

# **Connecting Water and Memory: Reshaping the Poetic Space of Canals in Amsterdam**

by

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Submitted in partial fulfilment of the requirements  
for the degree of Master of Architecture

at

Dalhousie University  
Halifax, Nova Scotia  
June 2020

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# Abstract

Amsterdam is a poem about water, it sings in people's mouths, and flows in the canals.

Language and people are the carriers of memory and the symbolic composition of poetry. Travellers to Amsterdam end their journeys with the water because all the names of places in Amsterdam are related to water.

Poetic images also have their matter. The people of Amsterdam have fought against the invasion of water and controlled it by moving water through canals. Canals were gradually developing and become the substance of the poetry.

Today, there is a disconnect between the understanding of the water as a system (canal/sleuth/lock/gates...) since the controlling mechanisms have moved to the outside of the city. This thesis is an attempt to reconnect people with memories of the canal through architecture design. The designs include a new fish market, a rain wall and a pool floating on the canal.

# Acknowledgements

I would like to first thank my supervisor Sarah Bonnemaïson and my advisor Catherine Venart. They always inspire and guide me when I feel confused. I could not have finish the thesis without their support.

I want to thank my parents for their care and encouragement, which gave me the power to persevere.

Also, I would like to thank my friends, who have always helped me and brought me happiness. A big thanks to Xiaoou Liu, Cheng Zhang, XiaoQuinn Yang, Shuyu Lin, Walter Wong and all my other classmates.

Finally, I hope all my family and friends can continue to explore themselves and the world and find their unique life path.

# Chapter 1: The Phenomenology of Imagination

Space and the pictures in space are the sources of memory. People utilize their own reflection to connect the pictures and signs in space, “with this reflection for the first time given full freedom of action, did invent language” (Rousseau and Herder 1966, 115). The structure of language is the structure of space.

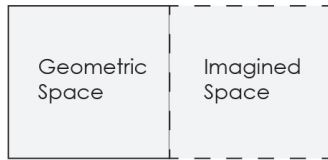
Memory exists in solidified times, and space is the section of times. People extract their memory from the section of space, and then put it into the container called language. People look for memory through space and store memory through language.

The exterior of a city is a space that contains all the historical materials, and its interior is time and memory. We try to understand memory, that is, the understanding of its language and space.

## Memory and Space

The history of a city exists not only in our minds but also in the materials and rituals around us. These physical forms constitute roads, canals, squares, monuments... thus forming the main body of the image of a city. Wittgenstein asked in his *Philosophical Investigations*: “How many houses or streets does it take before a town begins to be a town?” (Wittgenstein 1958, 8). Just like human beings, a building has its inner soul and voice, as well as its body. If a building loses its internal space, then, the exterior will be an empty shell (Wang 2016, 115). For a city, its exterior is a collection of all the historical materials, and its interior is time and memory.

So, the formation of a city is connecting progress between materials and memory.



The space of memory

Michelangelo said: “I saw the angel in the marble and carved until I set him free.” The internal structure of a city is like the uncarved David in marble; this statue does not hide but is hard to recognize. Memory is abstract, but the memory still has its space; here, the space has two different attributes. First, space has its geometric attribute. We can think of space is measured and enclosed by its surrounding objects. The other attribute is generated in people’s imagination. It is an experienced space and only exists in our minds.

Bachelard wrote in *The Poetics of Space*:

Memory-what a strange thing it is-does not record concrete duration... We can only think of it, in the line of an abstract time that is deprived of all thicknesses. The finest specimens of fossilized duration concretized as a result of long sojourn, are to be found in and through space (Bachelard 1964, 9).

## Memory and Language

The physical space is an external performance of the imagined space, and these were connected to be a whole through memory, and language is a complex of all the signs of memory. Lynch said: “An object seen for the first time may be identified and related not because it is individually familiar but because it conforms to a stereotype already constructed by the observer” (Lynch 1960, 7). Every object in the world has its own special attribute. Therefore, people could make specific names for each individual. Herder said in his work *On the Origin of Language*:

It stands there, entirely as it manifests itself in his senses. White, soft, woolly- his soul in reflective exercise seeks a distinguish mark- the sheep bleats! His soul has found the distinguishing mark...The sound of bleating perceived by a human soul as the distinguishing mark of the sheep became, by virtue of this reflection, the name of the sheep (Rousseau and Herder 1966, 117).

Thus, language is created in this natural way. After that, when we see the same picture again, we will think of its name as the “sheep”. People built the connection between objects and their names, and we could call this connection “memory”.

## Poetry

Language is not only composed of signs; it has its own emotion. As Herder said in *On the Origin of Language*: “While still animal, man already had language. All violent sensations of the body... and all strong passions of the body express themselves in screams” (Rousseau and Herder 1966, 2). Russell wrote in the introduction of Wittgenstein’s *Tractatus Logico-Philosophicus*: “The essential business of language is to assert or deny facts. Given the syntax of a language, the meaning of a sentence is determinate as soon as the meaning of the component words is known” (Wittgenstein 1922, 8). He added: “In practice, language is always more or less vague so that what we assert is never quite precise” (Wittgenstein 1922, 8). Poetry also has that ambiguous attribute. The connection between language and objects may not be linear; it could be a poetic connection. Poetry is higher than ordinary signified language because poetry can interweave reality and unreality through imagination. Poetry breathes new life into language. “The poet, in the novelty of his images, is always the origin of language” (Bachelard 1964, 3). Bachelard explained the poetry’s image in *The Poetics of Space*: “...when it emerges into the consciousness as a direct product of the heart, soul and being of man, apprehended in his actuality” (Bachelard 1964, 3).

## A Poem about Water

Thus water will appear to us as a complete being with body, soul, and voice. Perhaps more than any other element, water is a complete poetic reality (Bachelard 1982, 15).

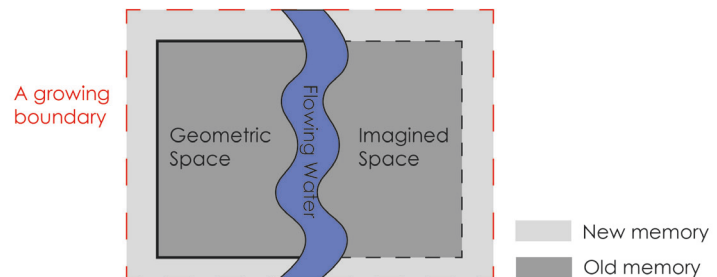
Amsterdam is a poem about water; it sings in people's mouth, and flows in canals, "Water is a mainstay for images, a mainstay that quickly becomes a contributor of images, a founding contributor for images" (Bachelard 1982, 11). Canals became the main body of this poem, and water was the theme and contributed to the images of the poem. The fluidity of water helps canals connect with other elements in the city. It is not only a connection between the structure of sentences but also a connection between the structures of fact. People overlapped these two structures in their minds, forming their memories about the canals.

The people of Amsterdam have fought against water, its violence and strength; they have lived with water, knowing that to control the water by moving it through its canals. People built warehouses along canals and trading with the outside world through the waterway. "Water" is a verb, its fluidity became a tool to connect with the other nouns in the city. Water weaved the images of Amsterdam and made them into language, people also lived on and along the canals, then the canals were gradually developed and became the substance of the poetry. Later, the canals lost their function; people no longer needed canals to control water levels, and transportation way moved from water to land. Finally, the canal became a monument in the city; people filled canals and transformed them into streets and squares. So that, the canal lost its fluidity and its language. Memory left marks in reality and pictures in our minds. The space of the canal is composed of countless time sections, and these sections overlapped with each other, and our memories are stored in



it. So, the memory of canals exists not only in the past but also in the present. If we want to evoke people's memories about canals, we are not going to restore history, because history already exists in that space; evoking people's memory is actually to evoke the vitality and fluidity of the water because water is the resource for the poetic image and the basis of language.

In the following two chapters, I will introduce the canals' history as well as an analysis of the sentence structure and the fact structure of canals. I will also explain the fluidity of water, and how the resource of memories and language is accomplished through trading activities.



The poetic structure of canals

## Chapter 2: Urban Memory

The sign is the part of the symbol perceptible by the senses (Wittgenstein 1922, 35).

### Collective Memory

Cities provide space for collective memories. Aldo Rossi wrote “The city is in itself a repository of history” where he continues to explain that “The city itself is the collective memory of its people, and like memory, it is associated with objects and places” (Rossi 1982, 130).

However, people’s memories are abstract and in fragments making it hard to capture. They exist in the subtle corners of the city, as Calvino says:

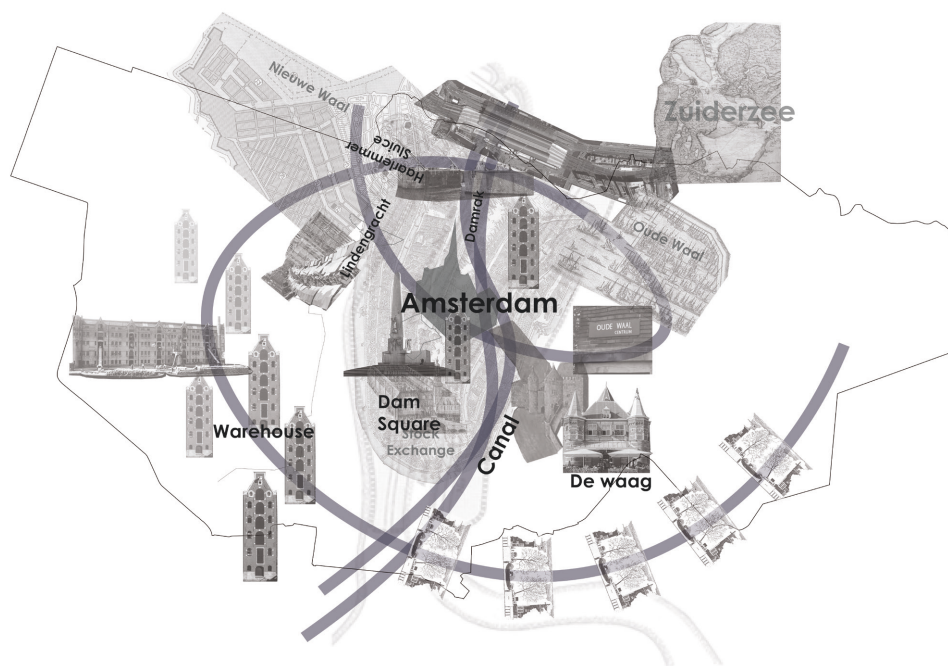
As this wave from memories flows in, the city soaks it up like a sponge and expands. A description of Zaira as it is today should contain all Zaira’s past. The city, however, does not tell its past, but contains it like the lines of a hand, written in the corners of the streets, the gratings of the windows, the banisters of the steps, the antennae of the lightning rods, the poles of the Bagnos, every segment marked in turn with scratches, indentations, scrolls (Calvino 1974, 10-11).

If we want to understand the memory of a city, we have to grasp all the marks in the city. Of course, nobody would claim that they can fully understand a city, and people’s understanding of a city is just a puzzle with endless details. Everyone has a puzzle or image in their minds to describe the boundary or features of the city. The themes of these puzzles are very different, but only the elements that are made up are similar, such as wind, water, flame, or soil. All these essential elements and imaginary collections extend from the basic elements, which are called the collective memory of the city.


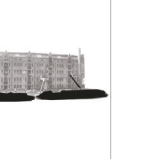

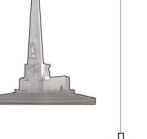
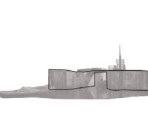




## Signs and Symbols

Finally, the journey leads to the city of Tamara. You penetrate it along streets thick with signboards jutting from the walls. The eye does not see things but images of things that mean other things: pincers point out the tooth-drawer's house; a tankard, the tavern; halberds, the barracks; scales...If a building has no signboard or figure, its very form and the position it occupies in the city's order suffice to indicate its function (Calvino 1974, 14).

Travellers knowing Amsterdam starts with its name. They read the names of the streets, canals or buildings on their maps and begin to imagine the destinations in their minds. The end of their journeys must be related to water because all the names of places in Amsterdam are the signs of water. Wittgenstein explained the relationship between signs and symbols in his writing: "Two different symbols can, therefore, have the sign (the written sign or the sound sign) in common—they then signify in different ways" (Wittgenstein 1922, 35).



My mind map : Amsterdam

	Amsterdam	De waag	Lindengracht	Damrak	Dam Square	Warehouse
	<p>Around 1250, the city was founded with the construction of the dam which given its name 'Amstelledamme' in Medieval Dutch for: 'Dam in a <b>Watery Area</b>'.</p>	<p>De Waag was originally founded as the <b>city's gate</b> in 1488. In 1617 it transferred into a weighing building. Today, it is occupied by a restaurant and an information centre.</p>	<p>"The Lindengracht" means the lime tree <b>canal</b> in English, and it has been filled up and turned into a street in the nineteenth century.</p>	<p>"Rak" means a straight <b>canal or river</b> in old Dutch and it was mostly filled until 1672. It used to be the busiest canal in Amsterdam where all the boats docked here for loading and unloading goods.</p>	<p>There was a <b>dam on the Amstel river</b>. Today it transferred into a "National square", and a national monument was built in 1956.</p>	<p>The name of the warehouse often implies the origin of the <b>wares or goods</b>: the 'Afrika' (Africa), the 'korendrager' (granary) and the 'Spaanse Huis' (Spanish House).</p>
History						
Today						
	<p>Until the 17th century, the <b>water level</b> of canals depended on tides connected to the sea. Later, people set up eight sluices to control the water level. Today, the sluices have lost the function.</p>	<p>The <b>Zuiderzee</b> used to be a <b>sea</b> and a centre for maritime trading. In 1932, it was closed off by Afsluitdijk, and transformed into a <b>freshwater lake</b> called IJsselmeer.</p>	<p>When the Oude Waal was too shallow for the large <b>ships</b>, people built the Nieuwe Waal. Today, the Nieuwe Waal lost its name and became a residential area.</p>	<p>"waard" means a piece of water surrounded by rows of <b>piles</b> so boats could dock. Today, the Oude Waal is a name for a street.</p>	<p>It is the first stock exchange building in the world, which served for the Dutch <b>East India Company</b> at that time.</p>	<p>The canal used to be a <b>traffic route</b> to connect with the outside world. Today its function has lost and served more for tourism.</p>
History						
Today					<p>It is no longer exists in the city.</p>	<p>UNESCO</p>
	Haarlemmer Sluice	Zuiderzee	Nieuwe Waal	Oude Waal	Stock Exchange	Canal

The signs and symbols in Amsterdam

## Chapter 3: Canal Memory

The canal is a symbol of Amsterdam. People would like to describe and store their memories of canals through language (sound signs) and words (written signs), so that, people's memories of canals arise from the continuous connecting between symbols and signs. In the past, the canal's fluidity was the basis for that connection, and trading was the method.

Next, I will introduce the history of the canal from the twelfth century to the seventeenth century to relate the construction history of canals and their function. Later, I will quote Wittgenstein's theory in his *Tractatus Logico-Philosophicus* to explain the formation process of canal memory: the continuous connecting between the structure of sentences and the structure of facts.

### The Construction History of the Canal

Everything related to trading is the main reason for the increase of urban wealth (Mak 1999, 29).

#### *12-13th century – A small fishing village*

In the beginning, Amsterdam was a small fishing village, and it was not a suitable place to live. The first building was even built on a layer of clay formed by the great floods of 1170 and 1173 (Mak 1999, 5). At that time, marshland was almost everywhere and connected to the sea, so Amsterdam could be flooded. To protect the villages from flooding, people built a dam, which gave the settlement its name (Mak 1999, 10). "Amsterdam" means a dam on the Amstel River.

#### *14-15th century – A small town.*

Between the fourteenth to fifteenth centuries, Amsterdam's

people developed and transformed the small village to a small town. (Mak 1999, 24). In the early fourteenth century, Amsterdam was granted the status of a city. The original settlement was built on a few strips of land perpendicular to the harbour, and the urban development centred on it. “During the fourteenth century, there was a double row of poles hammered into the ground as protection for the city against flood, in the location of today’s Central station, and the largest ship was moored here” (Mak 1999, 35). Amsterdam faces the sea; its great geographic location makes it a trading port.

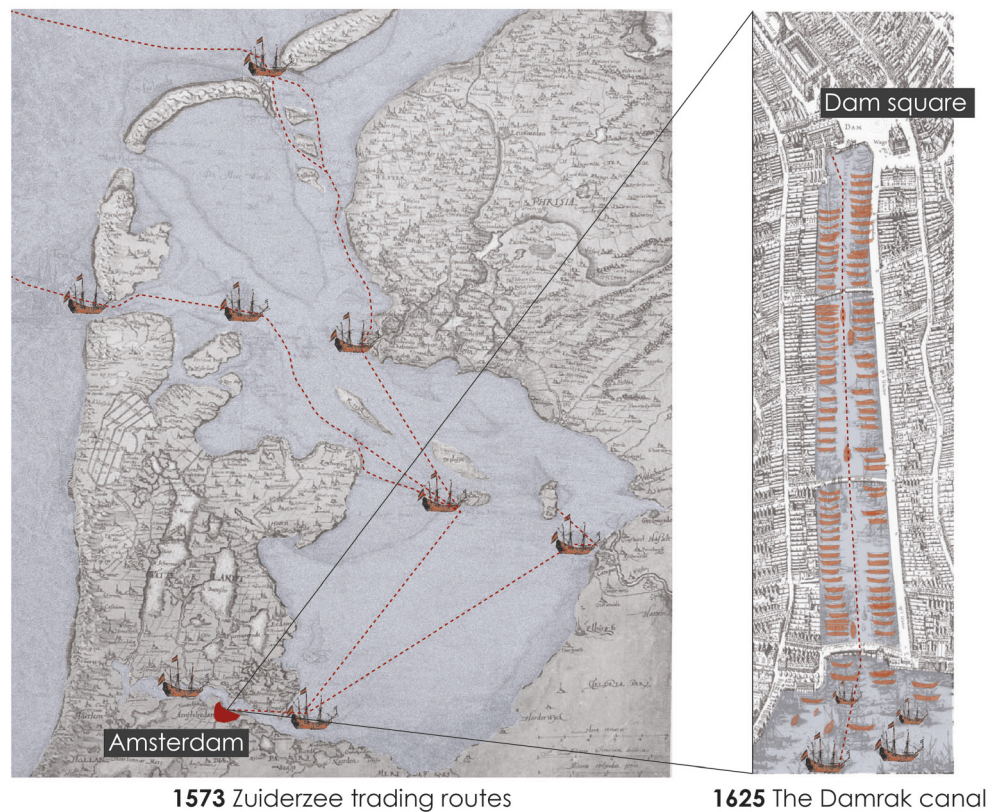
Of all ships passing through the Sound during the fifteenth century, almost 60 percent came from Holland, those from Amsterdam playing by far the most important role. This increased trade also had a significant consequence on the cityscape of Amsterdam (Mak 1999, 35).

