

Neighbourhood Stories

FINAL BACHELOR PROJECT

Industrial Design | Transformative and Inclusive Practices

TU/e EINDHOVEN
UNIVERSITY OF
TECHNOLOGY

J.O. Funnekotter
0949863 | s159332

JUNE 2019

Coaches | C.C.M. Hummels, B.J. Hengeveld

Experts | C.L. van den Bremen

Clients | ZET

Gemeente Breda

Provincie Noord-Brabant

Index

Executive summary	3	Conclusion	36
Prologue	4	Reflection	37
Introduction	5	References	40
Project goals	8	Acknowledgements	42
Process	11	Appendices	43
Discovering		Appendix A: Expert interviews	
Defining		Appendix B: Analysation tool 15 April 2019	
Developing		Appendix C: Analysation tool 1 May 2019	
Delivering		Appendix D: Data co-session	
Value Proposition		Appendix E: Benchmarking	
		Appendix F: Value Proposition Canvas	
Discussion	32		

Summary

This report describes the process of my **Final Bachelor Project**, at the Faculty of Industrial Design of Eindhoven University of Technology. The context for this project, was urban area development in a specific neighbourhood in Breda, "**Fellenoord**". The challenge was for the municipality (Breda) and province (Noord-Brabant), to improve and increase citizen participation. A collaboration of the **municipality, province and ZET**, was started, in order to investigate the best possible ways to reach this goal.

With my project, I aimed at contributing to the process of getting to know the neighbourhood and finding out what could **connect the government and residents**, to finally design a system or product. I interviewed experts, to gain knowledge about, among others, spatial planning, the neighbourhood and placemaking. I ideated with fellow students, conducted field studies, research and benchmarking, to define my design.

The final result is a combination of a **physical tool**, that facilitates the conversation between government and citizens, and a **digital platform**, in which the collected data is visualised in layers.



Fig. 3: Prototype

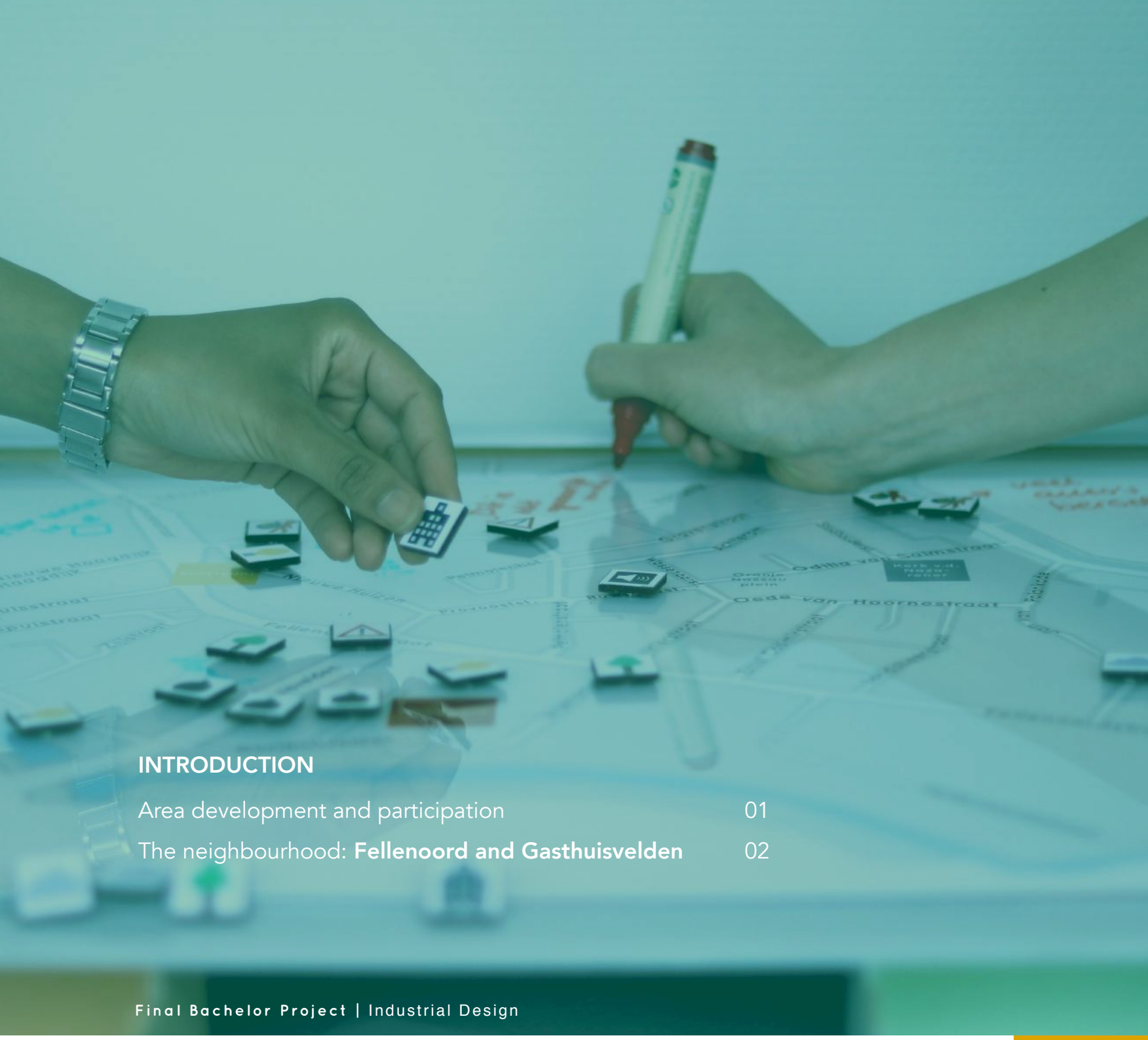
Prologue

The squad "*Transformative and Inclusive Practices*" appealed to me, because there is a huge emphasis on (complex) societal challenges that come with the rapid economical and technological developments that are taking place in the world. I find this the most interesting direction to focus on as a designer.

When Cindy van den Bremen (liaison of the squad, social designer at ZET and social design entrepreneur) offered me to collaborate with her in a social design project about participation in a specific neighbourhood in Breda, I was immediately motivated and enthusiastic. In my Vision and Identity, I stated that I am highly interested in communication between humans, on both an individual and group level.

This particular project, offered me the opportunity to connect two different worlds: the government and citizens. Furthermore, it allowed me to work closely together with all stakeholders, within a topic and context that was completely new and challenging.

After the bachelor Industrial Design, I am going to do a Psychology master, which is connected to this User & Society-focused project, as well. This squad fit with my Identity as a designer, interests and future plans, which made it the perfect bridge between finalising my bachelor and starting my master.



Introduction

INTRODUCTION

Area development and participation	01
The neighbourhood: Fellenoord and Gasthuisvelden	02



Area development and participation

The context of this project, is urban area development in a neighbourhood in Breda.

More specifically, it is about citizen participation in area development in an urban setting.

Citizen participation appears to be a complicated issue, for both government and citizens. As I learned from people working at the municipality and urban planners, participation now usually is unpopular, lacking efficiency and often focuses on negative issues (Appendix A).

Especially with the upcoming Environmental Planning Act in 2021 (Rijksoverheid, n.d.), citizen participation will become an increasingly more important part of decision-making in area development. In Breda, the province and municipality want to increase and integrate citizen participation more. The main issue is that there are no real guidelines yet, and it really depends on the situation and neighbourhood, how participation should be approached. The province and municipality want to, but do not exactly know how. The approach at this very moment is too “ad hoc”, with a lack of overall vision and structure.

The neighbourhood: Fellenoord and Gasthuisvelden

"Fellenoord" is a neighbourhood in Breda, close to the centre of the city. It is an area with a rich history and strong character. The average income is relatively low, compared to the rest of Breda and the average of The Netherlands (*Informatie Buurt Fellenoord*, 2019). Fellenoord is surrounded by the area named Gasthuisvelden (Fig. 5). The foundation for the military barracks was laid in the area in 1640 (Erfgoedweb Breda, n.d.) and the tax office and courthouse used to be situated in Gasthuisvelden, as well. In the past, this was not the most popular and appealing place for citizens to visit.

Plans are being developed to make this an attractive, inviting area. The challenge for the province of Noord-Brabant and the municipality of Breda is to let the residents of Fellenoord participate in the process of rebuilding Gasthuisvelden.

In order to investigate what works for this specific neighbourhood, the province (Noord-Brabant) and municipality (Breda), started a collaboration with ZET. ZET is a company that specialises in participation, inclusion and social innovations, for governments, companies and organisations (ZET, n.d.) The goal of this project was to understand, get to know and be visible to the residents of Fellenoord, in order to investigate how participation could be increased and improved. This is where I joined the project group, with my Final Bachelor Project, in February. The main goal for me was to design a system or product in this context, that, hopefully, could contribute to the process of increasing and improving participation, in this specific neighbourhood.



Fig. 5: Gasthuisvelden (Havermans Hielkema Architecten, 2016)

Especially in the first part of my project, I worked closely with Cindy van den Bremen (social designer at ZET and social design entrepreneur, who introduced me to this project) and her intern, Kyryn van IJzeren. We attended the meetings in Breda together, collected insights and information and made it visual in our office in the Teruggave building in Breda. Cindy and Kyryn have both been a great inspiration and support to me, with their knowledge and skills, and therefore, helped me a lot in this project.

Goals

PROJECT GOALS

- Setting up a user test/field research on a bigger scale 01
- Coding my own website 02
- Making a visualization of data 03
- Learning how to do a project on my own 04
- Being more structured and productive in my planning and approach 05
- Discovering the next step after my bachelor 06

In my Personal Development Plan for the Final Bachelor Project, I stated the following goals:

Setting up a user test/field research on a bigger scale

(User & Society, Math, Data & Computing)

I want to set up a well-organized user test or field research, (mostly) by myself. I want to apply my knowledge of approaches and information about dealing with target groups. The user test/research (or both) that I want to set up, should include a good location, well-thought through questions or assignments, taking into account ethics, using the right recording material. I will need to have a clear idea about the information I would like to get out of it and how that will help me in my project. The data I will collect from doing user tests, needs to be documented properly, in a way that it can help me get relevant information in my project. I will write a plan and document the process and results of the research.

Coding my own website

(Technology & Realization, Creativity & Aesthetics, Math, Data & Computing)

As I have not focused that much on technology in my projects the past few years, I would like to code my own website, throughout my project. This is useful to keep training my programming skills, have some variation and document my processes in the past and present. At the end of the semester, I want to have a well-functioning website with my own clear style, that I can use to demonstrate my portfolio.

Making a visualization of data

(Math, Data & Computing, Technology & Realization, Creativity & Aesthetics)

If there is an opportunity to do so, I want to build a physical or digital product, visualizing interesting data, in a context that is relevant for the people in the environment.

In my Personal Development Plan for the Final Bachelor Project, I stated the following goals:

Learning how to do a project on my own

(Professional Skills)

Although this might sound a bit vague and obvious for a Final Bachelor Project, it is a really important part of my development this semester. I am a real team player, and although I can take the lead in a group, it is not the position that I feel most comfortable in. I rely a lot on other people's opinions and wishes, I want to take it all into account. The challenge for this semester is to surround myself with the right people to give me feedback, but still making this project my own and trusting my own decisions. To reflect on this, I will document the process of decision-making and involvement of other people, every week.

Being more structured and productive in my planning and approach

(Professional Skills)

In my past projects, I had a team to rely on when it comes to planning and meetings. I always plan and motivate a team, but I feel like I could still improve in the part of actually doing it. Even while working together closely with a company and stakeholders, I need to be more structured and push myself to get things done. For this goal, I will make a global planning for my Final Bachelor semester, plan weekly meetings with my project coach, document my learnings every week and reflect on them, and use the Transformative Practices framework to make it visual.

Discovering the next step after my bachelor

As I have a very broad interest, it can be difficult for me to choose a direction in my educational path. I know that I want to continue studying and do a master. During this semester, I will explore the possibilities by visiting information days, asking fellow students, travelling to universities abroad. In addition, my Final Bachelor Project itself will have a great impact on my decision. Social design is the field in design that attracts me the most, and I want to discover whether I want to continue studying and working in that field. By the end of the semester, I want to be enrolled in a masters course.

I have used the Double Diamond as a framework for my process:

Discovering, Defining, Developing and Delivering.

(The Faces of Amnesty, n.d.)

The context for my Final Bachelor Project was quite complicated. In this project, there were many fields to discover, and even so, many stakeholders involved. The government system, citizen participation (both in general and mostly specifically for area development), the residents of this specific neighbourhood, et cetera. In order to find out where I could be of added value, I spent quite a big part of my process, discovering all the different roles, processes and bottlenecks in Fellenoord.

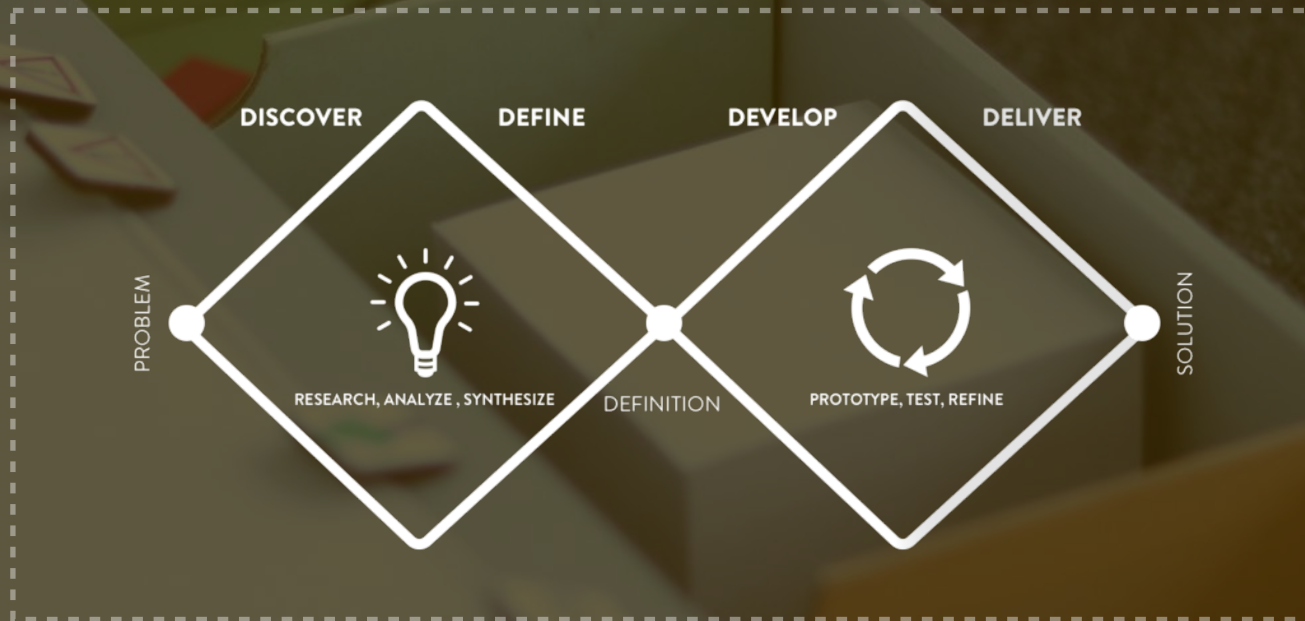


Fig. 8: The Double Diamond process (Faces of Amnesty, n.d.)

