Effio

An online brainstorming tool

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Wordcount: Approximately 11000 words, excluding references and the appendix

SEAMLESS
INTERACTION DESIGN
FOR PROFESSIONALS

Content

Summary

The following report describes the process of the development of Effio, a brainstorming tool in the form of a template generator application.

Initially, the focus of this project was mainly on the use of visuals in a multi-user situation, from education to business meetings. This idea eventually evolved and pivoted. During the forming phase, the following goal was set: Create an interesting, more structured and more creative way of running and participating in (online) meetings.

My motivation came partly from my internship, where I had seen how a good brainstorm session was run. Next to this, my personal experience with how tiring and unrewarding (online) meetings could feel, also played a part in developing something for this.

With that motivation and experience, a first - still physical- prototype was created. Quickly after that, the pivot to a fully digital prototype took place. Still, this first step and the research on brainstorm techniques I did for that first prototype can still be found in the final version.

The next two iterations were both 'templates' for online meetings. Prototype II was envisioned as a program used to structure a meeting in a separate environment on the computer.

Prototype III, was a set of templates build into Miro, an online collaboration program. This program was chosen after benchmarking research. The first reason was the flexibility and look and feel of Miro, which were both very good. Next to that, it was not feasible for me to build an entire platform, and this one seemed to fit a lot of the affordances I wanted to have in my prototype.

This third prototype, and its templates, were user-tested at ZET, a project agency with a variety of different experts working there. These tests with multidisciplinary teams helped me see what was good about the templates.

The layout, the flexibility and the creativity of the check-ins, were all praised. Things could still be improved were he explanations for the facilitator, the setting of a goal and the overall user experience.

With positive reactions and constructive feedback, the next iteration came to be. At this point, the choice for Miro proved very useful. With the Miro API, the final prototype became a template generator application build into Miro.

This final prototype, called Effio, consists of two parts, the application and a website with additional info for the facilitators.
Both of these parts of Effio were evaluated by an expert in the field with a designer background. She walked me through her tips and view on the system. Her positivity and enthusiasm about the system, next to her tips to improve were taken to heart.

That is also why, currently, Effio is still in development. The fully working application will probably be uploaded to the Miro application store somewhere this summer.

Prologue

My reason for choosing the Seamless Interaction for Professionals squad is related to my professional identity and vision on design and technology. When first choosing this squad in my B2.2, I learned about the interaction-attention spectrum by Bakker and Niemandsverdriet (2016). Intrigued by this spectrum, as well as the way people interact and understand systems made me curious for more. The combination of personal relations, the interaction with systems, and the attention both of those ask can make for an interesting mix.

This is also the case for my FBP. Brainstorming and collaboration are inherently processes that are full of interpersonal interactions and require your full attention. Online, this process is made much more difficult due to the lack of body language and the distractions that the internet provides. Creating a system that allows for both some type of online interaction, while keeping the attention of the user was a challenge I was eager to try.

My specific interest in brainstorming and cooperation comes from the internship I have done in my B3.1. The internship at JAM Visual Thinking, a design agency focussed on translating complex business problems or transitions into visuals, has shown me how much visuals can achieve in settings in which people must cooperate. When using visuals, people really start 'seeing things the same way'.

My vision for design is one in which the designer understands and cares for the attention the user needs to spend on their product or prototype. This attention and energy are valuable resources and should be used well. Next to this, I envision that tools created for professional purposes, like Effio, can always include a little fun and playfulness. In this project, I try to achieve this by adding something visual with which the user gets another channel to express themselves. Inspired by my internship and the creative energy visuals can provide.
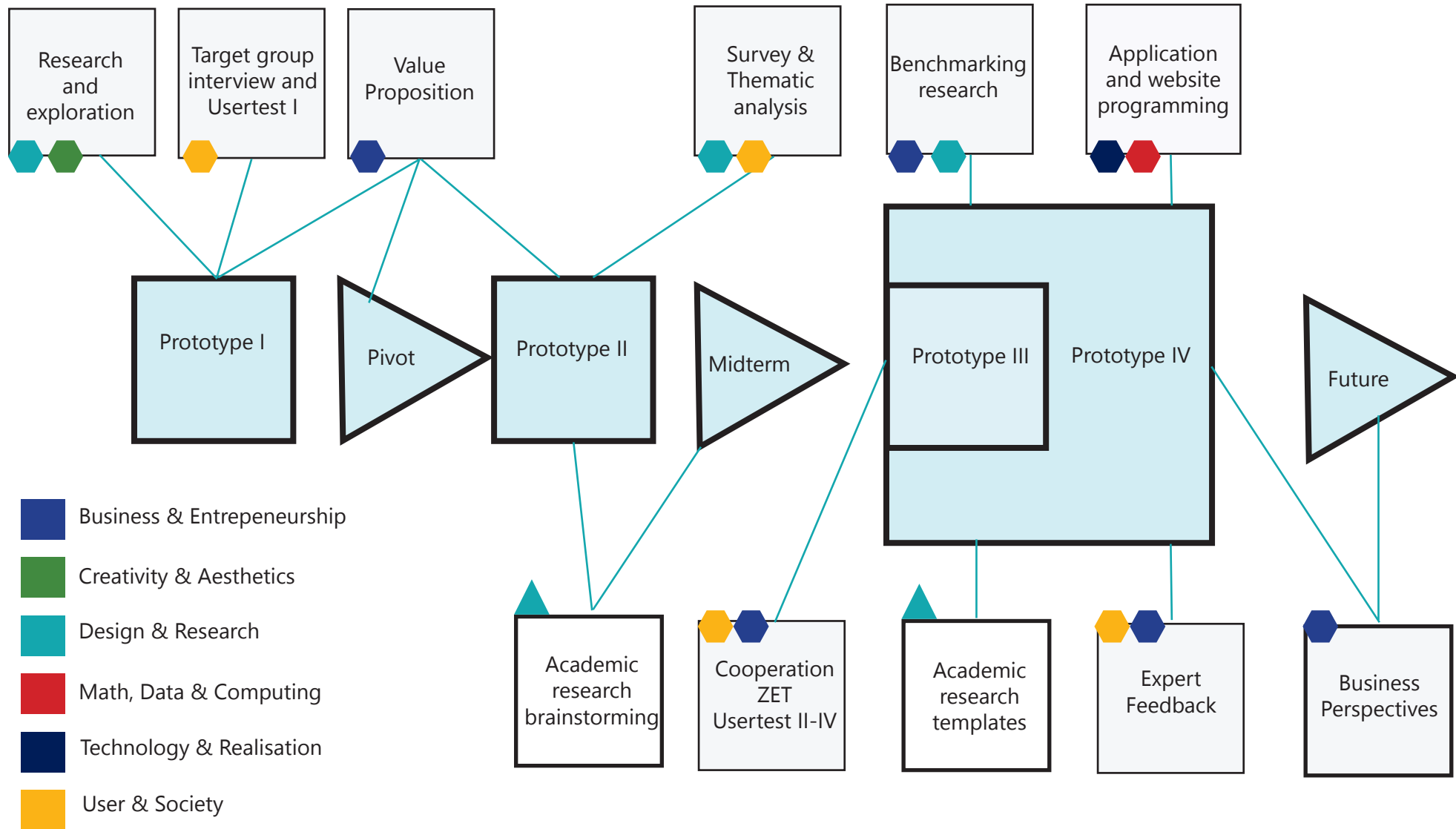
Figure 1. A picture of me

Introduction

The goal of this project was to create a useful and somewhat fun tool to help professionals run and prepare their online meetings. The reactions of society when everything suddenly had to be moved online were varied, but almost all could agree that meeting online is not ideal. Described as boring, tiring, even exhausting, online meetings seemed to be dreaded more than regular meetings by a large part of the population (Atlanta Small Business Network, 2020; Ryan, 2020; Sander, 2020; Wooldridge, 2020;). The rise of terms like 'zoom-burnout' (Martins, 2020), and 'video-call fatigue' (Kretchmer, 2020) showed that a solution to these issues would be accepted with open arms in the professionals working online.

This inspired me to take a look at the many systems and schemes used to structure and guide 'regular' meetings and tried to see how these could be applied to online meetings. With that, my goal for this project was set: create a tool that helps participants create a meeting from which they do not emerge tired or defeated, but one that provides a clear layout, invites creativity and makes sure that you have some fun when brainstorming with your colleagues.

Design process

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and
exploration

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Usertest I

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Thematic
analysis

Benchmarking
research

Application
and website
programming

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Midterm

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research
brainstorming

Cooperation
ZET
Usertest II-IV

Academic
research
templates

Expert
Feedback

Business
Perspectives

Business & Entrepeneurship

Creativity & Aesthetics

Design & Research

Math, Data & Computing

Technology & Realisation

User & Society

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Chapter 1: Research and Exploration

Introduction

This first chapter describes the journey towards my problem statement. This was done via desk research, small tests and interviews and the creation of a customer journey map. Throughout the chapter, it becomes clear that the focus of the problem I plan to solve resolves around meetings, specifically, brainstorm meetings.

Figure 2.   Journeymap setup

Research I: Prelaminar Research

Based on my PDP and the things I had learned during my internship, I knew that I wanted to do something with visuals, as I had seen first hand how powerful of a tool they can be in communication. To make an informed decision, I did some desk research to find out what literature states on the usage of visuals, if it is effective etc. Next to looking for anything that is already on the market concerning the use of visuals in meetings, education or otherwise.

Academic
First off, the study by (Shabiralyani, Hasan, Hamad, & Iqbal, 2015), found that overall, people respond well to visuals used in education. In this specific study, the visual aids were used to help students keep focus when reading academic texts. The study concluded that the majority of the teachers and students had positive perceptions of the use of visual aids.

More information was found in the book "Handbook for the Academic Physician"(McGaghie & Frey, 2012, pp. 1–3; M.P. Beery, 1986, p. 316). In the part "Visuals for Written and Oral Presentations" (M.P. Beery, 1986), it is explained how visuals can be used to enhance understanding during meetings and conferences, or as they say "*Visuals can make the abstract concrete by providing a visual referent.*". The affordance of making the abstract concrete is something that can be very powerful in meetings, especially when discussing abstract concepts.

Finally, a study done to investigate the effectiveness of Japanese visual communication in the workplace concluded that visuals in communicating reduce the volume of information. One image replaced 200 words, as well as overcoming any language barriers that may be present. Additionally, images give less 'noise' compared to spoken and written information (Mestre, Stainer, Stainer and Strom, 2000).

These studies, in combination with my own experience, gave me the impression that the usage of images and icons might be a good idea to improve meetings.

Market research
One actual tool found was "System and method for communicating expressive images for meetings" (US20040107251A1, 2003), which is a patent on a system in which participants of online meetings can share expressive images of themselves to other participants without interrupting the meeting flow. Interesting, but less valid in current society in which video calling and the use of emoticons have become normal.

There were quite some websites to be found on useful meeting techniques and tactics (Nature Editorial, 2019 ; Streibel, 2003), as well as on how to create a useful agenda for a meeting (Schwarz, 2017).

A website from Imagethink (2018) does give tips on what visual tools one can use to improve a meeting, however, these are things like a large piece of paper or a flip-over. Without a clear goal when using them, they might just be laying there unused. The book from Sibbet (2010) called "Visual Meetings: How Graphics, Sticky Notes and Idea Mapping Can Transform Group Productivity" does give some tips and tools on how to use the items described by Imagethink.

These items seem to be out there, but mostly in the forms of books and information, it might be interesting to pour this knowledge in a prototype or structure that guides the user unlock the creativity and fun visuals can bring to meetings.

Conclusion
From this short initial research, I could conclude there was not an actual physical tool on the market, but that there were indications that a tool using visuals could have potential in this field. Naturally. this was still very broad, but using journey mapping, a more specific problem and goal could be set for a visual aid in the field of making meetings more effective and enjoyable.

Journey mapping

Armed with this information I decided to do some small initial tests. During this first week, I asked one of my peers if I could observe their meeting, and if they wanted to tell me some things they observed themselves.

During this test, I would only write observations, non-specific so none of the participants would be identifiable from the data. Their quotes were then used in my Journey map (Figure 3), as a way to see where in a meeting things could be gained.
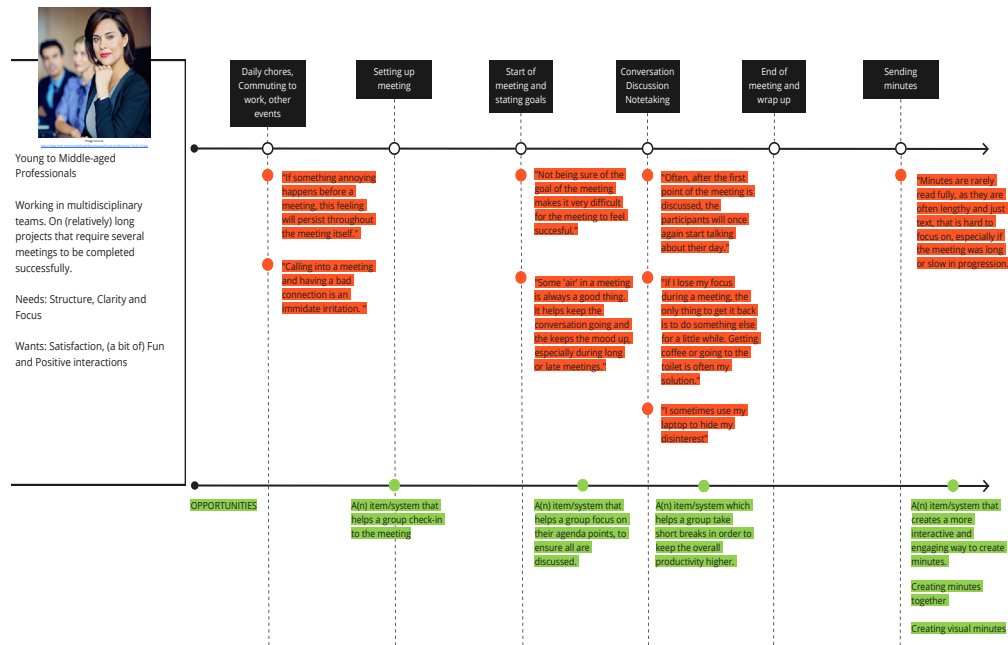
The creation of this journey map helped me determine where improvement could be made. I found the following points interesting:

- To meet or not to meet, it might be interesting to create a tool that helps people determine if a meeting is 'necessary'.

- The check-in of a meeting. This point of the meeting could be aided, by ensuring everyone is set into the 'meeting-mode'. It could help the rest of the meeting go more smoothly, by preventing people from perhaps wanting to share their weekend stories at later points during the meeting.

- Continuation of the meeting might be aided by a device that helps people keep track of the time taken for each separate part of the meeting, ensuring the overall meetings stays within the set time limit.

- Taking breaks however might be a solution for long meetings, this would be a part of the flow of the meeting.

- Creating minutes. Something that is done during a lot of meetings could perhaps be aided by a device that creates minutes for the group, or one that allows the group to create the minutes together. This device might help groups be more focussed on the process of the meeting and help each other co-create.

With these opportunities in mind, the following step would be trying to translate these ideas to some form of a physical prototype, to get specific feedback on what such prototypes might do or change in a meeting.

Figure 3.   Journey Map

Rapid prototyping

The next step on my way was the quick prototyping session. This session helped me think about the possible shapes of my design. I created the following ideas:

The first (Figure 4), shows a simple stand for a card-based game that will help the people in the meeting check-in. This item could be the start of a check-in set, focussed on the check-in I did when facilitating during my internship.

The second photo (Figure 5), is more of a game. This item could be used by the participants to draw out their idea, then turn it around for another to add something to it. This tool might also be interesting in ideating, as it would allow the participants to create something together. It is something similar to what I did at JAM, and this technique is also described in "Visual Meetings: How Graphics, Sticky Notes and Idea Mapping Can Transform Group Productivity" from Sibbet (2010) mentioned earlier.

These simple prototypes were a useful way of exploring possibilities in design, and both the check-in and brainstorm aid piqued my interest. As I had seen at JAM that the first is often overlooked, and the second is often disliked because of the unstructured nature of brainstorm sessions. However, before I could make these assumptions, I would need some validation. I decided to see what the user group -young professionals- think of brainstorming via interviews.
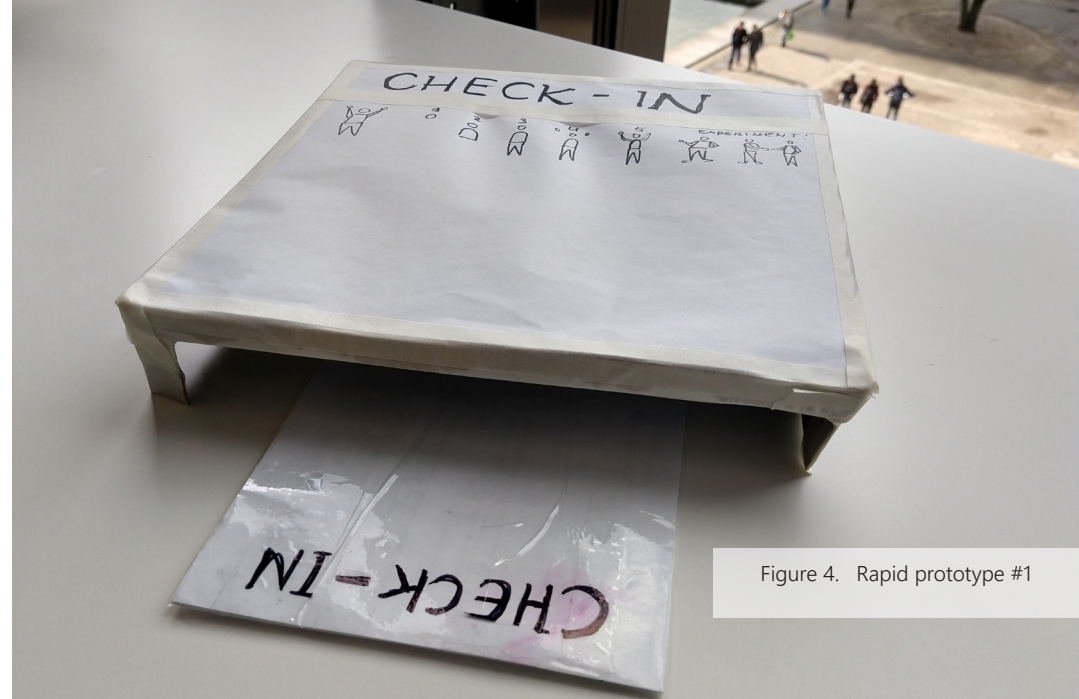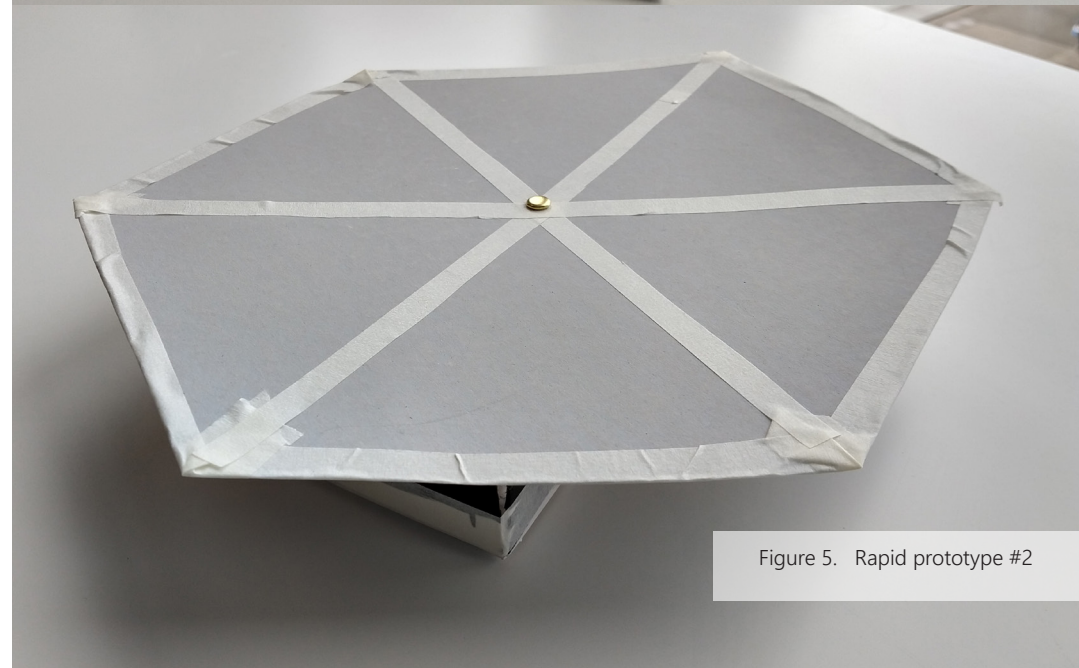

Figure 4.   Rapid prototype #1

Figure 5.   Rapid prototype #2

Interviews

I was able to conduct three relatively short interviews with a group of people from the potential user-group. These young professionals helped me get a clearer view of what is liked and disliked during brainstorm meetings. The transcripts of the interviews are in "Appendix I: Usertests & Consent forms".

Icebreakers and check-ins
Most of the people interviewed did not use 'icebreakers' or similar techniques. The first parts of their meetings usually consisted of the participants sharing personal things, how they felt, their weekend etc.

Brainstorming
The interviewees are with people who work in teams relatively often Most participants mentioned that they did not particularly like the brainstorming process, one person even said they just "Liked the idea of it" (Appendix I, Interview #1). There were different reasons for this: time pressure, loud people talking over you, or general disinterest by part of the group. All these things hindered their creative processes.

Next to this, all of the participants mentioned that their brainstorm processes started when they were alone, thus before the meeting. On the one hand, this was preferred, as it allows for some 'alone time' to think, but it also caused differences between participants, in the number of ideas, time spend and time to share the ideas.

The last point became more apparent when in interview #2, the participant mentioned that they often do not feel heard in brainstorm meetings, as there are always people louder or more present than they are. (Appendix I, Interview #2)

The way they approach brainstorming was also notable, two of the interviewees use the internet as a source of information, where another one started with a more visual approach.

Research II: Brainstorming Issues

I wanted to know more about the issues my interviewees mentioned, and thus did some research on what common issues are during brainstorming.

Researching the topic brought me to Diehl and Stroebe (1987). In their study, they found that there are several factors that influence the effectiveness of brainstorming. The first is social loafing. Social loafing is, as stated in the paper from Karau and Williams (1993): "*Formally, social loafing is the reduction in motivation and effort when individuals work collectively compared with when they work individually or coactively.*". This means that in group work, people individually tend to do less, thus the same happens during brainstorm sessions.

Other problems from Diehl and Stroebe (1987) were evaluation apprehension and production blocking. Evaluation apprehension is when the presence of an observer during a task or action makes the performer concerned about being evaluated (Cohen, 1980; Cottrell, Wack, Sekerak, & Rittle, 1968; Geen, 1981; Geen, 1983). This fear makes the performer feel scared to make mistakes. An example of this would be you feeling scared to give a 'foolish' idea in front of someone you want to impress.

Finally, the last factor stated in Diehl and Stroebe's research (1987) is production blocking. Production blocking happens when a lot of people work together, and thus have to present their ideas in turns (Nijstad, Stroebe, Lodewijk, 2003). This issue was mentioned in interview #1, where the participant mentioned 'not feeling listened to'.

Conclusion
There are several things that make brainstorming hard: the effects of evaluation apprehension, product blocking and social loafing are all examples of that. For a succesful meeting, there needs to be the right energetic/creative mood to make people feel at ease. A clear goal or structure to make sure everyone feels heard, and to get to the perfered results. This needs to be taken into account when designing the first prototype.