Before the sixteenth century, Amsterdam’s urban scale was very small and took the Single canal as its boundary.

#### *16-17th century – The golden age*

From the beginning, Amsterdam was a port where a lot of trading came, after the fourteenth century, sailors gradually transformed themselves into merchants (Mak 1999, 31). From 16th to the 17th century, due to the development of the shipbuilding industry, maritime trade became the primary method of trading between European countries. Amsterdam utilized its geographical location to become the center of European trade. At that time, the Netherlands had the world’s richest company, the Dutch East India Company, and Amsterdam established the first stock exchange building. Trading brought Amsterdam wealth, so Amsterdam had enough money to build more canals to expand its urban space. In the early seventeenth century, town planners made a big urban plan for Amsterdam, adding three main

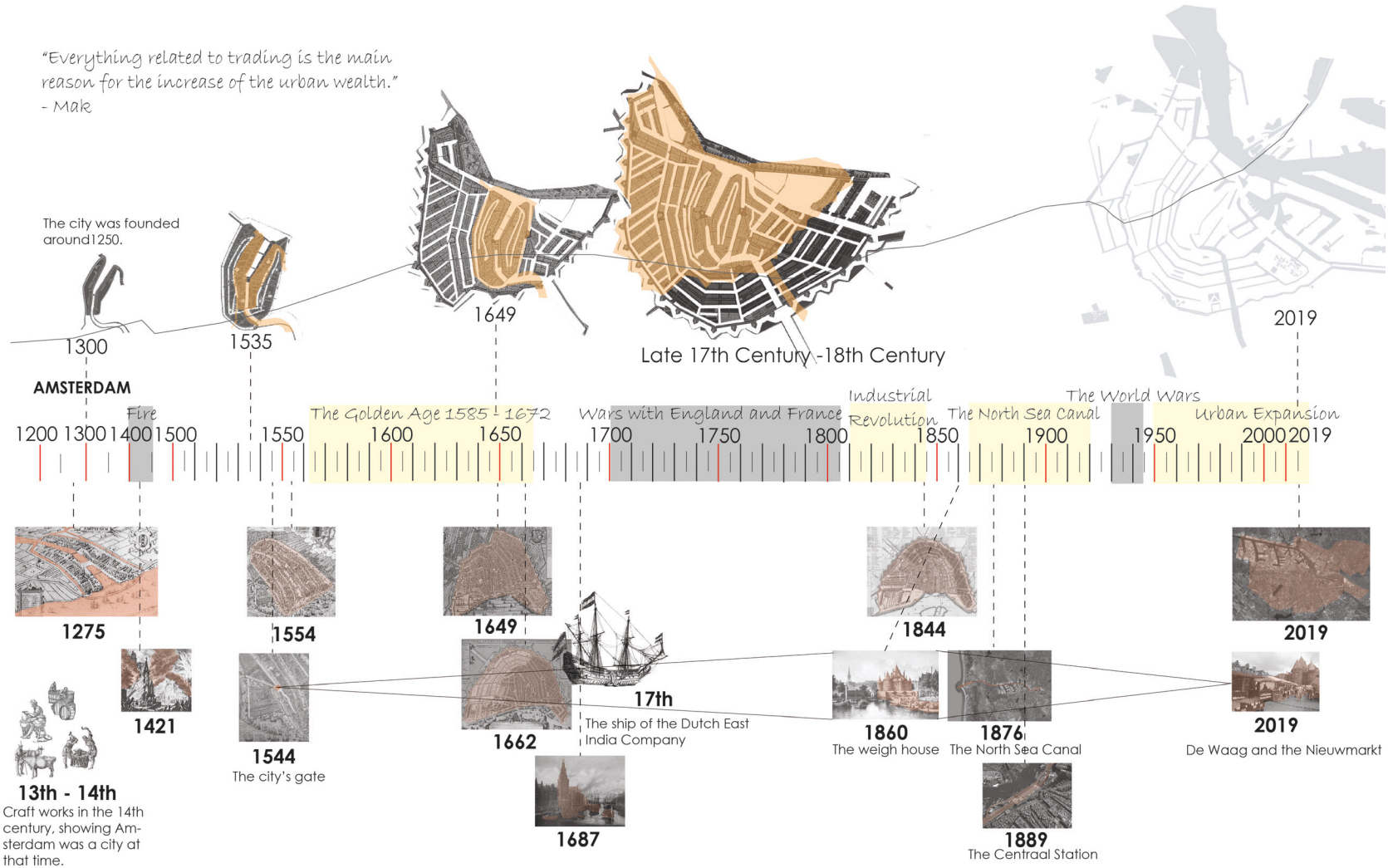
canals from the inside to the outside: the Herengracht canal, the Keizersgracht canal, and the Prinsengracht canal (Chen and Liu 2015, 94). People utilized canals for draining the marshland and then filled and flatted the new lands to expand urban space. (Chen and Liu 2015, 94). In the late 17th century, the construction of the canals was completed, and the spatial structure of Amsterdam was established.



Left: During the golden age, Amsterdam was the largest trading port in Europe; Christiaan Sgroten, map of Zuiderzee, 1573 (Palmboom 2018, 36).

Right: Small boats docked along the Damrak canal and used it for loading and unloading goods; Florisz van Berckenrode, map of city centre, 1625 (Bureau Monumenten & Archeologie 2009, 3).

"Everything related to trading is the main reason for the increase of the urban wealth."  
- Mak



The construction history of canals in Amsterdam

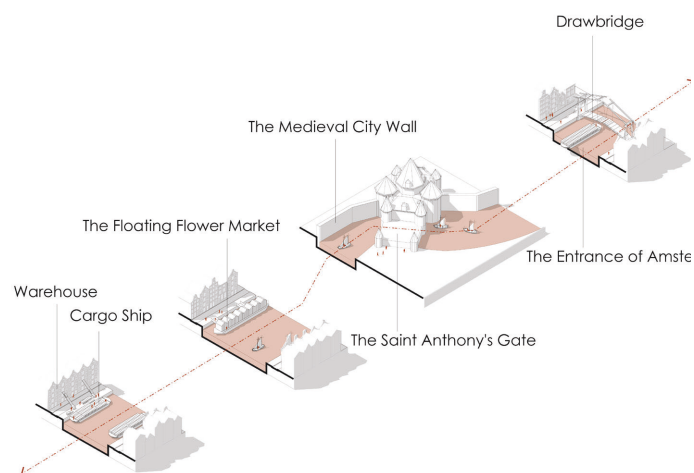


## Route and Roots

For the imagination, everything that flows is water; everything that flows participates in water's nature. The epithet flowing water is so strong that it creates its substantive at all times and in all places (Bachelard 1982, 117).

Water is one of the 'four fundamental elements', and water is the basis for people's 'material imagination'. The people's memory about canals is part of the phenomenology of the imagination. The flowing water is continuously bringing vitalities into canals, people also trade and live along canals, so that, the pictures of canals and water combined in people's minds. The canal was gradually developing, and constantly connecting and building relationships with the roots in the city, the canal became the main body of the poem. Here, the roots mean the fixed elements in the city, such as streets, squares, buildings and infrastructures.

Fluidity is the nature of water, but the fluidity of canals comes from water and people's trading activities on the water. The flowing canals and water were constantly creating the city's language (signs) and the city's spatial structure (symbols). People associate the city's language structure with the fact structure through imagination, which constitutes people's memories of the canal.



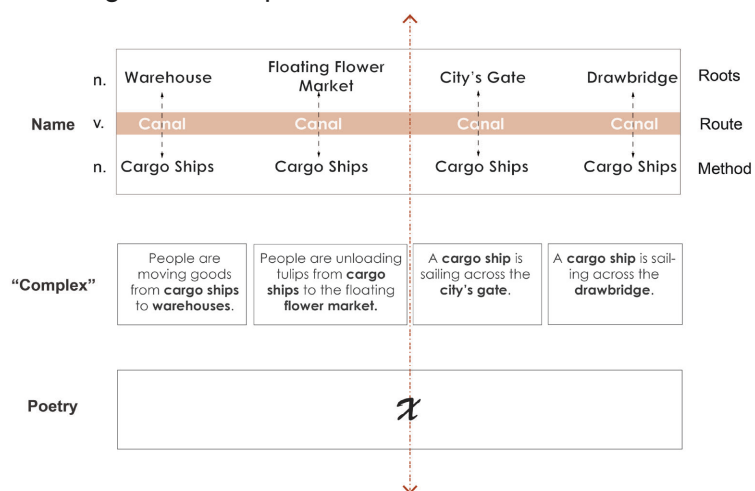
Route and roots

## The Structure of Language and the Structure of Fact

People associate language with facts through memory. “So that a certain sentence should assert a certain fact there must, however, the language may be constructed, be something in common between the structure of the sentence and the structure of the fact” (Wittgenstein 1922, 8). We could call this something in between, the memory.

### *The language structure of the canal*

In Wittgenstein’s theory, “names are only given to simples. We do not give two names to one thing, or one name to two things” (Wittgenstein 1922, 14). For example, when we say “canal” and “boat”, these are two names of two different things, but we cannot give only one name to represent both. If we are going to make a relation between “canal” and “boat”, we must establish a relation between the two names in a sentence (Wittgenstein 1922, 9). If we say, “The boat is sailing on the canal”, the word “sailing” happens between the “canal” and the “boat”, establishing a relation between these two words, and we could call this sentence, a “complex”. People utilize their own creativity and “reflexion” to connect all the signs into the poem about water.



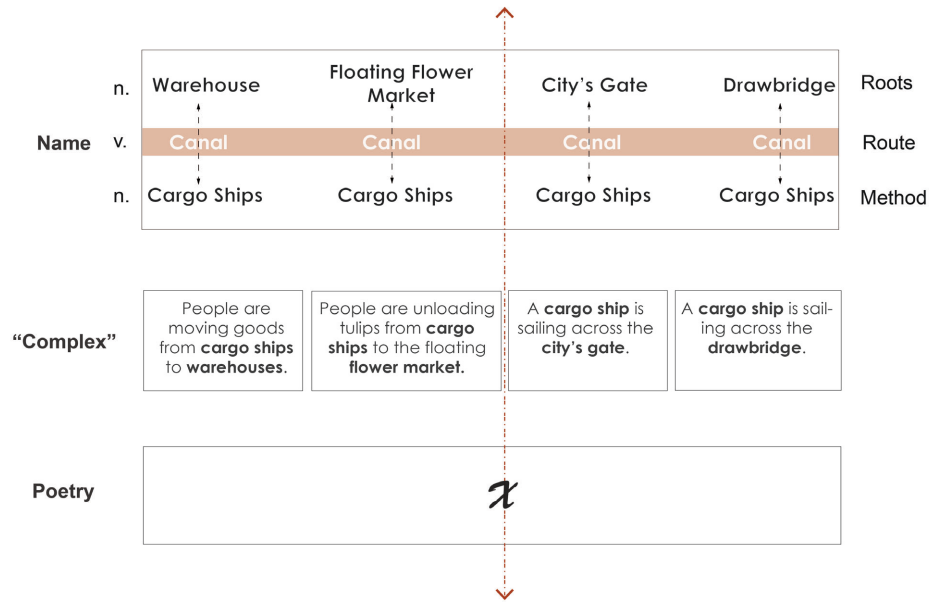
The sentence structure of canals

### ***The Fact Structure of the Canal***

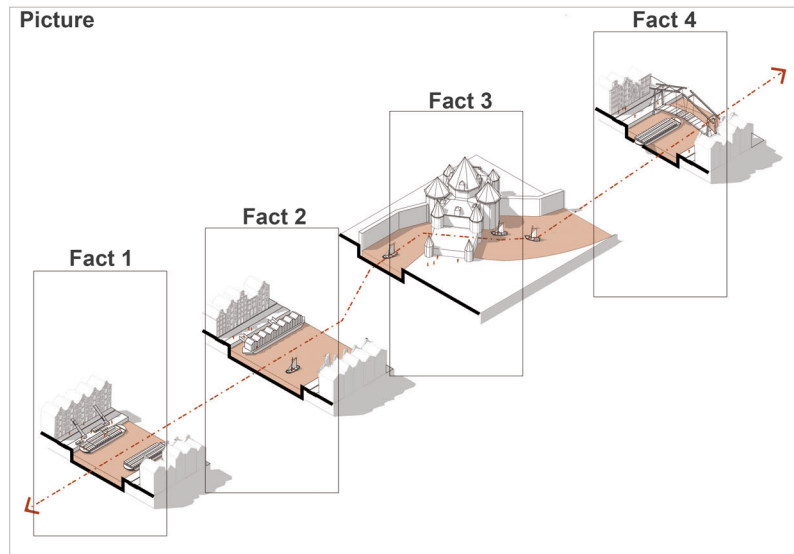
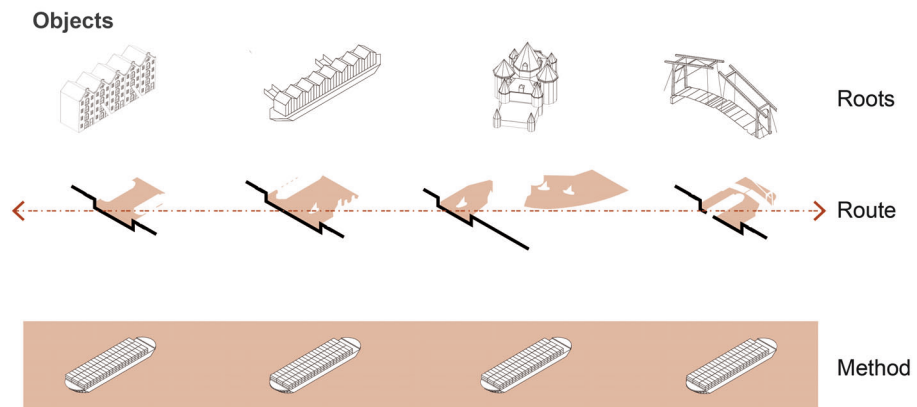
“We make to ourselves pictures of facts.” Wittgenstein explained “The picture consists of the fact that its elements are combined with one another in a definite way. The elements of the picture stand, in the picture, for the objects” (Wittgenstein 1922, 28).

“What is complex in the world is a fact. Facts which are not compounded of other facts are what Mr. Wittgenstein calls Sachverhalte, whereas a fact which may consist of two or more facts is called a Tatsache” (Wittgenstein 1922, 28). For example, the “The water is clear, and a boat is sailing on it” is a Tatsache, but “The water is clear” is a Sachverhalte, which is called an atomic fact. If we think that “the canal is clear” is an atomic fact, we could see it still contains two parts, “The canal” and “clear”. “If an atomic fact is analyzed as fully as possible, the constitutes finally reached may be called “simples” or “objects” (Wittgenstein 1922, 28).

In the past, canals were trading routes, and their transportation function was the basis of their fluidity. People built warehouses and shops on both sides of the canal to facilitate loading or unloading goods. People also expanded their commercial space to canals and built a floating flower market. Trading activities activated canals’ fluidity, which has become a source of people’s memory of the canals.



The sentence structure of canals



The fact structure canals

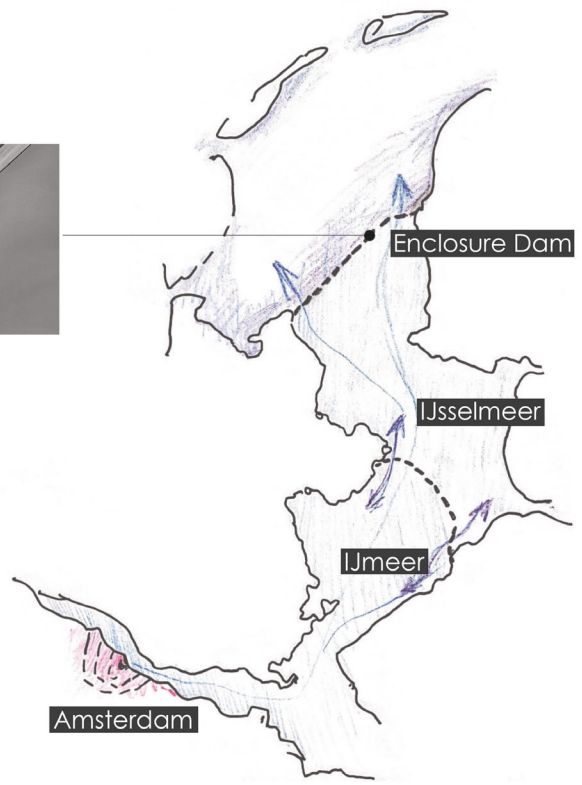
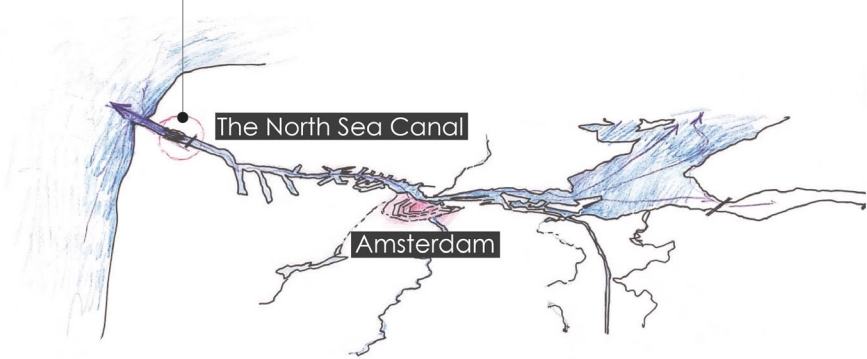
## **Chapter 4: The Disconnection of People's Canal Memory**

In the nineteenth century, the construction of the new water conservancy projects replaced the canals' function of controlling the water level. In twentieth century, trains and cars gradually replaced canals' transportation function. At the same time, with the expansion of the city and the growth of population, people need more public space. Therefore, they filled the canals, turning them into streets or squares; so, the canals had lost their fluidity and lost the connection with other elements in the city. People also lost their memories of the canal, and the canal has become a monument in the city.

### **Island City**

During the eighteenth century, while Amsterdam was at war, the urban development was stagnated. After the golden age, the canal was no longer expanded, and the city was developing outside of the canal rings. The North Sea Canal was built in 1876 to enhance the connection between Amsterdam and the North Sea. In 1932, people dam off the Zuiderzee and transformed it into a freshwater lake, the IJsselmeer. These two large- scale water conservancy projects replaced the canals' function of controlling the water level, and flood prevention.