Process

DISCOVERING

Introduction to the context

The first steps into getting familiar with the whole system in which I would be operating, I was introduced to the project by Cindy van den Bremen. She explained how the biggest challenge was to build a bridge between the government (the decision-makers) and citizens (the decision-experiencers). The main goal in this specific context, was to let the residents of Fellenoord both be involved in decision-making and profit by the developments in the area of Gasthuisvelden. For the area development of Gasthuisvelden, magazines are published, to update residents about the progress. I dived into the magazines, to find out what the role of residents input had been so far. It turned out that residents were asked about their dreams and visions for the area, but it did not become clear how their input would be taken into account in the realisation of plans.

Getting familiar with the context

Neighbourhood breakfast

In the second week of the project, I went to a monthly breakfast event in the church in Fellenoord, with Cindy van den Bremen and Kyrin van IJzeren. Here, we talked to residents of the neighbourhood, in a low-threshold way. The main topics that were discussed were how they experienced living in the neighbourhood, what the bottlenecks were and how much they knew about the developments in Gasthuisvelden. In addition, it was a step in becoming more visible in the neighbourhood and gaining the trust of the residents.

From what I had learned in the very first week, the initial direction for my project followed:

//

How can citizen participation become more interesting and attractive for both government and citizens? How do we connect those two worlds?

From here on, exploration of the context and problems continued.

Meeting with the province and municipality

Discussion about collaboration. Better idea of how they work and what rules need to be taken into account.

Early on in the process, Kyrin van IJzeren and I attended a meeting with people from ZET, the municipality of Breda and the province. In this meeting, it became more clear to me how the government system works and that they are attached to many rules and restrictions. Something that was interesting as well, was that making things visual (in this case, a timeline of the process so far, designed by Kyrin van IJzeren), made it a lot easier for everyone to grasp the process and discuss it. Here, although just a little, the added value of design became clear.

DISCOVERING

Expert interviews

In order to get more familiar with the context and citizen participation, I attended a couple of expert meetings. Officials of the municipality of Breda (Ingeborg Hoevenaars, from Neighbourhood Affairs, and Peter van Schie, from Spatial Planning) explained about the history and culture of Fellenoord and Gasthuisvelden (Appendix A); I reached out to other professionals, to learn more about area development, the current processes of citizen participation, approaches, tools and existing platforms (Appendix A).

Key learning points

- It is a huge challenge for both governments and citizens, to experience participation as a positive and helpful process. Trust is an important factor for this feeling.
- Fellenoord is quite a closed neighbourhood, where different groups of people do not blend either. The barrier to connect with areas surrounding the neighbourhood, is high.
- The history of the neighbourhood is still noticeable in the ambience. It shows in the culture, attitude of residents and the division of resident groups.
- There have been many (art) projects in the neighbourhood and there are a lot of existing tools and methods to improve the process of citizen participation. I will elaborate on the relevant tools and projects in the benchmarking section (Appendix E).

Benchmarking and research

Besides speaking with experts, I performed literature research and benchmarking. I went through papers about citizen participation, area development, inspiration for how to operate in neighbourhoods, placemaking and connecting government and citizens.

I learned about Kees Dorst's Frame Innovation and the upcoming importance of design thinking in public sector issues, in "Designing With - in Public Organizations", by André Schaminée. His book taught me how design thinking could lead to interesting solutions in the public sector, but that there is still quite some skepticism about this approach of problems in that context (Schaminée, 2018).

DISCOVERING

Benchmarking and research <cont>

Participation in urban area development has been done in many different ways. In the Dutch Achterhoek area, smartwatches were used to stimulate people to give their input for area development, based on the location that was detected. This way, they would think about improvements for a specific location, while being at that same location (Ernste & Meijer, 2019).

A more low-threshold level example of neighbourhood participation, is the "Maak kennis met mijn straat" (i.e. "Meet my street") project, by the University of Wageningen). They handed out cameras to residents, to let them introduce others to their neighbourhood, by making videos in their living environment.

Office in Teruggave building

To be able to operate in the neighbourhood, ZET was provided an office space in the old tax office - the "Teruggave" building (about which was explained more in the expert meetings, Appendix A). Cindy van den Bremen, Kyrin van IJzeren and I gathered all the useful information about Fellenoord, categorised and stucked sheets to the walls in our office (Fig. 9, Fig. 10). This way, our insights became clearer to us, it was inspirational and it facilitated conversations with people we would meet in the office.

These stories were used to get a better idea of how residents experienced the neighbourhood and what characterised their living environment (CEMA., 2014). There are many different examples of (participation) projects in neighbourhoods and tools, that will be further discussed in the benchmarking section (Appendix E).

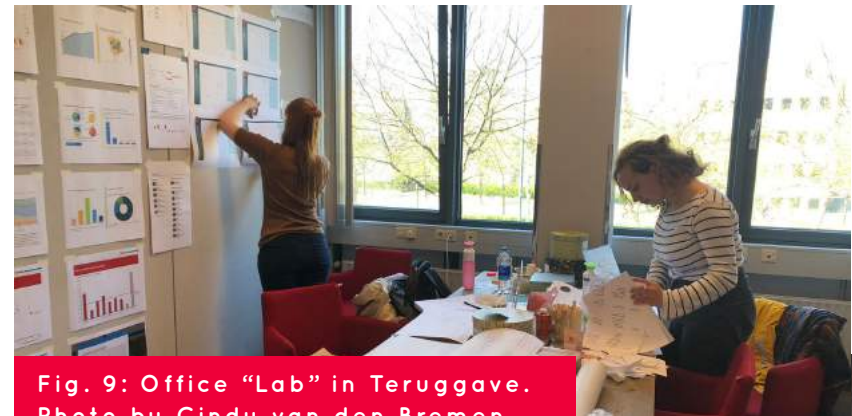


Fig. 9: Office "Lab" in Teruggave.
Photo by Cindy van den Bremen



Fig. 10: Office "Lab" in Teruggave.

DISCOVERING



Fig. 11: Session Teruggave



Fig. 12: Session Teruggave



Fig. 13: Stakeholder analysis



Fig. 14: Session Teruggave

Session tour in Teruggave with officials of municipality Breda: identifying missing stakeholders, stories and values.

To update the officials of the municipality about our process, we invited them to our office in the Teruggave building. In this session, we highlighted our findings and what we thought was outstanding, such as crime numbers. I walked them through the office and they could add stories and information. We also identified key figures in Fellenoord and divided stakeholder roles - who is involved on what level? (Fig. 13, analysis model by ZET)

DEFINING

Ideating

In an early stage of the project, I phrased the goal of my design: **connecting the government and citizens and making participation more interesting to both parties**. Still, this was a broad direction, and I needed to get more specific. After speaking with a lot of people, doing research and getting a grasp of the context, it was time to ideate.

I had to decide whether I wanted to approach the solution, with the focus on citizens, the government or both. From the interviews with experts (Appendix A), it became clear that it was necessary to turn participation into something fun and low-threshold, especially for citizens.

I came up with several ideas, such as a card game, a board game, "fluisterhuisjes" (i.e. "whispering houses"), building a physical version of the Sims, creating a huge physical mood board in the neighbourhood, and, finally, a conversation tool combined with a platform.



Fig. 15: Sketches

DEFINING

Inspiration: “Stichting Ik Wil”-tool

On 14 March 2019, Cindy van den Bremen attended the opening of the new community centre in Fellenoord. In order to identify residents’ needs, she used the tool that was designed for “Stichting Ik Wil”. The interaction works as follows:

Residents can place house icons in a printed map of their neighbourhood, triangles at locations with bottlenecks, and write ideas on the cloud papers. This tool inspired me for the first version of my concept, that I presented at the midterm Demo Day.

Midterm Design

My midterm concept was a physical map of the neighbourhood, with different layers for indicating different themes/bottlenecks, combined with a digital platform.

For the midterm pitch, I designed a clean, basic map of Fellenoord, glued on foam board (Fig. 18). Multiple perspex boards with different icons on each board, represented the theme layers. In the pitch, I explained how I would use the physical map as a conversation tool with residents and the digital platform for the municipality.

I noticed that my design was not clear to many students and other coaches. This was due to several factors:

- The topic is complicated; if you are not familiar with the context, it is hard to grasp the problem and solution in just two minutes. The design needs some explanation, because it is part of a system, and not just a product on its own.
- I did not have a clear picture of how it would work exactly, how it would be used and by whom.



Fig. 16: Tool “Stichting Ik Wil”



Fig. 17: Tool “Stichting Ik Wil”



Fig. 18: Midterm poster and design

DEVELOPING

As I had a first version of my design, I wanted to define the content and the looks of both the physical tool and the digital platform. The feedback from the midterm Demo Day, also made clear that I needed to specify all aspects of my concept. The following steps, moving on from this point, were:

- ◆ Defining the context of the physical conversation tool. Who would use it, where and how? What would be the added value of this conversation tool?
- ◆ Making a link from the physical tool to the digital platform

- ◆ Defining what the digital platform would look like and how it would work. What data should be visualised and in what way? Who would use the platform and how would the data be collected?
- ◆ Benchmarking existing systems, products, tools and methods that would facilitate communication between government and citizens.

I did more expert interviews, co-sessions with fellow students and validated with both the municipality and residents, to further define the concept.

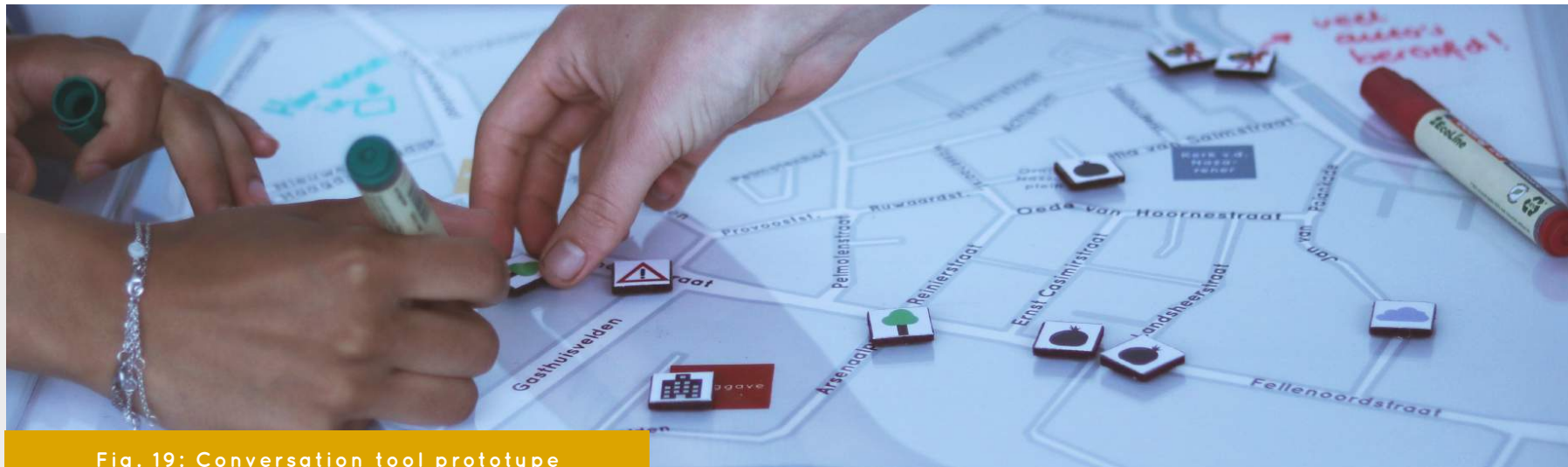


Fig. 19: Conversation tool prototype

DEVELOPING

Identifying residents' bottlenecks, experiences and needs in the neighbourhood of Fellenoord

Session Teruggave 15 April 2019

We had the great opportunity of joining an event where the history special of the Gasthuisvelden magazine was launched. Again, we printed a map (this time, one that I designed), and used the "Stichting Ik Wil"-tool. The evening turned out to be a great success; many people approached us and shared their experiences with us and each other. It turned out that the officials of the municipality were also really enthusiastic (Appendix A). The analysis can be found in Appendix B.



Fig. 20: Launch Gasthuisvelden Magazine Special. Photo by Jorgen Janssens

DEVELOPING

Expert meetings: defining the concept

To decide which components should be part of the design and what should be taken into account, I reached out to more experts. I met with architect Aart Wijnen, who has extensive experience with participation. From him, I received advice about operating in neighbourhoods and came up with a new concept (Appendix A).

We had another session with the municipality, in which I had the opportunity to validate my concept and ask the officials for input. I presented my initial concept and the concept that I created with Aart Wijnen (Fig. 21), and all were in favour of my initial

concept: the physical conversation tool, combined with a digital platform. I also inquired them about the themes (layers) that they would want to see in the digital platform (Appendix A).

To gain more knowledge about the software that is used by urban planners and the department of Spatial Planning at municipalities, I interviewed geographer Wout Ritzema. He explained GIS (Geographic Information System) to me, and the importance of that software for my tool. In addition, he advised me about future steps, how my tool could improve and how it could be used in practice (Appendix A).

Co-sessions with fellow students

As I was doing this design project alone, input from fellow students turned out to be really valuable. The co-sessions I had with other design students, mostly helped me filtering, defining features and think of future steps.

Filtering, focus and process

Brainstorming and discussing with fellow students, really helped me zooming out and refocusing on what was important to me. Because I was part of a “bigger project”, I tended to forget what my own design process was. Co-sessions with students helped me making decisions in which target group I should focus on, which designs would apply better to the target group and what steps I should take next in my process.



