Perception of Proximity

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Foreword

This report presents my graduation project Perception of Proximity, which is part of graduation studio Industrial Water Street. This studio focused on the redevelopment of industrial heritage, a topic very much to my interest. I believe there are many opportunities for great architecture in the redevelopment of buildings no longer acquired for their original function. These buildings hold stories, histories. Through redevelopment they can also hold the future.

When enrolling for my graduation project, this studio was at first cancelled due to a lower than expected number of students starting graduation. As it was however, the most suited studio to my interests. I made an effort together with like-minded fellow students to get the studio back on the list. We succeeded and I am still thankful for that. Especially as it did turn out to be as interesting and enjoyable a project as I had hoped.

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Introduction

The graduation atelier 'Industrial Water Street' was devised by dr. Ir. Irene Curulli and dr. Ir. Gijs Wallis de Vries and is part of the larger research of canal zones in the top five largest cities of Brabant by dr. Ir. Curulli. The program researches for value in often forlorn zones of these active cities. A seemingly useless crane, derelict vessels, sturdy concrete slabs lying here and there, what are they worth? And how can they help transform a zone into a lively part of town? Helmond was to be the case study for this studio for it being one of the five larger canal cities of the Brabant district.

Helmond has a rich history in which the textile factories play an important role. The central positions of the factories are reminders of this. In opposition to many other canal cities in Brabant, Helmond still has active factories that are producing textiles and ironmongery like screws and bolts. The largest textile factory, Vlisco, is located along the canal near the city centre. This factory had a big impact on the development of Helmond as it employed many of its inhabitants. Vlisco's terrain takes up a considerable part of the city grounds.

The image of Helmond is not a particularly good one. Neither socially nor architecturally. Architectural choices regarding the new urban project Brandevoort was cause for many heated debates in architectural circles. After visiting Helmond, it became clear that Helmond first has a representational problem. The town seemed friendly, active and attractive at some places. The city structure, however, left much to be desired. It was experienced as unclear and confusing.

The approach of this studio is described in the next part of this report. The studio consisted of three parts, a colletive part for which all five of the group members collaborated. This part was followed by a smaller collaboration on a more specific master plan for the Vlisco area by three of the group members, namely Dominique Geelen, Rik Verhalle and myself. Within this master plan, all three focussed on the design for the redevelopment of a specific part. In this case, Vlisco's Building North was chosen to design the redevelopment of.

A study trip to Italy was part of the collective research. Following this study trip, a topic of personal interest was researched in relation to industrial heritage. This individual topic was chosen to be the perception of proximity. The research question was defined as 'How is architecture related to the perception of proximity?' This research had its focus on the architecture of industrial heritage. The choice for Building North was made knowing it would make a good case study for this individual research. Thus, the redevelopment has been designed according to the research on the perception of proximity. This design is described in this report after a description of the collective research part, the master plan and the theoretical research on perception of proximity.

What all this leads to, a design changing the perception, experience of Building North, is described in a scenario. The scenario tells how the redeveloped Building North is experienced in approach and exploration. The scenario is illustrated with images taken from a model made of the new design.

The report is then concluded and the graduation project reflected upon.
Part One
Reading the industrial heritage in Helmond
Helmond Vision

From the start of the studio, an extensive theoretical research was taken up regarding industrial heritage. This so as to gain knowledge concerning the developments and strategies towards industrial heritage up to now. This was supplemented with the undertaking of a study trip to a variation of former industrial sites in Italy.

Case study Helmond was approached in a none standard way by focussing on the narrative aspects in addition to a historical analysis of the industrial development of the city. Information gathered from observations was combined with the stories and opinions of the locals through inducting interviews in the process. The interviews were based on a method developed by Kevin Lynch, mapping a cities experience.

Both the objective as the subjective researches lead to the defining of a vision on the further development of the city of Helmond. From the observations as well as from the Lynch-map can be concluded that there is little correlation between the main points in the city centre of Helmond. Due to the varying characters of the districts in the centre, the city is experienced as fragmented. The canal could function as a backbone for the city in order to mend the coherence of Helmond. The canal was made more use out of in earlier times, when it was important for the functioning of the cities industry. Nowadays, its function is of a more recreational nature. The canal together with the Traverse divides the centre into four areas. Where the traverse has a very strong presence both as a connective element from east to west and as a separator between north and south, the canal could be a stronger element, bringing balance to the directions. By enhancing the role of the canal, the four different districts can be connected.

The most enclosed district in Helmond is the Vlisco area. People tend to be aware of the historical and economical value of Vlisco, but the area itself is not appreciated. A bland wall surrounding a significant part of the terrain, an inaccessible interior and a dislike of some of the buildings avoid that Vlisco becomes part of the fabric of the city. The industrial heritage could be of great value to the city of Helmond when the Vlisco company were to shrink and the area to be opened up.

The proposed vision for Helmond creates much needed unity within the city by employing the canal as an ordering element. The canals binding potential is further exploited by the development of a canal route along the city-centered and southern parts of the canal. The northern part will retain its industrial character for the time being. This route is shaped by a series of interventions. Starting from the north, the Havenplein will retain its unique, lively character and will connect to the plans for the new city centre. South to the Havenplein, the route crosses the canal and involves the adjacent areas on both sides. Through continuing this from the north side of the Traverse to the south side, the four areas relating to the intersection of the Traverse and the canal are joined together. In addition to this, the transition from the one side of the Traverse to the other is eased through finishing the building block started on the north side on the south side of the traverse. The now continued building block pulls the relating areas together. Moving further south from the Traverse and through the castle gardens, the intervened Vlisco area is opened up and integrated in its surroundings. This area is studied in more detail in the following of this studio. The route ends on the south where it meets with the new train station. At this point the route progresses into a square in a similar way the canal transforms into a harbour. This harbour recalls the industrial harbour which once used to be there.

Along the canal route, the relation between the water, the route and the adjacent area varies as the character of the elements differs. For instance the recreational park area contains a very fluid transition between water and route and the industrial character of Vlisco meets with the water in a more abrupt way and with a bigger height difference.

More detailed information on the collective research and vision can be found on the website of this studio.
We already knew that when we were designing the canal route, Vlisco would play a defining role in the new urban sequence alongside the canal. The area is now entirely enclosed, no visitors are allowed, photographs are prohibited and walls separate Vlisco from Helmond.

Thus, in order to connect the different parts of Helmond, along the canal, Vlisco will need to open up. Vlisco itself is downsizing to a third of what they are using now, since they use far more space than is actually required to operate. We locate them at the most reachable side of the area, to the Verlengde Stationsstraat. This means the buildings of Vlisco will become vacant.

We wanted to execute the master plan of Helmond further by tackling its main problem, namely the Vlisco area.

The canal route connects five different areas with each other. Each of these areas is quite different from the others. The now vacant Vlisco area is a walled industrial enclave. Because of its disconnection with the city, it is a bit of a mystery to many inhabitants of Helmond. This mysterious and industrial character is something we do not only want to maintain but also want to emphasize in our further designs.

This industrial character is formed by the size of the buildings, the use of materials and the industrial artefacts. The buildings appear to be randomly placed on the Vlisco site. Each building has its own logic, but the whole is an urban labyrinth. The alleys, the dimensions of the street and buildings and the angular placement of the buildings create the mysterious character of Vlisco. Especially the mysterious character is site specific, since most industrial areas are built according to an orthogonal grid and work with a premeditated development plan.

