

**HIER**

**DAAR**

**Hier en Daar** - *An exploration of the potential of urban design processes to foster connectivity for urban areas with a high level of residential diversity*

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**MSc Thesis**

*Hier en Daar*

An exploration of the potential of urban design processes to foster connectivity for urban areas with a high level of residential diversity

Master of Science in Architecture, Urbanism and Building Sciences

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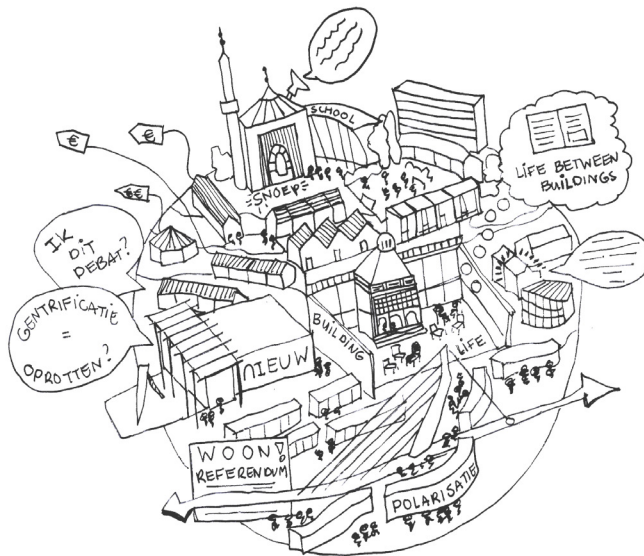


Figure 1 Collection of memories

# Preface

This master thesis is a joint graduation project of Urbanism and Science Communication at the Delft University of Technology. The thesis presents my desire to understand design assignments from multiple perspectives. It offers a greater understanding of problems and their complexity, and it offers a broader spectrum of potential solutions.

My motivation for researching connectivity in diversity did not arise from one experience, but is shaped by a collection of memories, arising from personal upbringing and reflections on professional encounters, as presented in Figure 1. An example is the drawn mosque - a building that often evokes resistance from opponents of the Islam in the Dutch society. However, the mosque next to my high school has created positive memories, as we would go there to buy cheap sweets, and during French listening tests, it would suddenly start to broadcast its prayers. The perfect moment to quickly peek at the answers of your neighbour. These small acts are the ones that enrich the urban experience. Figure 1 presents my strong conviction for the added value of residential diversity, but it also presents my worries for the current state of affairs.

This thesis is an invitation to become aware of your own values related to the built environment, along with exploring the values of others. I hope that designers, researchers and practitioners will communicate their values more transparent, and act accordingly. Alongside operating with an open attitude towards other valuations, and therewith embracing the diversity that is out there.

It is a challenge to have an interaction with someone you do not know, or do not feel familiar with. It is an act of uncertainty and vulnerability. It is the unknown. An act we do not always have many words for. You're welcome to read this thesis, which aims to extend - with text and images - the words of *hier en daar*, a connection in residential diversity.





# Acknowledgements

I would like to thank MaartenJan Hoekstra, Caroline Wehrmann, Machiel van Dorst and Maarten van der Sanden for the great support during the research project. All of you have helped me with the act of *shifting*, moving me to other thoughts than my own, and with *rooting*, explaining and exploring what I was trying to say. All of your help, by making use of *rooting* and *shifting*, has contributed to broaden of my own *hier* and *daar*. Specifically, I want to thank MaartenJan for the many nice and uplifting conversations in which you always thought along with me, helping to form an outcome that has become so much better than I expected. I want to thank Caroline for giving me great confidence in the steps and iterations I took, and for pointing out the value of my work, which has helped to brighten the outlook on the overall products. I want to thank Machiel for contributing his knowledge on people-oriented research and design, and broadening my view on social and physical aspects of the urban fabric. I want to thank Maarten for deepening the abstract concepts of this research, demonstrating the importance of thoroughly understanding and implementing emotions and its values. I have enjoyed the conversations with all of you a lot, and the thesis process would not have been so enjoyable without your contributions.

Special thanks to the Veldacademie, and in particular Ruth Höppner for the guidance and support. It has been helpful to receive guidance in relation to the context of Rotterdam. The ongoing research of Veldacademie on urban issues, contributing to a more value-driven, and just city, and their pro-active attitude, is inspiring.

Thanks to all the professionals that have helped me with exploring the *daar*, the context of Rotterdam West, and Schiemond. Specifically, I am grateful for Otto Zwetsloot for his enthusiasm, and for introducing me to a large network of involved professionals and citizens.



I really appreciate how you have helped me to get involved in the activities and gatherings of the neighbourhood of Schiemond.

I want to thank all of the citizens in Schiemond and surrounding neighbourhoods that have explained their *hier* to me during the citizens interviews, and were willing to draw their daily routines and mental maps of the area. It has been really enjoyable to hear all these different and interesting urban experiences.

Also a big thanks to the students of Urbanism and Science Communication that have helped me with the development of this thesis, and that have made the graduation year very enjoyable: Marieke, Jan Gerk, Wouter, Annika, Linda, Rik, Anne, Martine and Bram. I will cherish all the shared laughs.

I want to thank Thijs, Willie, Rik, Linda, Jorien and Nina for the fine-tuning of all written words. Thank you Linda, for your pleasant calm appearance and constant support during the presentations. Thank you Coco, for our sincere conversations, your artistic look and your advice on storytelling. Thank you Nina, for the inspiring and motivating conversations, and the contribution of your outstanding graphic design skills.

I would like to thank my parents and siblings for their infinite support regardless of what I do. Last, I am very grateful for those that have formed my *hier* in Delft. Especially during the time in which my capacity of *rooting* was lacking. Thank you to those that have put my feet on the ground: Roos, Nikki, Nina, Iris, Coco, Willie, Anne, Rutger, Tim and Thijs. And, I want to thank Remco, being my *hier en daar* at the same time, never far away.

Oukje Marlieke van Merle  
Delft, October 2019



# Summary

Due to an (1) erosion of institutions, (2) an increase of homogeneous networks, (3) a rise of urban places without clear links to each other, and (4) an upcoming tendency of high-income and high-educated residents to close themselves off within the built environment, the capacity of space to facilitate face-to-face interactions within residential diversity is questioned. Connectivity within residential diversity, however, is seen of high importance in current times of increasing polarization around economic and ethnic diversity.

Therefore, this thesis has sought for the potential of urban design processes to foster the value of connectivity within urban areas with high level of residential diversity. An answer to this search is developed through 4 substantive parts: *perspective, analysis of urban conditions, design and design mechanisms*. These parts are combined in an overarching end product, *a roadmap* for urban designers to foster connectivity in residential diversity. The findings are developed through a design-based research which makes use of a case study area: neighbourhood of Schiemond and surrounding areas in the city of Rotterdam, Netherlands.

## Perspective

Multiple perspectives - physical, social, theory and practice - differ on a potential definition for the value of connectivity, especially in a context of residential diversity. Essay B (2.3) analyses a variety of definitions of the value, in order to develop a working definition for this thesis. The definition of the value for this thesis is: *urban conditions that enhance the number of opportunities of social encounters, forming a dynamic connected area with constant change of individual identifications and sense of home in space and time, while also taking the need for distance into account*.

The internal and external motives to strive for connectivity are explored in Essay C (2.4). This thesis is motivated by arguments of the 'horizontal dimension', and therewith aims to develop connectivity to enhance mutual understanding.

To be able to do justice to the complexity of *diversity*, a suitable analysis and design approach is developed (2.2). First of all, this has led to the avoidance of the concept of identity, and the embrace of the concept of (fluctuating) identifications and senses of home through space and time,

seen as the *ambiguous perspective*. A change through space and time is facilitated by variety of *routes & routines* a citizens take on daily basis. This causes the variety identifications and senses of home.

Matching concepts are, the concepts of *hier and daar*. *Hier* is defined as a mental state in which an individual is turned inwards, either shaped by the physical and/or by the social environment, facilitated by places that offer a sense of home and or identification. *Daar* is defined as a mental state in which an individual is turned outwards, either shaped by the physical and/or social environment facilitated by places that offer space for the exploration of unknown identifications and or senses of places.

From an *unambiguous perspective*, the diversity of the built environment is seen as static, in which urban areas, named as *enclaves*, possess a distinguished use, design and experience.

### **Analysis of Urban conditions**

The three concepts, arising from the developed perspective, *enclaves* (3.1), *routes & routines* (3.2), *hier and daar* (3.3), are used to explore the urban conditions of *connectivity* for the case study area Schiemond, Rotterdam. It resulted in knowledge on which areas possess a strong, and which a low connecting capacity. The capacity is mainly low in Schiemond, and mainly high in 'Historisch Delfshaven'.

### **Design**

In a design for connectivity in residential diversity, it is important to always take the *hier* and the *daar* into account, as it is seen as an interaction between the 'known' and the 'unknown'. A cross-table (4.2) shows which different types of spaces exist if a design takes both the presence of *hier* and the presence of *daar* into account. Three various types of spaces (4.3) emerge from the cross-table, with a development of four accompanying design principles to achieve these type of spaces (4.4). These principles are illustrated in a design for the case study area of Schiemond. First of all, it illustrates spaces of 'shared presence', which can be developed through the design principles of *interweaving* (5.2), and *patching* (5.3). Secondly, it illustrates spaces of 'presence of a strong and shared *hier*', which can be achieved with the design principle of *buttoning* (5.4). At last, the applied design shows spaces with 'borders for invitation', developed with the principle of *ribboning* (5.5).

Design guidelines (4.6) are made to support designers with a better

understanding of which considerations should be made, they are related with opening up, keeping and/or celebrating *enclaves*, developing new *routes & routines*, focus on the *design of appearance* and find a balance between *product and process*.

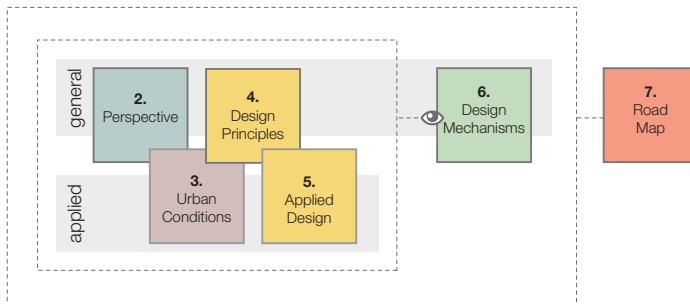
The applied design (5.1) illustrates that on urban places the design principles are often combined, to strengthen the potential to foster connectivity in residential diversity.

### **Design Mechanisms**

A reflection on the design-based research process, led to the detection of valuable design mechanisms (6.1): 1. *rooting*, 2. *shifting*, 3. *exploring the subsurface*, 4. *equalizing idealism & realism*, 5. *iterating the value definition*, 6. *embracing social & technical collective*, 7. *switch of perspectives*, 8. *managing of differences*, and 9. *developing a shared mental model*. These mechanisms can be helpful when an urban designer or planner aims to execute a design process starting from a value, which is often – although not always made explicit - the case in urbanism design projects.

### **Roadmap and Conclusion**

The final, and overarching product, *a roadmap for connectivity in residential diversity*, (Figure 105), presents four steps an urban designer should take to arrive at a final design of spatial interventions. Therefore, it concludes the main research question on *How to use an urban design process to foster the value of connectivity for Schiemond in Rotterdam, an urban area with high residential diversity?* The first step, named *explore intention*, involves a reflection on own motives and definition of the value of connectivity. This step is supported by the essays in the perspective chapter. A designer should reflect if she/he and other stakeholders in the design process agree. In case they do not agree, the design mechanisms can be useful to further develop an new value sensitive design and research process. In case they do agree, the second step a designer should take, named *adapt attitude*, requires to develop an attitude towards residential diversity that does justice to its complexity, including the *ambiguous* and the *unambiguous* perspectives. In the third step, *analyse*, concepts of *enclaves*, *routes & routines*, and *hier* and *daar* need to be analysed. At last, during the fourth step, *design*, these findings can be translated into new type of connecting spaces by applying the design principles, with help of the design guidelines.



**Figure 2** Structure of the thesis with a distinction between general, and applied chapters in corresponding numbers and colours with the layout



# Reading Guide

This thesis reads like an alternation of (a) general research findings and (b) applied findings. The general chapters can be read separately. However, the applied findings, linked to a specific case study area, make this research more concrete, and thus illustrate the answer to the main research question.

The chapters 2 to 5, form the main elements of the design-based research (Figure 2). The chapter on *design mechanisms* reflects on the design-based research process, and the design and research steps taken in the first four chapters. The last chapter, the *roadmap*, combines the findings of all the previous chapters into one product.

## Layout

The colours of the blocks in Figure 2 correspond to the colours of the chapters in this thesis. To show differences between the general and applied chapters, the general chapters, 2, 4, 6 and 7, have a two text column layout, and the applied chapters follow an one column structure. The other supportive chapters, 1, 8, 9, 10 – *introduction, conclusion, discussion, reflection*, are layout in a grey colour. This is done to highlight the difference between the shell and the body of the report.

In the perspective chapter, author's interpretations and responses to theory are highlighted with a **dark orange** colour. This is done to make all decisions based on theory, transparent, and to invite the reader to consider the viewpoints her-, or himself.

Most of the figures are made by the author, therefore, no source is specified for these images. However, when the figure is not made by the author, the relevant author is added to the caption.

Enjoy!



# Listening Guide

The songs in this listening guide aim to stimulate the reader to approach the coming chapters from multiple perspectives, in line with this thesis. It can help with the act of *shifting*, moving to other thoughts than your own. The list is made intuitively. Do you have a suggestion?

## Reading moment

p. 32, Methods of fieldwork,

p. 49, Approaching Residential Diversity

p. 70, Transversality

p. 105, Side note on Future diversity

p. 133, Hier & Daar in Schiemond

p. 164, Design principle of *interweaving*

## Song and artist(s)

*Alles doet ertoe*, Herman van Veen

*Onvoorspelbaar Onvoorspelbaar*,  
Iris Penning

*Get to know you*, Tina Dico

*Alles went*, Sef & Aafke Romeijn

*From the city*, Charles Pasi

*Iedereen is van de wereld*,  
The scene



QR code of Spotify List with  
'Hier en Daar Klanken'

3	Preface
5	Acknowledgements
9	Summary
13	Reading Guide
15	Listening Guide

# 01

## Introduction

21	1.1 The start
24	1.2 Problem statement
27	1.3 Knowledge tension
28	1.4 Aim
29	1.5 Research questions
31	1.6 Research approach
32	1.7 Methodology
40	1.8 Relevance

# 04

## Design Principles

153	Introduction
155	4.1 Emotions of <i>Hier</i> and <i>Daar</i>
157	4.2 <i>Hier</i> x <i>Daar</i>
159	4.3 Type of Spaces
162	4.4 Design principles

# 02

## Perspective

45	Introduction
47	2.1 Theoretical framework
49	2.2 [A] Approaching residential diversity
61	2.3 [B] Defining the value of connectivity
79	2.4 [C] Exploring the wish for connectivity
86	2.5 Summary
89	2.6 Conclusion SRQ1

# 03

## CASE | Urban Conditions

93	Introduction
95	3.1 Enclaves
113	3.2 Routes & Routines
133	3.3 <i>Hier</i> & <i>Daar</i>
145	3.4 Summary
149	3.5 Conclusion SRQ2

170	Overview four design principles
173	4.5 Elements for considerations
181	4.6 Design Guidelines
184	4.7 Conclusion SRQ3

# 05

## CASE | **Applied Design**

- 189 Introduction
- 191 5.1 Overview of the design
- 195 5.2 Interweaving
- 203 5.3 Patching
- 207 5.4 Buttoning
- 219 5.5 Ribboning
- 224 5.6 Mutual reinforcement
- 229 5.7 Considerations
- 233 5.8 Conclusion SRQ4

# 06

## **Design Mechanisms**

- 237 Introduction
- 238 6.1 Valuable Mechanisms
- 247 6.2 Conclusion SRQ5

# 07

## **Roadmap**

- 249 Roadmap

# 08

## **Conclusion**

- 255 Conclusion

# 09

## **Discussion**

- 267 9.1 Contributions
- 272 9.2 Opportunities for cross-pollination
- 277 9.3 Considerations
- 279 9.4 Limitations
- 281 9.5 Recommendations for further research

# 10

## **Reflection**

- 287 10.1 The Project and its values
- 289 10.2 Added value of double degree
- 290 10.3 Personal process

- 293 Bibliography
- 299 Appendices



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## 1.1 The start

“Planning is an always unfinished social project whose task is managing our coexistence in the shared spaces of cities and neighbourhoods in such a way as to enrich human life. [...] This social project has an imperfect past and an uncertain future, but it aims for a new urban condition in which difference, otherness, diversity and plurality prevail [...] living alongside others who are different, learning from them, and creating new worlds with them rather than fearing them” (Sandercock, 2014, p. 134).

The urban writings of urban planner and academic Leonie Sandercock form a source of inspiration for this thesis. The idealistic message in her writing about ‘urban conditions in which otherness, diversity and plurality prevail’ is in line with the three-folded starting point of this thesis. One side is formed by an approach of designing cities from values. The second side is formed by a professional interest in diversity of residents and its urban areas. Both these topics are explored within the third side: the built environment. So three elements – value sensitive design, residential diversity and the built environment - form together the overarching start of this thesis project: value sensitive design for urban areas with high residential diversity. This section will further illustrate all three of them.

### **Value sensitive design**

This thesis is influenced by the recently launched ‘Just City Index’ (2018) of professor Toni Griffon and her research team at the Harvard Design School. This index presents 49 values that can represent urban justice, which differ per person and per urban context. The underlying concept of this index- designing cities from values – forms the base of this thesis. The theoretical concept used for this approach, is called ‘value sensitive design’ (Van de Poel, 2018). It is defined as “integrating values of ethical import from the start in the design process of new products and systems” (Friedman as cited in Van de Poel, 2018). Values are seen as “lasting convictions or matters that people feel should be strived for in general and not just for themselves to be able to lead to good life or realize a good society.” (Van de Poel & Royakkers as cited in Van de Poel, 2018). This starting point adds a normative framework to the research project and the urban design assignment. This can be seen as a subjective design and research, instead of an objective one. However, according to Campbell (2006) urban planning always possesses values, although they are usually

not explicitly expressed. In the history of planning, the urban planner has had the role of an instrumental rationalist, being mainly concerned with the private realm. This has switched through time towards a planner as a facilitator, a professional that is more concerned with the public realm (Campbell, 2006). Campbell argues that both positions put an emphasis on the neutrality of the planner. However, according to Campbell (2006) and Fincher & Iveson (2008), a planner cannot be seen as a neutral observer or facilitator. Fincher & Iveson say (p.6):

“For the planner as instrumental rationalist, the fantasy of neutrality was sustained by claims of superior technical knowledge and expertise, on whose basis planners could claim to be acting in the ‘public interest. For the planner as facilitator, the fantasy of neutrality is sustained by the claim that they can somehow avoid any values [...]. The point here is that (planner) [...] must also articulate the value frameworks through which they exercise judgments when faced with the different kinds of difference which characterize urban life.”

## **Diversity**

As said, the other side that has formed the starting point is a professional interest in diversity of residents and urban areas. Hereby diversity of residents is seen as a diversity of multiple factors, such as economic and ethnic <sup>(1)</sup> backgrounds. It can be seen in line with the concept of super-diversity which functions as “a conceptual device with which to observe complex societies. It points to the changing conditions of diversity and the multiplication of variables, a phenomenon which differentiates today’s urban societies from previous demographic conditions. [...] It highlights the importance of going beyond the analysis of conditions of multi-ethnicity when analysing diverse urban areas.” (Wessendorf, 2010, p.7). Diversity is also seen as a diversity of urban areas and related residents or users which can differ in design, use and experience (Burgers, 1999).

(1) Within the Dutch context, authorities such as WRR (wetenschappelijke raad voor het overheidsbeleid) and SCP (sociaal cultureel planbureau) use the word (diversiteit naar herkomst) ‘diversity of origin’. Other authors (Veldboer, Duyvendak, Bouw, 2007), use words of ‘cultural diversity’ or ‘diversity of color’. International scholars mostly use the term ‘ethnic diversity’. It is good to know that ethnicity does not always correspond with nationality, or national boundaries. The Dutch translated term ‘diversity of origin’ is not used within an international context. So, there is a diversity of words related to the word of diversity. This thesis will use the term ‘ethnic diversity’, as it fits the literature search the best. However it is aware of the different perspectives and its slightly differences.

These two starting points are studied in relation to the built environment, which is seen as the physical and social environment. A case study location is used to make the research and design tangible. The choice has been made to work within a Dutch context, a context that is familiar to the author. This choice is made due to the wish for diving into an urban context with a high level of diversity and to get to know the location and her residents. Thereby understanding the language is of great importance. The case study location is described briefly.

### **Case study area**

The city that is explored is Rotterdam, because it is a very diverse city, as 50% of the population has a migration background (Gemeente Rotterdam, 2018). The city can be seen as a microcosm (Burgers, 1999). City-maker Malique Mohamud calls it as a state of superdiversity (Tegenlicht, 2018). Secondly, the city is also diverse in economic composition. The city houses residents from low- to high income levels. The percentage of low-income residents is 51 percent. (Gemeente Rotterdam, 2018). This is sometimes seen as a weakness by the municipality (Gemeente Rotterdam, 2007). However, from an inclusive perspective it can be seen as a strength, because a city is capable of facilitating diversity of residents and is not exclusively for prosperous citizens. (Fainstein, 2014).

A city district within Rotterdam that consist of high level of residential diversity is Delfshaven. The ethnic diversity is high, the economic diversity on the other hand is low. Currently the area possesses a high amount of low real estate value in relation to the average real estate value of Rotterdam (data from Gemeente Rotterdam, 2018). However, the expectation is that the economic diversity will increase because of planned urban developments.

More zoomed-in, the neighbourhood Schiemond and surrounding area is interesting for further research, because it is right in-between these potential urban development areas. Secondly the neighbourhood possesses a high contrast in relation to surrounding neighbourhoods. Schiemond is very diverse in relation to ethnic diversity, but is very homogeneous from an economic perspective. It houses mainly low-income groups. Contrarily, the adjacent neighbourhood Lloyd Kwartier, is exact the opposite.

In short, neighbourhood Schiemond and the city district Delfshaven, Rotterdam, is where the research and related fieldwork delves into depth.

So three elements – value sensitive design, diversity and the built environment - together form the overarching start of this thesis project: value sensitive design for diverse urban areas.

## 1.2 Problem statement

This paragraph presents first a general description on challenges within urban areas with a high level of residential diversity. These challenges present a more generic problem statement. This is followed by an applied problem statement, which describes how these challenges are visible within the case study area.

### **The diversity challenge**

One of the important components of globalization has been an explosive increase in long-distance immigration. This has changed the demographic composition related to ethnicity of many countries, and especially large western cities (Burgers, 1999). Within these cities a high level of ethnic diversity can be traced. In two large cities in the Netherlands, Amsterdam and Rotterdam, dwell citizens of 206 different origin groups (data of 2015, WRR, 2018).

Besides the ethnic diversity, the economic diversity within cities is often also high. Large cities and their economic attractiveness are places where citizens with a marginal existence seek to make a life. Alongside, after a trend of suburbanization in the Netherlands in the sixties, caused by increase of income and mobility, de-suburbanization and re-urbanization caused an increase of mid to high-educated and mid to high-income residents living in cities (Burgers, 1999).

Living together with a high level of ethnic and economic diversity causes multiple challenges. First of all, a higher level of ethnic diversity within neighbourhoods is experienced as a decrease of home feeling, cohesion and feeling of security (WRR, 2018). Secondly, polarization has increased in the Netherlands around the social-cultural topics, such as immigration. A topic that has actually partly established the current diversity. The polarization around these social-cultural topics is especially high between low- and high-educated citizens. (SCP & WRR, 2014).

These issues ask for face-to-face interactions, an on-going dialogue on how to develop a society that is able to live together. Or as Sorkin says: "It is no tautology to suggest that the only training for living together is living

together.” (Sorkin as cited in Talen, 2008). A space that can foster face-to-face interaction within this diversity of residents and opinions is the living environment (SCP & WRR, 2014).

However, some social developments question the capacity of space. First of all, there is an erosion of institutions such as family and church, in which social mixing takes place. People can choose themselves who they meet, and we often choose people similar to ourselves (SCP & WRR, 2014). This is known as the network society. However, a network society, does not necessarily mean residents (of diversity) are more connected, it actually creates a rise of homogeneous networks (WRR, 2018). Secondly, the developed network society creates urban places without clear links to each other (Hajer & Reijndorp, 2001). Thirdly, there is an upcoming tendency of high-income and high-educated residents to close themselves off in closed living forms (SCP & WRR, 2014).

These three trends can be seen as an unfair development, when it clashes with societal values. Intrinsic values can be leading in the assessment of problems, in which these values present a disconnected society as unjust (Buitelaar, 2019).

These previous described societal developments form the (more) generic problem statement.

### **Generic problem statement**

Due to (1) an erosion of institutions such as family and church (SCP & WRR, 2014), (2) an increase of homogeneous networks (WRR, 2018), (3) rising of urban places without clear links to each other (Hajer & Reijndorp, 2001) and (4) an upcoming tendency of high-income and high-educated residents closing themselves off within the built environment (SCP & WRR, 2014), the capacity of space to facilitate face-to-face interaction within residential diversity is questioned. The face-to-face interactions are however, seen as of high importance in current times of increasing polarization around ethnic and economic diversity (SCP, WRR, 2014) and deterioration of images of a variety of social groups (RMO, 2005).

To be able to get a better understanding of the challenges caused by diversity, the case study area presents a context that can make the challenges more tangible. The applied problem statement describes how these challenges are visible within the case study area.

### **An applied problem statement**

The conditions of disconnection of diversity for the specific case study area are elaborated below. Three issues of disconnection for the neighbourhood of Schiemond and its city district Delfshaven, in Rotterdam were defined.

### **Disconnection between citizens within a defined area**

Disconnection between citizens within a defined area is seen as a form of disconnection on a small scale, on the level of a neighbourhood. Residents of Schiemond have mentioned that citizens within the neighbourhood 'live on their own islands' (citizen of Schiemond, personal communication, November 15, 2018), which can be seen as a low level of connectivity within the neighbourhood area. Within Schiemond the disconnection is mainly visible as a disconnection between various ethnic groups (mentioned in interviews of professionals involved in Schiemond, January 2019). Cohesion is high within social groups of the same origin, however, cohesion is low between social groups (Gemeente Rotterdam, 2016). This can become problematic in case it causes misunderstanding of different behaviours (interview professionals, January 2019; Veldboer, Duyvenbak & Bouw, 2007).

### **Disconnection between landscapes and citizens**

Within the Delfshaven there are different landscape types present. Burgers (1999) describes that these urban landscapes, caused by societal developments, differ in experience, use and design. Landscapes that stand out are the Lloyd Kwartier with her high-income residents, and Schiemond on the other hand, as the coloured and marginalized space. Next to these post-industrial areas, there is still a harbour area present, called the M4H area. Right now there is no well-designed connection present between these areas. The current situation exist of many boundaries. Boundaries are defined by Sennett (2006) as "edges where things ends". So the neighbourhoods express themselves as different clusters, where 'things ends'. Clustering in itself is not wrong as people prefer to live in a neighbourhood with a homogeneous group (Dorst, 2005). So connectivity should respect the desire to live and associate with others from whom they feel particular affinity. However, disconnection leaves opportunities unused. Crossovers between a diversity of residents can foster creativity, vitality and economic growth (Talen, 2008). Another perspective on the issue of disconnection, is written down by Fincher and Iveson (2008). They highlight that it is important to keep

places connected to stimulate encounters, in line with their vision on diversity from a justice perspective. An encounter on crossing paths can function as “open places where people can learn about and explore their diverse and potentially shifting identities without being slotted ‘into’ pre-given categories.” (Healey, 2010 – review on Fincher & Iveson’s work).

### **Disconnection as a disintegration of areas in the urban fabric**

Next to social-spatial disconnection, the area south of the Schiedamseweg is spatially disconnected. As said, the area has functioned as a harbour and is partially transformed into a residential area. This area is not integrated into the city fabric, as pre-war residential areas.. The lay-out of the street patterns, the shape of the residential blocks and low level of services causes the area to be less integrated within the city than other areas. The traffic flows do not only influence social safety, but also economic vitality and street life (López & Nes, 2012). These aspects are of a low level within the neighbourhood of Schiemond (confirmed in interviews with professionals, January 2019 and interviews with citizens, April and May 2019).

The three described issues of disconnection differ. They differ in their approach on disconnection, either from a more social perspective, or physical one. The value of connectivity overlaps this variety of perspectives, as connectivity can apply both to social and physical domains. The problems of disconnection and the value of connectivity narrow the scope of this thesis project. The start of this thesis, value sensitive design for diverse urban areas, is therefore made more specific into ‘connectivity for diverse urban areas’.

## **1.3 Knowledge tension**

When diving into the topic of connectivity for residential diverse urban areas, a knowledge tension is detected. It is commonly referred to with the term ‘knowledge gap’. However, it is not seen as a gap of knowledge, but as conflicting knowledge, therefore, it is defined as a knowledge tension. It is a tension between theory, practice, social and technical dimensions, as described below.

### **Technical – Social – Practice – Theory**

From a technical perspective the value of connectivity is often approached from a mobility angle, looking at the extent to which an urban area is integrated into the urban fabric. However, from the social domain, scholars focus on the concept of social cohesion, which is often described separately from the physical environment.

In practice, urban designers and governmental bodies, often aim for developing places in the city in which residents can 'encounter each other'. In the urbanism domain the focus is often on meeting each other in public space.

In theory all three mentioned above – technical, social and practice, are criticized. First of all, it is not just seen as a technical subject. Secondly, the pursuit of cohesion is questioned, with questions to which extent these objectives should be aimed for in modern cities with a high level of residential diversity (Amin, 2002), by these authors facilitating plurality, instead of cohesion, is promoted. Thirdly, the focus on the design of public space is also criticized; "Habitual contact in itself, is no guarantor of cultural exchange." (Amin, 2002). Examples of a different approach promote a social oriented approach towards issues of disconnection. These theories can be interesting for providing answers for a better social connectivity, however, the spatial aspect is often missing.

The knowledge tension described above formulates the focus of this research. There is a wish in practice for social connectivity within space between diverse social groups and there is theoretical knowledge on how to create social interaction within space by improving the quality of urban conditions. However, both the wish of practice and the urban knowledge field are criticized from the described theoretical perspective. It is a tension that fascinates the author and there is a wish to further explore this tension within this research.

## **1.4 Aim**

This research aims to formulate a perspective on how to approach connectivity in an urban area with high residential diversity by using input from practice, theory and social and technical perspectives, so it becomes suitable for urban analysis and design. Furthermore, it aims to gain knowledge on potential design solutions for improving urban conditions of



connectivity in line with the formulated perspective. This is being done by creating design principles and by an applied design for the case study area. Thirdly the research aims to reflect on the most important mechanisms used in the iterative design process that can be useful for practice. The overarching, and fourth aim, is to combine all three aspects, within the final phase of the research, in an overarching roadmap that presents a design approach for achieving connectivity in residential diversity, answering the main research questions.

## 1.5 Research questions

From the problem statement, knowledge tension and the aim of the research the following **main research question** is formulated:

*How to use an urban design process to foster the value of connectivity for Schiemond in Rotterdam, an urban area with a high level of residential diversity?*

There are 5 sub research questions that support the main research question (SRQ 1 – SRQ 5).

**SRQ 1** *How to approach residential diversity in relation to the value of connectivity so it is suitable for urban analysis and design?*

**SRQ 2** *What are the urban conditions of the case study area in line with the developed perspective of SRQ 1?*

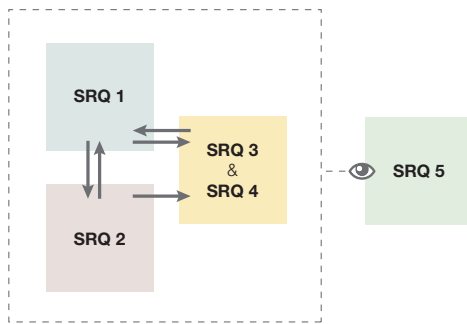
**SRQ 3** *How to design for connectivity in line with the developed perspective of SRQ 1?*

**SRQ 4** *How to design for connectivity for the case study area of Schiemond, Delfshaven, Rotterdam in line with the developed perspective of SRQ1 and design principles of SRQ3?*

**SRQ 5** *What are the valuable mechanisms of the executed design-based research process that can contribute to practice (the urbanism discipline)?*

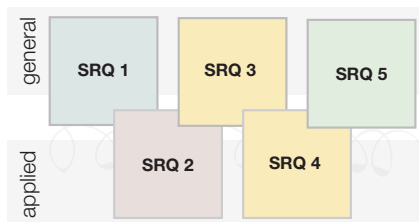
SRQ 1 aims to formulate a perspective on how to approach connectivity within urban areas of high residential diversity. SRQ 2 aims to understand the case study area in line with the developed perspective. SRQ 3 and SRQ 4 aim to explore design solutions in line with the developed perspective. The design is developed in the form of design principles which answers SRQ 3 and in the form of an applied design for the case study area which answers SRQ 4. SRQ 5 aims to reflect on the design process of this research and its value sensitive design process, to be able to translate it to potential design mechanisms for the discipline of urban design and planning.

Figure 3 shows how the sub research questions are interrelated.



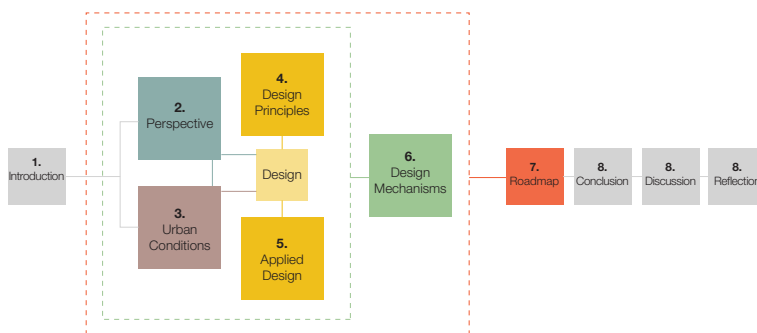
**Figure 3** Visualization of the coherence of the sub research questions

The sub research questions are designed in such a way to be able to provide answers for a specific case study area, which are seen as the *applied* questions and answers. They are asked and answered in sub research question 2 and 4. The other three sub research questions aim to provide (more) *general* answers (Figure 4).



**Figure 4** Visualization of the coherence of the general and applied sub research questions

All these sub research questions are answered in individual chapters, visible in Figure 5. The dark orange block “Roadmap”, placed after “Design mechanisms”, suits the fourth aim described in “1.4 Aim” on page 28, to combine the findings learned in the preceding chapters in an overarching roadmap that presents a design approach for achieving connectivity in residential diversity. It is a prelude for the conclusion chapter.



**Figure 5** Visualization of the thesis structure and its chapters, plus chapter numbers - each sub research question is answered in a separate chapter - with the addition of the *introduction, roadmap, conclusion, discussion* and *reflection* chapters

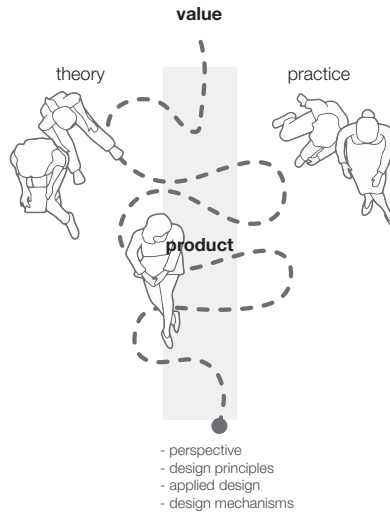
## 1.6 Research approach

The overall approach of the research will be a design-based research.

This term originally arises from the vision of The Design-Based Research Collective (2003). With design-based research is meant, that “the research goes beyond merely designing and testing particular interventions. But the interventions embody specific theoretical claims and reflect a commitment on understanding the relationship among theory, designed artifacts, and practice.” And the interventions can at the same time contribute to the original theories. This is visible in the image below (Figure 6); in which an iterative process moves back and forth between theory and practice, creating a product.

As said, this research starts with a value, namely *connectivity*. Throughout the design process this value is reflected on and modified. It is done through an exploration in theory and in practice and through process of introspection. The author reflects on a variety of definitions of the value.

Therefore the product is influenced by the spiritual self of the author (Ruijters, 2015). Likewise the theory and practice domain are highly influenced by the values and 'spiritual selves' of the presented authors and individuals. The element of introspection is of importance to highlight in this introduction chapter, as it has contributed to shaping all the end products. Therefore, the individuals shaping the theory, practice and the product, have been added to the design-based research model (Figure 6).

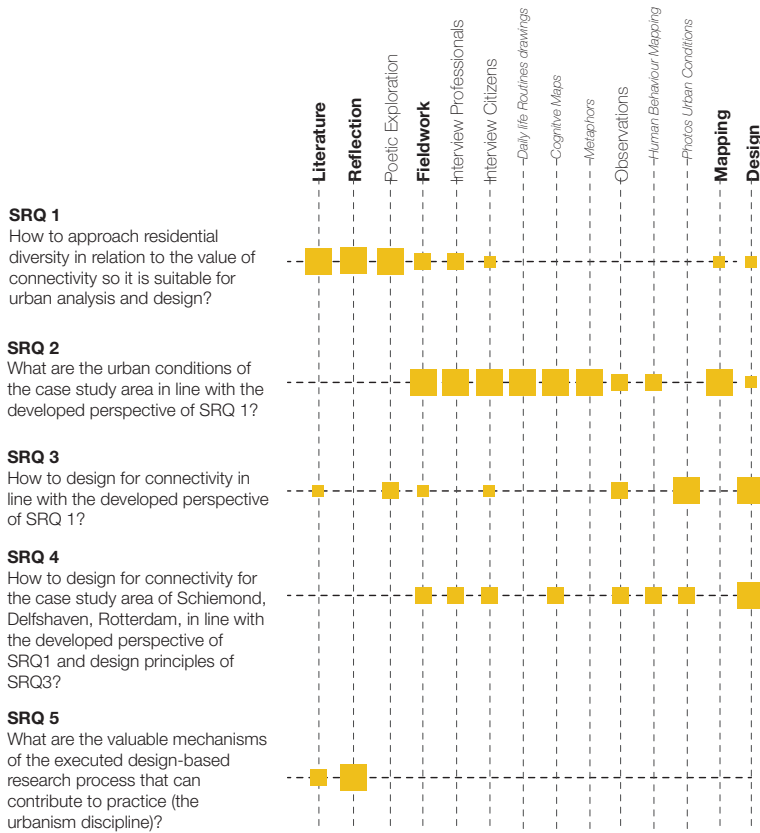


**Figure 6** Visualization of design-based research model with addition of the 'spiritual self'

## 1.7 Methodology

In line with the pursuit to understand the subject from multiple perspectives, the sub research questions are not answered via one appropriated method, but via multiple methods. Furthermore, in many cases, a method provides input for multiple sub research questions. Figure 7 presents the used methods and for which sub research question(s) it has provided input. The size of the yellow blocks abstractly shows the relative contribution of the method for the answer on the sub research question.

The methods differ in being conventional or unconventional. A method, such as a literature research is conventional in academic research. However, a method, such as poetry, is more extraordinary. The author's



**Figure 7** Overview of sub research questions and associated methods in different block sizes based on the relative contribution to the defined answer

perspective on these methods is that some are a ‘need to have’ when doing design-based research on the value of connectivity in residential diversity. These are the overarching method approaches of this research: (a) literature, (b) reflection, (c) analysis through case study fieldwork, (d) mapping, (e) design. However, which specific methods are used to execute these overarching methods, are seen as open. The more specific methods include for example the use of mental maps, metaphors, mapping daily life routines and the use of poetry. These methods are seen as very valuable for this research. However, the author thinks that there are also other methods possible for the completion of the overarching topics. Examples for other potential methods for fieldwork would be to ask residents to

take photographs of aspects of the neighbourhood they see as important, instead of the mental map, or make use of a gps app to track citizens daily routines. In addition, reflection can also be executed through different forms of art or tools for expression.

The different methods that are used in this research, are described in this subsection. More information regarding the interviews with professionals and citizens can be found in “Appendix II” and “Appendix III”.

### **a. Literature**

*Aim and link SRQ:* The main aim to use literature in this thesis, is to execute a design-based research in which “theoretical claims” are reflected on in relation to design and practice (Design-based Research Collective, 2003). Literature is, motivated by the detected knowledge tension, mainly used as a method to understand a variety of theoretical perspectives regarding the value of connectivity in diversity. Therefore it is mostly contributing to the first sub research question. Later on, literature is used to develop findings on the other two more general chapters and its sub research questions, namely SRQ 3 and SRQ 5.

*How:* It was deliberately chosen to not execute a systematic literature research, because it seemed to be difficult, and unworkable to define the accurate search terms. The literature research aimed to research multiple perspectives, detected in the knowledge tension, which all make use of different concepts. Therefore, tightly defined search terms would limit the literature research too much. The literature used for this thesis is explored by using a snowball search as a strategy, in which different snowballs rolled, depending on the perspective. The starting points of the snowball search has been two sources: ‘The Just City’ of Susan Fainstein (2014) and the book of Fincher and Iveson (2008) ‘Planning and Diversity in the City’. Later on in the process the Dutch book of Reijndorp (2004) ‘Stadswijk, stedenbouw en dagelijks leven has formed another important input for the development of the answer on sub research question 1. The literature is described in the Perspective chapter in which the different sources are compared, and the interpretation and conclusion of the author is clearly indicated by using a different text colour.

### **b. Reflection**

*Aim and link SRQ:* The method of reflection is not used in this thesis as a reflection on a personal process and growth. The aim of using reflection is different, and two-folded. On one hand it aims to understand the “lasting

convictions” that are part of value sensitive design (Van de Poel, 2018). This research aims to unravel internal and external motivations and the deeper meaning of the research topic, which contributes to the first research question. This is seen as an essential method when designing from values. On the other hand, on an even more abstract observational viewpoint, the method is used to reflect on the design-based research conducted in this research, aiming to develop thoughts on potential general design mechanisms regarding value sensitive design. This is the main method used for answering SRQ5.

*How:* The reflection is in line with a process of induction which “moves from the particular to the general, from a set of specific observations to the discovery of a pattern that represents some degree of order among all the given events” (Babbie, 2010, p.21). For SRQ1 this is done by a poetic exploration, further explained below. For SRQ5 the observations are presented in the existing theoretical model. The new version of the models is not validated, but presents first ideas on potential general design mechanisms.

#### Poetic exploration

*Aim and link SRQ:* In this thesis poetry is used to increase the understanding of the complex experiences of interactions within diversity, and also to increase the understanding on motives of striving for this value, with that contributing to answer SRQ1. The use of poetry can “enhance empathic and innovation skills” (Januchowski-Hartley et al., 2018). The aim of using this method, is to use creativity as a way to understand and explore a complex challenge on a deeper, more subconscious level. It, therefore, contributes to the development of design solutions and the design principles. Secondly, it contributes as a communication tool to explain the abstract aim and concepts of connecting within diversity. As Robert Pinsky writes: “Poetry mediates, on a particular and immensely valuable level between the inner consciousness of the individual reader and the outer world of other people.” (Pinsky as cited by Illingworth, 2016). The scientific value is not fully established yet. However, the added value of using poetry in science as a method, is currently explored in scientific articles, especially for the field of environmental and ecology conservation sciences (Januchowski-Hartley et al., 2018).

*How:* The poem is formed by reflection on all conversations in practice and theory related to the value of connectivity in diversity.

### **c. Fieldwork**

*Aim and link SRQ:* The aim of fieldwork is to get a deep understanding of the urban area, and its stakeholders. It is in line with the approach of design-based research in which theory is explored in practice. In addition, ideas also arise from practice, whereby fieldwork requires an open attitude that attempts to “make sense out of an ongoing process that cannot be predicted in advance” (Babbie, 2010). Practice Fieldwork offers knowledge on normative views of others on the case study area, knowledge on the use of the space, and observations on other conditions of the urban area, experienced with all your senses.

Fieldwork was mainly conducted to be able to answer the applied SRQ2 and SRQ4. However, the findings of the fieldwork also contributed to SRQ1 and SRQ3, in which practice has contributed to theory.

*How:* The next paragraphs describe in more detail the applied fieldwork methods, and will also describe the *how* of each specific method.

#### Interview professionals

*Aim and link SRQ:* This method has been chosen to explore the perspectives of the professionals contributing to two sub research questions. For SRQ1 the aim was to understand their perspective on the concept of social cohesion, so a comparison between perspectives in practice and perspectives in theory could be made. SRQ3 aimed to get a first impression of the conditions of the case study area related to social and the spatial conditions.

*How:* Interviews were conducted with professionals related to the case study area Schiemond and surrounding area. Some of the professionals that have been interviewed, are mainly active and involved within the neighbourhood of Schiemond. Others are involved in the urban development processes happening in the surrounding of Schiemond. The interviews have been executed in a semi-structured way, as less structured interviews are more appropriated to field research (Babbie, 2010). The overarching set up of the interviews was selected on the basis of the problem statement and knowledge tension. The interviews were transcribed, and coded in line with the previous mentioned topics. In addition, codes were set up in an abductive way, tracking recurring topics and comments. For more information see “Appendix II” .

#### Interview citizens

*Aim and link SRQ:* The motivation for conducting citizen interviews has



been formed by a belief that residents possess the most valuable knowledge on the urban life of that specific place. The aim was to get a picture of how residents experience their living area and how they make use of space, which can be translated into potential design interventions that fit the specific case study area. The citizen interviews were mainly conducted to contribute to SRQ2, analysing the case study urban conditions. In addition, the findings contributed to making design choices as part of SRQ4. The conversations and statements of citizens helped with the formation of thoughts for the answers to SRQ1 and SRQ3.

*How:* Interviews were conducted with eight citizens of Delfshaven. Together they form a very diverse group. They are diverse in age, gender, education level, migration backgrounds and the level of involvement in the neighbourhood and/or city district. Five of the interviewees live in Schiemonnd, one is active as an entrepreneur in Schiemonnd, and two live outside Schiemonnd, but still in Delfshaven. Meaning, that in case information is given related to Schiemonnd, some data is presented as amount "X" out of 5 interviews. On the other hand, when information is related to the city district Delfshaven, data is presented as amount "X" out of 8 interviews.

The interview consisted of three parts:

*(01) Daily life routines drawings*

All interviewees were asked to draw and explain their daily routine. Out of 8 interviewees, 7 interviewees made drawings during the interviews. The drawings, plus the accompanying spoken explanations, provided a good insight into the routes and routines the interviewees take. This method was chosen on advice of sociologist Reijndorp (personal communication, 25th of April 2019) to ask citizens 'what they do', and not 'what they think'. This method is in line with the philosophy of De Certeau who promotes to look more at the use than the users (Reijndorp, 2004). When you ask 'what they think' they might provide you with socially desirable answers. However as a researcher you receive more useful information regarding their daily life when you ask them 'what they do'. Secondly, they will tell their opinion along the way. The drawings and accompanying explanations were mapped out in an urban model of the case study area, to be able to understand overlapping and shared routes and routines.

*(02) Cognitive maps*

All interviewees were asked to draw their mental image on Schiemonnd, in the form of a cognitive map. A cognitive map, developed by Kevin Lynch can be seen as "the cognitive structure of the inhabitant's mind and the lived-in environment" (Lynch as cited by Tzonis, 1992). On one hand, these maps

can highlight what is characteristic of the place. On the other hand, it is also interesting what is not drawn, as it might express places of non-(cognitive) importance. The maps were placed side by side and similarities were looked for between these maps. These similarities were later translated into maps of *hier en daar* for the case study area.

### *(03) Metaphors*

For getting a better understanding of the citizen's perspective on Schiemond and/or Delfshaven, citizens were asked to think of associations related to the urban space. Questions such as: 'If Schiemond would be an instrument, what would it be?' were asked. It is a method that Charles Landry, writer and urban planner, has executed in one of his projects. It is a method that requires lateral thinking from the interviewee, and it aims at understanding the urban space in a deeper and more creative level. This method works to "make the familiar strange and the strange familiar" (Landry, 2008). It is a method used to not think along traditional paths (Sandercock, 2004). The words and accompanying explanation have been coded and categorized into six categories, presenting a potentially shared feeling.

The interviews were transcribed. They were coded in line with the three previous described parts. (01) The drawings of the daily life routines and accompanying explanations, traced within one physical model, aiming to understand similarities and differences between the interviewees.

(02) The cognitive maps were scanned and are presented in this thesis, the interpretation step is described separately. (03) The metaphors and the explanations of the chosen metaphors were coded. Corresponding comments of the explanations were combined into one term. The explanations were mapped by a word cloud, that shows by relative size which explanations occurred often and which not.

As said, other quotes present in this thesis are used as an illustration to accompany SRQ1 and SRQ3. For more information regarding the interviews with citizens, and the Outline of the interview protocol, see "Appendix III".

### Observations

*Aim and link SRQ:* Observations formed another part of "the entire field research process" (Babbie, 2010). Observations in the case study area were done with two different aims. First of all, to use the urban context as a form of inspiration for the design. The question 'Which urban design elements increase or decrease the value of connectivity?' has led many walks in the area. These observations contributed to SRQ3, developing the design principles and guidelines. Secondly, observations were made

of the case study area and its human behaviour of residents, visitors and passers-by in space. Traffic flows of these three groups were mapped on sight. Furthermore, activities that took place in specific spaces were noted. This was done, in addition to the method of “d. Mapping” which aimed to understand the infrastructure more systematically, also from an empirical point of view. These findings contributed to SRQ2 by understanding the urban conditions of the case study area, which contributed to the design solutions of SRQ4.

*How:* Observations on the urban conditions were recorded in pictures and notes. Later on, the pictures were graphically analysed by highlighting the key urban design objects. The output was used in the development of the design guidelines.

Observation of human behaviour was done throughout different seasons, and different times. To be able to explore the city life and its liveliness to the fullest, and to execute observations early in the morning and late in the night, the author stayed in the area for two days. The observations were mapped and resulted into interpreting and concluding maps.

#### **d. Mapping**

*Aim and link SRQ:* Mapping was used as a method to understand the case study conditions related to infrastructure, amenities and demography, data. The maps were mainly made for the scale of the city district Delfshaven, to be able to understand a bigger context than just the neighbourhood of Schiemond, which was seen of importance in a network oriented society.

*How:* The data was received from the municipality of Rotterdam (2018). Mapping of the data was done in a GIS program, QGIS. A selection of maps are present in this thesis, based on concepts developed during the exploration of SRQ1.

#### **e. Design**

*Aim and link SRQ:* Designing for a specific case study area was used as a method to be able to translate theoretical knowledge and practical insights into a product. Further, the product itself helps to reflect on the theoretical knowledge, the practice, and the potential to develop more generic design principles. This method is in line with the overarching research approach, as explained earlier, design-based research (The Design-Based Research Collective, 2003). The method of design is, naturally, mainly used for the design oriented SRQ3 and SRQ4. As the design process was not a linear

process, but iterative, the act of designing also helped to develop the thoughts on the answers of SRQ1 and SRQ2.

*How:* The method of design was executed as learned during the bachelor and master degree, mainly by making use of sketching in 2D and 3D and the exploration of reference projects.

### **Indirect input**

Other participating activities that author undertook are described below. The activities are not part of the developed methods, nor were they processed in a scientific way. However, the author believes that they have influenced the line of thought, and are therefore important to point out.

- Schiemond neighbourhood meeting with professionals, taken place in the community centre of Schiemond. Questioning 'What is going on in Schiemond and what do I want to contribute?' (31st of January 2019, Rotterdam).
- Presentation of students of HAS Hogeschool, who have conducted research on Schiemond regarding urban topics such as social cohesion and sustainability (12th of February 2019, Rotterdam).
- Meet up with Edwin Buitelaar, researching scenarios for the Just City in the Netherlands for PBL, planbureau voor de leefomgeving (8th of March 2019, Rotterdam).
- Lecture 'Leven in de stad', philosophical lecture regarding 'encountering each other in the city', by philosopher Naomi Jacobs (20th of March 2019, Delft).
- Exploratory conversation with Nanna van der Zouw, Project-manager and Walter de Vries, Urban planner. Both working at municipality of Rotterdam, involved in the development of M4h area. (22nd of April 2019, Rotterdam).
- Meet up with sociologist Arnold Reijndorp, author of one of the leading literature sources of this thesis (25th of April 2019, Rotterdam).
- Joining the event, 'Schiemond bloeit!'. First event of a planned series, aiming for exploring potential green initiatives for the neighbourhood of Schiemond by professionals of 'De groene connectie' (8th of May 2019, Rotterdam).
- Moderator of a city talk in Delft regarding topic 'Bubbels' – 'Delft als verbonden stad' (6th of June 2019, Delft).

## **1.8 Relevance**

### **Scientific relevance**

First of all, this research aims to contribute to the scientific research field, by developing more clarity within the existing perspectives on the value

of connectivity within diversity. There is a large spectrum present and this thesis reflect on all these perspectives (theory, practice, social and technical perspectives).

Secondly, this research aims to contribute to the on-going research within the Science Communication department of Delft University of Technology (SEC) on design-based research for complex issues. This thesis is a combined research project for the Master of Urbanism and the Master Science Communication, which means that it cuts through different scholar domains. By doing so, it aims to understand a complex issue by using a design process with many iterations between theory and practice, and social and technical dimensions. This thesis executes a design-based research and reflects on the process, and with that contributes to the broader knowledge within SEC on tackling complex issues through design based research.

Thirdly, it contributes to the field of value sensitive design. Leading professor of The Just City Index, Toni Griffin, is, with her team, researching to what extent values would help to design better, creating more just cities. It is for the scientific field, important to make these values more tangible, so "we know, as a community, when justice has been reached." (Griffin, 2018). This thesis contributes to this scientific field by exploring one specific value thoroughly. Designing from values can also be seen in line with research of SEC on responsible innovation. The thesis reflects on ethical dimension related to researching residential diversity.

### **Societal relevance**

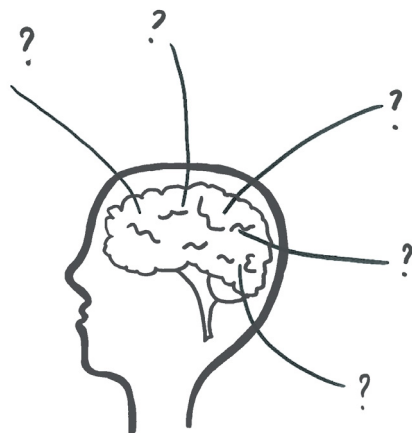
Connectivity within diversity is a wish within politics, governmental practice, media and society in general. The municipality of Rotterdam, but media also presents the urge of 'staying in contact with each other' within a city with high diversity (Gemeente Rotterdam, 2007; Minkjan, 2018).

In times of polarization and influence of mass media, there is a wish of staying in dialogue, especially in face-to-face contact. This is also visible within dialogue session held by TOPDelft in the city of Delft. Such as the event on the 6th of June 2019, promoted as an event 'for everyone that wants to think along and cooperate in Delft for a connected city'.

As the research emerges from societal developments, such as polarization on social-cultural topics, rise of homogeneous network, and increase of cultural differences between high- and low-educated residents (WRR, 2018), it aims to understand the contribution urban design can have for encountering such -valued as negative - societal trends.



per  
spec  
tive



**Figure 8** Reflective questions regarding a suitable analysis and design approach (source: author)



# Introduction

During the research many questions emerged of a reflective character. Questions such as *'why is it important to design for connectivity?'*, *'what is diversity?'* and *'how can diversity be made operable for an analysis within the built environment?'*. The questions emerged from ethical considerations or from questioning the motives for undertaking this research. Formulating answers to these questions is done in this chapter through a textual exploration. This exploration builds further on the knowledge tension, as described in the Introduction chapter.