In the nineteenth century, "Amsterdam was transformed from a city of water into a landlocked city" (Mak 1999, 206). The transportation on land gradually replaced transportation on water. In 1889, people constructed the central station in front of the open port, which cut off the city from the IJ in one fell swoop. Since then Amsterdam became an "island city".

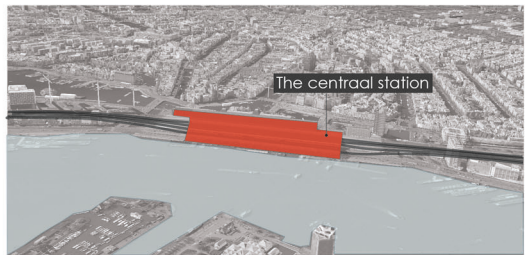


The North Sea Canal and the enclosure dam

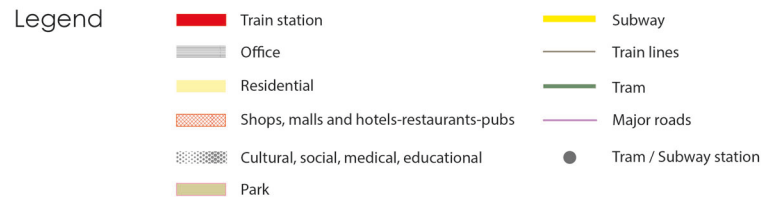
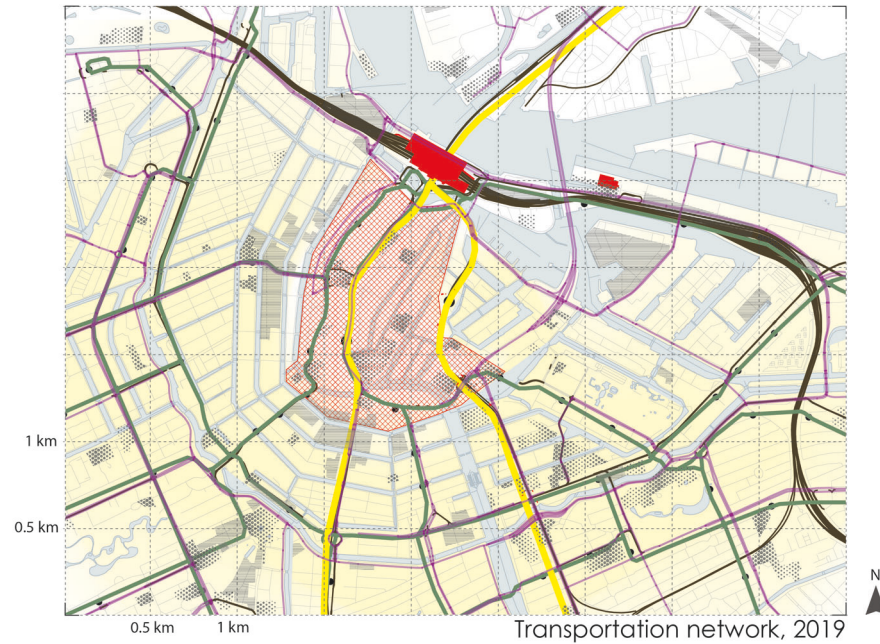
Left: Baart Theo, Points of contact along the IJ, the IJmeer and the Randmeren, (Palmboom 2018, 162-163)  
 Right: Baart Theo, Infinity in the longitudinal axes, (Palmboom 2018, 103)  
 Sluizen IJmuiden (Google Earth, 2020b) & Afsluitdijk (Google Earth, 2020a)



Transportation on water , 1625



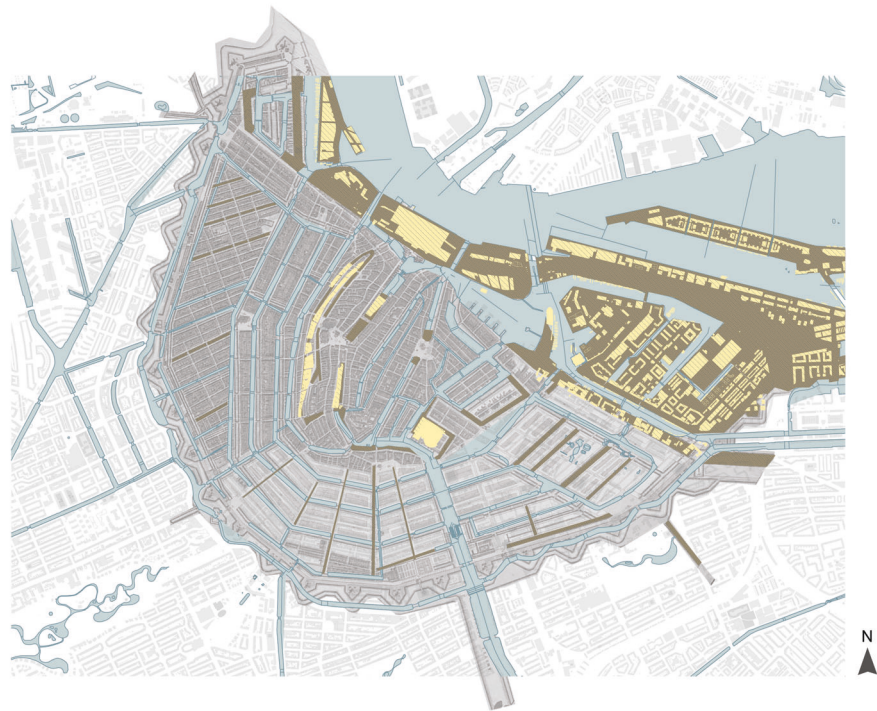
Amsterdam central station, 1889



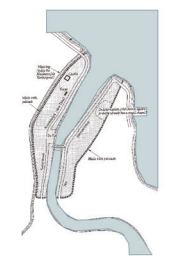
Transportation changes from a “floating city” to an “island city”

Left top: Florisz van Berckenrode, City centre in 1625, (Bureau Monumenten & Archeologie, 2009)

Left bottom: Aerial photo of the Amsterdam central station (Google Earth, 2020c)



- Landfill since 1662
- Constructions on landfill area



Amsterdam 1300



Amsterdam 1575

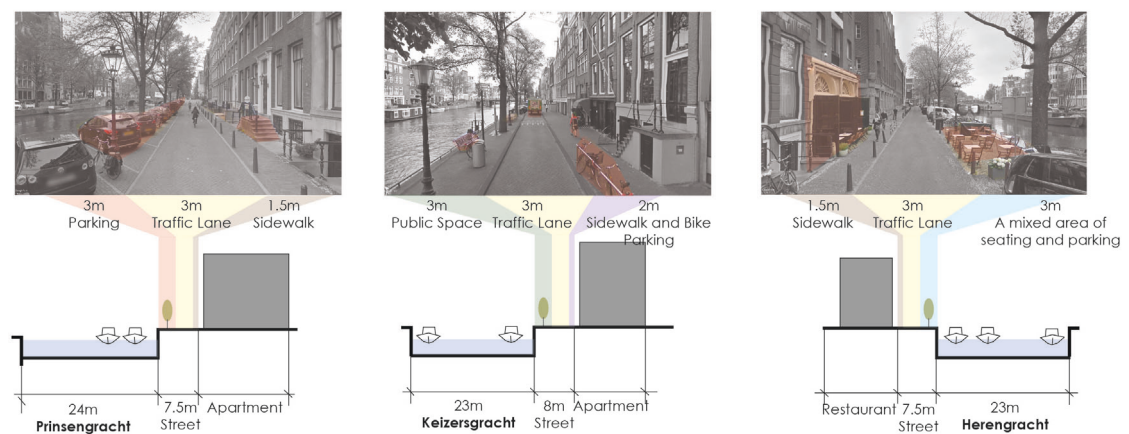
Over thirty percent of canals were filled since 1662.



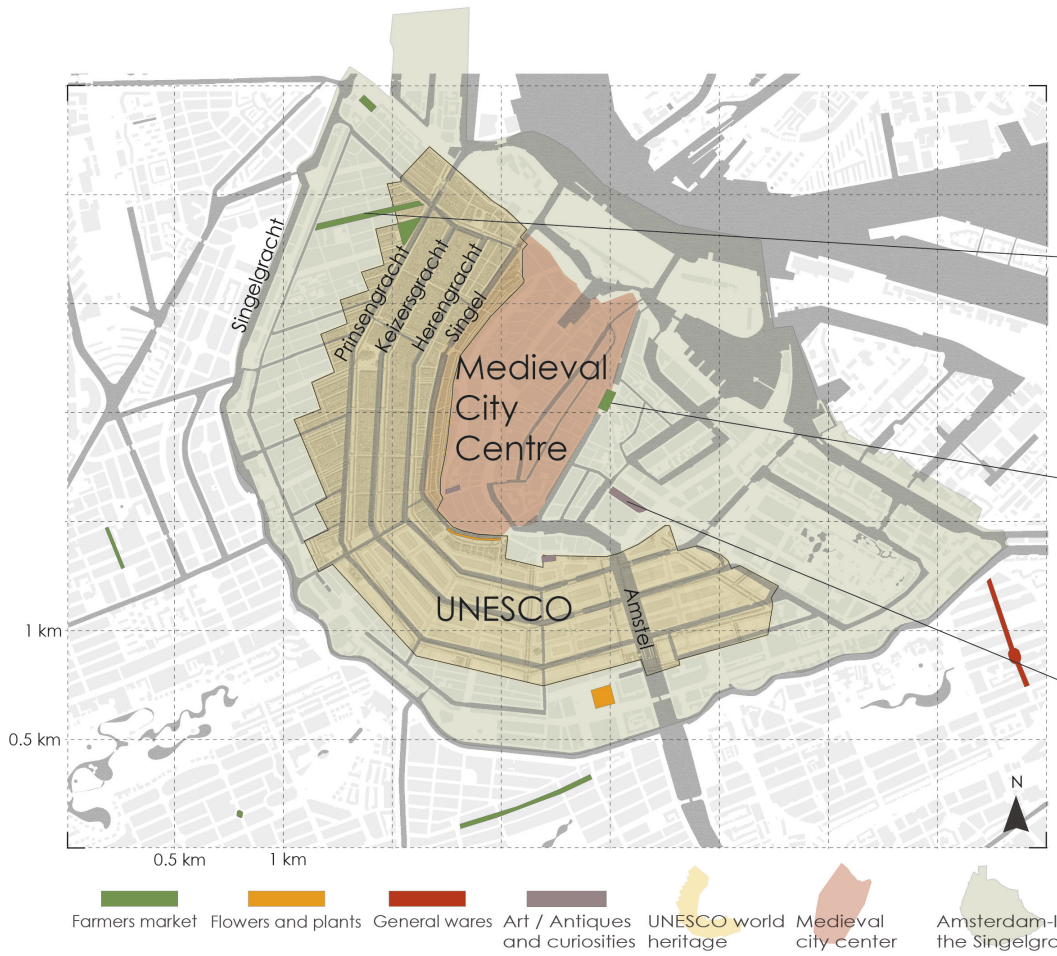
## Public Space

Canals lost their function, but the city is still growing. With the expansion of the city and the growth of the population, people need more public space. So, they filled the canals, turning them into streets or squares, and then occupied by markets. Today, the names of many streets or squares still imply their history. For example, the street, the Lindengracht, is called the lime tree canal in English, which has been filled up in the nineteenth century and turned into a wide street where the market stalls are built along with it.

The diagram in below is a study of the spatial relationship between streets and canals. The parking lots for cars or bikes occupy almost half of the street space and cut off the interactions between people and canals. In addition, in most cases, people would rather put tables and chairs on narrow streets as the public spaces, but not using canals as an extension of the public spaces. There is a lack of spatial connection between canals and streets.



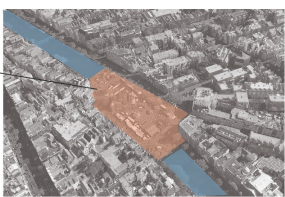
Section illustrations for canals in Amsterdam



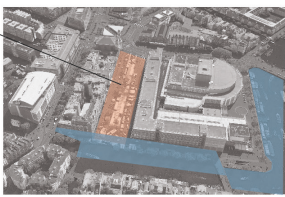
Canal infill for public space



**Lindengracht**  
 "Lindengracht" is called the lime tree canal in English. It was filled up in the nineteenth century and turned into a street where the market stalls are along with it.



**Nieuwmarkt**  
 The gate building transferred to a weighing house in 1617. The square in its front expanded over time, now there is a market on it.

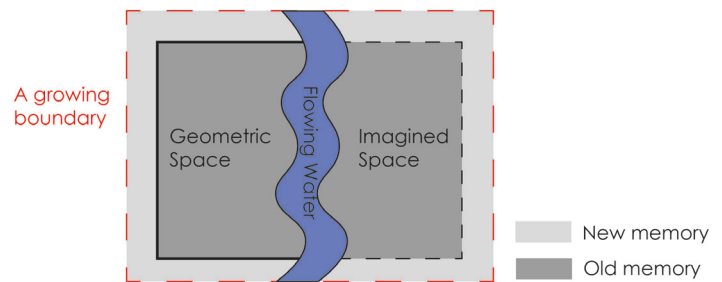


**Waterlooplein Market**  
 The square was built in 1880 from canal infills, the two canals, Leprozengracht and Houtgracht. Today it is a daily market with 300 stands.

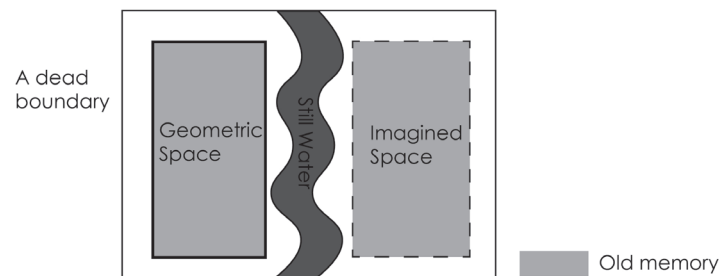
This diagram is a study of the evolution of the canals: canal - canal infill – square/street - market.

## Urban Monument

Canals lost the functions for transporting goods and water control. Today, they mainly serve for tourism. People designated a part of the canals and the surrounding areas as World Heritage sites. Canals became an artifact in a history museum. Water lost connections with urban elements and people's memory. Flowing water became still water, and it can not bring more language to the poem. The poetic space was divided into short sentences.



The poetic structure of canals



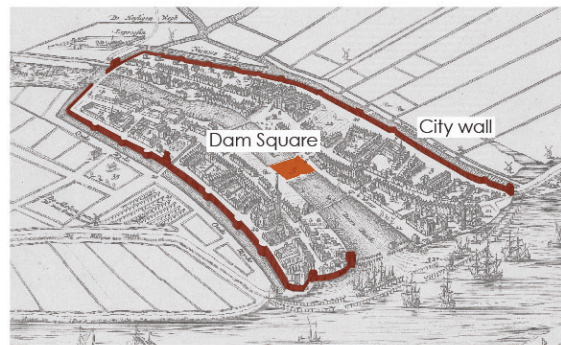
Urban monument

## Chapter 5: Site

### The Centre of Amsterdam

In the twelfth century, Amsterdam was a small village centred on the dam square. The dam square gradually became a trading centre. People built a weighting building on it, the square also transferred to a fish market.

Before the sixteenth century, the whole city took the Singel canal as the boundary. People built four gates along the city wall; Saint Anthony's gate is one of them.



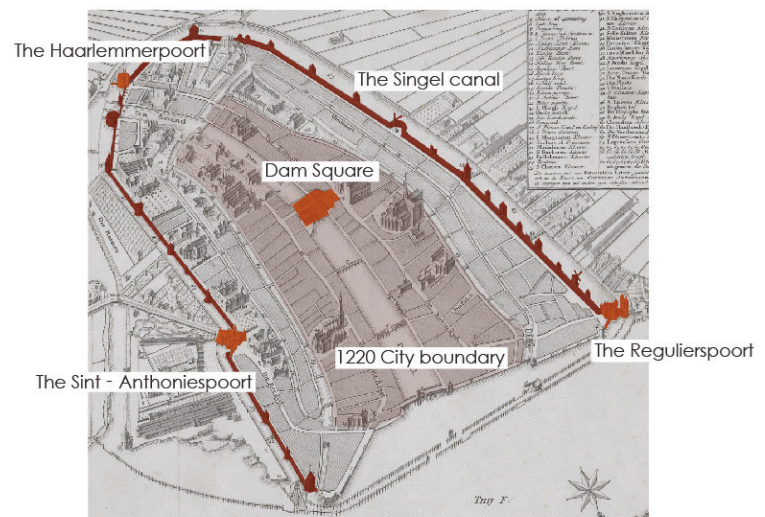
1300, Amsterdam



The **fish market** on Dam Square



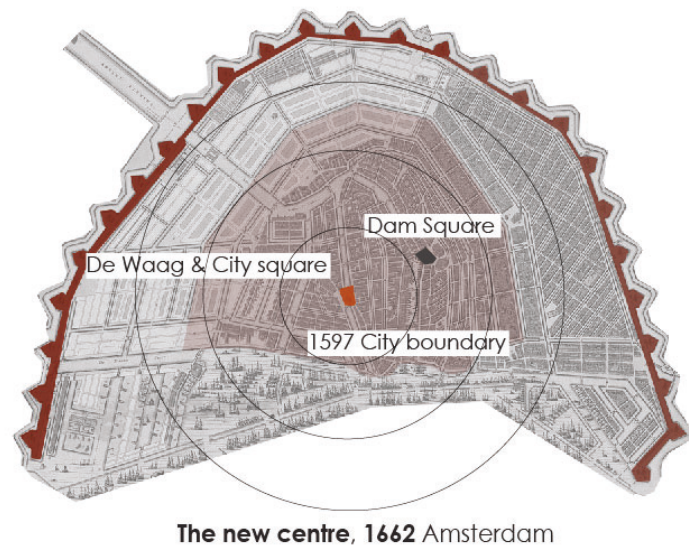
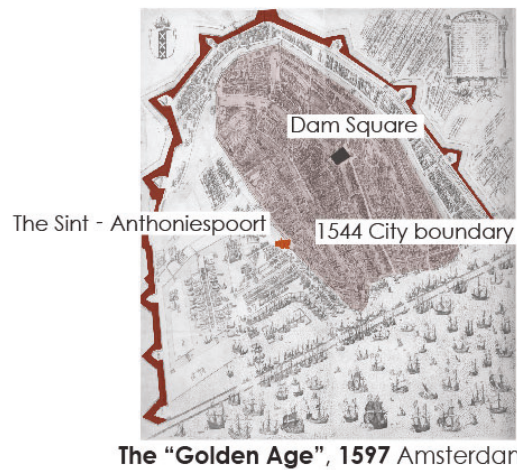
The **weighting building** on Dam Square



1544, Amsterdam

Urban development from 1300 (Commelin 1726) to 1544 (Wagenaar 1760)

With the expansion of Amsterdam during the “Golden age”, Saint Anthony’s gate became the new centre of the city. People filled the canal and built a town square, called Nieuwmarkt. Saint Anthony’s gate transferred to a weighting building to replace the weighting building on the dam square. The Fishmarket also moved to the Nieuwmarkt from the dam square. This town square became the new trading centre.