To maintain the character of the area the building outlines are preserved in the new design. We deliberately chose to reuse as much as possible since the Vlisco area has a very distinctive industrial feeling and most buildings are suitable for new functions.

Because the buildings of Vlisco are scattered around the area they needed a collective system to bind them together. The Vlisco terrain has paths made of concrete tiles of two by two meters, in two different directions. These tiles become the foundation of two grids, which are completed by sets of new tiles of the same dimensions.

On the border line where these two systems collide, the systems merge in a triangular pond. The pond contributes to the unambiguous shape of the newly formed main square in the centre of the Vlisco area. The pond can be used for ice skating in winter and has a small fountain in summer. It is a clear reference to the canal.

To further develop the master plan, the Vlisco area gets a closer look, from which a more detailed plan is derived. Our three chosen buildings are the key elements in the further development of the new Vlisco area.
Fig. 1.3 Master plan Vlisco: Existing versus New
Building Adaptations

The buildings of Vlisco will be reused for the greater part. Some buildings can be entirely reused, such as building 1911, Building North and the Ketelhuis. Some of the other buildings will receive a new facade and only building, Building South, will be completely renewed.

The three building that will get a new facade have reusable structures in the interior but lack functional exteriors. They will be clad in brick or concrete to adapt to the industrial look.

In our master plan, we have defined the borders for the different zones along the canal route. Building South, the only completely new building, has two faces. The north side faces the Vlisco area and the south side the new station square. The old building was not only structural insufficient, but also lacks the ability to adapt to both sides. Hence the entire building gets renewed in a style more suitable for both Helmond and Vlisco, using bricks as the main material. The new block resembles Building South, but has a few adaptations. First the division between two significant parts of Building South has been kept, but replaced. This was done in order to create a climax in height at the south west corner of the building block. It gives a signal about what happens behind the building. About halfway the new Building South an opening towards Vlisco appears. Walking on the canal route you get a glimpse of what is yet to come. Maybe you are persuaded to enter the Vlisco area already.

When you have reached building 1911, another significant change of the old Building South with the new Building South becomes apparent: where the building first was knotted it now has gotten a sharp end. This was done to complete the enclosed feeling of Vlisco by completing its strong borders and to strengthen the setback of building 1911. This now makes it the official entrance to the new Vlisco area.
1. Castle
2. Vlisco
3. Vlisco museum / Parking
4. Exposition / Education / Student accommodation
5. Ateliers
6. Bathing House / Restaurant
7. Bike repair shop / Fruit market / Fish retail / Garden roof
8. Vlisco shop / Tourist information / Accommodation
9. Ateliers / Accommodation
10. Public tables / Exposition
11. Hotel / Restaurant / Fitness / Bakery / Wedding chapel
12. Shopping and food facilities / Accommodation / Parking
13. Shopping and food facilities / Accommodation
14. Central station

Fig 1.4 Master plan Vlisco: Functions
Functions

Vlisco was a factory that produced colourful textiles for the high end African market. The new Vlisco area will keep focusing on textiles and fashion to distinct itself from other similar reused industrial regions, such as Strijp S in Eindhoven. Because they will focus on this niche they can cooperate with Strijp S, which focuses primarily on product design.

The new Vlisco area will function as an enclave within the city, separated by two large buildings, Building North and Building South. The functions will vary from fashion ateliers in the alleys to a hotel in building 1911 and even fashion education in Building North. The buildings will have a well mixed use, since there are apartments and smaller shops to do your ecological groceries. Most of these ecological food shops will be located in the new market hall, building 7 on the map. When you have bought food in the market hall, you can sit at the public tables at building number 10, which are bend corrugated steel plates that only act as roofing.

The new Building South has ateliers on the western Vlisco side, and high commercial functions, such as McDonalds, Hema and la Place on the south side towards the canal route. The ground floor of this section of the building will have a higher ceiling than the rest of the buildings in this particular area. The backside of the eastern part of Building South will be used for parking on two levels, of which one is underground.

Above ground floor level spacious apartments will be built with a beautiful view over the canal.
Fig. 1.5 Master plan Vlisco: Routing
Routing

We propose two routes, hidden in the urban labyrinth, to guide the keen spectator through the new Vlisco area. To further enhance the labyrinthic effect, one route is placed up in the air while the other one is placed on the ground. Both have a direct link with the history of Vlisco and gently steer the visitors through the terrain. The route + 1, the elevated route, follows the pipelines of Vlisco. It provides extra experiences for the visitors that are set on exploring the area. In the Ketelhuis, the kitchen for the restaurant and the machines for the bath house are revealed and in Building North it leads to the more private student exhibition.

The stairs to the elevated route are found on the far ends of the route and are made of steel lattices. The same steel lattices are used to materialize the route +1 and have a sense of lightness about them.

The other route follows a different path. A few tiles of the new grid have different prints which represent the printing process of the Vlisco textiles. The starting point of the fabric route is near building 1911 and represents the bleached fabrics. The route ends with tiles referring to the drying of the dyed fabrics near Building North.
Part Two
Theoretical research on Perception of Proximity
As part of the research on industrial heritage a study trip to Italy was made. Redeveloped industrial sites of Venice, Milan and Turin were visited. Following this trip an essay was to be written on a topic of personal fascination. During the trip I had been fascinated by the air old factories can have and how this air varied between buildings. Some came across as imposing and authoritative whilst others were perceived as vulnerable almost. What was it about those buildings that made me perceive them as I did? In what did they differ that resulted in such contrasting perceptions? Following this personal fascination the essay was written on the topic of perception of proximity. The research question of this theoretical research was stated as: How is architecture related to the perception of proximity? This research is described in the following paragraphs, starting with the definition of perception of proximity.
Perception of Proximity

- Knowledge
  - Past
- Experience
  - Present
  - Scale
    - Formality
'It all has to do with proximity and distance. The classical architect would call it scale. But I mean something more bodily than scales and dimensions.' Peter Zumthor (2006)

The topic of this research is the perception of proximity of a building. A building can feel relatively close to a person or relatively far off. It can be perceived as proximate or distant. A comparison between buildings and people can be made here. A person can come across as near, when for instance the person seems friendly, approachable, relaxed, or when personal stories of the person are known. Sympathy is felt towards this person. In contrast, a person can be perceived as far off, aloof, distant. This can for instance be following unfamiliarity with the person, a strict image, no or difficult interaction with the person or a feeling of inferiority. This principle is applicable to the perception of a building in a similar way. A building can be perceived as near when there, for instance, is a welcome and relaxed feeling to the place, a person feels at ease, when there is an attachment felt to the site or the building comes across as friendly. In contrast, a building can come across as far off, aloof, when it is intimidating, anonymous, strict, inapproachable, when it makes a person feel very small, unimportant, insignificant.

Steen Eiler Rasmussen writes about the perception of architecture in relation to experiencing architecture: "Just as we do not notice the individual letters in a word but receive a total impression of the idea the word conveys, we generally are not aware of what it is that we perceive but only of the conception created in our minds when we perceive it." In relation to the perception of proximity, this conception regards the sense of proximity, the experience of proximity. Experience is therefore stated as one of the two components of perception of proximity. This component is discussed addressing two elements of experience of most relevance to this research: the experience of scale and the experience of formality.

The second component of perception of proximity is 'knowledge'. Knowledge concerning a building gives meaning to a site, which is of influence on the perception of a building. The notion of this occurrence is extensively discussed by Bruno Zevi. He believed in a battle for modern architecture against Fascism. In his opinion static space is typical of authoritarian regimes. Dynamic space on the other hand is emblematic of community and democracy. He used architecture as a tool to advocate democracy in a fascist Italy.