In this theoretical exploration mainly theoretical input is used. The theories are supplemented and reflected on with perspectives from practice, collected during the interviews with professionals and citizens. Additionally, the method of poetic writing is used to explore personal perspective and motives related to the topic. At last, iterative steps within the analysis and design stages of this research have further sharpen the text. The conclusion of this chapter, answers the first sub research question:

*How to approach residential diversity in relation to the value of connectivity so it is suitable for urban analysis and design?*

The answer forms the basis for the approach of the other chapters, including concepts suitable for the case study analysis and potential design solutions. Paragraph 2.2 introduces the theoretical framework that has been used for this thesis. The concepts will be explained and explored within the three individual essays. Paragraph 2.3, the first essay, explores how to approach residential diversity as an urban designer. It aims to define an operable definition for analysis and design. The second essay, in paragraph 2.4, explores different perspectives on the value of connectivity and aims to consider the multiplicity of argumentations and to define the value of connectivity. The third essay, paragraph 2.5, explores different motives on why we, as a society, wish for connectivity within residential diversity. The essay aims to explain the variety of motives in theory and practice for achieving connectivity, and to clarify author's motive.

As explained in the reading guide, author's interpretations and responses to theory are highlighted with a **dark orange colour**. This is done to make the considerations transparent.



# 2.1 Theoretical framework

The theoretical framework is present in Figure 9. The concepts will be explained and explored within the following essays.

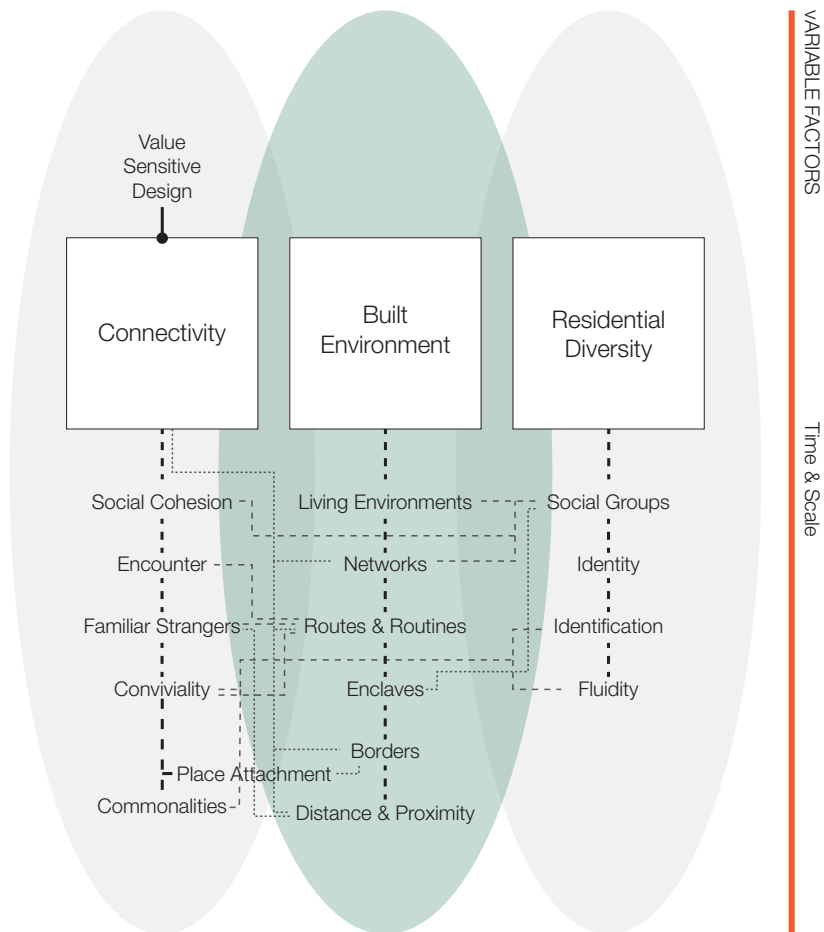


Figure 9 Theoretical Framework and detected links between the concepts (source: author)

**APPROACHING**  
RESIDENTIAL  
**DIVERSITY**  
AS AN  
**URBAN**  
**PLANNER AND**  
**DESIGNER**

## 2.2 [A]

# Approaching residential diversity

This essay describes how to approach and analyse residential diversity within the built environment, taking ethical considerations into account. The reasoning formulates a research perspective for approaching residential diversity within urban areas in analysis and design phases. It makes use of perspectives related to theories on urban justice. This is in line with one of the starting points of this research, *The Just City Index*, which also builds on urban justice theories.

The essay further explains methods suitable for the field work research in the case study area. The search for suitable methods is especially of importance for the method of citizens interviews, in which it is the aim to explore the relationships of a diversity of residents towards their environment. So questions that pop up, are: *“How to approach residential diversity?”*, *“Should it be seen as differences within economic and/or ethnic background?”*, and *“To which extent is this an useful approach within the discipline of urban design and planning?”*

The following paragraphs show the considerations that are made to come to

an answer on how to communicate on, and analyse residential diversity. In the end, this essay will answer the question:

*How to approach residential diversity, while doing justice to its complexity, so it is suitable for urban analysis and design?*

## Diversity - thinking in differences?

To be able to talk about residential diversity, it seems useful to pin-down the residential differences that make up the diversity. Which means thinking in categories. Categories could, for example, include a variety of socio-income groups or groups divided by their ethnic background. However, a category is defined by Mare (cited in Beall, p.10) as the act of labelling a number of people according to similar characteristics. Perhaps not intended, but categorizing citizens can be oppressing, as it can be based on prejudices and bias. The negative effect of categories is that it can be used by outsiders to define or even suppress the needs of others (Beall, 1997, p.10). According to Beall (1997), this act is related to the verb

“differentiating”, which “can become a top-down process of social planning”:

*“At best, ‘to differentiate’ implies categorization, prioritization, and potential hierarchies; at worst, it can imply discrimination, or even social engineering” (Beall, 1997: p.9).*

This negative effect of assigning differences, impose a dilemma for a planner or designer that wants to design for diversity. To *differentiate* – as an act from the outsider - is not acting in line with a just perspective. Though, the differentiation process is part of daily life as it is used by human-beings to be able to understand her or his environment. When talking to citizens of an urban area, they often describe their co-residents within self-defined categories. The act of differentiation is often related to this ‘outsiders’ perspective, where judgment is based on looks and categories are shaped by prejudices. Within the Dutch context, someone wearing a headscarf might be labelled as a Moroccan immigrant, whereby this does not have to be the case at all. In a similar way, it is difficult for researchers of residential diversity to define or differentiate citizens (Reijndorp, 2004), especially when this is being done by ‘outsiders perspectives methods’ such as street observations and mapping. An ethical pitfall is that a researcher relies on the group image she or he poses of a certain social group. When an group-identity is imposed upon someone, it

“holds the danger of inducing the status or responses implied by the label itself.” (Beall, 1997).

Nonetheless, the use of identity – often referred to as ‘identity politics’ - can be useful when a design is focusing on empowering or strengthening a social group. In that case group identity can be used “as a vehicle for marginalized, excluded and oppressed groups to assert their interests” (Beall, 1997). This can only be done when a group is not defined by a differentiation process, as highlighted above, but when a group is defined by the members itself. A group is defined by Mare (cited in Beall, p.10) as “people that are aware of and accepts belonging together and being categorized as similar. Members of a group accept their inter-relationship, even though they may not all know other members of the group.” So identity as highlighted above can be destructive, but also helpful, depending on who defines it. According to Young (1999) emancipation can be achieved when a group defines itself rather than it is being defined from the outside (Young as cited in Fainstein, 2014).

## **Conclusion 1**

**Identity and group-formation can be a powerful vehicle when a group accepts belonging together and being categorized as similar. It can function as a vehicle for emancipation. However, a group should not be differentiated from the outside as a top-down process.**

The previous paragraphs about the act

of 'labeling', highlight a static perspective on the concept of identity. Identity is described by several scholars (Beall; 1997, Ami; 2002, Fincher & Iveson; 2008) as something that is complex, fluid and contingent. This *fluidity of identity* is especially related to (urban) space as Fincher & Iveson (2008) illustrate very well within the following anecdote:

*"It is precisely through their use of a library newspaper reading room that a variety of individuals – who may also be identified as 'young', 'old', 'homeless', etc. – can adopt a shared identification as a 'library user' which allows them all to glimpse another dimension of themselves and each other. This is not a matter of being either a homeless person or a library user, but a matter of being a homeless person and a library user" (Fincher & Iveson, 2008: 154).*

Therefore, Fincher & Iveson (2008) promote a planning that "unsettles fixed identities", understands the many identity varieties a human-being can have and the changeability throughout stages of life (p. 215).

The library example illustrates the built environment as a facilitator for a shared identification process for multiple citizens. The example described below, originating from fieldwork interviews, illustrates a physical component as a facilitator for an individual to shift within her or his identity, by having multiple identifications:

*"Nu woon ik daar op de derde etage, kijk ik zo over het water uit zo. Heel mooi uitzicht, mooie boten. Wij hebben ook een huis in Kaapverdië. Het grappige daarvan is dat al die cruiseboten die hierzo voorbij komen, die komen bij mijn flat in Kaapverdië komen ze ook voor de deur langs. Precies dezelfde! Nou dat is echt ongelooflijk. Dat je op twee plekken in de wereld woont waar diezelfde cruise boten langs komen. Dat is echt... heel relaxend, zen, heel erg kalmerend."* <sup>(01)</sup>

*(01) "Currently, I live over there on the third Floor, so I look over the water like that. Very nice view, nice boats. We also have a house in Cape Verde. The funny thing is that all those cruise ships that pass by over here, also pass my apartment in Cape Verde. Exactly the same! Well, that is really incredible. That you live in two places in the world where the same cruise boats pass by. That is really ... very relaxing, zen, very calming."*

## **Conclusion 2**

**Within urban planning and design identity should be seen as a fluid concept that changes within different space-and time-settings. For planning and planning strategies it is important to acknowledge citizens as individuals with a variety of attachments and group-based identities, and that might also be adopted in a variety of context during her/his life. The concept of fluctuating identifications is, therefore, a more useful concept. The built environment possesses the opportunity to facilitate an identification process for an individual, as well as a shared identification for multiple citizens.**

Figure 10 presents an individual with a variety of identifications, and Figure 11 illustrates that attachments and group-based identifications might change through time.



**Figure 10** Individual with a variety of identifications



**Figure 11** Change of attachments and group-based identifications in a life time

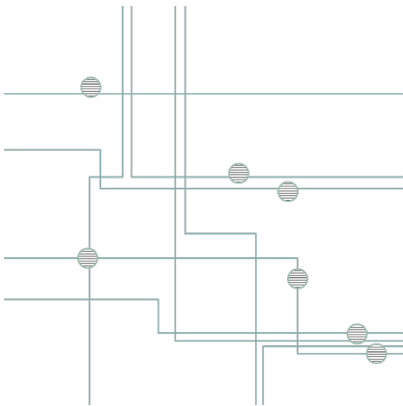
The previous two conclusions raise the question to which extent the concept of identity is useful when the aim is to analyse and design for a high diversity of residents? As described above, it seems to be reasonable to use it when the goal is to empower citizens that can identify themselves as a group. However, the aim of this research project is different. It does not aim to design for one specific group, but aims to design for a high diversity of residential diversity, so to design ‘in between ‘groups’’. *How to move forward?*

## The user or the use?

A method known within the Dutch discipline of urban development that uses the concept of identity, is the ‘leefstijl’ (lifestyle) method. This method is focused on identifying housing- and environment preferences and identities. It is based on research questioning “*What do people think, What is their opinion and, Who do they think they are?*”. According to Reijndorp (2004) - in line with philosophy of De Certeau as described in his well-known work *The practice of Everyday Life* - we should not focus on identity, but on activities that take place, look at use instead of users and look at routines instead of incidents.” (p. 199). This is in line with other approach the author encountered when discussing designing for diversity with others. Turkuaz Nacafi, familiar with the Turkish, Dutch and Chinese culture, also has given the



advise to not focus on identity, but on (shared) behaviour of different ethnic groups (personal communication, 20th of February 2019). Researching what people do, offers insights in the functional and the symbolic meaning of the neighbourhood and the city. (Reijndorp, 2004). Besides when asking 'who they are', and 'what they think', the answers will be both context-dependent (as highlighted in conclusion 2) and there is the danger of socially desirable answers (personal communication with Machiel van Dorst, 13th of March 2019). Activities can be analysed as two components: *routes and routines*. Routines form the basics of how citizens organize their daily life, such as work, going to school, grocery shopping. The routines are being reached through different routes. Some routes and routines are shared by high diversity of residents, others are not (Nio, Reijndorp & Veldhuis, 2009). Routes and routines are illustrated in Figure 12.



**Figure 12** Routes and Routines. Research the use within the diversity, not the user

This approach helps to examine and understand connectivity within diversity through different scales. It offers a broader look than only focusing on diversity within a clearly defined urban area, such as a neighbourhood. Therefore, it can be easier examined from the perspective of a network society. When social environments are researched spatially, it cannot be seen as successive rings of scale. Social environments are not similar as 'rings of a tree'. As Christopher Alexander made clear in his essay 'A city is not a Tree'. He states that social relations, environments and interactions are shaped as networks (Alexander, as cited in Palmboom, 2016). This is similar to Dorst (2005) who says; "social and the physical environment are not one-to-one related. People have social networks outside their neighbourhood, on a city-, a regional- or even an international scale."

### Conclusion 3

When the aim is to analyse diversity, a designer should not focus on top-down defined identities (who someone is) or personal opinions (what the person thinks), but on researching activities that take place and the reasons for the exposed behaviour (what does the person do). These activities provide a better insight into individual and/or personal way-of-living and to which extent it connects or collide with the physical and/or the social environment. Activities consist of routes (physical route taken to arrive at destination),

and routines (amenities or other urban functions used within the urban fabric). This analysis approach is interesting for understanding the diversity of citizens in relation to the (use of the) built environment. Further on, within a design process, the output of the routes and routines analysis method is useful for further design steps (which will be taken in the field of urban design and planning) as the concept of route & routine possess a clear link with the physical environment.

## Living environments and enclaves

Besides looking at activities that people undertake, a researcher can also understand the living- and housing history and future ambitions of residents. According to Reijndorp (2004), these varieties of living- and housing histories and future ambitions, shape the diversity of 'living environments' within a city. 'Groups' within cities can be distinguished by a difference in starting position. They arrive in the city for different reasons and with different purposes. According to Reijndorp the current societal diversity consist of different worlds with their own definition of time and space (2004, p. 199). It is important to understand the past of a resident and her or his ambitions for the future. Therefore, citizens should not be labelled as 'traditional' or 'modern'. "The way people organize their everyday life, is

a result of complicated considerations between conflicting desires and aspirations, between traditional and modern. [...] And these different time- and space worlds are not static, but in constant movement. Therefore, the city is not a mosaic, but a kaleidoscope" (Reijndorp, 2004, p. 199).

The philosophy of Reijndorp highlights a clear distinction between the on-going identity politics. Reijndorp's approach stimulates to let go of political frameworks that are connected to identity and demographic conditions.

In the (Dutch) book 'Stadswijk, Stedenbouw en Dagelijks leven' (2004) from Reijndorp, three living environments are described. These three groups are different as their 'living environment' (*leefwereld*) differs. The three groups described are: 'old city dwellers' (*oude stedelingen*), 'new city dwellers' (*nieuwe stedelingen*) and immigrants (*immigranten*). However, in the book and especially in later work in contribution with other scholars, this three divide is already being questioned, and made more diffuse. First, a fourth group is introduced: 'hybrid city dwellers' (*hybride stedelingen*). They are again divided into two categories: the children of the old city dwellers, and the children of the immigrants (Nio, Reijndorp, Veldhuis, Blom & Coumou, 2016). Secondly, the literature underscore the constant movements and developments within the living environments.

(Reijndorp, 2004; Nio, Reindorp & Veldhuis, 2009; Nio, Reijndorp, Veldhuis, Blom & Coumou, 2016). Therefore, the living environments are seen as an interesting perspective on analyzing diversity. However, when using this division it should also take into account the diffuse character and changes through time.

Although dynamic in time, some urban environments can be observed and experienced as a static given. When a living environment dominates an urban area, it can be seen as 'an enclave' (Hajer & Reijndorp, 2001). Hajer and Reijndorp describe society as 'archipelago of enclaves' (p. 56). The enclaves present different functions and atmosphere, referred to as 'themes'. Because of a more developed network society, urban places can be connected without clear links towards each other. No one is controlling or developing this archipelago. Everyone creates his or her own city, as a collection of diverse places that are of importance for the individual (Hajer & Reijndorp, 2001). The archipelago is in line with the different post-industrial landscapes Burgers (1999) describes. Instead of categorizing public spaces in parks, squares and streets, Burgers links societal development to public spaces. The landscapes, that Burgers defines, differ in design, use and experience.

This paragraph highlights a potential link between diversity, living environments and the built environment, where the

diversity is visible within 'enclaves', or 'landscapes'. Citizens do not only stay in one enclave, as that would be in contradiction to the model of network society. So, citizens move through a multiple of landscapes suitable to their needs, and pass by a variety of enclaves that are not. Living environments shape their own landscapes, with its own design, use and experience, as Burgers (1999) mentions. Sometimes these enclaves can be identified as they presented themselves isolated (Hajer&Reijndorp, 2001). Sometimes they overlap and co-exist, "as transparencies on the drawing board of the urban designer." (Burgers, 1999).

The concepts of enclaves and landscapes are related to the concept of identification. As this urban area presents an environment to which a person can identify or not. According to Burgers (1999) important elements are design, use and experience. In addition, "identification and recognition are not only connected to the physical environment, but also and mainly with the social environment shaped by variety of living environments" (Nio, Reijndorp & Veldhuis, 2009). This also emerged during the citizens interviews:

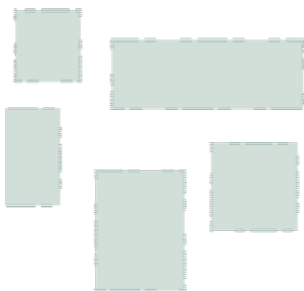
*"Dus liever dat je dan goede speelmogelijkheden hebt, niet te drukke straat, vanwege kinderen, en een beetje jouw type mensen omdat je kinderen daar mee kunnen spelen of dat je daar een beetje aansluiting mee hebt."*<sup>(01)</sup>

(01) "So you would rather have good play opportunities, not too busy street, because of children, and a bit of your type of people, with who your children can play, or you with who you feel connected."

#### Conclusion 4

Diversity within cities can be seen - besides the known categories such as economic and ethnic diversity - as a diversity shaped by the living and housing history of residents. This difference in past and future, shapes a variety of 'living environments'. These living environments and individuals are in constant movement, forming a *Liquid Diversity*. Both the concept of living environments and fluidity, can help urban design to create environments that both facilitate space for the different living environments and space for exploring the fluidity.

From a static perspective, living environments and urban functions create a variety of enclaves or landscapes (illustrated in Figure 13). These enclaves or landscapes are formed by design, use, experience, formed by a combination of the physical and social environment.



**Figure 13** Landscapes or Enclaves formed by physical and/or social environment

## Extra consideration: Scale

When reflecting on how to communicate and analyse diversity, time and scale are interesting factors. Two elements of the relationship between diversity and scale and time are described below.

Usually data regarding ethnic residential diversity, and categories of autochthonous and immigrants, present a historic perspective which focus on guest workers (*gastarbeiders*) and a post-colonial perspective. Categories that are presented are residents from a Turkish, Moroccan, Suriname, Antilles, other-non-western background and western immigrants. A more sensitive diversity perspective would present a wider palette of backgrounds (WRR, 2018). The previous example presents a difference within perspectives through scales. Whereby one category of data such as 'other non-western immigrants' can be useful when immigration topics are analysed on national scale. It does not reflect the actual gradations of diversity on a local scale.

The perspective on diversity can also make a huge difference when a neighbourhood is assessed on different governmental scales. Schiemon (without the 'Lloyd Kwartier' area) is seen as a homogeneous neighbourhood (interviews with professionals, January 2019), as it possess mainly social housing. However, residents of Schiemon refer to it as diverse (interviews with residents, April, May 2019), as it is very ethnic diverse. This is

of course also applicable to other factors for example gender, linguistic and age.

## Extra consideration: Time

As described before, diversity and its living environments change through time. Diversity can be seen as a kaleidoscope (Reijndorp, 2004). Or referred to within this essay as *liquid diversity*.

The reason to sometimes define the diversity and label the groups, is to have a short grip on the topic. According to Reijndorp (personal communication, 25th of April 2019), this is sometimes a good position, as all citizens are themselves practicing sociologists. Every citizen is constantly making judgments about the other, and tries to organize and place the other within a social group. These judgments and ordering processes, influencing the image and use of urban areas. Thus, the social environment shapes the physical environment, as the areas become places that visitors and passers-by will feel welcome, or maybe not. **So, living environments, perspectives and identities change over time, however, a static and biased perspective on diversity is present within daily urban life experience.**



## To conclude

Question discussed in this essay:

*How to approach residential diversity, while doing justice to its complexity, so it is suitable for urban analysis and design?*

The defined answer:

- Within urban planning and design, **identity** should be seen as a fluid concept that changes within different space-and time-settings, therefore, it is important to acknowledge citizens as individuals with a variety of attachments and group-based identifications. The concept of **fluctuating identifications** is, therefore, a more useful concept.
- When the aim is to analyse diversity, a designer should not focus on top-down defined identities or personal opinions, but on **activities** that take place. These activities provide a better insight into individual way-of-living and to which extent it connects or collide with the physical and/or the social environment. Activities consist of **routes** (physical route taken to arrive at goal), and **routines** (amenities or other urban functions used within the urban fabric).
- From a static perspective, living environments and urban functions create a variety of **enclaves** or landscapes. These enclaves or landscapes are formed by design, use, experience, as a combination of the physical and social environment. And although citizens make constant judgements of others and it is therefore part of everyday city life experience, living environments, perspectives and identities change over time. It is therefore important to constantly **change perspective within analysis and design regarding the topic of diversity, to be able to do justice to everyone.**

**DEFINING**  
THE VALUE OF  
**CONNECTIVITY**  
FOR **RESIDENTIAL**  
**DIVERSITY**  
IN **CITIES**



## 2.3 [B]

# Defining the value of connectivity

In the previous essay the perspective on *how to approach residential diversity so it is suitable for urban analysis and design*, has been presented. This essay explores different perspectives on the value of connectivity. It considers multiple argumentations and defines connectivity for further research and design.

As described in the Introduction chapter, one of the starting points of this research has been an interested in value-based design, inspired by the *Just City Index* (2018). This research focuses on one value, namely the value of connectivity. The value of connectivity is described within the *Just City Index* as: *“The physical and social networks that tie places and people together, providing contact and opportunity necessary for well being.”* This description shows beautifully the dual meaning of connectivity by naming both physical as social aspects, including physical and social networks and people and places. Secondly, the broad definition offers space in which many concepts, frequently present in theory and/ or practice, fit. These concepts and related variety of perspectives present different perspectives on what form of

connectivity should be achieved within communities of high residential diversity. These different perspectives form the “1.3 Knowledge tension”, as described in the Introduction chapter. This essay elaborates on the tension, and the variety of words that are used related to the value of connectivity. The essay aims to set a definition of the value of connectivity for this thesis project. The question that will be answered, is:

*How to define the value of connectivity for a high level of residential diversity, considering different perspectives presented in the knowledge tension?*

## Searching for appropriate words

A high variety of words can be found within theory and practice that fit in a certain way the value of *connectivity*. Although the concepts are different, all of them aim for a certain level or type of connectivity. This has already been highlighted in the paragraph on the found knowledge tension. Below a small recap of the knowledge tension is given.

**A small recap of the knowledge gap**

On multiple blogs and journals related to urban development, urban space is often called as a place for 'encountering each other' and achieving 'social cohesion'. A variety of stakeholders, such as the urban and governmental *practice*, possess the wish for achieving social cohesion and interaction within the city. However, from *theoretical* perspectives, it is being questioned to which extent these objectives should be aimed for in modern cities with a high level of residential diversity (Amin, 2002).

The paragraphs below will explore words that have been detected in literature and in practice, related to the knowledge tension described above. Successive theoretical concepts will be discussed and reflected on: *social cohesion, encounter, familiar strangers, conviviality, place attachment and commonalities*. The reflection is interwoven through the exploration of the multiple concepts, which builds up to a final value definition for this thesis.

## Social cohesion

A wish often present in governmental practice is to strengthen the feeling of social cohesion between different residential groups within an urban area. This is also the case in Schiedam. The wish for greater social cohesion is written down in policy documents (Gemeente Rotterdam, 2016). Likewise professionals active within

the neighbourhood express this wish (interviews with professionals, January 2019). To understand what the municipality and the professionals are aiming for, a definition on social cohesion is needed. That is not an easy task, as there is a high number of definitions present within literature (Chan, To & Chan, 2006). Therefore the concept is flexible, which makes it unclear what is meant when used in theory *and* practice.

### Theory

In theory social cohesion is ill-defined (Chan, To & Chan, 2006; Schiller & Schmidt, 2016). Beauvais and Jenson (as in Chan, To & Chan, 2006) describe five different possible definitions about the concept of social cohesion.

- (a) As common values and a civic culture
- (b) As social order and social control
- (c) As social solidarity and reduction in wealth disparities
- (d) As social networks and social capital
- (e) As place attachment and identity.

Chan, To & Chan (2006) criticize these broad definitions of social cohesion, and have set up their own: "Social cohesion is a state of affairs concerning both the vertical and the horizontal interactions among members of society as characterized by a set of attitudes and norms that includes trust, a sense of belonging and the willingness to participate and help, as well as their behavioural manifestations (p. 290).

This definition seems to be more accurate and has a smaller scope. Therefore it offers more clarity in the field of scholars. However the overall field still lacks in the use of a strong defined concept.

### **Practice**

The wish for social cohesion in practice is illustrated by the case study area, the neighbourhood of Schiemond. Within Schiemond governmental documents say that social cohesion is high within social groups, but low between social groups. Therefore the policy documents promote striving for more social cohesion between the social groups – referred to as groups based on ethnic background (Rotterdam, 2016). To get a better understanding of what practice is striving for, professionals involved in Schiemond have been asked to define their understanding of the concept of social cohesion (interviews with professionals, January 2019). The responses differ per person. After coding the interviews, three categories of given definitions are defined:

- (01) *A strong social network*: to know each other or care about each other
- (02) *An attitude*: to address responsibilities, and to take each other into account
- (03) *Collective action*: to have common goals and to do something together.

The definitions given in practice match with the definitions described within theory. This is probably true, as the

concept is described broadly within theory. It is striking that the concept of social cohesion is also interpreted in different ways in practice. So both in theory and practice it is difficult to pin down what we are talking about when it comes to social cohesion.

### **Critique from a justice perspective**

The critique on striving for social cohesion, as highlighted in the knowledge gap, is related to the definition of cohesion as having common values, a shared sense of place and local networks of trust (Amin, 2002, p. 972). Fincher and Iveson (2008) call social cohesion a ‘communitarian framework’ which focus on ‘lasting relationships and bonds established through shared values’ (p. 155). The authors think the concept of social cohesion is not suitable for an urban area with high level of diversity. Similar as the previous described text within the knowledge gap of Amin (2002).

If we link this criticism with the two previous paragraphs regarding theory and practice, the critique does not fully match with the given definitions. First of all, the definitions highlighted in the paragraph on theory illustrate that some authors actually do define cohesion as common values, shared sense of place and/or local networks of trust, as criticized within the knowledge gap. However in theory there are also other definitions present of the concept of social cohesion. Secondly, the first two criticized definitions - common values

and a shared sense of place - are not mentioned by the professionals within Schiemonde. And, a strong social network is mentioned, however the word of 'trust' is not mentioned by the professionals.

### **Conclusion 1**

The perspective of this thesis will be in line with authors (Fincher and Iveson, 2008; Amin, 2002) on that 'common values, trust and a shared sense of place' is not what diverse urban areas should strive for. That approach focuses on a homogeneous perspective on individuals, their lives and their experiences. Further, it neglects the struggle that is essential of living within differences.

In contrast to the criticism, both within practice and in theory social cohesion is not always just defined as 'common values and a shared sense of place'.

Both domains bring other definitions of the concept. So, the concept of social cohesion is blurry, both in theory well as in practice. To achieve one alignment within all definitions that are present in theory and practice, seems like a difficult task. Therefore, this thesis will not use the concept of social cohesion in further analysis or design. The next paragraphs explore other concepts used within literature related to forms of connectivity within a high level of residential diversity.

Related to connectivity in urban areas with high level of residential diversity, Amin (2002) advocates for a focus and development of places that shape the 'micropolitics of everyday social

contact and encounter (p. 959). The aim is to achieve successful, inter-cultural interactions. The perspective of Amin is in line with the concept of 'encounter'. This is often used within the urban practice, where designers aim to design places for encountering each other (in Dutch often referred to as 'ontmoeten'), and named as meeting places. Places to get connected.

Where social cohesion seems to be an always present condition, encounter has a temporary character. It is a momentum.

The underlying social condition that the authors aim for is not 'cohesion', but 'conviviality' (Fincher & Iveson, 2008).

## **Encounter, familiar strangers and conviviality**

Numerous social scientist and political leaders have written that cultural and religious diversity poses a threat to social cohesion. (Schiller & Schmidt, 2016). These statements have been criticized as "an anti-immigrant narrative, which construes ethnic and religious diversity as a threat to social order" (Schiller & Schmidt, 2016, p.2). In response to these scholars and politicians, other scholars have defined and promoted new concepts, which embrace the plurality that comes with diversity. Encountering, resulting in conviviality, has been developed within literature as a response to the concept of social cohesion. It aimed to define a new concept and narrative for urban areas

with a high level of residential diversity. Or as Fincher & Iveson state (2008): "The conviviality that can emerge through such encounters is certainly distinct from 'community' characterized by shared identities." (p. 155).

### Practice

Within the Dutch design practice buildings or urban spaces are often branded as meeting places (*'ontmoetingsplekken'*). There is also a wish within governmental bodies for meeting and encountering each other, especially between 'promising residents' (*kansrijk*) and 'disadvantaged residents' (*kansarm*) (Gemeente Rotterdam, 2016). A resident of Delfshaven expects a decrease of encountering each other within the city district, seen by the interviewee as something negative.

*"Dat het wel lastiger wordt om elkaar te ontmoeten. Want ik ga dus al niet naar zaken op de Schiedamsweg, maar mijn buurvrouw wel. [...] Ik denk dat mensen meer wat langs elkaar gaan leven."* <sup>(01)</sup>

*(01) That it will be harder to meet each other. Because I am not going to stores at the Schiedamsweg, but my neighbour does [...] I think that people will live more past one another.*

### Theory

Encountering seems to be a different type of connectivity than cohesion. So how is 'encounter' be defined in theory? Fincher and Iveson (2008) define encounter as "The ways in which different groups get to cross paths and

meet up in urban contexts, and thereby get to know the possibilities for different ways of living in the city."

The well-know urban designer and author Gehl promotes good designed public spaces as the place for facilitating activities and interactions. He states that "architects and planners do not have a direct influence on the quality, content and intensity of social contacts, but it can affect the possibilities for meeting, seeing, and hearing people." Whereby the presence and encountering of others is seen as "one of the most important qualities of public spaces altogether" (Gehl, 1971, p. 13). This is in line with writings of Blokland (2008) on promoting an urban fabric that 'weaves', in which people will start to feel at home (with each other). She names it as 'casual encounters', which contribute to dealing with diversity. A familiarity might arise, when the casual encounters repeat. Turning strangers into familiar strangers (Blokland, 2008).

Other authors writing about encountering, are Fincher & Iveson (2008). They mention the condition that can be present when moments of encountering occur – a word that is also often used within urban literature – is *conviviality*.

*" Planning for encounters among strangers, then, is a matter of working towards a kind of conviviality in urban life, where diverse individuals can work*

*together on shared activities, projects and concerns which don't totally reduce them to fixed identity categories either as 'citizen' or 'group member' (even as such identity categories will always remain important)." (p.154).*

The difference between encountering and conviviality is that the last strives more to a collaborative process. So it does not aim to provide "passive contact", or "fleeting encounters" (Neal et al., 2019, p. 73), such as described in Gehl (1971) possibilities for hearing or seeing others. Although conviviality may still consist of forms of encounter that are fragile and often fleeting. "They depend for their existence on the availability or construction of certain settings in which urban inhabitants can explore shared identifications (in addition to identities) through shared activities." (Fincher & Iveson, 2008, p. 154). **The concept of conviviality therefore also asks for another spatial dimension in the form of a program in comparison with the concept of encountering.** As Fincher & Iveson (2008) say it: "It is more than the free mingling of people in large public squares and spaces" (p. 155).

### **Critique on the concept of conviviality**

There is also critique of scholars (Schiller & Schmidt, 2016, and other authors in 'Identities: Global Studies in Culture and Power') on the concept of conviviality. They say that authors that write about conviviality, even

though they seek to "combat fears of diversity", still put "difference as a central aspect of everyday life" (p.2.). According to Schiller & Schmidt they still "reinforce ethno-religious boundaries as a deterrent of social interaction" and "continue to focus on distinctive groups, community, religious or other forms of boundaries of differences". Therefore, the authors work with a concept that perceives social relationship in another way than through "categories of difference", which they appoint as "social relations around commonalities rather than difference."

## **Commonalities**

At first sight, the concept of commonalities seems to be not of so much difference. However, the perspective of this concept moves from thinking in differences, towards thinking in 'being in common'. It is stated as follows: "[...] see urban life not as the integration of 'the other', but as the ongoing production of daily sociabilities that, while constituted by people of diverse backgrounds, cannot be explicated in terms of difference (Anthias as cited in Schillder & Schmidt, 2016). The concept is similar to what Sennett (2018) describes as 'sociality'. Commonalities or sociality focus on a 'common purpose or goal.' It is about "doing instead of being" (p. 260).

## Conclusion 2

Critique on conviviality, as expressed in the concept of commonalities, is that it takes differences as starting point. Therewith it would still distinguish social groups. To the author, this critique is understandable. However, identity for individual members of social groups is defined as a concept that changes through time and space, as described in essay A. Secondly, conviviality is embraced in line with the definition of Fincher & Iveson (2008), as "settings in which urban inhabitants can explore shared identifications through shared activities". These two definitions together create an understanding of connectivity, not emerging from differences, but from an embracing of the complexity and fluidity of identity between residents. This connectivity possess different levels. It starts from fleeting encounters – as often promotes within urban design. However shared activities, which can still be executed individually (as for example reading within a library), promote a higher level of connectivity, aiming for the condition of conviviality.

## Place attachment

Another concept not discussed yet, but which fits the value of connectivity, is *place attachment*. Place attachment means that people have something in common, as they have something in common with the place they live in.

The core of this concept is that people feel connected to each other through the place, not the other way around (Reijndorp & Reinders, 2010). This concept of connectivity is seen as interesting for urban design, as it does not focus on the social environment, but on the physical environment. Place attachment is different from the concepts of conviviality and commonalities, as it states that citizens do not necessarily have to execute similar activities, to feel comfortable and (in a way) connected.

Reijndorp (2004) actually also focusses on the concept of 'distance', which at first glance, seems to be in conflict with the value of connectivity.

## Distance and proximity

All the concepts described above focus on the conditions for achieving a certain form of connectivity. Reijndorp (2004) focusses on the concepts of *Distance and Proximity* (in Dutch, named as *Afstand en Nabijheid*). From this perspective, distance is seen as an essential criteria for achieving connectivity. This is in line with perspective of Schiller & Schmidt (2016), who also speak of "the need for social distance to safeguard personal privacy". It is therefore, within high diversity, important to also create possibilities for residents to distance themselves, especially when everyone is situated closely together.

The strong focus on the wish in practice for connecting citizens within a diverse city, might quickly forget how difficult it is to encounter “an other”. As Sandercock (2000) states it, as “the dark side of difference, namely fear of the other, or the stranger.” (p.14). The challenge is to “manage our co-existence in shared space” (Healy as cited in Sandercock, 2000). Potential methods for creating the co-existence is to, instead of only considering physical interventions in planning, also look at the ‘software of fear in the city’. Potential design principles will be further explored in the design chapter. Interesting notion of Sandercock’s research view, is the recommendation to recognize that an individual often possesses anxiety, and that the presence of a stranger can “challenge and undermine the known social order on which our identity is based.” So urban space can function as a place that fosters identification of an individual or between individuals creating a form of comfort, but it can also destruct the comfort.

Too much distance can be seen as a thread for the value of connectivity. Such as the rise of gated communities. Within the Netherlands these forms are not present as the well-known gated communities, as usually a gate is not used. However, even here, elements of water, green or difference in building levels, discourage contacts with the outer world (SCP & WRR, 2014). It reflects a desire for clarity, predictability, security,

but also a desire to protect the own environment and states (Hamers, as cited in SCP & WRR, 2014). This asks for a balance in urban design and processes between distance and proximity.

### Conclusion 3

When striving for connectivity, providing opportunity for distance should also be considered. A designer should recognize that connecting within diversity is not an easy task, as it is not a rational process, but it includes many emotions, such as anxiety.

To be able to understand these mechanisms to a deeper level, especially from an individual perspective, a poetic exploration was made to understand the emotions of connectivity better. The words that emerged from the poem are *hier* (here in Dutch) and *daar* (there in Dutch). The poem functions as a bridge between defining the value of connectivity and an exploration on ‘why we should aim for connectivity within diversity’. The poem can be read on page 77. The concepts of *Hier en Daar* transcend the previous mentioned concepts.



# Hier en Daar

The original meaning in the Dutch language for hier and daar (Van Dale, 2019):

**hier** (bijwoord / *adverb*)  
1 op deze plaats (*at this place*)

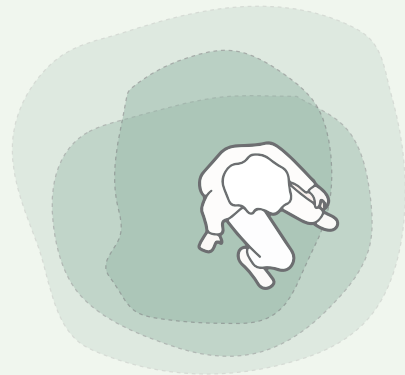
**daar** (bijwoord / *adverb*)  
1 op die plaats (*at that place*)

The definition for this thesis:

**hier** (*noun*)  
1 mental state in which an individual is turned inwards  
either shaped by the physical and/or by the social environment  
facilitated by places that offer or  
(a) an identification and/or  
(b) a sense of home  
An individual possesses multiple “hiers”, “hiers” differ per person and the amount of “hiers” differ per person.



**daar** (*noun*)  
1 mental state in which an individual is turned outwards  
either shaped by the physical and/or by the social environment  
facilitate by places that offers space for the exploration of unknown  
(a) identifications and/or  
(b) senses of place  
An individual possesses multiple “daars”, “daars” differ per person and the amount of “daars” differ per person



### **Switching between hier and daar** (*pharse*)

1 mental capacity to switch between turning outwards and inwards  
of stretching the threads of the personal cocoon  
the capacity to explore and enrich with personal life changes or societal changes  
an environmental skill developed by living in environments with high residential diversity  
being able to balance between distance and proximity  
the capacity and stretch of threads differs per person, facilitated by places that offer space for existing and new identifications.



when “hier and “daar” of multiple individuals overlap it can be seen as “**transversal places**” (Wise as cited in Wessendorf, 2010)

### **Transversality**

1 an interaction between two people of different backgrounds who are both reflexive of their own identity (rooting), while at the same time trying to put themselves into the situation of the other who is different (shifting) (Wessendorf, 2010).



So far the concepts of *social cohesion*, *encounter*, *familiar strangers*, *conviviality*, *commonalities*, *place attachment*, *distance & proximity* and *hier en daar* have been discussed. Before finalizing the thesis definition of the value of connectivity, two additional matters are being considered, namely the factor of scale and the factor of time. As stated within Essay A, diversity is changing continuously in scale and time. This is similar to connectivity.

## Extra consideration: Scale

A difference of scale can be detected in relation to the described concepts of connectivity. The concept of social cohesion, as described within this essay, is mainly used when we talk about a defined urban area. Social cohesion is often used in relation to policy document on the scale of a neighbourhood, such as Schiemond (Gemeente Rotterdam, 2016). Within this area, the wish for cohesion is present. On the other hand, the concept of 'encounter', is often used related to topics with a less strong focus on scale, or on a larger city scale. An example is the wish to connect socio-economic advantaged and disadvantaged citizens (Gemeente Rotterdam, 2007). Conviviality and communalities are not per se linked to a defined urban area that can easily be mapped, it occurs within the network society.

However theory presents multiple opportunities to use the concept of 'cohesion' – without using it for a

defined urban area – within practice it is often used to direct to a tangible physical urban space and her residents. Encountering (in dutch often referred to with the sentence: 'we moeten elkaar blijven ontmoeten'), is mostly used in practice for social gaps (economic and ethnic) that citizens experience on a larger, abstract urban scale through own experience or through media exposure (personal communication Stadsgesprek, 6th of June 2019).

Within this thesis connectivity is aimed to design for multiple scale levels. This is in line with the problem statement, that also detects disconnection through different scales. Secondly, it is in line with the message of Essay A that social environments cannot be seen as successive rings of scale. Similar to the physical environment within a network society where "urban places can be connected without clear links towards each other" (Hajer & Reijndorp, 2001, p.56).

## Conclusion 4

The described concepts, such as cohesion or encountering, put a different focus on scale. Sometimes it focusses more on neighbourhood scale, or scale is of less importance. Within this thesis the notion of *hier en daar* is seen as a mechanism that works on multiple scales. It can be seen as a Matryoshka doll, or a fractal design (as illustrated in Figure 14). Especially within a network society and a diverse society with her fluidity of identifications and senses of home,

a variety of scales offer opportunity for connectivity within diversity. Defined urban areas and related scale, such as a neighbourhood can help to make the goal for connectivity tangible. However, the thesis aims to explore connectivity way beyond this scale, in line with concept of a network society.

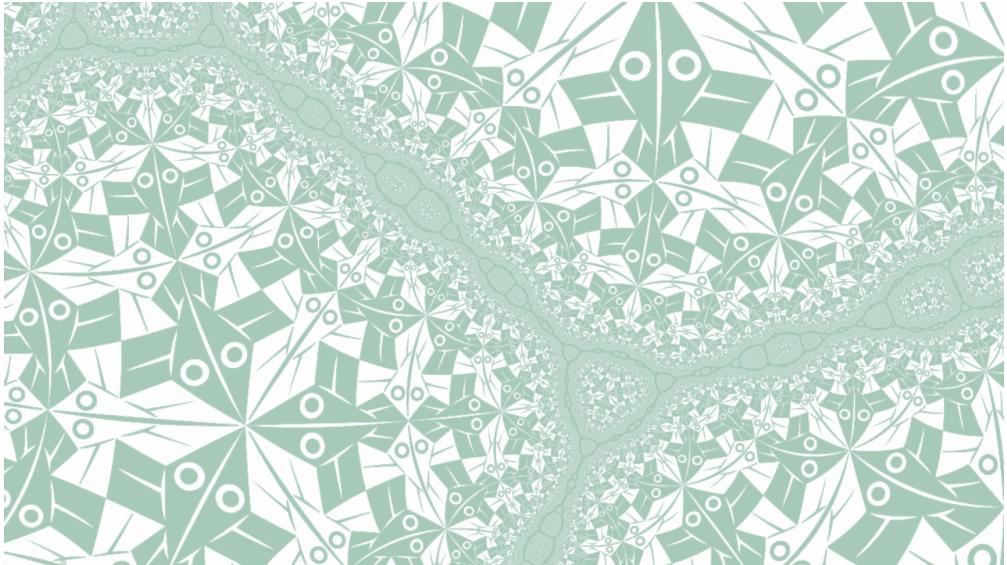
## Extra consideration: Time

For connectivity, the factor of time is also of importance. A(n) (disconnected) urban program, or what used to be described as an *enclave*, can be seen as an urban place with a level high level of a *hier*, or a *daar* (depending from which individual is reasoned). These urban areas can change through time, as the

following quote, originating from the citizens interviews - of an entrepreneur within the case study area - illustrates:

*“Ja, als jij een schilderij aan het maken bent, dan duurt het een tijdje, voordat jij het mag zien [...] Vaak kunnen burgers klagen onderweg, terwijl iets opgebouwd wordt met een bepaalde visie. En ja, dan als het klaar is, mogen ze daar van teren. En dan hoor je ze niet meer klagen. [...] Voor mij was het bijvoorbeeld eerst belangrijk om dit op te zetten, dus keek ik niet zo zeer naar de buurt, dan kom je in eilandjes gedrag even [...] Nu zijn we, stapsgewijs, meer bezig met de buurt. [...] Je moet zelf eerst op je eigen voeten kunnen staan, voordat je de andere hand kan geven om samen te gaan lopen.” (01)*

(01) Yes, if you are making a painting, it will take a while before



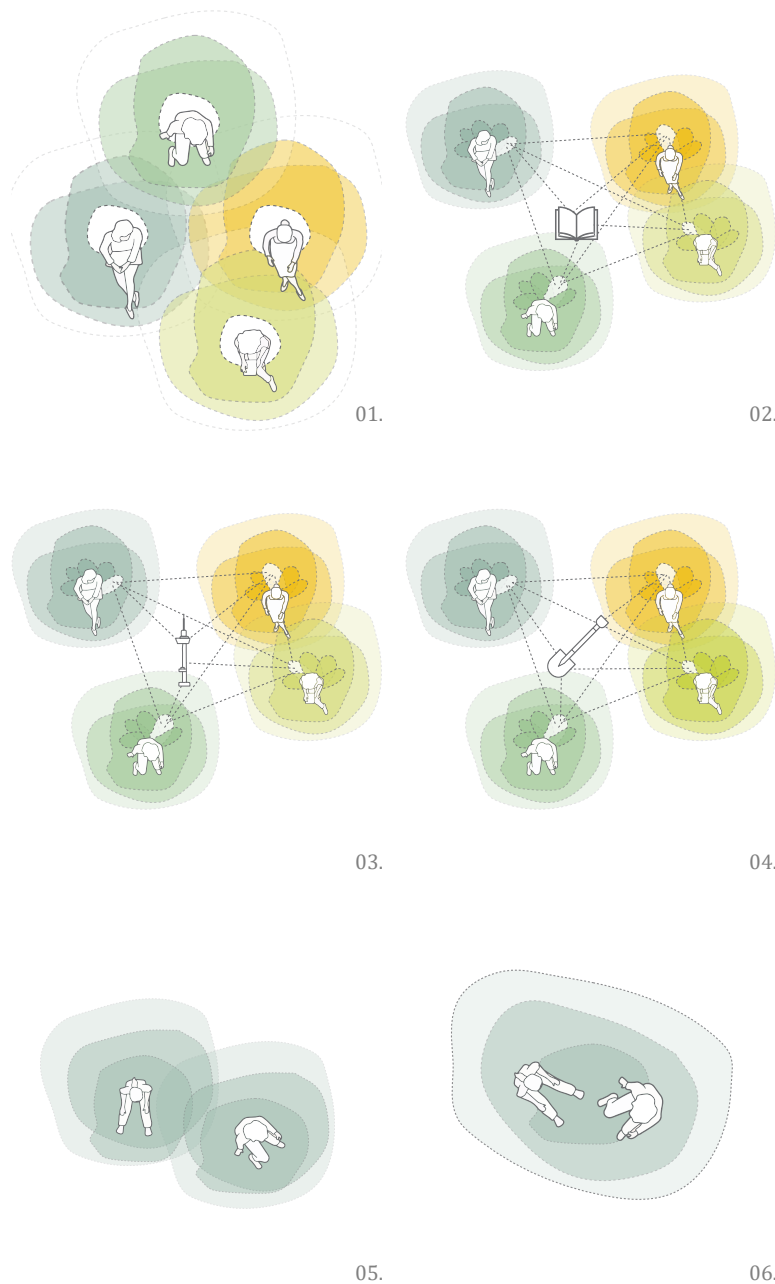
**Figure 14** *Hier en Daar* as a fractal design, image adjusted from the work of Vladimir Bulatov (2012)

someone is allowed to see it [...] Citizens can often complain along the way, while something is actually being developed with a certain vision. And yes, when it is finished, they can enjoy it. Then, you do not longer hear them complaining. [...] For me, it has been important to first set up this [institution], so I was not focused on the neighbourhood, which creates island behavior. [...] Now we are, step by step, more concerned with the neighbourhood. [...] You must be able to stand on your own feet first, before you can give the other a hand to walk together.

This examples shows that when the aim is to achieve connectivity, time should be considered. An enclave might change in time, or might need time to develop itself, before it can offer something to 'others'. Besides these entrepreneurial changes in time, demographic changes, and environment changes, will influence *enclaves* and, therefore, conditions of connectivity. The removal of one building, might result in a completely different enclave, routes or routines. Or as Sandercock (2004) writes: Urbanism is an 'always unfinished social project'.

### **Conclusion 5**

Changes through time – demographic, programmatic, environmental - will always reform social and physical conditions of connectivity. Therefore there is no final blueprint available for any urban area, especially not for the long term. This asks for an attitude of the urban discipline that embraces the entanglement and complexity of social and physical influences and conditions on the built and social environment of the city.



**Figure 15** Forms of connectivity: (01) Familiar Strangers through casual encounters, (02) Conviviality, (03) (Shared) Place Attachment, (04) Commonalities, (05) Distance and (06) Proximity.

## To conclude

Question discussed in this essay:

*How to define the value of connectivity for a high level of residential diversity, considering different perspectives presented in the knowledge tension?*

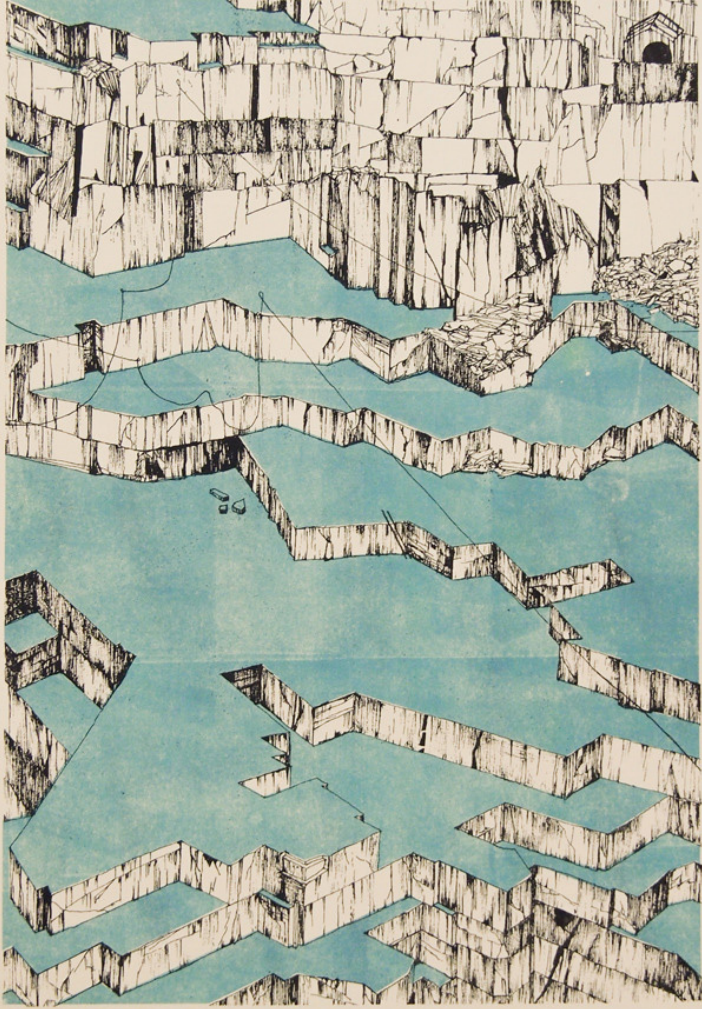
### **Connectivity is defined as:**

“Urban conditions that enhance the number of opportunities of social encounters, from fleeting interactions to public doings, on different urban scales forming a dynamic connected area with constant change of individual identifications in space and time, while also taking the need for distance into account.”

This definition covers the previous described adopted forms of connectivity, illustrated in Figure 15: (01) Familiar Strangers through casual encounters, (02) Conviviality, (03) (Shared) Place Attachment, (04) Commonalities, (05) Distance and (06) Proximity.

The overarching concepts used in this thesis are *hier en daar*, in which connectivity in diversity is seen as a connection between a *hier* and a *daar*. In which a *hier* are places with its physical and social environment that offers a sense of home and/or identification. And *daar* are places that offer space for the exploration of unknown identifications or senses of place.

Figure 16 Artwork of Struan Teague (2014)





## **HIER EN DAAR**

vecht bevries vlucht  
daar  
met een ander dansen  
beweeg  
de draden van je cocon  
lenig

sluit ontwijk worstel  
hier  
een beeld vervormen  
anders  
vrij  
een ruimere manier van zijn

**EXPLORATION OF**  
THE WISH FOR  
**CONNECTIVITY**  
IN AREAS  
WITH **HIGH**  
**RESIDENTIAL**  
**DIVERSITY**

## 2.4 [C]

### Exploring the wish for connectivity

This essay has the aim to explore ‘the why’ of this thesis, presented in the question:

*Why do we, and why does the author, aim for connectivity in areas with high residential diversity?*

The poem on the previous page presents an exploration of the wish using a poetic language. This helps to temporarily let go of thinking in a theoretical language, aiming to research personal motivation to strive for connectivity, especially related to residential diversity. Although, connectivity is a value that is important for many in the urbanism discipline, reasons why this value is important, differ. This essay explores theoretical, practical and personal motives.

The first paragraph will provide a summary of reasoning that was encountered within theory and in practice – external motives. The second part of this chapter will explain why the author aims for connectivity in areas with high residential diversity – seen as internal motives. For the thesis, it is of importance to reflect on author’s motives for designing for connectivity within

diversity, as it is based on the approach of value sensitive design. And the underlying argumentation of Campbell (2006) and Fincher & Iveson (2008), that a planner cannot be seen as a neutral observer or facilitator, demands on a reflection on personal values within an urban planning and design project.

### External motives

Within theory and practice a variety of reasoning is present why we should aim for diversity and a form of connectivity within diversity. Some of this reasoning, encountered in theory and practice, is illustrated below. This paragraph starts with a reflection on the Dutch context, as values are also context-determined. After, international perspectives are presented. Although it should be stated that these scholars are of western origin.

#### **The Dutch context**

The problem that is often mentioned which goes against the value of connectivity, is segregation. According to Veldboer, Duyvenbak & Bouw (2007) within the Dutch context segregation is being experienced

as uncomfortable. This is mainly experienced in such a way, because the Dutch identity is shaped by the willingness and efforts to decrease inequalities. The uncomfortable feeling shows the willingness for a more connected, integrated and mixed area. Motives for this desire can be organized in two categories.

The first category is referred to as the *vertical dimension*, the second as the horizontal dimension. The vertical dimension, named as "elevating" (*verheffen* in Dutch) contains the belief that diversity will improve individual and societal (economic) growth through an elevation of each other. This category of motives is also present within the policy documents of the municipality of Rotterdam. Those documents present the belief that by attracting high to mid income and educated residents, the advantaged (*kansrijk*) will help the disadvantages (*kansarm*) and all residents will benefit (Gemeente Rotterdam, 2007). In this category segregation can be seen as unjust because of instrumental reasons: connecting is used as an instrument to achieve other objectives.

The second category, the *horizontal dimension*, is named (ironically) as "connecting" (*verbinden* in Dutch). It aims to increasing mutual relationships within a diverse society. In this category segregation in itself is seen as unjust (Buitelaar, 2018; Veldboer, Duyvendak, Bouw, 2007).

Both categories of beliefs have also

been identified in the interviews with citizens of Delfshaven Rotterdam. One citizen has explained both reasoning why segregated lives within Delfshaven are not desirable in his eyes. The interviewee has said that not everyone might have equal opportunities (vertical dimension), and that a segregated city district is not cosy and that it creates a limited world-view (horizontal dimension).

*"Nou dat niet iedereen - nou dat klinkt zo politiek gelijk - maar niet iedereen heeft gelijke kansen, het is ook gewoon niet gezellig. Het geeft ook een soort beperkt wereldbeeld ofzo. [...] En ook gewoon dat je eigen kinderen sympathieker van worden als ze zien dat het niet allemaal Rosanna is en ... ik weet niet, dat daar ook af en toe lastige situaties zijn ofzo."* <sup>(01)</sup>

*(01) "That not everybody – well, that sounds politically correct – has equal opportunities, it is just not fun either. It also gives a kind of limited world view [...] And also, that children will get more sympathetic when they see it not all Rosanna and ... I don't know, that there are occasionally also difficult situations."*

This quote is in line with literature in which Sorkin states: "Encountering the full spectrum of a community is also thought to be essential for a child's education because it teaches them that they are part of a larger culture, that they have a role in, and can participate in, a shared society." (Talen, 2008). This brings us to motives detected in literature that is positioned in an international western context.