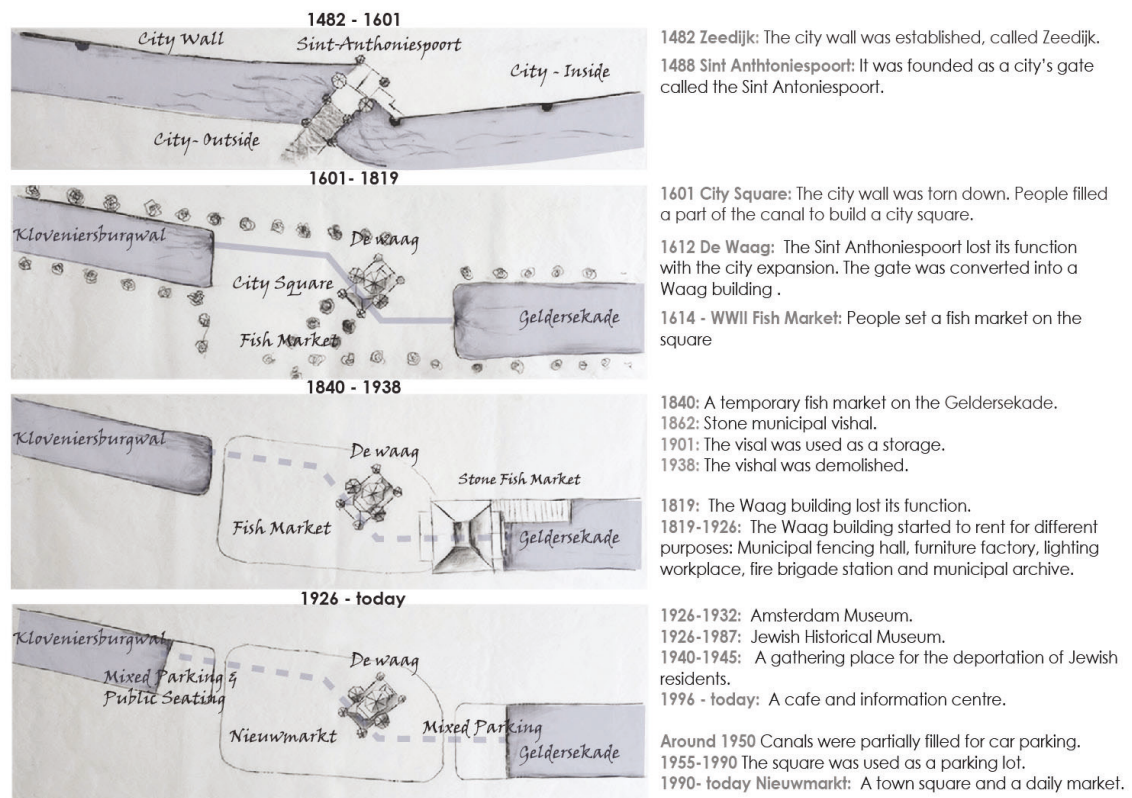


Urban expansion from 1597 (Bast 1597) to 1662 (Stalpaert 1662).

## Site History

The diagram below is an illustration of the history of Saint Anthony's gate. Water gradually lost its fluidity and space. People filled the canal and transferred it to a square and parking lots. The site was divided into three different parts.

The function changes of the square and the weighing building are closely related to the changes of canals. The existence of the weighing building and the markets promoted trading, thereby accumulating capital to build more canals. Canals also provide a waterway to connect the city square with the outside world. People also live along with canals; canals became the resource of memory.



The transformation progress of the canals, the square and the weighing building

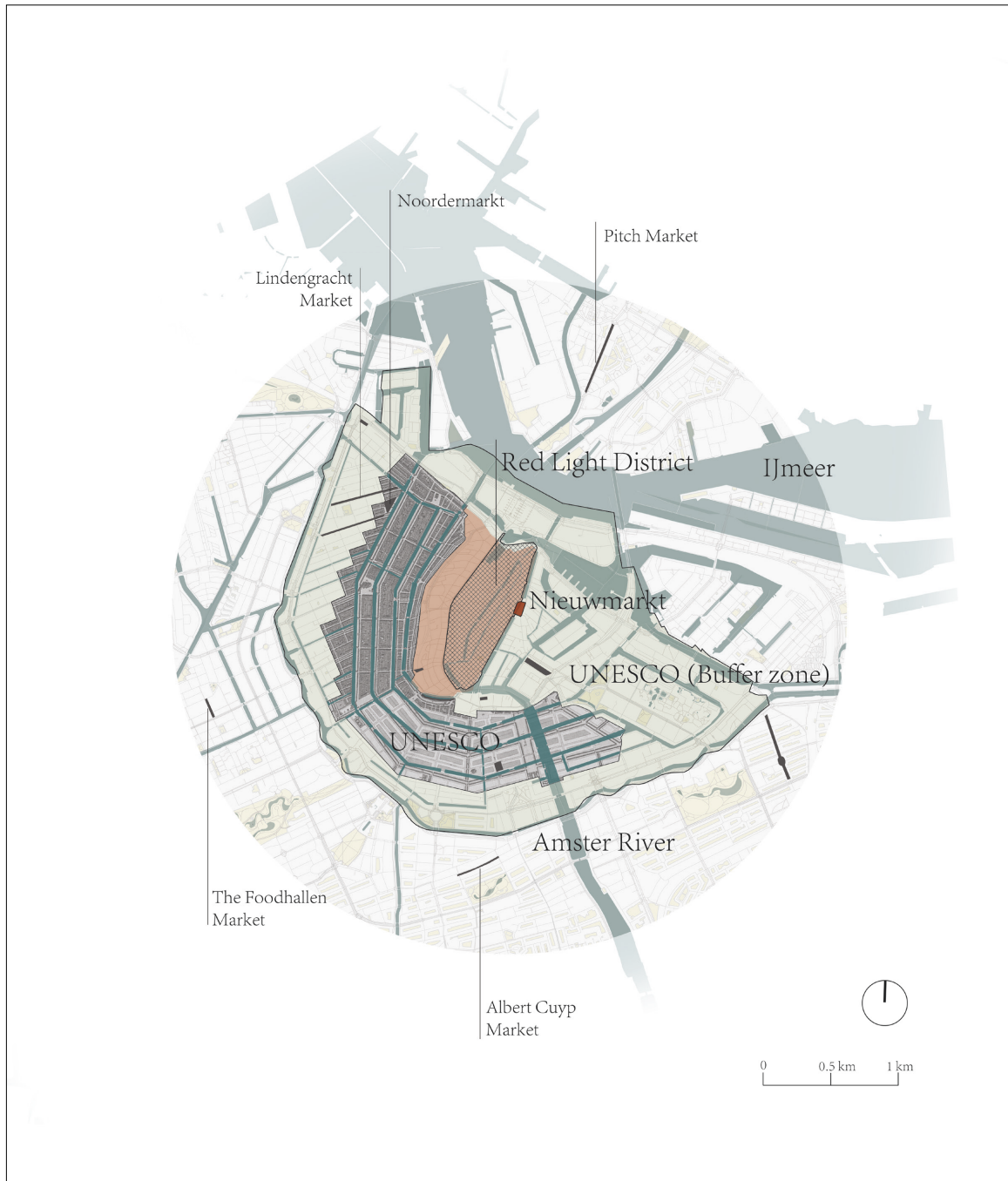
## Site Study

Today, the Nieuwmarkt is a part of China town and on the edge of the Red Light district. In the past, the square was a node for both transportations on land and transportation on water. Today, it is still a market square but is only supported by vehicles. It is the last “floating island” in Amsterdam, and is waiting for water to activate it again.

Additionally, it is a market square with over 20 restaurants facing to it. There is a daily market on the square, it also serves as an organic food market during weekends. For the weighting building, a restaurant is occupies on the ground floor and an information centre on the upper floors.

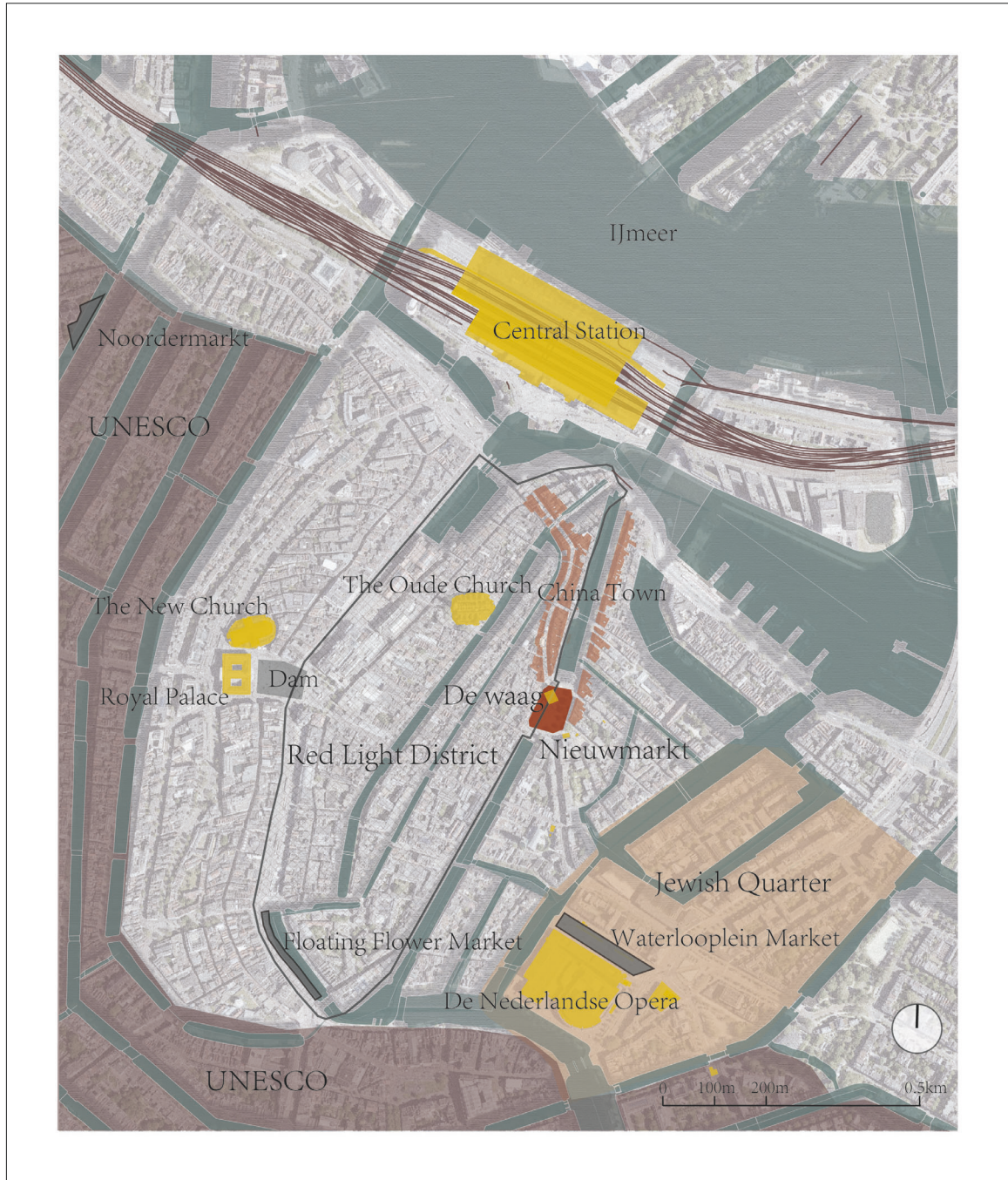


Site plan (Google Earth 2020d) and site photos (Wong 2020)



The map of Amsterdam, showing the geometric relationship between the Nieuwmarkt, the Red Light District and canals





The district map shows the Nieuwmarkt is in the centre of the medieval heritage district, next to the Jewish Quarter and a part of the China town. The Geldersekaade canal links the square with the IJmeer lake.

## Chapter 6: Design Method

### Reshaping the Poetic Space of Canals

The connection between people's memory and canals is a poetic connection. Poetry can interweave reality and unreality through imagination. I hope to build a connection with past memories and emotions through a poem and read the body of the poem in reality.

When people hear the sound of water, they will think of its image; when people see the image of water, they will think of canals; when they think of the cargo ships on canals, it will make them think of Amsterdam. Amsterdam is a city built by people's imagination. People have their own Amsterdam in their minds. Finally, all the images will dissolve in the water and flow in canals.

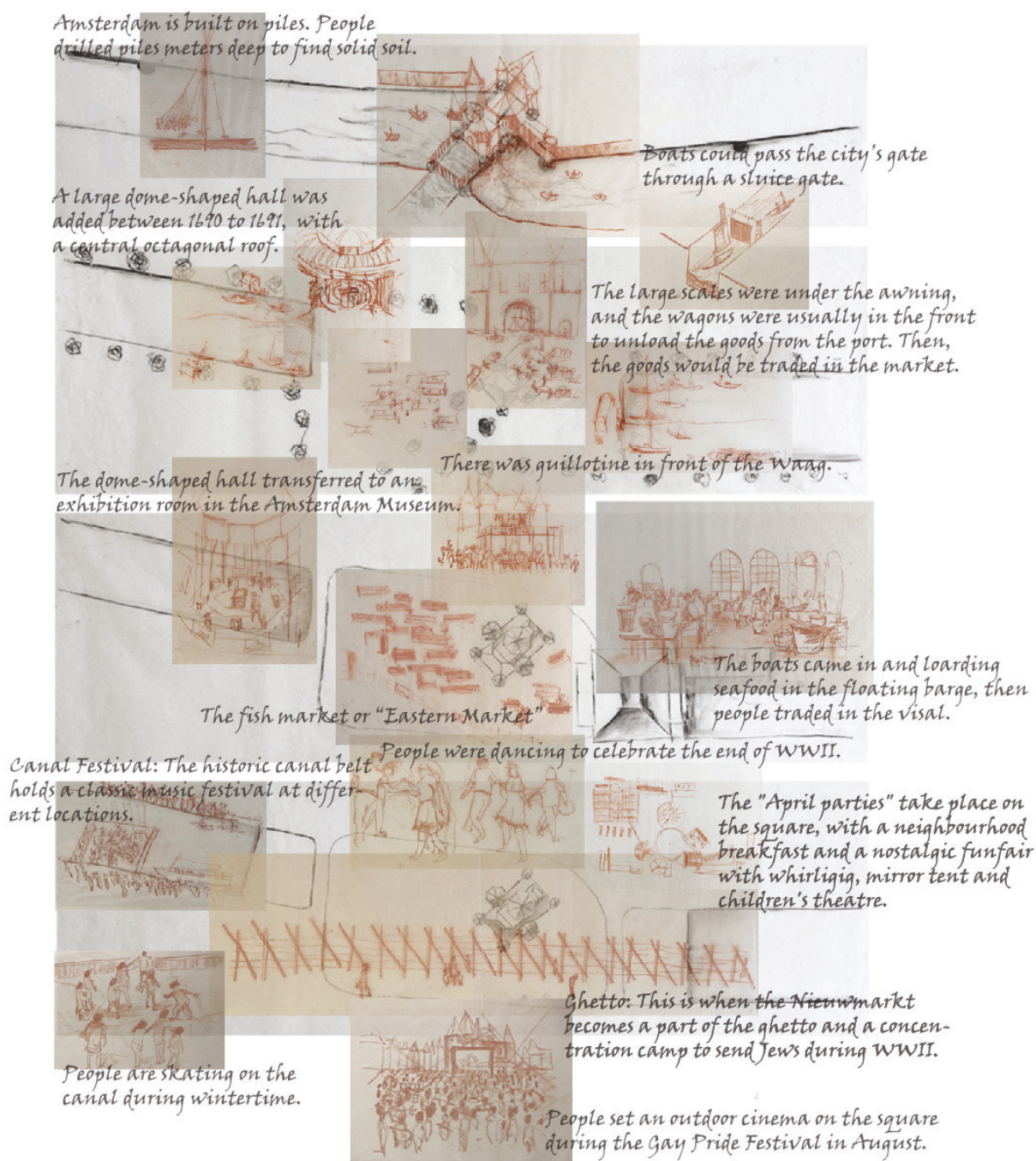
Poetry is a reorganization and rebellion of the physical world. The materials for poetry come from reality, but poets are good at picking materials and composing them into new pictures. Although poetry is beyond reality, people still feel familiar with the artistic conception of poetry, as if it came from a real experience. There is a classic short poem called "Haiku" in Japan. The most famous one is Basho's "old pond":

old pond  
frog leaps in  
water's sound

These three unrelated sentences were combined to form a picture of a frog jumping into an old pond. Poetry is always between reality and unreality, and it is a beacon for people to build the real world.

The drawing below shows the overlaps of historical space and imaginary space, forming a four-dimensional poem.

When the water sounds, people's memory also emerge. We build our own utopia in minds, then we can read out the poem. It is called "The Water of Amsterdam."



The poetic space

## “The Water of Amsterdam”

### Act 1: Floating Barrel

“Puton, Puton,” the lullaby of water. Morning dew condenses in the corner of fishermen’s eyes. There is a sea hidden in it.

### Act 2: Cave

“Daci, Daci,” the dance steps of treading water. Water splashed. Scared away the ghosts.

### Act3: Double Mirror

“Cila, Cila,” Spark is growing on the ice surface. The left hands hold the right hands. Just like the right hands hold the left hands.

The three acts have the same topic, and they are connected through canals to rejoin the divided site to a complete poem.