Chapter 2: First Iteration

In the following chapter, the process of the creation of the first iteration will be described. In the previous chapter, the following problem was found: Brainstorming can be tiring, boring and chaotic when not structured or organised well. In the following pages, I will further break down the problem to see what a potential prototype could look like, as well as creating a few -low-fi- prototypes, and doing a small-scale user test.
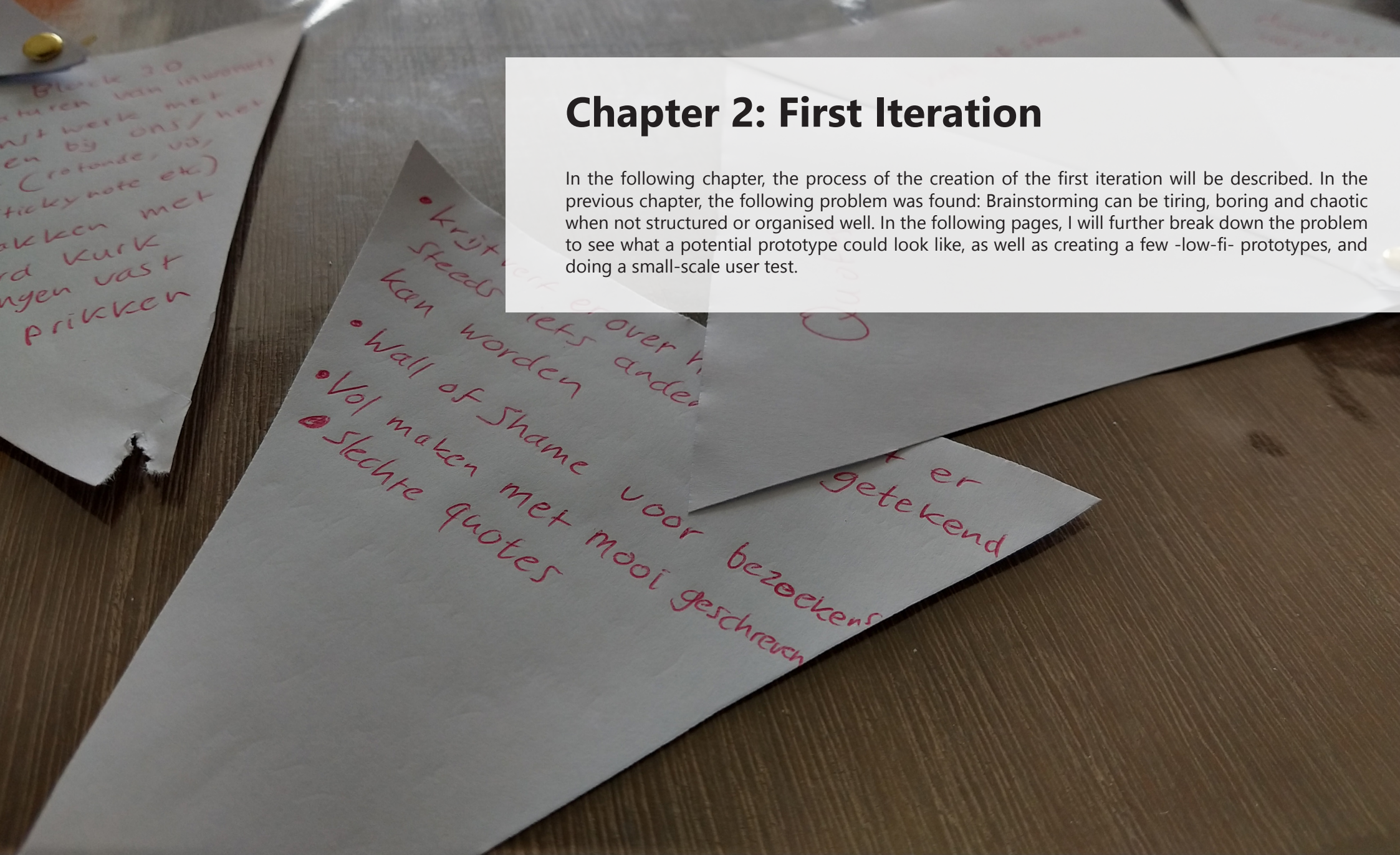
Figure 6.   Photo during first small usertest

Creating value

Value Proposition

To create a clearer goal for myself and the prototype I wish to create, I filled in the Value Proposition Canvas (Strategyzer AG, n.d.) (Figure 7). This helped me to analyse the problem, and what my product should be able to do. Next to this, I used the Ad-Lib Value Proposition Template (Strategyzer AG, n.d.) (Figure 8) to say in one sentence what I want to create.

With these, I immediately jumped into a brainstorm session to see what shape the product/service with these values might have.
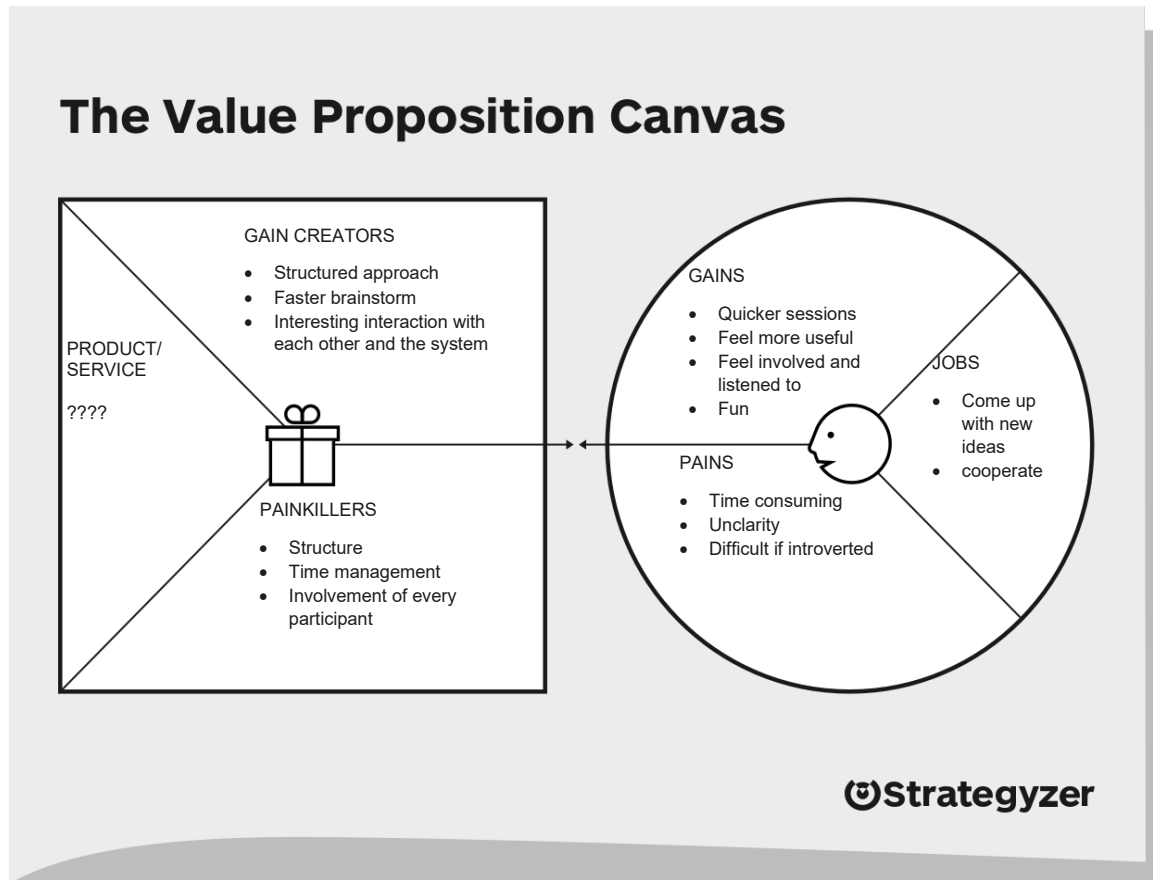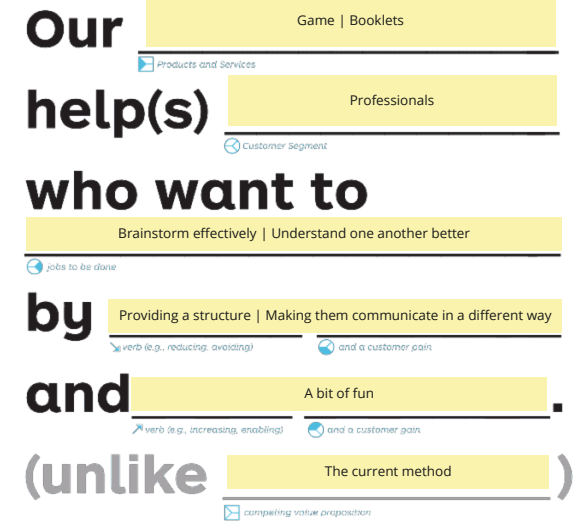

Figure 7.   Filled in Value Proposition Canvas (Strategyzer AG, n.d.)

Figure 8.   Filled in Ad-Lib Value Proposition (Strategyzer AG, n.d.)

Ideation

The Value Proposition Canvas as shown in Figure 7, and the Ad-Lib version of it (Figure 6.) helped me pinpoint what values might be important to incorporate in a design. In this canvas, I have mostly described values like 'efficiency, speed, and easiness". However, during brainstorms, values such as 'fun, playfulness and creativity' are just as important to incorporate.

With all these values in mind, I started to brainstorm.

Idea #1: Telestrations for offices

This design focuses on a system that allows the meeting participants to discuss vague terms such as 'cooperation' with one another via a simple pen and paper game. By doing this small game, everyone can get to know each other a bit, while having fun and learning to cooperate. The design itself would be a set of booklets, preferably the kind on which people can write with erasable markers so that they are recyclable. In the booklets, simple instructions would be written so that the participants can easily understand the game.

Idea #2 Guided Ideation

This design focuses on a structured approach to brainstorming. By making sure all the parts that were 'originally' part of brainstorming (Osborn 1963). By creating an item with which the participants go through the steps of personal ideation, letting go of criticism, sharing all the ideas, and then not shooting those ideas down but building upon them. For this, I would create a physical tool in which the different stages flow from one to another.

Start with a word of your choosing

The next person draws the word

The person after that, after only seeing the drawing, must guess the word

The next person only sees the word again and draws the word. This is done until the booklet has gone a full circle
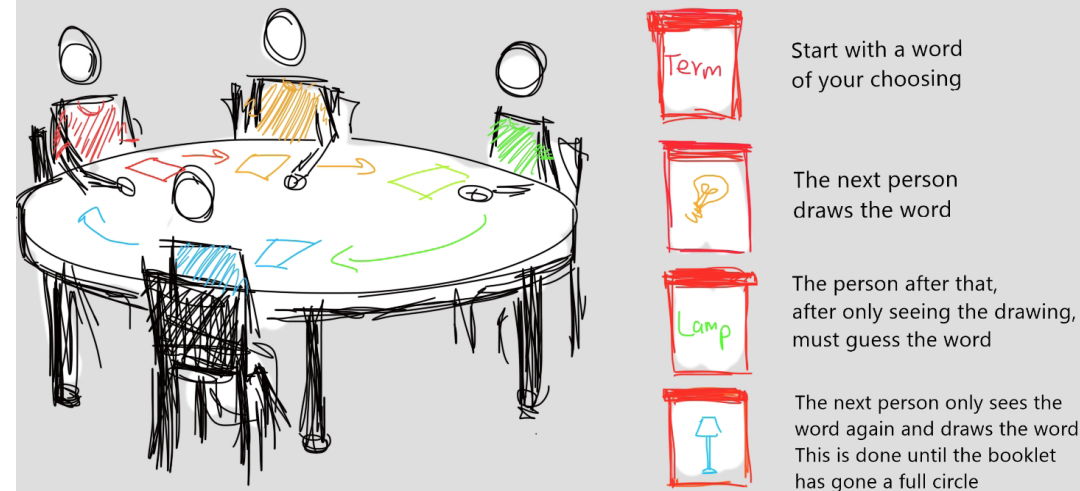
Figure 9.   Telestrations
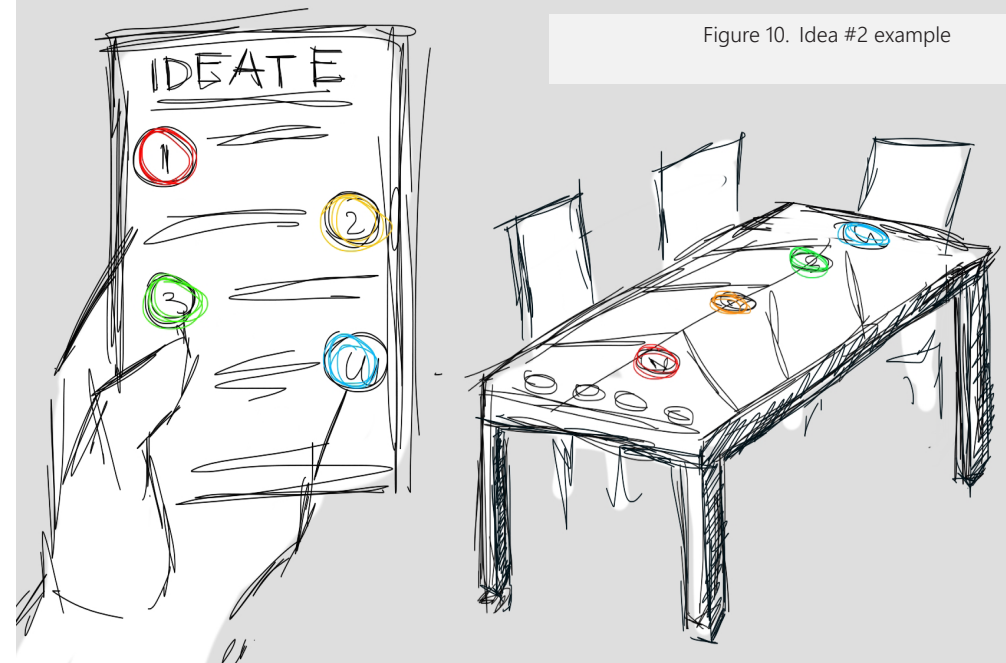
Figure 10. Idea #2 example

Idea #3 Visualize

This system could help the participants with the social loafing issue in meetings. The system automatically makes minutes with drawings and text. Everyone who talks gets a box on the large screen and on this box the things they say are visualised. By doing this, one can quickly look back on what is said during the session, as well as the different contributions of the different participants.

Idea #4 It's your turn

This design would focus on creating a game in which people are actively improving ideas through a game. The game starts when everyone has written down an idea. This is done on a small screen in front of them. When everyone is done, the screens randomly switch from the viewer and the next person then adds to the idea on a new drawing layer. This repeats a few times until all have had all the ideas, or when the time is up. By doing this, the ideas stay anonymous and thus avoid evaluation apprehension (Diehl and Stroebe, 1987) Specifically, doing online brainstorming has shown to lower evaluation apprehension. This can be read in the study from Gallupe, Cooper, Grisé, & Bastianutti (1994)

Figure 11. Visualize visualised

Step one
Everyone starts with writing down an idea

Step two
Idea is passed on randomly and the next person adds something to the idea

Step three
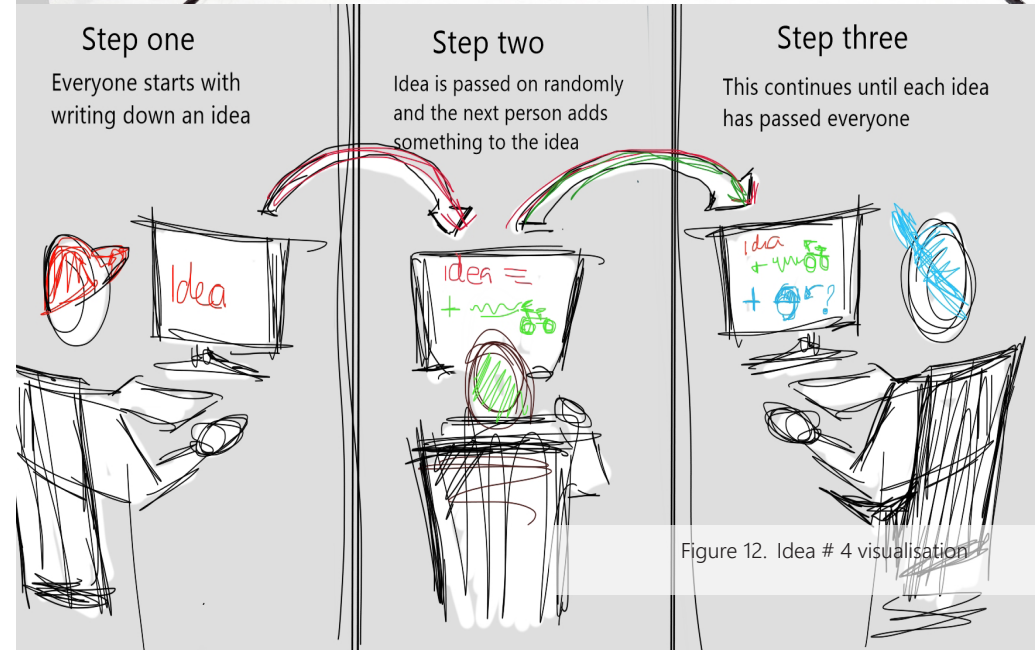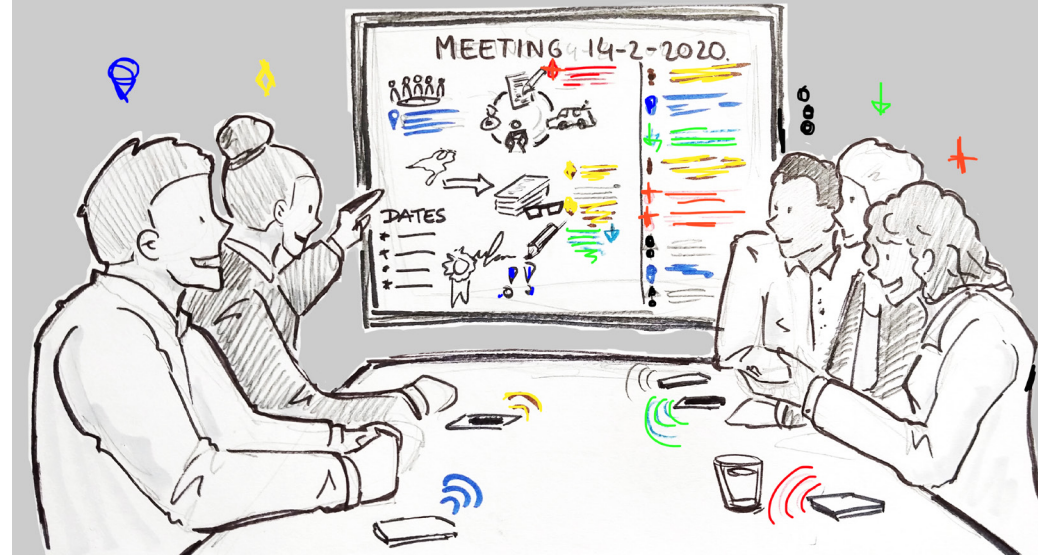This continues until each idea has passed everyone

Figure 12. Idea # 4 visualisation

Usertest I: Observation

I decided to do a small user test with simple booklets as shown in Figure 13 and Figure 14. The goal of this test was to see if a semi-structured approach already had effect. Next to this, I hoped to bring in some focus and fun with the booklets. The booklets allowed for different interactions thanks to the split pin holding the papers together.

The user test was set up in the following way, using Osborn's structure (1963) as a guide. They had to:
1. State a clear goal. 2. Take some time apart to brainstorm, writing everything on the booklets. 3. Share your ideas 4. Continue the rest of the meeting in a way you find appropriate. 5. End the meeting. I tried to observe what they did when this structure was introduced to their 'normal' routine.

Interestingly, most of them had used the booklets as a flip over, but when the second part of ideation started, they ripped off the ideas one by one and sorted them themselves. The ideas with potential were held apart and used to make an overview of liked ideas.
With these loose papers, they made their way to the wall, where they placed them and started adding ideas, adding them to the small papers until they though they had three clear ideas.

From this, I learned that the structure helped them get started in the beginning. One of the participants also stated liking this (Appendix 1 "Usertest I")
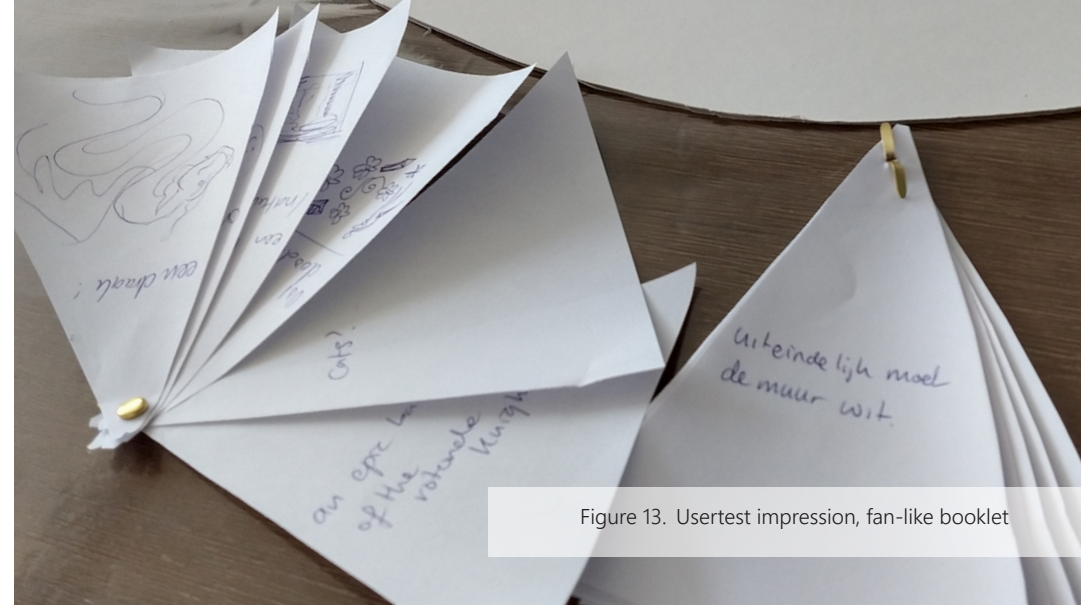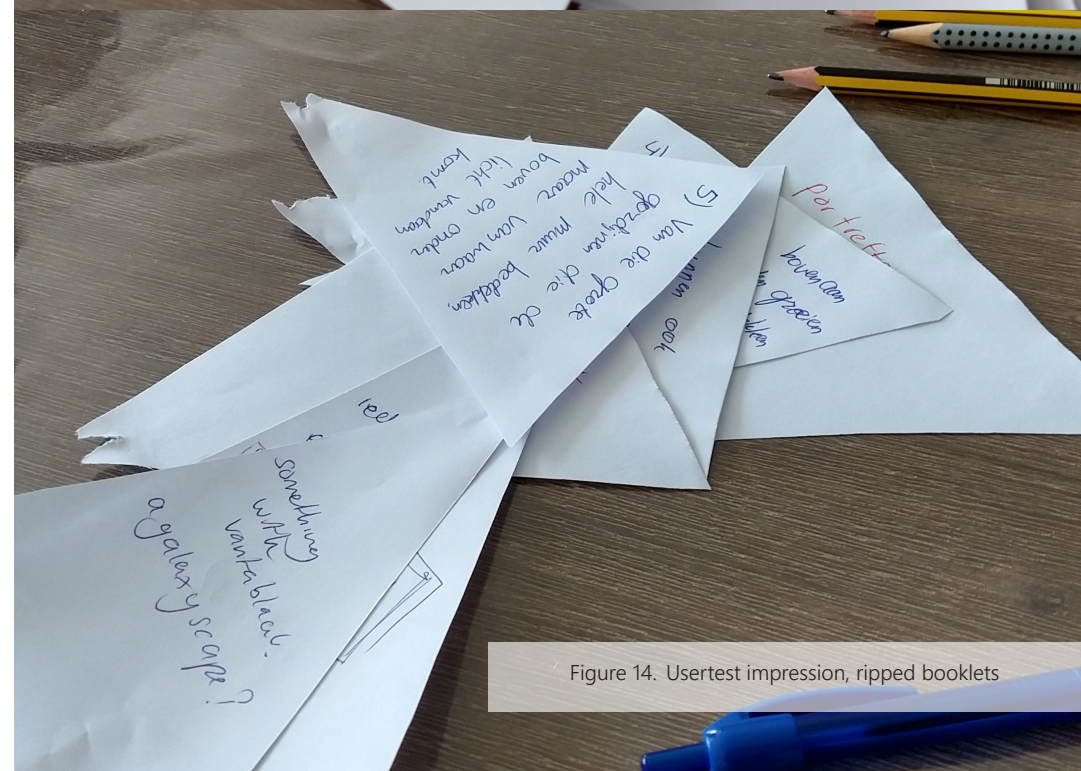

Figure 13. Usertest impression, fan-like booklet

Figure 14. Usertest impression, ripped booklets

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Prototype I: Turning Table

Combining my low-fi prototypes and these ideas based on the Value Proposition Canvas (Figure 7 & Figure 8). I came up with the following idea and prototype

This circular turning table (Figure 15) is a combination of idea #2 and #4, as described in "Brainstorming" on page 10, and I thought of it working as described in Figure 16.

