the distance dimension is about perception of depth. Depth cues consist of spatial information that is used to evaluate distances from the observer's point of view and can only be obtained by movement of the eye, head and body. In other words we can only experience space by movement (Blake and Sekuler, 2006; Ware, 2008; Bell, 1999).

The most powerful depth cue is occlusion (objects that visually block other objects appear closer). Other depth cues are related to the geometry of perspective: linear perspective, size gradients and texture gradients. Furthermore, cast shadows, height on picture plane, shading, depth of focus, size relative to known objects, and atmospheric contrast reduction are important depth cues (Blake and Sekuler, 2006; Snowden et al., 2006; Ware, 2008). Each of the depth cues support different kinds of visual queries and can be applied (individually) in a landscape architectonic composition to create optical illusions or pictorial effects.

Non-pictorial depth cues are related to the physiology of the visual system: stereoscopic depth (stereopsis), accommodation and convergence, and kinetics: structure from motion (motion parallax) (Blake and Sekuler, 2006; Snowden et al., 2006; Ware, 2008).

We can only experience landscape architectonic space by movement. As opposed to a painting, we move through a landscape or a building and its visible form alters or changes constantly, as does its internal relationships.

This kinetic experience of the observer who arrives at a 'single' image as the product of many partial images is summarised by Hoogstad (1990) as: $\text{Space} = \text{Time} (+ \text{memory}) \times \text{Movement}$. In other words, visible form is about the construction of time-space relationships among the space establishing elements and their attributes (Hoogstad, 1990).

Landscape architectonic compositions stimulate, or at least permit, certain kinds of movement with different modalities, and manage speed and direction. So movement takes place partly in response to or in accordance with the designer's intentions (Conan, 2003; Hunt, 2004). Yet together with spaces, paths are considered to be paramount structural components of (designed) landscapes because they play a crucial role in mediating or facilitating the experience and use of these compositions (Dee, 2001; Bell, 1993). In this respect paths and routes play a crucial role as structural organisers of the architectonic image (Appleyard, 1970; Lynch, 1960).

Visually Controlled Movement

With regard to visible form it is important to link

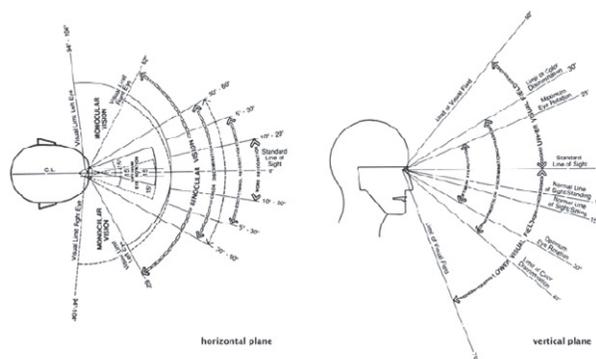


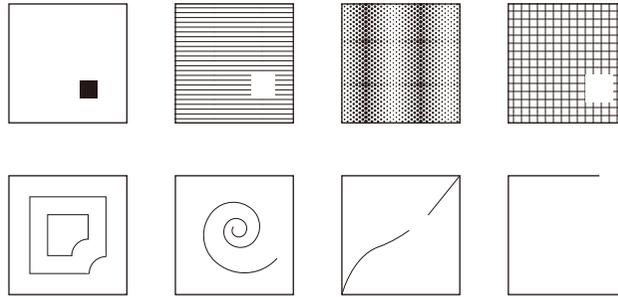
Figure 4
Field of vision in the horizontal and vertical plane (source: Panero and Zelnik, 1979)

visually controlled movement to space perception. Perception of space is essentially about perception of action potential within the local environment. This concept is referred to as affordances (Gibson, 1986). Gibson (1986) conceived affordances as physical properties of the environment, which are about linking perception and action. So, paths afford walking, a bench affords sitting, etcetera. Affordances in visual space are readily perceived possibilities for action, especially movement. With regard to the visual form we can speak of visually controlled movement. An open environment affords movement in any direction, and an environment with surfaces, screens and objects only at openings (Gibson, 1986). Research in way finding 5 indicates that route choice behavior is for 60% depended on spatial aspects such as space perception, patio-visual attractiveness, arousal and orientation (Korthals Altes and Steffen, 1988). So the visible form is crucial because it affords movement by its openings, offers a sense of direction by its spatial orientation and offers arousal/attraction by its visual composition.

Visual anchor points are another important factor in the spatial composition and function as orientation points or 'attractors', and induce and direct movement (Golledge and Spector, 1978; Golledge, 1999; Hillier et al., 1993).

Anchor points are key primitive elements or strategic foci (significant features or landmarks) in space and attract our attention more than other areas of the landscapes' face. Yarbus (1967) pointed out that they provide more information than others and carry useful or necessary information for recognition and understanding of spatial

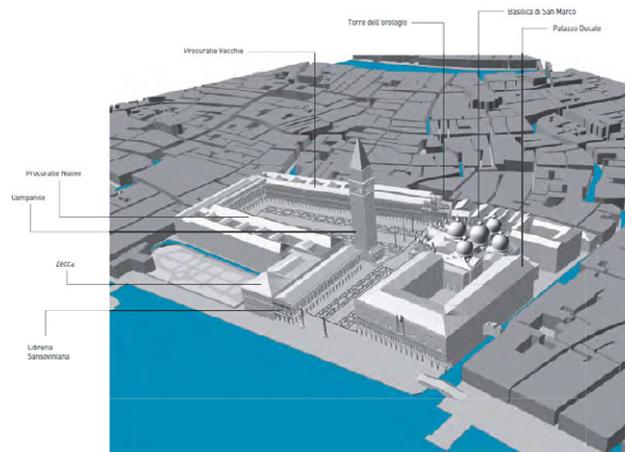
relationships and function as 'spatial magnets' or destinations.



Two Examples

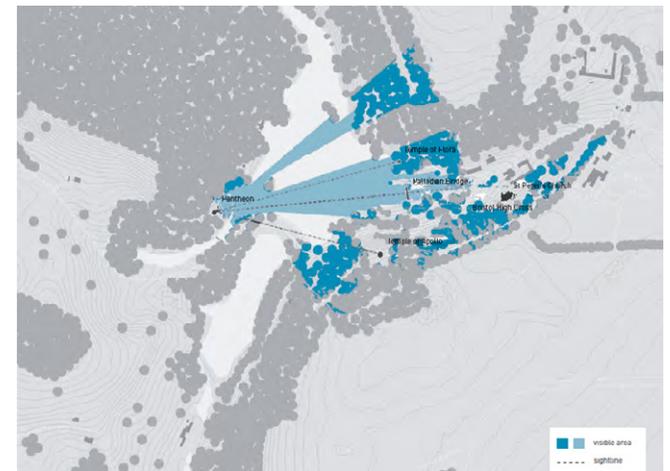
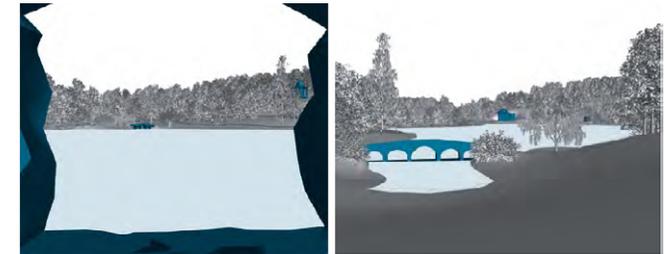
The Piazza San Marco

The example of Piazza San Marco showcases that it enables measurement of space relationships with isovists and isovist fields, such as the sequential unfolding of visual space at the entrance of the square and the hinge-effect of the bell-tower introducing a high degree of shifting scenery.



Stourhead Landscape Garden

At Stourhead landscape garden the analysis of the angular extent, the visual coverage of (composed) framed views and counting focal points by means of viewshed analysis, especially their angular extent in relation to the physiology of vision and the balanced amount of emblematic focal points within these views, gives an interesting result.



3.3 Design Principle

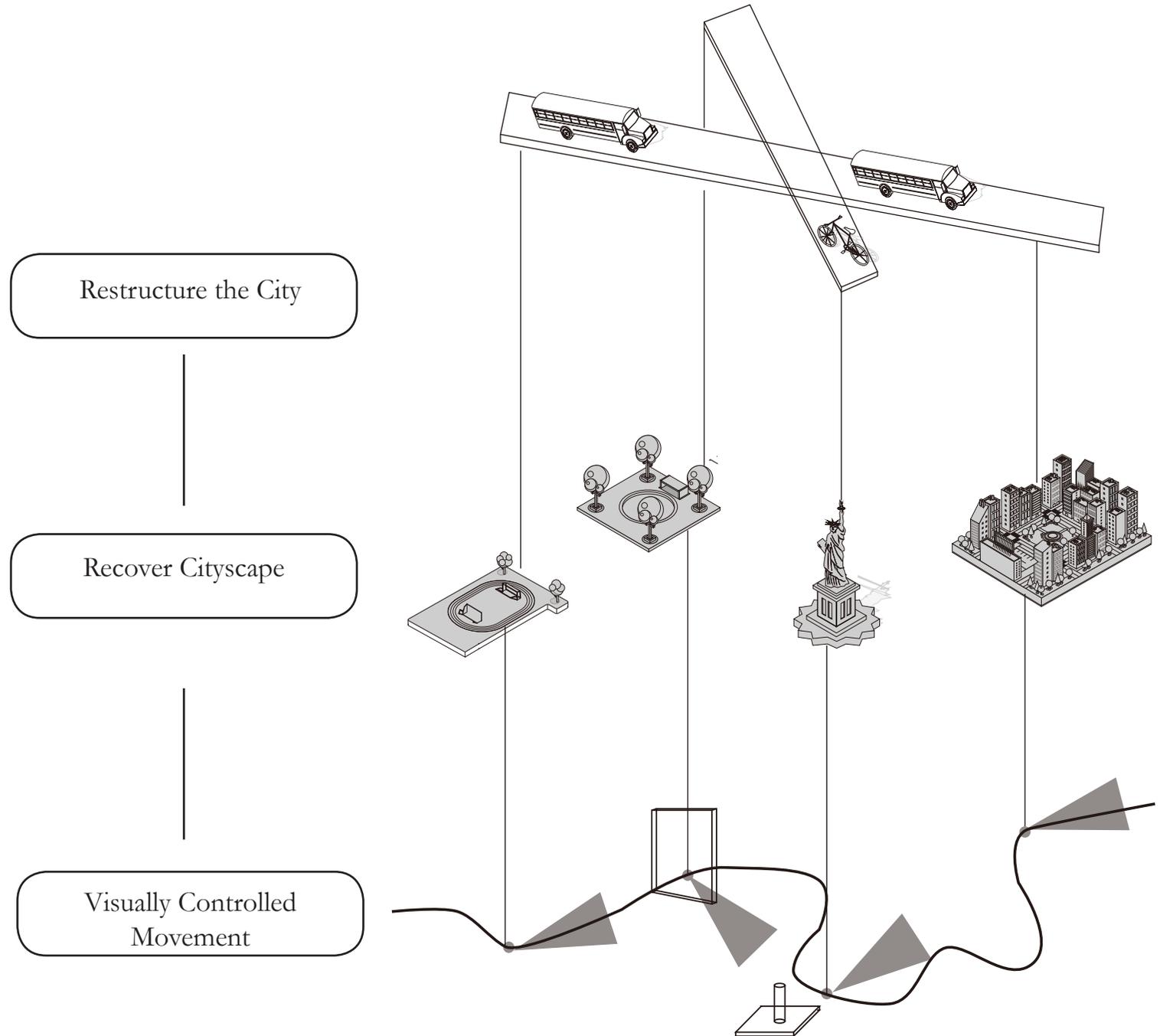
According to the knowledge grasped from case study and books. The design principle of my project is divided into three stages.

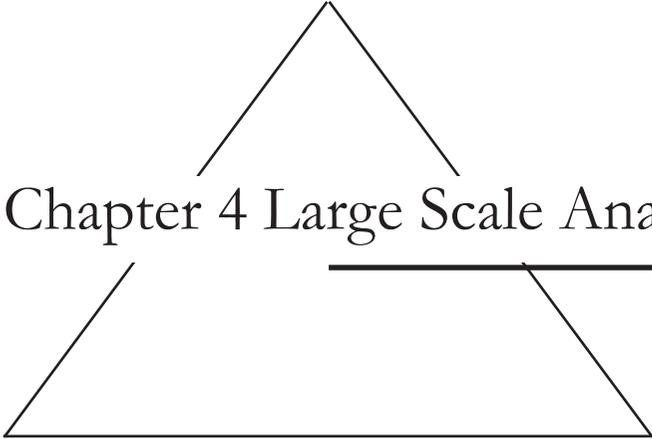
The first stage is restructuring the city in terms of infrastructure and public space.

The second stage is recovering the cityscape to reveal genius emphasizing legibility and imageability.

The third stage is capturing the movement of people by means of spatially vision design like frame and focus.

These three stages work together contributing to an adaptive city so as to release the pressure between crowds and limited city space.





Chapter 4 Large Scale Analysis & Structural Design

This chapter shows the link between research framework,site analysis and the application of design principle.

The analysis done in this chapter are:

The connection between Amsterdam and surroundings and the layout of attractions, different recommended routes in Amsterdam. The conclusion will help me locate the problematic site.

Overlap of land use and green infrastructure. The result will give me the first insight of the urban space on location.

By the analysis of the relationship between landscape character and urban patterns and the urban components, the key proposal for research question can be elaborated.

Following with the analysis of different typologies of urban components, the main design intervention and location can be addressed.

Taking into account of all these analysis,I will propose my conceptual design and apply design principle.



The Role of Amsterdam Centre



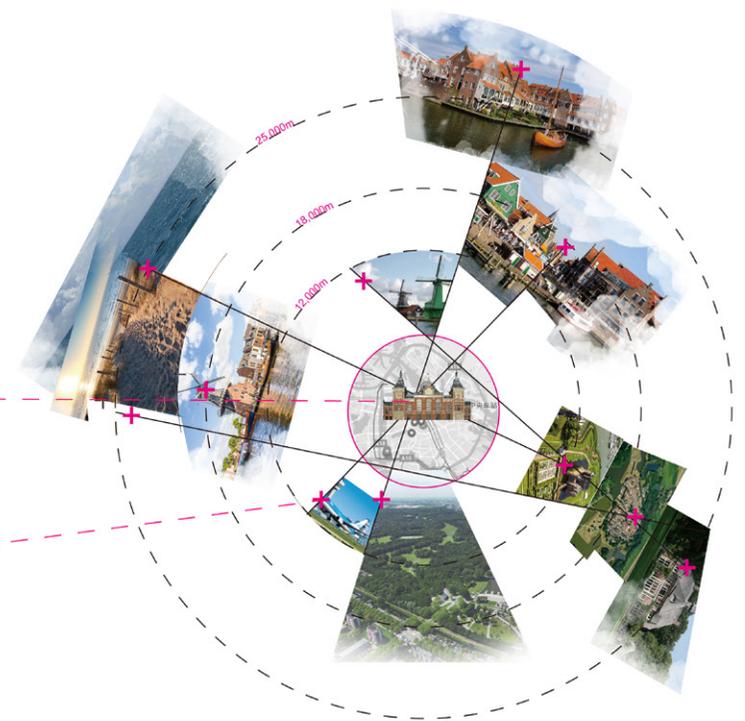
Urban Components

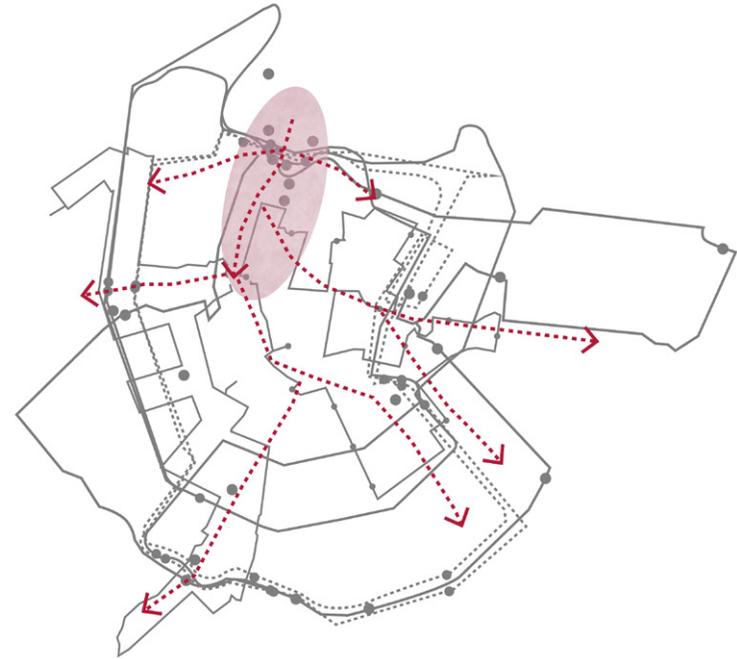
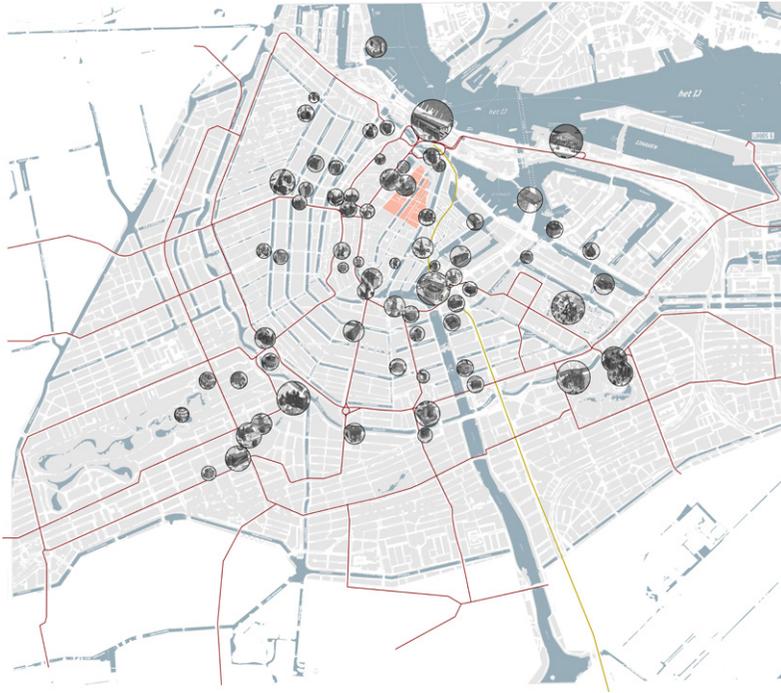
4.1 Location Definition

4.1.1 Surrounding Connection

First, I start from the regional scale, and try to know, except for residents, where are the people come from to the Amsterdam. With the mapping of the traffic connection

around Amsterdam, we can see Amsterdam has a very good connection with surroundings and the nodes of this traffic lines is Amsterdam Central Station. The Data shows, Amsterdam Central station has 168,000 passengers every day, which means, Amsterdam Central has a huge pressure of holding and distributing people.





Bike trip in
cannal area



Bike trip in
old city



Hop-on hop-
off boat



Cruise

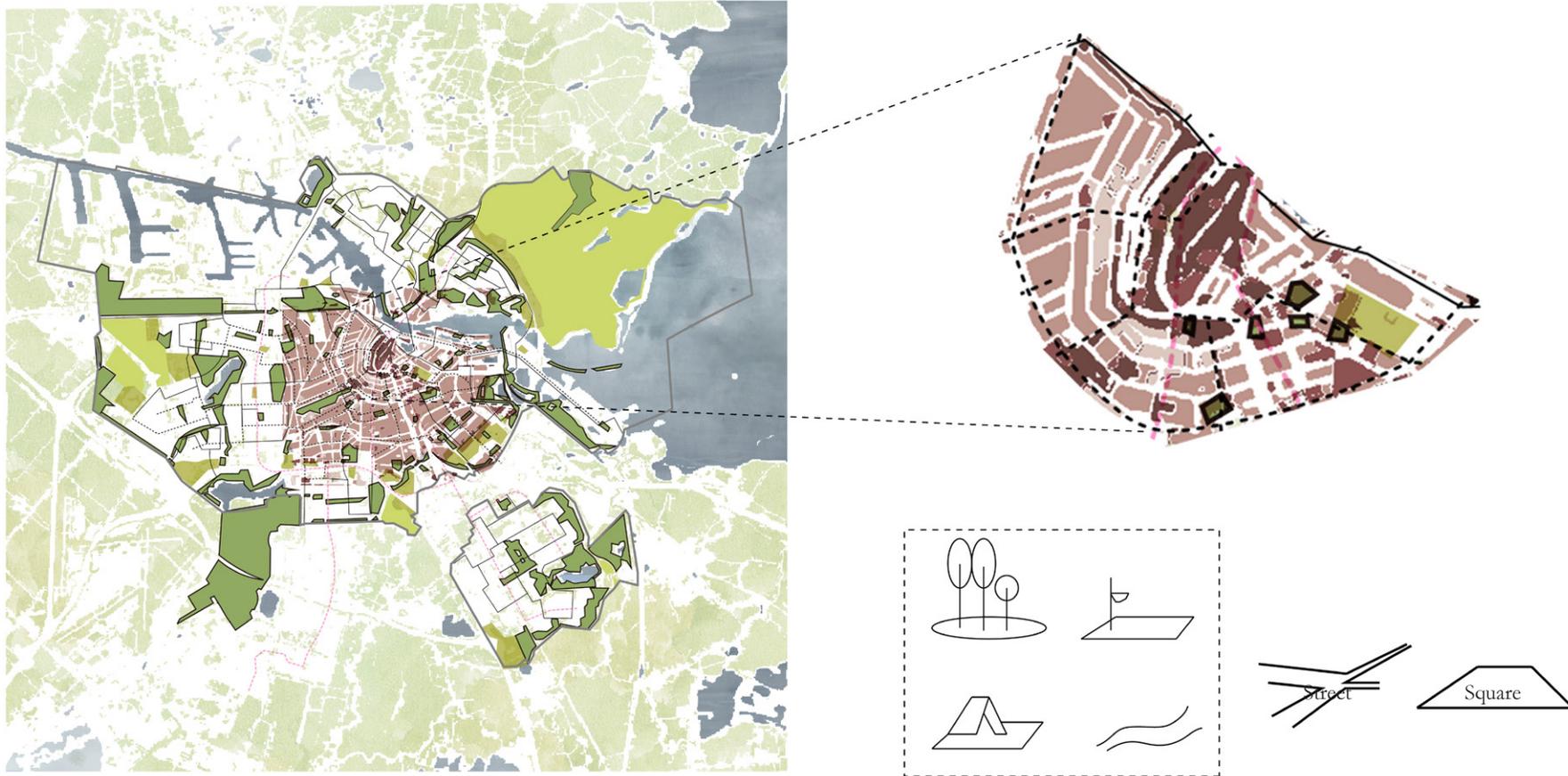


Tour Bus

4.1.2 Problematic Site Located

Then from different tour maps, including cycling trip in canal area, cycling trip in old city, boat, cruise and tour bus, we can clearly see the main street Damrak and its surroundings have the densest concentration of attractions and routes. It means the people will first all gather in this area and then, if it

is possible, they will be separated to different places. So we can see the area closely connected with central station forms a first image of Amsterdam, works as city index with massive amount of people.



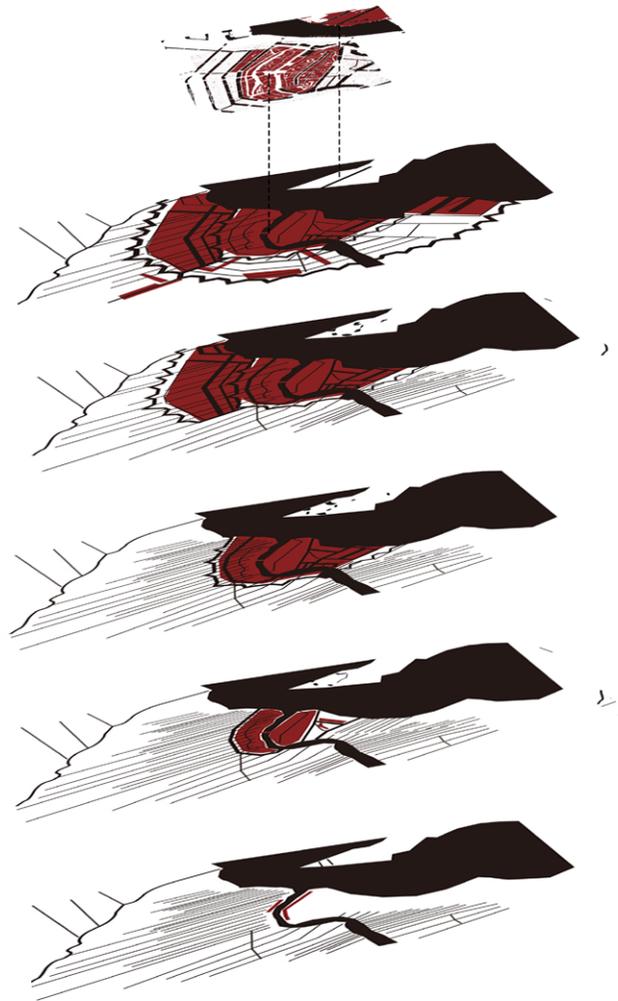
4.1.3 Land Use Analysis

However, when I overlap the land use map with green infrastructure. The dark red means commercial use and light red means residential use. There is a miss of green space in the centre. From the theory of Sandalack, we know there are six typologies of public space. Park, outdoor sport, picnic area, nature space, street and square. If there is a miss of green, the people can only gather on the hard material, that is: the street and square.

4.2 Urban Componets Analysis

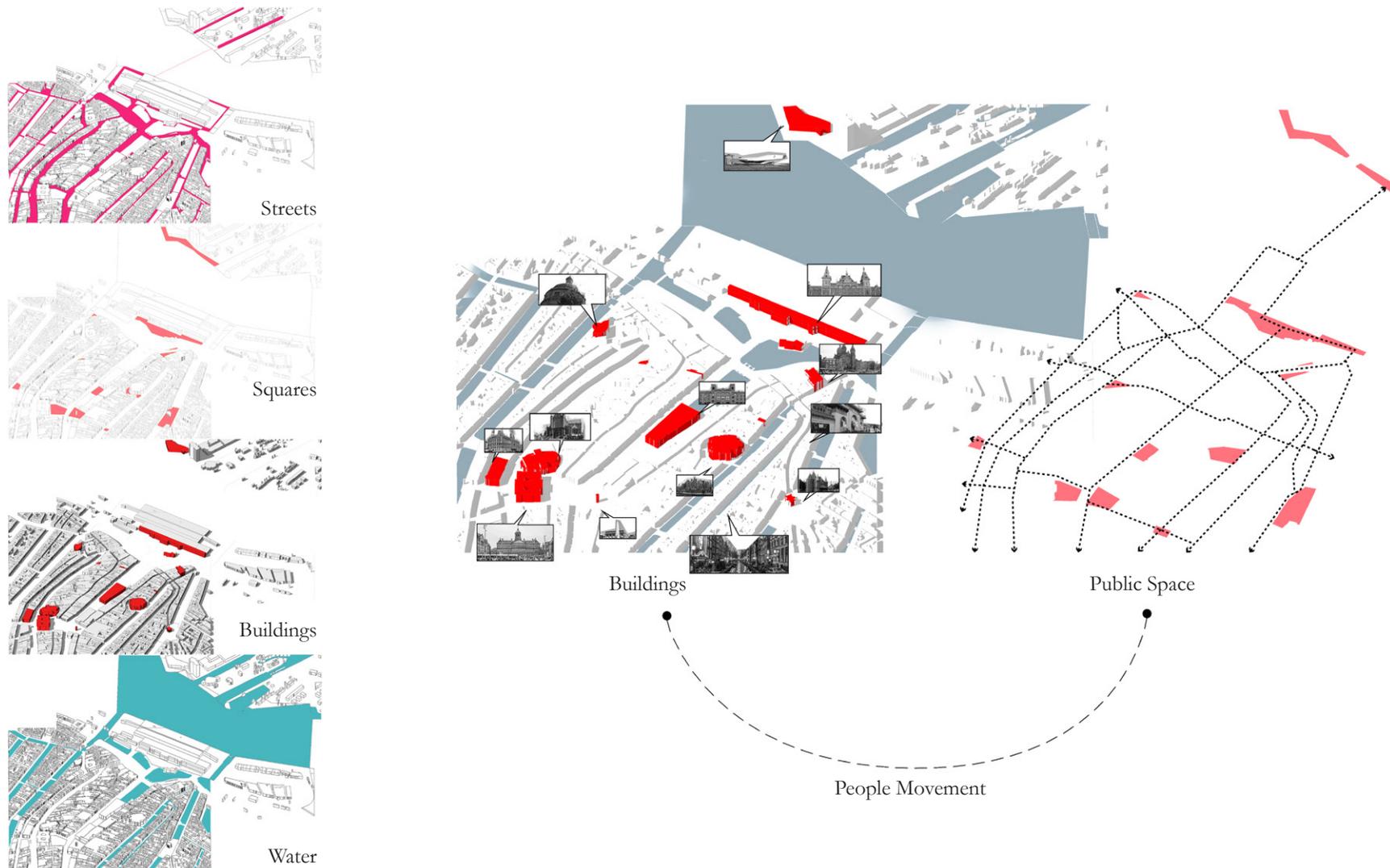
4.2.1 Layers during City Succession

From the historical growth of Amsterdam, this area used to be peat land and the canals were dug for drainage and water traffic by residents. With the expansion of city, some water lines are replaced by land, working as street. In other words, Amsterdam is a city on water, some streets, squares, buildings are all may be water in the past or had a closed relationship with water. Although there is a miss of green, the water take an important role in landscape characters.

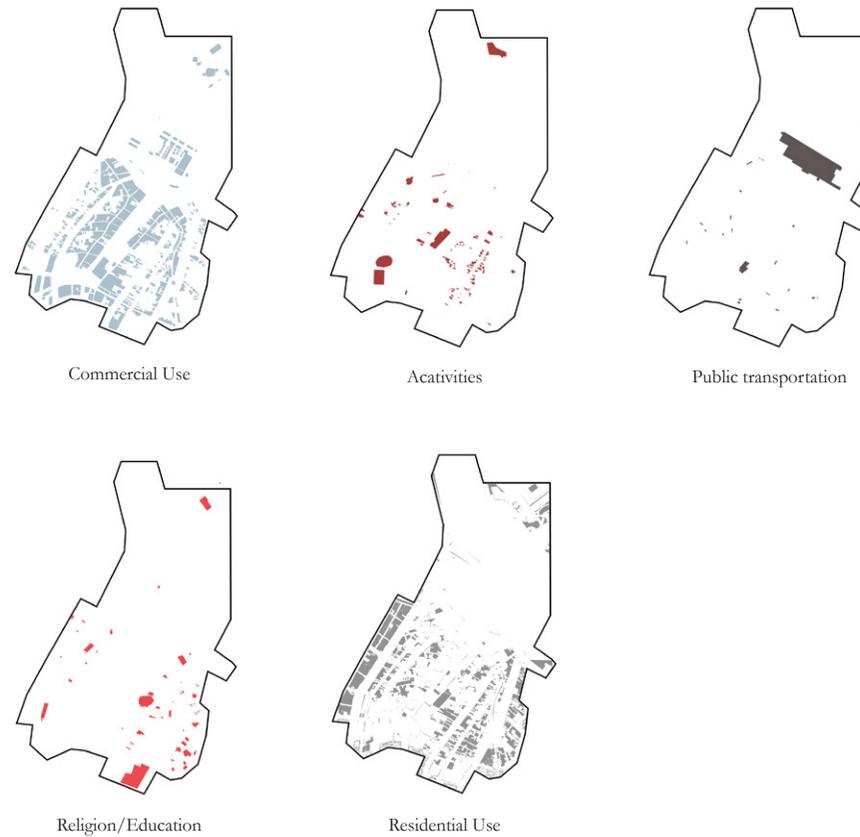


4.2.2 Existing Urban Layers

Combined with the landscape characters, there are four main layers. The landscape layers, which is mostly the water, the buildings, the public space: the square and the street. Through this analysis, the key to solve the conflict with diverse people and limited space and meanwhile, evoke the identity of Amsterdam, in this area is providing a sustainable relationship among people movement, public space and buildings.



