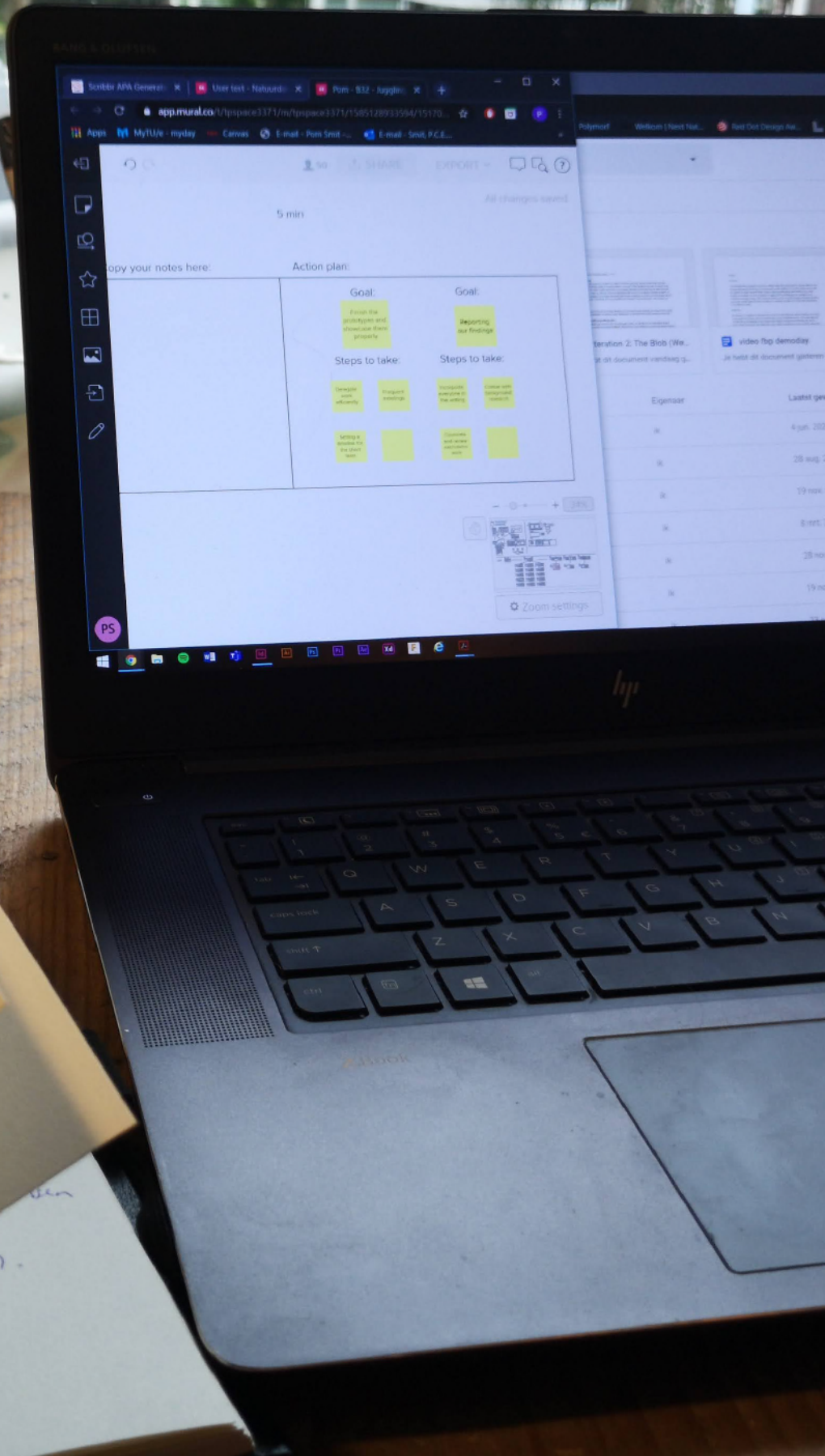


Connecting Values

Final Bachelor Project





EXTENDED SUMMARY

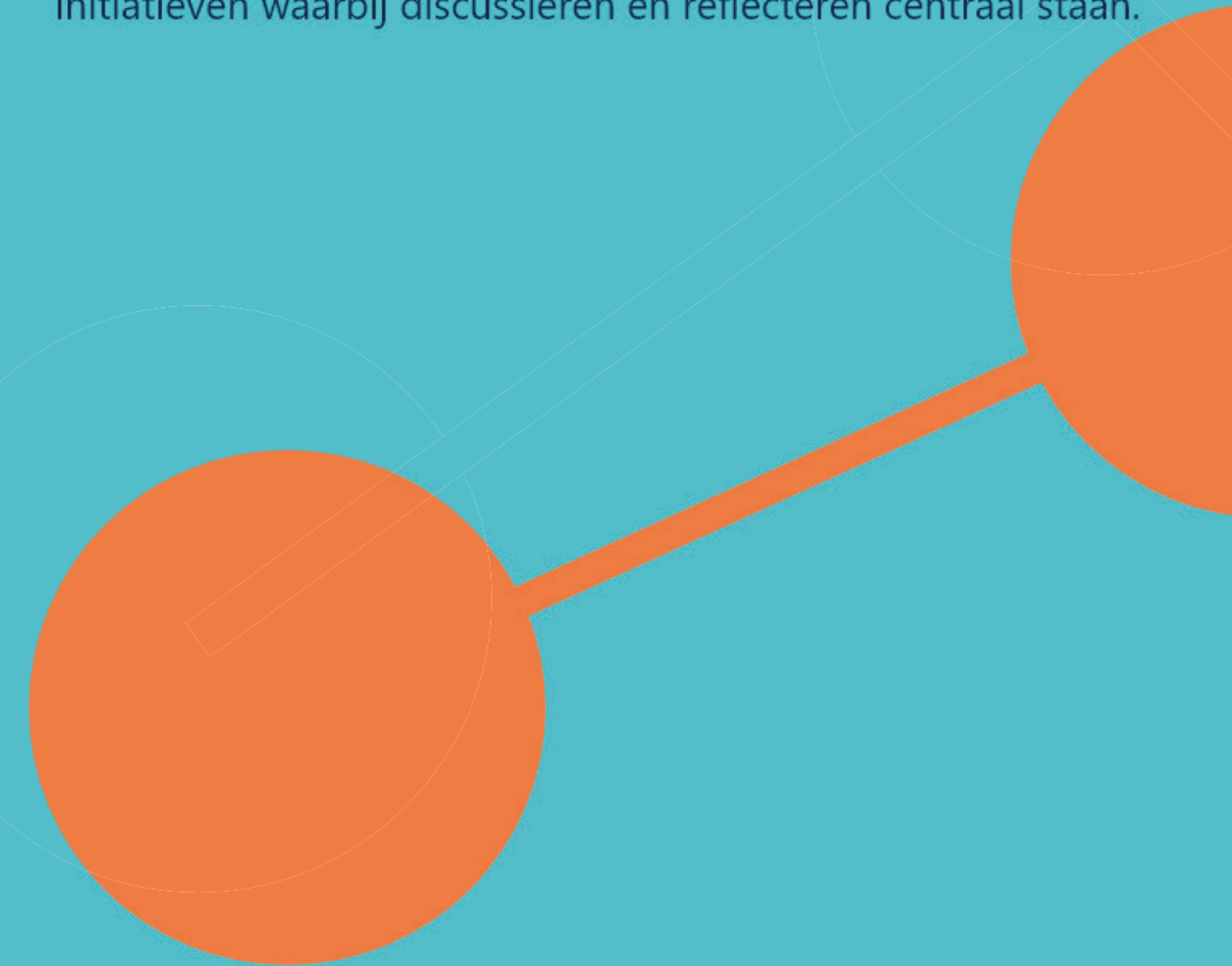
In this report I will describe my process and outcome of my Final Bachelor Project on the subject of increasing social resilience of bottom-up initiatives. The design challenge of this project was how design could play a role in supporting bottom-up initiatives in their initial stage or when stuck in the process. Goals with this were to design a reflective, stand alone and long term tool. During the process I used the theories of participatory sense making, reflection models and values. This design process was an iterative process where I used the approach of intuitive inquiry for design to ideate, lo-fi prototyping to realize and used usertesting, expert meetings and feedback from colleagues to validate. The outcome was Connecting Values, an interactive online reflection tool where the core of the tool was to reflect on and discuss about the relations between five values that are important for a bottom-up initiative. From these reflections new insights will arise that will be used to formulate a dynamic action plan. The final design ended up not specifically focussed on social resilience but will help increasing the social resilience of bottom-up initiatives.

ACKNOWLEDGEMENTS

I want to thank all who have helped and contributed in carrying out this project during these strange, online times. My project coach and expert Cindy van den Bremen who kept supporting and inspiring me in hard times. My teacher coach Caroline Hummels for the short and fun brainstorming sessions. The TP squad colleagues for the insights given during the carousel sessions and all the workshops, lectures and the inspiring assemblies. Remke Timmermans for her external view and feedback on my project and Natuurdorp Maashorst for the very long but certainly the most useful user test I have ever conducted. Finally, thanks to my friends and family supporting me and especially my dad for helping me see the bigger picture during the process.

Connecting Values

Connecting Values is een interactieve online tool ontworpen voor initiatieven waarbij discussiëren en reflecteren centraal staan.



es

burger

TABLE OF CONTENTS

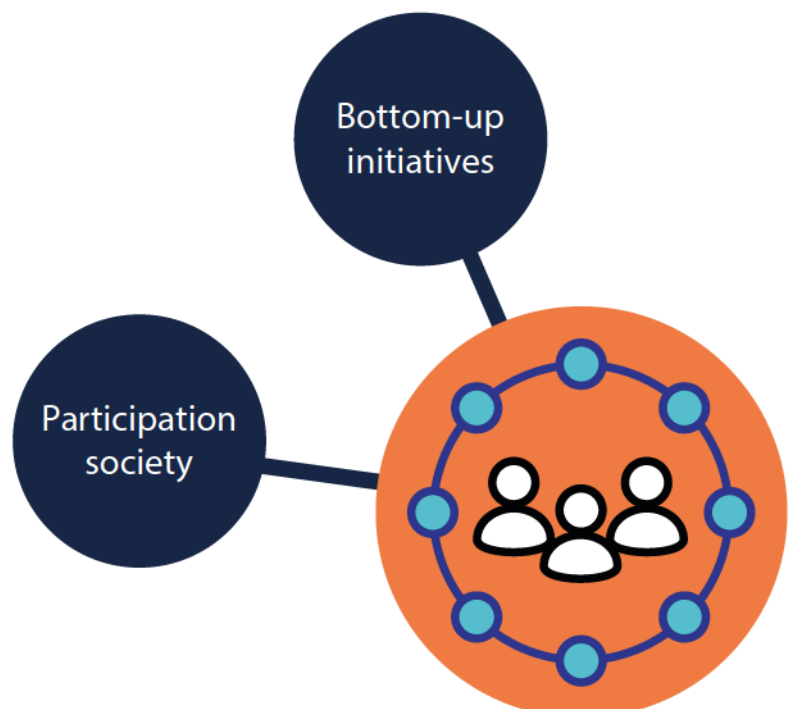
| | |
|--------------|----|
| INTRODUCTION | 1 |
| BACKGROUND | 3 |
| RESEARCH | 6 |
| FIRST PHASE | 10 |
| SECOND PHASE | 16 |
| THIRD PHASE | 20 |
| OUTCOME | 30 |
| DISCUSSION | 39 |
| CONCLUSION | 42 |
| REFERENCES | 43 |
| APPENDIX | 45 |

INTRODUCTION

The Netherlands is transforming from a welfare state to a participation society (Koning Willem-Alexander, 2014). Within this participation society active citizens are encouraged to take responsibility for their own well-being and take on societal challenges by themselves (Ministerie van Binnenlandse Zaken en Koninkrijksrelaties, 2014). These challenges are mostly related to improving of the livability of their neighborhoods, for example taking care of elderly or the physical appearance of the neighborhood (Frieling, Lindenberg, & Stokman, 2012). The organisations that take these matters into their own hands are called bottom-up initiatives.

Social resilience is the ability of a group of people to react to changes and approximately half a million people in Noord-Brabant are struggling with this (Provincie Noord-Brabant, 2020). The goal of Noord-Brabant is to make the province more social resilient by encouraging active citizenship in the form of bottom-up initiatives. These initiatives are spread all across the country and the province supports these initiatives through Stérk.Brabant, an organization that actively helps the development of initiatives by sharing knowledge about different aspects from, for example, financing to collaborating with municipalities.

However, research is still going on about how these initiatives themselves can be made more social resilient and sustainable. There are a lot of initiatives that succeed and reach their passionate and ambitious goals but there are also initiatives that fail. This leads to unpleasant consequences for the organisers such as social damage, financial problems and so called volunteer-burnouts.





DESIGN CHALLENGE:

How can we support bottom-up initiatives through design in their initial stage or when getting stuck in the process.

GOALS:

The goals of this project are the following:

Find out how to let the initiatives actively reflect through design.

Design a stand-alone system that initiatives can use on their own.

Discover how a reflective design can be made more useful for the long-term.

THEORY:

For this project I used the theory of Participatory Sensemaking. I will explain this further in the following chapter.

APPROACH:

My approach to this design challenge was Intuitive Inquiry for Design. I will explain this further in the following chapter.

BACKGROUND

In this chapter I will explain the fundamental topics, theories and approach I worked with during my project. It establishes the context and cares for better understanding of the main aspects of this design project.