Figure 15. First iteration top view

STEP 1 — Personal ideation

STEP 2 — Sharing ideas

STEP 3 — Selecting ideas

Step 4 — Take place around the table

Step 5 — Rotating table and enriching ideas together

Step 6 — After a full circle, dicuss the enriched ideas
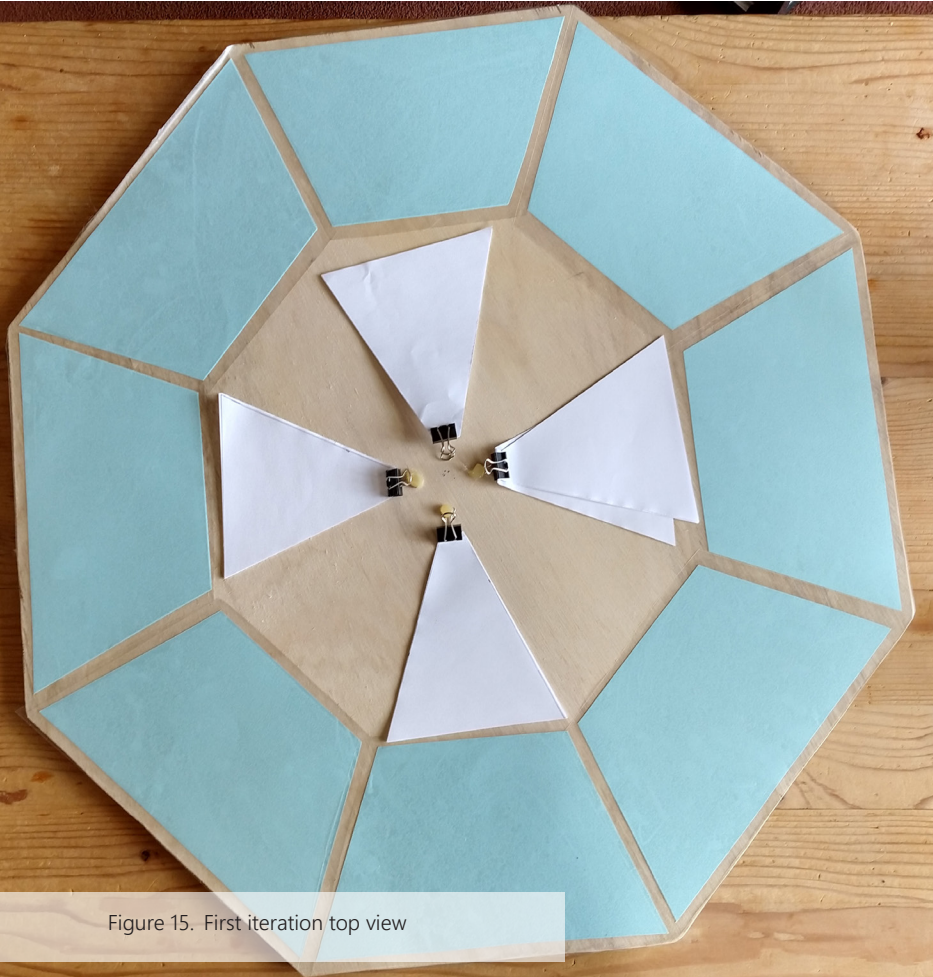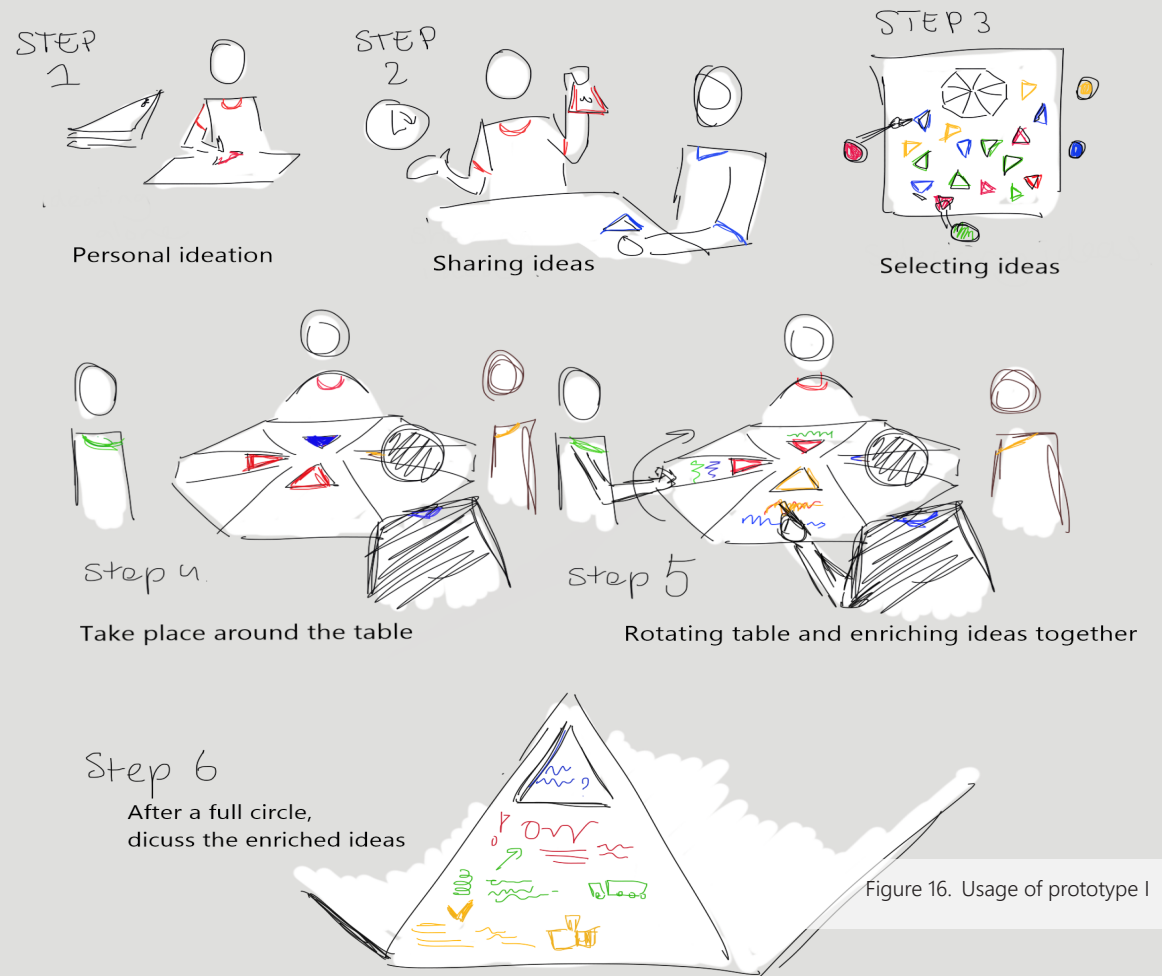
Figure 16. Usage of prototype I

Theory

The idea for the usage is roughly based upon the 'double diamond' technique as seen in Figure 17 (Design Council, 2006). Next to, of course, the earlier mentioned works of literature, such as the structure of Osborn (1963), the ideas from the book by Sibbet (2010), and my own experience facilitating.

To clarify, the idea of the double diamond technique is that first, people Discover the idea, then Define it. This is then followed by a Developing of the idea, and finally Delivering it. During this process, the group goes from expanding in ideas/information to narrowing it back down, to then build upon the information they found important to expand once again, this time in more concrete ideas. Which are then again narrowed down to one or two final ideas. If this is drawn out, a double diamond structure can be found.

These types of structures were also used at JAM when they facilitated brainstorm sessions. During those meetings, the facilitator - a JAM'er-, guides this process. Perhaps, with this design, the chairman of the meeting itself can create a similar structure, using my prototype.

Conclusion

The different design approaches that are often used in ideation can also be useful for non-designers in their brainstorm context. By using these techniques to create a prototype that guides the user through the different steps, ideation might be made a lot more structured and the time not spend organising can be used being more creative and having a bit of fun. This prototype should invite playfulness and present clear steps.
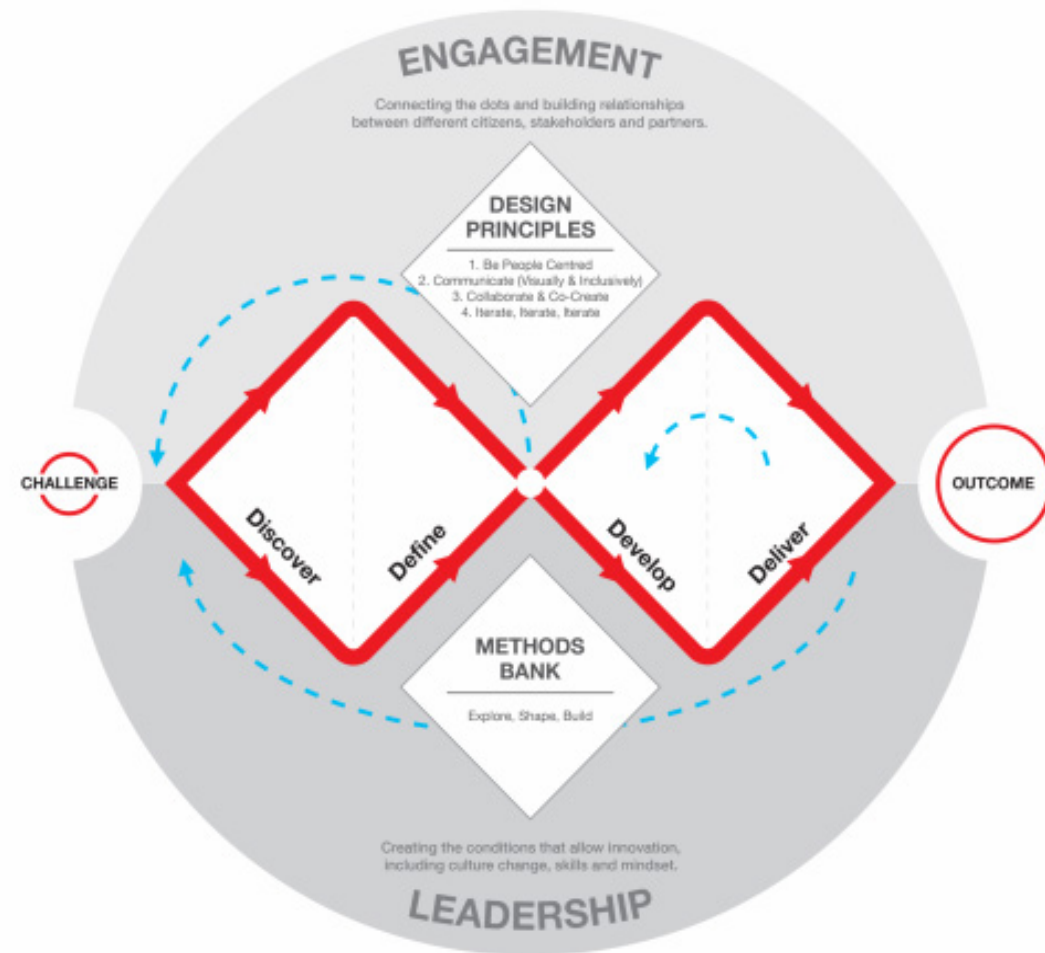

Figure 17. Doule Diamond Diagram (Design Council, 2006)

Chapter 3: Pivot and Second Iteration

Starting with a pivot in my design, this chapter describes the process towards my second prototype. By using a value curve, a survey and thematic analysis, I tried to get a grip on the new niche that this product would become part of. Finally, a scenario is sketched and the midterm prototype, a video and PowerPoint prototype are presented.
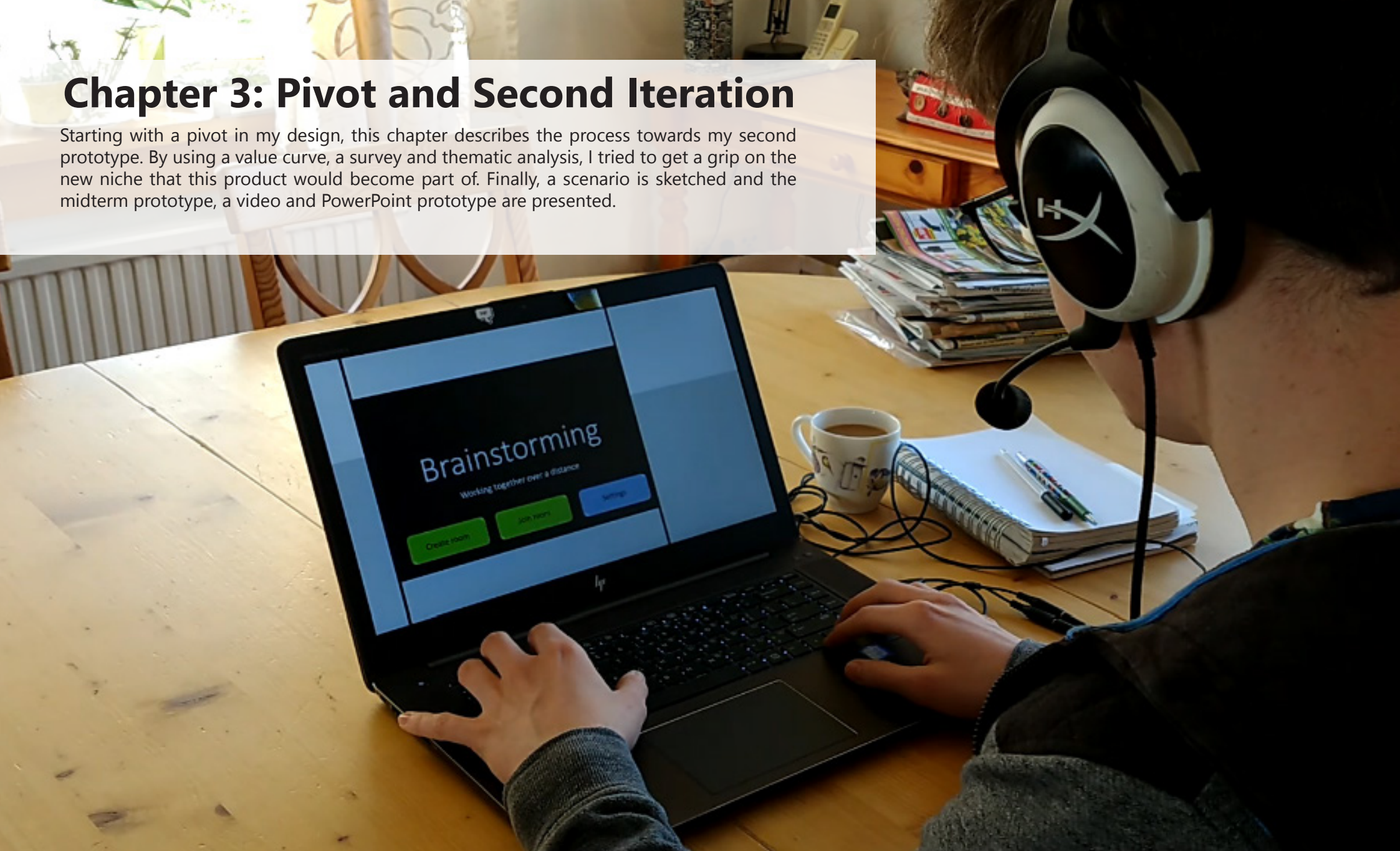
Pivoting & Value curve

In the following weeks, the situation in the world around the outbreak of COVID-19 worsened. The way we live was drastically changed to prevent the virus from spreading. Because of this, I decided to pivot my idea, and see if my initial idea could become something to help people work online. In the small search I did, I quickly found that working online brings difficulties with it. In the large survey from Buffer & AngelList (2020), they show that 20% of the people have difficulties with communicating and cooperating online.

Even though the pandemic is temporary, 98% of people state that they would like to work remotely more, even after the pandemic (Buffer & AngelList, 2020). Thus, the prototype would still be useful outside of this situation.

Next to this, pivoting would allow me to user test my design, as almost all meetings have been moved to online platforms.

This pivot towards an online product, instead of an offline one, means that this product will be used much differently. There are other, additional affordances and values that need to be taken into account when designing something

To determine which of the four ideas mentioned earlier might be the most interesting to reiterate, I decided to use a type of value curve (Figure 18) using my assumptions for a certain set of important values (Table 1).

Naturally, as these are almost fully based on my assumptions, this would not be representative of what would be needed. Therefore, I send out a survey, to find out what people want from a possible online program helping them brainstorm.
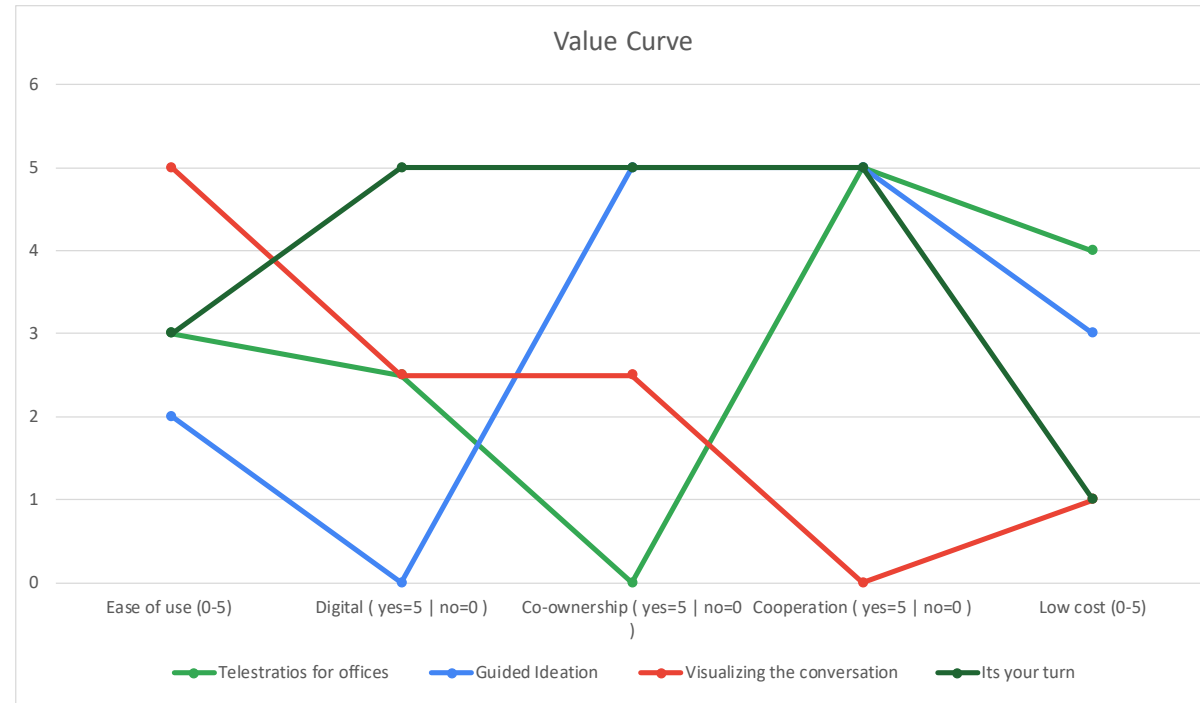

Figure 18. Value curve based on assumptions

	Ease of use (0-5)	Digital yes = 5 no = 0	Co-ownership yes = 5 no = 0	Cooperation yes = 5 no = 0	Low cost (0-5)
Telestrations for offices	3	2.5	0	5	4
Guided Ideation	2	0	5	5	3
Visualizing the conversation	5	2.5	2.5	0	1
Its your turn	3	5	5	5	1

Table 1.   Value curve based on assumptions

Survey & Thematic Analysis

What do people want from a possible program that helps them brainstorm?
That is what I wanted to know from the following survey, for my next iteration. The full list of questions can be found in "Appendix I: Usertests & Consent forms" on page 52.

Thematic analysis

As the number of respondents was not very high (24) I decided to use look at the written responses to see what qualitative data I could get from the responses. For this, I used the thematic analysis steps from Braun & Clarke (2006), specifically, inductive thematic analysis. Meaning, I will look at the data and try to determine some themes from that. I therefore also chose to be looking at the comments and quotes semantically, as I want to see what the people are asking for in their comments and count what is most prevalent.

Transcribing, Reading, Familiarization & Coding

In the images on the right (full image in Appendix I), you can see the transcript and coding of the different questions and the answers. The colours alone show that there is a possible difference in expectations.

Themes

I expect that the facilitator/program...
Red = ...prevents us from getting side-tracked
Yellow = ...has experience
**Green** = ...provides structure
Blue = ...promotes creativity
Pink = ...provides tangible results
Grey = ...gives everyone a turn to talk.

Reviewing themes

I had this thematic analysis reviewed by a peer, to check if we arrived at the same conclusions when looking at the data. Anniek Jansen took a look at the same dataset for me and concluded that the themes I had determined were similar to hers. The only difference between our views was the splitting of the green theme "provides structure" into two themes, "structure" and "timekeeping", to make the groups more specific.

Figure 19. Thematic analysis impression 1

Figure 20. Thematic analysis impression 12
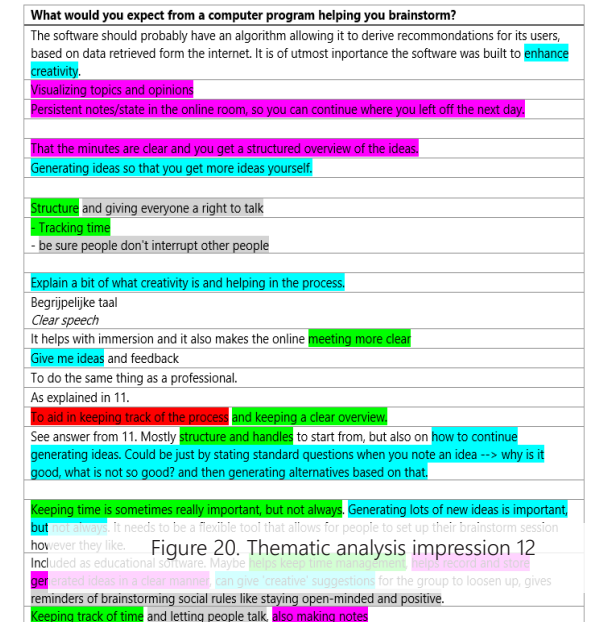
Placing the themes in the existing knowledge

Red - Prevent getting sidetracked
Getting sidetracked in online meetings can be difficult, especially when working on a computer. The phenomenon of distractions when using a computer as part of a focussed interaction has been studied. Mostly in the setting of students taking notes during lectures. The study by Cheong, Shuter, & Suwinyattichaiporn (2016), takes a look at the different studies done in the digital distractions students face. However, parts of this study, such as the seeming ease to 'multitask' when sitting behind a computer, apply to anyone working or meeting online. To prevent or subvert this behaviour in my prototype, it might be useful to create a fixed environment in which people work, limiting possible distractions from other windows or programs (Turmel, 2020; Perez, 2020).

Yellow - Has experience
Understandably, people expect a professional to have experience. But this is not something that a program or system can have. Still, it might be interesting in a system that learns, perhaps the average time of a certain meeting or adapts the settings for certain users. A self-learning system may be something to look into.

Green - Provides structure
Order and structure are important during meetings. Osborn (1963) describes this, and the creation of an agenda is often one of the first tips given to anyone wanting tips on how to run a successful meeting (Conti, 2017; Crump, 2019). At JAM, it was also important to send out an agenda, so people knew what to expect and prepare. Next to this, it is necessary to have a clear plan during the meeting, a way to know what is up next for the participants.

Blue - Promote creativity
Promoting creativity is expected from both the system as the facilitator. For either to do this, they have to get the participants in the right mindset. This can be done through icebreakers or check-ins. They have been proven to

help with transitions to clear the mind and focus (Boatman, 1991). This is

both the case for younger students and adults (Chlup & Collins, 2010). There are many types and forms of 'offline' icebreakers (John Newstrom, Scannell, & Newstrom, 1996). But lately, online forms of game design have also been developed (Witt & Robra-Bissantz, 2012). For my design, I would like to take a visual approach, as stated in Chapter 1.

Pink - Provide tangible results.
Much like the structure heading, getting clear results is part of having a set goal and way to reach that goal. I want to make a seamless way of getting results by incorporating it into the structure that automatic minutes are taken. Preferably in a (semi-)visual form.

Grey - Giving everyone a turn to talk.
In the past few weeks, with meetings moving online, an online meeting 'etiquette' has been slowly emerging (Chen, 2020; Crafford, 2020; deBara, 2020). From muting your microphone to talking in turns, in the past few weeks have learned to interact differently from offline. Talking in turns will help everyone feel heard, however, with constant input, even if two other people are talking, I think that times of silence, when working online will be just as important to incorporate.

Discussion
In this survey, I asked a lot of different questions, in the hope of gaining a lot of information to use for the next prototype. However, I understand that self-reported data about the time a session takes or letting people imagine a prototype is not the most reliable or effective way. Especially with the small sample size of 24 participants

Still, I hoped that this would allow me to find a point of reference around which I would later finetune with more elaborate user tests.

Scenario

Figure 21. Scenario without the prototype

Figure 22. Scenario with the prototype

Using the information gained from the survey and its analysis, in combination with the earlier obtained information, I envisioned the midterm prototype. This was done through the creation of a scenario of the situation, to help me imagine the situation of the potential user.

What is most important about this scenario is that it sketches a problem, solution and result.