Fig. 21: New voting concept, co-sessions with fellow students.

DEVELOPING



Fig. 22: Peter Meeuwen, owner of pet shop Haagdijk
Fig. 23: Results of field studies 1 May 2019

Technology and data input

In another co-session with a fellow student that is experienced in working with data, we came up with technological opportunities for my design (Appendix D). The outcome is explained in the Future Steps in the Discussion (p. 33).

Field studies in the neighbourhood

I went to perform field studies in the neighbourhood of Fellenoord, both alone and with fellow student Loes Voermans and Kyrin van IJzeren. The analysis of the field study I did alone, can be found in Appendix C.

Benchmarking

After collecting lots of projects, tools and papers about citizen participation and area development, I combined my findings in one document. I took all the relevant aspects of each project or tool, and clustered them, in order to categorise the features. The whole process can be found in Appendix E. Combining these findings with the insights from the expert interviews (Appendix A), I created an advice document for interacting with the neighbourhood of Fellenoord and participation in general.

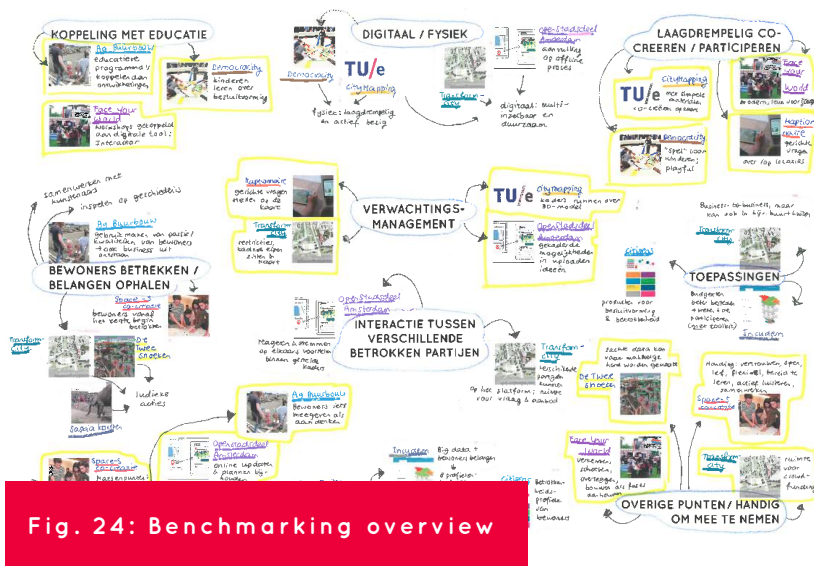


Fig. 24: Benchmarking overview

DELIVERING

The final design, was the next iteration on my midterm design. It still consisted of two parts (Fig. 25):

- ◆ A physical conversation tool, that could be used when walking around in neighbourhoods, or at events such as the magazine launch on 15 April 2019 (Appendix B), to collect stories of residents, their bottlenecks and positive experiences in the neighbourhood. It had to be low-threshold, facilitate conversation, not take over (advantage; real interaction, visibility).

- ◆ A digital platform in which the collected data could be documented (manually) and analysed, in order to get a better picture of what is going on, where in the neighbourhood.

Collecting the data had now been done by an external party (ZET), in collaboration with experts and key figures. In the future, officials of the municipality could collect data themselves.

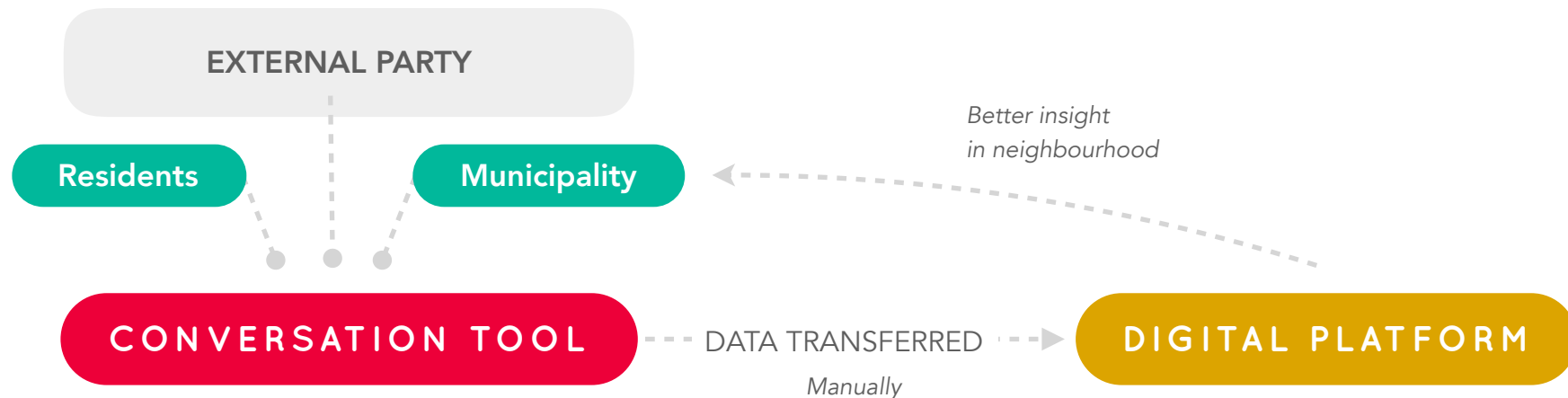


Fig. 25: System design

DELIVERING Digital platform

Content

Based on the input of the municipality (Appendix A) and the analyses of the sessions I did in the neighbourhood (Appendix B, Appendix C), I selected themes that I wanted to integrate into the first version of the platform:

SAFETY: traffic, feeling unsafe, crime and nuisance

PHYSICAL: need for nature, trash, routes and buildings that need renovation

SOCIAL: playing children, key figures, parochial domain (social meeting locations) and resident profiles (created by Cindy van den Bremen, Kyrin van IJzeren and theatre maker Heleen van Dooremalen).

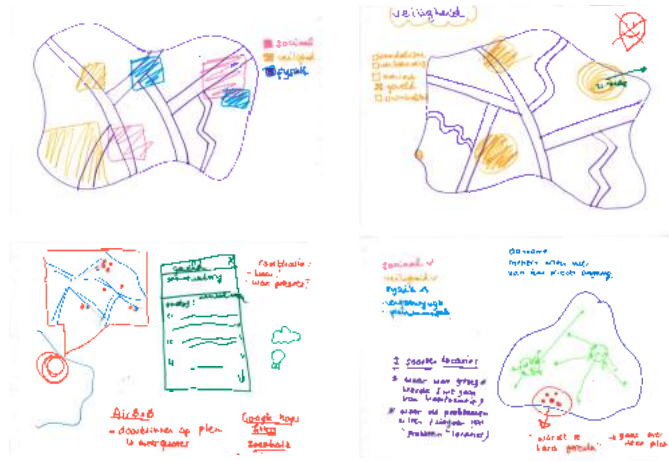


Fig. 26: Platform sketches

Inspiration and design roadmap

With the help of UI/UX expert Floor van der Sluis (Interaction Designer at Wehkamp), I made a roadmap for designing the platform. For inspiration, we looked at websites such as Google Maps (<https://www.google.com/maps/>) and Airbnb (<https://www.airbnb.nl>), that use maps for visualising data/information.

At my internship, I was introduced to Scrum (Scrum.org, n.d.); a method that is used by development teams, to build products. Scrum for apps or platforms, includes creating user stories. A user story defines a need or interaction that is necessary in the platform. For example, a user story could be: "As a user, I want to see a home screen", or "As a user, I want to be able to navigate back to the home screen". I made user stories for the platform, based on the input of the municipality, Floor van der Sluis, and the inspiration from other websites, to prioritise the interactions that I should design in my platform (Fig. 27).

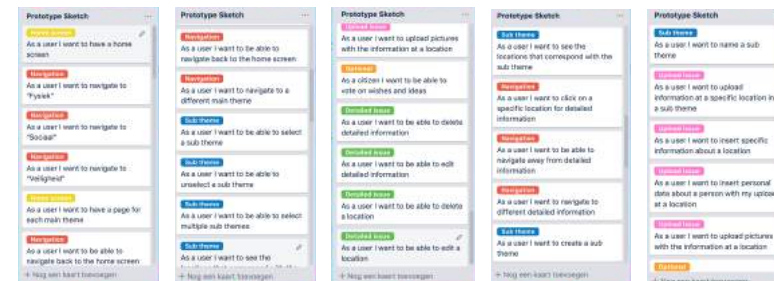


Fig. 27: User Stories

DELIVERING: Digital platform

Sketch

I used Sketch to create the interface, because the tool allows you to efficiently prototype an interface design. I was introduced to this program during my internship at OWOW, a design and innovation studio in Eindhoven, where I became the manager of the development- and design team for two different apps, after my internship. For the map, I used a Google Maps plugin (<https://www.google.com/maps>).

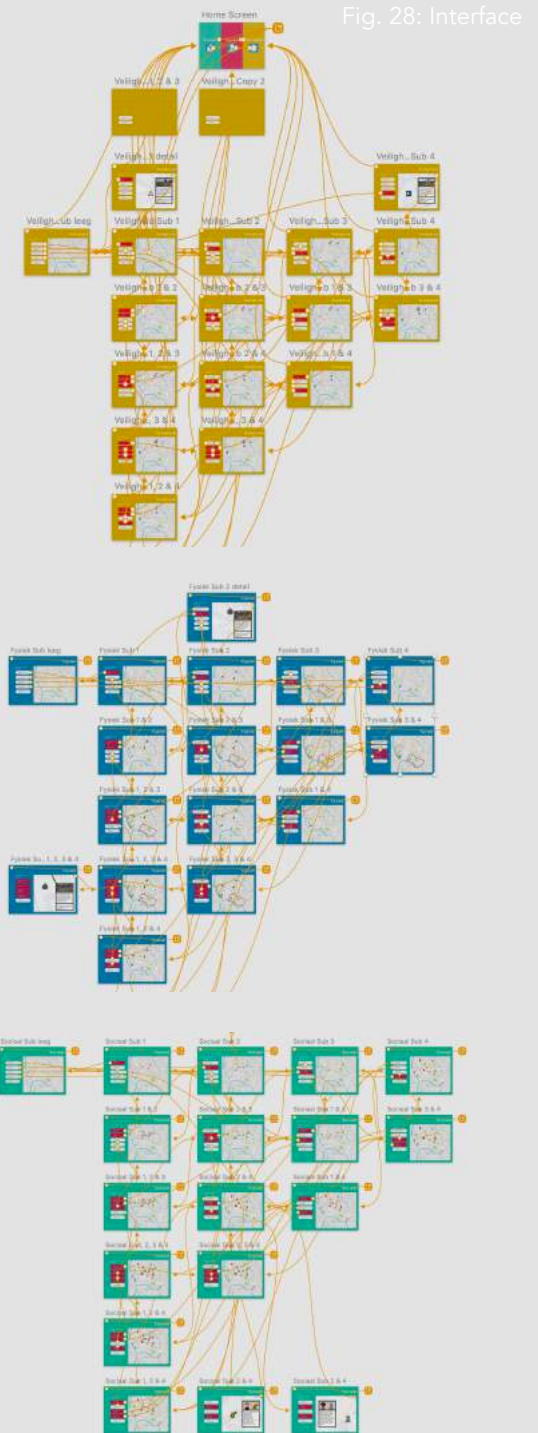


Fig. 28: Interface



Fig. 29: Interface

DELIVERING: Digital platform

Platform interface "SAFETY"

Colours, shapes and icons

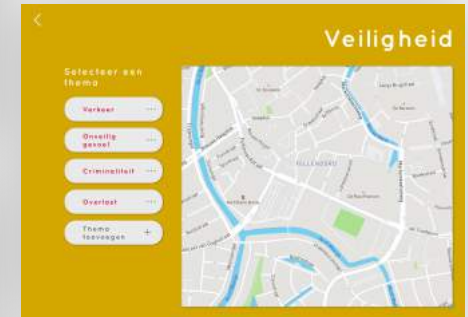
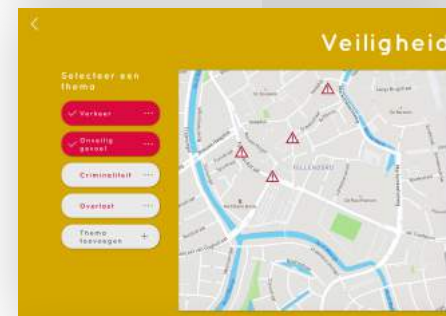
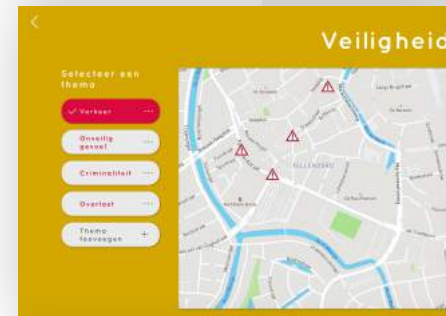
At the history event on 15 April 2019 (Appendix B), I received positive feedback from residents, municipality and Cindy, van den Bremen, about the clean, basic design of the map, combined with the colourful figures that could be placed on the map. Therefore, I kept the design of the platform clean and simple, with popping, bright colours. The reddish pink colour (#DA093F) that I used in the interface, is the colour that is used in the website of the municipality of Breda (Gemeente Breda, n.d.). For the text, I used the same font that we used throughout the whole project (Quicksand Bold).

The icons are based on the themes that emerged from the analyses of the field studies in the neighbourhood (Appendix B, Appendix C). All icons were designed by me.