4.2.3 Typology of Building

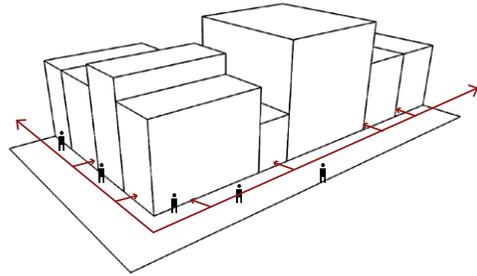


4.2.3.1 Buildings Distribution

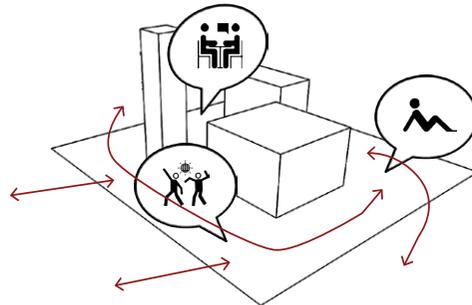
Then, I get into the typologies part of this main relevant urban layers to gather more information.

First is the typology of building. By categorizing according to different relationship with surroundings, there are five kinds of buildings in this area.

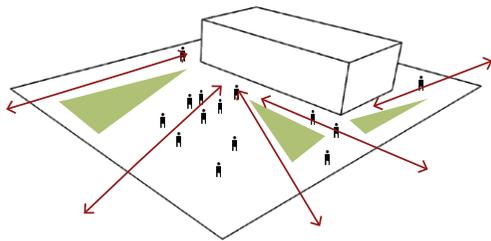
Then, I get into the typologies part of this main relevant urban layers to gather more information.



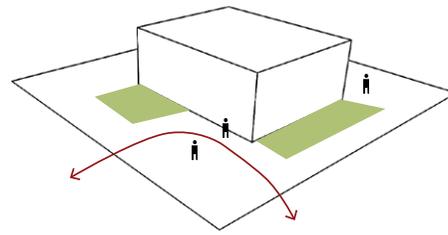
Commercial Use



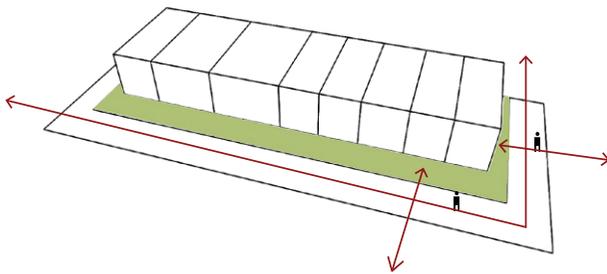
Activities



Public Transportation



Religion/Education



Residential Use

4.2.3.2 Spatial Features

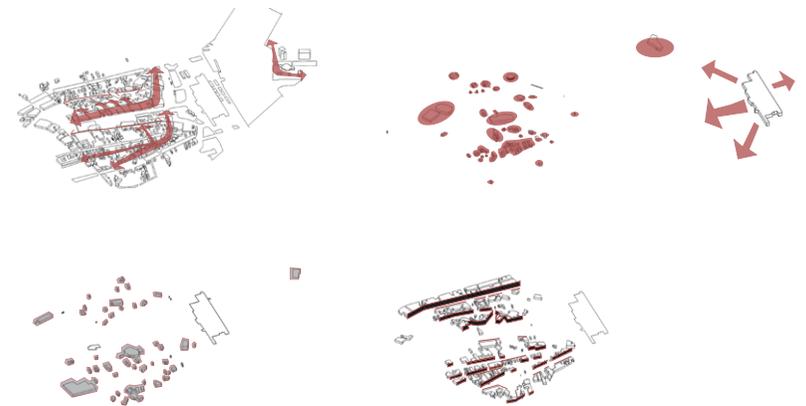
The first is commercial use buildings, which need a good interaction with side walk.

The second is building with activities. This kind of building will attract and stop people, so it need enough space for gathering and facilitating people.

The third is public transportation, the main function of the surrounding is to distribute people quickly. And it should be easy-reached.

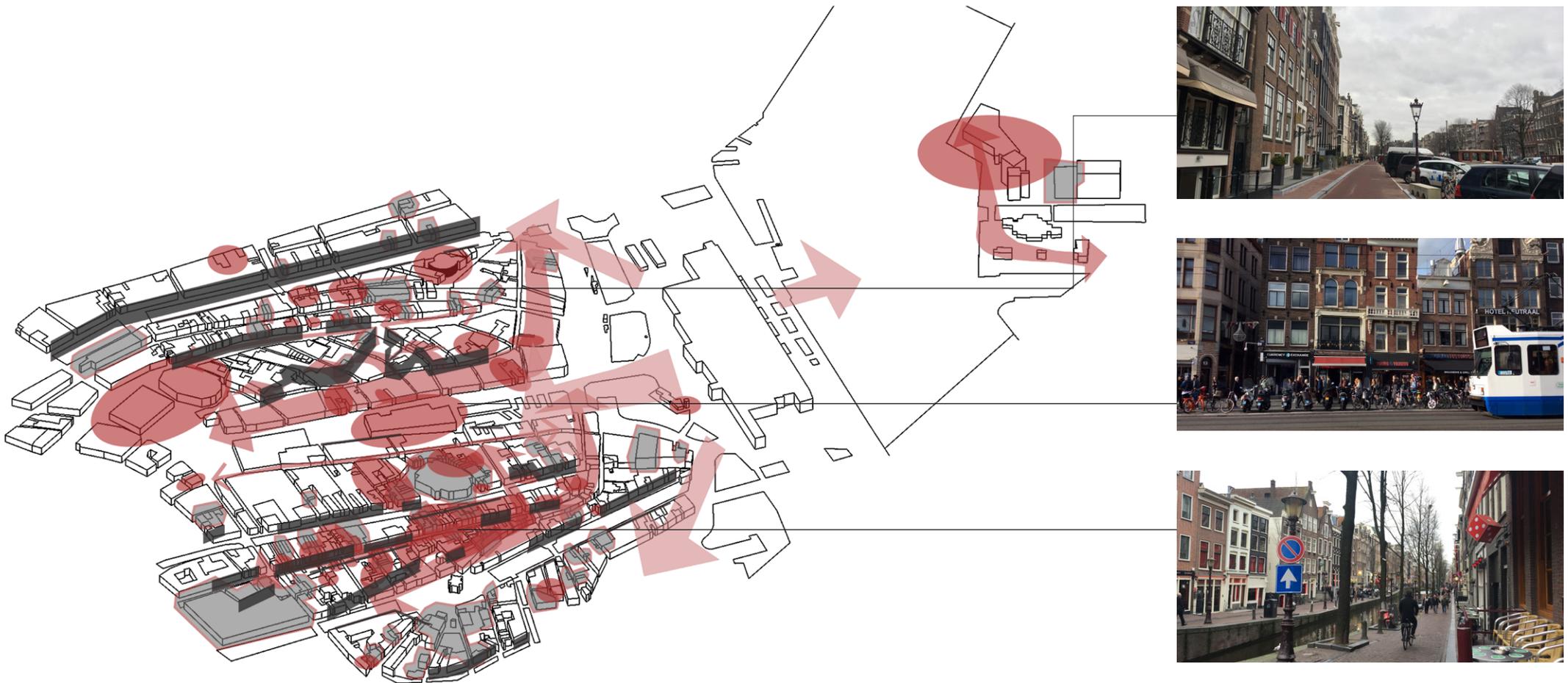
The fourth one is religion/education, this is semi-open while the fifth the residential use building focus mainly on privacy.

In according to the different spatial requirement. We can divide this area into different part forming a sequence of enclosed- semi open – open – semi-open- open- enclosed to satisfy different purposes.

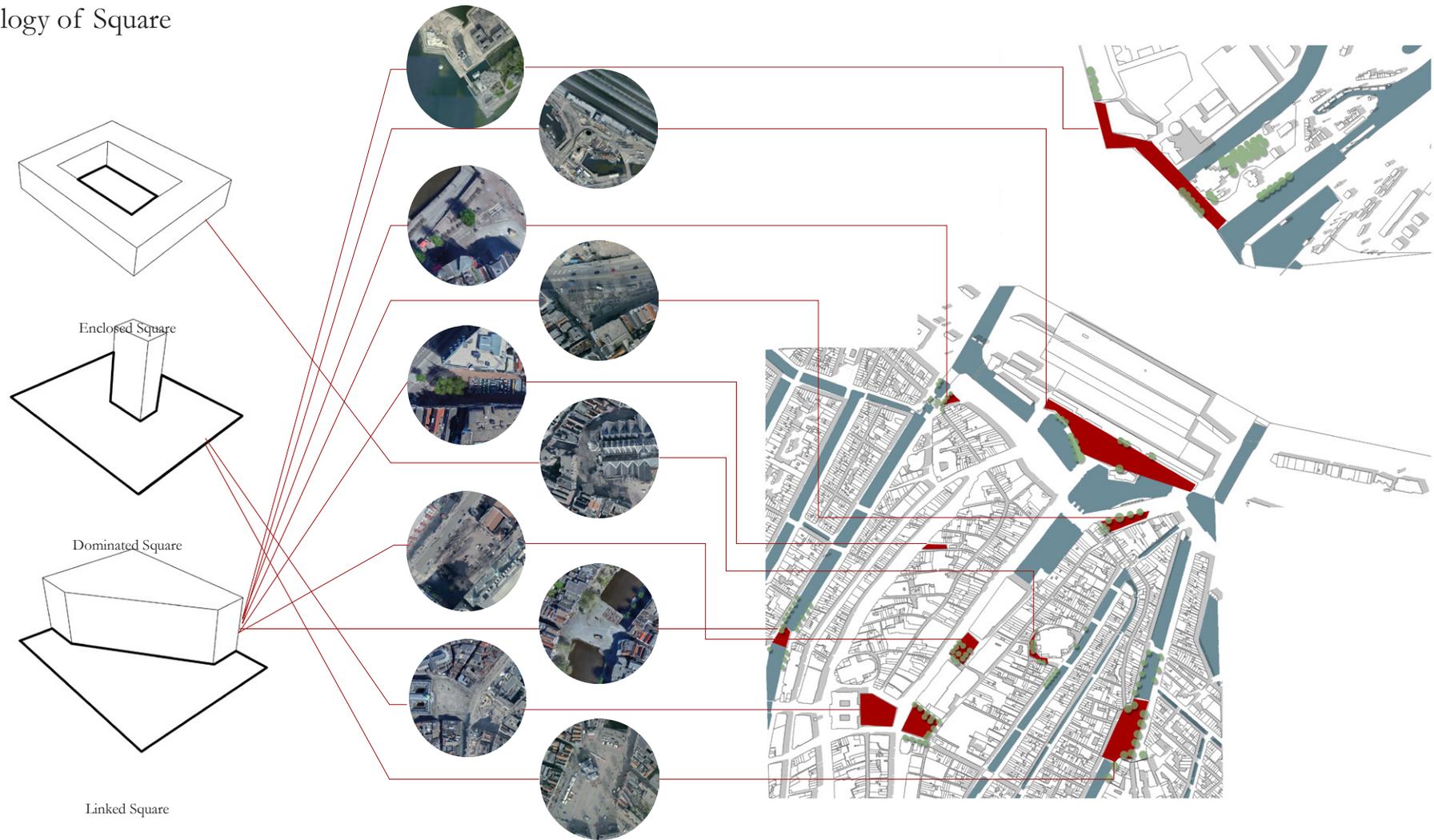


4.2.3.3 Spatial Analysis and Conclusion

When we overlap different building's spatial requirement in Amsterdam centre we can clear see that there are different rythm of space. In the west it is more loose since it is near the residential area while in the ease it is super compact because of the narrow streets and a concentration of attractions. In the middle, the Damrak Area where commercial buildings mainly locate, there is a high demand of interactive space for people to move freely. The spatial requirement in this area is a transition from loose to compact according to different function of buildings and this spatial pattern works for my further analysis.



4.2.4 Typology of Square



4.2.4.1 Squares Distribution

The second is typology of square. Through the book “urban design: street and square” There are three kinds of square.

The enclosed square which has the purest sense place and relies on the corners.

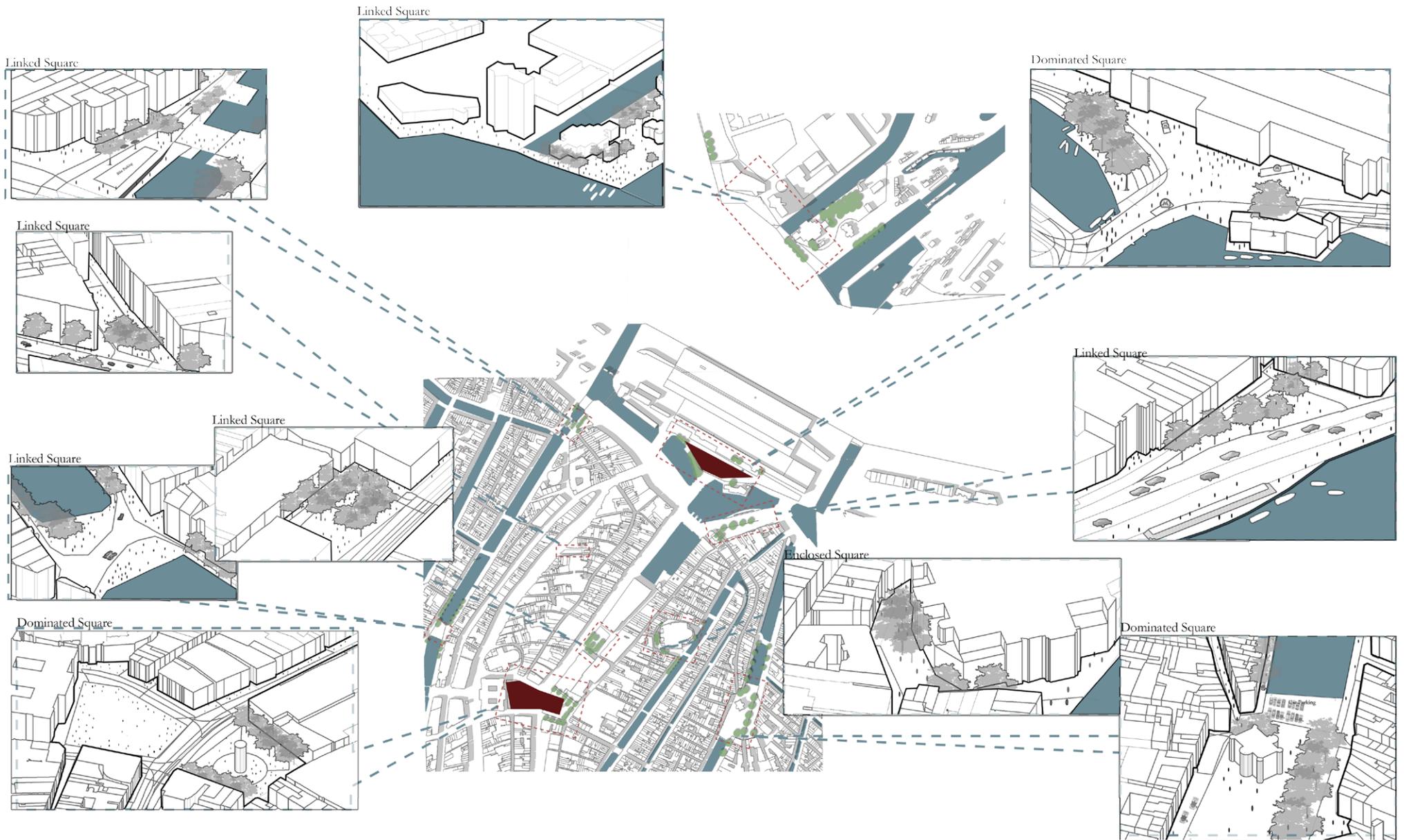
The dominated square which is characterized by one individual structure or a group of buildings.

The linked square which is used for walking from one place to another in a grouped sequence.

From the map and investigation we can see there are eleven important squares in this area and most

of them are linked square. There are three dominated squares: the dam square, monumental square and market square and one enclosed square located behind the church.

Reference: Moughtin, C. (2007). Urban design: street and square. Routledge.)

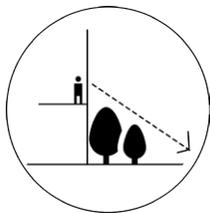


4.2.4.2 Spatial Analysis and Conclusion

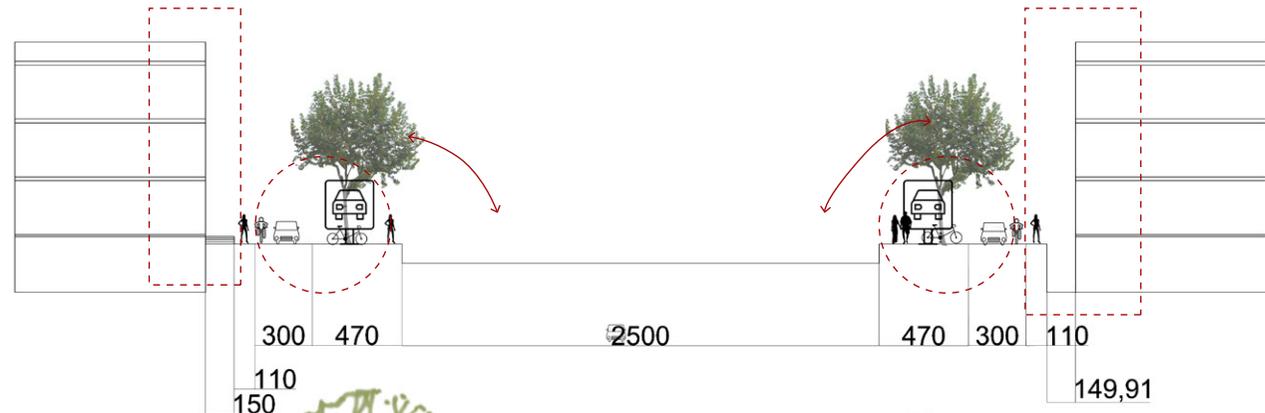
However, from the perspective of these squares, we can see these squares are all like blank patches in the city with no identifiable features or obvious func-

tion. The seven linked square which has the potential to be linked together for gathering and distributing people is isolated with no connection with each other and also the surroundings.

4.2.5.2 Specific Function Analysis

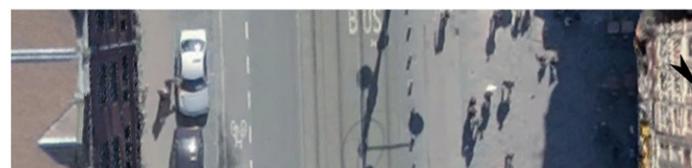
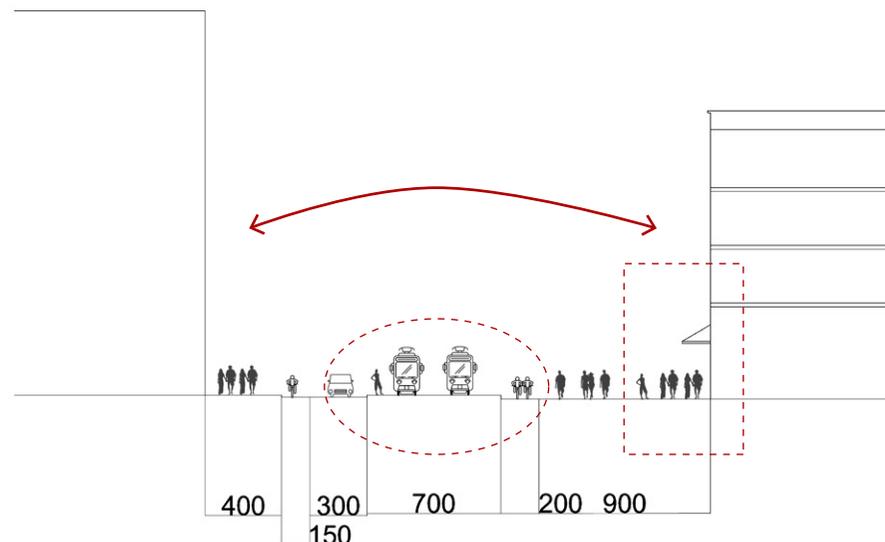
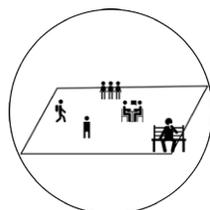
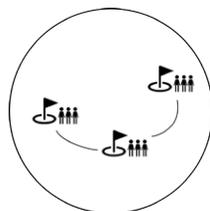


Singel



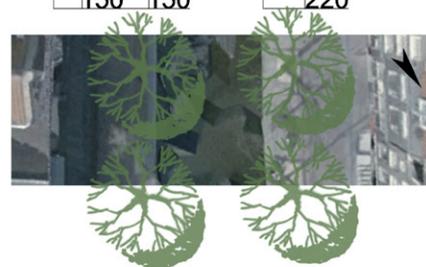
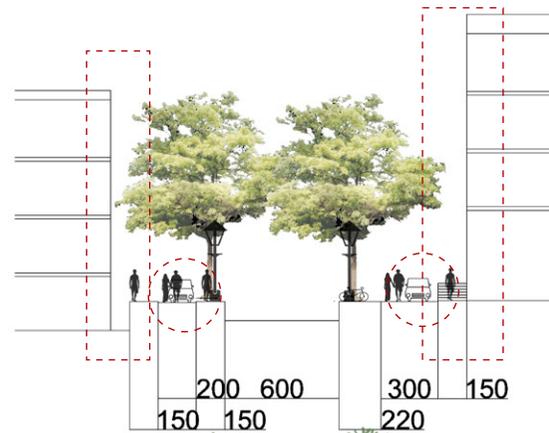
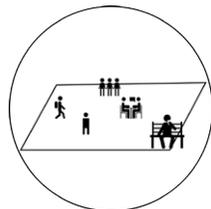
The Singel Street as the main street in west neighbourhood, should be a place for daily activities, for social interaction, for releasing pressure, for providing protection. However, we can see, the street is occupies by car parking and only little space left for passing by. The connection between the building and street has no de-

sign and the scenery of canal is not well made used of.



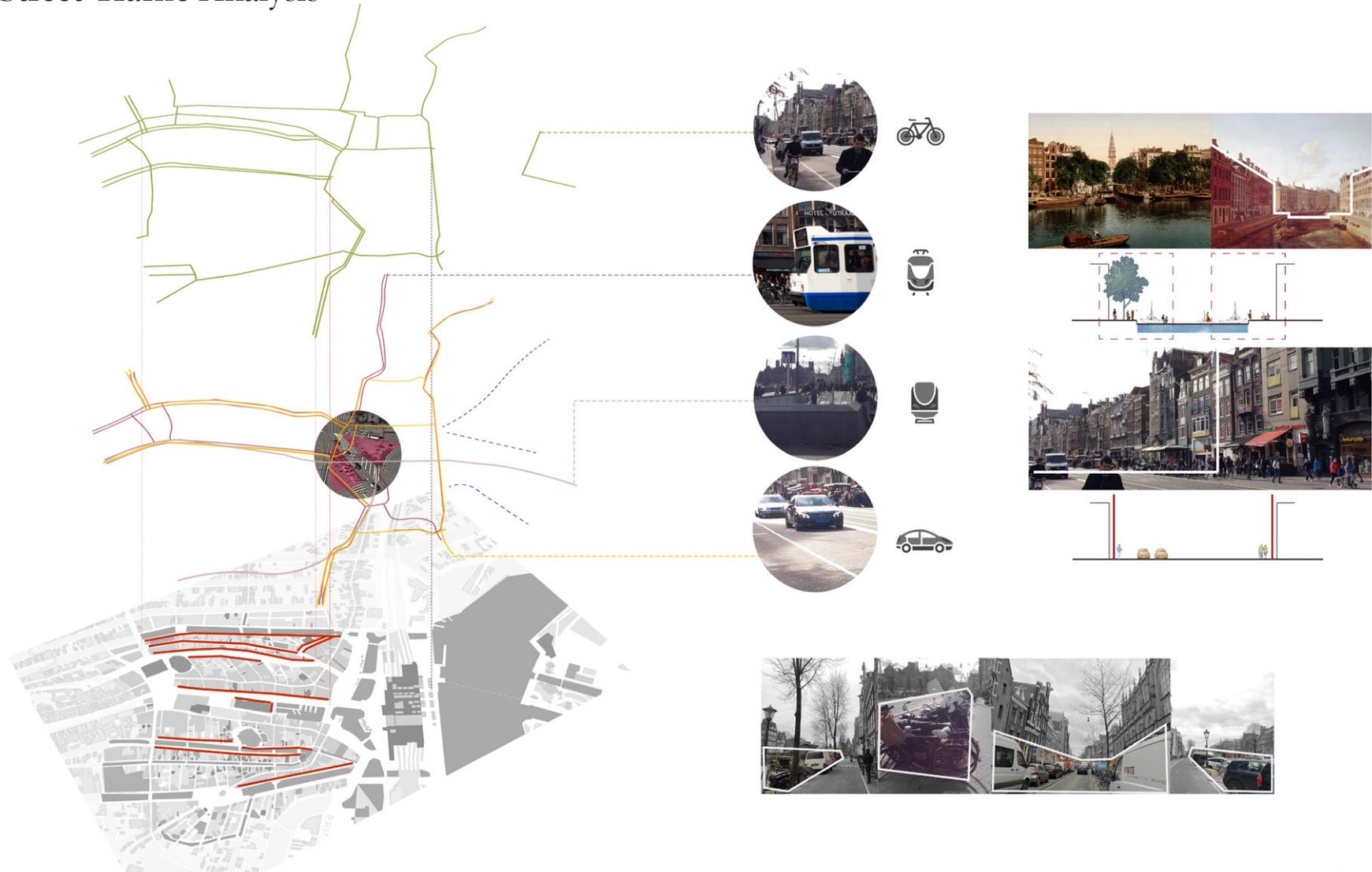
The same things happen on the Damrak Street which should provide the first strong image of Amsterdam. The connection between building and street is ignored and the traffic occupies most space of the street and separates two sides. Furthermore, there is no focus and as a result, people

will feel bored quickly.



The Oudezijds Achterburgwall, as the red light street, should facilitate complex requirements of people still lacks targeted design to improve its quality and still, the cars take a big part of the street.

4.2.5.3 Street Traffic Analysis



Through analysis we can see traffic and car parking occupy too much limited urban space. There are four main kinds of public traffic in this area except for pedestrian, the cycling, the tram, the metro and the cars. These traffic flows are overlapped in most areas and therefore, make the street a bit more crowded. The cars hinder the visual line and break the continuity of cityscape. From the image in history, we can see there is a good connection among buildings, street and

water. In contrast, the street nowadays is totally separated by traffic.

Furthermore, because the city hasn't taken parking problems seriously. The cars and bikes are just stopped along the street and make the street more and more narrow.

4.2.5.4 Horizontal Alleys Analysis

Most of the horizontal alleys as my experience in Amsterdam in these area are more like a passage than a city space. The important connection between different urban space is missed or in other words, has no specific design which causes confusion for people. It is also one of the reasons why the people flow is always vertical not horizontal.