Then, the 'experience' component is discussed in greater detail starting on the subject of scale, moving on to the subject of formality. Next, the ‘knowledge’ component is dealt with. Both components are illustrated with examples gained from a study trip to Italy focused on industrial heritage. The two components are then brought together in a case study.

Fig. 3.1 The abrupt transition in proportions of the Lingotto facade

Fig. 3.2 The gradual transition in proportions of Palazzo Madama Torino, Turin

Fig. 3.3 The Pirelli Headquarters showing a gradual transition in proportions
Experience: Scale

The experience of scale created by architecture, influences the perception of proximity. The comparison between the size of a building and the size of the comparing element, most commonly the human body, defines the scale of a building. The experience of scale concerning the perception of proximity can for instance be felt at an architectural site where the scale of the building is very large when compared to the human measurements. The building is then perceived as more distant than near, as it impresses and seems to be meant for things superior to the person experiencing it.

The scale of a building is, architecturally defined by its measurements, the proportions of the elements and the rhythm of the elements, amongst other things. These elements are not only the built elements, but also the elements of space created by these built elements.

To research this topic, the proportions and the transition between these proportions, are examined in relation to the experience of scale. The proportion of an element concerns the measurements of that element compared to the measurements of the whole. The transition of proportion, the gradient in building element size towards human size, is of significant influence on the perception of proximity of a building due to scale. In order to study this influence, the structural elements of architectural designs have been marked. These markings make the proportions of the different elements more easily comparable. Therefore the transition of the largest proportion of the design to the human measurements can be derived from this. From this study the following conclusions can be drawn.

When there is no or little gradual decrease in element size, the size of the larger elements is hard to comprehend. This is illustrated in figure 3.1, showing the facade of the Lingotto factory in Turin. The building has a larger scale and is perceived as further off, more distant. When on the contrary, there is a gradual decrease in size towards the human measurements, the bigness of the whole is perceptible. The building seems to be reaching out to the human size, seems to be attempting to comfort by showing it is not that different. This makes the building more comprehensible and therefore the building is perceived as more proximate. An exterior example of this can be found in the baroque facade of Palazzo Madama Torino shown in figure 3.2. Besides these exterior examples, a gradual transition can also help make interiors more comprehensible. A good example is found in the Pirelli Headquarters illustrated in figure 3.3. The size of the furnace is understandable due to the gradual transition in proportion of the surrounding elements towards the human measurements. That allows a person to relate to the furnace's size, making it being perceived as more proximate.
Fig. 3.5 The overgrown facade at the back of the Pomodoro museum, Milan.

Fig. 3.6 Graffiti on the facade of the Pomodoro Museum in Milan.
Experience: Formality

Formality is defined as the degree to which a subject is perceived as formal, stately. The affectability of a building specifies the level to which the building can be affected by either nature or humans. An increased affectability level transfers the status of the building from formal and stately to more informal and ready for use. In some cases it can evoke a status of faded glory. A higher affectability level results in a less imposing impression of the site and a more proximate perception of it.

The affectability of a building is present, experienced, in patina. Patina is defined as a thin surface layer which develops on something because of use, age or chemical action. Besides it showing the building as affected, it brings the element of time to the experience. Therefore, patina shows not only the affects, it also shows the age of the affects and the age of the building itself. Generally, the higher the age of the instigated affection of formality, the higher the affectability level and the more proximate the perception.

As mentioned before, a building can be affected by both nature and human actions. First, nature is discussed in more detail. The fact that people have let nature affect a building can be explained by the notion that the importance of the site has been lost, the stateliness is no longer needed. This makes the building come across as informal. The place is more approachable, less imposing and perceived as more proximate to the observer. Two examples of how nature can contribute to the affectability factor are found at the back of the Pomodoro museum in Milan. The first example is the old shed roof shown in figure 3.4. The paint of the construction has not been maintained since the change of function of the building. Now the decay of the paint caused by nature through weather, is visible. Secondly, next to the Pomodoro stands another industrial building of which the main part of the facade has been overgrown, as can be seen in figure 3.5. Both these processes are time consuming ones and therefore evident for the passing of time. The longer ago the formality of the building was first affected, the more informal it comes across, the more proximate it is perceived.

Besides nature, people can affect a building or site. These traces can be due to for instance use or vandalism. An example of traces resulting from vandalism is graffiti, as can be seen at the facade of Pomodoro, shown in figure 3.6. These traces show that the building is damaged, impaired. The vulnerability of the site makes it less formal and brings the building closer to the observer. However, the character of the human traces needs to be taken into account. When the traces are due to use, the nature of the damage is mostly positive. If the damage is a result of vandalism the character can be positive (when for instance graffiti shows humour), but it is often experienced as negative due to a feeling of neglect and desolation. This can overrule the positive effect of affectability in general and result in the site being perceived as more distant instead of more near.
Fig. 3.7 The 'Finger of Mussolini' as seen from Piazza Reale in Turin

Fig. 3.8 The production of Fiat 501 cars in Lingotto (1924)
Knowledge

Knowledge is the second component of the perception of proximity. It concerns how architecture can either add to a person's knowledge or refer to information the person already possesses, and give meaning to a site in that way. For instance, when a building is designed in a style used to represent a certain political belief, the observer will connect the site with the political values. This is the case with the 'Finger of Mussolini' in Turin, which represents a fascistic regime. The building as seen from the Piazza Reale is shown in figure 3.7. The knowledge of the political beliefs represented by the building gives an added layer of meaning to the building. The notion of this occurrence is extensively discussed by Bruno Zevi, as mentioned before.³

In general, the more knowledge available to a person of a site, the more proximate the site seems, as it is less anonymous. The nature of the knowledge, however, does play an important role in this. If the knowledge is of a generally negative nature as is the case with 'The finger of Mussolini', the site will grow slightly more proximate for the addition of knowledge in general, but that effect is then overruled by the distancing of the site due to negative associations. When, on the contrary, the knowledge is of a positive nature, the perception of proximity is enhanced. This is the case with Fiat's Lingotto factory shown in fig. 3.8. The prosperous development of Fiat and the positive effect Fiat's presence had on the city of Turin result in the building being perceived as more near.

Besides the nature of the knowledge, the level of detail also influences the effect of the knowledge on the perception of proximity. The more detailed the knowledge is, the greater the effect. This can be well illustrated focusing on a specific kind of knowledge, memories.

The degree of detail of memories concerning an architectural site can be seen in three levels. These three levels are determined following a study of writings on the historic monument including 'The invention of the historic monument' by Francoise Choay⁴, and writings concerning the relation between history and memory including 'Between memory and history' by Pierre Nora.⁵

Fig. 3.9 Ramp in Lingotto to transport cars through the factory (1926)

Fig. 3.10 The North facade of Lingotto with the addition on the rooftop by Renzo Piano
Case study: Lingotto

When the two components of perception of proximity, experience and knowledge, are combined, the effect on the perception of proximity can be optimized. How the two elements interrelate is researched through conducting a case study of the Lingotto factory located in Turin, Italy. The choice for Lingotto springs from a study trip to Italy where it was one of the visited sites which inspired the research topic of the perception of proximity. The Lingotto as seen from the North is shown in fig. 3.10.