The problem or before scenario: the meeting is scheduled, there is a lot of talking, but no clear choices are made. When no clear end time is set, meetings can seemingly go on forever, and without proper management, not everyone will feel listened to, as discussed in "Research II: Brainstorming Issues" on page 10. Finally, we see a lot of frustration and a tired person hanging up.

The result or 'after' scenario: In the second situation, a structure helps the participants structure the meeting and their ideas and the meeting ends with the people feeling satisfied. By creating a clear structure, some time for fun or friendly conversation can also be incorporated, contributing to an open and creative environment. That, in turn, helps come up with other, perhaps more creative ideas.

Creating this helps me imagine what I want to change about the current situation, in a different way than I had with the Ad-Lib Value Proposition (page 12). This scenario makes it more tangible.
Thus, the following prototype will have to exchange the stressful, often unstructured meeting structure to a more organised one. As well as, including a fixed part for relaxation to aid in creating an accepting and relaxed environment.

Prototype II: PowerPoint Program

Based on the scenario, I created a video prototype by using an interactive PowerPoint. A selection of the slides can be seen in Figure 23, Figure 24 and Figure 25. The full powerpoint can be found in "Appendix II: PowerPoint Prototype".

Next to this, I created a video to explain the concept. The video can be viewed via the following link: https://www.youtube.com/watch?v=M9klgXWwtb0.

The system

The prototype represents a software program which creates one environment in which the team members can cooperate. This environment allows the facilitator to create a 'room' in which they can brainstorm with their team.

In this room, the facilitator will set up the goal and duration of the meetings, along with any additional steps.

The structure for brainstorming that follows is done in the same way as shown in Figure 16 in "Prototype I: Turning Table".

Figure 23. PowerPoint prototype
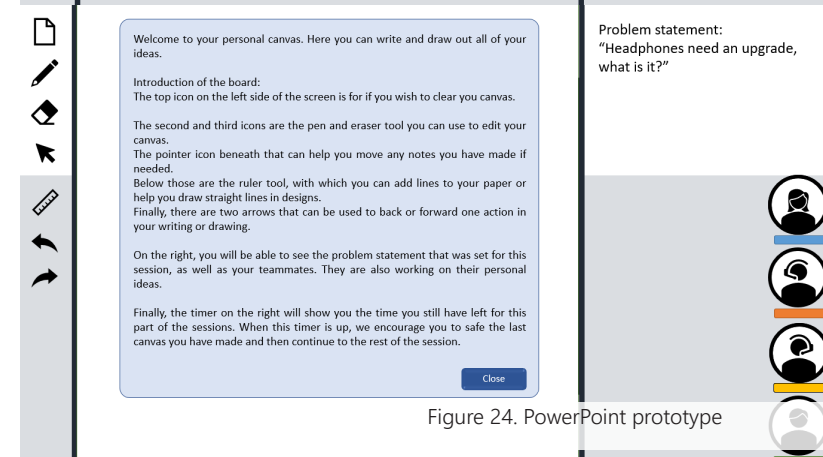
Figure 24. PowerPoint prototype
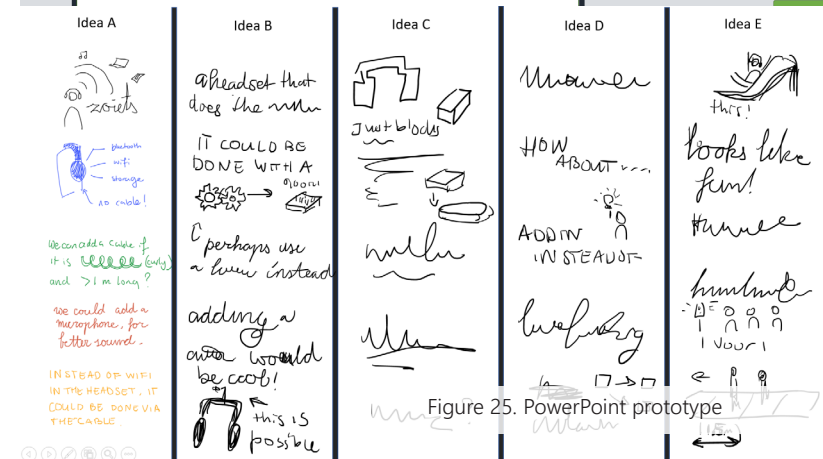
Figure 25. PowerPoint prototype

Midterm feedback

Validation

The feedback included that I should try to validate my idea more, through user tests or questionnaires. As well as try to investigate what the essential steps are in my program/design to ensure I focus on the most important parts of this design I wish to create.

As the criteria I set for myself are hard to measure and analyse quantitatively, most of the tests will have a qualitative nature.

Feasibility

Another important point of feedback was the feasibility of my product. I must determine what I want to make in the time I have, as a fully functional program may not be possible. To do this, I will have to split up my idea and find out what the essential steps are in the process and see if I can clearly define and design those.

Before doing this, however, I want to validate my idea through user tests and determine based on that what I should create. For perhaps using an existing platform might allow me to make something for that instead of creating the entire program myself.

Next, for the most recent prototype, I assumed all people would have a drawing tablet, and that is not reasonable. I, therefore, should figure out what other ways there are to integrate visuals into the brainstorming process that I want to stimulate. There are many possibilities here, mapping them might help me choose.

To do this, I will do some research on what programs and tools are currently out there and see how they integrate visuals. With that, it will also be possible to determine what the added value of my product would be against what is already out there.
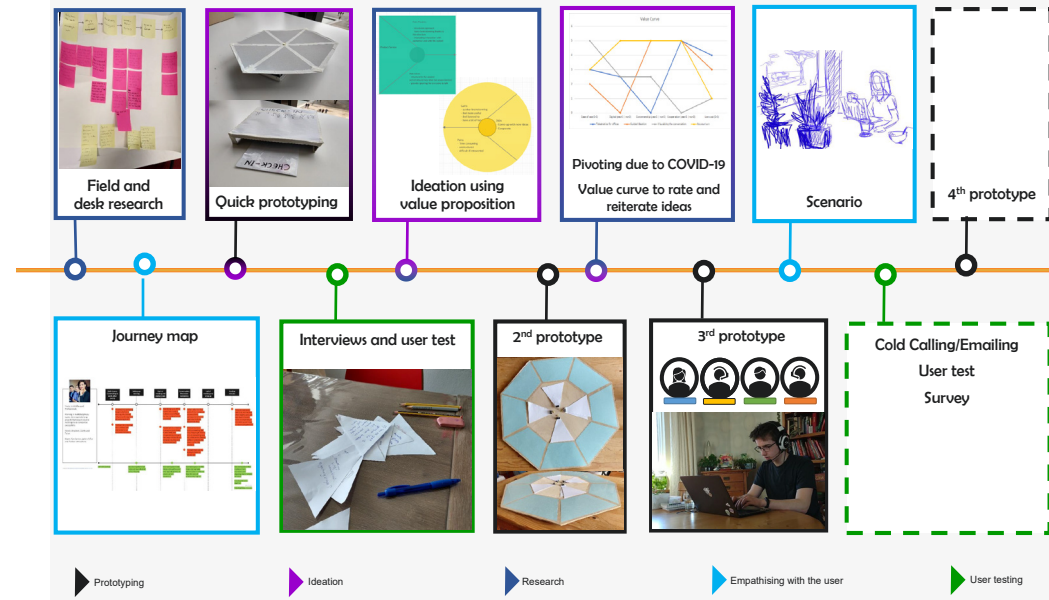
Figure 26. Miterm poster
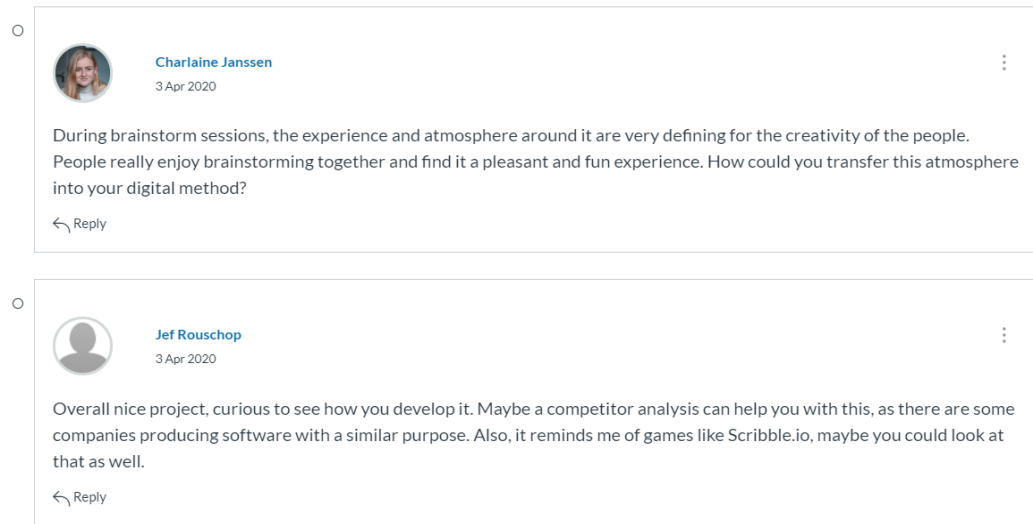
Figure 27. Feedback comments on canvas

Chapter 4: Third Iteration and Usertesting

The next iteration of the prototype presented in the previous pages, was created after feedback and more research. Using benchmarking to investigate the potential market and possible partners, brought me to the Miro platform -an already existing online whiteboard- on which my third prototype was build. Prototype III consists of a set of templates based on existing design and planning methods. These templates were usertested, of which the results proved positive.

Research III: Benchmarking

Investigating the field was useful in determining the current course of my design, and how it should differ from what is already out there, and could provide me with a medium to do a user test in.

Looking through companies that provide brainstorm tools or similar services, I stumbled upon Stormboard (https://stormboard.com/). This is a browser-based note board on which a team can post and assign ideas and concepts to be reviewed or commented upon. It provides several templates and setups to use and get started with the program.

Another tool is Miro (https://miro.com), a whiteboard program, also browser-based, which allows people to work together on a whiteboard. It is quite an elaborate program, and there are several provided templates for different frameworks and more specific purposes such as creating a journey map. It was not specifically created to brainstorm but is often used for that purpose.

A similar tool I found was IdeaBoardz (https://ideaboardz.com). This tool, compared to the other two is a bit more limited. It works with Post-Its that can be assorted into three lists: "went well", "didn't go well" and "action items".

For a different approach, there are Coggle (https://coggle.it/) and Wisemapping (http://www.wisemapping.com/), both tools with which one can create mind maps and flowcharts. These are also browser-based tools.

Finally, I also found some applications. MindMeister (https://www.mindmeister.com/), Simplemind (https://simplemind.eu/), Ideament (https://edshelf.com/tool/ideament/) and Mindjet (https://www.mindjet.com/). All of these use a structure similar to the mind-map approach from Coggle and Wisemapping.

Conclusion

What I think is important is that my design does not become just a tool like this. What the added value of my product will be is the guiding aspect of it. A board can be a useful medium, but I want my design to be an actual guide, one that structures the process and aids in provoking creativity. As well as a tool that can easily be somewhat tailored to the group it will be used for.

Affordances

The prototype I had thought out for the midterm evaluation was still quite abstract. To get into more concrete testing, I looked back the results from the survey (page 20) and took time to write out the affordances I wanted my system to have and different options of achieving those. With this in mind, it will be easier for me to test what people value and like the most during my user test.

With all these different ideas, a lot of different programs can be created.

Affordance	1	2	3	4	5	6
Drawing/using images	Drawing tablet and pen	Connecting phone as a drawing tablet	Pen and paper and photo upload	Pen and paper and scanning	Pen and paper and holding up the paper to the camera	Touchscreen computer
Drawing aids	Library with images	Direct communication with google images	AI that finds images for you based on drawings	AI that finds images based on spoken words	Ai that finds images based on typed words	Small drawing course
Process guidance	Appoint a team member to be the leader	Let the program guide the group	Introduce virtual assistant	Game design with a clear goal	Connect with an actual human facilitator	
Cooperation and Inspiration	Images → mood board creation	Cooperative game	Music	Breaks in the program for taking a walk or moving	Video camera-based introduction	Check-in
Time management	Timer	Game design	Clear steps with time indication	A team member that is appointed for this		
Clear final product	File with all the drawings/ ideations	One large poster with all the chosen ideas	A score list with the scores and ideas	A list with following steps that need to be taken in the process		

Table 2.   Affordance table

Miro as Medium

Affordances

For the next iteration, I decided to use Miro as a medium, as it already allows for quite some uses when looking at the blue affordances in the table. As to focus on my design of the tool, and not the technicalities, I Imagined that, when using this tool, the members are already in a call of some kind. This could be Teams, Zoom or something similar. This call would allow the orange affordances.

With all these affordances already in place, I could focus my design on trying to aid in the guidance, timekeeping and cooperation aspects, where the team members themselves are still mostly responsible.

Affordance	1	2	3	4	5	6
Drawing/using images	Drawing tablet and pen	Connecting phone as a drawing tablet	Pen and paper and photo upload	Pen and paper and scanning	Pen and paper and holding up the paper to the camera	Touchscreen computer
Drawing aids	Library with images	Direct communication with google images	AI that finds images for you based on drawings	AI that finds images based on spoken words	Ai that finds images based on typed words	Small drawing course
Process guidance	Appoint a team member to be the leader	Let the program guide the group	Introduce virtual assistant	Game design with a clear goal	Connect with an actual human facilitator	
Cooperation and Inspiration	Images → mood board creation	Cooperative game	Music	Breaks in the program for taking a walk or moving	Video camera-based introduction	Check-in
Time management	Timer	Game design	Clear steps with time indication	A team member that is appointed for this		
Clear final product	File with all the drawings/ideations	One large poster with all the chosen ideas	A score list with the scores and ideas	A list with following steps that need to be taken in the process		

Table 3.   Affordance table filled in for Prototype in Miro

Prototype III: Miroboard

The design I came up with was a set of templates build in Miro. These templates I created using the knowledge obtained throughout the various research-topics in combination with my knowledge from JAM. In total, I created eight different templates.

I looked into the different 'types' of (offline) meetings. The paper from Leach, Rogelberg, Warr and Burnfield (2009) gives the following types:

- Information sharing meetings
- Training meetings
- Recognition meetings
- Routine meetings
- Specific issue meetings

Considering online meeting, Routine meetings and Specific Issue Meetings seemed fitting to start with. The first includes coordinating activities, decision making and brainstorming, the second is about solving a specific issue or issues.

With this in mind I was thinking of creating the following templates:

- Long term planning
- Short term planning
- Who, what where plan
- Brainstorming (2 phases)
- Problem-solution check-up on multiple issues
- Problem-solution one specific (large) issue.

I thought about creating all these and using a flowchart (Figure 28) to guide the user to the template most fitting for their meeting. However, I started with creating two templates (Figure 29 & Figure 30), which I would be able to user test. If these proved useful, I could make the whole set shown in Figure 28.

The combination of using a template and talking should help create media synchronicity (Dennis, Fuller, & Valacich, 2008)

Figure 28. Online Brainstorming Tool Flowchart
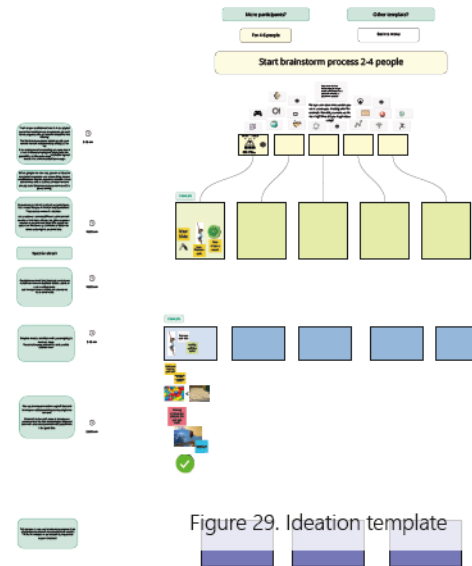
Figure 29. Ideation template
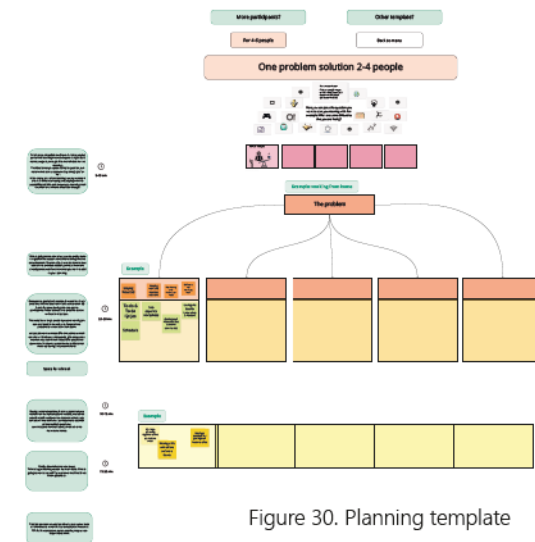
Figure 30. Planning template

Prototype III: Template Creation

In Figure 32 and Figure 31, the theory behind the templates has been noted next to the template.

Both templates build upon Osborn's strategy for brainstorming (1963), as explained in "Usertest I" on page 55". The structure in these templates is based on that and should help the facilitator guide the meeting with much more ease.

The Ideation template, Figure 31, was also inspired by the Double Diamond structure, as explained in "Prototype I: Turning Table" on page 16.

Figure 32, was in its turn also inspired by, the fishbone diagram. This strategy was first introduced in 'Introduction to quality control' (Ishikawa, 1990). The diagram is often used to find the roots to issues, especially for complex issues with multiple causes. The same is done in the Issue solving template, where the users are asked to think about smaller issues (causes and areas) contributing to the 'main issue'. After determining those, they can make concrete plans to solve the separate smaller issues, instead of trying to tackle the large problem at once.
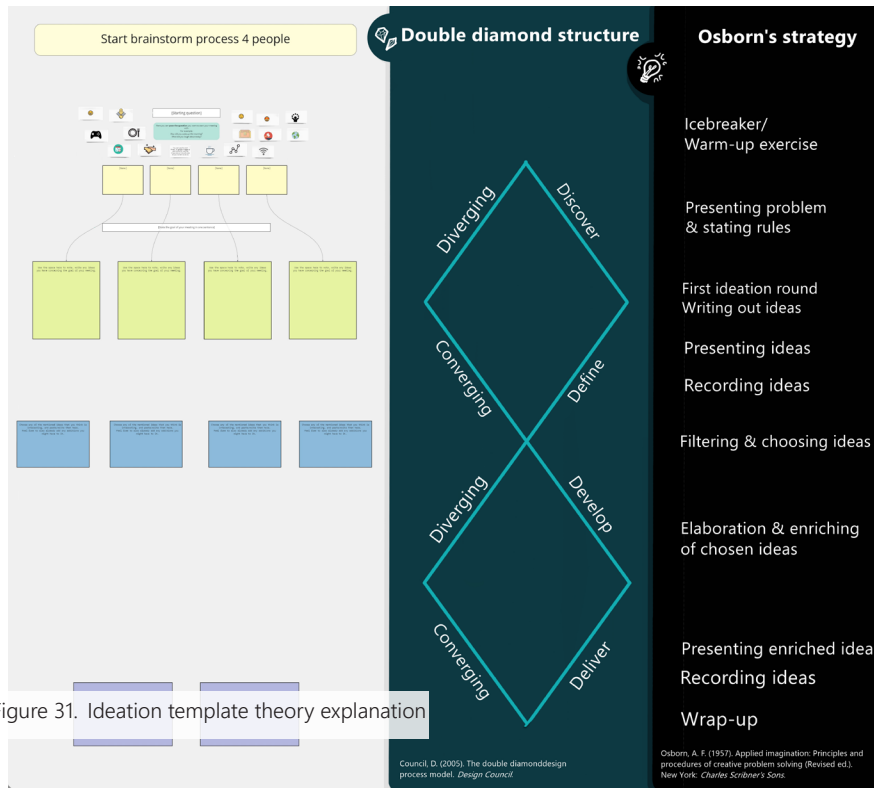
Figure 31. Ideation template theory explanation
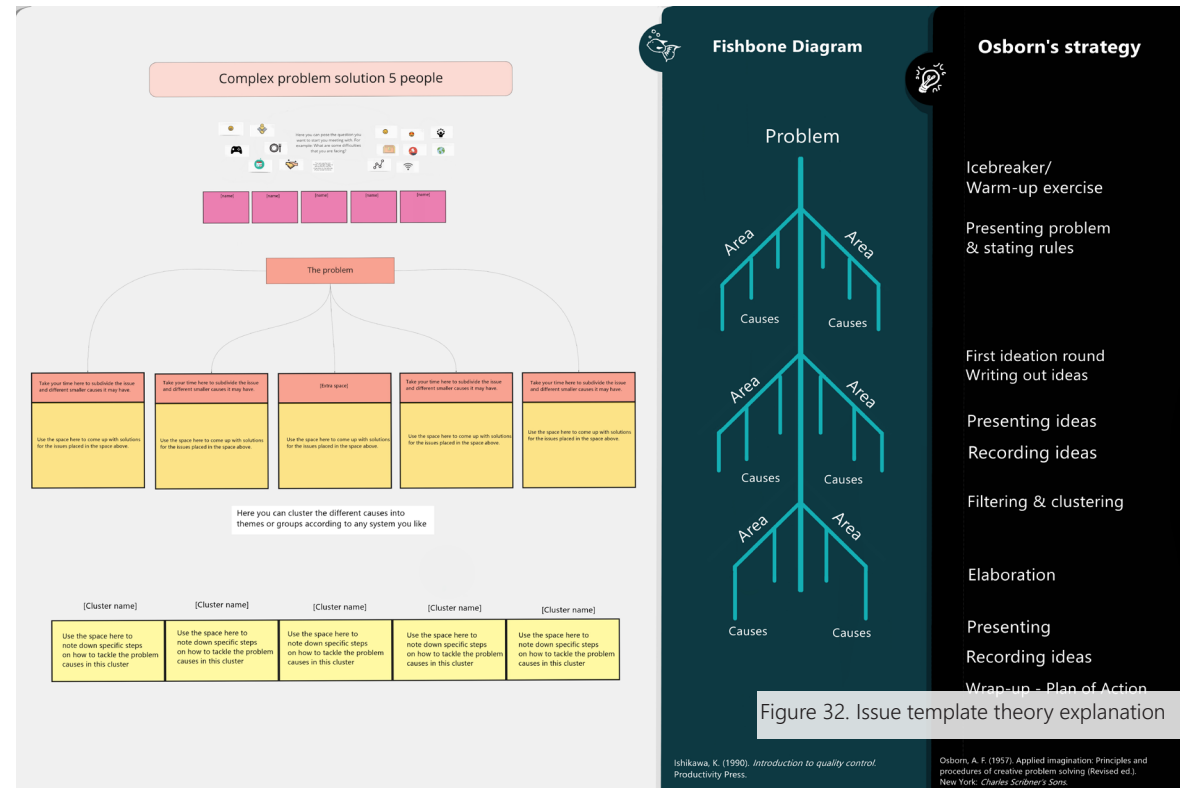
Figure 32. Issue template theory explanation

User test II-V: ZET

Usertesting in the current circumstances, even with an online prototype was not easy. Most companies were very busy transitioning and did not feel like participating in an experiment. Luckily, I was able to find a company to test with: a team with a mix of designers and non-designers working at the company ZET (ZET - schakel naar sociaal resultaat, n.d.) agreed to help me test my prototype.

With the user tests, I would like to learn the following things:
• Perceived creativity and playfulness in the meeting
• Perceived effectiveness of the meeting & template
• Perceived feeling of doing actual teamwork.
• Observed usability and clarity of the templates.
Answers on these questions are most easily obtained via qualitative testing.

Usertest I & II

In total, I got to do four tests. See "Appendix I: Usertests & Consent forms". In two of the meetings, I was also part of the preparation for the meeting with the chairman.

The goal of this user test was to investigate whether the template I had created was clear and to observe what the structure did for the participants.

The first test was a brainstorm session. Interestingly enough, the participants had already had a brainstorm session for the same topic, which had gone okay but had been quite tiring. This did allow me to ask the participants to directly compare the previous meeting with this one, resulting in useful comments.

The second meeting was a problem-solution meeting. The templates and observations can also be found in Appendix I.

Observations & comments

In the observations, I saw the following themes emerge: Template, Cooperation, Roles and Creativity.

Considering 'Cooperation', I observed behaviour such as adding post-its to ideas during conversations, to be able to come back to them later. Next to that, colour coding work was done automatically as well as noting down interesting ideas they heard of others. This all went quite seamlessly.
Quotes from participants also stated that they felt more connected than during their last meeting:

"I feel like it is easier to keep going, now that we are writing down everything together.
- "yes it is like actually working together when you see all your cursors moving on the canvas"

Within "Roles", it became clear that the chairman still has a clear role, and that a minute taker might still be useful in meetings done with a template. The theme 'Creativity' is based on the usage of images or icons, and the perceived creativity of the participants. Both the designers and non-designers were enthusiastic about the icons and overall flexibility of Miro and the template in it.