Residential are &
Commercial area



Main Street & Local
Street

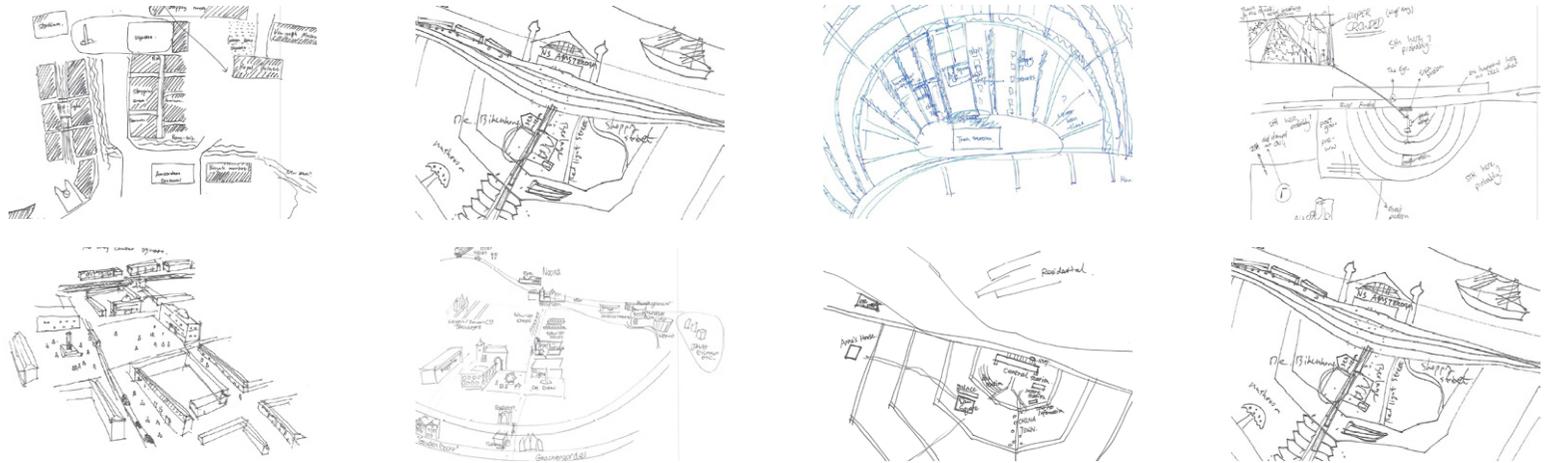
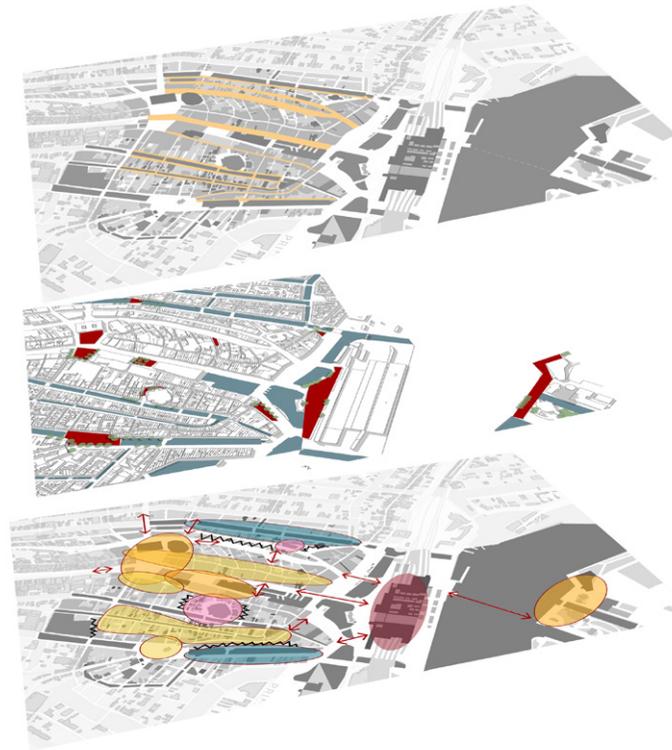


Commercial area &
Commercial area

4.2.6 Overlapping

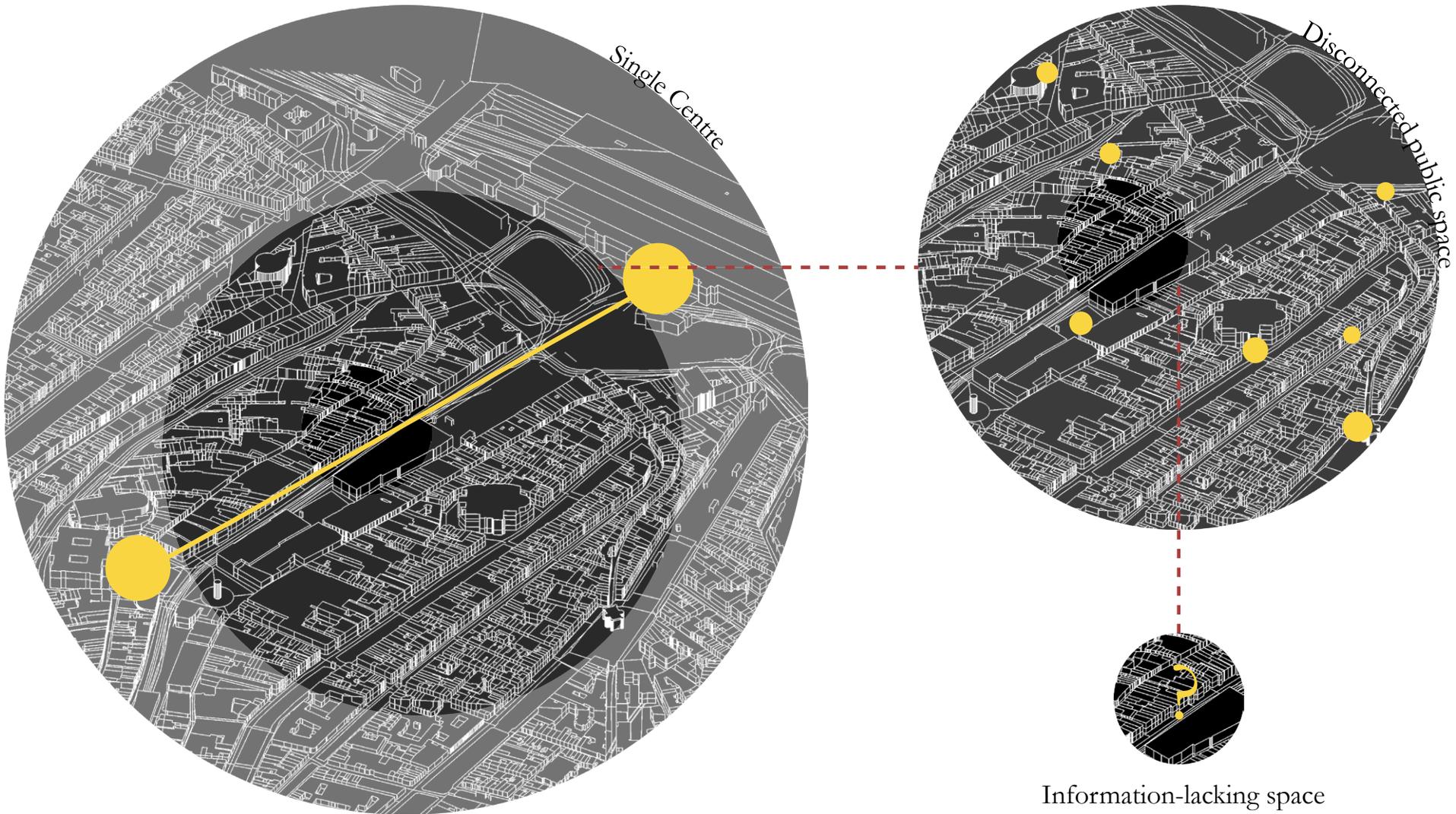
Now I overlap the conclusion of each urban layer to find the problematic in Amsterdam Centre. From the final map we can see, there are only two obvious public space (in dark orange): the station square and Dam square. The Damrak Street suffers too much crowds pressure but has weak spatial design. There are also other potential area but they are hidden under the crowds because of the lack of character.

As is shown in the mental map of Amsterdam, the Damrak Street is the most obvious and other area is most blurred.



4.2.7 Conclusion

As a result, the fundamental problem in this area is the assemble of public space. The connection between station square and dam square is so dominant that it causes people rushes into this area. The other public space that should be able to gather and distribute people is scattered with low connection so that it is hard to pay attention to it. Even if people get there, there is a lack of information to evoke the identity and retain people.



4.3 Target Group Analysis

4.3.1 Failed Trial: Typology of People

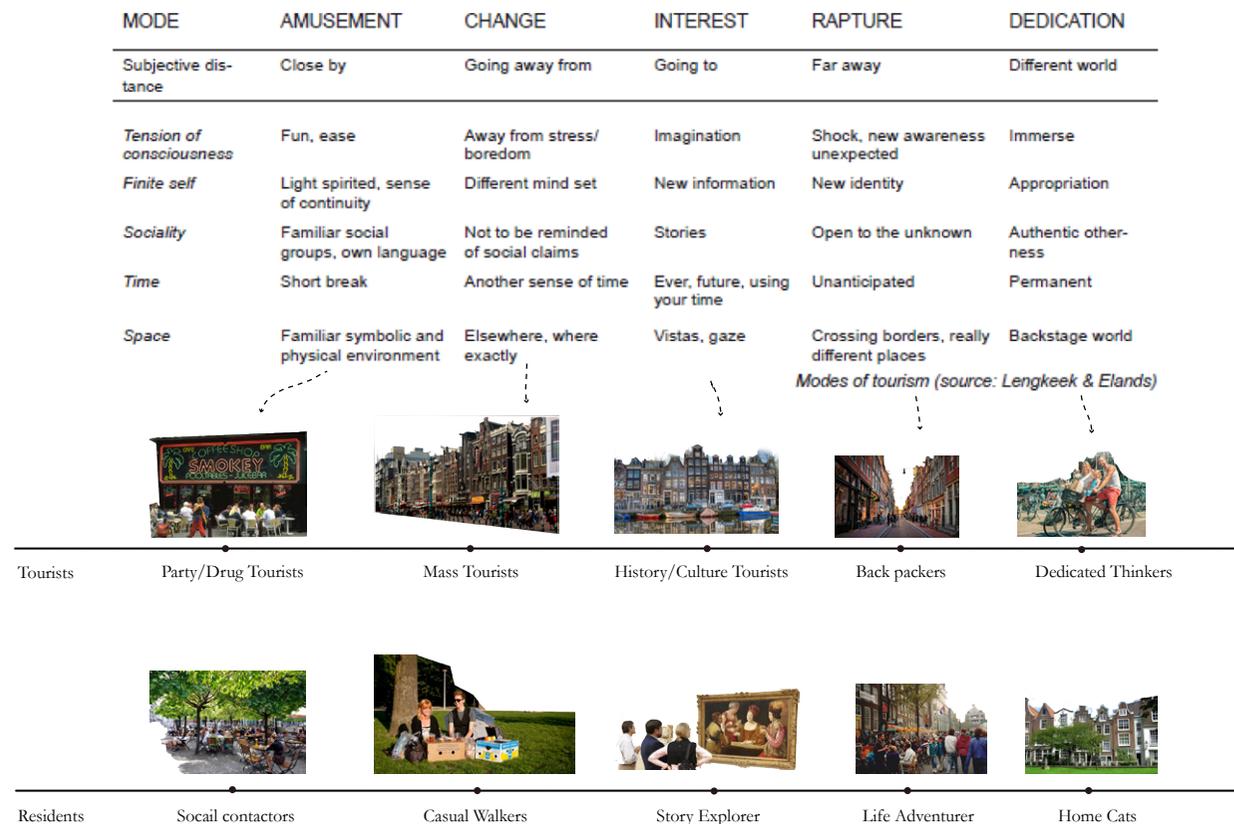
According to five modes of experience arose by Lengkeek (2001), I defined five kinds of tourists and five kinds of residents in Amsterdam Centre.

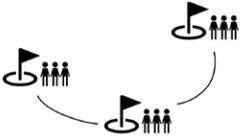
These ten kinds of people with different intention are supposed to be attracted by different space, programmes and atmosphere. Based on this, I thought I could distribute them by giving different design. However, when I made interview in Amsterdam, I found most of people thought they had overlapped intention. They were not only one kind of people, they would not only be interested in one thing. As a result, it is very hard to do the target design and achieve the goal that there are only a few kinds of people in one place.

In the next two pages, I show my initial ideas of typology of people and their demands.

Reference:

Lengkeek, J. (2001). Leisure experience and imagination: Rethinking Cohen's modes of tourist experience. *International sociology*, 16(2), 173-184.



Party/Drug Tourists	Mass Tourists	History/Culture Tourists	Back Paclers	Dedicated Thinkers
Looking for fun and ease; Short break with excitement; Most are young people	Away from stress; Looking for metropolitan scen- ery or different way of life; Some thing don't involve too much energy	Looking for stories, interesting things and new knowledge	Looking for shock, unexpected scenery, urging for diffenent and unique places	Looking for the real image of the city; Immerse oneslef into the local life; Don't mind spending long time in one place
				
				

Party/Drug Tourists: This group of people look for fun and ease for a short break with excitement. They will always gather together around one specific thing.

Mass tourists: This group of people look for metropolitan scenery or different way of life. Their purpose is being away from stress, so prefer to something involving not much energy. They are always leaded by attractive and easy-found points step by

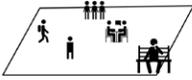
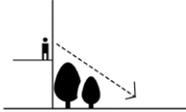
step. The route is always fixed;

History/Culture Tourists: This group of people looks for interesting knowledge that they are not familiar with and historical attractions. The route is influenced by cultural atmosphere, historical buildings or anything can give them imagination.

Back packers: This group of people looks for different and unique places that can give them sur-

prise. The rote is usually different from most people because they are willing to explore the world under cover.

Dedicated Thinkers: This group of people is interested in the real image of the city and wants to immerse themselves into the local life. They don't mind spending long time in one place. They always chose the local way to get into locals' daily life.

Social Contactors	Casual Walkers	Story Explorers	Life Adventurers	Home Cats
Looking for simple relaxation; Being with familiar social groups	Away from stress; Escaping from work or life troubles; Meditation	Looking for stories, interesting things and new knowledge	Man is man's great joy.	Immerse oneself in their own world
				
				

Social contactors: This group of people is willing to spend their leisure time with familiar social group in familiar environment just for simple relaxation. A comfort and easy-reached social place for social contact is important for them.

Casual walkers: This group of people wants to escape from work or life troubles, be away from stress. They prefer to choose the way with beautiful view and less people.

Story explorers: This group of people is interesting in new stories. A familiar place that can still give them imagination and keep them exploring or a new environment with new images is a choice for them.

Life Adventurers: This group of people looks for new identity or different things. They don't mind get into the crowds because man is man's great joy. They can watch different people doing different things. A place full of complexity can arouse their

interests.

Home cats: This group of people immerse themselves in their own world. What they need is the sense of belonging and safety. The environment should ensure the quality of see and to be seen.

4.3.2 Purposes in Amsterdam

4.3.2.1 Questionair in Amsterdam

When I was in Amsterdam, I asked 43 people : "What attracts to Amsterdam? " and here I show their answers and made the word clouds for them.

From the analysis we can see museums are really great attractions in Amsterdam representing its wealth of cultural collection. The canal house as a typical Dutch architectural form coping with water and historical buildings both show the rich history of Amsterdam and the achievement of Amsterdammers. Besides these, the city life is also important in Amsterdam encouraging people to bump into diverse atmosphere. Furthermore, The canals which is listed in world heritage play important role in Amsterdam Scenery, shaping Amsterdam landscape.



The Answers

Cannabis seeds (3)

Capital.

Museum

The museums, but too crowded most if the time.

Open environment

The canals, old canal houses, musea, shops

Amsterdan musemu.

The museums and the architecture

Freedom

Just the food offer

Concerts or shopping

The atmosphere

The night life

The canals

Van Gogh museum

The city life and history

Mostly visit amsterdam because there are some events happening, and maybe the museums although i havent visited any of them, but i will

Museums.

museumes

It is one of the most important cities in the Netherlands. Busy but full of signs of aging. The diversity, and the city suprise me every time

Red light districk is attractive

Stad met veel verschillende kanten en veel

verschillende mensen met verschillende culturen

museum

I can always feel diversity in Amsterdam.

Tourism

The shops

that remains almost untouched through history

Red light district

museums

I like the museums gathering in Ams. a city with canals!

Citylife

I have lived in Amsterdam for about 2 years, beautiful city and nice people there, would love to go back to live there

The liberal way of life, which disproves many theories about many things considered "bad for us" in other countries.

Liberalism

architecture, urban landscape, social culture beautiful architecture and greenness; yes, it does.

Easy-going Relax Diversity

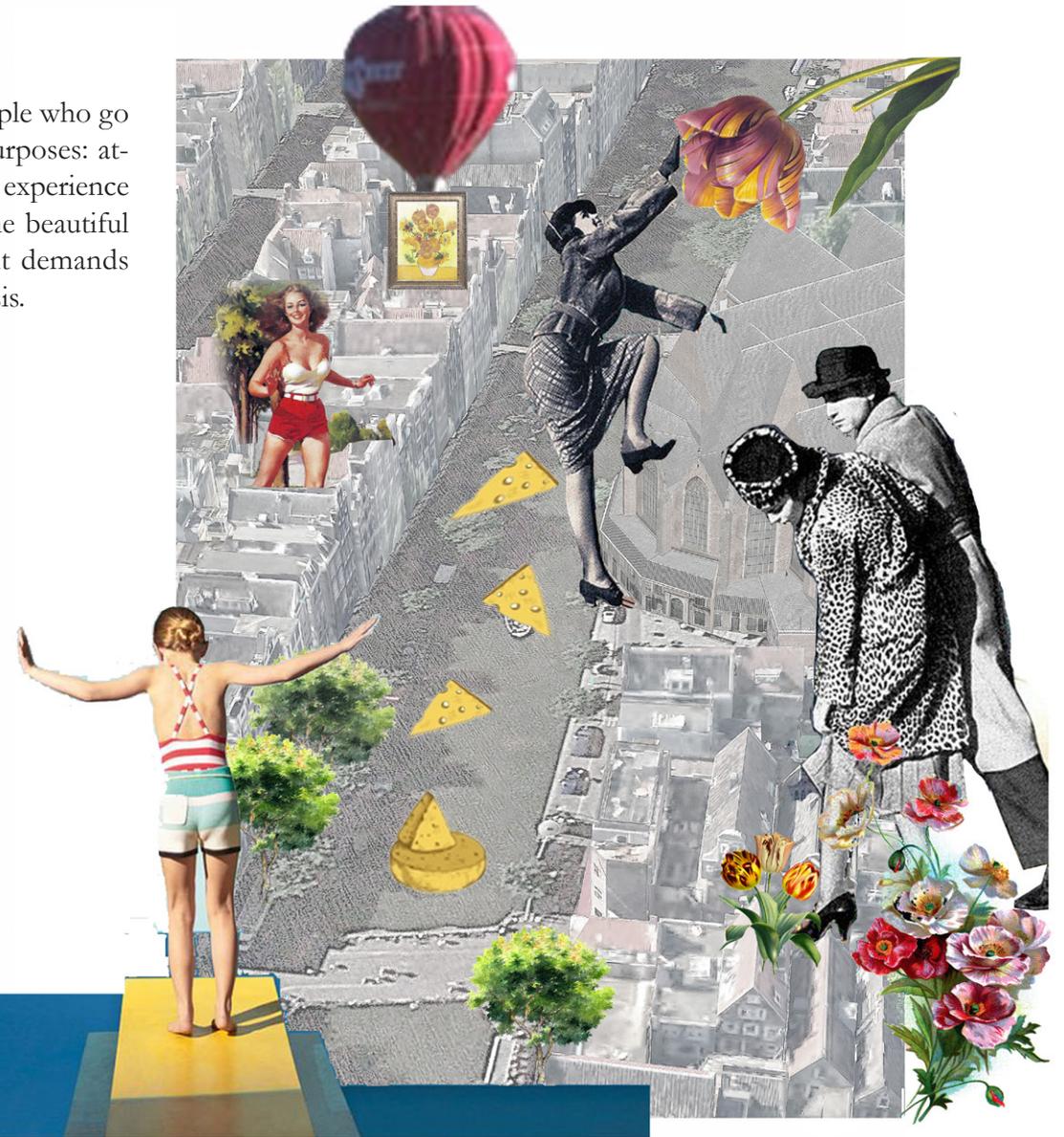
Diversity

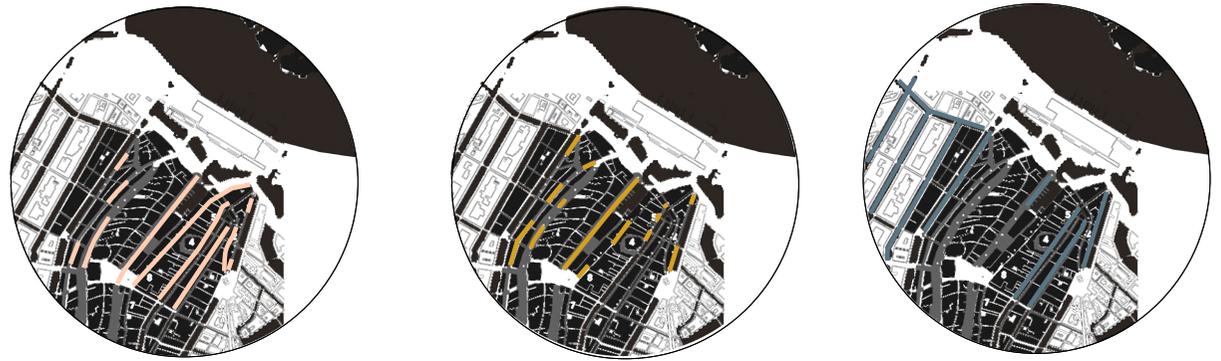
Buildings and water

4.3.2.2 Conclusion

As a result, we can generally say people who go to Amsterdam mostly have three purposes: attracted by the culture and history, to experience the diverse social life or to enjoy the beautiful canal scenery. These three different demands will be the base of my further analysis.

What attracts you to go to Amsterdam?

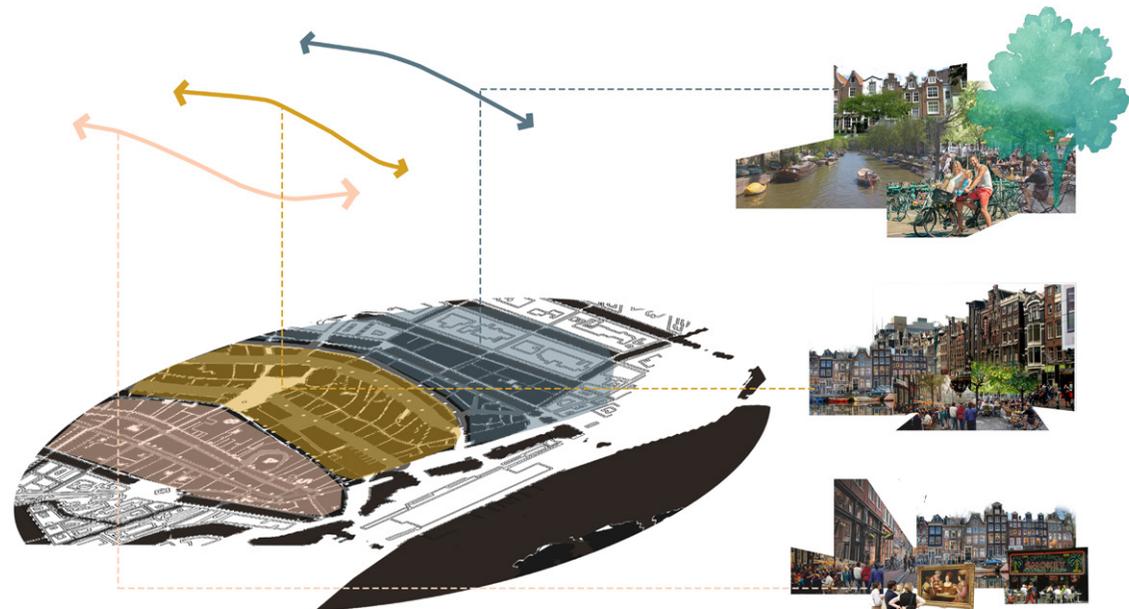




4.4.2 Urban Partition

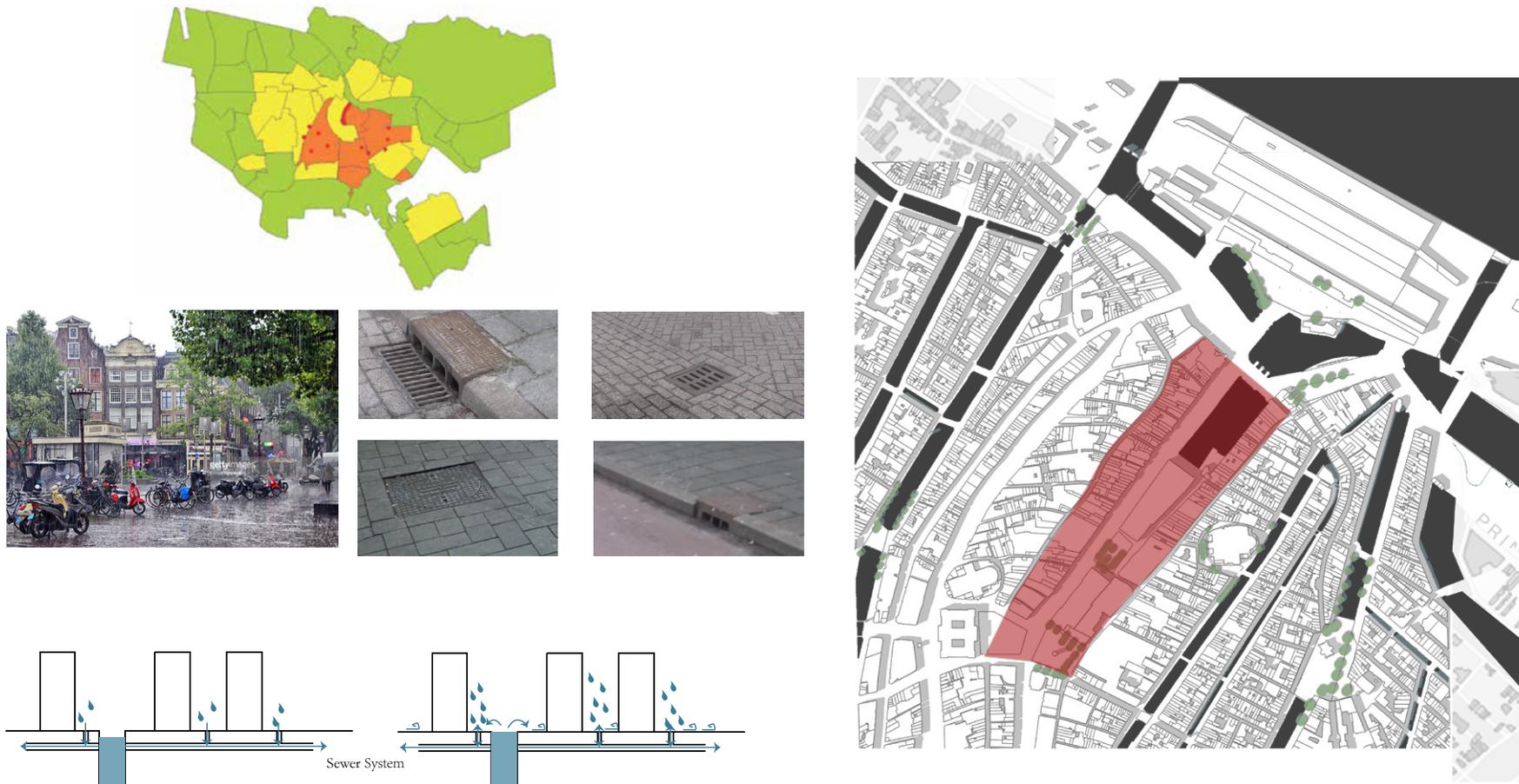
By overlapping elements separately on one map, we can see there is a kind of concentration. The cultural and historical attractions are mostly gathering in old city while the network of canals is in the west of city centre. The Damrak Street and its surrounding area is the place for plenty of urban facilities working as the vital social platform. The collages made by picked images in these three parts, furthermore illustrate the different atmosphere.

We can not say that in old city, there is no element about canal or social aspects. What we can see is that these three important aspects are overlapped all over the Amsterdam but in different area there is one dominant and this outstanding dominant give this area unique identity, differing it from others. Based on this, we are able to divide the city centre into three part, the cultural part, social part and landscape part. What I will do next is to strength the identity in each part to create a clear city image so that people can make choice easily along their experience routes and feel the charm of Amsterdam.



4.5 Flood Risk Analysis

As we know the Netherlands is a country with a lot of rain, it is important to create a safe and comfortable environment for people both living here and visiting here. As is shown in pictures and diagram, the drainage in Amsterdam relies on the water outlets and water drain on the streets combined with pipes underground to transfer rain water to sewage system. This is a kind of conventional and low-efficient way of water management. If heavy rain happens and the rainfall exceeds the maximum of pipe capacity, the flood will happen. The map below is an initial citywide analysis of the degree to which the city is rainproof reveals that 10 to 20 percent of Amsterdam is vulnerable to water damage in buildings, especially at certain spots in the city centre done by Amsterdam physical planning department. (The red color is the poorest). We can see the Damrak Street is in the high risk of flooding. It is a big hidden problem because this area is the most crowded area in Amsterdam Centre now and if the environment collapses, there will be a series of social problems.



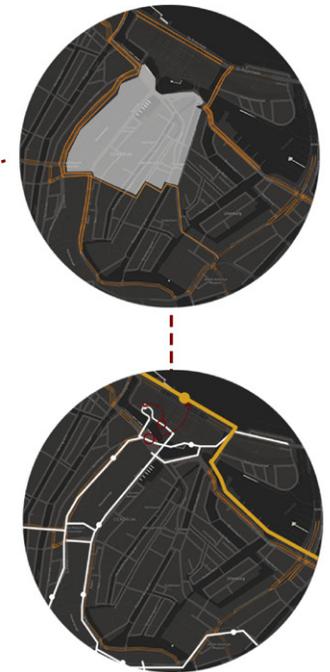
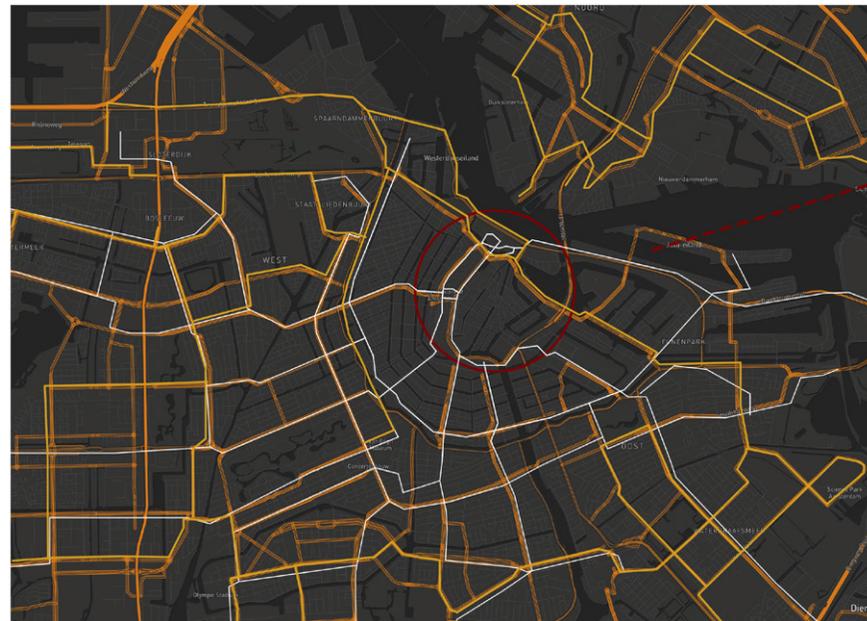
4.6 Structural Proposal

In this part I will give my proposal according to my previous analysis to make a strategy plan for Amsterdam Center in aspect of flow of traffic, flow of people and flow of water.

4.6.1 Re-organize the Infrastructure

To release more public space, the first step is re-organizing the traffic flow by restricting motorcycle and promoting public transportation.

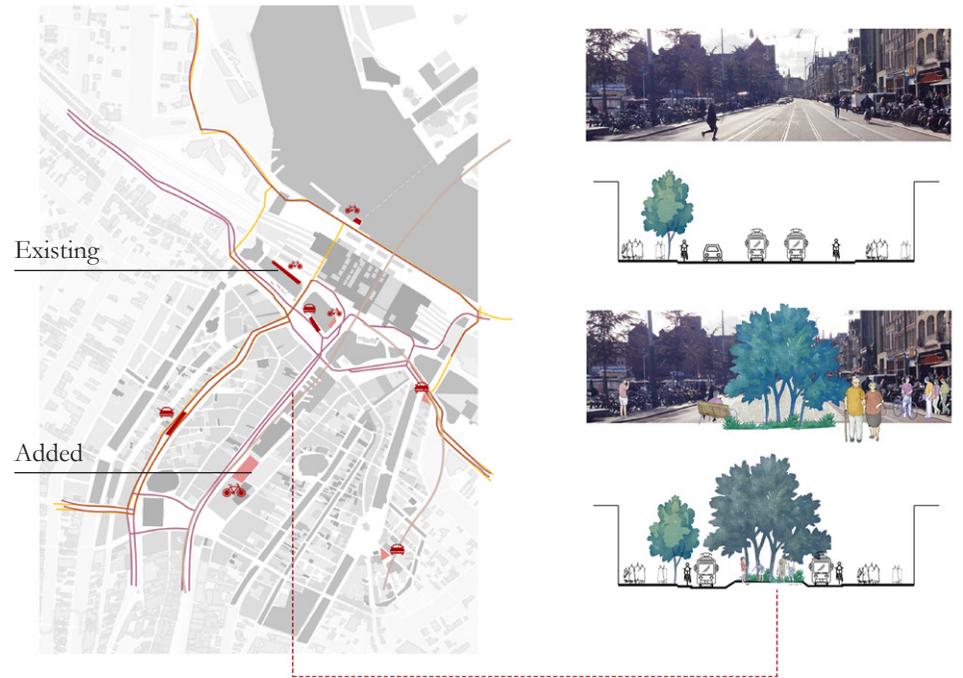
1. The centre area among Nieuwzijds Voorburgwal, Geldersekaade and Paleisstraat is planned to be car-free so the transportation will rely on tram, bus and metro.
2. I move the bus station from in front of the station which is a big obstacle between station and the city to the backside of the station so that lead some people go to the other direction and there will be more space in front of the station.
3. The west tram station in front of the station hind the visual line between the station and water. That's why I move it a bit far away to leave a integral outdoor space.



