WHY DO YOU BUY:

REDUCING FASHION CONSUMPTION TOGETHER THROUGH REFLECTION

Master Thesis by Sanne Bakker

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T̃UDelft Delft University of Technology

Master Thesis

Why do you buy?: Reducing fashion
consumption together through reflection

Author

Sanne Liana Bakker

Msc. Design for Interaction
Faculty of Industrial Design Engineering
Delft University of Technology

Supervisory team

Chair

Haian Xue

Human-Centered Design
Faculty of Industrial Design Engineering
Delft University of Technology

Mentor

Siyuan Huang

Human-Centered Design
Faculty of Industrial Design Engineering
Delft University of Technology

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Preface

When starting my study in Industrial Design Engineering at the Delft University of Technology, I was completely clueless about what the study would look like. Luckily, the bachelor turned out great. I enjoyed most of the courses and had an amazing time at the faculty with all my new friends.

Even though I really enjoyed the bachelor, I was still unsure about where my interest and passion laid. I did not see myself as a designer with her own goals and viewpoints, I was just a student following the courses. I still had to grow into the idea of becoming a designer.

When finishing the bachelor, I started the Master Design for Interaction. This turned out to also be a great choice. In the master I finally started to discover what I actually enjoy doing. Focusing on the interaction between users and designs opened up a new way of designing for me. I enjoyed the human-centered approach, that would allow new methods which include emotions, feelings and the experiences of the user into the design process.

At some point in my study, I was getting concerned about my future as a designer. Even though I knew industrial design engineering was a very broad field, I still had

this picture in my mind of a designer who only designs mass products. This image was causing concern as creating mass production is not something I want to do, especially not regarding the environmental problems that some products can cause.

Later in my master this concern fade away, I could do so much more with the knowledge and skills I had collected throughout the years of my study. I do not have to worry that my designs will cause negative impact on the environment, I can use my skills to reach sustainable goals.

So, my interest in sustainability and interaction design were the starting point of this project. This idea was very broad and vague in the beginning, I want to thank Haian and Siyuan for supporting me in executing this idea into a graduation opportunity.

I hope you will enjoy reading the process, and maybe in the future will take some time to **reflect on the purchases** that you make.

Best,
Sanne

Executive Summary

Climate change has made us all aware of the urgent need for change. We know that governments, companies, and even us have a role to play in countering its effects. Sustainable consumer behavior usually involves things like eating less meat and cutting down on single-use plastics. However, what many people don't realize is that the stuff we own, especially fashion items, actually has a major negative impact on the environment. These products contribute a lot of CO2 emissions throughout their lifecycle, but we aren't really encouraged to reduce our consumption.

Nowadays, there are many fast fashion companies selling cheap and trendy clothing. It's especially appealing to Gen Z because it's affordable and keeps up with online trends. Platforms like Instagram heavily influence Gen Z, making them feel like they always need to buy new clothing to express themselves. These influences make it hard for them to determine if a fashion item truly adds value to their lives.

This research focused on reducing fashion consumption amongst Dutch Gen Z while still being able to express themselves. A literature, introspective and generative research was conducted to find out more about the context and users. After several iterations the Reflection Café (see Figure 1) was created.

The Reflection Café is a place where you can playfully explore the reasons behind your purchases. You go on this journey with a partner to learn more about yourself and each other. Inside the café, you're encouraged to reflect on your recent fashion purchases by creating visualizations about the experience with the item. This so called Reflection Board starts your reflection process, even if it's unconsciously done. Reflection takes time, so the café offers a monthly experience. On your final visit, all your Reflection Boards are displayed on the wall, giving you an overview of your fashion consumption from the past months. This last visit will put together the pieces you have collected throughout the last couple of months and hopefully creates a better understanding of your own behavior. The ultimate goal is to answer the question: Why do you buy?

The Reflection Café subtly encourages visitors to reduce their consumption by letting them find out what fashion items bring value to their lives. The café doesn't impose any judgments on what's right or wrong; it's about what each person finds important. The café will help you to live life with greater awareness and appreciation.

Figure 1. The Reflection Cafe

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Background and Structure

Climate change; a problem that the most people nowadays are aware of (Poortinga et al., 2019; Steg, 2018). Our environment is being contaminated by vast quantities of plastic, causing pollution in our water, air, and soil. The media frequently reports on species extinctions, biodiversity loss, and their detrimental effects on ecosystems. It has been scientifically established that excessive emissions of greenhouse gases are responsible for severe weather conditions, extreme events, and irreversible changes in the climate. Despite having access to this knowledge, there is a significant lack of action in translating this information into sustainable consumer behavior (Brosch & Steg, 2021). It is crucial to recognize that changing our behavior is crucial for achieving conservation outcomes (Williamson, 2022).

When people hear about sustainable behavior (change) they often think about flying less, reducing their meat consumption or about using less plastic. Nonetheless, according to Porcelijn (2017) and De Graaf (2020) the average Dutchman creates the most environmental impact in their lives by the amount of stuff they own, see Figure 2 (De Graaf, 2020). Until recently the impact of the collection of materials, the production process, the transportation, etc., has not been taken into account when talking about the environmental impact of a product, often only the CO2 emissions during use are communicated (De Graaf, 2018; Porcelijn, 2017) . A few decades back in time, people would go to a store to buy products that would last the rest of their lives, and probably even those of their kids. However with the rise of internet and therefore online shopping, a world of millions of products opened up. This innovation led to more choice and convenience for the consumer (Bhatnagar et al., 2000). However with all of its cheap products at hand, it also led to a linear economy where 'thrown away'

Figure 2. The top 10 impact of an average Dutch man

products are dominating the market (Den Hollander et al., 2017).

Generation Z (Gen Z), born between approximately 1990 and 2010, is a generation that has never known a world without internet (Lissitsa & Kol, 2016). This generation has a tendency to start shopping any time of the day whenever they feel the need to, often influenced by various social media platforms multiple times a day, leading to impulsive purchases (Lina et al., 2022). Rapid technological innovations have made Gen Z used to frequent releases of new models and products, with items available within just a click (Wood, 2013). Growing up in an time of raised awareness about climate change, Gen Z shows more concern about environmental issues compared to older generations. However, despite their knowledge, translating this awareness into sustainable behavior poses challenges, resulting in what is known as the attitude-behavior gap (Tao et al., 2022).

Currently sustainable behavioral research is mainly focusing on cognition-based approaches. These approaches are widely used in order to try and change people's behavior, however they are limited in their scope. Chiefly, they forgot the impact of emotions on human decision making and

behavior (Brosch & Steg, 2021; Williamson & Thulin, 2022). Emotions have shown to apply great influences on human thinking and behavior, and are expected to play a critical role for sustainable behavior change in several respects (Brosch & Steg, 2021).

Therefore this graduation project had the goal to use emotion-driven design to reduce fashion impulse purchases of Dutch Gen Z while still being able to express themselves.

To reach this goal, several research and design steps were taken. Figure 3 shows the process I went through in order to create the final design. This report will explain every section of the process in detail. Figure 3 shows the process in chronological order, the report follows a different order.

The report starts with (1). Defining the problem in order to get the problem clear to the reader. Afterwards the problem

is explored in chapter (2). Exploring the problem. This chapter lead to three design directions which are explained and explored in chapter (3). Exploring the design directions. Out of these directions multiple iterations were made in order to create a concept in chapter (4). Developing a concept. The final design that came out of chapter 4, is elaborated on in chapter (5). Presenting the final design.

1.

Starting with the design brief

2.

Literature review
Introspective research
Generative research

1.

Analysing the data from the research

Formulating new design goal

3.

Developing 3 design direction + the desired interaction

Exploring the design direction

4.

Developing a concept, created 5 different versions

5.

Final design

DESIGN BRIEF

FINAL DESIGN
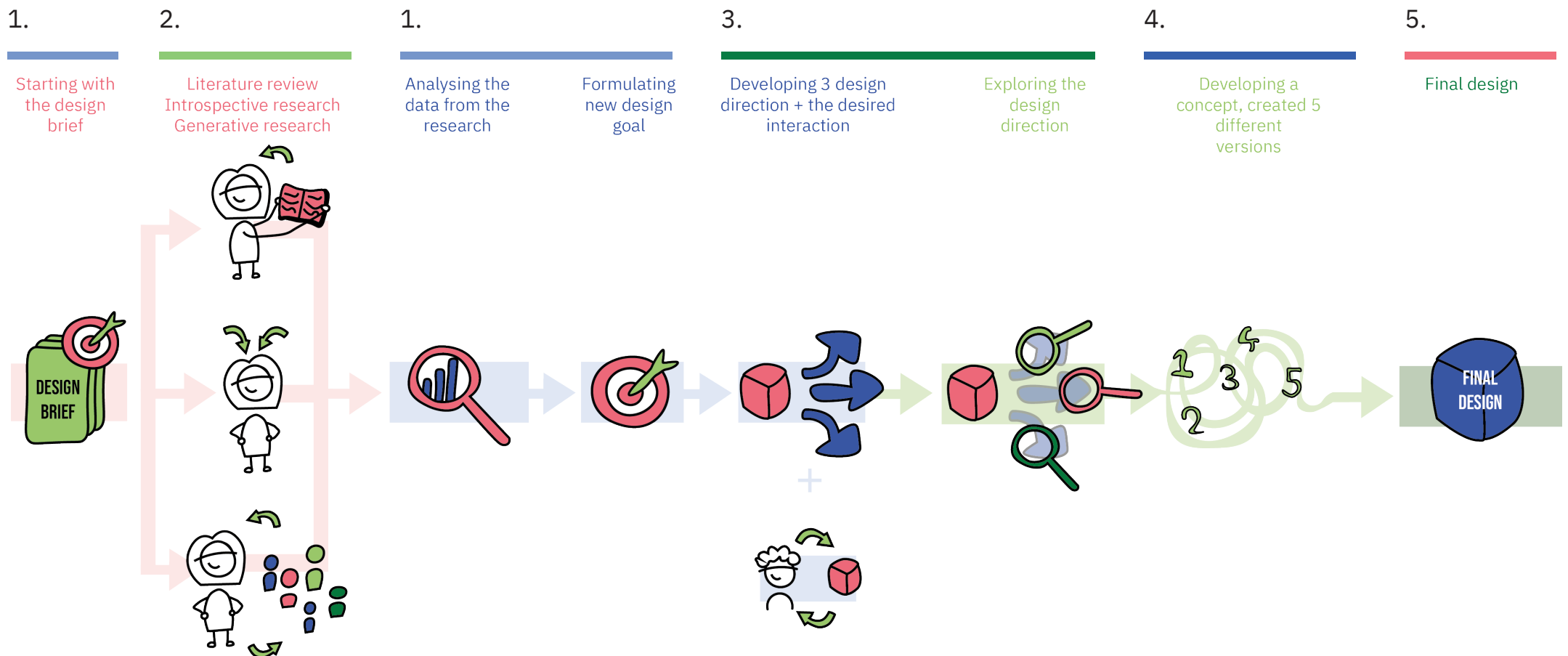
Figure 3. The complete design process

Defining
the problem

1.1. Introduction

This chapter starts with the problem definition to get a clear understanding of the topic of this graduation project.

The problem definition started at the beginning of the project in the design brief. This design goal was the start of the project. Chapter 2 and 3 were conducted to create insights into this problem.

From these insights a new design goal was derived, this design goal was improved multiple times according to the developments in the design process.

Figure 4 shows in which stage of the design process this part was executed.

Starting with the design brief

Analysing the data from the research

Formulating new design goal

DESIGN BRIEF

FINAL DESIGN
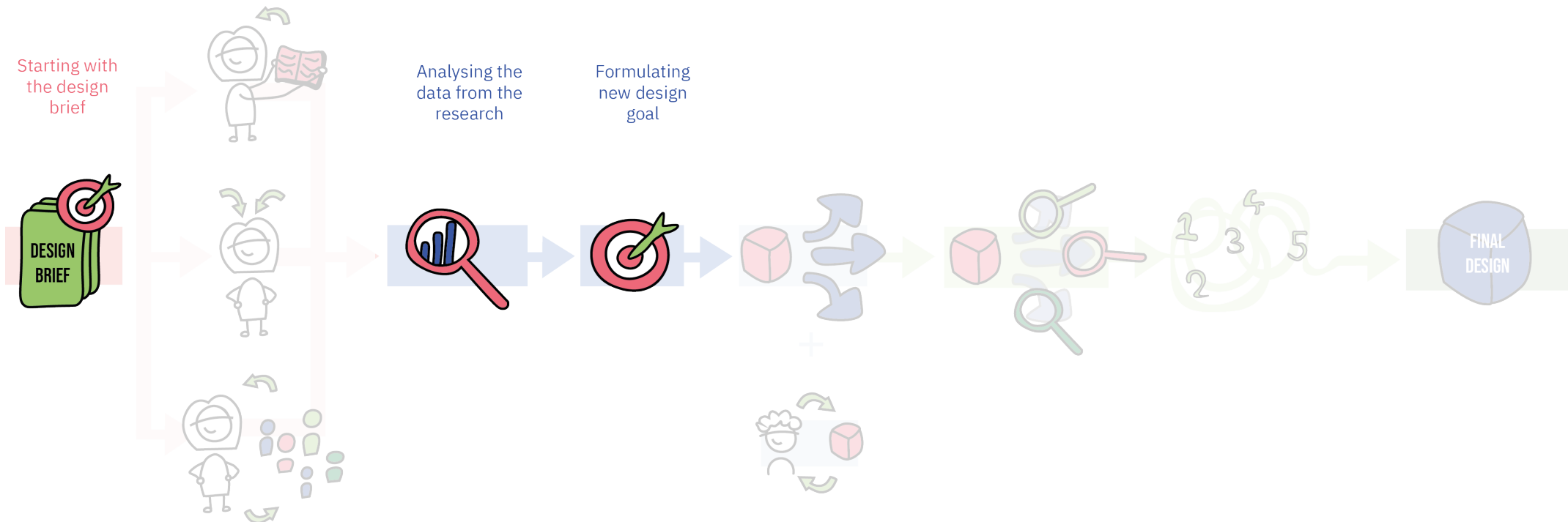
Figure 4. The stage of the design process

1.2. Problem definition

The project began with the design goal from the design brief, which was later narrowed down through Chapter 2. As the project advanced, the design goal was refined and specified multiple times based on the gathered information.

1.2.1. Development of the Design goal

It took in total 6 versions to get to the final design goal. At the start of the project the design goal was defined in the project brief (see appendix A):

1. The goal of this project is to use emotion-driven design in order to create sustainable online shopping behavior amongst Dutch Generation Z.

After the 8 weeks of the research:

2. The goal of this project is to use emotion-driven design to encourage Dutch Gen Z **females** to reduce their online impulse purchases triggered by Instagram to be able to better express themselves

3. The goal of this project is to use emotion-driven design to reduce the fashion impulse purchases of Dutch Gen Z **females triggered by Instagram** while still being able to express themselves.

4. The goal of this project is to use emotion-driven design to reduce the fashion impulse purchases of Dutch Gen Z **females triggered by Instagram and simultaneously make them able to better express themselves.**

The design goal that was chosen to work with to start the ideation phase was:

5. The goal of this project is to use emotion-driven design to reduce online fashion impulse purchases of Dutch Gen Z triggered by Instagram while still being able to express themselves (see Figure 5).

After starting the ideation phase, another adjustment was made on the design goal based on the development of the concept. The final design goal was:

The goal of this project is to use emotion-driven design to reduce fashion impulse purchases of Dutch Gen Z while still being able to express themselves.
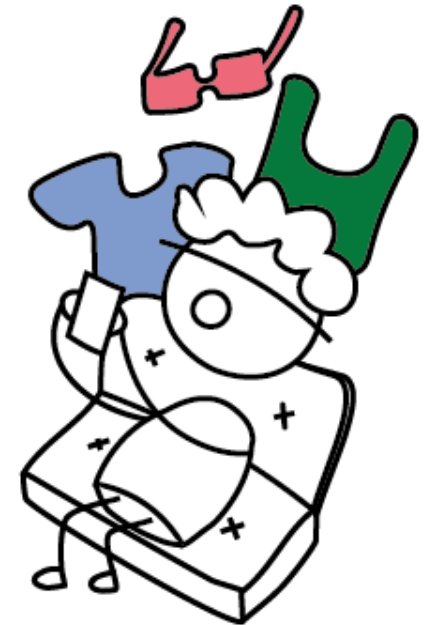
Figure 5. Friction in design goal

The next sub-chapters go into detail about the different parts of the design goal.

1.2.2. Emotion-driven design

Emotions are widely seen as essential for experiences, evaluations and actions of consumers (Bagozzi et al., 1999). Measuring emotions of an (online) shopping experience can lead to finding the underlying motives and needs of people. Using these motives during the design process stimulate creativity and can lead to rich consumer experiences (Desmet et al., 2021). Emotions are now mainly used by brands in order to tempt consumers to buy as many products as possible, this project researched how emotions can help to reduce consumption.

1.2.3. Reduce fashion impulse purchases

The generative research showed that all participants immediately thought of clothing related items when asked about online shopping. So called fashion items. Together with the findings from Djafarova and Bowes (2021), the decision was made to focus on fashion as this fits Gen Z. Gen Z does not have a lot of money and therefore seek for cheap fashion items (Pocas Ribeiro, 2023). This often results in them buying unsustainable items, e.g. bad quality items or unethical produced items. Buying 'green' options could serve as an alternative however that could still lead to over-consuming (Helm et al., 2019). Products often do not bring

long lasting satisfaction. Every time you need to buy more, better and newer products to find that feeling of satisfaction again, only to feel it slipping away as quickly as it came (Champniss & Vila, 2011). To reach for sustainable outcomes that bring joy, the amount of impulse purchases should be lowered (Helm et al., 2019). Gen Z shops both online and in-store. Online shopping makes it easier to shop and can therefore triggers consumption.

1.2.4. Dutch Gen Z

The focus of this project was on Gen Z as they are used to consuming a lot of product in a short amount of time. Gen Z spends a lot of time online, where they encounter many advertisements. The temptation to go into these advertisements is high (Djafarova & Bowes, 2021). Gen Z is tempted to 'always' wear the newest fashion trends, which leads to quickly consuming fast fashion. The target group will be Dutch as this group is easily available during this project.

Research from Djafarova and Bowes (2021) showed that in most chases females are more prone to online impulse buying, as they mainly use social media for fashion and lifestyle inspiration. Males have the tendency to watch more sport and news related content, which makes them less prone to impulse buying. However there are both males and females who impulse buy fashion items. Using the found fundamental needs in the design process helped to make the

design accessible for both genders. To keep this research widely applicable, both males and females will be taken into account.

1.2.5. Being able to express themselves

The generative research uncovered the underlying motive of the participants wanting to express themselves by the use of clothing. The use of fashion as a tool for self-expression is well established and goes back as early as 1949 (Cosbey, 2001; Moody et al., 2010; Stepat, 1949). Wearing clothing that you like helps to stand out and to control the images and impressions others have of you (Moody et al., 2010; Raunio, 1982). From the analysis of the generative session, purpose and recognition also came out as the two underlying fundamental needs of online shopping. Participants stated that they wanted to buy clothing in order to keep being able to express themselves, however it is not about buying the clothing, rather about feeling you get when wearing it.

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Exploring the problem

2.1. Introduction

This chapter is focused on exploring the current context and users in order to get insight into the (online) shopping behavior of Dutch Gen Z and the accompanying emotions during their experience. The goal of this chapter was to limit and define the scope and focus of the problem.

Starting this phase, an initial design goal was formulated: The goal of this project is to use emotion-driven design in order to create sustainable online shopping behavior amongst Dutch Generation.

This phase is divided into three research chapters, each chapter has its own goal(s) and answers its own research questions using the appropriate method.

Chapter 2.2. What is already known?
Chapter 2.3. What do I already know?
Chapter 2.4. What do the participants know?

The findings of the three researched are visualized in one user journey map. Figure 6 shows in which stage of the design process this part was executed.

Literature review
Introspective research
Generative research
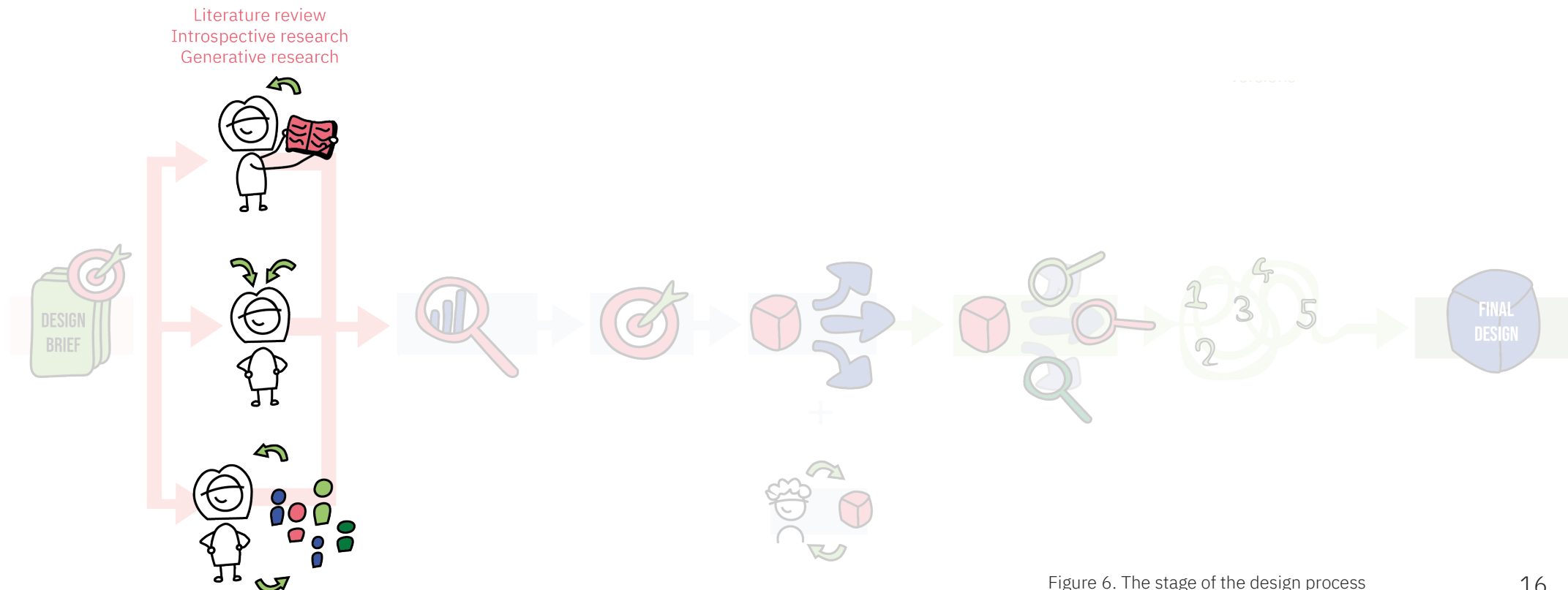
Figure 6. The stage of the design process

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2.2. Literature review

This chapter used a literature review to explore what is already known about the impulse shopping behavior of Dutch Gen-Z. This chapter dived deeper into impulse buying, the characteristics of Gen-Z, online shopping, emotions when shopping and sustainable shopping. The chapter ends with a conclusion on the goal of the chapter.

2.2.1. Goal and Method

The goal of this chapter was divided into sub research questions, every question was answered in a sub-chapter of this chapter.

The **goal** of this literature review was:

1. To explore what is already known about online impulse shopping behavior of Gen Z:

1.1. What is the definition of impulse buying?
1.2. What are the characteristics of Gen-Z?
1.3. What does an (online) shopping experience of Gen-Z look like?
1.4. What emotions does Gen Z experience when shopping online?
1.5. How does sustainability influences the impulse buying behavior of Gen Z?

A literature review was conducted to answer these questions (see Figure 7).
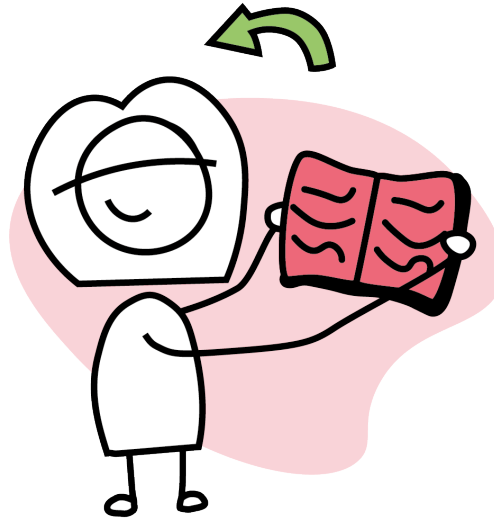
Figure 7. Literature review

2.2.2. Definition of impulse buying

Impulse buying has several definition, common used definition from Stern (1962) or Rook (1987) were made when online shopping did not exist yet.

Rook (1987) defined impulse buying as when a consumer experiences a sudden, often persistent urge to buy something immediately. The impulse to buy is hedonically complex and may stimulate emotional conflict. Also, impulse buying is prone to occur with diminished regard for its consequences.

With the quick rise of e-commerce activities, online impulse buying became the most common way of impulse buying amongst consumers. Online shopping eliminates most disadvantages consumers experiences when shopping in a physical store, this increases the likelihood of impulse buying (Chan et al., 2017). To consider the phenomena of online shopping Madhavaram and Laverie (2004) created the following definition:

Impulse buying is a result of a purchaser's immediate reaction to external stimuli that is often hedonically charged. An impulse buying episode signifies a change in purchaser's intention to purchase that particular product before and after the exposure to stimuli. The stimuli is not limited to just the product and change in purchaser's intention does not include a reminder item that is simply out of stock at home.

2.2.3. Characteristics of Gen-Z

Gen Z refers to those individuals who were born in the decade following the widespread emergence of the World Wide Web, from the mid-1990's to the early 2000's (Wood, 2013).

Growing up Gen Z has experienced multiple

big innovation in technological devices, e.g. mobile phones, streaming videos, social networks. For Gen Z the world has always been hyper-connected through their smart phones and social media, because of this there is a tendency for members of Gen Z to accept online sources without critical evaluation (Seemiller & Grace, 2016).

This generation is used to the quick obsolescence of products, they are used to the release of more, smaller and better versions of these technological products every few months. Constant innovation is the norm. Gen Z always had many different choices in the marketplace, therefore their reliance on using design-based or aesthetic differentiation is likely to be strong. The continuous innovation also has led to a comeback in starting a business, as Gen Z is not tied to 9 to 5 working days or working in an office building (Seemiller & Grace, 2016).

Gen Z highly relies on convenient goods, due to the increased pressure on them to achieve at a young age. For companies to keep delivering better and more customized products, information from the consumer is often needed. Gen Z, is much less likely to be concerned about privacy issues than baby boomers and generation X. As a result of this pressure to achieve, Gen Z often desires the opportunity to escape by technological means, such as video games, movies, music, social media networks, and having a 24/7 internet connection.

Gen Z grew up in economically, environmentally and socially difficult times (Moore et al., 2017; Wood, 2013). These factors and the hyper connectedness with the world made Gen Z more than any generation before, aware of the inequality in the world. They have strong urge to express their dissatisfaction with the world. Because of all the insecurities in Gen Z their lives, Gen Z may feel more careful in where they spend their money, this may result in consumers who are very brand-sensitive, but not brand loyal (Francis & Hoefel, 2018).

2.2.4. Gen-Z shopping behavior

Online shopping is growing rapidly the last years, especially the emergence of smart phones and tablets brought about new exponential developments of online shopping. Online shopping offers the consumer convenience, it allows them to shop more efficiently (Dabija & Lung, 2019; Nepa, 2022).

The COVID-19 pandemic accelerated the digital transformation even more, consumers where left no other choice than to buy products online as shops were closed due to lock downs. Or they started shopping because it offered non-contact services (Moon et al., 2021).

Nepa (2022) conducted a consumer research amongst 17 countries, the research reported (online) shopping habits worldwide, including 1393 participants in the Netherlands. Nepa

(2022) found that 40% of the Dutch Gen Z prefers online shopping over 20% offline shopping, 40% had a neutral preference. From 12 shopping categories, Dutch Gen Z prefers to buy 'clothing & shoes', 'electronics' and 'leisure, sport & hobby' online (Figure 8).

Saving time and comparing prices are the two main reasons (Figure 9, on the next page) for Gen Z to shop online. The number one reason to shop offline is better social interactions.
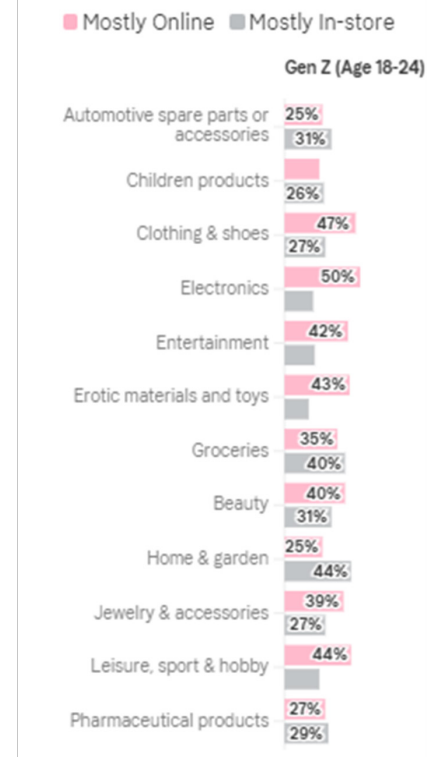
Figure 8. Preference for shopping online vs. instore
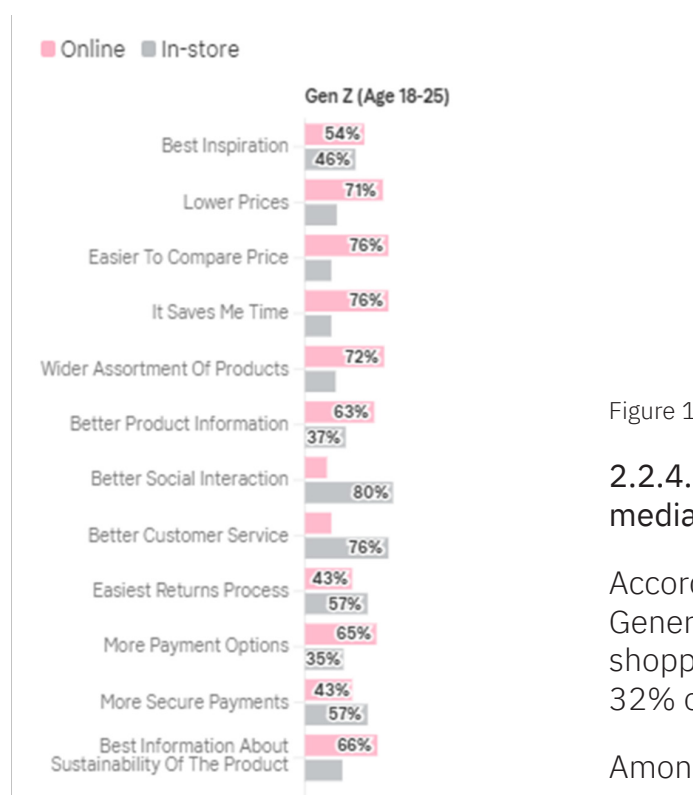
Figure 9. Main benefits of online and instore shopping

Most consumers in the Netherlands shop online at the evenings, between 1800 and 2100 o'clock. The purchases are mostly made at home. Figure 10 shows the start of the shopping journey of Dutch Gen Z, online stores are the most common channel to start the shopping journey (Nepa, 2022). Research from Nepa and Dynata (2021) found that Dutch Gen-Z prefers to shop using their mobile phone and that 60% of Dutch consumers have 1 to 5 shopping apps on their phone.
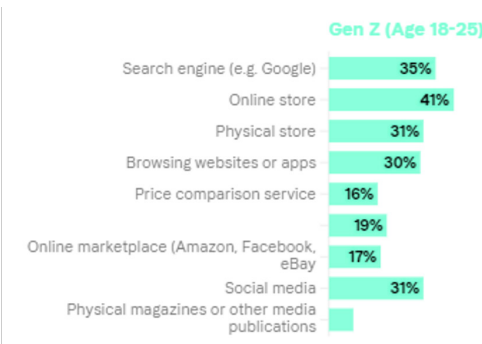
Figure 10. Where the shopping journey starts

2.2.4.1. Impulse shopping through social media

According to Lina et al. (2022), 41% of Generation Z customers are impulsive shoppers, followed by 34% of Millennials and 32% of Generation X.