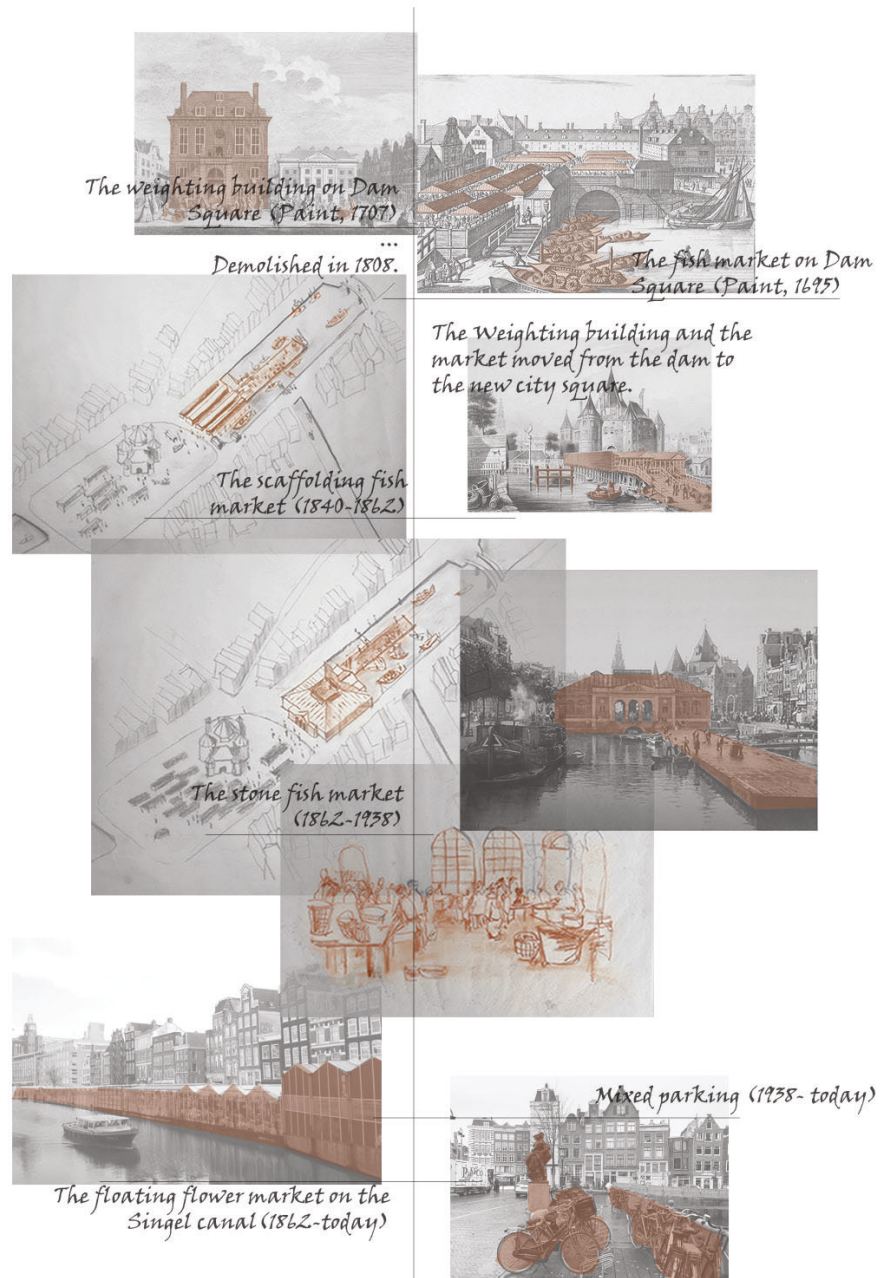
A poem about water

## Chapter 7: Design

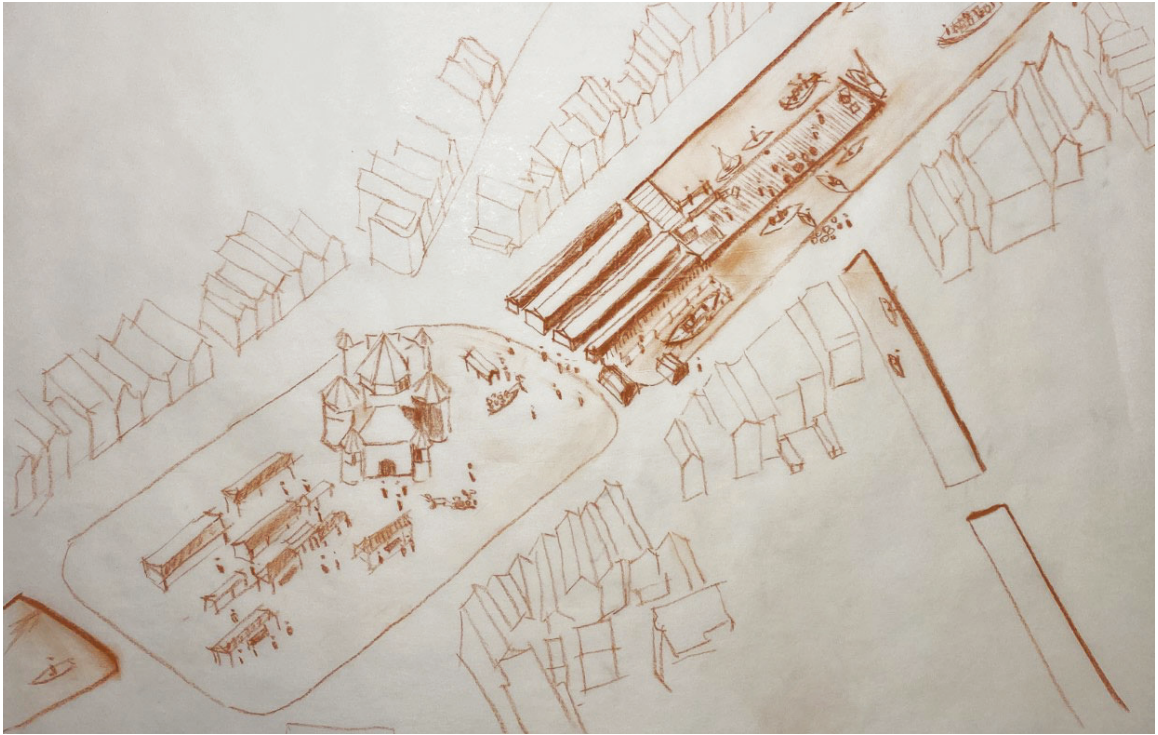
### Act 1 Floating Barrel

“Puton, Puton,”

the lullaby of water. Morning dew condenses in the corner of fishermen’s eyes. There is a sea hidden in it.



The history layers connected with the Gelderse Kade canal



Aerial drawing of the scaffolding fish market (1840 - 1862)



Aerial drawing of the stone fish market (1862 - 1938)

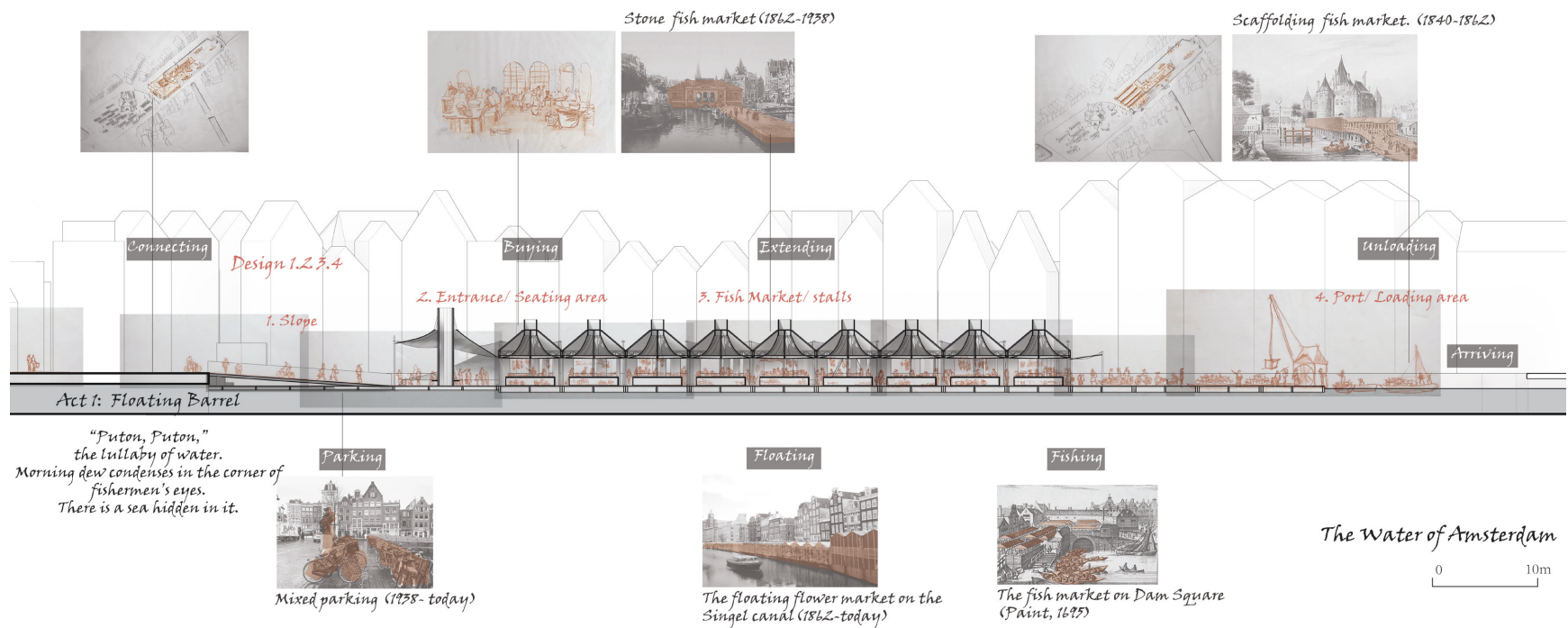
The first part of the poem happened on the Geldersekaade canal, a gathering space for trading. There was a scaffolding fish market in 1840, which then was transferred to a stone fish market in 1862, and was finally demolished in 1938. In the past, people transported goods here and then moved to the Nieuwmarkt to weigh the taxes. Today, in the same place as the fish market, people build a parking lot, which cuts off the connection between the canal and the square. I hope to restore the market culture, and a floating fish market can be established here. The floating market will also become an expansion of the Nieuwmarkt, a new interface to link the canal and the square.

It's a temporary building made up of many modular parts to echo the flexibility of a market. It has a sloped entrance to connect the square and an extended platform on the other end to load and unload goods. The floating idea comes from the floating barges of the old fish markets and the floating flower market on the Singel canal.

The shape of the roof echoes the roof of the old stone fish market. It uses canvas for sun shading around the building, which implies a connection with the sailing boats.

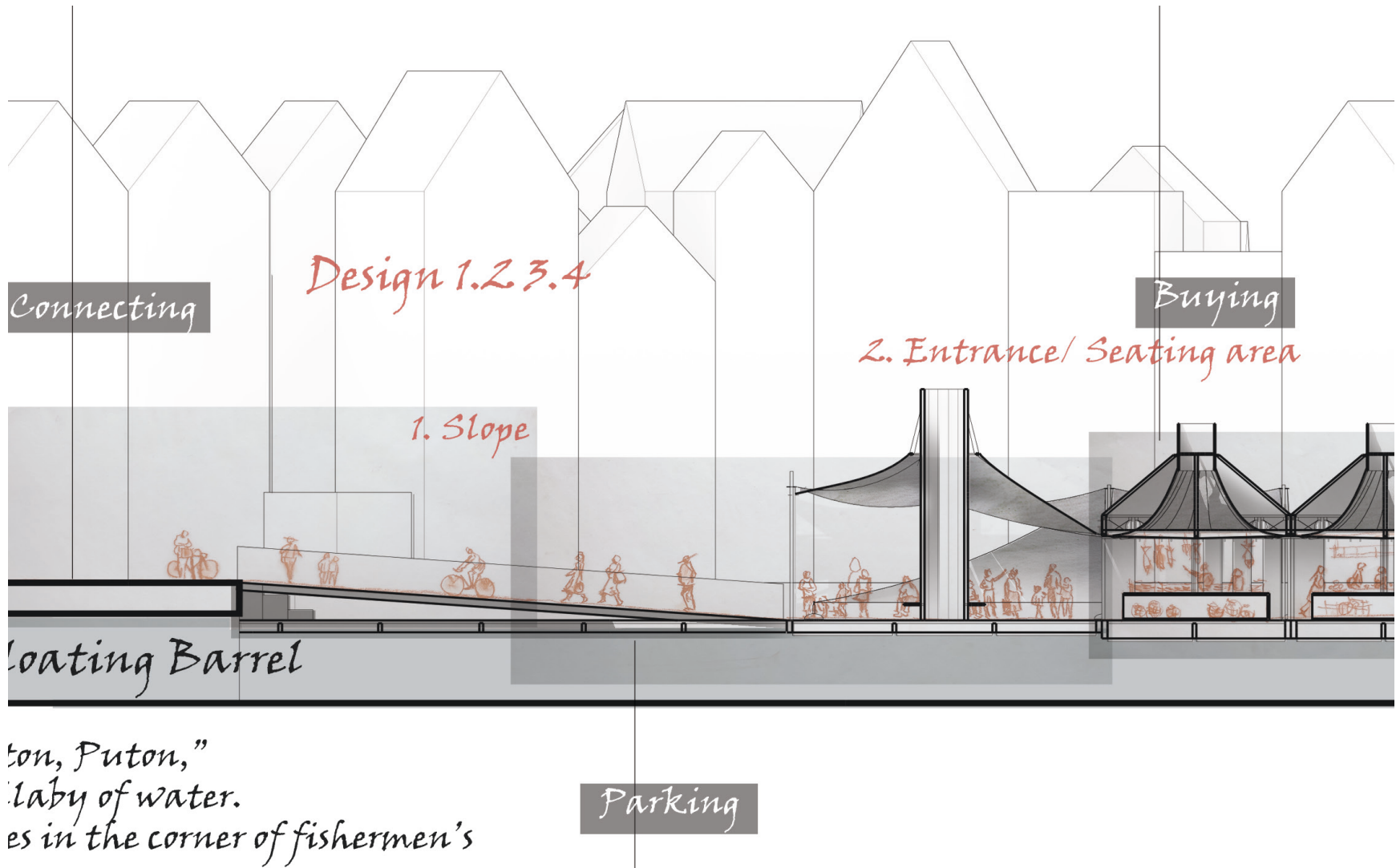


Aerial view looking from the De Waag to the Geldersekaade canal; photograph by Han van Gool (Gawronski et al. 2017, 27)