BOTTOM-UP INITIATIVE

Bottom-up initiatives are an aspect of direct citizen participation which is defined as “the process by which members of a society (those not holding office or administrative positions in government) share power with public officials in making substantive decisions and in taking actions related to the community” (Roberts, 2004, p. 320). These actions as Roberts describes it, come in all shapes and sizes which makes it difficult to give an unambiguous definition of bottom-up initiatives.

Bottom-up initiative consists of two different concepts, bottom-up and initiative. Bottom-up in this context is described as an approach that proceeds from the beginning of a hierarchy upwards (Oxford University Press (OUP), 2020). Here this is contextualized as an idea originated by a group of citizens with no direct power in their environment, the common people. Initiative, or taking initiative implies thinking, doing and acting where others before have not (Vrieling & Verhoeven, 2011). Combining these two and direct citizen participation will give the following description of a bottom-up initiative: A group of citizens or commons who -from their own drive, ambition and energy- take on a challenge themselves within the community which they find important instead of waiting for people in higher places to do it for them.

SOCIAL RESILIENCE

Social resilience is described as collectively coping with or responding to external stresses and disturbances resulting from social, political and environmental changes (Adger, 2000). By the province of Noord-Brabant it is described as the ability of a group of people to react to changes (Provincie Noord-Brabant, 2020). Bottom-up initiatives try to care for a more social resilient society by taking on challenges they see in their direct environment. For example taking care of the elderly or mentally challenged people. Noord-Brabant want to increase the social resilience in the province and is researching and learning how to support these initiatives financially and with the community and knowledge platform Stérk.Brabant.

However, it is important to understand that this project its goal is not about improving the social resilience in society. This project is about improving the social resilience within the initiatives themselves. How do these initiatives that care for social resilience deal with and react to changes themselves? Strengthening these groups of people is what Stérk.Brabant is doing already and this project is initiated by ZET, a partner of Stérk.Brabant that helps social organizations.

PARTICIPATORY SENSEMAKING

This is a theory that explains sensemaking through continuous embodied interaction in a shared action space (De Jaegher & Di Paolo, 2007). I see this as a dynamic dialogue between the physical interaction with the design and the social interaction with the users while experiencing the design. When an action is taken within the design, a reaction will follow in the sensemaking of the user group. In the same way when an action is taken in the sensemaking of the user group, a reaction will follow within the design. This dialogue can help people collectively get a grip on a situation or problem.

INTUITIVE INQUIRY FOR DESIGN

This approach describes how a designer or researcher can find opportunities by reflecting on its own interest. This is done by combining intuition and intellectual precision (Anderson, 2004). This approach gives freedom to put the designer's own identity in their research, ideation and design. I used my own interest in puzzles to help me tackle this design challenge and this approach also transformed both my understanding about the challenge and about puzzles. I discovered that while using this approach I got more energy working on a project by integrating something that sparked my own enthusiasm. I believe adding your own vision and own intuitive thoughts can make a design more personally connected to the designer.

Opportunities:

Reflection tool / Learning tool how to deal
with slow municipality

- old rusty looking puzzle box

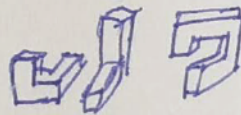


Complicated system, takes patience and
perseverance to solve.

What skills gained by puzzles?

Individual? → How to make it teamwork?

↳ Assembly of object?



→ everyone gets piece
of puzzle.

After solving/assembly

↳ - reflection on
how it went

- swap parts/handles
and do again with
gained insights.

OR new puzzle to
solve with gained
insights.

How does it help?

Bonding in the group

- division of roles
- general communication
- sharing workload
- group dynamic

Puzzles are hard!

- long term view
- planning, preparation
- setting goals.
- perseverance etc.

RESEARCH

In this chapter I describe my first step in the design process which was to look for materials and sources online to gain more knowledge about bottom-up initiatives. This desk research includes looking for data about what problems initiatives face, what causes a initiative to succeed and what causes it to fail. The goal of this research was to analyse this gathered data and structure it to find conclusions that could eventually help me find opportunities for the design process. During and after this research I also conducted literature research on reflection and reflective models.

GETTING TO KNOW THE SUBJECT

The first step I took was looking at the report of Remke Timmermans (2020) on her project Circo Resilience to get me familiar with the subject. She graduated the previous semester and her project had the same base or starting point as mine, supporting bottom-up initiatives by increasing their social resilience. From her report I could get a good understanding of what bottom-up initiatives were and ground myself in the context of this design project.

I got introduced to her theory and approach which really sparked my interest and I already started to brainstorm and ideate while reading her report, searching for opportunities and generating ideas. Using the approach of intuitive inquiry for design I quickly looked at my own social resilience as a way to shape my design, thinking about games in combination with talking or reflecting already. Applying participatory sensemaking to support the collaboration process to make sense of the changing situation through embodied interaction already brought a lot of ideas into my mind where I focussed on working on a shared challenge.

From her case studies Timmermans (2020, p. 32) found a set of basic ingredients for a strong and durable initiative which I found

very interesting and I took this with me in the desk research and case studies to look for similarities and connections. The ingredients were clustered in the following five main elements:

- Focus, patience and perseverance
- Self-esteem, guts and courage to fail
- Multidisciplinarity, collaboration, communication and interpersonal trust
- Energy, long breath
- Trust, experiencing success and long term view

After reading her report me and Remke had an inspiring meeting together and discussed about the opportunities of this project.

DESK RESEARCH & CASE STUDIES

The research of Remke gave me already a lot of data to work with but I wanted to deepen myself in this subject more by doing my own research and case studies. I did this because I really like to understand and analyse the problem to come up with good solutions. I will divide this research into two different parts, where the first part is me finding what makes a good initiative by looking for data online. Secondly I looked at different cases where the organizers themselves or other people reflected on the process.

I read a multitude of articles and case studies describing the difficulties bottom-up initiatives face or what makes them sustainable. From my coach and expert Cindy van den Bremen I received a blog about the effectivity and durability of bottom-up initiatives which described problems on collaborating with the municipality due to the differences that initiatives have. This blog also divided the effectiveness and durability into three different topics: leadership, bonding, and bridging. Where leadership is self explanatory, bonding means the connection with the core group and interaction with the target group and

bridging means the connection to other stakeholders such as municipalities and companies. I used these three topics to later organize my gathered data. I found data about the collaboration between initiatives and municipalities and how this could be done better (Nationale Ombudsman, 2018a; Nationale ombudsman, 2018b; Movisie, 2018; Dijk, 2014; den Ouden, Boogaard, & Driessen, 2019). ZET organizes workshops focussed on working responsive that describes a way the municipalities and governments should collaborate with bottom-up initiatives (ZET, 2019). Meijer & Syssner (2017) add to this that having informal contacts with the municipality is the key to success. Not only working with the municipality but general communication with and trust between other stakeholders is something initiatives struggle with as well, this also includes the expectations and requirements of the stakeholders (Movisie, 2018; Meijers & Syssner, 2017; Dijk, 2014). Research also shows that more internal topics such as motivation, continuity and setting goals is important for initiatives to remain sustainable (Movisie, 2018). Internal communication and the long term view and planning of initiatives also play an internal role in this (Dijk, 2014). After collecting this data I decided to look at other cases to see similarities in the research.

The Nationale ombudsman provided me with cases with reflections afterwards to look into myself which were about a sports hall in Asperen and a nature playground in Deventer. Tiny van Dortmont describes after successfully setting up, organizing and completing a bottom-up initiative a couple of important lessons she learned during this process of building a sports hall in Asperen (Nationale ombudsman, 2020). First know how your process is going to look like and have a clear planning, secondly ask the municipality for requirements and expectations and finally have one point of contact with the municipality. Nienke Nijhof and John Vos, who initiated the

nature playground in Deventer, said the following things: take your time and show perseverance, hold firm to your ideals, be flexible and record agreements (Nationale ombudsman, 2019).

I collected all the data gathered analysed and organized it into three big themes derived from the themes of ZET's blog which I discussed earlier. These themes each had more specific topics connected to them.

The first theme was Bridging and was focussed on the connection of the initiative with the other stakeholders such as the municipality, organizations and partners. The topics connected to Bridging were as follows:

- The expectations and requirements of the stakeholders
- Communication with the stakeholders
- The slowness of the municipality
- The need of one point of contact with the municipality
- Recording agreements with the stakeholders

The second theme was Bonding and was focussed on the interaction within the core group of the initiative. The topics connected to Bonding were as follows:

- General communication within the initiative
- The division of roles and sharing of the workload
- Group dynamic
- Knowledge of the process

The third theme was Perseverance and was focussed on how a initiative can survive from own values or beliefs. The topics connected to Perseverance were as follows:

- Long term view
- Continuity
- Setting goals
- Motivation
- Patience

CONCLUSION

Finally I combined my own desk research with the research of Timmermans (2020) and reorganized the different aspects for a resilient, durable and effective bottom-up initiative. I changed the themes from Bridging, Bonding and Perseverance to Group dynamic, Planning and Perseverance.

Group dynamic:

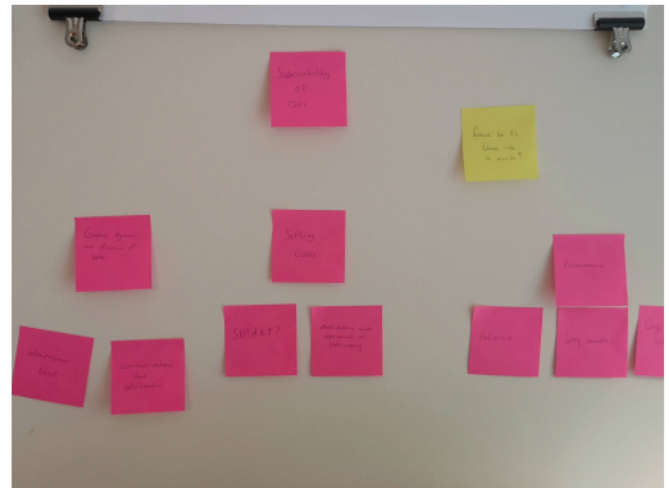
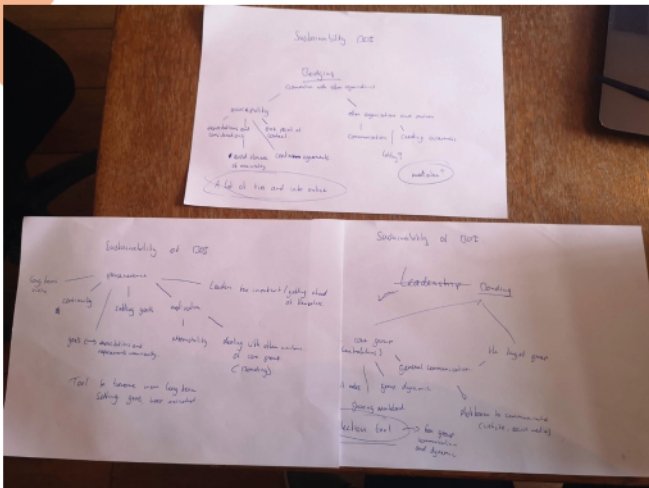
- Collaboration
- Division of roles
- Trust
- Communication

Planning:

- Setting goals
- Overview of project
- Expectations
- Requirements

Perseverance

- Patience
- Long breath
- Long term view
- Focus



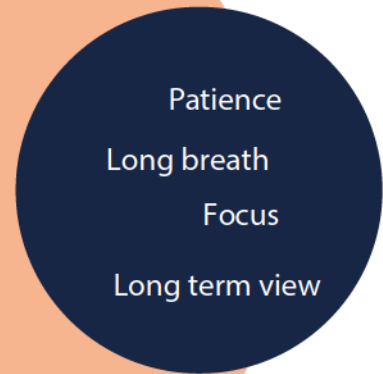
Group dynamic



Planning



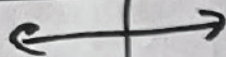
Perseverance



Collecting, structuring and concluding research.

SPANNINGSVELD tussen en leefbaarheid

leef



systeem

nu

snel

locking

Vloeiend

Verlangen naar
verandering

ongeduldig
verbaanheid ontvallen

tastbaar maken

sociale interactie

Geluk, hoop, relaties

verwachtingen en verlangens.

Activatie

I

↓

VLOEIENDE OUDE STROEVIE MACHINE

het resultaat

Mindset veranderen
van de mensen

mensen andere taken geven

Wat is de olie? →

waarom stroef? → mens

meerdere taken

→ Andere rollenpatronen

→ mensen zijn probleem

Responsief werken

II

↓

TASTBAAR MAKEN VAN ALGORITME

Computer krijgt emotie

Computer heeft burn-out

Heilende computer.

ztt

Computer heeft ver-
→ systeem werkt

Computer ↔ emotie
Buddy

FIRST PHASE

In this chapter describes how I first started ideating on the three different themes. After ideating I got to know the project Tegelen where I got more inspiration to look further into reflection models and processes. More development follows which I will write about and I will end this phase after the midterm demoday.

IDEATION

I used the three topics as a guide during the ideation and applied for one the approach of intuitive enquiry for design. In the beginning of this ideating phase I went really broad to explore different opportunities that the three different themes had. I came up with three main concepts that all explored different topics of my research. I will shortly explain my three concepts so you can get a feeling of the way I think and where the end design originated from. Later I got inspiration from another project that took me further in my process.