Lingotto is a former factory of car manufacturer Fiat. It is located in Turin and played an important role in the development of the city, similar to the role Philips played in Eindhoven. Lingotto was designed by architect Matte Trucco and was completed in 1923. At that moment in time it was the largest car factory in the world. The design of the factory was extraordinary in the organisation of the production process moving upwards over five floors. The resources came in at ground level and the finished cars were tested on the roof. Two ramps enabled the transport of the cars through the factory. One of these ramps is shown in fig. 3.9.

In 1982, the factory was shut down. The design contest regarding the redevelopment of Lingotto was won by architect Renzo Piano. The redevelopment was completed in 1989. Lingotto now accommodates a large number of functions including a shopping mall and a hotel. The eastern part of the building is occupied by the faculty of automotive engineering of the Polytechnical University of Turin. An addition to the original building volume was done by placing a building element on the rooftop, as can be seen in fig. 3.10.
Fig. 3.12 The testing of cars on the Lingotto rooftop cartrack (1923)

Fig. 3.13 The Lingotto car track as of today (2011)
Case study: Lingotto

In order to examine the experience of the scale of Lingotto, a study has been done marking the architectural elements in red so the proportions of the elements could be well compared. The marking of the facade is shown in fig. 3.11. From these studies can be derived that due to the non gradual transition between proportions, the scale of Lingotto is experienced as large. This large scale results in a person feeling very small and insignificant next to the building. Lingotto is perceived as large, incomprehensible, formal and distant, through this.

When it comes to affectability, the outside of Lingotto shows very few signs of higher levels of affectability in reference to when the building accommodated its original function. On the interior though, there is a very significant form of affectability decreasing the stateliness of the building. The ramps which used to be in use for transportation of the cars through the factory and are a very characteristic element, have been neglected and vandalised. The higher up the ramp, the more graffiti and the more decay is present. The graffiti does have a positive note to it as it shows mostly outings of love, it has a romantic feel. The decay does not, but it feels like the decay enabled the site to develop befitting this new 'function'. This high level of affectability of such an important part of the factory makes the building feel much more proximate, even empathy can be felt as the faded glory is so evident. The building seems to be less 'only to look at' and more 'ready for use', also bringing the building more near.

When it comes to the knowledge component, the memories a visitor gains are passed on memories, so this concerns the medium level of detail. One can imagine how it must have been through the presence of photo’s and texts speaking of the history of the factory. The unique characteristics of the building are an important part of the memories and provide the scenery. The emphasis of these characteristic elements therefore strengthens the effect of the memories and the knowledge component. The knowledge gained results in the perception of the factory being more proximate, especially as the memories are positive of nature and bare a reasonable level of detail.

The combination of experience and knowledge is what effects the perception of proximity most strongly. At Lingotto this is the case at the rooftop. Here, the large track where the cars used to be tested is still in tact, as shown in figures 3.12 and 3.13. The knowledge of the stories of the factory in combination with the spatial experience of the track, increases the ability to imagine the site as it once was. This results in a significant increase in the perception of proximity of the Lingotto factory.

Altogether the Lingotto factory is perceived as far off at first due to the abrupt transition in proportions of its large scale. When adding to this the high affectability factor and knowledge of the second level, the perception starts to grow more near. When all the components are at their strongest and perceived combined at the rooftop, the result is a significantly near perception of the building.
Perception of Proximity

- Knowledge → Past → Preservation
- Present → Transparency
- Scale → Transition
- Formality → Affectability

Experience → Architecture
Conclusion

The research question of this theoretical study has been defined as: How is architecture related to the perception of proximity?
The answer to this question has been schematized as shown on the left. The diagram starts with the term 'perception of proximity' and acknowledges two components: knowledge and experience. Of these components, the major aspects of relevance to the perception of proximity are named. In the case of knowledge these aspects are the past and the present. For experience they are scale and formality.
From the theory and the case study the manner in which a building communicates these aspects has been derived:

- Knowledge concerning the past of the building can be communicated through preservation and emphasis of characteristic elements.
- Knowledge regarding the present situation of a building can be communicated through the application of transparency.
- The experience of scale is changeable through altering the gradient of the transition between the building's proportions.
- The experience of formality can be addressed through influencing the level of affectability.

These four aspects, preservation, transparency, transition and affectability, are determined by architectural design.
Part Three
Exploring Building North
Selection of Building North

In review of a study trip to Italy, an essay was written on a topic following personal fascination. The chosen topic, the perception of proximity, has been researched as described later in this report. The new connective, open and approachable functioning of Building North in the new master plan in relation to the currently very distant and inapproachable character makes it an interesting case study for the topic of 'perception of proximity'. Therefore, within the new Vlisco area Building North has been decided upon to further investigate and design.

First, Building North will be introduced. Then the topic ‘perception of proximity’ is introduced and the relating research is discussed. Following, the two are brought together in an analysis of Building North and the design for the redevelopment of this site.

Fig. 2.1 Situation Building North
Fig. 2.5 Building North in its surroundings

Fig. 2.6 View from the park

Fig. 2.7 View from Kanaaldijk Noord

Fig. 2.8 View from the Vlisco terrain
Building North

Building North is situated on the factory terrain of textile processor Vlisco. The building institutes the North boundary of the Vlisco terrain and borders the canal on its west side and the castle park on its north side. The industrial character of the Vlisco area is in shrill contrast with the informal character of the castle park. The building was developed by Vlisco in 1953 and has since accommodated the processes regarding the finishing of the fabrics. The original design focuses on the practical functioning of the factory, resulting in large open plan floors allowing a flexible layout of machinery and work spaces. The brick facades with their reflecting glass windows are experienced as closed and distant, which is enhanced by the physical difficulty of entering the building. This difficulty comes from a protective attitude of the company regarding their processes and designs. Therefore, most people are only familiar with the closed exterior of Building North.

![Fig. 2.2 Historic picture of Vlisco machinery.](image)

![Fig. 2.3 Interior Building North](image)

![Fig. 2.4 Vlisco fabrics moving through the interior](image)
Master plan

Building North is part of the master plan proposed for the redevelopment of the canal zone and more particular of the more detailed plans for the Vlisco area. Through interrelating the designs of Building North and the Vlisco area, they strengthen each other. The way in which Building North is incorporated in the master plan is explained next.
Binding element

Building North functions as a binding element between the different adjacent areas. The canal links the industrial character of the Vlisco area with the recreational character of the castle gardens. The canal route is incorporated in Building North.
Routing

The canal route literally passes through Building North, connecting the Vlisco area with the castle park. The building interacts with the explorative routing of the Vlisco area. The +1 route, at 6 meters above ground level, is designed in correspondence with Building North. It offers a more general experience of the building from a slight difference as well as a detailed close up experience where the +1 route meets with the building. This close up experience is complemented with the ability to enter the building.

Fig. 2.10 Master plan Routing

Legend
Canal route
+1 route
Fabric route
Textile related functions

The new functions of Building North include exposition space, an educational function and student accommodation. These functions come from contributing to the overall functional master plan for the redevelopment of the Vlisco area in combination with the possibilities generated by the building's specific qualities such as its large size and flexible open plan layout. More specifically, the functions relate to the past of the building by being textile related.

Fig. 2.11 Master plan Functions
Function Building North

One of the main functions of Building North will be educational. The building has the potential to house this type of function both due to its size and the flexibility of its internal space. This flexibility comes forth out of the concrete constructional grid allowing an open plan layout.

The educational function will be linked to the past of the building. The textile production which used to take place in the building evolves into a textile design academy focussing on educating students in the existing techniques concerning the treatment of textile, the development of new techniques and the creative development of the design and the use of textile.