Among Gen Z online impulse buying is common due to the rapid growth of social media sites such as Facebook, Twitter, Instagram, Pinterest and TikTok (Djafarova & Bowes, 2021; Lina et al., 2022). Together with the growth of social media use, a new group of digital celebrities appeared, also known as influencers, vloggers or content creators. These influencers generate their own content but also sponsored content. For brands it can be beneficial to work with influencers as the content is less obviously an advertisement. For Gen Z these influencers are more credible than traditional celebrities and may impact impulsive buying behavior.

Besides sponsoring influencers, brands

also create their content on their social media platforms, so called brand-generated content (BGC). This content often pops up at the social media feed of consumers as advertisements (ADs). With the use of algorithms these ads match the interests of the user almost perfectly, which influence the consumer by creating new needs that lead to purchasing the brand products (Djafarova & Bowes, 2021).

User-generated content (UGC) is any content that is posted by users of social media platforms. This UGC is perceived more positively than BGD, resulting in a higher purchase intention as it is seen as more trustworthy. Consumers are continually influencing each other, especially Gen Z as 67% of them post videos or photographs on Instagram at least once a week. Consumers share images of their purchases and they offer recommendations (Djafarova & Bowes, 2021).

According to Nepa (2022) 64% of Dutch Gen Z stated that they purchased a product online after seeing it on social media in the last month of the research. For Gen Z influencers have the highest chance on inspiring them to purchase a product, compared to brand-generated content and retailers. Instagram and TikTok are the two must used social platforms in the Netherlands to purchase a product or service at (Nepa, 2022).

The research from Djafarova and Bowes (2021) concludes that gender is also

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an important factor for determining the influence of Instagram marketing on impulse buying behavior. Instagram has great influence on females in encouraging to impulse buy, as they mainly use Instagram for fashion inspiration and for insights into influencers their lives. Males use Instagram for general and sport related news, and therefore not that easily influenced to impulse buy because of this content.

2.2.5. Emotion

There are many different definitions of emotions. Russell (2003) stated that
emotions are mental states of readiness that arise from appraisals of events or one's own thoughts.

Another definition from Arnold (1960) said that
an emotions is the felt tendency towards anything intuitively appraised as good, or away from anything intuitively appraised as bad.

For this project I will focus on the definition of Arnold (1960). Emotion are widely seen as essential for the experiences, evaluations and action of consumers (Bagozzi et al., 1999). Emotions can be triggered when considering, seeing, buying, owning or using a product or service (Cohen & Areni, 1991; Pieter Desmet, 2002). Certain types of stimuli do not trigger certain of types of emotion, different people have different emotions towards the same event (Desmet et al., 2021). Consumers

emotions are influenced by the context in which they are and therefore change over time.

2.2.5.1. Emotions used in marketing

Online brands and retailers are focused on attracting and keeping consumers on their websites. With the goal to get consumers to spend more money and buy more, positive emotions of the consumers should be enhanced (Pappas et al., 2014). Consumers can either have a approach response, or avoid response. Approach would mean to have a greater tendency to browse, search and interact with a site for a longer period of time. Avoidance would mean to close the website off (Porat & Tractinsky, 2008). Negative emotions in online shopping should be avoided as this would cause consumers to avoid the web shop.

Verhagen and van Dolen (2011) stated that to stimulate impulse buying, online retailers should provide pleasure when browsing by creating calm, friendly, knowledgeable, fun websites with an attractive assortment. It is important for an online store to bring the ease of use to an acceptable level, however it is not the most relevant factor concerning impulse shopping. Stimulating positive affect will trigger positive emotion which will lead to possible impulse purchases, instead of trying to emphases the reducing negative affect. The use of recommendations and personalized serves enhance customers positive emotions, which may lead to them

spending more money and make more purchases (Pappas et al., 2014).

2.2.5.2. Emotion driven design

This research will focus on emotion-driven design: The activity of designing products and services with the deliberate intention to evoke predefined target emotions (Desmet et al., 2021).

Also negative emotions can be included into the design process as these emotion, when applied with care, can contribute to a rich and unique consumer experience. Measuring emotion can help for understanding what people really for, to find their underlying motives and needs. To create more opportunities for emotion driven design, not only direct emotions towards products but also indirect emotions regarding the context should be included (Pieter Desmet, 2002).

There are multiple ways to measure emotions in research, such as the appraisal-tendency framework (Lerner & Keltner, 2000) or the basic model of product emotions (Pieter Desmet, 2002). In this research the PrEmo tool of Pieter Desmet (2002) was used to measure emotions, together with the description of emotion from the Human Experience Catalogue (Desmet & Fokkinga, 2021) and the Emotion Typology website (Desmet & Fokkinga, 2022).

2.2.6. Sustainable consumer behavior

The consumption of goods and services, has an important influence on global warming, climate change and environmental degradations. This because energy and resources are needed for material sourcing, production, distribution, sale, use and for the disposal (Pocas Ribeiro, 2023; Porcelijn, 2017).

A common narrative in our society is that in order to decrease the effect of consumption, consumers can either reduce consumption or shift to products that are more green.

2.2.6.1. Reduce consumption

Reducing consumption is often associated with the total avoidance of consumption. However reducing consumption includes more. It is about shifting consumption, engaging in low-consumption practices and creating supportive contexts. The latter is important as social, personal, cultural, geographical, system of provision and infrastructure contexts all influence reducing consumption. The pervasiveness of unsustainable provisions systems are the main limitations for consumers to reduce their consumption (Pocas Ribeiro, 2023).

Besides the materials and practices used for reducing consumption, also aspects related to well-being were mentioned as a prerequisite for reducing consumption. Participants from the research of Pocas

Ribeiro (2023) claim that reducing consumptions is 'part of living a sustainable and therefore satisfying life'. However little research is done on how improving well-being could be a starting point for reducing consumption.

2.2.6.2. Shift to green products

Green consumption are product or services that are advertised as being sustainable. The problem with green consumption is that is hard for the consumer to judge if they are really sustainable or only advertised as so. This phenomenon is called green washing.

Regardless of the fact that a product is really sustainable or only marketed that way, Leonidou et al. (2013) showed that companies that make decisions with the purpose to project the natural environment can realize positive product-market performance outcomes. For web shops Chen et al. (2020) stated that the perceived sustainability can have a positive effect on consumer engagement as it influences customer satisfaction and commitment. Perceived sustainability has stronger effect on emotional relationships than on rational relationships. However, when looking at clothing Rausch et al. (2021) stated that conventional apparel attributes such as fit and comfort, price-performance ration, quality and design are still more important to consumers than sustainable apparel attributes such as working conditions, fair wages and bio-based materials. This applies

for most other shopping categories as well.

So for consumers who do not prioritize sustainability when shopping online, sustainable attributes hardly influence their decision making. Amongst sustainable conscious consumers online shopping can increase their life satisfaction, as online shopping makes it easier for consumers to engage in sustainable consumption practices as it provides greater access to green product and environmental information, and it saves time (Guillen-Royo, 2019).

2.2.7. Conclusion

This chapter was made to explore what is already known about online impulse shopping behavior of Gen Z and answers the research questions were stated in sub-chapters 2.1.1.

Gen Z is used to rapid innovation, convenient goods, efficient time management, being connected 24/7 and have a strong urge to speak up about the inequality in the world. The COVID-19 pandemic gave the online shopping market a rapid boost, almost everything can be bought online. Social media has great influence on Gen Z and their impulse buying behavior, brand and influencers are pursuing them to buy product by using personalized ads. Mainly females are sensitive for these advertisements, as they use social media for fashion inspiration. During online shopping, different people experience different emotions. In order to

use emotions in design, the underlying motives and needs need to be found.

Gen Z is highly aware of the effects of climate change, however for most of them it is hard to adapt their behavior to make it sustainable. Nowadays there are said to be two main ways of decreasing the effect of your consumption: you can buy 'green' products or you reduce consumption.

2.3. Introspective research

This chapter was used to explore and create a better understanding of the current experience of online impulse shopping in order to get sensitized for the generative research in chapter 2.4 using an analytic autoethnography approach. Analytic autoethnography entails five key features: (1) complete member researcher (CMR) status, (2) analytic reflexivity, (3) narrative visibility of the researcher's self, (4) dialogue with informants beyond the self, and (5) commitment to theoretical analysis (Anderson, 2006).

I, as a researcher, are a complete member of my own target group. I am born in 1999 I the Netherlands. I am therefore member of Dutch Gen Z. I live my life surrounded by other members of Gen Z. I experience, feel, see and do what they do.

2.3.1. Goal and Method

The goals of this introspective research were:

1. to understanding the inner experiences and conflicts, personal struggles, that I have and may be shared by other Dutch Z

1.1. What are my initial thoughts about online (impulse) buying?
1.2. What does my last online impulse buying experience look like?

1.3. What are my assumptions about online impulse buying amongst Gen-Z?
1.4. What are trigger for me to start online impulse buying?
1.5. How does social media influence my online buying behaviour?
1.6. What does an average online impulse shopping session look like?

2. to sensitize myself and prepare for the following generative session with research participants.

The methods, tool and techniques that were used to conduct for the introspective research were:

Brainstorming: problem-solving technique that involves the spontaneous contribution of ideas. This method is used to create an overview of the aspects that are included in the context.

Autobiographical design: Neustaedter and Sengers (2012) explained autobiographical design as: Designing a system with yourself as a target user and evaluating the design through your own self-usage. In this chapter an autobiographical story is used to get deeper insights into the context and problem.

Logging consumption behavior: Logging behavior is proven to be an appropriate

method for getting insights into the wanted behavior. This tool is used to create an overview of the advertisements that I encountered on Instagram, and to create an overview of my fashion consumption.

Emotions capture card: The emotion capture cards are developed by Ozkaramanli et al. (2013) and use the emotion laddering technique to get to underlying motives and fundamental needs of my emotions regarding shopping.
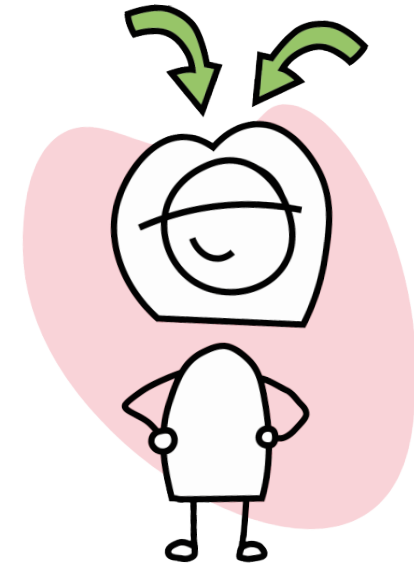
Figure 11. Introspective research

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2.3.2. Brainstorm about online shopping

Figure 12 shows a quick brains storm about my own experience with online shopping. This brainstorm was made as a sensitizing exercise to get into the context.
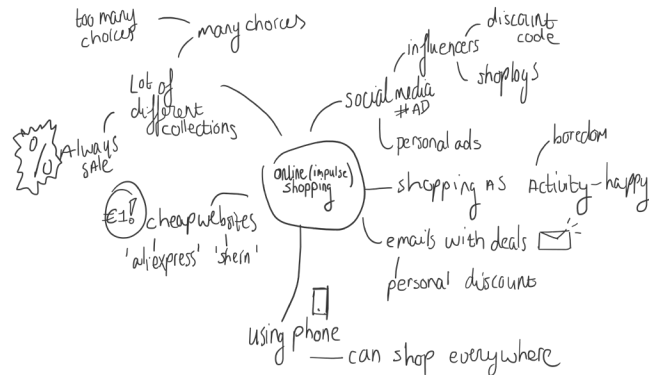
Figure 12. Initial thoughts about online shopping

2.3.3. Autobiography shopping experience

In order to get sensitize about the context of the problem, I wrote down my own experience with online impulse shopping (see Figure 13).

It was an afternoon somewhere in October. I was really bored and therefore I was hanging around on the sofa while mindlessly scrolling through Instagram. I already spend more than half an hour on the app and I really wanted to stop but I couldn't. After refreshing my feed for the millionth time, I noticed a picture of my favourite vlogger. The picture reminded me of her latest vlog, which I was

quite interesting in. So, I went to her channel to watch her latest vlog. The vlog took around 45 minutes in total and even though I had no other plans, I still felt bad watching vlogs at the 4 o'clock in the afternoon. It kind of felt like wasting time, but still I couldn't stop. This vlog included multiple shots of her day, but also a so-called shop log of the new collection of H&M. Normally I do not like to buy clothing at H&M as the quality leaves something to be desired and their production process is still a bit sketchy. However the clothing the vlogger showed seemed really nice and trendy, and moreover she had a nice discount code of 20% off. The discount code made me interested in the products, as they now where a lot more affordable. So I clicked on the

link in the description, the link immediately redirects me to the H&M website. Once on this website I was stuck, I keep scrolling through the thousands of new pieces of clothing. Adding more and more to my shopping cart. A strong desire to put everything that I liked into my shopping cart kicked in. The action would give me a few seconds of satisfaction, only to disappear as quickly as the product was added to the cart. I needed more products to fulfil this desire of wanting more and more. After around 20 minutes the doubt kicked in, and I started questioning what I was doing? Do I really need all of these clothes, and more important, can I afford them? No I can't, so I delete most items and start shopping at the sale section. H&M somehow always has sale

Figure 13. My impulse shopping experience

and these items are bizarrely cheap, ranging from 4 to 8 Euros for a spencer. So, I added 3 spencer's and a shirt, even though I really did not needed this. It wasn't even one of the pieces the vlogger showed. However at that time I was quite happy and satisfied with the clothing in my shopping cart. So I decided to buy them, however some voice in my head said I should not do it, but I did not listen. At this moment I was just too excited for my new stuff to arrive, so I put my principles aside. I waited not more than 1 day for it to arrive, which still felt like too much time. The process of opening the package was quite fun, the clothing looked nice and they fitted, so overall I was happy. It was a good deal price wise, so I was satisfied. However it fed the desire of buying and owning even more clothing. After a few weeks I noticed that I really did not wear most of the clothing I bought, only one spencer I wore multiple times. The regret started to kick in. Why did I waste my money and my time on things I did not need nor used. Why did I bought clothing at a store I do not even want to support? Suddenly I felt really disappointed in myself and also a bit as angry. I should have known this wasn't a good idea.

2.3.4. Assumptions

Based on my own online impulse shopping behavior, experiences from the people around me and from the literature review, I listed several assumptions that I had. These assumptions are listed to be able to identify my own blind spots of the context, in chapter

2.4 the results from the generative research will be compared to these assumptions. The assumptions were:

- Mostly clothing is bought online by impulse
- Impulse buying is mostly triggered through social media, such as Instagram
    • This can either be trough individual ads on your timeline or by online influencers that you follow
- Impulse buying is triggered by discount codes (of influencers)
- Smart phones are used to make the impulse purchase with
- Multiple items are bought at once when impulse buying
- The option to send the product back for free stimulates impulse purchases

2.3.5. My social media

I noticed that most of my shopping behavior was triggered by social media. Therefore I decided to dive deeper into my social media use and how it influenced my online shopping behavior. I looked at my most used social media: YouTube and Instagram.

2.3.5.1. YouTube

On YouTube the phenomenon of shoplogs became very popular last year's. A shoplog is a video where someone shows all the products they bought during that day, week or sometimes month. The products that are shown can be anything, from fashion to groceries and from make-up to garden

tools. Shoplogs can either be done by users (UGC) or by influencers. Influencers can be sponsored (BGC) or not (UGC). There are many Dutch videos about this topic as well.

"When I was younger I used to watch many of these shoplogs as the influencer I was subscribed to all made many of these videos. I remembered buying at least 2 specific shirts because of two of these videos. I still have both shirts, a grey one and a blue one. I wore the grey shirt multiple times, however it started to shrink everything I washed it. So in the end I regretted buying the shirt as the quality was really low compared to the price. The other shirt is perfectly fine quality wise, however I actually wanted it in another color (the color the influencer showed me). At the time of ordering this color was out of stock, but I really wanted it at that time, so I bought it in blue instead of grey. As I didn't want to pay for the shipping costs, I also ordered a bikini and another shirt with it. I did not need any of the things I bought. I was really angry at myself for buying these products. Currently I do not watch these videos any more. Sometimes influencer put these shoplogs into their vlogs, when this happens I skip these parts. As I do not want to be triggered to buy things I do not need."

2.3.5.2. Instagram

At the time that I used Instagram on a daily basis, I noticed how the advertisements they showed me really fitted my interest. I often was tempted to buy something however

I was not sure whether or not to trust the brand. The items looked amazing online, however the prices were so cheap that I did not trust it.

For 8 days I logged the advertisements and sponsored content I encountered on Instagram. Advertisements pop up in between your feed, I did not follow these account. This content is made by the brand itself. Sponsored content, is content that is made by the people that I follow, they get paid to make that content. I scrolled and watched the post in my feed as normally until I encounter in total five advertisements (AD) or sponsored content (SC), I logged after how many time an advertisement or sponsored content showed up. The log can be found in appendix B.

2.3.5.3. Results

For all 8 days it took no longer than 1.30 minute in order to get 5 advertisements or sponsored content. It were all advertisements, this is probably because I mostly follow friends who do not post sponsored content. The amount of 'normal' (non AD or SC) posts between the advertisement posts were no more than 3 posts. The amount of picture or video post are almost the same. I did not find any differences between the times I checked in the afternoon or morning. I mostly got ADs for posters, interior design, dental care and beauty. Figure 14 shows all ads in one overview.

Before logging these ADs and SC I never noticed how many Ads or SC I would get in such a short period of time. In this log, I got one AD for every two 'normal' posts I watched. Personally this really changed my perception of Instagram. Before this log, I had a hard time not scrolling through Instagram. I opened the app more than 20 times a day and often spend 1 hour per day on the app. I was really unhappy with this behavior because after using the app for such
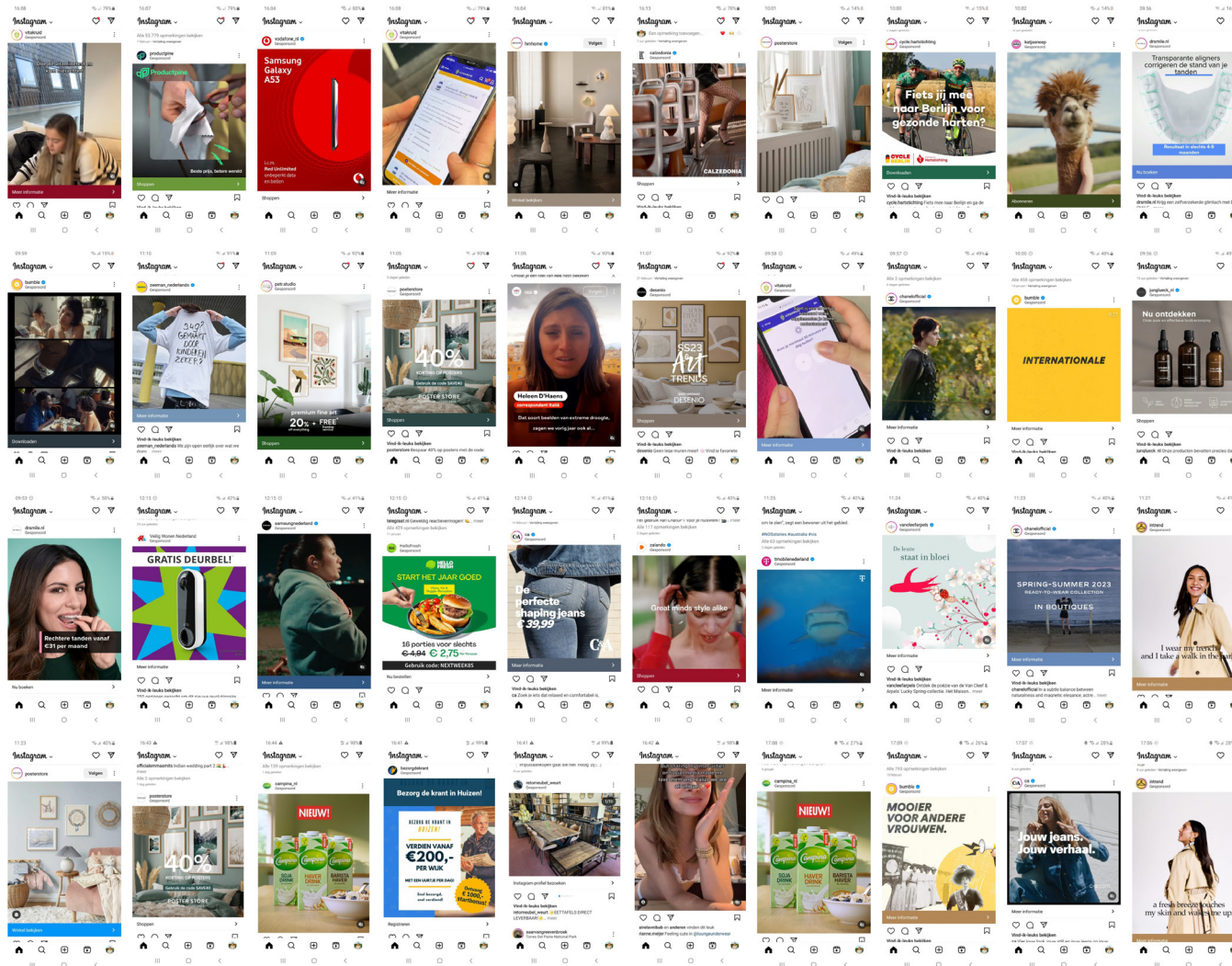
Figure 14. All 40 AD's and SC

time, I felt really drained and overwhelmed. The only way to keep me from using the app, was deleting it of my phone. However often after two days I would download it again.

During the 8 days of logging I had no problem with keeping off the app. The desire to use the app completely disappeared from the first day that I noticed how many ADs there were. Suddenly I realized that using Instagram meant mainly watching ads, which made me really dislike the app. So now I do not even like to use it anymore.

2.3.6. Logging online shopping behavior

In order to find out what triggers online impulse buying, I logged my shopping behavior for four weeks. I did not only log the products I bought but also the times I was browsing website and ended up not buying anything. These experiences were included as they can provide interesting information about the motivation to start shopping. The log can be found in appendix C.

Only 1 experience occurred during these four weeks. I was just to self-aware about shopping due to this project, that I did not let myself buy anything. However one time in the beginning of the project I did browse online, that one experience already gave valuable insights.

2.3.6.1. Personal Motives

From the shopping log, I wanted to derive the motives that laid behind my actions and emotions. Human motives are a person's needs, values, goals and impulses (Desmet & Fokkinga, 2020).

The laddering technique to uncover motive hierarchies is used, based on the technique of Gutman (1982) and adapted by Desmet. In this technique you start with the emotion and the stimulus event. From this, you uncover the underlying motive, which can be a goal, need or value. Emotion capture cards were used for the analysis (Ozkaramanli et al., 2013). The results of this analysis were a series of motive ladders (see Figure 15). One motive is chosen, which is called the sweet spot. This sweet point is used as starting point for ideation.
A more in depth analysis and explanation of the underlying motives is done in sub-chapter 2.4.2.5. where these capture cards are combined with the cards from the participants.
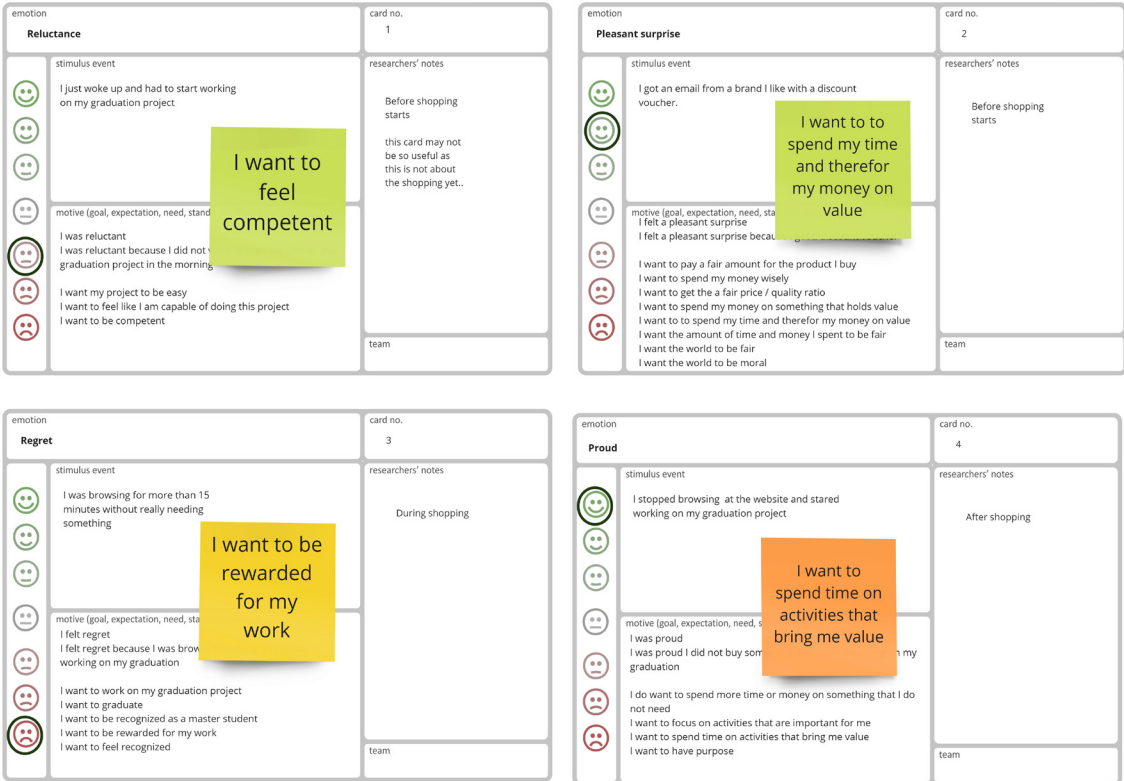
Figure 15. Emotion capture cards of my online shopping experience

2.3.7. Conclusion

The goal of this chapter was to get create a better understanding of the current experience of impulse shopping in order to get sensitized for the generative research and to answer the sub questions that were part of this goal.

Mapping out and analysing my own experience really gave me valuable insight into an (online) shopping experience. Logging my social media use gave new insights on why I use the app (boredom) and what the app gives me (advertisements). Logging my online shopping experience sensitized me in order to be able to make a generative workbook and session. Analysing my online shopping experience brought insight in how to analyse the data from the participants. All data derived in this chapter made the base for the UJM in chapter 2.5 which has the purpose to give a meta overview of the results of the three researches.

2.4. Generative Research

This chapter was interested in Gen Z their values, needs and emotions about shopping from the past, present and for the future. For most people it is difficult to clearly understand and express their values, needs and emotions. To help them express themselves, a generative research was conducted (see Figure 16). This generative research entailed two components: a workbook and a generative session. The workbook was used to gather information about shopping behavior and to sensitize the participant for the generative session. This chapter will go into detail about the planning and reasoning behind this research.

2.4.1. Goal and method

To start this generative research plan, three main goals and sub research questions were listed. The goals of this generative research were:

1. To provide an understanding of the shopping experiences (past, present and future) of Dutch Gen Z

1.1. What are the motivations of Dutch Gen Z to shop online?
1.2. What did their shopping experience look like in the past and the present
1.3. How often do the participants shop online
1.4. What does the experience of shopping instore look like?
1.5. What are the differences between shopping online and shopping instore?

2. To understand the context in which their experiences take place

2.1. What does the context of shopping online for Dutch Gen Z look like?
2.2. How does the context change overtime?
2.3. What does the lifestyle of Gen Z look like?
2.4. What does the social media use of Gen Z look like?

3. To identify opportunities that can be acted upon to make their (online) future shopping experiences more sustainable

3.1. What are the needs of Gen Z according shopping online?
3.2. What are the dreams of Gen Z according shopping online?
3.3. What does Gen Z like to change about their current shopping behavior?
3.4. What does Gen Z like to change about the current context?

Methods and design activities were needed to conduct the study in order to answer the research questions. Table 1 shows a overview of the methods uses. These methods are developed by Sanders and Stappers (2012) and have the goal to uncover the shopping experiences of Dutch Gen Z.

Goal	Method	Design activity
3	Generative workbook (and session)	Every participant got a workbook for 10 days, in this workbook they were sensitized for the generative session. The workbook was also used to answer the research (sub)questions. The workbook led the participants on a journey that took them to the past and the present.
4	Generative workbook (and session)	
5	Generative session (and workbook)	In the generative session we looked deeper into their needs and dreams for the future.

Table 1. Methods and design activities
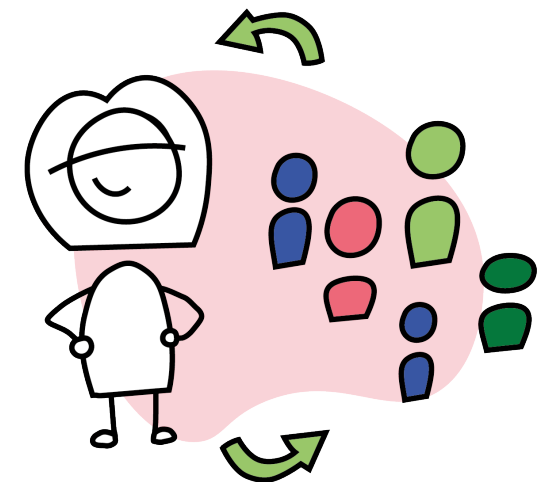
Figure 16. Generative Research

The scope and focus, see Figure 17, for this generative research were defined using the assumptions listed in sub-chapter 2.3.4. The focus of the project is the area of experience that you thoroughly want to understand, the scope refers to larger fields of experience around the focus. The scope can provide important links and perspectives (Sanders & Stappers, 2012).

Focus of the research effort: The online shopping experience of Dutch Gen-Z (at this time of the research the focus was online shopping only).

Scope of the research effort: physical shopping behavior, money spending, online behavior, social media use, online lifestyle.
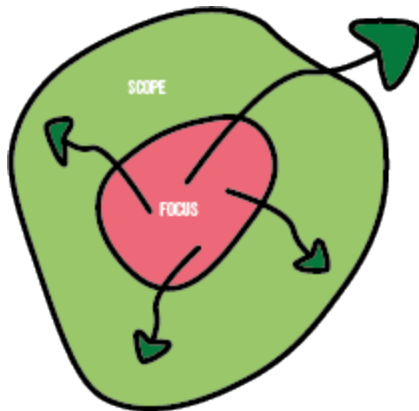
Figure 17. Focus and scope

2.4.1.1. Path of expression

For both the generative workbook and session the path of expression was used,

see Figure 18. The path of expression is an approach in which participants are led on a journey that takes them from their current experiences, into their past and lastly takes them to situations in the possible future. It ends with generating new ideas on how to get them to this future (Sanders & Stappers, 2012). The path of expression culminates the ability of participants to imagine and communicate their hopes, dreams and fears for the future.
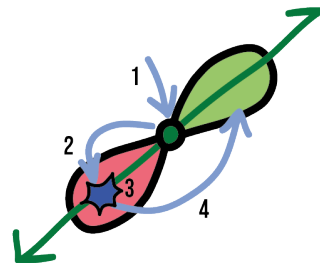
Figure 18. The path of expression

2.4.1.2. Generative workbook

A generative workbook was used to guide the participants through the 3 first steps of the path of expression (Sanders & Stappers, 2012):

1. Immersion into the current experiences
2. Activating feelings and memories from the past
3. Reflect on the past to dream about possible futures

The workbook was meant to sensitize the participants for the generative session.