### **The international context**

*The Just City Index*, starting point of this thesis, describes connectivity as “*the physical and social networks that tie places and people together, providing contact and opportunity necessary for well being.*” Whereby “necessary for well being” can be seen as the motives to strive for this value. **What is exactly meant by well being is unclear, because well being can be understood as a horizontal and a vertical dimension.**

An author that has provided an extensive overview of variety authors and motives for why we should strive for (connected) diversity is Talen (2008). She writes mostly about the American context, but the motives for striving for design for diversity is of wider interest. Talen introduces, in addition to the previous paragraph, some more philosophical motives which are linked to achieving a societal growth. Whereby the connected diversity is seen as essential part of a city. And it is seen as “higher forms of human achievement”, and a mature city. (Mumford as cited in Talen, 2008, p. 34). Or as Delany states it, an essential part of life: “To some, it is simply that life is ‘most rewarding, productive and pleasant’ when as many people as possible ‘understand, appreciate, and seek out interclass contact and communication in a mode of good will’” (Delany as cited in Talen, 2008). These motives can be seen as intrinsic. Next to the addition, Talen confirms the two categories of motives described

above – the vertical and horizontal dimension. She mentions both in the overarching category of ‘social equity’. The vertical dimension is described as access to resources for all social groups – ‘geography of opportunity’ – striving for fairness. The horizontal dimension is described as an ‘utopian ideal’ – striving for a better, more, creative, tolerant, peaceful and stable world – nurturing the human spirit.

Other authors that have formed an important theoretical basis for this thesis, are Fincher & Iveson. Within their book about ‘Planning and Diversity in the city’, a motive can be detected. For them “encounters among strangers” is seen as essential for experiences of urban life. They see it as “an opportunity for an urban citizen to explore own hybrid identity, alongside more fixed identities as group members” (Fincher & Iveson, 2008, p. 153). This design motivation seems to be intrinsic, as it is seen as essential to the urban experience. **It also shows a strong relation to other values, which author would describe as personal growth and freedom.** Further on they describe it as [designing] places where individuals can adopt a shared identification with others, which allows them all to glimpse another dimension of themselves and each other (Fincher & Iveson, 2008, p. 154). **The connection to “glimpse another dimension of each other” expresses also other values such as recognition and empathy.**

## Author's Valued-based City

- It is a city that aims for inclusion, which means that everyone should be able to access all facilities a city has to offer (house, health, education, basic income) and to be able to enjoy and experience the vibrant city life (delight) throughout the whole city, also close by home (vitality) in static and temporary structures (spontaneity).
- It is a city where we don't live segregated. A city which is designed with strong attention to border conditions, to facilitate functions and spaces that serve multiple sides (connectivity) and interaction between diverse social groups
- It's a city that facilitates differences in uses of space within housing sector and in public space.
- It is a city where governance, civic organizations, researchers and citizens are in an ongoing debate on how to live together and which future development the city should take (cooperation).
- It's a city with a governance that prioritize social outcomes for citizens above all other interests. Not a city where investors and competition models dominate the agenda. It's a city where not one citizen or neighbourhood is valued above the other (merit).
- It is a city where citizens and citizens groups are able to make their voice heard (agency) as part of an ongoing debate on how to live together. When protests is worn by many, governance should take action (accountability). So democracy and engagement not just as a process, but also as an outcome.
- It is a city where citizens are aware of city development that is going around them, to be able to understand processes that are not immediately visible in daily life (knowledge)
- It is a city where people feel freedom to express themselves (freedom), but where citizens act in a respectful way towards each other. It's a city where citizens accept differences (acceptance)

### **Conclusion 1**

First of all, there are two categories why there is a wish for a connected diverse society. A vertical dimension (access to resources) and a horizontal dimension (mutual links). These two appear to be leading in the argumentation for stimulating connected diversity. Secondly, some motives reason from a collective perspective – what it can offer society or groups of residents. Others look from an individual perspective. In addition, a sum of individual benefits can be seen as potentially creating collective benefits. Finally, in an analysis on motives for achieving a connected diversity, other values are detected that seem to be important for the professional. So when aiming for connectivity, an exploration of related values can contribute to a better understanding of motives.

### **Internal motives**

The poem highlights author's motives to aim for connectivity within diversity, framed as 'a broader way of being' (in Dutch: *een ruimere manier van zijn*). The core message of this perspective is that we, as society, should aim for connectivity within diversity as it will provide an individual and a collective 'a broader way of being'. It has the promise to bring wisdom, knowledge, creativity, (mental and spiritual) growth and joy to both scales – individual and collective. The motive is connected with other

values that are of importance for the author, as visible in the box "Author's Valued-based City"

The striving for connectivity within diversity, and effect on wisdom, knowledge, creativity, (mental and spiritual) growth and joy for an individual and a collective level, is a motive that fits the category with a horizontal dimension. However author does not agree with the statement of Talen (2008) that the horizontal dimension aims for a peaceful and stable world. The dimension is described within her book as an 'utopian ideal' – striving for a better, more, creative, tolerant, peaceful and stable world – nurturing the human spirit. The author does not aim to create 'a stable and peaceful world'. There is a struggle that comes to growth, both on an individual and a collective level. And there is also a struggle, conflict and level of stress that comes to living with diversity. This is also made clear in the poem. The aim is not to stabilize any of this. Therefore the wish is present to acknowledge the difficulties as well. To quote Sorkin: "It is no tautology to suggest that the only training for living together, is living together" (Sorkin as cited in Talen, 2008).

### **Conclusion 2**

The motive to strive for connectivity within diversity is to achieve a 'broader way of being', for an individual and a collective level. In which it will bring wisdom, knowledge, creativity, mental and spiritual growth and joy. My motives

have a horizontal dimension – gaining mutual links and benefits. The pursuit does not see it as an utopian dream without friction, which tends towards stability and peace.



## To conclude

Question discussed in this essay:

*Why do we, and why does the author, aim for connectivity in areas with high residential diversity?*

The defined answer:

There is a variety of reasons present within theory. They can be divided into two categories: *a vertical dimension* (access to resources) and *a horizontal dimension* (mutual links and understanding). These two appear to be leading in the argumentation for stimulating a connected diversity. Secondly, some motives reason from a collective perspective, on what it can offer society or groups of residents. Others argument from an individual perspective. In addition, a sum of individual benefits can be seen as potentially creating collective benefits.

Finally, in an analysis on motives for achieving a connected diversity, other values are detected that seem to be important for the professional. So when aiming for connectivity, an exploration of related values can contribute to a better understanding of motives.

Personal motive of the author to strive for connectivity within diversity, is to achieve a 'broader way of being', on an individual and a collective level. It has the promise to bring wisdom, knowledge, creativity, mental and spiritual growth and joy. The motives posses a horizontal dimension – gaining mutual links and benefits.

However, the pursuit does not see it as an utopian dream without friction, which tends towards stability and peace.

## 2.5 Summary

This subsection summarizes the conclusions of the three essays in 2.2 'Approaching residential diversity', 2.3 'Defining the value of connectivity', 2.4 'Exploring the wish for connectivity'.

Within urban planning and design, identity should be seen as a fluid concept that changes within different space-and time-settings, therefore, it is important to acknowledge citizens as individuals with a variety of attachments and group-based identifications. The concept of fluctuating identifications and fluid diversity, are therefore, more useful concepts.

When the aim is to analyse diversity, a designer should not focus on top-down defined identities or personal opinions, but on activities that take place. These activities provide a better insight into individual way-of-living and to which extent it connects or collide with the physical and/or the social environment. Activities consist of routes (physical route taken to arrive at goal), and routines (amenities or other urban functions used within the urban fabric).

From a static perspective, living environments and urban functions create a variety of enclaves or landscapes. These enclaves or landscapes are formed by design, use, experience, as a combination of the physical and social environment. And although citizens make constant judgements of others and it is therefore part of everyday

city life experience, living environments, perspectives and identities change over time. It is therefore important to constantly change perspective within analysis and design regarding the topic of diversity, to be able to do justice to everyone.

The value of connectivity in residential diversity is defined as:

“Urban conditions that enhance the number of opportunities of social encounters, from fleeting interactions to public doings, on different urban scales forming a dynamic connected area with constant change of individual identifications in space and time, while also taking the need for distance into account.”

This definition covers the previous described adopted forms of connectivity, illustrated in Figure 15: (01) Familiar Strangers through casual encounters, (02) Conviviality, (03) (Shared) Place Attachment, (04) Commonalities, (05) Distance, and (06) Proximity.

The overarching concepts used in this thesis are *hier en daar*, in which connectivity in diversity is seen as a connection between a *hier* and a *daar*.

In which a *hier* are places with its physical and social environment that offers a sense of home and/or identification. And *daar* are places that offer space for the exploration of unknown identifications or senses of place.

There is a variety of reasons presents within theory. They can be divided into two categories: a vertical dimension (access

to resources) and a horizontal dimension (mutual links and understanding). These two appear to be leading in the argumentation for stimulating a connected diversity. Secondly, some motives reason from a collective perspective – what it can offer society or groups of residents. Others look from an individual perspective. In addition, a sum of individual benefits can be seen as potentially creating collective benefits.

Finally, when analysing motives for achieving a connected diversity, other values are detected that seems to be important for that person or author. So when aiming for connectivity, an exploration of related values can contribute to a better understanding of motives.

Personal motive of the author to strive for connectivity within diversity is to achieve a ‘broader way of being’, on an individual and a collective level. In which it will bring wisdom, knowledge, creativity, mental and spiritual growth and joy. The motives posses a horizontal dimension – gaining mutual links and benefits. However the pursuit does not see it as an utopian dream without friction, which tends towards stability and peace.



## 2.6 Conclusion

### SRQ1

This paragraph answers the sub-research question:

SRQ 1 *How to approach residential diversity in relation to the value of connectivity so it is suitable for urban analysis and design?*

The **value of connectivity within residential diversity** is defined as:

*Urban conditions that enhance the number of opportunities of social encounters, from fleeting interactions to public doings, on different urban scales forming a dynamic connected area with constant change of individual identifications in space and time, while also taking the need for distance into account.*

**Suitable for urban analysis:**

- *Do justice to diversity:* to do justice to diversity, it is important to approach residential diversity by a constantly changing perspective within analysis and design. Within urban planning and design identity should be seen as a fluid concept that changes within different space-and time-settings. The concept of fluctuating identifications is, therefore, a more useful concept.

- *Research enclaves:* from a static perspective, living environments and urban functions create a variety of enclaves or landscapes. These enclaves or landscapes are formed by design, use, experience, as a combination of the physical and social environment.
- *Focus on activities:* a designer should focus not focus on top-down defined identities or personal opinions, but on activities that take place. Activities consist of routes (physical route taken to arrive at goal), and routines (amenities or other urban functions used within the urban fabric).
- *Research places of hier:* places that offer or (a) a sense of home and/or (b) an identification
- *Research places of daar:* places that offers space for the exploration of unknown identifications (a) or (b) senses of place

**Suitable for urban design:**

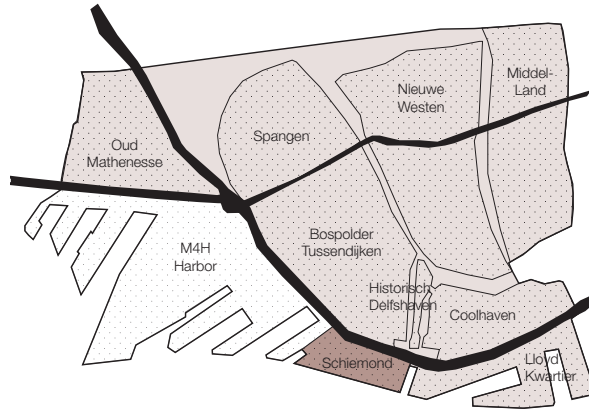
*The design brief, originating from the value definition, is to design an urban environment that offers citizens multiple possibilities for social encounters from fleeting interactions to public doing, while also offering spaces for distance. The task is to both create a hier and a daar.*



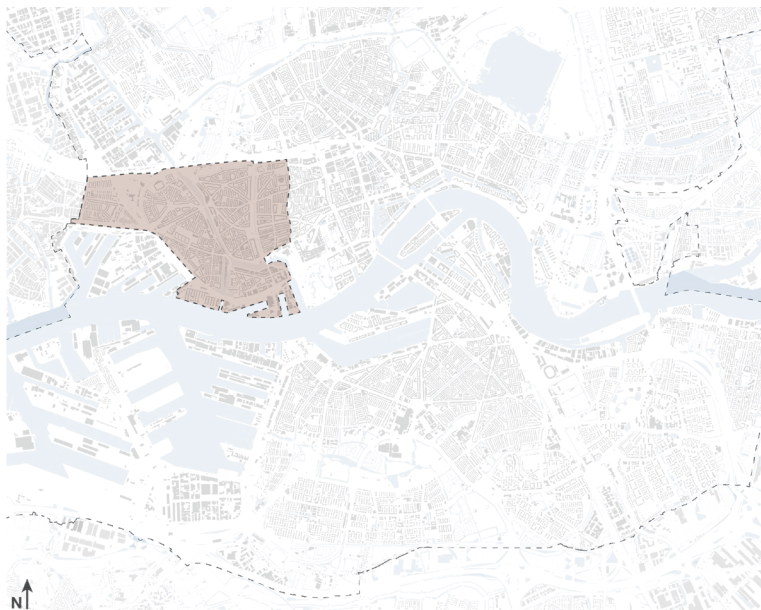
**CASE**

urban

conditions



**Figure 17** City district Delfshaven with its neighbourhoods. The primary route of Vierhavenstraat / Westzeedijk as heavy black line and the areas to the south, M4H harbour district, Schiemond and Lloyd Kwartier



**Figure 18** City of Rotterdam and its boundaries and the city district Delfshaven in purple, based on maps of the municipality of Rotterdam (2018)



# Introduction

Within the thesis a case study area is used to gain a deeper understanding of conditions of connection and disconnection. The case study area serves as a means to clarify the concepts explained in the previous chapter, which are: *enclaves, routes & routines, hier* and *daar*. In turn, the gained insights help to make a translation towards an applied design, and generic design principles. This chapter describes the urban conditions of the case study area. The analysis of the urban conditions is not executed in a traditional urbanism way, meaning analysing the well known layers of urban structures, such as green infrastructure, water infrastructure and urban functions. Although, these have been mapped throughout the process, they serve the defined concepts of *enclaves, routes & routines, hier* and *daar*. Extra information on social conditions of Schiemond, that did not suit the three concepts of this chapter, can be found in the “Appendix IV”.

This chapter aims to answer the second sub research question:

*What are the urban conditions of the case study area in line with the developed perspective of SRQ1?*

The case study area, as introduced in the introduction chapter, is city district Delfshaven and the neighbourhood Schiemond and its surrounding areas, shown in Figure 17 & Figure 18. The three described concepts of enclaves, routes & routines and *hier* and *daar*, are all described through the perspectives of:

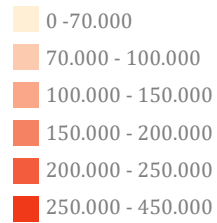
- Zoom out scale: city district Delfshaven \*
- Schiemond and its neighbours scale
- Time

\* Important notion is that the analysis on the zoom out scale of the city district is more focused on the west area of the city district. This is caused by the qualitative methods that are used, which was mainly conducted in areas and with citizens living on the west side of the Schie.

It is time to make the area come alive!



**Figure 19** Property Value in Euros, based on data of the Municipality of Rotterdam 2018



**Figure 20** Buildings with higher property value than the average value of the Netherlands - 230.000 euro in 2018 (CBS, 2019; Gemeente Rotterdam, 2018)



**Figure 21** Buildings with lower property value than average of Rotterdam - 166.000 euro in 2018 (CBS, 2019; Gemeente Rotterdam, 2018)

## 3.1 Enclaves

As described in Chapter 2. Perspective, a clearly labelled physical and social environment, referred to as the built environment, is seen as a *enclave*. Enclaves possess their own design, use and experiences. Humans create cognitive links between the physical environment and the social environment, and vice versa. This means that citizens create their own ideas about the residents in the neighbourhood where they live (Reijndorp, 2004), and about other neighbourhoods in the city. Two conditions that play a role in the creation of these cognitive links, are the observations of economic and ethnic conditions of an area. Those conditions are described in this subsection, for the scale of the city district and the scale of Schiemond. Further on, variety of *types of enclaves*, are described, which results in a map with observed enclaves in the city district. Thereafter, the border conditions of the enclaves of Schiemond and surrounding areas are analysed. At last, changing *enclave* conditions through time are explored.

### **Economic diversity**

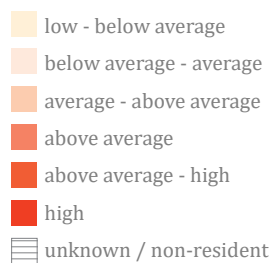
Figure 19 shows the property value of residential buildings present in Delfshaven. Overall the property value is low within the area. Figure 20 shows all the buildings with a lower property value than the average within Rotterdam – which is 166.000 Euros (CBS, 2019). The maps show clearly that a large part of the properties within city district of Delfshaven area are below average. Figure 21 on the other hand highlights all the property which possesses a higher property value than average within the Netherlands, which is 230.000 Euros (CBS, 2019). It shows a concentration of high property value in the east of Delfshaven, closer to the city centre, aligned with the main streets such as the Mathenesserlaan, and the water (de singel) Heemraadsingel. Other locations of higher concentration are Delfshaven, older buildings in Coolhaveneiland, and new build in Bospolder en LloydKwartier.

The city district presents a high concentration of low property-values, which makes the area seen as an area with a low level of economic diversity. However on a smaller scale, the scale of Schiemond and neighbouring areas, diversity and large contrasts are visible. Figure 22 illustrates the median income per zipcode for the neighbourhood

of Schiemond and Lloyd Kwartier, and the southeast part of Bospolder Tussendijken and south part of Coolhaveneiland. This map shows clearly the large differences in income between citizens of Schiemond and citizens of Lloyd Kwartier.



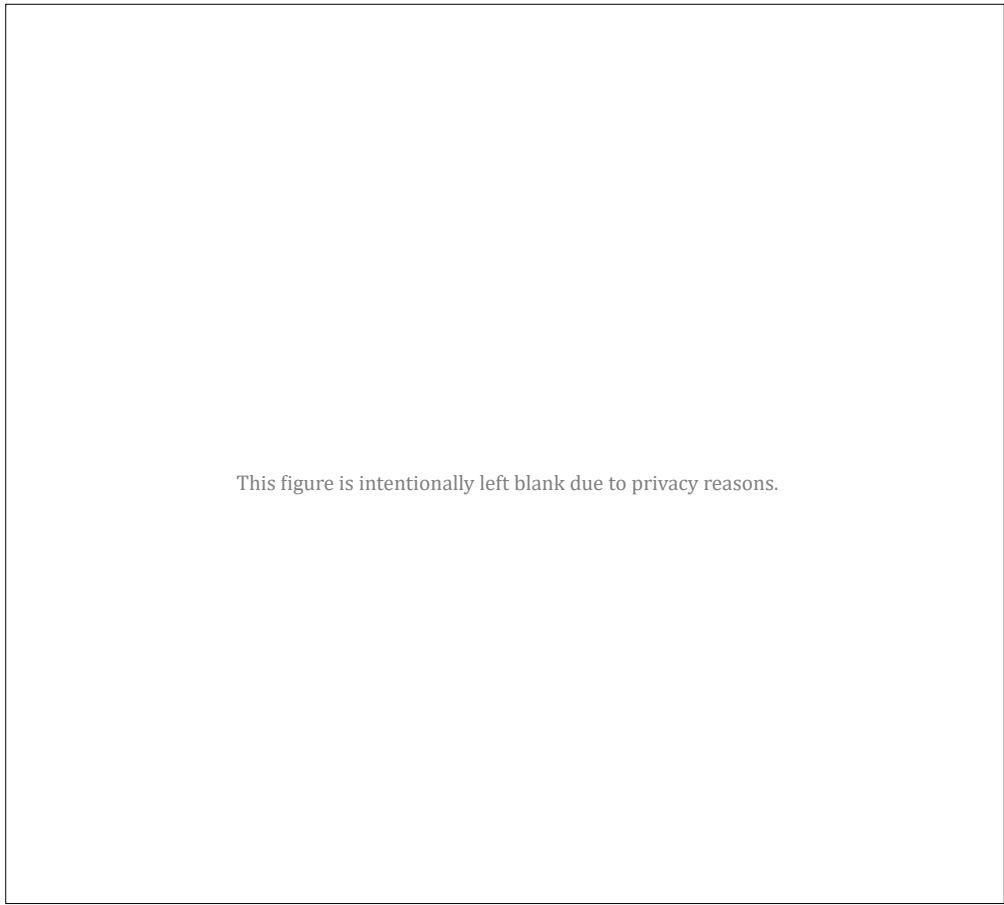
**Figure 22** Median Income per zip code based on data of PDOK, 2018



### **Ethnic diversity**

The city district Delfshaven is very diverse from a perspective of ethnic diversity. The nine maps (Figure 23) show that on the scale of the city district, there are no specific migrant groups that geographically dominate an urban area. So the ethnic diversity is scattered, not concentrated. On a city scale the percentage of migrants with a non-western background is 47.7 percent (data Gemeente Rotterdam, 2018). This percentage is lower than the average of the city, Rotterdam, which is 38 percent (CBS, 2018). Also the level of ethnic diversity of Schiemond (data of Schiemond and Lloyd Kwartier has been taken apart, however the data of these two areas is normally added) is high. However the percentage of autochthonous is quite lower than average, namely 14.5 percent. At Lloyd Kwartier on the other hand, there is in relation to the district, a higher percentage of autochthonous citizens, namely 70.2 percent (data Gemeente Rotterdam, 2018), see Figure 24.

So, the city district Delfshaven can be seen as a poor area within the city, as a large part of the housing stock is below city's average and it can be



**Figure 23** Residential addresses with the nationality of main occupant by origin, for the city district, based on data of Gemeente Rotterdam, 2018



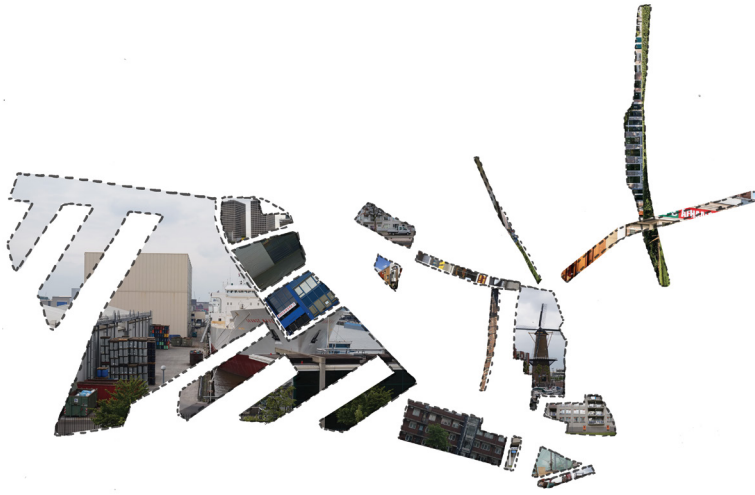
**Figure 24** Proportions of the ethnic background of citizens of four neighbourhoods: Schiemond, Bospolder, Historisch Delfshaven, Lloyd Kwartier. Based on data of the Municipality of Rotterdam 2018

seen as ethnic diverse. The level of ethnic diversity also differ through scales. In the case study area context, diversity is seen as high and, fairly equal divided on a city district scale, however a big contrast can be found on a smaller scale – as with the neighbourhoods of Bospolder, Historisch Delfshaven, Schiemond, Lloyd Kwartier. The latter is more related to an experience an individual can have regarding an environment. Because, even though data and maps provide insight on the current conditions, observations on a smaller, provide a better understanding of the experience of enclaves.

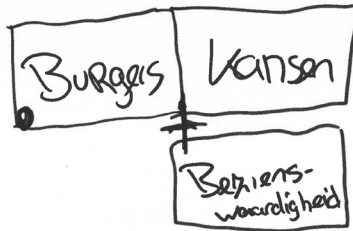
Figure 25 shows the enclaves defined for the case study area. These enclaves emerged from (a) the previous presented maps on the economic and ethnic diversity, from (b) conversations that took place during with citizens and professionals, and from (c) observations of the author on the case study area. The attempt is made to map enclaves that most people will experience, and of which it is possible to identify boundaries. An example that illustrates such an experience, is the mental map presented in Figure 26. This mental map describes Schiemond as 'Burgers' (citizens), M4Harbor area as 'Kansen'(opportunities) and Dakpark and its boulevard as 'Bezienswaardigheid' (sight). This is an illustration on how an urban area can be seen as different and defined enclaves with varieties of function, attitude and experience.

### **Types of Enclaves**

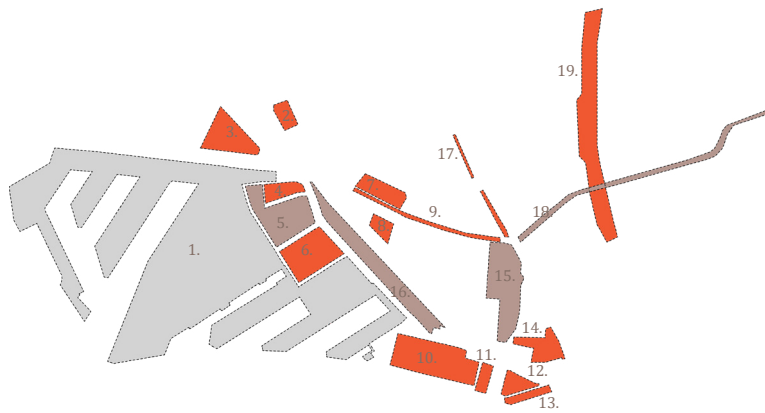
An enclave is seen as an urban area that can fulfil various functions in relation to the value of connectivity. An enclave can function as a 'connector', when it is visited by residents of different living environments (such an enclave is labelled as: *connecting*). Or an enclave is visited by limited amount of residents and their 'living environments' (called: *solitary*). Or the enclave contains a different function within the city, for example an industrial economic function such as a harbour area, which is (currently) not designed as part of the 'public life of daily movement for residents' (called: *non public life*). The types of enclaves of city district Delfshaven, for the present tense are visible in Figure 27.



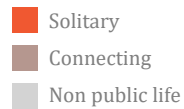
**Figure 25** Enclaves defined for the case study area emerged from variety of methods



**Figure 26** Mental Map of the area of Schiemond and its neighbouring areas, drawn by an interviewee during the citizens interviews



**Figure 27** Observed enclaves in categories of connecting, solitary or non public life



1. Harbor Area
2. Justus van Effenblok
3. Het Witte Dorp
4. Lee Towers / Marconit Torens
5. Praxis / Business Park
6. Creative Industry
7. Post-War Flats
8. Le Midi
9. Schiedamseweg
10. Schiemond
11. Accent School
12. Kroonlocatie
13. (previous) De Werf Museum / Vacant
14. Postwar Buildings Blocks
15. Historisch Delfshaven
16. Dakpark
17. Mathenesserdijk
18. Nieuwe Binnenweg
19. Heemraadsingel



Observations on enclaves, and determinations on the types of enclaves, provide input to design for connectivity. First of all, insights to which places are not fully seen as 'public', but as parochial. These places are interesting when a design is made for a *hier* and a *daar*, as one of these mental states is probably dominating the other one. Second, these enclaves illustrate a form of disconnection between the landscapes, for which there is the aim for a better connection in this diversity.

## Schiemond and its neighbours

When we zoom in into Schiemond and its neighbouring areas, a more detailed explanation can be given of the present enclaves and their edges. Looking at Schiemond, the following enclaves are of importance as adjacent neighbours: the M4H harbour area, School building of Accent and Horizon, Kroonlocatie, and south located industrial functions and its ship museum. Schiemond is also seen as an enclave on itself. Dakpark and Historisch Delfshaven are seen as connecting enclaves.

### Boundaries

Figure 28 shows three edges of Schiemond with the surrounding area. It shows that all three interfaces can be seen as boundaries in the definition of Sennett (2006); an edge where things end. On neighbourhood scale the area can be seen as a closed off area, an area on itself.

On a more zoomed-in scale, exceptions are present. Such as the small 'Snackbar' where the owner said that everyone in the area, from Lloyd Kwartier, Schiemond, Bospolder Tussendijken en Harbor area, eats at his place (personal communication, 15th of November). Also at the north edge, there is a small cluster of amenities, that creates a more vivid spot on the mostly inactive edge.

Figure 29 shows the edges observed along the Vierhavenstraat / Westzeedijk. This figure shows areas that repel with a thick line (Gehl, 1971), these areas have boundaries that possess a closed character; a boundary. The others (dashed line) are seen as a border, an area that invites (Gehl, 1971; Sennett, 2006) with the functioning or potential of being an edge where difference groups interact. Important note is that a solitary enclave, does not necessarily mean that it possesses high quality borders. The neighbourhood Historisch Delfshaven can be seen as an

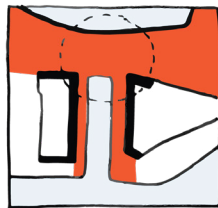
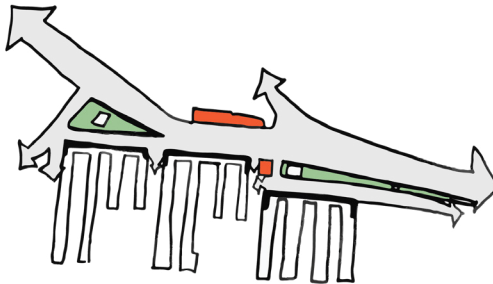
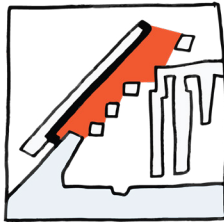
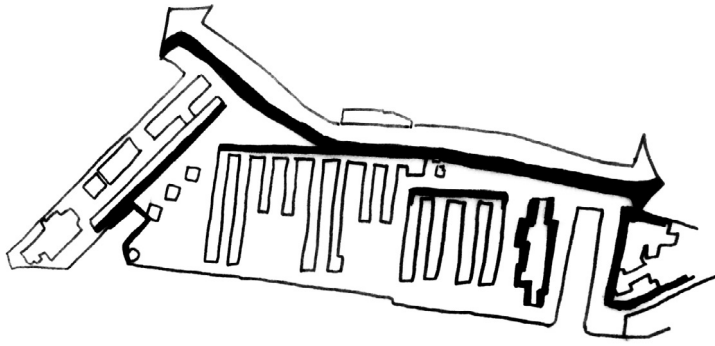
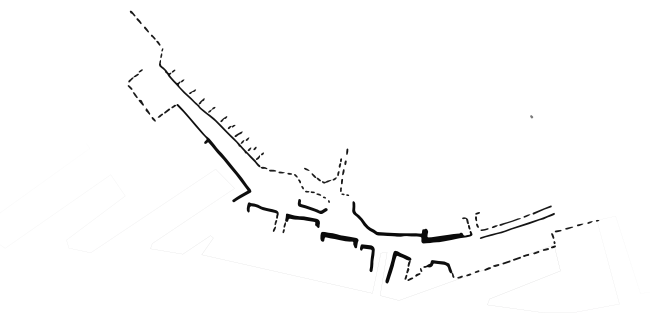


Figure 28 Schiemon and its borders and boundaries

example, as it possess a boundary with a closed character, however it functions as an connecting enclave. The figure shows that especially at the height of Schiemond many closed edges can be detected.



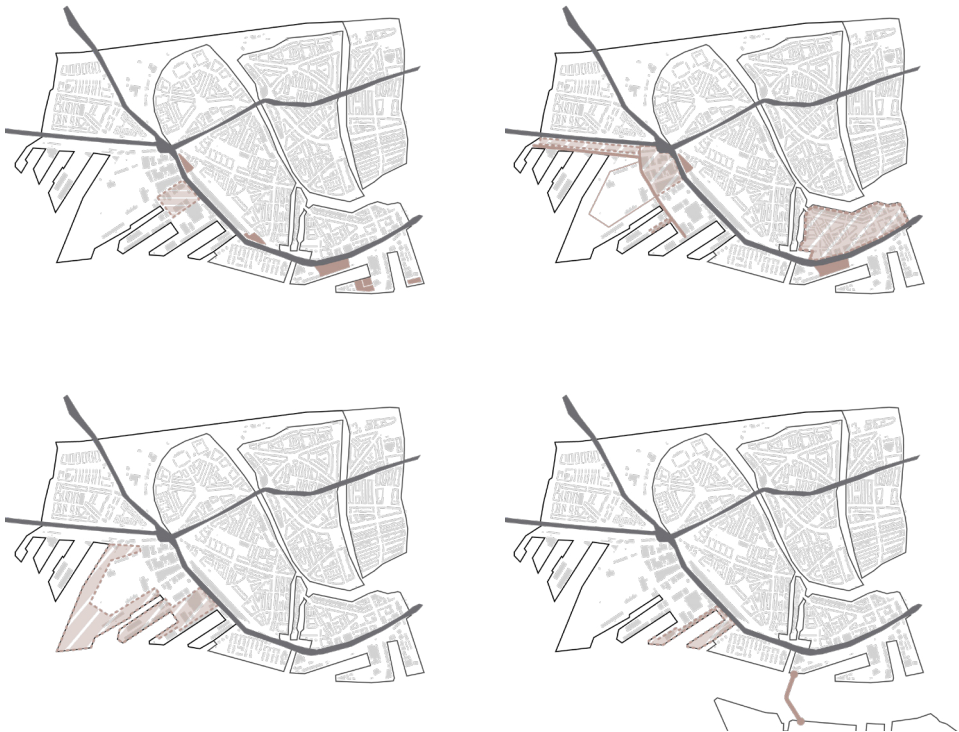
**Figure 29** Schiemond and its borders and boundaries

Analysis of the boundaries and borders provide insights that can be used in a design and it helps to understand the relationships of the enclaves with their immediate environment.

Conditions of diversity are dynamic, and to be able to develop a responsive urban design, upcoming potential changes of enclaves should be taken into account. Therefore the next section describes potential changes in time.

## Time

As said the city district Delfshaven consists of different neighbourhoods. Before the eighties the area south of the primary (car)route Vierhavenstraat and Westzeedijk, functioned completely as a harbour area. In the eighties, at the time of the urban renewal, the Schiemond area has been transformed to living area (Steenhuismeurs, 2018). The area of Lloyd kwartier has been recently developed – later than 2005 (Waag Society, 2015) – into a mix of business, school and residential area. Currently the Merwe-Vierhavens harbour district (M4H) still functions mainly as harbour area. However, new initiatives and businesses, mainly related to the circular economy, have already moved into area. Beside a new area plan is developed for transforming this area until 2035 - 2050 (Het Rotterdam Makers District, 2019).

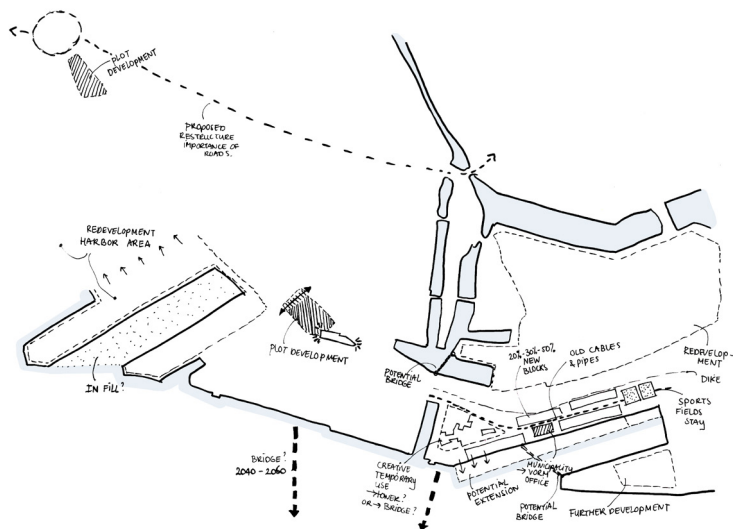


**Figure 30** Time-line of potential new changes in the built environment of city district Delfshaven, from left to right: (01) > 2025, (02) 2025 – 2030, (03) 2030 – 2040, (04) > 2040. Maps based on interviews with professionals

## Future developments

In the upcoming decades, the city district of Rotterdam West will change due to many new urban development planned projects. Figure 30 presents the predicted changes.

Figure 31 shows the planned urban development for Schiemond and surrounding area. Information originates from interviews with professionals involved in the case study area. The potential changes in the built environment, are taken into account in the applied design.



**Figure 31** Overview of the potential new urban development for Schiemond and surrounding area, originating from interviews with professionals involved in the case study area

## Future Diversity?

This paragraph continues with researching economic diversity, as presented in the paragraph "Economic diversity" on page 95. Within the city of Rotterdam multiple city debates and communication in variety forms of media are related to emerging gentrification processes (Tegenlicht, 2018). This paragraph aims to predict which areas will attract higher income residents in the future. This is important for this thesis project, as an urban design should consider possible changes in time. The current diversity conditions will change, as the city is always

subject to change. In case the aim is to improve connectivity for residential diversity, a hypothesis on possible diversity changes can provide input for a responsive design.

Figure 32 highlights the properties with a property value higher than the average within the Netherlands (230.000), in relation to the year of construction. Statistics related to these properties show that the median of the construction years is 1916. The most common value is the year of 1920. Although other factors make up the property value, such as location (close to the water) and building surface (as highlighted in the Figure 33 and Figure 34), these maps show potential future gentrification processes. It forms the prelude to the assumption that in case gentrification continues or rises and more wealthy residents will come and live within Delfshaven, they will probably find a place in residential buildings that are new build or constructed before 1920. Analysing these possible developments can be of importance to analyse the potential residential economic diversity of the future.

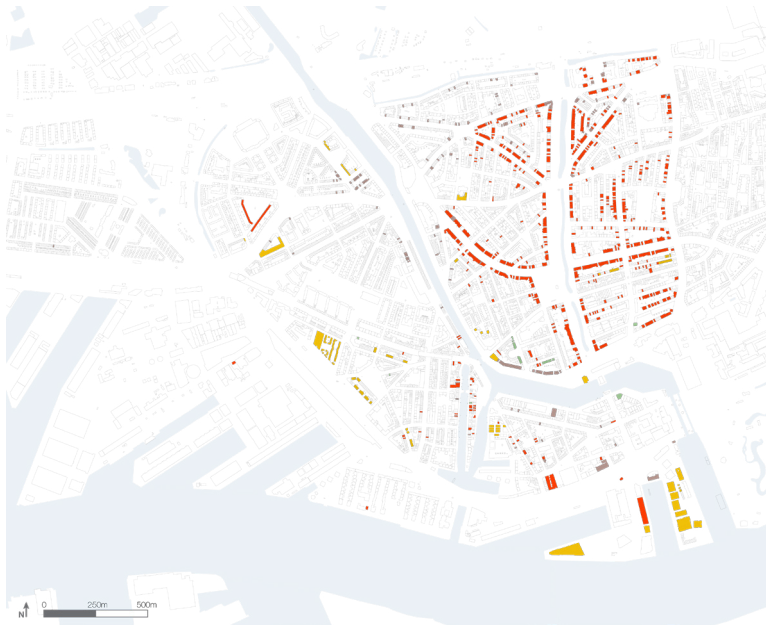
The predictions that the Delfshaven area will further be gentrified is a hypothesis that has been confirmed during interviews with residents of high-education level and mid- to high-income (living outside Schiedam). These correspondents (#C4 and #C7, interviews citizens April – May 2019) have lived their entire life within the Delfshaven area and see the area changing, as illustrated by the quotes below.

[Dutch] #C7: *“Nou het is wel ontzettend veranderd hoor. Destijds, want de burgermeester meinderts is nu echt gewoon een chique straat, dat was toen ook wel een beetje, maar de zijstraten was echt [...] wel echt achterbuurt.” (1)*

[Dutch] #C4: *“Dan heb ik het vooral over het stuk Spangen [...] Je ziet nu wel dat er echt veel horeca bij komt. Dus je ziet wel dat het echt veel meer booming is. Dat is iets van de laatste 5 jaar. Dus er zit daar op eens allemaal koffie zaakjes. Dus veel meer dat jonge hoog opgeleide publiek, denk ik, die er nu woont.” (2)*

(1) “Well, it has changed a lot. At the time, because, the ‘Burgermeester Meinderts’ [street] is now a fancy street, it was already a bit like that back then, but the side streets were really [...] slums.”

(2) “I am mainly talking about [the neighbourhood] Spangen [...] You can see now there are more cafes and restaurants popping up. So you can see that it is really much more booming. That is something from the last years. Suddenly there are coffee shops present in the area. There is much more young, high-educated visitors, I guess, that are living there now.”



**Figure 32** Buildings with higher property value than average of the Netherlands – 230.000 in 2018 (CBS, 2019; Gemeente Rotterdam, 2018) in categories of year of construction

- 1800 - 1920
- 1920 - 1945
- 1945 - 2000
- > 2000



**Figure 33** Buildings with bigger surface than 170 square meters based on data of Gemeente Rotterdam, 2018



**Figure 34** Buildings with bigger surface than 120 square meters, dutch average based on data of Gemeente Rotterdam, 2018 and CBS

Figure 35 shows the properties build before 1920, and buildings after 2000 with high property value (>230.000). Private owned properties will be influenced by change in market prices. Residential buildings owned by housing corporations are less influenced by the housing market, but they might come under pressure in the future due to the policies of municipalities – as the municipality of Rotterdam aims to attract more ‘privileged families’ (Gemeente Rotterdam, 2007). Both developments, market or governmental driven upgrading, will change the economic diversity within the area.

The other map, Figure 36, highlights the planned new urban development. At the Lloyd kwartier (luxury) towers will be further developed, which will only possess high property value. However, since the new political coalition of the municipality (2018), a standard has been set for diversity of development of residential buildings (20% social housing, 30% mid segment, 30% high and 20% top-segment) (Coalitieakkoord 2018-2022, Gemeente Rotterdam). Therefore future urban development will possess an economic housing diversity.

Figure 37 highlights the predicted gentrification processes. It shows which areas will probably be upgraded and which one might not. This is interesting as it might create new ‘enclaves’ of areas with high, and with low income citizens. Both citizens, mentioned above, talk about enclaves and associated and experienced segregation (C4 and C7, interviews citizens april – may 2019)

[Dutch] C7: *“Het enige dat ik niet positief vind, is dat het wel erg gesegregeerd is. [...] De leuke singeldingen op Heemraadsingel waar bepaald type mens heen gaat. Het gaat helemaal langs elkaar heen. En ja, weet je, ik heb het naar mijn zin, het is prima voor me, maar eigenlijk is het natuurlijk gewoon niet leuk.”<sup>(1)</sup>*

[Dutch] C4: *“Ik denk dat Delfshaven altijd een gemixte wijk zal blijven, maar [...] dat[het] wel onder druk zal komen staan. [...] Maar je komt elkaar alleen nog maar in de Albert Heijn tegen, alleen op straat. Dan ga je elkaar steeds minder kennen en dan ga je daardoor steeds meer naar elkaar wijzen. Dus in die zin [...] van onbekend naar onbemind.”<sup>(2)</sup>*

(1) “The only thing that I do not see as positive, is that the area is very segregated [...] The fun activities happening on the Heemraadsingel [street] which only a certain type of human join. It moves completely past



each other. And yes, you know, I am having a good time, it is fine for me, but of course it is simply not fun.”

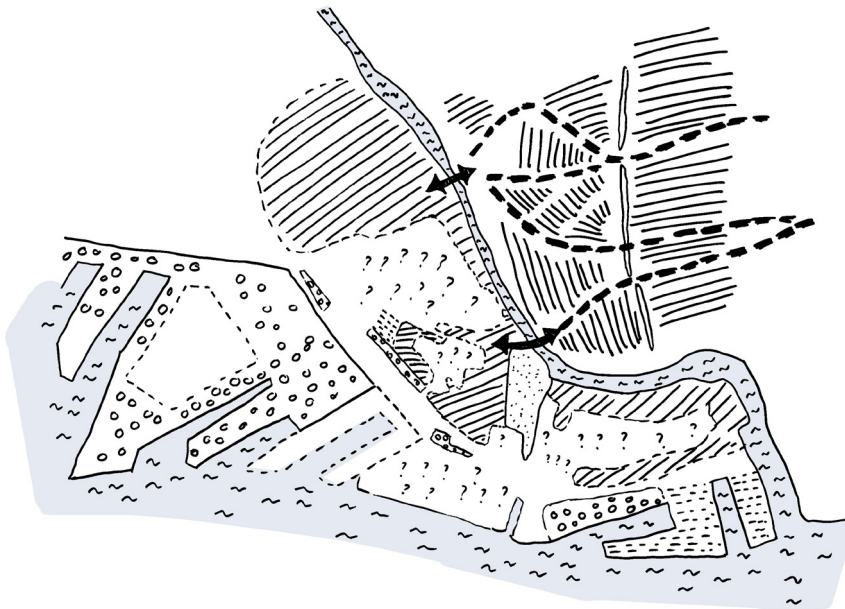
(2) “ I think Delfshaven will always remain a mixed neighbourhood, but [...] that it will come under pressure [...] You only meet each other in the Albert Heijn, or on the streets. And then you get to know each other less and less, and then you start to point at each other more and more. So in that sense [...] from unknown to unloved.”



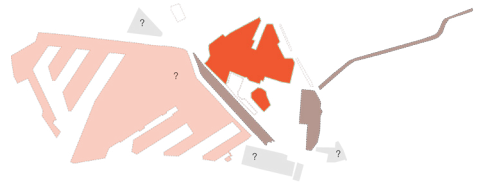
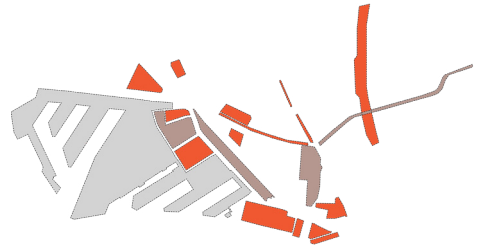
**Figure 35** Buildings constructed before 1920 and buildings after 2000 based on CBS, 2019 and data of Gemeente Rotterdam, 2018



**Figure 36** Buildings constructed after 2000, and sites allocated for new urban development based on interviews with professionals



**Figure 37** Hypothesis about which areas will gentrify and which will stay behind



**Figure 38** Contemporary enclaves and prediction about future enclaves. Solitary (red), Connecting (purple), Non public life (grey). From top to bottom, years of: 2019, 2035 and 2050

*Side note:* From a diversity perspective, it can be stated that future development will make Delfshaven economically more diverse, as the expectation is that more high-income residents will settle in city district of Delfshaven. However, from a justice perspective, question arise related to the existence of residential diversity. Especially, the question pops up: *how to keep the area accessible for low-income residents already living within the area?* This is an example where values can collide.

The observed contemporary enclaves and the predictions about future enclaves, as described above, are presented in the concluding drawings of Figure 38.



**Figure 39** Main car road network based on GIS data, Gemeente Rotterdam 2018

## 3.2 Routes & Routines

As described in Chapter 2. Perspective, a designer should focus not focus on top-down defined identities or personal opinions, but on activities that take place. Activities consist of *routes* - physical route taken to arrive at a goal - , and *routines* - amenities or other urban functions used within the urban fabric. In this subsection the *routes* and *routines* of the case study area are analysed. This done on the scale of the city district with the use of multiple methods: GIS mapping of the infrastructural system and amenities, analysis of Strava data, and citizens interviews. Together these methods provide input for concluding maps on the city district scale. Once the city district is described, this subsection will show routes and routines for the smaller scale of Schiemond and surrounding areas. Finally, considerations regarding changes of routes and routines through time will be explored.

### **Infrastructure: roads**

Roads form a network that can connect or disconnect areas, different per scale. This might mean that a road function as a dis-connector on a small scale, but also function as connector on a larger scale. Roads are an important element of the more traditional approach of Urban design and planning towards the value of connectivity. Figure 39, Figure 40 and Figure 41, present the road system of Delfshaven, the main car roads, bike roads and public transport roads. The map on public transport shows that the public transport system is lacking in the south of the city district. This area has no (daily) bus connection, only possibilities for taking the tram.



**Figure 40** Main bike road network based on GIS data, Gemeente Rotterdam 2018



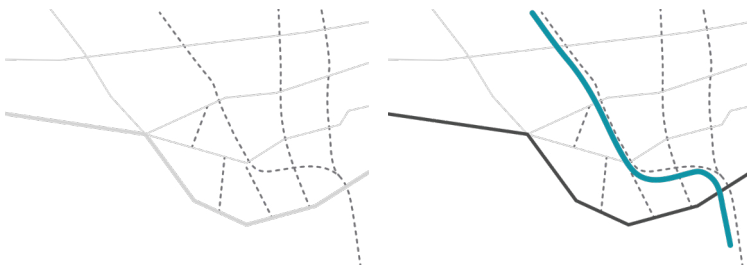
**Figure 41** Public transport network: train, metro, tram, bus, based on data of Gemeente Rotterdam, 2018

Figure 42 highlights that the current infrastructure is mainly oriented from east to west, and the other way around. This makes sense due to the positioning relative to the Maas river.



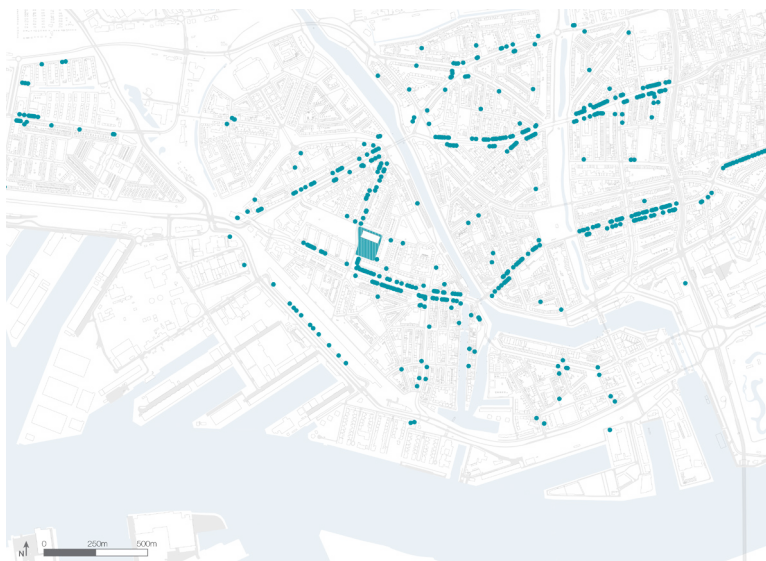
**Figure 42** Roads mostly orientated from east to west

There are some strong road connections present from north to south on the east side of the Schie – as visible in Figure 43. However they are not continuously on the west side of the Schie.

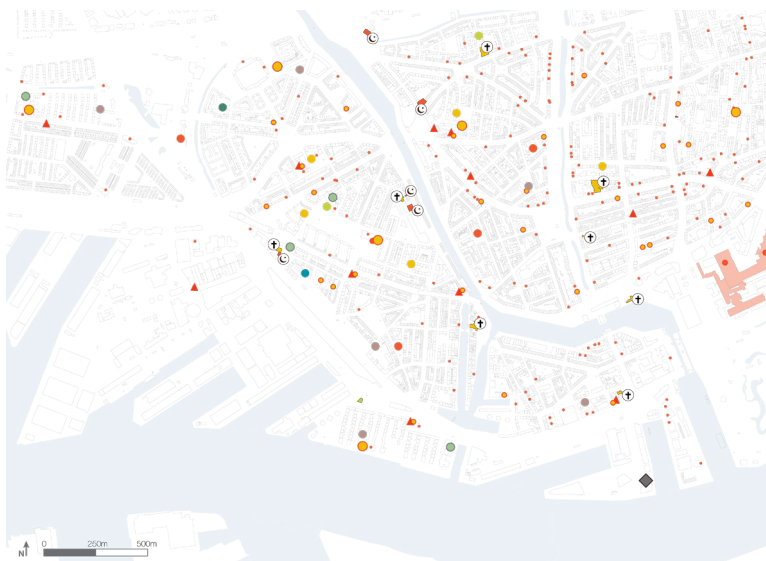


**Figure 43** Continuously north-south roads on the east of the Schie, and non continuously roads at the left of the Schie

As described in the Perspective chapter, the capacity of roads to achieve connectivity is approached differently within this thesis. Roads are not similar as routes, as defined by Reijndorp (2004). Roads help to create routes of citizens as it provides the infrastructure. However, citizens might create routes that are not part of the designed road system – often named as a desire path ('olifantenpad' in Dutch). Roads can also not be used, as there is no reason to take it, often when amenities (routines) are lacking. Therefore, the following paragraphs reflect on the concepts of routes and routines and analyses these concepts in relation to connectivity.



**Figure 44** Shops and the market place, based on data of Gemeente Rotterdam, 2018



**Figure 45** Community centers, schools, religious institutes, health care infrastructure, based on data of Gemeente Rotterdam, 2018











### Routines: amenities





Figure 44 and Figure 44 show the amenities within Delfshaven area. The first maps shows locations of shops. It clearly presents a concentration of shops. These shops are mostly located along the most important infrastructural roads presented in the previous paragraph. This makes sense as streets that are used often by many (potential customers), offer economically attractive plots.

However, all the other amenities, presented in Figure 45, do not necessarily match this road system. Yet mapping these amenities can be useful within the design phase, when a design is made on a smaller scale. An example is the 'snackbar' where often a high level of residential diversity steps by, and therewith contribute to a form of connectivity. Some amenities can function as a connecting program (health care for example, but also the 'snackbar') and some amenities can facilitate needs of one living world (such as religious institutes).

#### Education

-  primary school - generally special
-  primary school - Hindu
-  primary school - Islamic
-  primary school - public
-  primary school - Protestant
-  primary school - Catholic
-  special education ("speciaal onderwijs")
-  vocational education ("mbo")

#### Health

-  general practitioner
-  pharmacy
-  hospital
-  others

#### Religion

-  Church
-  Mosque



**Figure 46** Recreational infrastructure, routes, parks, sport fields based on data of Strava, 2018 and data of Gemeente Rotterdam, 2018

- allotment garden
- sport association
- Cruifj court
- skate facilities
- playground association
- indoor swim / volleybal
- Strava routes



**Figure 47** Map of the proposed green recreational structure in Rotterdam, Schiemond is highlighted with the red dot, based on 'Kaart Groene Map', Rotterdam Natuurlijk, 2013

### **A routine as a route**

Figure 46 shows a different network than the other maps. This map is based on data of Strava (Strava, 2019). Strava is an app used by bikers and runners to map their recreational routes. Recreational routes can be seen as a route and a routine at the same time.

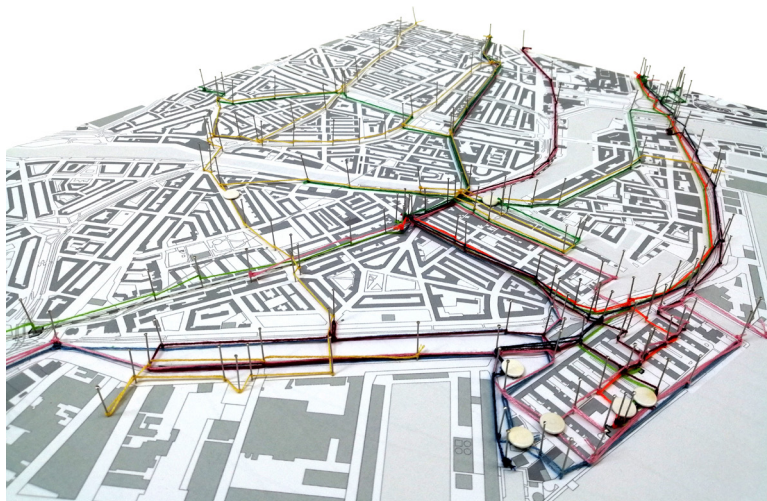
This map is interesting as it is not an image of recreational routes urban designers have designed (as a strategy), but it is a map that shows the actual behaviour of recreationist (tactics) (Reijndorp & Reinders, 2010). The routes exposed by the data of Strava present a relation between the recreational routes and the water infrastructure.