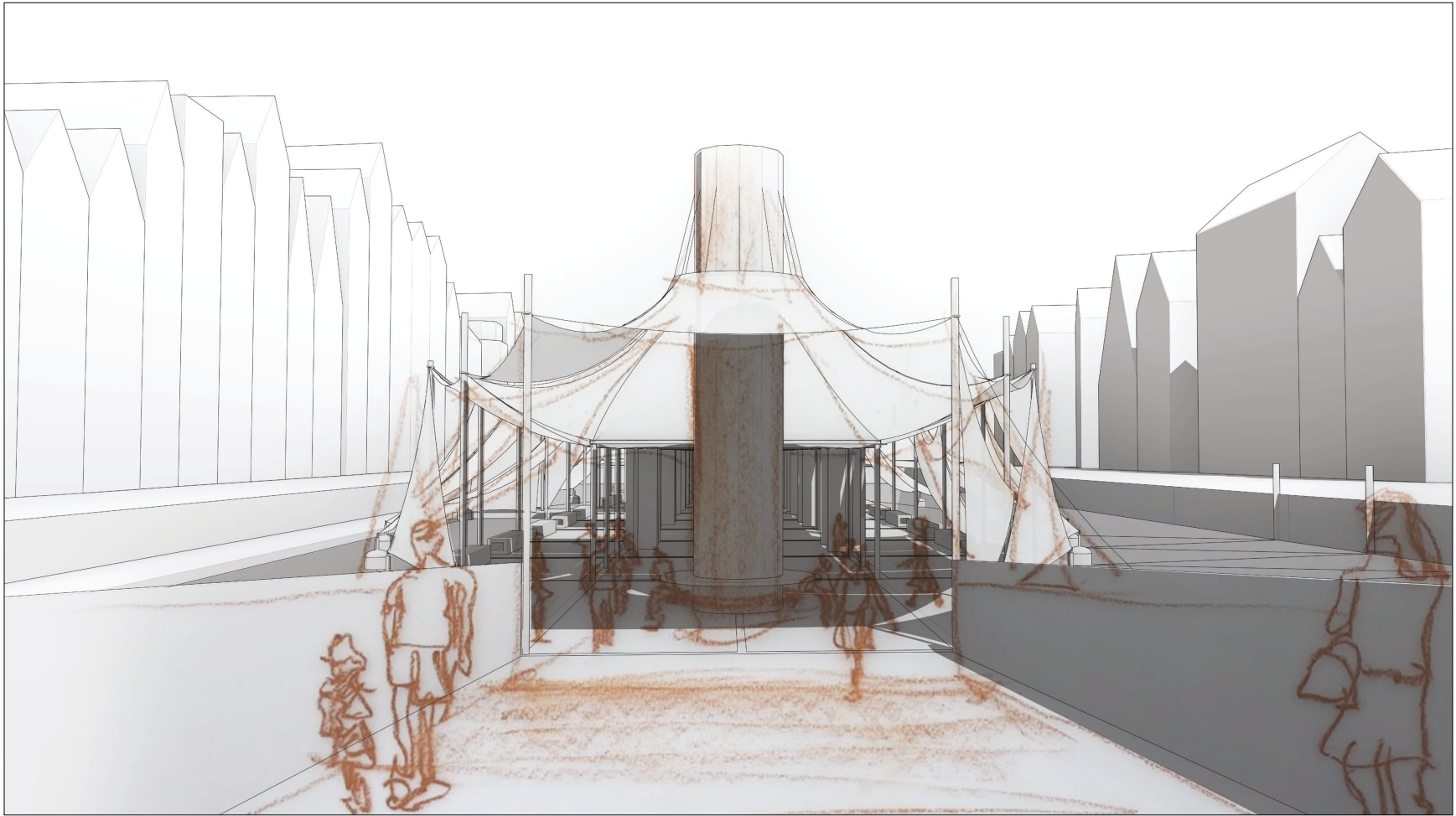


Section drawing of the floating fish market





Section drawing showing the entrance of the floating fish market



Rendering from the entrance, a seating and gathering space for people



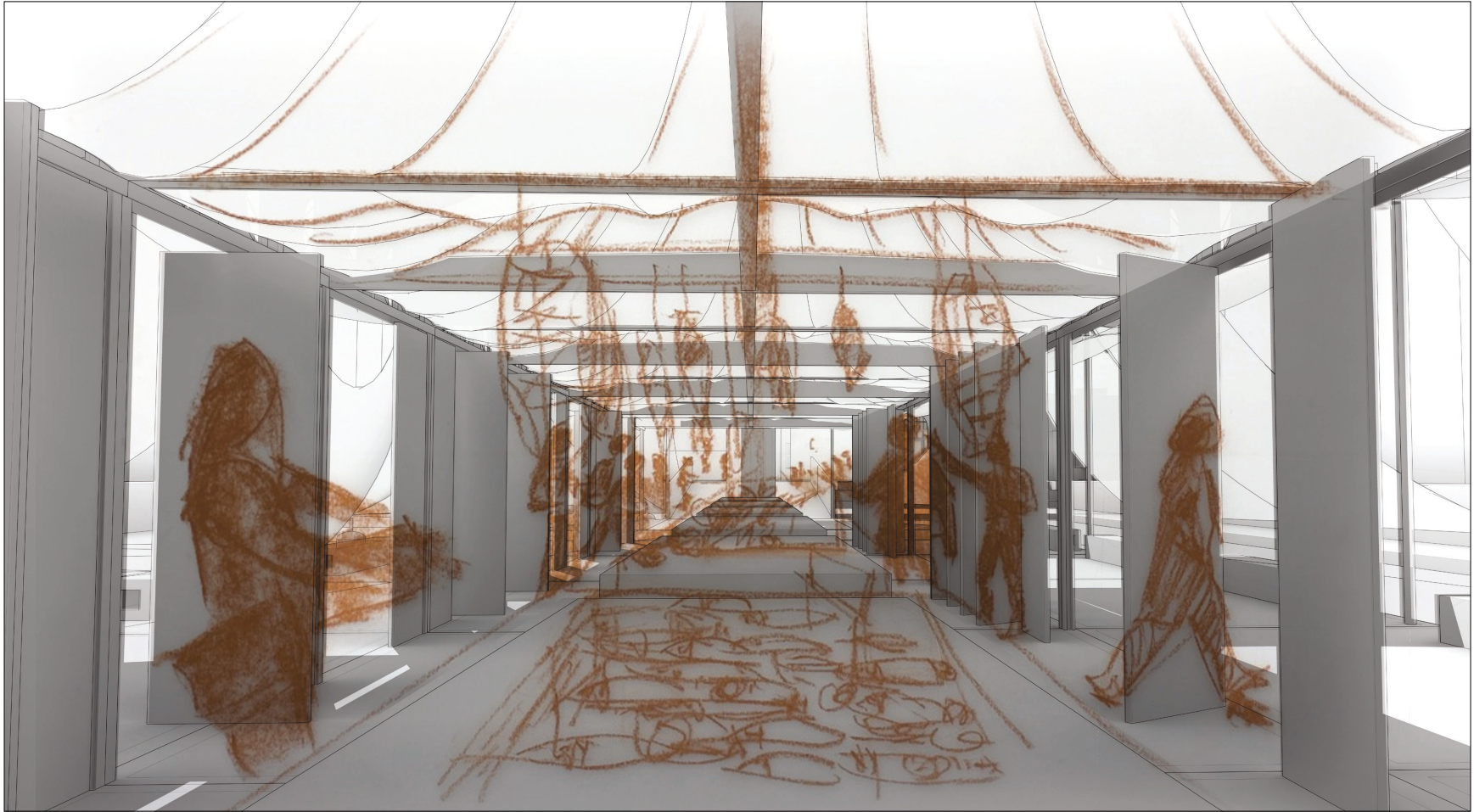
Extending

3. Fish Market/ stalls

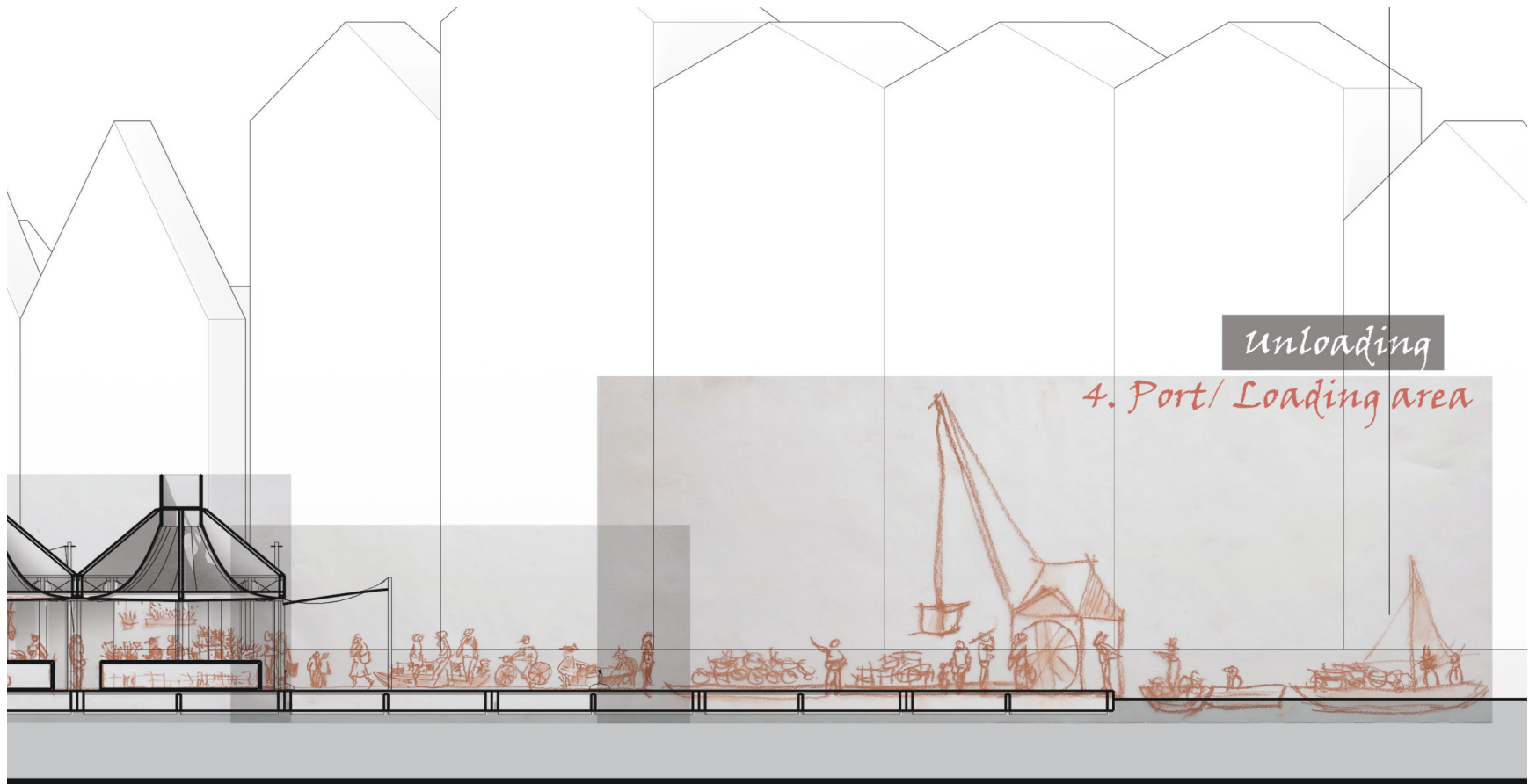
Floating

Fishing

Section drawing showing the interior of the floating fish market

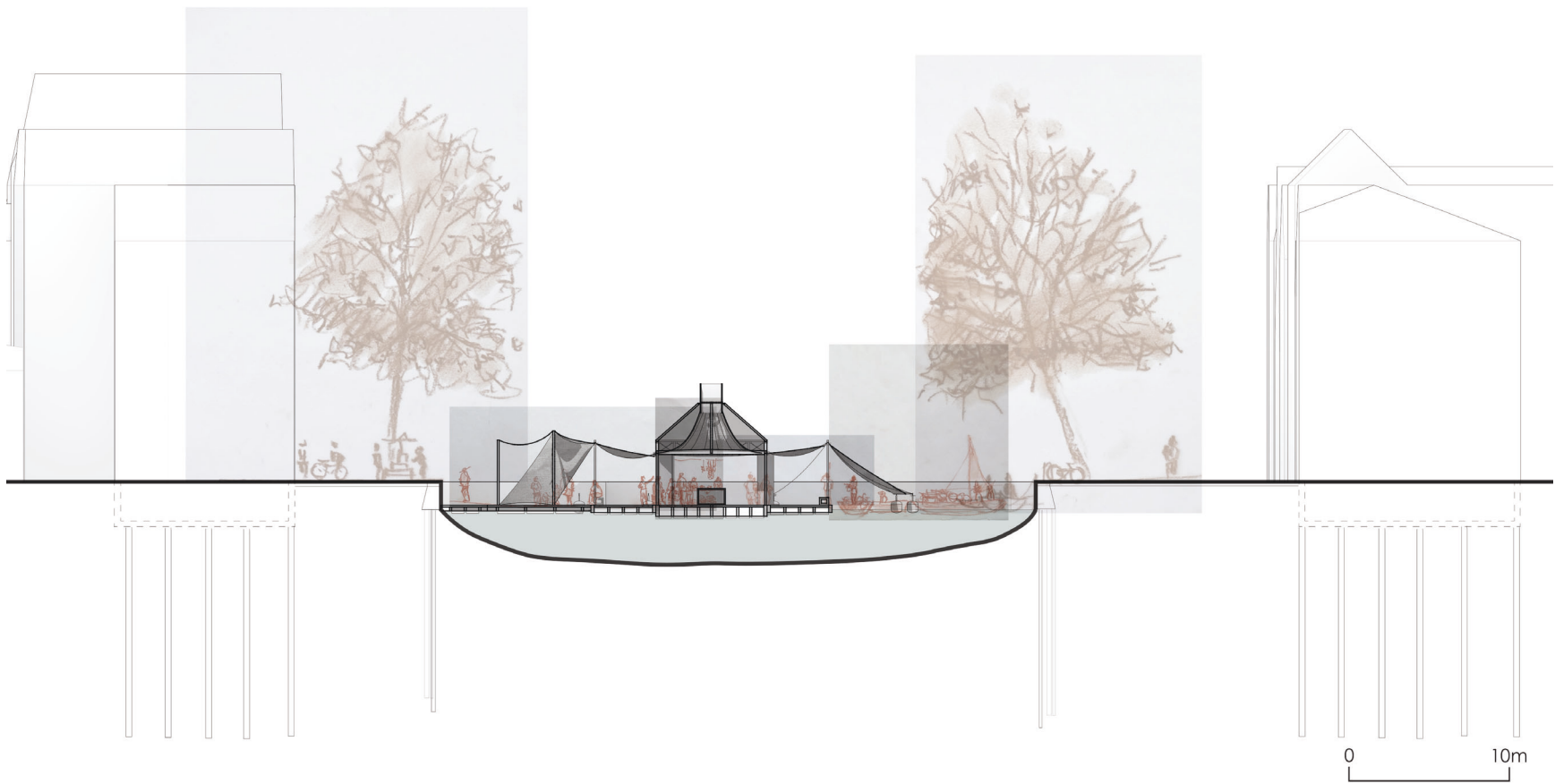


Rendering from the interior space, the round opening on top and the inverted funnelled canvas dome diffuse light for the stalls underneath.

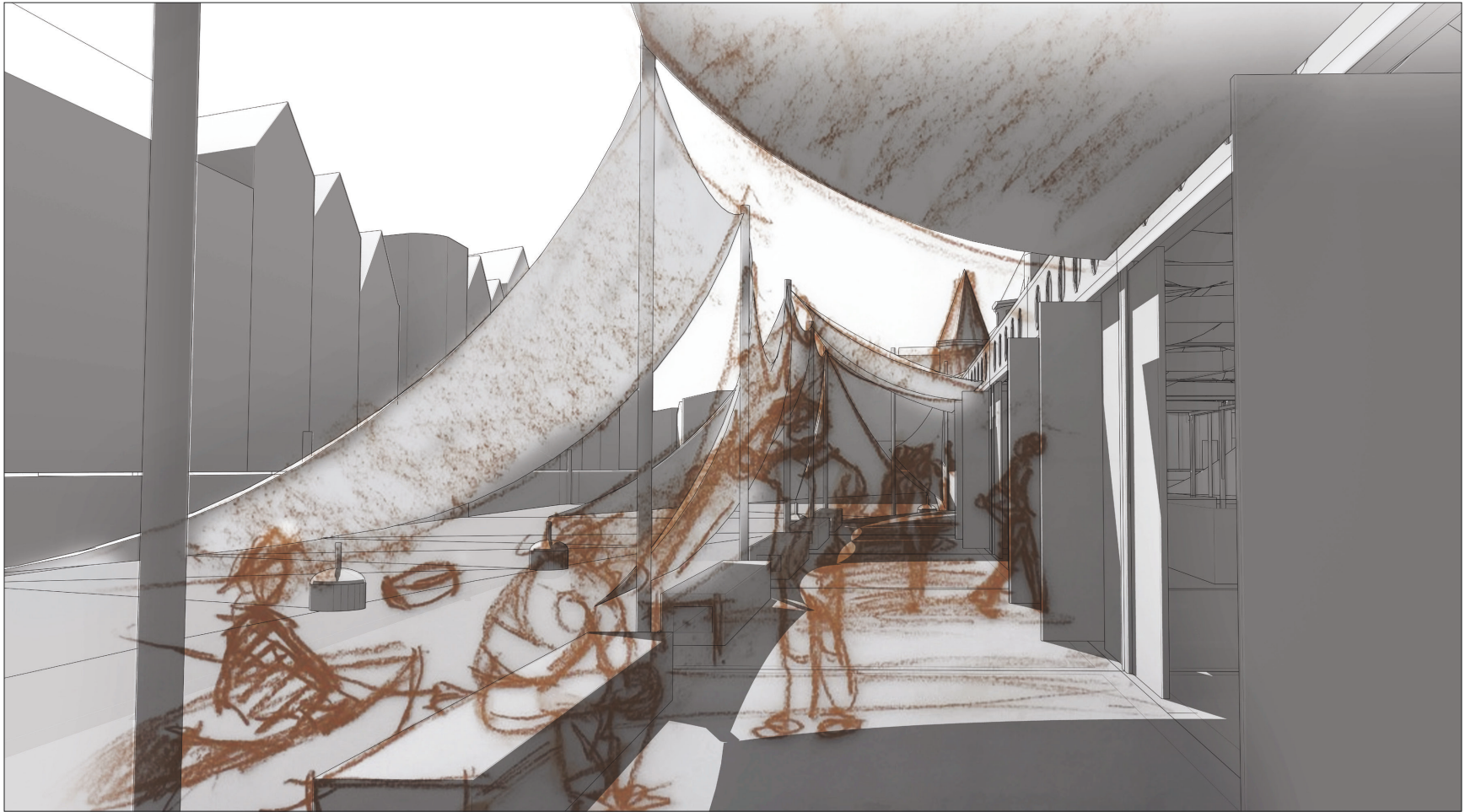


Fishing

Section drawing showing the loading area of the floating fish market



Section across the Geldersekkade canal, the canvas is continuous from inside to outside to echo the shape of waves.

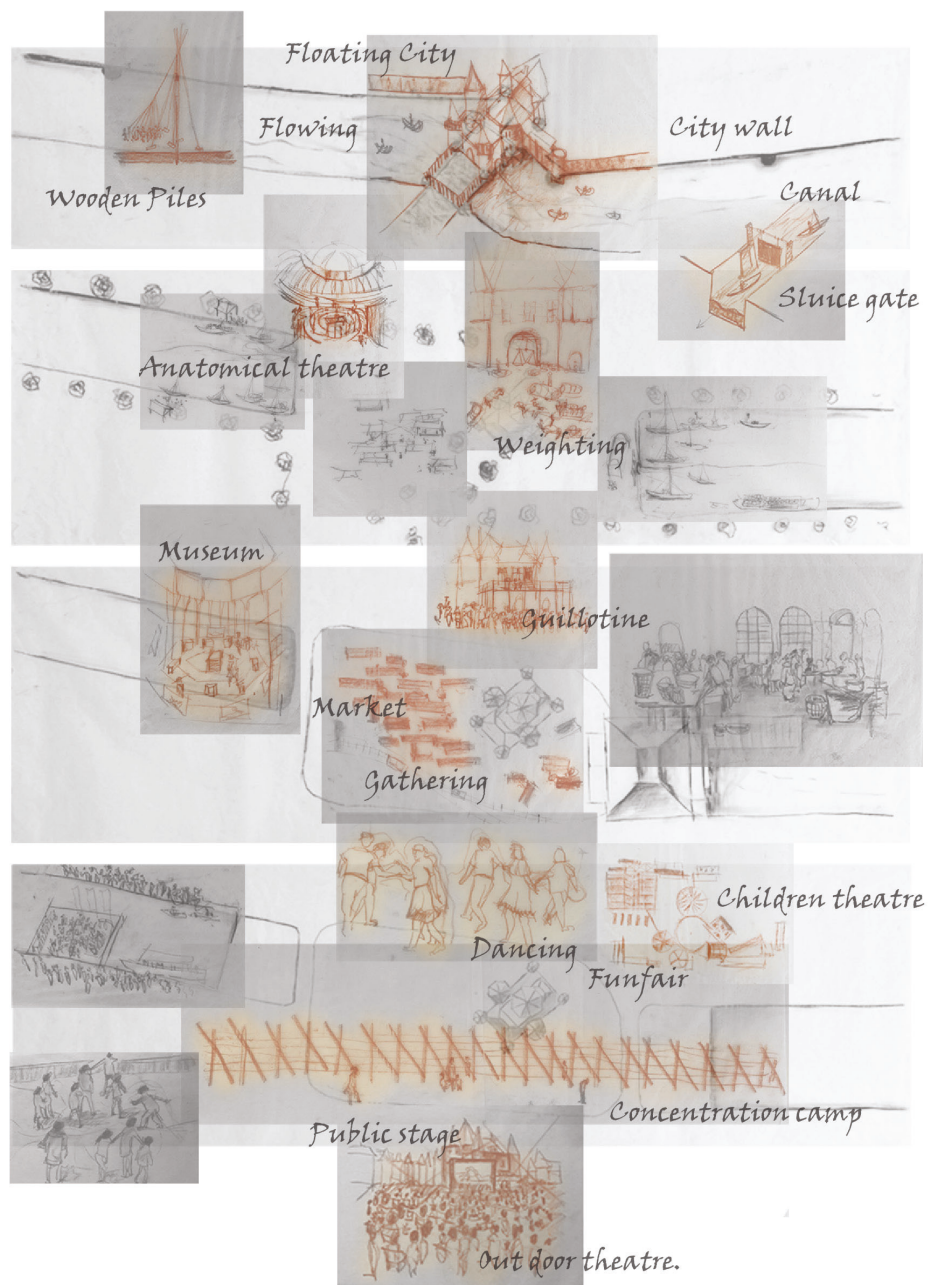


Rendering of the circulation area in the market, small boats could port aside and loading goods.