Concepts

Tree

This concept was focussed on the friction between the system and the living world where municipalities are slow and bureaucratic and bottom-up initiatives are all different and dynamic. This makes the process of setting up an initiative frustrating and it makes it hard for the municipality to have one set of rules to support every initiative. The core idea of this concept was that there would be a big tree, representing the living world, infiltrating in the city hall, which represents the system world. This tree could take on multiple forms to support the two stakeholders working together in a better way. The tree was a mediator and a data collector to give advice to the initiatives and be one point of contact, but the tree was also a meeting point for stakeholders to come together and talk or reflect about projects.

Slow puzzle

The slow puzzle was a concept that also was about dealing with the slow municipality but was more focussed on reflecting.

The puzzle box represented the slow and complicated municipality and solving this puzzle was a metaphor for dealing with the slow municipality. The initiative would solve this together in a group and doing this would take several actions that I found in my research. For example the theme Group dynamic was very present when solving this puzzle collectively. Also solving a puzzle will need patience and focus which came with the theme Perseverance. In this concept I used the approach intuitive inquiry for design where I took inspiration from something I like myself, puzzles.

Reflection buddy

This concept focussed on active reflecting where the initiative would reflect each week, month or after meetings. The initiative could chose the subjects themselves but the reflection method would be the same. This method could be designed and be the core of this concept. The buddy would function as a sort of talking pillow and can respond to the user by giving visual or haptic feedback. Every member of the group could say something by passing this buddy around in the group.

After discussing these ideas with my coach we decided that the most opportunities lay with the slow puzzle. This because of the notion that bigger is not always better. I learned here that smaller designs can have a big impact on big problems while sometimes bigger designs become too distant.

TEGELEN

A bit further in the ideation process I was steering towards a 2D or 3D puzzle where people could reflect on the complexity of the municipality system to see and understand why it was so slow. Multiple people around me advised to take a look at the project of Yasemin Arslan called Tegelen. Tegelen

is a tool that can be used by facilitators in individual and group reflections. It is design to stimulate reflection, which really grabbed my attention. Especially when she is writing about reflection where John Dewey (1910) states in his book "How we think" how reflecting can be seen. According to him reflection is ordering thoughts build upon each other that lead to conclusion. I began to see a lot of opportunities. Reading her report I really learned to see the value of actively reflecting and how shapes can support this process.

LITERATURE RESEARCH ON REFLECTION

After being inspired by Arslan about active reflection I did quick research on the topic of reflection. I collected different kinds of reflection models and methods on how to reflect. These methods I used to further build on my concept. I will shortly describe the methods.

The Schön model describes that there are first of all two types of reflecting where one is reflection in action and one is reflection on action (Schon, 1984). Reflection in action involves reflecting while a certain event is happening. I believe this way of reflecting can be linked to Participatory sensemaking. Reflection on action is reflecting after a certain event. The following two models describe different ways of reflection on action.

The Gibbs reflective cycle is divided in 6 steps (Gibbs, 1988). This first step is a description of what happened, this sets the context of what the reflection is about. The next step is more emotional and here are the feeling described during the experience. Next comes an evaluation of the experience that questions what was good or bad about it and is followed by the analysis that will explain why it was bad or good. This analysis is the largest part of the reflection. The next part is the conclusion where first the learning points are described and also what knowledge or

skills are needed to do things differently. Finally in the action plan the future goals will describe how to obtain these new skills and knowledge.

The Driscoll model only has three steps in its cycle (Driscoll, 2006). The first one is "What?" where the event is described. The second one is "So what?" where the analyzation of the event takes place. Finally the "Now what" will describe the action plan corresponding to the analyzation.

To conclude, I gained insights on how reflection on action methods work and how I could apply this to my own design. These insights were mostly focussed on how to structure a reflection by taking multiple steps in the process and ending with an action plan to achieve active learning in the future. However, this also led me to transforming my project into an active reflection tool to reflect on all of the three themes instead of only reflecting on one.

MIDTERM CONCEPT

My concept for the midterm demoday was a tangram reflection puzzle which was a reflection tool to reflect on the three themes I found during my research: Group dynamic, Planning and Perseverance. The goal was to get an understanding about the themes and reflect on them in a playful way. The second goal was to provoke a discussion about the themes. In this concept I included the approach of intuitive inquiry for design and the theory of participatory sensemaking.

I chose a puzzle for this tool because when using my approach I discovered there were a lot of similarities with solving a puzzle and the themes I got out of my research. This puzzle was a metaphor, a physicalization or an embodiment of dealing with these themes. A tool to grasp these complex themes by associating them with a abstract puzzle. The reason why I decided to work with a tangram puzzle was because of the freedom the user

has when exploring the pieces and making shapes. A tangram puzzle can in this way be used to create shapes and envision their own identity or the identity of the initiative in the process.

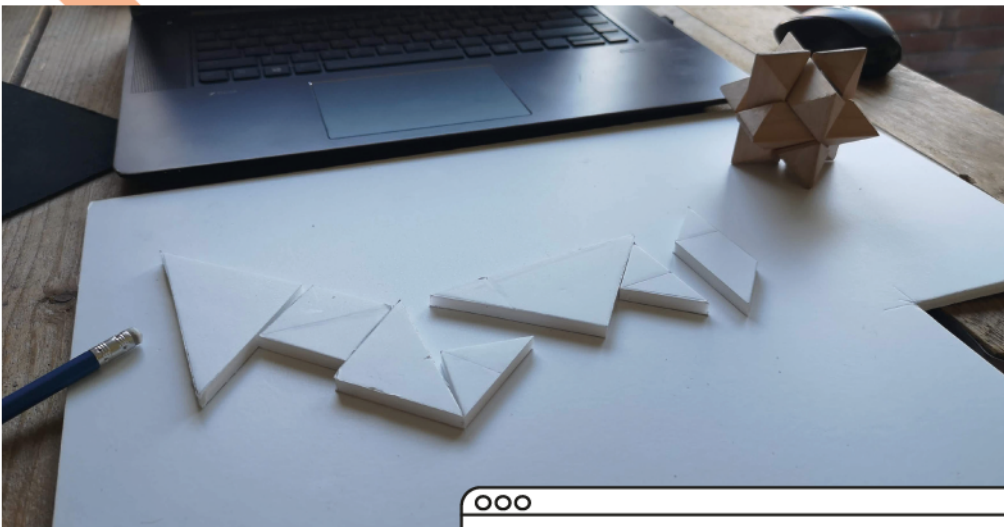
The method of the reflection tool had three steps.

First the participants would individually solve two tangram puzzles and reflect on the themes Planning and Perseverance which are of benefit when solving a puzzle.

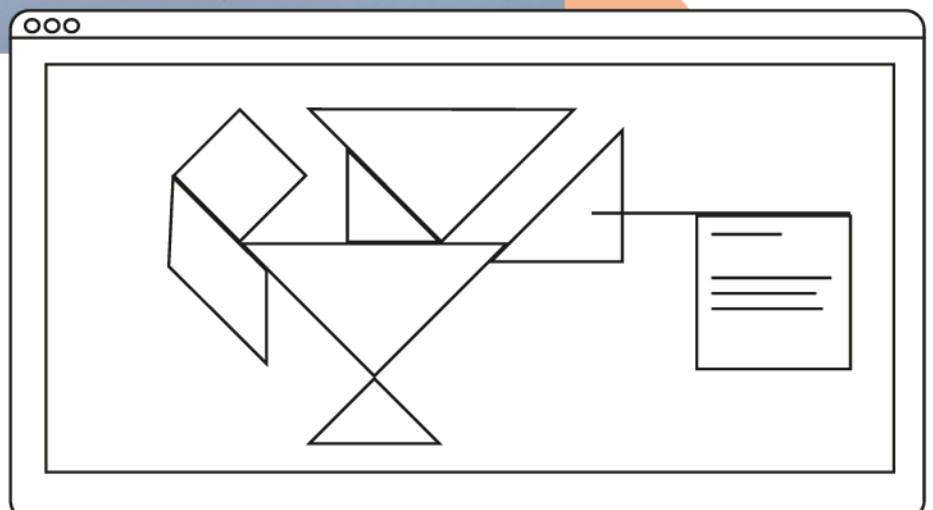
Next, the participants would collectively solve two different tangram puzzles reflect on the theme Group Dynamic which are important when solving a problem, in this case the

puzzles, within a group.

Finally, the participants will engage in a envision and create assignment where they will collectively make three tangram shapes representing their vision of the three themes. This assignments is meant to reflect on their current view on the themes. This was done by provoking the users to discuss about why it was shaped like this, if they could address values to the pieces that support this theme and how these values are connected to the initiative. This assignment was based on participatory sensemaking where people would interact with the pieces of the puzzle in a shared action space and discuss this to find new insights. Here they use reflection in action as support to reflect on action.



Midterm lo-fi prototype to explore possibilities.



Basic sketch of user interface.

My third goal of this project was to discover how a reflective design can be made more useful for the long-term. Due to this and due to the increasing social distancing because of the Corona crisis I expanded the project from a fully tangible tool to partly digital where the participants could upload their end shapes, discussion points and reflections. This platform could function as a database saving all this data for the long term to look back at. Adding an online platform to the tangible tool would also add another layer in the concept where the users can reflect and look back on their reflecting. Reflecting on reflecting I found interesting.

User test

Before the midterm demoday I was planning to do a user test to discover how people would interact with the tangram puzzle. I wanted to find out if making shapes with the pieces would encourage people to reflect and support them in the process.

I made lo fi prototypes of multiple tangram puzzles and planned to hand them out to people around me. However, due to time constraints and the Corona crisis I could only test this with myself. It was a very explorative session where I just tried to interact with the tangram to support my reflection process. From this short session I gained the following insights:

The pieces needed to represent something, for example if the end shape is representing a theme, the pieces should represent the topics. It was hard for me to come up with values myself.

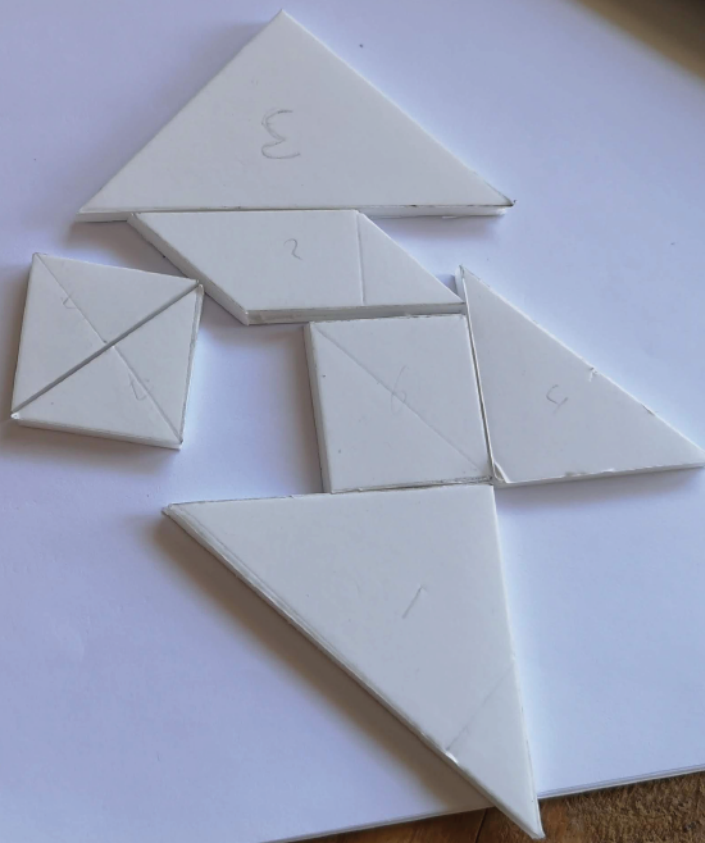
The pieces were biased by the size and shape which meant I was limited by the amount of important topics or values. For example there are only 2 big parts, these big parts give bias that they are important but I what if I only found one value important, or three?

Testing out reflecting using shapes myself.

1. Structuur
2. Transparantie / Communicatie
3. Privacy
4. Planning
5. Vertrouwen
6. Samenwerking
7. Verantwoordelijkheid

→ verdeel over
Stukken, hoe groot
het stuk, hoe
belangrijk.

→ begin met groot stuk
en probeer andere
aan de stukken die
er mee samen hebben.



Feedback midterm demoday

After the first online midterm demoday I gained feedback from many students and professors which I collected, analysed and structured in the following conclusion. I also added my own insights to this section.

The tangram shape was too abstract for people to translate the literal into the abstract and give meaning to it. I, as an industrial designer, am a creative and visual thinker and I am capable to find connections between the literal and abstract. However, for other people it could be too hard to find these connections which will stand in the way of the reflection process. From this I described three different things to improve this design. First, I could give more value to the shapes by naming them or colouring them. Second, I could add support to the users on how to work with the tool by offering more guideline or already existing foundation values where they could built upon. Finally I could step down from the tangram, using different shapes or even adaptive shapes.

The connection between the shapes and the reflection was also something I could have done better. It was a bit loose and there was not really a method for the reflection process. The structure was missing which I found during my literature research but did not apply significantly in this design concept. I could do this better by for example show the progress of an initiative in the shapes. Or reflecting on many shapes and connecting that reflection to the initiative.

Guidelines voor
UI
Interactie design

Methoden

Build -
Evaluate
K

Tangibles
to transform
into shapes.

Guidelines
for
Users.

reflecteren door
werken met als doel
om dialog te starten

SECOND PHASE

This chapter I will describe how I took a step back from the tangram puzzle and started to look more at what the metaphor of a puzzle meant in my design. Next I did a small usertest to discover how people would interact with the new concept.