Figure 47 is based on the 'Kaat Groene Marathon' (Map Green Marathon), this map presents the initiative to connect green routes on the large scale for the city of Rotterdam (Gemeente Rotterdam, 2014). Another initiative active in the city of Rotterdam is 'De groene verbinding' (The green connection) aims at connecting green infrastructure in Rotterdam, including green citizens initiatives. This connection is aiming for a more green, sustainable and healthy Rotterdam. Currently professionals, both of 'de groene connectie' and of Schiemond aim to develop a green neighbourhood initiative within Schiemond (personal communication, participating in Groen Schitternd Schiemond!, 8th of May 2019). Schiemond is located along the planned green connection, however it is not yet connected to this green infrastructure.

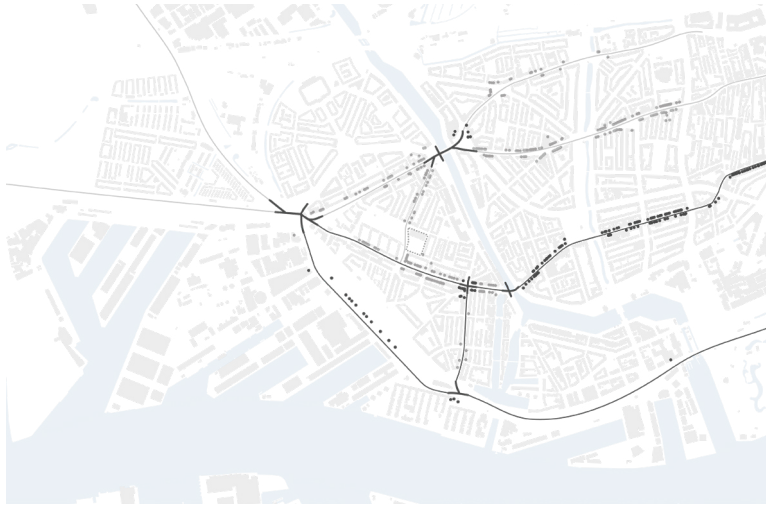


### **Routes & Routines via interviews**

All interviewees were asked to draw and explain their daily routine. These drawing presents their mental map of their daily life. The drawing plus the accompanying spoken explanation provided a good insight into the routes and routines the interviewees take. The drawings of the daily routine of the citizens are visible in Figure 48. The drawings were used as a conversation tool to get a better understanding of the routes and routines of the interviewee. The drawings and the accompanying explanation are translated into one model with threads related to the routes of all the interviewees, visible in Figure 49.



**Figure 49** Pictures of the model presenting routes and routines of interviewees on the map of the city district



**Figure 50** Routes with high level of routines – shops and a distinction between streets that are mentioned within the interviews (black) and those that are not (grey)



**Figure 51** Streets with high level of amenities and their physical conditions

1. Main streets with Amenities on both sides = vital for connectivity
2. Nodes with Amenities = vital for connectivity
3. Main streets with Amenities on 1 side = vital for connectivity, but vulnerable (Nio, Veldhuis, 2008)
4. Main streets without Amenities = potential for connectivity, but currently just functioning for passing-by
5. Nodes without Amenities = potential for connectivity, but currently just functioning for passing-by
6. Amenities with lower street level = potential for connectivity, but currently (probably) low level of routes.

- 1.
- 2.
- 3.
- 4.
- 5.
- 6.

### **Shared routes and routines**

Routes and routines shared by many citizens are interesting when designing for connectivity, as it will stimulate the concept of 'casual encounters', and it advances having familiar strangers (Blokland, 2008), as explained in the Perspective chapter.

There are not so many routes that are used by all the interviewees. The majority of the routes focus on moving from east to west. Therefore many of the routes citizens take, are parallel. On one hand, citizens of Schiedam move through the Westzeedijk and the Vierhavensstraat, on the other hand citizens of BOTU and Historisch Delfshaven move through the Nieuwe Binnenweg, Mathenesserlaan or Vierambachtsstraat. Only the Nieuwe Binnenweg and the east part of the Schiedamseweg are used by many, due to amenities, forming their routines.

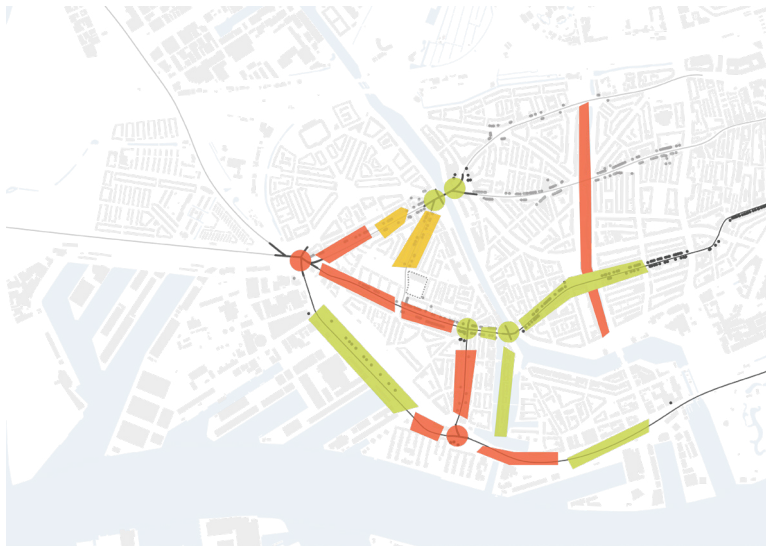
The shared routes and routines, distilled from the interviews, are: Shops at the Boulevard (shops underneath the Dakpark), Jumbo, supermarket at the Schiedamseweg, Metrostop Delfshaven at the Schiedamseweg, Historisch Delfshaven (a routine; recreational walking in the form of a route), Shops, restaurants and liveliness on the Nieuwe Binnenweg (both a routine and a route).

### **Categorizing routes & routines**

The road system and the amenities are part of everyday movement. Understanding the functioning of the streets is of importance for the further development of the design. Mapping of GIS data and in addition observations and citizens interviews, are used to analyze the everyday movement. Figure 50, Figure 51, and Figure 52 show important cross-sections and roads, based on its everyday functioning. They are made on the Delfshaven City District scale, plus M4H Harbour area. However these figures mainly focus on the neighbourhoods of Schiedam, Lloyd, BOTU, Delfshaven, as interviews and observations have provided information mostly related to these neighbourhoods.

The roads with routines can be analyzed from different perspectives: Figure 50 presents the distinction between streets that are mentioned within the interviews and those that are not, Figure 51 presents the physical conditions of the streets with high level of amenities, Figure 50 presents the streets and their connective quality. It presents streets that are mentioned by many of the (diverse) interviewed residents, or specific praised by few, for their (social) connecting capacity. Secondly, it presents streets that are mentioned as having less or low connecting capacity.

The figures make it visible that having a good spatial quality of a street, is not necessary one-to-one linked to being a good (social) connecting street. For example: The west side of the Schiedamseweg possesses the quality of being integrated within the main street network, and it possesses amenities on both sides of the street. However during the citizen's interviews the outcome has been that citizens don't experience it as a street to go to or visit - with a big exception of the intersection at the metro station, and the area to the east of the intersection. Therefore it is potentially vital, but other aspects create a non-connecting street - such as the amenities - in the case of the Schiedamseweg described as 'shabby shops' (citizens interviews C4).



**Figure 52** Streets and their connective quality based on interviews with citizens and observations

- strong connecting capacity
- medium connecting capacity
- low connecting capacity



# Schiemond and its neighbours

## Shared Routes and Routines

There are two shared routes inside the neighbourhood of Schiemond that are used often, which are the water boulevard and the underpass through all the residential blocks. The water boulevard is used as a route and a routine: used for recreational walking. The underpass is used as a route, however, it is also used by children and youth to play and hang out, so it also facilitates routines. Other routines / amenities present within the neighbourhood have been mentioned in the introduction paragraph of this chapter: the Cruijff Court area, the Huis van de Wijk and opposite school and schoolyard, and the playground.

Multiple types of mobility are used by citizens of Schiemond: pedestrian, biking, car and metro. Public Transport options are low within Schiemond, so there is a concentration of routes towards the metro station on the Westzeedijk. When you use the car, you have two exits, as the correspondent mentioned in the interview while drawing:

#C6 [Dutch] *“Exit 1. (tekent exit) Schiemond heeft twee ingangen. Exit 2. (tekent exit) [...] Bij Ricky’s. Daar heb je toch zo’n weg naar links, bij de stoplichten. Dat zijn de enige twee ingangen. En dat vind ik ook zo kenmerkend aan de wijk Schiemond. Lloyd kan je van allerlei manieren in: achter, voor. Bij ons niet.”*<sup>(1)</sup>

*(1) “Exit 1 (draws exit). Schiemond has two entrances. Exit 2 (draws exit) [...] At Ricky’s you have a road to the left, at the traffic lights. Those are the only two entries. And that, to me, is so characteristic of the neighbourhood Schiemond. Lloyd [neighbourhood] can be entered from all different kind of directions. Not with us”*



**Figure 53** Map of Schiemond and its three types of routes made by residents (green), visitors (purple), passers-by (red)



**Figure 54** Map of Schiemond with short-cut areas (gray dotted line), and obstacles (orange dots). On the right; picture of short-cut #1



1.

### Routes – 3 types

The routes can be made more specific, divided in three types of user categories. These categories of users are: residents, visitors and passers-by (personal communication with Machiel van Dorst). Figure 53 presents these three categories for the area of Schiemond. It shows that routes within Schiemond mainly take place in the north-south direction within the car streets and in the east-west direction within the underpass. The visitors routes are mainly situated along the water structures and the dakpark – as recreational routes. Passers-by routes concentrate on the Westzeedijk / Vierhavenstraat and the Spanjaardstraat by car, tram, bike and pedestrian. Shared routes can be found along the Westzeedijk / Vierhavenstraat, the Speedwellstraat and along the waterfronts.

### Routes but no roads

There are two places present in the urban area where routes are taken where there is no road-design. This illustrates a difference between urban strategies – the planned urban infrastructure – and the human behaviour dealing with these strategies (tactics) (Reijndorp & Reinders, 2010). These spots and photos are visible in Figure 54. The crossing at the Vierhavenstraat however will not happen for long, as there is a plan for new build on the north side of this street, which will make the short-cut impossible.

### Obstacles

In Schiemond many obstacles for pedestrians can be found, such as poorly placed garbage cans dead end-sidewalks, and parking spots. These objects decrease the quality of routes, and the capacity for facilitating high quality outdoor places. Found obstacles are also visible in Figure 54 by the orange dots, and illustrated in Figure 55.

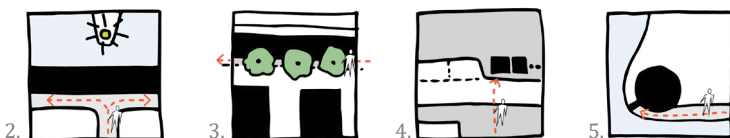


Figure 55 Illustrations of obstacles found within Schiemond, mapped on Figure 54

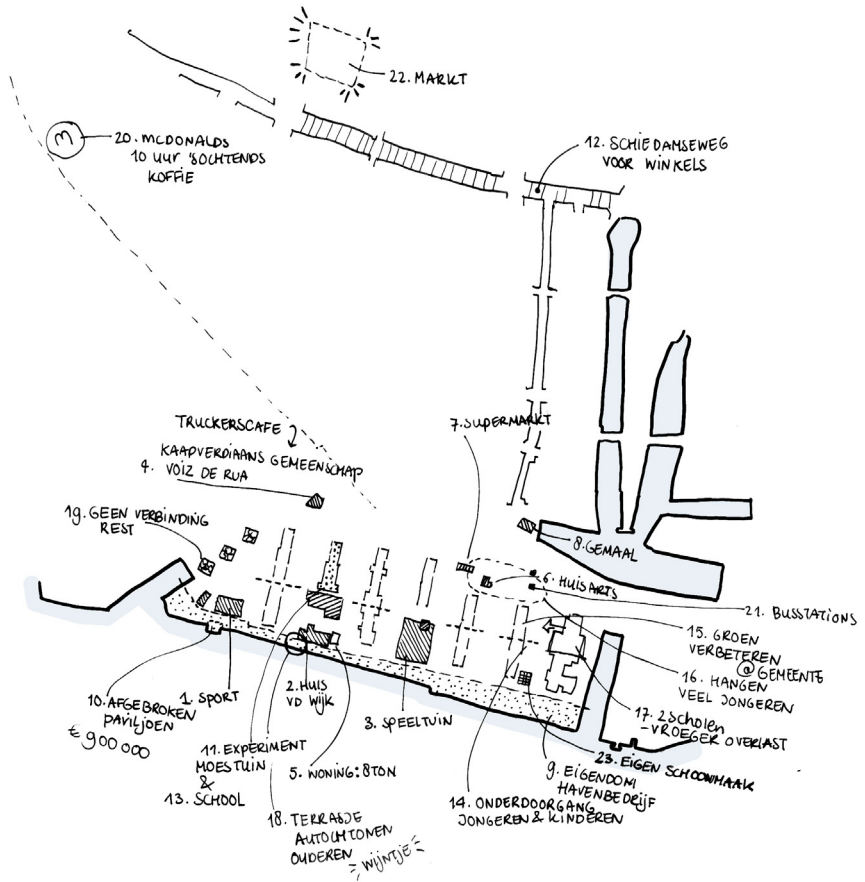


Figure 56 Amenities of Schiedmond, information originating from Interviews

## **Amenities**

There are three areas with amenities of importance, used in Schiemond as public spaces; (01) the Cruijff Court area (02) the Huis van de Wijk and opposite school and schoolyard and (03) the playground. For the rest it has a low level of amenities, therefore, residents go to the shops underneath Dakpark, BOTU, Schiedam or the city centre for other amenities (citizens interviews, 2019).

Within Schiemond it is difficult to facilitate interaction between the diverse ethnic groups. Professionals mention that citizens make use of the playground and 'Huis van de Wijk'. However it is being used per group. It is difficult to find activities that all groups enjoy - only cooking is successful (interviews professionals, 2019).

When people don't make use of these 3 facilities Schiemond has to offer, it is the daily-infrastructure, such as the bus stop, that provides day-to-day interactions (citizens interviews, 2019). One professional has mentioned that residents don't really move to other areas than the area where their apartment is located. First, this can be related to the low level of amenities, which form the routines and routes of the citizens. Secondly, the rectilinear shape of the building, and the locations of the parking spaces, creates entrances per street, so the flow of citizens is therefore quite linear.

## **Time**

The paragraph will explain some historical events that have caused the current conditions of spatial connectivity and its disconnection within the area. The neighbourhood 'Historisch Delfshaven' used to be the harbor connected the Schie with the Maas river. However, sedimentation as a natural process caused the formation of land at the harbour mouth of Delfshaven, called De Ruigeplaat. The land provided the city with more space for industrial functions, at the Ruigeplaat shipyard Bartel Wilton took a seat, in 1902. Since then, there is no direct connection anymore present between Delfshaven and the Maas River (Steenhuismeurs, 2018).

Since the eighties the harbour area in city district Rotterdam is changing. The harbour is moving more and more out of the city, and within the areas there has been a focus on new or more housing at the water fronts. In Rotterdam West this has been the case for Schiemond (since 1980) and Lloyd Kwartier (since 2000) (Steenhuismeurs, 2018). The areas represent



**Figure 57** Time-line of changes in the built environment of city district Delfshaven: years of 1819, 1850, 1900, 1916, 1960, 1993. (source: topotijdreis, 2019)

a new urban development where the residential urban fabric is more connected to the river Maas, in contradiction to the harbour-transport relationship of the past. And although it represents a tendency of better public and residential space at the waterfront, parts are still fragmented. This might change in the future. The different appearances of the area through time are presented in Figure 57

The previous subsection has explained expected changes in the future related to the enclaves. Along this potential change, the infrastructure will probably also change. Figure 58 presents potential changes of the infrastructure in the future. This information is conducted from interviews with professionals and conversations during the fieldwork. The new connections offer optimism, because there is a plan to realize several new physical connections. However it is uncertain to which extend these will be integrated in the current urban fabric and whether it will be accompanied with amenities - (shared by many living environments), and with that increase connectivity.



**Figure 58** New roads that will potentially be built in the future

**Dier (Animal)**

Walvis | Aapje | Papegaai | Luiaard | Leeuw | Kat  
*Whale | Monkey | Parrot | Sloth | Lian | Cat*

**Fruit (Fruit)**

Tutti Frutti | Citroen | Kiwi | Passievrucht | Granaatappel | Sinaasappel  
*Tutti Frutti | Lemon | Kiwi | Passion fruit | Pomegranate | Orange*

**Muziekinstrument (Musical Instrument)**

Harp | Trommel | Gitaar | Gitaar | Viool | Mondharmonica  
*Harp | Drum | Guitar | Guitar | Violin | Blues harp*

**Kledingstuk (Garment)**

Saron | Trainingspak | Schoenen | Schoenen | Sokken  
*Saron | Jogging suit | Schoes | Shoes | Socks*

**Automerk (Car brand)**

Volkswagen | Daf | Porsche | Tweepersoonsauto  
*Volkswagen | Daf | Porsche | Two seater*

**Box 1** Schiemond's metaphors, originating from citizens interviews



### 3.3 Hier & Daar

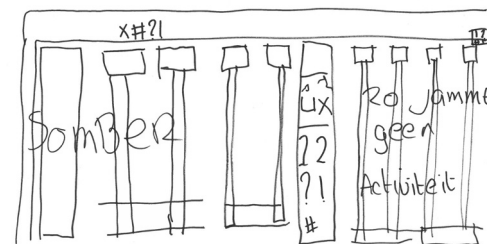
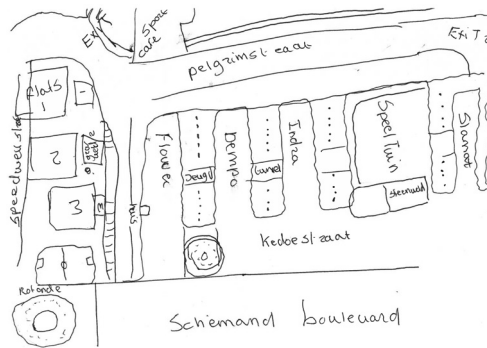
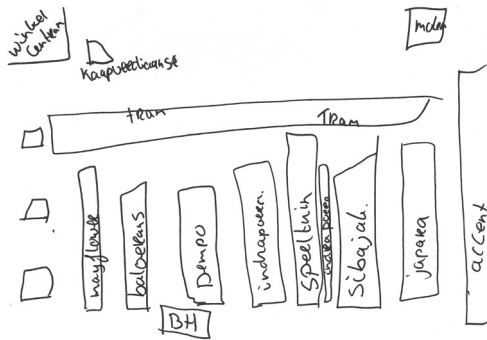
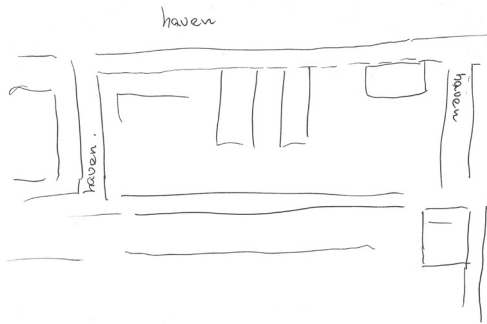
The concepts of *Hier en Daar* have only be researched by qualitative methods, such as interviews and observations. Therefore it will only be illustrated for the scale of Schiemond and its neighbours. This paragraph is formed by bundling stories from variety of interviews and conversations. Although there are always more and different stories to be told, attempts have been made to present a rich and multifaceted story.

At the end of the citizens interviews, interviewees were asked to think creatively. They were asked to come up with metaphors to describe Schiemond. *"If Schiemond would be an animal, which animal would it be ...?"* The answers can be read in Box I.

The words itself do not always make clear why this metaphor is chosen. Therefore they have been asked to explain why they have chosen for this metaphor. The word cloud (Figure 59) presents the words that have been used to describe the reasoning of the decisions that have been made.



Figure 59 Word cloud of words that have been used to explain the chosen metaphors for Schiemond, based on data of citizens interviews



**Figure 60** Mental maps of Schiemonnd made by citizens interviewees

Analyzing and interpreting these given explanations, six categories are being detected:

**Verskillend / Exotisch** (*Different / Exotic*)

*Used to describe the diversity of citizens of Schiemond*

**Los / Makkelijk / Dagelijks** (*Loosely / Easy / Daily*)

*Used to describe the attitude of citizens of Schiemond and urban function of the area*

**Beschermend / Gevoelig / Zorgen voor** (*Protective / Sensitive / Caring*)

*Used to describe the character of the citizens of Schiemond*

**Nodig om te prikkelen / Energieloos** (*Needed to excite / Inert*)

*Used to describe the energy level and social involvement of citizens of Schiemond*

**Waardevol / Gewaardeerd / Kwalitatief goed** (*Valued / Good quality*)

*Used to describe the urban environment*

**Water** (*Water*)

*Used to describe the most important characteristic of the urban environment*

These categories provide insights into how citizens perceive their own neighbourhood. This information – a list of characteristics of the urban area - can later on be used in design

### **Mental maps**

During the citizens interviews all interviewees living in Schiemond, have been asked to draw their mental image on Schiemond (Figure 60). Four out of the five interviewees living in Schiemond have drawn their mental map. These maps can be interesting to see what is being drawn as a *hier*, but also what is not being drawn. What is not drawn, can be interpreted as not being part of the *hier*, it can be seen as a *daar*, or a non-existence.

Most important observations and interpretations regarding these mental maps can be read in the following paragraphs.

## **Hier**

### *Maas river*

From the drawings, 2 of the 4 have drawn the buildings towards the Maas river, oriented towards the south. The other two have drawn their image, similar to a standard map, oriented towards the north. Many of the interviewees talk about the joy the water and the quay brings them. Many of them can see the Maas and the passing boats from the window view of their apartment. Therefore it makes sense that they draw the neighbourhood orientated towards the water.

### *Harbour*

From the interviews the image emerge that the still functioning harbour is not seen as an obstacle or nuisance in the area, but as a place citizens feel attached to. It is seen as a quality, and it provides a pleasant experience to see all the harbour and ship activities from your living room.

### *Underpass*

The underpass through the residential buildings is taken by many as a route. It is a connection that makes it possible to go from one side of the neighbourhood to the other one, instead of walking around the built structure. It is used often, also in combination with routines, such as a visit to the community centre ('huis van de wijk' in Dutch) and playground. The tunnel itself is also a place to stay, mainly used by youth. The tunnel has its own name, although no households are connected to this street. So it is a street without house numbers. The street is called Kedoestraat and is experienced as an distinguished and, sometimes even important, element of the neighbourhood. This is also illustrated by the quotes originating from the citizens interviews, below:

#C2[Dutch]: *"Ja, kijk ik loop hier die tunnels onderdoor [...] naar de tram."*

*(01)*

#C8 [Dutch]: *"Die zitten meer of onder de tunneltjes, zitten ze zonnepitten te eten."* *(02)*

#C6 [Dutch]: *"Dat is die inham, zo door die wijk zo, die tunnels.[...] Ik ga het de jeugd-tunnel noemen. De Kedoestraat. [...] Het is gewoon een tunnel waar je heel je jeugd heb doorgebracht."* *(03)*

*(01) "They are staying underneath the tunnels, eating sunflower seeds."*

*(02) "Yes, here I walk (draws) to the tram, underneath the tunnels."*

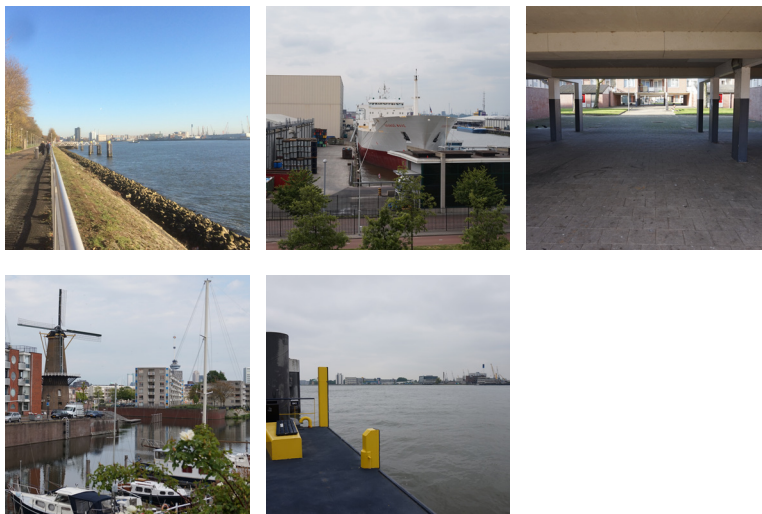
(03) "That is the cove, through the neighbourhood, the tunnel [...] I will call it the youth tunnel. The Kedoestraat (street) [...] It is the tunnel where you have spent your entire childhood."

### *Delfshaven*

The Neighbourhood Historisch Delfshaven – and its historical buildings is named in a positive way by 5 out of 8 interviewees. The urban area can be seen as a strong 'hier', as a shared place attachment. This can be seen as a form of connectivity, as explained in the perspective chapter. Citizens have something in common, because they all feel in a certain way connected to the place where they live (Reijndorp, Reinders, 2010).

### *Fishing Spots*

There are many fishing activities taking place within Schiemond (observations and mentioned by 2 out of 5 interviews). One interviewee showed me his fishing spot, which is located on the quay at the Kroonlocatie. "It is actually a platform for watertaxi's, however it is also perfect for fishing!" Other fishers perform this activity along the Bartel Wiltonkade, on the west side at the platform that sticks out, or at east of the quay.



**Figure 61** Photos of the *Hiers*: Maas river, Harbour, Underpass, Delfshaven, Fishing Spots

## **Daar / Non-existence**

### *Flats Speedwell*

The flats at the Speedwell street are only drawn and mentioned by 2 of the 4 mental maps, despite that they definitely belong to the geographical layout of Schiemond. The conclusion is drawn that often the buildings with the 'comb structure' form the most important part of the mental picture of Schiemond. This comb structure has been referred to as a fortress by one of the interviewed citizens.

### *Schools*

The schools Accent and Horizon on the east at the Japarastraat is also only drawn by 2 of the 4. These two interviewees were familiar with this school, because of it is on their route or because he/she grew up in this street where the school is located. Others, not passing by this school, or have lived close to the school, don't draw it on their mental map of Schiemond.

### *The Green Pockets*

None of the interviewees drew the green pockets – the shared garden spaces - that are in between the houses. The comb structure of Schiemond is constructed with an alternation of green and streets for parking. Only the car streets and housing blocks are being drawn, but not the green pockets. An explanation for this notion might be that not many citizens pass these green pockets within the routes they take, and that has almost no program, it is just decorative green. Two out of five interviewees have mentioned the green pockets during the interview, not while drawing the mental maps, but at other times during the interviews. They have explained that it used to be used a lot, especially by youth. However people started to complain about noise and nuisance. Therefore all play equipment has been removed. This story is illustrated by the following quote.

#C8 [Dutch]: "Je hebt van die huizen met van die tussentuinen er daar tussen zaten allemaal speeltuintjes en stenen tafeltennis tafeltjes en klimrekken. [...] Waar je gewoon even samen kon zitten. Veel bankjes hadden we ook, waar we allemaal op konden zitten. Maar overal waar wij gingen zitten, als groep zijnde in de wijk, om gewoon samen te zijn, ja, gingen mensen klagen. [...] Op een gegeven moment werden de bankjes weggehaald, klimrekken werden weggehaald, stenen tafeltennis werden weggehaald. Alles wordt weggehaald. Dan denk ik bij mezelf; wat is dit allemaal. Waarom doen ze dat nou?" <sup>(01)</sup>

(01) "There are houses with in-between gardens where all types of playgrounds were present, with stone table tennis tables and climbing equipment. [...] Where you could just sit together. We also had many benches on which we could sit. But everywhere we sat down, forming a group within the neighbourhood, just to be together, people started to complain. [...] At one point the benches were removed, climbing frames were removed, stone table tennis tables were removed. Everything is taken away. Then I think to myself: 'What is all of this?, Why are they doing that?'"

The conclusion is drawn that the green pockets in Schiemond used to be a 'hier' for youth. However the conditions have been changed, and currently they are definitely not a 'hier' for the any of the residents of Schiemond.

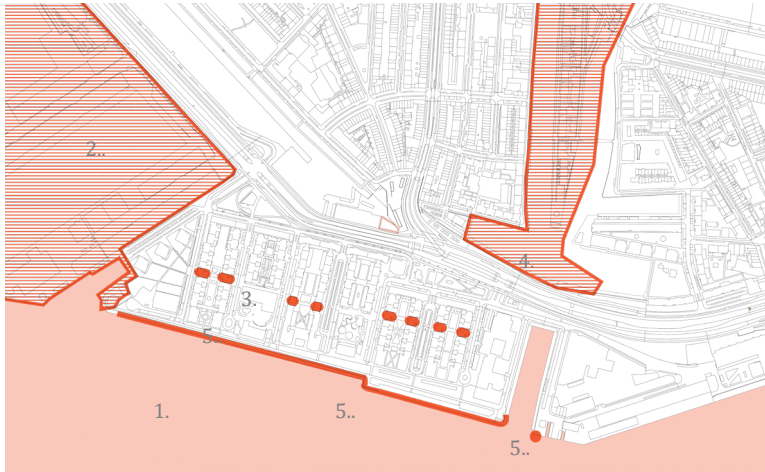
### *Boats as an art object*

On the quay in Schiemond along the Maas river, named Bartel Wiltonkade, 5 coloured boats are placed as art objects. These boats, despite having a striking appearance, are not mentioned by any of the interviewees. This is quite striking, and a possible explanation is that the art objects function as intriguing objects from a distance – mainly from the Maas river and from the land across the river, Rotterdam South. However it cannot be used or appropriated if you are standing next to it. The objects are placed on large blocks of concrete, and you can't climb into it. Up close the objects are not designed to have a human scale or texture. Therefore they can be seen as elements that increase a positive feeling of *daar* for passers-by and visitors. However, it is not seen as a *hier* by the citizens of Schiemond.



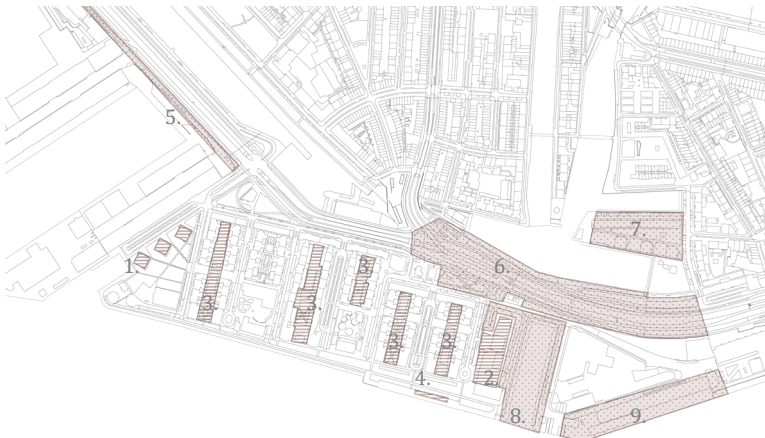
**Figure 62** Photos of the *Daars*: Flats Speedwellstraat, Schools, Green pockets, Boats as art objects

The mental maps are the input for the next figures. The mental maps have been expanded with observations of the author with notions of places that possess a low level of comfort and/or security – contributing to the map of Daar / Non-existence (marked with dots instead of stripes).



**Figure 63** Map with areas of *hier*, originating from the interviews

- 1. Maas river
- 2. Harbour
- 3. Underpass
- 4. Delfshaven
- 5. Fishing spots



**Figure 64** Map with areas of *daar* or non existence, originating from the interviews and observations



Numbering of Figure 64:

1. Flats speedwell
2. Schools
3. Green pockets
4. Boats as an art object

*The following areas are added to the map of Daar or Non-existence, where feelings of insecurity and discomfort were detected*

5. South side of the Vierhaven straat – due to poor pavement, fences and low (human) activity
6. Westzeedijk at the height of Historisch Delfshaven – due to large seize of space, lack of human scale
7. Buildings at the Lelyboskade – due to absence of plinth.
8. Inlet of the river between the schools and Kroonlocatie – due to large seize of public space, lack of places for staying in comfort, and lack of activities
9. Schiehoofd (street) – due to absence of plinth – closed facades and no (human) activity.

## Time

For youth there are not many places to go. They usually go somewhere else, outside Schiemond. Or they stay on the corner of the Schiemond neighbourhood at the water cove along with the fishermen (citizens interviews, 2019). There used to be a hangout-space in the basement of the Huis van de Wijk, but has been closed due to too much nuisance.

FE: “Er was vroeger een jongerenhok onder de Huis van de Wijk, maar daar gebeurde verkeerde dingen en gaf overlast. Dat is toen gesloten, maar er is nu weinig voor jongeren, geen ontmoetingsplek.”<sup>(01)</sup>

(01) “There used to be a youth loft in the basement of the ‘Huis van de Wijk’ (community centre), but wrong things happened and it caused nuisance. So that has been closed, so now there is a low amount of facilities for youth, no meeting place.”

Both professionals and citizens mention many changes that have occurred in Schiemond and surrounding area. The ‘Keileweg’, located in the M4H-area used to be a street with criminal, drugs and prostitution activities.



Visitors of the Keileweg also ended up in Schiemond, mainly in the publicly accessible cellars at the Pelgrimsstraat. After closing of the Keileweg and renovation of the residential buildings in Schiemond - including closing the cellars for public - criminal activities decreased. The renovation has been finished in 2014 and Woonbron (housing association, and owner of most of the properties) intends to maintain it well for at least the next twenty years (interviews with professionals, January 2019).

And although most stories are positive, citizens also mention that many social amenities - especially playground equipment targeting youth- have been removed from the communal gardens (2 out of 5 citizens). There used to be a strong youth culture within Schiemond, however this has changed due to the removal of the equipment. From their perspective this has caused a decrease of the spatial quality. The other aspects of the renovation are mostly seen as positive, however 2 out of 5 of the citizens that are interviewed, are afraid that the spatial conditions will decrease more, and 3 out of 5 citizens are afraid that the quality of the social conditions will decrease. At last, they say that they feel there is a growing negligence of maintenance and attention for the public spaces by housing corporation and municipality.



## 3.4 Summary

### **City district Delfshaven**

The area of Rotterdam West has changed through time: from a harbour area (Delfshaven) directly connected to the Maas river, to a harbour area south of this historical centre, towards a harbour area into transition towards a residential area. The area will continue to transform over the next twenty years.

### *Enclaves*

Observations and interviews show that all three types (connecting, solitary and non public life) of enclaves are present within the area. The connecting enclaves are: Dakpark – and especially its shops underneath, Historisch Delfshaven, Nieuwe Binnenweg and the industrial area where among others the praxis shop is located. Non public life area is the harbour area, although this will partly change in the future to a mixed area that holds housing and businesses of the new circular economy. Solitary enclaves are observed as: Witte Dorp, Justus van Effenblok, residential flats in Tussendijken, Schiedamseweg, Le Midi, Marconi towers, area with Roosegaarde and Van Lieshout, residential buildings at the Mathenesserdijk and Spangesekeade, Heemraadssingel, residential buildings at Lelyboskde, Schiemond, Schools at Schiemond, Kroonlocatie and industrial area at the street Schiehoofd.

There is an expectation that the experience of enclaves will change in the future, due to new built developments and gentrification processes. The prediction is that some areas will be upgraded and some not. This might creates new 'enclaves' of areas with high, and with low income citizens, and / or a variety of experiences.

### *Routes & Routines*

The current infrastructure is mainly oriented from west to east. There are some strong road connections present from north to south on the east side of the Schie. However these north-south connections are not continuously on the west side of the Schie. This results in a more fragmented fabric. Public transport system is lacking in the south of the city district, which makes this area less connected (in the field of public transport) to the rest of the city.

The most important shared streets on city (district) scale are: the

boulevard at the Dakpark, the east side of the Schiedamseweg, Historisch Delfshaven and the Nieuwe Binnenweg.

The routes exposed by the data of Strava present a relation between the recreational routes and the water infrastructure. Initiatives in Rotterdam are working on creating a strong green recreational connection throughout the city. Schiemond is an urban area that is located along the planned green connection, however it is not connected yet.

### **Schiemond**

There is currently no strong tension present within the neighbourhood of Schiemond. However the condition of interaction between residents can be better described as 'disinterest'.

The neighbourhood has changed, since renovation process ending in 2014, in a positive way. However some citizens are expecting that the physical and social conditions will decrease in the future. And especially the removal of play equipment suitable for youth and negligence of maintenance and attention, is causing a decrease of social and spatial conditions.

#### *Enclaves*

When we look at Schiemond, the following enclaves are of importance as adjacent neighbours: the M4H harbour area (enclave of non public life), School building of Accent and Horizon, Kroonlocatie, and south located industrial functions and its ship museum (as solitary enclaves). Schiemond is also seen as an enclave on itself (solitary). Dakpark and Historisch Delfshaven are seen as connecting enclaves. The three edges of 'the enclave' Schiemond are seen as boundaries: edges where things ends. Also surrounding Schiemond, other edges are seen as boundaries, including the neighbourhood Historisch Delfshaven, which is a connecting enclave, however it edges at the south posses a closed character.

#### *Routes & Routines*

The routes in the area can be divided in three types of user categories: residents, visitors and passers-by Within Schiemond routes mainly take place in the north-south direction within the car streets, along the boulevard at the Maas river and in the east-west direction within the underpass. The visitors routes are mainly situated along the water structures and the dakpark – as recreational routes. Passers-by routes concentrate on the Westzeedijk / Vierhavenstraat and the Spanjaardstraat

by car, tram, bike and pedestrian. Shared routes can be found along the Westzeedijk / Vierhavenstraat, the Speedwellstraat and along the waterfronts.

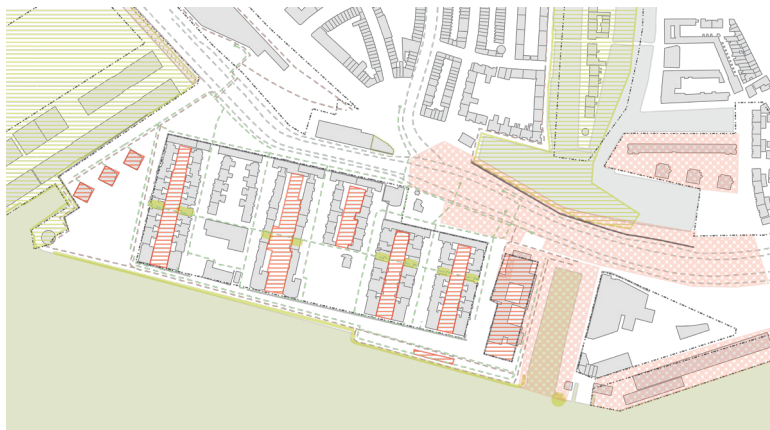
In Schiemond many obstacles for pedestrians can be found, which decreases the quality of potential routes.

### *Hier & Daar*

Mental maps drawn during the interviews have provided insights into the Hier's and Daar's of the area. The Hier's are: the Maas river, the Harbour areas, the underpass through the residential blocks, Historical centre of Delfshaven and the fishing spots. The places of Daar's or places of non existence are: the flats at the Speedwellstraat, the Schools of Horizon and Accenture, The green pockets of the shared gardens and the boats as art objects. Additionally the following places are seen as places with lack of comfort and security: Southside of the Vierhavenstraat, Westzeedijk at the height of Historisch Delfshaven, Residential buildings at the Lelyboskade, Inlet of the river between the schools and Kroonlocatie and the street Schiehoofd.



**Figure 65** Concluding drawing for the enclaves and routes & routines for the zoom-out scale, city district Delfshaven - *connecting* (green), *solitary* (red)



**Figure 66** Concluding drawing for Schiemond and its neighbours for the enclaves (dashed border line), routes & routines (of residents, visitors and passers-by), hier (in green) en daar (in red)



## 3.5 Conclusion SRQ2

The conclusion on the second sub research question - *'What are the urban conditions of the case study area in line with the developed perspective of SRQ1?'* - is presented below. The answer is presented per scale, and on each scale the topics of *enclaves* and *routes & routines* are integrated into one figure. On the scale of 'Schiemond and its neighbours', (Figure 66) the analysis of the concepts of *hier* and *daar* is also added to the Figure.

### **City district Delfshaven**

Figure 65 presents the concluding drawing for the enclaves and routes and routines for the zoom-out scale. It shows the connecting enclaves and streets in green, and the solitary enclaves and streets in red. On this scale, it becomes clear that the connecting capacity of Schiemond and surrounding areas is very low. In the immediate surroundings the connecting capacity of the 'Dakpark', and 'Historisch Delfshaven' is seen as high.

### **Schiemond and its neighbours**

On Schiemond scale the enclaves and its edges, routes, routines and *hier en daars* are observed. Figure 66 presents the concluding drawing with its enclaves, routes (of residents, visitors and passers-by), closed edges and *hier* (in green) and *daar* (in red). These findings are taken into account in the applied design (page 187).



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# Introduction

The knowledge tension (p. 27) in the introduction chapter describes a tension between different views on the value of *connectivity* and different ideas on potential design solutions. The second chapter, “Perspective” compared these different views, and formed a value definition for this thesis (p. 75), which resulted in a design brief:

*“The design brief, originating from the value definition, is to design an urban environment that offers citizens multiple possibilities for social encounters from fleeting interactions to public doing, while also offering spaces for distance. The task is to both create a hier and a daar.”*

This design brief states “from fleeting interactions to public doings”, which refers to the six variety forms of connectivity found in literature - the overview can be found in Figure 15 on page 74.

This chapter aims to convert the design brief to design implementations, which possess a general character. They are iteratively developed by making an applied design of which the results can be seen in chapter 5 “Applied design” (p. 187).

This chapter will give an answer on sub research question 3:

*How to design for connectivity in line with the developed perspective of SRQ1?*

To be able to answer this question, six topics are discussed. First of all, ‘emotions of hier en daar’ (4.1 on page 155) will be explored. These mental states and corresponding emotions are important to understand, as the design brief states “the task is to both create a hier and a daar”. Therefore, both mental states are taken into account in this subsection, and they are plotted against each other in a cross-table, in “4.2 Hier x Daar” on page 157. This results into three type of spaces, explained in “4.3 Type of Spaces” on page 159. Furthermore, to achieve these type of space in an urban design, *design principles* are developed in “4.4 Design principles” on page 162.

The *design principles* are further defined by exploring the *elements for considerations* 4.5 on page 173, which results, in a comprehensive overview in “4.6 Design Guidelines” on page 181.

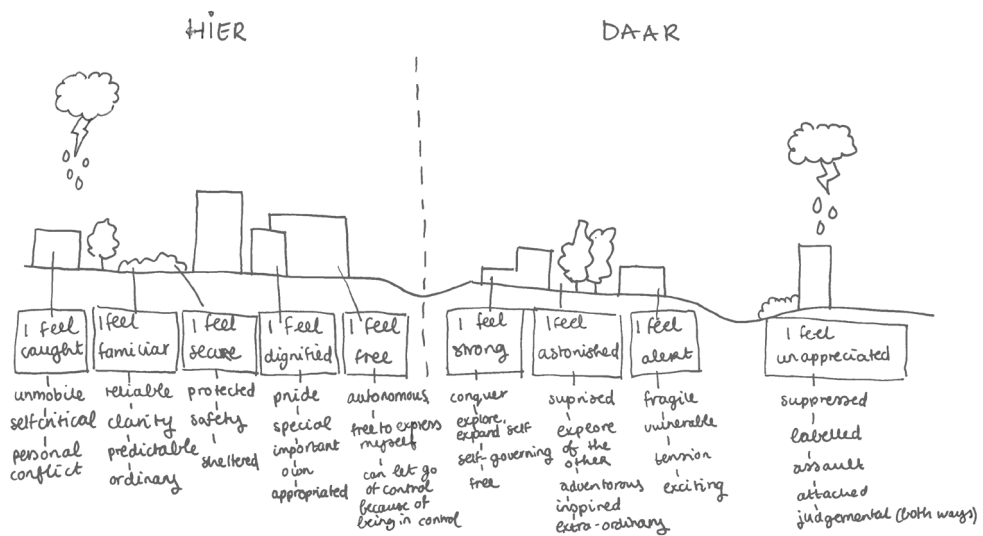


Figure 67 Horizons of emotions that can be experienced in *Hier* and in *Daar*

## 4.1 Emotions of *Hier and Daar*

To be able to better understand the concept of *connectivity* in residential diversity, an exploration is made of the possible emotions that an individual can feel, as part of their *hier* or *daar*.

On one hand, the experience of approaching and getting connected with an 'other' - 'the unknown' - is described as the horizon of *daar*. On the other hand, the experience that are part of feeling a sense of home, or identification - 'the known' -, is described as the horizon of *hier*. The mapped emotions are visible in Figure 67.

There is no strict hierarchy on these horizons, however, the emotions described on the outside of the line are more negative than the emotions towards the middle. In addition, the emotions are bundled to communicate a clear overview. The categories and its emotions show the high amount of emotions that can be part of one of the two mental states. It also shows that some categories balance between positive and more negative emotions. An example is the category of '*I feel alert*', which possesses the emotion of exciting (mainly experienced as positive) and the emotion of vulnerable (mainly experienced as negative). This category presents the many faces of the emotion of 'tension', a tension that is essential to the urban experience. The overarching emotions of the categories, visible on the

horizons, are intuitively chosen, therefore Figure 67 is of extra importance, as it shows to the reader the multiplicity of the emotions.

The knowledge on the potential emotions of *hier* en *daar* originate from variety of sources, gathered by different methods - *literature, interviews, personal experience and indirect input* (from visits to events and lectures related to the topic) - illustrated more in detail below.

The emotions belonging to the mental state of *daar*, of 'I feel alert', are mainly based on the executed literature research, and can be read in the writing of Sandercock (2000). In addition, tension and insecurity, related to the category of 'I feel alert', were frequently appointed in city dialogue event in Delft, '*Delft als verbonden stad*'. (6th of June, 2019) The emotions regarding 'I feel unappreciated', regarding feeling suppressed or labelled, arose from interviews with professionals. The emotions of 'I feel strong', and the act of moving out of your 'comfort zone', arose from personal experience.

The emotions belonging to the mental state of *hier* are based on literature and citizens interviews. Specifically, 'I feel secure and familiar', on the writing of Blokland (2008), and Reijndorp & Reinders (2010).

		<b>HIER</b>				
		I feel free	I feel dignified	I feel secure	I feel familiar	I feel caught
<b>DAAR</b>	I feel strong	<i>Hier &amp; Daar:</i> A very welcoming and characteristic public space		<i>Hier &amp; Daar:</i> A comfortable embracing and safe public space	<i>Hier &amp; Daar:</i> A vivid well readable space	<i>Hier:</i> Space that doesn't contribute to freedom, but works fine for others ( <i>daar</i> )
	I feel astonished	<i>Hier &amp; Daar:</i> A space like theatre: watching the performance		<i>Hier:</i> A space that your are proud of and/or is strongly part of your 'hier'. <i>Daar:</i> A space of 'an other' that you can enjoy.	<i>Hier:</i> Space that doesn't contribute to freedom, and is (negative) enjoyed by others ( <i>daar</i> )	
	I feel alert					<i>Hier:</i> Space that doesn't contribute to freedom and is uncomfortable for others ( <i>daar</i> )
	I feel unappreciated					

**Figure 68** Cross table of emotions of *Hier* and *Daar*



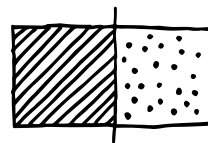
## 4.2 Hier x Daar

As stated in the introduction of this chapter (p. 153) the design brief states “the task is to both create a hier and a daar.” This is in line with the assumption that in *connectivity in residential diversity* there is an experience of differences and therewith a presence of *hiers* and *daars*. Important to say is that a designer should stay conscience to the note that it cannot be determined from the outside when an individual experiences a ‘difference’.

To be able to understand places in which a *hier* and a *daar* is present, a cross table is used to plot the emotions of *Hier en Daar* against each other (Figure 68).

The cross table presents type of spaces that facilitate the combination of both mental states and the variety of emotions. The completed blocks show the way a space functions for both the mental state of *hier* and *daar*. Some combinations show that the experience is similar for *hier* as for *daar*, other spaces differ per mental state. This difference is further elaborated on in “4.3 Type of Spaces” on page 159.

The potential negative emotion of ‘I feel alert’, and the negative emotions of ‘I feel caught’, and ‘I feel unappreciated’, are not emotions an urban designer wishes to cause. These boxes are, therefore, coloured grey. In design possibilities can be sought to turn these negative emotions into more positive ones.



**Figure 69** Visualization of the assumption that in the condition of (dis)connection in residential diversity there is a presence of both *hier* (stripes) and *daar* (dots)

	I feel free	I feel dignified	I feel secure	I feel familiar	I feel caught
I feel strong	<i>Hier &amp; Daar:</i> A very welcoming and characteristic public space		<i>Hier &amp; Daar:</i> A comfortable embracing and safe public space	<i>Hier &amp; Daar:</i> A vivid well readable space	<i>Hier:</i> Space that doesn't contribute to freedom, but works fine for others ( <i>daar</i> )
I feel astonished	<i>Hier &amp; Daar:</i> A space like theatre: watching the performance	<i>Hier:</i> A space that you are proud of and/or is strongly part of your 'hier'. <i>Daar:</i> A space of 'an other' that you can enjoy.			<i>Hier:</i> Space that doesn't contribute to freedom, and is (negative) enjoyed by others ( <i>daar</i> )
I feel alert	<i>Hier:</i> A space that is part of your sense of home or identification, but not instant comfortable for visitors / passers-by'. <i>Daar:</i> A space that evokes a feeling in between positive excitement and negative discomfort				<i>Hier:</i> Space that doesn't contribute to freedom and is uncomfortable for others ( <i>daar</i> )
I feel unappreciated	<i>Hier:</i> A space that works fine for some, but not for others ( <i>daar</i> )				

**Figure 70** Cross table of emotions of *Hier* and *Daar*, and its three type of urban spaces

- Shared presence
- Presence of a strong and positive shared *hier*
- Borders for invitation

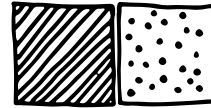
# 4.3 Type of Spaces

To design for *connectivity*, and tackling conditions of disconnection, three different types of spaces are observed in the *hier* and *daar* cross-table (Figure 70). These types of spaces are translated into spaces an urban design can strive for to develop *connectivity in residential diversity*. Therefore, the three types of spaces are framed as positively experienced places. The negative experienced spaces, visible in the cross-table, are also part of the three categories, for which an urban design can aim to reverse the negative emotions. The three types of spaces are: (1) *shared presence*, (2) *presence of a strong and positive 'hier'*, and (3) *borders for invitation*. "4.4 Design principles" will explain and illustrate each type of space further, and will explain how urban design can contribute to achieving these type of spaces through a development of *design principles*. The three type of spaces are briefly explained below. The little drawings show the relationships of *hier* and *daar*, before an urban design intervention changes the relationships and proportions of *hier* and *daar*.

## 1. Shared presence

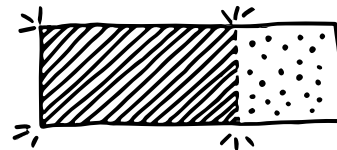
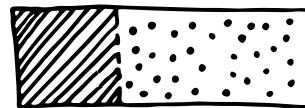
Spaces of *shared presence* are spaces in which the emotions of *hier* en *daar* are similar and equally present. Of course, this depends on what urban scale the area is looked at, but the spaces refer to urban spaces in which we would popularly describe as: 'this is an area in which 'different worlds' come together.

When there is no *shared presence* yet in an urban area, an area can be observed as 'worlds that live apart', as presented in the drawing below:



## 2. Presence of a strong and positive hier

A space with a strong and positive *hier*, is seen as a space that contributes to a shared place attachment, a shared identification and/or sense of home. It is linked with emotions related to pride, dignity, appreciation. Such a space can be enjoyed by *daar*. When this type of space is not there yet, the conditions might be as the two drawings below:

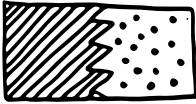


These drawing show, a situation in which the presence of the mental state of *hier* is low, and a situation in which there are many emotions of *hier*, but this cannot be enjoyed, explored or seen by *daar*.



### 3. Borders for invitation

A space with *borders for invitation*, functions as a space that tackles the emotions visible in Figure 70, related to 'I feel alert'. When this type of space is not present, a tension is experienced, once entering this other 'world', or 'enclave', presented by the image below. Or there is an absent of invitation, meaning that the two sides will not connect.



Borders for invitation will invite the *daar* to take a look at the *hier*, with a lower level of anxiety.

The next subsection, "4.4 Design principles", explains which urban design principles can be applied to achieve these three different spaces, and to transform the drawings of *hier* and *daar* of this subsection, into drawings with new conditions of *connectivity*.

## 4.4 Design principles

To design for *connectivity*, and tackling conditions of disconnection, three types of spaces are developed in the previous subsection “4.3 Type of Spaces”.

These type of spaces are further explored in this subsection and *design principles* are developed to explain how these type of spaces can be achieved. The *design principles* contain knowledge on the variety of *types of connectivity*, which resulted from the literature search in the *perspective chapter*. An overview of these *types of connectivity* can be found in on page 180.

The three types of spaces and its *design principles* are separately described, with guidance of:

- The cross-table
- Design principle icons that will be used throughout the thesis
- Drawings that show the new relationship of *hier* and *daar*
- Pictures of reference projects that illustrate a possible interpretation of the design principle
- Drawing on the types of connectivity derived from literature

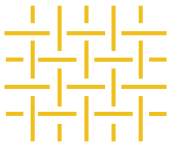
# 1

## Shared presence

‘Worlds come together’

In case there is a wish to develop a space that facilitates *shared presence*, there are two urban *design principles* that can be used: (a) *Interweaving*, and (b) *Patching*. Both design principles are further explained on the next pages.

	I feel free	I feel dignified	I feel secure	I feel familiar	I feel caught
I feel strong	<i>Hier &amp; Daar:</i> A very welcoming and characteristic public space		<i>Hier &amp; Daar:</i> A comfortable embracing and safe public space	<i>Hier &amp; Daar:</i> A vivid well readable space	<i>Hier:</i> Space that doesn't contribute to freedom, but works fine for others ( <i>daar</i> )
I feel astonished	<i>Hier &amp; Daar:</i> A space like theatre: watching the performance				
I feel alert					
I feel unappreciated					



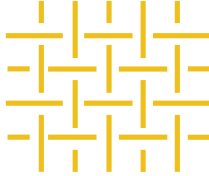
### (a) Interweaving

Interweaving involves an optimization of the possibilities for casual encounters between citizens, which increases the sense of home and/ or shared identification, caused by a shared identification in space.



### (b) Patching

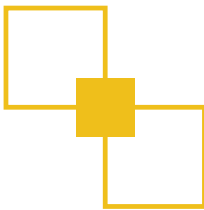
Patching involves a materialization and design intervention which aims to emphasize and visualize an already existing programmatic or symbolic connection between two or more areas.



**Figure 71** Icon of the *design principle interweaving*, and the new relationship of *hier* and *daar*

### Interweaving

The definition of *Interweaving* on the previous page, is illustrated on this page with pictures of the ‘Nieuwe Binnenweg’, a street in Rotterdam, as an example of a street that is used by a broad resident diversity - this notion also emerged during the citizens interviews. The example is in line with the concept, found in literature, of ‘casual encounters’, which can lead to a form of connectivity, named ‘familiar strangers’. The other picture shows ‘OPEN in Delft, a combination of a library and a music school’. It illustrates citizens connected through executing a similar activity, which they can identify themselves with, resulting in a form of connectivity, named ‘conviviality’. Both forms interweave a diversity of residents through shared routes and routines.



**Figure 72** Icon of the *design principle patching*, and the new relationship of *hier* and *daar*

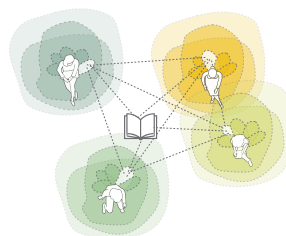
### Patching

An example of patching is the Park ‘Superkilen’ in Copenhagen, design of Topotek1, BIG Architects and Superflex. It shows a change of design and materialization in an area, which creates a new visual relationship between a variety of spaces. The principle of *patching* aims to develop a physical connection to emphasize a programmatic or symbolic connection between two or more areas. To which extent these conditions of (dis)connection are present in the Superkilen park is unknown, as author is unaware of the socio-spatial conditions. However, the image shows a good illustration on how patching can look like.