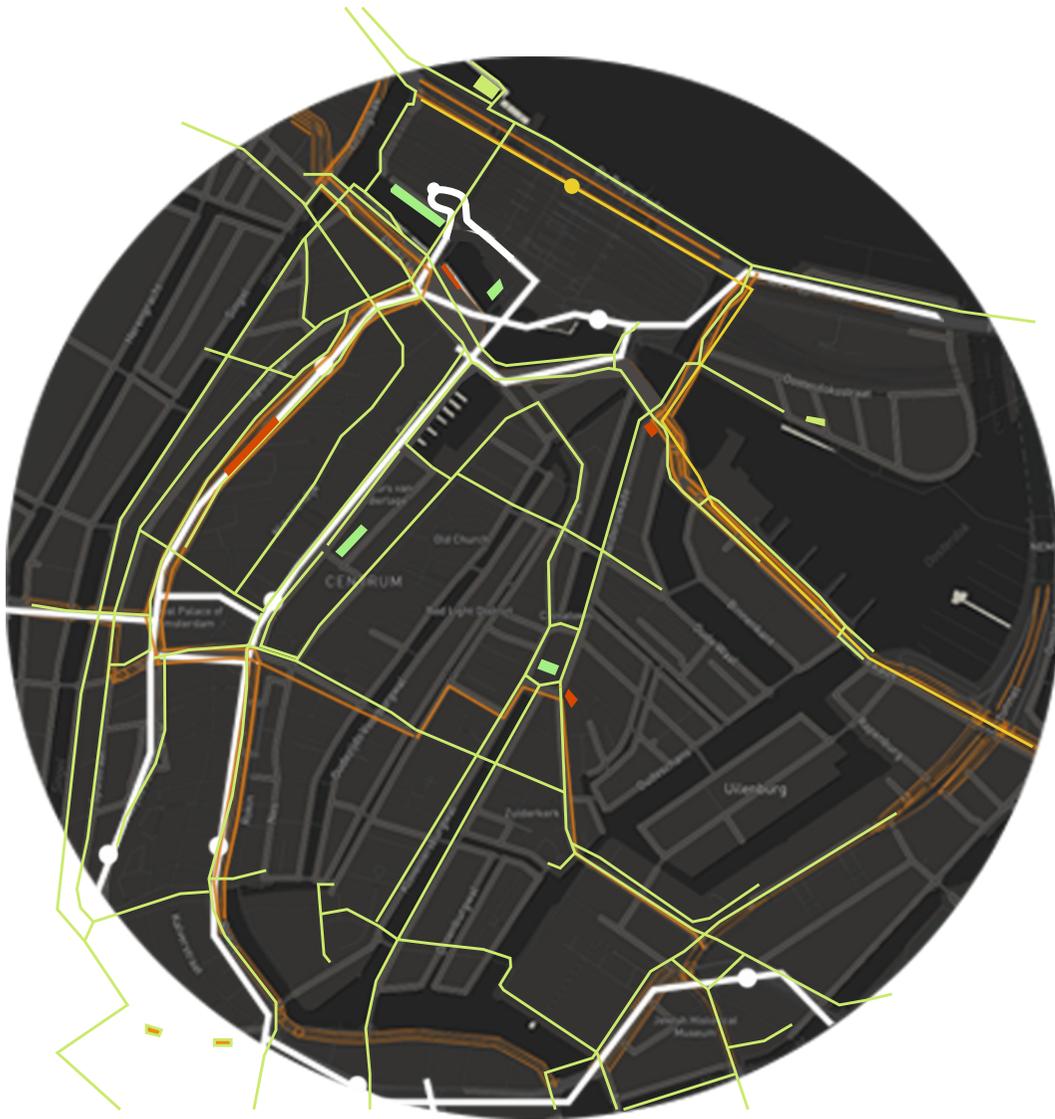
As we have mentioned the problem that car parking occupies too much public space, the car-free proposal will release the parking pressure a bit. Combined with the analysis that there are already two underground parking (dark red) adjacent to car-free zone in the west, I add two more (light red) in the east working for the neighbourhood and tourists. Since bicycles on the streets is also a problem, the municipality already decided to add two underground bike parking (see project 1012) to give more freedom on the ground.

After the finish of this proposal, the space which was used for car road or parking will be transformed into well-designed public space facilitating people and serving for urban identity.

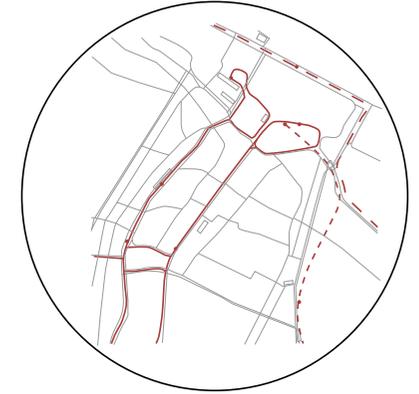
In the future, it is predictable that the city will be more and more ecological and cars will be gradually replaced by bike and public transportation. As a result, it is important to construct a complete bike path system to promote the healthy way of experience the city. Furthermore, it is also necessary to decorate the bike path to make it not only a road but also a ecological belt in some spots. It is a way of transforming mono-functionaal to multi-functional space to solve the short of space in metropolitan area.



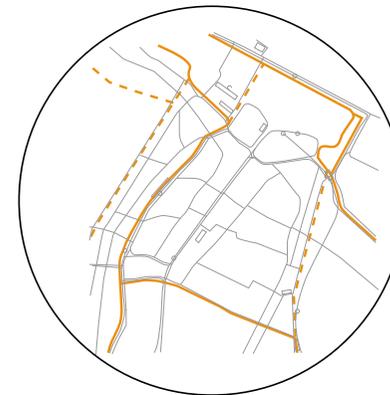
Eventually, the TOD Mode (Transportation Oriented Design) is formed. Inside the carfree-zone, there is a comprehensive public transportation network along with well-connected bike path which enables the traffic flow more efficient and sustainable and furthermore, release more urban space.



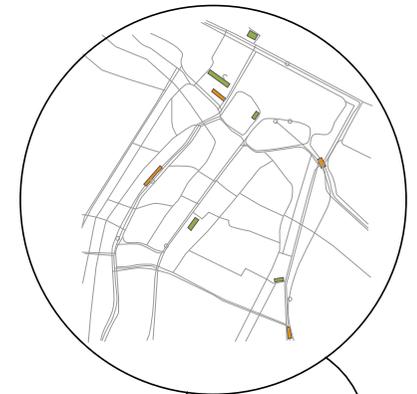
Bike Path



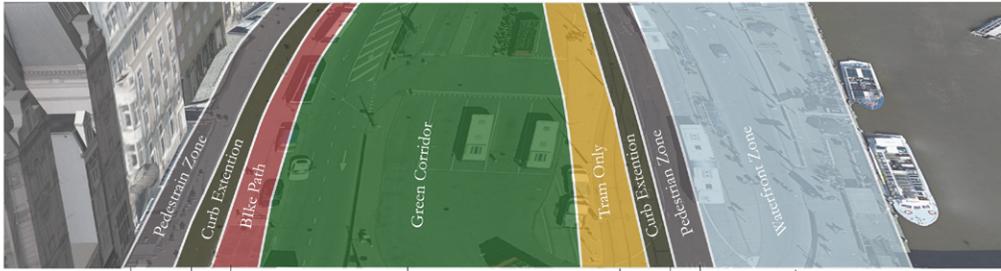
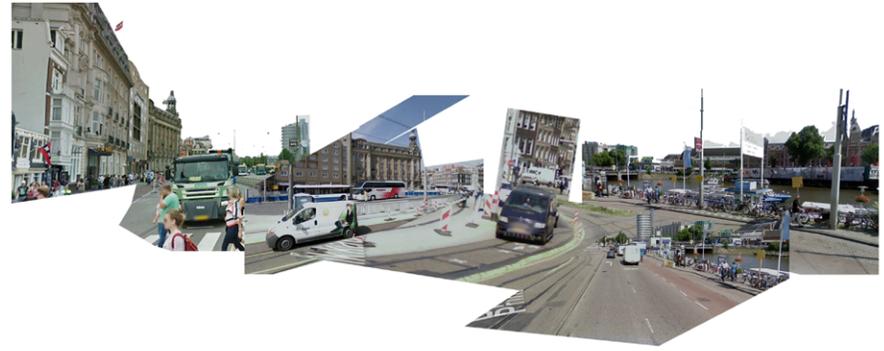
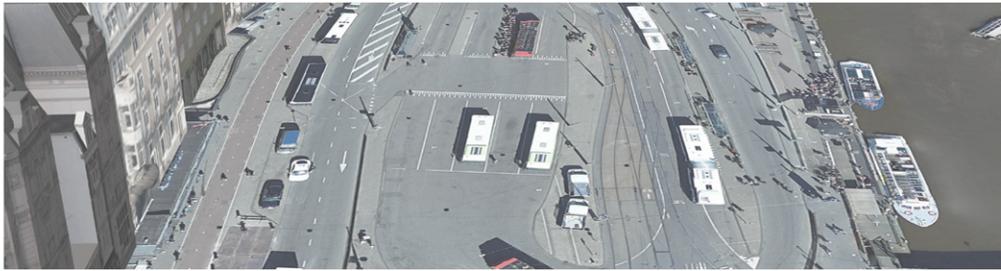
Tram/Bus/Metro



Carway



Parking



(Photos come from the Internet)

This contrast show my concept of how this area will look like after the re-organize of infrastructure. The urban space which used to be occupied by traffic, now is open again to people to provide good quality of environment, to make a better connection between city and water.

4.6.2 Guide the Crowds

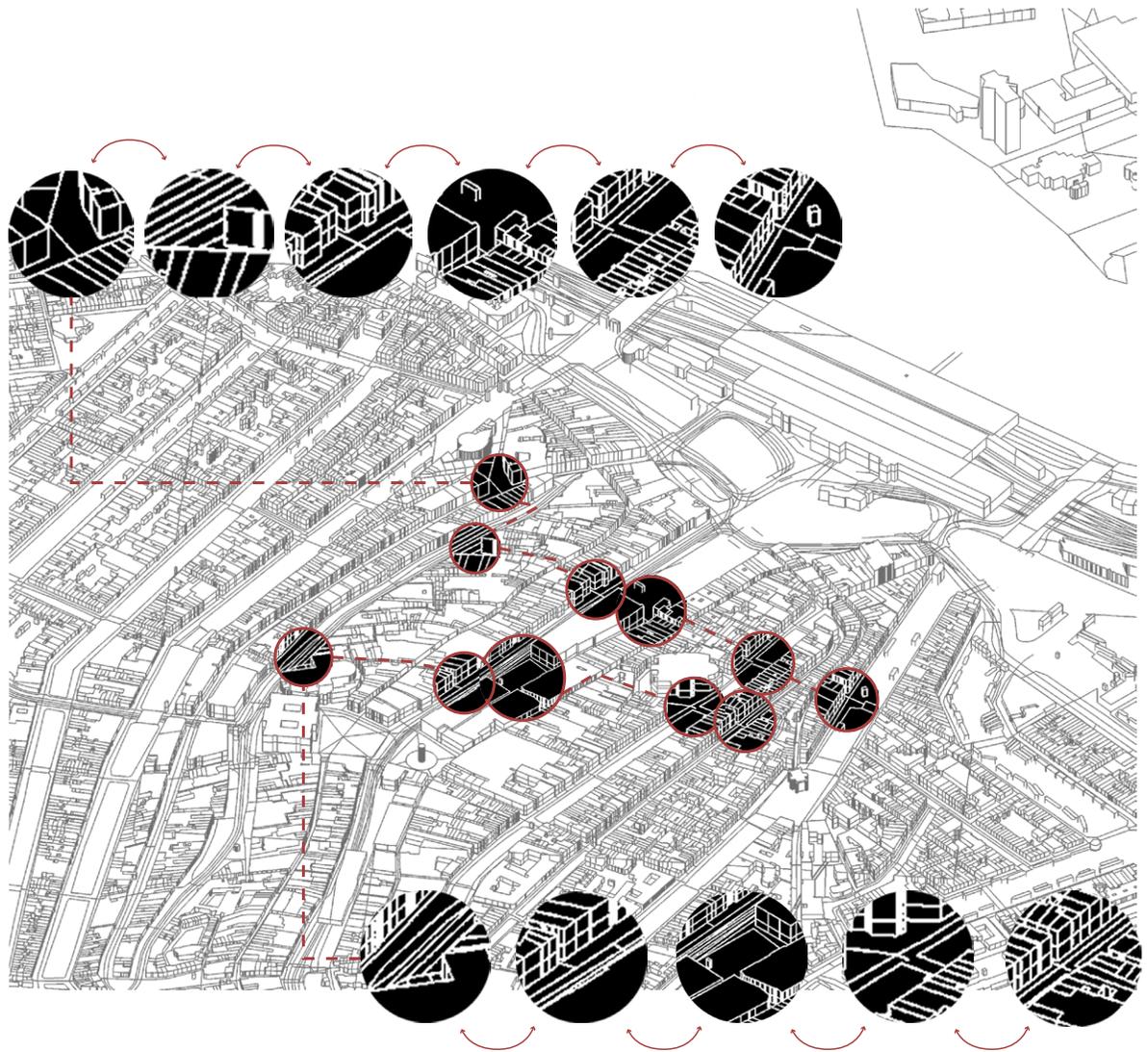
4.6.2.1 Integral public space

The existence of other important public space will be emphasised working as new gateway to explore Amsterdam so that people can have more choices. The Damrak Street will work more like urban Avenue and its function is to distribute people to local street. The internal connection of public space will be achieved by shared elements and signs. However, this public space will also gain characteristics varied from one to another to make the city more readable.



4.6.2.2 Internal Network

These two horizontal links shown in the map are very potential in Amsterdam centre because they already have the trend of connection in space. What I will do is adding signs according to the site identity along the route to attract people step by step go to the other area. It will not only accelerate the distribution of people but also increase the legibility of the city, make the city image more clear.

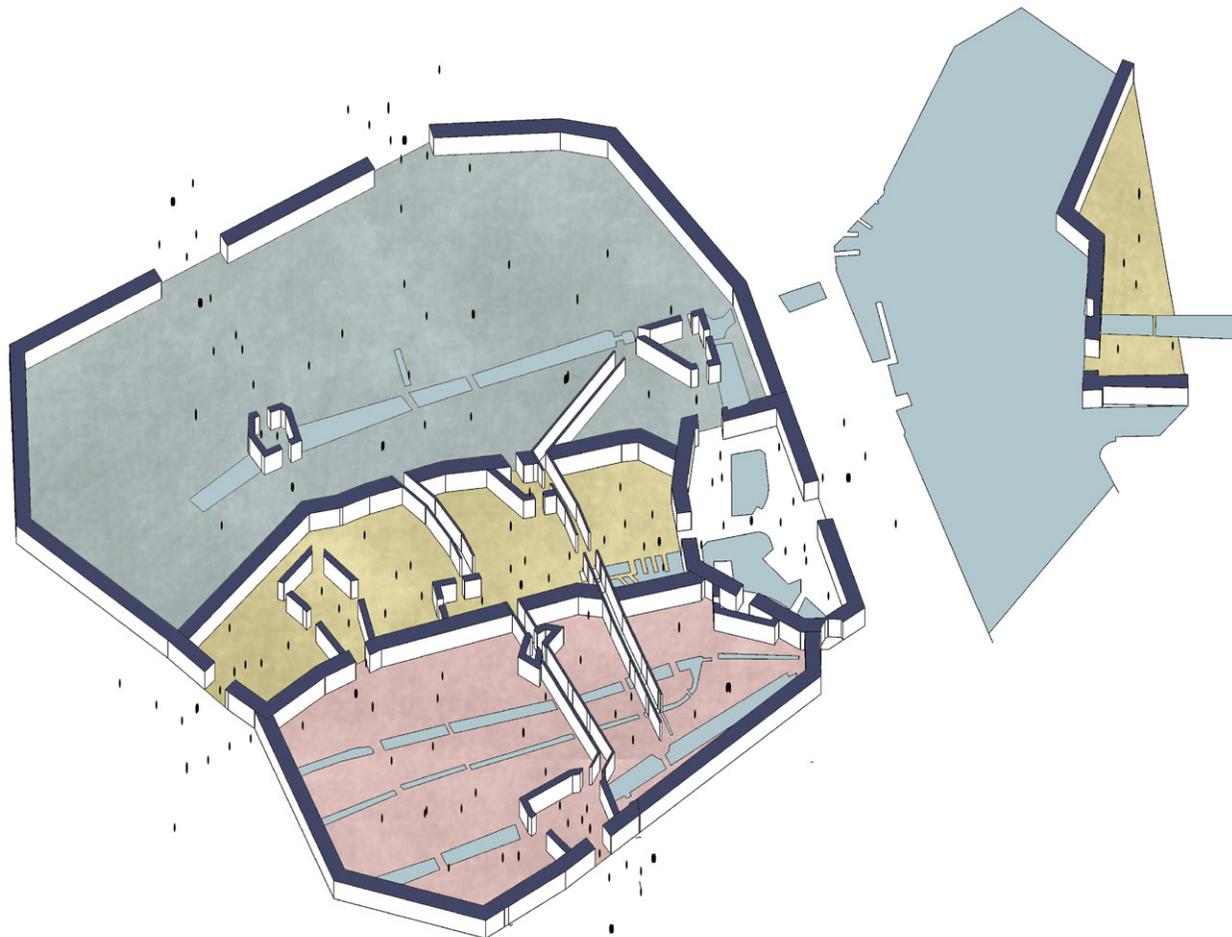


4.6.2.3 People Movement Strategy

As we have found Amsterdam has three big attractions and made the partition according to culture, social and nature. From the aspect of people, it is possible to provide three lens to read Amsterdam by strengthening the identity in each part.

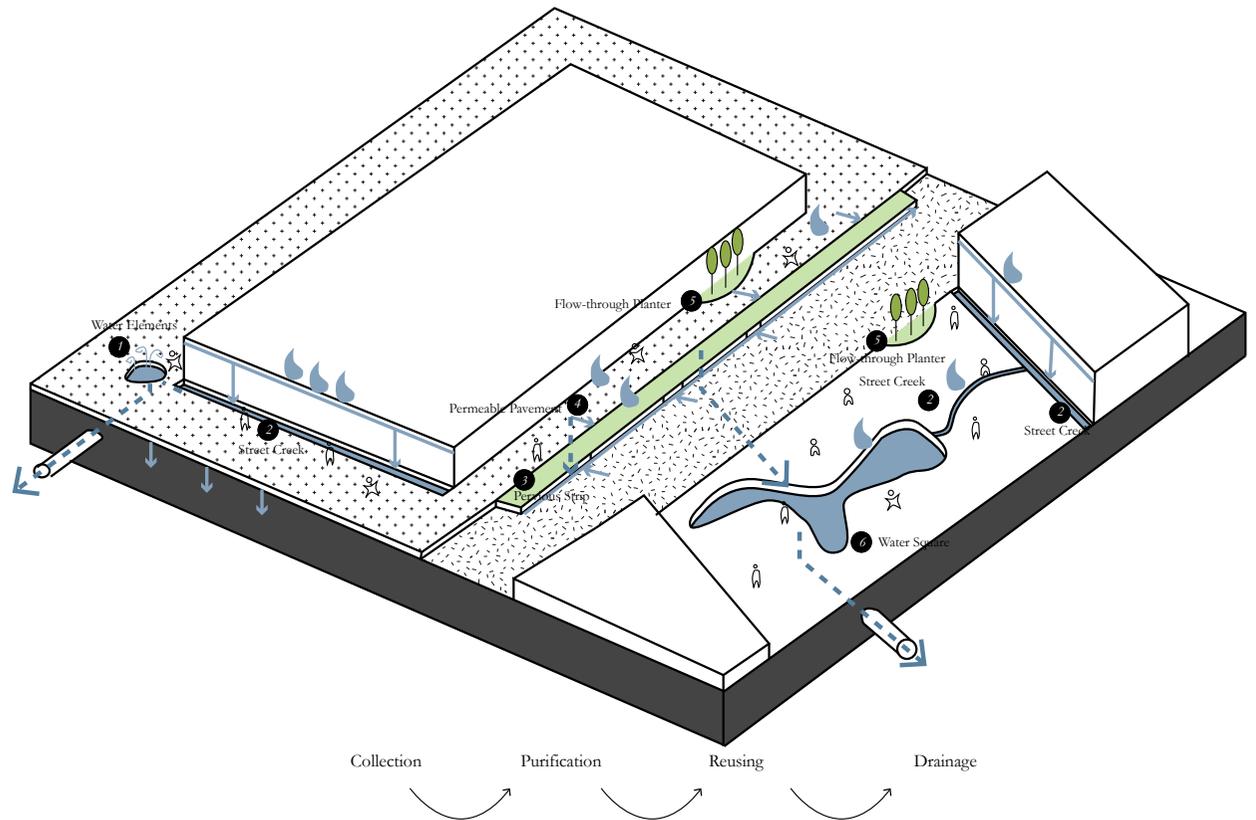
In this strategy, the city is like a big house with different rooms. Each room has its own unique decoration combined with the context. People can choose to open the door or not with the signs outside it. With these identifiable signs in this big urban

house, people can easily find their way, go to the room they want according to the identity of Amsterdam.



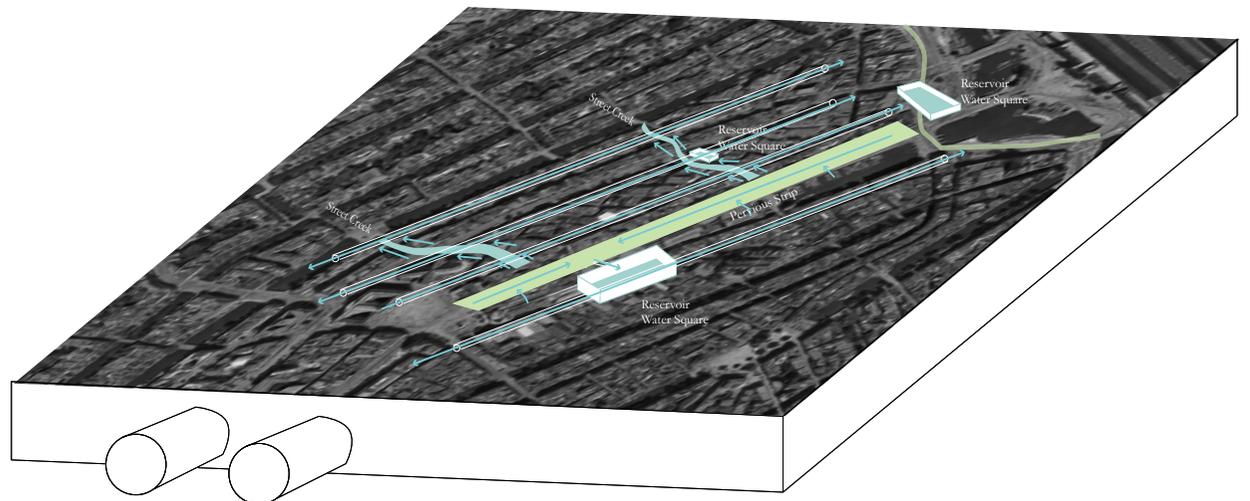


This Collage shows the moment of choice. It is clear to see the different atmosphere in different room, so it is time to choose your preference.



4.6.3 The Water Flow

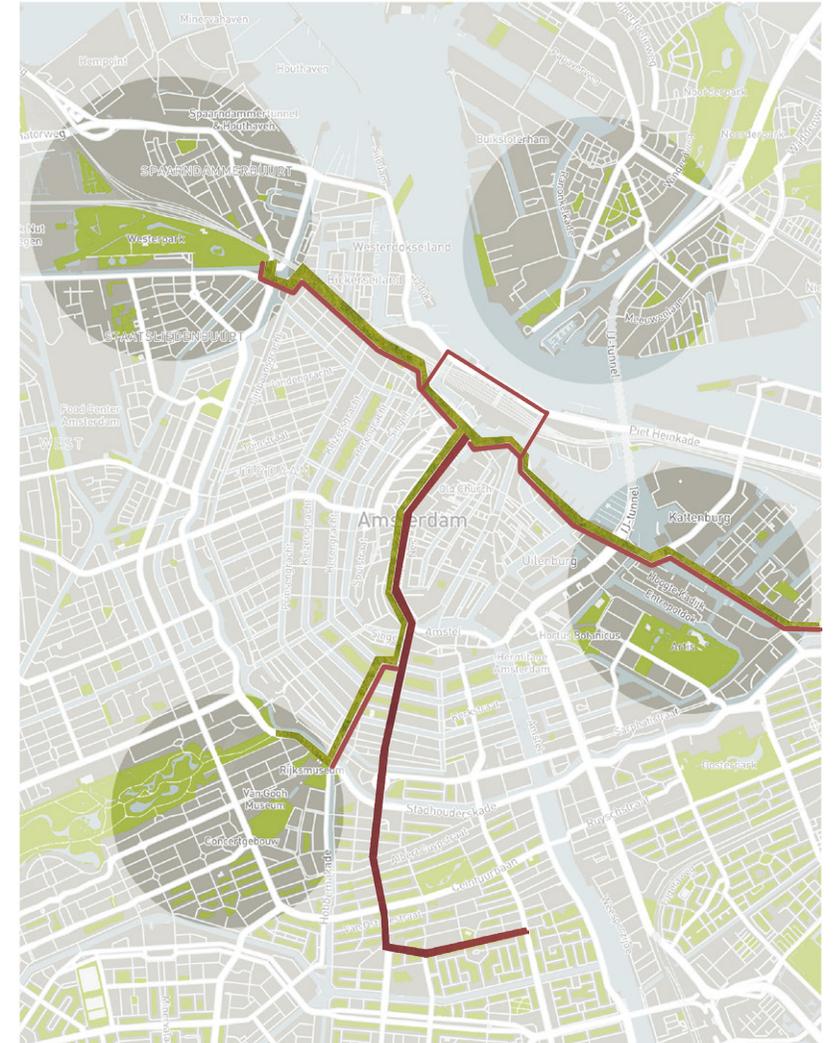
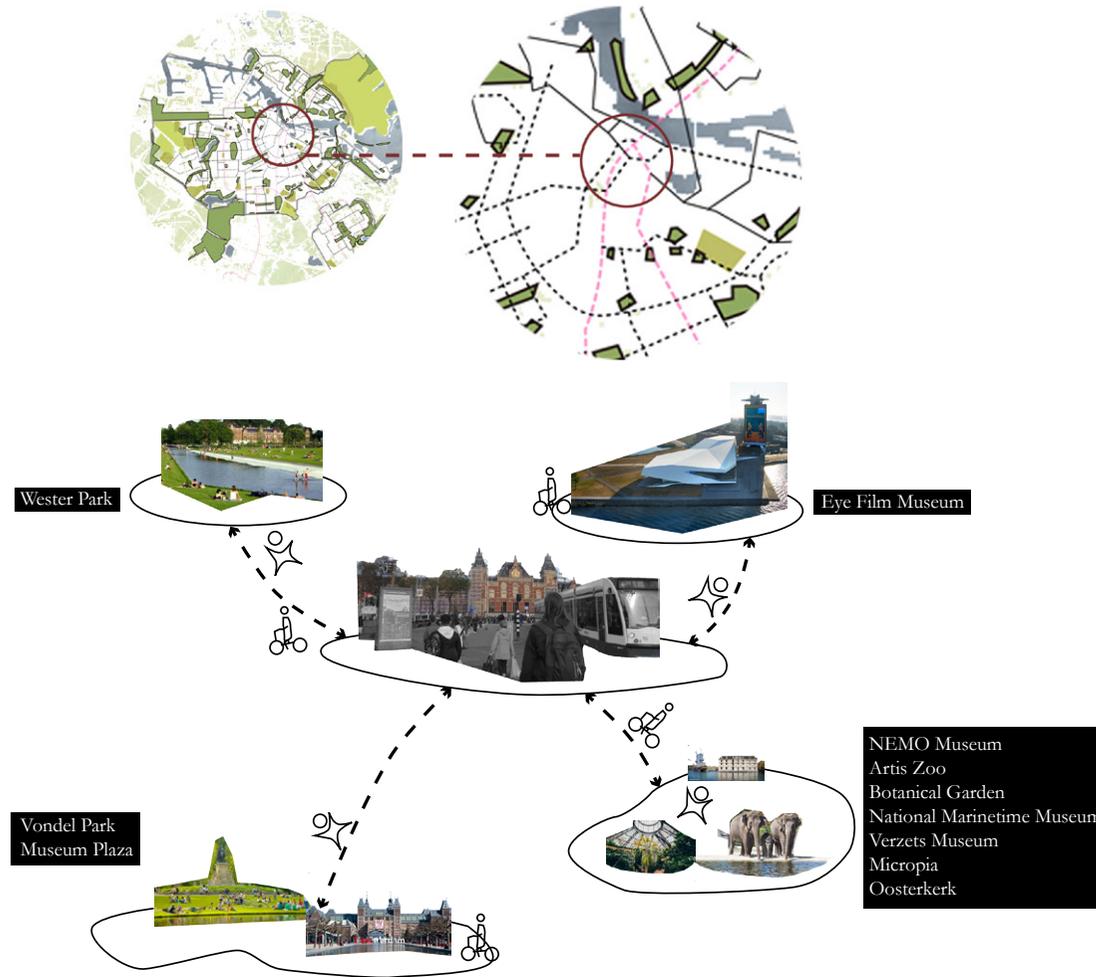
The sponge city strategy will be applied to Damrak Street area to make a system of collection, purification, reuse and drainage to slow down the runoff and create water features including water square, street creek and fountains. As a result, the water management is also a way of decorating built environment and the water line could another way of sign to attract people.