RETHINKING THE CONCEPT

After the midterm demoday I did not feel very comfortable with my design using the tangram puzzle as a metaphor. I felt stuck during this period and was not really sure where my project should be going. Due to this I decided to discover what my core value of my design is. What is the main principle I want to address with this tool. What is the goal that this tool should achieve.

Structuring this helped me greatly developing the tool further. I discovered that the main aspect of my design was not trying to solve a puzzle and create shapes with puzzle pieces that represents a theme. The main concept of my design was to think about the connections between the pieces. Solving a puzzle to me is grabbing a puzzle piece, then looking at its connections on each side while looking at other connections of other pieces. Due to the fact that a puzzle piece only fits in one place means that you have to do this sequence a lot before discovering where it fits. I saw this as a metaphor for constantly reflecting meaning that the user is constantly reflecting on the connections between the pieces.

Keeping this in my mind I thought back at the sentence of Dewey (1910), describing reflection as ordering thoughts build upon each other that lead to conclusion. At the same time I also thought back at my own identity as a designer where I find myself a thinker and an analytical person. A competency of being analytical is being good at making connections or establishing links with the goal to find new insights or conclusions.

Due to the Corona crisis which led to a

request from initiatives for more online tools I decided to change my concept to a complete online tool. Changing it to an online tool also supported two of my goals which were to make a reflection tool standalone and to make it effective in the long term. This caused a rethinking of the concept and the start of a new iteration.

The concept at this stage of the process was an online environment where initiatives collectively reflect through building a shape with 12 pieces which represented the 12 topics I collected from my research (every theme had four topics). The goal of this was that the users together will place the topics next to each other one by one, find connections and start a discussion about the relation/connection. Finding connections and relations will hopefully bring new insights about the initiative each time they place a new piece of the "puzzle". There is no right or wrong, it is a tool to reflect on the topics and that supports dialogues. The process of building and finding connections is more important than the end shape itself.



My "office" during the most part of this project.

USER TEST

In the second carousel I conducted a small user test to explore how people would work with my new concept. I used the same topics gathered from my research but now applied it to their own projects. This test was purely an interactivity experiment where the accurateness of the topics was not of importance.

During this test I used the program Mural where the participants could interact with the 12 topics. I made them circular shapes as a starting point but addressed to the participants that they could do whatever they wanted with the shapes. For example make them bigger or change the shape. The goal for the participants is to connect

all of the topics to each other and form one single big shape while discussing about the connections and relation between the topics. How the topics connect the users could find out themselves and were free to explore.

I gave them the following questions to think about:

- What connections can you find in the topics?
- How are they connected?
- Then what topic is also quite connected to it? Is it connected to it both or only one?
- Which are not connected at all?

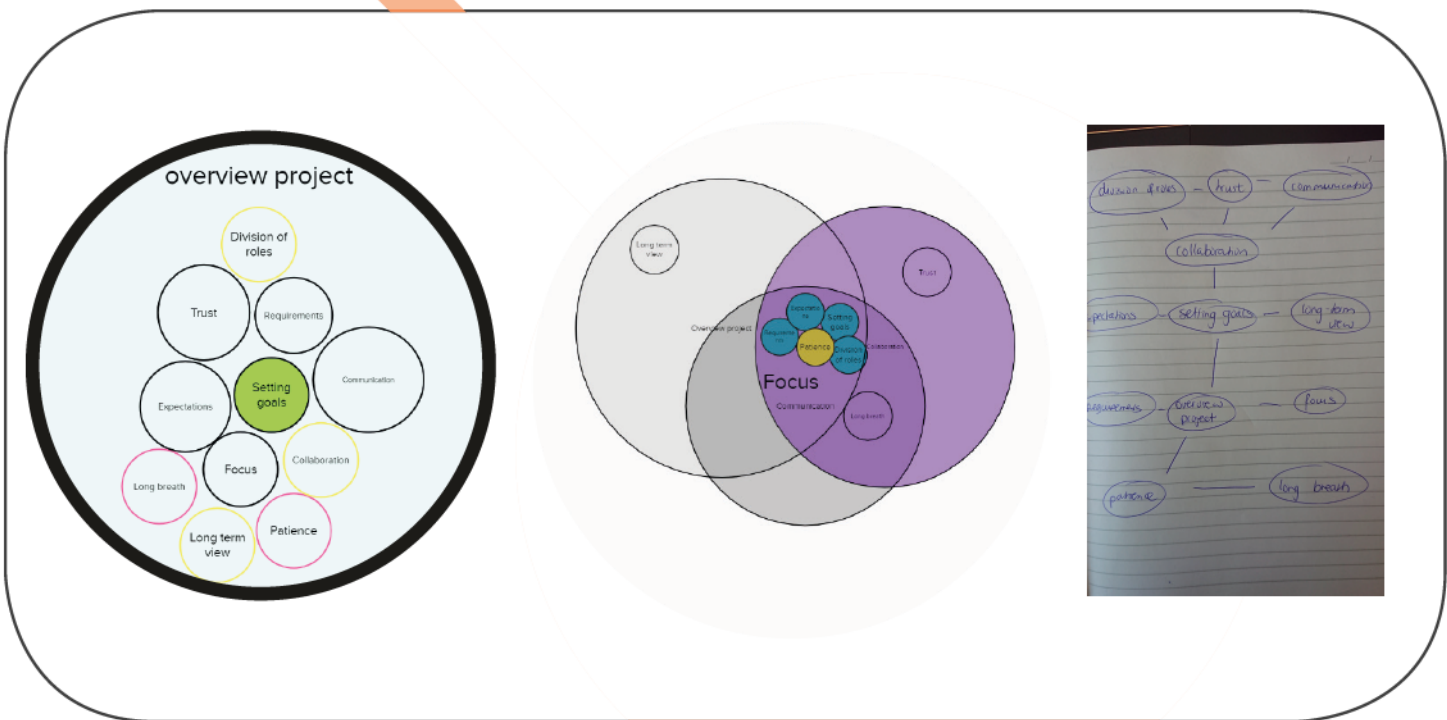
I also let them think about how they would like to connect or differentiate the topics:

- Are some connections bigger or stronger than others?
- Are some topics more important and should be displayed more "out there"

From this small user test I got three completely different outcomes which was very nice. The first group of colleagues made a shape where most of the topics were connected by placing them next to each other.

They made some bigger and some smaller to indicate importance and gave some topics the same colour to communicate that they are also connected. The second outcome was very dynamic, using colours and overlapping a lot of topics to indicate connection. Also placing whole groups of topics within multiple overlapped topics showed the complexity of the relations. The last participant took a more linear approach where the topics were connected with lines. Starting from the bottom, where topics important in the beginning phase of a project were placed, and ending at the top, where topics important in the end phase of a project were placed.

Insights from this user test were that the first group of participants had fun during the process of connecting these topics. This was very positive because this is also important for any tool. Also there were a lot of discussions between the participants during the process. Feedback I got from them was that they were missing some structure in the process and would like to end with a clear conclusion after the session.

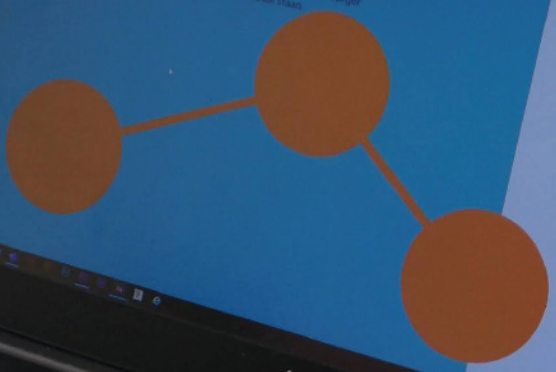


Outcomes of the carousel participants.



Connecting Values

Connecting Values is een interactieve online tool ontworpen voor burgerwetenschap waarbij discussies en reflecties centraal staan.



Welkom!

Log hier in of maak een account aan

E-mail adres

Wachtwoord

Inloggen

Aanmelden

THIRD PHASE

In this chapter I will first explain the new concept iteration after the user test. I also had a expert meeting where I talked about the topics and the general concept. After this I made a low-fidelity prototype on Mural which I tested with an initiative. Simultaneously I prepared for demoday, making a prototype using Adobe XD.

CONCEPT

I described my concept in a concept description where I explained the concept, answered the why, how and what questions and finally wrote down my goals I wanted to achieve with this design concept.

Description

The concept is a online workshop tool to let initiatives find connections between 12 topics. First the participants will individually reflect on the 12 topics to get familiar with them and ground them with their own experiences and beliefs. Next they will be introduced to a central "table" where they can all interact with the 12 topics. They can be seen as 12 shapes that can be moved around. The users will as a group decide what topic connects the most to another topic and gradually, step by step, build a shape from the 12 topics. The goal is to provoke the users to reflect while they build this shape by looking at the topics through different perspectives and talking about the relations between the topics. By constantly shifting their focus and perspectives they will reflect on the topics from many different angles. Their reflections, discussion points and insights can be uploaded in the online environment. To get a more clear overview on the complex connections between the different topics in the end shape, the user can find an overview screen where one topic can be selected and the other topics will clearly be displayed regarding their relation to the selected topic. In this screen the relation between topics can be documented again. After this the initiatives will collect all the insights and build a conclusion out of this, from these

conclusions they will formulate an action plan.

Why

Bottom up initiatives struggle with reaching their goal or with the collaboration within the organization. I want to design a tool to optimize initiatives in those two topics.

How




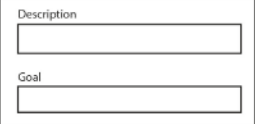
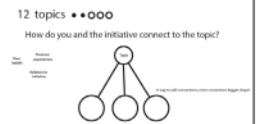
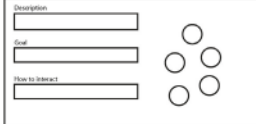
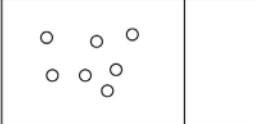



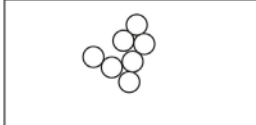
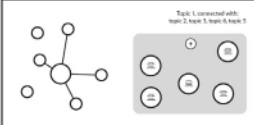
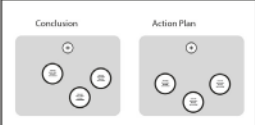


The goal of this tool is to provoke a discussion within initiatives where they actively reflect upon their own experiences or beliefs while finding relations between important topics. Having this discussion and reflecting can lead to the group gaining new insights and strengthen their ability to overcome new challenges. These insights will later be used in an action plan.

What

Through an online environment the users will play around with 12 different movable objects, each representing a topic. The task of the users is to physically connect these objects in the online environment and simultaneously discuss and reflect about this connection within the group. Eventually they will create a personal shape of the objects which can be later expanded where one topics is central and the other topics are distanced around the central topic corresponding to the connection in the end shape.

Goals

- I want to increase their knowledge about what is important in running an initiative.
- I want to let them reflect about how these topics are relevant to their initiative.
- I want them to connect these topics and see them in different perspectives.
- I want them to gain new insights on how these topics are connected to each other and to the initiative.
- I want them to see that there are many aspects of creating a successful initiative but a lot of it is connected.

| | | | | |
|---|--|---|---|---|
|  <p>User starts conference call and opens the website</p> |  <p>Show log in screen</p> |  <p>Create personal account</p> |  <p>Read description and goal of tool together</p> |  <p>Individually reflect on every topic by connecting it to previous experiences, own beliefs and how it relates to the initiative</p> |
|  <p>Explanation of next step and small tutorial how to interact. Again in a group format.</p> |  <p>Start with "table" where people are introduced to the setting.</p> |  <p>Select one starting topic, individual reflections will be visible. Start discussion about the topic.</p> |  <p>Connect first topic and discuss how these topics are connected and related to the initiative.</p> |  <p>Start connecting more topics and again start discussing.</p> |
|  <p>End up with end shape and reflective data</p> |  <p>Explore the shape by expanding it, revisit the different connections, display and add more thoughts and discussion points</p> |  <p>Define a conclusion and action plan using important thoughts and discussions points</p> |  |  |

Scenario building to find out which steps are needed for a good user flow.

- Through this I want to support them in optimizing their internal workflow and the ability to reach their goal.

EXPERT MEETING

Remke Timmermans did her project on the same subject, conducted multiple user tests with bottom-up initiatives and successfully graduated from the faculty of Industrial Design with her supporting workshop Circo Resilience the previous year. Meeting with her would give me more insights on the project due to her experience with designing for bottom-up initiatives. The meeting was very uplifting and inspiring because, due to the Corona crisis, I did not really discussed my project a lot with other students. Remke being a fellow student but however having extensive knowledge about what bottom-up initiatives are and how they behave concluded in a very informative and nice meeting.

With Remke I wanted to talk about the

concept in general and secondly I wanted to talk about the themes and topics from my research. Reflecting on 12 different topics would be very time consuming so I wanted to bring them down to approximately five bigger, inclusive, overall values, I will elaborate on this further in the next section.

From this meeting I gained the following insights:

Bottom-up initiatives mostly consist of excited and energetic people who, if they had the power to do so, would want to make the world a better place today. This means that initiatives generally want to see quick results when using supportive tools or workshops. Initiatives would mostly want to know specifically what the benefit of a tool is before using it. It is better if I could explain the benefits and objectives of the tool to make this clear.