The work of the students is exposed in the building, stimulating interaction between the students as well as between the students and the outside world. The amount of exposition space increases towards the part of the building which meets with the canal route. This space will be a general exposition space focussed on textile related expositions, including graduate work from the students educated in Building North.

In addition to the educational function and exposition function, the redeveloped Building North will house student accommodation.
Architectural Analysis

In order to influence through the new design the perception of the of proximity of Building North, first a clear conception of the building's existing architecture needs to be obtained. Therefore, an architectural analysis of the building has been done. A model 1:100 has been made as part of this studies. The analysis is presented in the next part of this report in the following order:

- Introduction
- Materialization
- Development
- Facades
  - Park facade
  - Canal facade
  - Vlisco facade
- Interior
- Windows
- Perception of proximity
- Most characteristic elements
Introduction

Building North was designed for textile processor Vlisco to host the finishing processes of their fabrics. It was built in 1953. The 128 meters long building was first realised as a three story building. Soon after the completion the fourth story was added in the same architectural style, and is later in this analysis referred to as extension A. It nowadays shows hardly any difference in age with the original building. The main entrance to the building originally designed with a significant difference in height to the general building has now more or less been incorporated in the increased height of the general building.

Fig. 3.14 The original building

Fig. 3.15 The addition of a top floor

Perception of Proximity
Materialization

The main materials used in the design of Building North are concrete for the construction and floors, red bricks for the facades, reflective glass in steel frames for the windows and a particular yellow paint to highlight certain parts of the facades. The image of the construction shows the concrete structure of Building North. The grid this construction is built in shows in the partitioning of the facades. The bricks used in the facades are of standard measurements known as ‘waal formaat’. They are arranged conforming the most common bond in the Netherlands, the stretcher bond. This is an economically viable and constructionally strong bond. The windows are very dominantly present in the facades. The glass did not always use to be reflective, this was changed in the 1990s in order to block the sun. The yellow colour of the window frames and other highlighted parts of the facade is very particular to the building.
Fig. 3.22 The development of Building North
Development

As can be seen on the historic images, Building North used to be a freestanding entity in its early days. Currently, it has several extensions blocking parts of the original facade. These extensions were mostly realised during the 1990s. The first extension however was built shortly after the completion of the original building. This extension A beheld the addition of a top floor to the building. The first of the more recent extensions, extension B, is designed in the style of Building North and establishes a connection with the Vlisco processing building on this side of Building North. A jump in structural rhythm from the original facade to this part is evident to it being a later addition.

Extension C is located to the east side of the main entrance and is designed in a modern interpretation of the original building's style. It uses the same materials but varies in composition. Two of the additions differ in style in comparison to the original building. The first of these extensions, extension D, blocks part of the ground floor facade on the south side of the building. It has been designed in brick, but of a differing, darker red colour. The composition of the facade shows little relation with the main building. This extension accommodates office space. The second of these extensions, extension E, is a distillation unit designed in contrast to the original building. The concrete unit, cladded with yellow painted metal cladding, blocks the facade of the eastern staircase. The fire escape of the unit asked for part of the original facades' windows being filled up with brickwork. The colour of these bricks does not match with the original bricks of building North. The unit with a rounded of top is now the highest component of Building North where it used to be the main entrance. The distillation unit differs to the main building in height, materialization and morphology, making it into a clear identifier. Following, the Vlisco sign shows on the top part of the unit.
Park side facade

This facade bordering the park has a very strong and uninterrupted structure in horizontal direction. All the windows are of the same proportions and contribute to the horizontal direction of the facade. The upper three levels lie a few meters back from the wall on the ground floor level. This brick wall constitutes the actual physical border between the park and the vlisco terrain. The wall is of a completely closed nature allowing no exceptions. This in combination with the strict structure and reflectiveness of the glass on the upper levels of the facade results in this facade being experienced as a closed unity.

Fig. 3.23 North facade

Fig. 3.24 North facade
Canal side facade

The canal side facade is of a particular shape. It clearly shows the main building and then the extension only on ground floor level to the park wall on the North side. Due to the deviation in measurements of the extended part of the facade, it is even more clearly an exception to the rule stated by the remainder of the facade.

The year of completion of the original Building North has been incorporated in the masonry of this facade. The canal is reflected in the windows when the trees currently growing in between the facade and the canal do not block the view.
Vlisco side facade

The South facade is bordered by a high density, slightly chaotic urban space. This space is relatively narrow and does not allow an overview of the facade, resulting in a fragmented experience of it. This is enhanced by the blocking of the facade by extensions and pipelines. The fragmented facade shows a rule equivalent to the other facades, but with many exceptions which include variations in window size and the addition of exterior staircases. This fragmented facade stands in high contrast with the clear facades on the park side and the canal side where the set out structure is not interrupted.
Interior

The interior is dominated by the concrete construction, organised in a clear grid. With the measurements of one grid element being 7700mm x 7500mm x 6000mm it is of large proportions. This concrete construction also structures the exterior as it determines the measurements and rhythm of the windows.

The interior layout is of an open plan concept, with machinery filling the space. The division of spaces has been painted with the particular yellow paint on the concrete tiled floor. Because of this layout it is possible to see over the entire length and width of one floor on specific points where the view is not blocked by machinery. Vertically the floors are only connected through the exterior staircases.

Fig. 3.29 Interior

Fig. 3.30 Interior
The windows of Building North are all similar in materialization, namely reflective glass in a yellow painted metal frame. Most windows are also similar in proportions and positioning in the facade. There are, however, many small exceptions to this rule. The main part of these exceptions is located at the Vlisco side facade as this is also the facade with the most exterior extensions made to it. The small deviations between the window proportions and positioning results in a somewhat disorderly feeling. The different windows and their frequency is shown in fig. 3.31.
Building North is currently perceived as a distant building when it comes to the perception of proximity. This is due to several factors. First, the scale of the building is very large and the transition between proportions is abrupt. Secondly, the building comes across as very formal due to the closed nature of the facade and its low level of affectability. This is enhanced by the private function occupying the building, excluding nonpersonnel from entering. Thirdly, knowledge concerning the past is only available at the small Vlisco museum, which is not a very inviting place. Moreover, this information concerns mainly Vlisco as a company and has no focus on Building North in particular. Knowledge regarding the present activities taking place in Building North is very much shielded from the public in order to protect the Vlisco product.

All these aspects combined result in a very distant perception of proximity of Building North.
Most characteristic elements

As can be derived from the theoretical research on perception of proximity, the preservation and emphasis of characteristic elements of the building can contribute to a more proximate perception of it. The following elements come fourth from the architectural analysis as being characteristic for Building North. Firstly, the concrete constructional grid dominates the interior experience of space and structures the facades. Secondly, the large proportions make Building North stand out and dominantly present in its surroundings. Thirdly, the contrast in materialization between the externally dominating red brick and the internally dominating concrete of the construction and the floors has a characteristic value. Finally, the typical facades contribute to the building's character as they are the only part of the building most people are familiar with due to the private occupation by Vlisco. The structure is determined by the measurements of the constructional grid, which is complemented with the particular window partitioning and yellow colour.