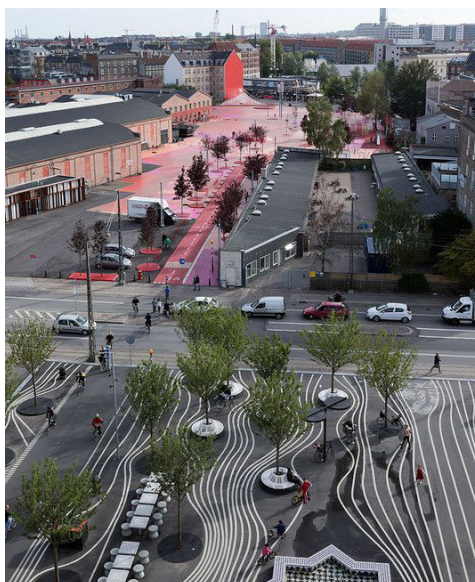




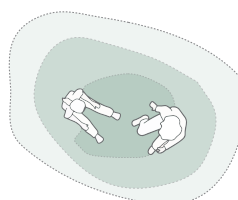
'Nieuwe Binnenweg' in Rotterdam (Schenderling, 2017) and OPEN, DOK in Delft (Heyda, 2018)



**Figure 73** Forms of connectivity in line with the *design principle of interweaving* - 'familiar strangers', and 'conviviality'



Superkilen Park in Copenhagen (Baan, 2012)



**Figure 74** Forms of connectivity in line with the *design principle of patching* - 'proximity'

# 2

## Presence of a strong and positive hier

Enjoyed by *daar*

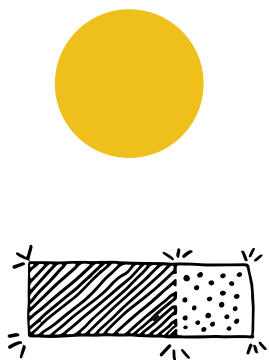
In case there is a wish to develop a space that facilitates the presence of a strong and positive *hier*, enjoyed by *daar*, the *design principle* that can be used is *buttoning*. This principle can be used when there is already a strong *hier* present, but it is not yet enjoyed by *daar*, or it can be used to develop and create a *hier*.

	I feel free	I feel dignified	I feel secure	I feel familiar	I feel caught
I feel strong					
I feel astonished		<i>Hier</i> : A space that you are proud of and/or is strongly part of your 'hier'. <i>Daar</i> : A space of 'an other' that you can enjoy.			<i>Hier</i> : Space that doesn't contribute to freedom, and is (negative) enjoyed by others ( <i>daar</i> )
I feel alert					
I feel unappreciated	<i>Hier</i> : A space that works fine for some, but not for others ( <i>daar</i> )				



### Buttoning

The principle of buttoning uses the built environment to create shared place attachments, to facilitate appropriation, and/or to work on a common purpose or goal.



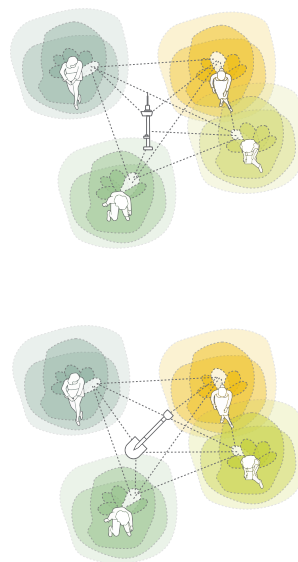
**Figure 75** Icon of the *design principle buttoning*, and the new relationship of *hier* and *daar*

### Buttoning

The definition of *Buttoning*, is illustrated on this page with pictures of the ‘Euromast’, an observation tower, which can be seen, due to its great height, from many places in the city of Rotterdam. It is part of many citizen’s mental maps - as observed in the citizens interviews. It facilitates a shared place attachment, in line with the concept found in literature (Reijndorp & Reinders, 2010). It is an object that can also be enjoyed when it is someone’s first visit to the city, and in a mental state of *daar*. The other picture shows a street in the city district of Rotterdam West where it looks like neighbours have decorated the street together, and through a shared goal, appropriate the space, which can also be enjoyed by a *daar*.



‘Euromast’ in Rotterdam, and the ‘Albregt Engelmanstraat’ (author, 2019)



**Figure 76** Forms of connectivity in line with the *design principle* of *buttoning* - ‘shared place attachment’, and ‘commonalities’

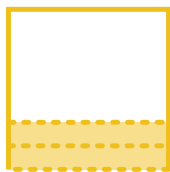
# 3

## Borders for invitation

From tension to comfort and/ or excitement

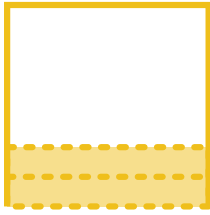
In case there is a wish to develop a space that facilitates *borders for invitation*, the *design principle* that can be used is *ribboning*. The principle aims to tackle negative emotions of *daar*, of 'I feel alert', in which there is a tension between *hier* and *daar*, or a non-connection.

	I feel free	I feel dignified	I feel secure	I feel familiar	I feel caught
I feel strong					
I feel astonished					
I feel alert	<i>Hier</i> : A space that is part of your sense of home or identification, but not instant comfortable for visitors / passers-by'. <i>Daar</i> : A space that evokes a feeling in between positive excitement and negative discomfort				<i>Hier</i> : Space that doesn't contribute to freedom and is uncomfortable for others ( <i>daar</i> )
I feel unappreciated					



### Ribboning

The *design principle* focusses on the design of borders, which aims to translate negative emotions into positive ones, in which borders are designed for distance, clarity and invitations.



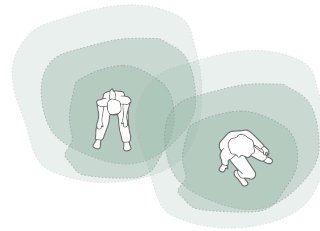
**Figure 77** Icon of the *design principle ribboning*, and the new relationship of *hier* and *daar*



Warrior square gardens in Essex, England (Philp, 2011), and project Silence! in Riga, Latvia (Takahasi, 2016)

### Ribboning

Ribboning is seen as a urban design act in which an urban fabric is changed through materialization and design into one, or multiple, in-between zones. Border conditions change, in which ‘a ribbon’ creates clarity, distance and/ or invitation. Two examples are shown in the pictures, which highlight the design of a different atmosphere in relation to the surrounding area. The references are an illustration of how *ribboning* might look like. However, to know if the reference is in line with the principle, knowledge is required on the urban conditions of borders and boundaries in that specific context. Therefore, the *design principles* should not be isolated, but executed with a good understanding of the context. This is further explored in the “4.6 Design Guidelines” on page 181.

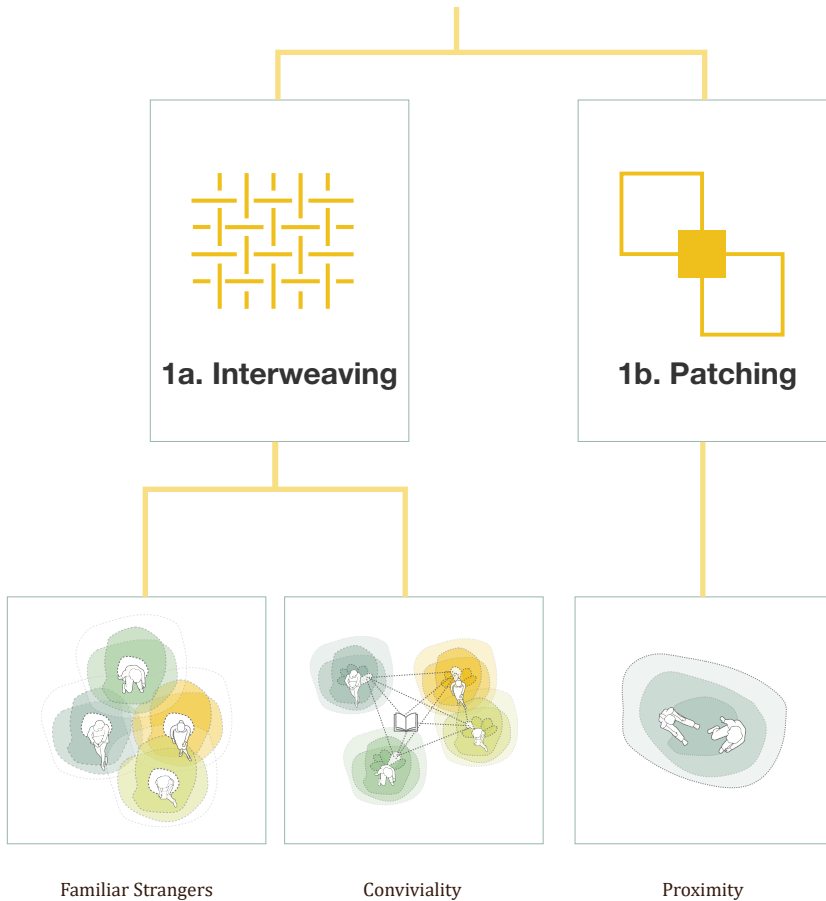


**Figure 78** Forms of connectivity in line with the *design principle of ribboning* - ‘distance’

# Overview four design principles

These pages present an overview of the four *design principles*, in line with the type of spaces a designer can develop to foster connectivity in residential diversity, and in line with concepts found in literature. The four *design principles* are: *interweaving*, *patching*, *buttoning* and *ribboning*.

## Shared presence

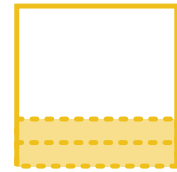


Presence of a strong and positive shared *hier*

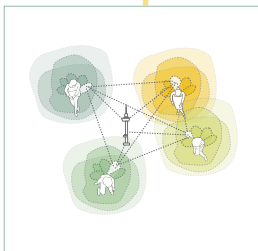


**2. Buttoning**

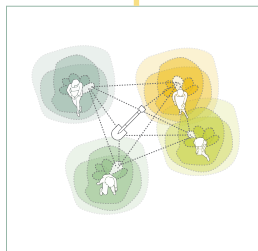
Borders for invitation



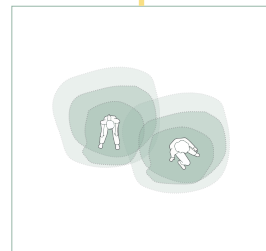
**3. Ribboning**



Shared Place Attachment



Commonalities



Distance

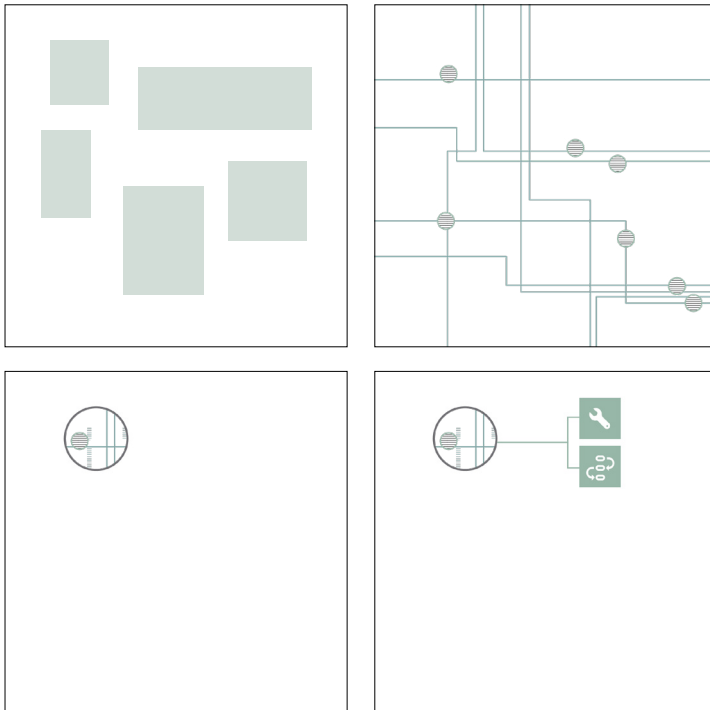




# 4.5 Elements for Considerations

The reference photos, presented in the previous subsection, already show that the appearance of an urban space does not always display if a design fosters *connectivity in residential diversity*. Other urban elements are just as important to implement a *design principle*. Therefore, this paragraph describes four urban conditions that are seen as elements for consideration during the development of a design. These are in line

with previous mentioned concepts, namely *enclaves* and *routes and routines*. The other two concepts are related to design decisions that need to be taken once a more zoomed-in urban design is being developed. The four elements of considerations are: *Enclaves (01)*, *Routes & Routines (02)*, *Design of Appearance (03)*, *Product & Process (04)*. The elements of considerations are further explained in this subsection.



**Figure 79** The four elements for consideration: *enclaves, routes & routines, design of appearance, product & process*

## Enclaves

As explained in the previous chapters, *enclaves* can be seen as solitary, connecting or non public life. They are formed by their physical and social environment, and differ in design, use and experience.

### Considerations

From a design perspective the choice can be made to keep the enclave as an enclave, or to open up the enclave. The decision depends on the size of the enclave, the amount of possibilities to open up the enclave, and the amount of benefits the decision will bring to all living environments present in the city. Once the decision is made to keep the enclave, two elements become of importance for further design: the inner world and the borders. Once the decision is made to open up the enclave, it is important to understand the routes and routines that are currently present within the area. Routes or routines (program) should be changed to be able to open up the enclave for multiple living environments. However, enclaves can also be celebrated, as the goal is not to 'neutralize' urban city fabrics.

### Connectivity

Enclaves, in a negative way, can be seen as places where people, not belonging to the enclave, don't feel welcome. In case a city consists entirely of enclaves and borders are not well designed (such as a city full with gated communities and outdoor settlements), the connectivity level will be low. This can both be seen as a physical and a social disconnection. Rethinking existing

enclaves and making decisions about keeping or opening up, can help to strengthen the connectivity. Especially in case it is further developed through urban, architectural design, and programming.

### Link with design principles

*Interweaving, patching and buttoning* can be done within and in-between enclaves. However, extra attention in relation to enclaves is required regarding the design principle of *ribboning*. In case a solitary enclave is kept, it can be interesting to place a design focus on the borders of the enclave, and design it for clarity, distance, and invitation. So, even though the enclave is seen as solitary, it can still play a role for *connectivity*.

ik ben hier  
zonder dat de hier er ook is  
dus daar, ja daar  
daar zal ik hem misschien vinden  
heb jij mijn hier gezien?

## Routes & Routines

Routes and routines are related to the activities citizens undertake within an urban area. The activities consist of *routes* (physical route taken to arrive at destination), and *routines* (amenities or other urban functions used on daily basis within the urban fabric) (Reijndorp, 2004).

### Considerations

In relation to enclaves, *routes and routines* are urban elements that can help to open up or protect an enclave. In case the wish is

there to open up the enclave, routes can be designed to connect. However when there are no routines designed, the route will not be used. So as explained, for design, routes and routines can be used to understand what should be changed to order to achieve the aimed goals. Secondly, an analysis of routes and routines of a variety of living environments can present a network with roads and nodes that offer an opportunity for connecting the multiple living environments. Routes that are taken by many, form opportunities to add connecting program, because potential reach is large. Or a program used by single living environments can be (re)located to connect to routes or routines of other living environments.

### **Connectivity**

Sometimes routes are not paved and not part of the designed urban network. This does not stop people from going. So routes are not per se dependent on urban design. However some barriers, such as water, will define routes that are taken. So (social) behaviour and (physical) design are both influencing each other.

### **Link with design principles**

When the aim is to 'interweave' areas, the design of routes & routines is of high importance. Enclaves and its residents can be linked or integrated by creating an extensive and connected network of routes and offering a diversity of routines, stimulating to become 'familiar strangers'. Secondly, shared routines are seen of high importance to achieve connectivity, as it will stimulate a shared identification through a shared activity,

named 'conviviality'. A list of routines that can be considered for facilitating shared routines by many, are: cooking, eating, learning, going to school, gardening, doing sports (jogging, fitness, playing table tennis, free running etc.), walking, sun bathing, (low-intense) swimming, biking, going to the movie / theatre, going to the zoo, going to a doctor or other health care professional.

He, ik zie je altijd daar  
je bent er vaker  
ik was op pad  
nu keek je weg  
was je met je hoofd ergens anders?

## **Design of Appearance**

### **Considerations**

The design of urban space, includes, among others, choices of material, form, proportions. These are not so well visible on a map of a large scale, such as a city district. To be able to design a space for connectivity, one should zoom in. Even a map is often not sufficient, as it is missing information on height, material, but also the more intangible aspects as called atmosphere, influenced by circumstances of light, climate and activities. These aspects can be experienced best on site.

### **Connectivity**

Well designed places, will make people stay longer, and increases the changes for passive contacts between variety of residents. This in line with Gehl's philosophy (1971). It can change fellow citizens from strangers into

familiar strangers (Blokland, 2008). Well designed urban spaces can be seen as the basic foundation for being able to design a connected city. However, within consideration of the other three principles, it has the danger of only creating a pretty city.

### **Link with design principles**

As said, design of appearance is of importance to increase the opportunities for realizing 'familiar strangers'. This is related to the design principle of *interweaving*. However, design of appearance has strong links with the other three design principles as well. For *buttoning* it can be of important to design a space that has, or will have, a shared place attachment: this means (at least) that it stands out in relation to its environment. For the principle of *patching*, materialization is of high importance as it can create a well designed 'overlapping' urban area. In addition *design of appearance* is important for the principle of *ribboning*, as materializations can make borders more clear and inviting, and/ or offer more distance.

When designing it is important that public space does not function per se as a 'neutral space'. As this might result in not being a 'hier' or a 'daar'.

ik heb dat daar  
nog nooit gezien  
vol kleur in het grijze gebied  
tussen hier en hier  
wil je even gaan kijken?

The following pages show edited pictures of places that possess the spatial quality that has been explained above. The fifteen examples present potentials for a *hier en daar* design appearance.

1. Assembling
2. Shared use in place and time
3. See you at the corner!
4. Zoning
5. Staying in business
6. Embraced in public
7. Activities at eye level
8. Mobility hierarchy
9. Marking
10. Naming
11. Sight (lines)
12. Stories in public space
13. Pointing to other places
14. Material links
15. Appropriation of private or semi-public spaces

1. **Assembling** Placing of variety of functions close to each other, used by many different living environments (Hajer & Reijndorp, 2001)
2. **Shared use in place and time** Optimal use of space through time, increasing the encounter capacity (Hajer & Reijndorp, 2001)
3. **See you at the corner!** Use of nodes in the urban fabric as landmarks and accessible and visible from many directions.
4. **Zoning** Designing spaces that ensure an individual can choose how much distance one takes from the other, making it possible to stay close by designing a distance.



1.



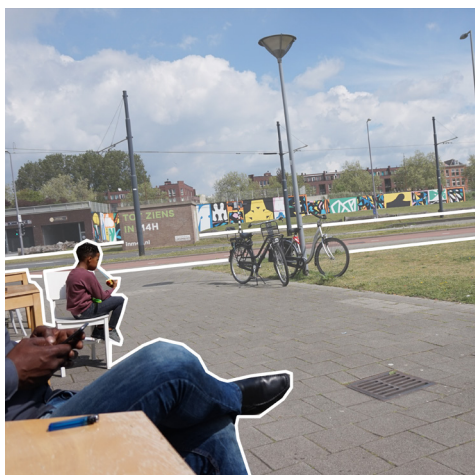
2.



3.



4.



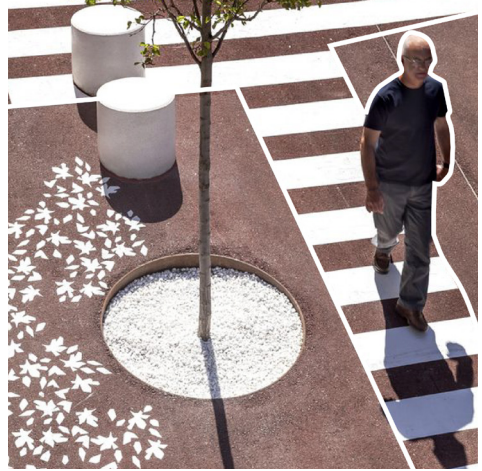
5.



6.



7.



8.



9.



10.



11.



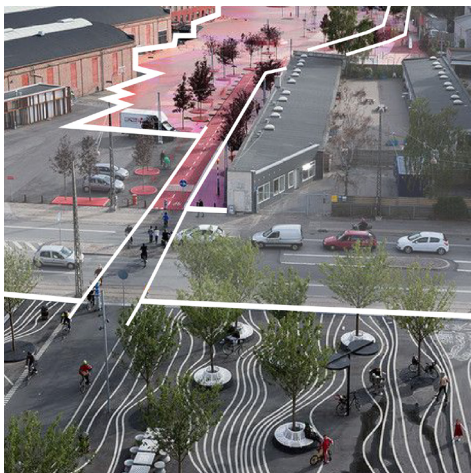
12.

- 5. **Staying in business** Facilitating places in business, so individuals can enjoy busy areas.
- 6. **Embraced in public** Large plains should be alternated with intimate spaces to be able to move away from the hectic.
- 7. **Activities at eye level** City life should be visible from eye level, focus on activities and a well-designed plinth.
- 8. **Mobility hierarchy** Design mobility flows in such a way pedestrian and bike get the most prominent place; greatest



13.

- possibilities on encounters.
- 9. **Marking** Marking a clear defined place: "Hi there, here starts something new!"
- 10. **Naming** Naming places so it can become part of individual's cognitive maps
- 11. **Sight (lines)** Design of urban fabric that makes it possible to 'read' the area, and see what 'happens' further in the city. Secondly, sight can provide a sense of space and tranquility.
- 12. **Stories in public space** Stories (of the past) can be told, especially, related to diversity, of interest when a plurality of stories can read.
- 13. **Pointing to other places** Emphasize the relationship of one place to another clear through design of objects
- 14. **Material links** Emphasize the relationship of one place to another clear through well-designed materialization of space
- 15. **Appropriation of private or semi-public spaces** Making it possible for residents or users to appropriate the space, to adapt it to own needs.



14.



15.

### Sources of photos 'design of appearance':

1. Nieuwe Binnenweg, Rotterdam (Schenderling, 2017)
2. OPEN DOK, Delft (Heyda, 2018)
3. Rossio, Delft (Joor, 2016)
4. Mathenesseplein, Rotterdam (author, 2019)
5. Voz-di-Rua, Schiemond, Rotterdam (author, 2019)
6. Sclera project, London (Adjaye Association, 2008)
7. Flipboard cafe, Australia (Milbourne, 2013)
8. Malgrat de Mar (Goula, 2012)
9. Schieblok, Rotterdam (van Duivenbode, 2016)
10. Keilewerf, Rotterdam (author, 2019)
11. Euromast, Rotterdam (author, 2019)
12. Schiemond, Rotterdam (author, 2019)
13. Westzeedijk, Rotterdam (author, 2019)
14. Superkilen Park, Copenhagen (Baan, 2012)
15. Albregt Engelmanstraat, Rotterdam (author, 2019)

## Product or Process

### Considerations

A fixed physical end product does not necessary achieve a form of sociality (Sennett, 2018). Adding a vegetable garden to an urban design, might not result in happy 'connected citizens'. Especially in case it is not part of an appropriation process and intrinsic motivation of citizens.

When designing *connectivity* with predominantly social aims, the urban design or program named as 'product' should not be the starting point of designing, but the end product of a process. This process and the ones executing it, should be open-minded, and responding to voices and activities happening within the process. The first idea of a designer might be to design a vegetable garden on the outskirts of a neighbourhood. However, a good process takes on the idea and might turn it into a playground in the middle of the neighbourhood.

To achieve a good urban design for *connectivity*, the consideration should be

made if an urban design becomes a product or a process, is it a means or an end?

### Connectivity

Both a well designed process, and a well designed product, can strengthen the conditions of connectivity. However, especially when the aim is to create a shared *hier*, a process might be a better fit!

### Link with design principles

This element for consideration is mainly of interest when a designer wants to do 'buttoning'. A product might not be suitable for the action of buttoning.

Ik denk daar

Ik denk daar

Ik denk daar

Mijn voorstelling

Ik hoor hier

Ik hoor hier

Ik hoor hier

Jouw verhaal



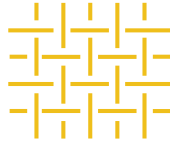
## 4.6 Design Guidelines

The *type of space*, with its *design principles*, its *forms of connectivity*, and the *elements for consideration*, form together the design guidelines, presented on the next pages.

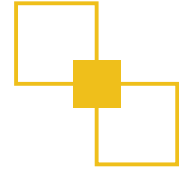
The **Yellow** blocks and the word, **DESIGN**, show which are the most important *design elements* an urban designer should focus on and consider, for that specific *design principle*.

# Design Guidelines

## Shared presence



### 1a. Interweaving



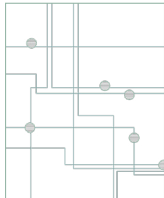
### 1b. Patching

#### Elements for Consideration

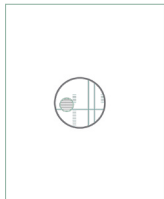
Enclaves



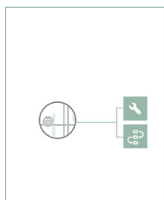
Routes & Routines



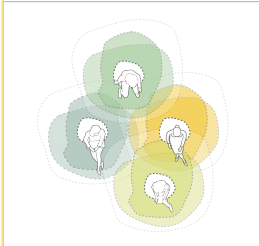
Design of Appearance



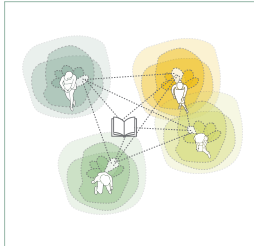
Product or Process



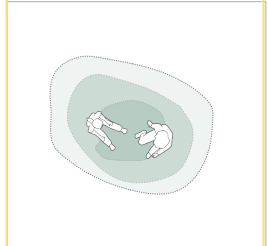
Familiar Strangers



Conviviality



Proximity



Possible within or in-between enclaves

Possible within or in-between enclaves

Possible within or in-between enclaves

**DESIGN** | Link residents by creating multiple shared routes and routines

**DESIGN** | Offer routines that can facilitate shared behaviour (list of potential routines: p. 182)

Design patches in the areas with shared routes and routines of variety of citizens

**DESIGN** | Design attractive outdoor spaces that stimulate 'staying in public'.  
Nr: 1 t/m 8

Combining routines with shared urban conditions  
Nr: 1, 2, 3, 7

**DESIGN** | Focus on urban design qualities  
Nr: 7, 8, 9, 10, 11, 14

Emphasis on urban product

Emphasis on urban product

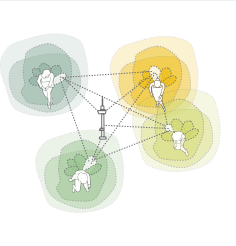
Emphasis on urban product

## Strong and positive shared *hier*



### 2. Buttoning

#### Shared Place Attachment



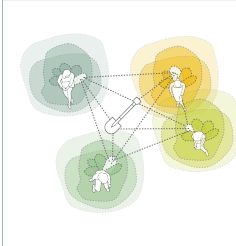
Possible within or in-between enclaves, can also have the form of a connecting enclave

Link routes and routines to spaces of shared place attachment

**DESIGN** | Create or strengthen shared attachment through design  
Nr: 9 t/m 13

**DESIGN** | Emphasis on urban product and/or process - design the process

#### Commonalities



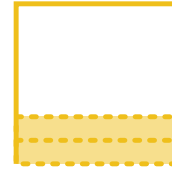
Manageable in well defined area, either within or in-between enclaves

Working towards a common purpose or goal is suitable between individuals that share routes and routines

Unknown outcome of the design at the start  
Nr: 15

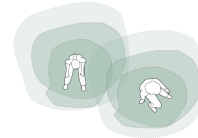
**DESIGN** | Emphasis on urban process - design the process

## Borders for invitation



### 3. Ribboning

#### Distance



**DESIGN** | Define and design borders for distance, clarity and/or urban area invitations.

Knowledge on the routes & routines of visitors, users and passers-by can help to understand the experience of borders

**DESIGN** | Focus on urban design qualities  
Nr: 4, 5, 6, 9, 10

Emphasis on urban product

# 4.7 Conclusion

## SRQ3

This chapter answers the sub-research question:

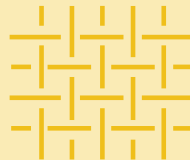
*How to design for connectivity in line with the developed perspective of SRQ 1?*

To achieve connectivity in urban areas with high level of residential diversity, three type of spaces an urban designer should aim for, are defined with accompanying four design principles, shown in the columns on the right.

The three type of spaces, are places where emotions of *hier en daar* can both exist. Design guidelines (“4.6 Design Guidelines” on page 181) are made to support designers with a better understanding of which considerations should be made. The considerations are related with opening up, keeping and/or celebrating *enclaves*, developing new *routes & routines*, focus on the *design of appearance* and find a balance between *product and process*.

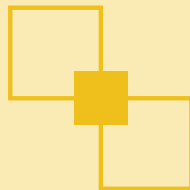
### 1. Shared presence

Spaces of *shared presence* are spaces in which the emotions of *hier en daar* are similar and equally present. It refers to urban spaces which we would popularly describe as: ‘this is an area in which ‘different worlds’ come together. In case there is a wish to develop a space that facilitates *shared presence*, there are two urban *design principles* that can be used: (a) *Interweaving*, and (b) *Patching*.



#### (1a) Interweaving

*Interweaving* involves an optimization of the possibilities for casual encounters between citizens, which increases the sense of home and/ or shared identification, caused by a shared identification in space.



#### (1b) Patching

*Patching* involves a materialization and design intervention which aims to emphasize and visualize an already existing programmatic or symbolic connection between two or more areas.

## 2. Presence of a strong and positive *hier*

A space with a strong and positive *hier*, is seen as a space that contributes to a shared place attachment, a shared identification and/or sense of home. It is linked with emotions related to pride, dignity, appreciation. Such a space can be enjoyed by *daar*. In case there is a wish to develop a space that facilitates the presence of a strong and positive *hier*, enjoyed by *daar*, the *design principle* that can be used is *buttoning*. This principle can be used when there is already a strong *hier* present, but it is not yet enjoyed by *daar*, or it can be used to develop and create a *hier*.



### Buttoning

The principle of buttoning uses the built environment to create shared place attachments, to facilitate appropriation, and/or to work on a common purpose or goal.

## 3. Borders for invitation

A space with *borders for invitation*, functions as a space that tackles the emotions visible in Figure 70, related to 'I feel alert'. When this type of space is not present, a tension is experienced, once entering this other 'world', or 'enclave', presented by the image below. Or there is an absent of invitation, meaning that the two sides will not connect. *Borders for invitation* will invite the *daar* to take a look at the *hier*, with a lower level of anxiety.

In case there is a wish to develop a space that facilitates *borders for invitation*, the *design principle* that can be used is *ribboning*. The principle aims to tackle negative emotions of *daar*, of 'I feel alert', in which there is a tension between *hier* and *daar*, or a non-connection.



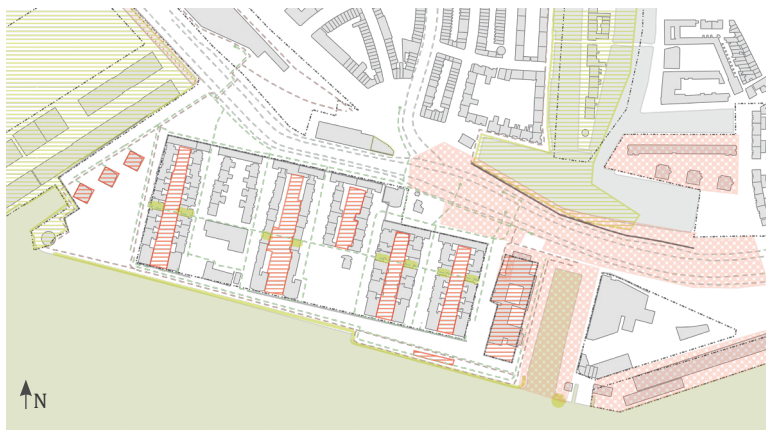
### Ribboning

The *design principle* focusses on the design of borders, which might cause (negative) emotions of 'I feel alert', into positive ones, in which borders are designed for distance, clarity and invitations.



**CASE**

applied  
design



**Figure 80** Concluding drawing for Schiemond and its neighbours for the enclaves (dashed border line), routes & routines (of residents, visitors and passers-by), hier (in green) en daar (in red)



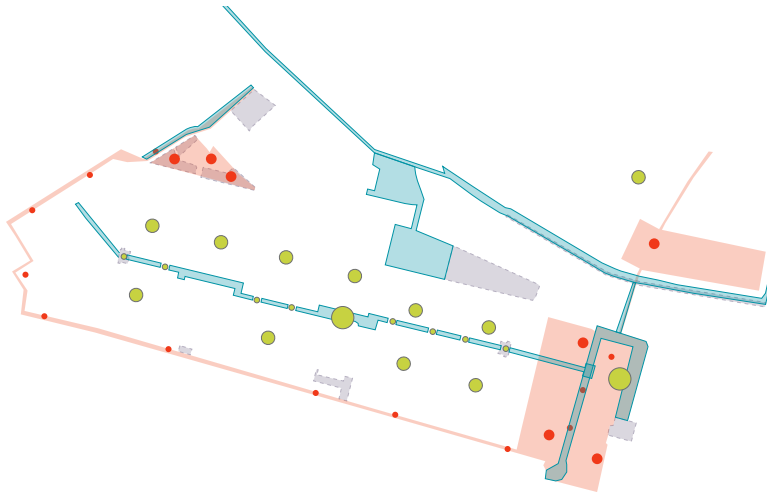
# Introduction

Chapter 3, analysis of the urban conditions of Schiemond and surrounding area, on p. 149, concluded with a map that shows the *enclaves, routes & routines*, and the *hier* and *daar*, of the area (Figure 80). The figure displays boundaries with a low level of activity and connecting capacity, and it displays areas with a strong connecting capacity (in green) and those of low capacity (in red). This knowledge on the case study area is in this chapter converted into a design, that aims to foster the value of *connectivity in residential diversity*.

The conclusion of this chapter, answers the fourth sub research question:

*How to design for connectivity for the case study area of Schiemond, Delfshaven, Rotterdam in line with the developed perspective of SRQ1 and design principles of SRQ3?*

This chapter will first present an overview of the developed design “5.1 Overview of the design” on page 191, to make it easy to navigate, and understand the applied design, throughout the chapter. Thereafter the design is explained per design principle: “5.2 Interweaving”, “5.3 Patching”, “5.4 Buttoning”, “5.5 Ribboning”. The *design principles* will be presented with company of the *design guidelines*, in order to give a good illustration of a possible interpretation. The subsection “5.6 Mutual reinforcement”, shows that often multiple design principles are applied on urban places. At last, “5.7 Considerations”, explores possible consequences for the design and the design principles through time and different scales.



**Figure 81** Design strategy for Schiemond and surrounding areas with use of the *design principles*, based on the conclusion drawing of the analysis of the urban conditions



**Figure 82** Design strategy for Schiemond and surrounding areas with use of the *design principles*, presented on a detailed map

- Interweaving
- Patching
- Buttoning
- Ribboning

## 5.1 Overview of the design

This subsection presents an overview of the developed applied design. Figure 81 shows the design strategy for Schiemond and surrounding areas, based on the conclusion drawing of the analysis of the urban conditions, which makes use of the four design principles. The strategy is also presented in Figure 82 on a more detailed map.

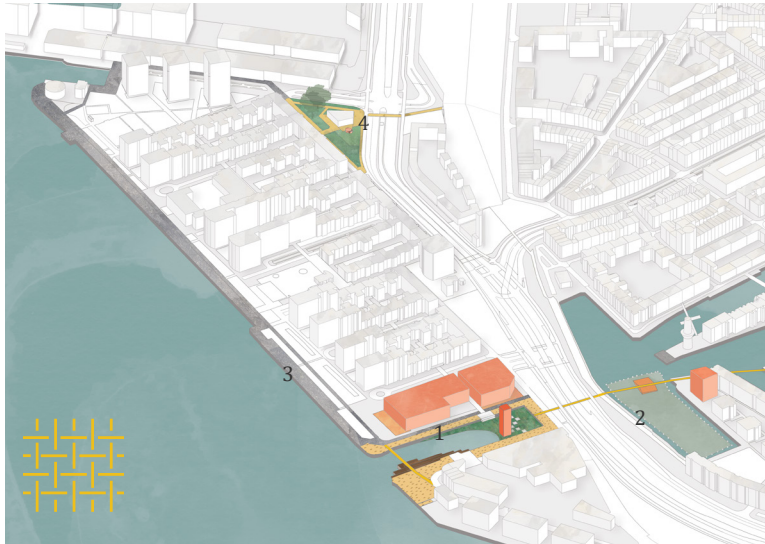
### The design strategy

The strategy is

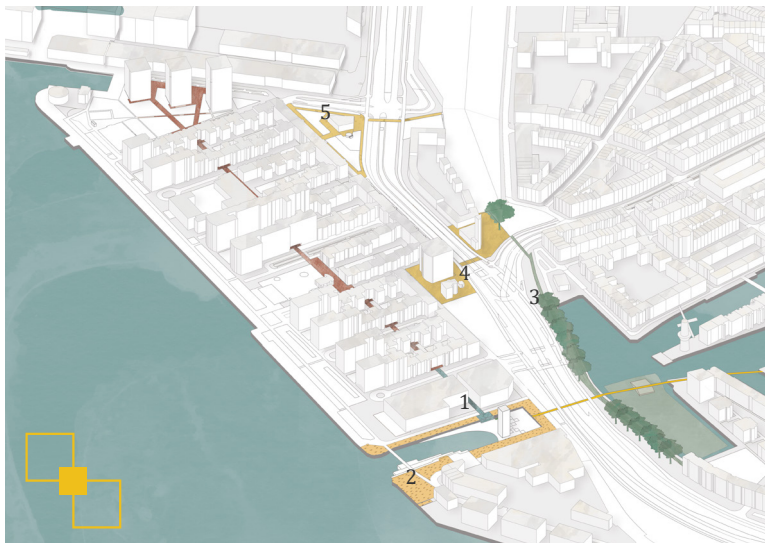
- to *interweave* Schiemond with the surrounding areas by an addition of amenities (routines) that can be shared by a high diversity of citizens, two bridges (routes), and by an improvement of the outdoor quality of space to foster casual encounters.
- to *patch* areas that already possess a programmatic or symbolic connection by changing the sightliness and materialization
- to *button* the already present *hier* of the Kedoestraat, to extend the *hier* of Delfshaven to Schiemond, and to develop a *hier* in the communal gardens.
- to create new border conditions by adding *ribbons* on multiple spots by changing the atmosphere and materialization, to develop distance & invitations.

The next pages show isometric drawings of the final design. The design interventions are presented per design principle. This is done to show a clear illustration of each principle, so that it becomes understandable and tangible how a design principle is, and can be, used in a design. The isometric drawings on the next pages reveal that often multiple design principles are used at the same locations. Design principles can reinforce each other and therewith increase the capacity of the location to foster *connectivity in residential diversity*.

\* **Important** to communicate is that the places where a design intervention is made, have been coloured. The 'uncoloured' objects are, in the design, still similar to the current situation, with an exception of the 'yellow windmill'. The windmill is already present in the area, but plays an important role in the new design, and is therefore sometimes highlighted.



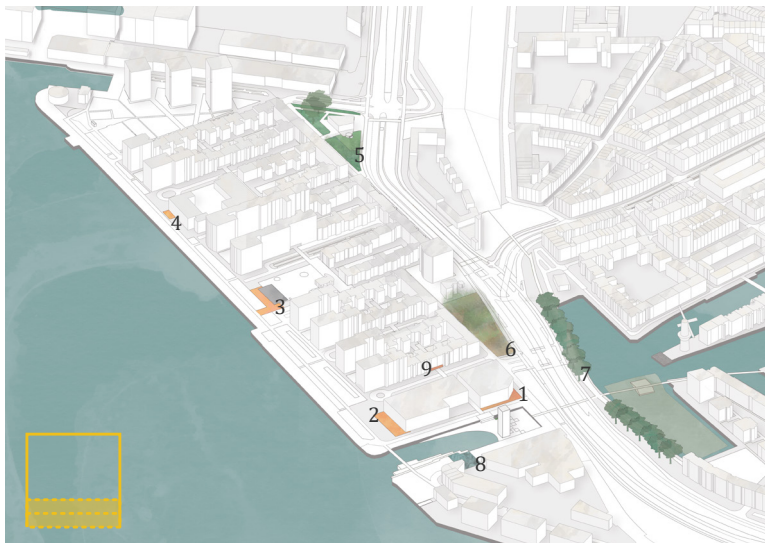
- **Interweaving** | In four places connectivity will be fostered by the principle of *interweaving*: a vibrant fabric between Schiemond and Kroonlocatie (1), a swimming pool/ ice rink/ stage weaving multiple areas (2), an outdoor fitness on the quay, connecting through sport (3), a garden and petting zoo between Schiemond and new construction of Diepeveen (4).



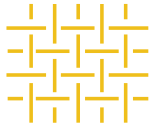
- **Patching** | Multiple areas can profit from the principle of *patching*: the 'Kedoestraat', continuing to the harbour inlet (1), the harbour inlet as an anchor point instead of an intermediate piece; patching between Schiemond, Schools and Kroonlocatie (2), the pedestrian road alongside 'Historische Delfshaven', towards the 'Dakpark' (3), Programmatic link between 'Diepeveen' and Schiemond (4), and sport-route from 'Dakpark' to the new fitness on the quay (5).



- **Buttoning** | There are three places that can be well improved by the principle of *buttoning*: Emphasizing the existing *hier* of the 'Kedoestraat' (dark red), developing a *hier* in the communal gardens (green), and expanding the *hier* of 'Historisch Delfshaven' to Schiemond (presented by the yellow mill and red tower).



- **Ribboning** | There are seven places on the borders on the 'solitary enclave' of Schiemond where *ribboning* is applied (1 to 6, plus 9), on one border of the 'connecting enclave' of 'Historisch Delfshaven' a *ribbon* is added (7), and a *ribbon* is added to the border of the 'solitary enclave' of the 'Kroonlocatie' (8).



## Interweaving

	Familiar Strangers	Conviviality
Enclaves	Possible within or in-between enclaves	Possible within or in-between enclaves
Routes & Routines	<b>DESIGN</b>   Link residents by creating an multiple shared routes and routines	<b>DESIGN</b>   Offer routines that can facilitate shared behaviour (list of potential routines: p. 182)
Design of Appearance	<b>DESIGN</b>   Design attractive outdoor spaces that stimulating 'staying in public'. Nr: 1 t/m 8	Combining routines with shared urban conditions Nr: 1, 2, 3, 7
Product or Process	Emphasis on urban product	Emphasis on urban product

Figure 83 Design guidelines of the design principle *interweaving*

## 5.2 Interweaving

The design principle of *interweaving* is part of the type of spaces that facilitate *shared presence*, in which the designer aims to 'bring worlds together'. For Schiemond the aim is to interweave the area with the surrounding areas, as it is disconnected by the heavy infrastructure, but also surrounded with a low level of amenities.

### Guided by the design guidelines

Figure 83 shows the design guidelines for the principle of *interweaving*. For Schiemond the decision has been made to mainly apply *interweaving* outside the 'enclave of Schiemond', as this enclave does not, due to routes and routines of visitors and passers-by, offer many possibilities for interweaving on a city district scale. Secondly, also no *interweaving* principle has been applied in the neighbourhood, as citizens of the neighbourhood already move from time to time, from east to west, underneath the 'Kedoestraat', to arrive at the community centre, school, or tram stops. *Interweaving* is applied **in between enclaves**: such as Schiemond - Voz di Rua - New residential buildings Diepeveen (number 4 in Figure 84), and Schiemond - Kroonlocatie (number 1 in Figure 84). In addition, *interweaving* is applied **inside the 'connecting enclave'** of 'Historisch Delfshaven', to further exploit this connecting character and to improve the connection of Coolhaven with the south area of Delfshaven city district, and the other way around (number 2 in Figure 84). Further, *interweaving* is applied on the quay of Schiemond by adding outdoor fitness equipment (routines) (number 3 in Figure 84), which further **exploits the routes & routines that are already slightly present**, as shown in Strava data (Figure 46 on page 118).

An overview of the added routines can be found in Figure 84, and the following pages will also illustrate on how the *design of the appearance* can potentially look like.

3.

**Routines** | Development of fitness outdoor equipment on the Schiemonnd quay (currently citizen initiative) in line with Dakpark

**Routes** | Stays as existing - but with a smooth crossing

**Design of appearance** | Shared use in space and time (2), Activities at eye level (7), Mobility hierarchy (8)

1.

**Routines** | Development of outdoor play equipment, watchtower, fishing, places 'to stay', to enjoy the 'Maas' river view. Shared Kitchen and fitness facilities in schools.

**Routes** | Additional bridge Kroonlocatie - Schiemonnd, and move of crossing Schiemonnd - Delfshaven to the center

**Design of appearance** | Assembling (1), Shared use in place and time (2), See you at the corner! (3), Embraced in public (6), Activities at eye level (7), Mobility hierarchy (8)

4.

**Routines** | Development of gardens, little animal farm, (music) stage, all in creation with Voz di Rua.

**Routes** | Development of multiple pedestrian routes around and through the area of Voz di Rua, creation of routes for comfort and invitation, in line with principle of *ribboning*.

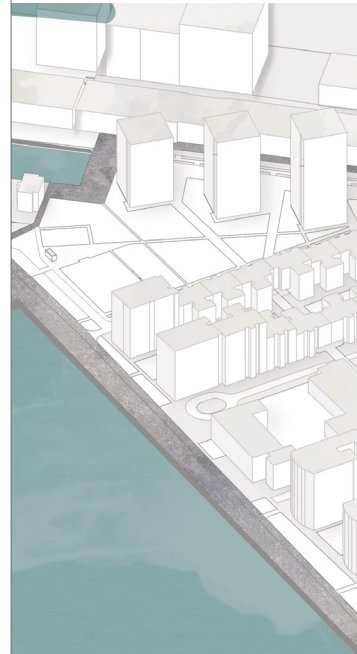
**Design of appearance** | Assembling (1), Shared use in place and time (2), Zoning: focus on developing variety of zones and its atmospheres. (4), Staying in business (5), Embraced in public (6), Mobility hierarchy (8)

2.

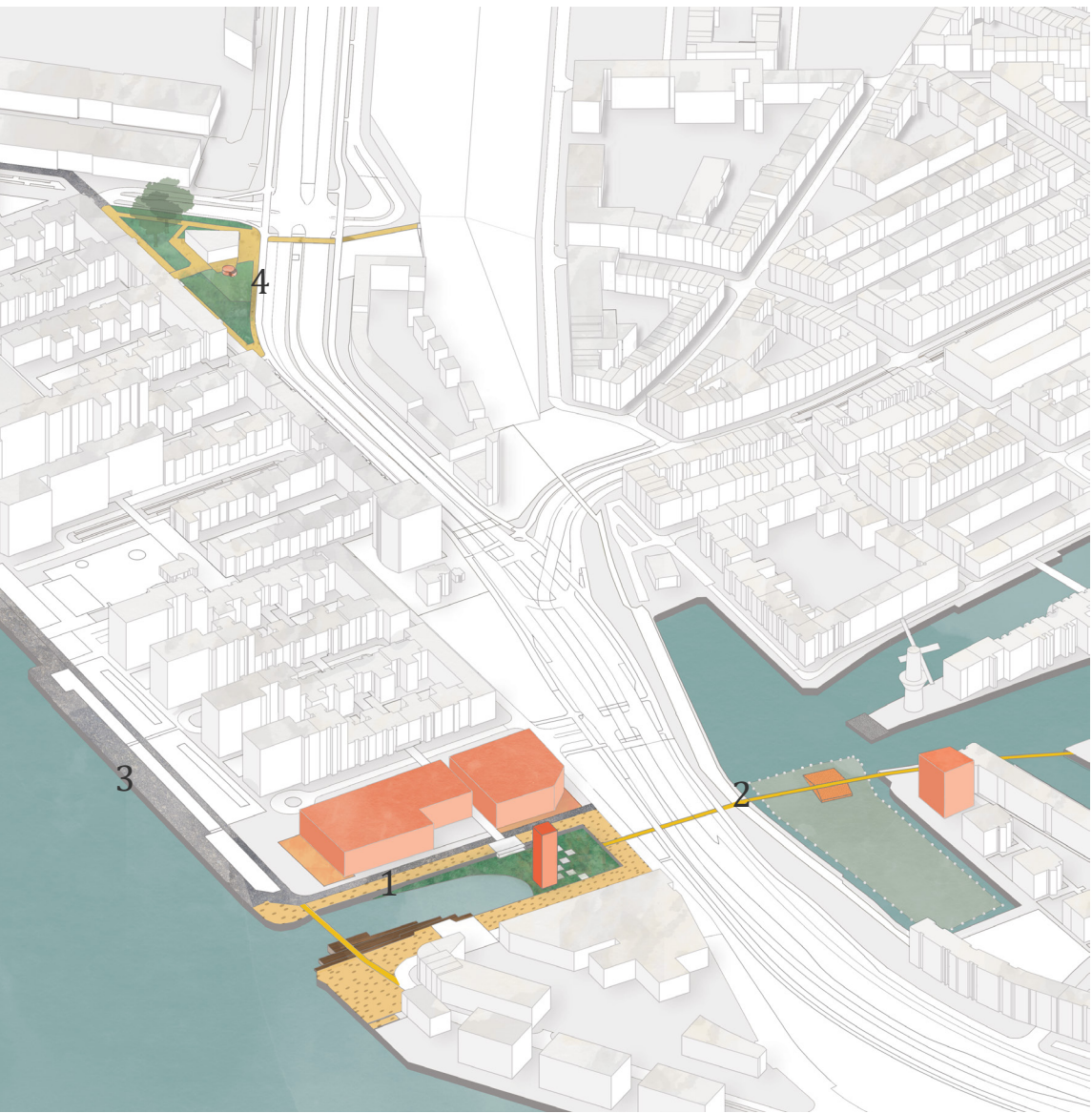
**Routines** | Development of city swimming pool (summer), and ice skating (winter), additionally stage and grandstand for multiple use.

**Routes** | Additional bridge Westzeedijk - Delfshaven, and change of crossing place Schiemonnd - Delfshaven

**Design of appearance** | Shared use in place and time (2), Activities at eye level (7) - by an additional building block with well designed plinth.





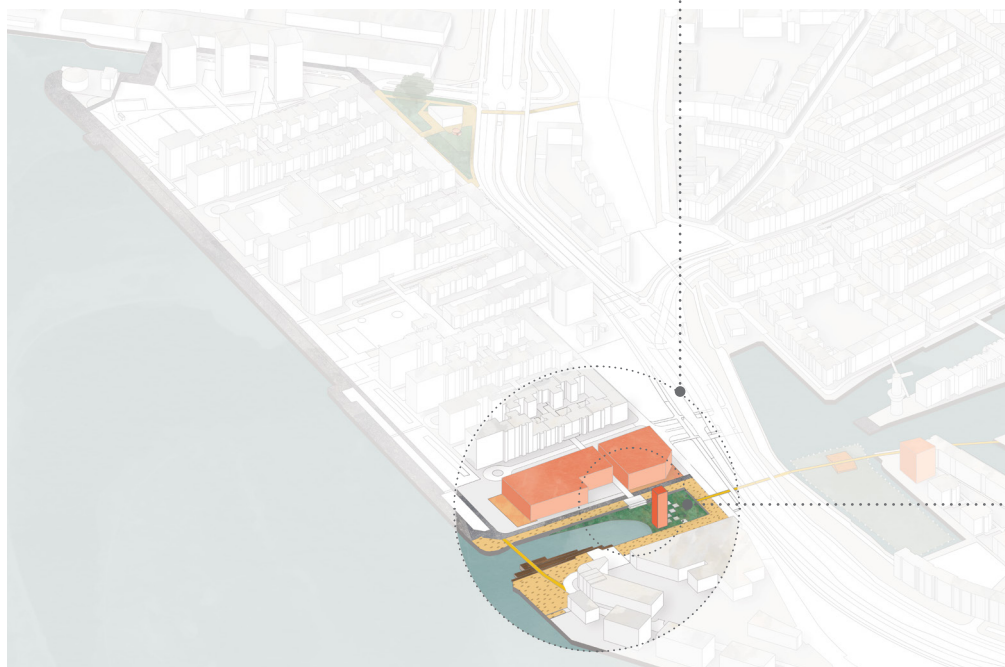
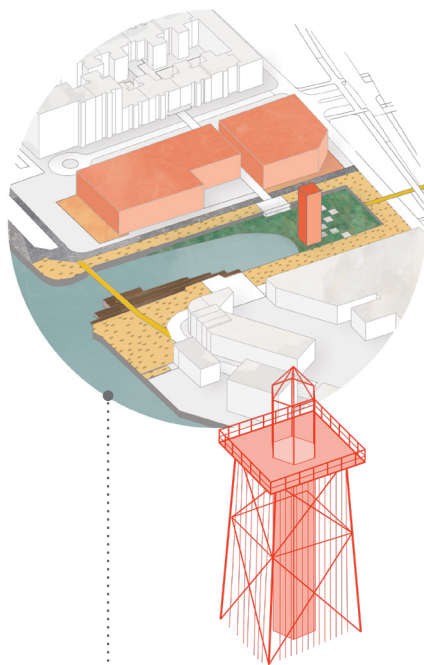


**Figure 84** *Interweaving*, its four focus spots, and added routes & routines

## Interweaving at

### Schiemond - Schools - Kroonlocatie

These images show the concept of *interweaving* on a zoomed-in level. For this specific location, multiple *routines* are added, alongside a new bridge (*route*) to improve the connecting capacity, as it is currently a 'dead area'. On this location the amenities of the schools are turned outwards, and the multiple facilities are open for shared use in the evenings and weekends, such as the fitness, sportfields and kitchens. The harbour inlet is transformed into a green recreational and playground space on sedimentation, with a watchtower, which increases the *interweaving* capacity of the space on a higher city scale. In addition stairs are added for the fisher men of Schiemond and surroundings, and which can be used by the employees of the Kroonlocatie during a break, as it offers sun throughout the day and a stunning view on the harbour on the other side of the Maas river.