Fig. 29: Icons interface

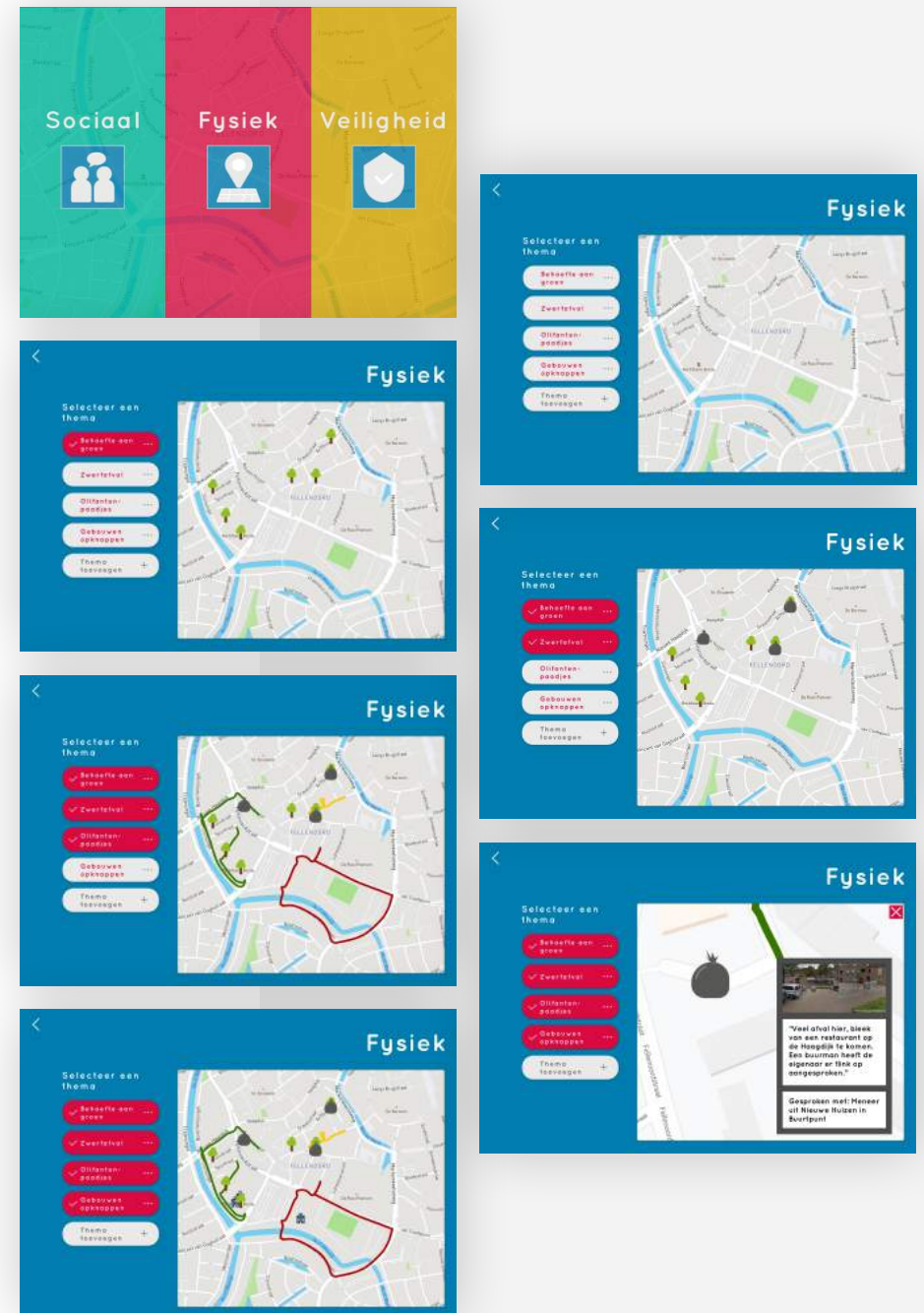
Fig. 30: Platform interface "Safety"



DELIVERING: Digital platform

Platform interface
"PHYSICAL"

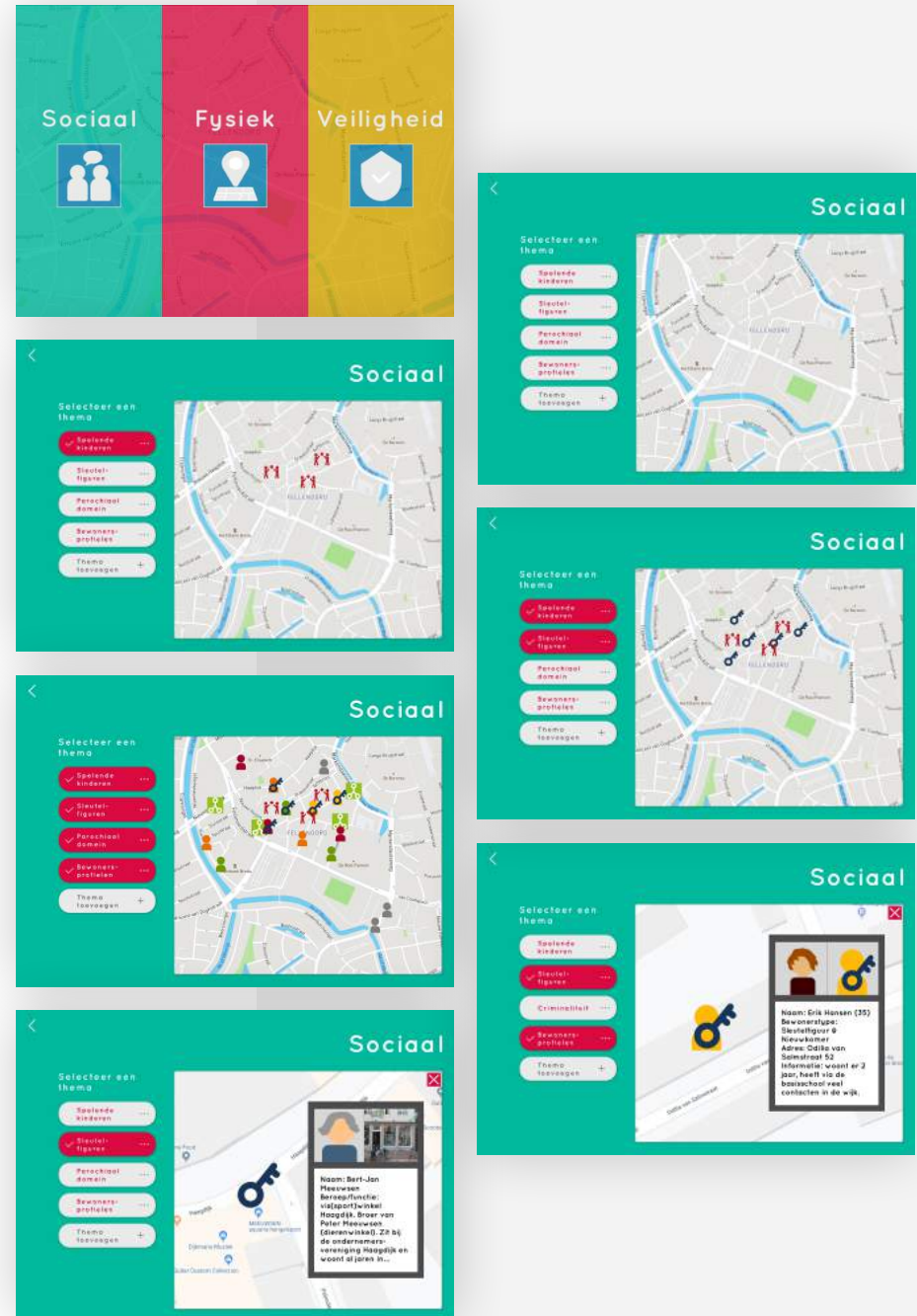
Fig. 31: Platform interface "Physical"



DELIVERING: Digital platform

Platform interface "SOCIAL"

Fig. 32: Platform interface "Social"



DELIVERING: Physical tool

After interacting with the tool of “Stichting Ik Wil” on 15 April 2019 (Appendix B) and walking through the neighbourhood with a slightly different map (Appendix C), I wanted to make a new iteration, that combined the interactions.

The concept is a portable conversation tool, that is used in neighbourhoods, to identify bottlenecks, important locations and neighbourhood stories. It is shaped as a box with a map on top. The combination of different materials invites for two different interactions:

- ◆ A perspex sheet on top of the map, to write on with whiteboard markers
- ◆ A metal sheet underneath, to enable magnets to stick on top of the map

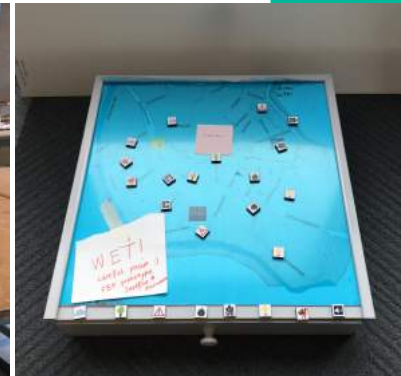
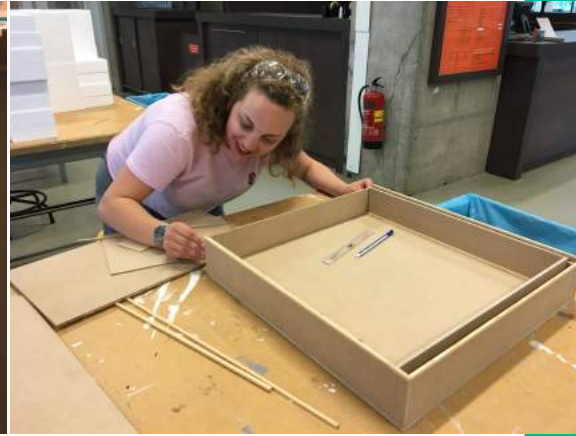
Both interactions can be used to indicate what problems or experiences, take place at which location in the neighbourhood. The magnets can be used to indicate a specific theme, markers or sticky notes for new themes or extended information/explanation.

In the box, there is a drawer, where the whiteboard markers and magnets can be stored. In addition, you can put in sticky notes, contact cards, pens and anything else that could be used to write down ideas, bottlenecks or experiences. This way, all the needed items, can be carried at once.



Fig. 33: Physical conversation tool

DELIVERING: Physical tool



MATERIALS

I used MDF and wood to build the box and drawer, which I glued, sanded, spray painted with white primer and painted grey lacquer on top. I chose a light tint of grey, to match the colour of the Fellenoord map on top. For the magnets, I stuck magnets to pieces of felt, with the icons printed on it.

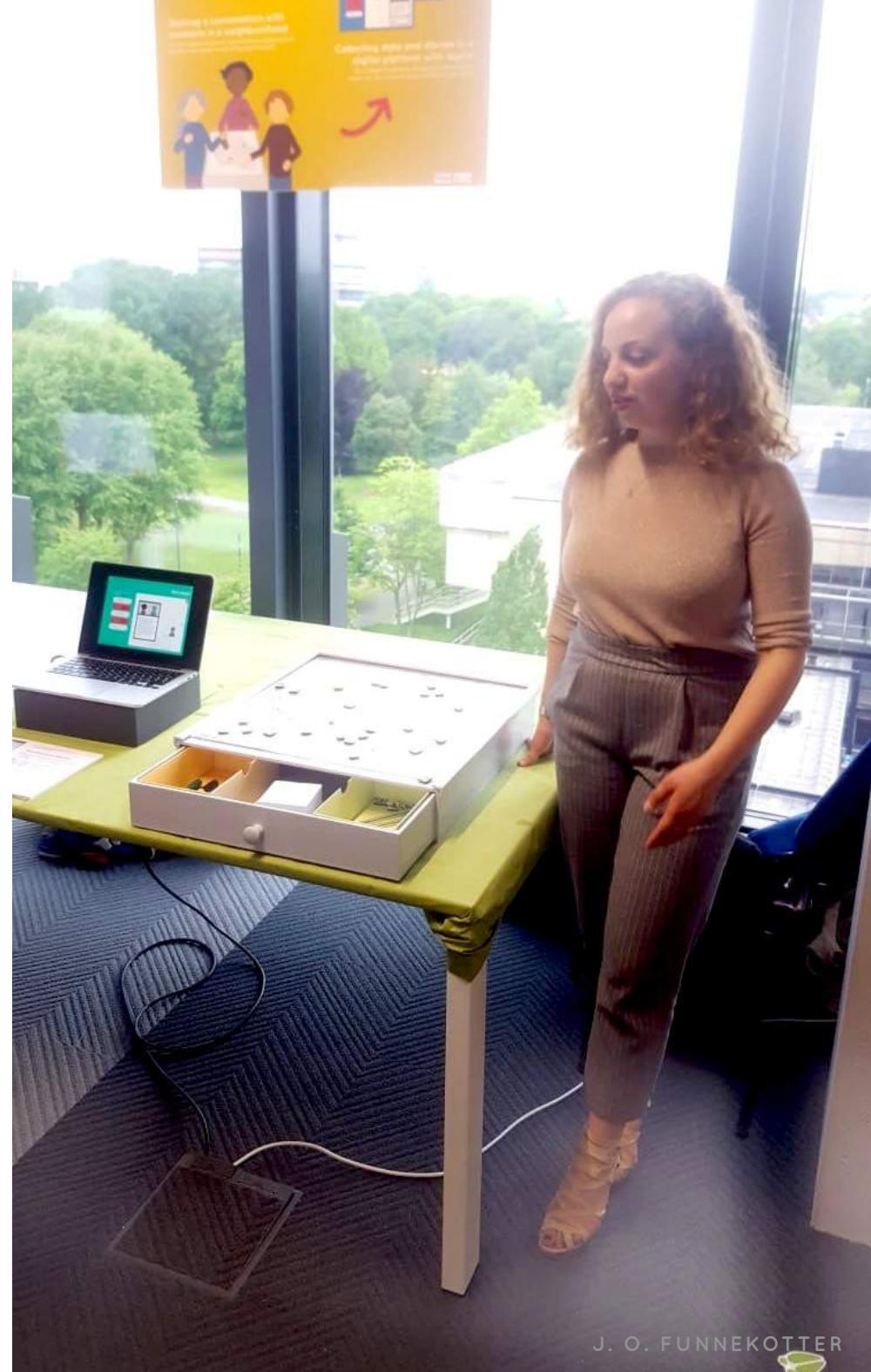
Fig. 34: Painting prototype. Photo by Sabine van Heusden
Fig. 35: Building prototype. Photo by Iris Bataille

Fig. 36, 37: Progress prototype
Fig. 38: Prototype for Demo Day

DELIVERING: Demo Day

The Final Demo Day was an occasion for me to put all my findings together in one design and present it to visitors. Among these were clients, coaches, friends, family and fellow students. I noticed that the design required some explanation, which partially has to do with the fact that the problem is complicated. In addition, the design is part of a system, which makes it hard to be self-explanatory. Nonetheless, I received very positive feedback, by many different people. They liked the interaction with the conversation tool, the link to the digital platform, but mostly the story behind it and the design opportunities it has for the future. A small interesting thing I noticed, was that people tended to misinterpret some of the icons - especially the lamp icon (for ideas) and the crime icon.