Fig. 3.33 Constructional grid

Fig. 3.34 Facade
Part Four
Design interventions in Building North
Design Target

The Vlisco area has been a very closed and introvert company terrain. Building North was no exception to this rule. The anonymity of the building greatly contributed to the distant perception and the inapproachable character. The imposing building suited the Vlisco company. It marked the border of their territory and exuberated importance through its closed and aloof appearance. The new function placed in the building does not benefit from this distant appearance. The building will now serve as a connective element, interrelating with the canal route. In addition to that, the functions occupying the building will be of a more public and accessible nature, in strong contrast to the restricted occupation by Vlisco. Therefore the building should now draw people in, stimulate approach, visit and passage through. This is in sharp contrast with the border function it had under Vlisco.

In order to solve this conflict, the following design target is stated: Transforming Building North from a closed and distant separating border to an open and approachable connective element.
Design goals

The design goals for the redesign of Building North are based on the design target of transforming the building from a closed and distant separating border to an open and approachable connective element. This will be accomplished by focusing the design on the alteration of the building's perception of proximity from distant to proximate. The design goals focus on the architectural aspect of influence on the perception of proximity as derived from the theoretical research, namely: preservation, transparency, transition and affectability. The goals combine these aspects with the existing architecture of building North studied in the architectural analysis.

The design goals are first described individually, followed by a diagram showing the relation of the goals to each other and to the aspects 'preservation', 'transparency', 'transition' and 'affectability'.
Interaction interior - exterior
An interaction between interior and exterior is established by increasing transparency. Therefore, both the facades and the floors are physically opened up. This opening up will be designed in keeping of the facades character.

Encouraging approach through transparency
In order to encourage approach and give direction towards the entrances, the openings are designed in a guiding pattern. This pattern is particular to each individual facade and its surroundings.

Emphasizing preserved characteristics
The large scale of Building North is acknowledged as being one of the characteristic elements of the building. It is preserved and emphasized in the experience of the building and its surroundings.

Showing age
Through the preservation of characteristic elements, the stories of the building are remembered and emphasized. The keeping of aged elements adds the factor of time to the stories, strengthening their experience.
Design goals

Transition of transparency
The openings created in the building's facades and floors are gradually increasing towards the canal, encouraging approach of the main entrances where the canal route joins Building North.

Transition of publicity
The function transitions from private on the east side via a semi-public one in the middle to a public function at the canal side, where the public function benefits from the incorporation of the canal route and the higher level of transparency.

Transition in scale experience
The scale experience of Building North is gradually increased to the unique experience of the entire particularly large scale. The gradual transition in experience ensures the approachability of the building and stimulates exploration.

Routing
The routing is designed in correspondence to the transition in publicity of function and the transition in transparency. The organic flow of the route through the preserved constructional grid is inspired on the movement of the Vlisco textiles.
Design goals

Personal influence
The ability to personally influence the building results in an increased level of affectability. The way of influence is incorporated in the design in order to ensure the positive nature of the affects.

Preserving affects
Preserving characteristic affects implied to the building and allowing them to show age, contributes to the communication of knowledge regarding the affects as well as to the level of affectability of the place.

Transition in affectability
In correspondence to the transition in transparency and in publicity of function, the level of affectability is gradually increased towards the open atrium. Here, the space enables a high level of affectability in freedom of exposition design.

Dynamic experience
A high affectability level ensures a dynamic environment. This in combination with an increased transparency factor ensures a continual attraction. The transition in level of affectability and transparency combine into a transition in dynamism.
Design goals

The diagram on the left shows the relation between the design goals and the four architectural aspects of influence on the perception of proximity of a building. These four aspects are transparency, transition, preservation and affectability. They are positioned in the corners of the diagram. The design goals are then positioned within the square formed by the aspects. The closer a goal is positioned to an aspect, the stronger it is related to it. As all goals are positioned in the diagram in the same way, the diagram also shows the relation between the goals. The closer two goals are together, the stronger they are related.
Fig. 4.1 Building North as left by Vlisco
Architectural interventions

The subdivision in design goals as stated before, is regarded as subordinate to the greater, overall design goal of improving the building's approachability through increasing the perception of proximity. The effect of the individual goals is strengthened when they are combined.

The architectural interventions are set out accumulative, resulting in the complete design. The building cleared from Vlisco's occupation is visualised on the left. This is the base for the new architectonic design.

As discussed in more detail in the earlier architectural analysis, the building is vertically divided in four floors with an open plan layout. The space of these floors is dominated by the concrete construction placed in a strict grid. The materials occupying the space are brick, concrete and reflective glass. These materials are maintained as they form a significant part of the building's character. The materials and the aging of them are part of the stories concerning the past of the building.

The interior space of a floor is experienced as one, no dominant subdivision is made in the filling of the space. Though due to heavy machinery, the entirety of one floor space is seldom experienced at once.
Fig. 4.2 Functional organisation transitional from private on the east side to public on the west side
Situating new functions

The new design accommodates three main functions: student accommodation, textile education and textile exposition. These functions are situated transitional from private on the relatively closed East side of the building to public on the relatively open West side of the building. This is illustrated in fig. 4.2. The different shades of red represent the publicity of the function. The lower the opacity of the colour, the more public the function is.

The space assigned to the different functions is done so according to space requirements as well as the rhythm of the structural grid. The number four is dominant in the division of the building in zones by the structural grid. The building consists of four floors. Each floor is four units wide and four times four units long.

The student accommodation is assigned the floor space of four units wide and four units long over four floors. The educational function requires more space and is assigned floor space of four units wide, two times four units long and also covering all four floors. The third and most public function of exposition space is assigned floor space again covering all four floors, of four units wide and four units long.
Fig. 4.3 Opening up the facade
Opening the facade

The facades are physically opened up by removing part of the present highly reflective glass. Resulting in a contrast between the closed and reflective windows and the now opened windows giving a view of the internal happenings. By only removing the glass and not the window frames, the characteristic look of the facades is kept in tact. Only at the points in the facades where the building can actually be entered are the window frames removed. This difference in facade highlights the entrances on the one hand and the characteristic window division of the not enterable facade on the other hand.

As stated in the design goals, the openings are designed in correspondence to the building's surroundings and of a transitional nature. The facade on the Vlisco side is treated according to a very close up experience and opened up on the two lower floors. The canal side facade as well as the park side facade are gradually opened up, with the pattern on the canal side opening towards the canal and the pattern on the park side increasing in openness towards the exposition area.

The design of these patterns is based on a design studies regarding good composition and the theory of pattern design as discussed by Peter F. Smith. He studies the relation between pattern typology and aesthetic architectural theory in 'Architecture and the human dimension' and in 'The dynamics of delight, Architecture and Aesthetics'. He addresses the orders of aesthetics, chaos theory and typology of patterns amongst other subjects. The pattern created in the design of both the park side facade as the canal side facade is a teleological one. This kind of complexity/unit relationship involves progression towards a climax or goal, as stated by A. Zeising as early as 1855. In this case it progresses towards the melting point of the canal route and Building North, and more precisely to the one point inside where the entire scale of the building can be experienced at once.

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8 Zeising, A. (1855). Ästhetische Forschungen.
Fig. 4.5 Opening up the floors
Opening the floors

The removal of part of the floors enables a visual connection between the different levels of the building as is conceptually visualised in fig. 4.6. In addition to that it creates multistory views from outside the building. The pattern of openings has been designed in a similar way as the facade patterns. The openings correspond to the function occupying that particular part of the floor, to the openings in the facades and to the transition in transparency of the building towards the public exposition space, the canal route and the unique scale-experience point. As these factors differ through-out the building, a varied pattern has been designed.