4.7 Application

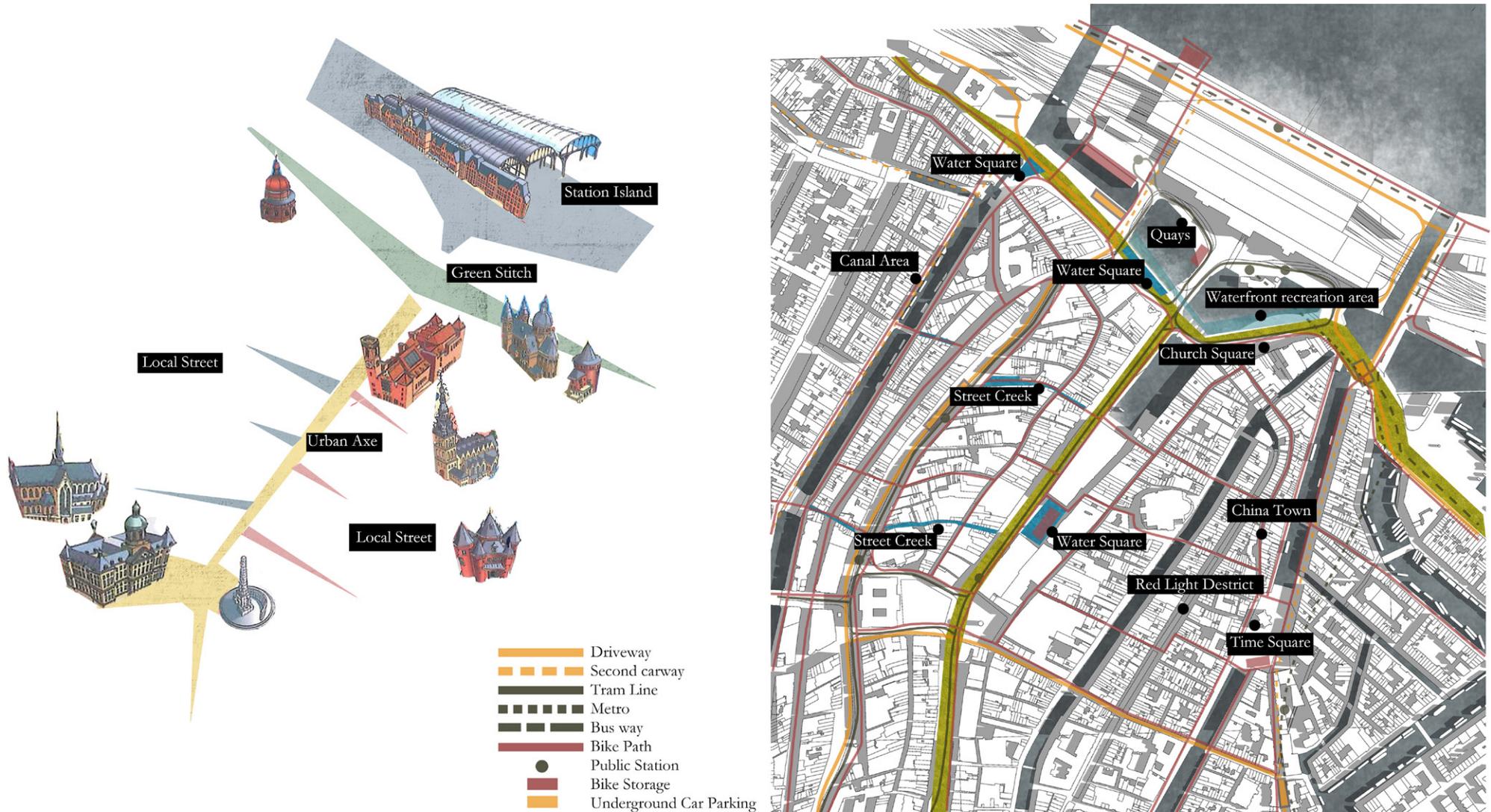
4.7.1 Large Scale

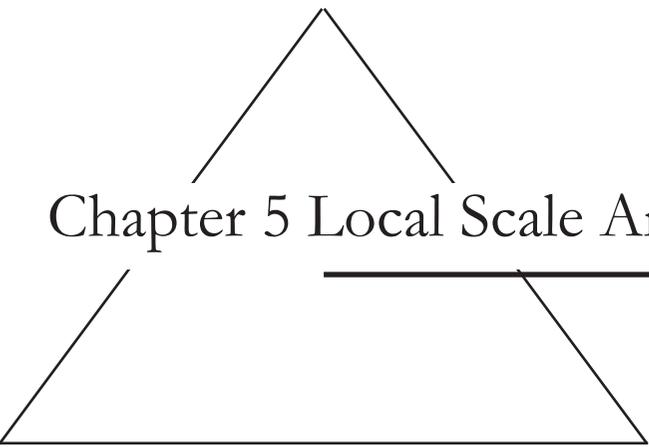
Under the principle of adding new gateway and create integral space, the attractions outside the city center could be emphasized to gather people. These added new centres will release the pressure of city center. Furthermore, the red carpet made by municipality will be extended to these new centres along with the green belt to form a strong and beautiful Amsterdam cycling system.



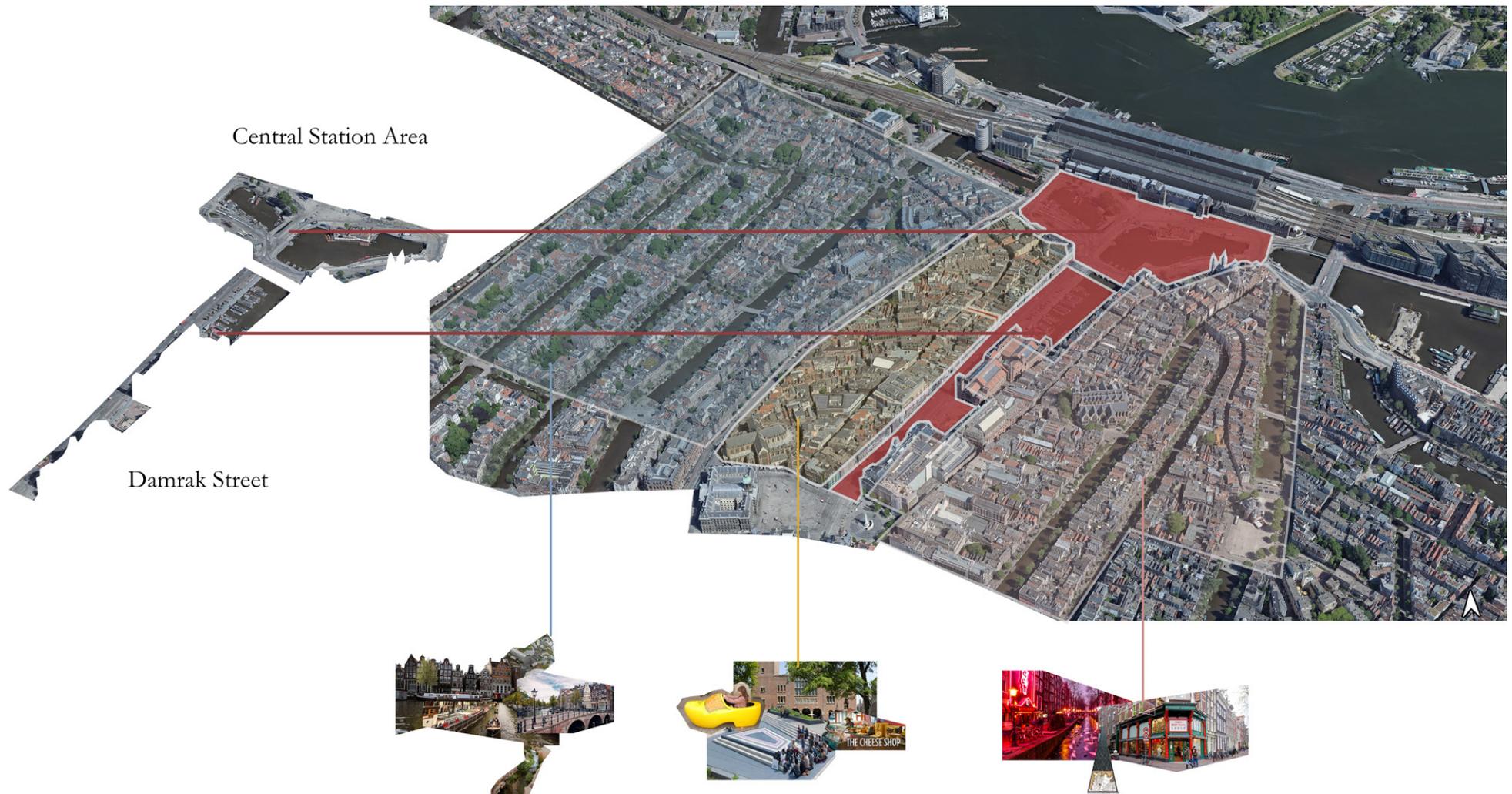
4.7.2 Medium Scale

In the scale of downtown, the connection system will be more specific. From the station to main city area, the green belt will be a stitch or buffer zone providing transition for people movement. The Damrak Street will be the urban avenue with the function to distribute people to surrounding local streets. The squares as the gateway to different area will be designed on the basis of identity and the different characteristics will also strengthen the city image in turn. The internal connection will be achieved by spatial design, pavement design or other elements to distribute people and meanwhile enhance the three lens of Amsterdam. In this way, a comprehensive connection system with vitality and identity will be finished.



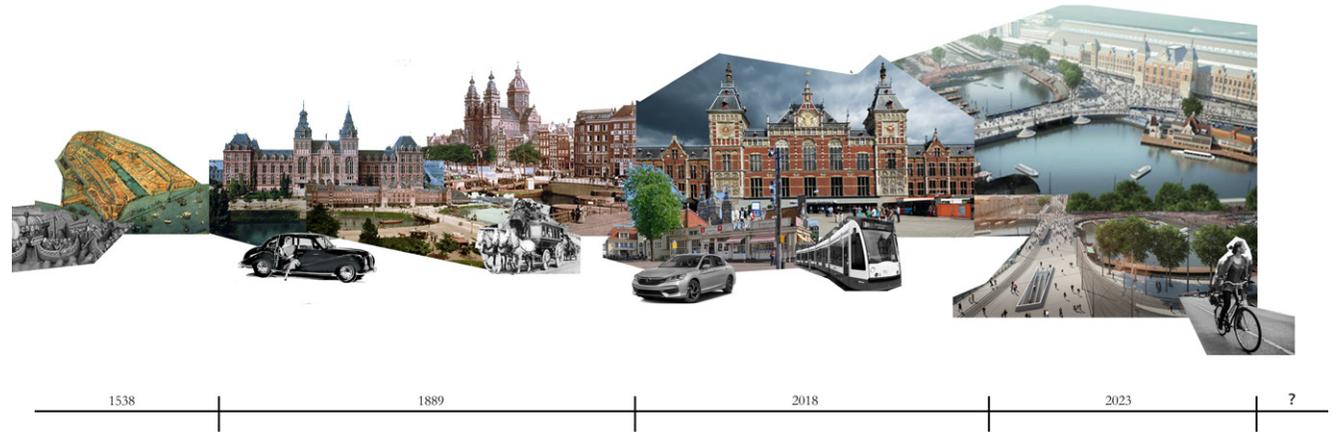


Chapter 5 Local Scale Analysis & Landscape Design



5.1 Two Intervention

I choose Amsterdam Central Station and the Damrak street to do the detailed intervention. The Amsterdam Central Station is the beginning of the journey to explore the city centre and as a result, it is vital to do intervention at starting point. The Damrak street as the urban axe is the most potential area to distribute people to local streets with several horizontal alleys to different parts of city center and because of its unique historical status, it needs a design to reveal its buried characters.

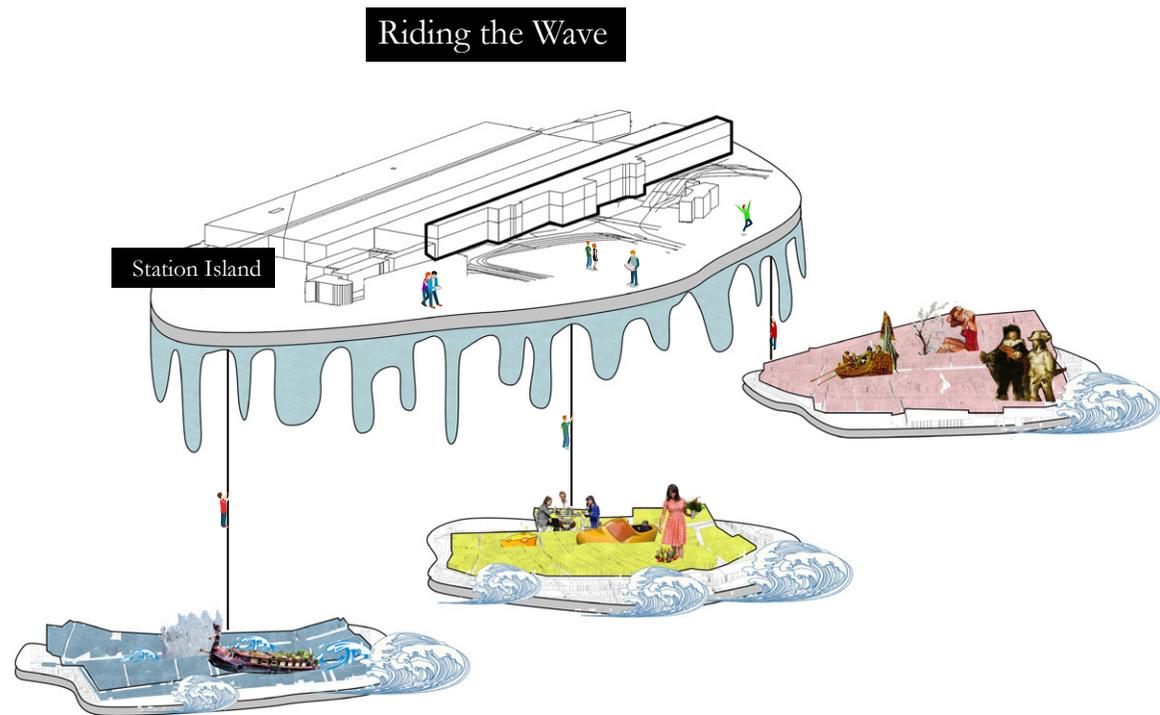


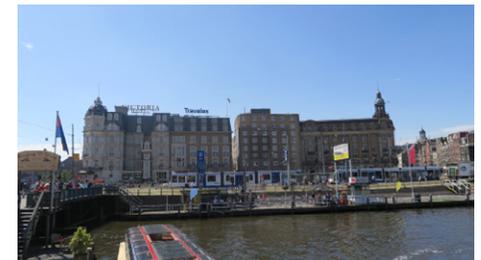
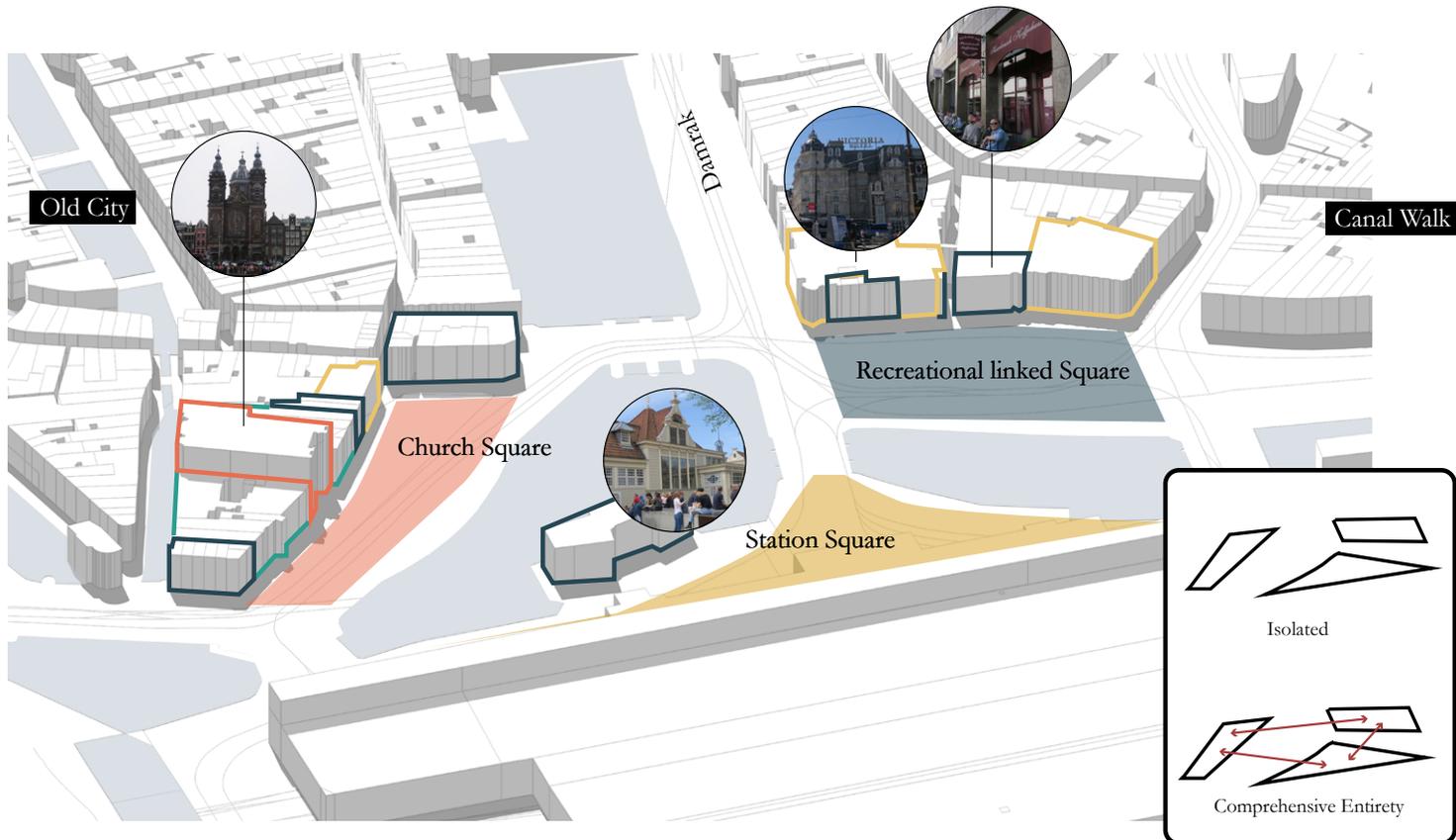
5.2 Amsterdam Central Station

5.2.1 From history to future

From the historical change of the central station area, we can clearly see that the area used to be water and a land was built for boating also worked as a dike to protect the city. In the long time of urban succession, the Amsterdam Central Station keeps as an island on the water, a departure and terminal land for people. In history, people boated from island to the city, nowadays, people take trams and in the future, as the promotion of bike, people will cycle to explore the city.

Combined with previous research, we can conclude that the station has a closed relation with water, it transports people from water to land with different beauty. It gives people a feeling of riding the wave which is also a very strong Amsterdam identity. That's why I will enlarge this water feature.





5.2.2 Spatial Problems

In this area, there are generally three parts: the station square, the church square which is dominated by the Nicolas Church and a linked area. Now these three parts are more like separated individual because the connection mainly relies on simple streets which are easily interrupted by traffic and there are hardly shared design elements in there three parts. Furthermore, the church square is more like a pass way than a place to retain people and the linked area does not show the transition to canal area.

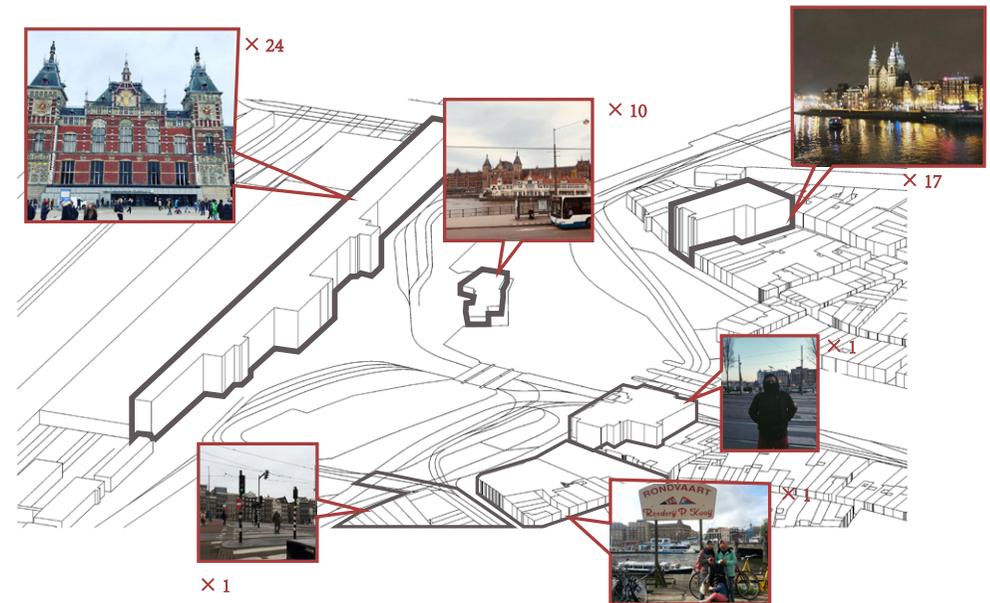
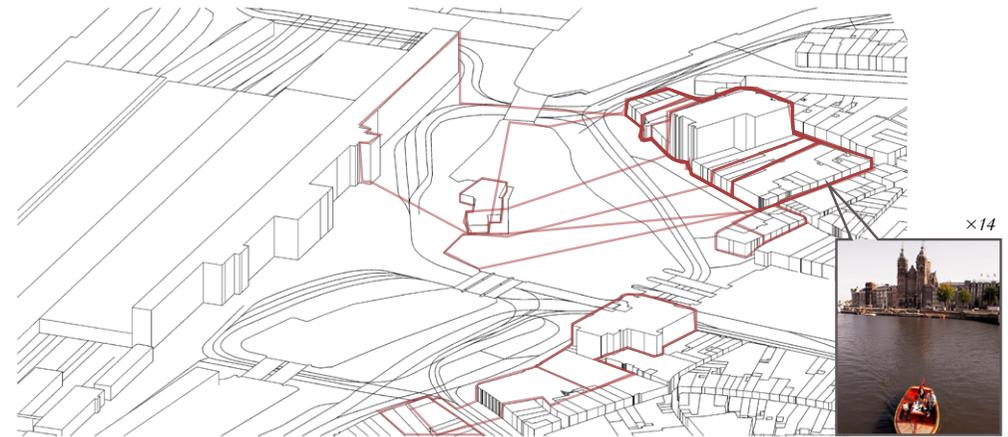
These are the reasons why people most go directly to Damrak Street and ignore the surroundings. My proposal is to reconnected these three parts to make it a comprehensive entity.

5.2.3 Picture Research

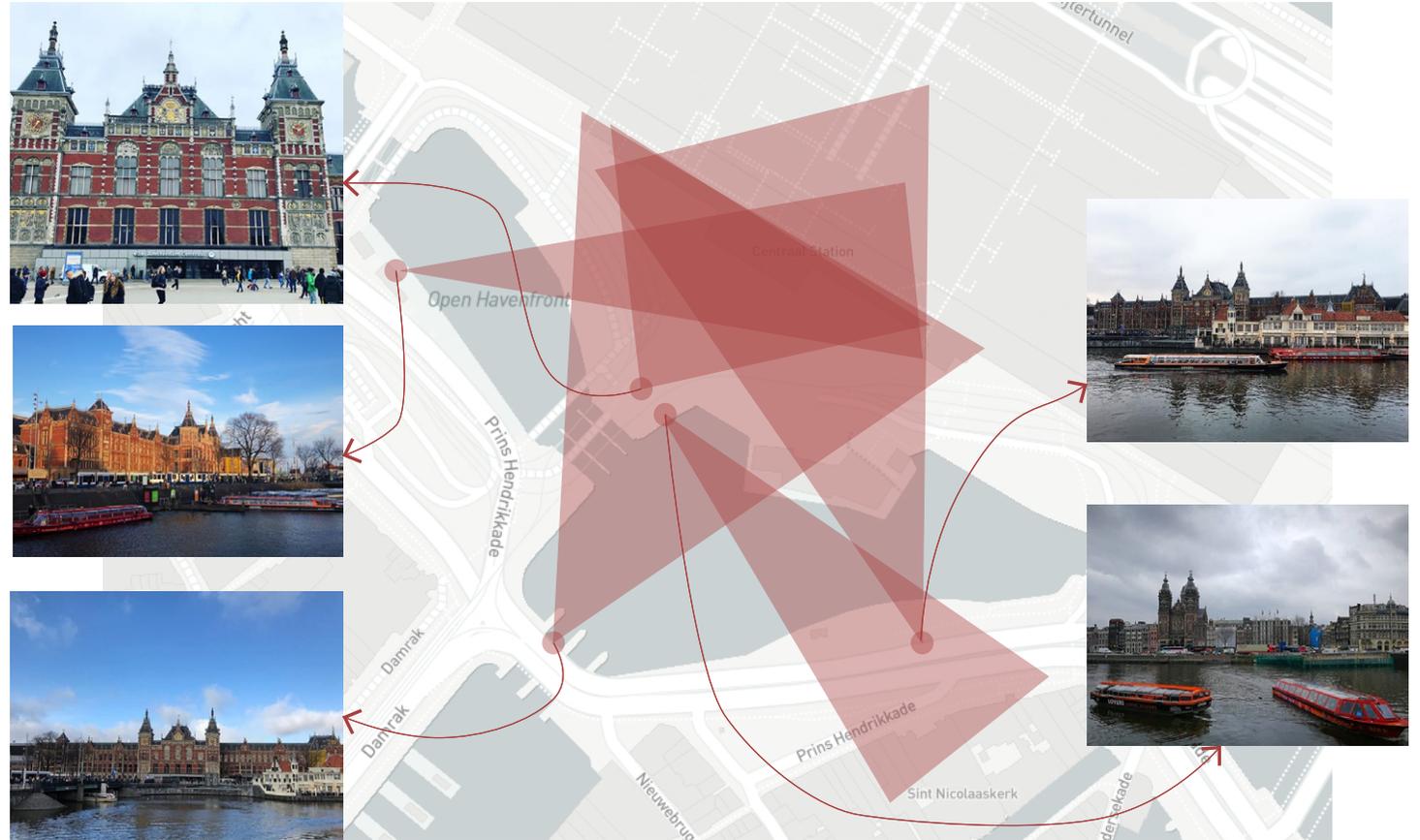
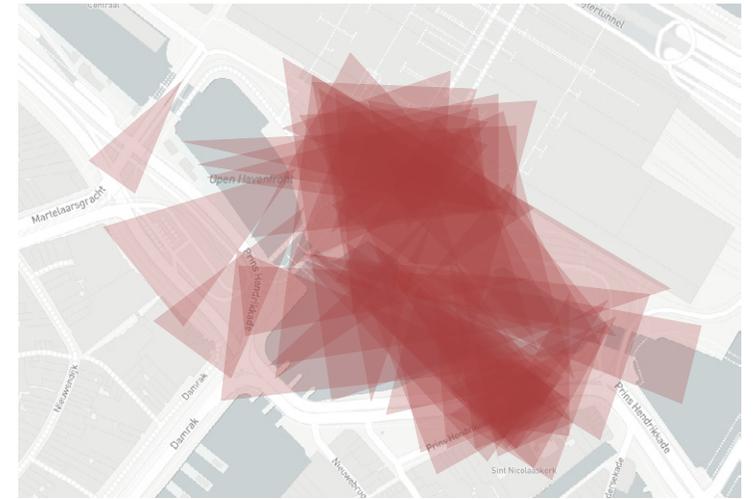
I pick 50 pictures took in Amsterdam Central Station area from Instagram. Only 18 of 50 were taken from the direction of station and others are about the station architecture and its surroundings. Furthermore, the photos mainly focused on the Nicolas Church and other parts were missed. However, as I have said before, the church square lack programs to retain people and people eventually flow into the Damrak again.

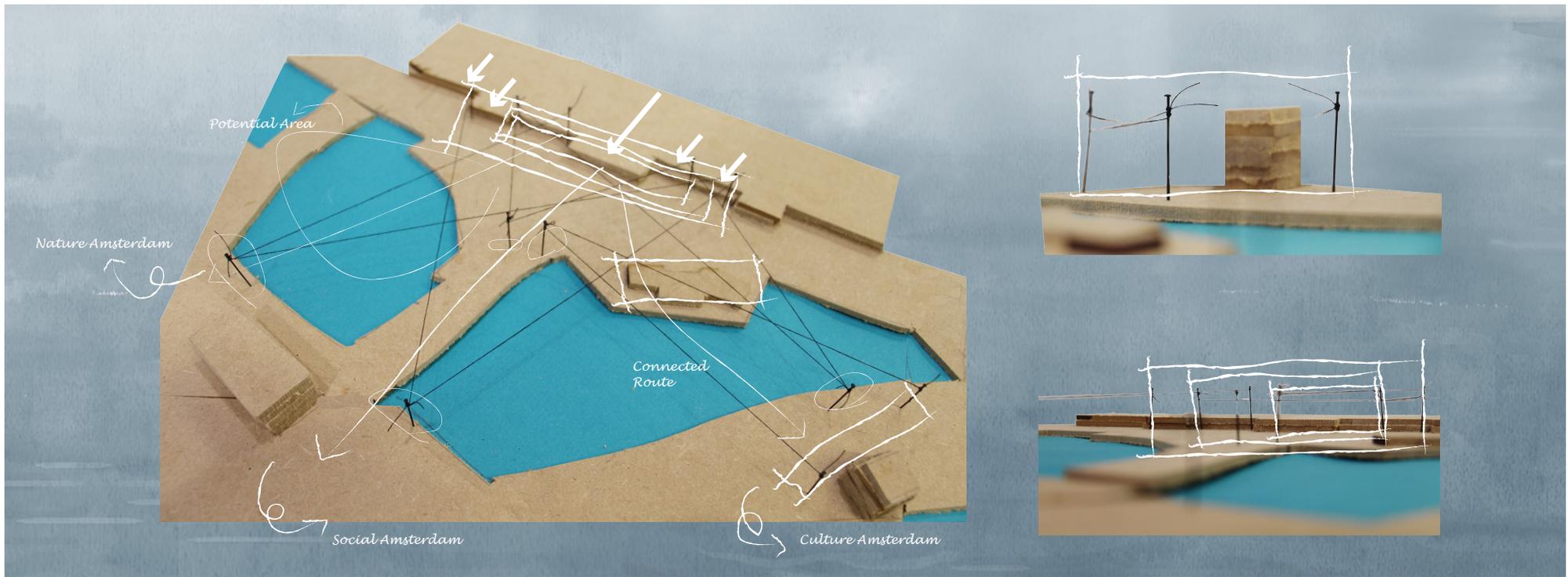
The focus on Nicolas Church is also clear when I mark the focus in each photo and the part directing to canal area is missed obviously.

18/50



I then draw and overlapped the vision of each photo. The red is darker in the area where is repeated more. According to this, I get the most attractive vision in this area. It seems like it's very interesting to watch the Station from different perspectives and the water always plays a very important role.