Fig. 39: Final Demo Day. Photo by Abe Funnekotter



VALUE PROPOSITION

Value Proposition Canvas

I filled in a Value Proposition Canvas (Strategyzer, n.d.), (Appendix F), to summarise the needs for both the municipality and residents in Fellenoord, and illustrate the added value of my design for both target groups. From the canvas, it becomes clear that the added value is mostly in making the interaction between government and citizens more fun, low-threshold and interesting, and documenting data in a more efficient way. The next step would be to act upon these findings, in order to actually let the residents participate in decision-making.

The pain of expectation management could be relieved, by the approach in using the conversation tool (emphasising that the goal is to collect input, not to co-create). Another option would be to add an aspect to the system that either clarifies the rules and restrictions for the area development, or illustrates what the municipality did with the input of the residents.

Furthermore, the system does not effectuate that the residents understand the decision-making process of the municipality and other stakeholders. This might not be a problematic issue, if expectation management is performed well.

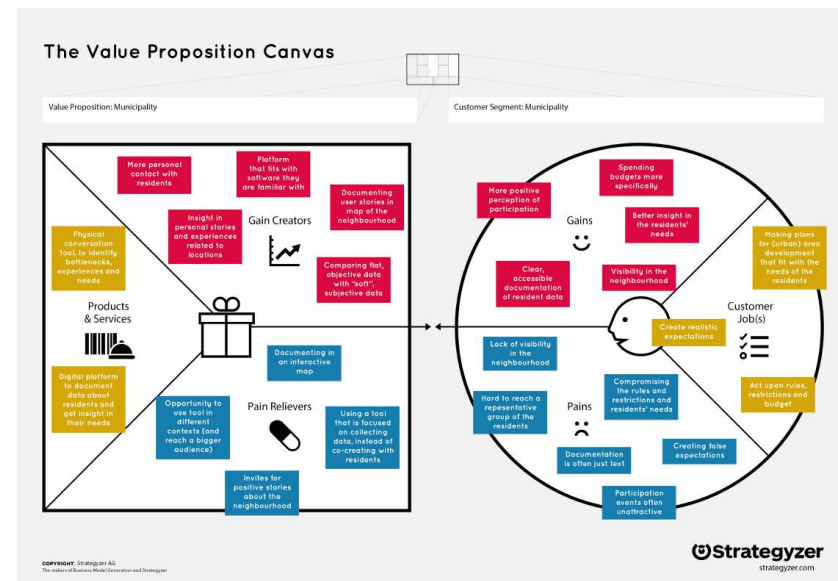
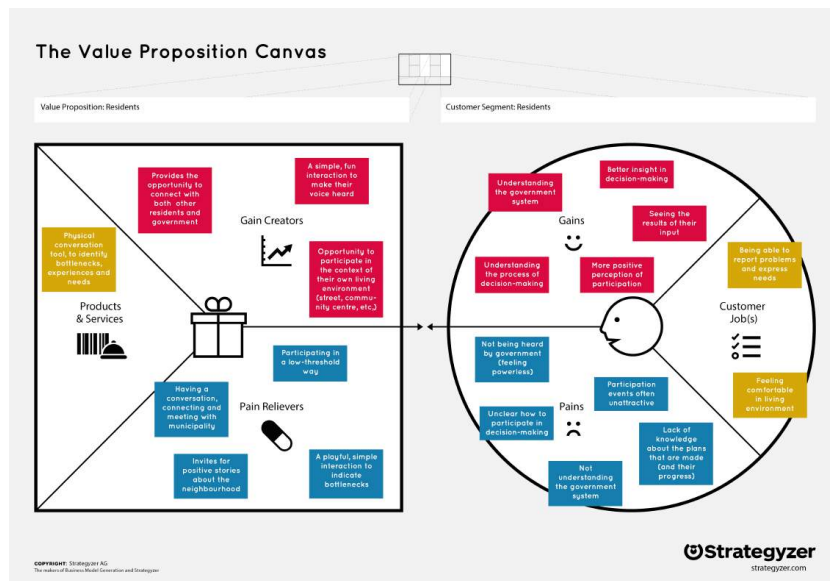


Fig. 40: Value Proposition Canvas Residents, Fig. 41: Value Proposition Canvas Municipality (Strategyzer, n.d.)



DISCUSSION

Future steps	01
The digital platform	02
Interface	03

Discussion

Discussion

Citizen participation is an issue that needs a lot of trial and error, to experience the best possible method for a specific group of people. As Jim Steenbakkers (designer and expert in citizen participation) told me in his expert interview (Appendix A), it is important not to rely on one sole method or tool, to gather input from residents in a neighbourhood. Therefore, this design - like almost any design - is not the only and right solution for participation in urban area development. There are many different ways to collect data/input from residents, and many ways to design an interactive participation platform.

This concept only focuses on data input of residents' stories and documenting the input, with output in a digital platform. The system does not focus on providing feedback to residents, of what is done with their input. By having more (specific) knowledge about the

neighbourhood, municipalities may operate and make decisions in a way that fits the needs of the residents. Though, the government is still dealing with many rules, restrictions and stakeholders and therefore, cannot always realise all the wishes of residents. Expectation management is of great importance, when providing participation opportunities.

The design decisions are based on expert input (Appendix A), talking to residents of Fellenoord (Appendix B, Appendix C) and my own scientific expertise. Although I know that storytelling and comparing subjective and objective data, which my design is offering, has added value in the process of citizen participation, there is a lot that could be improved or changed. There are many possible future steps for both the physical tool and the digital platform.

Future steps

The physical design of the conversation tool

In order to make the map easier to carry, it should be made of a lighter material than the MDF that I used. Grips should be added for carrying the tool and it would be useful to insert a foldable map - that way, the map can be bigger, yet the size of the tool would be smaller when it is not used. Instead of a drawer, the design would be suitcase-shaped. The perspex and drawer should be protected better, so no materials would be damaged and nothing would fall out of the drawer. By making the map foldable, the perspex would be on the inside and the drawer could be locked.

Digitising the physical conversation tool

By integrating technology in the map, transferring data to the digital platform, could be automated. In the co-session with my expert fellow student Zeno Kapitein, I discussed a few technological opportunities for the map:

- Integrating a layer with capacitive sensors underneath the map, to measure on which location on the map people are tapping.
- Creating a smart token that connects with the map via RFID chip in the token, that is read by scanners in the map. This way, the map recognises which token is tapping on which location on the map.

Discussion

The digital platform

Existing GIS maps

As I discussed with Wout Ritzema, geographer and expert in citizen participation (Appendix A), municipalities work with GIS for spatial planning. Therefore, it would be useful to fit the platform with the existing GIS-layers that are used by the municipality. According to Wout Ritzema, I would have two different options:

- Buying a platform from Esri (Esri, n.d.) and inserting the data I gathered myself
- Using open source GIS data, that I would integrate in my platform

This way, the layering of objective, flat data (that is usually already known by municipalities) and subjective data, is facilitated.

Each person involved in the conversation had a personal token. The smart token measures audio input over time, which then is connected to the locations and the identity of the token and the time at which each interaction takes place. The details can be found in Appendix D.

Expanding the target group of the platform

In platforms such as OpenStadsdeel and Transformcity (Appendix E), multiple stakeholders have access. This way, all stakeholders can be updated about plans and interact with each other. The disadvantage of this feature, is that quite a big part of the residents in the neighbourhood of Fellenoord, prefers receiving information offline, instead of online. This would require a solution, that would enable the "offline" residents, to interact with the platform, too (e.g. an organised gathering, where people can interact in a group).

If it would be made possible to access the platform as a different stakeholder than the municipality, it would be necessary to filter information, based on the stakeholder role. This can be linked to the login. Privacy would become an important issue, as names and addresses are inserted in the platform.

The data input would be different as well, as the output is targeted at multiple stakeholders. More data sources than just the conversation tool would be required (e.g. destination plans). This data is often available in GIS-maps already.

Linked to this future step, is extending the purpose of the digital platform. If the platform would be accessible to multiple stakeholders (one of which would be residents), the feature of discussing future plans of the area development could be added. Stakeholders and residents would be able to discuss issues of the neighbourhood.

Discussion

Interface

Interaction

Due to the fact that I was not able to program a working platform and I was not able to realise all the features I wanted to include, I added these in the following future steps. These are based on interactive maps such as Google Maps (<https://www.google.com/maps/>) and Airbnb (<https://www.airbnb.nl>), the expert input of Floor van der Sluis (Interaction Designer) and my experiences at OWOW.

- ◆ *Being able to scroll in the map*
- ◆ *Being able to add a theme and add detailed locations within a theme*
- ◆ *Being able to delete or edit a theme*
- ◆ *Being able to drag the map, even when it is zoomed in*

Aspects that need testing at the municipality, which I was not able to realise within the time I had, but is planned for the future, are the following:

- ◆ *Whether icons are the best way to represent a theme*
- ◆ *If so, whether the icons are clear (especially because not all icons appeared to be clear to the visitors at Demo Day)*
- ◆ *What themes are still missing*
- ◆ *Whether the look of the platform is appreciated and matches the municipality*

- ◆ *Whether the detailed information is visualised in an accurate and understandable way*
- ◆ *Whether there are features that are still missing*
- ◆ *Whether the interaction feels intuitive and is understandable to them*

In order to test this, I would both and give them certain tasks, to observe whether they are able to conduct the task without any help, and ask for feedback about the design.

To validate my future steps for the interface, I conducted a small user test, with design experts. The future steps I suggested, were validated, but due to personal circumstances, I had limited time, I was not able to test with enough participants. Therefore, the validation is not trustworthy enough to rely on. In order to get more reliable validation, I am planning on user testing the platform with more participants, before my graduation presentation. I will present the results there.

Transferring data from the physical to the digital tool

Automated data transferring could be facilitated by using technology. If the interaction with the physical tool would still be without any technology, it would become more efficient if a facilitator would be present. This way, one person can interact with residents, and the other one can document the input.

Conclusion

Citizen participation remains a complex problem, and it is impossible to come up with “the” solution, within the time frame I had and with my knowledge and expertise.

In order to improve communication between government and neighbourhoods, design can play an important, interesting and helpful role. Making use of a simple interaction, with an aesthetic product, can facilitate the conversation between multiple stakeholders.

The added value of my design is the link between a low-threshold, physical conversation tool and a digital platform and storytelling documented in a map. Furthermore, the digital platform allows the municipality to compare subjective data to the flat data that is already known. According to officials of the municipality of Breda, from different domains, it would be of added value to visualise each theme in separate layers in a map, which would enable you to compare them.

There are many possible future steps, that could take this design to the next level, make it more efficient and fit the target groups better. Improvements can be made with the use of technology for data transfer, a more manageable physical tool and linking the platform to existing Geographic Information Systems. In order to achieve this, a lot of research (e.g. on technology that could improve the design), new iterations and a lot of user testing will be needed.

Reflection

If I were to describe this project in a few words, I would say: incredibly interesting, yet intense. I started off being highly motivated and interested in the topic. Though, I had some difficulties getting a grasp of the context and where I could be of added value in the process of improving and increasing citizen participation in Fellenoord and Gasthuisvelden. I noticed that I wanted to come up with a groundbreaking design that would make citizen participation an interesting and positive process for all stakeholders. This held me down for a quite a while. I expected too much from myself, which blocked my creativity and inspiration.

Personal circumstances

There were some personal issues that left a clear mark on my process, too. My dear grandmother suddenly became very ill and passed away, right before the start of this project. Later on in the process, I noticed some traces of earlier issues, such as my burnout, that sometimes made the project seem overwhelming and more stressful than it actually was. As the end of the semester approached, my dear grandfather's health deteriorated and he passed away, two days before Demo Day.

Doing a project on my own: taking control

I noticed that it was hard for me to go through a creative process on my own, within this new and complex context, the pressure I put on myself and my personal circumstances. I feel like I lost some valuable time in my process, due to these things, and got stuck in the "Discovering" stage. Still, I am proud of what I developed and my growth. There were a few things that helped me to get more creative and productive, which made the process much more enjoyable, as well.

As I was getting familiar with the government system and the neighbourhood, I found that participation is a very complicated issue and that it would be quite impossible for me to find the "perfect" solution, within the time frame of this project and with my knowledge,

budget and network. After a while, I was able to find my own voice and generate ideas.

The key things that helped me, were sometimes just making a decision and moving on from there, and asking for help (from the right people). A short conversation with a fellow student, coach, friend or parent, helped me to see things clearly again. I started making better plans, as I knew better what I wanted to do, which made me feel more in control of my own process.

Working in practice

I learned a lot from working with Cindy van den Bremen and Kyrin van IJzeren. Cindy took me with her in practice, from the very start of my project. She offered me the opportunity to take a closer look at the context and target group, throughout the entire process. Kyrin kept on asking critical questions, to the municipality, experts, Cindy and me, which helped me to look at issues from a different perspective. I realised that, in future projects, I want to approach problems with more confidence and blend in the environment and context of the target group, as we did at the neighbourhood breakfast.

Working with the municipality was an instructive experience, as well. I learned about the system they operate in, what their constraints are in decision-making, and we were both able to provide each other new insight on the topic of participation and design, as we came from different backgrounds.

Bringing everything together

This project combined what I find most interesting in design (human behaviour, communication and aesthetics), the challenge of working on my own and the UI/UX skills I picked up at my internship. In addition, it builds a perfect bridge between my Industrial Design bachelor and my upcoming Psychology master.

Reflection: Goals

Setting up a user test/field research on a bigger scale

(User & Society, Math, Data & Computing)

I did field research in the neighbourhood, both at an event and alone. These sessions were highly motivational and a positive experiences for me. I very much enjoyed interacting with the people I was designing for and seeing their reactions to the tool. Going into the neighbourhood by myself and approaching people in the streets, pushed me to get out of my comfort zone.

Coding my own website

(Technology & Realization, Creativity & Aesthetics, Math, Data & Computing)

I discarded this goal, during my process, as I prioritised creating quality content in my portfolio, over focusing on the technology behind the website.

Making a visualization of data

(Math, Data & Computing, Technology & Realization, Creativity & Aesthetics)

I visualised data in a digital platform in my prototype. Even though the platform is not working technologically, I created an idea of how the data input would be visualised, to the municipality.