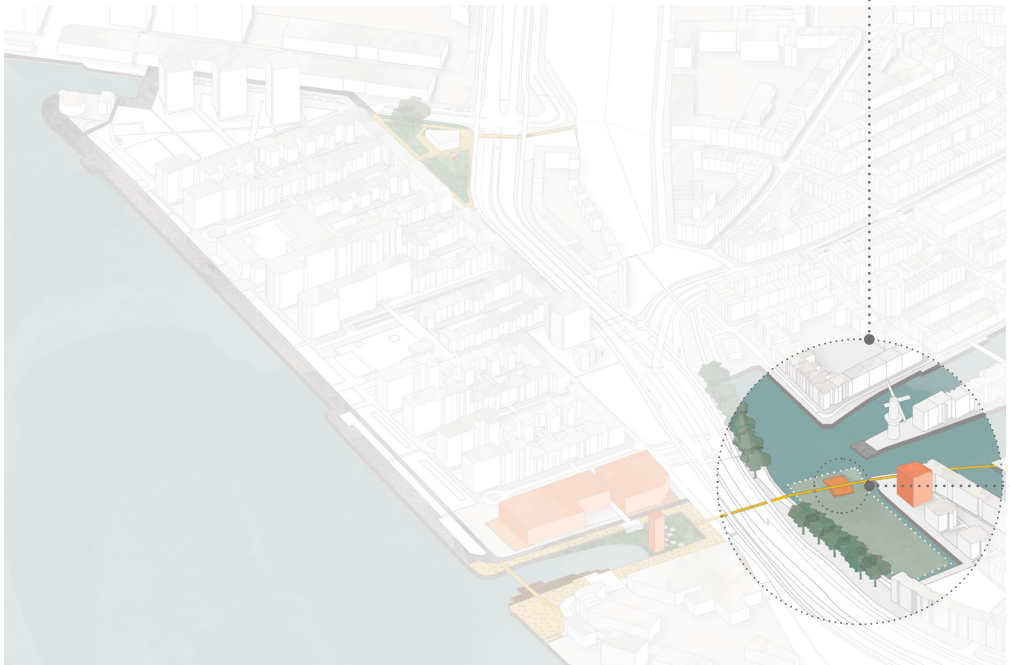
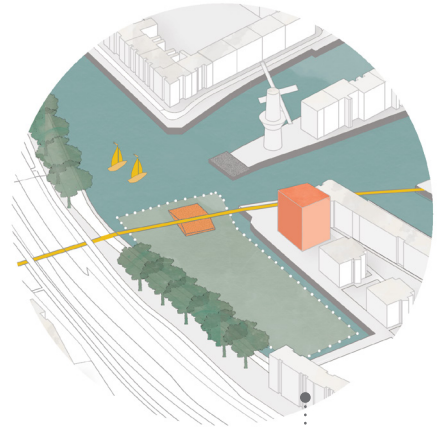


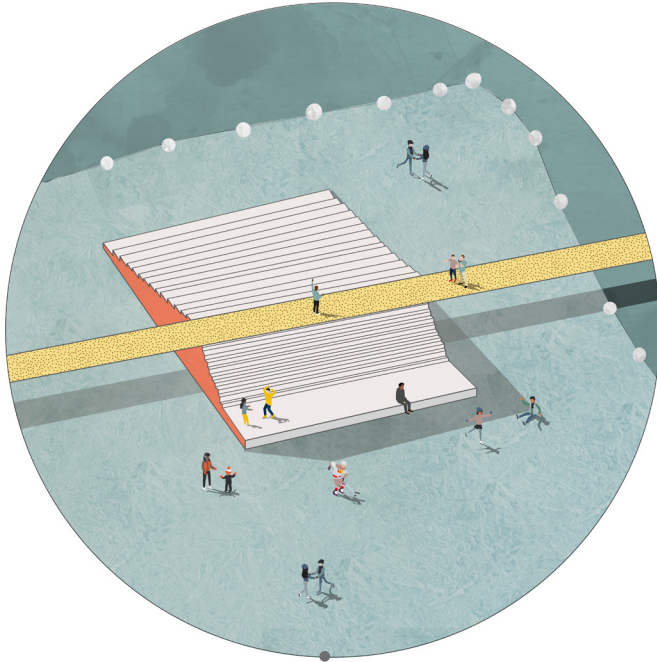


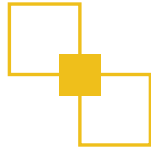
**Interweaving at  
'Historisch Delfshaven'**

These images show another illustration of the concept of *interweaving*. For 'Historisch Delfshaven' multiple shared *routines* are added, which are shared by high level of residential diversity: swimming, ice-skating and visiting performance, cinema and/or theatre. All of these activities can be held in the new *interwoven* fabric, which, not to mention, also functions as a bridge (*route*) which improves the connecting capacity of 'Coolhaven' and 'Historisch Delfshaven' with the rest of the city district.

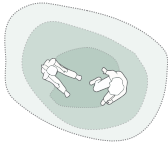
This design is in line with the type of space 'shared presence', 'worlds coming together'. The emotions in the cross-table, Figure 70 on page 158, of 'I feel astonished' (*daar*), and 'I feel free' (*hier*), creates a *hier and daar space* of 'A space like theatre, watching the performance, really fits the design shown on this page.







## Patching

	Proximity
	
Enclaves	Possible within or in-between enclaves
Routes & Routines	Design patches in the areas with shared routes & routines of variety of citizens
Design of Appearance	<b>DESIGN</b>   Focus on urban design qualities. Nr: 7, 8, 9, 10, 11, 14
Product or Process	Emphasis on urban product

1. 'Kedoestraat', continuing to the harbour inlet, a symbolic patch between Schiemond and 'the mond van Schie'. ('mouth' of river of the Schie)
2. The harbour inlet as an anchor point instead of an intermediate piece; patching between Schiemond, Schools and Kroonlocatie
3. Patching a pedestrian road alongside 'Historische Delfshaven', towards the 'Dakpark'
4. Patching the programmatic link between the new buildings development of 'Diepeveen' and of Schiemond
5. Patching the sport-route from 'Dakpark' to the new fitness route on the quay

**Figure 85** Design guidelines of the design principle *patching*

## 5.3 Patching

*Patching* is a design principle that aims to create new physical relationships between urban areas by a change of materialization and atmosphere. For Schiemond this has been applied on five places, see Figure 86, and in addition, a list of the five places can be seen on the left page.

### Guided by the design guidelines

The *patches*, mainly focused on materialization, are applied within or between areas that possess a programmatic link, such as the link between the shops that will arise in the new building development at ‘Diepeveen’, and the shops already present at Schiemond (number 4). *Patches* are also applied in areas that possess a symbolic link, such as between the residential buildings of Schiemond, and the ‘mouth of the Schie river’, (In Dutch: *mond van de Schie*), (number 1).

The patches support *routes* or invites to take a *route*, stimulating ‘casual encounters’, between users of different areas. Therefore, *patches* usually focus on pedestrian areas, as slow movement is the best mode of transport for ‘casual encounters’. (in line with design of appearance number 8: mobility hierarchy, explained on p. 176). The *patches* aim to strengthen sightlines (design of appearance number 11, p. 176), which, from an urban design point of view that focus on physical design components, can foster the experience of *shared presence*, similar to the principle of *interweaving*.

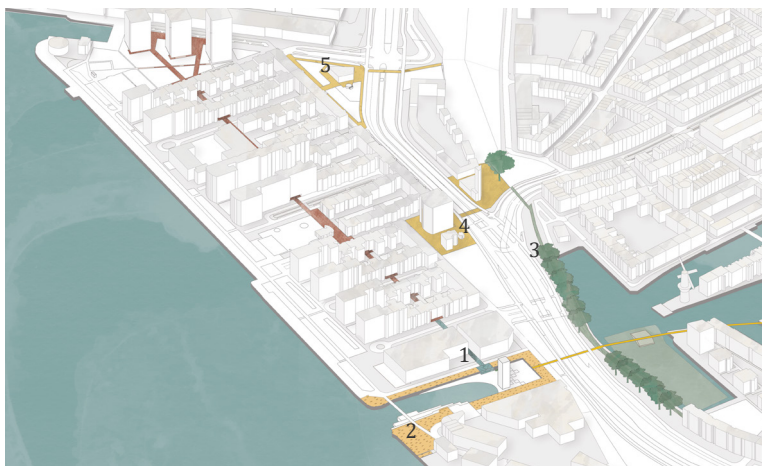
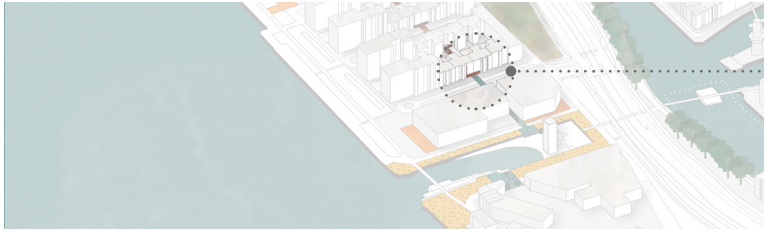


Figure 86 Interventions of the design principle *patching*

### **Patching between**

### **Schiemond residential buildings and 'Mond van de Schie'**

These images present an illustration of *patching*. A patch is applied between the residential buildings of Schiemond and between the 'mouth of the Schie river'. These areas possess a symbolic link, because the name of the neighbourhood is related to the history of the water infrastructure. The blue *patch* functions as a 'red carpet' that overlaps the current street materialization. It is an invitation to visit the 'new designed mouth of the Schie'. The invitation is reinforced by the sight line to the watchtower. The 'red patch' strengthens the physical connection and route between the residential buildings of Schiemond: the Kedoestraat, through an emphasis on the continuous path between the underpasses.



**Figure 87** Location of the design intervention of *patching* in between the residential buildings of Schiemond and the harbour inlet. In addition, a picture of the current view once a citizen leaves the residential buildings of Schiemond. Currently a 135 meter long building is blocking the connection





**Figure 88** An illustration of the 'new view' from the residential blocks of Schiemonde towards the 'mond van de Schie', and the two new red and blue *patched* paths. In addition a picture of the current situation



## Buttoning

	Shared Place Attachment	Commonalities
Enclaves		
	Possible within or in-between enclaves, can also have the form of a connecting enclave	Manageable in well defined area, either within or in-between enclaves
Routes & Routines	Link routes and routines to spaces of shared place attachment	Working towards a common purpose or goal is suitable between individuals that share routes and routines
Design of Appearance	<b>DESIGN</b>   Create or strengthen shared attachment through design Nr: 9 t/m 13	Unknown outcome of the design at the start Nr: 15
Product or Process	<b>DESIGN</b>   Emphasis on urban product and/or process - design the process	<b>DESIGN</b>   Emphasis on urban process - design the process

For Schiemond the design principle *buttoning* is used to emphasize the ‘shared place attachment’ of the ‘Kedoestraat’. (A) This street already possess a strong *hier*, as explained in the ‘urban condition chapter, “Underpass” on page 136. The principle can contribute to a celebration of the *hier*, and to make it visible for *baar*. ‘Shared place attachment’ is also applied to ‘Historisch Delfshaven, and ‘mouth of the river of the Schie’ (C). There is a historical link between these places, as explained in “Time” on page 129. The existing *hier* of ‘Historisch Delfshaven’ is exploited towards Schiemond. For the communal gardens (C) the principle is used to work on ‘commonalities’. In these gardens there currently no *hier* present (p. 138).

**Figure 89** Design guidelines of the design principle *buttoning*

## 5.4 Buttoning

The design principle of *buttoning* aims to develop a 'strong and positive shared *hier*'. The principle is supported by two concepts originating from literature, -'shared place attachment', and 'commonalities', as visible in Figure 89. The projects are briefly described on the left page.

### Guided by the design guidelines

The project of the communal gardens (B) is developed as a *process, not a product*. This decision has been made as the social aim of *connecting and empowering the citizens* is of greater importance than a physical end goal. This is further explained in "B. Appropriation of Communal gardens" on page 209, in line with the design appearance of 15. 'Appropriation of private or semi-private spaces', p. 179.

Project A on the 'Kedoestraat' focusses on 9. Marking, (p. 179), which aims to distinguish the 'Kedoestraat' from its surrounding areas, in line with the shared place attachment of the citizens of Schiemond.

Project C focusses on the creating of 11. Sightlines, 12. Stories in public space, and 13. Pointing to other places (all on p. 179), further explained in "C. Delfshaven - Schiemond" on page 212.

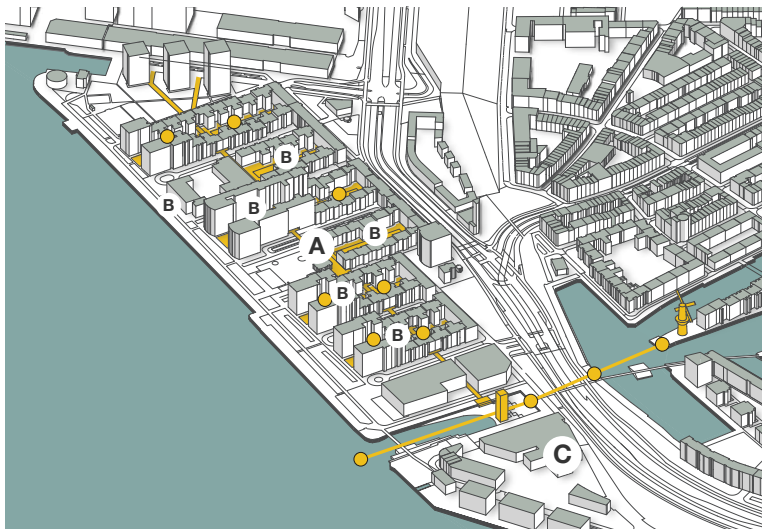
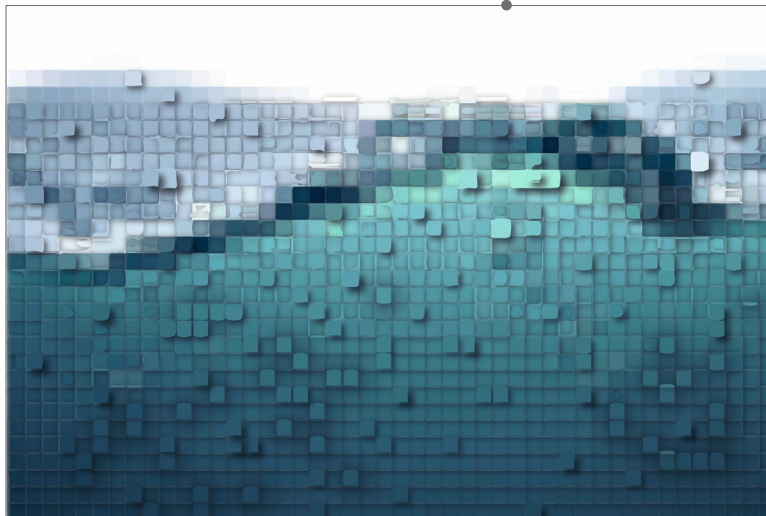


Figure 90 Projects of *buttoning* developed for the case study area of Schiemond



**Figure 91** Wall of stones that vary in depth, based on metaphors originating from citizens interviews

## A. Kedoestraat

The re-materialization of the 'Kedoestraat', is a product and a process that emphasizes the shared place attachment of the Kedoestraat. The project consists of a change of the 'underpasses', and design the walls with mosaic stones. The images are inspired by the metaphors originating from the citizens interviews, which can be read in the subsection of "3.3 Hier & Daar" on page 133. These words describe the 'sense of place' of Schiemond. The categories of words that describe Schiemond are: *exotic, loosely, caring, valued and water*. For this project of *buttoning*, the senses of place were translated into mosaic stone walls that present these senses. These walls will celebrate the 'Kedoestraat' as an important place in Schiemond, visible for *hier* and *daar*.

Besides the walls, the street is emphasized by extending materialization throughout the neighbourhood, in line with the principle of *patching*. However, this design intervention also contributes to the principle of *buttoning*, as it highlights the *strong hier*.

The walls are designed in such a way that it has a depth created by difference sizes of stones. This creates a more intimate atmosphere, and it can function as an invitation for passers-by to explore these underpasses, in line with the principle of *ribboning*. The walls can be accompanied by a textual explanation, which is in line with the *design of appearance* of the design guidelines, "12. Stories in public space" on page 176.

This project is seen as a combination of a product and process, as further process steps can be undertaken to make the project matching with the experience of the citizens of Schiemond. The questions related to the metaphors can be extended through interviews with youths - as the 'Kedoestraat', is seen as the 'youth street' (source: citizens interviews). So youth can also appropriate these places, and potentially be (more) proud.

## B. Appropriation of Communal gardens

The design of the communal gardens mainly possess a social aim, which is to empower the citizens of Schiemond to further shape their own environment. The process is designed from multiple considerations. The following paragraph describes three important considerations.

In the past, when an event was organized for citizens of Schiemond, the attendance of citizens was very low. The gathering events were usually

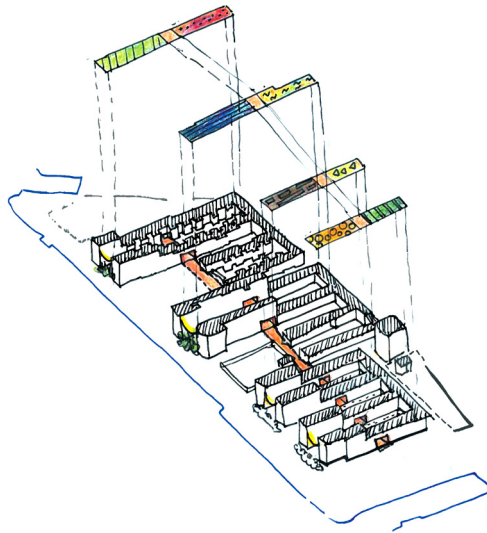
given in the 'Huis van de Wijk' (Community centre). However advice has been given to author by professional Willem Beekhuizen, (personal communication, January 2019), to not invite citizens to an event, but to be pro-active, and to approach citizens yourself. Therefore, for this project, the decision was made to redesign an urban environment which is close (spatial proximity) to the residents, but is not occupied yet or part of the mental maps (no mental proximity).



**Figure 92** Schiemondd residential blocks and its communal gardens

Other consideration were made in relation to the group size of citizens, attending the development process. More than 3000 citizens live in Schiemondd, which is seen as too many to be involved in a commonality all in once. The new materialization of the Kedoestraat physically splits the communal inner-gardens into two parts, which makes a co-creation more manageable. Once the product & process of A 'upgrading and celebration of the Kedoestraat' has been completed, process of B 'Appropriation of the communal gardens' can start.

Last consideration, is related to youth. As stated in the urban condition chapter, youth used to be very active in the neighbourhood, also within these communal gardens. The process of taking away the seating- and play equipment has had a negative effect on them and the neighbourhood according the youth that has been spoken with (source: citizens interviews). Besides, this intervention has been done without extensive communication, as explained in "Daar / Non-existence" on page 138.



**Figure 93** Schiemond residential blocks and its communal gardens

Because of this history, the participation of youth within the process, is seen as importance. This is in line with the writing of Sandercock (2000), who describes the (change of the) built environment as a platform to have a transformative dialogue, which can help to move forward to a more sustainable future for all residents.

#### *Potential Steps*

1. In relation to step A) Celebration and upgrade of Kedoestraat, which will 'split' the communal gardens into two.
2. Create an outdoor stand, in the neighbourhood, retrieve stories, get acquainted, aim to understand the multiple stories, and invite passers-by to next event.
3. Use the network of professionals to invite citizens, especially the youth
4. Invite residents for a fun event in 'their' part of the communal gardens; ring the bell of those that you have not caught up with yet.
5. Create, during the first event, space for everyone to explain their perspective on the communal gardens. Besides, see if people are enthusiastic for changing the environment, search for commitment.
6. Go / No Go: consider if the project is achievable in relation to detected enthusiasm.
7. Yes? Start a design process on which the following topics needed to be discussed: management of the space, construction done by who?, program of the new design, and the design itself: type of green and other materialization

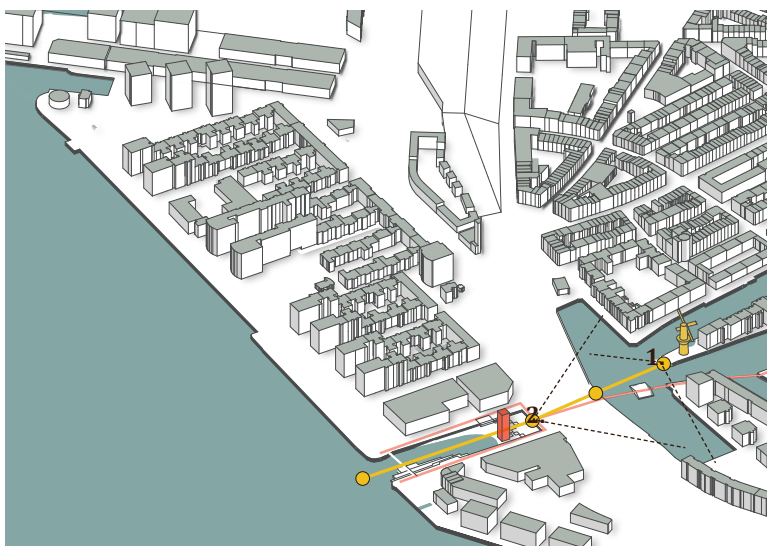
## C. Delfshaven - Schiemond

The area on which the neighbourhood of Schiemond is built, is created to a process of sedimentation. It used to be called 'Ruigplaat', and facilitate Harbour activities. Before the sedimentation took place, 'Historisch Delfshaven' formed the connection between the river of the Schie and the Maas river. The harbour inlet on the east side of Schiemond, can still be seen as the former 'mouth (*mond* in Dutch) of the river of the Schie', in other words 'Schiemond'.

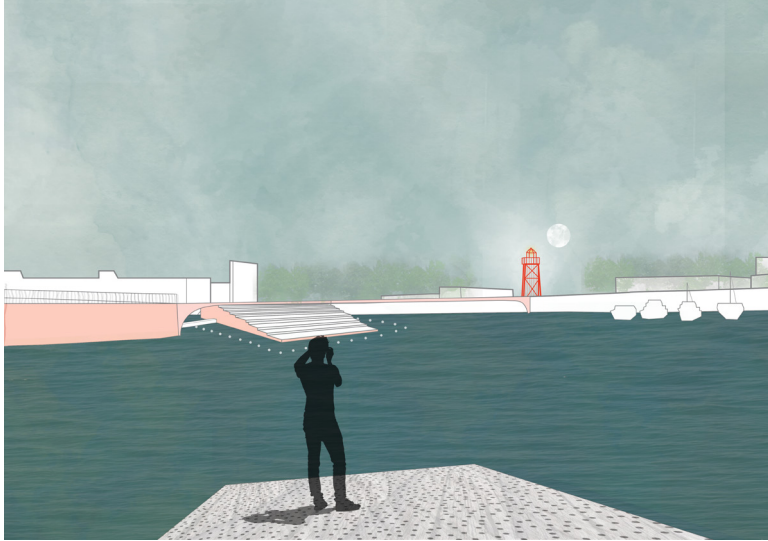
'Historisch Delfshaven' contains and radiates this history. However, the harbour inlet in between Schiemond and the Kroonlocatie does not show this history at all. Secondly, the 'Historisch Delfshaven', cannot really be seen from Schiemond, as the windmill is blocked by trees. To *button* the existing strong *hier* of 'Historisch Delfshaven', and to connect and extend it to Schiemond, a lookout tower, sightlines and stories in public space are added to develop these combined *hiers*.

The watchtower is designed in a way that it tracks attention from the *daar*, however it is not just a landmark, but can also be used and climbed, and with that also contribute to the mental state of *hier*.

The dike, present in between Schiemond and 'Historisch Delfshaven', disconnects the two parts. However, in the design it is used to create a scenery, and a tension build-up in the landscape, as one path leads into the direction of the windmill.



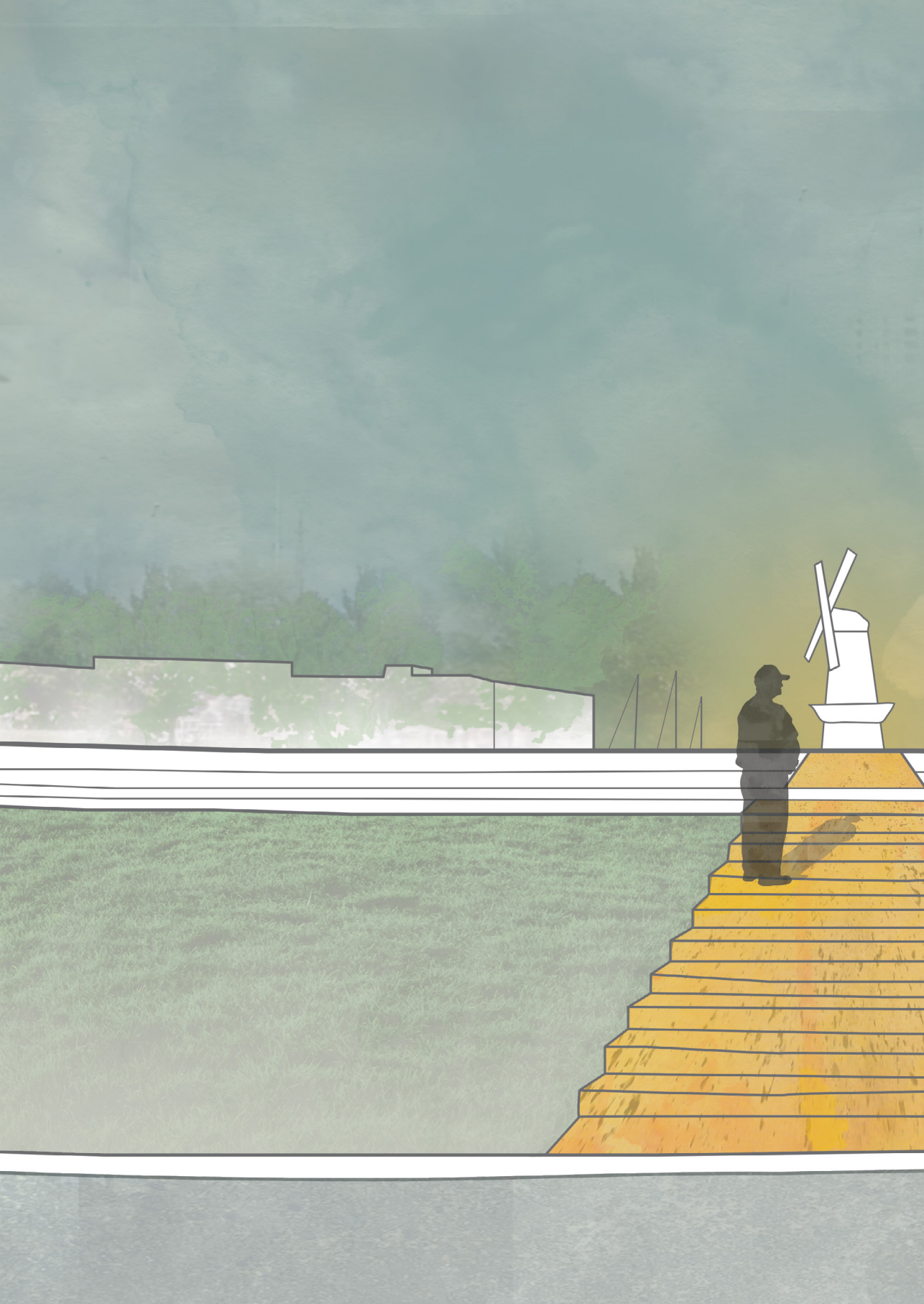


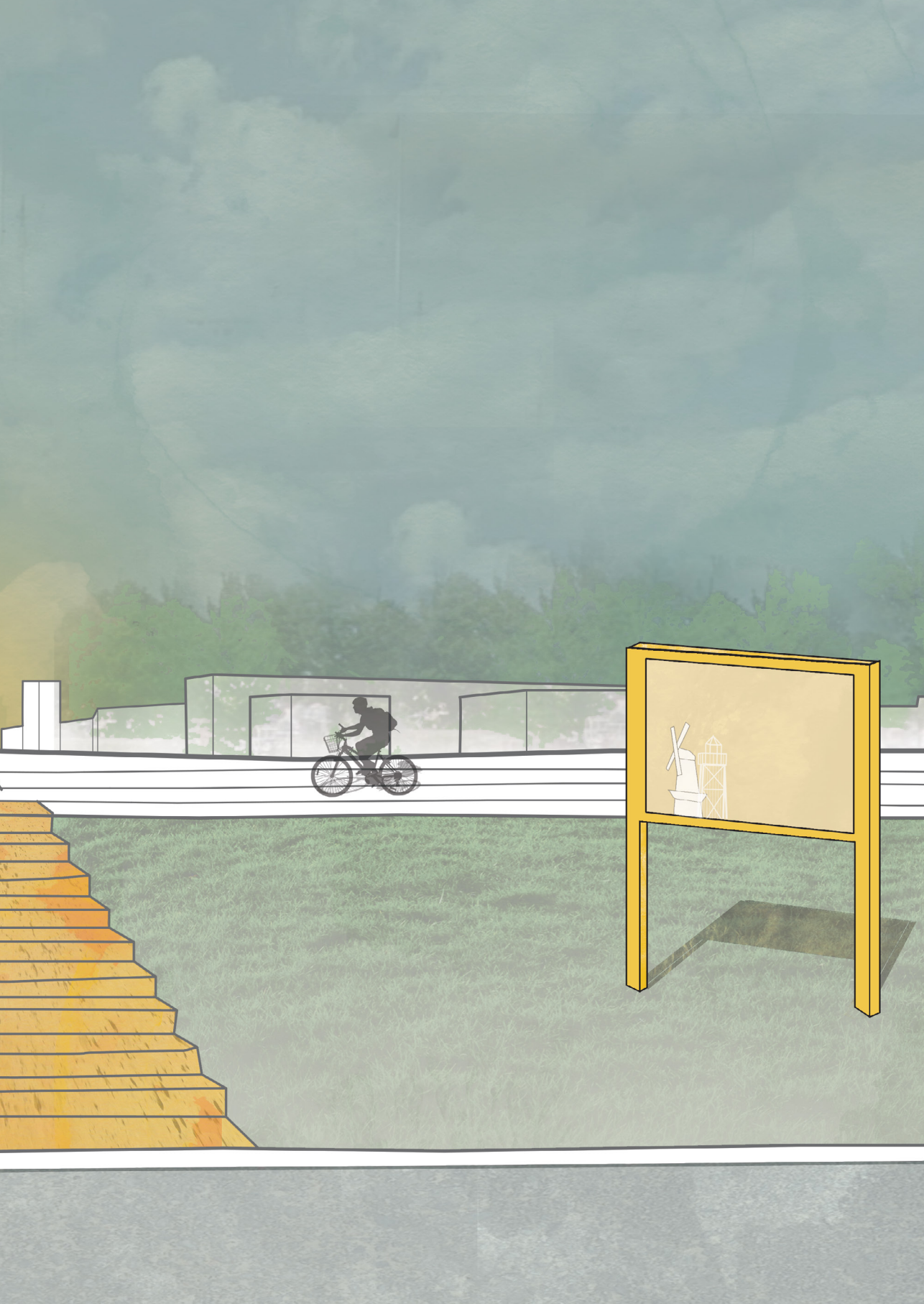


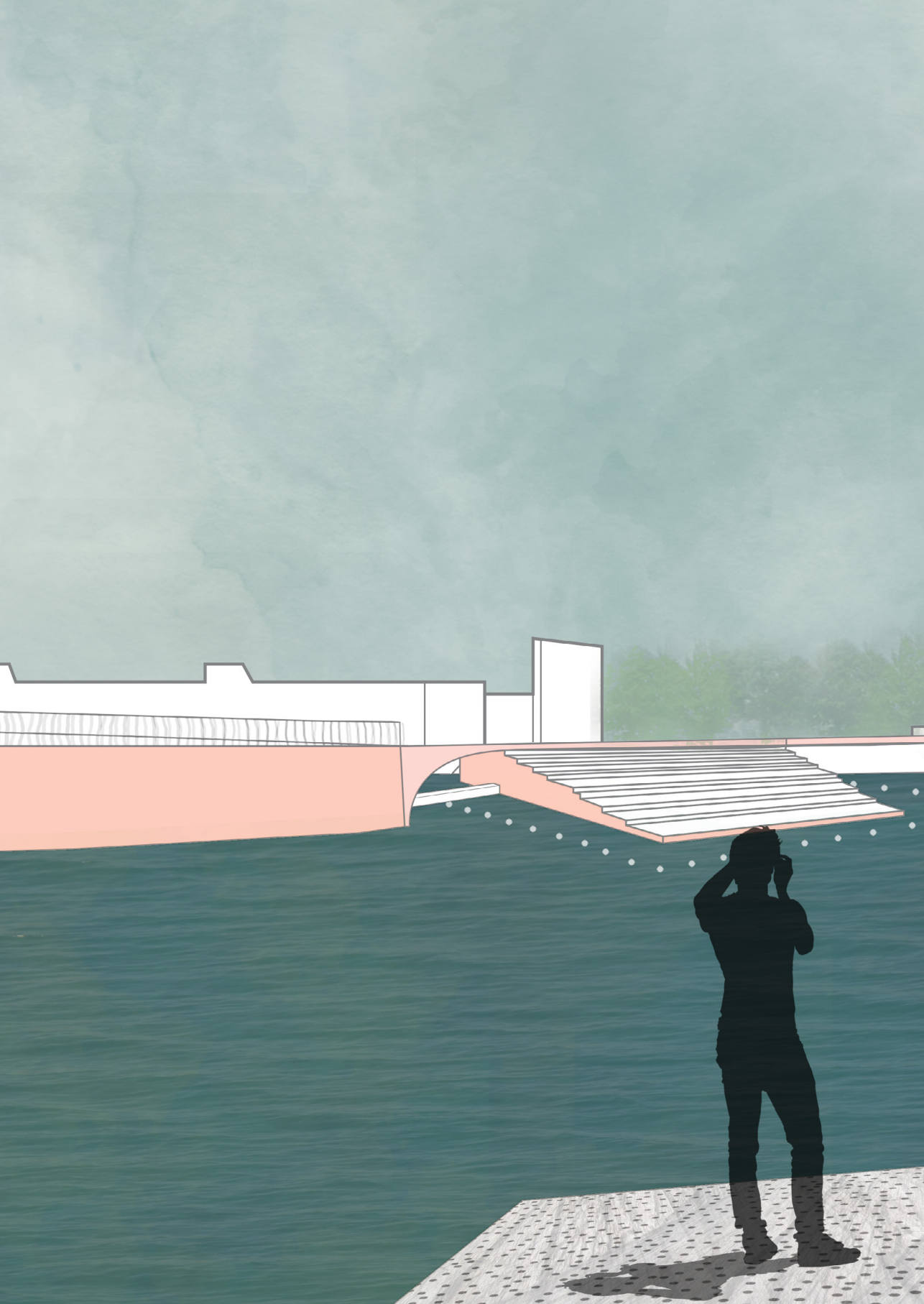
*1. hier / daar*

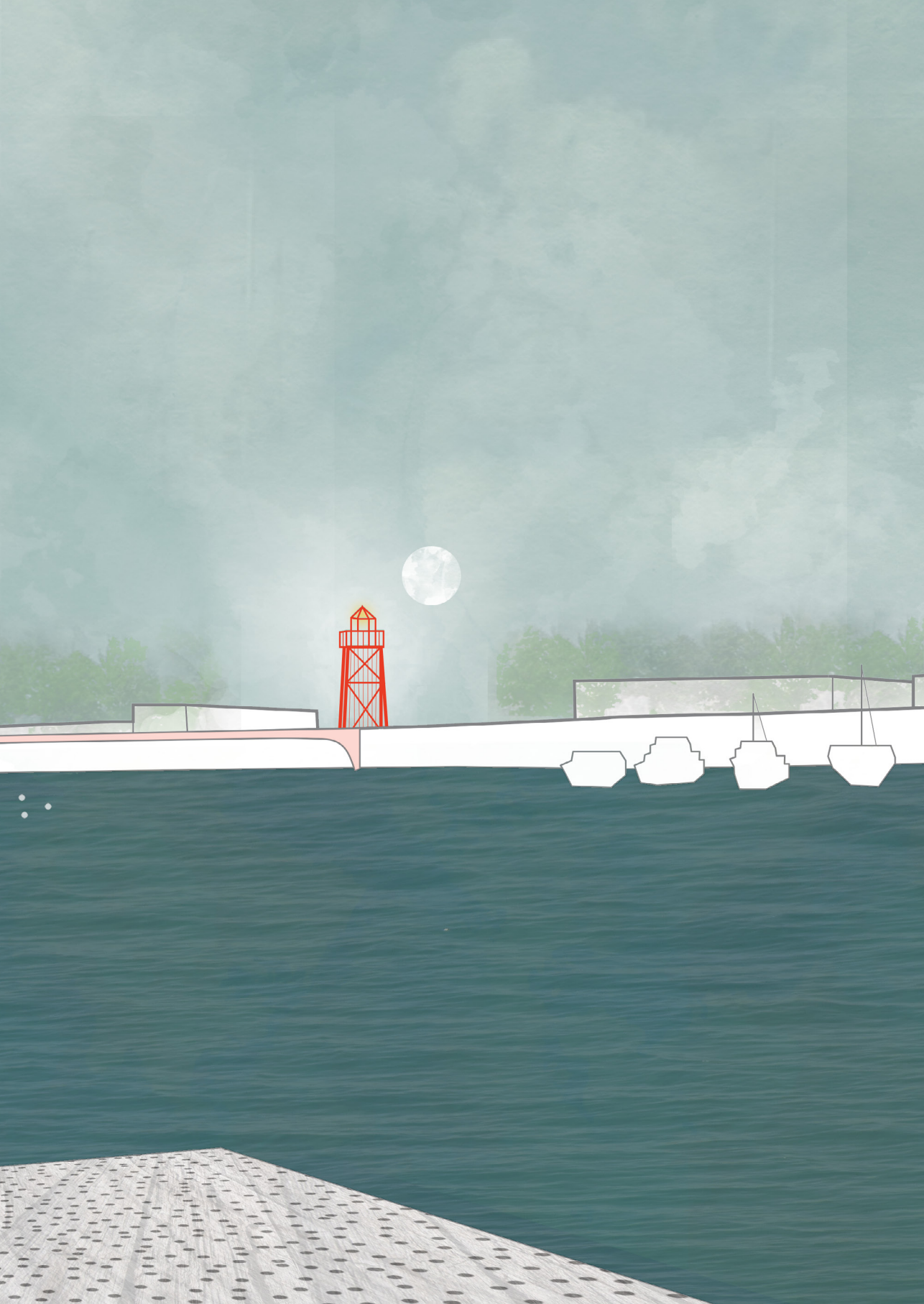


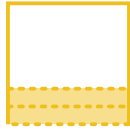
*2. daar / hier*











## Ribboning

	Distance
Enclaves	<b>DESIGN</b>   Define and design borders for distance, clarity and/or urban area invitations.
	Knowledge on the routes & routines of visitors, users and passers-by can help to understand the experience of borders
Routes & Routines	
Design of Appearance	<b>DESIGN</b>   Focus on urban design qualities Nr: 4, 5, 6, 9, 10
Product or Process	Emphasis on urban product

**Figure 94** Design guidelines of the design principle *ribboning*

On the border of Schiemond there are seven (1 - 6, plus 9) areas in which a 'ribbon' is added to the edge, to create different atmospheres and zones. Secondly, a change has been made to the edge of 'Historisch Delfshaven' (7) and the 'Kroonlocatie' (8).

1. In-between the school with fitness in the plinth, and the quay with the outdoor fitness.
2. A *ribbon*, in-between the schools with kitchens, outdoor terrace and the quay, for comfortable outdoor staying of the *hier*, and an exploration of the location made possible for the *daar*.
3. In-between the quay and the football field, as an invitation to visit and play football.
4. In-between the community centre and the quay, an outdoor terrace oriented towards the routes of passers-by, to increase interactions.
5. Multiple zones within the Voz-di-Rua area, in-between Schiemond and the new buildings of Diepeveen, which invites to pass through, and pass by as more comfortable experience.
6. In-between Schiemond and the heavy infrastructure road 'Westzeedijk', the empty grass field turned into a space with higher 'walls' of vegetation, with addition of skate elements. Space of green comfort, distance, and invitation for citizens of Schiemond, and passers-by.
7. *Ribbon* of trees that offers a different atmosphere for the pedestrian route alongside the water of 'Historisch Delfshaven'.
8. Zone in-between the 'Kroonlocatie', and the harbour inlet, that invites to take a look into the nicely occupied inside square of this place.
9. *Ribboning* of the Underpass of the Kedoestraat, a change of atmosphere caused by the mosaic wall, which is also in line with the principle of *buttoning*.

## 5.5 Ribboning

The *design principle of ribboning* focusses on the design of borders, and aims to tackle negative emotions of *daar*, ('I feel alert'). Emotions that present a tension between *hier* and *daar*. In case a border is physically very broad, it might not cause a tension, however the border is seen as a non-connection. In that case the 'problem' is less serious, however, it offers an opportunity for a well designed in-between zone. *Ribboning* is the act of improving borders with one, or multiple, in-between zones.

For Schiemond and surrounding areas the choice was made to focus on the borders of the solitary enclave of Schiemond, the border of the connecting enclave of 'Historisch Delfshaven', and the border of the solitary enclave 'Kroonlocatie'. The analysis of the borders of the enclaves (Figure 28 and Figure 29), formed the input to define places for *ribboning*.

This design principle focusses on an urban design product, and on the physically appearance. The design interventions shown on the map below, make use of the *design of appearance* of 4. Zoning (all of them), facilitating 5. Staying in business (1-7), 6. Embraced in public space (5, 6, 7, 9), 9. Marking (8 and 9), (the various *design of appearances* are presented on p. 176 and p. 179).

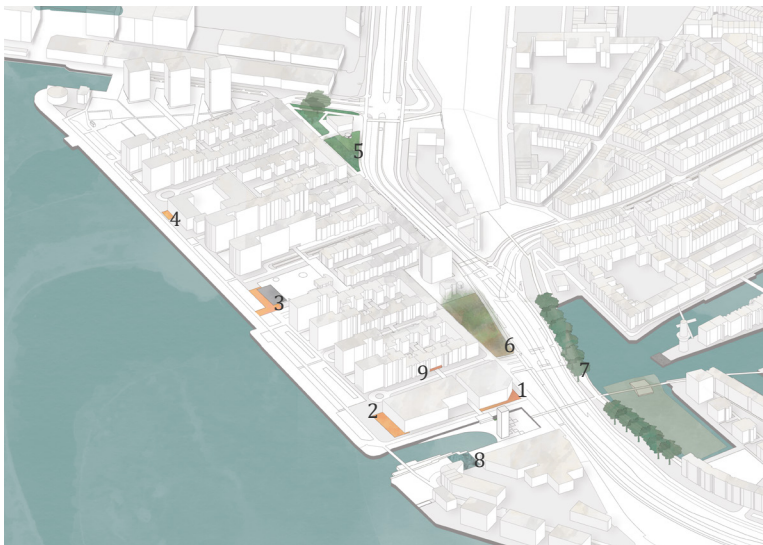


Figure 95 Design interventions related to the principle of *ribboning*

## Border Design

The underpass is already shown in the subsections of the other principles, *patching* (by an extension of a red path going underneath all the underpasses, and by a blue path, presenting the link between 'Schiemond' and the 'Mouth of the Schie river') and *buttoning* (by expressing the sense of place through mosaic walls underneath the underpasses). However, it also meets the principle of *ribboning*. The intervention fits these three design principles for variety of reasons. The design intervention of *ribboning* is needed to tackle the emotions a visitor or passers-by might have, when entering or passing Schiemond: emotions of 'I feel alert'.

The explicit element that illustrates the principle of *ribboning*, shown in Figure 97, is the distinction between the blue path and the red path. The materialization switches on the border of the buildings of Schiemond. A difference is deliberately designed between these two area, which focus on the concept of 9. Marking: 'He, here starts something new!' So the different materialization offers clarity.

The bricks of the blue path are consciously laid diagonally relative to the stones of the red path. This also offers the freedom to move to the right or left, to take a turn. The walls and depth details also invite the passers-by to take a look.

Other designed borders, visible in Figure 95, show *ribbons* that are located more on the outside of the built environment, on the 'outside of a border'. This also creates a zone that invites the *hier* to take place on the other side of the border of the area, an area where passers-by and visitors pass.

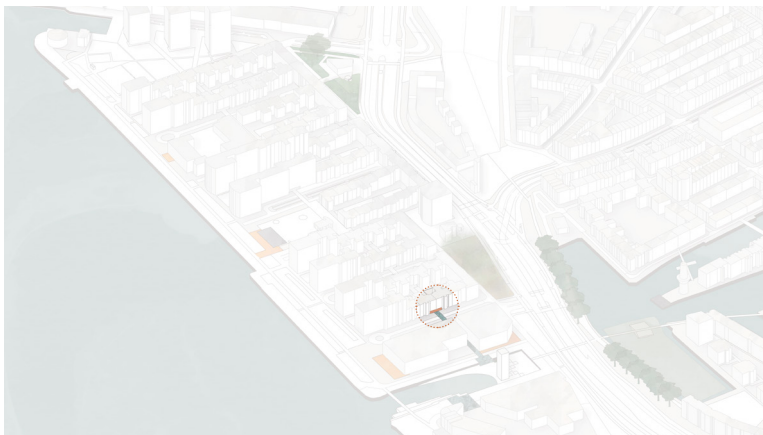
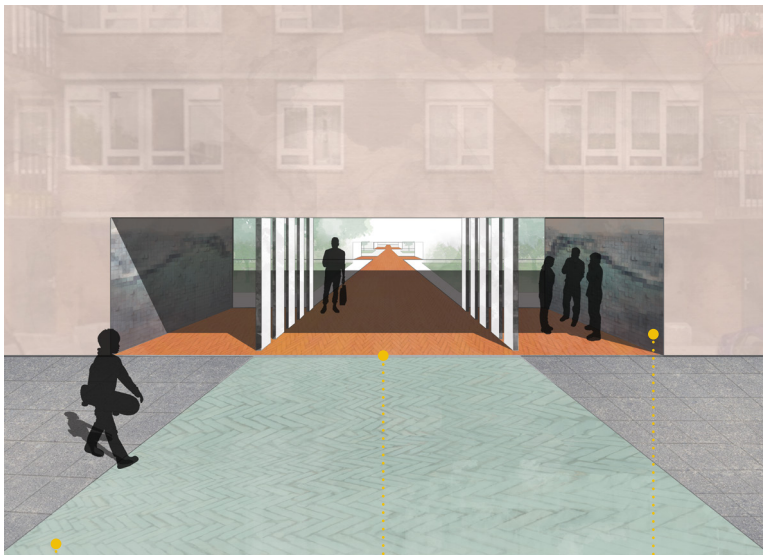


Figure 96 Zoom in on the border design at the border of Schiemond





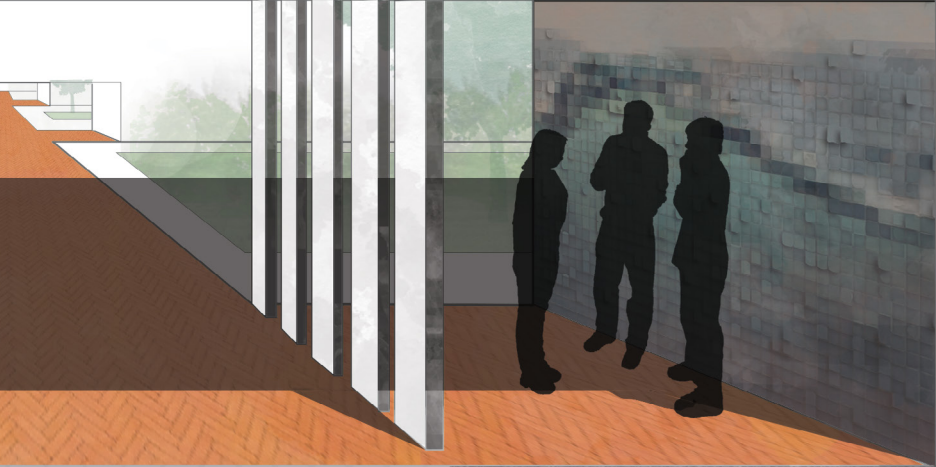
Path in line with the Kedoestraat, but the stones are laid in a diagonal direction, to facilitate a sense of freedom and invitation at the same time

Change of material, with a clear distinguish between 'outside the enclave', and 'inside the enclave' 'He, here starts something new!'

Mosaic wall with a strong texture, invites to take a look

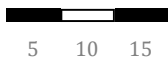
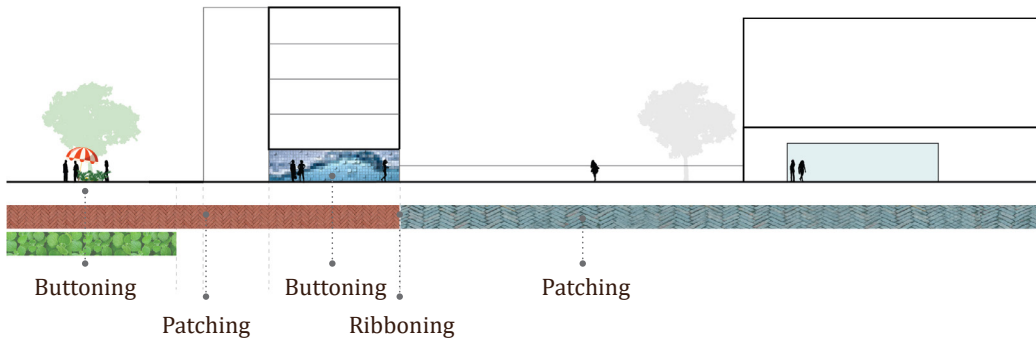
**Figure 97** Illustration of the border of Schiemond and the elements of *ribboning*

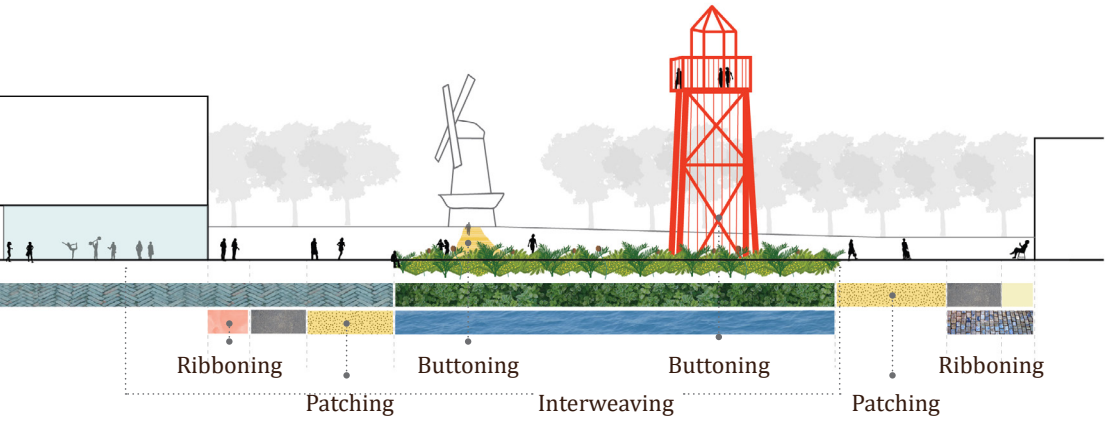


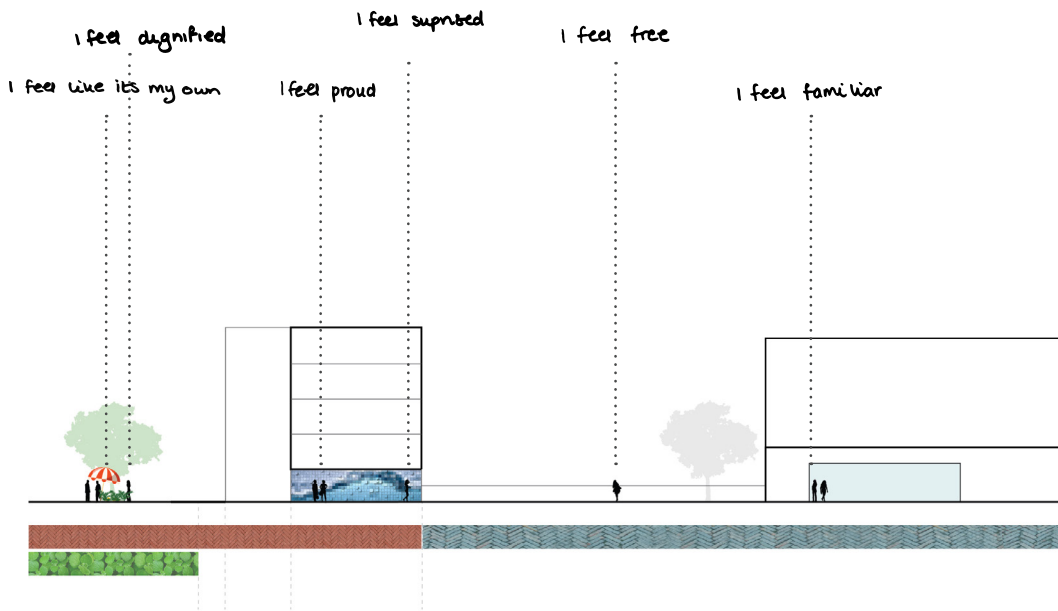


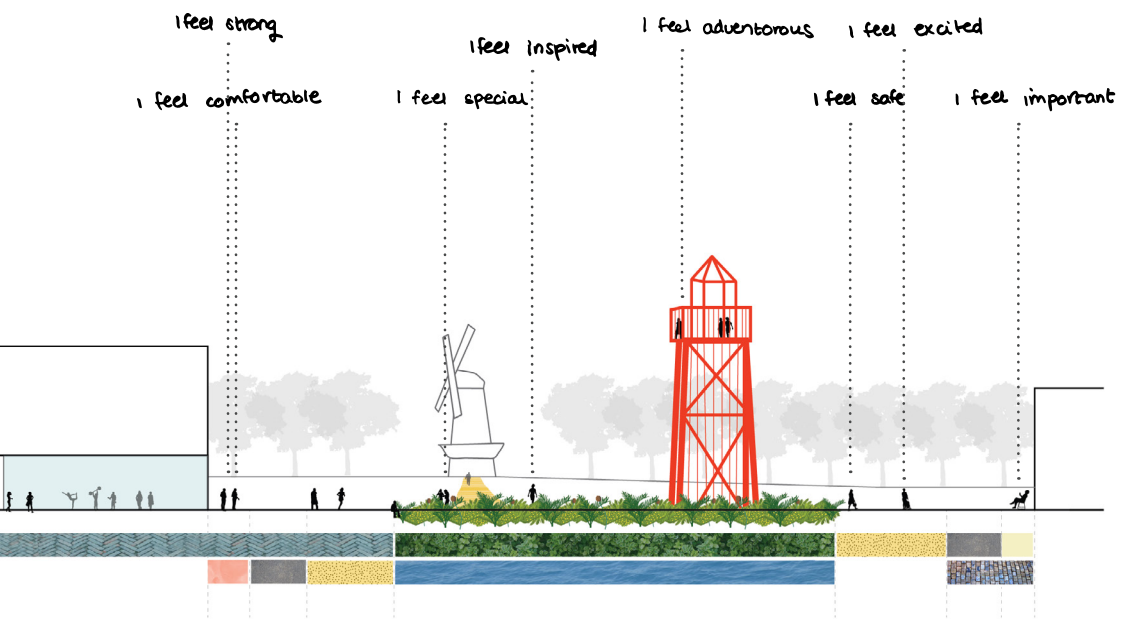
## 5.6 Mutual reinforcement

This section aims to show that the four design principles can be combined to increase the capacity of urban design to foster *connectivity in residential diversity*. The section shows the area in-between Schiemonde, the schools and the 'Kroonlocatie'. It presents the multiple applied design principles, and the 'new emotions' that are part of these new *hier and daar* relationships.











**Figure 98** Considerations made regarding the urban design regarding changes in time (1 to 5) and regarding feasibility (visible as a star, \*)



## 5.7 Considerations

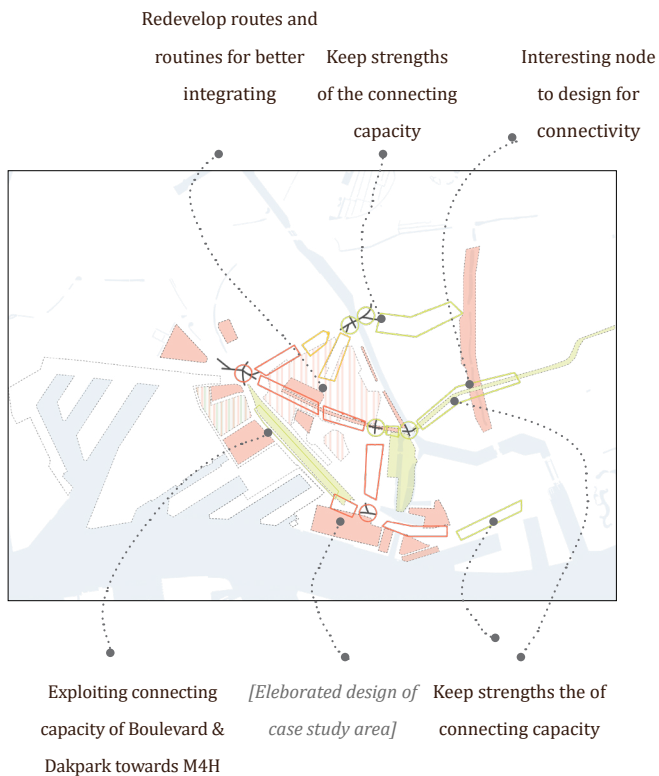
The conditions of *connectivity in residential diversity* differs through time and scale, as explained in the Perspective chapter. Therefore this subsection considers potential changes and differences through time and scale.

### Time

Conditions of diversity are never stable, neither the social or the physical environment stays the same. There are five considerations regarding changes through time that have been taken into account, either, already in the developed design, or considered as potential design ideas for the future. They are discussed below.