The action plan was missing structure and seemed to come out of the blue. The last

step of the tool needed to be more specific on how an action plan would be formulated. Topics that are also important for initiatives which Remke discovered in her process is the energy, motivation and fun in the process.

VALUES

As mentioned in the previous section I was iterating on the three themes and its topics with the goal to transforming these different aspects into values that could grasp these themes better. Doing this I could make the reflection process easier by reducing the amount of reflections between aspects.

Schwartz (2012) describes values as the following: "Values are used to characterize cultural groups, societies, and individuals, to trace change over time, and to explain the motivational bases of attitudes and behavior." (Schwartz, 2012, p. 3). This made me realize that according to Schwartz reflecting and values lay very close to each other. In his research he also pointed out six main features of values which strengthened the theory behind my tool. I will point out a couple of them to show this.

He describes that values can be referred to desirable goals and that the relative importance of multiple values guides action, this contributed to the action plan integrated

in my tool and the use of connecting the values relatively to each other to guide action.

I restructured my themes and topics using the theory of Schwartz, the insights of the expert meeting and my own interpretation. Merging the topics with the themes gave me 15 themes to work with. These 15 aspects I grouped again into five values and within these values I added the other topics of my research and named them important ingredients for the value. I will shortly explain the five values:

- Trust: This values is about trust within the initiative. Division of roles and collaboration are important ingredients.
- Stimulation: This value is about the stimulation within the initiative. Energy, motivation and fun are important here.
- Communication: This value is about the communication of the initiative. Internal communication and external communication are important here.
- Perseverance: This value is about the determination of achieving the goal. Focus, structure and setting goals are important here.
- Patience: This value is about the tolerance and endurance when difficult situation arise. Long term view is important here.

USER TESTING

Simultaneously I was creating a lo-fi prototype in mural where the goal was to test the basic functionalities of the tool.

Step 1: I created five “screens” for the first step of the tool where the participants individually reflected on the five values. They had one minute for each value to write down own experiences, beliefs or thoughts, both personal and related to the initiative.

Step 2: They had 10 minutes to collectively connect the values using circles on the screen. While connecting I asked them to discuss and reflect about how these values were connected and how this was related to the initiative. These discussion points and insights were described and added to the tool.

Step 3: This final step was the formulation of the action plan. Here the participants collected their discussion points and insights to derive and formulate an action plan from

these notes. The action plan consisted of main goal(s) with separate intermediate goals or actions to achieve the goal.

The first test was during the final carousel of the semester where I did a pilot test on the usability of the lo-fi prototype. This went quite well and I did not face any big problems so I decided to keep the tool for what it was.

The main user test was conducted with two board members of the bottom-up initiative Natuurdorp Maashorst. Unfortunately a third participant was not able to join us on short notice. The user test was planned to take only 30 minutes to an hour but ended up during more than two hours due to nice conversations and a good atmosphere during the test. The participants were experienced with reflective models, tools and workshops and during the user test the participants were very open to share any thoughts about the tool as they went through it. Due to this I did not only did a user test but it also felt more like an expert meeting due to the knowledge

Lo-fi prototype consisting of 4 steps.

Step 1: 2-3 min

Introduction and tool description

'Connecting Values'

Connecting values is about connecting and reflecting. The goal is to get new insights through discussion and reflection.

This you will do in 5 short intermediate screens that you can move around and connect on the screen. These screens each represent a different value.

Click, hold and drag the circles to move them. Release the mouse to be able to click on another circle. You can also click on a circle to select it. There are 5 'screens' with 5 values underneath each circle.

Try it!

Step 2: 1 min each (total 5-7 min)

Individual:

Getting to know the values.

In this individual part you will be introduced to the values and invited to reflect on them. For example think about your own experiences and beliefs. There are 5 short screens to be connected to the initiative.

At the top in the blue circle is the value with a short description. Below you can now start notes of the reflection points.

There are 5 'screens' with 5 values underneath each value.

Write down here short notes about experiences, beliefs or thoughts. Personal and connected to the initiative.

Step 3: 10 min

Connecting values

You will have a better understanding of personal ideas of the different values now. The next step is to connect these values. This is done by starting to connect the circles on the screen. You can move them around and connect them to each other. There are 5 short screens to be connected to the initiative. Below you can now start notes of the reflection points.

There are 5 'screens' with 5 values underneath each value.

You can now connect the circles on the screen. You can move them around and connect them to each other. There are 5 short screens to be connected to the initiative. Below you can now start notes of the reflection points.

Step 4:

Action plan

You will have a better understanding of personal ideas of the different values now. The next step is to connect these values. This is done by starting to connect the circles on the screen. You can move them around and connect them to each other. There are 5 short screens to be connected to the initiative. Below you can now start notes of the reflection points.

There are 5 'screens' with 5 values underneath each value.

You can now connect the circles on the screen. You can move them around and connect them to each other. There are 5 short screens to be connected to the initiative. Below you can now start notes of the reflection points.

Copy your notes here:

Action plan:

Goal: Goal:

Steps to take: Steps to take:

and feedback they gave me during the test. The session gave me the following insights:

- Communicate dimensions of the white space where they place the spheres (Only the relation to each other is important)
- Let people know what kind of tool this is (reflection on the group)
- Us and me (values can be seen in a personal "me" perspective and a collective "we") there are a lot of different dimensions to the values.
- Too simplistic to grasp the complexity of the discussion. One circle with a word is not enough.
- Zoom in in the different values, what are they, (click in value and show all of the associations of the first part, possibility to add to the values and maybe click on them to see the complexity of the values)
- Let people find their own values that are important for the problem
- Structure and process also very important.

Observation and discussion

They experienced that the 5 chosen values were coming back throughout the discussion and reflection, were very recognizable and fitted well in what is important in working together and achieving a certain goal. A healthy discussion started because the values were not very judging or provoking, it is not so much about the differences of the people working in the initiative. It was easy for them to link certain values to experiences that had happened in the past. They reflected on the past with these values. They set up goals that they already spoken of before but never actually wrote down and did.



Full lo-fi prototype for the user test.

DEMODAY

This year the demoday was a lot different than the previous demodays I have had. Due to it being completely online I decided to make a interactive prototype using Adobe XD where people could experience the flow of the online interactive tool themselves at home, now called Connecting Values. The prototype was both an experience and look and feel prototype where people could interact with the different steps of the tool and but also see the formgiving and aesthetics of the tool. Making this prototype I discovered that making an online interactive tool can be very hard if the design should be able to be explorative and free to use.

The changes made for the demoday included the following:

- Home screen and login screen
- A dashboard where the user can choose to begin a new session or to look back at one for a long term effect.
- Added interactive explanation screens to show how the tool works to make a better standalone tool.
- Added visualization to the different values and ingredients for contextualizing them.
- To enrich the interaction the user must drag notes from the value in the first part.
- The values are now connected with lines that are responsive: when values are closer the connection is thicker implying that it is stronger, when dragged farther apart the line shrinks to communicate a weakening connection.
- The connecting lines can be clicked on and a reflection panel will pop up where the user can add reflections, discussion points and thoughts. This data for each connection will be stored.
- The action plan is also made more interactive where the user also drags actions or intermediate goals from the bigger goal.
- As explained in the first point, the user can look back at their end shape and click on the connections to reflect on their

reflection. They can also look back at their action plan to refresh their minds.

I wanted to show that there was a lot of different interactivity within the tool such as dragging reflection notes from a value and responsive shapes in the form of lines. The goal of this was to make it more immersive and dynamic.

FEEDBACK

My final feedback during my project was from my teacher coach Caroline Hummels. I will describe the most important insights gained: I need to improve or iterate on the values because some values are not actual values, more skills or traits.

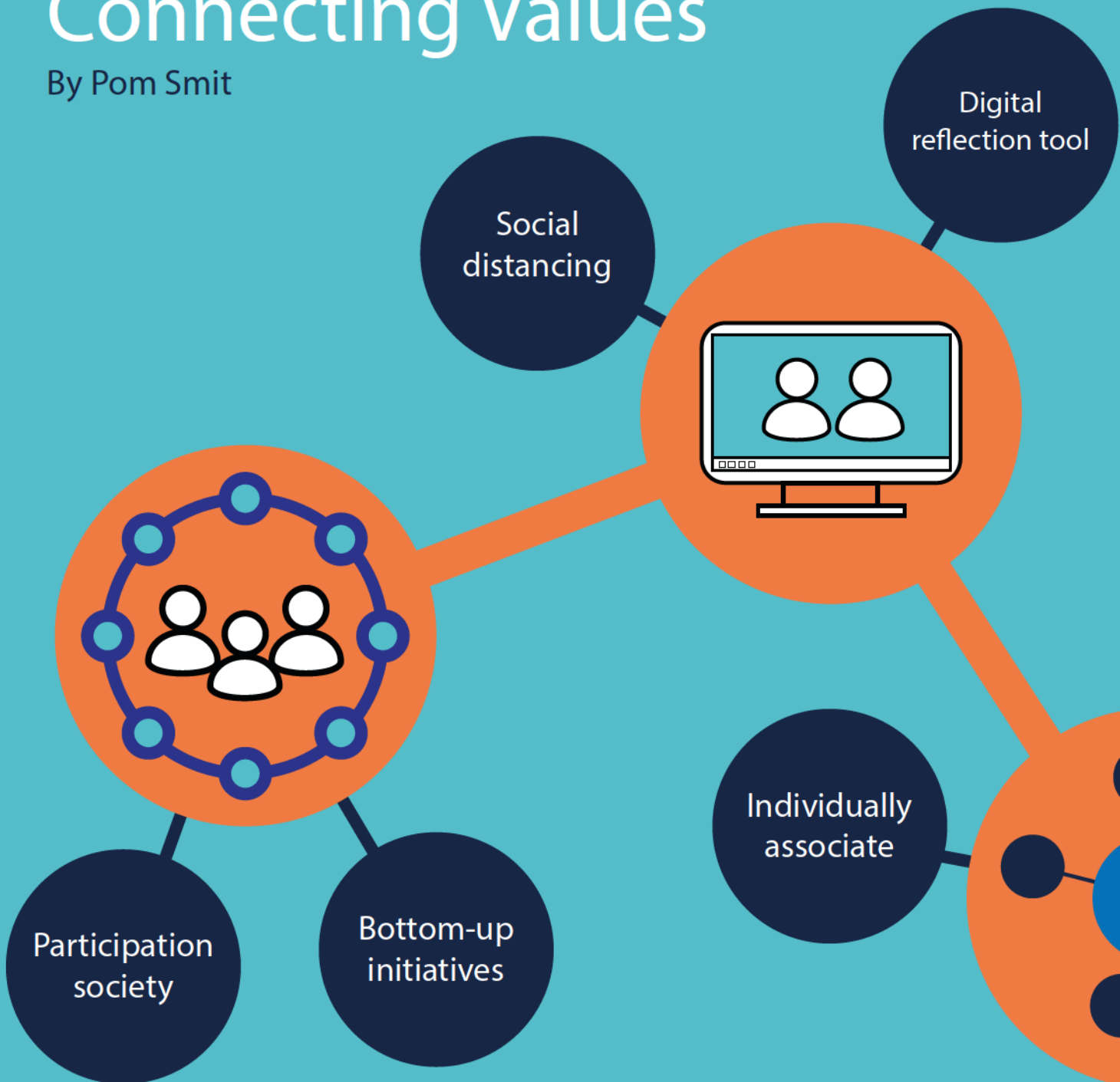
The added interactivity of dragging a shape from a shape can be improved even more using my own metaphor of this shape being more alive, organic or responsive.

The action plan could be made more dynamic, similar to the metaphor of the shape.