Reflection: Goals

Learning how to do a project on my own

(Professional Skills)

I think this has been one of the most important things I learned from this project; how to go through a design process, when you are doing it on your own. As I mentioned earlier, asking for help, planning and filtering were the key aspects that were needed to get me going and more creative.

Being more structured and productive in my planning and approach

(Professional Skills)

At the start of my project, all the information that I received and found, felt rather overwhelming. Therefore, I was struggling to focus and make a clear planning for myself. About halfway through the semester, I started working with week plannings and made an overview of the important dates and deadlines in the remaining part of the project.

Discovering the next step after my bachelor

On 1 April 2019, I applied for the Applied Cognitive Psychology master programme in Utrecht. In this study, I hope to get more in-depth knowledge on human behaviour and cognitive processes in relation to the environment that humans operate in. I find this highly interesting, and it will definitely be of added value for me, if I decide to do an Industrial Design master afterwards, as well.

References

Aucxis (n.d.). Hoe werkt RFID?. Retrieved from: <https://www.aucxis.com/nl/rfid/rfid-werking>

BeterBuiten (n.d.). Factsheet uit vragenlijst - Leefstijlen SAMR [Illustration]. Retrieved from: <https://beterbuiten.wordpress.com/beter-buiten-werkwijzer/>

CEMA. (2014). Lively Cities Toolbox. INTERREG IVB

Citizens (n.d.). Het Citisensmodel - 8 betrokkenheidsprofielen [Illustration]. Retrieved from: <https://citizens.nl/betrokkenheidsprofielen-citisensmodel/>

De Jonge, L., Nollen, J., Peters, E. (2011). Breda Seeligkazerne/Nieuwe Mark/Inventariserend veldonderzoek - boren en grondradar. Retrieved from: <https://erfgoed.breda.nl/upload/iblock/a52/seeligkazerne.pdf>

Eindhoven University of Technology (n.d.). tue-logo.png [Illustration]. Retrieved from: <https://is.ieis.tue.nl/research/MAFS18/assets/logo/tue-logo.png>

[Elephant Saskia Korsten] (n.d.). Retrieved from https://dwaalmachine.sjonges.nl/kunstenaar_539.html

Erfgoedweb Breda (n.d.). Het klein arsenaal. Retrieved from: <https://erfgoed.breda.nl/erfgoed/archief/het-klein-arsenaal/>

Ernste, H. & Meijer, M. (2019). Broadening the scope of Spatial Planning: Making a Case for Informality in the Netherlands. Utrecht, The Netherlands

Esri (n.d.). ArcGIS - kaarten maken en analyses doen. Retrieved from: <https://www.esri.nl/nl-nl/producten/arcgis-platform/home>

Face Your World (2015). Opendag StedelijkLab Slotervaart [Photo]. Retrieved from: http://www.faceyourworld.net/nl/about/stedelijklab_slotervaart/

Fifth Generation Computer Corporation (n.d.). Speaker Independent Connected Speech Recognition. Retrieved from: <http://www.fifthgen.com/speaker-independent-connected-s-r.htm>
Gemeente Amsterdam (2019). OpenStad: online participatietools. Retrieved from: <https://www.amsterdam.nl/bestuur-organisatie/meedenken-meepraten/openstad-online/>

Hallolosser (2019). Kinderen nemen raadzaal in Losser over [Photo]. Retrieved from: <https://hallolosser.nl/nieuws/kinderen-nemen-raadzaal-losser-over>

Havermans Hielkema Architecten (2016). Gasthuisvelden [photo]. Retrieved from: https://havermanshielkema.nl/wp-content/uploads/2016/10/220_1506.3_RV_2016-lr.pdf

Huijbers, V. (2018). Gestelse buurt [Illustration]. In A. Wijnen, Brabant brein - hersenen met een hart (p. 38). 's-Hertogenbosch: Stichting Cultuurfonds

Incudem (n.d.). Incudem Monitor [Illustration]. Retrieved from: <http://incudem.nl>

Informatie Buurt Fellenoord [AlleCijfers]. (9 May 2019). Retrieved from: <https://allecijfers.nl/buurt/fellenoord-breda/>

Maptionnaire (n.d.). Stockholm Brings Public Participation Online With Maptionnaire [Photo]. Retrieved from: <https://maptionnaire.com>

MyTownNEO (n.d.). Walkable, mix-used Stow development could transform City Center? [Illustration]. Retrieved from: <https://www.mytownneo.com/news/20180308/walkable-mixed-use-stow-development-could-transform-city-center?template=ampart>

OpenStad Amsterdam (n.d.). Digitale Participatietools [Illustration]. Retrieved from: <https://www.amsterdam.nl/bestuur-organisatie/meedenken-meepraten/openstad-online/>

Pierson, J.G. (1992). The Art of Practical and Precise Strain Based Measurement. (n.p.): Pierson Associates

References

ProDemos (2019). Democracy: interactief rollenspel in het gemeentehuis. Retrieved from: <https://prodemos.nl/voor-scholen/voor-basisscholen/democracity/>

Rijksoverheid (n.d.). Omgevingswet. Retrieved from: <https://www.rijksoverheid.nl/onderwerpen/omgevingswet>

Schaminée, A. (2018). Designing With - in Public Organizations. Amsterdam: BIS Publishers

Scrum.org (n.d.). What is Scrum?. Retrieved from: https://www.scrum.org/resources/what-is-scrum?gclid=EAlalQobChMI6caxntfr4gIVReR3Ch3LXAtmEAAAYASAAEgJywPD_BwE

Stadshout (n.d.). Stadshout richt speel- en moestuin in samen met bewoners [Photo]. Retrieved from: <http://stadshout.nu/#4199-projecten/4210>

Strategyzer (n.d.). The Value Proposition Canvas. Retrieved from: <https://www.strategyzer.com/canvas/value-proposition-canvas>

The Faces of Amnesty (n.d.). Week 4: Double Diamond Framework. Retrieved from: <https://interactiondesign17.wordpress.com/2017/02/09/week-4-double-diamond-framework/>

Van Veelen, A. (2019). Cocreatie op een Rotterdams pleintje: eindeloos veel lullen, en dan een beetje poetsen. De Correspondent. Retrieved from: <https://decorrespondent.nl/9218/cocreatie-op-een-rotterdams-pleintje-eindeloos-veel-lullen-en-dan-een-beetje-poetsen/982759657198-a7b9b311>

Wijnen, A. (2011). Brabant Brein - hersenen met een hart. 's-Hertogenbosch: Stichting Cultuurfonds

Woonbedrijf (2014). LAB Architectuur en buitenruimte [Photo]. Retrieved from: <https://www.woonbedrijf.com/buurtinfo/buurtzaken/space-s-bewoners-ontwerpen-buurt>

Woonbedrijf (2014). SPACE-S: bewoners ontwerpen hun nieuwe buurt. Retrieved on 20 March 2019, from: <https://www.woonbedrijf.com/buurtinfo/buurtzaken/space-s-bewoners-ontwerpen-buurt>

ZET (n.d.). Wat wij doen. Retrieved from: <https://www.wijzijnzet.nl/over-zet/wat-wij-doen>

Acknowledgements

First of all, I would like to thank **Cindy van den Bremen** for all the coach meetings, great talks, advice and providing so many opportunities to take me with her in her job. Thank you for inspiring me with your passion and drive, and for believing in me, when I did not.

Kyrin van IJzeren, my partner in crime in this project, who has helped me getting structured, motivated and me taught me a lot, with her expertise and critical questions. Thank you for all the days we spent in Breda, travelling together and sharing the love for food.

Next, I want to express my gratitude to the squad ***Transformative and Inclusive Practices***, all the coaches and fellow students, for the workshops, coaching sessions, feedback and support.

I would like to thank my teacher coach **Bart Hengeveld**, for always making things clearer and more manageable to me. Thank you for all the good conversations and laughs, in the past three years.

I am expressing great gratitude to all the **officials from the Municipality of Breda and other experts** that advised me and gave me feedback on my concepts.

Thanks to all of my **friends and family**, who got me through the harder times of the process, both personally and professionally, and celebrated the good times with me.

And last, but definitely not least, **Elvina Yuliana Budiono**, my design guru and dear friend. Thank you for advising me on the platform and taking my report layout to the next level.

Appendix

Appendix A: Expert interviews

Appendix B: Analysis tool 15 April 2019

Appendix C: Analysis tool 1 May 2019

Appendix D: Data co-session

Appendix E: Benchmarking

Appendix F: Value Proposition Canvas

Appendix A: Expert interviews

14 February 2019

Present: Ingeborg Hoevenaars (Neighbourhood Affairs Municipality Breda), Cindy van den Bremen, Kyrin van IJzeren, Josefine Funnekotter

Ingeborg is the official of the municipality of Breda that is most closely involved with the people in the neighbourhood Fellenoord. She is often present at the neighbourhood breakfast and many residents know her. She could tell us more about the ambience in the neighbourhood and her experiences as a social professional.

Ingeborg mainly told us about the different groups in Fellenoord; families that have lived there for generations (the old guard), people with a migration background, natives from Breda and a lot of loners. Also, there is a small group of people with a psychiatric disorder, walking around in the neighbourhood. It is rare that these groups actually mix; they are usually separated.

19 February 2019

Present: Peter van Schie (Spatial Planning Municipality Breda), Kyrin van IJzeren, Josefine Funnekotter

Peter van Schie explained us more about the spatial planning of the Gasthuisvelden area. The main goal of these developments, were making an uninviting area, inviting again. Due to the historical implications, namely, those of the military barracks, courthouse and the tax office, it used to be an area that was associated with negative events. The name of the Teruggave building, in which our office was located too, had two meanings. The first one is related to the history of the building; this used to be the tax office and "teruggave", (i.e. "refund"), refers to the tax rebate. The second meaning is related to the purpose of the area developments; the "giving back" the building to the residents of Breda. Peter also talked about the barrier that residents of Fellenoord experience, to cross the street and visit the Gasthuisvelden area. Therefore, it is important to actively reaching out to residents, to attend events in the area, instead of expecting them to be interested and present, by just organising an event.

28 February 2019

Present: Neele Kistemaker (Muzus), Cindy van den Bremen, Josefine Funnekotter

Muzus, a social design company in Delft, had done a project about climate adaptation. They focused on designing for children, to make it fun and low-threshold, while making people in Fellenoord more aware of the environment. We met with Neele, who told us more about the ambience in the neighbourhood and listed many do's and don'ts for us.

28 March 2019

Present: Barbara Putters (Owner of Breda Promotions), Cindy van den Bremen, Kyrin van IJzeren, Josefine Funnekotter

As the owner of Breda Promotions, Barbara is an expert of the city of Breda, has a big network and has done many creative projects in the city. She combines art, skills of locals and history, to create interesting events. This meeting was mostly an inspiring conversation about how to create interventions and events, that are attractive to both local residents and people from outside of Fellenoord, or even outside of Breda.

Appendix A: Expert interviews

3 April 2019

Present (phone call): Duco Kapitein (Architect), Josefine Funnekotter

In order to look at area development and citizen participation from an architectural perspective, I interviewed Duco Kapitein. He told me about the traditional way of participation; residents gathering with people from the municipality, to discuss problems in the neighbourhood. Usually, it turns out to be an evening with a quite negative ambience, due to a lot of complaining, misunderstanding and frustration. This is due to the fact that residents do not feel heard, municipalities do not trust residents input enough or are not able to realise their wished, due to the restrictions and rules, that make spatial planning a complex challenge. Once again, I heard that citizen participation in area development is complicated, because there are many restrictions and rules that need to be followed.

5 April 2019

Present (phone call): Jim Steenbakkers (Incudem), Josefine Funnekotter

I contacted Jim, who used to work at Incudem (Appendix E) for years. Incudem provides the combination of generating data about neighbourhoods, resident profiles and participation methods. The data, mainly generated from open sources, is used to predict the wishes and needs of the residents in a certain neighbourhood. Along with the data and prediction, they offer a toolkit with participation methods that match the different approaches that fit with a particular group of citizens.

In addition, Jim introduced me to BeterBuiten, Maptionnaire and Citisens (Appendix E) - all methods and tools to improve citizen participation.

Jim also mentioned that it is really important not to rely on one product or method when it comes to citizen participation. It is useful to reach residents through different approaches (e.g. organising events, meetings, playing games and creating a voting system), in order to reach a higher percentage and greater variety of the residents.

6 May 2019

Present: Aart Wijnen (CEO De Twee Snoeken, 's-Hertogenbosch), Josefine Funnekotter

Aart Wijnen is the CEO of "De Twee Snoeken", an architectural and software development office, located in 's-Hertogenbosch. Aart is an expert in multiple areas that were relevant in my project; area development, participation and software development. He explained the methods described in his book "Brabant Brein - hersenen met een hart", that he used to reach as many people in a neighbourhood and use art/design, to facilitate participation in neighbourhoods.

To me, one of the most outstanding things he mentioned, was that he usually works with homogenous groups of people - people with the same background or values, that they feel comfortable with - to generate ideas. Each group would have a captain. Afterwards, he would gather all the captains, who then would pitch their ideas to each other (Wijnen, 2011). This turned out to be an effective method, to give each "group" in an area an equal voice and vote. Another important thing he mentioned, was that it is really important to work with genuine interest and love, because people feel that.

Appendix A: Expert interviews

<cont>

In addition to that, I discussed my concept with him and asked for feedback. We came up with a new concept, that I would present to the municipality, later that week.

The new concept was a system for residents, in which they could “vote” for certain themes that they find important in their neighbourhood; if they were the municipality, what would they spend their money on?

9 May 2019

Session with municipality of Breda.

Present: Ingeborg Hoevenaars (neighbourhood affairs), Ellen van 't Geloof (neighbourhood affairs), Marcel Hermans (spatial planning), Henk van der Corput (spatial planning), Cindy van den Bremen, Kyrin van IJzeren, Josefine Funnekotter

Choosing a concept and defining content

In another meeting with officials from different domains at the municipality of Breda, I presented my two concepts: the map with the platform and the voting system. All officials were more enthusiastic about the map with the platform. The voting system would risk creating false expectations. As one of the officials said: “They are already familiar with the map, and it was a great success on 15 April 2019” (Appendix B). Also the digital platform was an interesting concept, to them. I asked them what data they wanted to see, and presented in which way. They answered:

> Make layers; the added value of this system would be that the map would contain several layers that each represent a theme. The subjective data about the neighbourhood would go from one big cluster of information/knowledge, to categorised layers, where the subjective data would be linked to locations, as well.