- (1) First of all, future changes of the harbour activities of the 'Fruithaven', offer opportunities to redevelop the border conditions of Schiemond on the west, and to interweave Schiemond with the new residential area of M4H-area.
- (2) Secondly, it is unknown for how long Schiemond will look like it is, and house the current residents. The assumption is made that Schiemond will be demolished within 20 to 40 years (based on interviews with professionals). Housing access should still be made possible for the current residents, to keep offering low-cost housing in the area.
- (3) When the new planned buildings next to Diepeveen are being developed, it can be an opportunity to expand the health care building of Schiemond, to foster (shared) amenities, to connect to the amenities at Diepeveen, and to contribute to a larger scale with a decentralized 'health care node'.
- (4) There might be a change of routes the tram runs, moving from the Spanjaardstraat towards the Vierhavensstraat, the design has taken this into account, and the design interventions can co-exist with these changes.
- (5) The interweaving nodes between Delfshaven, Kroonlocatie and Schiemond are designed in such a way that it can still exist when a new bridge is designed. In that case, the pedestrian and biking routes along the quay should still be made possible, to maintain the connections.

Another consideration that is made, is not related to time but to feasibility. Due to the principle of *interweaving* new (shared) amenities are developed. However, due to financial reasons, it can be difficult to realize these amenities, especially those that are placed in the plinth of the schools. Therefore the design makes it possible to build higher, so it is

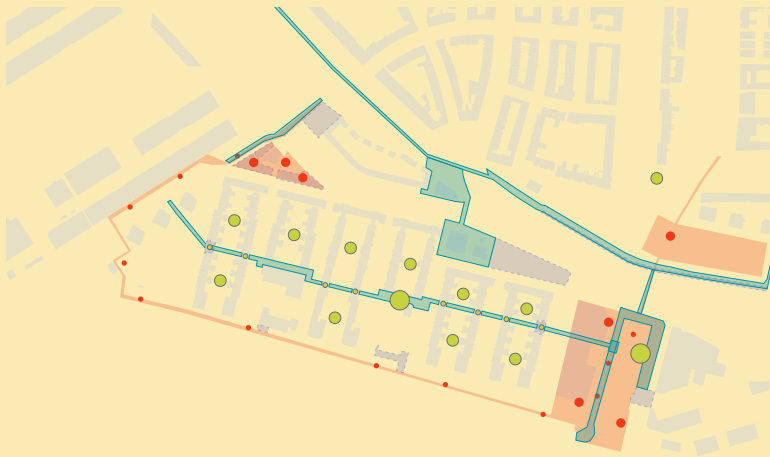


**Figure 99** Concluding map of the 'urban conditions' on the city district scale with potential locations for further design with appliance of the *analysis methods* and *design principles*

commercially more attractive. The development of urban program that can be shared by many **in the plinth** is seen as essential for the principle of *interweaving*, and should therefore be realised. Therefore, a balance must be found between commercial and social ambitions.

### **Scale**

A design for *connectivity* in a network society should reach way further than a framed design area. As citizens move easily through a city and shape in that way their own social network and activities, *connectivity* does not have to be achieved in their immediate surroundings. Therefore, the assignment to design for *connectivity in residential diversity*, is everywhere. Of course, priority can be given to places with higher level of diversity, higher level of disconnection, and higher level of solitary enclaves. The data retrieved from the citizens interviews, mapping and observations, offered a broader look on the city district, than just the area of Schiemond. Therefore, Figure 99, shows design strategies for other areas of the city district of Delfshaven. These are seen as interesting areas for another application of the *design principles*, developed in this thesis.



**Figure 100** Overview of the implementation of the design principles for Schiemon and surrounding areas

- Interweaving
- Patching
- Buttoning
- Ribboning

## 5.8 Conclusion SRQ4

The applied design in this chapter illustrates a possible implementation of the *design principles: interweaving, patching, buttoning and ribboning*. This chapter answers the sub-research question:

*How to design for connectivity for the case study area of Schiemond, Delfshaven, Rotterdam in line with the developed perspective of SRQ1 and design principles of SRQ3?*

The connectivity in the area is improved by applying the design principles of *interweaving, patching, buttoning, and ribboning*. They are developed on the knowledge of the urban conditions related to *enclaves and its boundaries, routes & routines, and hier and daar*.

In Schiemond, *Interweaving* is achieved on four locations by adding routes (two bridges) and shared routines, visible in Figure 100 by the red dots. These locations are chosen as they are able to *interweave* multiple areas and enclaves. In other case study areas, *interweaving* within an enclave, might be possible, but for Schiemond this is not suitable, as the area itself is quite isolated from the routes taken by visitors and passers-by, and potential to change this situation is low. Besides, citizens of Schiemond themselves are already *interwoven*, as they share the route of the 'Kedoestraat', and amenities of a community centre, playground and school.

*Patches* are added to places that possess a programmatic or symbolic link, visible in Figure 100 in blue.

In Schiemond and surrounding area, products and processes for *buttoning* are developed for three projects: (a) design of a new expression of the underpasses of the 'Kedoestraat', to celebrate an existing *hier*, (b) development of a process of appropriation of the communal gardens, to develop a *hier*, and (c) design of a new relationship between 'Historisch Delfshaven', and Schiemond, extending and exploiting an existing *hier*.

At last, the principle of *ribboning*, is applied to change border conditions of the border of the 'solitary enclave; of Schiemond, the 'solitary enclave' of the 'Kroonlocatie', and the 'connecting enclave' of 'Historisch Delfshaven'.

**An important conclusion of the applied design is that the design principles are often combined to increase the potential to foster connectivity in residential diversity.**

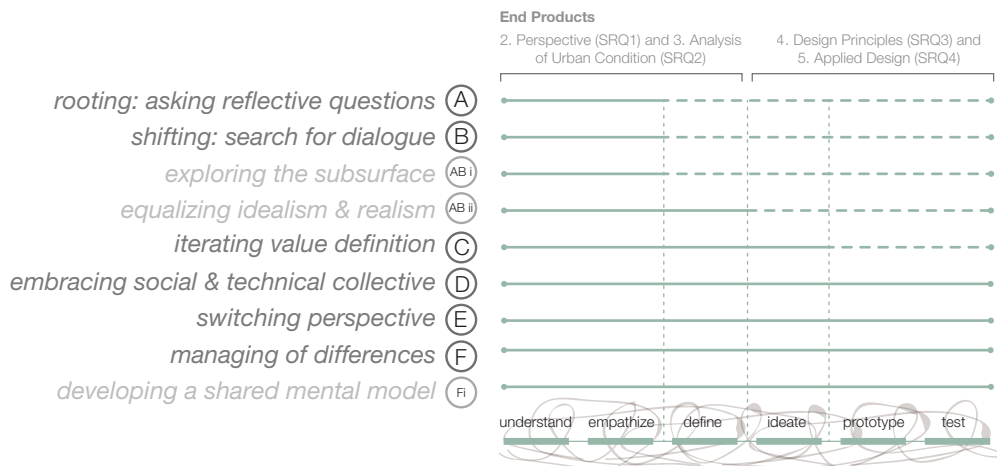


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**Figure 101** Valuable mechanisms A – Fi mapped on the Stanford design thinking model (Institute of Design at Stanford, 2010), showing level of importance per phase: solid means important, and dotted line means less important, in relation to the developed end products and sub research questions of this thesis



# Introduction

This chapter presents a reflection on the design-based research process, executed via sub research questions 1 to 4. As explained in the introduction chapter, (p.21), *value sensitive design*, has been one of the starting points of this research. This has influenced the research process. Two models are used to guide the reflection, the *Stanford design thinking model* (Institute of Design at Stanford, 2010) and the *design-based research model* (Design-based research collective, 2003). This chapter aims to extract potential design mechanisms that are valuable for the urban design and planning discipline, referred to as the *urbanism discipline*. The sub research question answered in this chapter, is:

*What are the **valuable mechanisms** of the executed design-based research process that can contribute to **practice** (the urbanism discipline)?*

## **An overview**

Figure 79 presents an overview of the found mechanisms mapped on the phases of the Stanford design thinking model. This model is interesting to use, because most designers will recognize the design steps, as they are usually consciously or unconsciously taken. Therefore, it can help to clearly communicate to urban designers and planners in which

phase of the design process the mechanisms are seen as most important to use. A solid (important) or a dotted (less important) line indicates this level of importance per phase (Figure 101). The lines go, either solid or dotted, through all phases, because it refers to the iterative steps that are essential to this model. A design phase is not fully completed once a designer goes to the next one, but it remains open for iterations. Therefore, the mechanisms, though in the background of the design process, remain important.

Mechanisms ABi and ABii refer both to mechanisms A and B. ABi and ABii are seen as mechanisms with a high value, however, they are further elaborations on how mechanisms A and B can be achieved, and therefore lower in hierarchy.

The figure shows that in the first two phases all mechanisms are seen as important.

The first four mechanisms (A, B, ABi, ABii) become of less importance after the empathize and define phase, which in this report is done after the Perspective and the Urban Conditions chapter. Mechanism D, E, F and Fi are seen of high importance throughout the whole process.

All of the mechanisms are described in the following paragraphs. The chapter is concluded with an adjusted version of the design-based research model which incorporates the valuable mechanisms.

# 6.1 Valuable Mechanisms

## A – Rooting

### *Asking reflective questions*

When using a value sensitive design approach, a normative framework shapes the start of the design process. The normative framework possess values that are of importance for an individual designer, group of designers or even society. As said before, a value is seen as “lasting convictions or matters that people feel should be strived for in general and not just for themselves to be able to lead to good life or realize a good society.” (Van de Poel & Royakkers as cited in Van de Poel, 2018).

To be able to design and research a value or values, the “lasting convictions or matters”, should be explored. The formulation of an answer to a value sensitive design question, depends on how an individual or group of individuals define a value. In the case of this research, the main research question, *How to use an urban design process to foster the value of connectivity in areas with high residential diversity?*, is guided by how the value is defined. Reflective questions are, therefore, needed to be able to understand the essence of the value for an individual and/ or group. The questions are asked to ‘the self’. This form of introspection can be explored individually, and shared and/or discussed with others. Two questions that should be asked, are:

- *What are you exactly aiming for?*  
- Create a definition of the value in relation to the context.  
Case example: what does the value of connectivity mean within urban areas with high residential diversity?
- *Why are you aiming for this?*  
Case example: why aiming for the value of connectivity in areas with high residential diversity?

Within the design based research process this could be seen as moments of *rooting*. This concept refers to the writing of feminist activist Nira Yuval-Davis (1999) about transversal politics. This form of politics recognises that “from each positioning the world is seen differently, and thus that any knowledge based on just one positioning is ‘unfinished’. – which is not the same thing as saying it is ‘invalid’ ” (Yuval-Davis, 1999, p.95). Yuval-Davis introduces the concepts of *rooting and shifting*. Both take place in a political dialogue. *Rooting* is about being reflexive on own positioning, identity and values (Yuval-Davis, 1999; Wessendorf, 2010). The concept of rooting is important in a value sensitive design process, as the author(s) views(s) are essential within the development of the products: the perspective which ultimately forms the design as illustrated in Figure 102.

This thesis has been executed by an individual, which means that the outcome of the rooting did not had to be negotiated. When a value sensitive design process is done as a group project, the variety of outcomes need to be discussed and, to which extent necessary for further analysis- and design-

steps aligned. The tools developed by *The Just City Index* of Harvard Design School (2018), as mentioned before, are useful when a value sensitive design is done in a group. The concept of *shifting*, also part of the idea on transversal politics of Yuval-Davis (1999) is described below in component B.



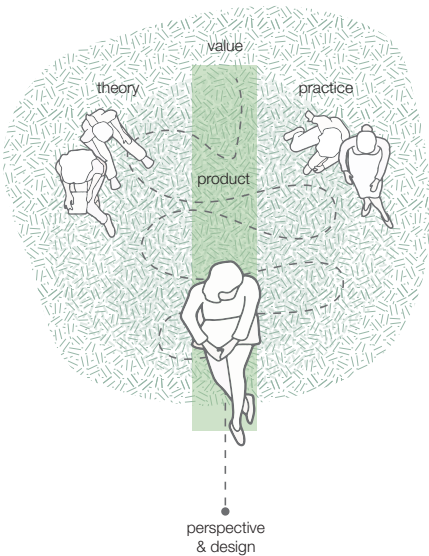
**Figure 102** Process of rooting within a value sensitive design process

## **B – Shifting**

### *Search for dialogue*

The concept *shifting* is seen as trying “to put themselves in the situation of those with whom they are in dialogue and who are different.” (Wessendorf, 2010). This has been done throughout the design research as the author tried to switch perspectives in theory and practice throughout the process. Both contained different perspectives on the topic of connectivity and diversity. This has been done by writing a dialogue in the perspective chapter between authors of the literature and

the author self. And this has been attempted in practice by the extensive fieldwork. The process of *shifting* is seen as a valuable component for two reasons. First of all, *shifting* provides the understanding of other perspectives, which can enrich, or clarify your own. Secondly, it provides a broader framed view on the value, and thereby a better understanding of the human preferences and struggles. An example arising from the design process has been the realization that distance is just as important - and a human need - as proximity and connectedness. This realization has been formed both by literature, as by conversations held in practice. Advice on how to perform and combine *rooting* and *shifting* is provided in the following two mechanisms ABi and ABii.



**Figure 103** Process of shifting within the design-based research framework

**ABi – Exploring the subsurface**

*Use of creative tools outside of the own discipline, applicable for shifting and rooting*

To be able to explore new thoughts in the area of *rooting* and *shifting* it can be useful to use creative tools. In this thesis this has been done by using poetry as a tool for *rooting*, and asking citizens to explain their living environments in metaphors as a tool for *shifting*.

Poetry helps to take a step back from the tangible problem statement and practice. In the first place, the distance and the use of creativity can help to understand the complexity in a more empathic way. A skill that can be contribute to the development of a professional (Januchowski-Hartley et al., 2018). Secondly, it can “illuminate hidden relationships, allowing for altered or changed views (Aslan et al, in Januchowski-Hartley et al., 2018).

The other described tool – asking citizens to explain their living environments in metaphors, is also seen as a tool to enrich existing views, and to develop empathy for the multiple perspectives and its complexity. The value of this mechanism is not related to the specific methods, but in its overarching strength. Creative tools are methods that are used to think not along traditional paths (Sandercock, 2004). Therefore, the value of this mechanism is related to the use of tools to understand ideas, problems or views different than the normal way of thinking, also referred to as lateral thinking (Landry, 2008).

## **ABii – Equalizing Idealism & Realism**

*Consider them all on an equal basis*

To be able to execute the act of *rooting* and *shifting*, awareness of idealistic and realistic thoughts is seen as important. A value can be understood and explained both in theory, as in practice, and often theoretical perspectives contain idealistic characteristics. In this thesis a large amount of the literature covered, is from writers who, from an idealistic perspective, embrace residential diversity and aim for a justice approach to diversity. The author often agreed intrinsically with these writing. This is seen as the *idealism perspective* in theory, and as the personal conviction of author(s). These views have been tested within the interviews during the research process, and discussed with intimates of the author in spare time. In contradiction to the idealistic writings, opinions were detected that do not believe in the ideal image, or consider it as desirable. This is seen as a *realism perspective*. The idealism and realism perspectives can be found both in theory as in practice. The value of this mechanisms is to be aware of these different relationships of individuals and groups to a value. When executing *rooting* and *shifting*, it is important to search for a way to incorporate all of these outlooks. As Yuval-Davis (1999) say: “the only way to approach ‘the truth’ is by a dialogue between people of differential positioning” (p.95). In a transversal dialogue the advise is given to “recognises the differential power positions among participants in the dialogue, but encompasses these differences with equal respect and recognition of each

participant.” (p. 98). This design mechanism can be confronting and challenging, as it might clash with personal values, and the aim of the research and design. Or as the Design-based research collective (2003) says: “By trying to promote objectivity while attempting to facilitate the intervention, design-based researchers regularly find themselves in the dual roles of advocate and critic.” (p.7). A way to tackle the dual role of advocate and critic, is to be transparent about the treatment of more idealistic or realism perspectives. The choice has been made in this thesis to write author’s thoughts regarding practice and theory in a different colour, which makes the advocate and the critical role more transparent for the reader. Therefore, this mechanism is of high importance in the define phase of the design thinking process (Figure 101).

## **C – Iterating value definition**

*Develop the value definition as a product throughout the design process*

Important notion is that developing a definition of a value, is seen as something different than setting a definition on the basis of a literature research. The method of (structural) literature research often aims at defining and fixing the concept and/or value to the end of a project. In the case of value sensitive design, the definition is seen as a product, and therefore all the time adjusted throughout the process. The product is named ‘perspective’ within this thesis. The definition has become clearer through iterations arising from field work analysis and design. A perspective will

change throughout large part of the process. The added value of this approach is that the understanding of the value from theory can be increased through the iterations in practice (as part of the act of *shifting*), and by the act of *rooting*. This is fully in line with the model of design-based research. This approach can be experienced as restless, especially if a definition stays undefined for a long time. Therefore, the advice is to define the value from the start, but label it as a 'working definition'. This has been very useful for the author, because it gives the analysis and design direction, but it also offers freedom to make it better step by step. It also contributes to a more easy communication with external parties.

#### **D – The Social & Technical Collective**

*Embracing the intertwining systems in which everything is an actor*

The described knowledge tension within the introduction chapter (p.27) made a clear division into a social and a practical dimension. This division can be helpful from time to time, to be able to understand multiple influences and layers related to the topic. However when it is the aim to understand the relationship between both, it can also be unhelpful to take them apart. Especially when you want to design from a value, which does not necessary has to be specific technical or social related. This is often the case in the urbanism discipline. As Tonkiss says: "Core themes in urban design [...] – connectivity, permeability, accessibility, integration – are as much social objectives as they are spatial conditions having to do with

how people live together, or apart, in urban environments. Similarly, the physical forms of the city [...] are products of social, economic and political designs for the city before they become products of architects or engineers." (Tonkiss, 2013, p. 11). To be able to grasp these intertwining systems, the philosophy and network theory of Latour has been very useful. Latour sees everything as an actor, so not just human beings, but objects can be an actor as well. The whole of actors is not seen as society, but as 'the collective' (Verbeek, 2000).

Author's educational background in Urbanism has introduced author to the influences of physical objects on human behaviour. This can be seen as a direction of *Physical (or technical) → Social*. The notion that the other directions are also essential to urban life - namely:

*Social → Physical,*

*Physical → Physical*

*Social → Social*

- has helped to look more broadly at the research question. A clear example is described below.

The philosophy of the social and technical collective has helped to understand the complexity of interaction of actors within a neighbourhood during the analysis phase. Residents have explained that youth was very active in the neighbourhood in the past. However, nuisance had been experienced by other residents and neighbourhood authorities. This resulted in the removal of (youth) facilities such as benches and play equipment. The consequence of this interaction is that youth has disappeared,

and searched for another spot. Secondly, there is dissatisfaction among the youth (that has been talked to), and they do not see the future of the neighbourhood brightly.

This example shows a social issue, resulting in a physical intervention, followed by a change of social environment, developed into the use of other (physical) spaces, resulting in a different (social) attitude of citizens towards their environment.

It shows that all actors – physical or social – transform one another through their interactions (Verbeek, 2000).

This is seen as a very important mechanism when aiming to design for values. A(n) (urban) value is usually related to both the physical and social domain, and therefore, it is important to not just approach an urban area from one actor (physical) to the other actor (social), but always aim to understand the interrelation of both of them.

To make this mechanism more concrete and useful, the design guidelines are set up with the design consideration of choosing for a product or process, or a combination of both. An urban designer can consider what – a (physical) product, or a (social) process -, is the most appropriate, reflecting on the question if the urban design will be a means or an end.

### **E – Switching perspective**

*From an ambiguous perspective to an unambiguous perspective, and back*

Throughout the whole process there was a constant change of perspectives related to

residential diversity, which are defined in this paragraph as: (1) an *ambiguous perspective*, and (2) an *unambiguous perspective*.

From an *ambiguous perspective*, citizens are seen as a collection of individuals that possess multiple identifications that change in time and space. The sum of these individuals, and their variety of attachments and group-based identifications, creates a very varied palette of residential diversity. Residential diversity is therefore seen as fluid in space and time.

From an *unambiguous perspective*, urban areas and its users are seen and labelled as entities, in which urban areas and its users possess an entangled relationship. To illustrate: when we, as humans, move through a city, cognitive links are made between the physical environment and the social environment, and vice versa. This illustration shows that ‘labelling’, although it is not in line with a justice perspective, is part of the urban experience and should therefore not be neglected.

The constant change of thoughts, and the use of both perspectives, is seen as valuable. Both perspectives do justice to the complexity of the concept of residential diversity. The perspectives understand the ambiguity of ‘identity’, and points out the deviations of generalizations. In addition, the perspectives offer grip on the topic, in which residential diversity and urban areas can also be seen as stable conditions in space. This mechanism, and attitude to residential diversity, is seen as essential for an urban design project or research related to residential diversity. Especially, to make sure residents are not top-down defined.





## **F – Managing of differences**

### *Searching for the overlap*

The described knowledge tension (p.27) explains the differences of variety of scholar domains towards the subject of connectivity in residential diversity. This research has sought for a workable approach between all these different disciplines. And although this research is executed by an individual, the act of managing these differences, is seen similar to a transdisciplinary research collaboration. A transdisciplinary research is a research that “cuts across disciplines, integrating and synthesizing content, theory and methodology from any discipline area which will shed light on the research questions.” (Russell cited in Gray, 2008). A team that executes a transdisciplinary research is seen similar to cross-cultural teams, and teams that aim to solve complex societal conflicts (Gray, 2008). These teams do not strive to master individually all the disciplines, but “aim to open all disciplines to what they share and to that which lies beyond them.” (International centre for transdisciplinary research, cited in Gray, 2008). This touches upon the design mechanism that has been used to manage the different disciplines, which is searching for ‘what they share’. This research searched for ways to overlap and/ or complement the knowledge of the multiple perspectives. As an individual it has been challenging to also aim for ideas and knowledge ‘which lies beyond them (the disciplines)’, however in a team with a variety of strong expertise, this can be further explored as a valuable design mechanisms. The following mechanism, Fi, explains a tool

that has been used to be able to manage the different scholar angles.

## **Fi – Developing a shared mental model**

### *Framing, a new language as an abstract level of thinking*

To be able to manage the differences, the use of an overarching language, namely *hier* and *baar* was very useful. These words can be connected with knowledge and jargon of multiple disciplines, due to its abstractness. Therefore, it creates an umbrella for multiple concepts of a variety of disciplines, such as *identity, identification, individuals, groups, enclaves, zones, (urban) areas*. The developed language functions as a link between the, sometimes separately described, social and physical world. The words are seen as a communication tool, which is named, in transdisciplinary research, *framing*. *Framing* is “the construction of a mental model that provides a sense-making device for team members, captures their beliefs and abilities, and motivates them to work productively together.” (Limmerick and Cunnington, cited in Gray, 2008). Framing can cause a shift in thinking through the use of a “new metaphor”, which stimulates to move “up or down a level of abstraction in thinking” (Gray, 2008). This act of ‘framing’ contributing to a shared mental model, is seen as a useful design mechanism contributing to the management of differences in a design-based research that aims to tackle multiple perspectives.

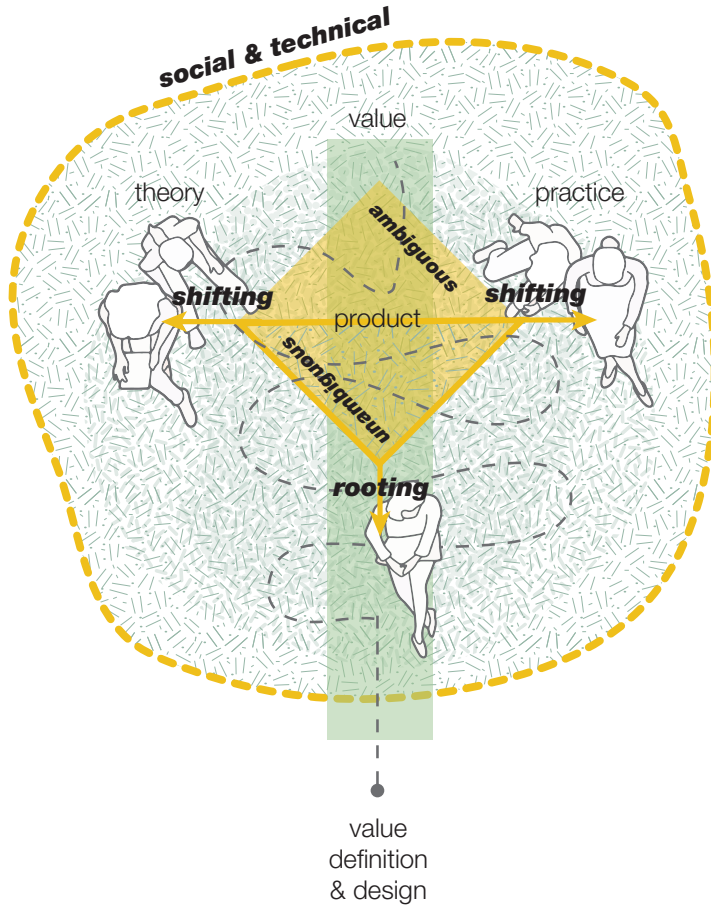


Figure 104 Design-based research model adapted with the valuable mechanisms of the executed design process

# 6.2 Conclusion

## SRQ5

This paragraphs answers the fifth sub research question:

*What are the valuable mechanisms of the executed design-based research process that can contribute to practice (the urbanism discipline)?*

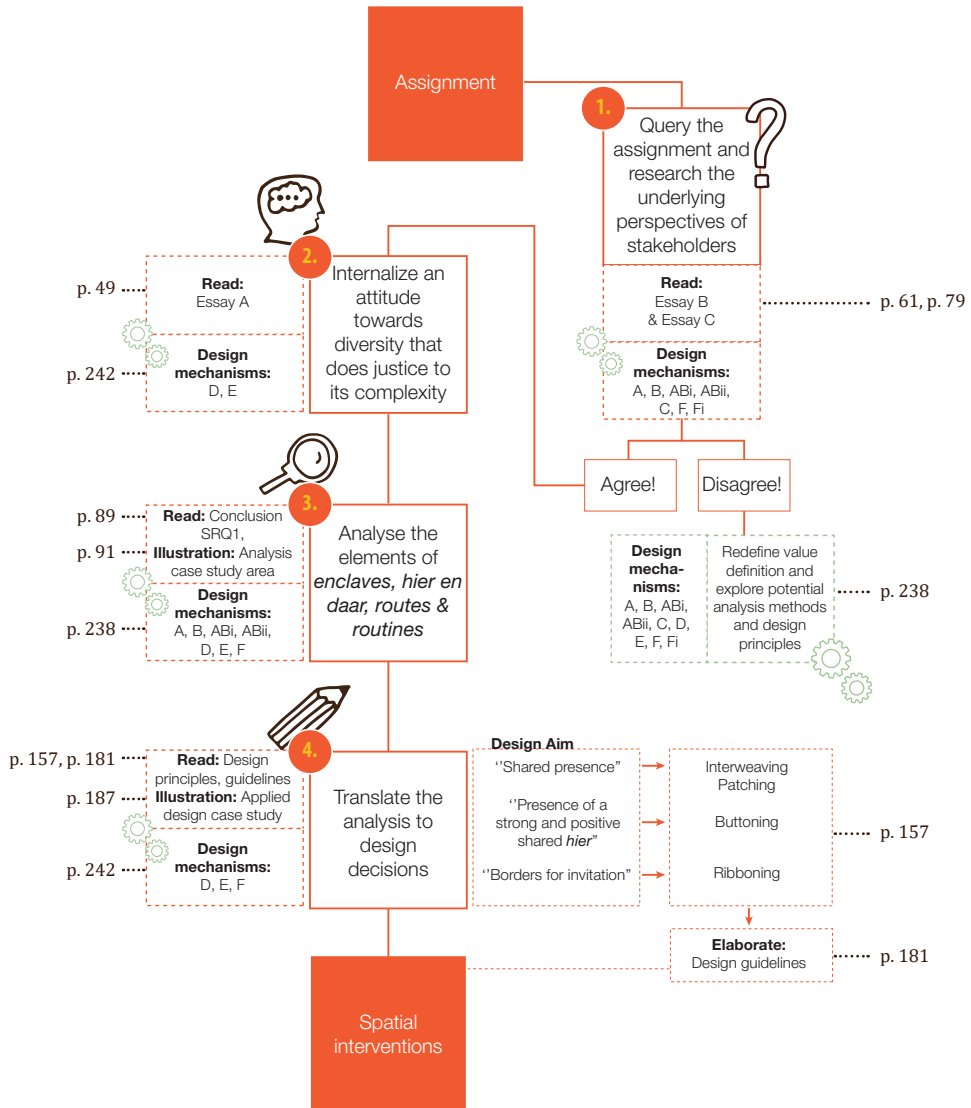
Valuable mechanisms that can be of interest for the urbanism discipline, are:

- *Rooting*: condition in which time is taken by a process of introspection to reflect on own values and perspective.
- *Shifting*: condition in which time is taken to switch to other perspective.
- *Exploring the subsurface*: use of creative tools that are not necessarily part of the urbanism discipline, but can help to understand ‘hidden relationships’, and ideas, problems or views from a different angle than the normal way of thinking.
- *Equalizing idealism & realism*: an attitude that approaches all perspectives that are encountered from an idealism angle or a realism angle as valid, however knowledge from one position is seen as ‘unfinished’. A creation of a dialogue between different perspectives, aiming to approach (a version of) ‘the truth’.
- *Iterating value definitions*: iteration process in which the value definition is changed and finalized throughout the process in which it is seen as a product on its own.
- *Embracing social & technical collective*: way of thinking in which complexity is embraced rather than the aim is to take social and technical dimensions apart. Social and technical dimensions are seen as a collective and which they transform each other through their interactions. This way of thinking expands analysis tools and solution opportunities, as an urban designer should consider if a (physical) product, or a (social) process, is the most appropriate, reflecting on the question if the urban design will be a means or an end.
- *Switching perspective*: a constant change of two perspectives: an *ambiguous* and an *unambiguous* perspective which understands the complexity of the concept of residential diversity.
- *Managing of differences*: approach in which a search is done to understand the overlap of content, theory and methods from multiple disciplines.
- *Developing a shared mental model*: way to develop a shared language on an abstract level by framing a new model of sense-making, for example in the form of a metaphor.

The nine detected valuable mechanisms are illustrated in Figure 104, in relation to the model of design based research.

7

# road map



**Figure 105** Roadmap for urban designers to foster connectivity in residential diversity. Overarching product of this thesis: a roadmap of four steps to take, with associated mechanisms, that can contribute positively to the design process, including references to pages in this thesis for further explanation

This chapter presents the overarching product of this thesis and combines the four aspects of this thesis and the corresponding sub research questions: *perspective, analysis, design and design mechanisms*.

This chapter does not answer one defined sub research question, but it combines the answer of the previous explored sub research questions, SRQ1 to SRQ5. Therefore, it is a prelude to the conclusion (p. 255) which can be read in the next chapter.

## **Roadmap**

The overarching product is designed as a *roadmap*, which professionals in the urbanism discipline can follow in case they aim to foster the value of connectivity in urban areas with high residential diversity. However, urban designers do not often receive such an abstract assignment. It is more realistic to assume that a designer receives concrete questions, perhaps as follows: 'We would like to develop a space where citizens can meet each other in this neighbourhood, can you help us with that?' or, 'We want to improve the connection of the south part of the city with the northern part of the city, can you help us?'. The roadmap, Figure 105, aims to offer a compact step-by-step plan, and provides links to pages in this thesis with further explanation. It also shows, per step, associated mechanisms that can contribute positively to the design process (indicated with the icon of a gear wheel). A design process contains many iterations, therefore the first three steps do not have to be fully completed when a designer starts with step 4. The roadmap and its steps have been kept simple, to be able to communicate

the findings as simple as possible. The steps of the roadmap, are explained below in text.

## 0. Assignment

As stated above, an assignment in practice usually starts with a concrete question from a client, which can differ, from municipality to real estate developer. In addition, a designer can also strive to foster the value of *connectivity* in his design projects based on intrinsic motivation, thereby 'giving her-/himself an assignment'.

## 1. Explore intention

The first step is to explore the underlying motives of the client, and potential other stakeholders involved in the development of the urban design, including the urban designer her-/himself. To be able to understand the multiple perspectives related to the value of connectivity and motives to strive for connectivity, essay B and essay C (p. 61, p. 79) can be read. Essay B explains the multiple concepts and definition that are related to the value of *connectivity*, and essay C explains the possible motives that an individual or society can possess to strive for this value. Understanding these concepts can help in the search for the underlying perspectives of the design assignment. Example of questions to further clarify the motives are: 'What do you, or we, mean with connectivity?', 'Why do you, or we, aim for connectivity?', 'Who should meet who?'. Besides providing material for reflective questions, the essays can also broaden the designer's and client(s)'s view on this value, and thereby increase the number of solution. It is important this step is taken, so the

concepts and motives are clearly defined before moving on to the subsequent steps of the roadmap. The essays must also be read to make sure the next 3 steps of the roadmap fit the actual intentions of the design assignment the urban designer is given.

However, it is possible that the client and/or the designer disagree on the value, the definition or their motives for connectivity. When this is the case, they can opt for the 'disagree' exit. This 'exit' does not mean that they cannot longer benefit from the findings of this thesis. It is recommended to read the design mechanisms chapter (p. 235), and in that way start a research on the formulation of the analysis and the design that fits the views and motives. When the client and/or the designer agree on the defined value and possess similar motives, steps 2 to 4 can be taken. They can also partially agree with the essays, then they should research which elements are useful for them. However, this must be done carefully, as the roadmap is most powerful when multiple analysis techniques and multiple design principles are used together.

## 2. Adapt attitude

The second step of the roadmap is to develop, adapt and internalize an attitude towards diversity that does justice to its complexity. Such an attitude is seen as important in a society that aims to be more inclusive. To become aware of the complexity that belongs to the concept of *diversity*, essay A (p. 49) can be read. In addition, the design mechanism "E – Switching perspective" (p. 243) clarifies the possible approaches towards diversity.

This attitude is essential to be able to understand the developed design principles. However, it mainly comes into play when fieldwork is being executed in the next step of the roadmap, the analysis. During fieldwork, it is important to approach residents with an awareness of their own bias, and to be open for the exploration of other aspects of the resident's identity than observed in advance.

## 3. Analyse

The third step is a common step taken in the urban design practice, namely analyse the urban conditions. The extra-ordinary aspect of this step in the roadmap, is the advice to focus on specific concepts; *enclaves, hier en daar, routes and routines*. Normally, traditional aspects of the urban fabric are researched, such as green-blue infrastructures, road infrastructure, building typologies, and urban functions. In this thesis, and therefore, also important for the roadmap, specific concepts are seen as useful for understanding of connectivity in residential diversity. Therefore, it is advised to focus on these concepts during the analysis phase. The explanation is given in the perspective chapter, and summarized in the conclusion of this chapter (p. 89). The analysis of the case study area (p. 91) illustrates the way an analysis can be executed, which methods are involved, and possible outcomes.

## 4. Design

The last step of the roadmap is dedicated to the design decisions that need to be taken, something that will always be an important aspect of a design process. Step four, and



the corresponding pages in this thesis, aim to guide an urban designer when making these considerations. It can help to define what the specific design aim is for specific spots. 'Which type of spaces should be aimed for?' The four developed design principles (p. 162), present, on an abstract level, how an urban design can be formed, and in that way contribute to *connectivity*. The design guidelines (p. 181), provide more concrete 'guidance'. The guidelines can be translated into spatial interventions. This thesis assumes that an urban designer possesses the skills to make this translation. The guidelines therefore do not offer concrete 'urban tools' (such as a 'wall', 'tree', 'street furniture'), so these elements are not prescribed. The guidelines, however, show which design elements need to be considered. The added photos aim to illustrate possible concrete interpretations.

### Spatial Intervention

These design steps result in spatial interventions for the specific assignment. The spatial interventions may also include a 'process', usually executed as a part of the design principle *buttoning*. In order to achieve a good effect resulting from a 'process', that aimed for *buttoning*, it is important that the urban designer stays involved in the urban area. If this is not the case, it is important to transfer the knowledge and ideas on attitude (step 1) towards the ones executing the process.

The hypothesis is that the (spatial) interventions will be different if you take the 'disagree exit', as the hypothesis is made

that the developed concepts for analysis, and the developed design principles and guidelines, will be different. An example is the assumption that when someone strives for *connectivity* from motives of the *vertical dimension* (p. 79) - aiming to improve the access to resources for all - other aspects should be analysed and designed, such as employee integration, and diversity in schools. This might also ask for a greater focus on policy interventions, or other types of interventions, in which the potential of urban design can also be questioned. A great start of a beautiful new research linked to the same value, but with a different perspective, caused by a consciousness of motive(s).

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In the previous chapters, *a perspective, an analysis of the urban conditions, design principles, an applied design and design mechanisms* have been developed in order to investigate how an urban design process can foster the value of connectivity in areas with high residential diversity. This has been developed through the use of a case study area, the neighbourhood of Schiemond in Rotterdam, Netherlands. This chapter answers the main research question:

*How to use an urban design process to foster the value of connectivity for Schiemond in Rotterdam, an urban area with a high level of residential diversity?*

The roadmap (Figure 105) forms the prelude to the answer on the main research question, which distinguishes four successive steps and components of the urban design process: *explore intention, adapt attitude, analyse* and *design*. The conclusion described in this chapter elaborates on these steps and provides more substantive findings. It describes general findings and more applied findings, which are related to the case study area. The potential of the generalization of the 'general findings' is discussed in "9.1 Contributions", on page 271.

### **Explore intention**

To realize a well-considered design that fits the motives of the designer and/or other stakeholders, it is seen as important to research the underlying intentions of an urban design assignment. This involves awareness of the existence of the multiple definitions of a value, and the multiple motives to strive for this value.

In this thesis the motive to strive to foster the value of *connectivity* is driven by arguments of the *horizontal dimension*, in which the aim is to foster mutual links and understanding between citizens. This motive influences the developed value definition used in this thesis. The value of *connectivity* is defined, with considerations of multiple perspectives, as: *urban conditions that enhance the number of opportunities of social encounters, forming a dynamic connected area with constant change of individual identifications and sense of home in space and time, while also taking the need for distance into account*. Connectivity is therefore seen as a condition that arise when there is a (temporary) form of shared presence, which can vary from, low intensity in the form of fleeing encounters to high intensity, in the form of public doings. The level of

intensity cannot be controlled by the physical environment. However urban design and processes can facilitate opportunities for shared presence and a constant change of individual identifications in space.

### **Adapt attitude**

In order to analyse and design for the value of connectivity in a context with a high level of residential diversity, the complexity of residential diversity in relation to urban spaces must be understood. To do justice to its complexity, a constant switch should be made between an understanding of diversity from two different perspectives. These perspectives are named the *ambiguous perspective* and the *unambiguous perspective*. From an *ambiguous perspective*, citizens are seen as a collection of individuals that possess multiple identifications that change in time and space. The sum of these individuals, and their variety of attachments and group-based identifications, creates a very varied composition of residential diversity. Residential diversity is therefore seen as fluid in space and time. From an *unambiguous perspective*, urban areas and its users are seen and labelled as entities, in which urban areas and its users possess an entangled relationship. To illustrate: when we, as humans, move through a city, cognitive links are made between the physical environment and the social environment, and vice versa. This illustration shows that 'labelling', although it is not in line with a justice perspective, is part of the urban experience and should therefore not be neglected. Diversity of urban areas and its residents is therefore also seen as a stable condition in space, although fluctuating in time. The use of a combination of both perspectives, *ambiguous and unambiguous*, offers an approach that includes a dual attitude that aims to understand the complexity of diversity.

### **Analyse**

In the analysis phase of the urban design process it is important to focus on three concepts: *enclaves, hier and daar, routes and routines*. These specific concepts are seen as useful to be able to understand the current conditions of connectivity in residential diversity. A clearly labelled physical and social environment, referred to as the built environment, is seen as an *enclave*. Enclaves possess their own design, use and experiences. These enclaves have a place in an urban fabric that is used by a diversity of flows of *routes and routines*. Reasoned from the *ambiguous perspective*, a change of individual's identifications is facilitated by these *routes and routines* taken on a daily basis, as identifications and

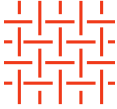


senses of home change through space.

While taking a variety of routes and routines, emotions exist when an individual is interacting in a built environment that is not part of her/ his senses of places, or in a built environment which is not part of her/ his identifications. These emotions and corresponding mental state are named *daar*. This mental state is in contrast to emotions that are experienced when an individual is interacting in a built environment that offers a sense of home, or is part of her/ his identifications. These emotions and mental state is named *hier*.

These three concepts - *enclaves, routes & routines* and *hier* and *daar* are useful to explore the urban conditions of *connectivity*. For the case study area Schiemond, Rotterdam, it showed a low connecting capacity in the immediate surrounding, clearly distinguishable enclaves, low level of routines, and mainly transit routes, and presence of a few strong shared *hiers*, but also a few strong *daars*.

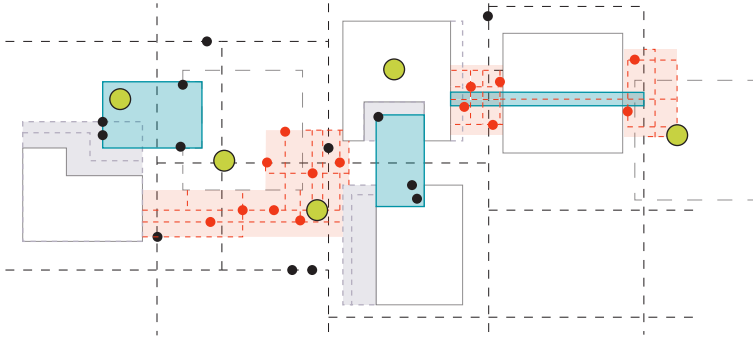
## Design

During the development of a design for connectivity in residential diversity, it is important to always take the *hier* and the *daar* into account, as it is seen as an interaction between the 'known' and the 'unknown'. Urban design can influence these (positive) feelings of *hier en daar*, and with that foster the value of connectivity in areas of high residential diversity. Three types of spaces can be designed which facilitate a positive co-existence of *hier* and *daar*. These three types of spaces are supported by four *design principles*. An overview and definitions are shown in Figure 106. The design principles are supported by *design guidelines*. The guidelines propose which urban elements should be considered, and about which a decision must be made. The *urban elements for considerations*, are: *enclaves, routes and routines, design of appearance, and product and/ or process*. These elements together influence the conditions of *connectivity*, and should not be seen apart. An illustration is that a well-designed space, which is only focussed on the guidelines of *design of appearance*, may not foster connectivity at all, because it was not designed on the right place, or it was too much focussed on an end product instead of on a process. The applied design for the case study area showed that the design principles are often combined to increase the potential to foster *connectivity in residential diversity*. This finding is visualized in Figure 107. It shows the application of the design principles for the case study area, and an abstract representation of the design principles in relation to the urban fabric.

Type of space	Design principle	
Shared presence of <i>hier</i> and <i>daar</i>	<p><i>Interweaving</i></p> <p>Interweaving involves an optimization of the possibilities for casual encounters between citizens, which increases the sense of home and/ or shared identification, caused by a shared identification in space.</p>	
	<p><i>Patching</i></p> <p>Patching involves a materialization and design intervention which aims to emphasize and visualize an already existing programmatic or symbolic connection between two or more areas.</p>	
Presence of a strong and shared <i>hier</i> , enjoyed by <i>daar</i>	<p><i>Buttoning</i></p> <p>The principle of buttoning uses the built environment to create shared place attachments, to facilitate appropriation, and/ or to work on a common purpose or goal.</p>	
Borders for invitation, in between <i>hiers</i> and <i>daars</i>	<p><i>Ribboning</i></p> <p>The <i>design principle</i> focusses on the design of borders, which aims to translate negative emotions into positive ones, in which borders are designed for distance, clarity and invitations.</p>	

**Figure 106** Overview of 'Type of spaces' of *hier and daar* and accompanying *design principles*





**Figure 107** Mutual reinforcement of design principles. Application of the design principles for the case study area, and an abstract representation of the design principles in relation to the urban fabric.

- Connecting Enclave
- Solitary Enclave
- Routes
- Routines
- Interweaving
- Patching
- Buttoning
- Ribboning



### **Urban design process supported by design mechanisms**

The urban design process was supported with helpful design mechanisms, which are: *1. rooting, 2. shifting, 3. exploring the subsurface, 4. equalizing idealism & realism, 5. iterating the value definition, 6. embracing social & technical collective, 7. switch of perspectives, 8. managing of differences, and 9. developing a shared mental model.* These mechanisms were useful for the executed design-based research process that started with a value. These design mechanisms have supported the steps of the urban design process: *explore intention, adapt attitude, analyse and design.* These are also seen as useful for other urban designers.

In case another urban designer aims to design for connectivity in residential diversity and follows the developed steps, it is possible that the motives and/ or value definition differ from the ones described in this thesis. In case they differ, the design mechanisms can also be useful to further develop a new value sensitive design and research process.

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The aim of this thesis was how an urban design process can be used to foster the value of connectivity for urban areas with a high level of residential diversity, explored in the case study area of Schiemond in Rotterdam. The previous chapter, the conclusion (p. 255), formulated an answer. This chapter reflects on the research set up and its given answer places the findings in a wider context, organized in four topics: (9.1) *the contribution of the research to the scientific field and practice of urbanism*, (9.2) *opportunities for cross-pollination between the urbanism and the science communication disciplines*, (9.3) *considerations for theory and practice*, (9.4) *the limitations of the research* and (9.5) *recommendations for further research*

## 9.1 Contributions

In this paragraph, the contributions of the thesis to the scientific field and the field of urban practice are described.

The overarching contribution is made by the bundling of three products that all contribute to knowledge on a valuable use of the urban design process to promote connectivity in areas with high level of residential diversity. The three products are described, separately, below: *a working perspective for the urbanism discipline, design principles and guidelines for urban design, and design mechanisms for the urban design process*. Afterwards, the contribution of the applied analysis and design is discussed. Finally, this subsection further elaborates on the contributions by a discussion on ‘overarching contributions’. This includes the concepts of *hier* and *daar*, and, the *roadmap*. At last, the generalizability of this research is discussed.

**(a) A working perspective for the urbanism discipline** | *value definition, and an attitude towards diversity and its analysis and design approach*

The perspective chapter, and its conclusion on the first sub research question (“2.6 Conclusion SRQ1”) consists of different parts, of which two are seen as new, and as a contribution to the urbanism discipline: (1) the *value definition* of connectivity in residential diversity, and (2) the *analysis and design approach* that contribute to the understanding of the complex concept of *residential diversity*.

Both are further explained in this paragraph.

The urbanism discipline often operates between a variety of knowledge fields related to social and technical dimensions, and the research methods are usually embedded both in practice and in theory. This research aimed to contribute to the urbanism discipline by further exploring a topic on these edges of social and technical dimensions, and of theory and practice.

This research made an overview and comparison for the meaning of the value of connectivity in a context of residential diversity, in essay "2.3 [B]", and concluded with a value definition that contains both social and technical dimensions. This is relevant, because in the urbanism discipline values often pursues social and physical goals (Tonkiss, 2013). A definition that tackles both, and represents the interrelation, can therefore, be used to achieve both goals. The overview of the multiple existing perspectives, its analysis and comparison, and the concluding definition, is seen as the first contribution to the urbanism discipline. The perspective is seen as an end product on itself, which responds to the detected knowledge tension (1.3).

The second contribution to the urbanism discipline is the formulated *analysis and design approach to residential diversity*. Currently, social developments cause changes on the views on suitable approaches towards (residential) diversity. Discussions on racism and discrimination are frequently held in politics and media, and are related to very wide aspects of emancipation and equality of a diversity of people. In the Dutch society, topics as women emancipation, LGBT+ emancipation, and emancipation of migrants - including debates related to decolonization in relation to still existing forms of racism - are widely exposed, researched and discussed (SCP, 2016). These discussions question existing prejudices and to which extent they have an effect on our actions. Urban researchers, designers and planners usually operate in a context with a level of residential diversity and therefore should seek for a justice approach that fits these social developments of emancipation. This thesis searched for a suitable approach that does justice to the complexity of diversity, and tries to dodge the act of labelling, in essay "2.2 [A]" (p. 49). The outcome does not provide a detailed guide on appropriate approaches towards residents, but it promotes awareness about the complexity of diversity. The novelty is in the visualization of an individual and his or her fluctuating identifications, and senses of home (Figure 10; Figure 11), as part of the *ambiguous perspective*, which aims to contribute to the urbanism discipline in combining knowledge on the complexity of diversity, presented by the concept of identifications, with the aspect of space. Other concrete concepts, enclaves (Figure 13) and routes & routines (Figure 12),



further contribute to an analysis and design approach, which enriches the understanding of complexity of diversity and connectivity. These concepts are not novel on it's own, but the side-by-side use of a dynamic and a more static perspective, also referred to as *unambiguous*, is characteristic of this thesis. It can help the urbanism discipline to combine thinking in complexity related to diversity, with use of this dual perspective, *ambiguous and unambiguous*.

### **(b) Design principles and guidelines for urban design**

As said, the detected knowledge tension (1.3) highlights a difference in ideas about suitable design solutions for disconnection in residential diversity. The different perspectives and ideas vary from an improved urban infrastructural system, to better designed and accessible public spaces, to stimulating human interactions through shared activities. The developed value definition, as mentioned before, contains different types of connectivity, as stated in the definition: 'from fleeting encounters to public doings'. and therefore, overarching the many detected perspectives related to the value of connectivity. The developed *design principles* - four in total - , *interweaving, patching, buttoning, ribboning* (4.2), are in line with the value definition and the principles contain different types of connectivity. The four principles with associated forms of connectivity are seen as a contribution to the urbanism discipline, both in theory and practice, because they show different possibilities that the urban fabric can offer to pursue connectivity. The principles communicate, on an abstract level, the symbolic effect the design intervention are aiming for. The terminology of the principles is in line with words used in the urbanism jargon, also known as the 'urban fabric'. The principles are described as forms of adjustments a designer can make to a fabric. To be able to make these design principles and associated forms of connectivity more concrete - so an urban designer can use the knowledge in practice - the design principles have been made more specific in *elements for consideration* (4.5) and *design guidelines* (4.6). The contribution of both are described below.

The developed *elements for considerations* contain both elements of the urban infrastructural systems (in the considerations of the designed *routes*), elements of well designed public spaces (in the considerations on the *design of the appearance*) and elements to increase 'public doings' (in considerations on the *routes* and the choice between *process and/or product*). The relationship of the *elements for consideration* with the

developed *design principles* and associated forms of connectivity, are captured in one overview, the *design guidelines* (4.6). The novelty, and with that the contribution of this product, is within the development of the 'umbrella' with the various options for designing for connectivity in residential diversity, presented by the *design guidelines* (4.6). The *design guidelines* show the elements an urban designer consider, but it does not specifically communicate the final form of the product. It is ultimately the choice of the designer to decide on the specific form and appearance. Therefore, as the name suggests, it can *guide* urban designers in the design of connectivity, whereby this product mainly contributes to practice.

### **(c) Design mechanisms for the urban design process**

This thesis shows an exploration on how an urban design can be made, based on a value. The reflection on the design process of this exploration, resulted in defined *design mechanisms* (6.2). This is seen as a contribution to the urbanism discipline in the form of knowledge on which design mechanisms are seen as essential for executing a value sensitive design project. Therefore, the contribution of this product can be seen as broader applicable, as is not directly linked to *connectivity*, and can contribute if a designer wants to design from a value.

### **(d) Applied analysis and design for practice**

The developed applied analysis and design of the neighbourhood Schiemon and city district Delfshaven, is seen as a product that can contribute to practice. It can function as an inspiration for professionals, and citizens, involved in the area. It can open up unseen opportunities, and function as a starting point of a conversation between stakeholders - including citizens - discussing if the design matches with individual or collective wishes for a more connected city.

### **(e) Overarching contribution | A vision for design communicated by the concepts of Hier en Daar**

The novelty and characteristic of this research is the development and the use of the concepts of *hier* and *daar*. First of all, these concepts are used as a communication tool to explain to the reader the emotions and mental states that are essential to the act of "connecting in diversity". This can be adopted by others and contribute as dialogue concepts that helps to internalize the emotions of *hier* and *daar*. Although the concepts of *hier* and *daar* seem to be abstract, the corresponding emotions can be seen

as concrete, because they represent an often shared urban experience of connecting with knowns and unknowns. Therefore, the concepts contribute by having a strong communicative value. Secondly, the concepts contribute to the urbanism discipline, because it supports the analysis and the design, by supporting the making of decisions. It helps to understand the conditions of an urban area, to understand meaningful places, and which places are not. Based on this knowledge, decisions can be taken on which design principles can be applied, and where.

**(f) Overarching contribution | *Roadmap for connectivity***

Finally, the knowledge derived from the developed value definition, analysis methods, design principles and guidelines and design mechanisms, together form an overarching contribution in which a suitable *urban design process* was sought, a combination of knowledge, methods and urban design attitude, which is presented in the *roadmap* (p. 249). The roadmap is a pragmatic contribution, as it makes the steps an urban designer should take simple and insightful, and makes this research more accessible.

**Generalization**

This research used a case study area to explore the research topic in practice and to test the design ideas on site. The case study area influenced both the analysis set up and the design products. Therefore, this paragraph questions the generalization of the research, and comments on the contributions explained above. In addition to the discussion on the generalization of the research in relation to the case study area, the potential generalization of the *design mechanisms* and the *roadmap* are discussed. Other limitations regarding the research are described in “9.4 Limitations” on p. 279.

Case study area

The main obstacle to generalize the perspective and the design principles, are the specific urban conditions of the case study area. The following aspects are seen as specific, and, therefore, a limitation on generalization of the research:

(1) The research is limited by the use of a western context, and more specific, a Dutch context - which can also be detected in the widely used western and Dutch literature. Therefore, it is unclear to which extent the findings are suitable for other countries, and continents.

(2) It was quite easy to define the enclaves in the case study area, as many differences can be detected. This might be different in urban areas with an (even) greater mix of economic and ethnic diversity. And it can be different for areas in which the grain of urban enclaves is small or even absent.

(3) The case study area has an already built urban fabric, therefore it has been doable to analyse the existing *hier* and *daar*. An undeveloped area may profit from the same design principles, however, the developed analysis methods are not suitable.

### Urban design process

The generalization of the findings on *design mechanisms* is considered as likely possible. However, the design process is also influenced by the context of diversity, in which it is seen as logical to understand a diversity of perspectives. This logic has influenced the design process, especially the act of *shifting*. However, author believes in the importance in this act, which is also seen as suitable for other values. An urban design is almost always made for a large group of citizens, or for changing groups over time, and therefore it will always be subject to different views.

### Roadmap

Finally, it that it is unknown if the roadmap (p. 249) is useful for urban designers, as the usability is not tested.

The limitations, mentioned above, on the generalization, offer input for "9.5 Recommendations for further research"

## **9.2 Opportunities for cross-pollination**

There are three types of cross-pollination discussed in this paragraph. First of all, the opportunities for cross-pollination, resulting from this research, from the *science communication* to the *urbanism discipline*, are described. Next, opportunities for reverse cross-pollination are described, thus from *urbanism* to *science communication discipline*. Finally, components of the research that offer opportunities for both master degrees, are discussed.

This research focused on the development of an *urban design process*, which makes it seem like the *urbanism* discipline was more prominent in the research. However, the research is also highly formed by the *science*

*communication* degree. The influence is visible in the socially oriented problem definition, which shows different aspects of an interaction between social and technical dimensions. Secondly, it is present in the analysis and design approach whereby the individual experience is attempted to understand to the fullest, in line with the educational aim to understand (the small scale of) human interactions. Thirdly, the chapter *design mechanisms* (p. 235) is energized by the knowledge and interest of *science communication* to understand the design and innovation processes, and to research how these (transdisciplinary) approaches can be improved. The combination of the two degrees combined in one research offers opportunities for cross-pollination, further explained below.

### **Science Communication pollinates Urbanism**

There are two valuable components of this research influenced by the *science communication* degree, which are less present in the *urbanism* degree, and, therefore, seen as potentially valuable additions to the *urbanism* discipline.