## Act 2 Cave

"Daci, Daci,"

the dance steps of treading water. Water splashed. Scared away the ghosts.



The history layers connected with the Waag and Nieuwmarkt





Liberation party in front of the Waag (Anefo 1945)

The second part of the poem was generated from the city square and the weighting building. The memory here is complicated, layered, and conflicted. People have both dark and light memories. Here used to be a guillotine, an anatomy institute. It was once used as a concentration camp during the second world war to hold and transport Jews.

People also have some happy memories, because here is the centre stage for Amsterdam. People would dance and celebrate on the square and canals during significant festivals.

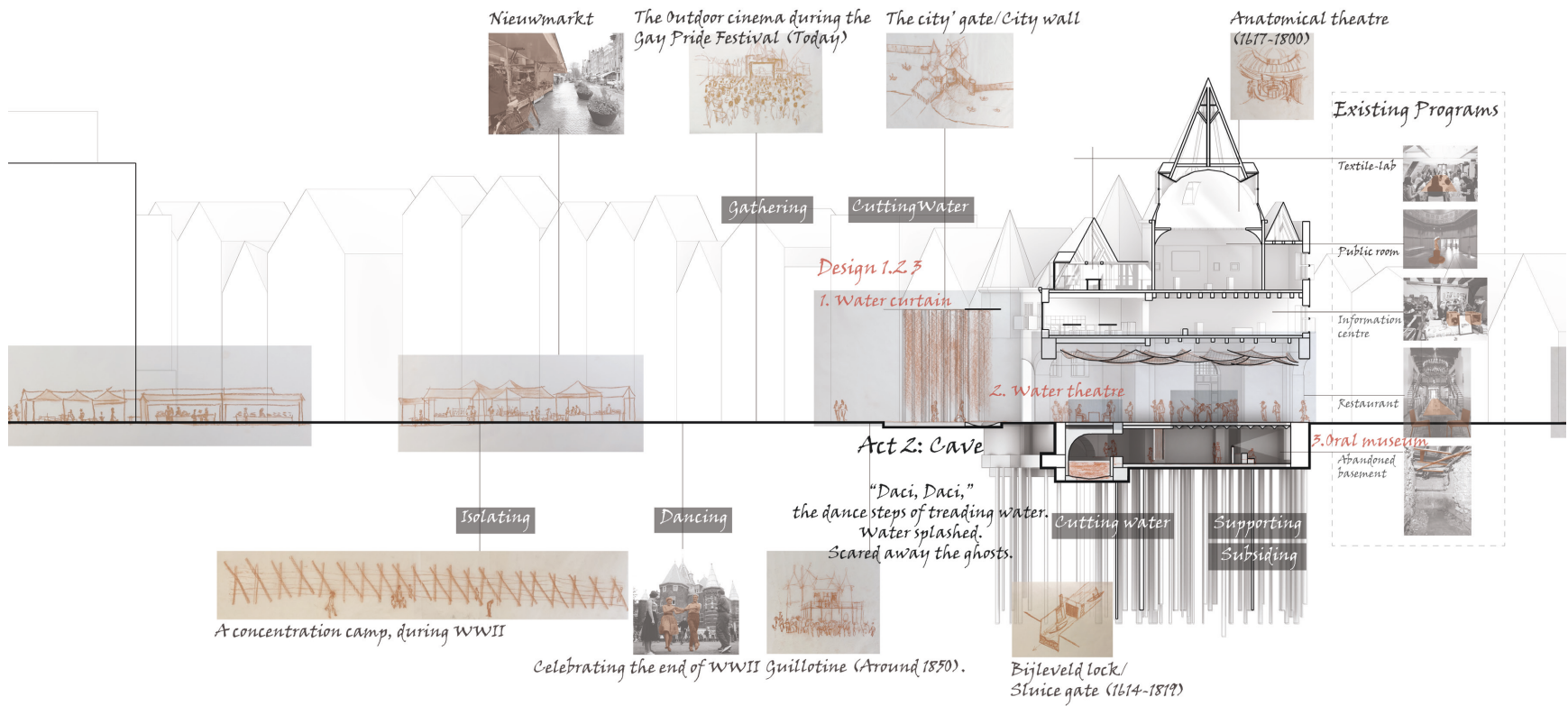
The memory here is also hidden and hard to recognize. Under the square, the canal is flowing silently. The remains of the broken city walls have been forgotten. This square is the centre of the city's history and a stage for people's daily life. The hawker's hawking and the dancing people seem to have met before. People are playing history here, and they are the actors in this drama.

The Waag building is a "water architecture"; it was enclosed by water when it was a city's gate. At the same time, it is also floating and supported by wooden poles, and eventually, it will subside and dissolve into water. Today, there is a restaurant on the ground floor and an information centre on the second floor, and the basement is abandoned. My design strategy is to transform the ground floor into a "water theatre." Surrounding the building is a "water wall," which is also the outer curtain of the theatre. The "water wall" also echos the old city wall. People's role in this theatre is not only the audience but also the actors of the historical drama. People perceive history and become a part of it.

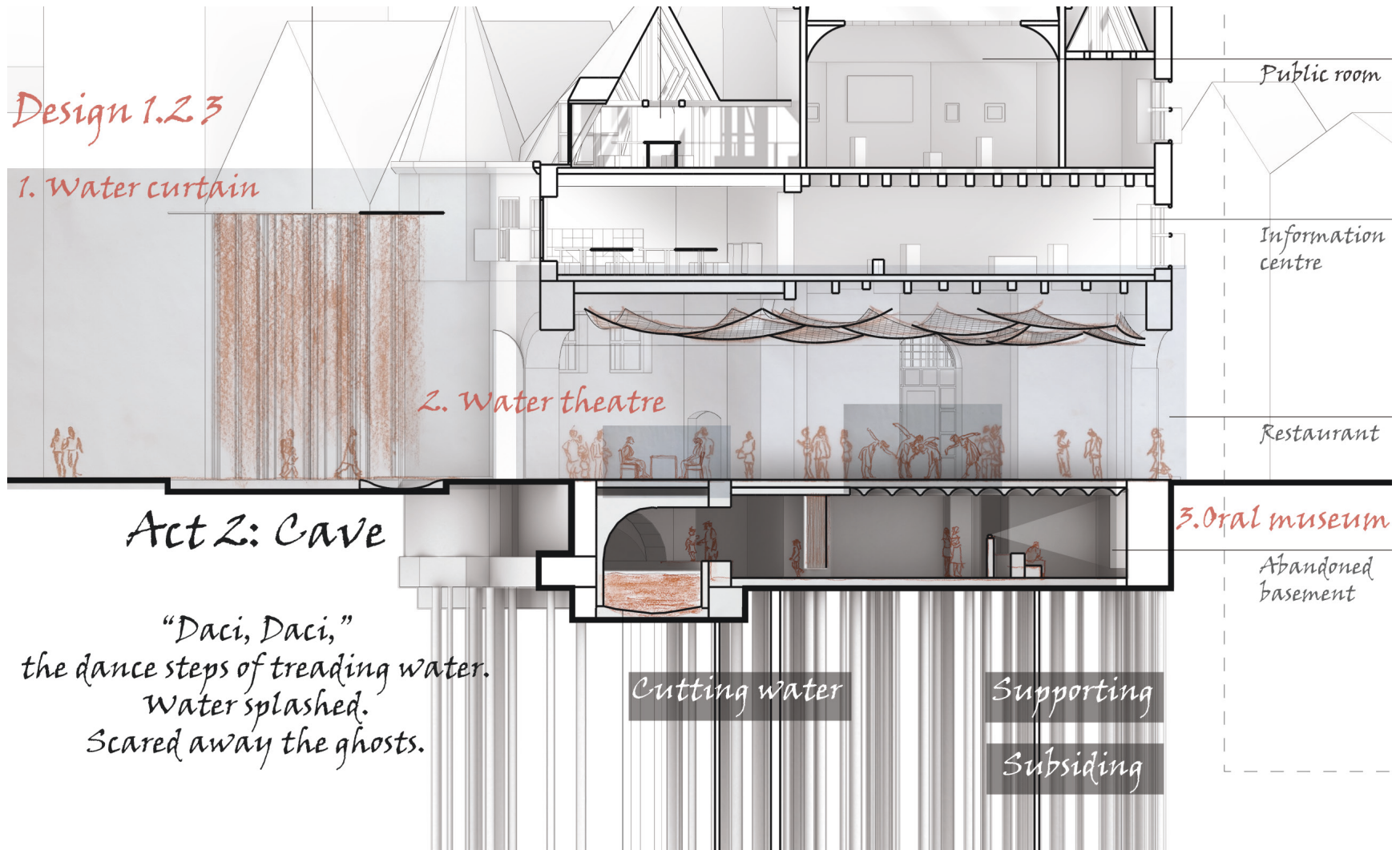
The basement is designed around the canal. In contrast to the bright and cheerful theatre upstairs, the basement is a dark space for ghosts, as many people had died on the guillotine and in the concentration camp. The canal was buried underground, but it is still flowing today. My design strategy is to transform the basement into an oral history museum with two main exhibition rooms. When people walk into the basement, they will first see a screening hall where people can watch or listen to the stories that people dictate. When people continue to step in and cross a curtain, they will reach the second exhibition room. I designed an opening on the wall between the canal and the exhibition room so people could watch and listen to the flow of water.



The underground canal (Gawronski et al. 2017, 121)



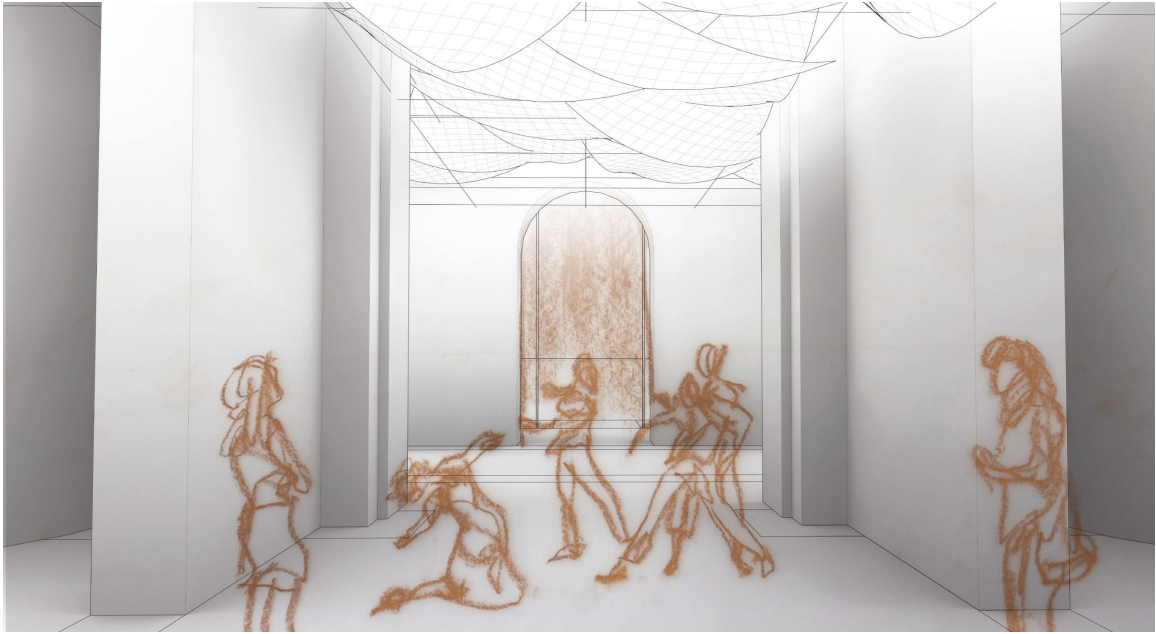
Section drawing across the Waag building and the Nieuwmarkt



The section drawing shows the design programs: the water curtain, the water theatre and the oral history museum.



Rendering of the water curtain in the outside of the Waag building, it seems to melt the old brick walls. When people get closer, the water curtain will open, reminding people of the sluice gate, where boats passed.



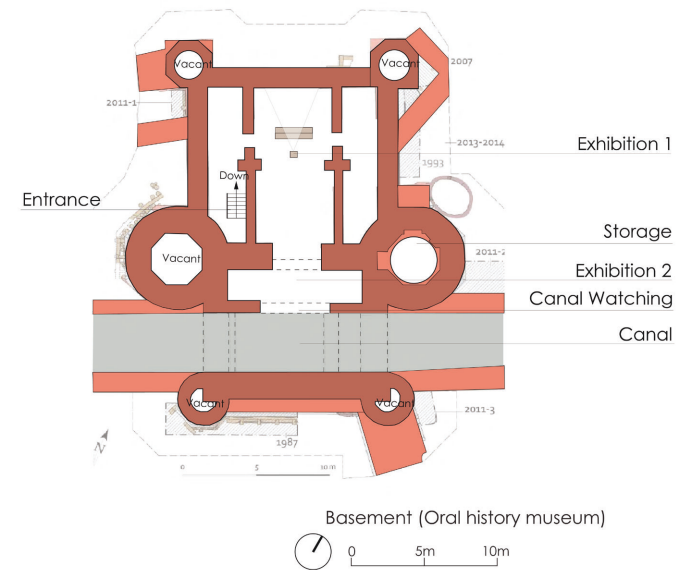
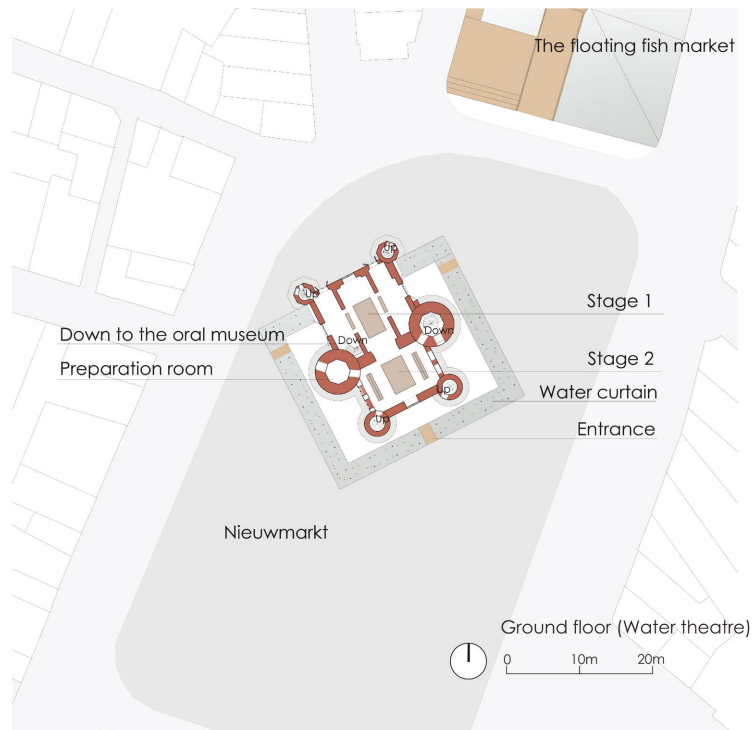
Water theatre

When people walk through the water curtain, the first floor is a water theatre for them to dance and perform. The fabric ceiling is the resource of the stage light, while its shape mimics the movement of waves.



Canal watching

In the basement, there is an oral history museum, where people can hear the sounds of water and watch historical films.



The ground floor plan for the water theatre and the basement plan for the oral history museum (basement plan from Gawronski et al. 2017, 28)

### Act 3 Double Mirror

“Cila, Cila,”

Spark is growing on the ice surface. The left hands hold the right hands. Just like the right hands hold the left hands.



Canal music festival on the Kloveniersburgwal canal; photograph by Joroen C. Van Zijp (Grachtenfestival 2018)

The last act of the poem happens on the Kloveniersburgwal canal. People’s memory becomes clearer. Those are new memories and memories of the future. Either during snow skating in wintertime or the canal music festival and the King’s day in the summertime, the canal is always the public space for gathering.

However, in daily life, the Kolveniersburgwal canal’s function as a public space has not been well utilized. The canal was connected to the Nieuwmarkt, but today it is blocked by the parking lot and becomes a dead end. The street space around the canal is not connected to the canal as well, so the streets are becoming more crowded as businesses grow, while the canal has a lot of unused space. My design strategy is to activate the canal’s attribute as a public space, so people can use the canal as an extension of the Nieuwmarkt and the streets in the festival events and in their daily life.

At the interface between the canal and the square, my design is to remove the parking lot and create a “floating port, “to allow the cargo ships moored here to support the Nieuwmarkt. At the interface between the canal and streets, I designed a strip of floating stage to transform the canal’s edge into part of the street space. The restaurants around the canal can also use the floating platform as a dining area.



Since the water quality of the canal is not suitable for swimming, I designed a swimming pool in the centre of the canal, and the freshwater comes from the rainwater collection shade above. The suspended installation was inspired by the art works in the Amsterdam Light Festival. Lighting installations above the canal bring people into a romantic space, and the reflection on canals also reminds me a mirror. The surface of the swimming pool and the surface of the canal actually form a double mirror. In winter, people can skate on the “mirror,” the swimming pool will temporarily transform into a warm hut.