The design of this pattern, as well as with the facade patterns, is based on compositional design studies and the theory regarding this subject written by Peter F. Smith. An example of one of the design studies shown in fig. 4.7 studied possible integrations of floor pattern, spatial functioning, routing and transparency. Another study, regarding the interrelation of the openings between floors, was done via a model, as shown in fig. 4.8.

More than the facade patterns is the floor pattern divided in three phases, corresponding to the three occupying functions. The pattern of openings follows the rhythm created by this division, with an extra 'jump' where the function transfers. The increase in open/closed ratio accumulates towards the exposition atrium, the passage of the building, in a teleological manner.

The pattern of openings in the roof corresponds to the openings in the floors, creating light atria throughout the building.
Fig. 4.9 Creation of climatized space through the addition of walls
Recreation of climatized interior space

As the exterior facade has been opened up by the removal of part of the window glass, the former interior climate has now become a sheltered exterior climate. In order to recreate climatized interior space, closed and glass walls are added internally. The walls form a transitional pattern with a gradual increase of interior space towards the more private functions on the East side of the building. The pattern corresponds to the opening of the facades and the floors as well as to the building’s surroundings. The varying line of the walls ensures an indirect view of the internal space from the exposition atrium, encouraging further exploration of the building.

The materialization of the walls corresponds to the transition in climate within the building and realizes a transition in experience of transparency. This is visualized in fig. 4.9. The added walls are marked in red. The lighter red walls are glass wall panels. The darker red walls are textile covered acoustic walls. The zoning the addition of these walls creates is shown in yellow. Where the building is not coloured is where the climate is a sheltered outside climate. The lighter shade of yellow represents the first climatized zone. The darker yellow areas represent the second climatized zone. The building physics of the design are dealt with in more detail at page 109. The textile material of the closed walls refers to the former function of the building, strengthening the memory of it. The level of affectability is heightened by the ability of occupiers to personally influence the textile. The students of the Design Academy situated in the educational part of the building can design a pattern as part of their graduation to be printed on part of the textile wall. The techniques used for this are based on the Vlisco techniques for an increase in historic value. In this manner the interior space is personalized by the occupying students, their surroundings are of a dynamic nature with the changing patterns and the knowledge regarding the building’s past is communicated.
Fig. 4.12 Addition of stairs and interior walls and floors
Addition of stairs and interior floors and walls

Subsequently to the creation of climatized space, this space is subdivided into comfortable and functional smaller spaces. In order to emphasize the transition from internal common space (between the glass walls and the closed textile walls) to the internal specific spaces (between the closed walls and the original facades), a new floor is added to the last. This also heightens the comfort of these spaces. The floor of the internal common space and the sheltered exterior space is equal in order to create a more gradual transition of spaces. This floor is the original Vlisco floor, relating to the historic background of the building and in keeping with showing age and the passing of time.

There is one floor which deviates from the others, the glass floor implemented at the one point in space where the entire scale of the building can be experienced at once. Through this deviation, the platform stands out and communicates a uniqueness. Also, the glass enhances the scale experience of the place as a view is created downward through the glass, enabling a full experience of the height of the building. As can be seen on the left, the platform has sight lines covering the entire length and width of the building besides the height, creating a unique experience of the entire immense scale of the building at once.
Fig. 4.13 Design overview
Routing

The result of the accumulation of architectural interventions is shown on the left. The routing connecting the varying parts of the building forms a transition in approach, function and experience and reacts specifically to the differing spaces and surroundings it is a part of. It interrelates with the canal route as well as the +1 route and the explorative ground floor routing of the Vlisco area. The routing creates the phased experience of the building, leading up to the atrium. The transition from one part to another is stimulated through sight lines showing hints of activity, stimulating exploration. The dynamically shaped routing resulting this concept refers to the dynamic movement of the Vlisco fabrics through the strict constructional grid.

Fig. 4.14 Routing Concept

Fig. 4.15 Conceptual section showing internal routing

Fig. 4.16 Routing coming to and inside the building
Visualisation

Fig. 4.17 North facade looking into the atrium

Perception of Proximity
Fig. 4.18 Approaching from the canal route on the North side
Fig. 4.19 Student accommodation looking in from the outside
Visualisation

Fig. 4.20 Student accommodation interior
Fig. 4.21 The educational part looking towards the exposition space, illustrating the interrelation between floors through the means of atria.
Fig. 4.22 The educational area, one of the drawingrooms with a large characteristic window overlooking the Vlisco area.
Fig. 4.23 Looking down into the atrium
Fig. 4.24 The platform and the sight line covering the entire length.
An overview of the architectural design of Building North is displayed in the following in 1:1000 drawings of the facades, sections and floor plans. In addition to this a technical detail illustrates the technical design principle relating transition between different climates, as further explained in the corresponding part of the report. These drawings in scale 1:500 are added to this report in appendix B.
Sections 1:1000

Section A4. Longitudinal section looking south

Section A1. Student accommodation
Section A2. Educational function
Section A3. Exposition atrium
Floor plan Ground Floor 1:1000
Floor plans First Floor 1:1000
Detail column and acoustic walls (horizontal) 1:1000
Detail column and acoustic walls (vertical) 1:1000
Building Physics

The redesign of Building North has an emphasis on building physics in several ways. The physical opening of the facades results in the shifting of the climate boundary to within the original building. The shifting of this boundary causes a cold interior construction. By applying insulation between boundaries the temperature loss of spaces with a warm climate is reduced. Because of the continual constructional grid, some of the columns will be in direct contact with cold climate as well as with warm climate. As this construction is of significant measures, it works as a temperature buffer and the negative effects of transferring cold are decreased. Attention does need to be paid to a good interior ventilation to avoid the development of damp. A potential increase in energy costs resulting from the cold construction are compensated by the decrease in energy costs due to the external, non-heated climate of a significant part of the building.

With the large proportions of Building North, the level of natural light can be an issue. The large number of atria ensure natural light reaching deep in the building, creating light and comfortable spaces also further away from the facades.

As the internal spaces are of significant measurements and the materials are mainly acoustically reverberating, the acoustics are paid special attention to. The choice for textile as an important interior material corresponds to the improvement of the acoustics. By applying textile covered acoustics walls, the resonance factor of the interior spaces is reduced, creating acoustically sound interior space.

Through taking into account these physical aspects in the design, a comfortable climate is ensured.
Part Five
Experiencing the new design
Scenario

The new experience of Building North, approaching it from the South side, is described through by means of a scenario.

The experience starts when we arrive in Helmond at the new train station. We get out of the train and catch a view of the surroundings. From the train station wide steps descend onto the station square. First our attention is drawn to the canal, as it is designed interrelated with the square. The square descends into the water via large, multifunctional steps. From these steps and the water itself, the attention draws to the boats occupying the water somewhat further up the canal. The boats ensure the canal to be experienced as an accessible space. Whilst we overthink the opportunity to enter the canal space via this mean, the canal route is wandered upon, heading North. Small shops and eateries are passed on the right hand side, giving a lively and busy feel to the area.