> Keep the themes that are used in making plans for the neighbourhood: Social, Physical and Safety.

> Within those themes, the following topics are important:

- ◆ Violence/crime
- ◆ Key figures
- ◆ Trash
- ◆ Nature
- ◆ Locations where people meet for social occasions
- ◆ Parochial domain
- ◆ Elephant paths
- ◆ Places that people associate with positive events.

> They do not have the knowledge of the residents’ stories; the subjective data that is collected with this system, has added value.

> Show detailed information about a location with quotes of the person you talked to.

Appendix A: Expert interviews

15 May 2019

Present: Wout Ritzema (Freelance Social Geographer, expert in citizen participation), Josefine Funnekotter

Wout Ritzema works freelance, meaning, in his case, he has worked with all different kinds of clients and on a great variety of projects. He is currently part of a big project in the area of the central train station in Eindhoven, for which a participation platform is launched, as well. I wanted to get another expert view, from the perspective of urban planning - as that is the department in municipalities that works most with data in maps - in a later stage of my process.

Wout and I discussed the role of placemaking in area development - how you can make the best of an area, while the area is renovated. This corresponded with the placemaking example of Buurbouw in Amsterdam (Schaminée, 2018).

He also explained me about the usage of GIS (Geographic Information System) in area development. This is basically a map system, with layers, that contain information about a certain topic (e.g. soil properties, income per home, etc.). Municipalities work with GIS as well, and therefore, my platform could make use of open source GIS data, or become a new GIS of its own.

Furthermore, we talked about possible future steps and the design of my concept. He mentioned heatmaps in a map, as used in the Snapchat app (<https://map.snapchat.com/>), to visualise which locations are discussed often (by many people), and which are less. Wout Ritzema also suggested using mental maps (subjective maps that people create, based on their perception, memory or feeling about a place or area) to visualise residents' perceptions of the neighbourhood.

Other possible future steps we discussed, were:

- ◆ Making the map static or dynamic (does it continuously change or is it static documentation).
- ◆ Using technology to gather data, e.g. using bluetooth to detect walking streams, to define the mostly used routes
- ◆ Making the platform interactive for both residents and government (filtering information at the login, depending on the target group in the platform)
- ◆ Lastly, Wout mentioned that the platform should be and feel trustworthy; this would make it more attractive to use, for all stakeholders.

Appendix B: Analysation tool 15 April 2019

Occasion

On 15 April 2019, the new special of the Gasthuisvelden magazine was launched. To celebrate, Walter van de Calseyde (historian), gave an incredibly interesting lecture about the history of Fellenoord and Gasthuisvelden. After the lecture, there was time to talk to clients, institutes and each other. We were assigned a table, where we could test the tool.

Present: *Cindy van den Bremen, Kyrin van IJzeren, Josefine Funnekotter, officials of the municipality, residents and other institutes*

Materials

- Map of Fellenoord on foam board
- “Stichting Ik Wil”-tool (Fig. 46)
- Contact cards
- Boxes for contact cards (Fig. 46)
- Clouds and lamps paper sheets for dreams and ideas
- Pens and markers

Approach

We put the foam board map with all the components of the tool on a table, and then received people at the table, before and after the lecture. It was a great success; people were interested, shared their stories and started talking to each other, too.

Analysis

The tool was a great success. People were enthusiastic about sharing their experiences and connected with both us and each other. We analysed the findings in an excel sheet (Fig 47).



Fig. 46: Tool “Stichting Ik Wil” and analysis process 15 April 2019

Appendix B: Analysation tool 15 April 2019

	Lampjes	Opmerkingen	Wolkjes	Opmerkingen	Adressen	Opmerkingen	Ideeen		Uitdagingen	Opmerkingen
Sociaal	Infopunt en ontmoetingspunt ontwikkelingen Gasthuisvelden met brug in leegstaand wit huisje		In witte huisjes wonen		Usbrand Smit Raula Irenestraat 8 - 48 11 SC Breda 06-51303536 usbrand@raulat.nl	Stromagazijn (bewoner en ondernemer)	Geen stadscamping maar overnachting in de hooischuur/stromagazijn op dekbedden van stro S (Harder)		Veel daklozen in struiken Sluisingel	
Fysiek	Fellenoordstraat erbij laten horen, geen scheidsingsweg		Park als aantrekkelijke doorgangsroute tussen buurten	Man zou dit graag zien als uitkomst van het aanleggen van het park	R. Harder Markendaalseweg 359 076-5226791	Bewoner	Woonerf (max 30 km en fietspad) 3		Overlast als het te druk wordt rondom Gasthuisvelden	
Ideeen Gasthuisvelden	Rechtbank tegen de vlakke, kantoren bouwen (in luxe segment)		Atelier		M. van den Enden Mathenerstraat 152 - 4834 EB Breda mvandenenden@ziggo.nl	ouders wonen er nog, zij niet meer	informatieborden over geschiedenis Gasthuisvelden		Wordt te hard gereden aan andere kant van de singel dan GHV	
Veiligheid	Morgen beginnen met verbouwen		Ik hoop dat het groen ook echt komt		M. v. Agtmaal Pieter Breughelstraat 6 murielvanagtmaal@live.nl		Extra aanlegsteigers voor bootjes en bewoners aan de singel	Man wilde het park als doorgang tussen wijken. Voorbeelden van evenementen: food trucks, teamsport evenementen	Fellenoordstraat is een racebaan	
Droom	Combinatie wonen en bedrijvigheid, kleinschalig, niet zo'n belastingkantoor		Levendigheid door park en water		W. Veenstra Marksingel 97 w.veenstra.01@gmail.com		Evenementen in park Gasthuisvelden, maar wel kleinschalig		Door hoge bomen geen uitzicht op de buurt	Oude vrouw (K), had niets tegen groen
Zorg (als in, zorgen maken)	Weinig parkeerplaatsen (bezoek past niet meer) V	Als er bezoek is, moeten ze heel ver lopen naar mijn huis	Mag wat gedaan worden met het gerechtsgebouw		Angelinge Grosveld Reinierstraat 16 sierhout@gmail.com		Grote rotonde Fellenoordstraat/Gasthuisvelden Q		Veel zwerfvuil	
Verkeer	Kantoor Kadaster afbreken (lelijk)		Meer ruimte voor fietsers en voetgangers, minder voor auto's		Paulien Sluis Nieuwe Huizen 51 paulienstus@live.nl		Aanlegsteiger + plek om boot uit 1 water te halen			
	Binnenspeelplaats van buurthuis in Oud-Boeiemeer	Man (Harder) heeft met Usbrand idee over stromagazijn	Op je rug liggen in het grasveld				Kunst op het podium, schoonheid van de plek tonen in het hooischuur/stromagazijn. Moderne kunst een podium geven: broedplaats van Breda			
	Veel stof van bussen (vieze lucht) - stukje Fellenoordstraat onderin recht van het bochtje K		Waar mensen bij elkaar komen, moet extra groen komen (Liesbeth)				Meer busverbindingen naar en van de wijk	Te weinig busverbindingen nu		
	Plannen duren lang, wel begrijpelijk		Wat vaker iets organiseren in de buurt, dat de eenheid wordt bewaard (ook voor nieuwkomers)	Verwarde vrouw met rode haren			Uitvaarten over het water (begrafenis) mogelijk			
	Voldoende parkeergelegenheid nodig		Meer leven in de wijk door ontwikkelingen Gasthuisvelden							
	Lawaai als kroegen dichtgaan (maar je woont wel in het centrum)	Je kiest ervoor dat er veel leeft als je in het centrum woont								
	Teruggave plat: groen of sociale woningbouw (Reinierstraat)									
	Pisbakken (niet meer in de bossen van het park pissen)									
	Breda en kunst begrijpen elkaar niet (vooral modern)	Usbrand: Breda doet te weinig met (vooral moderne) kunst stromagazijn ideeën								
	Meer parkeerruimte									
	Grote eenheid en huizen zijn mooi									
	Rechtbank meer groen									
	Vaste plek voor activiteiten in de wijk									
	Rondom rechtbank moet het sangeramer worden om te wonen. Speelplekken voor kinderen en gymzaal									
	Meer groen en vernieuwen voetpaden Weertsingel en Bernardsingel									
	s Avonds en 's nachts veilig									
	Rozemarijnstraat autovrij									
	Vergroening langs water doortrekken in zijstraten									
	Wandelpad Markendaalseweg tussen Tolbrug en Waterstraat									

Fig. 47: Analysis 15 April 2019

Appendix C: Analysation tool 1 May 2019

Present: *Josefine Funnekotter, residents of Fellenoord*

Materials

- Map on foam board
- Perspex to write on
- Sticky notes
- Whiteboard markers
- Regular markers

Approach

Walking through the neighbourhood, approaching people and asking them questions. focused on the following:

- Their name and age
- For how long they have lived there
- Their experiences in Fellenoord
- Whether they felt unsafe

Other than that, it was meant to be a low-key conversation, in which I would perhaps discover (new) bottlenecks and needs.

Key learnings about the neighbourhood:

- People usually say they feel good, there is nothing to complain about and they all know each other.
- It is not that important to them what happens further away than their own street.
- Nature and playgrounds for children were often mentioned with appreciation.
- Nuisance seems to be caused by people living outside of Fellenoord; people partying in the city centre and cars driving too fast.
- De “Blauwe Hand” (i.e. “Blue Hand”) is still experienced as an uninviting, slightly strange area in Fellenoord.

Evaluation of approach

In the beginning, I felt quite uncomfortable approaching people and it was hard for me to ask for exact addresses and names as well, because I did not want to come across as a journalist or researcher. I wanted to present myself as I was; a student that is genuinely interested in these people. Documenting the conversations correctly, was a challenge, as well. It would help if there would be another person to divide tasks (a facilitator).

There were a few things that worked well. First of all, approaching people that were having a relaxed conversation outside, not approaching people in a rush. The perspex worked great and quick, to indicate locations and write additional information. Approaching children was a good decision, because they led me to their adult parents. They tend to experience less shame, so the barrier to approach adults, was lower for me. In addition, I wanted to take the input of children into account as well. Lastly, the weather was good, which was a helping factor, too.



Fig. 48: Resident input 1 May 2019

Appendix D: Data co-session

In the current concept, data that is gathered in sessions with residents, is still transferred to the platform manually. I wanted to find opportunities to keep the interaction simple, yet make the transferring process more efficient, by using technology. In this session with data expert and fellow student Zeno Kapitein, a few opportunities were discussed.

First of all, we defined my Unique Selling Point. Based on the expert interviews (Appendix A) and benchmarking (Appendix E), I concluded that this was: storytelling in a map and comparing subjective to objective data. We also stated that the stronger the link between collecting data (input) and visualising data (output), the stronger the value of the design becomes.

Then, we ideated on how the conversation tool could be digitised, in such a way that transferring data becomes more efficient and effortless. As Zeno stated: "people-centric GIS". Key was to keep the interaction simple and low-threshold, as was advised by Neele Kistemaker (Muzus) and other experts (Appendix A). Therefore, I did not want a high-tech screen.

Ways to digitise the designs we came up with, were:

- Focus on locations: a smart layer/raster on top of the map (Fig 49).
For example, a touch-sensitive (capacitive) layer underneath the map, that notices when and where fingers are tapping on top of the map. (Pierson, J.G., 1992) The interactions can be mapped over time and perhaps linked to (general) microphone input.



Fig. 49: Smart raster

Appendix E: Benchmarking

Benchmarking process

From the projects I found while doing research, I thought the following were most relevant for this project:

- Face Your World (<http://www.faceyourworld.net>)
- Space-S co-creation (Woonbedrijf, 2014)
- Buurbouw A9 (Schaminée, 2018)
- Co-creation in Rotterdam (Van Veelen, 2019)
- OpenStadsdeel Amsterdam (Gemeente Amsterdam, 2019)
- Transformcity (<https://www.transformcity.com>)
- Incudem (<http://incudem.nl>)
- Democracy (ProDemos, 2019)

- Maptionnaire (<https://maptionnaire.com>)
- CityMapping (TU/e Innovation Space project, discussed with fellow student Loes Voermans)

From these projects, I selected the interesting aspects, that could be relevant for creating interventions in neighbourhoods and gathered them in one document. I took the relevant aspects and interesting learning points from each tool or project, clustered them and named the categories.