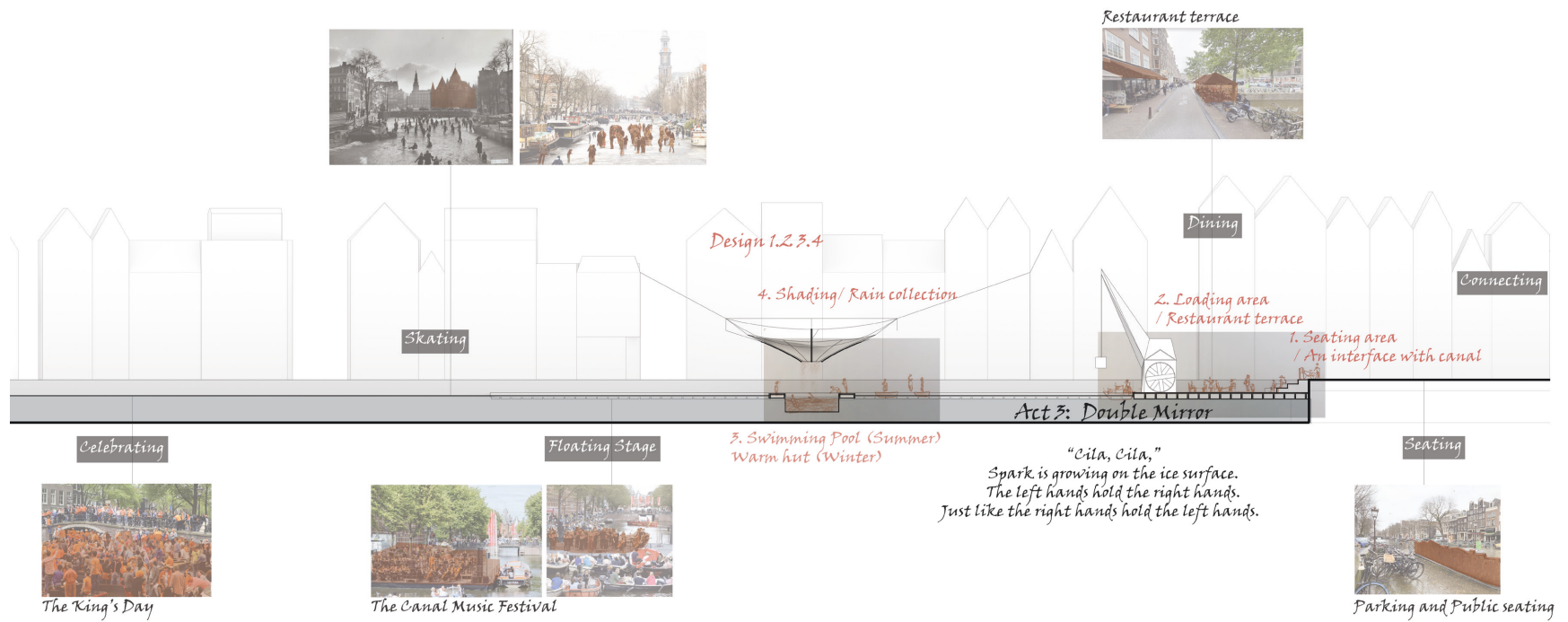


Skating on the Geldersekkade (Winter on the Geldersekkade, 1950)

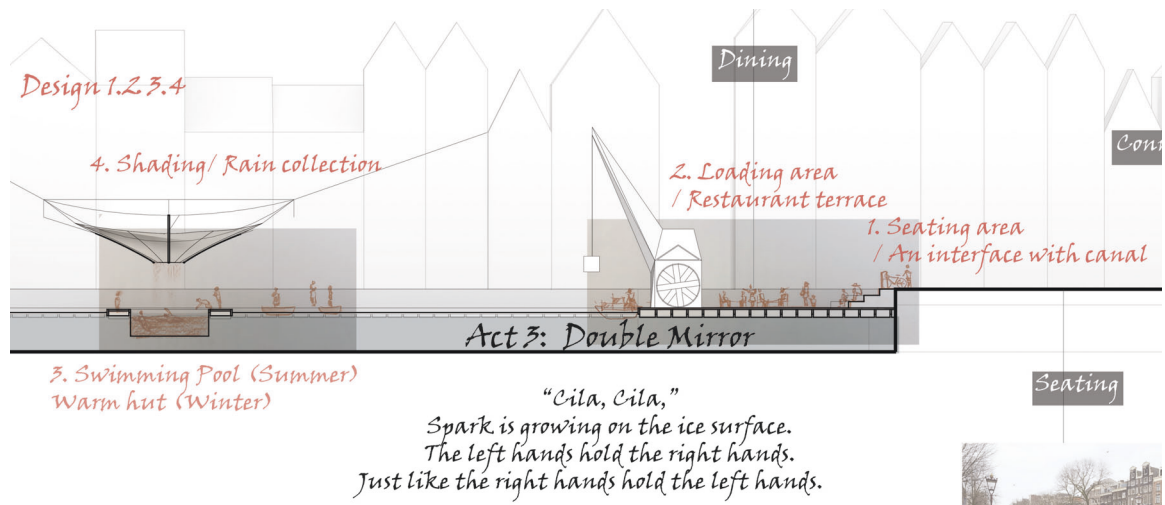


Left: Amsterdam Light Festival, (Choi + Shine Architects 2016)

Right: Amsterdam Light Festival, (Lighting Design Academy 2017)



Section drawing across the Kloveniersburgwal canal

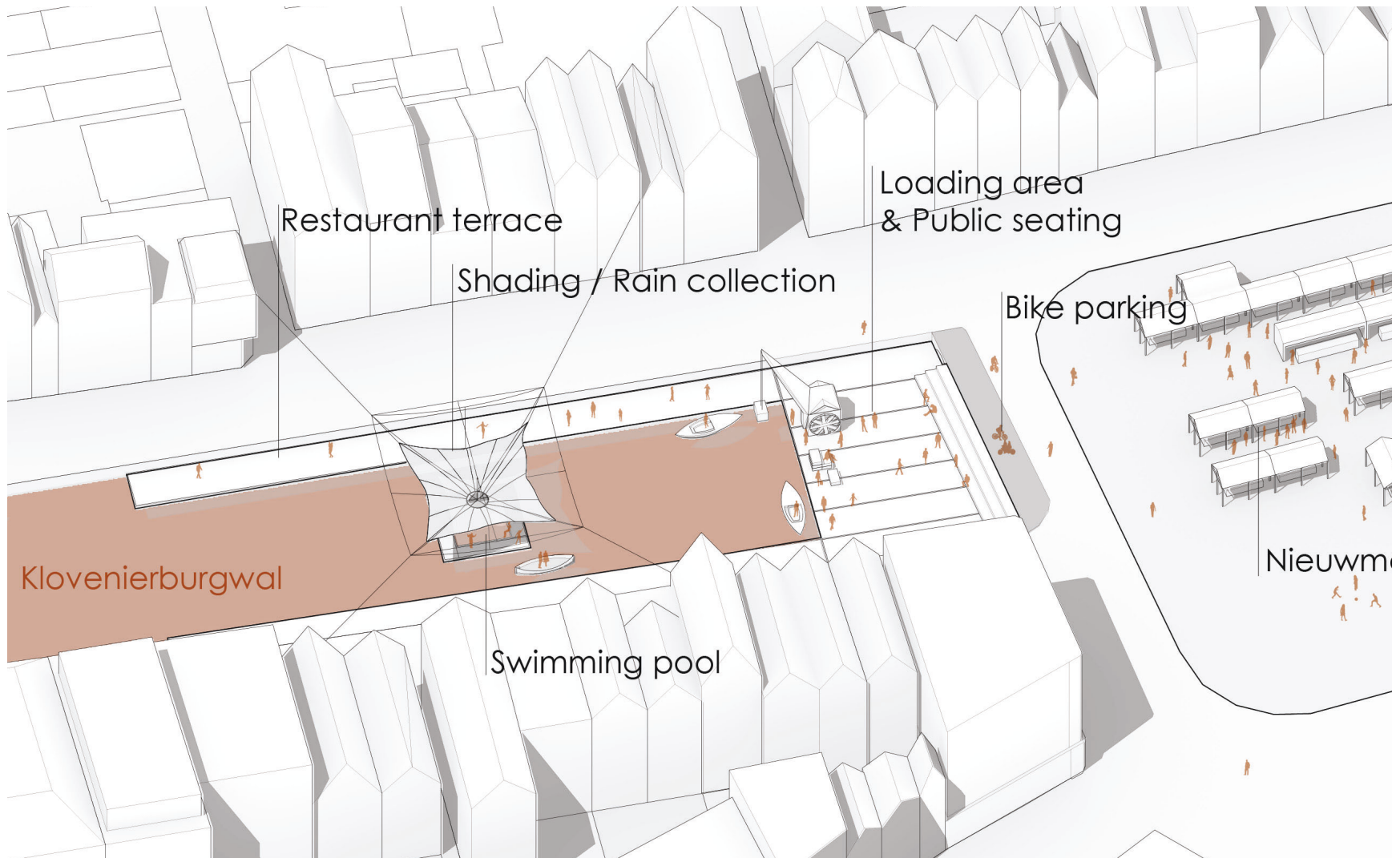


Section showing the design programs

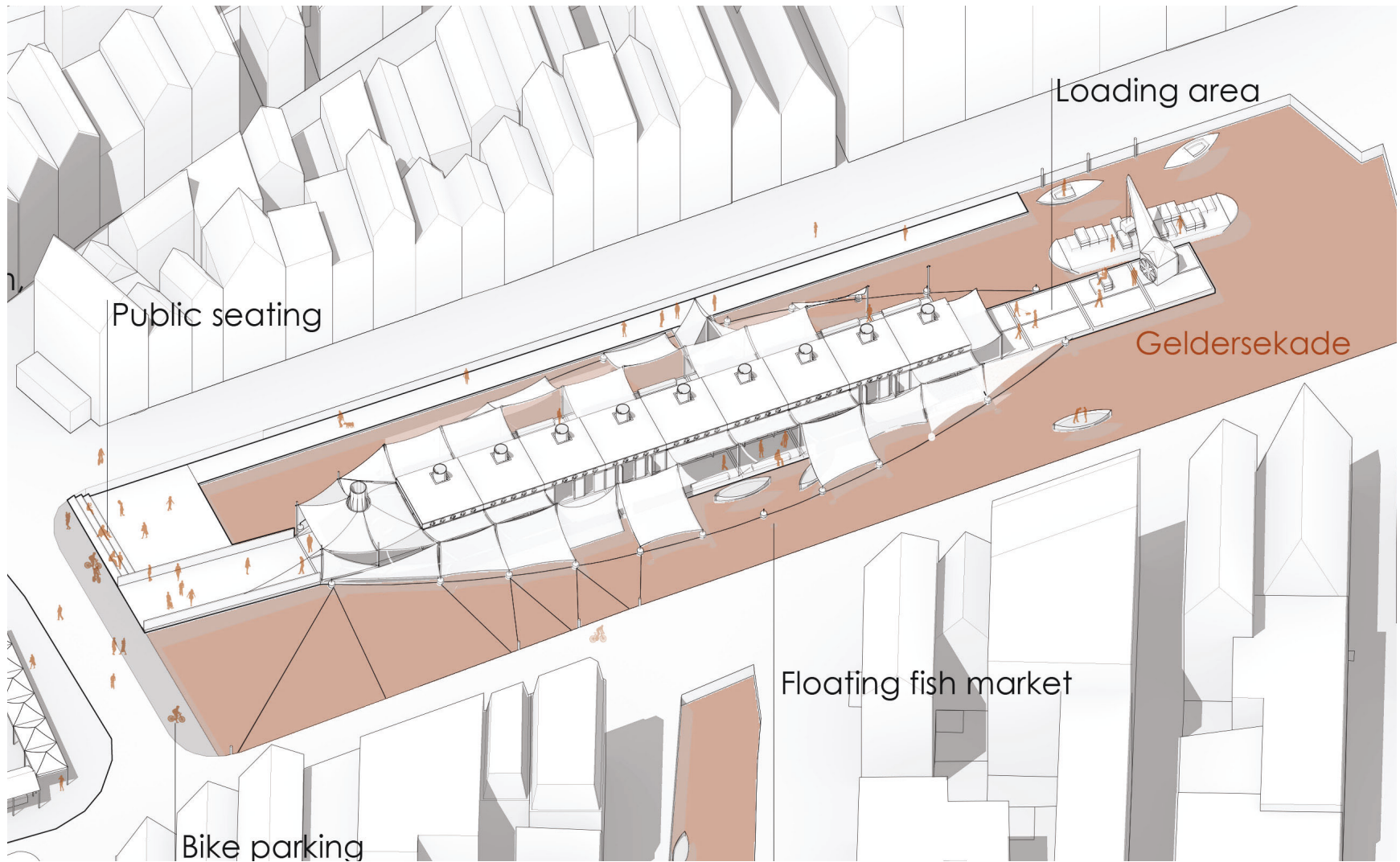
There is a swimming pool in the middle, together with the canal, making the space a double mirror, reflecting people, trees, and boats. Connected to the plaza is a floating platform; the surrounding restaurant could use it as a terrace; cargo ships are also moored here to deliver goods for the Nieuwmarkt.



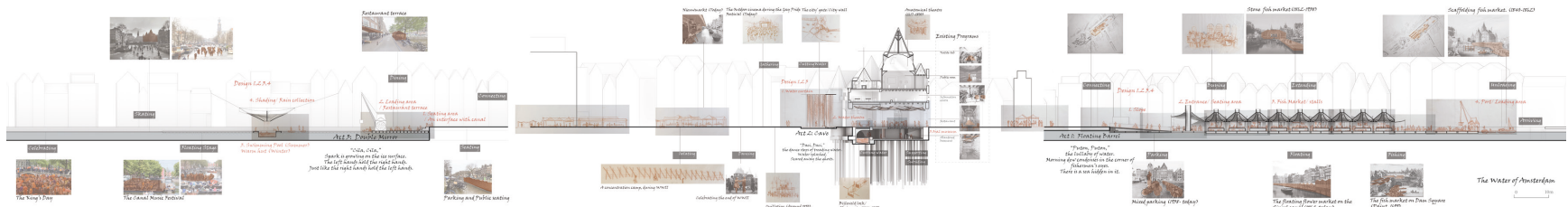
Rendering of the rain collection shade and the swimming pool in the middle



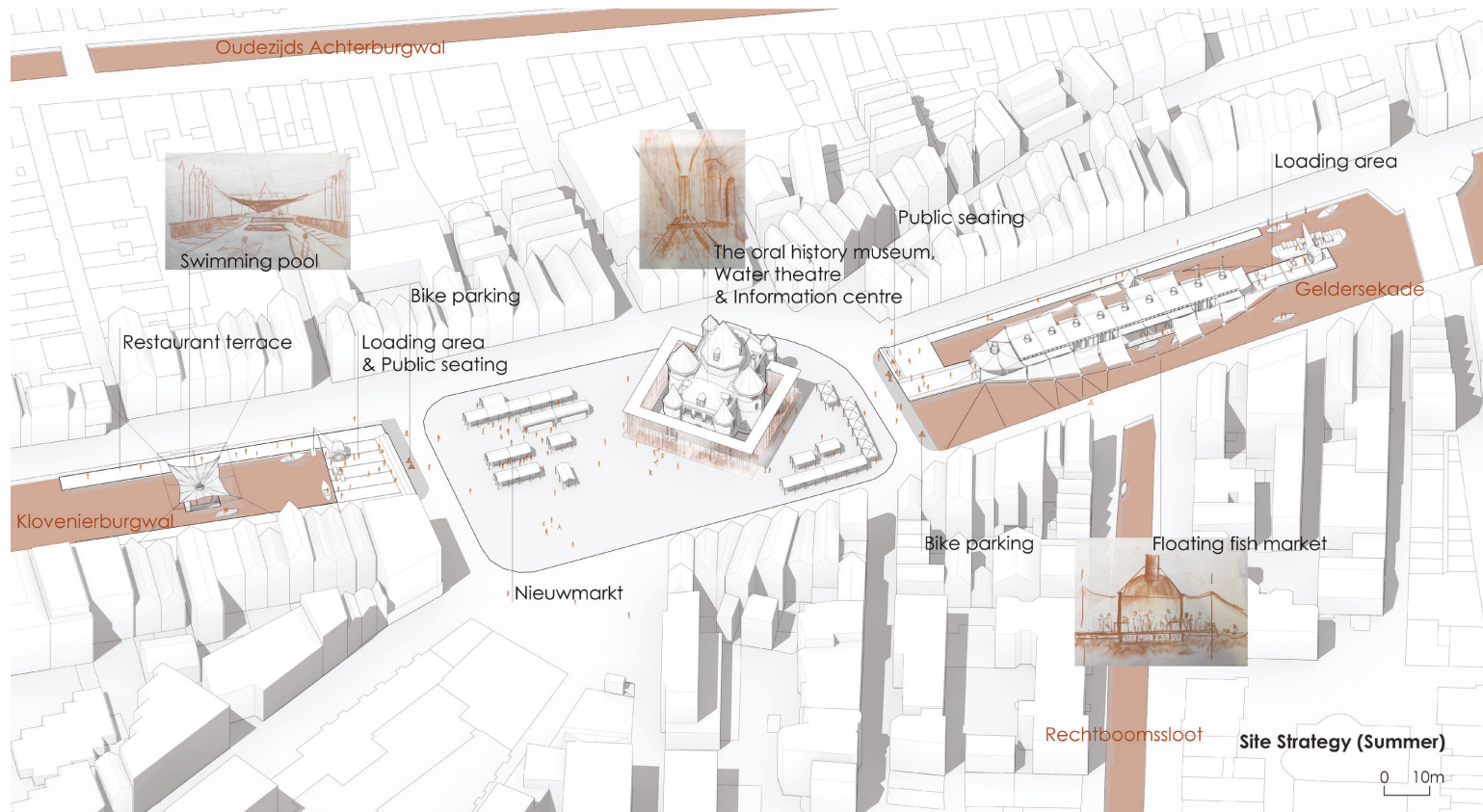
Axo drawing of act 3: "Double Mirror"



Axo drawing of act 1: "Floating Barrel"



Section drawing of the whole poem



Axo drawing of the whole poem

## Chapter 8: Conclusion

The theme of this report is to evoke people's canal memory, so I first studied the history of Amsterdam and canals. I was attracted by the city's complicated and long history from the beginning of my research, to be precise, by its abundant symbols and signs. The city is full of various landmarks, smells and languages; people don't pay much attention to them in daily life, but this is how our understanding of the city is influenced and shaped. For Amsterdam, the canal is its most important symbol; water is the blood flowing in Amsterdam.

The memory of the canal is an infinite puzzle; if we want to grasp it, we need to jump out of its infinite details. Through emotion, people's attention is kept somewhere in the puzzle, and our imagination also diverges from this point to imagine the whole picture of the canal. People always describe canals in different ways, but people's emotions about canals are similar, so I hope to explain people's canal memory through the perspective of emotion. My curiosity about things started in its centre. The centre of Amsterdam was on the dam square initially and then shifted to the Nieuwmarkt. The latter's emotion is a conflicting complex, but just like the canal flowing under the square, the memories and emotions here are also hidden.

It is difficult to organize a space with emotions. Only poets can do it. So what I did was not a designer's work, but a poet's. Poetry can integrate fragments into a whole through imagination; connect objects into pictures; break the boundaries of time and connect the past and the future. The space of the canal is a complete poetic space with its verb "flowing." The flowing people and flowing canals are

the keys to compose the poem and to grasp memories and emotions.

I hope this report can provide a little inspiration for the space design of the canal, and help people realize the role of a poem in the organization of space. Poets interweave space and memory into poetry!



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