When we turn the corner at the end of this part of the canal route, the Vlisco area is giving act de presence. The canal provides guidance along the route, the Vlisco area an opportunity to explore. The exploration of this area is started through entering 1911 and continues passing ateliers, shops and cafés. When arriving at the Ketelhuis, a glimpse of Building North is encountered. The huge building is largely concealed by the surrounding buildings. When approaching Building North to try and get a better view of it, the facade is experienced in more detail and the variety of it is taken in. Intrigued by this, the building is further approached. Now the opened facades starts providing insights into the interior activity taking place in Building North. Views of the expositioned student work of textile design and the liveliness of the interior space attract and encourage further approach. The opened windows create an incision in the facade where the building and the exposition space can be entered.
Scenario

We notice the absence of window partitioning at the entrance, which emphasizes the presence of the partitioning in the other transparent parts of the facade. On further approach the internal activities appear in more detail through the transparent facade, showing liveliness.
Scenario

We pass through the facade following the canal route. The canopy above the entrance emphasizes the openness of the rest of the atrium. The routing gives a clear direction to the space and we proceed further into the building.

When coming out from under the canopy, our attention is drawn up the atrium. We can see textiles seemingly floating through a clear and strong concrete construction. Between the expositioned fabrics we can see stairs making their way from one platform to another, creating a routing through the spectacular space.

Looking back down the floor space of the atrium is dominated by the route and two stairs. One of these stairs is directed towards us and we dare to wander of the canal route and see where those stairs will take us.
Scenario

After climbing the stairs we reach a platform. It covers the floor space of one component of the concrete construction, fitting in with the grid. We now have a better view on the exposition space. We can see more stairs and platforms, but the space is dominated by the flowing textiles and the strict constructional grid. The routing leads further upwards through the space, turning around the textiles. We are curious to take a closer look at the fabrics and proceed further up the atrium.
Scenario

Whilst moving along the route through the construction we experience the textiles from different angles. Looking down, the canal route is visible, functioning as an orientation element. By getting higher up in the atrium, we get a better overview of the space. One platform starts to draw our attention, the top platform. The entire space seems to be leading up to this platform. Also, we notice the contrasting materialization of the platform. Where the other platforms are concrete floors, this one is made out of reflective glass. We do feel it fits in with the space as the reflective glass is the same as the characteristic windows in the facades. The reflectiveness of the glass prevents us from having a clear view on what happens on the platform, stimulating our curiosity. We continue exploring the space and the exposition, gradually making our way up to the top platform.
Scenario

Whilst we draw nearer to the top platform, the changing view on the textiles gives us a unique experience of the exposition. Taking the final steps, we ascend on to the top platform. Instantly we are hit by the staggering scale of Building North. After experiencing the building one small part at a time, these small parts have now built up to the experience of the entire, dazzling scale of the building at once. We can see over the entire length, all the way to the window right across in the east facade, guided by the rhythm of the construction and the north facade. Looking down we are now on the transparent side of the glass so we can see all the way down to the canal route, experiencing the entire height of the building. Looking across the atrium, a view to the Vlisco side facade gives us the complete scale experience.

After having come to terms with this scale experience, we start to take a look at the view this platform offers of the surroundings of Building North. Looking out of the window right next to the platform, we can see the castle and its park. As we turn towards the canal side of the building the transparency of the canal facade increases downwards, pointing our view in the direction of the canal. As we turn even further we now face the facade on the side we originally entered Building North from. The windows on this side provide us with a view over the Vlisco area with its industrial character.

After taking in the surroundings, our view starts to focus back on the interior of Building North. The sight line over the entire length of the building provides us with a look upon the part accommodating the student dwellings and a view into the educational spaces. Because of the wavering of the walls and the concrete columns now and then blocking the view, we are given hints of the ongoing activities behind them and are drawn to come closer and explore this part of the building. The exposition of student work attracts our attention and we can see stairs leading there from the atrium. We decide to start by continuing to explore the atrium and then add the students’ work to the professional exposition before we descend back down to the canal route.

Perception of Proximity

The gradual experience building up to the one, unique experience of the building as an entity, the connecting of interior and exterior spaces, the communicating of knowledge, the personal, informal feel to the spaces due to a high affectability level of the spaces and the stimulation of exploration, lead to a significantly proximate perception of Building North.
Perception of Proximity

- Knowledge
  - Past
  - Preservation

- Present
  - Transparency

- Experience
  - Scale
  - Transition

- Formality
  - Affectability

Architecture
Conclusion

The research question of this graduation project came from the personal fascination regarding the perception of proximity within the topic of industrial heritage. The research question was defined as: ‘How is architecture related to the perception of proximity?’ This question was first theoretically answered through combining literature studies with analysis of personal experiences gained at the study trip to Italy and a case study of the former Fiat factory Lingotto. Resulting these studies the relation between architecture and the perception of proximity was schematized as shown on the left. From this scheme can be conducted that the four main architectural aspects of influence on the perception of proximity are preservation, transparency, transition and affectability. This theory was then put to the test in the redevelopment of Vlisco’s Building North. The design target set for this redevelopment was to transform Building North from a closed and distant separating border to an open and approachable connective element. The design goals for this redevelopment were then determined by combining the four architectural aspects of influence on the perception of proximity with the unique properties of Building North, derived from a profound architectural analysis. The design goals were then translated into architectural interventions starting from the different approaches towards the building. Extensive design research was done in order to compare design alternatives and strengthen the design by combining interventions into one coherent architectural experience. Also, careful thought was given to the interrelation of the design with the proposed master plan for the area.

The architectural interventions include communicating knowledge through the preservation and emphasis of characteristic aspects of Building North, such as the image of the facades, the concrete constructional grid and the remarkable scale of the building. Also the reference to past activities, including the use of textile as one of the main interior materials contributes to the communication of knowledge. The increase in transparency through the opening up of facades and floors, communicates knowledge concerning present activities. The heightening of the level of affectability by incorporating textile walls with patterns designed by the building’s occupants as well as creating a large amount of exposition space further contributes to the design. As does a transition in the experienced scale by phasing the approach through creating a transitional, teleological pattern in openness, interior, routing and approach. This pattern builds up towards the one point where the enormity of the complete magnificent scale is experienced. Here, the building is experienced most strongly as the connecting element as persecuted in the design target. The different areas within the building as well as the characteristic building itself and the varying surrounding areas can be experienced altogether, in strong relation with each other, as they interconnect at this point. Through these architectural interventions the perception of proximity of Building North has been significantly changed from a very distant one to a significantly proximate one. Resulting in an approachable building functioning as a connecting element within the building itself as well as in its surroundings.

The achievement of this significant change in the perception of proximity of Building North through architectural means gives value to the theoretical research on the topic. It shows how the theory concerning the relation between architecture and the perception of proximity can be applied in architectural design and can improve architectural designs for the redevelopment of industrial heritage.
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All other images are own production of the Industrial Water Street Graduation Studio.

Website

1. www.industrialwaterstreet.com
Afterword

This graduation project has been very hard work, but was most definitely worth the effort. I have found it very pleasing to be able to spend a full year studying on one project, as it enabled me to research the topic on a much deeper level than would otherwise have been possible.

I would very much like to thank both my tutors, Irene Curulli and Gijs Wallis de Vries for their input and support. I feel they let me free to find and follow my own interests within the studio and I really appreciate that.

Also it would not have been such a pleasant year if it had not been for the good group collaboration, and I would like to thank Myrthe Buijs, Dominique Geelen and Rik Verhalle for an incredibly companious year.

The last weeks were the most stressfull of all with the end drawing near. I have had great people around me on whom I could always count for support, so a big thanks to them!
Summary

This project is part of graduation studio Industrial Water Street tutored by dr. ir. Irenede Curulli and dr. ir. Gijs Wallis de Vries. This studio focuses on industrial heritage and more particularly on industrial heritage of canal zones. Helmond was set to be the case study for this studio as it is one of the five ‘Brabant cities’ with an interesting canal zone.

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