'Template' was mostly about noting the things I needed to improve on the templates. One example: that I had not noted a moment for a break in the meeting. The participants took a short break about an hour into the meeting, after completing one of the steps.

One of the comments also hooked into this: *"I like having an overview before the meeting on what we are going to do, an agenda if you will. Perhaps this is also possible for the template."*

There were positive reactions on the template and the effect it had: *"It (the template) works like a kind of external memory, all the interaction is on the template, instead of it being between my head and the screen"*
"It is just very nice that we immediately have some documentation"

Problems noticed

There was not a very concrete goal for the first meeting, causing the participants to wander every now and then. A space to note the problem statement might be helpful here.

In the same meeting, the template was not completed in the set time (1.5h). This could be due to the problem mentioned above, but more checks must be done to confirm this.

The second meeting, using the problem-solution template was finished within the time. The chairman did state the following: *"I do think some people will need more guidance than this, not everyone knows how to use a template like this."*

This was also true for the usage of Miro. People unfamiliar with Miro needed the check-in to be guided by me, as they found it difficult to find the different icons and options.

Results and conclusion

Using the observations, problems and comments, I improved and updated my templates. Adding a break, a more elaborate explanation and a place to write the problem statement or goal of the meeting.

It was at this point that I decided to create a webpage on my website to add any additional resources (hannahvaniterson.nl/present/Effio). On this, I added a short explanation, the link to the template set with the flowchart and several files with extra tips and tricks, such as check-in questions and an agenda.

After the comment from the second facilitator on wanting more info on the template, I also took it upon myself to create two different sets of templates. One with a relatively elaborate explanation, and one with shorter ones for possible returning customers or people more experienced with facilitating online and the usage of templates. Finally, I linked two videos made my Miro, with quick explanations of the things that are possible within the boards.

Usertest III & IV

After updating the templates, and creating a website, I joined two more brainstorm meetings from ZET. This time, I would not be an active part of the preparation of the templates, but let the facilitators use the templates themselves while using the website.

Observations & Comments

The team continued working on the template they used earlier, to continue working on the ideas and finishing the template. Due to this, the meeting did not start with a check-in as in a regular template. This, in combination with a press conference that interrupted the meeting, made meeting three quite chaotic. Based on this experience, there should be some kind of plan to help people pick back up if a template is not finished.

The fourth meeting was much later, about two weeks. There are no notes from the previous session except for the template that they filled in. The participants took around 10 minutes to refresh the info from the last session.

Problems noticed

The text explaining the templates is too long. Also commented: *"Reading this takes long, normally I do not spend that much time on my preparations and this is a little too much, especially when I have to look for it"*

While the flowchart and copying of the templates works, it is not very user friendly. A comment from the facilitator: *"So I should copy this to one of my own files/boards? Clear, let me see for a moment …. Yes that is nice and easy, I can also move the whole thing a bit if I like"*
While it did work, it took some time and was not very smooth.

The need for a designated minutes taker became more clear during these follow-up meetings relying on templates that were started earlier:
"Seeing how little of this is still clear and straight forward for me makes me think that we should have written down more (last session)"
Response: "I do not think it is too bad if you start at the top things will come back to you"

Results

These two user tests, next to confirming some good points of the templates, also revealed some problems in the current setup. The template continuation is very hard with the current templates, they are not quite flexible enough for that. The text I added was also too much for the two chairmen of these meetings. A solution to this may be a different way of presenting the info and allowing skimming using bold words or more visual representations of info.

Discussion

The notes on observations and comments were done by hand. A recording of the sessions could have been better, as more of the info would have been transcribed. Next to this, the user group was relatively small with only eight people. A larger, more diverse group would probably find different results when using this system.

Conclusion

The user test showed that the overall reaction to the usage of the templates was positive. The perceived creativity and the quality of ideas generated were higher compared to the other brainstorm meeting, with three of the four participants mentioning that they thought they were better or more elaborate ("Appendix I: Usertests & Consent forms" on page 52).

Most of the reactions on the template and its affordances were positive as well, with statings about the ease of use and structure it provides, without being too limiting.

Reflecting further, I realised that, while this setup of a website and a board with flowchart worked, in terms of usability and experience it does not score high. Looking into other possibilities to provide a template in miro should be investigated.

Reflection

It was really interesting to see what other people thought about my design. Having only worked with the templates myself, and having formed my own opinions on it, the views from others were refreshing. I would have liked to have done the user tests in a bit more structured manner, but like most companies, the people at ZET were quite busy and I was already happy with the times that they could invite me.
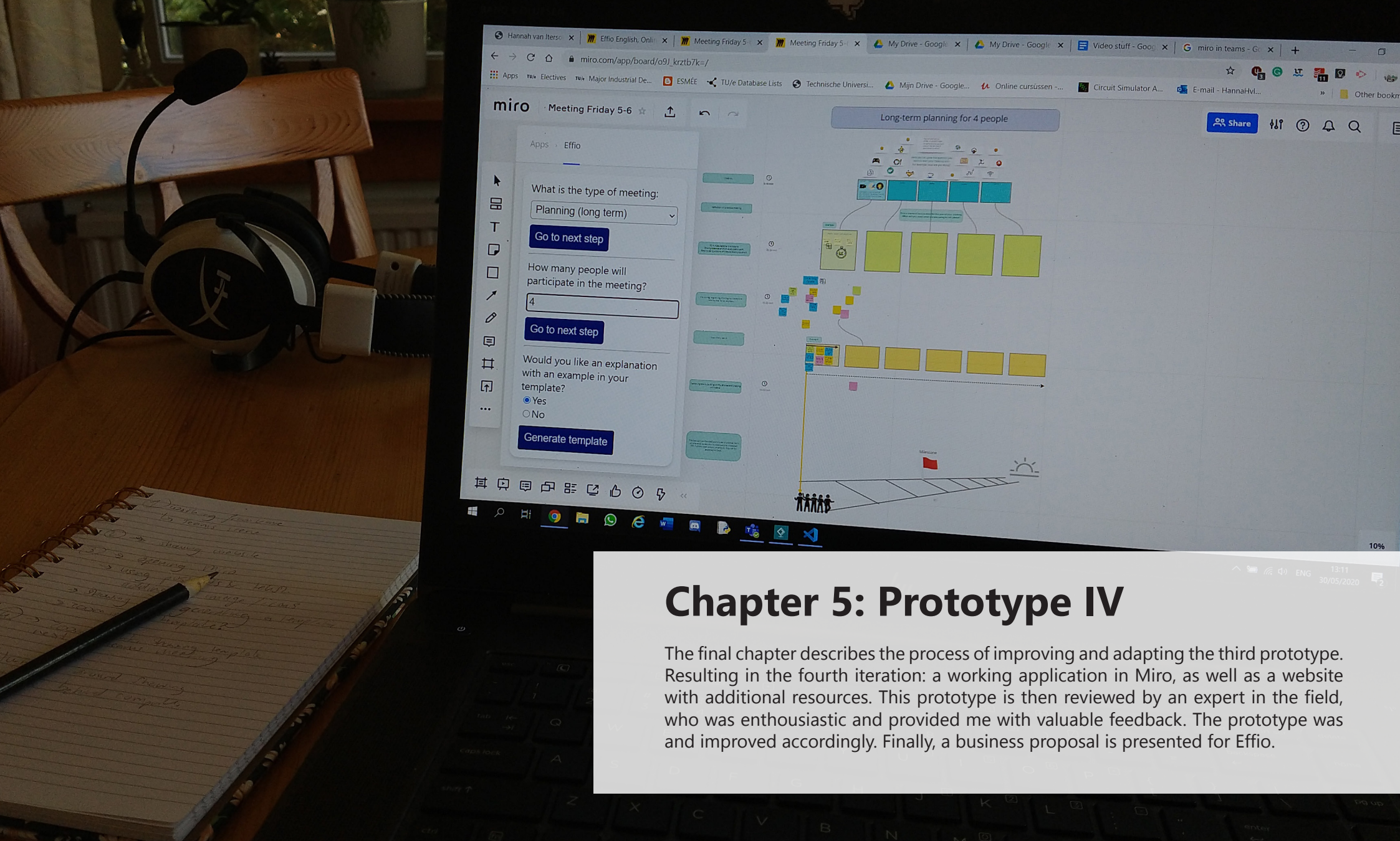
Chapter 5: Prototype IV

The final chapter describes the process of improving and adapting the third prototype. Resulting in the fourth iteration: a working application in Miro, as well as a website with additional resources. This prototype is then reviewed by an expert in the field, who was enthousiastic and provided me with valuable feedback. The prototype was and improved accordingly. Finally, a business proposal is presented for Effio.

Research IV: Template Creation 2.0

As concluded in the previous chapter, more, different templates could aid this system in taking off. Therefore, I created the other templates as mentioned in "Prototype III: Template Creation" on page 30.

Osborne's Brainstorm
As described in "Usertest I: Observation" on page 15, this technique is the base of all the brainstorm templates I have created. It is based on the steps as described by Applied Imagination; Principles and Procedures of Creative Problem-solving (Osborn, 1963).

Check-in /icebreaker
As mentioned earlier in "Interviews" on page 10, and "Survey & Thematic Analysis" on page 20, a 'check-in' or 'icebreaker' as it is sometimes called is a technique used in some meetings. Its goal is to make people feel comfortable, tell something about themselves and learn something about the other participants.

Gantt chart
A Gantt Chart is a way to represent the different parts done by the different people in a project over time. As stated on the site: "showing activities (tasks or events) displayed against time" (https://www.gantt.com/). It gives a clear insight in what the various activities are, when each activity begins and ends, how long each activity is scheduled to last, where activities overlap with other activities and by how much, and finally, the start and end date of the whole project. (Project Manager, n.d.) See figure Figure 33 for an example.

Kanban framework
The Kanban methodology focuses on creating an overview of what is yet to be done, what is in progress and what is done. Trello and Jira are both examples of tools that use the Kanban framework for their service. (Inflectra, n.d.; Atlassian, n.d.)

Double diamond
The Double Diamond is a design process model. Developed by the British Design Council in 2005. It tries to describe the overall flow of a design project. This is very hard to do, as this model is very linear and design processes tend to not be linear at all. However, for this project, the visualisation of converging and diverging that this model shows, will be the key usage.

Gantt Chart

Figure 33. Gantt chart example (Project Manager , n.d.)

Kanban project management framework
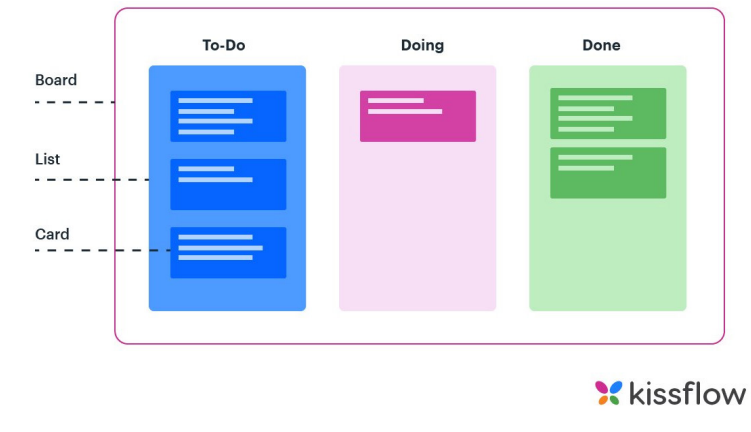
Figure 34. Kanban framework example ((Khalil, 2020))

Fishbone diagram - Ishikawa

The fishbone diagram or Ishikawa is a diagram used to find the cause of a problem. Looking at the image of the diagram, it seems to look like the skeleton of a fish. The goal of this is to identify all the possible issues resulting in the final problem. By visualizing it, the different causes can be tackled, solving the 'head' issue.
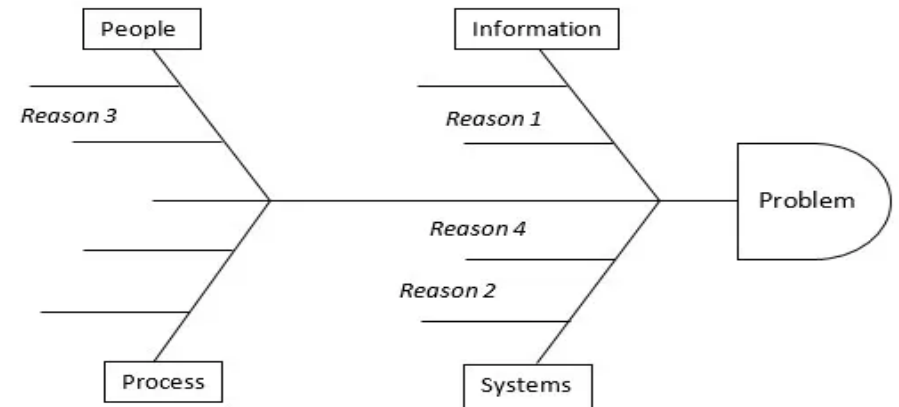

Figure 35. Fishbone structure (Lean CX, 2014)

JAM session setups

At my internship at JAM, I learned and saw how people come to a solution all can get behind. Part of this is the willingness to cooperate, but a technique I have seen at JAM was the co-creation of an idea. This co-creation starts at every individual, after which they come together in small groups to discuss their ideas and create one based on that. Next, these smaller groups come together again. See Figure 35 for a visual representation of this.

This technique ensures everyone feels heard, something that is often mentioned to be missing in online meetings, as discovered in my initial survey described in "Survey & Thematic Analysis" on page 20.
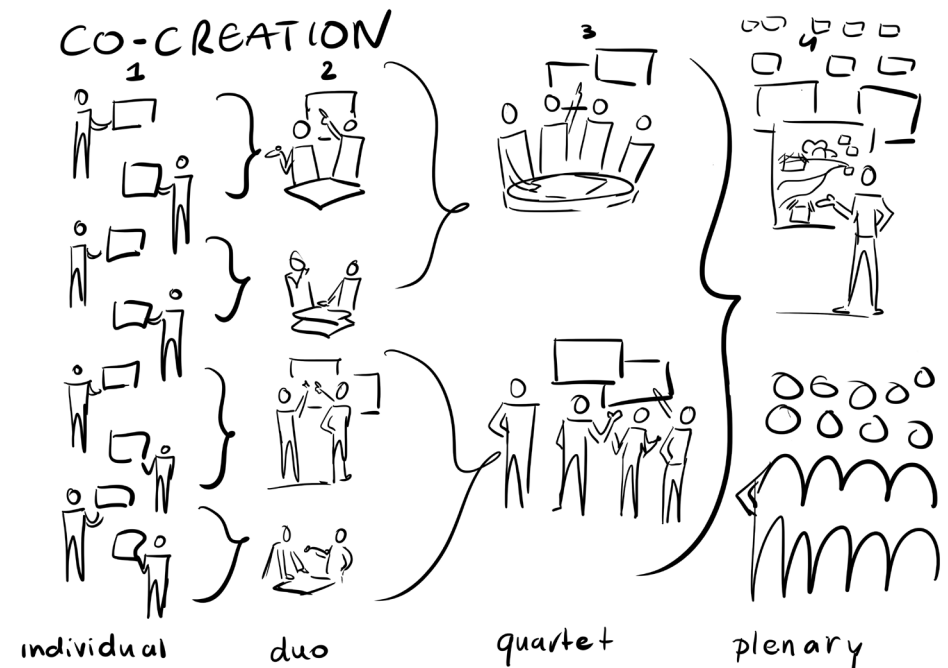
Figure 36. JAM Visual Thinking Co-creation method (own image)

Prototype III: 2.0 - Added templates

The templates from the previous pages and the templates and flowchart shown in "Prototype III: Miroboard" on page 29 are part of the expanded version of my third iteration of the prototype. This is a Miro board on which there is a flowchart that, when followed, guides the user to a template for their meeting. The full board can be seen in "Overview Prototype III: Miroboard (van Iterson, 2020c)" on page 37, or via https://miro.com/app/board/o9J_ktnoVOw=/.
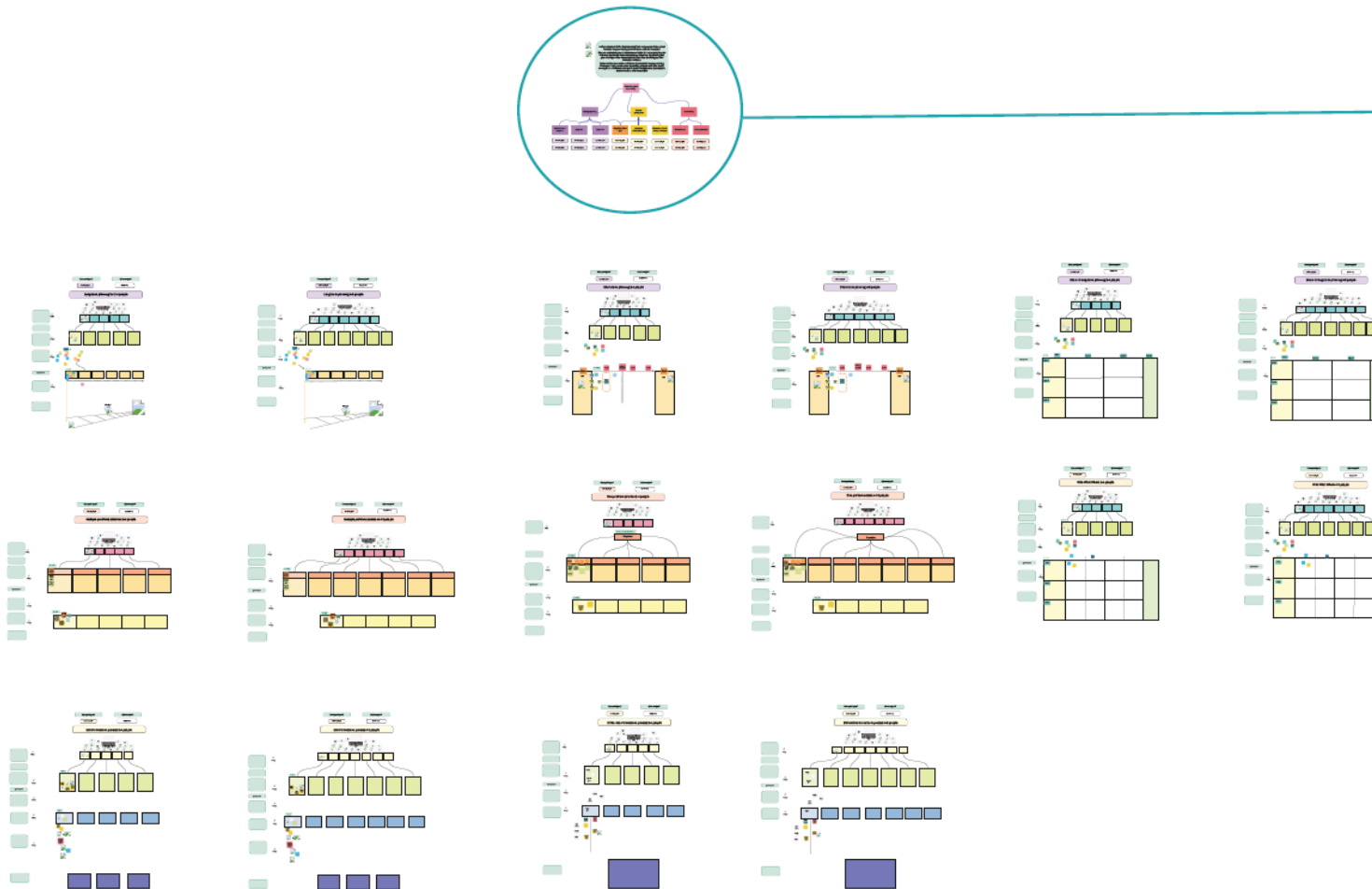
Figure 37. Overview Prototype III: Miroboard (van Iterson, 2020c)
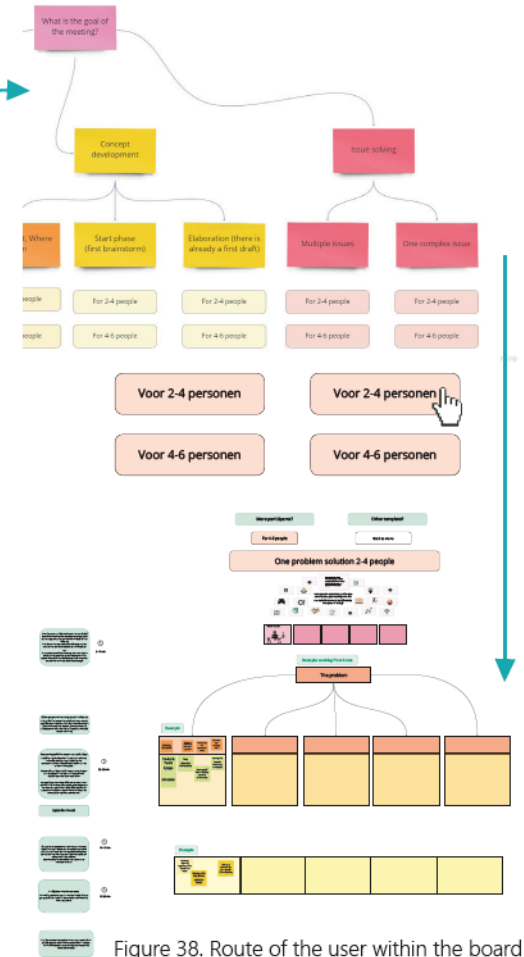
Figure 38. Route of the user within the board

Prototype IV: Website

As described in "User test II-V: ZET", I created a webpage on my ebsite 'hannahvaniterson.nl' (van Iterson, 2020b) to make a hub for the different part of the third prototype. The goal of the site was to make it easy for the user testers to find the links to the Miroboards and perhaps some additional information. For this next iteration, I decided to further elaborate on this webpage and make it more userfriendly.

Design

As the webpage was situated on my website, it mostly followed the structure and layout of my other pages. An example of this can be seen in Figure 39. To improve the layout and usability of this webpage, I decided to do some research on layouts and features that are often associated with good and easily navigatable websites.

Material.io

In my research, I stumbled upon many tips. Such as the fact that 76% of people just want to be able to find things quickly (Volpe, 2011). Next to that, I found material.io (Material, n.d.), a website focussed on giving tips to create a beautiful, easy to use and intuitive website. Using their tips, I created the following website: https://hannahvaniterson.nl/present/Effio/ (van Iterson, 2020a). A few parts of it can be seen in Figure 40.

Most importantly, the website has a few quick buttons to the two kinds of templates that I had created: with long and short descriptions. As well as a link to the guides, the videos about miro and download section. This should make navigation easy. For those completely new, there is a short introductory text and an explanatory video.

The links to the templates currently still bring you to the Miro boards on which you will find the flowchart guiding you to the correct template as described in "Prototype III: 2.0 - Added templates" on page 37. This ensures that people can use the templates while the application is being developed.
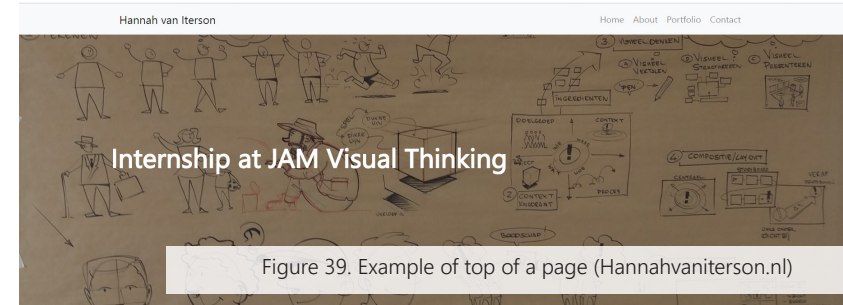
Figure 39. Example of top of a page (Hannahvaniterson.nl)
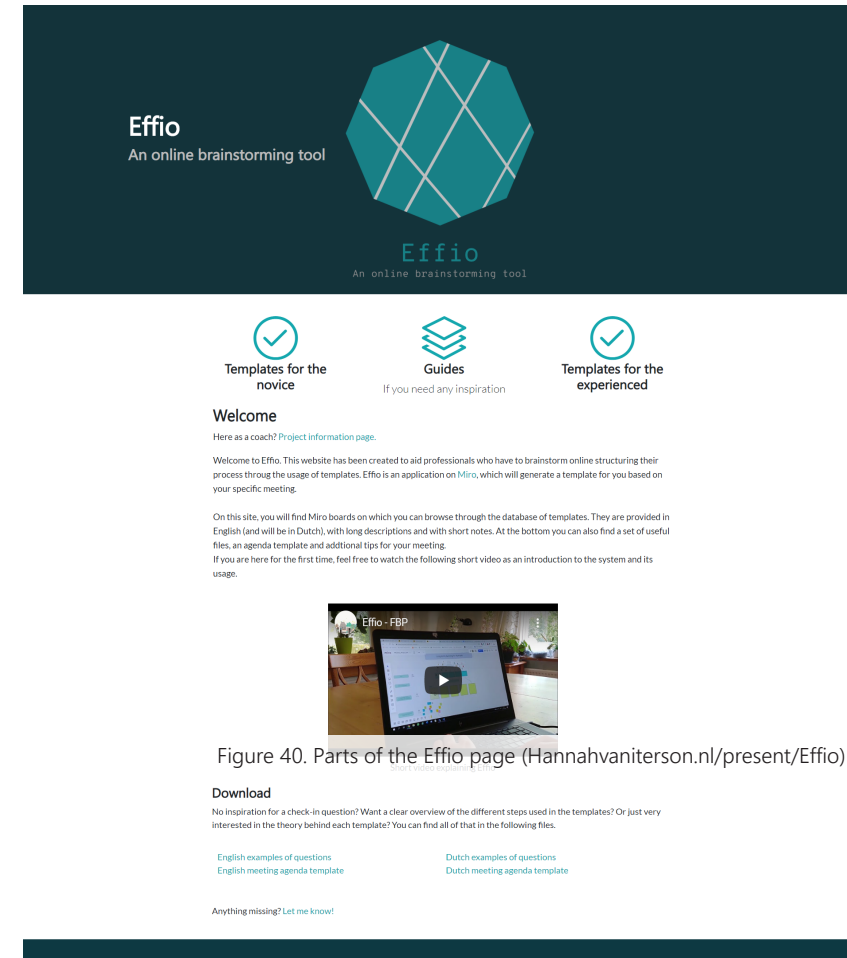
Figure 40. Parts of the Effio page (Hannahvaniterson.nl/present/Effio)

Prototype IV: Application

For the next iteration of the template part of my prototype, I looked into what I could do to make the whole system more user friendly. This choice was based on my conclusions from the user test ("User test II-V: ZET" on page 31).