The workbook was used early in the design process, in this stage the context is still fuzzy. The workbook was meant to create a better understanding of the current users and the context and what their needs are for the future. Thus it was meant to explore and define the scope for the beginning of the research, later in the process it was used as a diving board for idea generation. To make the workbook appeal and accessible to non-designers as well, the workbook was made quite 'sketchy'. The sketchy look of the workbook allow participants to freely express themselves without having to worry about the appearance or quality of the content they produce. The workbook can be found in appendix D.

Several different tools and techniques were integrated into multiple different assignments in the workbook, such as image collages, word collages, emotion journey maps, autoethnography and keeping a dairy. Every workbook included a set of triggers, these triggers were images, words, shapes, expression and emotions. All triggers differed in content, abstraction and in level of ambiguity and openness in order to give the participants the freedom to express their meanings (Sanders & Stappers, 2012). To help the participants express their emotions, the PrEmo tool of Pieter Desmet (2002) was included in the trigger set, together with a description of the emotion from the Human experience catalogue of Desmet and Fokkinga (2021).

The exercises included both do and make techniques, every exercise is made to prime participants for the next exercise. The workbook made the participants well-prepared for the session, it guided them through the path of expression. The path of expression stimulates creativity and helps to avoid of becoming fixated on preconceived ideas about the future.

A detailed description of each research question and the accompanying workbook page can be found in appendix E.

2.4.1.3. Generative session

A generative session (see Figure 19) was held to guide the participants through all the stages of the path of expression (Sanders & Stappers, 2012), but was mainly focused on stage 4:

1. *Immersion into the current experiences*
2. *Activating feelings and memories from the past*
3. *Reflect on the past to dream about possible futures*
4. *Generating and expressing new ideas relating to the future experiences.*

In these sessions of 40 – 60 minutes, with a group of 1 or 2 participants, the exercises were discussed using the path of expression. The participants had room to share their experience with the workbook and explain what they did, how they felt and what they discovered.

First, exercises 1 to 5 of the workbook were discussed, the participants first had the opportunity to explain and discuss their work. The question from appendix E were integrated into this conversation. After exercise 5, exercise 0 (the log) was discussed. In this log the participant had

to write down their emotions during an online shopping experience, these emotions were analysed using emotion capture cards (Desmet, 2021). During the session the underlying motives are uncovered together with the participants. After that part was finished, exercise 6 was discussed using the sub research questions 3.1 to 3.4.

"When I order something online and it turns out that I do not like it that much, I often keep it as it is too much effort to send it back"

"I like the ADs that Instagram show me, they make me feel like I made a well-considered choice"

Figure 19. The generative session

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Afterwards the idea generation of the participants started. The whole workbook sensitized the participants to think, feel and dream about possible futures, this sensitizing was the starting point for generating ideas that can lead to this imagined future. To help them express this ideal future of online shopping, the template in appendix F was made. The full script of the session can be found in appendix G.

2.4.2. Results

In total three generative sessions were held. Two sessions in groups of two, and one participants alone. During the first session, it turned out that the template (appendix F) that was created for this session was not helpful and was actually interrupting the conversation. The participants were already immersed into the topic through the workbook and already started analysis their behaviour and creating ideas for the future. So there was decided to not use the template and focus on the workbook itself. For the rest of the session, the script was followed, which worked well to lead the session.

Exercise 0 to 6 were analysed one by one. All workbook were scanned to be able to put them in Miro, in Miro the full analysis was made.

Appendix H shows the full overview of the analysis. In the following sub-chapters the method of the analysis, main takeaways and conclusions of all exercises were explained.

The main focus was on exercise 0, 4 and 6, as these exercises turned out to contain the most in depth information. The other exercises supported these three exercises.

2.4.2.1. Participants

This study had five participants, all participants were female and part of Gen Z. The participants made a drawing of themselves to introduce themselves (Figure 20).
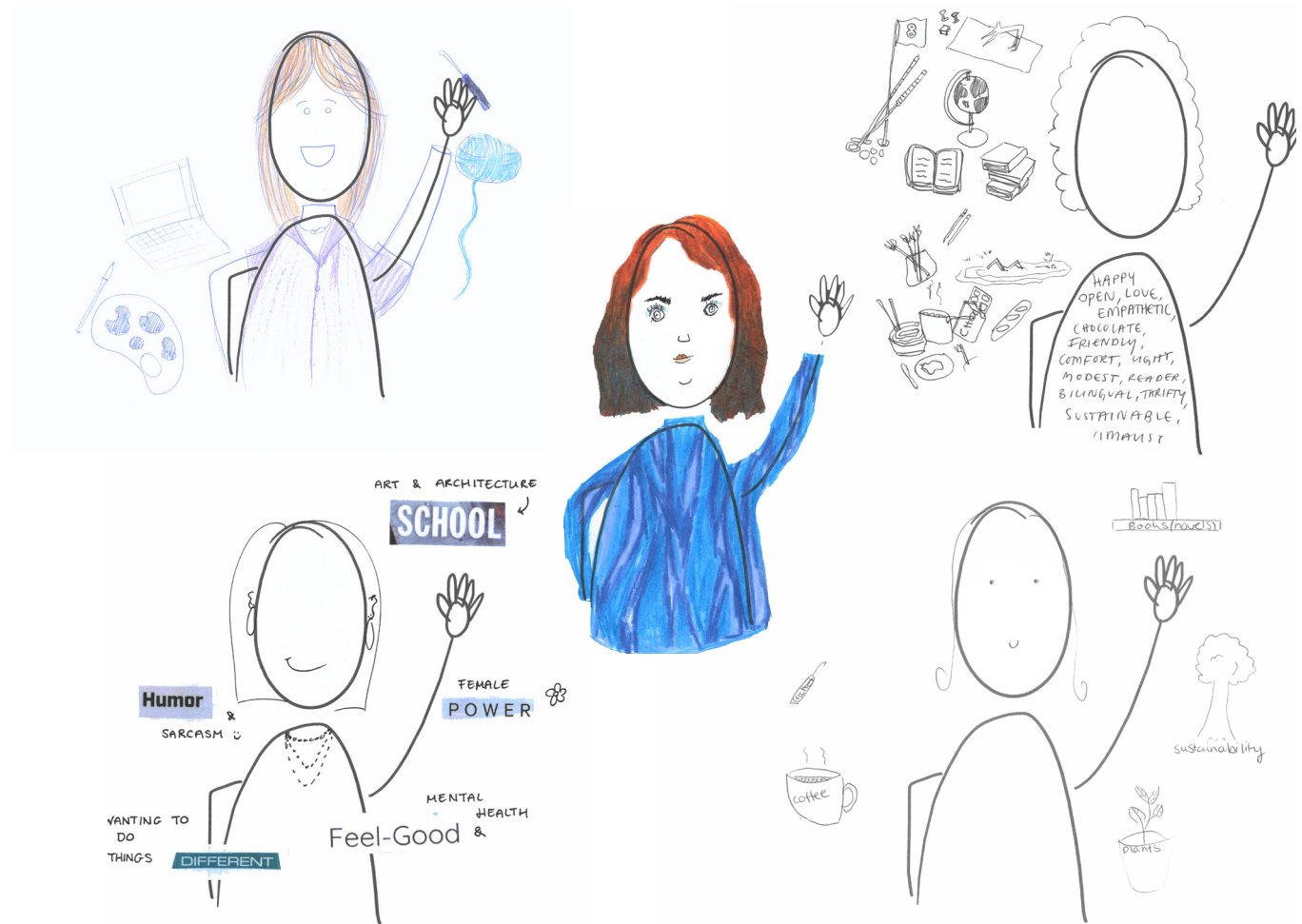
Figure 20. The participants of generative research

2.4.2.2. Overall characteristics of Gen Z

Figure 21 shows an overview of the key takeaways from exercise 1, these takeaways were meant for inspiration for the ideation phase. The favourite web shop of the participants was clearly Zalando, this is an online retailer of shoes, fashion and beauty. This example clearly shows that the participants immediately think of fashion when talking about online shopping. The participants all stated to have busy life, they have work, study, friends, social life, hobbies

Figure 21. Life of Gen Z

and sports. They feel like they have to spend their time as efficient as possible and show the world how successful they are.

2.4.2.3. Difference between online and in store shopping

Exercise 2 and 3 showed that all participants mainly thought of clothing when talking about online or instore shopping. Online shopping is seen as easy and time efficient (see Figure 22, on the next page). The participants like that there are so many (size) choices online and that you can search for the most cheapest option. Shopping online is often done when the participants have nothing else to do, or when they are bored (but should be doing something). Social media can be a trigger to start shopping, especially Instagram as these advertisements really fit the interests of the participants. The social media advertisements often include a discount code, which can also be a trigger to start shopping. Online shopping can bring joy as buying clothing can be a way to express your identity, however it can also lead to frustration. Frustration can occur when the amount of choices are overwhelming, when the participants cannot find what they search for, or when they do not know if they found the right choice already. The delivering process can also lead to negative emotions, as you have to be home at the right time and day. Participants stated that this process can lead to stress as their lives are busy.

Instore shopping (see Figure 23, on the next page) brings about different associations amongst the participants. Instore shopping is either seen as an activity that you do for fun together with a friend or family member, or as a necessary activity because you really need a product immediately. Instore shopping often takes a lot of time, it can be tiring. However the main benefit is that you can feel and try on all the products you see. Because of this participants trust these products more than products they see online, the pictures can be nice but you never how what it is like in real life. Some participants states that they impulse buy more in stores, however some impulse more online. The reason to impulse buy instore is because the participants took a lot of effort to go to the store, and it would feel like a waste of time when they did not buy something.

In the end money is still the main driver on making decisions about whether or not to buy clothing (online or instore) for the participants. This is because the participants are still students and do not have a (full time) job.
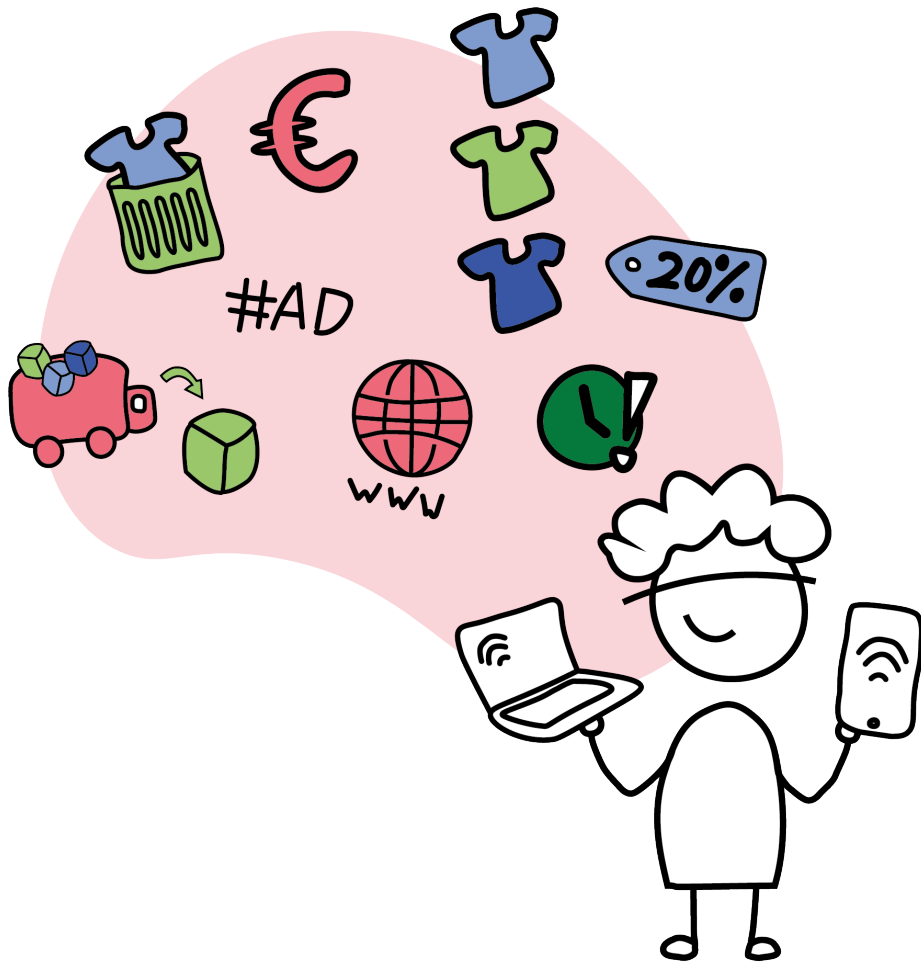
Figure 22. The Online shopping main takeaways

VS

Figure 23. Instore shopping main takeaways

2.4.2.4. Social media and online shopping

Four out of five participants named Instagram as their most used social media, one as their second most used. Four of these participants bought something through Instagram, and all of them often click on the ads. Participants really appreciate the ads as it shows them (mostly) clothing that really fits their specific style. The advertisements can therefore bring joy, but it can also lead to disappointment when the products turn out to be made of bad quality materials, are too expensive or just not really needed. Because the ads of Instagram are personalized, the temptations to click on it is really high. Participants also named TikTok as resource to buy products from, these were not really advertisements but mainly UGC. These users share their experiences about for example traveling, which allows the consumers to feel like they made a well-considered choice.

When the participants use social media, they are often doing something else simultaneously. Like watching TV, waiting for the train or talking to friends.

2.4.2.5. Emotions during online shopping experience

The participants had to log there shopping experiences during 10 days using the PrEmo tool, see Figure 24 step 1. In exercise 4, the participants elaborated on one of their experiences. The results from exercise 4 are included in this analysis. From these logs,

a graph is made of their (micro) emotions during the experience. This graph showed the difference in valance of the emotions and gave a quick overview of the overall experience, see Figure 24 step 3.

During the generative session, emotion capture cards (see Figure 24 step 2) were used to uncover the underlying motives of the

participants. This was done together with the participants.

The laddering technique was used to uncover motive-hierarchies, described in sub-chapter 2.3.6.2. After the session, the 'sweet spot' of every motive was established by the researcher. This sweet spot is one of the
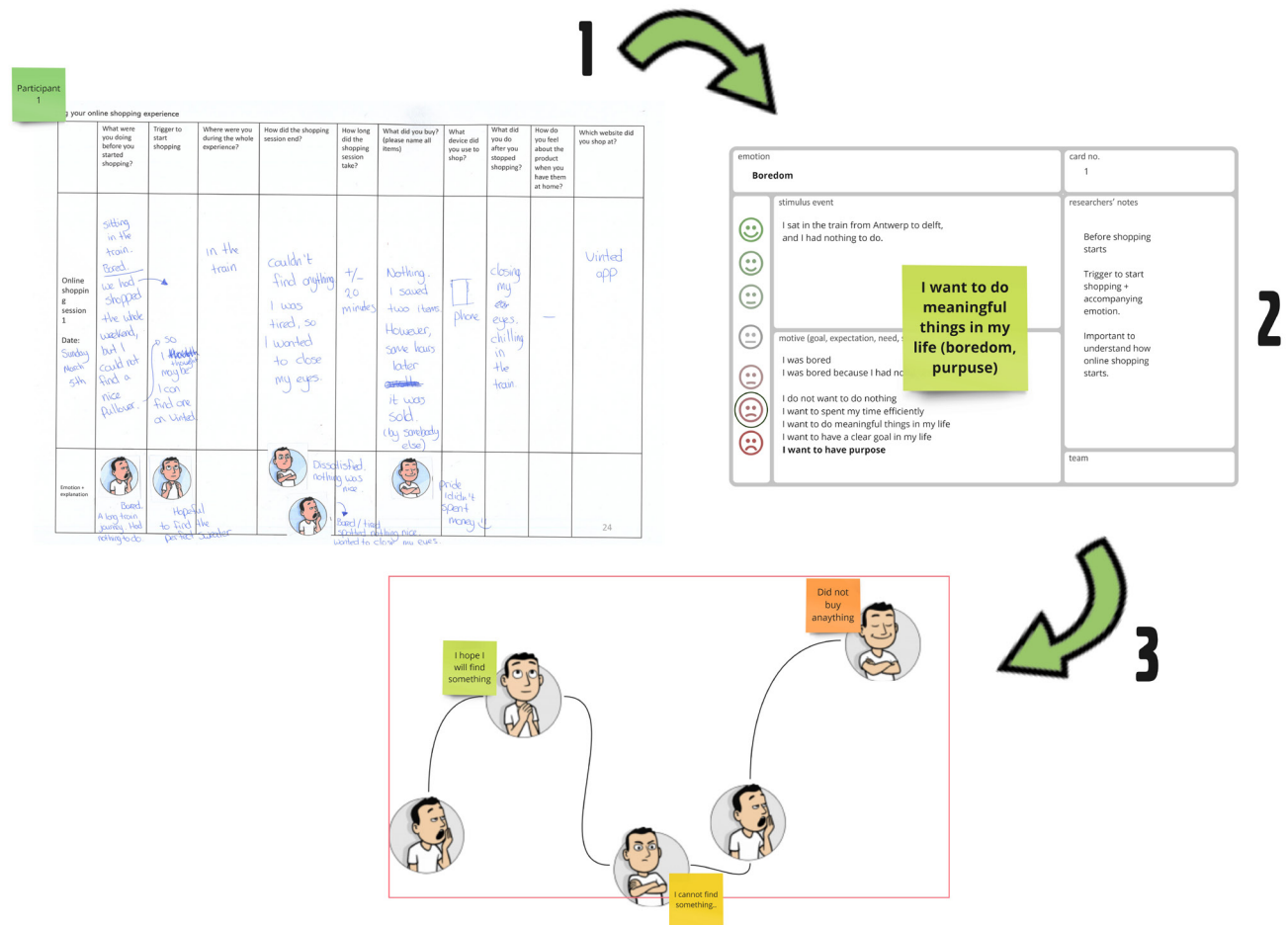
Figure 24. Example analysis of exercise 0

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motives from the ladder that are the optimal balance between concrete and abstract. The full analysis can be found in appendix H.

The (micro) emotions graphs

Out of the 11 shopping experiences, 11 micro emotion graphs were made. From the experiences the PrEmo figures were taken and turned into a graph. The emotions were placed roughly in a graph based on the intensity of the emotion. These graphs were clustered into 2 categories; bought something and did not bought something (see Figure 25).

Within the 'bought something' category there were two experience that were not useful for this research. In these experience both participants really needed a specific product, and immediately bought that product, and nothing else. This experience was not triggered by an external factor, but they really needed or wanted the product for a long time, so this experience is not within this scope. During the remaining experiences, the emotion really fluctuate. There are both peaks of positive and negative emotions. Four out of five experiences started with a negative emotions, such as boredom and dissatisfaction. Two experience also ended with a negative emotion; dissatisfaction

or disgust. During shopping most of the participants felt joy or satisfaction.

Within the 'did not bought something' cluster there are four experiences. All of these experiences started because the participants were bored. Three of these experiences started without having a clear goal of what to buy. During the experience participants felt the desire to buy stuff because there was so much choice. Afterwards two participants felt proud because they did not buy something. But they also felt regret because if felt like wasting their time. One participants felt inspired afterwards.
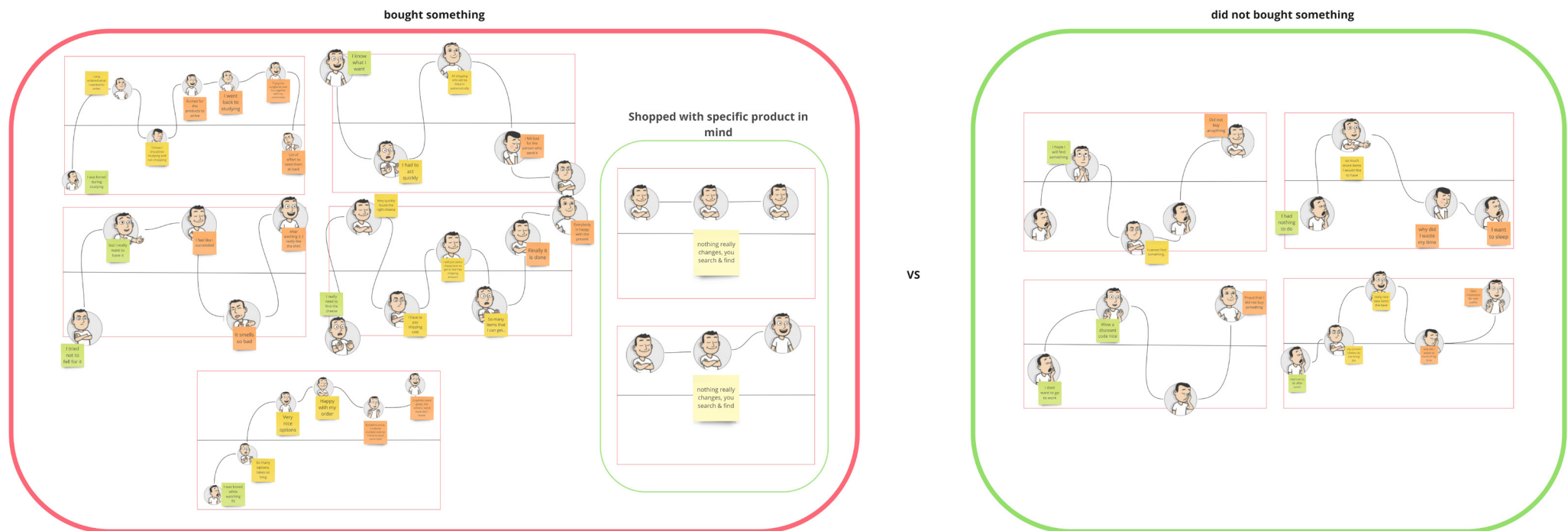
Figure 25. Clusters of emotion graphs

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Overall, boredom was the main reason to start shopping. During the experience, the great amount of options keeps the participants excited and longing for more. Out of the 9 graphs, 6 ended with a positive emotion. This was either because they were satisfied with the products they bought, or because they were proud that they could resist the temptation to buy something.

Fundamental needs clusters

In total there were 50 capture cards. All motives were coded by color and by negative or positive emotion. Green; before shopping, yellow; during shopping, red; after shopping. The negative emotion has a bold font, the positives ones do not have a bold font. There were 23 negative emotion, and 27 positive emotions. A overview of the distribution of the cards is shown in Figure 26.
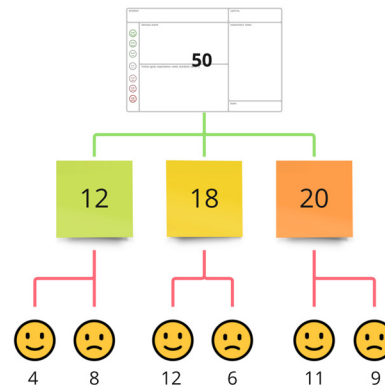
Figure 26. Distribution of emotion capture cards

All capture cards were clustered according to their underlying fundamental need (Ozkaramanli et al., 2013), a list of these clusters can be found in appendix I. These fundamental needs were clustered, and then divided in into two categories of fundamental needs; within yourself and from without yourself (see Figure 27). The green motives, are motives based on emotions that occurred before the shopping started, these emotions triggered the shopping experience however the fundamental needs underneath it are not applicable on the online shopping experience itself. As these triggers can be anything unrelated to shopping. When taking the green motives out, purpose and recognition are still the main fundamental needs.
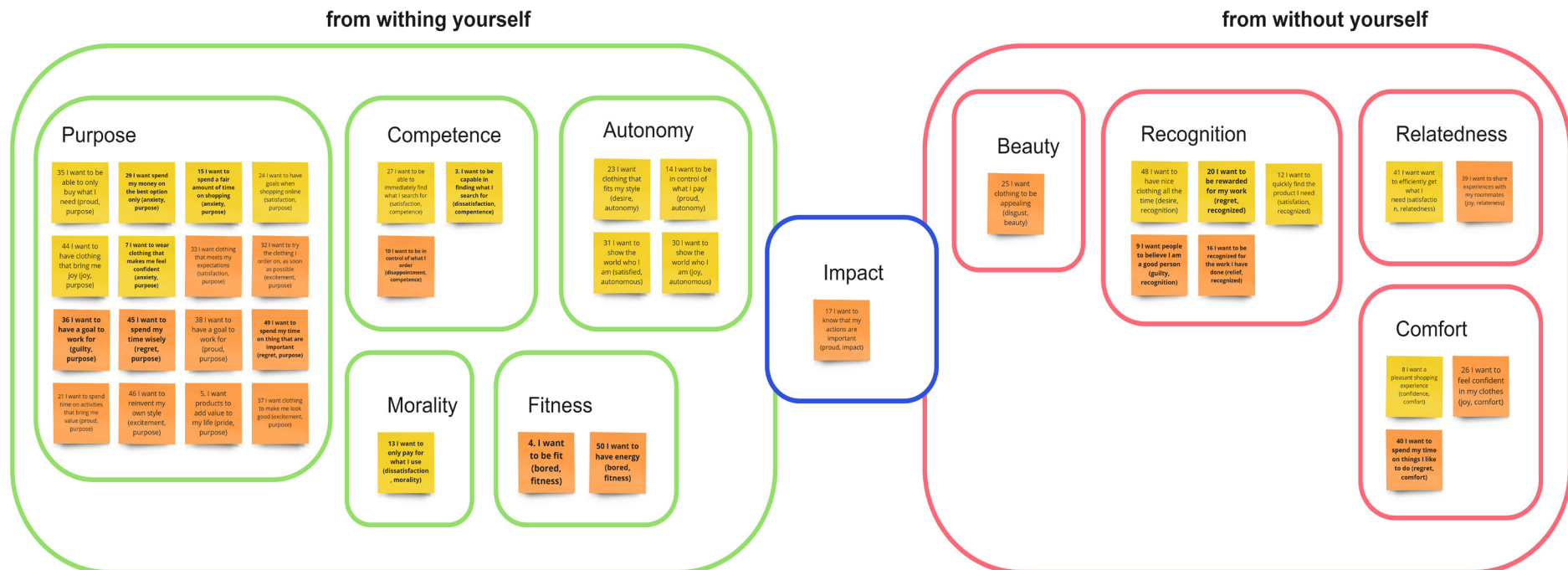
Figure 27. Fundamental needs within yourself and without during and after shopping

The main focus was on having purpose and recognition. This was interesting because these needs are in the 2 different categories. All fundamental needs, motives and categories were used as starting point, support and inspiration to define the problem definition in chapter 1 and to serve as inspiration and support during ideation.

2.4.2.6. The future of online shopping

The participants came up with multiple different ideas on how they would like their future online shopping experience to be. 4 of the 5 participants talked about wanting to make their shopping behavior more sustainable. All of them know it is important but it is hard to align their behavior with this knowledge. The different ideas are translated into statements. These statements were written from the perspective of the participants, in chapter 3 these statements are translated into desired interaction qualities.

- I want to keep buying clothing as it is a way to express myself
- I want to know more about the different aspects of sustainability
- I want to know the positive effect of my actions, not the negative ones
- I want to be sure the clothing will fit me
- I want to have enough choice but I do not want to be overwhelmed
- I want to be inspired during shopping online
- I want to use personal filters

2.4.3. Conclusion

This chapter researched and explained the answers to the three main research goals and questions, a detailed list of the answers to all sub questions can be found in appendix J.

During online shopping experiences, Gen Z experienced multiple emotions like joy, disappointment, and satisfaction. Online shopping allows the participants to consume a lot of products in a short period of time, however the decision is harder to make as it is more difficult to judge the quality of a product.

The underlying motives of the participants for shopping clothing online is that want to have nice clothing in order to feel confident and happy. Clothing is a way to express themselves. In an ever changing world, their personality and style are therefore also changing. Money is still an important factor in decision making on whether or not to buy a product.

The participants knew that they have to take sustainability into account however this is often difficult for them as the desire to buy products is high and the transparency about the impact of a product is low. The main underlying fundamental needs from the emotion of the participants were recognition and purpose.

2.5. Conclusion

A user journey map was made to create an overview of the data from chapter 2 (see Figure 28). Every online shopping experience differs per person, however there are certain patterns and similar behaviors that can be found in multiple experiences.
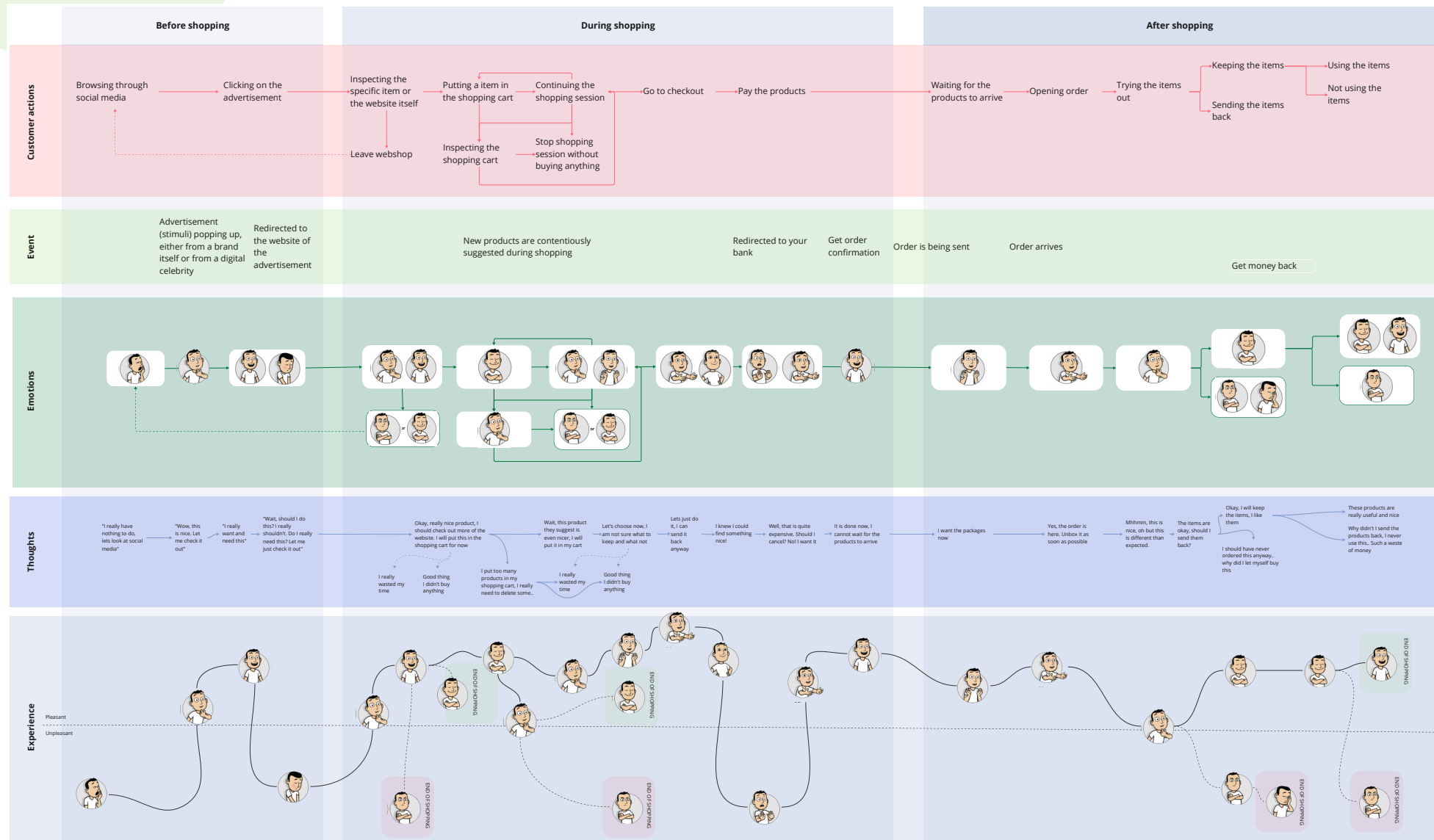
Figure 28. User Journey Map

3

Exploring the design directions

3.1. Introduction

Three design directions were created from the insights of the research in chapter 2. These three directions all fitted the design goal of that moment but with a different approach. To find out which directions would create the most fitting design solution, the three directions were all explored. This sections shows these explorations.

To have guidance during this exploration process, a interaction visions was created. This vision reminded me during the process what experience I wanted to create for the user, without knowing what the design itself would be like. After that there were several different design heuristics collected, using all kinds of different methods that brought

inspiration. Such as, looking at excising art and deconstructing my own wardrobe.

These exploration formed the base of the concept that was developed in chapter 4.

Figure 29 shows in which stage of the design process this part was executed.
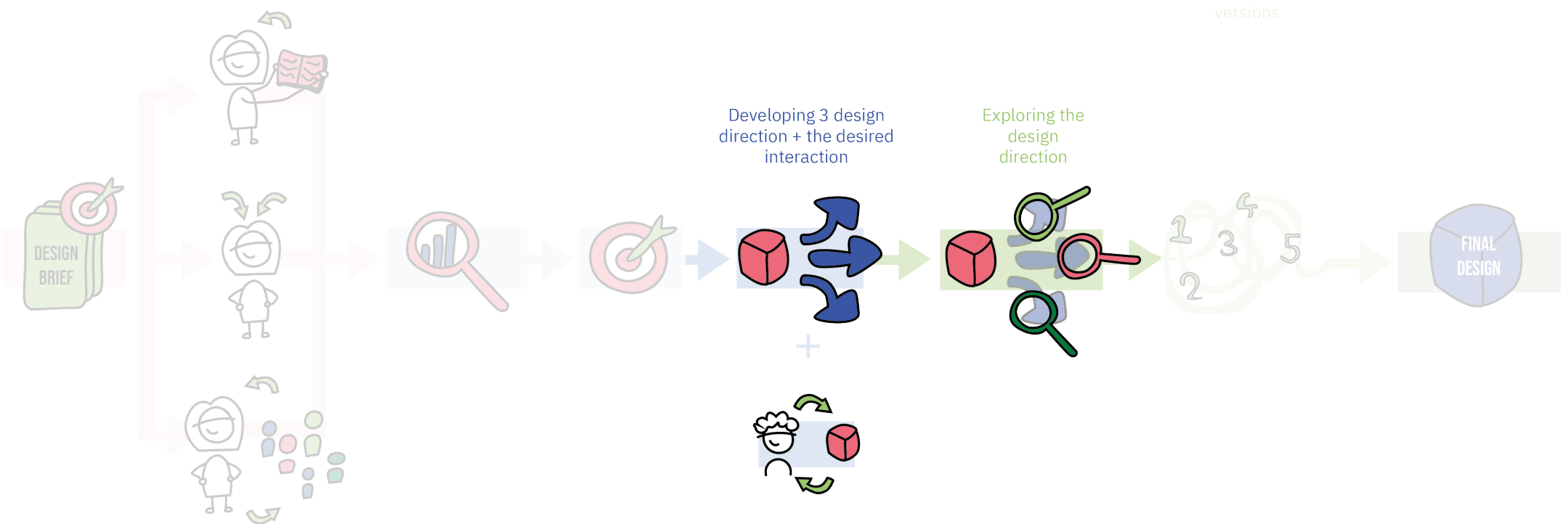
Figure 29. The stage of the design process

3.2. Design directions

At the time that the design directions were developed this design goal was used:

The goal of this project is to use emotion-driven design to reduce online fashion impulse purchases of Dutch Gen Z triggered by Instagram while still being able to express.

In this design goal there is an interesting tension between:

Wanting to reduce impulse fashion purchases VS. I want to express myself

On the one hand Gen Z knows that buying a lot of fashion items is not sustainable, they know there need to be a change. However, the urge to buy the fashion is stronger than the sustainability concern. There are multiple reason for this, but the overarching reason is that they seek for a way to express themselves, through clothing. They use the clothes they wear as a mean to derive purpose and recognition from. Finding purpose and recognition from clothing alone is a difficult thing to do, these fundamental needs are not met with only buying nice clothing, the feeling of happiness only last for a short time after buying the clothing. Consumers seeks for this feeling again, which leads to buying more and more clothing.

From the design goal three design directions were derived (see Figure 30):

Design direction 3 was specifically focused on personal Instagram advertisements as this was part of the design goal at that time. Later in the process Instagram and online shopping were removed from the goal. The process of exploring this design direction was very useful for the insight that the final design should not focus on Instagram advertising only.

Creating different means to express yourself instead of using fashion

Creating a sustainable way of using fashion as a mean of expression

Creating a way to make mature decisions when encountering personal ads on Instagram
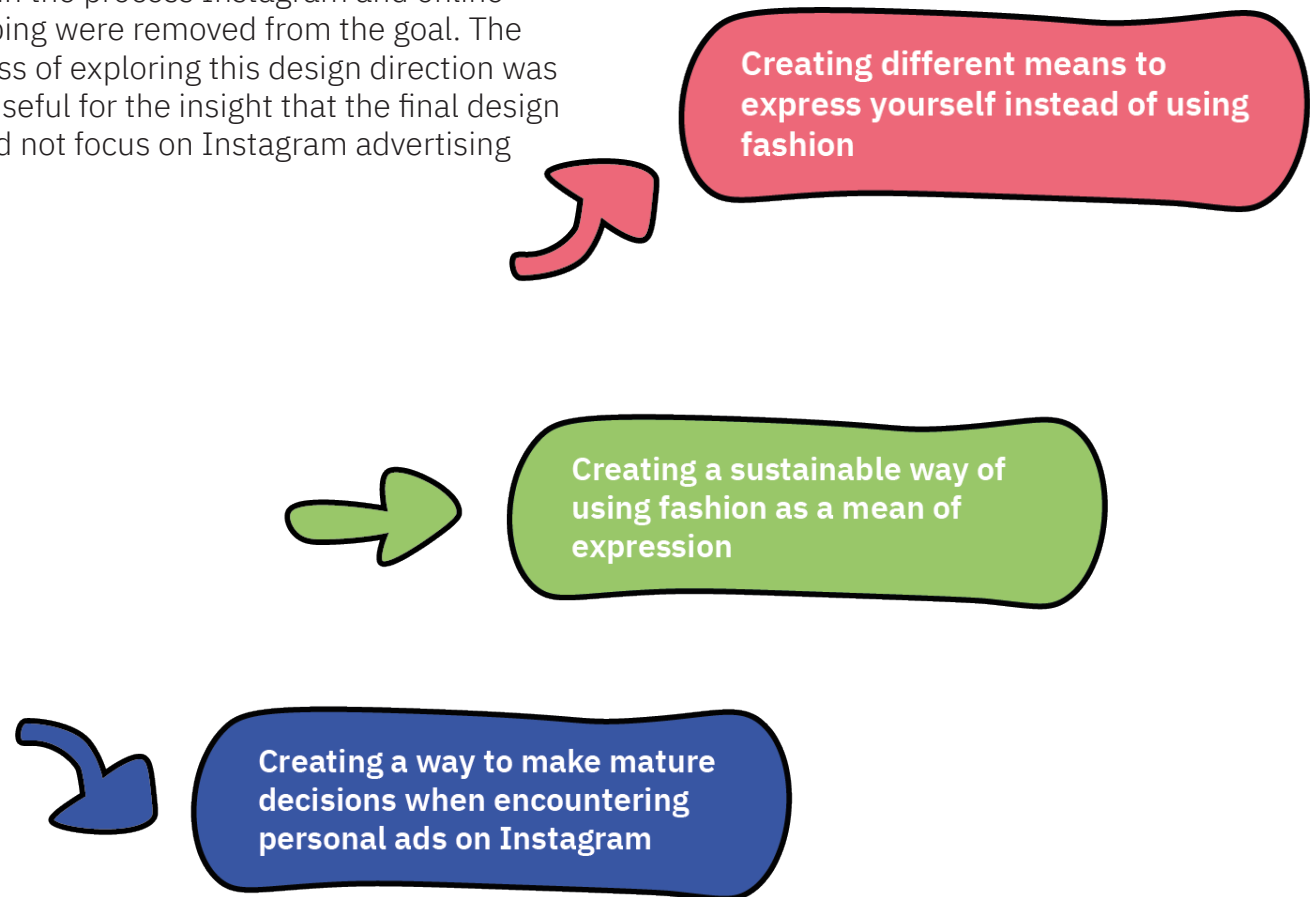
Figure 30. The 3 design directions

3.3. Desired Interaction

This chapter dived into the current interaction of the design goal. Form the current interaction a desired interaction was made. This interaction vision was used as support for the exploration of the design direction.

3.3.1. Goal and Method

The goal of this chapter was to:
Deconstruct the current shopping experiences of Gen Z, in order to define a desired interaction that would bring guidance during the concept development.

The method that was used to deconstruct the current experience of Gen Z while purchasing fashion items was the Vision in Product Method of Hekkert and Van Dijk (2011). It started with deconstructing the current interaction while shopping and translating this into a desired interaction by the use of the design goal. This desired interaction is useful to envision what the experience of your design should look like when the design itself does not exist yet.

3.3.2. Current interaction when shopping of Gen Z

The current experience of Gen Z when shopping was stated as followed (see Figure 31):

Gen Z can either purchase fashion items online or instore. When they are shopping online there are many triggers to start or keep on shopping, such as personal advertisements, discounts emails, influencers, social media, etc. When going to stores the product itself are the triggers to shop.
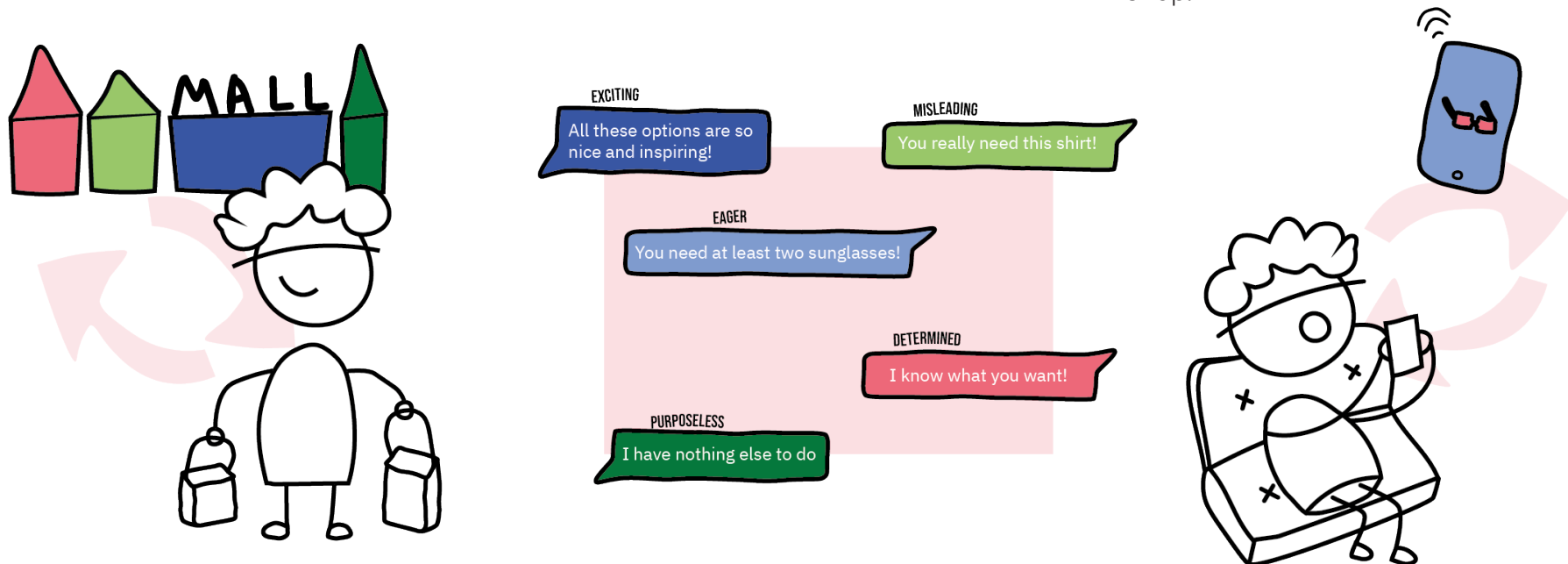
Figure 31. Interaction qualities of the current situation

In both cases there are multiple different context factors going on that interact with the user. These factors can be translated into interaction qualities. Together with the data of chapter 2, the following interaction qualities for both online and instore shopping are defined:

The interaction when shopping feels:

Exciting: there are so many options of fashion items to be explored

Determined: the company's goal is to make you buy anything

Eager: you want to buy more and more the longer you keep shopping

Misleading: you feel like you made a well-considered choice, but the advertiser made the choice for you

Purposeless: you start shopping without needing to buy something

3.3.3. Interaction vision for the final design

In the previous sub-chapter the interaction qualities of the current situation were defined. There are in total five qualities of which 4 are negative. The final design should of course not have negative interaction qualities. At this point of the process the concept development did not started yet. However there was already a vision on what the interaction should feel like with the final design. This vision is called the interaction vision.

This interaction vision is based on the current interaction qualities, but translated the negative qualities into positive ones. The current interaction qualities were derived from the research that was done, translating them into desired interaction qualities makes sure the findings from the research are integrated into the final design.

To strengthen the vision of the interaction qualities, a metaphor is used that evokes the same qualities (Hekkert & Cila, 2015; Hekkert & Van Dijk, 2011).

The desired interaction should feel like... **going on a road trip with friends** (see Figure 32 on the next page). The interaction qualities are Exciting, Meaningful, Trusting, Fulfilling and Inspiring.

The next sub-chapters explain why these qualities should be present in the design.

3.3.3.1. Feeling of excitement

In the generative test, it became clear that during and after shopping the participants felt excitement because of the many options and curiosity towards the products. Champniss and Vila (2011) stated that during the purchase of a product, there are both positive and negative affections, at some point the negative affections take over. The product did not make the consumers as happy as they thought it would. To find this feeling of happiness again, people start to consume again. Every time you consume the

negative affections take over sooner, which mean the time between consumption and the feeling of positive emotions becomes shorter. The design should bring this feeling of excitement back without needing to consume.

3.3.3.2. Feeling of meaning

Chapter 2.4 showed that having purpose and recognition are important fundamental needs during and after shopping. Participants stated that they often lack meaning when shopping online, the trigger to start shopping was often boredom. To stop users from shopping out of boredom, the design should give the meaning. Having meaning will also help to express yourself.

3.3.3.3. Feeling of trust

Chapter 2.4 showed that consumers often do not know whether or not to trust an brand concerning their sustainability claims and the quality of their products. Especially online brands can make their product look perfect, but for the consumer it is difficult to check whether this is true or not. The design should give the users a feeling of trust, without leading to consuming more items.

3.3.3.4. Feeling fulfilled

The time between consumption and the positive emotions becomes shorter every time you consume. This is because the products cannot fulfil your need of wanting

to feel happy, or it only can for a short amount of time. Therefore consuming 'green' products is not a solution to make your behavior more sustainable, research of Helm et al. (2019) states that to feel happiness on the long run, you have to consume less. The design should give the user a feeling of fulfilment in order to reduce their consumption and to express themselves.

3.3.3.5. Feeling inspired

Currently social media brings a lot of inspiration to the participants. It shows fashion items that almost perfectly fit your style and interests. Also stores bring inspiration when shopping. This feeling being inspired to express yourself in a new or different way should be kept, however it should not lead to consuming more.

Exciting: you do not know what the road will bring you

Trusting: you know the road will bring you there

Meaningful: you are on an journey to your desired location

Fulfilling: the journey brings you multiple different experience

Inspiring: you see al kind of new landscapes and people when on the road
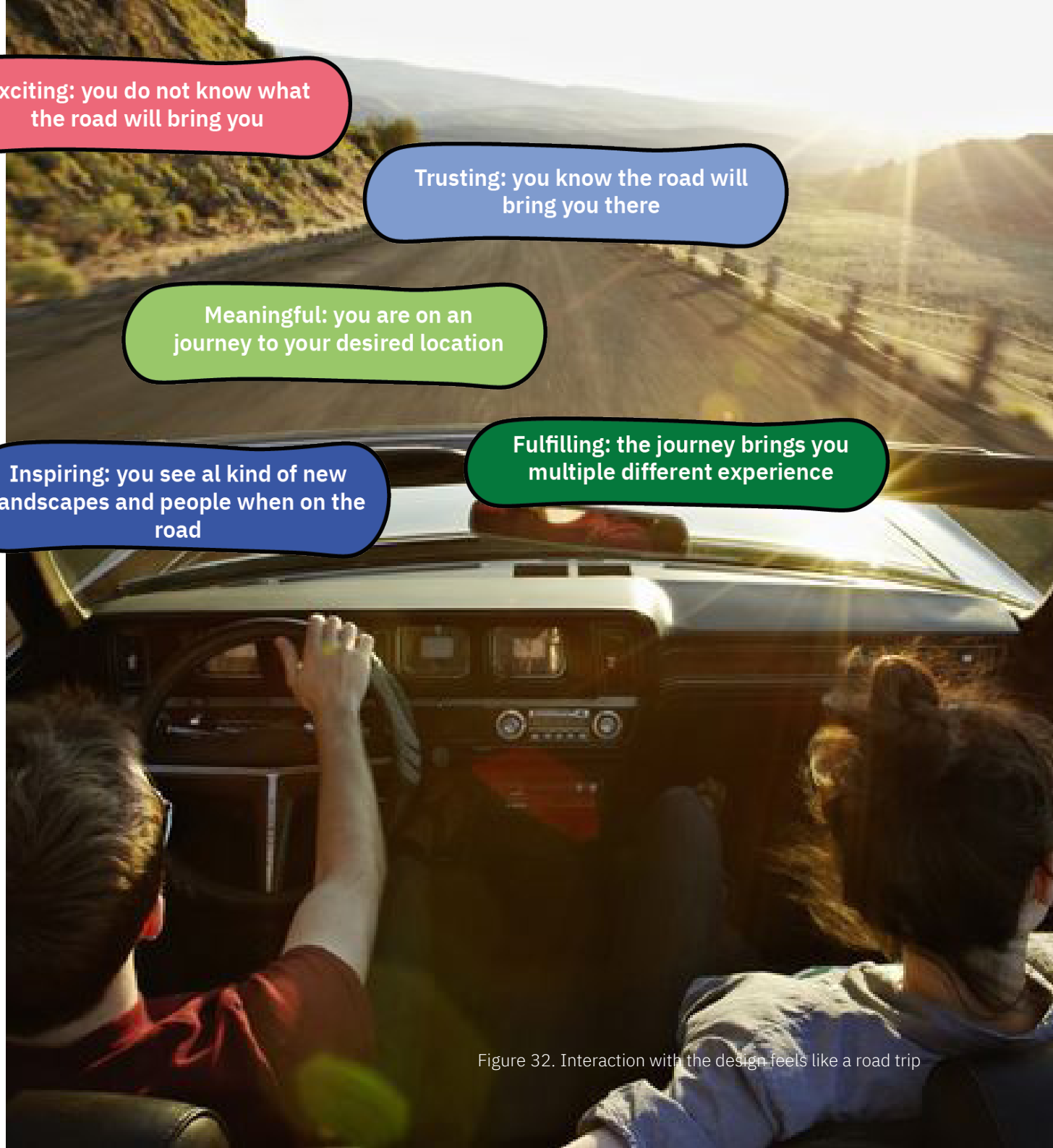
Figure 32. Interaction with the design feels like a road trip

3.4. Collection of design heuristics

The design direction were explored in this chapter. In order to be able to create multiple different concept, different design heuristics were collected (Yilmaz et al., 2016). This was done by reading literature, looking at existing anti-consumption strategies and by looking at anti-consumption art.

The goal of this chapter is to find inspiration to spark ideas for the development of a concept.

3.4.1. Reducing consumption

There are different ways to reduce compunction, the most found motive is money. Website and blogs such as Mymoneyyard (2023) provide consumers with clear steps and flowcharts in order to help them in making less impulse purchases. When googling 'buying less' financial experts and banks also offer their advice. Most website provide you with long text how to not buy any more stuff, they ask questions like: do you really it? However, these methods do not provide any guidance in knowing whether the product adds real value to your life. These advices or charts all seem based on practical reasoning, but they completely leave out how the person feels about the product, and about their current possessions.

The flowcharts that are provided also suggest to always carry it with you and make it a habit to go through it when making a purchase. Again, it does not explain how you should make it a habit and carrying it with you all the time does not seem feasible at all.

These kinds of examples showed the importance of this research, little methods or designs are known to make consumers reduce their consumption behavior using their emotions.

3.4.2. Expressing yourself through fashion

Kim and Ko (2007) defined self-expression as *expressing one's thoughts and feelings, and these expressions can be accomplished through words, choices or actions.* Self-expression thus can have many different forms. This research focused on fashion as a way of self-expression.

Young people, such as Gen Z, use clothing for many different purposes. It is found that younger people, often have a greater interesting in fashion that older consumers (Evans, 1989). The way of use depends on both the individual and the situation. For many Gen Z members the trade-off between fitting in and expressing their identity is a difficult task. Even when expressing your individuality, clothing can still be used to symbolize the link between the individual and the group they want to fit into. Clothing can make the wearer feel more confident and makes them able to fulfil certain roles. For Gen Z it can be difficult to satisfy the many, often conflicting, goals they try to reach with the consumption of clothing (Piacentini & Mailer, 2004).

All choices you make considering the clothing you wear; impact the way you express yourself. Whether a person wears expensive, basic, cheap, second hand or colourful clothing all contributes to the persecution of the self and the perception that other people have of you (Evans, 1989). Like artist Oliver (2018) once said: we use fabric to both conceal and reveal elements of our identity.

The use of Instagram enhanced the ability for Gen Z to express themselves across the globe. Gen Z use their Instagram account to show their followers 'who they are', fashion plays a great role in this. However the picture that Instagram users paint, is often of their ideal self rather the true and actual self (Choi & Sung, 2018).

3.4.3. Sustainable clothing

The term sustainable clothing is still a vague term. The term can confuse consumers and even mislead them and trick them into buying a product that has been green washed. Currently sustainable clothing mainly refers to the use of organic material or recycled materials, however being a sustainable product entails so much more. The current use of the term sustainable clothing conserves the linear waste economy (Vesterinen & Syrjälä, 2022). As Leach (2022) said in his book; "It doesn't matter how much organic cotton and recycled polyester you use, if you're buying too many clothes, that's never going to be sustainable".

3.4.4. Reflection as anti-consumption tool

The research of Dholakia et al. (2018) introduced the use of reflection as an anti-consumption tool. Dholakia et al. (2018) explained that anti consumption classifies three broad strategies: reject, restrict and reclaim. These strategies are widely used by practitioners of anti-consumerism. However, there is little said about how the mainstream consumer can change their current behavior so that it becomes more sustainable. Much of the current consumption is driven by social pressure to wear the latest fashion trends, a desire for newness and cultural norms that encourage constant change. Some of these reasons are self-generated and some are marketer-provided. Whatever the reason is,

people need help and support in changing their current consumption-based lifestyle. The design should help them to increase appreciation and enjoyment of their current fashion items. To achieve this, a fourth strategy for anti-consumption, is introduced: reflection. Reflection can be used a way to regulate and reduce impulse purchases, as current choice of purchases are dependent on previous choices. The intensity of desire for a purchase directly affects the user's likelihood to impulse buy again. Simple thinking of the useful stuff you own and how you enjoyed them, can already lead to reducing consumption (Dholakia et al., 2018).

3.4.5. (Anti) consumption art

For more inspiration I looked at different artist and TV shows, see 33, 34, 35 and 36. All artists used different ways to show the impact of the (fashion) items you own. Making such overviews create awareness and brings room to reflect on each item more easily. I really love this way of showing the value of products to the people who own it. I imagined that the artist and people involved in the art pieces went through this process of reflection, however nothing was written down or published about this process.

Everything I have by Simon EvansTM

This artist duo made a list of everything they own (see Figure 33). The art piece is made from all kinds of papers found on the streets. The collage is put together with handwritten notes underneath every item. The artwork is critical towards the current consumption society (Evans & Lannan, 2009).

Figure 33. Simon EvansTM - Everything I have

Soft shells by Liddy Oliver

The portrait series of Liddy Oliver explores the tendency to visually represent our personality through garments and accessories, while also using these tools to mask our insecurities from the outside world (Oliver, 2018) (see Figure 34).

Material World: A Global Family Portrait by Peter Menzel

Peter Menzel made a series of pictures of families all over the world (see Figure 35). He portrayed the families in front of their house together with everything they own. The pictures clearly show the difference between the lives of families around the globe (Menzel, 1994).

Television program – Je huis op orde

This Dutch television program helps families with cluttered houses. The program takes out ALL the items that the family belongs and sorts them into product categories and color (see Figure 36). Afterward the family had to reflect on what they want to keep and what can be gone (IDTV, 2023).

Figure 36. TV Program - Je huis op orde

Figure 35. Peter Menzel - A Global Family

Figure 34. Liddy Oliver - Soft shells

3.5. Deconstruct my wardrobe

From chapter 3.4 the inspiration arose to start and destruct my own wardrobe as there was still a lot unknown about what reflecting on clothing entailed. First the wardrobe of multiple members of Gen Z were researched to find similarities and difference between different people's wardrobe. Afterwards, I developed a way of deconstructing my own wardrobe. This process led to a top 10 of most regretted items, and most valuable items was created. From the whole reflection process, insights were derived at the end of this chapter. These insights formed the base for the concept that was created in chapter 4.

3.5.1. Goal of deconstructing my wardrobe

The goal of this chapter was to dive deeper into the process of reflecting on one's wardrobe, in order to experience this reflection process first hand. The insights that were derived from this activity were translated into a concept design.

3.5.2. Gen Z closets

I was inspired from the art works I found in sub-chapter 3.4.5. All these art works were a form of self-reflection. However little was know about the process of reflecting. The art works made me look critical to my own wardrobe and wonder what holds value and what not, and especially why. Figure 37 shows my closet, which was a mess. There was no way I could reflect on my wardrobe if it looked like this.

That is why I asked 13 other Gen Z-ers to share a picture of their closet, see Figure 38 (next page). These pictures showed that I am not the only one who has a messy closet. This gave me the confirmation that I should work on a design that allows people to reflect on their fashion items regardless of how messy their wardrobes are.

The first idea was to make a picture of every fashion item I own. In this way I could go through this reflection process of deconstructing my own wardrobe. Just like Simon EvansTM did. However after some iterations this did not seem to be the best option. It would create a nice overview for sure, but it was too much focused on creating awareness instead of creating a design that would actually help and guide Gen Z. Therefore this idea did not fit the design goal. However reflecting on my wardrobe still hold the potential to bring very valuable design insights, that can be used to create a concept with.

Therefore I reflected on my whole wardrobe and made pictures of the 10 most valuable items and the 10 most regretted items. These 20 items I reflected on in detail.

Figure 37. My own wardrobe

49

Figure 38. Gen Z wardrobes

3.5.3. My wardrobe top 10

In total I own 266 pieces of fashion items (see Figure 39).

From all these 266 pieces I mapped out the 10 items I regret buying the most and the 10 items I value the most. To guide the process I gathered the following information:

- A picture
- Product Category
- Brand
- Year of purchase
- Frequency of use
- In store or online bought
- Evoked emotion
- Story how I bought it
- Why do I regret? Or value?

At the next two pages the two top 10 are showed. Figure 40 shows an overview of my 10 top most regretted fashion items and Figure 41 the most valuable ones.
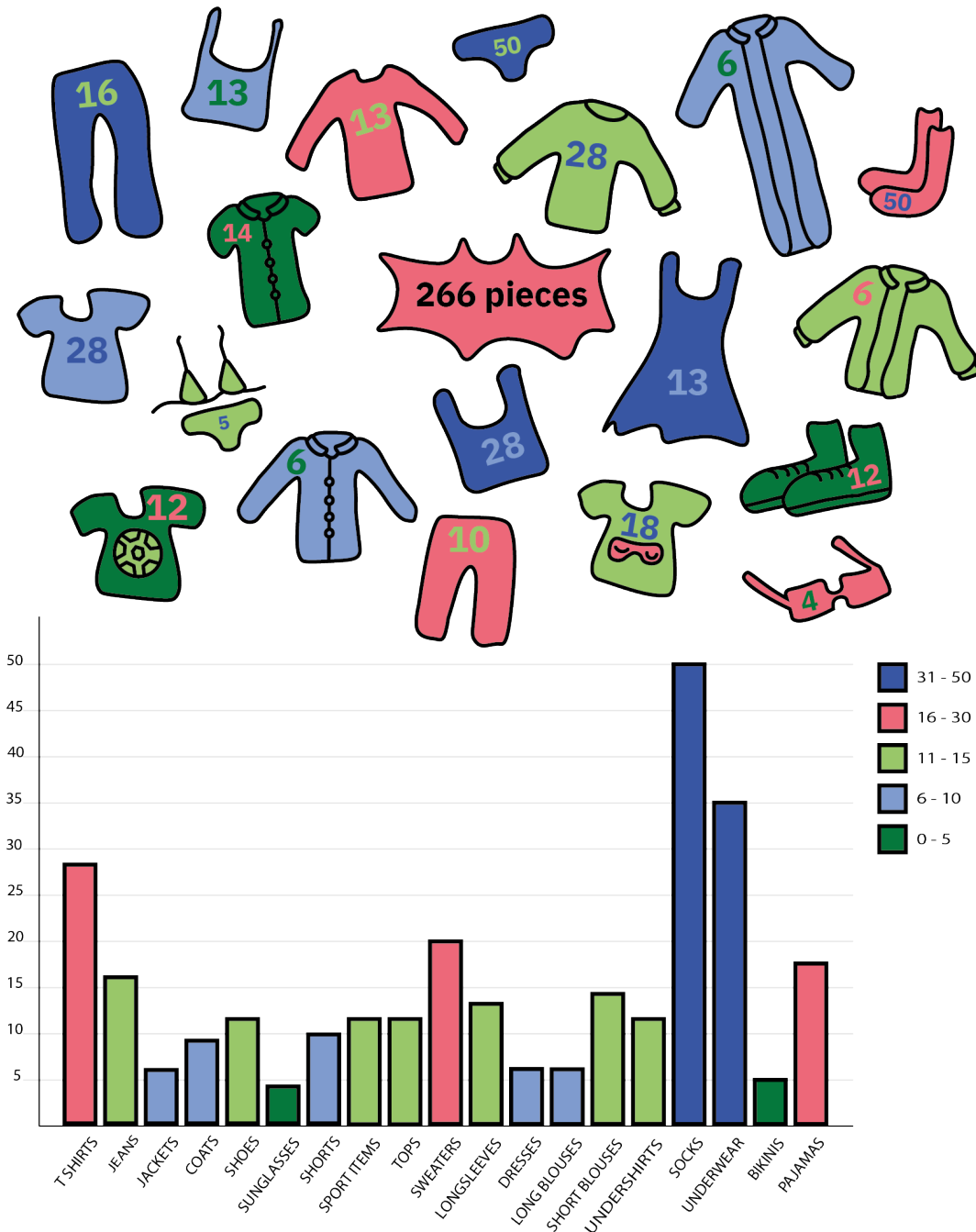
Figure 39. Every piece of my wardrobe

Top 10 most regretted fashion items

Figure 40. Top 10 regretted items

Top 10 most valuable fashion items

Figure 41. Top 10 valuable items

Every piece holds a story and an emotion. From all the 20 items and their stories, a booklet was made. The full booklet can be found in appendix K. See Figure 42 for a example of a regretted item and Figure 43 for a valuable one.

3.5.4. Comparison regret and value

To gain insights into the reason why I value or regret certain pieces, a comparison was made of items that were similar in pattern, category, brand, place of buying, etc. (see Table 2 at the next page).

Guilt

bought during sale – 2018 – never worn

I was on a short holiday in the Netherlands with my parents. We were in a small town and there was a small shop which had huge sales. I saw this dress and really loved the pattern. It was quite cheap as well. My mother bought the dress for me, even though I never wear dresses in daily life. At that moment I was happy and thought I was going to be a girl who wears dresses. My father was really confused when we came out of the shop with a dress, as he also know I never wear dresses.
I should have never let my mother buy this for me, as I have never worn it. I do not feel comfortable in the dress and the fabric is also very see through. The dress makes me feel guilty that I wasted my mother's money.

Figure 42. Evoked emotion and story of the dress

Admiration

thrifted – 2017 – worn very often

I was visiting my older niece in Amsterdam, together we went to several vintage stores. I really enjoyed spending time with her, and she showed me around the city, which was super cool as I was still in high school. I wanted to have some more 'hipster' pieces of clothing, that's why we went to the vintage stores. In the store I found this blouse, I loved it, and the price was Very reasonable. So, I bought it. Everyone at school complemented me with my new purchases. I worn it so many times and I am still wearing it now, a bit less then back than, but still often. I love the look. It is interesting but also suitable for everyday life. The quality is still good, and the baggy fit is perfect for me. When I look at this blouse, I have a feeling of admiration as the piece brought me so many memories and makes me feel confident when wearing it.

Figure 43. Evoked emotion and story of the blouse

Value	Regret

Difference: the category of the piece

These 2 pieces are similar in the pattern. Both are colourful and striking, the colours are quite similar. The blouse I value because of the pattern and the memory attached to it, after years the material is still very good. The dress I regret because of wasting my parents money, as I should have know that I never wear dresses. I still like the pattern of the dress, if it was a blouse I would have worn it.

Difference: the quality of the material

These two jeans are very similar. Both in color and the fitting. The material of the left one is more breathable and thinner. The quality of these trousers are high

and the fitting is perfect. The right jeans did fit well in the shop however after one time washing it, it shrunk. Which made it too tight. It was not comfortable to wear anymore.

Difference: the fit

The shoes on the left, I bought second hand. They are made of leather and can last years. Even though it took me a lot of time to get used to them, I now wear them every day during winter. They go with almost every look. The heels on the right are also made of leather and of good quality, however heels are just not comfortable. I only wear heels during special occasions, but when I have one I never take these.

Difference: the fit and style

Both shirts are both in the thrift shop for two Euros. I like left one because of the loose fit and the stripes, I dislike the right one because the fit is too tight for my liking and because of the 'posh' style.

Corresponding factor: the fit and quality

These four T Shirts I all regretted, they all look similar because of the color. This makes it seem like I dislike light coloured T shirt, this is not true. The corresponding factor is the fact that the fit is not what I like, it fits but I like baggy shirts. Also the quality of the first three is not great.

Table 2. Comparison regret and value

3.5.5. Insights from both top 10s

From the process of creating the top 10 regret and value, multiple insights were derived. These insights are translated into statements that can be used to design with.

3.5.5.1. Regret

Most items bought in the regret top 10 were bought during sale. The other items were either thrifted or just cheap. I did like most of the items but an important motive to really buy it, was the fact that is was on sale or cheap in general. The fact that is cheap makes it easier for me to make the choice of buying it as I have less to loose. This also applies for products I bought in a thrift shop, I may not like them that much, but it does not matter because it was only a few Euros.

Looking back at these items now it does matter when I do not use it. Living a sustainable life is something that gives me purpose in life and brings me value, buying fashion items just because they are cheap is not really a sustainable thing to do. So in the end all these 10 items brought me negative emotions.

3.5.5.2. Value

None of the valuable items were bought during sale. Some were bought in the thrift shop, others were gifted, and two items were bought online (of which one second hand). All the items are of good quality and still look presentable even though I wore them often. Some items I attach value to as they hold an emotional memory, others are just really functional or some just fit with a lot of other clothing I own.

All items evoked positive emotions when looking at it and when wearing it. Them make me feel comfortable and good about myself.

3.5.5.3. Overall insights

Reflecting on my wardrobe and selecting which items I regret and which I value, gave me so much insights into my own mind. It showed me what is not important to me and why. It also gave me insights in the money, time and effort I lost when I buy something out of impulse instead of having a reason to buy it. None of the valuable items I bought during sale, while I did with most of the regretted items.

The regretted items are mostly poor quality, while the valuable items are durable. Both top 10 include items from the thrift shop, however the valuable one were items that really sparked excitement when seeing them for the first time. Compared to the thrifted regretted items, that I bought just to try out or because I thought I may be nice for some sort of specific occasion. The whole process of creating the two top 10's, was an emotional journey. Writing down why you value a piece can bring up the specific emotions that is connected to it. It did not only make me content with these pieces, it also made me really grateful for the many valuable memories they hold.

Looking at both top 10's, both include a very similar beige jeans. One I absolutely love, the other one I really dislike. The difference is in the quality, not in the price. The valuable jeans was only 6 Euro in the thrift shop, the regretted one was 25 Euros.

Another interesting insight is the fact that it was easy for me to choose what I could get rid of. While normally this is very hard for me, but now that I focused on the completely wardrobe and reflected on the emotions every piece evoked, it was suddenly a very easy choice on what to keep and what not. If an item evoked annoyance or embarrassment, why should I keep it?

3.5.5.4. Design insights

I translated the insights from this research into key point that can be used to design with.

• You need to hold or wear the piece to be able to reflect on it

• Taking the time to reflect on what emotions you feel when looking a piece, makes it easier to choose what to keep an what not. You see patterns in your own buying behavior

• The process of reflection on your wardrobe can be emotional as it shows you insights into yourself and the choices you make

• It can take time to get into the process of

reflection, there is a threshold to start

• Buying items in sale almost never turned out as a valuable purchase, you buy from the wrong intention when shopping in sale (shop to shop)

• Value is not only about money

Developing a concept

4.1. Introduction

After the exploration of the design direction was done, it was time to start the development of a concept. First all ideas that came out of the exploration were written down and sketched out. In total more than 10 pages full of sketches were created. This section will start with explaining seven of these ideas in more detail. From these ideas, idea 3 was chosen to focus on. This idea was made into a concept. This concept went through several iterations before it became the final concept. In total 5 versions were made of the concept, all versions are explained in this chapter. The section ends with the first version of the final design. The final design will be presented in more detailed in the next section.

Developing a concept, created 5 different versions
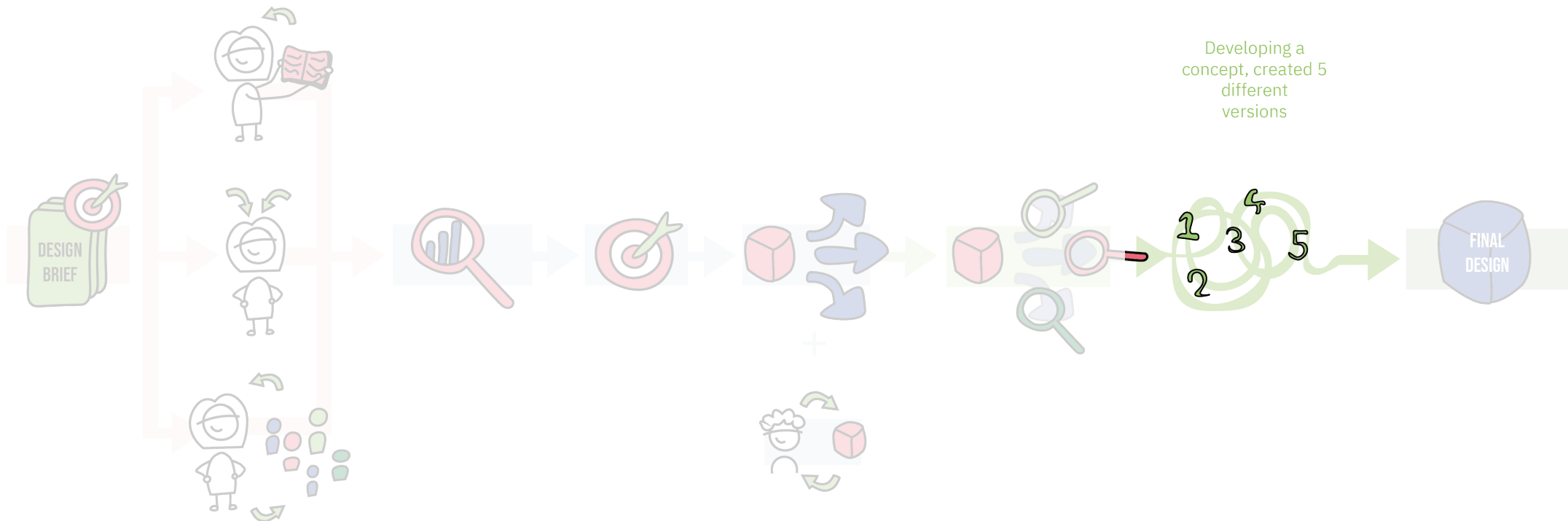
Figure 44. The stage of the design process

4.2. Ideas from exploration

From the exploration of chapter 3 multiple ideas were generated. These ideas are explained in this chapter. From these ideas a design concept was made.

4.2.1. AI-Scan Your Closet + Instagram Block

Scan your closet using a specially designed app, AI will make an inventory of your whole closet. It makes an overview of what you own and categorizes it, makes new combinations and shows you what you do not use anymore. The app is connected to your Instagram account, when you start to shop, the app will pop up and shows you a similar item you already own. It will show you how to style and use the item you already have, and therefore makes you able to express yourself with your own clothing and without buying new items. Figure 45 shows the both ideas.

4.2.2. Reflection On What You Have

Have a reflection tool / guide that makes you content with what you have, to reduce the desire to consume new impulse purchases. Have a step by step guide to do this (see Figure 46).

In the research of Dholakia et al. (2018) they let participants reflect in the following way:

• Take a minute and think of a product that you purchased, currently own and have used recently.
• Describe this product in detail.
• Now describe how you used the product on the most recent occasion. Explain WHEN,

Figure 45. Scan your closet & Show similar items you own
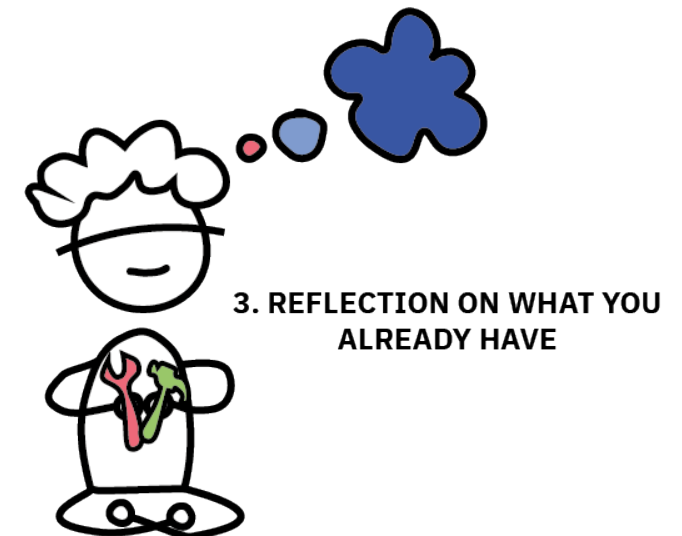
Figure 46. Tools to reflect

WHERE, HOW, and HOW LONG you used this product. Please describe your experience with the product in as much detail as possible, and please spend at least two minutes on this task.

4.2.3. Anti Consumption campaign

Make people really think about how much impact their consumption has (see Figure 47). Shock and provoke people in order to make them buy less. Let them find meaning in expressing them through other means. The design itself does not bring guidance but sparks a new way of thinking and maybe even living.

Figure 47. Campaign

4.2.4. Tool For Rational Decision Making

Give people guidance at the moment they start seeing an advertisement. Provide a step by step guidance that is easy to follow for everyone and is applicable to many different shopping situations. The tool will make them stop making the purchase (see Figure 48).
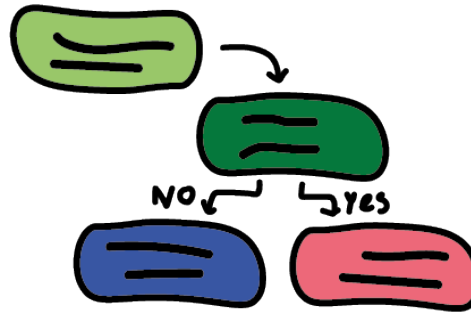
Figure 48. Rational decision making tool

4.2.5. Swap Products For Experience

Get a pop up every time you start to shop that explains you what you can also do with the money you are about to spend. This activity is based on your personal likings and fits your schedule. It shows you all the benefits this activity has over the product you want to buy (see Figure 49).

Figure 49. Choose experience over products

4.2.6. Project Everything You Want

What would you look like if you would wear anything you can imagine (see Figure 50)? This tool allows you to explore your style and go beyond any boundaries of what you would like to wear. The clothing you project does not have to exist, you can imagine your ideal style. This tool, or game, makes you realize what really fits you and what you like, the desire that is evokes makes sure you do not have the desire to impulse buy later. You 'use up' your consumption desire.

Figure 50. Tool to project everything you can imagine on yourself

4.2.7. Conclusion

All ideas already sparked new ideas. Idea 3 sparked the most ideas. This idea focussed on reflection as tool to reduce your consumption. In the next chapters this idea is developed into multiple different concept versions.

4.3. Concept development

From the explorations of chapter 3 and 4, a design concept was created. Multiple iterations were made during the process of exploring and developing the concept. This chapter shows these iterations. The iteration process itself was quite chaotic, a structure was made to report the process (see Figure 51). The process is divided into 5 versions of the concept. Every versions holds its own explorations and developments, however these versions are not linear, at some points in the process it goes back to previous versions or moves to further versions.

4.3.1. Version 1 of the concept

A feeling of chaos arose when looking at the different wardrobes of Gen Z. This chaos made me deconstruct my own wardrobe to create a clear and calm overview. For the design I do not wanted to create a tool that helps people tidying up their closets, however the design should bring the users this feeling of calmness. Especially the
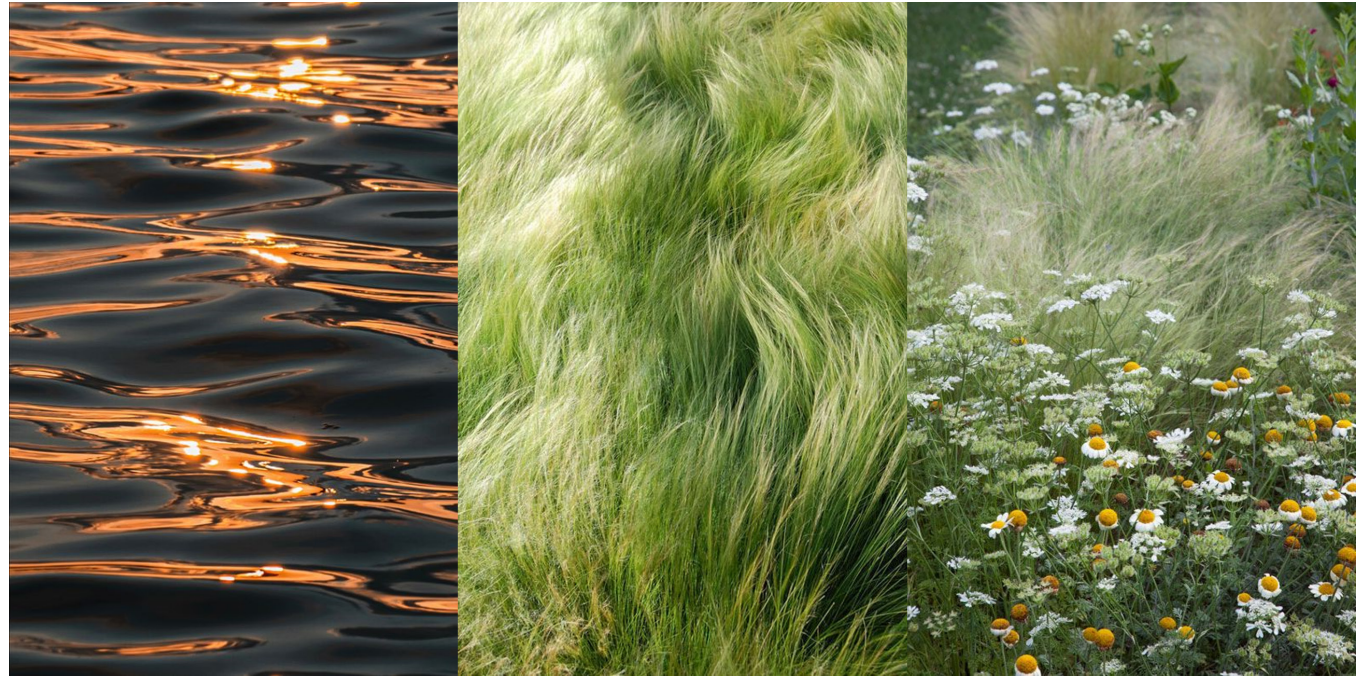
Figure 52. Long term feeling of calmness

feeling of calmness on the long run, so it is not necessarily about the design being calming. Figure 52 symbolizes they feeling the design should bring on the long term.

Figure 51. The process of developing the concept

From the generative research and the literature review in chapter 2, it became clear that some Gen Z struggles with the heaviness that concerns about the environment can bring. One of the participants made clear that thinking too much about her (fast) fashion purchases, made her feel sad about herself. This design should avoid this feeling, the feeling of calmness can help to avoid this feeling of sadness.

The concept of using reflection as an anti-consumption tool is a new approach in consumer behavior change and was

introduced to me by Dholakia et al. (2018) and is supported by several others (Iyer & Muncy, 2009; Lee & Ahn, 2016). However, there are not many practical implications that I could find using this method, too be honest I could not even find one. Reflection is proven to be a powerful tool in different fields already, such as in education, at companies, in healthcare, in yoga and many more. Using reflection to reduce purchases, holds great potential. However for many users it is still a unknown tool, that may feel a bit 'woolly'. Dholakia et al. (2018) wrote that the reflection should be made as easily as possible, otherwise it is hard to be accepted by the target group. For example, telling the user to mediate or be mindful can already be challenging for users. This is because reflection can be vague when not guided correctly, the user can feel lost because they do not know what to do. To make reflection as a tool approachable and due able for Gen Z, the concept in Figure 53 was created.

The concept worked as follows:

Step 1. After the user did a purchase online, a picture will be printed immediately of the product.
Step 2. This picture can be placed on a frame in the users room
Step 3. There will be room to write down the emotion the user has about this product.
Step 4. When the user makes a new purchase, they will be asked to reflect on the previous one(s). They will also put up the new
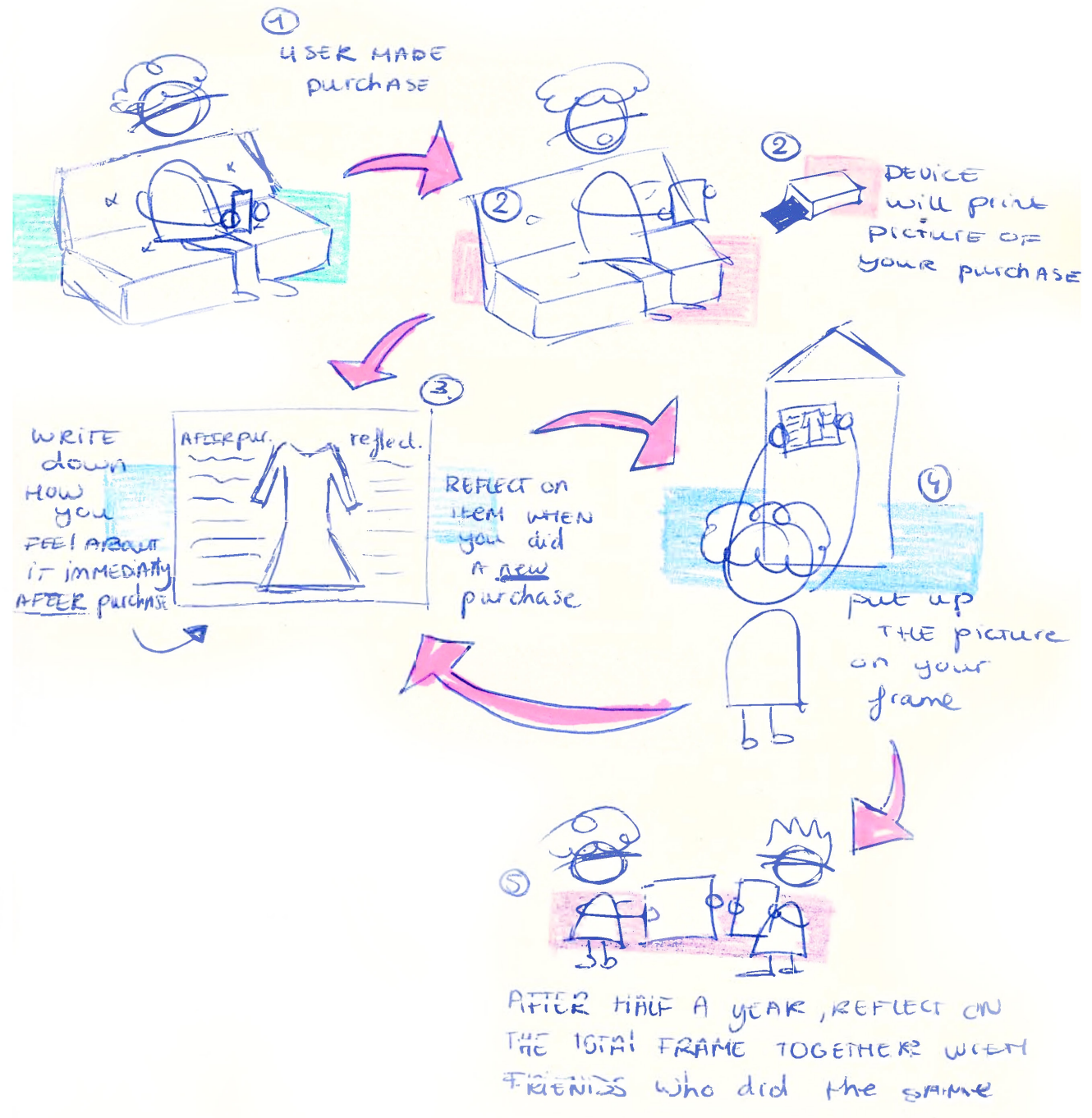
Figure 53. Concept version 1

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picture in the frame.
Step 5. After a certain amount of time the user is asked to reflect together with someone on the picture frame (artwork) they made.

The concept focused on the situation that is happening after the user made a purchase. This is because at this point there is the most room for reflection. Companies are so focused on making people consume, that is hard to convince the users at that exact moment to stop making the purchase. For this project there is a greater opportunity in focusing on long term change. The attitude of the users need to be changed first, after that their behavior will follow. This design will guide the user in getting motivated to (slowly) change their consumption behavior by practicing introspection.

There are multiple aspects of the concept that are unclear still at this point:

- How to print the picture?
- Place: Where to put the artwork? - What should the reflection cards entail?
- Should it be in a place where others can see it? Make it something that starts a conversation. When should you see it?
- What should the size be? Not too big?

The following (sub)chapters will go into these questions to create improved versions.

4.3.1.1. Reflection cards exploration

The first aspect of the concept that was explored, were the reflection cards. Multiple existing reflection cards were research to take out the most important aspects and use these in the concept. The reflection cards that were researched can be found in appendix L.

Design takeaways from existing cards:

- Have different levels to start with, so you can built further (levels of abstraction)
- Guidelines to help you to reflect
- Not too much text on the reflection card itself
- Room to write / draw on the cards
- Make the reflection moment individual, versus the discussion a group activity (but also something you can do alone)

4.3.2. Version 2 of the concept

From the findings and questions of the previous sub-chapters and explorations of the context, version 2 of the concept was created (see Figure 54). There are still questions that need to be answered, a user test and co-creation session was be held to help filling these gaps. This concept is more open than concept 1 and therefore better usable for user testing and co creation sessions.

The concept worked as follows, including the questions that still need to be solved:

Step 1: User made purchase
Step 2: Print reflection card
- How will this reflection card be printed?
- Will the full card be printed or just the picture of the purchase?
- What should be on the reflection card? Picture of purchase, price and date?
Step 3: Reflection on purchase at moment of purchasing
- Online: do it immediately when you done paying?
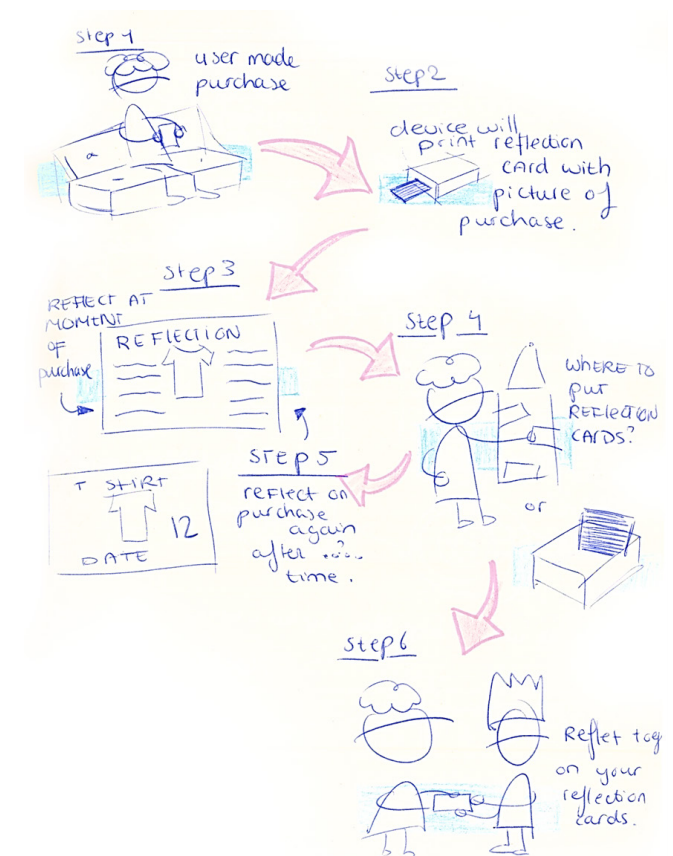
Figure 54. Concept version 2

- Physical store: do it when you come home?
- Provide guide lines for reflection?
- Provide guiding of emotions?

Step 4: Place of the reflection cards

- Unclear where to put the reflection cards, it should be visible as you have to reflect on it again, should not forget.
- Make art work out of reflection cards? Have nice pictures at the other side?
- Have organizing box?

Step 5: Reflect on the purchase again after some time

- How much time should there be in between? In between purchases?

Step 6: Reflect together with friends on the reflection process

- Provide guidance of reflection?
- Reflect with two people or a bigger group?

4.3.3. User test of concept version 2

To answer the question that were presented in version 2 of the concept, an user test was done. This test consisted of 2 tests, a paper one and an online one.

4.3.3.1. Goal and Method

The goal of this user test is to gain insights into the current version of the concept, to improve the concept. To research this goal, three research questions were made. These questions will be answered by conducting two different but similar tests.

Test 1: Let people reflect on their purchases alone using a paper booklet.

RQ1: How does reflecting on a purchase influence the value people attach to a product?

Test 2: Let people reflect using a Miro board together with other participants.

RQ2: What is the difference between reflecting using an online medium versus an offline medium.

RQ3: How does reading other people's reflections influence the participants perceived value of their own product?

4.3.3.2. Test 1

In test 1, 3 participants got a small booklet that would help them reflect on an purchase they made (see Figure 55). The book can be found in appendix M. The focus of the booklet can be seen in Figure 56. This page shows the reflection exercise the participants were asked to do directly after purchasing an item online, and after 1 week. The participants were asked to note down their emotion and their reflection. At first, the participants were asked to reflect on online purchases, however this was later changed to both online and
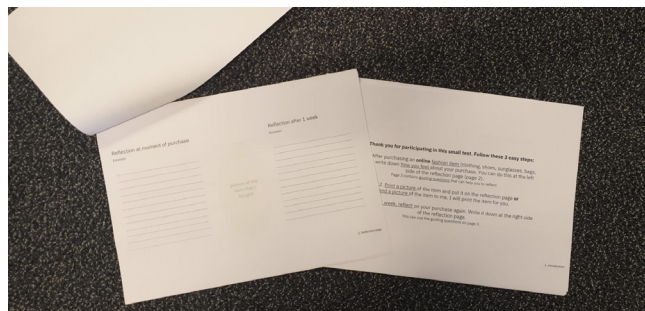
Figure 55. Reflection booklet - user test 1

Figure 56. Reflection exercise of the booklet - user test 1

instore purchases that were no longer than 1 month ago.

After the participants filled in the booklet, a in depth interview as held with 2 participant about their experience with the booklet. It took around 20 minutes.

4.3.3.3. Test 2

In user test 2, the participants got a similar booklet, the difference is that they got it online. This exercise had one step extra compared to test 1, the participants were asked to also read the reflection of other participants (see appendix N). The participants had to write down their reflection on a shared Miro Board (see appendix O), they all gave consent to participate in this study and knew other participants could read their answers. To guide the participants in their descriptions of their emotions, the descriptions of positive and negative emotions of Desmet and Fokkinga (2021) were attached to the board. It was difficult

to find enough participants who bought something online in the past week, after the iterations on the design goal, it was decided to also recruit participants who bought something instore, no longer one month ago.

A follow-up interview was held with two participants.

4.3.3.4. Results of test 1 and 2

From both test the results gave the following answers to the research questions:

RQ1: How does reflecting on a purchase influence the value people attach to a product?

Users stated in user test one, and also two, that this reflection exercise helped them to gain insights into the reasons why they bought these purchases. It gave them a clear overview of their emotion and whether they were satisfied with the product. Two participants noted that they wouldn't have known their emotions attached to the purchase if they had not done this exercise.

RQ2: What is the difference between reflecting using an online medium versus an offline medium.

At the online reflection exercise it was easier to attach a picture to the reflection cards. However the users forgot to fill out the second part of the research, which led to the researcher having to send multiple reminders. With the paper version that was

not the case as most users put the booklet on their desk or table where they would see it and be reminded of the exercise. Writing it down on paper creates a moment to calm down and think about your behavior, where online it is more of a exercise you do in between other tasks.

RQ3: How does reading other people's reflections influence the participants perceived value of their own product?

Reading other people's reflection did not change the perceived value of their own product. However it did gave insights into why people buy certain products, and some participants even became critical at the reflection of others. 1 participant was confused that the other two participants still had a positive emotion at the second reflection, even though there was something

wrong with both purchases. Reading others reflection thus not have immediate impact on the perceived value of your own purchases, however I do think it does influence the way you look at your own reasons to purchase certain items. So it is not about the purchase itself but the motivation behind it.

Figure 57 shows a few interesting quotes from the participants of test 1 and 2. The next paragraph will go into detail about how these results were used to design with.

Figure 57. Quotes from participants

"Even though they are very cool, I do **not** think I needed to buy them in the first place."

"I am going to wear it, but after I fixed it (which often takes a while..)"

"I think people are often happy with a purchase because they invest time and money and not nessecarily by the exact choise they make."

"It was worth the money, however I feel less fulfilled"

Test 1

The main takeaways from test 1 are:

- The description of emotions made it easy to explain the emotion
- The reflection exercise made user aware of their emotions
- Guiding questions were helpful during the reflection for inspiration and to check if you did not forgot to think about a different aspect
- Comparing the change in emotions gives insights into your reasons to buy
- The paper booklet made it easy to remember to fill out the exercise as you could see it laying on your desk or table
- Writing your emotions down feels like you are really taking time to think (and thus reflect)
- You need to take to calmly reflect on the item
- It was difficult to start the reflection
- It was a hassle to print a picture of the item, the participants just had the item in front of them during the exercise

Interviews

Participant 1 – Test 1

This participant was given an paper booklet, however he delivered the exercise to me online. As he said: "I could not find a pen, so this was easier". He stated to be in a hurry when filling out this exercise. Even though he was in a hurry this person had multiple ideas on how to improve this concept. Such as: comparing your change in emotion to previous experiences, is there a pattern in your shopping behavior? For this participant the exercise was relatively easy as he stated to think about his clothing already. His emotion stated the same, namely joy, however he stated that the sweater was a bit small.

Participant 2 – test 2

This participant made a well-considered choice to buy a new jacket. His old jacket was worn out and he really needed a new one. However he was not sure about the size and does not like to send purchases return, therefore there was this feeling of guilt in the beginning. However the guilt was overshadowed by the excitement for the new jacket. When the jacket arrived it was a disappointment, the jacket missed multiple features that he envisioned. He had to return it, something that he tries to avoid. However in the end it was the better decisions as other wise he would have a jacket that really disappoints him. The questions helped this participant to reflect. Normally he would have never done this but he enjoyed the experience quite much. It made him aware of this own emotions. The participant even stated to take this experience into account during his next purchase.

Test 2

The main takeaways from test 2 are:

- I needed to send multiple reminders of filling in the reflection after 1 week, all participants did fill out the second reflection eventually (1 participants after 3 reminders)
- Out all reflections "after use", the participants felt both positive and negative emotions
- Two participants bought an item they did not really needed, another participants had to return the item as it did not fit
- Having a description of the emotions worked well for 1 participants but not for someone else
- Reflecting on purchases is really personal as it differs per person why they value certain items. Directly reading other person's reflection cards did not work, as you do not feel what that person feels. However the participants stated that it could work to discuss their reflection process in general. The were also quite critical about each others reflection, they did not believe that some others felt positive emotions afterwards
- People can have trouble assigning emotions to a purchase as they do not feel such strong emotions

Interviews

Participant 1 – Test 2

It was quite easy for the participant to reflect on the item, this because she had a story attached to the piece. Before buying it she

thought about it multiple times, this made here choice well-considered. After the shirt arrived it had holes in it, which made her angry towards the seller as that person did not mention the holes. She still likes the shirt but she first had to repair it, which will take time. Therefore she was not sure when she is going to wear it again. She bought this shirt because she had owned it before but she had thrown it away because she was a bit too fanatical with throwing old clothing away. She had not worn it a lot however she found out that the piece did hold value to her.

She did not reflect on other's pieces as there were no other reflection at that time, she did not go back to the Miro board to take another look. Filling it out online was easy to do, but it did not felt like she was really taking a moment for this exercise. It felt more like a to do.

Participant 2 – Test 2

This participant bought a bra because she got a discount voucher in her email. She already needed a new bra, but it was not that urgent that she had taken time to search for it before. She was very satisfied with the purchase also after some time. She was satisfied with the comfort and with the price. Reflecting on her purchase was meaningful for her, however because she needed the product her emotions regarding the purchase did not change much. She expected the design to work well if you buy a lot. Assigning emotions to the purchase was a bit hard, however the questions really helped her.

Reading others peoples reflection did not change her perception, however she does think that the others were just happy with the product because they invested time and money in it, not because they like the products so much. Because the two product of the others were both broken.

Improvements for concept

- Different levels of guidance would solve the problem of some people needing more guidance then others
- The second reflection should be after a fixed time, so it will not be forgotten
- Reflecting directly at other people's reflections did not work, it is too personal
- Reading others reflection does give insight into why people buy certain products in general and may let the user think critical of their next purchase
- For most participants their emotions changed after 1 week
- Writing your reflection down on paper feels like you are really taking a moment to reflect, online you can do it quickly in between other tasks
- Make it easy accessible for first use

4.3.3.5. Printing of purchase

This part focused on exploring the different ways of printing a picture of the purchase. In the graduation project of Vela (2014) the user reflects on money they spent by means of questions that are printed from a device when you smartphone is installed into the device.

This would mean that this design will come with such sort of device. The design should encourage people to consume less products, including an extra device does therefore not fit the design goal.

During the deconstructing of my own wardrobe, it was easy to reflect as I hold every piece in my hands. In the user tests it became clear that users do not need nor want a printing device for this design. Holding the item and or wearing it, would be the most optimal way to reflect on the item according to the participants and according to my own experience. Because it is not about the way the item looks, it is about how you feel when you hold and wear the item.

4.3.3.6. Development of reflection card

The reflection cards are an important part of the concept, therefore the layout of the cards were important. For the user test a simple reflection card at a4 size was made (see Figure 56).

Figure 58. Second version of reflection cards

Based on insights from the user test, the reflection cards in Figure 58 were made. These cards were A6 size. While trying the cards out, multiple aspect became clear.

Backside: The coloured version gives a more calm feeling than black and white. However not all text should be coloured, others it gets too complex. A vertical card seems more inviting then horizontal, as that allows you to follow a timeline. At the horizontal card it looked like you have to fill out the whole card immediately. Full opacity of the writing lines felt too harsh. A lower opacity felt more inviting to write on and also more calming.

Front side: The 'circle' image fits the reflection theme better than the lines, the round form of the circles makes you feel comfortable. A quick note about what the purchase is and when it is bought helps to quickly see what the reflection card is about.

Figure 59. Version 3 of the reflection cards

It is confusing that the backside is vertical and the front side is horizontal. The size is comfortable and fits the purpose.

From these insights version 3 of the reflection cards was made, Figure 59.

This version includes a guiding card. This card includes guiding questions that can help you during the reflection (Figure 60). From the user test it became clear that these questions should have multiple abstractions levels, this aspect was explored in the co-creation session. The questions that are proved at the cards were based on existing reflection methods such as the Gibbs Reflective Cycle (Gibbs, 1988), Self-Reflective questions of Brownhill (2022), and self-reflection questions of the Berkely Well-being institute (Davis, 2021).
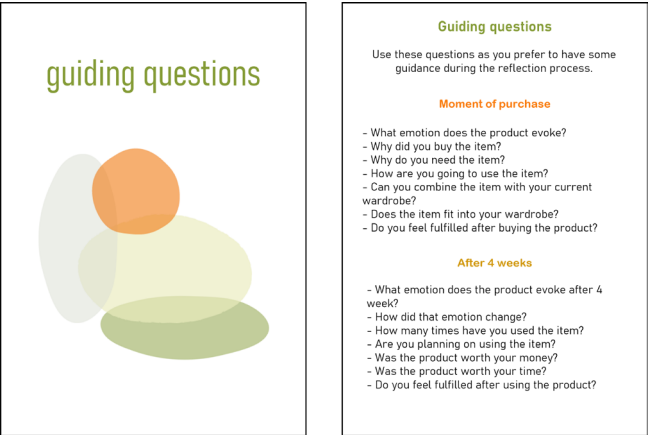

Figure 60. Guiding question for reflection card

4.3.4. Co-creation session

The goal of this co-creation session was to gain new insights into the current concept. The co creation session was held with 2 Gen Z-ers. To quickly divide deeper into the concept, exercises A and B were made (see Figure 61 for A, B is the same exercise but with different pieces of clothing). The exercise was meant to stimulate the participants to reflect on my clothing in order to get sensitized to think about their own of clothing. Both include two pieces of my clothing, one I regret and one I value. Both pieces are very similar. I provide the emotion I felt with the piece and the story behind the pieces. The emotion that I attached to the pieces are personal, however analysing the pieces can help the participants to get into the topic and maybe even see patterns or other elements that are important during the reflection process.

The co-creation sessions started with introducing the topic of this project, after that the sensitizing exercise was introduced. Next there was room to explore the thought and ideas of the participants. After that the current concept was introduced through the visual of Figure 54, together with the short comings of the concept. Figure 54 was deliberately chosen to show to the participants, as the sketchy look allowed the participants to critical reflect on the concept. The session ended with discussing the different reflection cards. Figure 59 show the reflection cards that were shown to the participants.

4.3.4.1. Results

The sensitizing exercise worked to create an idea of what the reflection should look like, however it did not work to make people think about their own reflection. It was too personal for the participant to work with it. Showing the concept and the reflection cards already sparked many ideas and new insights by the participants.

There were multiple interesting ideas found during the sessions with the participants, the most promising one were visualized in Figure 62.

Guilt

bought during sale – 2018 – never worn

I was on a short holiday in the Netherlands with my parents. We were in a small town and there was a small shop which had huge sales. I saw this dress and really loved the pattern. It was quite cheap as well. My mother bought the dress for me, even though I never wear dresses in daily life. At that moment I was happy and thought I was going to be a girl who wears dresses. My father was really confused when we came out of the shop with a dress, as he also know I never wear dresses.
I should have never let my mother buy this for me, as I have never worn it. I do not feel comfortable in the dress and the fabric is also very see through. The dress makes me feel guilty that I wasted my mother's money.

Admiration

thrifted – 2017 – worn very often

I was visiting my older niece in Amsterdam, together we went to several vintage stores. I really enjoyed spending time with her, and she showed me around the city, which was super cool as I was still in high school. I wanted to have some more 'hipster' pieces of clothing, that's why we went to the vintage stores. In the store I found this blouse, I loved it, and the price was Very reasonable. So, I bought it. Everyone at school complemented me with my new purchases. I worn it so many times and I am still wearing it now, a bit less then back than, but still often. I love the look. It is interesting but also suitable for everyday life. The quality is still good, and the baggy fit is perfect for me. When I look at this blouse, I have a feeling of admiration as the piece brought me so many memories and makes me feel confident when wearing it.

Figure 61. Exercise A (from the top 10 booklets)

Attach reflection card at the purchase itself

Reflect on it again after first wear
- how long did it took?
- how do you feel wear it?

Reflect together with the person(s) you live with

I.e. when you change your summer wardrobe to winter

Draw or write the item on the reflection card

Have an emotion guide in different levels

Figure 62. Outcomes of co-creation session

4.3.5. Version 3 of the concept

Based on the user tests and the co creation session, new improvements were made on the concept (see Figure 63).

Step 1: User made purchase. Either at home or in store.

Step 2: When the user is home and about to store their new purchase, they take a reflection card and fill it out at that moment. The first reflection happens preferably at the same day of purchase.

Step 3: Attach the reflection card to the piece of clothing and store where you would normally do.

Step 4: Reflect on the purchase again after the first time of use.

Step 5: After half a year, try to find patterns in your purchases. How did your emotion change? Are there more positive or negative emotions after the first time use. Do this meta reflection together with someone you live or a friend.
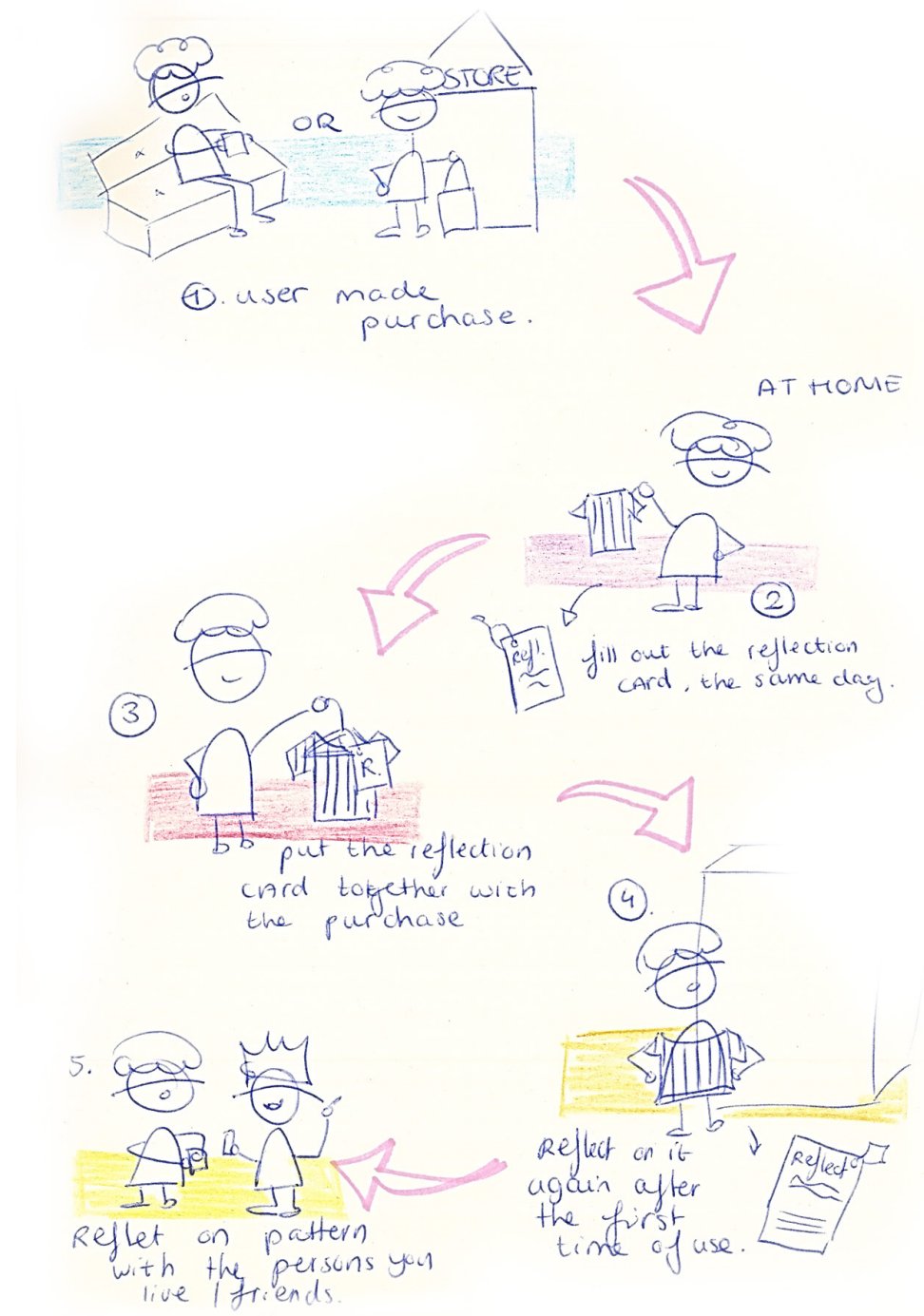
Figure 63. Concept version 3

4.3.6. Version 4 of the concept

When critically looking at concept version 3, it needed adaptation because of several reasons:

1. From the user tests and co creation session it became clear that is it difficult for people to start doing a reflection exercise and to keep on going.

2. Concept version 3 felt too forced to reflect, and leaves little room for the user to explore and go through a reflection process more naturally.

3. A reflection process is enriched by talking about it with someone else, but there also needs to be room to explore by yourself.

4. The process should fun, not only serious.

To create a concept that solves these problems and fits the design goal I looked back at the generative research and the interaction vision I created, together with the user tests, co creation session and coaching session, version 4 of the concept flowed out quite naturally.

Figure 64 visualized the first draft of this concept and therefore was the starting point to build upon. The concept was elaborated and extended during the next sub-chapters.

The design that was envisioned had to be engaging from the start so that people are motivated to keep on going, it should be fun
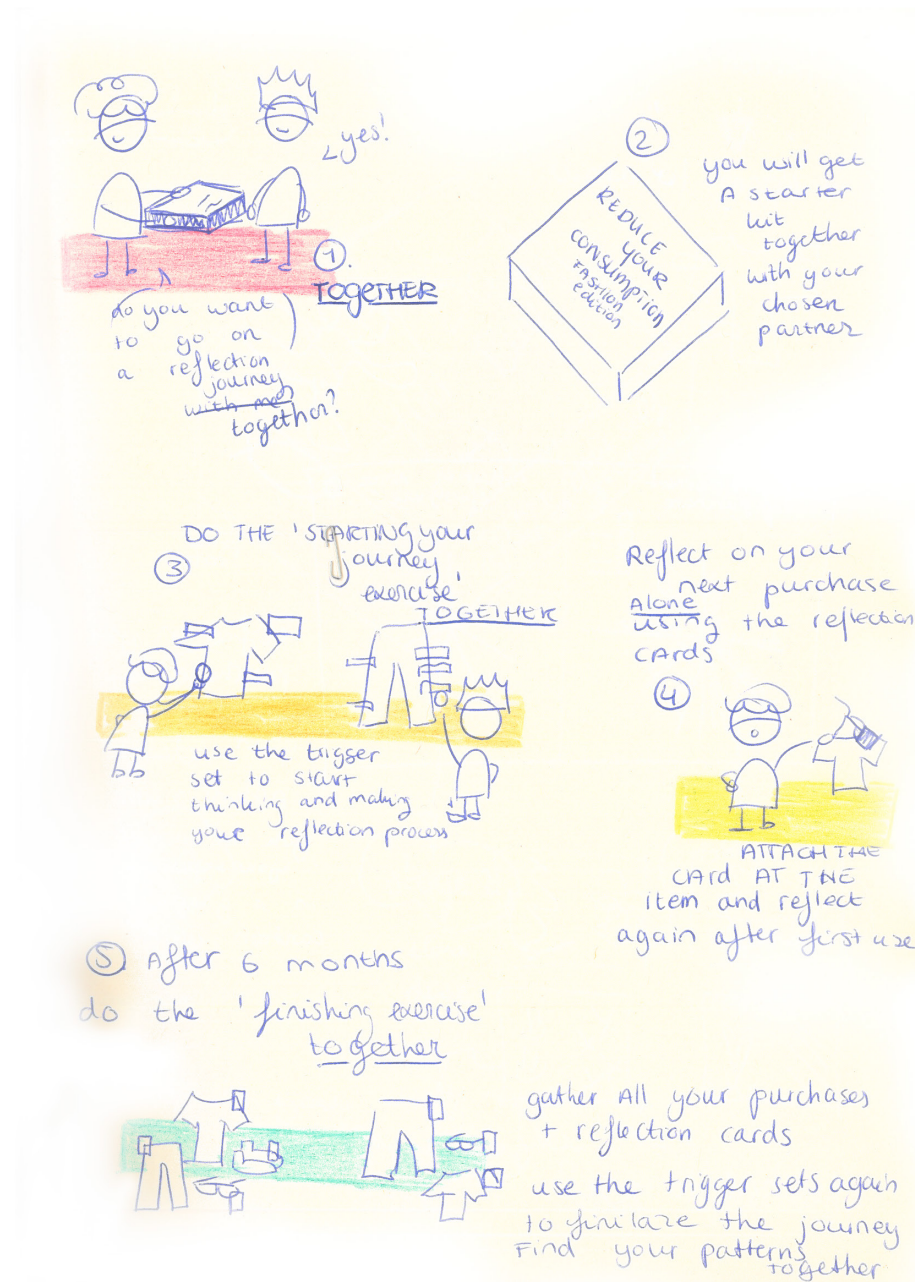
Figure 64. Version 4 of the concept

to do it. Therefore a starting exercise was introduced, this exercise must be interesting, sensitizing but also challenging. To make users committed to this beginning exercise, this starting exercise will be done together with another person. Together with your chosen partner you start your reflection journey and motivate each other to keep on going. You will discover new things about yourself but also strengthen the bond with your partner. The starting exercise will include different trigger sets to use, and also include guiding questions.

The reflection cards described in version 3 are kept, however they are adapted to be more open to the user and more visual. These reflection cards will be filled out alone, and still be attached to the purchases. The card itself is focused on letting the user go through a reflection process through a making process instead of only writing. They have to 'shape' the card, there are multiple levels of guidance that can help the participants while doing this.

After a set time (2, 4 or 6 months) the duo will come together to finishing their reflection period with final reflection exercise. This exercise looks back at all the purchases made in the last months and encourages the users to find patterns in their buying behavior and be critical but supportive about each other's behavior.

The design thus exist out of 3 stages:

1. Start of the reflection journey
Together you will go through a starting exercise that motivates and prepares you for the rest of the journey

2. Middle of the journey
Use reflection cards to reflect **alone** on every fashion purchase you make

3. End of the journey
Together you will wrap the journey up by making an overview of all the purchases that you made

The time spent on each stage can be adapted to the preference of the user. The design will give guidance about the time spend however this is not a fixed time. Every person needs a different amount of time in order to be able to truly look at their own behavior, it can take time to get new insights about this behavior. The 3 stages were explored and elaborated in the next sub-chapters.

4.3.6.1. Overview of all stage

The design exist of a cardboard box including multiple different attributes that will guide the user through the 3 stages. At this point of the design process, the concept was called "Why do you buy". As it was made to gain insights into why people keep buying fashion items when their wardrobe is already overflowing. Figure 65 shows a visualization
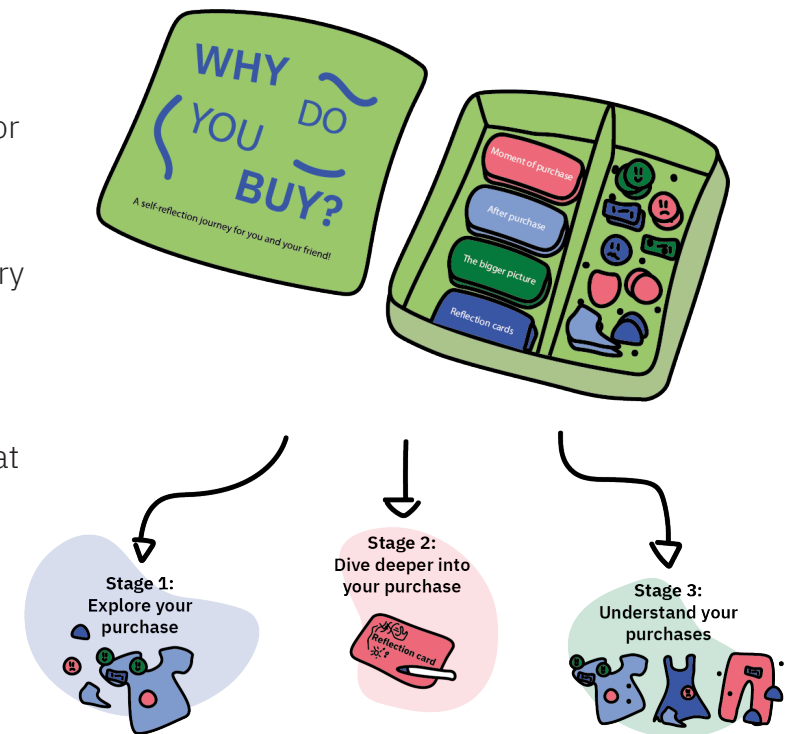
Figure 65. "Why do you buy" box used in the 3 stages

of the box that was used to communicate the idea. All the attributes and the box itself are made of cardboard.

The box includes the following attributes:

Guiding cards A – Moment of purchase

These cards can be used in stage 1 and 2. Each card has a question regarding the **moment of purchase** that will help the user to think about the reason behind their purchase (see appendix P). The user can take as many cards as preferred, depending on

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the level of guidance they want.

Guiding cards B – After first use

These cards can be used in stage 1 and 2. Each card has a question regarding the time **after the first use** of the purchase (see appendix P). These questions will let the user think about the use of the product and how felt about this compared with the moment they bought the item. The user can take as many cards as preferred, depending on the level of guidance they want.

Guiding cards C – The bigger picture

These cards are used in stage 3. The cards include questions that allow the user to create a better understanding of their buying behaviour (see appendix P). The cards search for patterns, habits, and possibilities to improve the users behaviour for the future. The user can take as many cards as preferred, depending on the level of guidance they want.

Reflection cards

These cards are used in stage 2. These cards have to be filled in individually. Every time a user will make a fashion purchase, this card has to be filled in. First at the moment of purchase and later after the first use. The time between these events

will differ per person and also per purchase. The cards are made to encourage the user to make their experience as visual as possible (see appendix Q). If the user needs more guidance to fill out the reflection cards, the guiding cards A and B can be used.

Creation set

This creation set is used in stage 1 and 3 and is used together with your partner. This set enables the user to visualize their experience. This is done by making a collage using the attributes included in the creation set. These attributes are (see Appendix R):

- PrEmo tool (man and woman)
- Shapes in different colours
- 80 evocative images
- 164 drawings of icons
- 27 written positive emotions
- 27 written positive emotions

All these attributes differ in shape, size, colour, style and openness. This is deliberately done to give the user as much space as possible to create their own visual of their experience (Sanders & Stappers, 2012).

Starting exercise – Explore your consumption

Goal: To playfully introduce the users to self-reflection

The goal of the starting exercise is to get the users familiar with the concept of reflection through letting them create their own visual reflection. This exercise will be done together with a partner as different viewpoints will enrich the reflection process. Through the process of 'making' the users will be introduced to reflecting on their own behaviour in an accessible way.

Attributes needed for this stage:
- Instruction sheet for stage 1 – exploring
- Creation set
- Guiding cards A (optional guiding)
- Guiding cards B (optional guiding)

The users starts their reflection journey together with a chosen partner. The duo will get a box full of attributes to guide them through this reflection journey (see Figure 66).

Figure 66. Opening the box together with your partner

The first exercise starts by taking your last purchase (that you have used already) and putting it in front of you, on the ground or on a table. Take the 'creation set' and start making a visualization of the buying experience of that item (see Figure 67).
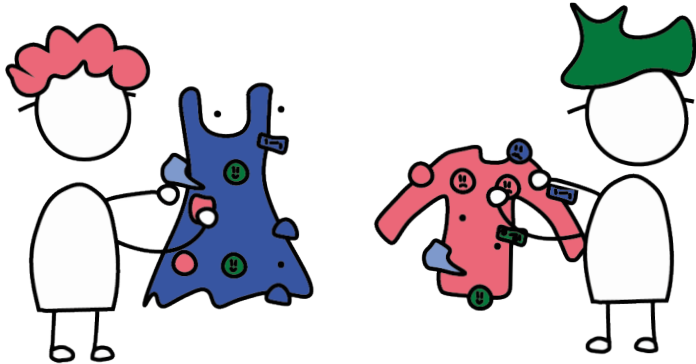

Figure 67. Create a visualization of your experience at the moment of buying and after (first) use.

Do this at the left side of your purchase. The users can take a "guiding card A" if they need help during the visualization process. Creating a visualization of your experience will automatically start your reflection process, maybe without the user even noticing. After this part is done, there is time to discuss the result together with your partner, of course this can already happen when making the visualization.

When the first collage is done, you will make a new one, about the way you feel after using the item. Here you can use the "guiding cards B" to help you. The exercise ends with discussing the differences and similarities between both visualization together.

The next stage will be done individually, agree on a place and time to meet again for finish up the journey. Recommended is to do this after at least 3 months, however the users are free to choose a time that they think is fitting.

Reflection cards - Dive into your consumption

Goal: to let the users dive deeper into their individual fashion consumption

The goal of stage 2 is to let the users dive into their own fashion consumption. This stage is deliberately done alone as this allows the users to freely discover their own consumption behaviour. In this stage they should really move into their own body and mind without too many external distractions.

Attributes needed for this stage:
- Instruction sheet for stage 2 – diving
- Guiding cards A (optional guiding)
- Guiding cards B (optional guiding)
- Reflection cards

This stage is done individually, therefore the Guiding cards A, B and the reflection cards are provided double in the "why do you buy" box. One user can keep the main box and the other person can take the cards that are double home (they will be packed in a smaller box).

After the user made a fashion purchase, they take one of the reflection cards. This is an empty cards, with only the words: "moment

of purchase" and "after first use" on it. The user is asked to visualize their experience at the moment of purchase on the cards. This time by drawing (and a bit of writing). The process of thinking about visualizing your experience is part of the reflection already. The user can use the Guiding Cards A for help.

After the reflection is done, the user can attach the card to the purchase itself (see Figure 68). In this way the user will not lose the card but will also be reminded of the reflection. After the first use or wear of the item, the user is asked to make a new visualization. The user can use the Guiding Cards B for help. Making a new visualization after using the item will make the user aware of the changes in emotions towards the purchase.
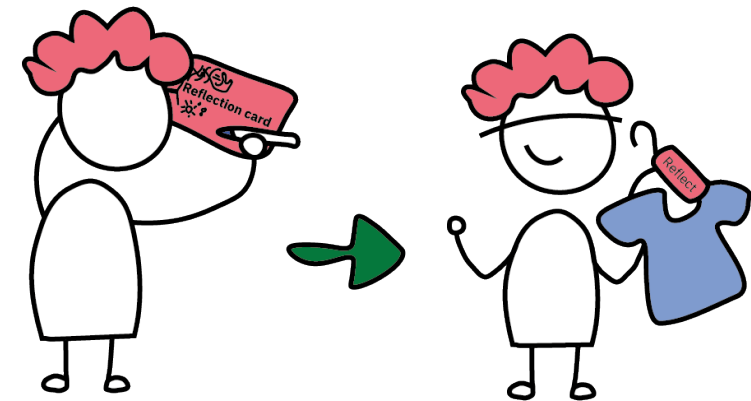
Figure 68. Drawing your experience on the reflection cards and attaching it to the purchase

Finishing exercise – Understand your consumption

Goal: to understand your own consumption and that of your partner

The goal of stage 3 is to create a better understanding of yourself and each other. The journey was started together and will also end together. By creating an overview of all the purchases they made, the users will gain insights into the reasons why they bought certain things, and why they like or dislike certain items. They can help each other by critically but supportively commenting on each other's behavior. The users are encouraged to decided which behavior they like to keep in the future, and which one you rather not and to motivate each other to maintain this behavior change in the future.

Attributes needed for this stage:
- Instruction sheet for stage 3 – understanding
- Guiding cards C
- Creation set

For stage 3 the users will meet up with their reflection partner, you have to take all the purchases and reflection cards you made with you. Lay down the purchases together with the reflection cards. Use the creation set to create a visualization of the way you feel about all the purchases (see Figure 69). The questions from Guiding Cards C will enable the users to make conclusion together about

their buying behavior of the past months. This stage ends with creating a plan on how to change your behavior in the future, and how to maintain this behavior.

Figure 69. Creating an overview of your buying behavior

4.3.7. Version 5 of the concept

Concept 4 needed improvements to make the user experience more smooth and meaningful. These 3 stages of concept 4 are kept however, stage 2 and 3 are adapted. The whole experience will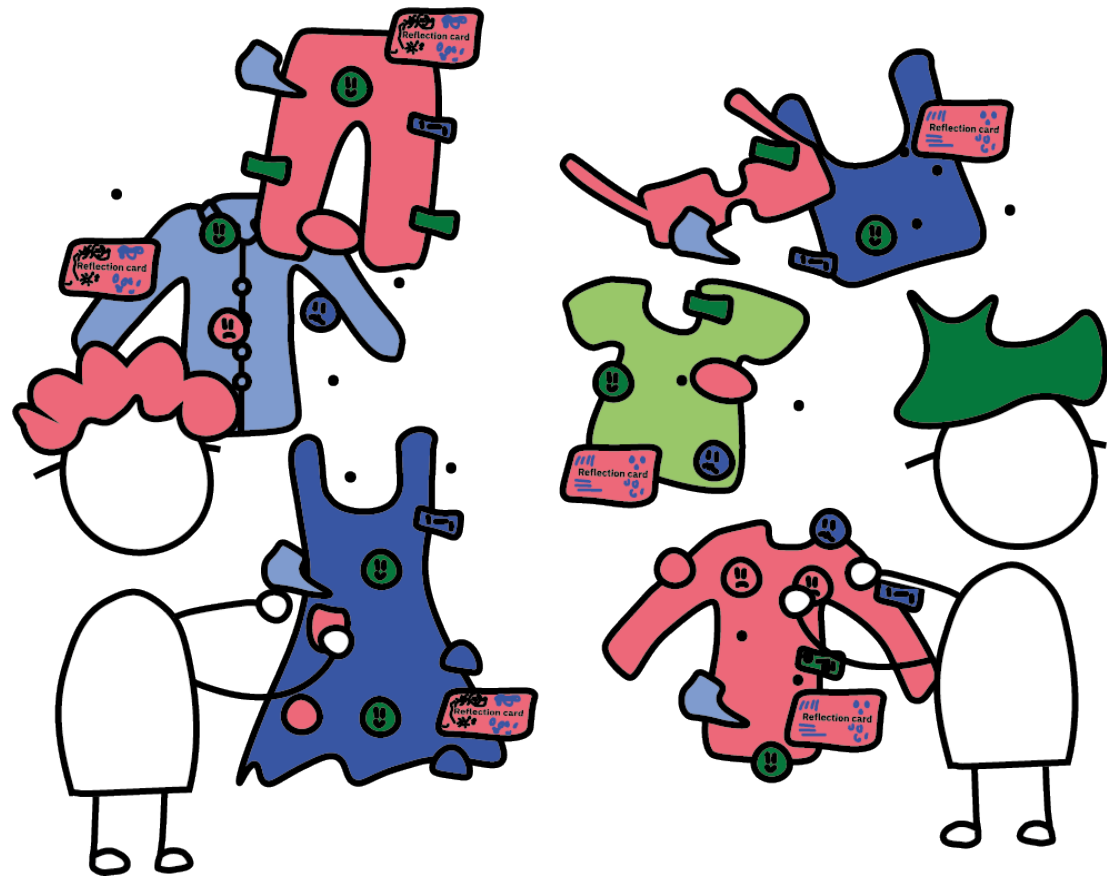 take place in a different context. This concept will be the final one and therefore the visuals have the colours of the final design.

The concept works as followed: You invite someone you like to see more often and want to create a deeper bond with, to go to this new place which is called the "Reflection Café" (see Figure 70). You heard about their 'Why do you buy" experience. In this café you will be guided through a journey where you will reflect on your wardrobe in a playful, fun but also meaningful and fulfilling way. This café is fully focused on this experience and therefore the other visitors are also on this journey.
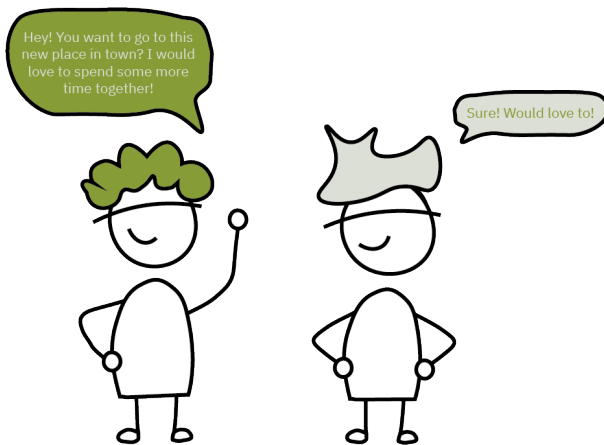
Figure 70. Invite someone to the Reflection Cafe that you want to spend more time with

You book a monthly experience for 6 months (or a year), this experience includes drinks and snacks.

Stage 1 - Exploring your last purchase

During your first visit, you are asked to bring your last fashion purchase. When you are settled down and up to date with both of your lives, you will start the exercise (see Figure 71).
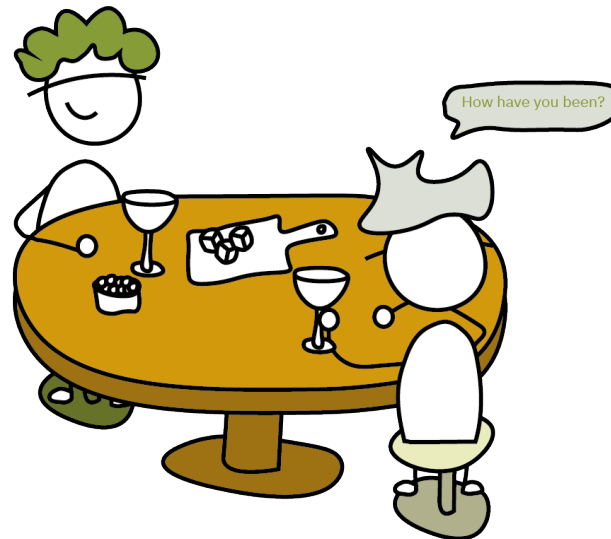
Figure 71. First there is time to catch up

The exercise will ask you to make a visualization of your experience during **the moment of purchasing.** The café will support you in making this visualization by means of different attributes, images, words, etc. and with guiding cards with questions. Together you will discuss your visualization, when this discussion is done you will make another visualization but now of the way you feel

after using the item (see Figure 72) .
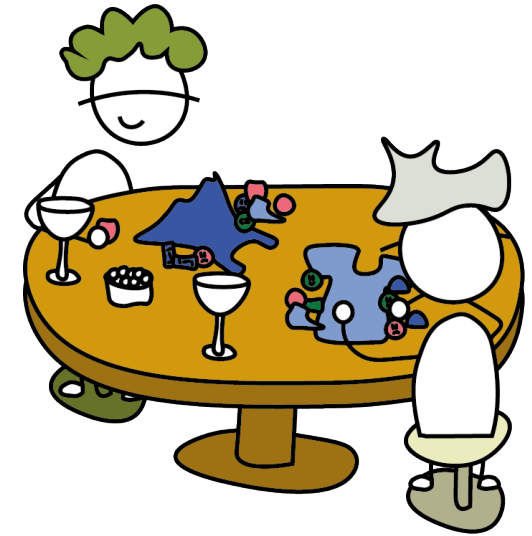
Figure 72. Creating your visualization

The exercise ends by discussing the difference between the visualizations and by you putting your visualization on a A3 'Reflection Board' (see Figure 73).

Figure 73. Put your visualization on your Reflection Board

To finish up the reflection board and to make sure you remember which item is made for which board, a polaroid picture will be taken of you wearing your item. You will glue this to the middle of your reflection board. It is not only a reminder but also a memory of that moment together.
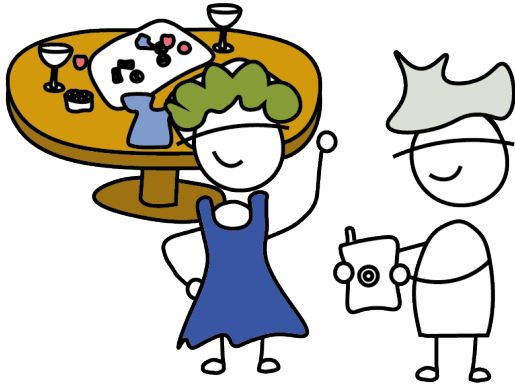
Figure 74. Take a polaroid of each other while wearing your purchase

Stage 2 - Diving into your last purchases

In the upcoming months you will make a board for every fashion purchase you make. Once a month you will meet up at the cafe together with your reflection partner. The café will store the boards.

Stage 3 - Understanding your behavior

At the last visit the café puts all your boards on the wall to create an overview of your fashion purchasing behavior (see Figure 75). At this last visit you will be encouraged by multiple different questions on the Guiding Cards to find the underlying patterns and motives in your purchases.

You can do this together with your partner, or invite other visitors of the café to join your session. After this final visit your done with the journey, and hopefully had a fun time. The ultimate goal is to answer the question: Why do you buy? However it can take time before you can truly answer this question.

Figure 76 gives a overview of the full experience of the final design (on page the next page).

The concept will be elaborated in the next sub chapters, an overview of the final design after evaluation will be presented in Chapter 5.

Figure 75. Creating an understanding of your behavior by looking back at all your Reflection Boards
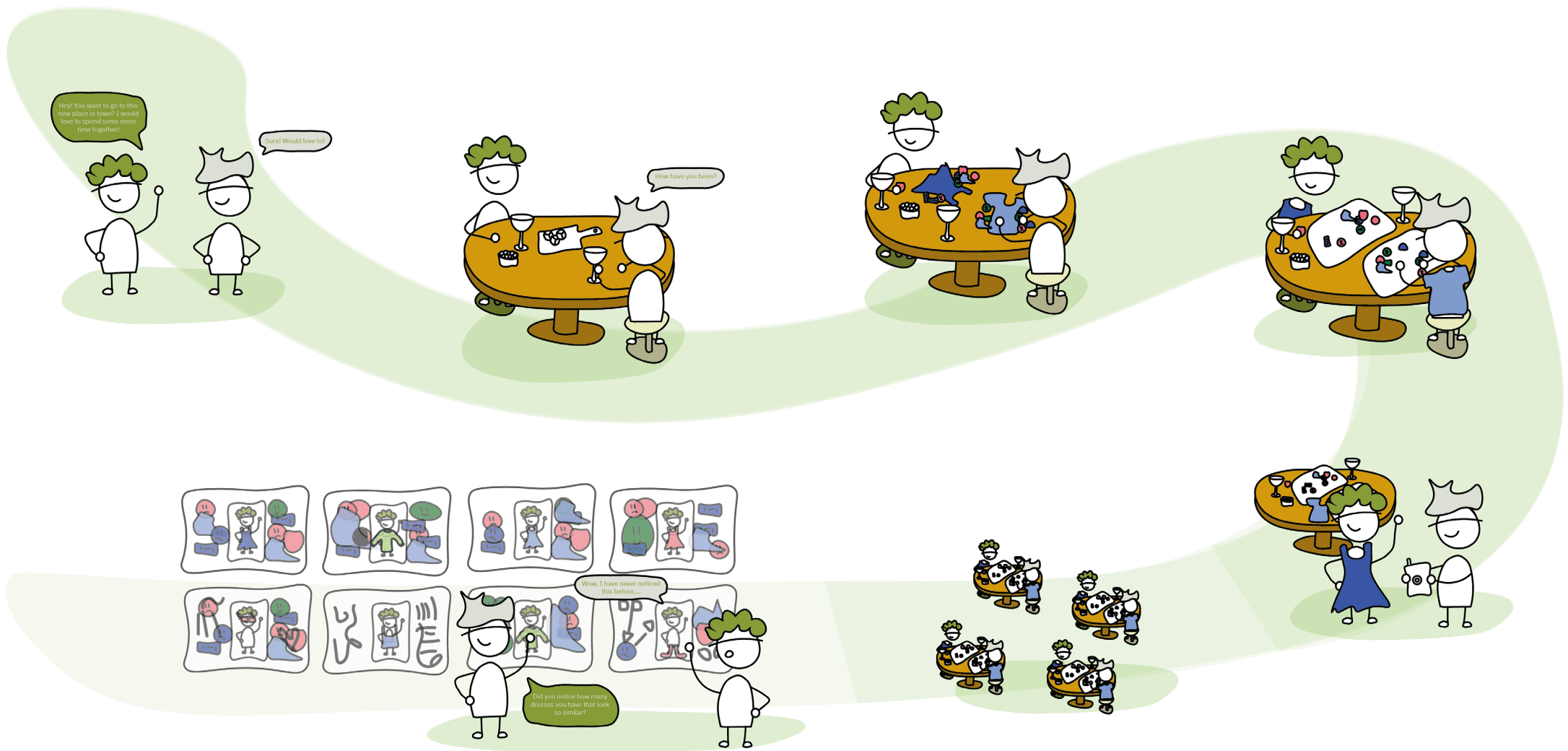
Figure 76. Overview of the final design

4.3.8. User test in context

This design was validated and improvement by doing a user test in context. This test was done by me (the researcher) and a friend of mine. The user test tested the first stage of the design, so it was about exploring the last purchase we made.

I invited a friend to join me to a café to catch up and try out the concept. Normally the restaurant will provide all the materials needed for this experience, of course this was not the case now. Therefore I provided all the materials that were needed. The participant only had to bring themselves and their last purchase, just like in the final design. The participants even wore the purchase to the restaurant (see Figure 77).

The participant first wanted to go through all the images before he started, he did this because he wanted to have a good overview of what was possible (see Figure 78 on the next page). This took quite a while, around 10 minutes. During this ten minutes we already started talking about the purchases and why we bought it. The participant started without using the Guiding Cards, he thought he did not needed those. However he was curious what would be on them, he planned on reading it after this visualization was done. In the meantime we would talk about our

I bought these shoes on "Marktplaats" for €60,-, new they are €140,-. So it was a great deal! These are special Barefoot shoes, that I really wanted to try out!

Figure 77. The participant is showing his purchase

I first want to go through all the images to see what there is.

Figure 78. The participant is going through the creation set

realization caught him a bit off guard, however it did show that the reflection exercise was working. He searched for something that would clear up his memory on his phone but couldn't find it. After he explained his struggles he kept on going and just wrote down some annotations to remind himself of these new insights.

After 45 minutes we were both still working concentrated on the Reflection Board. At that point the snacks arrived. This was a welcoming break to lay down our work and chat a bit about what we made so far, and there was also time to talk about some other things that were

experience and explain them to each other, during this process we both looked out for imagines that fitted the experience of the other person (see Figure 79). Therefore the 'creation set' really enhanced the experience, as we could help each other through that way.

At some point, the participant got insecure about the visualization that he made. He wondered if this was really how it happened or just the way he wanted it to happen. This

I am pretty confident to start after seeing all the images, I do not need the guiding cards (yet)!

But I do want to read them because I am curious! I will do it after I am done!

I am looking for an image that visualizes my feeling of 'wanted to buy something because I paid for the entrance'. Did you see anything that seems fitting?

Figure 79. In the middle of the visualization process
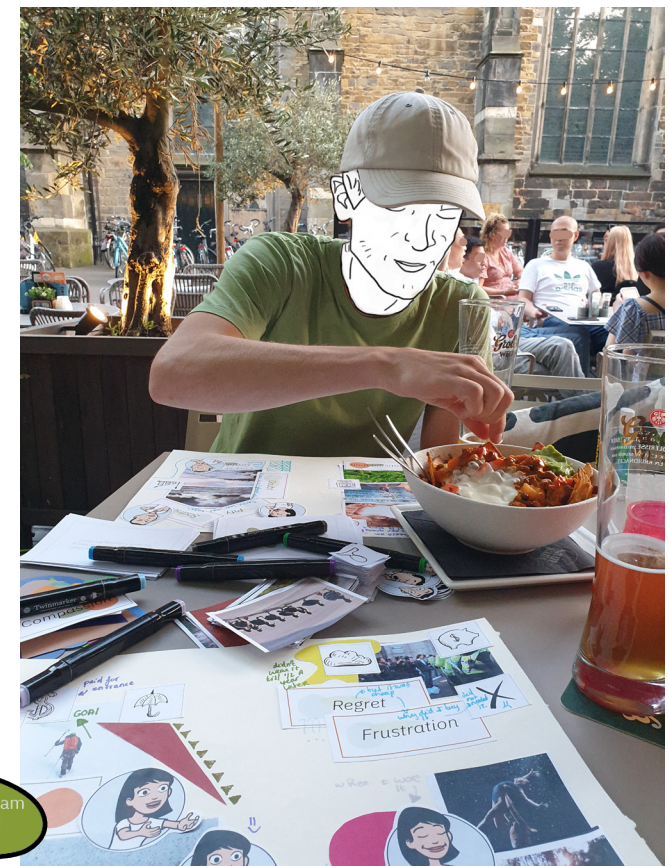
Figure 80. Taking a break from the visualization

going on in our lives. This pause helped to take some time off the board and focus on each other again (see Figure 80).

After the break, our boards were almost done, we just had to finish up the last bit.

At this point we were both quite done with it. We spend almost an hour quite effortlessly on the assignment, but now our concentration span has come to an end. This was okay as the boards were nearly done and

we had a great talk about it. It does not work if you keep going even though you do not want to anymore.

The last thing the participant wanted to do was to take a look at the guiding cards, he did and we asked each other some of the questions. This worked well to wrap up the conversation.

Figure 81. Polaroids of us wearing the purchase

To completely finish the reflection board and have a nice memory and reminder of this day, a polaroid was made of both of us wearing our purchase (see Figure 81). This polaroid is attached to the reflection board. Figure 82 shows the final reflection boards.

Figure 82. The final reflection boards

The participant said he liked this way of reflecting, he had never done this before. He was a bit afraid it would be too hard for him as he is used to a technical approach. However after I explained how it worked he did not need any help. It was fun to do, and he was doing great! He found the exercise a bit too long, however it worked really well to give him time to really think about his purchase and the reasons behind it. It gave him new insights into himself. He liked that is was something that you did individually but also together, alon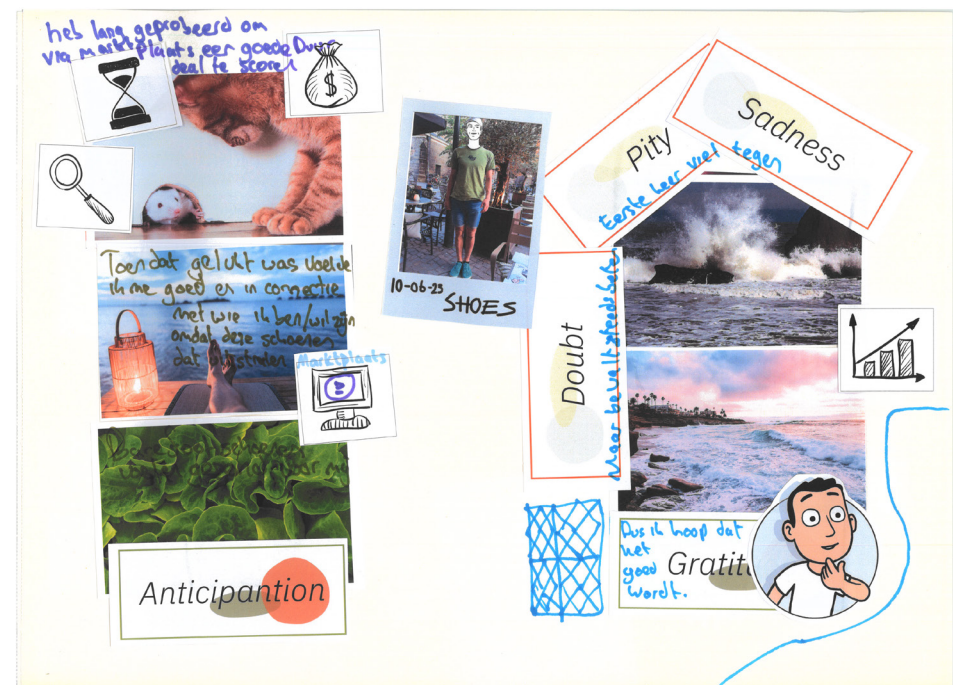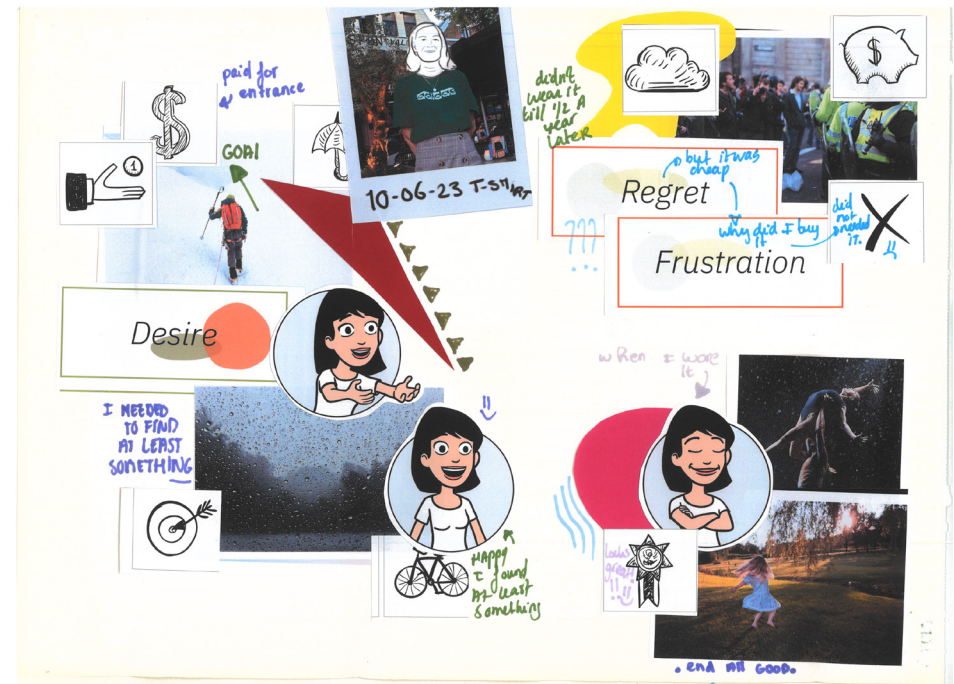e he would never have done this. "Especially together with a beer it was a really nice way to learn about each other in a different way" he said.

Interview after 1 week

After a week we talked about the experience again to see if the design had made impact on his life. The participant said he did not consciously thought about the experience, however he expects that it will influence his next purchase as the Reflection Board made him wonder about why he buys certain items. The participant did not think that this one time experience deepened our bond, however it was a nice time to learn about each other and talk about different topics than usual. He could imagine that you learn more about each other's buying behavior when you do this multiple times.

4.3.8.1. Improvements for the design

- Use the 'Guiding Cards' at the end of the exercise to wrap up the conversation together
- Make sure there will be a break during the exercise
- Empathize there is no fixed time to spend on the exercise, if the participant does not enjoy it anymore, they should not feel pushed to go on
- Create an overview of the things that are available in the creation set, this will save the participant time
- Empathize that is not about creating the most visually pleasing Reflection Board, it is about the process and the conversation. So if the Board did not worked out as expected, that is no problem
- It takes time to make 1 board, if you have bought more purchases in one month there should be a maximum of boards that you 'have' to make.

Presenting the final design

5.1. Introduction

The previous section showed the iterations that the concept went through. The last version, version 5, was the first draft of the final design. Version 5 of the concept was improved by an user test, this improved version is the final design. The final design will be presented in this final chapter. After the design is explained, the last evaluation of the design will be presented. Improvements that were found by the use of this user test, are explained in the recommendations chapter. After the recommendations this report is done.

Figure 83 shows in which stage of the design process this part was executed.

Final design
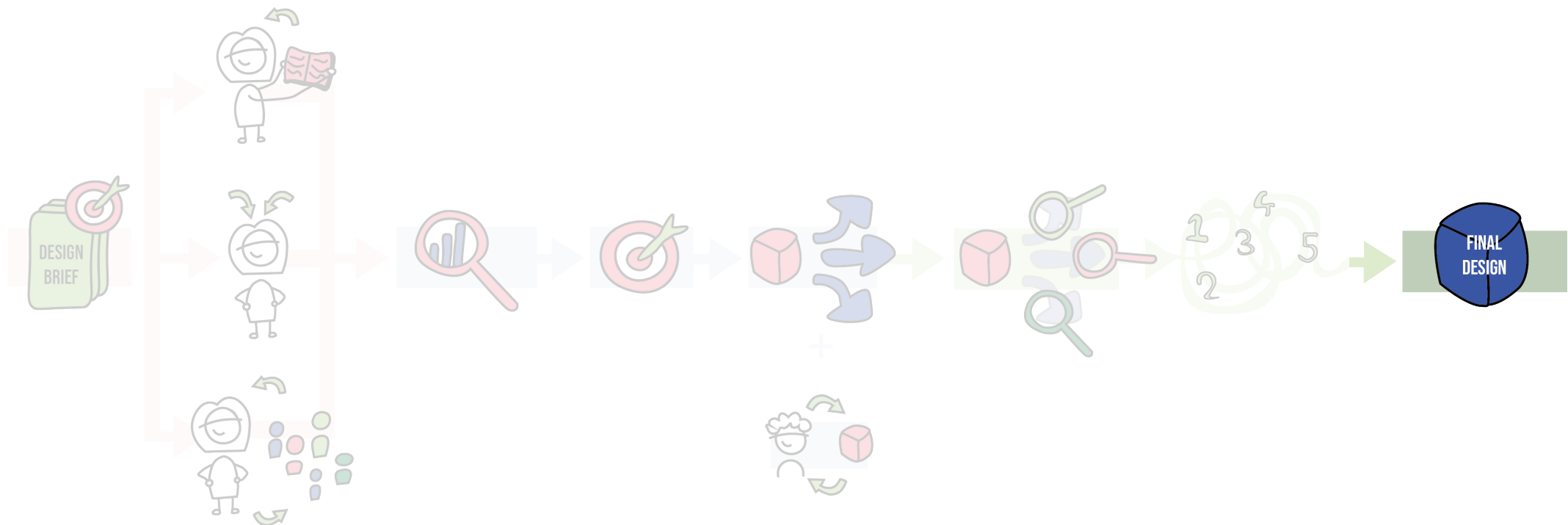
Figure 83. The stage of the design process

5.2. Final Design

In chapter 4 the whole concept development was reported. This chapter ended with version 5 of the concept. Concept version 5 formed the base of the final design. In chapter 4.3.8 an user test was done and according to these findings the concept was improved. This improved version is the final design. This chapter will explain how the design works and explains the reasons behind the choices that were made.

5.2.1. The Reflection Café

The final design is an experience café called: Why do you buy? The Reflection Café.

The Reflection Cafe enables users to take time together to learn about their wardrobe, their selves and each other to live life with greater awareness and appreciation. This journey will guide them through better understanding their decision making, and gives insights into which pieces of clothing bring value to life and which absolutely do not. Figure 84 shows a snap shot of a moment in the Reflection Cafe.

The design exist out of 3 stages:

Stage 1 - Exploring your last purchase

Stage 2 - Diving into your last purchases

Stage 3 - Understanding your behavior

Figure 84. Snap shot of the Reflection Cafe Experience

To start this experience, you invite someone you like to see more often during the upcoming months to join you on this journey in the Reflection Café. You book the experience in advance, this booking includes the full experience for 6 months including 2 drinks per visit. The visitors can order more drinks and snacks in the café if they like.

Stage 1 – Exploring your last purchase

For the first visit, you are asked to wear your last fashion purchase to the café (see Figure 85). If this is not possible, you can just bring the item.

First there will be time to catch up and enjoy your drinks. When you are settled down and up to date with both of your lives, you will start the activity. The waiter will bring all the needed attributes for this activity and explain the concept to the visitors (see Figure 86).

On the Menu and Instructions card, the drinks and snacks can be found. But also quick instructions on how the experience works and an overview of the Creation Set and Guiding cards (see appendix S).

Figure 85. Wear your last purchase to the Cafe

Figure 86. The waiter will explain the concept

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During the activity you will make two visualization on one Reflection Board. To make this visualization a Creation Set is available (see Figure 87). This Creation Set includes all kind of attributes to visualize your buying experience with. All attributes vary in content, abstraction and in level of ambiguity and openness in order to give the participants the freedom to express their meanings (Sanders & Stappers, 2012). The Reflection Board is a blank A3 size board, that is open for you to fill in.

The first step will be to make a visualization of your experience during the moment of purchasing. You can make this visualization on the left side of the reflection, the second visualization will be on the right side (see Figure 88).

The Creation Set does not only provide means to express your experience, it also serves as a way to explain your experience to your Reflection partner. You will both make your own board, but you will discuss your visualization together. You can help each other during the process of making the visualization.
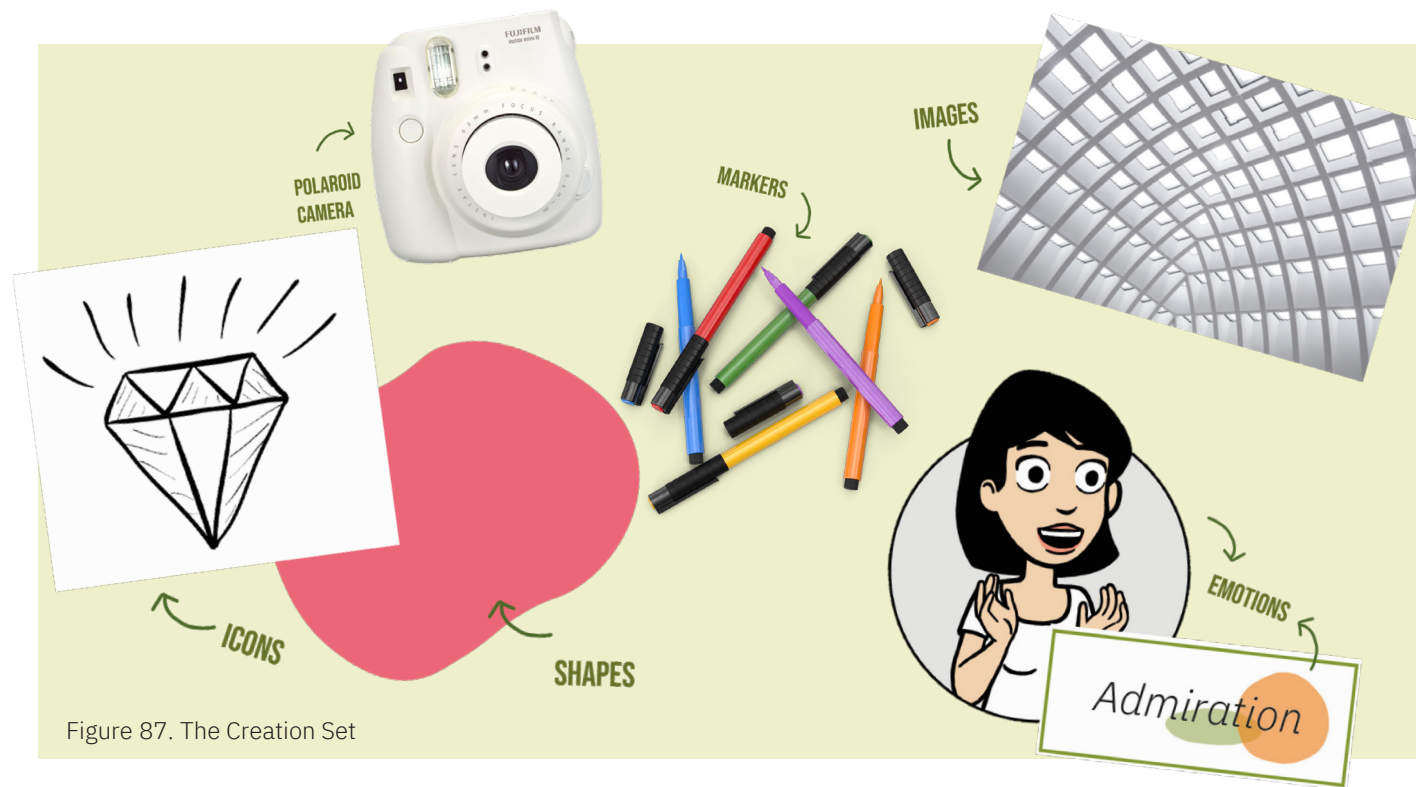
Figure 87. The Creation Set

Figure 88. Moment of purchase

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After you made the visualization of the moment of purchase, you will make a second one of the way you felt after wearing or using the item (see Figure 89).

When it is difficult to start the visualization or you are getting stuck, there are Guiding cards to help you (see Figure 90). These cards include questions that will help you to get closer to your experience. There two sets of cards, A: 'moment of purchase' and B: 'after use'. You can also use the Guiding cards B to wrap up your conversation when the visualization is done (see Figure 89).

Figure 89. After use and using the Guiding Cards B

How did your emotion change after using the item?

Moment of Purchase
A

How did the item contribute to your life?

After Use
B
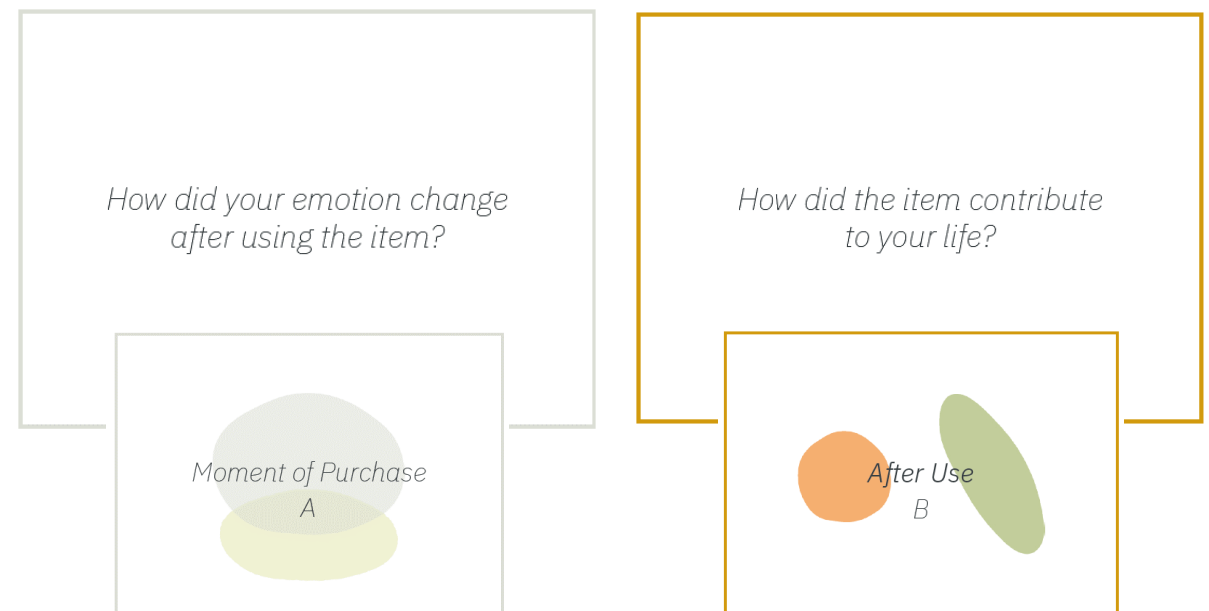
Figure 90. The Guiding Cards decks - A and B

To finish up the activity and to make sure you remember which item is made for which board, a polaroid picture will be taken of you wearing your item. You will glue this to the middle of your reflection board (see Figure 91). It is not only a reminder but also a memory of that moment together.

Stage 2 – Diving into your last purchases

Once a month you will meet up at the Reflection Cafe together with your reflection partner (see Figure 92). During every visit you will make a new Reflection Board for a new purchase that you have made. If you did not make any new purchase during that month (well done), you can reflect on another item that you recently bought. The café will store the boards.

Figure 91. The Reflection Board is done

Figure 92. Visit the Reflection Cafe more often to reflect on your new purchases

Stage 3 - Understanding your behavior

After you have visited the café 5 times, you will have a special last visit. During this 6th visit, the café created an overview of all your reflection boards by hanging them on the wall (see Figure 93).

At this last visit you will be encouraged by multiple different questions on the Guiding Cards C (the Bigger Picture) to find the underlying patterns and motives in your purchases. You can do this together with your partner, or invite other visitors of the café to join your session.

After this final visit your done with the journey and hopefully had a fun time. The ultimate goal is to answer the question: Why do you buy? However it can take time before you can truly answer this question. If you enjoyed the journey you are always welcome to visit more often.

Figure 93. Overview of your Reflection Boards

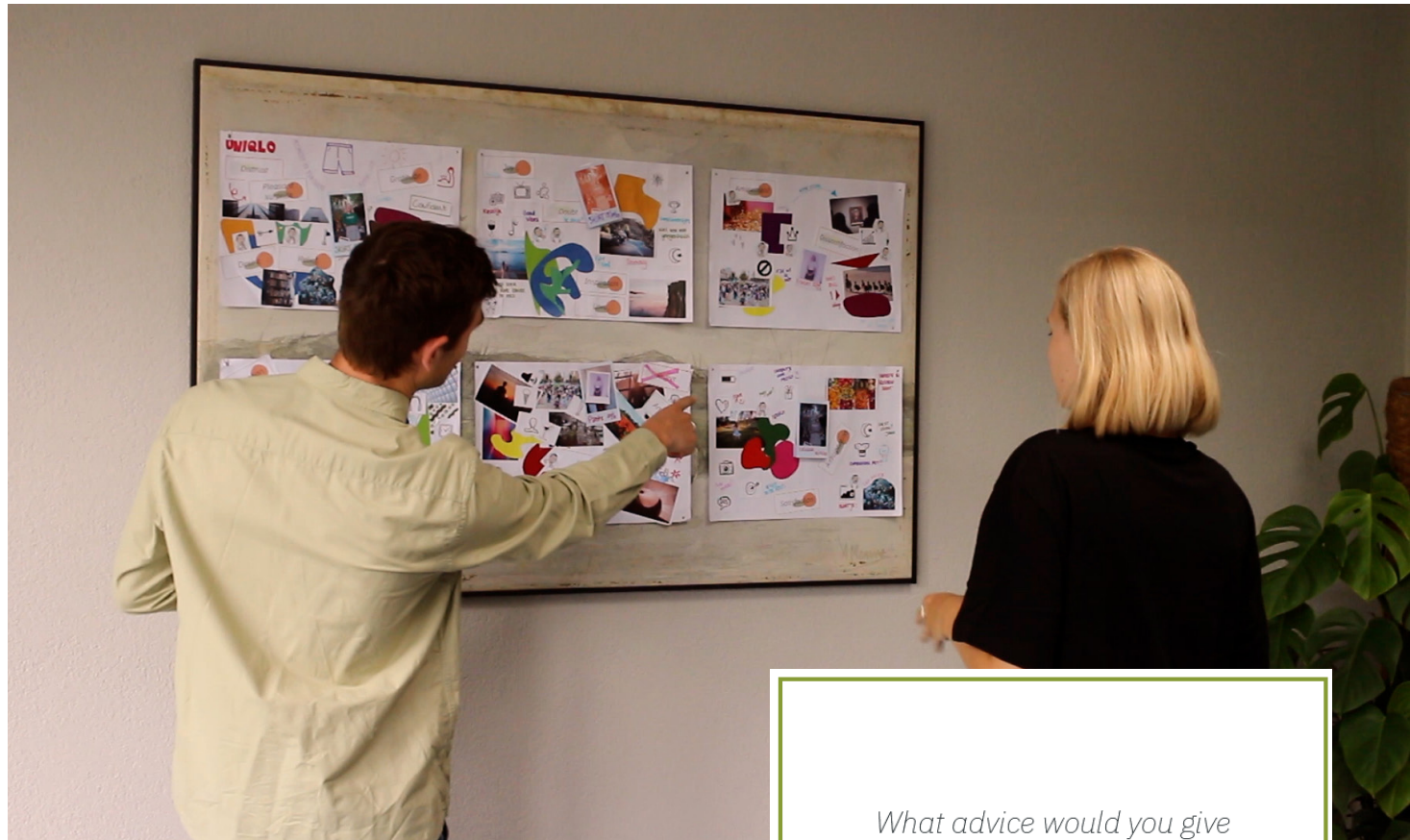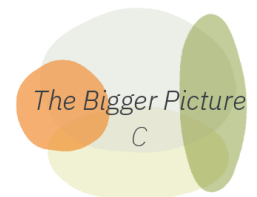*What advice would you give yourself for future fashion shopping based on your reflection process?*

The Bigger Picture
C

5.2.2. Design goal

The goal of this project was to use emotion-driven design to reduce fashion impulse purchases of Dutch Gen Z while still being able to express themselves. The intentions and reasons behind Reflection Café will be explained through the design goal in the next sub-chapters.

5.2.2.1. Emotion-driven Design

The Reflection Cafe used reflection as a foundation of the design. Self-reflection is the mental process of evaluating one's strengths and limitations, in order to grow your understanding of who you are, what your values are, and why you act, think and act they way you do (Brownhill, 2022; Davis, 2021). When practicing self-reflection you become more conscious of all these factors, which allows you to more easily make changes in your life. Some people are born with the gift of being able to easily practice self-reflection, however for a lot of people it takes a lot of practice and often quite some time before they consciously start doing it. Reflection can be done by many activities, such as speaking, writing, drawing, visualizing, making diagrams, creating performance etc. It differ per person and per group what activity they prefer and which one is appropriate (Brownhill, 2022). Self-reflection is not a new concept however it is not used to its full potential yet. Reflection methods are now mostly know as something you do at work or in education or are seen as something 'woolly'. However many people do not realize that using self-reflection in daily life can bring many benefits, such as less stress, better understanding of yourself, and better decision making (Brownhill, 2022).

Reflection is used as the foundation of this design as it is a promising anti consumption strategy (Dholakia et al., 2018). Starting to implement self-reflection in your (daily) life, and especially regarding your fashion consumption can be difficult. This design therefore guides you through the process of reflection in a very accessible way, you do need any experience for it. Multiple research is done on the positive effects of reflecting alone and reflecting together (Dholakia et al., 2018; Ellis, 2001). As both ways of reflecting have their own benefits, they are both present in this design.

5.2.2.2. Reducing fashion consumption

The goal of this design was to reduce fashion consumption. Reducing consumption can play a great role in reducing the negative environmental impact humans have on the earth. During the research in chapter 2, it became clear that the topic of climate change can be a huge burden for Gen Z. Thinking about their impact on the environment can make them feel sad, guilty and even depressed in some extreme cases. This design therefore tried to research the goal of reducing consumption in a more subtle and lowkey way. To the user the goal of the Reflection Cafe is communicated as way to strengthen your bond and to learn more about yourself and each other. This is an important goal of the design, however not the only one. To get users to reduce their fashion consumption, they should first gain more understanding about themselves and the world around them, therefore the goal of reducing consumption can only be researched when the first goal of understanding your own behavior is achieved. The goal of making users reduce their fashion consumption can therefore be seen as a long term effect of the Café. In this way the user does not have to feel sad, ashamed or depressed when visiting the café.

5.2.2.3. Dutch Gen Z

The Reflection Café was designed for Dutch Gen Z. Gen Z is concerned about climate change however the often find it difficult to act sustainably. A lot of Gen Z members are not aware about the impact of their fashion consumption, when thinking about sustainable behavior they often think about eating less meat, flying less and not using too much plastic. In the busy life of many Gen Z members, it can be difficult to really take time for each other. The Reflection Café helps Gen Z to take time, calm down and disconnect with the online world. Gen Z is used to being connected 24/7, when wanting to take time to reflect, this hyper connectedness can distract you from the reflection. Therefore the final design is fully made out of paper, there are no digital means

that can distract you from the moment you are in. It encourages the users to really start paying attention to themselves and their partner.

The Reflection Café is designed and tested for Gen Z, however also other generation can visiting this café. It may not be suited for everyone, but the café is open for everyone to try. It is not just limited for Gen Z, but it is focused on them.

5.2.2.4. Express yourself

The interaction with the final design should feel like going on a road trip with friends. The experience entailed the following interaction qualities: Exciting, Meaningful, Trusting, Fulfilling and Inspiring.

The Reflection Café has all of these interaction qualities.

Existing: It is exciting as you and your reflection partner are going to experience something new, you do not exactly know what you are going to do but you know it will be fun.

Meaningful: you make time to spend together with someone you love, together you go on a journey to understand more about yourself and each other.

Trusting: the Reflection Café does not tell you what is wrong and what is good. It will not shame you for your consumption behavior. It lets you explore yourself what holds value to you.

Fulfilling: the Reflection Café will help you to understand yourself better in order to live life with greater awareness and appreciation.

Inspiring: you will be inspired by the Café to look differently at yourself, your Reflection Partner can also inspire you to change your behavior or to do something differently.

These interaction qualities ensure that the user will be able to express themselves without being afraid of consequences. The Reflection Café leaves open what is right and what is wrong and encourages you to explore what is important to you personally.

5.2.3. Style of the design

The process of reflection is one of calmness. You need to have the time, headspace and motivation to start doing it. The mood board of Figure 94 was used to derive the colours used in this design from. Figure 94 shows the eight colours that are used for the final design. These colours transfer the feeling of calmness and therefore help the user to find calmness when using the design.
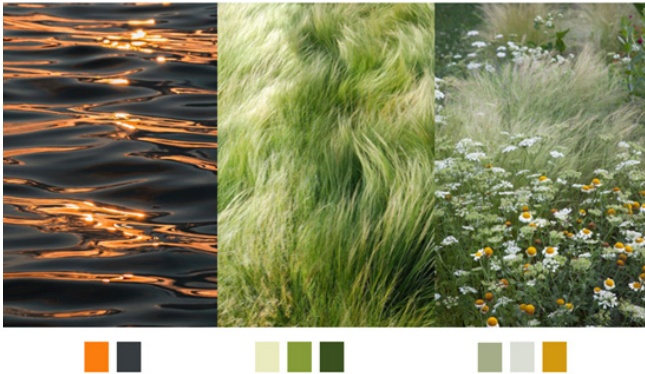
Figure 94. The color palette used for the final design

These colours are used in the final design for the Guiding Cards, the Menu Card, the Creation Set and for the logo of the café. There are 3 different sets of Guiding Cards, A (Figure 95), B (Figure 96) and C (Figure 97). These all have a different graphics:

A: 2 elements that are overlapping. It is one moment however it does exist out of multiple elements.
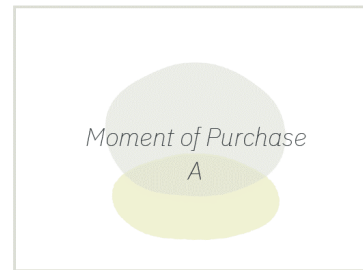
Figure 95. Moment of purchase - Guiding card

B: 2 elements next to each other. There are two moments that you can compare.
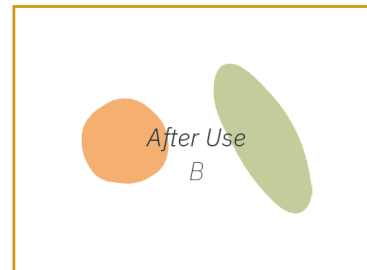
Figure 96. After use - Guiding cards

C: All elements come together. You see an overview of your behavior.
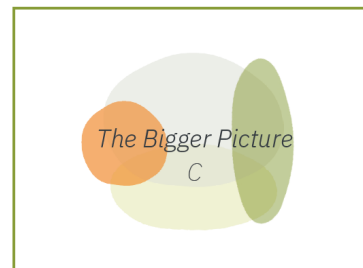
Figure 97. The bigger picture - Guiding cards

5.3. Final evaluation

This chapter evaluated the final design by doing a last user test. This user test was done together with 6 participants. As the design takes place over a time span of several months, only the first stage of the design is evaluated. After the user test, a questionnaire was filled out by the participants about their experience with the design.

5.3.1. Goal and method

The goals of this user test were:

1. to evaluate the first stage of final design to validate whether or not the design creates impact on the way people perceive at their last purchase

2. to test whether it adds value to the design when there are more than 2 people involved in the process

Important limitation:
This design is meant to create long term behavior change, in the final design this is created over a time of 6 months. For this graduation project there is no time to test it for more multiple months, not even multiple weeks. Therefore only the first stage of the design is tested. No long term effect can be measured within this project.

To test the design, a restaurant setting is created at my home. Six participants will go through the first stage of the design in which they will make a visualization of their last purchase. There are 2 tables in the 'restaurant', one table for two people (Test A) and one for 4 people (Test B). Test A and B will be held simultaneously. During both test observations will be made, after the exercise is done there will be a group discussion about the design. At the end of the test a questionnaire with a Likert scale was filled out by the participants.

Attributes that were used during the user test: 6 Reflection board - 3 Creation sets - 3 Menu cards - 3 Glue sticks - Markers - Questionnaire link - Polaroid camera

5.3.2. Results

First the observations during the test are discussed, after that the discussion with the participants and last the results from the questionnaire. Figure 98 shows the test.

Figure 98. Snap shot of the testing experience

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5.3.2.1. Test A

This test was done with two participants, they already knew each other. After the explanation of the design, the two participants started with reading the guiding cards. These cards helped them to start the visualization process. After they read the cards they started looking through all the different cards globally (see Figure 99). They started talking about their purchase and how they felt at the moment of purchase. The images that were laying on the table brought all kind of different associations with it, and the participants started to help each other to find the right image for their experience (see Figure 100). The participants worked together and also looked at each other visualization to see what attributes from the creation set they had chosen, a few times they copied certain ways of visualizing a feeling from each other. They also started to discuss how they could visualize their experience using the creation set, this let them to talk about their experience of their purchase in more detail. During the visualization process they would go back to the guiding cards multiple times, with the use of the cards they started to ask each other what the underlying thought of their purchase were (see Figure 101). After 20 minutes they were both working concentrated on their board and therefore stopped talking.

Figure 99. Beginning of the exercise

Figure 100. Helping each other find the right image

Figure 101. Reading the guiding cards

That took a few minutes, after that they started asking more specific questions to each other about their purchase. Again they used the guiding cards. One participant was done earlier than the other and started to look at her own board, she immediately saw something she did not noticed before. She discovered that her purchase was not really important but that she really enjoys the activity of shopping. The other participant did not have new insights at the moment yet. At the end they shared their reflection boards together to end the exercise. The session took around 1 hour and 10 minutes.

5.3.2.2. Test B

This was the first test where there were more than two participants included in the test, there were four who already knew each other. Before the exercise started, the participants started to show their purchase to each other. Every one was enthusiast about each other's purchases, which at that moment seemed to spark the desire to shop more. This was because the participants were inspired by the nice purchases and also surprised by the shops where it was bought.

The start of the exercise went smoothly. One participant started asking the others questions about their purchases, these questions were already going into the underlying motives of their purchases. The questions of this participant sparked the conversation between the participants. They al started to talk enthusiastically about their purchases, but also started to share their doubts and insecurities about it. During this conversation they simultaneously started to look through the creation set (see Figure 102). Again the same participants started to ask about the emotions the other felt at the moment of purchase. They shared their experiences. You could see that some participants preferred different triggers from the creation set that others. One participant really liked the shapes as these could be interpreted more freely, while others liked the images more as it sparked more associations. One other participants mainly focused on the colours of the image, while some one else focused on the shapes of it. While going through the images and putting them on the board, different emotions from the experience came back. The experience with the purchase were all different, some were hesitant about purchasing, where others bought way to much. After 30 minutes everyone was working very concentrated on their boards, for a few moments it was quiet. One participant was looking for a specific image that she saw before, however she could not find it anymore as the table was covered with the creation set (see Figure 103).

Figure 102. Going to the creation set together

Figure 103. Table covered with the creation set

She then went to the other table, to ask if they still had the image. The tables started to share there creation set, even though it was the same one. Some images made the participants laugh, they showed the images to each other, this made the activity really easy going.

They started to help each other with finding images that matched their emotions. When someone shared their emotions they would go deeper into that topic. One participant also started to cut out some images to adapt it to her preferences. Suddenly one participant shouted that she had a new insight about her purchase, she did not share what it was at that moment. The group did not use the Guiding Cards, they did look at them when they were done. However this did not added much for them as they already discussed most of the questions that were on the cards. They liked some questions more than others. When it is was done they did not look at each other's boards and started to eat some snacks. The session took around 1 hour and 30 minutes.

All the reflection boards can be found in Figure 104.

Figure 104. Reflection Boards of the participants

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5.3.2.3. Discussion together with all participants

After the Reflection Boards were done there was a discussion together with all eight participants. Two participants found it difficult to simultaneously make the reflection board and talk to the other participants, as they were concentrated on the board. For the duo this was not a problem as they were with just two persons. Having more people in the group enhanced the discussion about their experience but could also be distracting as there were multiple people talking at the same time. One participant would like to have magnets instead of gluing the images down, as this would allow her to 'make mistakes'. For all participants they liked the images more than the words, however they imaged that other people would just use the words. The participants suggested to put also questions on the reflection board to help people when doing this the first time. They also suggested to not put the images in any order, just randomly on the table, as one participant was influenced by the only positive emotion cards that were laying in a stack in front of her.

One participant stated that she did not like the name of the concept as she did not know why she bought it that point, she did got more insights into how the process of buying went. However another participant interrupted that she did gain insights into why she bought it. The participants were wondering how they would feel about their reflection board when they owned the item for one year, they would like it to be able to look back at their previous reflection boards. One participant stated that she really enjoyed to learn more about the buying behavior of her friends. Another participant wanted to do this exercise digitally, however the other seven participants did not agree. They started to talk about why having a physical medium helped during their reflection.

At the end of the discussion the participants all started to wonder about the café and what it should look like. One suggested to have this café during a festival, another suggested to sell your purchases that you regret in the café and to put quotes of previous visitors on the walls. They envisioned it to be a really creative place.

After the test was done, all participants stayed to enjoy some more drinks and food together. We all know each other. A interesting thing happened, that may be or not be related to the reflection exercise, we all started to share personal experiences and stories about things that were going on in our lives. These were non-fashion related topics. I have no proof that the design had triggered this conversation but I do believe it influenced it as the participant were encouraged to share personal experiences when testing out the design.

5.3.2.4. Questionnaire

The questionnaire and the data can be found in appendix T. Figure 105 shows the results of the questionnaire.

1. The design was difficult to understand
2. The design was easy to understand
3. I knew what to do when I started making the visualization
4. I got to know my reflection partner better
5. The design is fun
6. The guiding cards helped me during making the visualization
7. The creation set allowed me to make visualizations that fitted my experience
8. The time I spend on the visualization was too long
9. The time I spend on the visualization was too short
10. The design helped me to reflect on the last purchase I made
11. I will think about this experience when the next time I am going to buy a fashion purchase
12. I got to know myself better
13. I got new insights about my buying behavior
14. I want to visit the reflection café again
15. The design made me feel guilty about my purchase
16. The design is boring

5.3.3. Conclusion

The participants strongly agreed on the fact that the design helped to reflect on the last purchase that they made. They agreed on the fact to think about this activity when buying their next purchase. However it is difficult to say whether or not they design has a long term effect on their shopping behavior. It did triggered them to think about the reasons behind their shopping behavior. Reflections takes time, thus to fully validate the design, a long term user test should be executed.

The user test did show that it works better for the discussing to do this exercise with 2 people. When including more than 2 people at the table, it can occur that one or more persons will just be focused on their Reflection Board and not on the discussion around it. With multiple people there is just too much going on.

The improvements that were derived from this user test, will be included in chapter 5.4 Recommendations.
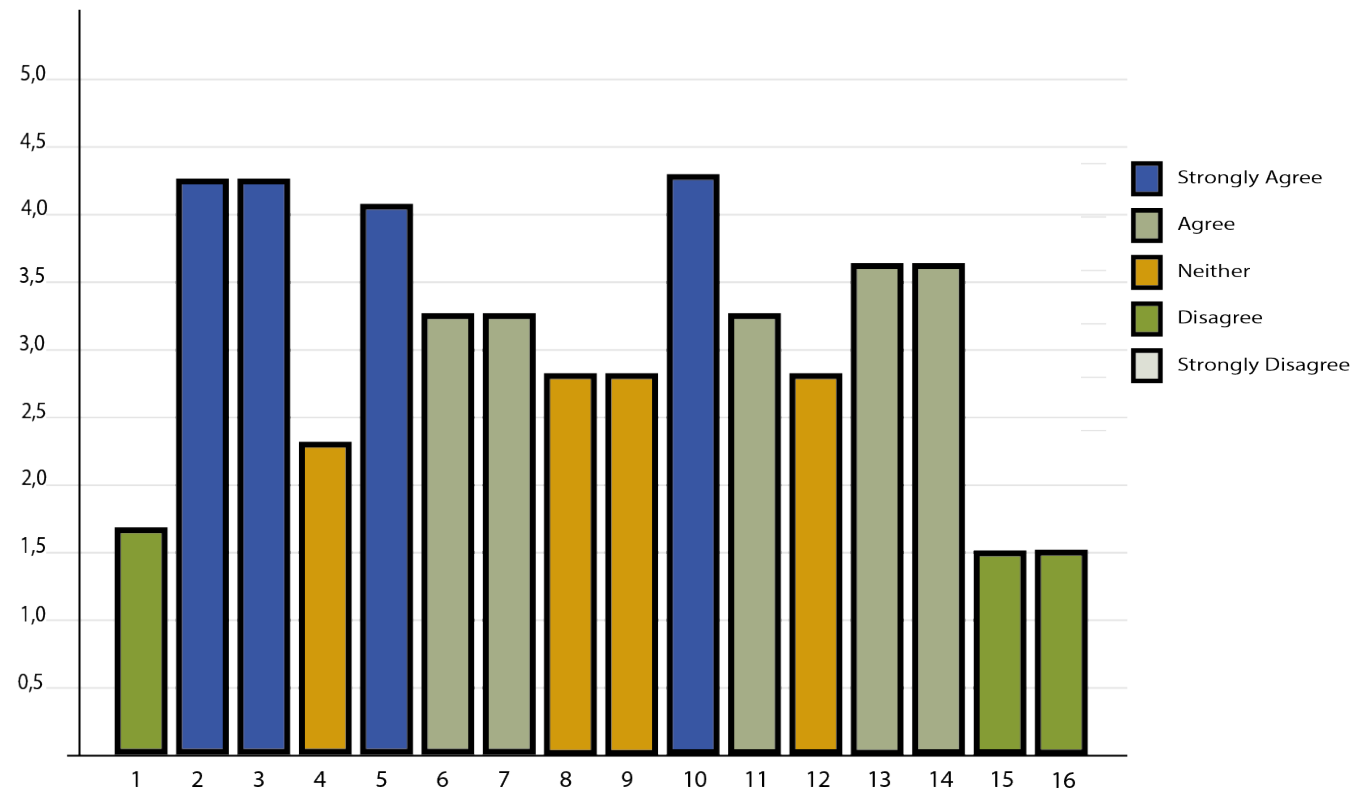

Figure 105. Evaluation of the final design

5.4. Recommendations

As a result of the evaluation of the final design, improvements were identified to further develop the concept. These improvements are translated into the ideal setting of this design. This setting explains how the concept can be implemented into a restaurant.

Figure 106 shows the ideal setting. The Reflection Café should be a 'gezellig' and creative place. The goal of the café is to reduce consumption however this should not be visible in the café itself. Communicating this to the visitors can be overwhelming or be experienced as judging. The Reflection cafe is a place where you can share your thoughts and emotions, the atmosphere should allow such personal conversations. The tables should therefore not be right next to each other, in order to safely share your insights without being scared to be judge by someone else. However if people want to share their insights with other visitors this should also be possible. This can be realised by having a separate part of the restaurant where you can share your board with other visitors, or just by asking other visitors to take a look at your board.

The café should be fully focused on the 'why do you buy' experience, so everyone in the café is working on their visualization

IDEAL SETTING FOR THE REFLECTION CAFE

2 Persons per Table

The Reflection Board can be messy

Glue the images to the Reflection Board

Ensure space between the different tables

Have Enought Space for the Creation Set & drinks

The Cafe takes care of the full service, you only have to wear your last purchase

The Creation Set is made out of paper

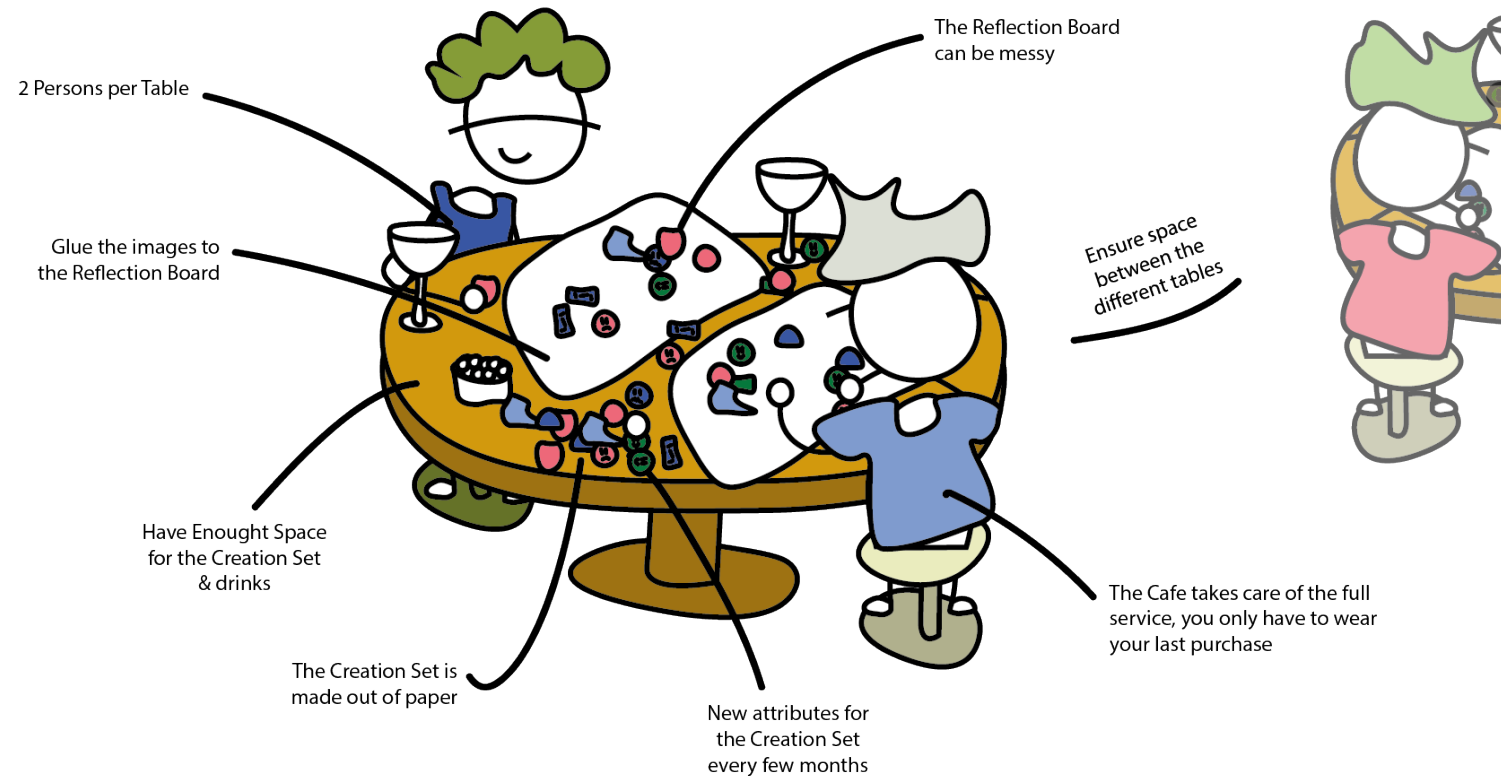New attributes for the Creation Set every few months

Figure 106. Ideal setting for the Reflection Cafe

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and having conversations about it. Seeing other visitors in the café working on their Reflections Board will encourage new visitors to confidently start.

The tables itself should be big enough to fit 2 Reflection Boards, a Creation set, and drinks and food. The café will take full care of the service, the user only has to wear or bring their last purchase. The café also stores the Reflection Boards. There should be space to cover the table with the creation set, to freely explore all the different triggers. The Creation Set should be extended every few months, in this way the visitors will get new attributes they can work with. This may trigger new insights.

Including more than 2 people on the table can disturb the flow of the activity, one person may not engage in the conversation and only focus on the board. Having no more than 2 persons per table prevents this.

The user should be encouraged to put effort in the Reflection Board in order to start their reflection process, however it is important to communicate that the board is a mean to reach a greater goal. The board can be super messy and does not have to be perfect, only the user has to understand the board. To keep the activity low key and flowing, the creation set should be made out of paper. Having paper images will allow you to glue down the attributes, it is important to glue it down as that is a permanent action. When looking at the board later, you may not agree

with that image anymore or your experienced change, seeing the old image will help you to reflect on this change.

The Guiding Cards should be tested on which questions work the best, also the amount of questions should be elaborated.

5.5. Personal Reflection

Starting this graduation project, I had set several personal learning ambitions that I wanted to develop during my project. These ambitions were:

1. Learn more about experience design

2. Using introspection methods, such as autobiographical design, into a design process

3. Learning to use emotions during a design process

4. Broaden my sustainability knowledge, specifically on the full impact of products from the very start to end

During this project I did integrated all the learning ambitions, however not really consciously, it sometimes just happened within the process. I wanted to learn more about creating experiences instead of products, which I did. I designed a full experience, which surprised me because at the beginning of the concept development the design was going into a different directions.

With the Reflection Café I went into a whole new direction of sustainability. It uses the emotions of people to gain insights into their own behavior, they are the ones who decides what is desirable behavior and what not. I believe this way of creating awareness (introspection) can create a long term behavior change instead of a temporary solutions.

I am proud of the Reflection Café that I have created, it resonates with my personal beliefs and the ones I have as a designer. This project turned about differently than other project I have done, which helped to get out of my comfort zone. It wasn't always easy, but I am happy with the result.

For next projects, I want to take into account that I can take some more time for certain tasks. I can work quite quickly, which allows me to get a lot done in a short time, however it also brings a lot of unnecessary stress. This stress is often not needed I am mostly ahead of my planning, being more confidence about my work would allow me to experience a project more peacefully.

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