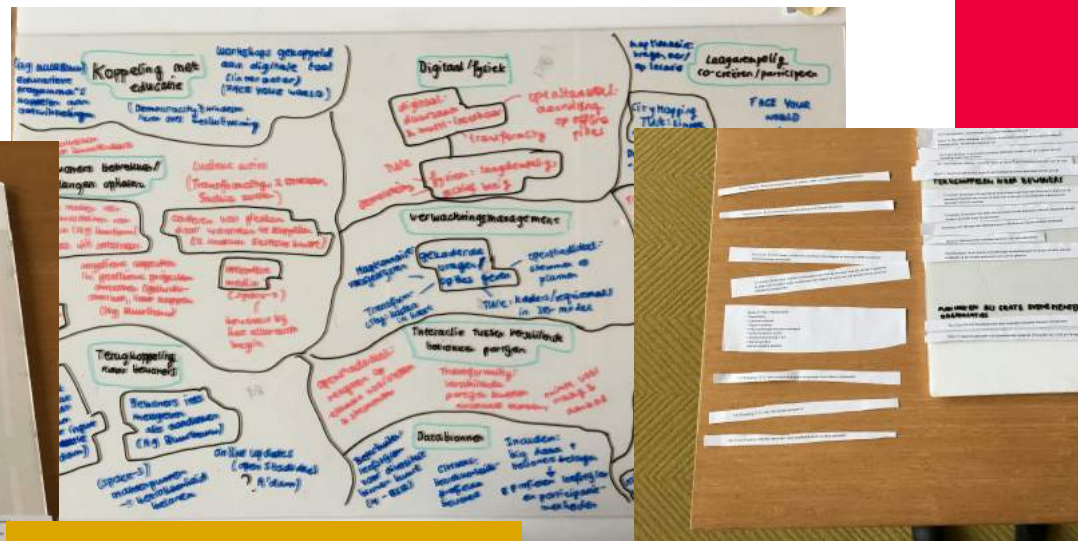
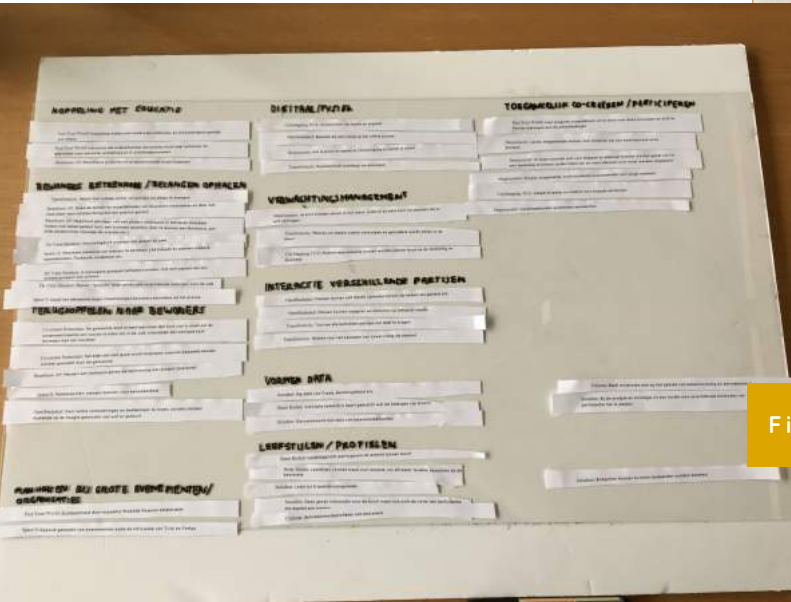
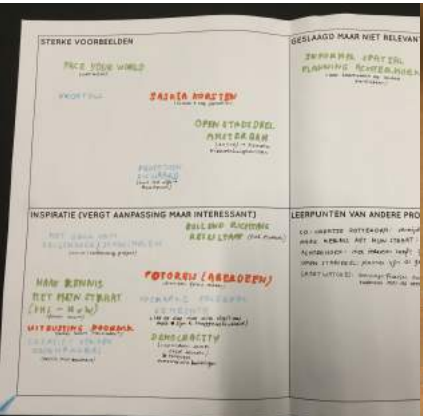


Fig. 51: Benchmarking process

Appendix E: Benchmarking

Benchmarking process

Face Your World (Face Your World, 2015)

Democracy (Holloosser, 2019)

Transformcity (MyTownNEO, n.d.)

TU/e logo (Eindhoven University of Technology, n.d.)

Maptionnaire (Maptionnaire, n.d.)

De Twee Snoeken (Huijbers, 2018)

Saskia Korsten ([Elephant Saskia Korsten], n.d.)

Stadsontwikkeling Rotterdam (Van Veelen, 2019)

BeterBuiten (BeterBuiten, n.d.)

Incudem (Incudem, n.d.)

Space-S (Woonbedrijf, 2014)

OpenStad (OpenStad Amsterdam, n.d.)

A9 Buurbouw (Stadshout, n.d.)

Citizens (Citizens, n.d.)

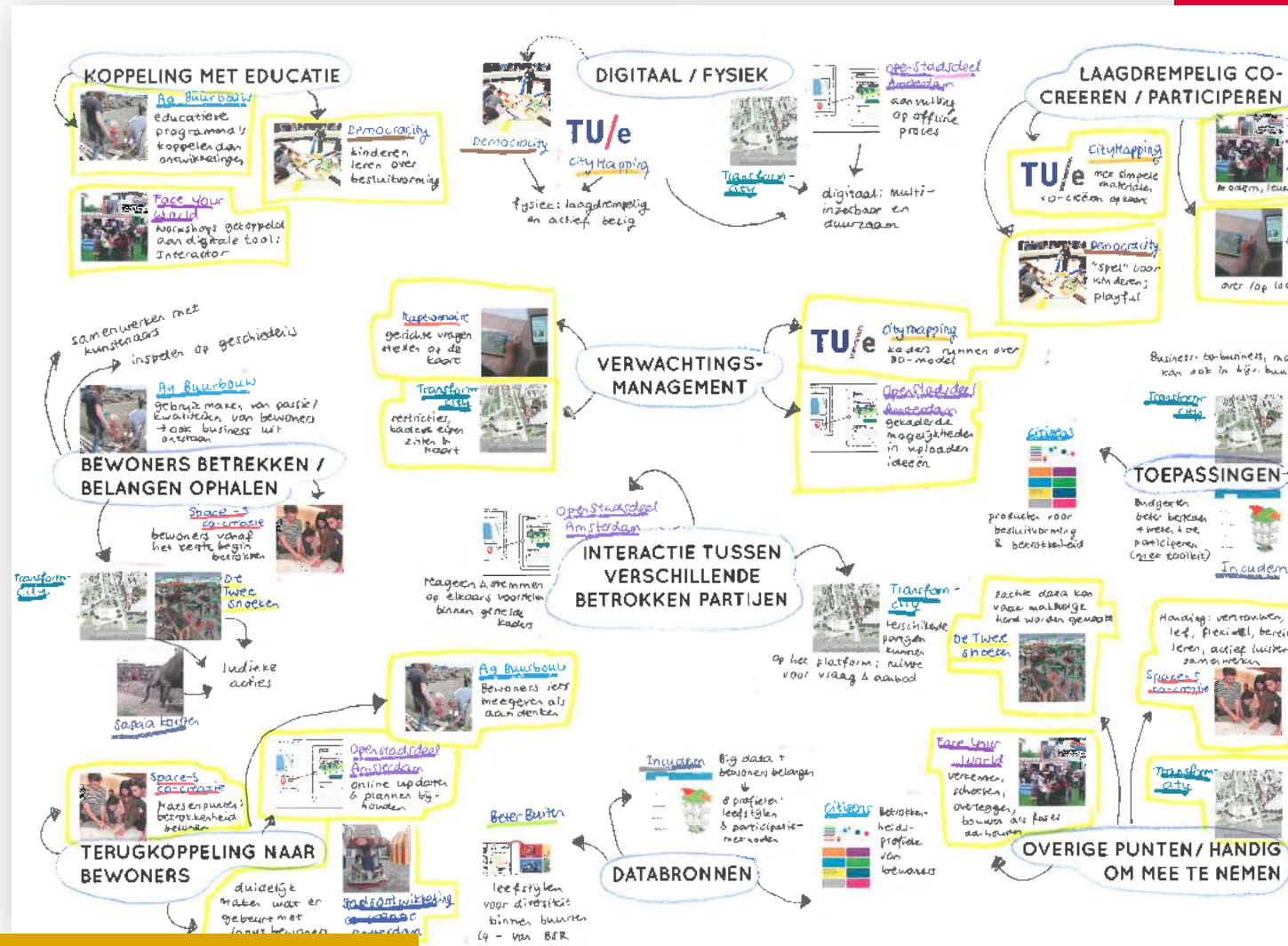
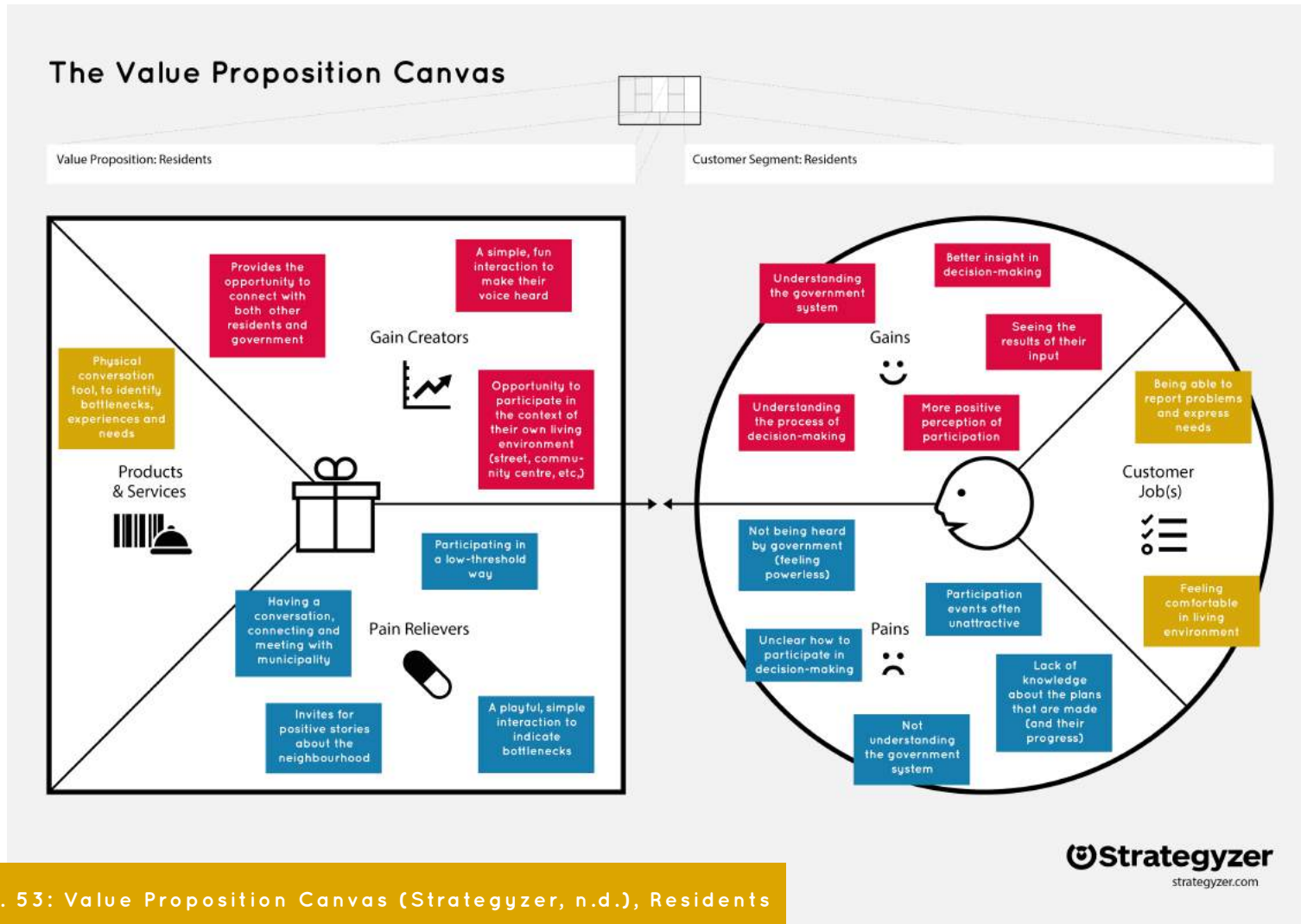


Fig. 52: Benchmarking overview

Appendix F: Value Proposition Canvas



Appendix F: Value Proposition Canvas

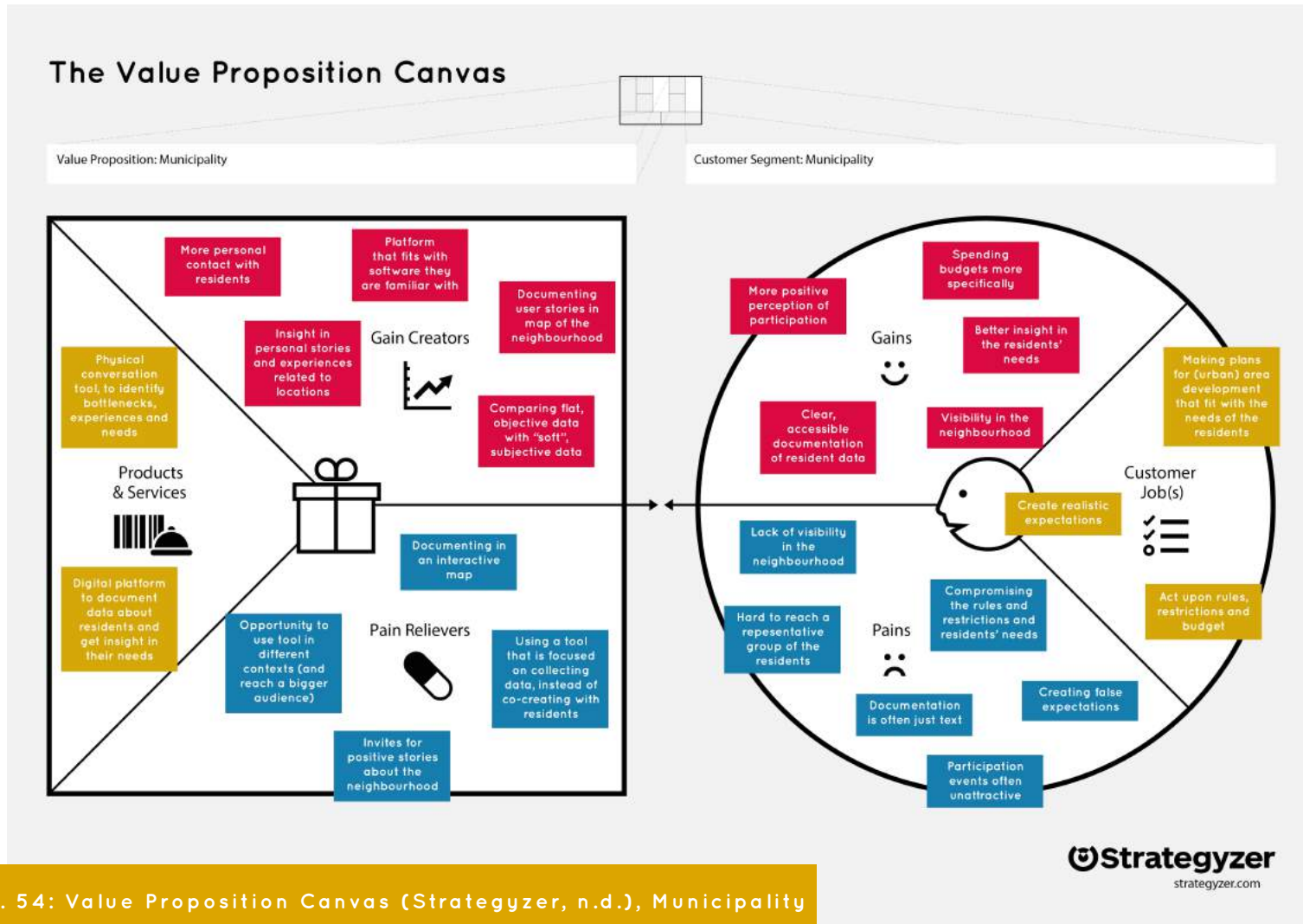


Fig. 54: Value Proposition Canvas (Strategyzer, n.d.), Municipality