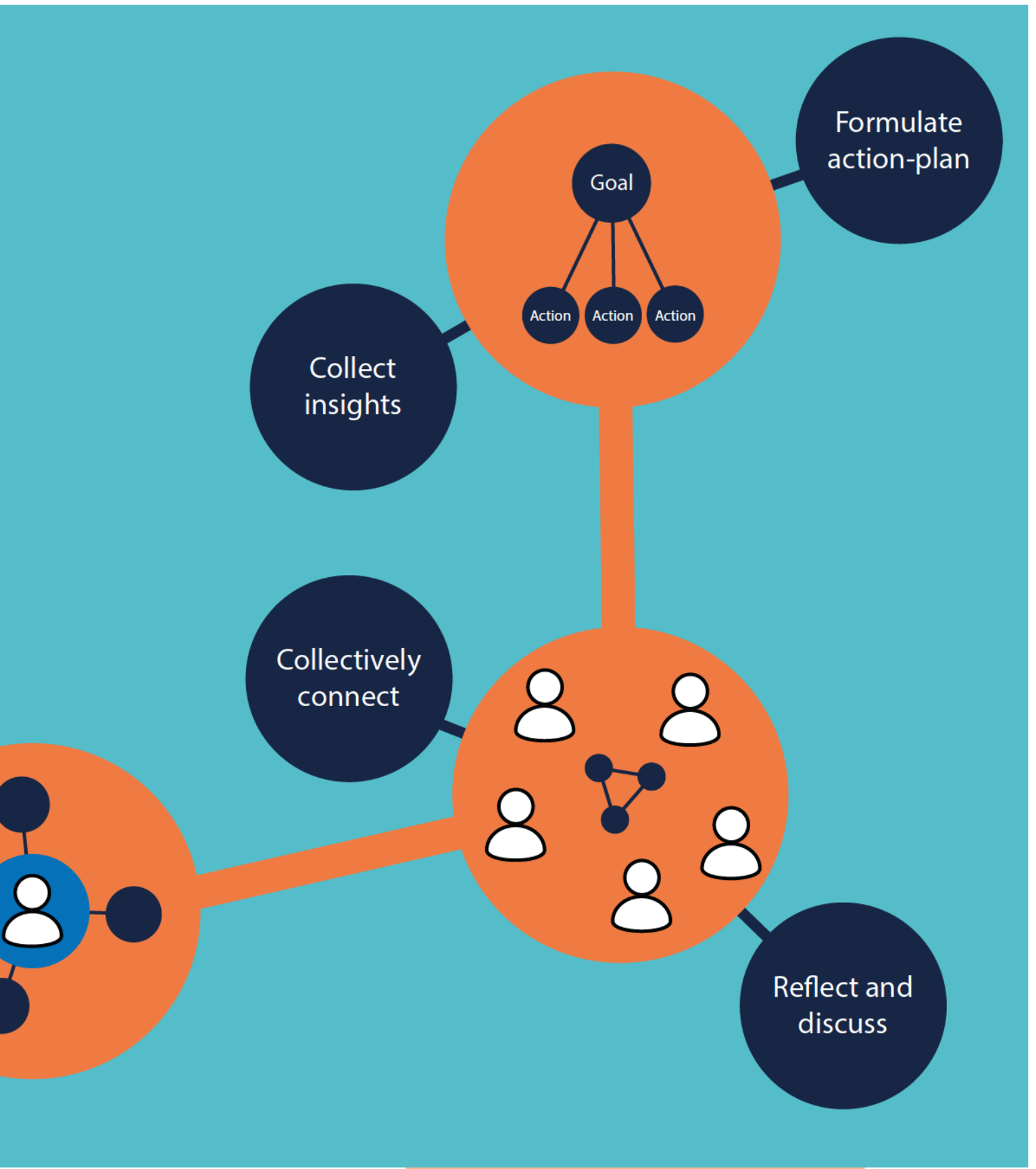
Quick overview of the interactive tool.

Connecting Values

By Pom Smit



1 min pitch poster for Demoday.



BANG & OLUFSEN

Connecting Values

Nieuwe sessie

Naam sessie:

Met wie?

Start sessie

Sessie 1



ZBook

OUTCOME

In this chapter I will describe my final design of my Final Bachelor Project. This design is a iteration on the demoday design and is mostly the same. However there are a few developments that I will cover in this chapter. I will do this by explaining the user experience of my design step by step.

Concept description

Connecting Values is a digital reflection tool designed for bottom-up initiatives to support them in the beginning stadia or when they get stuck in their process. This tool, designed for times of social distancing, connects them in an online environment where they will be interacting together with five important values. After associating with the values the participants can move shapes on their screens that represent the values and have to connect them correspondingly to their relation to each other. Reflecting and discussing why and how certain values are connected and how that relates to the initiative is the core of this tool. This changing

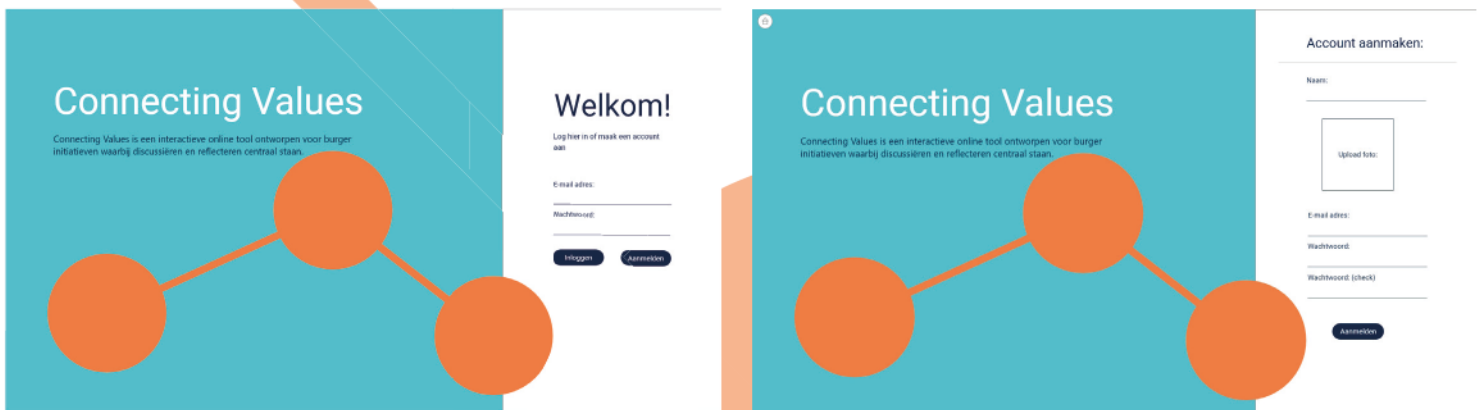
of perspectives will gain new insights that will be used in the formulation of an action plan. This tool supports the initiative in achieving their goal while improving their internal relationship and cooperation.

Login and creating an account

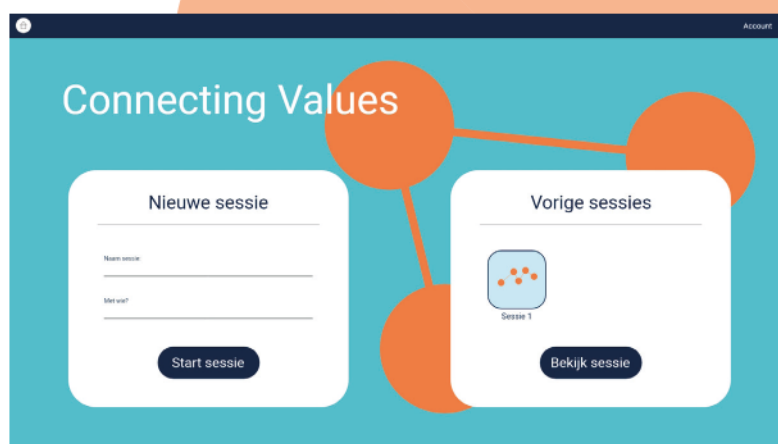
Before the session starts the user creates and account or logs in, depending if the user has an account already. When creating an account the user fills in a name, a picture, their email address and password for future use of the tool.

Dashboard

When logged in the user arrives at the dashboard, here the user can choose to start a new session or (if applicable) look back at a session. Here the user can also view and edit their account and log out. Starting a new session begins with giving it a unique name, then adding people from the user database to the session and finally pressing the start button. The session will start if everyone accepted the invitation and is connected.



The design for the login screen, account creation screen and the dashboard.



Part 1: Associating

Part one is getting to know the values, here the participants individually reflect on the 5 values to associate with them and get a grip on what the values are implying.

The user first comes to an explanation screen with a interactive tutorial to get to know what the goal is and how the system works. They only get 1 minute to reflect on each value to keep it fast and the notes intuitive. If they continue a screen pops up telling the user that the 1 minute is about to start. If they continue again the counter will start and the

user arrives at the next screen where on the left a description is displayed and on the right they can interact with the value. In the description part the value and its important ingredients are displayed in both words and icons. in the right section the user interacts with the value, displayed as a circle, by dragging another circle out of the value. In this new circle the user can write down their association with the value. This they can repeat until the timer runs out. When the time runs out the user comes to another screen where they can take a quick break before going to the next value. This repeats for each value.

The screenshot shows the 'Connecting Values' app interface. The top navigation bar is dark blue with a home icon on the left and 'Account' on the right. The main content area has a light blue background with two white rounded rectangular panels. The left panel is titled 'Deel 1 - Associëren' and contains three paragraphs of text explaining the first part of the process. The right panel is titled 'Hoe werkt het?' and contains a paragraph of text followed by a diagram. The diagram shows a central orange circle labeled 'Waarde 1' connected to three dark blue circles labeled 'Notitie 1', 'Notitie 2', and 'Notitie 3'. An arrow points to the 'Waarde 1' circle with the text 'Klik hier!'. Below the diagram is a dark blue button with the text 'Ik snap het!'.

Connecting Values Account

Deel 1 - Associëren

Het eerste deel draait om associëren en reflecteren waarbij jullie individueel gaan nadenken over 5 waardes.

Per waarde krijgen jullie een minuut de tijd om persoonlijke ervaringen en overtuigingen op te schrijven. Denk hierbij ook na hoe deze waarde verbonden is aan het initiatief.

Schrijf het zo kort mogelijk op, het liefst in een aantal steekwoorden. Alles wat te binnen schiet is meegenomen en niks is fout!

Hiernaast volgt een handleiding hoe je notities kan toevoegen aan de waarde.

Hoe werkt het?

In de oranje cirkel hieronder staat de naam van de waarde waarover je gaat reflecteren. Je krijgt 1 minuut om alles op te schrijven wat in je op komt, dit doe je door nieuwe verbindingen toe te voegen aan de waarde. Sleep vanuit de waarde een nieuwe notitie, dit kan je doen zo vaak je wilt! Hieronder zie je een voorbeeld. (dit is een prototype, klik op de waarde om nieuwe notities te tonen)

Notitie 3

Notitie 2

Waarde 1

Notitie 1

Klik hier!

Ik snap het!

Design of the explanation screen of the first part, associating.

Connecting Values Account

Vertrouwen

Deze waarde slaat op het vertrouwen binnen het team.

Ingrediënten belangrijk voor deze waarde:

Rollenverdeling



Collaboratie



[Volgende](#)




Connecting Values Account

Stimulatie


Deze waarde draait om de stimulatie binnen het initiatief.

Ingrediënten belangrijk voor deze waarde:


Energie



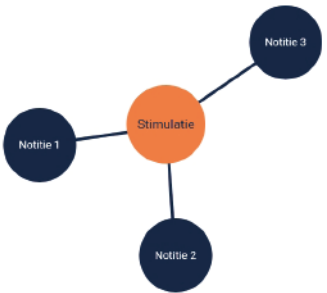
Motivatie



Plezier



[Volgende](#)




Connecting Values Account

Communicatie


Deze waarde draait om de communicatie, zowel intern binnen het team als in extern met de gemeente of andere belanghebbenden.

Ingrediënten belangrijk voor deze waarde:

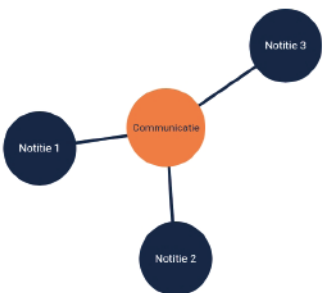
Interne communicatie



Externe communicatie



[Volgende](#)



Individual reflection screens for the values trust, stimulation and communication.

Connecting Values Account

Volharding

Deze waarde draait om de vastberadenheid om het behalen van het doel van het initiatief.

Ingrediënten belangrijk voor deze waarde:

Focus 

Structuur 

Doelen 

[Volgende](#)



Connecting Values Account

Geduld

Deze waarde draait om het vermogen ergens op te kunnen wachten met uitzicht op de toekomst.

Ingrediënten belangrijk voor deze waarde:

Verdraagzaamheid 

Lange termijn visie 

[Volgende](#)



Individual reflection screens for the values perseverance and patience.

Part 2: Connecting

Part two is where the participants collectively connect the values and add reflections and insights to the connections. The time frame for this is 15 minutes but can be extended if needed.

When the first part is done the users come to another explanation screen where they again get a description of this part and a interactive tutorial. When they start the second part the screen is again divided in two sections, on the left they can add reflection points and on the right they can interact with five shapes representing the five values. These five shapes can be placed and moved anywhere on the right section by anyone who is in this session. The goal is to connect these values to each other by moving the shape towards each other. The placement on the screen is not important, only the relation or distance between the values is important.

There is a certain threshold for a connection and when close enough a line appears which gets thicker if the values are moved closer to

each other. The line also animates a “stream of data” flowing between the values which also responds to the distance between the values where closer means quicker and further away means slower. This cares for a more immersive interaction. The users can click on the connection and then on the left part add reflection points about this connection. The group will collectively connect all the values to each other and add as many reflection points to the connection as possible in the given time frame, or more if they desire.

During this connecting of the values the user can at any time double click on the values to see a collection of associations which everyone filled in in the first part. In this screen the value is centered in the middle and all the notes are connected around it. The user can also add more associations to the values if new ones arise during the second part of the session.

When the users are done connecting they can quickly look back at all their reflections before going to the final part.

The screenshot shows a mobile application interface titled "Connecting Values" with an "Account" link in the top right. The main content is divided into two white panels on a teal background.

Deel 2 - Verbinden

De volgende stap is om gezamenlijk de waarden te verbinden! Besluit met welke waarde jullie beginnen en welke waarde het beste erbij past. Reflecteer en discussieer met elkaar over de connecties tussen de waarden en hoe dit zich verhoudt tot het initiatief. Denk en kijk hierbij terug aan de reflectie en associatie in het individuele deel.

Iedereen mag de vormen verschuiven. Geef elkaar de ruimte maar spring ook in als je ergens wat anders over denkt!

Doe dit stap voor stap tot dat jullie elke waarde hebben gehad. Er kan ook nog worden nagedacht hoe de waarden juist niet bij elkaar passen.

Hier geldt ook weer, schrijf zo veel mogelijk op wat er besproken wordt in korte begrijpbare kernwoorden. Succes, jullie hebben 15 minuten!

Hoe werkt het?