*Incorporating the understanding of the complexity of human interactions and emotions, into the analysis and design phase.*

In urban design research, human interactions and behaviour are regularly investigated. The research focus may lie on human-human interactions or behaviour influenced by the built environment, or on collaboration and strategies for the development of the built environment with a variety of stakeholders. Both are, from the author's perspective, often superficially researched and designed for. An understanding of why certain collaborations or interactions are (not) happening, and what kind of emotions and rationalities are involved, remains undiscovered. And therefore the research and design lacks depth. The *science communication* department of the TUDelft teaches and investigates how these forms of complex interactions can be understood. To be able to do so, the research scope is made small, this can be either be done by having a narrow defined topic or case study context. The *Science communication* department also possess knowledge and skills on unravel the complexity and make it visible for the designer, researcher, involved parties or reader of the research. In this research this component is visible in the exploration of the mental states of connectivity (p. 69), and the cross-table of *hier* and *daar* (Figure 68 on p. 156). This design mechanism is named 'ABi of *exploring the subsurface* (p. 240). Such an approach towards social components is

seen as a positive contribution that *science communication* discipline can make to the *urbanism* discipline.

*Creating a shared mental model; the use of tools to build bridges in the analysis and design process.*

The use of a shared mental model, as explained in the design mechanism Fi, *developing a shared mental model* (p. 245), is seen as a communication tool that is used more often in the *science communication* discipline. In this thesis the shared model is formed by *hier en daar*, but a mental model can also possess another form. In the *science communication* educational program, students are taught to communicate topics in a way that it is not tied to a professional jargon. Additionally, the use of metaphors and analogues is taught. This can stimulate and improve the analysis and design phase of a design process, and therefore also the process of creating an urban design between a variety of disciplines or stakeholders. In the *urbanism* education program it is often emphasized that an urban design is created through interactions with many stakeholders, and that it is important to involve residents in the design process. 'Urbanism is communication', is a frequently outspoken conclusion of a debate between urbanism students and teachers. However, no knowledge or skill class is given on how to communicate with such a variety of stakeholders. Knowledge and skills of *science communication* on how a shared mental model - usually an abstract version of the problem or solution - is seen as an opportunity to contribute to the *urbanism* discipline. In this way it is easier to understand and discuss urban challenges of the future with all the stakeholders involved. This is seen as important in a world with an increase of the complexity of scientific problems and societal problems. An urban designer can take on a leadership role in the transdisciplinary challenges, especially if he or she is able to make use of a common language for the team members or stakeholders (Gray, 2008). The *urbanism* educational program teaches how to communicate with drawing, but a dialogue with words, and other forms of mental models, could be taught in a better way.

### **Urbanism pollinates Science Communication**

There are two components of the design-based research, highly influenced by the *urbanism* discipline, seen as valuable for the *science communication* degree.

### *Internalizing the act of design*

A significant difference experienced by the author, is the way *science communication* and the way *urbanism master and the bachelor degree in architecture, urbanism and building sciences*, teach the act of designing. In the *science communication* degree design thinking is taught as a method, with certain clear steps to take, labelled as diverging and converging. Although the action of iterations is explained within the education program, defined tools are provided to be able to make these steps. These tools can be useful when a student is new to design. However, designing has never been experienced by the author as a method with clear steps and tools, but as a way of the acting and thinking. An act that has been internalized during the bachelor degree, in which it seems to be difficult to understand the own executed design process, as diverging or converging steps are not consciously made at all. In conversation with mentor and head of the Urbanism department, Machiel van Dorst, the cause of this perceived difference became understandable (personal communication, September 2019). In the bachelor design projects of *Architecture, urbanism and the building sciences*, the creation of a design is taught as a craftsmanship. It is taught between a master and a companion, similar to the way a student might learn to build a violin. The teaching approach will be as follow: “Ok, design and build a violin. Once it is finished, I will provide you with comments”. A student learns to get better in designing through the many questions from teachers and its one-on-one interaction. The benefits of this master-companion approach, is that the act of designing is being internalized. This causes, according to the author, that you become better at it and you are able to really learn this skill, the skill is like a craft. This craftsmanship, and the way it is taught, is seen as a cross-pollination opportunity for *science communication*, so that individuals are therefore always ready to use the act of designing in a research or work context. An important note is that the author thinks this can be the best trained as an individual, as done in *architecture* studies, not in group form, as done in *science communication*. This is in line with the next described opportunity for cross-pollination.

### *Stimulating individual creativity, exploring your own voice*

As said, no clear methods are prescribed in the *architecture* and *urbanism* educational program. Although, there are a number of traditional methods in the field, it is appreciated if you experiment with extraordinary methods. This illustrates that the design craftsmanship is

closely related to artistry (personal communication Machiel van Dorst, September 2019). This freedom stimulates the development of a critical, analytical and open mind. It trains students to think carefully about the problem definition, the necessities for the input of the design, and the communication of the design. All the products need to be serving the storyline. The storyline is always influenced by the 'I' and, therefore, a student will - step by step, and encouraged by teachers - develop their own style and voice. A developed style and voice, is also important to distinguish yourself from others, since there is a lot of competition. The development of individual creativity contributes to quests to involve others in your way of thinking. Creativity is seen as highly important to transdisciplinary research. In which unleashed "curiosity and creativity" is needed to make transdisciplinary collaborations successful (Gray, 2008). Therefore an on-going development of *individual* creative skills and voice, is seen as an opportunity for the improvement of the *science communication* education program. According to Gray (2008) good leaders of transdisciplinary research need to promote "divergent thinking, risk taking and challenge established methods". This is an interesting statement as the education program of *science communication* focuses on knowledge and collaboration of multiple disciplines. And the act of 'risk taking and challenging of established methods, is exactly in line with skills being taught by the educational program of *architecture* and *urbanism*, which results in a design process that stimulates experimental thinking and acting.

### **New pollinations for both**

Two components, which were also clearly explained as design mechanisms in the "6.1 Valuable Mechanisms" on p. 238, are seen as opportunities of pollinations arising from the research for both of the education programs of *science communication* and *urbanism*. These are the act of "*A – Rooting*" and "*B – Shifting*". The expected opportunities are elaborated on below.

#### *Rooting & Shifting*

Both in the *urbanism* and the *science communication* master, little attention is paid to researching and analysing own values and to which extent it influences the professional view on design, technology and science. Communication on science, and on urban plans, always contain a perspective, and often these perspectives possess qualitative judgements, which are in themselves influenced by values. End products of both



education programs often work towards an application in practice, which is not only informed by knowledge. Values, and what it means to the author(s), are often not made clear from the start of the project, even though it determines why the choice is made to even investigate this topic at all.

Both the *Science communication* and the *urbanism discipline* often operates in a field with multiple stakeholders and backgrounds. In addition the *urbanism discipline*, often aims to create an urban design that benefits all. To be able to do this well, it is essential to understand other perspectives, and to be able to do so, it is essential to know your own. There can only be a *daar*, if there is a *hier*, and the other way around. Therefore, the act of *rooting* and *shifting*, as a combination, is seen as an improvement opportunity, arising from this research, for both disciplines. The skill of being able to do both, is seen by the author as life skill, that can be used well in the professional field of *science communication* and *urbanism*.

### 9.3 Considerations

This paragraph presents considerations for theory and practice. The described topics are not a contribution that results directly from the research questions, but they are first thoughts on what can be implemented or improved in theory and practice.

#### Theory

*Human influence on product making: an addition of the human influence on the product added to the existing design based research model*

For the design based research model, a consideration can be made to incorporate the human scale in the model. The actor-network theory (ANT) of Latour, as explained in the design mechanisms chapter, presents a perspective on society as a collective, in which everything is an actor that enters interactions (Verbeek, 2000). This perspective changes the outlook on research, in which a research outcome can be scientific performed correctly, but still be highly influenced by its (social) environment. This is certainly the case when a value is taken as the starting point of a design-based research. So, a human (actor) influences the output of the research (actor), and other way around. The author, therefore, sees it as important – for the sincerity, transparency and opening the knowledge for discussion – to show these human influences more clearly in the model.

## **Practice**

### *Values incorporate into the governmental visions of municipalities*

Designing from values in urban design and planning is seen as an interesting opportunity to approach city challenges from an overarching concept that connects with different disciplines. Even though this research mainly focuses on urban design and processes, a value can help to broaden the analysis and the design scope. In literature solutions, outside the scope of an urban designer, have been found, which are interesting for a governmental body that aims for connectivity in diversity. In July (2019) author has given a presentation to policy makers of the municipality of Rotterdam to explain provisional thoughts resulting from the research. These policy makers were part of the policy department that focus on social development. Within the municipality governmental structure, there is also a department for urban development. These separate worlds and the difficulty to incorporate social aims into urban development - as experienced, and explained by the policy makers - challenges the notion to develop a city from values incorporated through multiple disciplines. A well integrated and collaboration system between social and urban development within governmental bodies is seen as high important by the author; to be able to develop a value-driven city. In 2021 a new environmental law (*Omgevingswet*) will be introduced in the Dutch context. A first vision (*Verkenning Omgevingsvisie Rotterdam, 2018*), as presented by the municipality of Rotterdam, is hopeful, as the overarching concepts are closely related to values: *compact, healthy, inclusive, circular and productive* (Gemeente Rotterdam, 2018). This document and the environmental law will influence both the social, as the urban departments. To conclude, to be able to develop a connected city in diversity, a well integrated collaboration systems between social and urban development should be considered. This could be possibly be further developed linked to the opportunities the environmental law (*Omgevingswet*), starting in 2021 can bring.

### *Urban development as an ongoing social project*

The quote at the start of this thesis report (p. 21) of Leonie Sandercock (2014) stated that "Urbanism is an always ongoing social project." This means there is no end status, or that it never will be finished. This also means that urban design and planning always need to stay responsive. There is a difference between 'the ideal', present in urban design and urban policies and strategies, and 'the reality', present in the actual city use and residential behaviour. This difference is also referred to as

strategies (design and policies with its exercise of power), and tactics (the way individuals or groups deal with design or policies in their own way), component of the philosophy of scholar de Certeau (Reijndorp & Reinders, 2010). The difference of these two illustrates that these systems are interlinked, and responsive towards each other. To be able to adapt strategies to a way it fits the tactics of residents, periodic tests, interviews, and observations should be made, to see if the wished outcomes are present, and to which extent it is a mismatch between strategies and tactics. This notion is in line with the next consideration.

#### *Means and ends of social and physical interventions*

The author feels like too often a physical means is used by municipality and housing associations, to address a social phenomenon. An example is the experienced nuisance from youth in the neighbourhood in Schiemond, which was solved by taking away the play equipment, without consulting, or talking, with the youth. Such an intervention is shifting problems. The design element for consideration, of product and/or process (p. 180), is therefore, seen as very important. Municipality and housing associations should improve their decision-making process, and consider means and ends of social and physical interventions.

## **9.4 Limitations**

This remark present limitations related to *validation and reliability*. Limitations related to generalization were described in “Generalization” on p. 271.

### **Validation**

Validation of the general design findings of the research, the perspective and the design principles, is done via the case study area. This area has helped to check whether the perspective and the principles remain valid in practice by an applied analysis and design. The drawings are the validation by itself, which can be judged by outsiders as a functioning analysis and design or not.

First remark related to limitations, is the lack of knowledge about to which extent these findings, and especially the *design guidelines*, are operable for an urban designer in practice. This should be tested by a designer other than the author. Tests can sharpen the product and make it more

useful for urban designers. Second remark is related to the validation of the actual effect of the developed design interventions on the level of connectivity. Such a form of validation (real-life proof) is seen as difficult within the urbanism discipline, as 1-to-1 prototypes are (usually) not built. Therefore models and drawings are seen as the (scaled) prototypes. A validation of design principles in real life, asks for a longitudinal study – researching phenomena over an extended period (Babbie, 2010), in which it is still difficult to separate potential parameters that have an impact on a condition such as connectivity. A potential method to research the topic of this thesis within a longitudinal study (once one of the design principles has been actually built), is performing repetitions of the mental maps. This way it can be researched of conditions of *hier en daar* have been changed through time.

### **Reliability**

The second consideration of limitations is related to reliability. This paragraph would like to explain two: (a) One person's diversity and (b) Advocate & critic.

*(a) One person's diversity:* the biggest challenge of this research has been to formulate a perspective and a design that tackles the complexity of the topic, and with that the wide range of perspectives related to the topic, but also regarding the case study area. An attempt has been made - although it cannot be known if this happened successfully - to approach 'the truth', through a dialogue between people of differential positioning, in line with Yuval-Davis thoughts on transversal politics (Yuval-Davis, 1999). The limitation of the individual project is that all information was tried to understand and grasp by one person. One person is never diverse, which challenges the capacity to understand diversity in all its dimensions. However, two tangible steps were taken to tackle the lack of diversity as an individual. First of all, extensive fieldwork was executed, including interviews for understanding the perspectives on the case study area of six professionals and eight citizens, of which five living or working in Schiemonde area, and three outside. This offered a wide range of perspectives. Secondly, extra activities were undertaken, which are not directly part of the fieldwork ("Indirect input" on p. 40), such as conversations with professionals involved in a substantive way in the development of thoughts on urban development from a justice or social perspective. Other attended activities offered new perspectives in relation to the value of connectivity, or to the case study area. This helped to

understand a diversity of perspectives.

(b) *Advocate & critic*: the second limitations has already been mentioned in chapter 6, *design mechanisms*, which is related to the dual role of being an advocate and a critic (Collective, 2003). The design mechanism is named 'Equalizing idealism & realism', (p. 241), an attitude that approaches all perspectives, encountered from an idealism angle or a realism angle, as valid. The notion of acting as an advocate - which is often the case when a design is made based on values - can be seen as a decrease of the reliability of the research. However, as explained before, the wish for achieving the value has also been criticized. Additionally, author's evaluations and considerations regarding the variety of perspectives, are presented in a different font colour in the perspective chapter, aiming to be transparent regarding the advocate and critical responses.

## 9.5 Recommendations for further research

Several topics are seen as interesting for further investigation. The seven recommendations are labelled as (a) to (g).

(a) The first recommendation is in line with the detected limitations on generalization (p. 271). To be able to transfer the develop urban design process to other contexts, it should be tested in areas outside the Dutch and/or western context, in areas which posses less clearly present enclaves, and areas which are still undeveloped. For example, would the *value definition*, *design principles* and *analysis methods* work in an Asian country developing new built neighbourhoods?

(b) The recommendation is to further investigate possible operationalisation of the design mechanisms, so it is suitable for the urban practice. The mechanisms could potentially further developed in a tool, which can be tested with urban professionals.

(c) Thirdly, a validation-, and design- research is recommended to further develop the roadmap. It should be further developed and tested to become an useful tool for urban designers in practice.

(d) Further, the value of connectivity in diversity, can be researched in other disciplines. Especially in the domain of education and employment, although much research and knowledge about this topic is already present. Therefore, the recommendation is to research the role of education and employment for connectivity in diversity, *in relation to* the spatial discipline. This can offer opportunities for practice to further strengthen the coherence between social and spatial policies.

(e) Additionally, it may be of interest to research and design conversation methods in which individuals can set and explain their identifications, also in relation to the built environment. This research promotes to not define top-down identities for individuals, but to understand the complexity and empower citizens to set (bottom-up) identifications. However there is no knowledge or design yet on how to incorporate this perspective into research methods, such as one-to-one interviews.

(f) One of the design guidelines, related to routes and routines, makes use of the formation of social focussed real estate. However, real estate that is well connected in the fabric of routes and routines, often is of great value and asks for a high rent. Therefore, it can be challenging to realize socially driven program. The recommendation is to research and design business models on how these socially driven amenities can get a prominent place in the urban fabric, to be able to achieve amenities of connectivity in the right places in the city.

(g) Finally, it is recommended to further investigate a potential incorporation and combination of the value of access with the value of connectivity. Market forces, and sometimes municipal control, pressures the existence of economic residential diversity in a neighbourhoods, potentially resulting in an area that is unaffordable for low-income residents. This threatens the value of connectivity in residential diversity. Further research and design to tackle these mechanisms, and combine it with a design for connectivity, can bring *the just city* closer.



10



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This chapter reflects on three topics: *the project, education and personal process*. Regarding the project, it will reflect on the defined values and its work-definitions that have been set in the theoretical essay written at the start of the project. Regarding education, it will reflect on the added value of a double degree. And finally, regarding the personal process, it will reflect on the changed attitude towards, and experience of, residential diversity.

## 10.1 The Project and its values

In November 2018 a theoretical essay has been written as a first step in the thesis design process. The theoretical essay can be found in “Appendix I” on page 302. The essay describes the spatial and social conditions in the city district Delfshaven and analyses the urban developments on the basis of values of the just city index (Griffin, 2018). The essay concluded with three values: *access, connectivity* and *recognition*, and defined a working-definition for each value. The value of *connectivity* is ultimately treated as the core part of this thesis. The thesis has furthermore no longer focused on the values of *access* and *recognition*. However, the values have been kept in mind. This paragraph reflects to which extent the values, and its working-definitions, have been consciously or unconsciously met in the design and its process.

### *Connectivity*

The work-definition of the value of *connectivity* in the theoretical essay, was: (a) *places on borders for encountering diversity in culture and lifestyle*, (b) *spatial network integration of areas within the city fabric*.

In the end this research defined the value of *connectivity* more broadly, however, part a and b are seen as design goals that have been included and achieved in the design. The work-definition highlighted above, presents a spatial interpretation of the value. This work-definition is seen as met, especially in relation to what is possible to achieve within the urban design discipline. During the process, however, there have been moments of doubts regarding the capacity of space to facilitate *connectivity* in diversity. A value reaches much further than its own discipline. Therefore, education and work have been seen as of high importance as well.

### *Access*

The value of *access* has been defined in the theoretical essay as, *access: (a) to public spaces that are inclusive within the design and amenities for the diversity of users, providing residents with agency to act on behalf of their own interest, (b) to housing, including the ability to compete for housing in the community of choice, (c) to jobs and associated education, to succeed in terms of economic prosperity for all residents.*

The first part, part a, was considered in this research, and further developed in the design principles. In this thesis, this is also seen as a characteristic of *connectivity*. The other two parts of the value definition are not part of the design principles. Although, part b, did influence the research, especially in the analysis phase. The urban conditions of the case study area and its potential gentrification processes have been analysed. These potential developments are taken into account in the applied design, especially in the zoom-out scale. Thus, it has been taken into consideration, however the problems caused by these developments, are not tackled. The c part of the working-definition was not tackled, as, now, at the end of the research, this is seen as something outside the scope of the urban planner.

### *Recognition*

The value of recognition is a value that has highly influenced the thesis. It motivated to write the first essay “2.2 [A]” on page 49, ‘Approaching residential diversity’. The essay answered the question: “How to approach residential diversity, taking ethical considerations into account, so it is suitable for urban analysis and design?”

In the theoretical essay the value of recognition was defined as: *(a) an inclusive approach to different opinion, attitudes and behaviours and a non pre-given or singular view on identity, (b) an understanding of the lived experience of residents and inclusion of this understanding in urban environmental design.* Both parts of this definition are seen as met. The first part is extensively described, with a theoretical search and support, in the perspective chapter. It has formed the basis of the ambiguous perspective, as explained in design mechanism “E – Switching perspective” on page 243, named the *ambiguous perspective*. The value of recognition also functions as the foundation of the described forms of connectivity, that incorporates the ‘non pre-given or singular view on identity’. Part b of the definition, formed the motivation to execute fieldwork to a comprehensive level, and to aim for a strong incorporation of these found lived experiences into the applied design.

## 10.2 Added value of double degree

This paragraph reflects on the added value of doing a double master degree. It reflects on the two masters: Master of Urbanism and Master of Science Communication. The reflection highlights five important notions, labelled as A to D.

### *(A) Mentor perspectives*

Multiple educational perspectives have enriched the integrated thesis, this was, especially, experienced in the mentor sessions. During the 3-year master program, courses of each master were achieved separately. This thesis, however, is done by an integration of both disciplines. In doing so, the development of the thesis was experienced as a broadening of knowledge of both studies, including interesting cross-fertilizations, as described in the discussion chapter “9.2 Opportunities for cross-pollination” on page 272. The four mentors all have commented differently on the topic, which has greatly enriched it. During the process it turned out that everyone understood the research topic, however the mentors were all focused on other aspects of the subject. This has further broadened the topic.

### *(B) Appreciation of science*

To be honest, at the start of the master, the appreciation of science and technology was not so high. This was mainly caused by the view on architecture and urbanism as neither science or technology. Additionally, societal topics seems to be way more interesting than scientific or technical topics. However, discussions held during the master have changed these thoughts. In the *science communication* master, thinking about the creation of science and technology in relation to society, showed that it is all interconnected.

### *(C) Curiosity has increased*

Something unexpected is that the *science communication* triggered the development of a curious attitude. This was mainly triggered by other students that do a double degree, but a different combination. It brought me in contact with ‘experts’ who are motivated and passionate about their expertise. The *science communication* master provides an opportunity to learn and collaborate with these multiple, but diverse ‘experts’. The urbanism master made it possible to further specialize knowledge and

skills, and to become 'an expert' myself, and share knowledge on the built environment. An individual can only absorb in-depth knowledge on a few topics. Other students, and the learning environment, offered contact with in-depth knowledge of other scientific fields, and with that triggered curiosity.

*(D) Increased understanding of complexity*

The lessons learned from both masters are related to complexity. Both approach complexity completely different, and both contribute to an increased understanding of complexity. Urbanism teaches to understand all aspects that influence an urban development, from politics, to economy, to human behaviour. These lessons helped to keep considering multiple factors, which should also been taken into account in practice. Science communication, on the other hand, helped to research complexity by actually making the topic and observation's scale very small. This helped to understand different topics to an in-depth level, and to make it suitable for a proper research. And, that precisely points out the difference: *urbanism* prepared me for understanding complexity in practice related to urban development, and *science communication* helped me to understand, and design for, complexity with a research attitude.

## 10.3 Personal process

Personally, in daily life when present in the streets of Delft or Rotterdam, I experienced 'social tension in diversity', as it is so extensively present in the media. The many writings regarding polarization and politics of extreme right and extreme left, formed my perspective on diversity in the Dutch society. This also formed the motivation to do extensive research regarding analysing diversity in a justice way and the motivation to do a lot of field work.

The research, and the fieldwork helped to let go of the 'fear of labelling', and to be able to embrace human-beings in their complex form. First of all, by understanding the ambiguous perspective (as described in design mechanism "E – Switching perspective" on page 243) that promotes to perceive individuals as human beings with multiple identification. This was experienced in fieldwork as true, or as Wessendorf (2010) states: "The more people I met, the more difficult I have found easy

labelling and categorization.” (p. 20) Secondly, in contradiction to the previous notion, conversation with Reijndorp helped to formulate an unambiguous perspective on diversity – embracing the environmental perspective. Reijndorp explained that everyone is a practicing sociologist (*‘praktiserende socioloog’* in Dutch), as we all divide people into groups based on their appearance. All of this helped to be more at peace with my own *hier*, and to explore with open arms, the *daar*. So, it provided me a broader way of being (*een ruimere manier van zijn*). It is in line with Latour thoughts (as explained in Wessendorf, 201) on the notion that the author will influence the research, and the research will influence the author.

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*Wij zagen*

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*Anders*

*En velen keken*

*Hetzelfde*

*Ik*

*Ik zag*

*De stad*

*Anders*

*En daarmee ook*

*Mezelf*





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## Appendices

- I      Theoretical essay
- II     Interview protocol professionals
- III    Interview protocol citizens
- IV    Social conditions Schiemond

# **Appendix I**

Theoretical essay

# Landscape of Co-Existence

Reflection on Conflicts in Urban Spaces to Define Values of  
Urban Justice for the Delfshaven Area in Rotterdam

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**Abstract** – Western European cities are being shaped and transformed by societal developments such as migration-flux, change of economic industries and the increase of the recreational significance of cities. According to Burgers (1999) these societal developments result in different types of post-industrial urban landscapes possessing distinction in design, use and experience of space. The possible negative consequences between the societal developments and related urban landscapes, are present in the on-going dialogues on segregation, stratification and gentrification in West-European Cities. It questions *'For who to build'* and asks for a reflection on urban development from an urban justice perspective. Therefore, this essay reflects on these negative relationships in and between these post-industrial landscapes described by Burgers (1999). This is done from an urban justice perspective, reasoning from the disadvantaged groups. Following the ideas of Fincher and Iveson (2008) and the Just City Index of Harvard Design School (Griffin, 2018), the essay reasons from the perspective that conditions and important values of urban justice will differ per context. Therefore a case study is used: the neighbourhood *Delfshaven* in Rotterdam. Through a reflection on three negative relationships between the landscapes - *domination*, *disconnection* and *tension* - values and adequate definition of urban justice are being investigated. It concludes with a reflection on the landscape types of Burgers by proposing a possible new landscape type for *Delfshaven* designed from the defined values; a landscape of co-existence.

**Key words:** Post-Industrial Urban Landscapes, Values of Urban Justice, Delfshaven, Rotterdam

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## **Introduction**

In the documentary *My City, My Heart* (Mijn Stad is Mijn Hart), Malique Mohamud, writer and city entrepreneur, highlights the construction work that is being executed on a square within the city of Rotterdam. The square is being transformed from a neighbourhood playground to a *City Lounge*. It reflects the ambition of the

Rotterdam's municipality to transform public spaces - within and close by the city centre - into 'vital' spaces that attract companies and the creative class. These spaces should represent the international status of Rotterdam (Gemeente Rotterdam, 2018). On this square in transition, Malique Mohamud interviews residents who highlight another perspective on the meaning of

this public space. The square used to function as a gathering place for the residents where kids would play. But not anymore. The playground equipment is being removed as it no longer fits the new chosen appearance of a *City Lounge* (Tegenlicht, 2018).

The documentary highlights a conflict between different types of urban landscapes that are present in the larger European cities of the Western World (Burgers, 1999). The production of such cosmopolitan space as the *City Lounge* has become part of "a political strategies for managing the city" (Binnie et al., 2006). From an urban justice perspective it can be seen as unjust, because the development satisfies the needs of the 'cosmopolitan citizen' at the expense of local residents of the area. And although the documentary does not provide an objective reflection on the situation – as only one side of the story is represented – it still highlights an on-going discussion 'For Who to Build?'.

The conflict present in the *Tegenlicht* documentary, raises the question of 'what is the *right* thing to do, in other words, what is *just* urban development?'. To explore possible answers, this essay will look at urban space from a perspective of urban justice. It will not provide an overview of theories that are related to urban justice, but it aims at using it as a lens to reflect on conflicts of interests. The essay reasons from the perspective of disadvantaged groups similar to writers on urban justice – although they differ on how to achieve – as Harvey (2009) and Fainstein (2014). Following the ideas of Fincher and Iveson (2008) and the Just City Index of Harvard Design School (Griffon, 2018), the essay reasons from the perspective that conditions and important values of urban justice will differ per context. Therefore a case study is used: the neighbourhood *Delfshaven* in the west part of Rotterdam. To do so, values of justice and corresponding definition will be explored by

using the *Just City Index* developed by The Harvard Design School (Griffin, 2018). The index consists of 49 values, as an overview of values that can represent justice for a certain area or community. The essay does not aim to pin down definitions of urban justice, but explores potential values that can be of importance for the specific context of *Delfshaven*, values with a working definition - a tentative definition that can be tailored along the way.

This essay will answer the question: *Which values and corresponding definition of urban justice are important for the Delfshaven area in the city of Rotterdam?* First, three landscape types and associated social developments that are of importance for the area of Delfshaven will be elaborated on. Thereafter the possible conflicts within or between these landscapes of Delfshaven will be described. And finally, various literature will be used to reflect on these conflicts with the aim to define important values for future development of Delfshaven from a perspective of urban justice.

### **1. Urban Landscapes of Delfshaven**

Although the program and the design of the square, described in the introduction, is transformed, it keeps the same morphology. Therefore a classification of urban spaces into form is not sufficient. So, to reflect on urban developments that are in conflict, a different approach to spaces is needed. Hence, the approach of Burgers (1999) is interesting. Instead of categorizing public spaces in parks, squares and streets, he links societal development to public spaces. Focusing on larger European cities, Burgers defines six post-industrial urban landscape types that differ in design, use and experience. And although the categories are not covering the complexity of urban spaces, it can offer a first step towards analyzing relations between societal development and meaning of public space.

To be able to define urban landscape types for the context of *Delfshaven*, first some characteristics are described. The *Delfshaven* is characterized by a high percentage of citizens with a migration background, as 70% of the population has a migration background, at which the average of Rotterdam is 50% (Gemeente Rotterdam, 2018a). Beside 62% of the citizens is part of the low-income group, whereby the average in Rotterdam is 51%. The municipality of Rotterdam is not satisfied with the high percentage of low-income residents and wants to create a 'stronger' city (Gemeente Rotterdam, 2018). Therefore the municipality is aiming at attracting mid- to high-income and high-educated citizens and redeveloping urban conditions that suit this desired residents group by stimulating gentrification (Gemeente Rotterdam, 2018).

Some of the above-mentioned characteristics – such as the high percentage of migrants and this desired 'new middle class' - can be clearly found in the theory of Burgers (1999). The next paragraph will highlight the three most important landscapes and related societal development of the categories of Burgers for *Delfshaven*. These three landscapes are: *Colored space*, *Marginalized Space* and *Displayed Space*. Figure 1 (p.4) shows *Delfshaven* and the present landscapes. This Figure will guide the next paragraphs.

### 1.1 Colored Space – Landscapes of migrants and minorities

Due to an explosive increase of long-distance migration within Europe, the ethnic composition, especially in the larger European cities, has profoundly changed (Burgers, 1999). This is also the case for Rotterdam where the city has become a micro-cosmos on itself. The spatial expression of the long-distance migration flow is often visible as a concentration of migration groups. As they often live in the same city area, because cheap housing is usually not

evenly spread over the city and because of the attractiveness to live in each other's neighborhood to be able to make use of the ethnic network. Ethnic entrepreneurship in the form of shops that sell ethnic products are part of the landscape. These products or services are sold to their own ethnic community or, in a later phase, for the new urban middle class that attracted by the exotic products (Burgers, 1999). Besides shops, also cafes, tea houses and temporarily manifestations – as the Antillean summer carnival in Rotterdam (Tak, 1997 as cited in Burgers, 1999) - create the landscape of the *colored space*. Most neighborhoods of the *Delfshaven* fit the characteristics of the *colored space* (Figure 1), because of the population composition and high percentage of low-income groups.

Sometimes, when residents of the Landscapes of migrants and minorities are social, economical and spatial excluded, the landscape smoothly transition from a *colored space* to a *marginalized space*.

### 1.2. Marginalized Space – Landscapes of deviance and deprivation

In European cities the industrial oriented economies have given way for the service oriented industries. Within this industry, workers are no further being exploited (as in the industrial economy), but excluded (as in the current service industry). When the regulated economy does not provide access to a job and citizens are therefore excluded from prosperity, alternative careers are being developed (Burgers, 1999). The spatial expression of this exclusion is visible in parts of the city where concentrations are found of people who do not stand a chance in the regular labor market. Resulting in places where informal and criminal practices are present and the rest of the urban population no longer dares to come. To what extent citizens do not dare to come to places within the *Delfshaven* is unclear, but for most of

the neighborhoods the municipality mentions the present of nuisance and criminal activities (Gemeente, 2018a). When these activities and atmosphere shape the experience of the public space, it represent the *marginalized space*. A very different characteristic of the *marginalized space*, is the presence of entrepreneurial places (*broedplaatsen*). Low rental prices within the *marginalized space* make it attractive for start-ups or creative business to settle, as it requires limited investments (Burgers, 1999). These entrepreneurial places are also present in *Delfshaven*, visible in Figure 1.

### 1. 3. Displayed Space – Landscapes of Temptation

The third landscape that is relevant for *Delfshaven*, is the *displayed space*. Because of the emerging large share of the service industry within the economy, the type of employees that form the active workforce has changed as well. This workforce consists of employees that work with ideas, concepts and data. They work on the basis of flexible hours and switch smoothly between work and leisure. Hereby the city is a place for exchanging ideas, finding potential partners and maintaining relationships. The spatial expression of this workforce is visible in the rise of meeting places and living rooms within the city; cafes, restaurants and meeting rooms near traffic nodes (Burgers, 1999). Another societal development is that many members of the new middle class are characterized by having money, but a tight time budget. This results in growth of the catering industry and the retail trade: the city as a consumption paradise. This urban formation of new middle class creates new work and consumption spaces that seem to be heterogenic on a local scale, but they manifest themselves in cities often in the exact same way (Burgers, 1999; Binnie et al., 2006). Within *Delfshaven* this landscape is present in *Lloyd Kwartier* (Figure 1). The *displayed space* is visible through the

restaurants and high-income residents. Besides the currently presence of the *displayed space*, the creation of this landscape is stimulated by the municipality, as said before, aiming to make the city 'stronger'. The stimulation of gentrification by the municipality is mainly focused on the neighborhoods *Middelland* and *Nieuwe Westen* (Gemeente, 2007). It highlights an upcoming trend of *displayed spaces* (Figure 1).

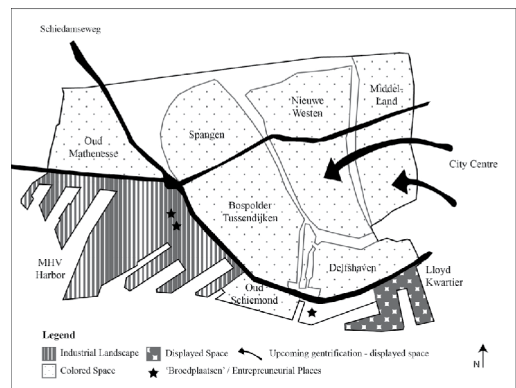


Figure 1: Exploration Map of Post-Industrial Urban Landscapes of Burgers (1999) for the Delfshaven area (source: author)

## 2. (Inter)relationships of the Landscapes

These landscapes as Burger mention can co-exist, "as transparencies on the drawing board of the urban designer." However, there can also be conflicts in or between the landscapes. First of all, one landscape can dominate the other, as visible in the *Tegenlicht* documentary described in the introduction paragraph. With *dominance* unjust development is meant: it refers to the situation where one landscape overrules the other one (which is disadvantaged) by its design and program, resulting in exclusive urban development. Besides domination, landscapes can also be disconnected. With *disconnection* both social- and spatial disconnection is meant. And last, conflicts may also exist within a landscape, resulting in tension between residential groups (Burgers, 1999).

Figure 2 shows the three types of (unwanted) negative interrelationships between landscapes.

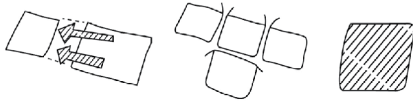


Figure 2: Three types of negative (inter)relationships: (1) Domination (2) Disconnected (3) Tension (source: author)

These three types of negative (inter)relationships are further described for the case study area and they are reflected on by using the Just City Index. This is done to further define workable definitions of values that are of importance for *Delfshaven*.

### 2.1 Domination

There are two important situations of domination for the case study. Both the *displayed space* as the *marginalized space* can, through domination, negatively influence the *colored space*.

#### 2.1.1 Displayed space dominating Colored space

The *displayed space*, as mentioned in paragraph 1, is not yet dominating the *Delfshaven* area. Nevertheless, the municipality of Rotterdam is within their city strategy focusing on attracting high-income and creative class and is therefore aiming at developing living environment that fits this population group (Gemeente Rotterdam, 2007). The example of the arise of the *City Lounges*, represent the development of a landscape where the catering industry in forms of cafes and restaurants is booming, as a characteristic of the *displayed space*. It also highlights the a domination of the *displayed space* above residential meaningful spaces. It poses a danger of exclusion, as mentioned by Binnie et al.:

The mundane activities of urban authorities that support a certain style of regeneration, or which monitor and regulate certain ('public') spaces so as to

make them 'safe' for consumers, or of business which sell products that appeal to a certain 'cosmopolitan aesthetics', can lead to unintended exclusion of difference (Binnie et al 2006: 25).

Thus, domination by the *displayed space*, might deny access to public spaces for residents that do not fit the lifestyle of this 'cosmopolitan aesthetics'. So, to be able to develop *Delfshaven* in an inclusive manner, the value of *access* is important and defined as:

*Access to public spaces that are inclusive within the design and amenities for the diversity of users, providing residents with agency to act on behalf of their own interest.*

Besides a visible and experienced domination in public space, the user of the *displayed space*, can also dominate the housing market. The municipality of Rotterdam is stimulating gentrification processes within the city, aiming to influence the population composition of the city through mixing or 'balancing' socio-economic citizens groups. By attracting high-, mid-educated citizens and the creative class, they want to make the city 'strong' (Gemeente Rotterdam, 2007). But the ambition to increase the share of middle-class household is at expense of lower income group (Hochstenbach & Musterd, 2018). After all, social mixing of different population groups is achieved by reducing the supply of cheap housing. This worsens the opportunities for low income groups to find an affordable home. So the adverse consequences of gentrification are mainly felt by outsiders who want to get a spot in the city, or movers, as youth that wants to leave the parental home. These groups are directly confronted with a less accessible and affordable housing stock as a result of gentrification processes, with possible exclusion as a result. Where gentrification initially causes mixing, it can in the long term actually

contribute to stronger segregation (Hochstenbach & Musterd, 2018; Hochstenbach, Van Gent; 2015). According to Young (1999) the process of segregation is unjust because it inhibits the freedom of people to live where they choose, or at least have the opportunity to compete for housing in the communities of their choice. Thus, with regard to the housing market, the value access is defined as:

*Access to housing, including the ability to compete for housing in the community of choice.*

### **2.1.2. Marginalized space dominating Colored space**

As stated in the previous paragraph, when the regulated economy does not provide access to a job, alternative careers are being developed. The spatial implementation are visible in parts of the city where concentrations are found of people who do not stand a chance in the regular labor market, which may result getting into criminal activities (Burgers, 1999). It results in unsafe spaces, where the *marginalized space* dominates the *colored space*. And although no hard figures are available about the accessibility for citizens of *Delfshaven* to regulated economies, in several neighbourhoods, as *Bospolder Tussendijken* and *Schiemon*, there is an increased attention for safety due to criminal activities (Gemeente Rotterdam, 2016). From a justice perspective, it is important to keep providing economics that can benefit the prosperity of all residents. According to writers of foundational economics, this means stimulating economies that first, are necessary to everyday life, secondly, all citizens regardless of income consume and finally, are distributed through branches and networks (Foundational Economics, as cited in Franke & Veldhuis, 2018). From this follows the third definition of access:

*Access to jobs and associated education, to*

*succeed in terms of economic prosperity for all residents.*

## **2.2 Disconnection**

This paragraph reflects on two types of disconnection related to *Delfshaven*. Before the elaboration on the concept of disconnection starts, some characteristics of the urban fabric are described.

The *Delfshaven*, as the Dutch word *haven* appoints, has functioned (and partly still is) as a harbor. Since a few decades harbor activities are moving out the city of Rotterdam, towards the west coast. This trend is changing the city landscape, certainly also the landscape of *Delfshaven*. Within the *Delfshaven* the harbor is still active in the *Merwe Vierhavens*, over here the landscape is, as in contrast to the post-industrial landscapes of Burgers, still an industrial landscape. However, since the '80's some other harbor areas have been transformed into housing areas, such as the Neighbourhood neighbourhood *Lloyd Kwartier* and *Schiemon* (Figure 1). These areas possess several issues, both social as spatial, related to connectivity, which are elaborated on below.

### **2.2.1 Between Landscapes and Citizens**

There are different landscape types present in the two mentioned neighborhoods: *Lloyd Kwartier* fits the *displayed space* with located restaurants and high-income residents, and *Schiemon* on the other hand, suits the image of *colored and marginalized space* (Figure 1). There is no well designed connection present in public space. The current situation exist of many boundaries, defined by Sennett (2006) as "edges where things ends". So the neighborhoods express themselves as different clusters. Clustering in itself is not wrong as people prefer to live in a neighbourhood with a homogeneous group (Dorst, 2005) And as long as it does not exclude people from access to benefits and opportunities, it can stimulate self-organization, self-esteem and resistance (Young, 1999). So



connectivity should respect the desire to live and associate with others from whom they feel particular affinity. However Disconnection can be seen as problematic. Fincher and Iveson (2008) highlight from a justice perspective that it is important to keep places connected to stimulate encounter. By encounter they mean "The ways in which different groups get to cross paths and meet up in urban contexts, and thereby get to know the possibilities for different ways of living in the city." These crossing paths can be seen as "open places where people can learn about and explore their diverse and potentially shifting identities without being slotted 'into' pre-given categories." (Healey, 2010). These crossing paths can be occur on borders, as places where difference groups interact (Sennett, 2006). To add to that, disconnection can occur between landscapes, but also within landscapes. Resident of *Schiemond* mentioned that citizens within the neighbourhood 'live on their own islands' (citizen of Schiemond, personal communication, November 15, 2018), meaning that encounter might also absent within the landscape. Concluding, the values that is important to counteract this disconnection, is *connectivity*, both between different landscapes and between citizens. Therefore the first part of the value connectivity is defined as:

*Connectivity as places on borders for encountering diversity in culture and lifestyle.*

### 2.2.2 Disintegration in the urban fabric

Next to social-spatial disconnection, the area south of the *Schiedamseweg* (Figure 1) is spatially disconnected. As said, the area has functioned as harbor and is partially transformed into a residential area. This area is not integrated into the city fabric, as pre-war residential areas, such as *Bospolder Tussendijken* (Figure 1). This disconnection can do harm to conditions of safety, which can especially do

harm to the already vulnerable neighbourhood *Schiemond*. Disconnection can cause more criminal activities, which result in (perceived) unsafe places. The urban fabric of streets has a strong influence on the possibilities for criminal disturbance. The lay-out of street patterns may cause that some streets or complete neighborhoods are less well integrated within the city than others. This has effect on the traffic flows, which not only influence social safety, but also economic vitality and street life (López & Nes, 2012). Therefore it is important to look at landscapes with accompanying streets and neighborhoods from a perspective of a network of connectivity within the urban fabric. So, the second part of the value definition of *connectivity* for the context of *Delfshaven* is:

*Connectivity as a spatial network integration of areas within the city fabric.*

### 2.3 Tension

Besides conflicts present between landscapes, there can also conflict present within a landscape. Within the *landscape of migrants and minorities* – the *colored space*, the relationship between the seated population and new residents can sometimes be tensed (Kleinhans, as cited in Ouweland, 2018). The influx of migrants is often seen as a sign of decline in quality by the seated population. The citizens who could afford it, have moved to 'better' neighborhoods. The native residents who are still living in old neighborhoods are also mentioned as the 'stayers or trapped' (Burgers 1999; Ouweland, 2018). These citizens are unsatisfied, especially related to the amount of migrants and their different lifestyle (Bergeijk, as cited in Ouweland, 2018). The values and norms that they possess are in their eyes trampled by the new occupants. To deal with the changing environment, citizens develop different coping strategies, for example avoiding the unwanted neighborhood residents or

construction new social hierarchies (Burgers, 1999). This conflict is less related to spatial components, but more to the social environment. Tension is not something that can be easily solved, and it can be questioned to what it extend it should be, as tension will always be part of *living together*. Therefore it can be seen as an always on-going project, as Sandercock (2001) calls it: “an always unfinished social project to manage our co-existence”. And although the tension does not need to be completely solved, it is ‘the shared space of cities and neighborhoods where we can enrich human life to work for social, cultural and environmental justice.’ (Sandercock, 2001). As said, the tension that results from the changed environment, express itself through different coping strategies carried out by citizens (Burgers, 1999). One of these strategies, is avoiding each other. This phenomenon is also present in *Delfshaven*, as for example in the neighbourhood *Schiemond*, where residential groups are strongly bounded as separate groups, but not mutually (Gemeente Rotterdam, 2016). This is, as said in the previous paragraph, confirmed by a citizen of *Schiemond* (personal communication, November 15, 2018): ‘Everyone lives on their own island.’ As stated before, bonding or clustering is not wrong in itself. However, it is important that citizens are open to one another, “and recognize that they dwell together in city spaces” (Young, 1999). “As together, whether they like it or not, they share common experiences of geography, environment, and the impact of wider economic, social and political processes on their region.” Young therefore advocates for *recognition*. She emphasizes on the difference between *tolerance* and *recognition*. “Tolerance is a stance of mutual non-interference—you leave us alone and we will leave you alone.” – similar to the current situation within the *Schiemond* neighbourhood where ‘everyone lives on their own island’. However, “to recognize the other groups [...] is

to affirm a relationship with them at the same time as one keeps a respectful distance, not claiming that underneath we are all the same.” (Young, 1999). Young refers to the governmental aim to achieve integration, at which the focus lies on creating one society or community. The definition of recognition of Fincher and Iveson (2008) is slightly different, as they focus on the tendency of labeling others or to make use of prejudices. They emphasize that people’s identities are not pre-given and singular, and the difference lies on the emphasis on “group” division. Fincher and Iveson say that “the recognition of diverse identities in an urban context should not assume in advance which identity and social-group categories are important” as “they are formed and re-formed as life histories and contexts evolve.” (Healey, 2010). Both the attitude to include and respect difference – as mentioned by Young – and the open-attitude towards identity – as mentioned by Fincher and Iveson, are defining the first part of the value of *recognition*:

*Recognition as an inclusive approach to different opinion, attitudes and behaviors and a non pre-given or singular view on identity.*

Another value-driven approach to counteract tension is described by Sandercock (2001). She appeals for a urban process that “moves back between an analytical mode and a narrative sensibility, to be able to communicate and negotiate urban fears and emotions, as a way to keep public sphere vital.” This can be seen as a different explanation of *recognition*, which is not about recognizing the other, but about a recognition of the lived experience of all residents. Therefore the second definition of *Recognition* is as follow:

*Recognition as an understanding of the lived experience of residents and inclusion of this understanding in urban environmental design.*

Access	<ul style="list-style-type: none"> <li>a. to public spaces that are inclusive within the design and amenities for the diversity of users, providing residents with agency to act on behalf of their own interest</li> <li>b. to housing, including the ability to compete for housing in the community of choice</li> <li>c. to jobs and associated education, to succeed in terms of economic prosperity for all residents</li> </ul>
Connectivity	<ul style="list-style-type: none"> <li>a. as places on borders for encountering diversity in culture and lifestyle</li> <li>b. as a spatial network integration of areas within the city fabric</li> </ul>
Recognition	<ul style="list-style-type: none"> <li>a. as an inclusive approach to different opinion, attitudes and behaviors and a non pre-given or singular view on identity</li> <li>b. as an understanding of the lived experience of residents and inclusion of this understanding in urban environmental design</li> </ul>

Table 1: Working-definitions of values of importance for the Delfshaven area (source: author)

## Conclusion

An overview of the developed working-definitions of the elaborated values, can be found in table 1. These values answer the research question; *which values and corresponding definition of urban justice are important for the Delfshaven area in the city of Rotterdam?* These values have arisen through a reflection on different urban landscapes defined by Burgers (1999). Three urban landscapes that are of importance for *Delfshaven* are: *colored space, marginalized space and displayed space*. These landscapes can be in conflict by negative (inter)relationships, as *domination, disconnection and tension*. To tackle these possible negative relationships values have been defined. These definitions are not developed to pin down justice, but to be used as working definitions for the design of upcoming urban development in *Delfshaven*. The definitions are allowed to change, as urban justice is an on-going dialogue. As Sandel (2010) says: "Moral reflection is not a solitary pursuit, but a public endeavor."

Getting back to the documentary *My City, My Heart*, Malique Mohamad highlights besides the *City Lounge* square, also the coffee place *Espresso Dates*, owned by *Alia Azzouzi*, possessing a Moroccan background. Visitors that are unfamiliar with the place and that are confused by the culture-neutral interior, ask her 'Is this a Moroccan place?' 'No', she answers: I am

Moroccan, my husband is Pakistani and this place is a Rotterdam's coffee place (Tegenlicht, 2018). The dialogue shows a 'migrant' enterprise that does not fit Burgers post-industrial landscape in use, design and experience. And when you leave *Espresso Dates* and move towards the southwest of *Delfshaven* you might enter the *Dakpark*, a nicely designed park with a greenhouse on top. A greenhouse can be seen as a Dutch symbol, but in *Delfshaven* Arabic women run the place, where many residents enjoy their breakfast with Turkish thee. These examples might highlight a new landscape, that is not present yet within the sixth division of Burgers. Malique Mohamad calls it Rotterdam as a place for "superdiversity" (Tegenlicht, 2018). This landscape might possess a new use, design and experience of public space. As Sandercock (2002) says: "within dominant society there are always cracks in which other realities begin to take shape." The values written in this essay aim to contribute to a further shaping of a new landscape; a landscape developed from a justice perspective. Spaces that provide *access* in an inclusive manner, that *connects* different landscapes and citizens groups and where tension is being transformed into *recognition* as an always on-going social project. A landscape of co-existence.

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## **Appendix II**

Interview protocol professionals

## Interviews Professionals

Some of the professionals that have been interviewed, are mainly active and involved within the neighbourhood of Schiemond. Others are involved in the urban development processes happening in the surrounding of Schiemond. The following interviews have taken place:

Otto Zwetsloot - Wijkmanager Schiemond, Gemeente Rotterdam (OZ)  
Fatima Ergin - Wijknetwerker Schiemond, Gemeente Rotterdam (FE)  
Necati Nakcahuseyin - Sociaal Beheerder Woonbron in Schiemond (NN)  
Rachied el Zohri – Locatiebeheerder Huis van de Wijk Schiemond (RZ)  
Tanja Vis - Projectmanager Stadsontwikkeling, Gemeente Rotterdam, involved in the development of the Kroonlocatie (TV)  
Yffi van den Berg – Concept developer ERA Contour, involved in the development of the Kroonlocatie (YB).

And another conversation with professionals related to the case study area, has taken place later on: Nanna van der Zouw, Projectmanager Stadsontwikkeling, Gemeente Rotterdam, involved in the development of M4h area and Walter de Vries, Urban planner Stadsontwikkeling, Gemeente Rotterdam, involved in the development of M4h area.

The interviews possess multiple aims:

- (01) understanding the perspective of professionals on the social conditions within Schiemond
- (02) understanding the professionals perspective on the concept of social cohesion.
- (03) understanding the spatial conditions and the new planned urban development in and surrounding Schiemond.

### Questions

#### *Beroep*

Wat houdt je werk precies in?

Hoe lang ben je actief bij het gebied betrokken?

#### *Geschiedenis*

Hoe heeft dit gebied zich ontwikkeld, van jaren 80, aan?

Sociale en ruimtelijke veranderingen?

### *Huidige Sociale situatie*

Wat is jouw kijk op de sociale situatie van Schiemond?

Wijkbeleid zegt; sociale cohesie binnen groepen, maar niet onderling. Hoe kijk jij daar tegenaan?

Wie zijn deze groepen?

Hoe uit de binding binnen groepen zich?

Is er spanning in het gebied aanwezig?

Waarom heb jij de wens voor sociale cohesie?

Wat houdt dat voor jou in?

Hoe denk je dat sociale cohesie zich uit?

Wanneer heb je sociale cohesie bereikt?

Wat bedoel je met actieve bewoners?

Waarom is dat belangrijk?

Wanneer zijn bewoners actief?

### *Gebiedsontwikkeling*

Toekomstige gebiedsontwikkelingen rondom Schiemond?

M4H, Kroonlocatie, Dakpark?

Toekomstvisie woningbouw Schiemond?

## **Processing**

Applied Codes regarding the concept of 'social cohesion'

### 1. Sociale Cohesie

#### a. Social Network

- i. To know each other
- ii. Care about each other

#### b. Attitude

- i. Addressing Responsibilities
- ii. Respect and consider each other  
(in Dutch: rekening houden met elkaar)

#### c. Collectiveness

- i. Common goals and doing something together; a shared activity





## **Appendix III**

Interview protocol citizens

# Interviews Citizens

## Qualitative Interview Outline

*\* Vastleggen: wat tekenen mensen zelf, en wat tekenen ze erbij aan de hand van vragen.*

*[intro]*

*[koekje/taart]*

*[opnemen?]*

*[deel 1: verleden]*

Mogelijke vragen

Mag ik vragen, wanneer u bent geboren en waar?

Bent u daar ook opgegroeid?

Wat voor wijk groeide u op?

Waar heeft u gewoond totdat u naar Schiemond kwam?

Waren die wijken heel anders dan waar u bent opgegroeid?

Wanneer kwam u wonen in Schiemond?

Waarom kwam u naar Schiemond?

Wat waren uw verwachtingen?

Hoe zag uw leven eruit toen u net in Schiemond kwam wonen?

Groot verschil tussen wijk waar u bent opgegroeid/gewoond heeft en hier?

Is uw leven, vanaf het moment dat u hier kwam wonen tot nu, veel veranderd?

Is het gebied veel veranderd?

Heeft u gewerkt/werkt u nu? / kinderen?

*[deel 2: heden]*

### **Tool: Mental Maps**

Ik ben benieuwd hoe uw dagelijks leven eruit ziet? Zou u dat kunnen tekenen. Hoeft niet netjes, of kunstzinnig. [Hier een voorbeeld]Hoeft geen mooie tekening te zijn, en op een manier die voor u werkt. Ik heb hier een vel en wil vragen of u uw huis wilt tekenen, wegen die u neemt, gebouwen en plekken waar u komt.

// vel 1 //

Tweede tekening; Meer uw beeld van de wijk en de omgeving, hoe ziet u dit? Zou u een tekening kunnen maken van Schiemond en de omliggende wijken- (niet per se waar u dagelijks komt, uw beeld)?

// vel 2 //

Mogelijke vragen

[zwijgen, min 5 sec]

[herhaling] oh,... u pakt de tram?

Blijft u daar lang?

Met wie bent u daar?

Wie komt u daar tegen?

\*\* Mogelijke verdieping naast routines en routes, is rituelen (verjaardag, trouwen, geboorte, overlijden, diploma halen, feestdagen (nationaal/cultureel), evenementen (1x per jaar?))

*[deel 3: Toekomst]*

Geen tool; mental maps liggen wel nog op tafel, kunnen erbij gepakt worden.

Hoe ziet uw woon-toekomst In Schiemond?

Waar zou u willen wonen? Hoe zou u willen wonen?

Welke activiteiten vullen dan uw dagelijks leven?

Ziet uw dagelijks leven er dan anders uit? / Doet u dan andere dingen?

Voor u zelf? Kinderen?

Hoe ziet u de toekomst van Schiemond?

*[deel 4, Afsluiter: Metaforen]*

Even op een andere manier naar Schiemond kijken...

Als Schiemond een dier zou zijn

Als Schiemond een stuk fruit zou zijn

Als Schiemond een automeerk zou zijn

Als Schiemond een muziek instrument zou zijn

Als Schiemond een kledingstuk zou zijn

// Bedankt! //

// Hoe vond u het? //

// Contactgegevens; mail //



## **Appendix IV**

Social conditions Schiemon

## Extra information | Social Conditions Schiemond

*The governmental documents of the municipality of Rotterdam related to Schiemond mention that social groups within the neighbourhood are very close, but the social cohesion between these groups is really lacking (Gemeente Rotterdam, 2016). This statement is also part of the problem statement: 'disconnection between citizens within a defined area'. The policy document of the municipality formed the starting point for analyzing Schiemond. Interviews were conducted on the site to discover the actual and many-sided stories about Schiemond. During the interviews professionals and citizens have been asked to reflect on their perspective on the current social conditions of Schiemond. The following paragraphs highlight the most important conclusions.*

### **No strong tension**

Professionals mention there is no strong tension present between citizens within Schiemond. Tension between citizens has been an issue in the past, especially between autochthonous and citizens with a migration background. According to professional (NN), currently citizens have accepted the changed demographic balances within ethnic background. Two professionals (NN, FE) explain that in case there is a case of tension, it is caused by a non-understanding of behaviour. An example is that residents with Islamic faith throw bread out of their houses into the public space. For them bread is holy and it needs to be given back to mother earth. However other residents do not understand this behaviour and are annoyed by it.

### **Disconnection**

Professionals do mention a disconnection between citizens. This disconnection is present in a form of non-interference. Therefore there is a wish for more social interaction. This is not seen as an urgent problem, but is seen explained as a step towards a more ideal situation.

One professional (FE) mentions the positive sight of those strong social networks between citizens of one ethnic background. These networks sometimes form the reasons why citizens do not want to move out of Schiemond. Professionals also mention that the non-interference attitude of citizens of different social groups is not a specific condition for Schiemond, but it is the social conditions for many places within Delfshaven, or even of the Dutch society (RZ, NN, OZ).