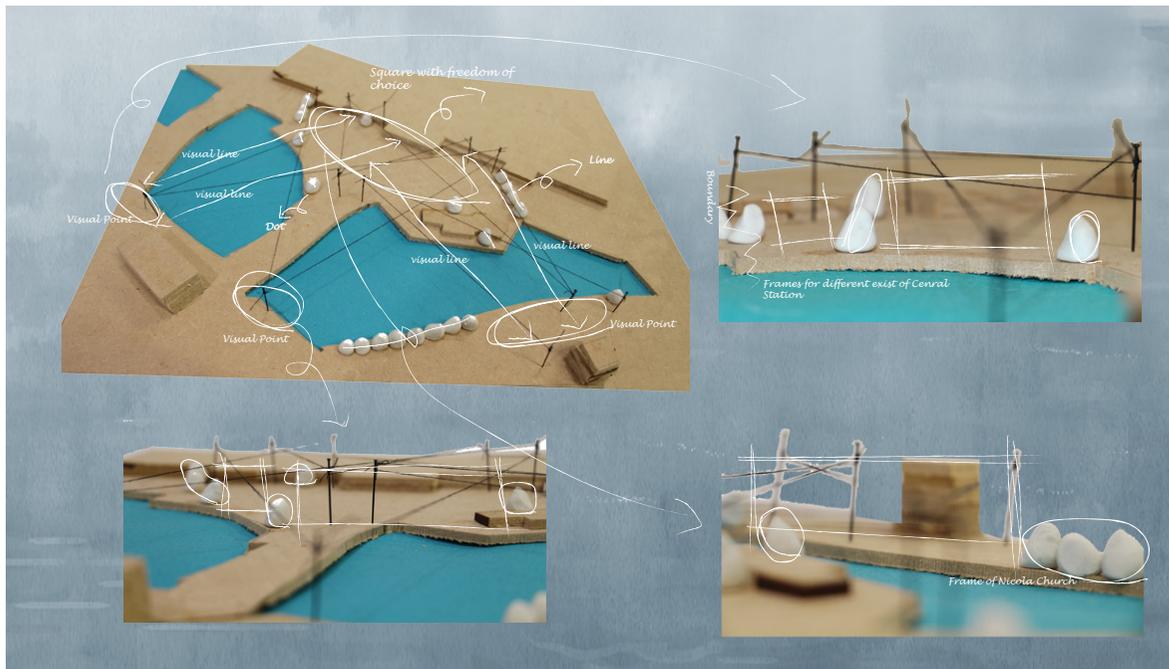


5.2.4 Modelling Test

The picture research gave me the inspiration that visual line is the key to reconnect this area. For the further exploration on the spatial connection, I made a model. My proposal is creating a cinematic

landscape, a landscape with narrative. We already made the partition of Amsterdam into cultural, social and natural part. and it is important make the different characteristics obvious to help people read the city and make a choice. I use dark lines repre-

senting the edge of vision I conclude from picture research to mark the potential important point and use nail working as a frame to emphasize the important elements representing different parts.

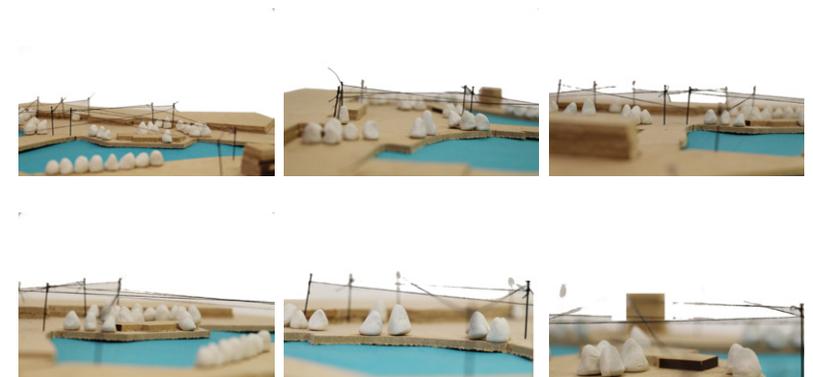
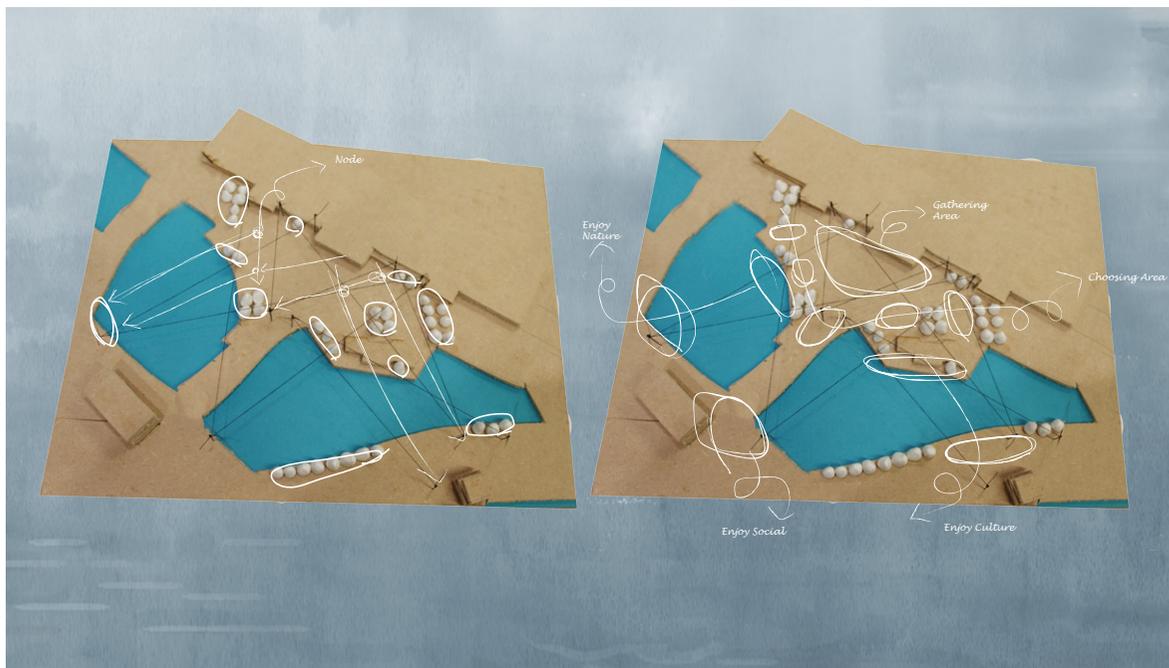


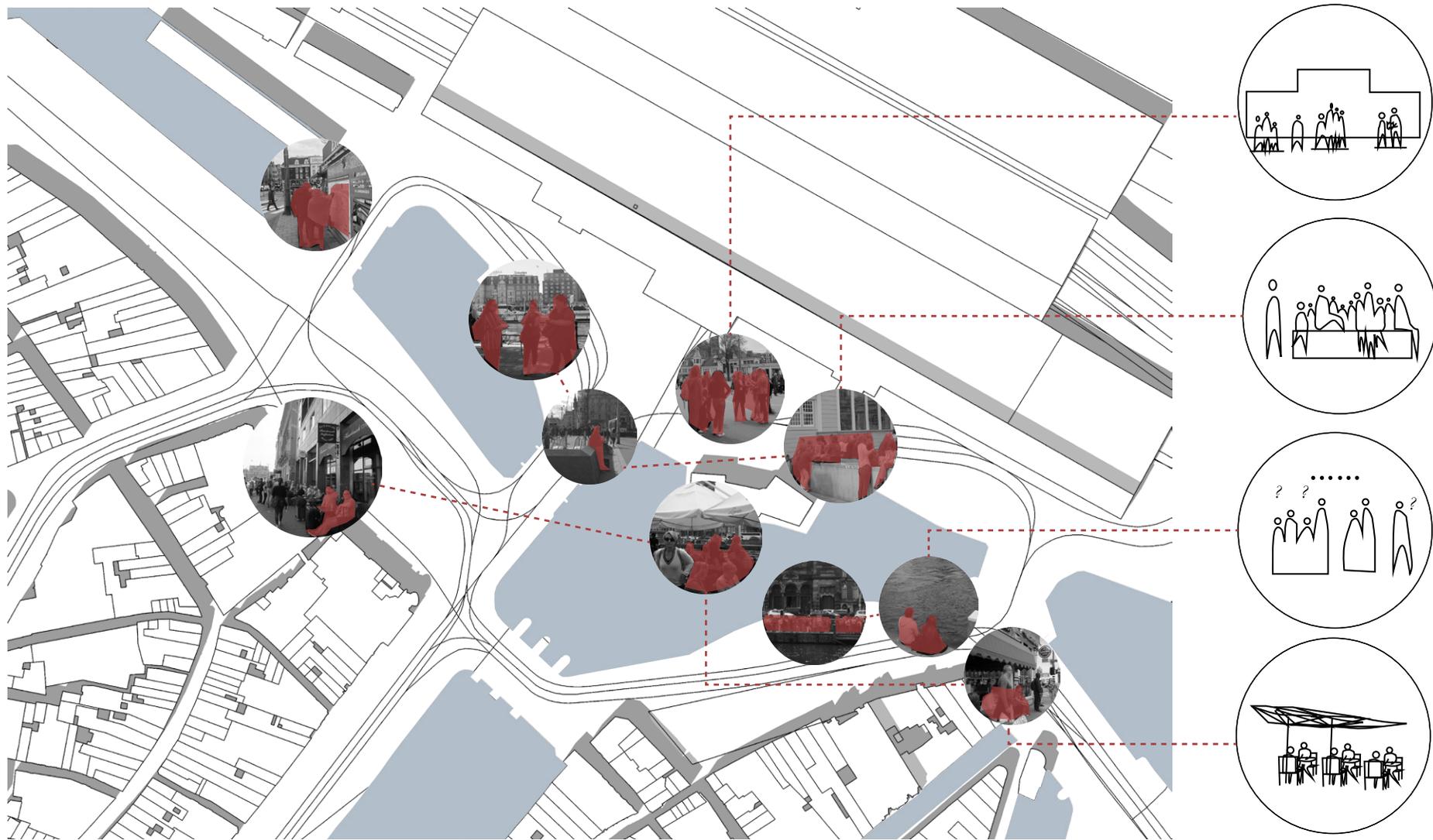
The tree as a important landscape vertical spatial element plays the key role in my experiment. I abstract trees into white cone to give different spatial direction, to make background for elements and also to hind some visual line.

I first make use of them as dots and lines and the space is a bit weak. That's why I then add patches as a more strong way of create space.

As a result, the station area is divided into new three parts: the free area right in front of the entrance for gathering and distributing people, the choice area for reading the city through three lens and the enjoying area to experience the city emerged into strong identity.

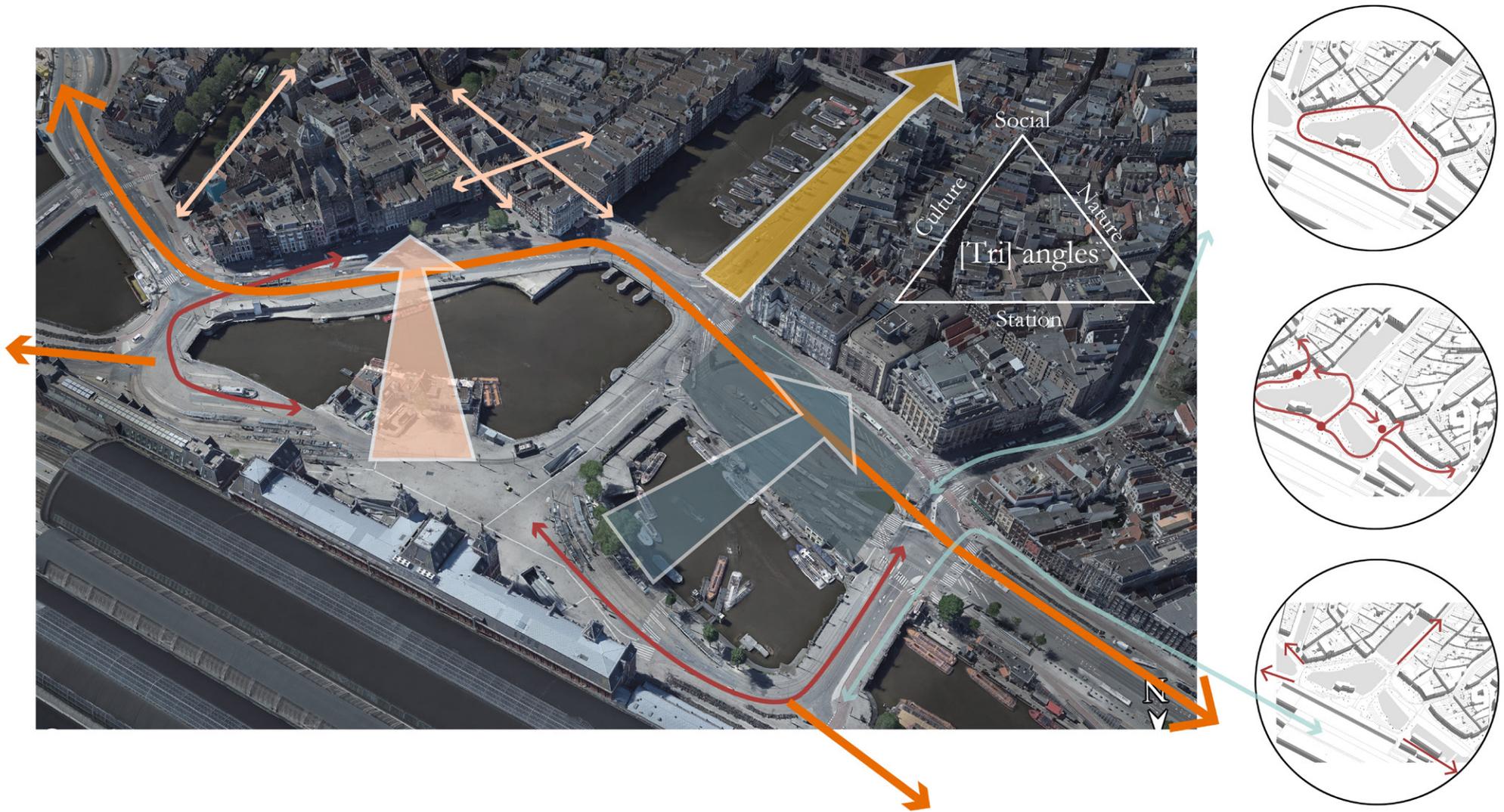
In this system, people are able to have different experience through movement and read the city easily.





5.2.5 People's behaviour research

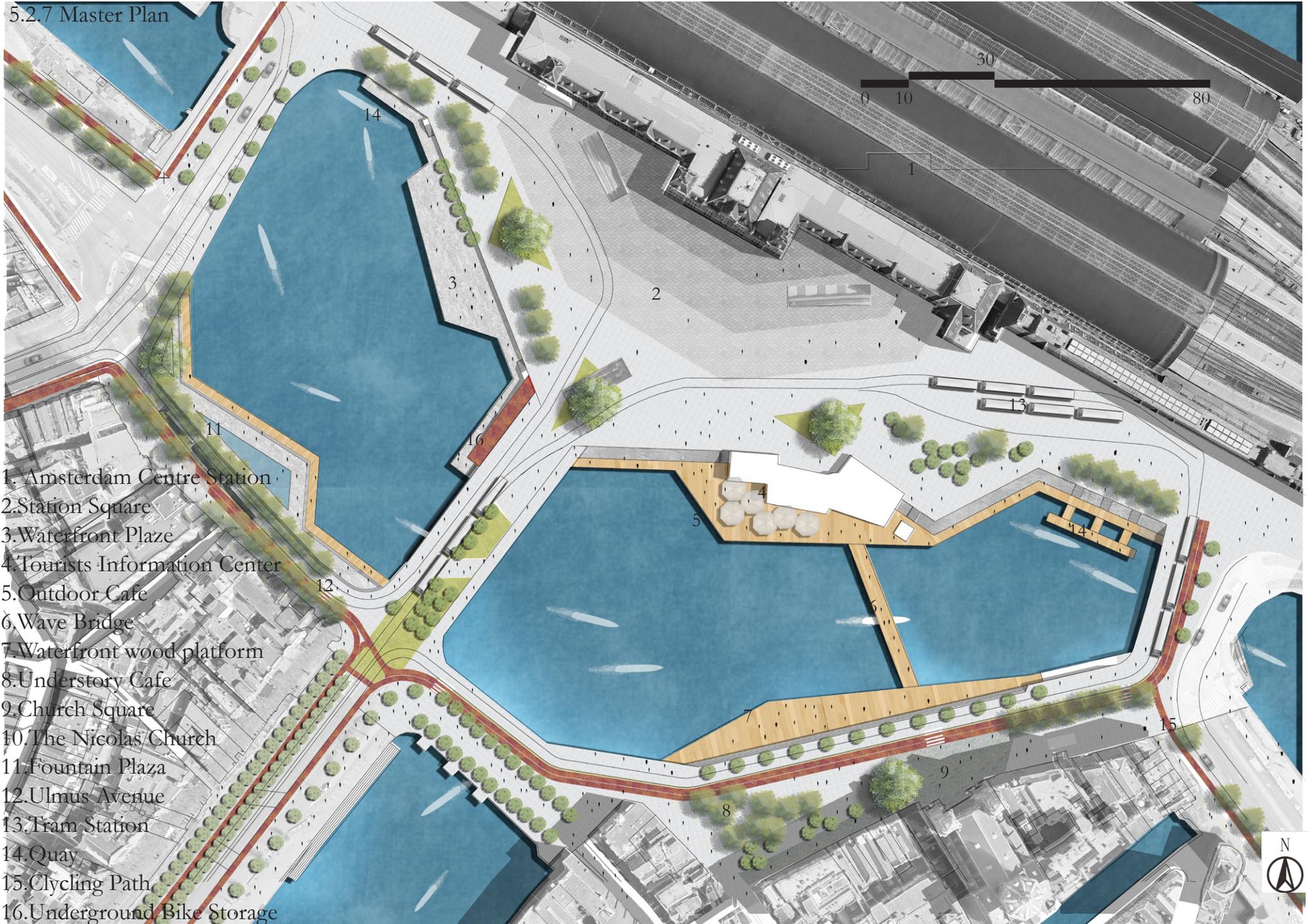
Besides the spatial research, people's behaviour is also worthy to be found to decide the programs in this area. From this research, we can clearly see people here are mostly gather in groups so the big free area is necessary for people to move around. There are few benches in this area which cause people are concentrated in one place for waiting and resting. Furthermore, the lack of other programs make people bored and only some cafe hide in the corner with few scenery.

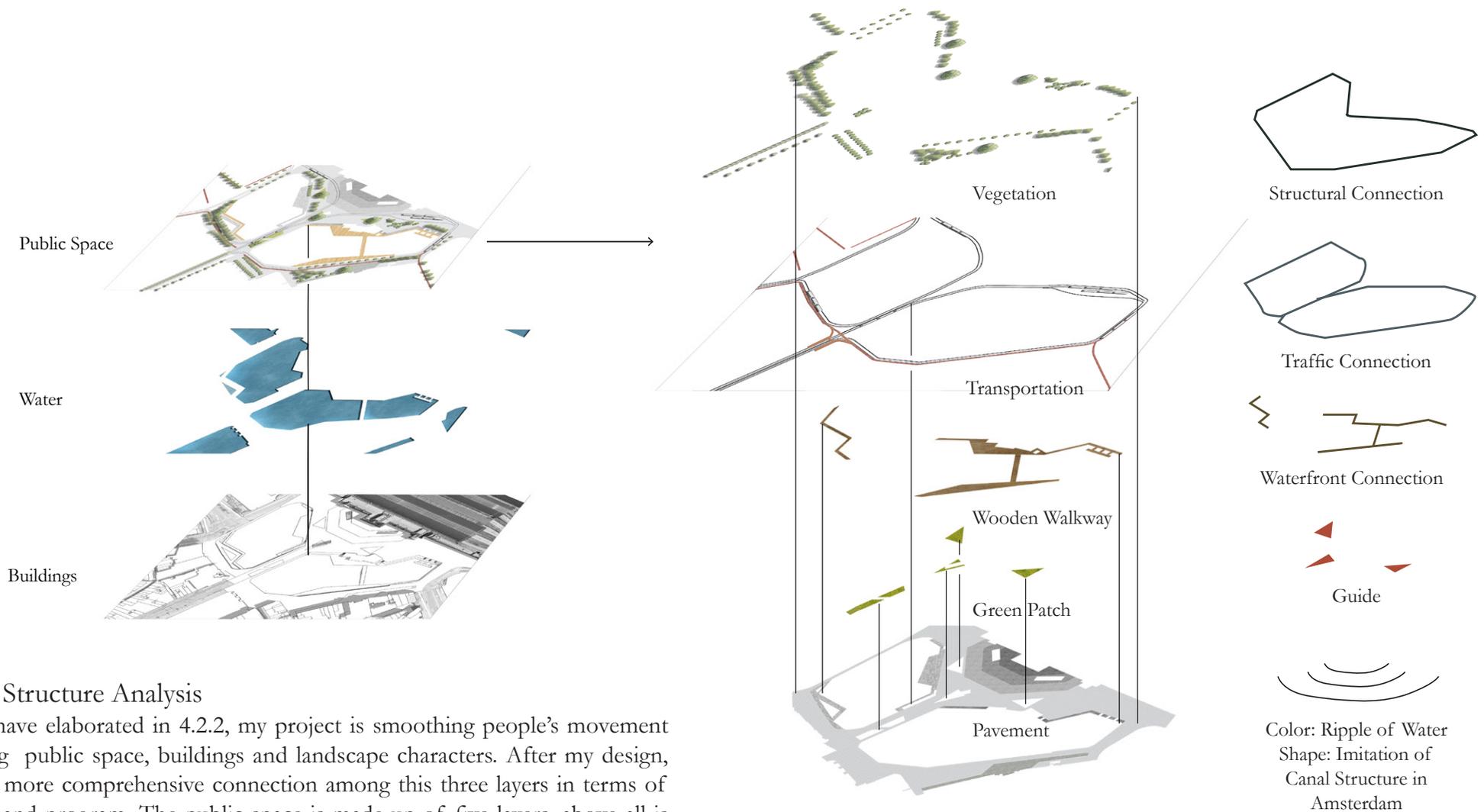


5.2.6 Concept & Strategy

All in all, the concept of my design is “Triangle” or called “Tri-angles”. The station area plays a role of triangle to connect three parts and also provide three angles to read the city. The triangle shaped circle will be the basic strategy combined with three nodes and many branches. In addition, the “Amsterdam Central Station Renovation project” (see 3.1.3) plans to enlarge the water in front of Victoria Hotel, I will also take this proposal.

5.2.7 Master Plan





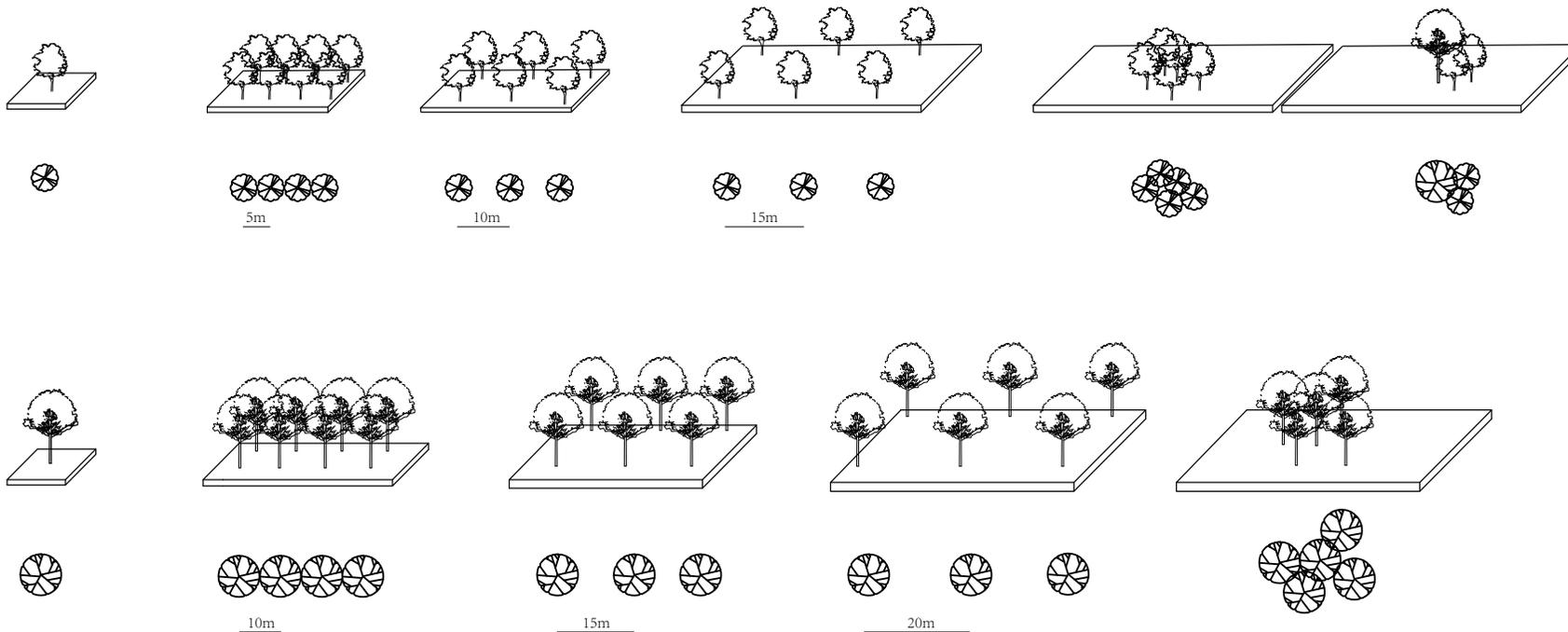
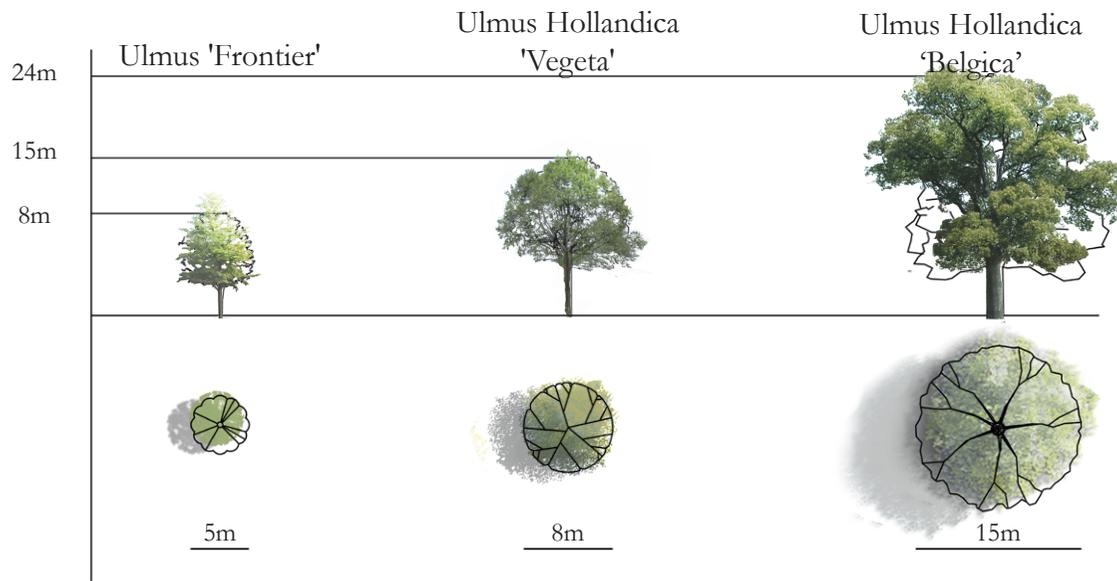
5.2.8 Structure Analysis

As I have elaborated in 4.2.2, my project is smoothing people's movement among public space, buildings and landscape characters. After my design, it is a more comprehensive connection among this three layers in terms of space and program. The public space is made up of five layers, above all is the vegetation layer which give it a frame structure and the transportation including tram and bike play the role of traffic connection. The wooden walkway create a continuous waterfront area. The green path's triangle shape provide basic direction. The pavement as the fundamental layer works as a metaphor of water and also creates a pedestrian connection.

5.2.9 Tree Analysis

Thanks to Amsterdam Tree map, I find Ulmus is a typical Amsterdam tree because it is everywhere. According to different height and shape, I pick three kinds of common Ulmus in Amsterdam to be put in my project. The Ulmus 'Frontire' is the small tree with the height of 8m and the oval shape, Ulmus Hollandica 'Vegeta' is the medium tree with the height of 8m and the umbrella shape and the Ulmus Hollandica 'Belgica' is the large tree with the height of 24m and the column shape.

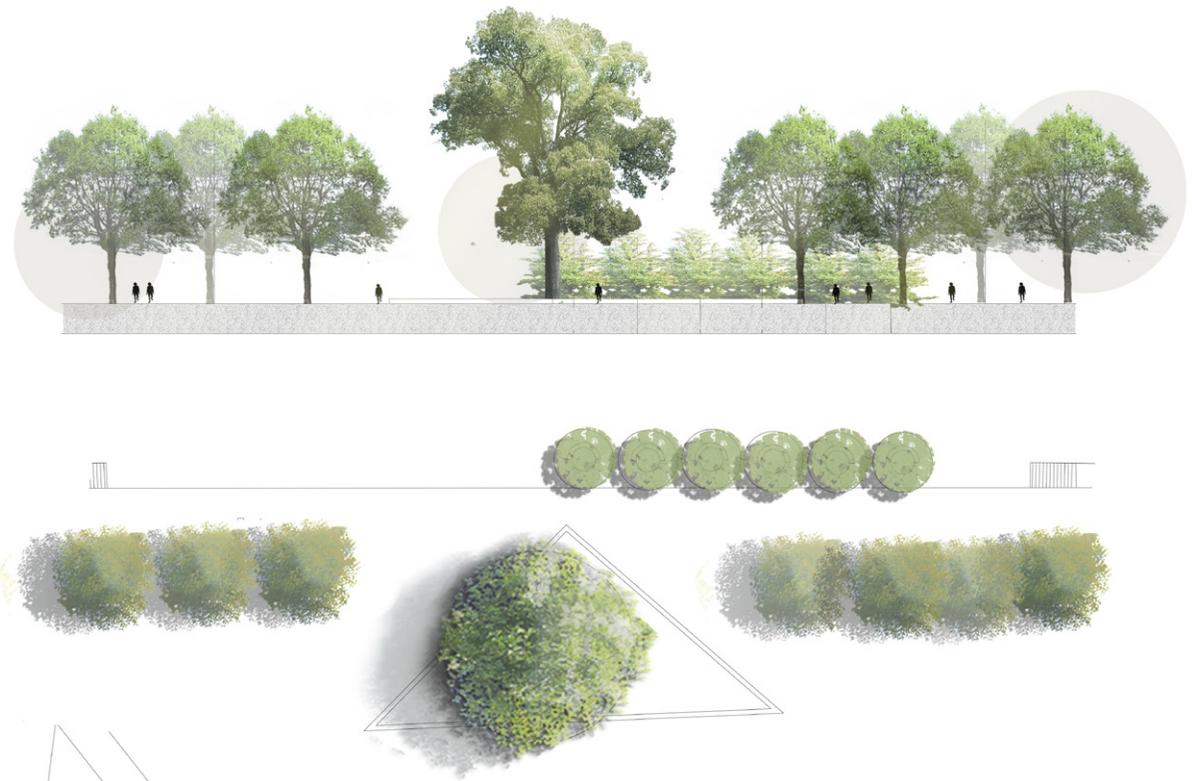
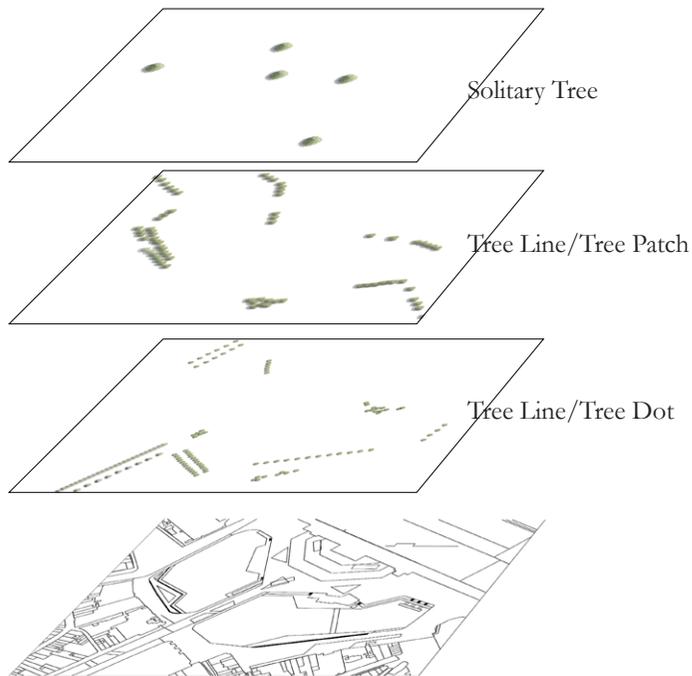
Then I test differnt way of planting to find the best spatial quality I want to achieve. I finnaly chose the distance of 10m for small trees and 15m for medium trees.