Het verbinden van de waarden doen jullie door middel van interactieve vormen die jullie kunnen bewegen en verbinden op het scherm, deze vormen representeren de verschillende waarden. Hoe dichter de waarden bij elkaar liggen, hoe dikker de verbinding. Hoe verder ze van elkaar liggen hoe dunner de verbinding tot er uiteindelijk geen verbinding meer is.

Aan de verbinding die ontstaat kan een reflectie punt aan worden toegevoegd door er op te klikken. Aan de linker kant kunnen dan per verbinding notities worden toegevoegd. Klik op volgende om hieronder de stappen een voor een te bekijken.

The right panel includes two diagrams: "Reflectie punten" showing a blue circle with a plus sign, and "Interactieve omgeving" showing an orange circle with a curved arrow pointing to it, labeled "Verbind eerste waarden". Below these are buttons for "Volgende" and "Ik snap het!".

Design of the explanation screen of the second part, connecting.

Connecting Values Account

Reflectie punten

+

Notitie 1

Interactieve omgeving

Connecting Values Account

Reflectie punten

+

Notitie 1

Notitie 2

Notitie 3

Interactieve omgeving

Connecting Values Account

Reflectie punten

+

Interactieve omgeving

Klik op de verbindingen om terug te kijken naar de reflectie punten

Volgende

Part 3: Activating

In the final part they organize the notes and create a dynamic action plan with future goals and actions to achieve those goals. The time for this is 10 minutes but can be extended as well if needed.

For the final time the users will come to a screen that will describe and explain the next part using an interactive tutorial. When this part is started on the left of the screen all of the reflection points of the previous part will be displayed. The users have to collectively organize these notes to formulate new goals. They don't have to do this but organizing the notes helps to find conclusions and set new goals.

Formulating the action plan happens on the right side of the screen where the new goal is displayed as a big circle. From this circle the users again drag out smaller circles representing the actions needed to achieve this goal. How further away the action is dragged from the central circle, how less important that action is and how more time it is given. So multiple actions are ordered by importance and time using the distance to the main goal. This action plan is designed to be dynamic and the actions will slowly be pulled to the main goal. If one action has reached the goal, the users get notified via an email to let them know that this happened and are asked to look at the action plan to see if everything is still correctly planned.



Design of the explanation screen of the final part, activating.

Connecting Values Account

Notities

Actie plan

+

Connecting Values Account

Notities

Actie plan

+

Connecting Values Account

Notities

Actie plan

+

VALUE PROPOSITION

Starting at the viewpoint of the suppliers of tools and workshops such as ZET and Stérk.Brabant this product is really cheap to distribute and run. The tool only needs to be produced once which could be calculated by estimating the amount of work hours needed to program the software (Laboratory, 2018). I expect that anyone who runs an initiative today has a computer and internet so the distribution costs are zero. Being a stand alone tool also contributes to the running costs because no facilitator is required by the tool. Running a web application with users and the stored data can be scaled up, hosting costs starting at around \$5 annually and scale up depending on the amount of data used (Laboratory, 2018).

There is a demand for online tools and workshops due to the social distancing and this tool supplies that. Actively reflecting on the topics helps initiatives to start discussions about both the process and the collaboration which in turn supports the initiatives in reaching their goal. New developments within the initiative can lead to the reuse of the product at any time and getting reminded (if they choose) to look back at their action plan by the system will help them also on the long term.

REALIZATION

Due to time constraints and prioritizing the user experience above a working system I decided that for this project I would only think through and design the user experience completely and not build a working back-end system behind it. I expected it to take a lot of time for me to do both and I did not wanted to end up with two half working prototypes. Although I did thought about how to make this web application.

Due to the fact that the user interface is already fully designed the only thing that has to be done is to transform it into front-end code using HTML, CSS or JavaScript. For the database a document database can be used to save the user information, the user input (associations, reflections and action plan), the location of the values on the screen and the placement of the actions around the goals. The language JSON and the database Firebase can be implemented for this. Of course this needs to be protected. With building the back-end of a web application I have not a lot of experience although I have worked with people who do.

I think to realize this application I have enough basic knowledge to talk about people what I want and how it should work with shallow knowledge of what is possible and what is not.

DISCUSSION

In this chapter I will describe and critically reflect on the outcome and the fulfillment of the project goal.

SOCIAL RESILIENCE

During the process I got distracted by the amount of data that was available about bottom-up initiatives online and took a different route that was more about the sustainability and the success factors of bottom-up initiatives instead of really diving into the subject of resilience.

Due to this the outcome focusses not really on the subject of social resilience anymore but rather on the internal relation and cooperation of the initiative. Social resilience is earlier described as collectively coping with or responding to external stresses and disturbances resulting from social, political and environmental changes. The tool is not really focussed on this subject about coping and responding. However, I think the tool does help increase the social resilience of initiatives in its own way.

STANDALONE

This reflective tool is designed to be a standalone tool which means that the tool itself is the facilitator. This design should be intuitive and clear enough so that any participant can effectively interact with it. With this I mean that most of the time the facilitator of a workshop helps the participants to think differently about a topic or support them during their process. This social contact and the participants knowing that the facilitator is specialized in this area gives the participant trust that makes the workshop or tool effective.

During my user test I was in the same video call as the participants and the prototype was missing some functionalities because it was a lo-fi prototype. This meant that sometimes I had to guide them through the session which actually made me the facilitator while the tool itself should be doing that. To test if this

tool is indeed an effective standalone tool, a better prototype should be made where the facilitating party should observe how the people are interacting with the tool and if they need more support during the process.

USER INVOLVEMENT

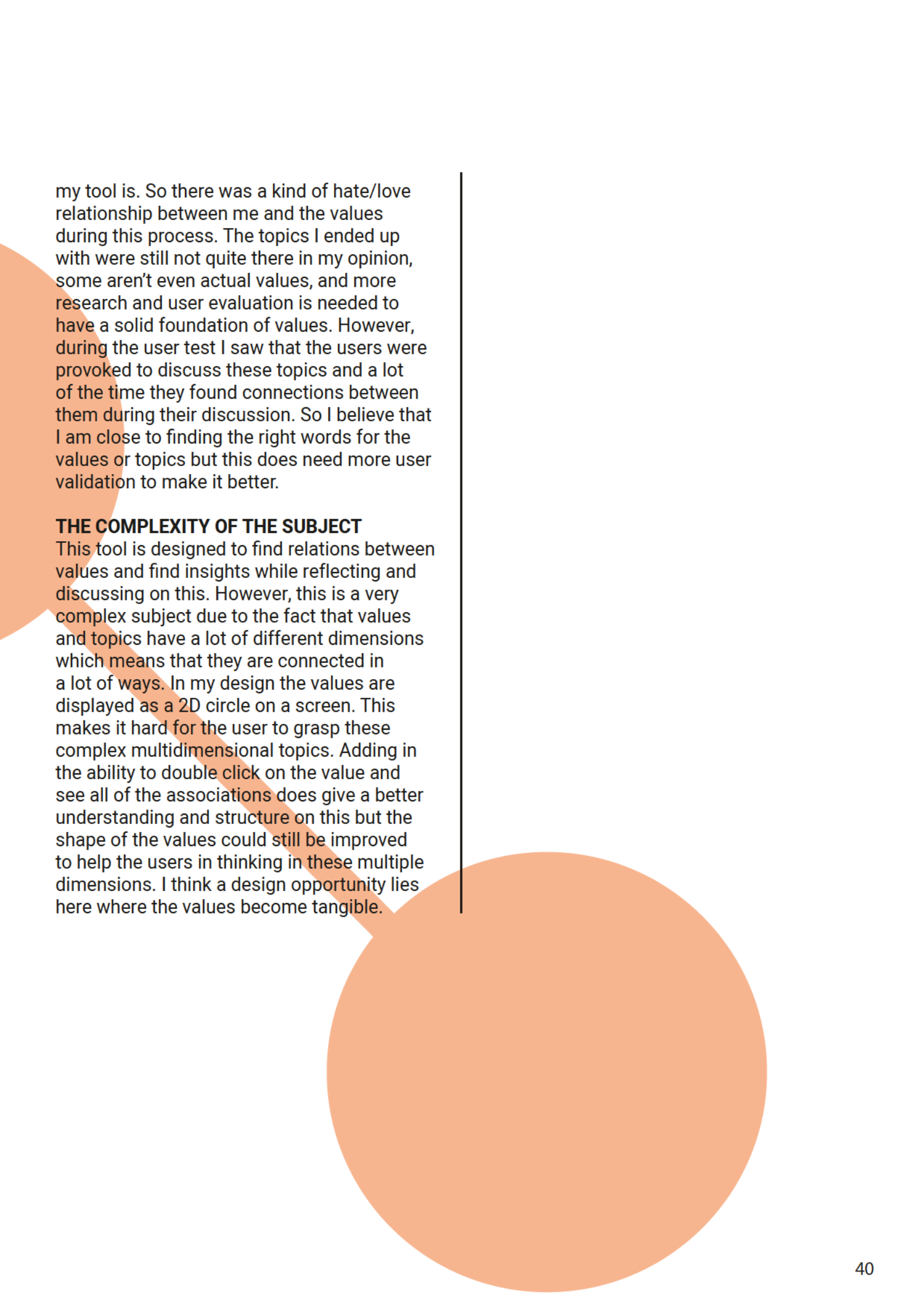
At the end of my design process I struggled a lot with finding initiatives that could test my design concept to help me further in the process. Here I discovered that when designing for a specific group of people it is very helpful if they are involved in the process early on.

During this process I followed the steps that I took in previous projects, ideate, realize and validate. However, this was a project for a specific group of people with specific needs that they know best, I should have better used a different strategy. Designing with the users in a sort of co-creation process or co-design would have been more effective in my personal opinion. Involving users in the process much earlier will gain insights and feedback which is not retrievable in desk research. Involving the users early on will also contribute to the user testing later because they will be more eager to help. Doing this could result in more user input to validate my design better and get more insights which could be user for a stronger design.

VALIDATION OF THE VALUES

The values I used for this project were based on the basic foundation that is needed for a successful initiative which I found with research and validated through an expert meeting and a user test. These values were quite a struggle for me during the process because of the complexity that comes with this and some of them not really being values.

Values have a multitude of dimensions to them and can be different for every person. This makes it both very complex but also very open to discussion, which the goal of



my tool is. So there was a kind of hate/love relationship between me and the values during this process. The topics I ended up with were still not quite there in my opinion, some aren't even actual values, and more research and user evaluation is needed to have a solid foundation of values. However, during the user test I saw that the users were provoked to discuss these topics and a lot of the time they found connections between them during their discussion. So I believe that I am close to finding the right words for the values or topics but this does need more user validation to make it better.

THE COMPLEXITY OF THE SUBJECT

This tool is designed to find relations between values and find insights while reflecting and discussing on this. However, this is a very complex subject due to the fact that values and topics have a lot of different dimensions which means that they are connected in a lot of ways. In my design the values are displayed as a 2D circle on a screen. This makes it hard for the user to grasp these complex multidimensional topics. Adding in the ability to double click on the value and see all of the associations does give a better understanding and structure on this but the shape of the values could still be improved to help the users in thinking in these multiple dimensions. I think a design opportunity lies here where the values become tangible.

Scenario ③: Tree is meeting point.



- Tree is mediator / bridge between core group of people and target group
- Connects BOIs with other organizations (municipality, communes, partners, other BOIs)
- > can also be a place for BOIs to reflect.

Scenario ④: ~~tree~~ BOI teacher

System that teaches BOIs how to lead

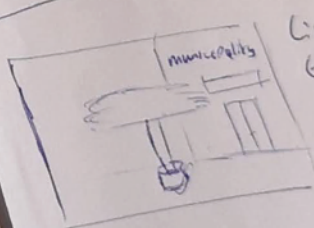
System vs leaf world / system vs living world.

Problem: difference in BOIs, municipality is slow.

meeting place and function / critical design to start dialogue

infiltrate with a desire of change

Scenario ①: Big function / awareness



- Living object infiltrates the system to create awareness.
- tree to symbolise living world that is working -> BOI can also work together

Scenario ②: Tree is data collector

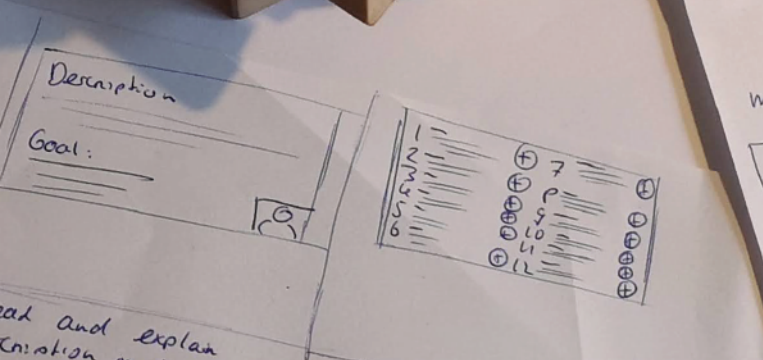


Living
↕
System

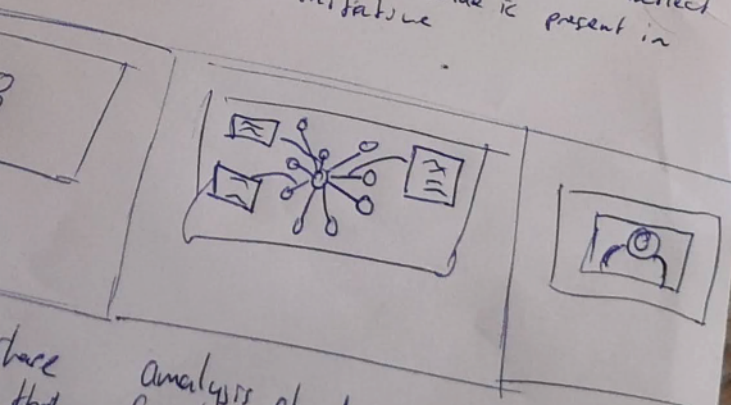
Tree is data collector BOIs and agent. Si

- Data gathered
- people can use

Social pl



Describe and explain situation and goal:
Shows the 12 values and explain, give time to reflect on how value is present in initiative



Analysis of distance from center, more room to document reflections
your discussion and end of workshop. + conclusion on autonomy

CONCLUSION

The design challenge was to design to support bottom-up initiatives in their initial stage or when stuck in the process. With this I set goals to design an active reflection concept which was stand alone and useful for the long term. While taking social distancing in consideration an online reflection tool developed throughout the process which supports the initiatives in their internal relation and cooperation by provoking discussion and reflection about the relations between five separate important values and topics that set a good foundation for an initiative. The values and topics are trust, stimulation, communication, perseverance and patience which all had own important ingredients. The overall theme of this project was social resilience and although the project took a different route it will still contribute to this by giving the initiatives a tool to reflect and learn. Adding reflecting and dynamic planning in the routine of initiatives will cause them to cope and respond better to changes in the future.