Miroverse

Researching options at Miro brought me to Miroverse (Miro, n.d.-a), a place where people can upload their own templates for others to use them. This seemed like a good place at first, but after reflecting, I realised that this would still cause the user to look for the template, which is not that different from what I had.

API: Application creation

Then I found the API website of Miro (Miro, n.d.-b). Via this, you could create your own application. This application would function like the icon application I already used. See Figure 41.

If I could program something that would generate the template for you on your board, no additional boards, or any copying would be needed. With this promising perspective, I started looking into what was possible with this API.

Coding

On my own, I found it hard to figure out what was needed for the creation of this app I had gotten lost in the 'keys' and links I needed to upload in my Dev-team account of Miro. Thus, I reached out to a good friend of mine who studies IT: Bas van Rossem. Together we figured out what the necessary steps were to start trying and testing code,, savely and securely.

With some testing and trying, the following website was created. With the code and key from Miro, it became possible to add that webpage into the tiny pop-up window in Miro. (Figure 42) The first step to a working application. The code for this can be found in "Appendix III: Effio Application Code".

When using this page, the user can fill in the different fields and click "generate template" then, a template based on the filled-in data will be generated.

Currently, the system is not very robust. It is possible to fill in the fields and a template will be pasted into the field, however, no adjustments can be made and the program is still prone to crashes.
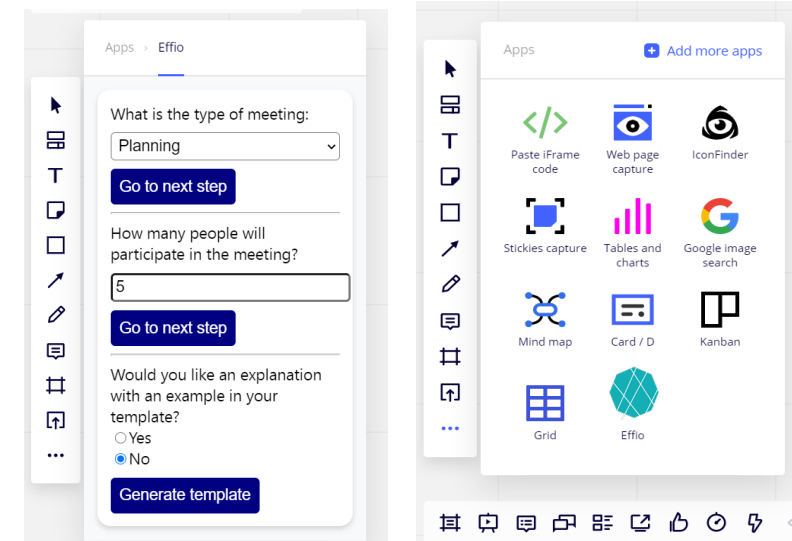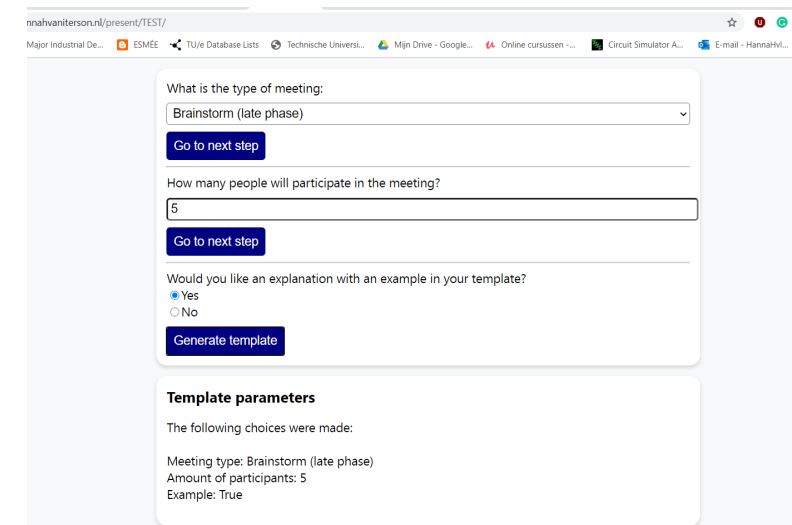

Figure 41. Applications window in Miro

Figure 42. From website to application using Miro API

Expert Evaluation

Having someone who is experienced with both Miro facilitation and design review my work was really helpful. I got a lot of feedback and tips to improve the system.

But most importantly, they found the system very promising and offered to help me to go and pitch the project to companies if I get the Miro Application working.

Tips

I have gotten tips from technicalities in Miro, to tips if I want to make this into a small business, but for the current design of the system. For all the tips and info I received, please go to "Appendix I: Usertests & Consent forms" on page 52. The most important design tips I received, were the following:

Ensuring that people can skim the text. Both in the templates and on your website. Many who work online already do this, and it is a good experience if you are helped with this.

Fixing the flowchart on the Miroboard to be more intuitive, as well as adding summaries of the templates, to make the usage of the system more user friendly. Making sure people can quickly see what they are going to work with makes the usage a lot more clear.

Take a look at your templates and website and use the 10s-1min-10min method to see what information you can pick up in different times. This will help you figure out what the most important info is and filter that out.

Template update

Based on the feedback I got during the expert evaluation, I decided to give the templates an update, while I was working out how to improve the application.

I changed the layout of the explanation next to the templates so it would be more visual, next to adding a short overview at the top of the template for the facilitator. This would allow the chairman to quickly see what to expect from this template and estimate the time the meeting would take.

Another thing I added was the possibility to skim the information as well. Skimming, as explained by the University of North Carolina at Chapel Hill (2018), is the "strategic, selective reading method in which you focus on the main ideas of a text". This strategy, if done right, significantly cuts down your reading time while still making sure you get the most important information from the text. To make this practice simpler in my design, I made the most important words bold in the text. When you read just those words, you will get the 'summary' of that piece of text. An example of this can be seen in Figure 43 & Figure 44.

Reflection

After having the expert review my work and working out their tips, I felt quite confident about my design. I had reached a point at which I was not quite sure about it all anymore, but with this feedback and the achievement of getting the application partially working was a boost.

Figure 43. Effio introduction text
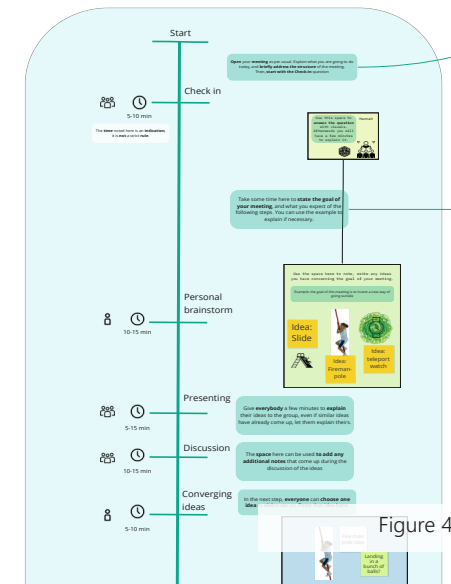
Figure 44. Effio template text

Business Perspectives

Considering the future, I filled in the business model canvas from Strategyzer (Strategyzer AG, n.d.-a).

Filling this in was part of my PDP goals, but posed an interesting question. I suspected that a possible model would result in a B2B model, However, when working out the business model, I realised that there were two models that I was actually using:

1. The application providing to Miro, a Business to Platform model: "A business model that creates value by facilitating exchanges between two or more interdependent groups, usually consumers and producers." (Moazed, 2020).

2. The website targeted directly at the end-users.

Because of this, I decided to fill in two canvasses fu. (full images in "Appendix IV: Business Model Canvas").
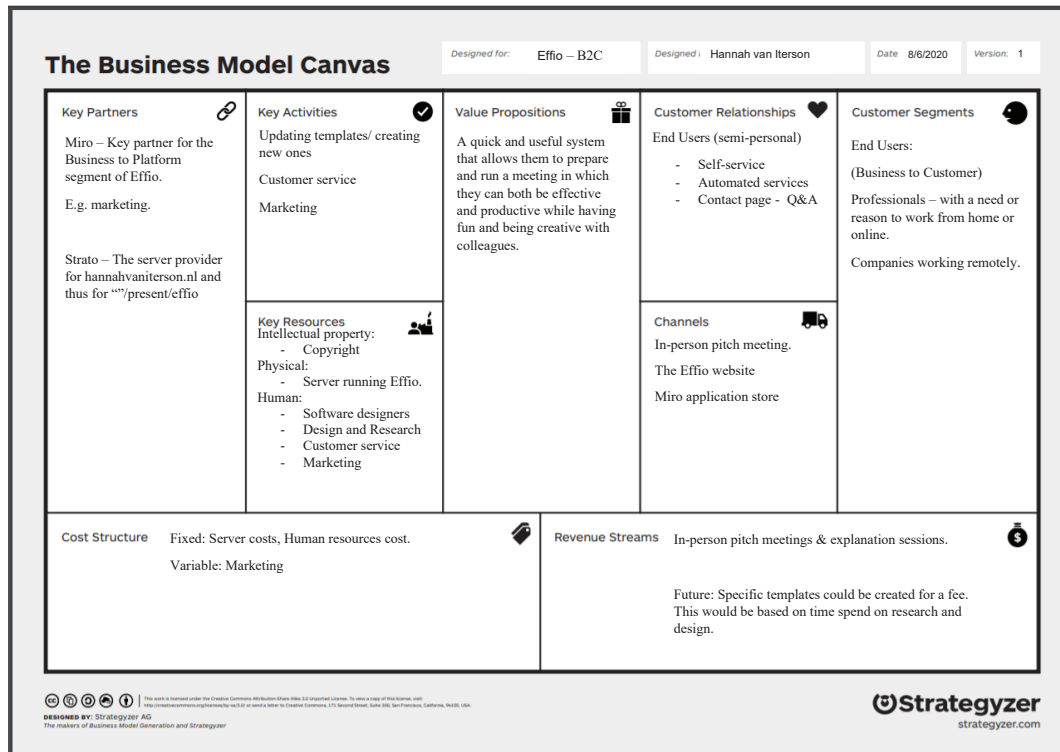
Figure 45. Effio Business Model Canvas B2C
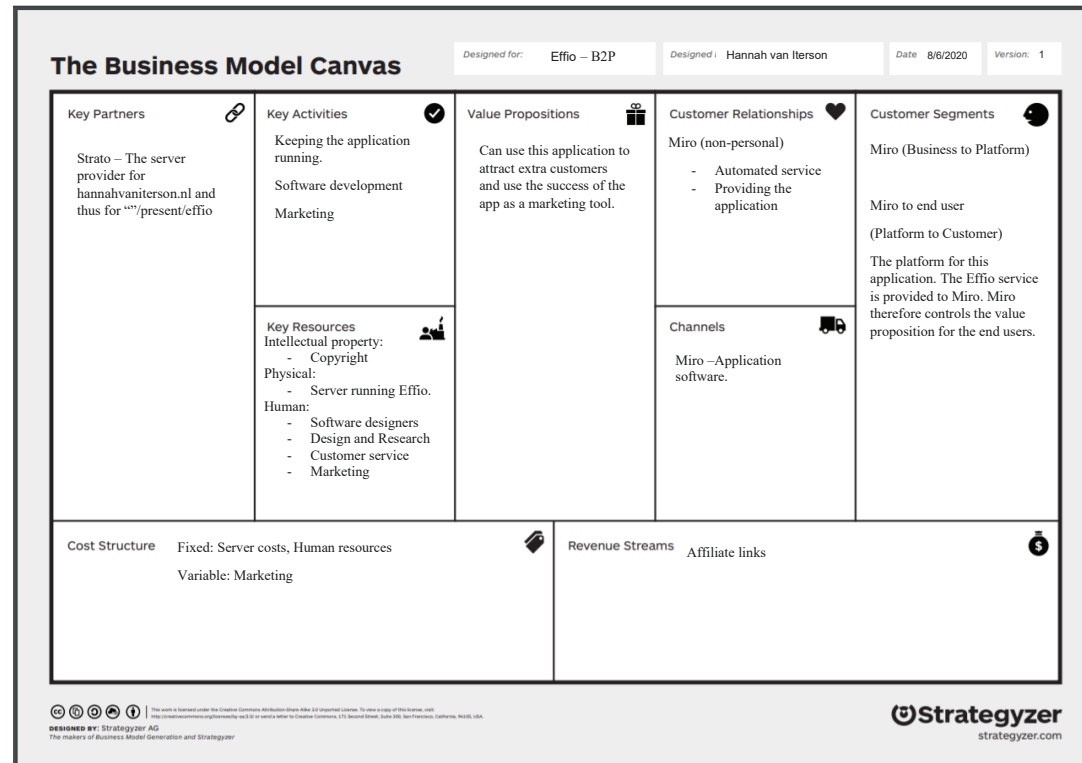
Figure 46. Effio Business Model Canvas B2P

Customer segment & relations

The main difference between the two templates is the customer. In the B2P template, the customer is Miro, the platform who receives the application. They in their turn have their own B2C segment in which they will provide the Effio Application to their customers. The relationship with Miro will be relatively impersonal, as Effio will simply provide the application to Miro.

The B2C template describes the relationship of Effio with its direct users -professionals working online- via the website. This relation will be a bit more personal, however, Effio is mostly a self/automated service, thus not a lot of personal interaction will be present. There will be options to ask questions or create a forum on which users can suggest new templates or report things that need fixing.

Key partnerships

Naturally, Miro will be a key partner in both of these models. In one, Miro is the customer, while in the other Miro is the one providing the platform for the templates to which the Effio website will redirect.
Next to this, the web service provider, in this case, Strato,will also be a key partner. For they are the ones keeping the server address and domain name.

Channels

As shortly touched upon in Customer segment and relations, the channels for reaching Effio is either via the website, or via the application store in Miro. Specifically for the B2C model, in-person pitch meetings will also be a possibility to let users and companies know that Effio.

Value Proposition

In B2P Effio is another asset Miro can add to their library. If this application takes off thanks to the marketing in the B2C model, they could gain additional customers on their platform, as well as adding a success story to their API system. Letting user contribute and add systems to your platform is something that, if done right, will only strengthen their position in the now booming online collaboration tool market.

For the B2C value proposition, the story is more about the pains of the customer who works online. Effio is an example of market pull, the need for a structured system to work online has skyrocketed during the COVID-19 lockdown, as the pains of online working became very visible.

Therefore, Effio is designed to relief a set of pains such as the time it takes to prepare a meeting. Effio is created to be quick as well as tailored to the need of the user. With an overview, the chairman of the meeting also immediately knows what to expect in terms of time when using the template
The usage of a template also helps combat the structure that is often missed in meetings.

And finally, fun and creative interaction, which both very prevalent pains in those who work online. Effio solves these through the practice of media synchrony (Dennis, et al. 2008).

Revenue streams

In the first phase, Effio will not be a business with a lot of revenue. However, as the application takes off more people will start using Miro. Via affiliate links and in-person pitch or explanation meetings, it will be possible to start earning some money. If the revenue stream increases after this point, the expansion can be done, getting staff, and spending more time on additional research. With more hands on deck, providing more specific templates or themes for customers will become possible.

Outgoing streams, in the beginning, will mostly be server costs and possibly marketing.

Conclusion

As Effio is a two-part system, I created two models to explain the different contacts and relations a possible business would have. However, as the future for this application, and the full app has not yet been accepted by Miro, the future is still unclear. Still, the creation of these canvasses helped me learn more about the possible models that could be used.

Demoday

At demo day I presented Effio. I did this with a poster, short text images and a video. With an online product, the online demoday became a lot easier, with the possibility of simply posting the link.

During the demoday I received feedback, both positive and constructive. My images (Figure 29, Figure 30 & Figure 47) were said to be quite clear, but the opinions on the video were too varied, some liked it and found it clear, while others wanted to have seen a clearer story and problem statement.

Reflection

The feedback from the demo was quite useful. It became clear that I should make sure that the feedback on the video is taken to heart for my final presentation. The online demoday did result in a lot fewer feedback and tips compared to a 'regular' demo. More opinions and tips would have helped me improve even more.
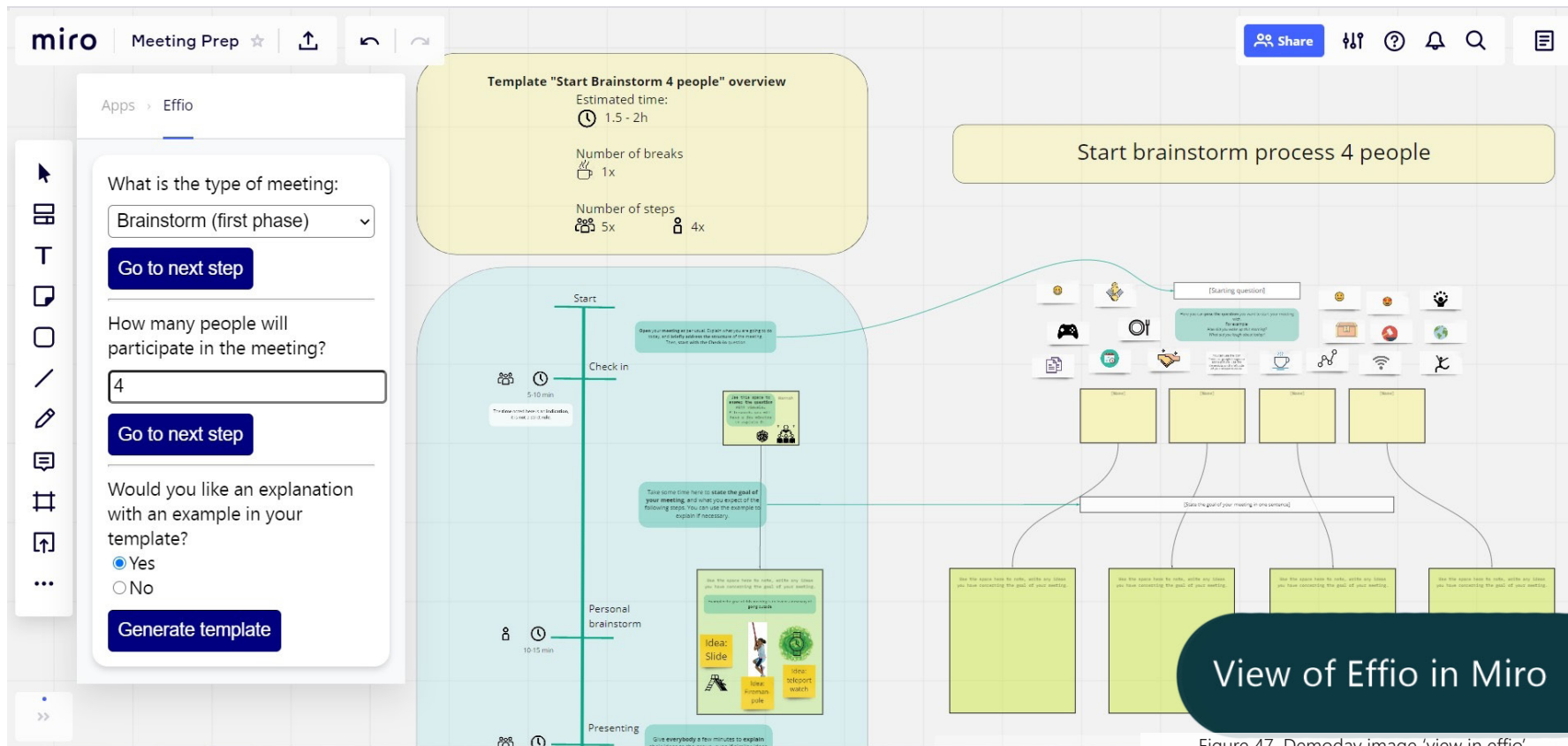
Figure 47. Demoday image 'view in effio'

Future

The final design of Effio might never have formed the way it did under 'normal' circumstances. The pandemic has changed the way we work, both online and offline. It has called for new designs and opened up new design opportunities.

I do think that Effio could have a place in one of the new niches that have opened up. The expert evaluation also showed me the possible potential, but while evaluated to be promising, this is still the opinion of only a few people. More validation will have to be done, and the acceptance from Miro will also play a large part in this. But, before it can be accepted, and thus validated, the application still needs quite some work. The system needs to be coded neatly and made more robust than it is right now for it to be accepted by Miro.

Next to this, the templates do seem to work, but will need a lot more testing for this to be validated completely. With more time, possibly a setup more like the process done by Osterwalder (2004), who created the Business Model Canvas and Value Proposition Canvas, could be done. This would result in a much better validated and higher quality template than the current templates.

It is clear that work of such standards could not be achieved in a short project like this, but it could be interesting to continue the research and development of this product in the future.

As it does seem like Effio is on its way to reaching the goal set for this design process: *"Create a tool that helps participants create a meeting from which they do not emerge tired or defeated, but one that provides a clear layout, invites creativity and makes sure that you have some fun when brainstorming with your colleagues."* as stated in "Introduction" on page 6.

Acknowledgements

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Appendix

Appendix I: Usertest & Consent forms

Appendix II: PowerPoint Prototype

Appendix III: Effio Application Code

Appendix IV: Business Model Canvas

Appendix I: Usertests & Consent forms

Interview

Consent forms

Interview Consent Form: Meetings

In this study, the researcher -*Hannah van Iterson*- wants to ask you -*the participant*- several questions concerning your experiences when having brainstorm meetings. Questions such as: "What are your likes and dislikes during brainstorm meetings?", "What do you do during these conversations?" may be asked.

The following personal information will be stored: your position or department within the company. Other information stored: comments, experiences and responses to the questions.

All names, contact info or other information that is provided to the researcher will not be stored in any way that is retractable to you, the participant.

- I have been given information and I understand what this research is about. I was also able to ask questions. My questions have been answered to my satisfaction. I had enough time to decide whether to participate.
- I know that participation is voluntary. I know that I may decide at any time not to participate after all or to withdraw from the study. I do not need to give a reason for this.
- I know that some people can access my data. These people are [Hannah van Iterson & Yaliang Chuang].
- I consent to the gathering and usage of my data for scientific publication and additional research on my data.
- I consent to my data being stored at the research location for another [15] years after this study.

I want to participate in this study.

Name of study subject: Meetings

Signature: Date: __ / __ / __

I hereby declare that I have fully informed this study subject about this study.

Transcript of interview #1:
Junior software engineer (m)
-The interview was conducted in Dutch, and was translated to English-

What do you think about brainstorming?
I like the idea of brainstorming, but not doing it.

Why not?
I generally feel like I am not listened to. I tend to be a bit quiet and held back whereas I often work with people who are very outspoken. They just talk more than me.

What do you think about working together in general?
It is okay, together you can do more than alone.

How do you brainstorm normally?
First, we come up with ideas at home. We try to share those during the meeting. Then pick the one the majority likes the most and continue with that.

What would you like to see changed during meetings that require brainstorming?
Perhaps a way of keeping track of all the ideas? We often go with like the fourth idea and then never look at the others.

What do you do when you are brainstorming at home?
I sit down with my laptop and do some research on the topic and just think about it. Often write them on a scrap piece of paper or some note block.

Transcript of interview #2
Junior software engineer (f)
-The interview was conducted in Dutch, and was translated to English-

What do you think about brainstorming?
In groups, I generally dislike it. There is always a certain pressure behind it, that something must be finished at the end of the meeting. But there is no clear path on how to get there. This pressure makes it something I do not enjoy.

And working together in general?
It is fine if all can do something they are good at, everyone's skills should be used.

How do you brainstorm normally?
Often we start at home, just on our own and then share what we did during the meeting. But not everyone prepared the same amount of ideas. I think that when we are together, more creative ideas are formed.

What would you like to see changed during meetings that require brainstorming?
--> Less time-pressure, but that might be difficult.
-->Making sure that you know the people you are going to work with.
-->The environment would also help. If it is a creative or interesting environment that could help people be creative I think.

What do you do when you are brainstorming at home?
Mostly just think about it. Sometimes when coding something I draw or write down some schemes to help me structure my thoughts. I also use the internet to help me find new ideas.

Junior mechanical engineer (f)

-The interview was conducted in Dutch, and was translated to English-

What do you think about brainstorming?
It is not something I do a lot, but overall I think it is fine. Sometimes a bit messy with everyone talking through each other, but if someone takes the lead it tends to go okay.

And working together in general?
If everyone is on the same page, it is fine. I just really dislike people coming in late, it somehow always gets me out of the flow.

How do you brainstorm normally?
Sometimes we do some work at home, but generally, we just go to the meeting and do our thing there. We start together and just sit there and think for a minute. It is honestly kind of funny, as it is a bit awkward at times. But we all know one another so it is fine.

What would you like to see changed during meetings that require brainstorming?
Some kind of organisation would be nice. Not sure tho, it is quite okay how it goes with the people I work with

What do you do when you are brainstorming at home?
I take a paper and write out some things, wait I have one with me from some time ago. It is a mind-map, but with a few extra things.

(The participant proceeds to show me a picture or a simple A4 paper with a few keywords written in the middle and some rough ideas written out around them. There are circles and arrows to show connections between similar ideas and the keywords they are connected to)

But that is it. I use something like this, if I remember to take it with me, to tell my ideas to the others.

Usertest I

Consent form

User test Consent Form

In this study, a simple first version of a prototype will be tested. This prototype is created to inspire creativity and cooperation during a brainstorming workshop. During the study, the participants are asked to interact with the prototype and do their work as needed. They may give comments, tips or critique during the process or afterwards. Afterwards, the researcher may ask some questions concerning the use of the prototype. The following personal information will be stored: Your position, educational degree or department. Other information stored: Comments, experiences and responses to the prototype.

All names, contact info or other information that is provided to the researcher will not be stored in any way that is retractable to you, the participant.

- I have been given information and I understand what this research is about. I was also able to ask questions. My questions have been answered to my satisfaction. I had enough time to decide whether to participate.
- I know that participation is voluntary. I know that I may decide at any time not to participate after all or to withdraw from the study. I do not need to give a reason for this.
- <if applicable> I give permission for my [GP/treating specialist(s)/pharmacist/…] to be informed about my participation in this study and to be informed about […].
- I know that some people can access my data. These people are […]. *Hannah van Ikeren*
- I consent to gathering and usage of my data for scientific publication and additional research on my data.
- I consent to my data being stored at the research location for another [15] years after this study.

I want to participate in this study.

Name of study subject:
Signature: Date:

I hereby declare that I have fully informed this study subject about this study.

If information comes to light during the course of the study that could affect the study subject's consent, I will inform him/her of this in a timely fashion.

Name of investigator (or his/her representative):
Signature: Date:

Survey

Questions:

What is important for you when brainstorming?
What is important for you when brainstorming ONLINE?
What is generally the most difficult for you to do during brainstorming?
What is generally the most difficult for you to do during brainstorming ONLINE?
How long does a brainstorm session normally take?
Do online brainstorm sessions generally take longer or shorter?
Have you ever had a professional guide your brainstorm or creation process?   (What was it like? If it was not enjoyable and/or helpful, please explain why. If it was enjoyable and/or helpful, what made it that way?)
What would you expect from a professional if you were to ask them to guide your ideation process?
Do you think a program/software can help people brainstorm effectively online?
Can you explain your previous answer?
Would you like a program/software that can help you brainstorm remotely?
What would you expect from such software? What is the most important thing it should aid you with?
Can you explain your previous answer?

What would you expect from a professional helping you brainstorm?

Having moderate experience with the topic (a year of work experience is fine, doesn't need to be 20+ years of experience), excellent experience with guiding brainstorm sessions, being able to think out of the box

Experience in this area

Managing the schedule, and making sure the session has some kind of tangible outcome

Structure and keeping track of the goal

Structure.

Help you getting creative without influencing the process. And that all persons stay at subject, time etc.

Iemand die het proces stroomlijnt en de juiste vragen stelt om te concretiseren

Someone who guides (streamlines) the process and asks the proper questions to get specific

Ask answer-prompting questions

- Be sure people aren't interuppting eachother.

- Be sure we don't get sidetracked

Steps for the ideal process, keeping track of the progress

Having knowledge about creativity as an process and about group dynamics and how to break through, e.g participants having too much respect for the hierarchy within the group

Dat hij weet waar hij het over heft

That he knows what he is talking about

I expect this person to give clear summaries of what the current ideas are, and make sure everyone gets to share their ideas

Guide me in the right way, towards the goal

I'd expect them to boil the goal down and letting us work from there.

Giving outlines of the process, control time schedule and moving forward.

To provide a sort of step by step plan and to keep track of all ideas that are mentioned.

Structure the brainstorm session, where do you start. Time management. Letting everyone speak. Ask to elaborate on interesting topics/ideas.

To step in when I would be stuck, and tell me a way to get my mind flowing again.

To make sure that everyone stays on track and everyone is heard

help break away from critical attitudes, stagnation in idea generation, perhaps appointing roles or giving creative exercises

Lead us in the right direction and don't lose track of the objective

| What would you expect from a computer program helping you brainstorm? |
| --- |
| The software should probably have an algorithm allowing it to derive recommendations for its users, based on data retrieved form the internet. It is of utmost inportance the software was built to enhance creativity. |
| Visualizing topics and opinions |
| Persistent notes/state in the online room, so you can continue where you left off the next day. |
| |
| That the minutes are clear and you get a structured overview of the ideas. |
| Generating ideas so that you get more ideas yourself. |
| |
| Structure and giving everyone a right to talk |
| - Tracking time |
| - be sure people don't interrupt other people |
| |
| Explain a bit of what creativity is and helping in the process. |
| Begrijpelijke taal
Clear speech |
| It helps with immersion and it also makes the online meeting more clear |
| Give me ideas and feedback |
| To do the same thing as a professional. |
| As explained in 11. |
| To aid in keeping track of the process and keeping a clear overview. |
| See answer from 11. Mostly structure and handles to start from, but also on how to continue generating ideas. Could be just by stating standard questions when you note an idea --> why is it good, what is not so good? and then generating alternatives based on that. |
| |
| Keeping time is sometimes really important, but not always. Generating lots of new ideas is important, but not always. It needs to be a flexible tool that allows for people to set up their brainstorm session however they like. |
| Included as educational software. Maybe helps keep time management, helps record and store generated ideas in a clear manner, can give 'creative' suggestions for the group to loosen up, gives reminders of brainstorming social rules like staying open-minded and positive. |
| Keeping track of time and letting people talk, also making notes |

Results thematic analysis

These are the results from counting the instances of different themes found in the data.
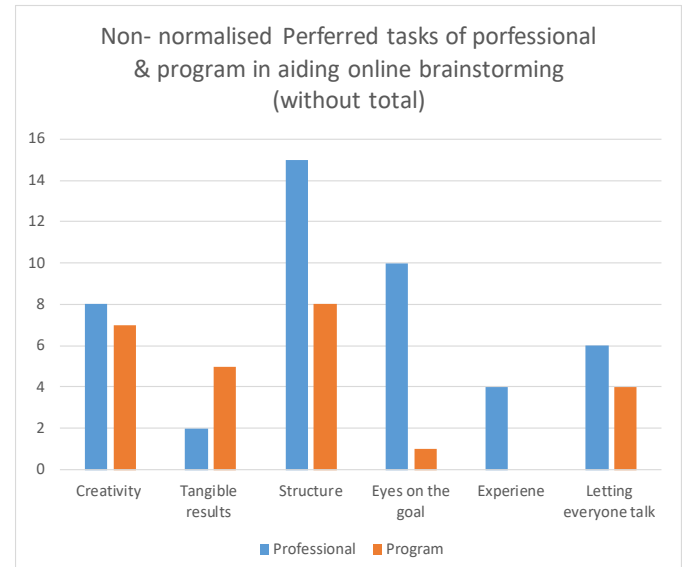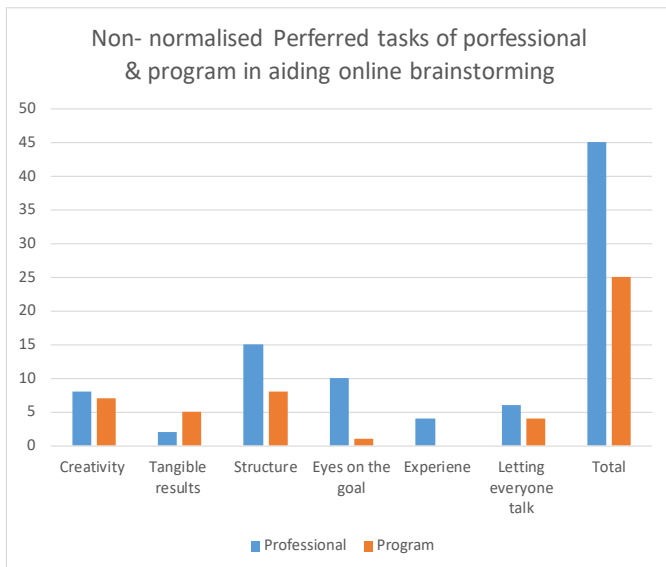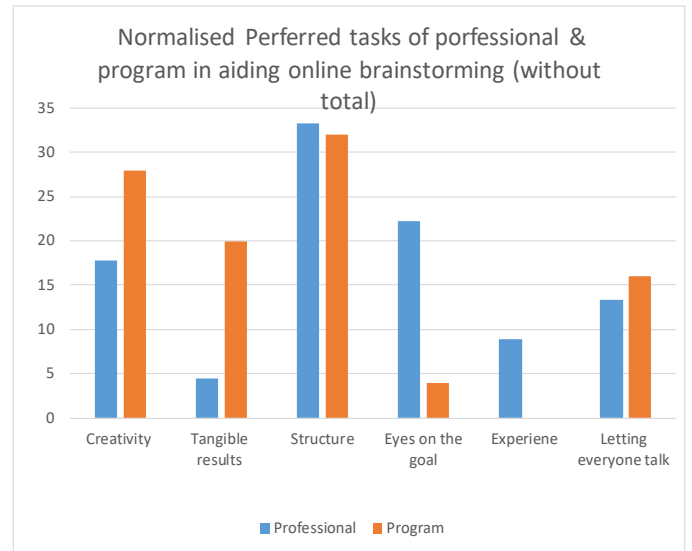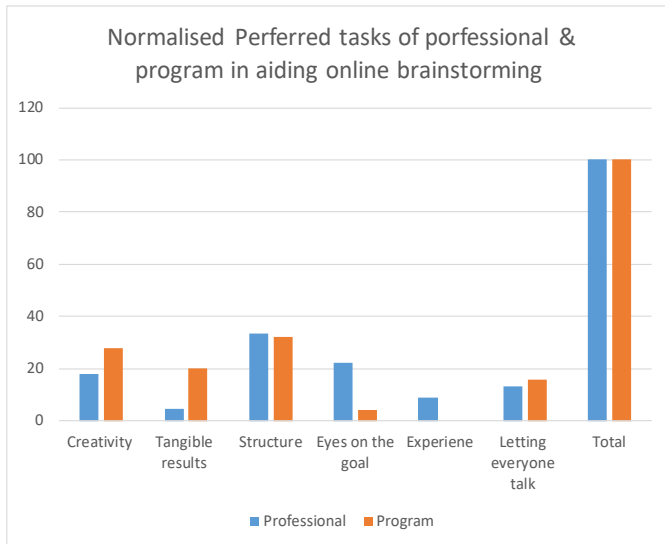
Usertest II - IV

Consent form

Gebruikers onderzoek: Observatie studie – Toestemmings formulier

Het volgende onderzoek is voornamelijk gericht op observatie en de interactie met het prototype. De onderzoeker [Hannah van Iterson] zal deel zijn van uw meeting om het gedrag van de deelnemers to observeren, en daarnaast delen van de meeting faciliteren die gaat over het gebruik van het prototype.

Het eerste houd in dat zij aantekeningen zal maken van opvallend gedrag, zoals bijvoorbeeld moment van overeenkomst of onenigheid maar ook discussies en het afronden van de vergadering. Onthoud dat er in dit onderzoek geen 'verkeerd' gedrag is.

Het tweede onderdeel, de facilitatie, zal vooral gaan over het gebruik van het system [Miro] wat als medium gebruikt wordt voor het gemaakte prototype. Verder zal de vergadering geleid worden door een van uw collegas.

Achteraf kunnen er mogelijk wat vragen komen van de onderzoeker over de ervaring van en de gevoelens over de vergadering. De antwoorden op deze vragen zullen anoniem opgeslagen worden en mogelijk met een pseudoniem gebruikt worden in het verslag.

Alle namen, contact informatie en andere persoonlijke informatie die u aan de onderzoeker geeft zullen worden opgeslagen zonder dat deze traceerbaar zijn naar u, de participant.

Uw quotes en opmerkingen kunnen gebruikt worden in het verslag, maar altijd onder een pseudoniem, om uw privacy te waarborgen.

Geen informatie over de inhoud/onderwerp van de meeting zal worden gepubliceerd in het uiteindelijke verslag van dit onderzoek.

- Ik heb informatie gekregen en begrijp waar dit onderzoek over gaat. Ik had de mogelijkheid vragen te stellen. Ik ben tevreden met de andwoorden die ik heb gekregen.
- Ik weet dat deelname aan dit onderzoek vrijwillig is. Ik weet dat ik op ieder moment kan stoppen met het meedoen aan dit onderzoek. Ik hoef hiervoor geen reden te geven.
- Ik weet dat bepaalde mensen bij mijn data kunnen. Deze mensen zijn: Hannah van Iterson, Yaliang Chuang.
- Ik geef toestemming tot het opslaan en gebruik van mijn data voor wetenschappelijke doeleinden en toekomstig onderzoek dat met mijn data kan worden gedaan.
- Ik geef toestemming tot het opslaan van mijn data op/door het de onderzoeks instantie voor [3] maanden na het afronden van deze studie.
-

Ik wil deelnemen aan dit onderzoek:

Naam van de deelnemer:

Handtekening: Datum:

Ik geef hierbij aan dat ik de deelnemer volledig heb ingelicht over de studie.

Als informatie aan het licht komt tijdens dit onderzoek dat invloed kan hebben op hetgeen waar de deelnemer toestemming voor heeft gegeven, zal ik deze tijdelijk hierover inlichten.

Naam van de onderzoeker of haar vertegenwoordiger: Hannah van Iterson

Handtekening: Datum:

Observations II & III

--> The group really likes playing around with the pictograms that can be added.
There are differences between people in how they use the images, but a bit of explanation helps here.

-->The chosen conversation leader still has an important role in the online conversation. He is the one keeping track of time and guiding people through the different steps of the template.

--> There is a lot of communication that is not documented, perhaps there should be a minute taker assigned as in usual meetings, or perhaps something should keep track of this.
One person took this task upon themselves, as they are adding notes in the template as the others talk.

--> The people keep adding things while others talk is done more often, these are often images or additions to the ideas already on the board.

-->The users took it upon themselves to take a short break after an hour of talking. Tis is about 2/3 fo the way through the meeting.

--> Uploading images might be necessary, it was particularly useful during this meeting.

--> Miro allows for post-its to be exported to excel, which the users really liked.

--> One thing that stood out was the fact that participants automatically colour code their work. A lot of virtual post-its were used during the session and people almost automatically either picked a colour of their own, or colour coded their ideas.

--> One of them stated that they liked the fact that they had their own space to work on during the first ideation phase, as it helped them keep their focus. When asked if the space limited them in their creative process, the answer was no, as the board used on Miro can be zoomed in on indefinitely, and thus if they needed more space, they would simply create it.

--> An important quote from one of the participants was: "I really feel less tired than during 'normal' online meetings. There is this feeling that instead of the interaction and information being between my head and the screen, it is now somehow in the (Miro) board."
A response to this was: "We are truly working together on something, without all of us having to do everything in our minds. The board just functions as some kind of external memory"

Comments, quotes and statements

"Het clusteren en convergeren is het moeilijkste in het process, ik vraag me af hoe we dat gaan doen."
"The clustering and converging is the hardest in the process, I wonder how we are going to do that."

"Even alleen zitten is top, ik vind jullie allen heel aardig, maar ff alleen erin duiken en brainstormen was voor mij een goede manier om te starten"
(reactie van andere persoon): "Ja het gaf mij ook even tijd om jullie in te halen, omdat jullie er al eerder aan hadden gezeten een tijdje terug."

"Starting alone for a short while is quite refreshing, I like you all, but diving into the content and brainstorming alone was a good way to start for me personally"
(other participant): "yes, it gave me some time to catch up with you, as you already had some time to think about this"

"Ik heb het gevoel dat ik het langer kan volhouden nu dat we alles meteen samen opschrijven"
"*I feel like it is easier to keep going, now that we are writing down everything together.*

"ja het voelt ook echt of we samen aan het werk zijn als ik jullie cursortjes zo zie bewegen over het canvas"
"*yes it is like actually working together, when you see all your cursors moving on the canvas*"

"het (template) werkt als een soort extern geheugen, alle interactie zit ook op dat template inplaats van tussen m'n hoofd en het scherm"
"*it (the template) works like a kind of external memory, all the interaction is on the template, instead of it being between my head and the screen*"

"Ik denk weld at sommige mensen meer begeleiding nodig gaan hebben dan dit, niet iedereen is bekend met het gebruik van templates"
"*i do think some people will need more guidance than this, not everyone knows how to use a template like this.*"

"Het is gewoon wel heel fijn dat we nu meteen documentatie hebben"
"*it is just very nice that we immediately have some documentation*"

"De laatste stap, dat clusteren is het lastigst, hoe gaan wij dat doen?"
"*the last step, clustering is the hardest, how are we going to do that? *"

Laten we kijken waar we naar toe willen, dan hebben we een doel om naartoe te werken"
"*lets look at what we want to achieve, then we have a goal to work towards*"

Question: "Do you find the placement of the boxes limiting at all?"
"nee niet echt, het geeft een soort omkadering van alles, een beetje houvast"
"*no not really, it helps structure everything and just gives an outline.*"

"Ik vond het eigenlijk wel fijn mn eigen box te hebben, ahah. Gewoon een plekje voor mezelf en mn notities." "ook makkelijk als je je eigen gedachtengang terugwilt zien, kan handig zijn"
"*I actually liked having my own box, haha. It gave me some me-space and a place to take notes.*" "*it can also help backtracking your personal thought process, which can be useful*"

"Ik zoomde gewoon in, zodat ik alleen mn eigen blokje kon zien, dan werd ik ik niet afgeleid"
"*I just zoomed in so I could only see my box, that way I was not distracted by the others*"

Question: "Compared to the other meeting, what do you think about the ideas generated?"
"*Ja meer denk ik wel, ook wel iets anders. *"
"*Yes, more i think, they (the ideas) are also somewhat different.*"

"*Beter, omdat we er allemaal mee bezig zijn geweest*"
"*Better, because we have all worked on them now. *"

"*Niet zeker, ik was niet bij de vorige meeting. *"
"*Not sure, I was not part of the previous meeting*"

"*Hmm lastige vraag, ik heb het idee dat de ideeen iets uitgebreider zijn.*"
"*Hmm difficult question, I do feel like there are a bit more, elaborate*"

Observations III
NOTE: The facilitator wanted to add a part to his previous template, for this, he looked through my full miro protoype.

Reading takes too long, it is too much. Far too much. (this was reinforced by the paticipants comment)
Flowchart works intuitively.

Comments, quotes and statements
"Dit lezen duurt lang, meestal zit ik maar kort aan mn voorbereiding en dit is wel pittig, helemaal als ik moet zoeken"
"Reading this takes long, normally I do not spend that much time on my preparations and this is a little too much, especially when I have to look for it"

"Vind de kleuren trouwens leuk, best wel gezellig ofzo"
"I do like the colours, somewhat cosy or something like that"

"Dus ik moet dit dan kopieren naar mn eigen bestand? Juist, even kijken ..... ja dat is wel makkelijk dan kan ik nog een beetje schuiven enzo"
"So i should copy this to one of my own files/boards? Clear, let me see for a moment .... Yes that is nice and easy, I can also move the whole thing a bit if I like"

Observations IV
NOTE: There was a press conference during the meeting that cut it short making the overall session much shorter.

The team is going to continue on the template template they used earlier, with the new addition of the template chosen in Pre-session 3

There are no notes from the previous session (2 weeks ago) except for the template that they filled in. It seems like they are really looking for what they did last session. It takes a minute or 10 before they are back on track.

During this session, the goal was not clear, so it was hard to get somewhere. This was due to the fact that the facilitator of the session wanted to discuss the goal of the session, during the session. That, in combination with a meeting that was interrupted and shortened by an hour made this a very chaotic session.
Interestingly, the board did invite the users to 'just start posting post-its" which got the session going.

Comments, quotes and statements
"Het valt me op hoe weinig van dit alles nog voor zich spreekt nu, we hadden (vorige sessie) iets meer op moeten schrijven"
Reactie: "Valt mij nog wel mee, als je van boven af kijkt komt het wel terug"
"Seeing how little of this is still ease and straight forward for me makes me thing that we should have written down more (last session)"
Response: "I do not think it is too bad, if you start at the top things will come back to you"

"Als we dit omzetten tot een verslag is er meer toelichting nodig"
"If we want to translate to a report, more explanation will be needed"

"Zullen we maar gewoon gaan plakken en kijken waar we komen met het voorbeeld?"
"Shall we just start posting post-its and see where we end up with this example?"

Expert Evaluation

Consent form

Gebruikers onderzoek: gebruiksvriendelijkheid studie & expert interview

In dit onderzoek wordt u gevraagd om het prototype – een website- te gebruiken. Tijdens het navigeren over de website, zal de onderzoeker meekijken. Door dit te doen kan er een duidelijk beeld gemaakt worden van wat wel en wat niet duidelijk is op de website, wat er mist en of er enige knelpunten zitten in het gebruik.

Achteraf zal u, gevraagd worden feedback te geven op het gebruik van de website. Daarnaast, zal u ook gevraagd worden deze te vergelijken met vergelijkbare producten, of andere gereedschappen die u op dit moment voor hetzelfde doeleinde gebruikt.

Alle namen, contact informatie en andere persoonlijke inforamtie die u aan de onderzoeker geeft zullen worden opgeslagen zonder dat deze traceerbaar zijn naar u, de participant.

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Ik wil deelnemen aan dit onderzoek:

Naam van de deelnemer:

Handtekening: Datum: __ / __ / __

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Als informatie aan het licht komt tijdens dit onderzoek dat invloed kan hebben op hetgeen waar de deelnemer toestemming voor heeft gegeven, zal ik deze tijdelijk hierover inlichten.

Naam van de onderzoeker of haar vertegenwoordiger: Hannah van Iterson

Handtekening: Datum: __ / __ / __

Feedback

[after showing the system with the application]
"Als dit werkt, moet je het echt gaan pitchen bij bedrijven, dit kan mensen echt helpen."
"If this works, you should really go and pitch this at companies, it can help people. "

Tips

The link is sensitive to captial letters, change this if possible.

The agenda should be changed from 'approximated time' to actual points in time, that is how i keep track in meetings.

Ik zou graag de korte templates eerst zien, daarna de lange. Ik vind het fijn om eerst even snel te kijken.
I would like to see the short templates first, then the long templates. I like taking a quick look at things first.

Walkthrough

There are purple highlights everywhere, remove if possible.

Make short the text is short and consise, allow 'dwarslezen' (a type of skimming) --> bold words

The flowchart is weird, the questions are odd.

"Zorg dat ik uitgezoomt bij een template kom, dan kan ik meteen overzicht krijgen. "
"Make sure that i started zoomed out when finding a template, this helps me get an overview."

"Over overzicht gesproken, kun je geen korte samenvatting toevoegen, zodat ik snel kan zien wat een template inhoud? "
"About getting an overview, can you add a quick summary about the templates, so that when you open them, you can immediatly see what the template is going to offer? "

Add arrows to guide the eye.

Make sure you mention how long eacht template takes. Or atleast an approximation.

Use placeholder text in templates for the extensive templates to guide the unexperienced user.

Explain every single step, make it so simple it cannot go wrong.

"Je kunt gebruikmaken van de frames van Miro, dan wordt deze pagina misschien sneller. "
"Using Frames in Miro might be helpful in making it faster. "

"Een overzichtje maken van alle templates op je website kan handig zijn voor de nieuwelingen en de veteranen."
"Giving an overview of all the templates on your website will also be helpful for both newbies and veterans. "

Mail companies with this idea.
Using cookies might allow me to see how many people visit.

Use the 10s - 1 min - 10min method for your website!

Appendix II: PowerPoint Prototype
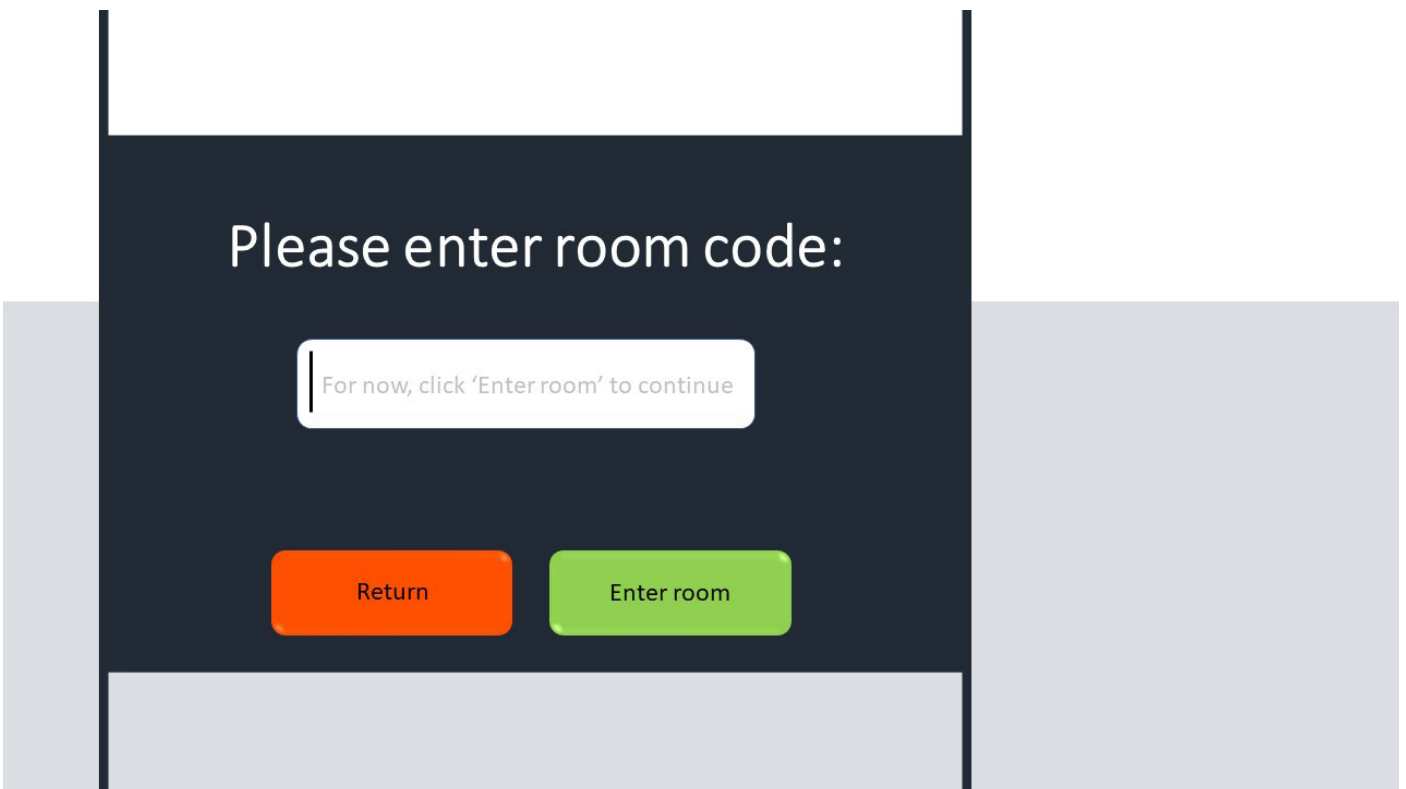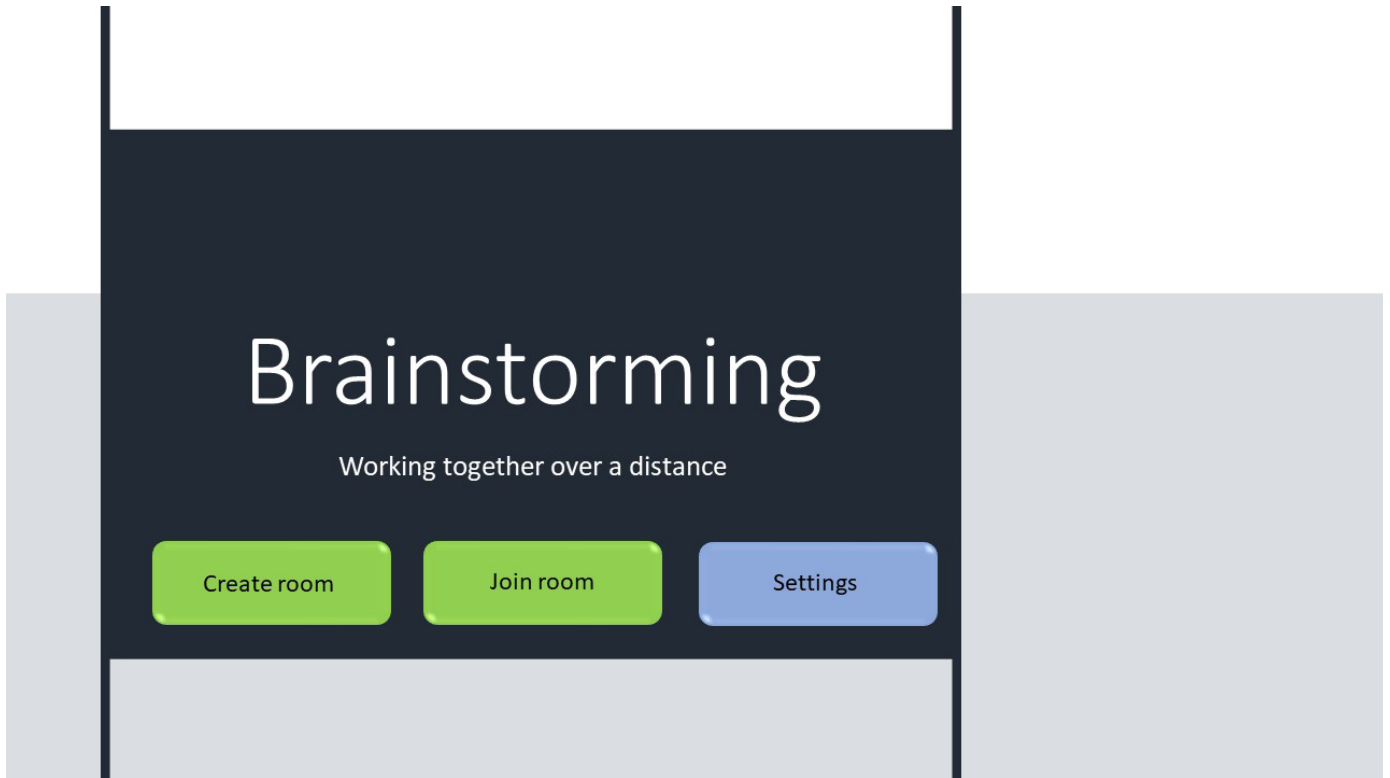
Welcome!
The session will start shortly, please have your beverage of choice, drawing pad and pen ready

you
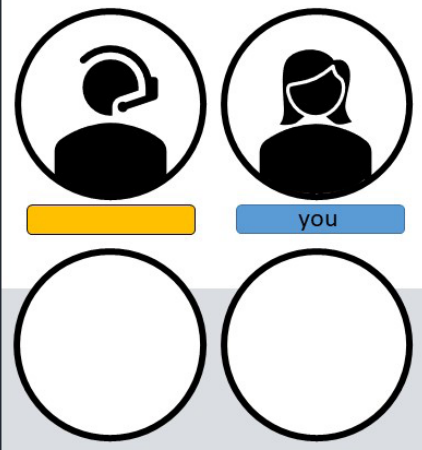
Welcome!
The session will start shortly. Please check if the audio and video of the calling platform you are using are working.
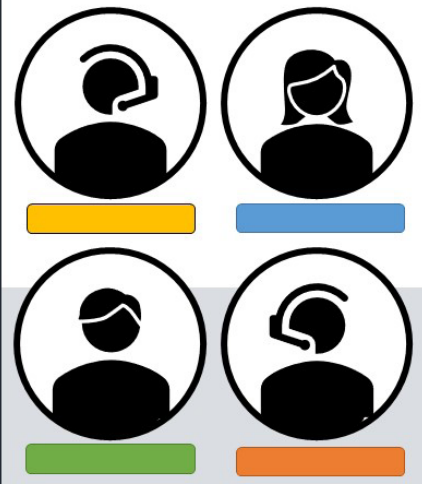
Welcome!
The session will start
shortly. Your host will start
when everyone has arrived.

you
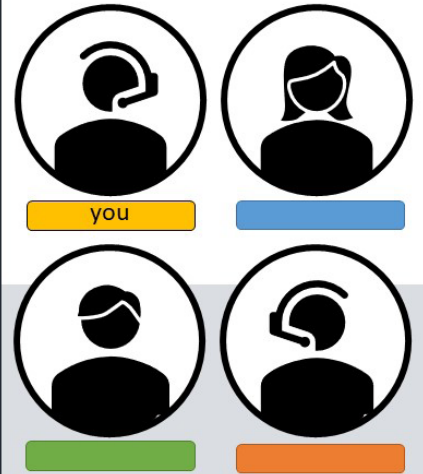
Check-in

Is everyone's sound working?
Can everyone see each other?
How is everyone doing?

you
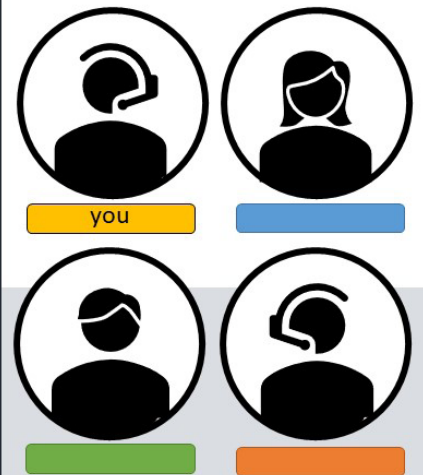
Round 1

In the following step, everyone will get some time to write/draw their own ideas. Be as creative as you can get during this round! No ideas are too crazy!

you
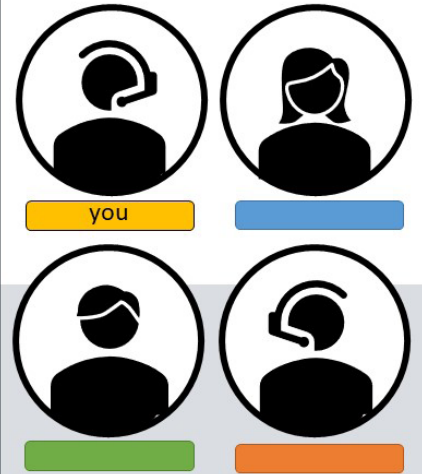
The problem statement: "Headphones need an upgrade, what is it?"

If this statement is clear to everyone, please create a personal canvas and take 10 minutes to come up with some ideas by yourself.

Create canvas

you
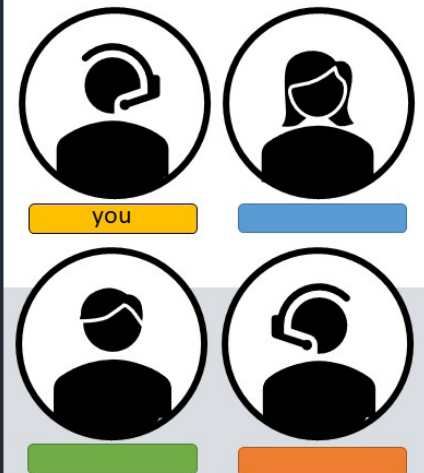
Welcome to your personal canvas. Here you can write and draw out all of your ideas.

Introduction of the board:
The top icon on the left side of the screen is for if you wish to clear you canvas.

The second and third icons are the pen and eraser tool you can use to edit your canvas.
The pointer icon beneath that can help you move any notes you have made if needed.
Below those are the ruler tool, with which you can add lines to your paper or help you draw straight lines in designs.
Finally, there are two arrows that can be used to back or forward one action in your writing or drawing.

On the right, you will be able to see the problem statement that was set for this session, as well as your teammates. They are also working on their personal ideas.

Finally, the timer on the right will show you the time you still have left for this part of the sessions. When this timer is up, we encourage you to safe the last canvas you have made and then continue to the rest of the session.

Close

Problem statement:
"Headphones need an upgrade, what is it?"

#1

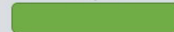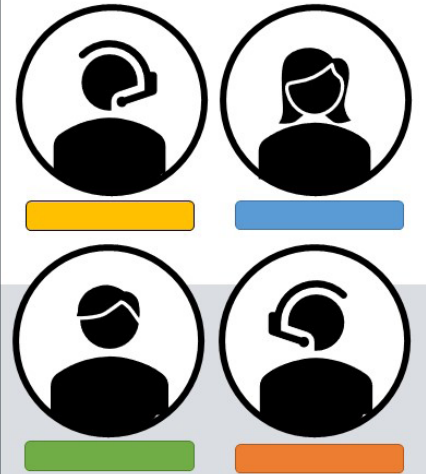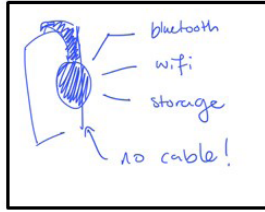Problem statement:
"Headphones need an upgrade, what is it?"

#1

Submit

#1

perhaps we can
create :

Problem statement:
"Headphones need an upgrade,
what is it?"

#1

Submit

#2

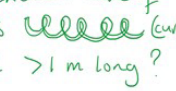Problem statement:
"Headphones need an upgrade,
what is it?"

#1

#2

Submit

#2

another idea
mught be:

Problem statement:
"Headphones need an upgrade,
what is it?"

#1

#2

Submit

#3

Problem statement:
"Headphones need an upgrade,
what is it?"

#1

#2

#3

Submit

#3

Problem statement:
"Headphones need an upgrade, what is it?"

#1
#2
#3

Submit

#3

Problem statement:
"Headphones need an upgrade, what is it?"

#1
#2
#3

The time is up, please finish the idea you are currently working on and press submit.
After this you will return to the lobby where the next phase of brainstorming will start.

Close

Submit

#3

Problem statement:
"Headphones need an upgrade, what is it?"

#1

#2

#3

Submit

Round 2

In the following step, everyone will get the opportunity to share their ideas. Please listen to one another and make a note if an idea sparks your interest.

Round 3

Now, everyone will pick an idea they like, from all the ideas generated by the team. Please add something to the idea, and press submit. You will then get another idea that was chosen, please again add something to it. Until all ideas have gotten feedback from everyone

Problem statement:
"Headphones need an upgrade, what is it?"

#A

bluetooth
wifi
storage

no cable!

zoiets

Submit

Problem statement:
"Headphones need an upgrade, what is it?"

INSTEAD OF WIFI IN THE HEADSET, IT COULD BE DONE VIA THE CABLE.

Submit

#A

| Idea A | Idea B | Idea C | Idea D | Idea E |
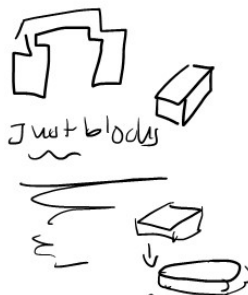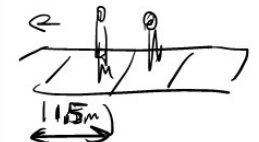
Appendix III: Effio Application Code

The HTML code for the Miro application choice-menu.
This code was created with help from Bas van Rossem.

```html
<!-- ---------------------------------------------------------------- -->
<!--        This code was created collaboration with Bas van Rossem:   -->
<!--                    https://basvanrossem.com/.                      -->
<!--        Any additional information can be found on his website      -->
<!-- ---------------------------------------------------------------- -->

<!DOCTYPE html>
<html lang="en">

<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Miro Template Generator</title>
    <link rel="stylesheet" href="assets/css/main.css">
</head>

<body>
    <div class="content">
        <div class="container" id="options">
            <!-- Type -->
            <div class="option" id="div_type" style="display:block;">
                <label for="type">What is the type of meeting:</label>
                <br>
                <select name="type" id="type" onchange="load_button('button_type')">
                    <option disabled selected value> -- Choose meeting type -- </option>
                    <option value="brainstorm_fp">Brainstorm (first phase)</option>
                    <option value="brainstorm_lp">Brainstorm (late phase)</option>
                    <option value="issue">Issue</option>
                    <option value="issue_c">Issue (complex)</option>
                    <option value="planning">Planning</option>
                    <option value="planning_st">Planning (short term)</option>
                    <option value="planning_lt">Planning (long term)</option>
                    <option value="www_plan">Who, what, where plan</option>
                </select>
                <br>
                <button onclick="load(div_participants)" id="button_type" disabled>
                    Go to next step
                </button>
            </div>
```

```html
            <!-- Number of participants -->
            <div class="option" id="div_participants">
                <hr>
                <label for="participants">
                    How many people will participate in the meeting?
                </label>
                <br>
                <input type="number" name="quantity" id="participant_amount" min="1"
                    onchange="load_button('button_participants')">
                <br>
                <button onclick="load(div_explanation)" id="button_participants" disabled>
                    Go to next step
                </button>
            </div>

            <!-- Explanation line in template -->
            <div class="option" id="div_explanation">
                <hr>
                Would you like an explanation with an example in your template?
                <br>
                <input type="radio" name="choice" value="True" onchange="load_button('button_explanation')">Yes</input>
                <br>
                <input type="radio" name="choice" value="False" onchange="load_button('button_explanation')">No</input>
                <br>
                <button onclick="generate_template()" id="button_explanation" disabled>
                    Generate template
                </button>
            </div>
        </div>

        <div class="container" id="div_parameters" style="display:none">
            <span class="title">Template parameters</span>
            <p>
                The following choices were made:
                <br>
                <br>
                Meeting type: <span id="parameter_type">None</span>
                <br>
                Amount of participants: <span id="parameter_amount">None</span>
                <br>
                Example: <span id="parameter_example">None</span>
            </p>
        </div>
    </div>
</body>
<script src="assets/js/options.js"></script>
</html>
```
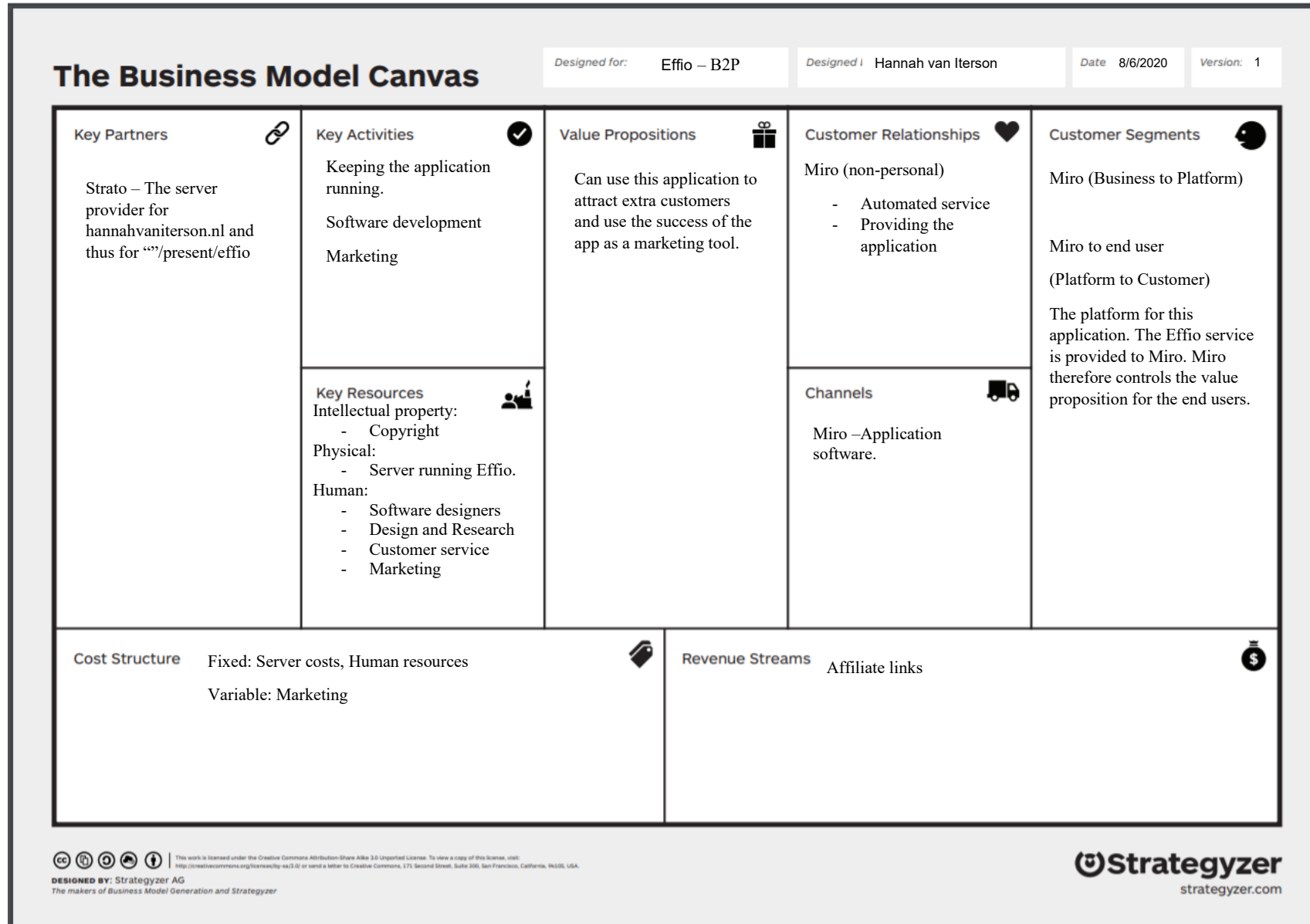
Appendix IV: Business Model Canvas

The Business Model Canvas

| Designed for: | Effio – B2P | Designed by: | Hannah van Iterson | Date | 8/6/2020 | Version: | 1 |

Key Partners 🔗

Strato – The server provider for hannahvaniterson.nl and thus for ""/present/effio

Key Activities ✓

Keeping the application running.

Software development

Marketing

Key Resources 👤
Intellectual property:
- Copyright
Physical:
- Server running Effio.
Human:
- Software designers
- Design and Research
- Customer service
- Marketing

Value Propositions 🎁

Can use this application to attract extra customers and use the success of the app as a marketing tool.

Customer Relationships ❤

Miro (non-personal)

- Automated service
- Providing the application

Channels 🚚

Miro –Application software.

Customer Segments

Miro (Business to Platform)

Miro to end user

(Platform to Customer)

The platform for this application. The Effio service is provided to Miro. Miro therefore controls the value proposition for the end users.

Cost Structure 🏷

Fixed: Server costs, Human resources

Variable: Marketing

Revenue Streams 💰

Affiliate links

Strategyzer
strategyzer.com

The Business Model Canvas

Key Partners

Miro – Key partner for the Business to Platform segment of Effio.

E.g. marketing.

Strato – The server provider for hannahvaniterson.nl and thus for ""/present/effio

Key Activities

Updating templates/ creating new ones

Customer service

Marketing

Key Resources

Intellectual property:
- Copyright

Physical:
- Server running Effio.

Human:
- Software designers
- Design and Research
- Customer service
- Marketing

Value Propositions

A quick and useful system that allows them to prepare and run a meeting in which they can both be effective and productive while having fun and being creative with colleagues.

Customer Relationships

End Users (semi-personal)

- Self-service
- Automated services
- Contact page - Q&A

Channels

In-person pitch meeting.

The Effio website

Miro application store

Customer Segments

End Users:

(Business to Customer)

Professionals – with a need or reason to work from home or online.

Companies working remotely.

Cost Structure

Fixed: Server costs, Human resources cost.

Variable: Marketing

Revenue Streams

In-person pitch meetings & explanation sessions.

Future: Specific templates could be created for a fee. This would be based on time spend on research and design.

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strategyzer.com