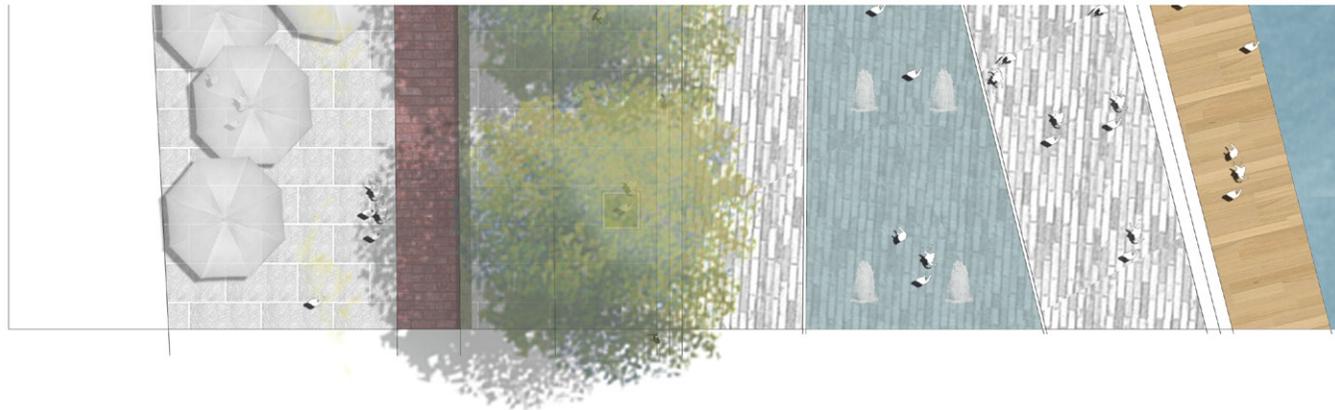
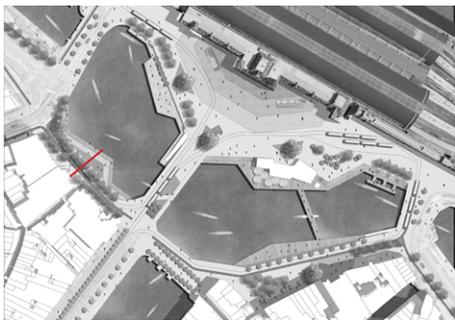
These three kinds of trees play different roles in space shaping. The tallest *Ulmus Hollandica* 'Belgica' is the solitary tree giving strong visual focus. The medium trees *Ulmus Hollandica* 'Vegeta' mostly are used as tree line for its transparent space under the canopy as a frame and also create a beautiful space for people to stay. The small trees *Ulmus* 'Frontier' are more like walls to hide the visual line and also work as dots to create a easily pass-through space.

Accordinging these features, I am able to create diver spatial quality for gathering, distributing people and emphasizing identity. From example, the trees in front of the station. The solitary tree catches our attention immediately and the medium tree line creates a continuous

frame while the small trees because of the height difference we can only see the leaves, are like a wall and create a enclosed space for people to stay.

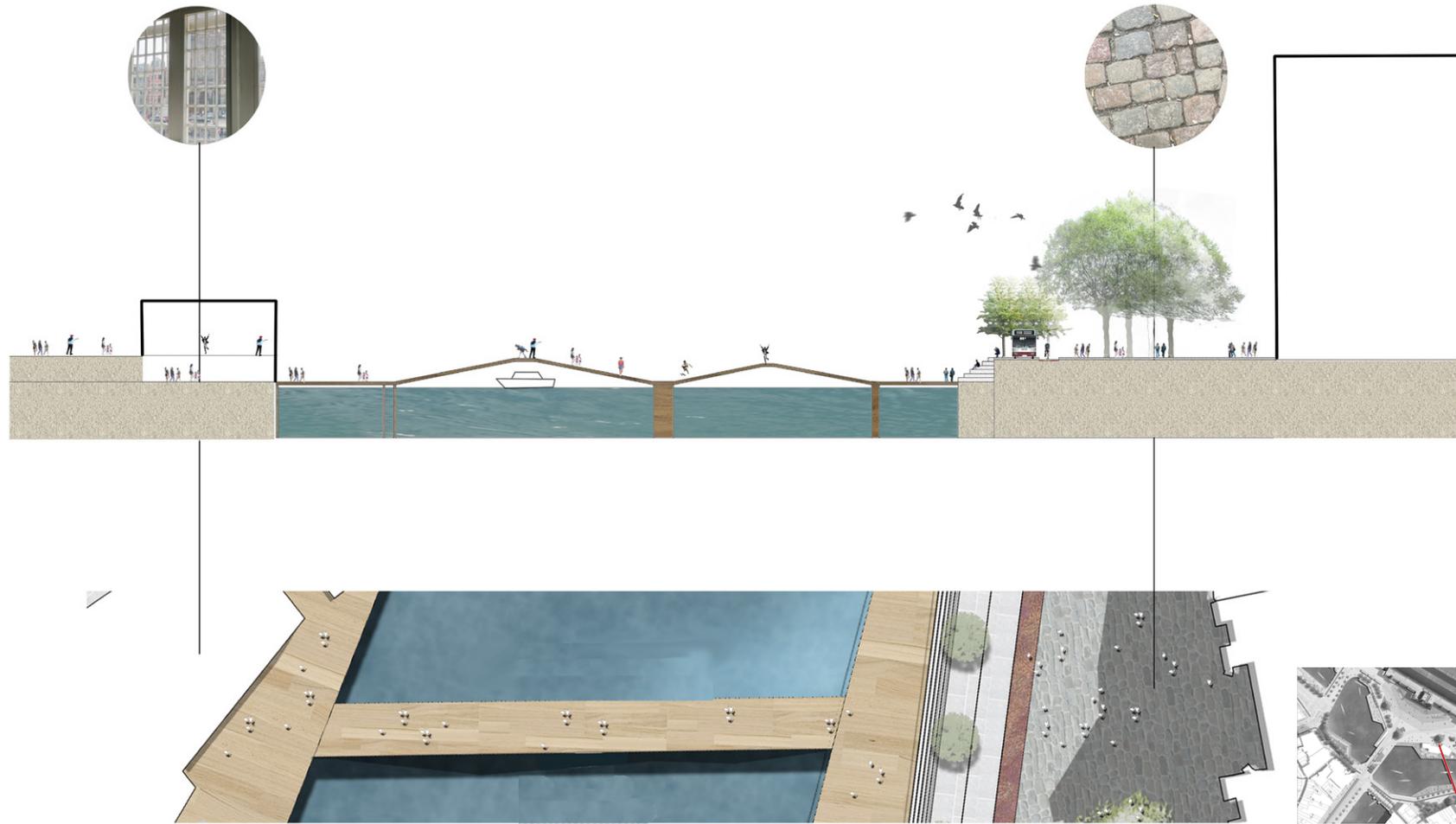


On the other side, to attract people to go to this area, I add fountains to create sound of water. Two lines of *Ulmus Holandica* 'Vegeta' contribute to the Ulmus Avenue and in spring, the beautiful white flowers of *Ulmus* will create the 'snow' just like what will be in canal area which strengthen the natural beauty. The tree line also gives a sense of direction leading people go to the canal area and provide cosy space for under canopy activities.





The perspective show the fountain pool is also a recreational area for people to play with water and the sound will attract more and more people. The tree line is a pure background for this beautiful space and let people enjoy the beauty of Amsterdam freely.



The connection between the station and cultural area is finished by a 'wave bridge' to show the spirit that Amsterdamers ride the wave form water to land and create the marvellous culture. The bridge has two arches to enable ship to pass through and

the slope is gentle enough even for wheelchair. This direct connection give a strong direction to the Nicolas Church. The facade of the tourism centre is glass so that people can see through the window. The pavement of church square is the same one as

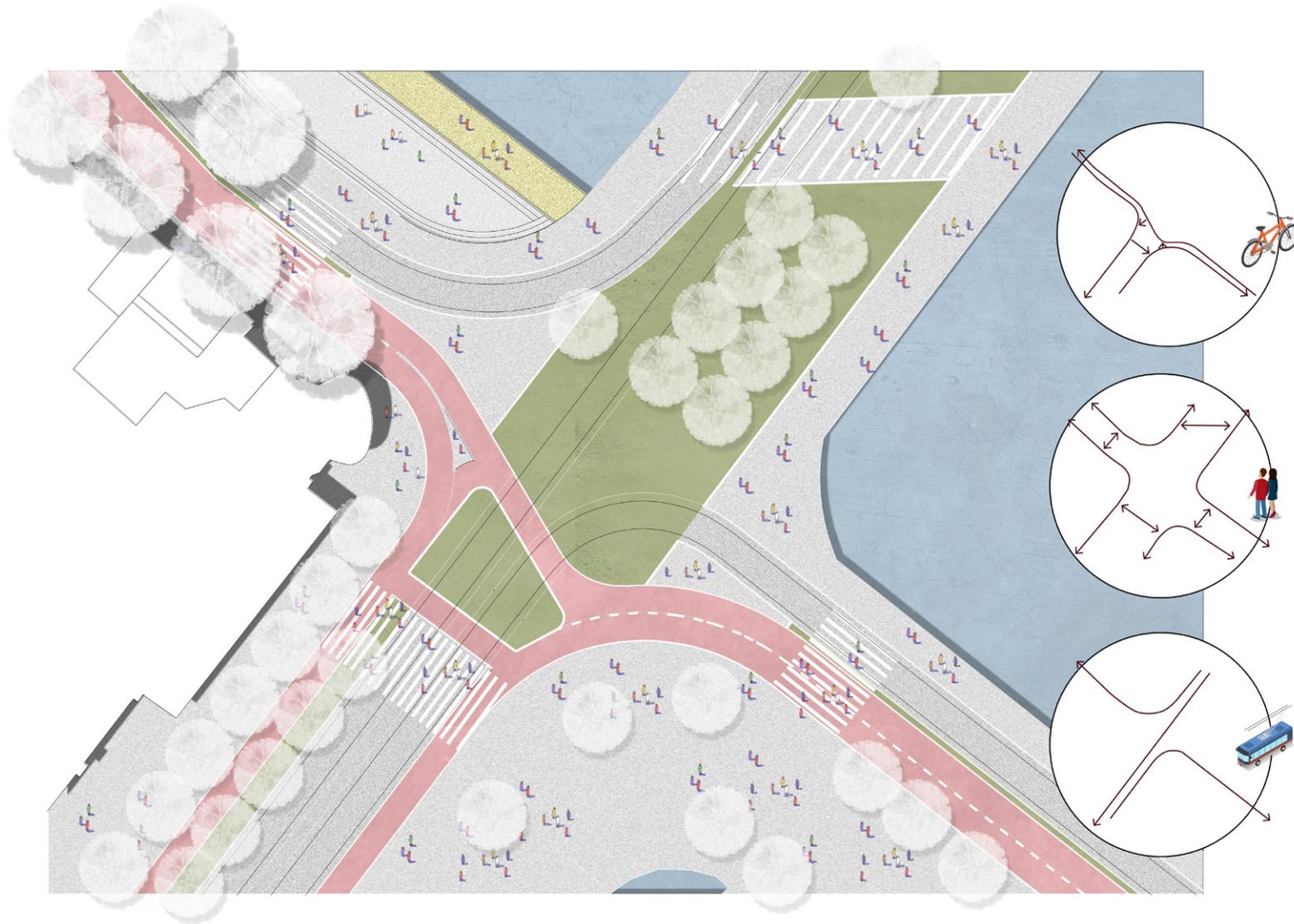
other historical monumental square in Amsterdam to show the cultural connection. I plant small trees Ulmus 'Frontier' in the distance of 10m on the riverbank to create a uninterrupted visual line from the station side to church side.



The perspective shows the wave bridge towards the church, which is marked by a solitary tree and lower trees to create a foreground.

On the side of church square, the area closed to restaurant, I plant group of trees to give people a enclosed space under canopy away from the traffic.





5.2.11 Intersection Design

The busy traffic intersection is organized to be more readable for both people and cyclists to avoid the traffic accidents. The tram line, bike path and pedestrian crossing is clearly distinguished by different color and pavement and there are enough safety islands, buffer space and open vision where different transportation meets. Furthermore, the grass is a nice stretch from station to Damrak street and a relaxing transition zone for different directions.

5.2.12 Bird View

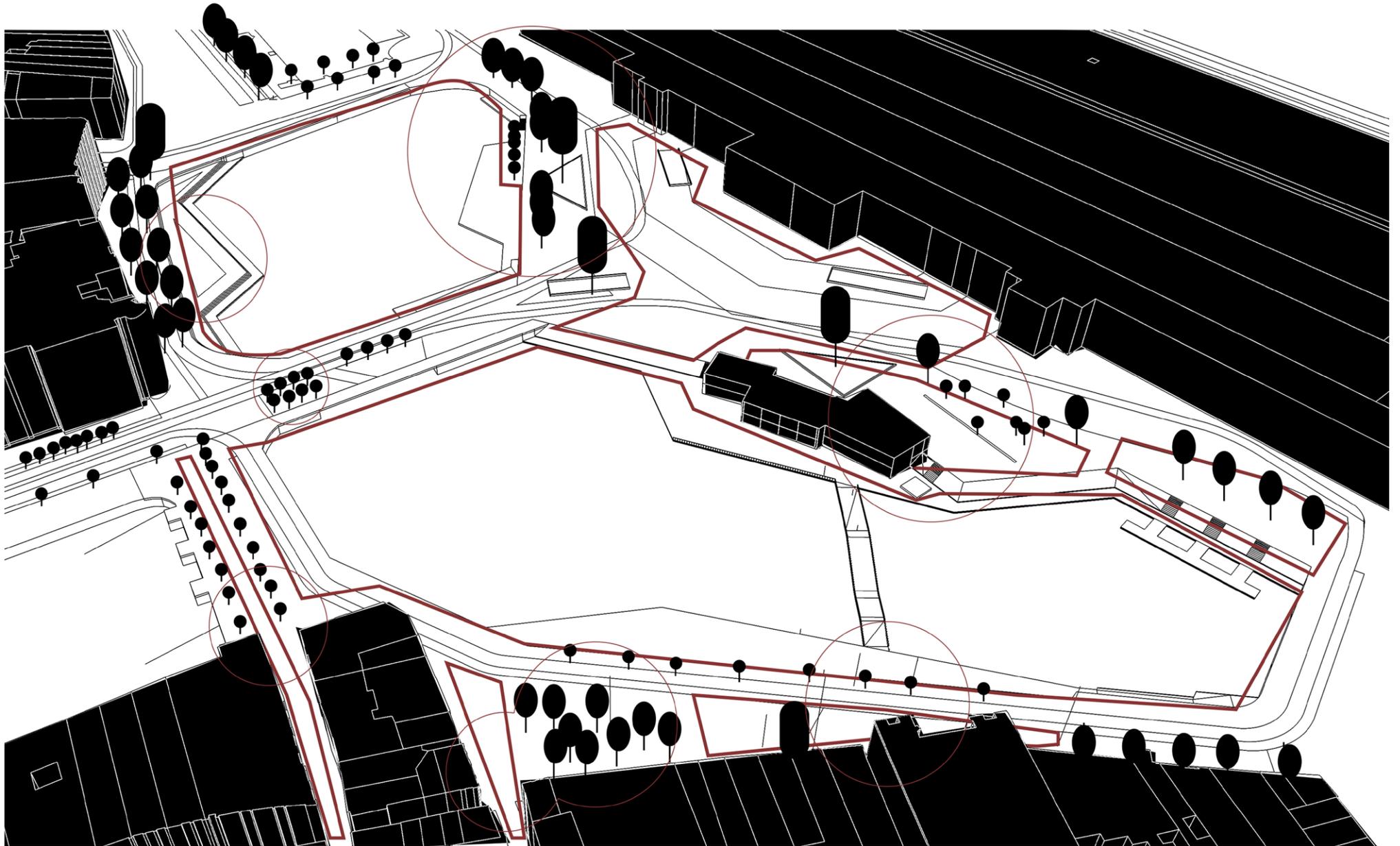
The bird view clearly show us the spatial relationship of Amsterdam centre area.

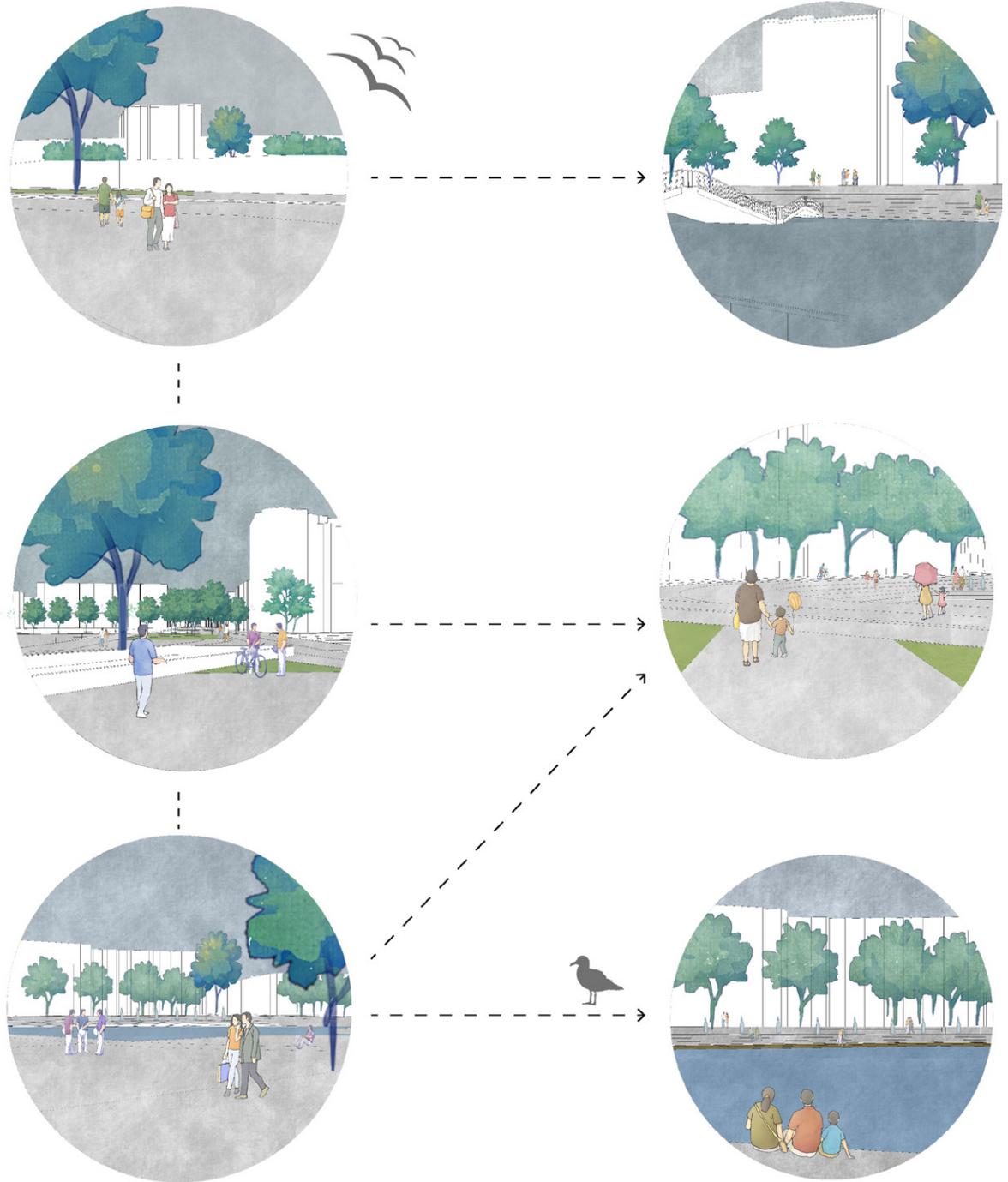
A pure water area in the west in between the tress and a strong direction from tourism center to the Nicolas Church. The solitary trees are like pins on the map to emphasize the important element, tree lines give strong sense of direction and group of trees create space for retaining people.



5.2.13 Spatial Structure

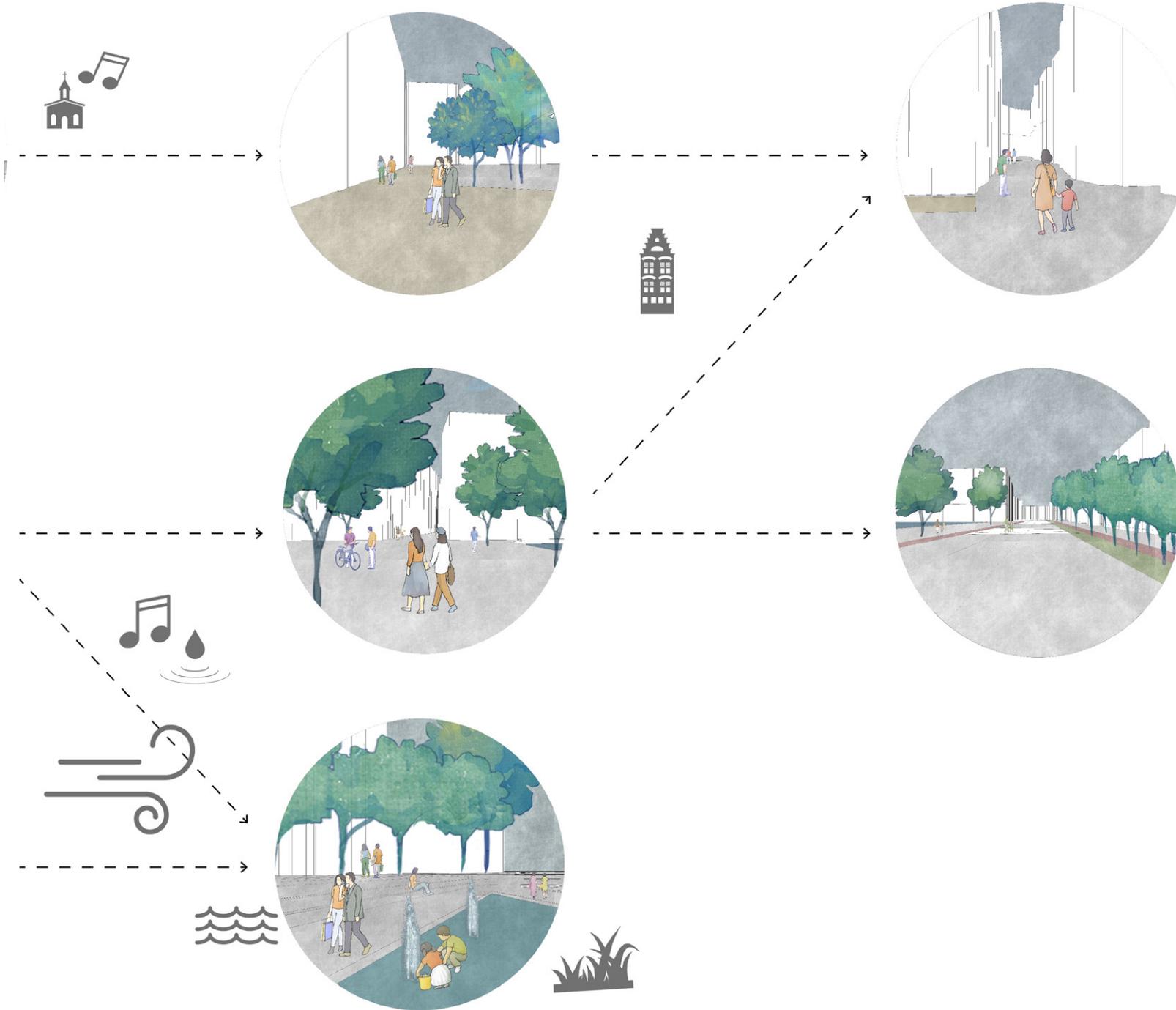
When the image is abstracted into black and white, it is obvious to see the spatial structure. The open, semi-open and closed space are arranged along the movement creating the rhythm of environment to give people mystery which captures people to explore the built environment.





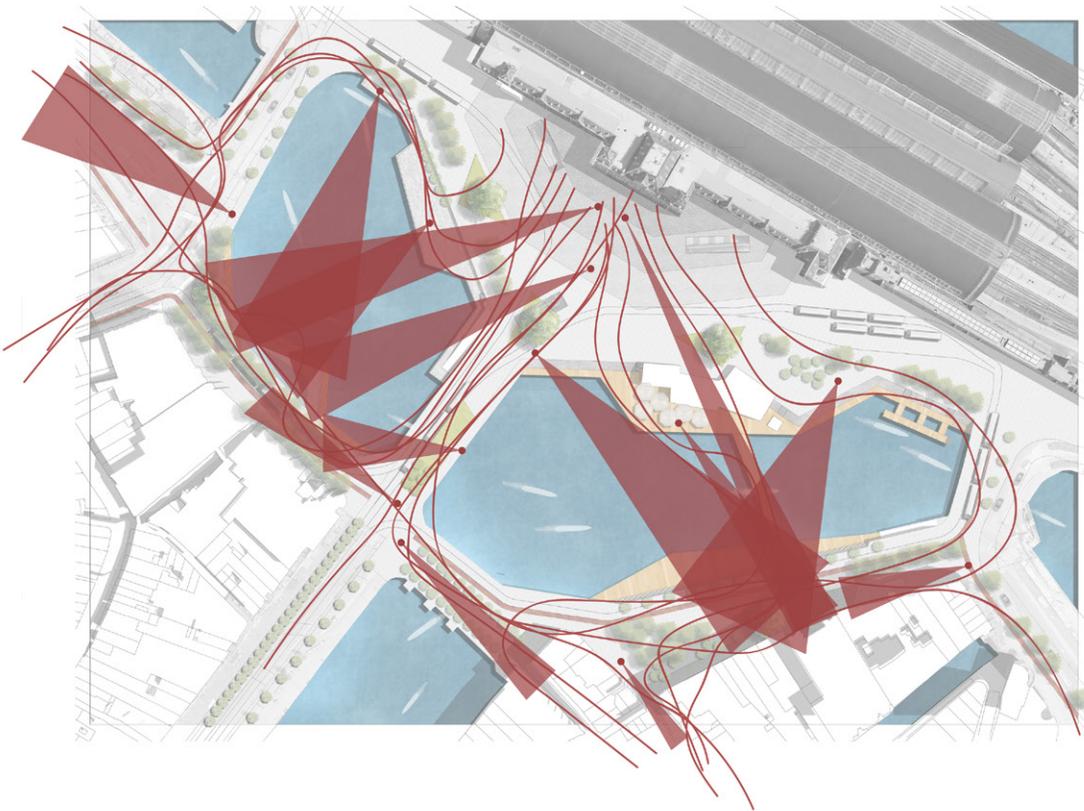
5.2.14 Visual Sequence

To be more specific, the visual sequence is made to show the eye-level perspective changing from the exit of Amsterdam Central station to different part of the Amsterdam center. The visually controlled movement is based on different focus: the Nicolas Church, the urban axis and the waterfront recreation. Each feature is emphasized by means of landscape design combined with sounds and other senses. Just like what was mentioned before, the city is like a big room, people have the choice to follow the way they want to go with clear city image.



5.2.15 Predicted Picture Research

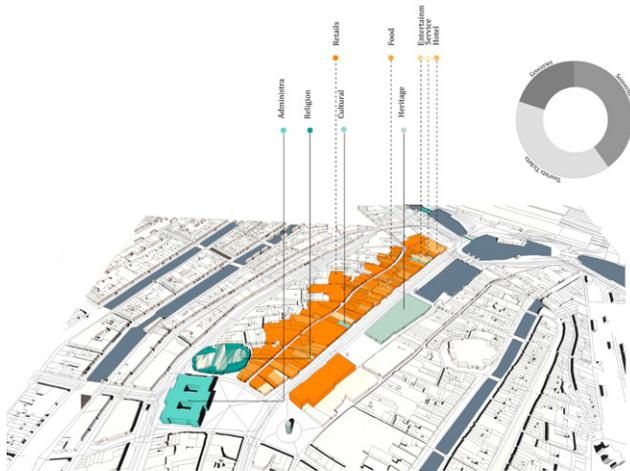
It is predictable that the new Amsterdam area will have new hot vision, more average flow of people going into different urban area. Also. we can see diverse photos in Instagram including different interesting places in this area.



5.3 Damrak Street Design

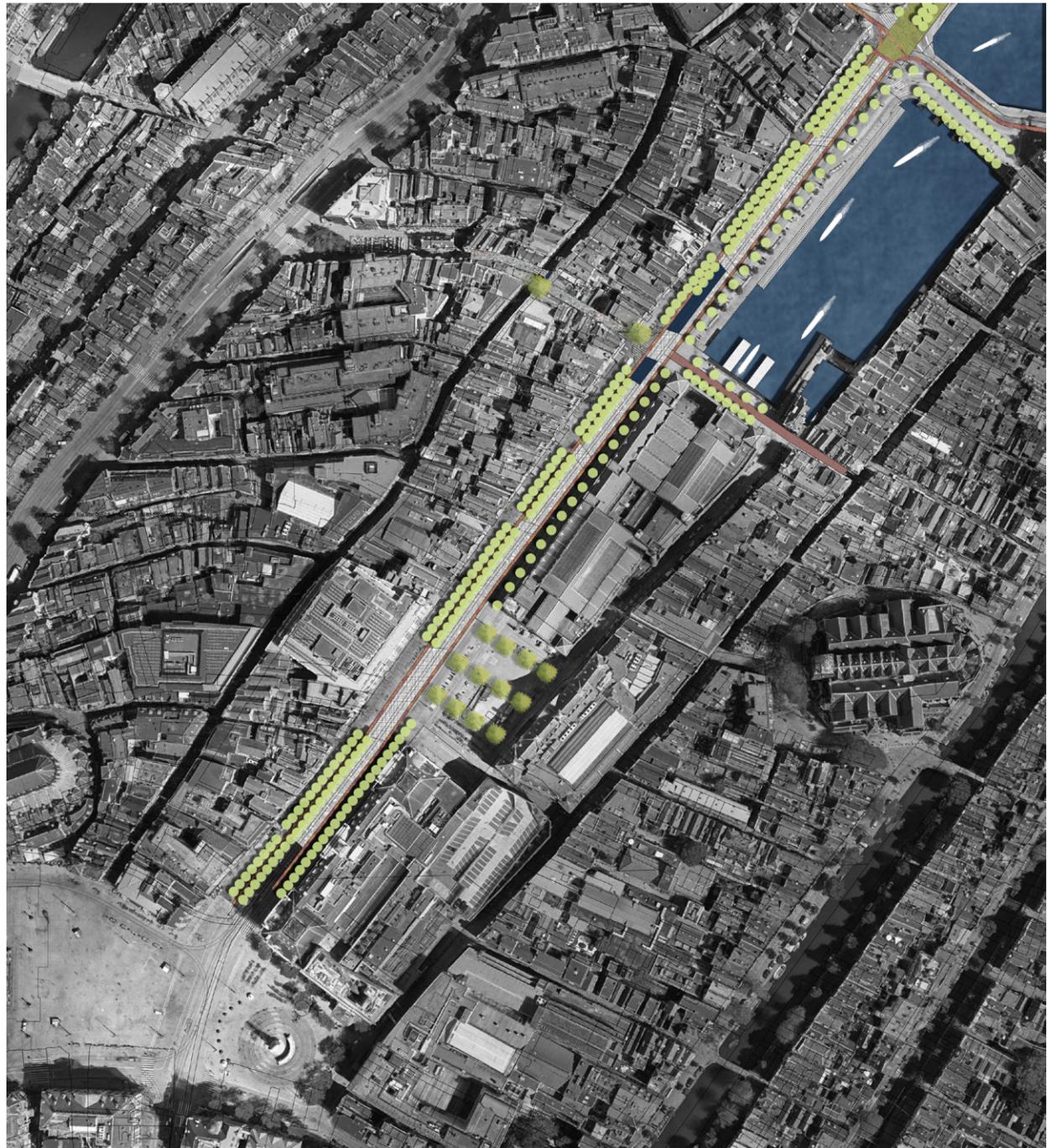
5.3.1 Structure

As I have elaborated in my motivation, there is no visual focus, no sign for direction and messy traffic. After the promotion of car-free, the car way can be transformed into public space so the pedestrian street can be wider to hold more function.



From the building function analysis we can see the Damrak street is positioned as a commercial street to show the lively city life and provide enough urban facilities serving people. As a result, I design wider pedestrian street and cozy tree lines to create possibilities for more social interaction.

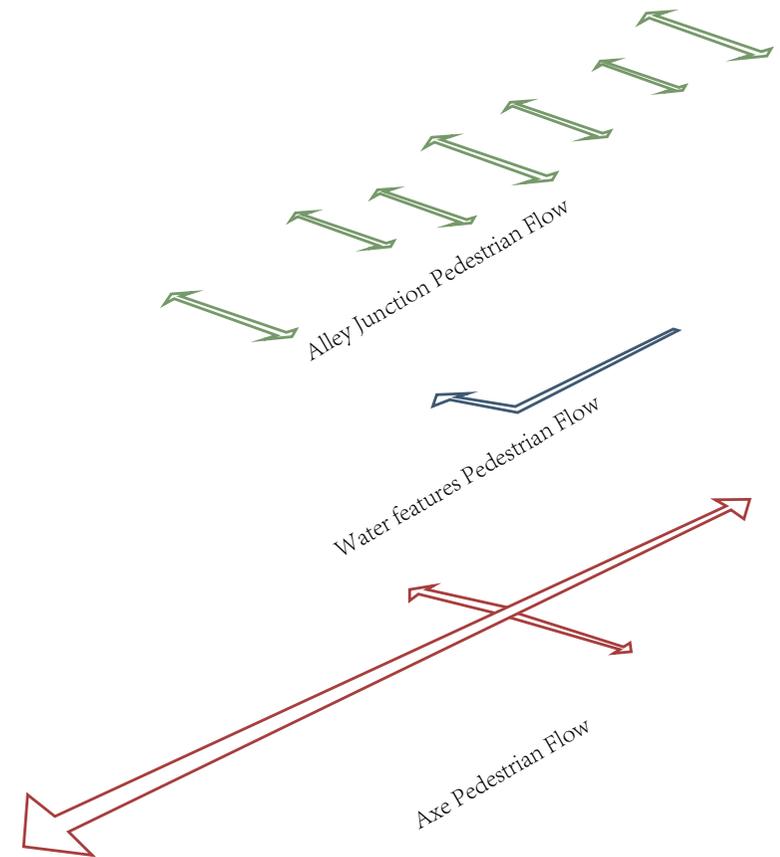
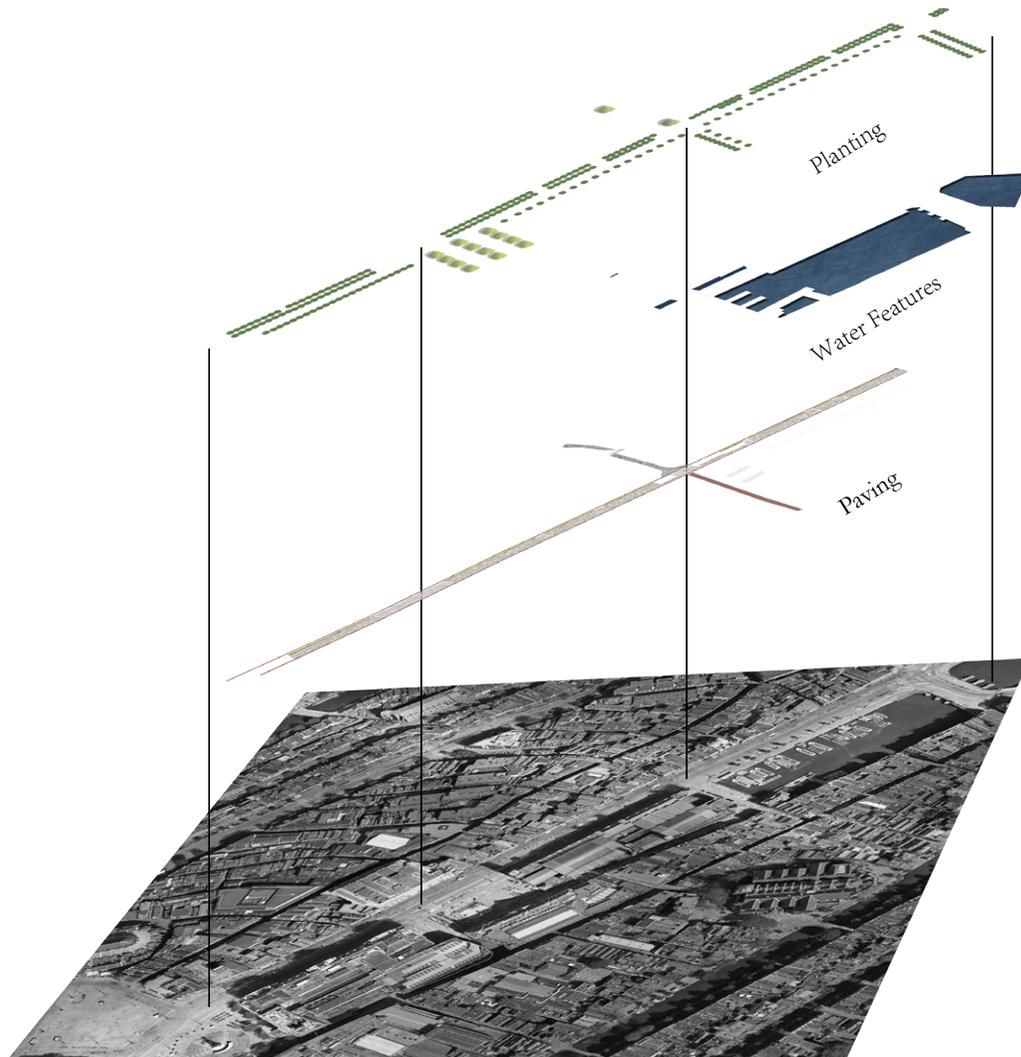
In addition, I specially open up the junction to emphasize the alleys and give specialized design at important nodes.



I add two tree lines on the side of compact house to form a continuous under canopy space and trees in the distance of 10m on the side of water to form an interaction between pedestrian side and water side. Moreover, in order to emphasize the horizontal connection, I open up the space in the node giving the sequence of close-open to remind people.

Furthermore, we know the Damrak street used to be water. To reveal the historical layer, I use cobblestone to be the pavement under the tram line also works as a water-management basin. As a result, when it is rainy, it can be a water line. The image of tram running on the water is a metaphor of boating on the water in history.

Also, from the analysis, the piers in front of the canal house break the famous image of the house and its reflection. I demolish them and add them to the side of Beurs van Berlage. The place used to be piers is changed into waterfront stairs for people to sitting down and enjoy the beautiful view.



5.3.2 Water Management

To increase the rainwater adaption of Damrak, the street consists of permeable bricks, previous planting strip and cobblestone water collection basin. As a result, the street is able to slow down, collect and reuse the water.



5.4 Horizontal Connection

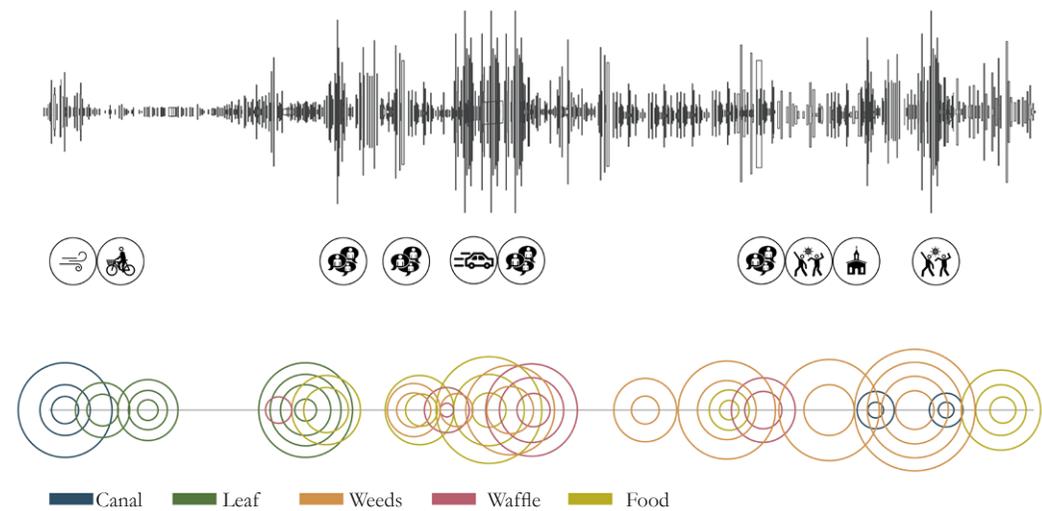
5.4.1 Character Research

It is a very important horizontal connection besides the Berus van Berlage. To give people the sign, I first try to find the obvious distinction and give people a predict at the junction node.

From the picture we can see the repeated elements are different: from green vegetation to diverse signs and billboards. The quantity of information also varies in different area.

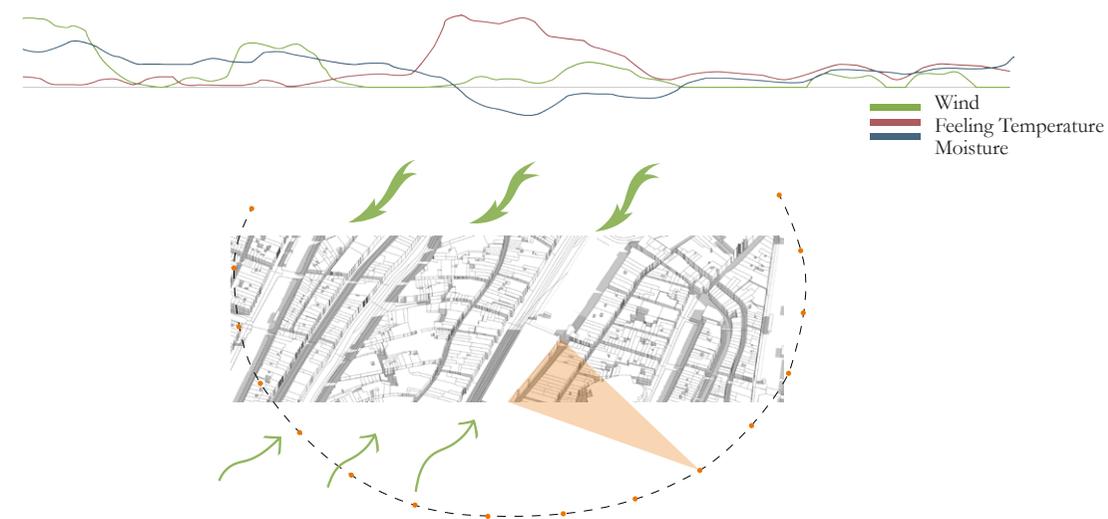


Smell map

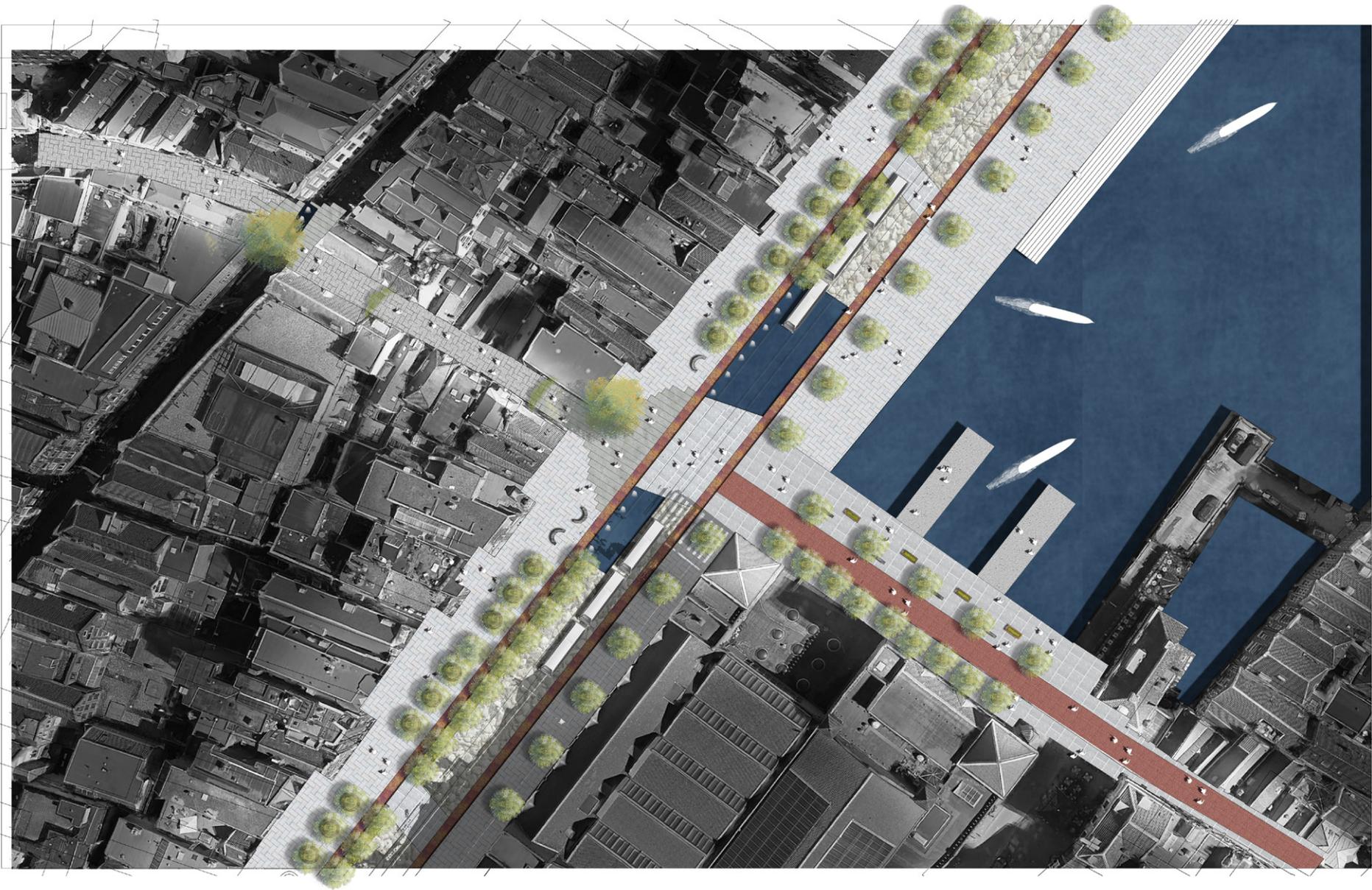


The smell map further indicated the difference. The smell in canal area is more about nature while in cultural area is more about urban smell.

Micro-climate



The micro-climate shows that the climate in canal area is cooler than other area.



5.4.2 The connection design

In this area a water pool combined with fountain is designed to stop people ,use solitary tee and directional pavement to lead people see the ally and add another solitary tree and fountain pool to catch people. In this way, the landscape catch people step by step enabling the movement.

On the other side a red brick pavement which is the same as in the cultural area is designed to lead people and tree lines to frame the entrance.



A urban public space full of vitality and possibility is formed.



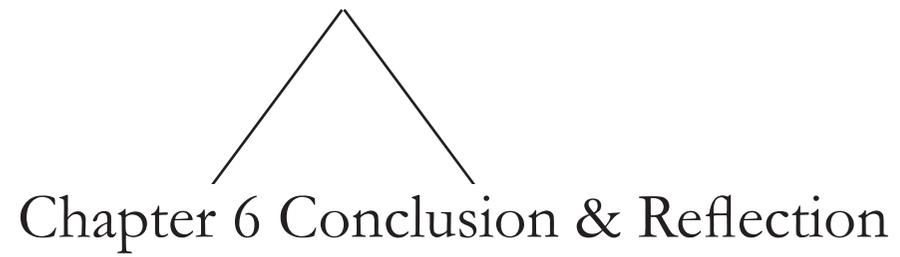
5.4.3 Perspective

The ally towards canal area is decorated by climbing trees to remind people that this is the way to nature and a solitary tree in the end is also a begin of the next step. The plants, the pavement and the way of decoration are all extracted from existing elements in natural area. In this way, the ally is like a primer attracting people who like natural atmosphere.



The red brick is distinguished among the gray pavement working as a carpet let people to explore the cultural area. The red color is repeated in old Amsterdam as the color of architecture, the color of curtain in red light district and the color of pavement and as a result, it also provides a sense of coherence leading to cultural area.





Chapter 6 Conclusion & Reflection



6.1 Conclusion

With more and more people in urban area, the conflict between crowds and limited cityscape need to be taken into account seriously. I researched from large scale structural proposal to small scale intervention to answer my research question “How to form a sustainable and dynamic cityscape by designing adaptive public space?”.

All in all, in my project, the adaptive public space which has the great potential to gather and distribute people can be formed in the following steps:

Firstly, new centres can be added and developed to de-concentrate people.

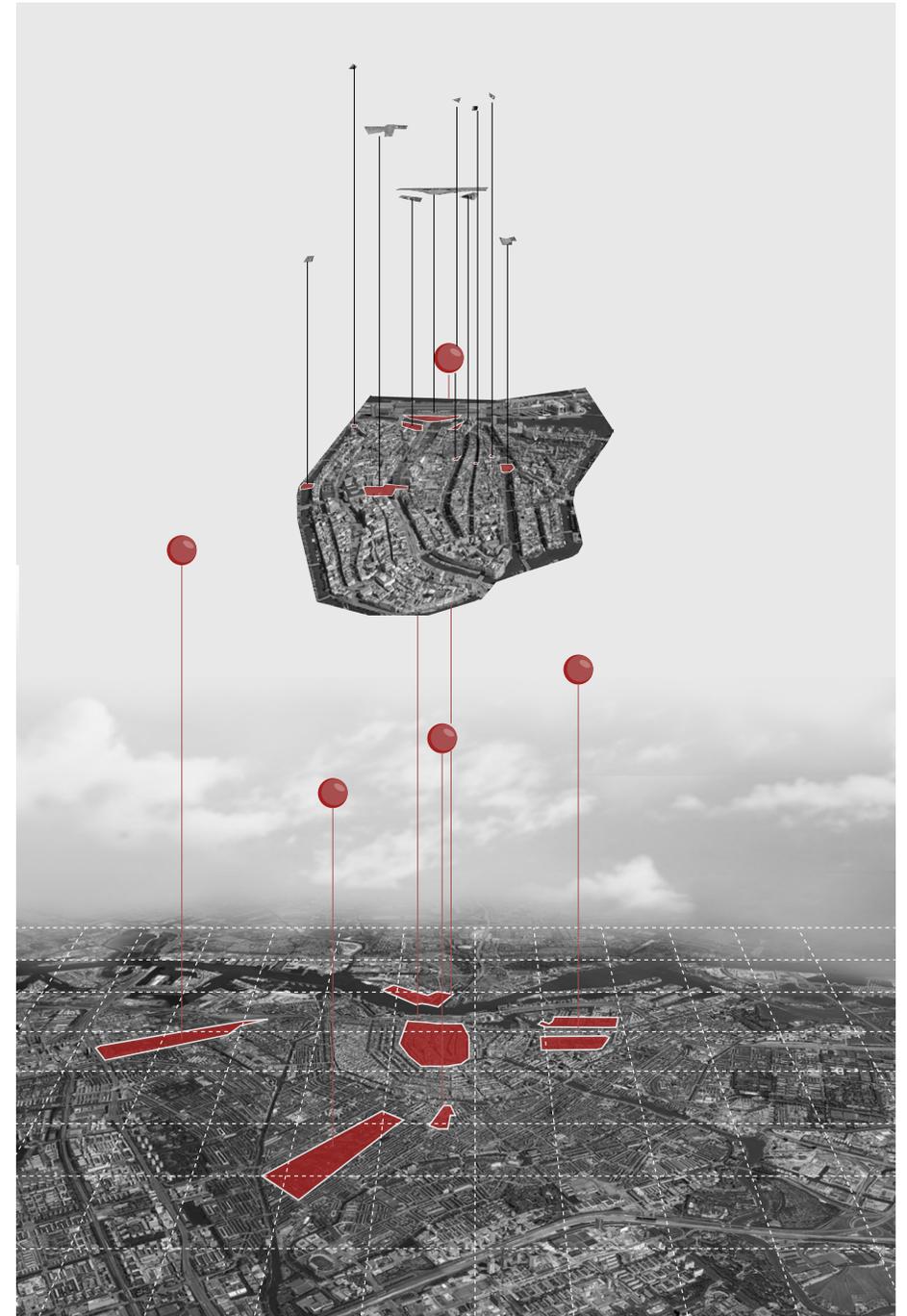
Secondly, restructure the infrastructure to form a well-connected reach network around centres to enable the fluent flows.

Thirdly, in one centre, new gateways are further added to spread people.

Fourthly, important public space in-between the gateways can be regarded as stop points and transition points and they should be emphasized to provide enough information for people to make choice.

Fifthly, the urban design should take different characteristics into account and pay attention to the perception of people in order to ensure the efficient movement of people.

In this way, the genius loci of public space and the distribution of people is interrelated and it is predictable to form a balance between crowds and limited city space. Finally, the city can continue on its own process as a complex ensemble with different flow, different elements, and structuring different orders to reveal its beauty.



6.2 Reflection

Introduction

Built environment is considered to be an integration of different layers, land or landscape characters, public realm, building forms, program and trends and fashion (B.A Sandalack 2000). People move through the space and they experience the environment. When individuals or groups become familiar with a particular space and link it with their cultural values, social meanings and personal experiences, it becomes a place for them (Tuan 1977). The city, as a big environment interacting with the people in it, gradually forms its own unique identity, shows its genius loci and continues on its long term process. As Ellin said in 1999, "The city, ancient or modern, has some characteristics that define it forever: the street, the square, the public buildings, the residences, have established between them, through a slow and uninterrupted process, laws of composition... If such compositional laws are forgotten, as in recent years, the City, deprived of measurement and proportion, corrupts the architectural components within it, creating a monstrous medley which can never be called a true City".

Amsterdam, a city on water, with marvelous history behind it should have a strong city image that enable everyone who lives here, visits here, studies here, passes here to feel the rich context and strong urban spirit. However, my experience in Amsterdam was quite disappointing. Trams, cars, crazy bicycles and thousands of tourists occupied the urban space,

the beauty of Amsterdam was buried under the chaotic modern infrastructure and unorganized people, sacrificed for the tourism economic. The city image was blurred. The public space which should be the Living Room of All Amsterdam Citizens was in a mess and as a result, the democracy of the city was vanishing. The capacity of limited urban space was reaching its peak. If we let this urban process go, the Amsterdam will lose its characteristics forever.

It is urgent that a project should be tested to find a new purpose of organizing urban flows in order to release the pressure of public space and a new idea of integrating landscape with urban context to reveal the city identity and as a result, to find back the livability and vitality. Looking back now, when I choose Amsterdam, I was questioning the role of a landscape architect under such a complicated urban system. My aim was to find a balance between crowds and limited city space to enable the city continue on its own process as a complex ensemble with different flow, different elements, and structuring different orders to reveal its beauty. The first thing came to my mind was the sponge city, the principle of which is to collect, absorb and divert water under a large amount of rainfall. This gave me the inspiration that now, the city was suffering a similar problem of capacity. Therefore, can I learn from the concept of sponge city to form a sustainable and dynamic cityscape by designing adaptive public space? Under this concept, can space work as a container for the interweaving of different flows and distribute and gather people efficiently? Do my design enable city to be sustainable in the aspects of environment, economic, society and culture, in-

volving with legible sense of place, providing and collecting memory?

Relationship between research and design and methodical line of approach

Luckily my first site visit gave me motivation to choose this project and the experience provided a view in my research methodology. There are many flows happening in Amsterdam Center and as a landscape architect, my focus was changing Amsterdam back to a usable social and functional entity through emphasizing the order of spatial layout. As is elaborated by Kanellos in 2003 "It is the complex system of routes and connectors fixed in the physical fabric of the city that this dynamic negotiates and it is this spatial infrastructure that accommodates this dynamic 'in place' structuring movement and flow by scales and in the process, it is proposed, producing much of the character and social and functional qualities of places."

In my project, research and design were not irrelevant aims. Instead, research was arose form design. A research by design model was formed, achieving new knowledge about landscape design through the act of designing. More precisely, each work should be a mix of both research leading to design decisions, and design for theoretical re-evaluations. Under the research-by-design model, the research through different scales get to interesting conclusions important for design and it was important to verify the application of design in turn to select effective intervention.

The theoretical framework of my project was built based on the city image. Keeping the problems in Amsterdam in mind and considering what Balibrea argues in 2004: the city image is important to draw because tourists require a coherent representation/meaning of the city, one that is easy and pleasant to consume in order to be oriented in a new map, to build clear and attractive city image, we as designers should reveal legibility to provide qualified orientation, evoke identity and sense of place which give imageability and finally, find back disappearing dynamic vitality. Besides, thanks to the case study and books about Barcelona urban evolution, I collected insights in Amsterdam future policy decision and design methods on similar urban issues.

From preliminary site observation, investigation and desk study, I have a grasp of basic information about Amsterdam. The core idea was to know where people go. By desk mapping and collecting tourism maps on site, I get to the answer: Amsterdam center is where conflicts most happen. Research from historical perspective help me to answer the question such as what is the characteristic of Amsterdam center. Amsterdam is a city on water, some streets, squares, buildings are all may be water in the past or had a closed relationship with water. This narrow down my further research and give me a scope of analysis.

In the next step, I did a comprehensive analysis of main layers in Amsterdam Center in terms of typology, spatial setting and function and drew the conclusion that the fundamental problem in this area is the assemble of public space. There is only one

dominant axe and other public space is scattered with low connection and moreover, there is a lack of information to evoke the identity and retain people. Defining the core problem made me understand what I needed to address in the design. Besides, through questionnaires, investigation and picture research, I made further detailed partition of Amsterdam Center to have a grasp of identity and potential people movement which help me to do the design.

All in all, the combination of methods lead me to find the possible solution in Amsterdam Center scale and choose the further intervention.

Dilemmas I face with

My initial idea to release the crowds' pressure was to defined five kinds of tourists and five kinds of residents in Amsterdam Centre., according to five modes of experience arose by Lengkeek (2001). These ten kinds of people with different intention are supposed to be attracted by different space, programs and atmosphere. Based on this, I thought I could distribute them by giving different design. However, when I made interview in Amsterdam, I found most of people thought they had overlapped intention. They were not only one kind of people, they would not only be interested in one thing. As a result, it is very hard to do the target design and achieve the goal that there are only a few kinds of people in one place.

Then I choose to start from the angle of the city. When I was in Amsterdam, I asked 43 people: "What attracts you to Amsterdam?" and from the results

we can generally say people going to Amsterdam mostly have three purposes: attracted by the culture and history, to experience the diverse social life or to enjoy the beautiful canal scenery. These three different demands would be the base of my further analysis and design.

We cannot say that in old city, there is no element about canal or social aspects. What we can see is that these three important aspects are overlapped all over the Amsterdam but in different area there is one dominant and this outstanding dominant give this area unique identity, differing it from others. Based on this, we are able to divide the city center into three part, the cultural part, social part and landscape part and this helped me strengthen the identity in each part to create a clear city image so that people can make choice easily along their experience routes and feel the charm of Amsterdam.

The relevance of the graduation project

One perspective of "the Flowscape" is regarding the landscape as a spatial-visual structure. "The visual form of the landscape is based on the sensorial experience that emerges only by movement and is affected by the position and intensity of light sources. The act of perceiving is linked with the sequential unfolding of information as our bodies pass through space." It is regarded as a type of transportation infrastructure.

My project is fundamentally embedded in the flow of people, aiming at creating sense of place and revealing the identity through their experience. The

topic of “Flowscape” is more like a way of research, viewing the movement of people as a flow, besides the flow of people, I also take the flow of traffic, the flow of water into account.

From the review of previous landscape works, at the mention of cityscape design for people, most of us choose to design public space. However, the space is designed for what? Can this space help people read the city? The public space, as the important patches in the city, can it provide different sense of place according to different urban palimpsest? On the other hand, in what way do people perceive the landscape? How can we design a landscape that is able to capture people? As a landscape architect, the focus of my project is not only recovering the urban structure but also researching the delicate relationship between people and their surroundings. The visual perception as the basic principle of my project, I explore the role of vision in landscape design, elaborate the factors influencing people’s movement and the way people reacting to the landscape through design and put forward the importance of visually controlled design in the field of landscape architecture.

Facing with the problem of Amsterdam, my project starts from restructuring the city mainly in terms of infrastructure and function partition, then recovering cityscape in terms of the streets and squares. In this way, the crowds are able to be gathered and distributed in the city. The project contributes to the sustainability of society and the dynamic process of urban revolution. Although the project starts from the scope of a series of public space in Amsterdam

and the specificity of my design proved a possibility for Amsterdam center, many other conclusions, methods and principles have the potential to be applied to other similar location in metropolitan area which suffers the pressure of uneven distribution of crowds. Furthermore, the visually controlled movement is based on the clear image of the city and as a result, the intervention of my project also benefits the genius loci of cityscape which makes the city more readable.

From September of last year until now, the logic and systematic design process provides me a great opportunity to dive into the research on complex flows in a city and gives me an insight in the relationship between people and built environment involving environmental psychology. This valuable experience lets me believe in the role of landscape architects in urban issues and helps me stand more practically on the side of landscape perceivers in the future.

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