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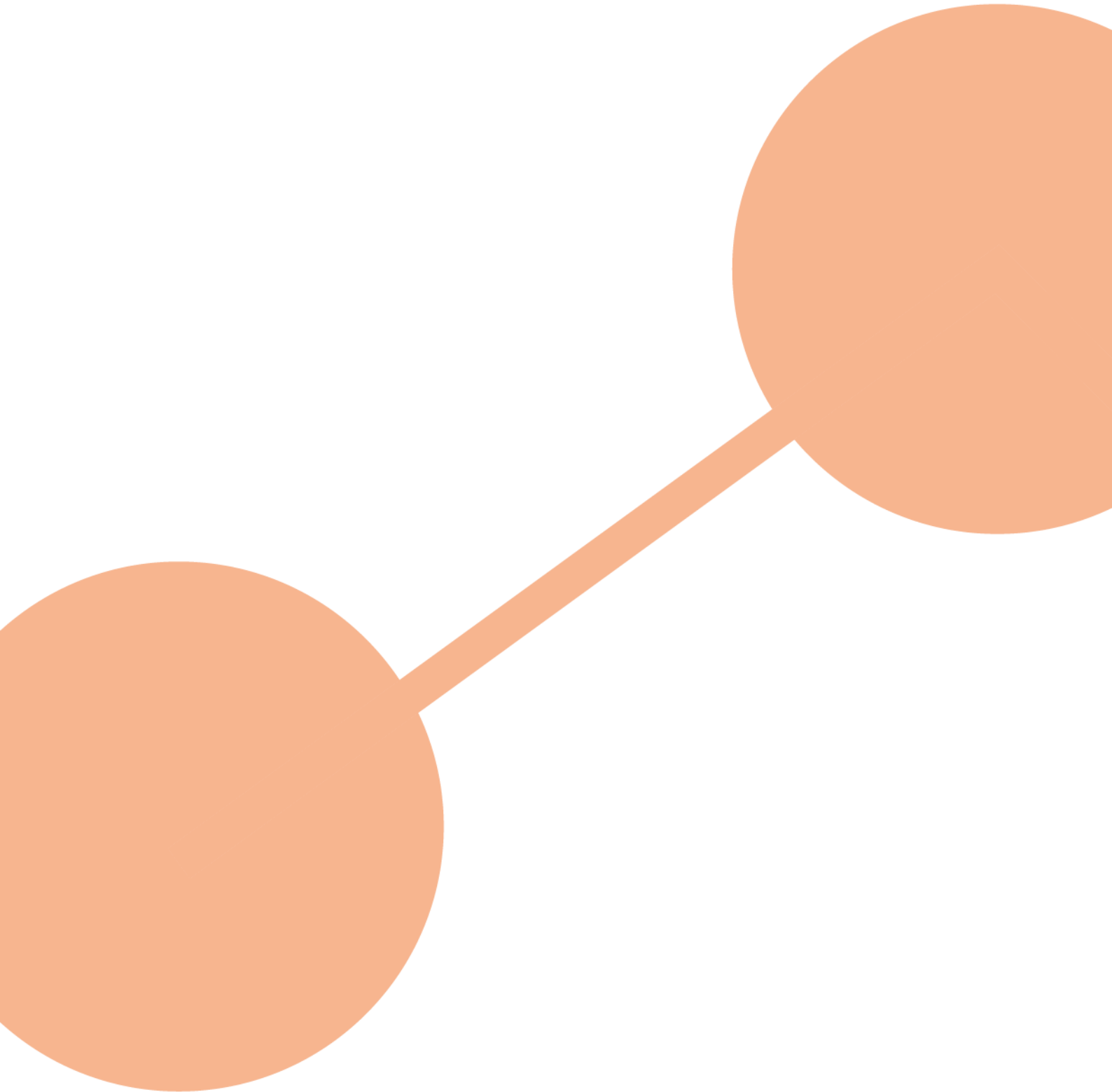
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APPENDIX



Ethical Review Form

(Version 27.06.2019)

This Ethical Review Form should be completed for every research study that involves human participants or personally identifiable data and should be submitted before potential participants are approached to take part in the research study.

Part 1: General Study Information

| | | |
|-----------|---|---|
| 1 | Project title and project number | Social Resilience FBP |
| 2 | Researcher name and email | P. Smit p.c.e.smit@student.tue.nl |
| 3 | Supervisor(s) | prof.dr.ir. C. Hummels, C. van den Bremen |
| 4 | Faculty/department | Industrial Design |
| 5 | Research location | Participants home |
| 6 | Research period (start/end date) | 3 rd February 2020 to 4 th July 2020 |
| 7 | Funding agency | - |
| 8 | [If Applicable] Study is part of an educational course with code: | DEP004 Transformative and Inclusive Practices |
| 9 | [If Applicable] Proposal already approved by external Ethical Review Board: Add name, date of approval, and contact details of the ERB | |
| 10 | Short description of the research question | In this study I am researching how design can play a role in optimizing the collaboration and achieving the goal of initiatives. |
| 11 | Description of the research method | I will test the usability of the tool by observing the participants while interacting with it. Afterwards I will conduct an interview with the group to get insights on how the tool was experienced. |
| 12 | Description of the research population, exclusion criteria | I will test this with real initiatives in the Netherlands. |
| 13 | Description of the measurements and/or stimuli/treatments | Participants will experience the tool and asked to share opinions and ideas about the design. |
| 14 | Number of participants | Expected to be 2 groups of around 4 to 5 people. |
| 15 | Explain why the research is socially important. What benefits and harm to society may result from the study? | This research is socially important because initiatives struggle with their collaboration and achieving their goal. This tool is made to optimize this and to help initiatives. No harm is expected to society. |
| 16 | Describe the way participants will be recruited | A post on the Sterk.Brabant community website is placed where initiatives can respond freely. My coach also mailed directly to initiatives. |
| 17 | Provide a brief statement of the risks you expect for the participants or others involved in the research or educational activity and explain. Take into consideration any personal data you may gather and privacy issues. | The participants are sharing personal views on certain values that maybe can be seen as private. |

Ethical Review Form

| Part 2: Checklist for Minimal Risk | | | |
|--|---|-----|----|
| | | Yes | No |
| 1 | Does the study involve participants who are particularly vulnerable or unable to give informed consent? (e.g. children, people with learning difficulties, patients, people receiving counselling, people living in care or nursing homes, people recruited through self-help groups) | | X |
| 2 | Are the participants, outside the context of the research, in a dependent or subordinate position to the investigator (such as own children or own students)? | | X |
| 3 | Will it be necessary for participants to take part in the study without their knowledge and consent at the time? (e.g. covert observation of people in non-public places) | | X |
| 4 | Will the study involve actively deceiving the participants? (e.g. will participants be deliberately falsely informed, will information be withheld from them or will they be misled in such a way that they are likely to object or show unease when debriefed about the study) | | X |
| 5 | Will the study involve discussion or collection of personal data? (e.g. name, address, phone number, email address, IP address, BSN number, location data) or will the study collect and store videos, pictures, or other identifiable data of human subjects?. Please check the FAQ's on the intranet . If yes: please follow the procedure . Make sure you perform a Data Protection Impact Assessment (DPIA) and make a Data Management Plan if necessary and let the data steward check it. Please attach these documents with this form (see part 5; enclosures) | | X |
| 6 | Will participants be asked to discuss or report sexual experiences, religion, alcohol or drug use, or suicidal thoughts, or other topics that are highly personal or intimate? | | X |
| 7 | Will participating in the research be burdensome? (e.g. requiring participants to wear a device 24/7 for several weeks, to fill in questionnaires for hours, to travel long distances to a research location, to be interviewed multiple times)? | | X |
| 8 | May the research procedure cause harm or discomfort to the participant in any way? (e.g. causing pain or more than mild discomfort, stress, anxiety or by administering drinks, foods, drugs) | | X |
| 9 | Will blood or other (bio)samples be obtained from participants (e.g. also external imaging of the body)? | | X |
| 10 | Will financial inducement (other than reasonable expenses and compensation for time) be offered to participants? | | X |
| 11 | Will the experiment involve the use of physical devices that are not 'CE' certified? | | X |
| <p>Important: If you answered all questions with "no", you can skip parts 3 - 4 and go directly to part 5. Check which documents you need to enclose and continue with signature and submission.</p> <p>If you answered one or more questions with "yes", please continue with parts 3 – 5.</p> | | | |

Ethical Review Form

Part 3: Study Procedures and Sample Size Justification


| | | |
|----------|--|--|
| 1 | Elaborate on all boxes answered with “yes” in part 2. Describe how you safeguard any potential risk for the research participant. | |
| 2 | Describe and justify the number of participants you need for this research or educational activity. Also justify the number of observations you need, taking into account the risks and benefits | |

Part 4: Data and Privacy Statement

| | | |
|----------|---|--|
| 1 | Explain whether your data are completely anonymous, or if they will be de-identified (pseudonymized or anonymized) and explain how. | |
| 2 | Who will have access to the data? | |
| 3 | Will you store personal information that will allow participants to be identified from their data? See <u>VSNU draft</u> . | <input type="checkbox"/> No <input type="checkbox"/> Yes, and I declare I will follow the general data protection regulation (GDPR). |
| 4 | Will you share de-identified data (e.g., upon publication in a public repository)? | <input type="checkbox"/> No <input type="checkbox"/> Yes, and I will inform participants about how their data will be shared, and ask consent to share their data. I will, to the best of my knowledge and ability, make sure the data do not contain information that can identify participants. |

Ethical Review Form

Part 5: Closures and Signatures

| | | |
|-----------------|--|---|
| <p>1</p> | <p>Enclosures (tick if applicable):</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> Informed consent form; <input type="checkbox"/> Informed consent form for other agencies when the research is conducted at a location (such as a school); <input checked="" type="checkbox"/> Text used for ads (to find participants); <input type="checkbox"/> Text used for debriefings; <input type="checkbox"/> Approval other research ethics committee; <input type="checkbox"/> The survey the participants need to complete, or a description of other measurements; <input type="checkbox"/> Any other information which might be relevant for decision making by ERB; <input type="checkbox"/> Data Protection Impact Assessment checked by the privacy officer <input type="checkbox"/> Data Management Plan checked by a data steward | |
| <p>2</p> | <p>Signature(s)</p> <p>Signature(s) of researcher(s) Date: 13-05-2020</p> <p>Signature research supervisor (if applicable) Date:</p> |  |

Eindhoven University of Technology, 27 April 2020

Consent form

For my Final Bachelor Project (FBP) 'Connecting Values' of the Eindhoven University of Technology, I am conducting research on how design can play a role in supporting bottom up initiatives through an online reflection tool. As part of this research, your experiences with the tool will be recorded in order to improve the product. If at any point in the research you feel uncomfortable or do not want to proceed any longer, you can withdraw without consequences.

You have been invited to take part in this study, to give new insights into the use of an online reflection tool. Within this project, I am researching how design can play a role to actively reflect upon certain important values with the goal to support and/or optimize the collaboration within an initiative and achieving the goal of the initiative.

You are not obligated to participate in this research or to answer the questions of the interviewer. In case you want to withdraw from the study you can mention this to the interviewer at any time. The collected research will be used for my educational purposes only and will not be shared by a third party. Collected data will be treated confidentially, unless you indicate that it can be made publically. Check either:

- I **do** give permission, to publicly publish data provided by me on internet and social media. Next to this, my data may also be used for the purpose of this research. I understand that any data and audio recordings produced during this research will be made anonymous and recordings will be used only for observation and will not be published anywhere.
- I **do not** give permission, to publicly publish data provided by me on the internet or any other media. My data may only be processed anonymously for the purpose of this research.

I understood this consent form, and voluntarily take part in this interview. I understand that my permission does not damage my legal rights in case of negligence or other legal faults of anyone involved in this study. For more information contact the interviewer: p.c.e.smit@student.tue.nl. For other questions contact the project coach Cindy van den Bremen c.l.v.d.bremen@tue.nl or c.c.m.hummels@tue.nl.

Date:

Name participant:

Signature participant:

Date:

Name student:

Signature student: