Maintaining consumer motivation in digital loyalty programs

Graduation thesis report by
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"Maintaining consumer motivation in digital loyalty programs"

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Master thesis

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ICEMOBILE

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◼ Preface

During my master I developed interests in the field of designing interfaces. My interests were triggered by the fact that designing an interface also includes a strong focus on the user experience and the use in context. The translation from the results of a user research study into a design, whereby the user experience and usability are of utmost importance, is what fascinates me.

In September 2014 I decided to do an internship at IceMobile, because I wanted to gain more experience in practice and because IceMobile is focused at the topics I was most interested in. During my internship I learned a lot about designing interfaces with a strong focus on usability and the user experience. Also the culture at IceMobile is great because there are almost no hierarchies and communication is informal, but still everyone works together in a professional way. Also everyone's ideas are welcome and for every problem a creative solution is thought of, which makes it a pleasant atmosphere. As this implies I enjoyed my internship a lot at IceMobile. So when they asked me halfway my internship if I wanted to do my graduation project for them, I agreed.
Because IceMobile was interested in further research about the motivation of consumers

in loyalty programs this became the topic of my graduation project. Actually, I never really participated in a loyalty program before the project myself and therefore it triggered my interests (i.e. to do user research on a topic I am not familiar with myself). Next to this, I had a strong interest to focus my graduation project on emotions, because design for emotion always interested me during my master. Fortunately, it turned out that this could be combined in my assignment because consumers in loyalty programs experience a rollercoaster of emotions. Therefore I was very pleased with the assignment of my graduation project.

So after seven months of hard working and getting involved in loyalty programs myself, this is the result of it. In front of you lies the report of my master thesis. It describes an extensive user research study, the design process I have been through and finally the concept that was developed during the project.

◼ **Acknowledgements**

Despite the fact that it was an individual project, I could not have done it without the help of my supervisors and friends. Therefore I would like to thank them.

I would like to thank my supervisors of the TU Delft, my chair Maria Sääksjärvi and my mentor Pinar Cankurtaran for their sharp criticism and cheerful meetings.

I would like to thank IceMobile for offering me this opportunity and the inspiring atmosphere. Emma, my supervisor, for her enthusiastic, constructive feedback and her dedication in supervising me. Anna for her enthusiasm and creative solutions. Miika for the challenging assignments and sharp remarks for improvements.

Furthermore I want to thank all the participants of my user research studies for participating in the self setup loyalty program or small concept evaluation tests and for the feedback that was provided.

And last, but not least, I want to thank my boyfriend, parents and friends, especially Rianne, Janne, Imke, Tinde and all other friends or family that helped me through the project when I needed a sounding board or I needed support in other ways.

◼ Executive summary

Loyalty programs are mainly implemented to build up the relationship between the company and the customer, i.e. to increase the customer loyalty. This has both social and financial benefits for the customer (e.g. feeling of community, discounts, etc.) as well as for the company (e.g. better relationship with customers, increase share-of-wallet, etc.). BrandLoyalty is the global leader in loyalty programmes for food retailers and their partner IceMobile, the company this master thesis is carried out for, is a mobile service provider for food retailers worldwide. The problem they are dealing with is that customers start late with redeeming or do not redeem at all during the collecting period. Prior research studies of Icemobile and theory show that this is dependant of the motivation of the user. Therefore the goal of this master thesis is to explore how consumers' motivation in digital loyalty programs can be maintained.

This report describes and evaluates the extensive user research and literature studies that are conducted and the range of possible design solutions that were generated based on the results of these studies.

First an in depth literature study was conducted to create an understanding of how consumer behaviour in a loyalty program influences the motivation of the user. A conceptual framework was created that included factors that directly and indirectly influence motivation. The four main factors, which influence motivation directly, are commitment, progress, emotions and moods.
To examine if the behaviour described in literature is similar to actual behaviour, an extensive user research study was conducted. Other goals of the research were to find out if it

is possible to form groups and what emotions these groups experience. This study existed of a self-setup loyalty program via Whatsapp with 30 participants that lasted for 3 weeks and which was setup in such a way that it was as similar as possible to a normal program. Results: direct and indirect influences of the conceptual framework were recognised in the actual behaviour. Also, 6 groups of collectors could be identified based on the level of commitment, progress and emotions.

Reversal theory (Apter, 2006) was used to examine what behaviour should be adjusted and how this could be done. This showed that users could be helped to be more playful (i.e. enjoyment in the moment) than serious (i.e. Focus on achievement and future goals). Besides this, reversal theory explaind that the user should experience positive emotions that are not too intense. This leaded to the following design goal:
"To help the users, who mainly focus on the achievement/reachability in the loyalty program and experience negative emotions in it, to be more excited and less anxious about collecting stamps by creating enjoyment in the moment. Solutions should be directly applicable on the existing application of IceMobile."

The design goal was the starting point for the concept generation. After exploring all possible solutions, according to idea generation techniques, three concept directions were selected that fitted the design goal best and that were feasible in implementing it in the app of IceMobile. In several iterations these were developed into concepts. The three concepts that were developed are:
Swipeshare: Implementing the possibility to share stamps in the application

Surpris: guiding the user through the process by revealing special stamps on moments they can use it, but in a way that it feels random to them (trigger desired behaviour).
Memo: Making the process of collecting more fun by offering games, that will get harder every time, throughout the process of collecting.
By doing quick concept evaluation tests, it was concluded that the concept Surpris had the most potential and would therefore be developed into a final concept. Several iterations followed wherein the content of the concept was developed in detail and the concept was applied on actual transaction data, of loyalty programs that were already finished, until it worked like intended.

The final concept is a feature in the application that gives special activities to the user the collecting period. There are four types of activities, namely questions, compliments, games and wheel of fortunes. These activities are given on moments users can use it best, but in a way that receiving the activity still feels like a surprise to them. If the user will receive an activity depends on the amount of collecting moments, sometimes he will receive an activity and sometimes he will not. The feature is communicated by Stampie, a character in the form of a stamp, and he will only be available in the app when an activity is offered to the user, otherwise he disappears. The goal of this feature is to mentally help the user through the collecting process and so motivate him to keep collecting. Besides, activities are offered to the user on specific moments and therefore try to trigger the desired collecting behaviour, e.g. buying BSO's, immediate redeem, etc.

To gain insights about how the concept works in an actual loyalty program, an evaluation study was conducted. This study was as similar as possible to the first Whatsapp loyalty program, but was conducted with 10 participants.
From this study three recommendations can be given:

- Do another evaluation test in the actual app or a test whereby the user experience of the app is as equal as possible. Most important is to test if Stampie will be seen as a bigger help when he is animated (i.e. when he will stand in your screen and wave to attract attention) than when he is a static character.
- The purpose behind the games can be improved because this was not totally clear yet.
- Stampie could also communicate about other topics than BSO's and rewards, like how to convert, the duration of the program, etc. This because people mentioned they liked it that Stampie reminded them about things like the duration of the program.

These recommendations show that the final concept should still be further developed before it is actually implemented.
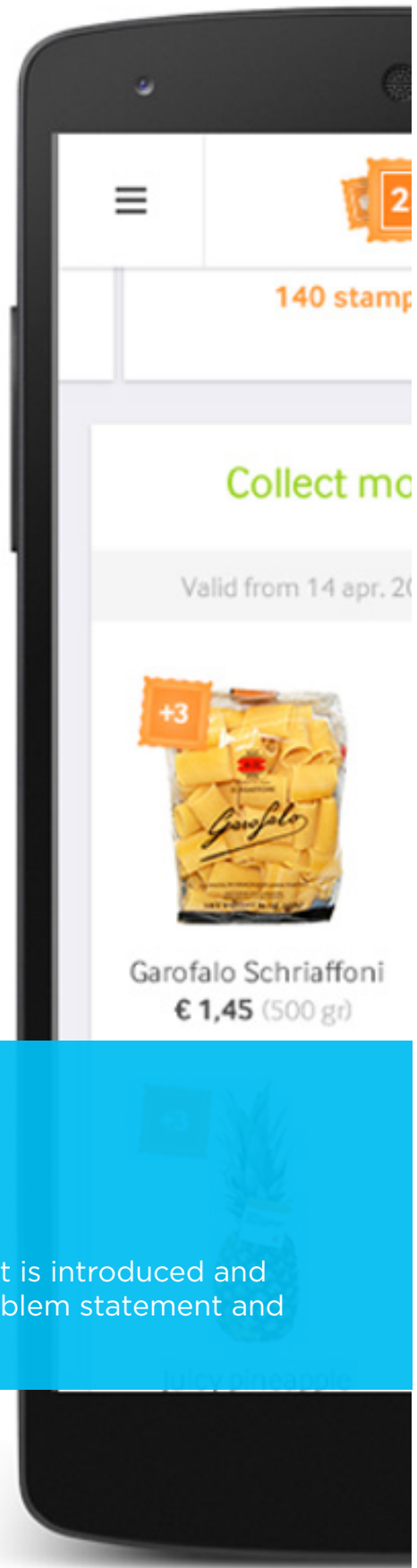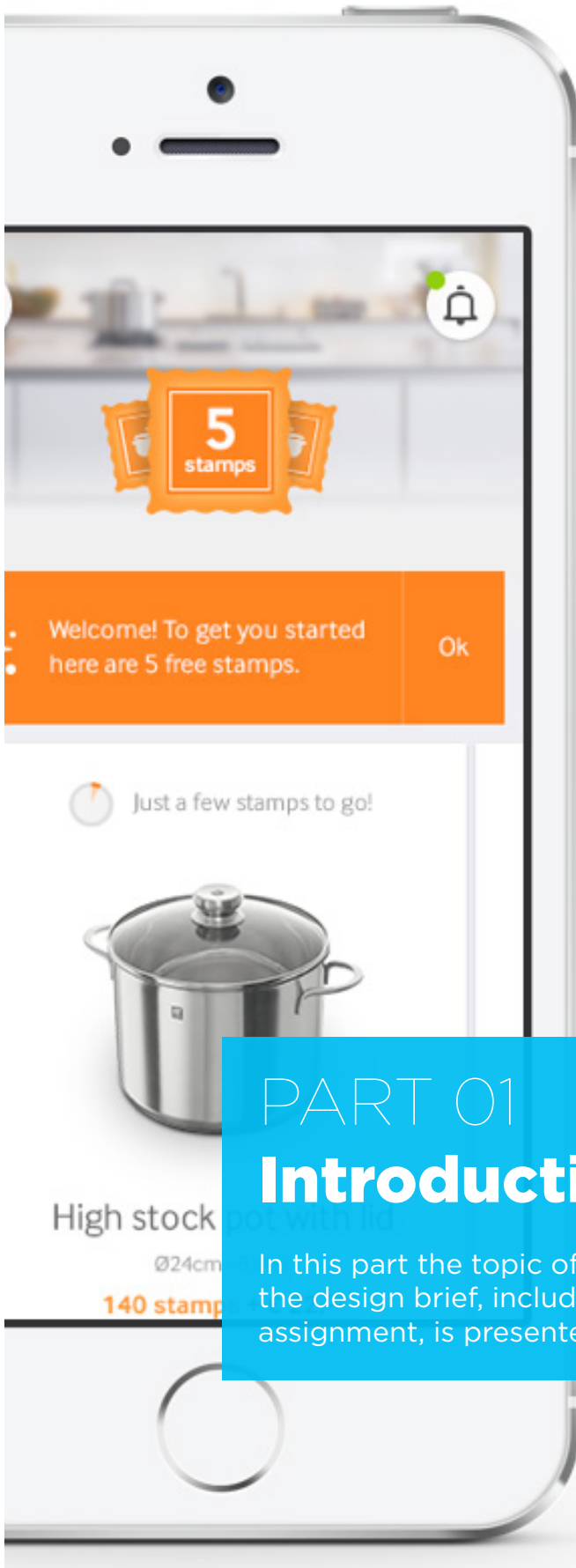
List of abbreviations

App   application
BSO   bonus product (a product that comes along with an extra, free stamp)

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Introduction

In this part the topic of the project is introduced and the design brief, including the problem statement and assignment, is presented.

CHAPTER 1
Introduction

In this chapter the project will be introduced. First, the topic of the project will be explained as well as the benefit of it for customers and companies. After this, the company were the graduation project will be executed for will be introduced. Then the project brief will be described followed by an explanation of the product focus of the project ending with research previously conducted.

1.1 **Introduction to the topic**

The topic of this graduation project is 'maintaining consumer motivation in digital loyalty programs'. In this chapter the definition of a loyalty campaign will be explained, followed by an explanation of why it offers benefits for companies and customers. Lastly will be explained why the focus on digital is of relevance.

What is a loyalty program?

A loyalty program is a form of relationship marketing with the goal to establish a higher level of customer retention by providing more satisfaction and value to certain customers (Bolton, Kannan, and Bramlett 2000). It will be carried out by companies that are interested to increase the customer loyalty, i.e. build a relationship with the customer. The loyalty program is defined as an integrated system of marketing actions that aims to reward and encourage customers' loyal behavior through incentives (Leenheer et. al., 2007; Sharp & Sharp, 1997).

Loyalty programs exists in different compositions and are carried out by companies all over the world. One example is Air Miles whereby the user collects points by buying products at different stores. The points are another form of currency of which the value can differ over time. The points can be redeemed for discount on products, travel tickets or daytrips.

Another example is Starbucks whereby the user receives a star for a specific spend level. First the user has to collect 300 stars to reach the 'golden level'. When this level is reached the consumer can benefit from several rewards, like free refills or a free (personalised) drink or food item for the next 125 stars the user will collect.

What is the benefit for companies?

There are several reasons for a company to decide to offer a loyalty campaign. For them a loyalty program can help to build or maintain close relationships with their customers and to increase sales revenues by encouraging repeat purchases (Uncles, Dowling & Hammond, 2003).

To build a close relationship with the customer, it is important to win the loyalty of the customer. Via a loyalty program customers are triggered to interact more often with the company. This because when people are committed to a loyalty program they will decide to go to the concerning company, in order to spend more on the current program, rather than go to the competitors (Leenheer et al., 2007). By more frequent interactions with the company, the customer will become familiar with the brand and therefore develop a positive attitude towards the company. This encourages customer-company identification. This means that customers start to identify themselves with a specific brand (i.e. company) in order to create their own social identity (Ahearne, Bhattacharya & Gruen, 2005). This will lead to

more attached customers and therefore an increase in company loyalty.

On the other hand companies are looking for a financial benefit. Loyalty programs contribute to an increase in the customer's share-of-wallet, i.e. the spend level of the customer (Leenheer et al., 2007). Customers, who are participating in the loyalty program and are committed to it, tend to increase their share-of-wallet regardless of their psychological attachment to the company (Wirtz et al., 2007). There are two explanations for this. On the one hand people experience positive feelings towards the program, which implies higher repurchase levels and share of wallet (Taylor & Neslin, 2005). And, as mentioned before, the customers will decide to go more often to the concerning company rather than competitors and thus their spend level will increase.

What is the benefit for customers?

On the other side of the program the customers decide whether they will join a loyalty program or not. Also for them it offers social and financial benefits.

Socially a loyalty program will create a community feeling amongst customers. This community feeling can give the user a feeling of belonging, a sense of importance and integration and a means to fulfill emotional needs (McMillan & Chavis, 1986). Also other social benefits can occur like fraternization, development of friendships and personal recognition (Gwinner, gremler, & Bitner, 1998). Financially there are several benefits for the user. The loyalty program offers customer discounts, cash-back offers, coupons and rewards (Mimouni, Chaabane & Volle, 2010) to the customer.

Besides the financial and social benefits, the loyalty program may also provide the customers an aspirational value. The rewards that are offered by the program can motivate the customer to join the program (O'brien & Jones, 1995).

Why digital?

In the field of mobile technology a lot of innovations occur. In the last decade the use of the mobile device changed radically. Nowadays it is used for an abundance of purposes (e.g. social media, news reads, e-commerce etc.), whereas a decade ago it was a medium that was particularly developed to contact another person via a call or a text message (Business Insider, 2016). And it will not stop here, this development of the mobile technology will always continue and people will use their mobile device in the future for additional purposes. For example, in the future we might pay with our phone instead of the bank card, due to the innovations in the field of digital-payment technology (Business Insider, 2014). Therefore it is important for companies to adapt to these technological trends and innovations accordingly. So the marketing strategies should be developed to suit this new channel.

There are several companies that already offer loyalty programs via the mobile channel. Still it is relatively new, namely the first time a loyalty program was offered digitally was in 2011 (Belly, 2016; Bridg, 2016).

However, there are a lot of advantages of a digital loyalty program for the company and its' customers.

For the company mobile technology is becoming a noteworthy tool in customer retention management (CRM) (Helenius & Liljander, 2005) and thus to maintain or build up a relationship with the customer. First it can lead to an increase in customer loyalty (Fjermestad & Romano, 2003). This can be identified since the system captures data of the customer. This makes it easier for the company to identify the actual costs of winning and retaining individual customers. Also, the data can be used to put the company's time and effort in focusing on the most profitable customers. Second, using mobile technology for CRM can

help to build a closer relationship with the customer. The company can learn from every customer interaction and in this way deepen the relationship by offering solutions that suit the customer (Crosby & Johnson, 2001). Lastly, offering a mobile application can have a positive influence on the image of a brand and the company. According to Nysveen et al. (2005) the users' beliefs about a services' (i.e. mobile application) usefulness, ease of use, enjoyment and possibilities for expressiveness should positively influence their attitude toward using the service.
For the customer a mobile application is easy to use and offers a better user experience for several reasons. First, the customer can access the service whenever and wherever he wants (Heinonen, 2006; Sugai, 2005; Turban et al., 2002) in contrast to a store with opening hours. Also, the service can provide location-specific information, e.g. information about the nearest store (Jukic et al., 2002; Turban et al, 2002; Wang & Cheung, 2004). Secondly, via the mobile channel better and accurate service can be offered to the customer, because it could offer quick resolutions to problems (e.g. complaints can be easily send to the company and can be answered quickly) (Liljander, Polsa & Forsberg, 2007). Lastly, a mobile application offers the possibility to integrate new features and services to the customer. This can enhance the service contentment and usability of the application, which is of utmost importance for the users' satisfaction (Chae et al., 2002).

Why interesting for further research?

So a loyalty program is an integrated system of marketing actions that aims to reward and encourage customers' loyal behavior through incentives. The goal of a loyalty program is customer retention, i.e. increase the loyalty of the customer towards the company.
For the company this has two benefits. First, it is a tool to build a closer relationship between the company and the customer by letting them interact with the company more often. Second, the financial benefit is to increase the customers' share-of-wallet (i.e. spend level of the customer). When people are committed to the program they will go more often to the specific store rather than to competitors. When they get attached to the supermarket their loyalty towards it will increase.
For the consumer there are some benefits as well. First, the loyalty program creates a community feeling amongst customers. Second, the financial benefit for the customer is that a loyalty program offers discounts, cash-back offers, coupons and rewards. Last, the loyalty program adds an aspirational value.
Offering the loyalty program digitally is a relatively new step in this field, but it has great potential to have a positive effect on building a relationship with the customer (and so developing the customer loyalty). This because the mobile channel is an easy way to communicate directly with the customers. To gain more knowledge in the field of this topic will be helpful for companies, so that they know how to deal with this way of building customer relationships.

1.2 **Introducing the company**

The company wherefore this graduation project will be done is IceMobile. IceMobile is a design agency located in Amsterdam. Their mission is 'to add emotion to transactional loyalty, which we uniquely focus on food retail' and 'to be the best mobile service provider for food retailers worldwide' (IceMobile, 2016). They believe they stand out by creating magic at the intersection of creativity and technology and by combining data & digital to deliver personalized mobile experiences, with which they will boost revenue and customer loyalty for retailers worldwide.

IceMobile has a clear vision on increasing customer loyalty. They believe that the stronger the relationship is between a brand and its user, the stronger the business is and the faster it grows (IceMobile, 2016). Moreover their vision is that customer loyalty exists of two types of loyalty. On the one hand there is emotional loyalty (heart) which is defined by 'the satisfied customer's overall emotional attachment/love toward a particular retailer based on his or her experience with the retailer over time' (Kim & Lee, 2010). On the other hand there is transactional loyalty (wallet) which is defined by 'the customer's perception of the tangible attributes and benefits of a specific product, service or transaction' (Stringer & Cates, 2009). To earn the customers' loyalty, and build the relationship successfully, you have to deliver on both types of loyalty. As the mobile application is the direct communication channel with the customer, it is of big importance for IceMobile to strongly focus on the user experience of the app. As explained above a better user experience will influence the relationship between the customer and retailer positively.

In 2012 IceMobile merged with BrandLoyalty, the global leader in loyalty programmes for food retailers. This was done because

BrandLoyalty is expert in loyalty programs and IceMobile in offering digital solutions. By collaborating they can offer a more innovative solution to their clients (including all the advantages explained above) and adapt accordingly to the technological innovations.

BrandLoyalty offers two types of loyalty programs to their clients. One type is an instant loyalty program whereby the consumer gets an instant reward, which are topical, newsworthy, educational and focused on kids, based on the amount they spend. The other type is a reward loyalty program, which is a retail promotion whereby customers collect stamps and when they reached a certain threshold they can redeem a reward (BrandLoyalty, 2016).

The stamps application of IceMobile focuses only on this last mentioned type of loyalty program which is why the focus in this graduation project is on the development of a digital soluiton for a tailor-made loyalty program.

As already mentioned, for this type of program the customer receives stamps for a certain spend level when doing groceries. When enough stamps are collected, i.e. the stamps sheet is filled, the customer can exchange the stamps and redeem a reward of his choice. The offer of rewards usually exists of a set of products that form a set when they come together, like knives, pans, cutlery, glasses, etc.

For an example, see Figure 1.1. This is the most

Figure 1.1 Example of booklet of a loyalty campaign.

recent loyalty program at Albert Heijn. The customer receives a stamp for every 10 euro. When the stamp sheet is filled (50 stamps in total) he can redeem one of the options of the rewards. In this case the options existed of cutlery and knives.

1.3 **Project brief**

In the project brief it is explained what the exact problem is IceMobile is dealing with and what the relevance would be for them to do more research in this field. Lastly the assignment for this graduation project is presented and who the target group is.

Problem definition

To explain what problem IceMobile is facing, the business model of IceMobile and BrandLoyalty should be explained.
The business model for IceMobile is shown in Figure 1.2. It starts with a retailer who is interested in a loyalty campaign. Then BrandLoyalty and IceMobile come into the picture.
BrandLoyalty first buys the products for the loyalty program from the vendor and they will be responsible for it. This means that they will ensure the logistical process of getting the rewards to the stores of the retailer. In this way there is no risk for the retailer because

BrandLoyalty arranges everything for them. So the retailer only buys the loyalty program from BrandLoyalty whereby the possibility to collect digitally is offered (i.e. offers the app of IceMobile). Besides this, there is an option to include a supplier. They can offer bonus products (i.e. products where the customers receives an extra stamp for) in order to sell more of their products.
IceMobile and BrandLoyalty will receive money from the program when a customer redeems the stamps for a reward and pays for it. So more redeems in a program means an increase in turnover for them both.
When looking into customer transaction data (e.g. information about the amount of stamps that were collected, the moment the customer redeemed, etc.) of IceMobile, it shows that customers start late with redeeming or do not redeem at all, which results in a lower turnover than is desired.
In addition, qualitative research studies of IceMobile show that the motivation of consumers are going up and down during a loyalty program, which will influence the emotions as well. An example: in the beginning of the campaign consumers set a goal and they get really motivated to reach it. Then halfway they find out they collect too slow and are not able to redeem the reward in the end. This has a bad influence on the
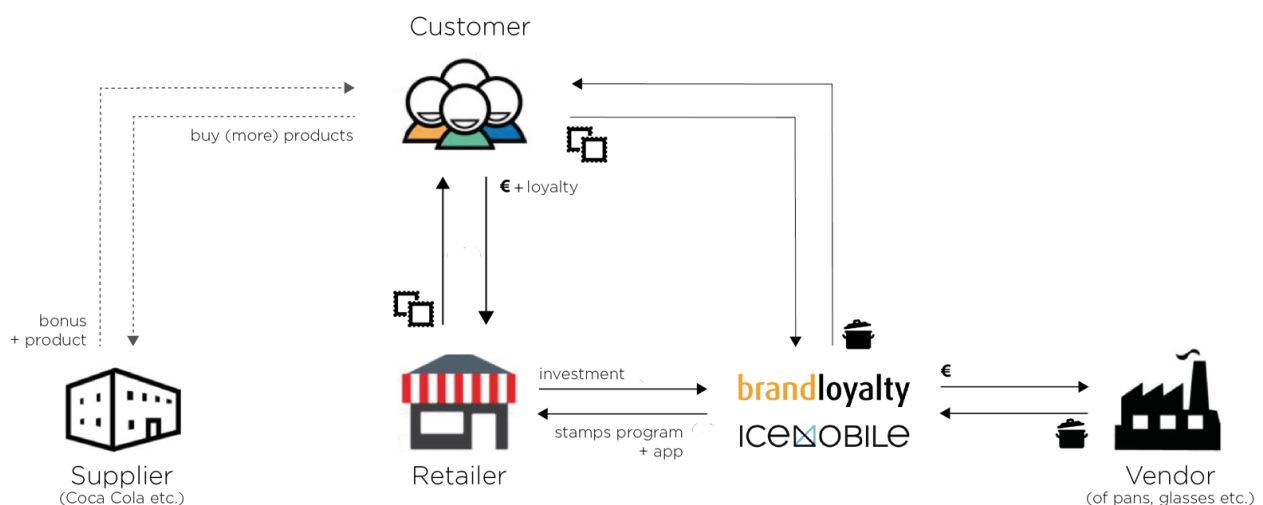

Figure 1.2 Business model of IceMobile

motivation of the consumer, but also on their emotions. Some consumers can be really frustrated or disappointed about the fact that they will not succeed and possibly stop collecting. Resulting in a lower turnover for IceMobile.

Relevance & assignment

IceMobile already knows a bit about the ups and downs in motivation and emotions that users experience in a loyalty program. However, it is not clear yet how this knowledge can be used in order to influence the motivation of the consumer, so that he keeps collecting during the entire loyalty campaign and finally redeeming the collected stamps for the provided rewards. Above the definition motivation is mentioned several times already. This because motivation is of great importance in the consumer behaviour of a loyalty program. It is the key aspect that ensures that a customer will take action towards the program (Touré-Tillery & Fischbach, 2011). Thus, increasing or maintaining the motivation of the consumer can help to encourage them to stay collecting for the program in the entire period and finally encourage them to redeem if possible.

Taking all above mentioned aspects into account it is clear that it would be relevant for IceMobile to do further research on the topic of maintaining motivation of customers in a digital loyalty campaign. This because if customers' motivation can be increased or maintained the possibility exists that it will lead to more redeems and thus an increase in revenue for IceMobile and BrandLoyalty. On the other hand if the consumer motivation can be maintained and will lead to a redeem, this probably result in the consumer enjoying the program more. Which also means that the user experience of the program will be increased.

That is why my assignment will be to explore how consumers can be kept motivated for collecting and redeeming during an

Problem

Customers start late with redeeming or do not redeem at all, which results in a lower turnover than is desired. This possibly occurs because they have a lack of motivation and therefore customers do not take action towards the program.

Relevance

If customers' motivation can be increased or maintained the possibility exists that it will lead to more redeems and thus an increase in revenue for IceMobile and BrandLoyalty. For the customer this means an increase in the user experience.

Assignment

To explore how consumers can be kept motivated for collecting and redeeming during an entire loyalty campaign in relation to the digitalization of a loyalty campaign.

entire loyalty campaign in relation to the digitalization of a loyalty campaign.

Target group

Everyone could collect for a loyalty campaign, so in that sense everyone could be the target group in this project. In spite of the fact that BrandLoyalty and IceMobile are running these kind of programs in countries all over the world (e.g. Netherlands, China, Taiwan and Denmark), the target group for this project are Dutch people in all age groups. This because it is a reachable target for an extensive research study.

1.4 App and research by IceMobile

In this chapter the app for digital loyalty programs will be presented and a user scenario will explain how the app is used normally. Also research that IceMobile already did is explained together with the most important outcomes.

Introducing the application

The application that IceMobile developed makes it possible to collect stamps digitally. The application that supports the loyalty program is called Bright Stamps. In the app the users can check the amount of stamps they have collected so far. Besides this, they can check information about the campaign, the available rewards (and the amount of stamps needed for them), bonus stamps offers and read (push) messages. In Figure 1.3 a visualisation of the app is shown. In the left picture the welcome screen is shown, with the balance of the stamps on top, a welcome message in the orange box and rewards shown in a tile underneath this box. In the right picture some bonus stamp offers are shown.

There are four situations that are important in using the application in the actual context.
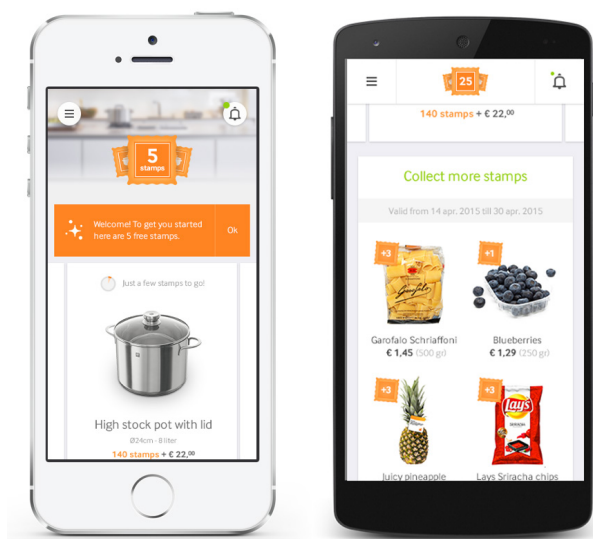

Figure 1.4 Doing groceries and earning stamps

Figure 1.5 Check balance

Figure 1.6 Rewards in store

Figure 1.3 *The stamps application. Left picture: welcome screen, Right picture: bonus stamp offers.*

Figure 1.7 Converting stamps

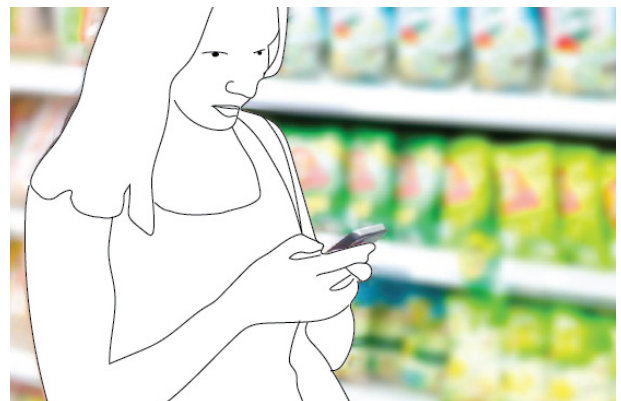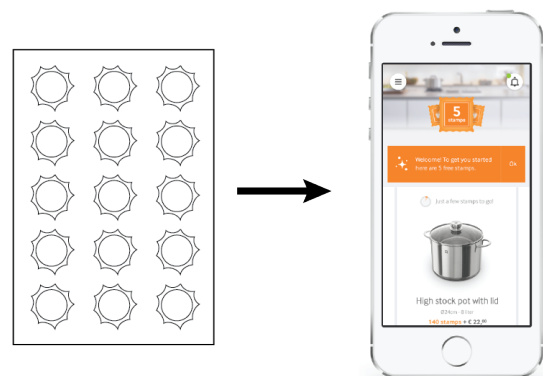In Figure 1.4 the first step is shown, doing grocery shopping. Customers need to do grocery shopping in order to earn stamps. For a certain amount of money (e.g. for every 10 euro) a stamp is given to the customer. When the customer is at the cashier desk he needs to let the cashier scan his loyalty card. Automatically the right amount of stamps will be transferred to his account, this will be visible in the application.

In Figure 1.5 the second step is shown, users will namely check their belance. They will check this right before or after shopping to check if the right amount of stamps are added or to check whether the balance is high enough to redeem a reward.

In Figure 1.6 the reward stand in the supermarket is shown. There is a special stand in the shop where the rewards are shown. Customers will use it to see if the products are of good quality and therefore if it is worth it to collect for this program. And they can decide to redeem their stamps in exchange of a reward which they can pick up at this stand.

In Figure 1.7 the option to convert (i.e. exchange paper stamps for digital stamps) is visualised. Retailers still give the opportunity to their customers to collect paper stamps during a loyalty program. Because of this it is possible to convert the paper stamps into digital stamps at the service desk of the retailer. This service is used by users who discover the application later on in the program, when they already collected some stamps, and it is used by users who receive stamps from friends and/or family members.

Research findings of IceMobile

The UX Lab team of IceMobile already did several qualitative research studies examining collecting behaviour. These studies included interviews with users of the application at PLUS (1 loyalty program) and COOP (2 loyalty programs) and a context chat study (a study whereby the participants occasionally received an assignment or question through whatsapp). From all these insights seven types of collectors were identified by IceMobile, whereof two examples will be given.

The first example is of a type of collector who mobilizes people around him to collect for him. This customer aims at a high goal, namely all rewards of the set, and will do anything about it to reach this goal. Another type of collector is a customer who collects by himself and has a small spending pattern, so he will collect slowly. He will set a goal (one part of the set) at the start of the loyalty program, but will find out that he will not make it.

Recognizing these behavioral patterns is valuable for understanding how users collect, nonetheless it is still unclear if these seven stereotypes are complete yet. But it is a helpful starting point for analysing collecting behaviour.

Conclusion: introducing topic and assignment

This part of the report gave an introduction in the overall purpose of the project: maintaining the consumer motivation in digital loyalty programs. This to build up the relationship between the company and the customer, to increase the customer loyalty. This has both social and financial benefits for the customer as well as for the company. IceMobile is the company that offers the loyalty program digitally together with BrandLoyalty. It is important to deliver both emotional and transactional loyalty to the customer. The digital solution can help to support these types of loyalty. For emotional loyalty a strong focus on This part of the report gave an introduction in the overall purpose of the project: maintaining the consumer motivation in digital loyalty programs. This to build up the relationship between the company and the customer, to increase the customer loyalty. This has both social and financial benefits for the customer as well as for the company.

IceMobile is the company that offers the loyalty program digitally together with BrandLoyalty. It is important to deliver both emotional and transactional loyalty to the customer. The digital solution can help to support these types of loyalty. For emotional loyalty a strong focus on user experience is key.

The problem that IceMobile and BrandLoyalty are dealing with is that customers start late with redeeming or do not redeem at all during the collecting period. Literature and research studies of IceMobile already show that it is of great importance to focus on the motivation of the user, because this is the key aspect that will trigger the customer to take action towards the program. If the motivation can be increased or maintained during the collecting period, it could lead to an increase in redemptions and thus an increase in revenue for IceMobile and BrandLoyalty. Therefore the assignment of this graduation project will be 'to explore how consumers can be kept motivated for collecting and redeeming during an entire loyalty campaign in relation to the digitalization of a loyalty campaign'.

The research that is conducted by IceMobile will be taken into account and will be further build upon in this graduation project.

PART 02
Research

In this part the literature study and the user study, which
included a Whatsapp loyalty program, are exlpained. The
part will be concluded by presenting the design goal.

CHAPTER 2
Literature research study

As seen in the previous chapter motivation is the core aspect that influences the consumers' behaviour in a loyalty program. To create an understanding of how it exactly influences the motivation of the user, an in depth literature study was conducted. First theories about motivation and the factors that influence it are consulted. Second, reversal theory was consulted because this gives insights how user behaviour can be influenced positively.

2.1 Conceptual literature framework

As explained in the previous part of this report the main goal of this graduation project is to increase or maintain the customers' motivation in a digital loyalty program. Motivation is the core aspect that drives users to collect, because it is defined as 'the psychological force that enables action' (Touré-Tillery and Fishbach, 2011). Therefore it is important to get an understanding of how the motivation will influence the consumer's behaviour, i.e. if and how the motivation will increase or decrease.

To gain this knowledge a literature research study was conducted focused on motivation. The first part of this study was focused

on motivation theory. This theory explains that motivation is interconnected with four aspects, namely commitment/engagement, progress, emotions and moods (Fishbach, Eyal, and Finkelstein, 2010; Touré-Tillery and Fishbach, 2011). These aspects can influence the consumer's motivation and the other way around. The second part of the literature study focused on getting a deeper understanding of how these four aspects are influenced by other factors and so indirectly influence the motivation of the user. A visual representation of all the theories that directly (dark grey) or indirectly (light grey) have an influence on motivation can be found in Figure 2.1.

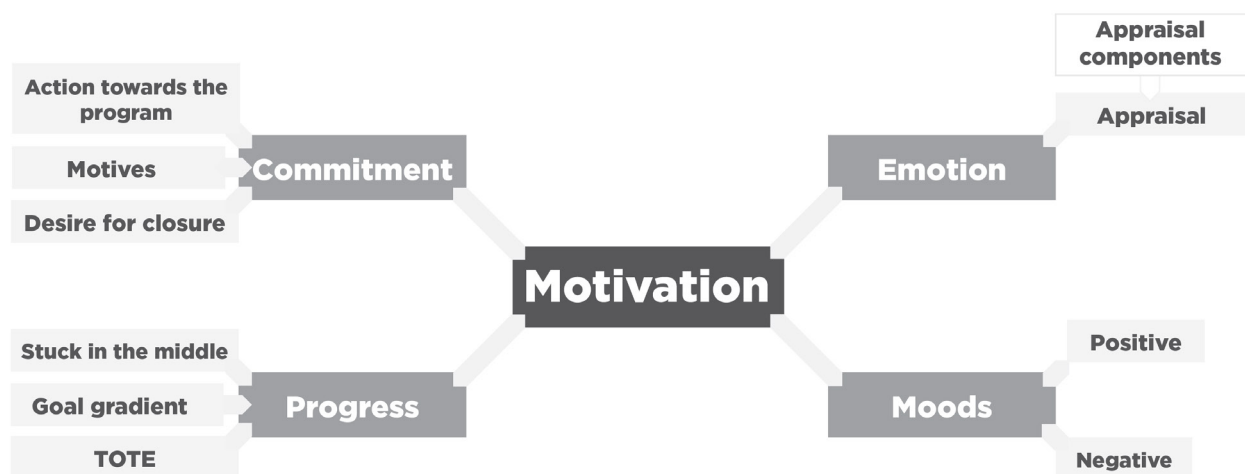In the following paragraphs all the aspects from this literature framework will be explained in detail.

Figure 2.1 The literature framework: how motivation is influenced directly (dark grey boxes) and indirectly (ligth grey boxes).

Motivation

First take a look at motivation and how it is influenced by the four aspects mentioned above. Motivation is the main driver for the user to decide to participate in a loyalty program. However, it is influenced by the four main factors mentioned above (commitment, progress, emotions and Moods), see Figure 2.2 for a visualisation of how the four aspects are interconnected with motivation. Beneath the definitions of these terms and what influence they have on the motivation of the user will be explained.

Commitment is defined by 'the sense that a goal is valuable and that the expectancy of attaining the goal is as high as a result of the initial pursuit' (Fishbein and Ajzen, 1974; Vroom, 1964). So commitment comprises the aspirational value of the rewards of the loyalty program and the estimation if the program is reachable. When the user thinks positive about this, he will be more committed to the program and therefore more motivated.

Progress is defined by 'the perception of moving forward on a goal and reducing the discrepancy between the current state and the desired state' (Carver and Sheier, 1998; Higgins, 1987). This means that the user will be more motivated if he comes closer to his goal.

According to Mesquita & Frijda (2011) emotions are generated when a person–situation transaction compels attention, has a valenced meaning to an individual, and gives rise to a coordinated yet malleable multi-system response to the ongoing person–situation transaction. They are elicited by an explicit cause (Frijda, 1994). Obviously, positive emotions will have a positive influence on the motivation of the user, whereas negative emotions can influence it negatively.

Last moods influence the motivation of the users. Moods are defined by 'a low-intensity, diffuse feeling state that usually does not have clear antecedents, is not directed at a particular object and can last for hours or days but are limited in time' (Desmet, et. al., 2012). They have an ambiguous character because it is not clear how they arise and therefore it will be hard to identify them.

So motivation is influenced by these four factors. Interestingly, all the factors can be identified in the different type of collecting behaviours (defined by IceMobile) in a loyalty program. For example, the collectors who always decide to join a loyalty program do this because they first of all are motivated and thus they are committed, they are making sufficient progress and they experience positive emotions towards the loyalty program. Because of this it would be interesting to dive deeper in these theories and so find out what other aspects influence these four main factors. Therefore, in the following paragraphs every factor will be discussed in detail according to the definitions in theories that were consulted.

Figure 2.2 Motivation is interconnected with commitment, emotion, progress and moods.

Commitment

There are three other factors that all have an influence on the level of commitment of the user. These factors are desire for closure, the motives of the user and actions that are taken by the user towards the program. For an overview of these factors see Figure 2.3. First, people have a desire for closure and therefore the tendency to proceed until they reach their goal. This because a finished task corresponds to a completed goal (Touré-Tillery and Fishbach, 2011). This indicates that all users will have the intention to collect until they have reached their goal, whether this goal exists of filling up a stamp sheet or collecting a whole set.

Second, commitment is influenced by the motives of a person (Demir, Desmet and Hekkert, 2009). These motives can differ amongst users and can have a positive or negative influence on the loyalty program. For example, one users' motive can be that he anyhow needs the rewards, which has a positive effect on the commitment towards the loyalty program. Another users' motive can be that he that he only wants to buy products he normally buys and no BSO's (i.e. bonus product offers) whatsoever (negative effect on the commitment towards the loyalty program).

Thirdly, every interaction with the loyalty program can increase the commitment. This because every action towards the program increases the sense of personal commitment to the goal (Fishbach, Eyal, and Finkelstein, 2010).

So together these factors define the level of commitment of the user, which is an extremely important aspect in a loyalty program. Because when a user

Figure 2.3 Influences on commitment

Figure 2.4 Influences on progress

is not committed to the program, he will not interact with it and therefore he will eventually not collect.

Progress

Progress is influenced by three factors, namely by the processes of TOTE, goal gradient and stuck in the middle. For an overview of these factors see Figure 2.4. There is a process wherein people continuously test if they will reach their desirable goal, called TOTE (see Figure 2.4). It begins with an estimation of distance and effort towards the end goal (test). Then people will invest a certain effort into reaching that goal (operate). Followed by another evaluation of the feasibility of reaching it (test). Whenever people decide it is not reachable they will stop with the goal pursuit (exit). Otherwise this process of testing and operating will continue until the goal is reached and the process is ended (Touré-Tillery and Fishbach, 2011). For the loyalty program it is thus essential that the user keeps collecting and making progress, otherwise he will stop.

Another theory that influences the perception of progress is the phenomenon of goal gradient. This theory indicates that when people approach reaching a goal they get motivated to put more effort in it. When people get notion of decreasing distance to a goal, each incremental step represents greater proportional progress in the shrinking portion that remains (Förster, Higgins and Idson, 1998). So the further the stamp sheet gets filled, the more the level of motivation increases because the goal is getting within reach. This means that making sufficient progress will increase motivation and no or little progress will decrease motivation. Additionally there is one last theory that influences the perception of progress, namely the phenomenon of stuck in the middle. This theory describes that if the initial state is chosen as a reference point, motivation decreases as distance from the initial state

increases. If the end state is chosen as reference point, the motivation increases as the distance from the end state decreases. This means people are motivated in the beginning and in the end of the process of reaching a goal, but get stuck in the middle (Bonezzi, Brendl and De Angelis, 2011). So when filling up a stamp sheet users can get stuck in the middle because they have the perception they are not making sufficient progress anymore.

So these theories summarize how people perceive progress. The two phenomena explain how people interpret their progress and the theory of TOTE gives insights in the behaviour of goal pursuit. Overall it is clear that it is desirable that the user makes sufficient progress in a loyalty program. Because when the user is not doing this, it depends how he interprets the situation and thus if he decides to quit the program or if he collects further.

Emotion

How a user interprets a situation, and thus feels a specific emotion, is based on the process of appraisal. This is defined as 'the process of signaling the personal significance of an event. A direct, non-reflective, non-intellectual, automatic judgement of the meaning of a situation' (Arnold, 1960). In Figure 2. it is shown how this process of appraisal takes place. By interpreting a situation the user first considers a set of seven appraisal components (Smith and Ellsworth, 1985; Frijda, 1986; Ortony, Clore and Collings, 1988; Lazarus, 1991; Roseman, 2001; Sherer, 2001):

- Motive consistency; how does this situation relate to what I want?
- Certainty; am I certain about this event?
- Standard conformance; how does this situation relate to social norms and standards? (like eco-friendly products, etc.)
- Intrinsic pleasantness; to what extent is this object pleasant?

- Expectation confirmation; whether the actual outcome of a situation confirms or violates the expectation(s) of it.
- Agency; who or what is responsible for the given situation?

The user compares the the situation in relation to these appraisal components, i.e. to what the user wants, needs, principles and expectations are. This final interpretation is the process of appraisal in which the user decides if the situation is pleasant or unpleasant to him. And this will finally lead to the fact that the user experiences a specific (positive or negative) emotion.

To give an example: when the user will do grocery shopping and simultaneously collects for a loyalty program, he can decide in the supermarket if he would buy something extra to round up the total amount. When the motive (i.e. appraisal component) of the user is that he does not want to be influenced by the program, he can experience the emotion of disappointment afterwards (i.e. outcome of the appraisal process). This because he did something he normally would not do.

As this example illustrates, it is essential to indicate what emotions people experience in a loyalty program and especially which situations elicited these emotions. In other words, the appraisal components should be identified. Only then it would be possible to indicate how the situation should be changed in such a way that these negative emotions will be prevented.

Moods

Last, but not least, moods are influenced by a lot of things. By what antecedents it is influenced is hard to capture. However, it is known that positive moods can have a positive influence on motivation (can serve as a boost) and negative moods can exacerbate the negative situation, see Figure 2.6.

People in a positive mood are more kind both to themselves and to others, more willing to help other people, more generous, more satisfied with the products that they own and have higher expectation about future pleasurable activities (Gardner, 1985; Faber and Christenson, 1996). Whereas negative moods exacerbate the effects of ego depletion (Touré-Tillery and Fishbach, 2011).

Because moods are hard to capture it would be interesting to know if moods have a significant influence on a loyalty program. From the research of IceMobile nothing is

Emotion

Appraisal

Appraisal components

Motive consistency

Certainty

Standard conformance

Intrinsic pleasantness

Expectation confirmation

Agency
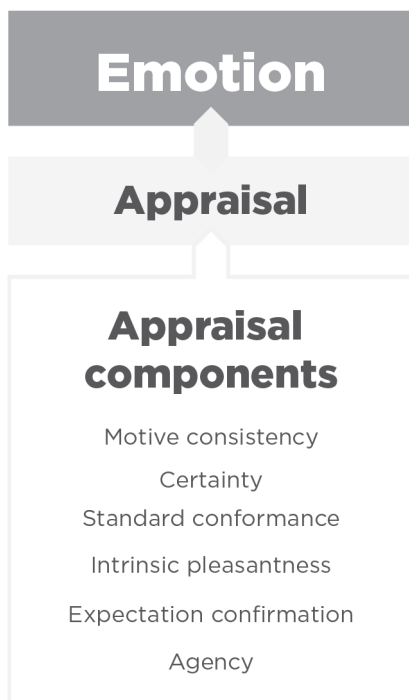
Figure 2.5 Model of componential appraisal

Moods

Positive

Negative

Figure 2.6 How mood influences motivation

known about this yet. However, manipulating the moods in order to increase the motivation of the user will be an unrealistic goal as it is often not clear how moods are elicited and because sometimes people do not even know exactly why they are having a certain mood. Nevertheless, it is valuable to know what influence they can have on th e behaviour of the consumer in a loyalty program.

Conceptual framework

In this chapter all the theories that influence the motivation of the user in a loyalty program were described. The four main aspects are commitment, progress, emotion and moods. All of these are influenced by other theories or phenomena. This theoretical overview, shown in Figure 2.1, gives insights in how the user probably will behave in the collecting process. As a next step it would be interesting to indicate all these aspects about the collecting behaviour during a real loyalty program.

2.2 **Reversal theory**

Besides the motivational theories, reversal theory is consulted as well. Beneath it will be exlpained why and what it implies.

Why consulting reversal theory?

First, the theories related to motivation, which are explained in the previous chapter, will be used to identify and recognise collecting behaviour in a user research study. This can answer the question 'what (types of) collecting behaviour can be identified in a loyalty program?'. In this way a complete understanding of the consumer behaviour in a loyalty program can be acquired.

When this knowledge is gained the second step is to indicate how users can be kept motivated over a longer period of time, as this is the goal of the project. Therefore this will probably lead to the fact that the behaviour of the user should be (slightly) changed by the design that will be

developed, in order to let the user behave as is desired. So for this last step it is needed to answer the question 'how can the collecting behaviour of the user be adjusted positively?'. This implies that the four main aspects of motivation (i.e. commitment, progress, emotions and moods) should be influenced differently than in the current situation by a new solution, which could be described as increasing the commitment or by decreasing negative emotions. But these are not direct and clear starting points for a design process. Because it does not imply how the designer actually can come up with a new solution to adjust the behaviour of the user. Nevertheless, there is a theory that suggests how consumer behaviour can be influenced positively in the field of motivation, namely reversal theory. This theory describes how people can reverse in motivational states and also what can be done to initiate a change in these states (i.e. change their mindset which will influence their behaviour). This theory will be described in detail beneath.

Explanation reversal theory

Reversal theory is a systematic description of the various ways that we can experience the world and act in it (Apter, 2006). People can reverse between psychological states regularly. This means that they reflect their own motivational viewpoint and the meaning they give to a certain situation. For example, a roller coaster can be experienced as excited, but another time it can trigger anxiety.

As this example indicates, reversal theory is based on opposing values. There are four domains wherein opposing states can be experienced. These states are called metamotivational domains. Each domain consists of two opposing states whereof only one state can be experienced at a certain moment. According to Apter (2006) the four domains are:
- Means & ends, whereby people focus on achievements and future goals (serious

state) or on enjoyment of the process in the moment (playful state).

- Rules, whereby people enjoy operating within the rules and expectations (conforming state) or people wish to be free and push against these structures (rebellious state)
- Transactions, whereby people are motivated on transacting power and control (mastery state) or by care and compassion (sympathy state).
- Relationships, whereby people are motivated by self interest, i.e. personal accountability and responsibility (self state) or people are motivated by the interest of others, i.e. altruism and transcendence (other state).

The four domains with their opposing states are visualised in Figure 2.7.

There are two other variables in reversal theory that influence every metamotivational domain and eventually determine how the user experiences a specific situation.

The first is the level of arousal. This is the degree to which one feels oneself to be "worked up" or emotionally intense about what one is doing (Apter, 2006). Second, is the hedonic tone, which is defined by how pleasant or unpleasant the arousal is. So for example, excitement is an emotion wherein people experience high arousal (intense feeling) and a pleasant hedonic tone. Whereas boredom is experienced as low arousal (not intense) and has an unpleasant hedonic tone.

According to the reversal theory there is an optimal level of both of these variables, which is illustrated in Figure 2.8. The grey circle shows that the optimal level of arousal is approximately in the middle and the optimal level of hedonic tone is obviously in the pleasant area.

As this theory explains influencing the consumer behaviour of the user can be done by taking into account these three variables. In order to change the metamotivational state of the user some tools should be offered to him that trigger this transformation. For example, to let the user go from serious to playful in the metamotivational state of means & ends, a game could be offered. Besides this, it should always be taken into account that there is an
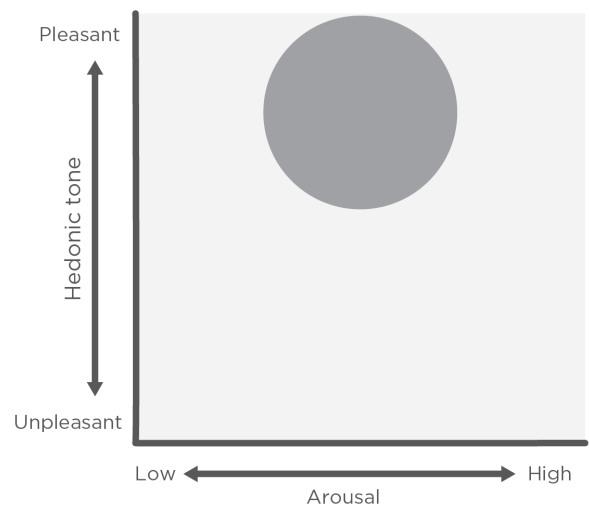

Figure 2.8 The relationship between hedonic tone and arousal

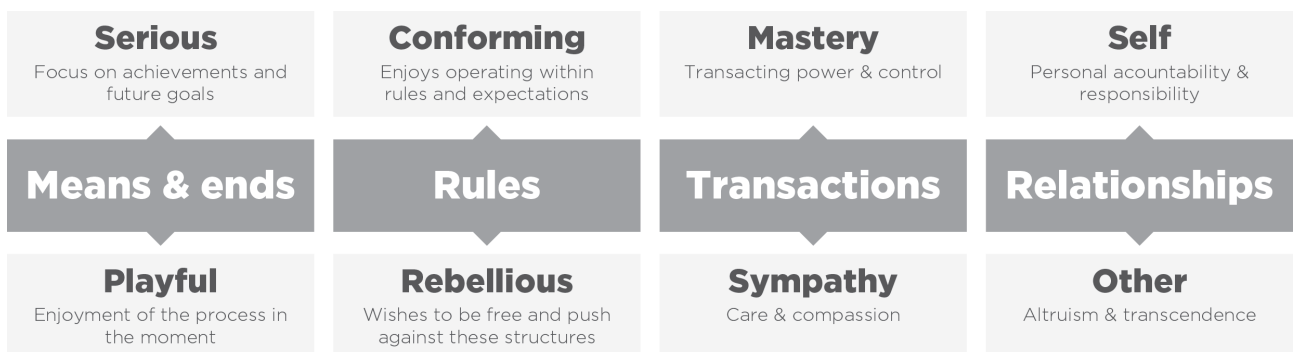| Serious	Conforming	Mastery	Self
Focus on achievements and future goals	Enjoys operating within rules and expectations	Transacting power & control	Personal acountability & responsibility
Means & ends	**Rules**	**Transactions**	**Relationships**
Playful	Rebellious	Sympathy	Other
Enjoyment of the process in the moment	Wishes to be free and push against these structures	Care & compassion	Altruism & transcendence

Figure 2.7 The four domains of the reversal theory with their states

optimal level of arousal and hedonic tone. So the user should experience positive emotions whereby the arousal is neither exceptionally high nor low.
This indicates that this theory could help to adjust the consumer behaviour in a desired way. However, first an user research study should be conducted, whereafter can be concluded if this theory can be applied in this project.

Conclusion: literature study

In this chapter the literature study is given. It existed of two parts, namely a conceptual framework about motivation and an explanation about reversal theory. Both are important for the following research study. First, the conceptual framework should help to identify the consumer behaviour and help to find out what (types of) collecting behaviour can be identified in a loyalty program. Second, reversal theory could help to offer a direct and clear starting point for the design process and therefore help to find out how the collecting behaviour of the user be adjusted positively.

The conceptual framework about motivation showed that there are four main factors that influence the motivation of the consumer directly, namely commitment, progress, emotions and moods (see figure beneath). In this framework it was also discussed that there are other aspects that influence these main factors indirectly.

It was concluded that it is important to identify all these aspects in the loyalty program in order to create an understanding about the consumer behaviour. So an user research study should show how committed users are, how users react on the progress they make, how users interpret a certain situation (identify appraisal components) and how moods influence the motivation of the user. This in order to see what factors assure that users keep collecting.

Reversal theory showed that users experience different motivational viewpoints. There are four metamotivational domains existing of two states of which the user can only experience one state at the time. These four domains are:

- Means & ends: existing of a serious and a playful state
- Rules: existing of a conforming and a rebellious state
- Transactions: existing of a mastery and a sympathy state
- Relationships: existing of a self and an other state.

The theory also showed that in every state the level of arousal and hedonic tone the user experiences, can differ. There is an optimal level of both variables, namely arousal should be in the middle (so not extremely high or low) and the hedonic tone should be pleasant.

Most interesting of this theory is that it explains, according to the three variables above mentioned, how consumer behaviour can be adjusted by changing their motivational viewpoint. As this graduation project aims at keeping users motivated throughout a loyalty program, this could be an interesting method.

The next step is to observe actual collecting behaviour in order to identify the consumer behaviour in a loyalty program.

CHAPTER 3
User research study

In order to see if the conceptual literature framework corresponds with actual consumer behaviour in a loyalty program, an extensive user research study was conducted. In this chapter the research goal, setup of the study, results, analysis and conclusions will be described. This study existed of a self-setup loyalty program via Whatsapp that was running for three weeks.

3.1 Research goal

As explained in the previous chapter the conceptual literature framework indicates theoretically how consumers' motivation is influenced in a loyalty program. The goal of the user research study will be to observe actual consumer behaviour in a loyalty program and to see if the direct and indirect influences (of the literature framework) can be identified.

Research that was already done by IceMobile (chapter 1.4) showed that there are probably seven different types of collectors (based on collecting behaviour). Nonetheless, if groups will be identified in this research study, they will not be linked to the types found by IceMobile. It would make more sense to form groups based on motivation and collecting behaviour, because the goal of this graduation project is keeping users' motivated during the loyalty program. In this way it would be easier to indicate what can be done to reach this goal. Therefore another goal of this research is to find out if groups can be formed based on motivation and if different groups experience different emotions. In the box beneath the research goals are described in detail.

3.2 Setup user research study

To find out how all four motivational aspects have an influence on the actual behaviour of the user, it was chosen to conduct the research study in the form of a self-setup loyalty program via Whatsapp. The main

Research goals

First, to find out how the motivation of the user is influenced by direct and indirect factors that influence it. Namely:
- How commitment is influenced by the desire for closure, motives of the user and the actions towards the program and how this affects the level of motivation of the user.
- How progress is influenced by the process of TOTE, stuck in the middle and goal gradient effect and how this affects the motivation of the user.
- How emotions are influenced by the process of appraisal. In other words, to find out which emotions are experienced and what appraisal components can be identified in relation to this. And finally how this affects motivation.
- How moods, positive and negative, influence the level of motivation of the user.

Second, to find out if it is possible to form groups based on motivation and collecting behaviour and if this is possible find out what groups can be identified.

Third, to find out, if it is possible to identify groups, if there are group specific emotions.

reason for this is that emotions should be captured in the moment itself. When asking users about programs they previously participated in, the possibility exists that they will not remember correctly what their emotions where because people tend to remember only the peak experiences, i.e. most intense experiences (Do, Rupert & Wolford, 2008).

The virtual campaign is conducted through whatsapp. First, this source was chosen because almost everyone has whatsapp, so it is easy accessible for people. Second, it is easy for people to send photos, videos and/or speech messages, which will result in richer data. Third, Whatsapp is a digital approach which is an advantage because this project focuses on digital loyalty programs.
The virtual campaign will exist of a part wherein users can collect, like they are used to in normal collecting programs. The other part is more focused on self reporting about motivation, emotions and moods. The first part is meant to get insights about the collecting behaviour and the second part is meant to get insights about how emotions, moods and motivation influence the collecting behaviour.

Participants
It was chosen to conduct the study with 30 participants. One of the goals of the research study is to identify groups based on motivation and this will play an important role in defining the amount of participants. As mentioned before IceMobile identified seven types of collectors. The only assumption that can be made is that this is approximately the amount of groups that will be found.
To define the amount of participants two aspects should be balanced out. Namely, choosing the amount wherein the highest chance exists that all types are included in a representative amount (so not only 2 participants per type of collector, but more) and the amount of participants wherewith

it is doable to execute the research study (send messages on whatsapp, send/deliver rewards to participants, processing data, analysis, etc.). For these reasons it was chosen that 30 participants is a sufficient amount for this research study. More than 30 participants would make the analysis too complex and less than 30 participants would increase the possibility that a type of collector was left out and that the groups would exist of too little people (less than 3 or 4 participants).
Of these 30 participants 8 were man and 22 were woman from all age groups (23-68 years old). Because the spending pattern can have a big influence on the collecting behaviour, it was taken into account that participants had different compositions of households, For example, there were some participants that live on their own or only live together with their partner (small spenders) and there were some participants that live together with their partner and children (big spenders).

How to realize a loyalty campaign via Whatsapp?
This virtual campaign should be as similar as possible as a real loyalty campaign. Therefore existing loyalty campaigns served as an example to come up with a proper setup for a virtual campaign. Beneath it will explained step by step how the typical aspects of a loyalty campaign are replaced in this research setup. And the blue box on following page gives a quick overview of this.
Duration: The campaign will last 3 weeks, whereas normally a program lasts for a maximum of 15 weeks. The three week period is chosen because this is the minimum time span wherein it is expected that participants will experience ups and downs in their motivation and emotions. This because people do groceries several times per week and experiencing emotions occurs when something positive or negative happens in the collecting program. Also these emotions

Figure 3.1 Stamp sheet used in the whatsapp program

will differ at the beginning, in the middle of at the end of the process, according to aspirational values and progress that is being made. When the program would have a duration of 1 or 2 weeks it would be difficult to simulate the emotional rollercoaster of a normal loyalty program. When the program has a duration longer than 3 weeks, it would take too much time that is available for this graduation project. Therefore the amount of 3 weeks is chosen.

Earning stamps: Grocery shopping is something really personal. The frequency and spending level can vary a lot between people. Therefore the way participants can collect is almost the same as in a normal loyalty campaign. Namely, participants can collect stamps by making a picture of their receipts, making sure that the total spend, location of the supermarket and date are clearly visible. This to be sure they are not cheating by sending in receipts of previous weeks/months.

Threshold: Defining the threshold of the virtual campaign is the most complex part. The amount of stamps and the value of a single stamp should be in proportion to a real campaign. Also, the stamp sheet should have a certain amount of stamps so that users can experience the goal-gradient effect and the phenomenon of stuck in the middle.
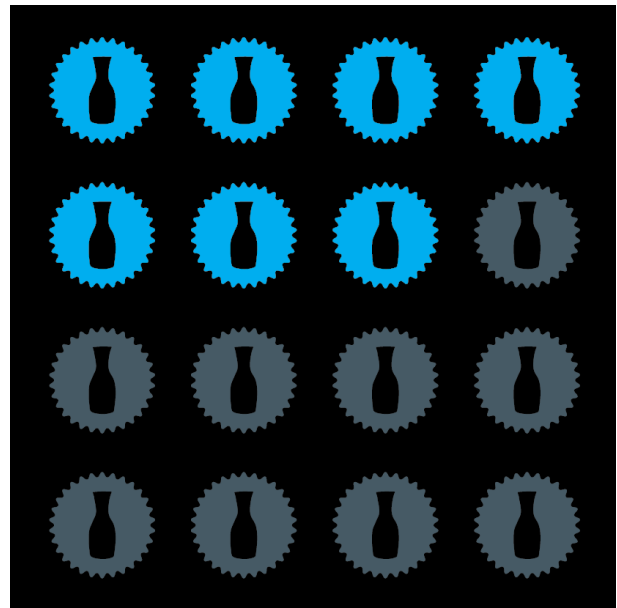
However, this virtual campaign only last 3 weeks and according to Nibud (2015) people spend 200 (single household) to 442 euro (family with 2 kids) on groceries every month. So based on this the stamp sheet will exist of 16 stamps with each a value of 5 euro (which is 80 per stamp sheet and the possibility to collect three full stamp sheets).

Update of stamp sheet: When receiving a photo of the receipt, the researcher will communicate to the participants how many stamps they receive. Every day they will get an overview of their stamp sheet that will look like Figure 3.1.

Rewards: Participants can collect for a set of products. To be sure their commitment is the same as in a normal loyalty campaign four different sets, existing of the french carafe by Royal VKB, wine saver by VacuVin, Popsome herbs & spices by VacuVin and Serve and Stack by Vacuvin (see Figure 3.2), are proposed of which they can choose one to collect for. These sets are chosen because they are of more value when you have the whole set instead of loose parts. This is often also the case with rewards in a real loyalty campaign. For example, the cutlery program at Albert Heijn, already mentioned in the introduction. In Figure 3.3 it is shown what rewards were offered. The user could redeem

Figure 3.2 Overview of rewards offered to the user

Figure 3.3 Example of rewards offered in the loyalty program of Albert Heijn

Figure 3.4 Three parts of the set

each time 4 knives, forks or spoons. Most people want to have a complete set (so forks, knives and spoons) and probably the user prefers to have 8 pieces of each type of cutlery in total (for if people are coming over for dinner and you need extra cutlery than normally). So a whole set creates this feeling of greater value than all pieces apart from each other. This is the effect that should be created in the research study with the rewards that are offered to the user.

Moment of redemption: Every set can be collected in three redemptions. So for example the carafe, participants have to collect two times two glasses and one time the carafe (see Figure 3.4). However, they can choose themselves in which order they want to receive their rewards. This to see if participants will wait with redeeming to the end of the campaign or if they will so earlier in the process. And it would be interesting to see in which order they want to redeem their rewards.

Bonus stamps: In a real campaign bonus stamps can be collected by buying certain products. In the virtual campaign participants can earn extra stamps by answering extra questions about their collecting behaviour, based on past experiences. What questions were asked exactly will be explained further ahead.

Emotion report: Every two to three days people are asked to fill in the emotion report. This to get insights about how people feel towards the loyalty campaign. This report will be sent at different times everyday, so participants cannot prepare for it (which they can if it will be a routine) and to be sure different emotions are reported. This because emotions are intentional (Frijda, 1994) and moods can change because they are limited in time (Desmet et al., 2012), so it could be that people will report different emotions and moods at different time slots during the day. How this emotion report is build up will be explained further ahead.

For the exact rules that were communicated to the participants, refer to appendix A.

Reporting emotions

An emotion report is sent to a participant at random times every two to three days. The questions that are asked to the participants are:

1. How did you feel during the past few days? Rate the following moods on a scale from 1 (not at all) to 5 (extremely): miserable, unhappy, troubled, content, happy, pleased.
2. How motivated did you feel to collect stamps the past few days on a scale from 1 (little motivated) to 5 (extremely motivated)?
3. Were you involved in a specific situation the past few days according to the collecting program wherein you experienced one of these emotions? If yes which emotions? (see Figure 3.5 for an overview of the emotions showed to the user)
4. Can you explain for each emotion what happened and why this was important?

For a visualisation of the report that was send to the user Refer to Appendix B.

The first question is asked to get an overview of how people feel at that specific day.

The second question is asked, because participants can experience a certain emotion during specific situations. By asking why they experienced this emotion deeper insights can be gained about why they felt like this and what situation leaded to this
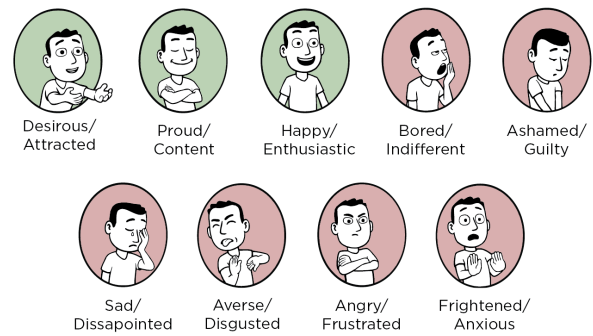

Figure 3.5 Emotions that could be reported by users

emotion. If the appraisal process can be recognised this can help in understanding how people make their decisions during the collecting process.

Besides, using the Premo tool (Desmet, 2005), the cartoons in Figure 3.5, can help to measure emotions accurately and to create a common understanding about emotions between the participant and the researcher and will reduce confusion.

Bonus stamp questions

The bonus stamp questions are asked in such a way to get a better understanding of the appraisal components. It would be valuable to know the underlying thoughts behind the actions people do. So it is important to become more acquainted with people's motives, concerns, expectations, intrinsic pleasantness, etc. Therefore specific questions are asked during the program, namely:

5. Approach: What is your approach towards the program and why is this the best way of collecting for you? Do you use the same approach in a real loyalty

Figure 3.6 Timeline of messages sent to the user

campaign?

6. Storage place Stamps: Take a photo of the place where you always keep your stamps and a photo of the place where you always keep your stamp sheets. Can you explain why these are the best places to keep your stamps and stamp sheets?

7. Positive and negative experiences: Ask somebody (partner, friends, family, etc.) to interview you about your most positive and negative experience in loyalty programs wherein you participated.

8. Considerations: Can you tell me what your considerations are before you decide to join a loyalty campaign? At what point do you make the definitive decision to join a campaign?

9. The ultimate feeling of collecting: Impersonate or draw what the ultimate feeling of collecting is in your opinion and send this as a photo or video through Whatsapp. Can you explain what this feeling is and why this is the ultimate collecting feeling for you?

10. Stereotypes: Can you tell me in which of the stereotypes (defined by IceMobile) you recognize yourself? (this can be 1 or more types) Can you explain what you exactly recognize of yourself in these types?

To get an overview of when what messages were sent to the participants (emotion reports and bonus questions) see Figure 3.6. This is a timeline of the entire program with exactly the dates whereon the messages were sent.

Interviews
Afterwards interviews will be held with six users. This selection of users will exist of participants with different spending patterns or the ones where something really interesting is happening. The questions that will be asked will highlight topics like:

- How they do grocery shopping
- What people did (extra) for the collecting program

- Questions related to their commitment
- Questions related to their progress
- What their expectations were, discuss their moods with them
- What they thought of the digital approach
- What they thought about the personal influence (influence of the researcher) in this study.

The list with the questions that will be asked can be consulted in Appendix C.

3.3 Setup analysis
For the analysis an overview of the collecting behaviour will be created in combination with the emotions, moods and motivation that were reported by the user during the research study. For every user such an overview will be created.

A separate overview for every user will be created of the bonus stamp questions. In this way all the results of the research study are covered and ready to analyse.

The analysis itself will exist of two parts. Namely, identifying groups from the collecting behaviour and a statement card analysis of all the interesting quotes of users.

Collecting behaviour analysis
For the analysis of the collecting behaviour the overviews will be consulted. The goal is to see if it is possible to form groups. This can be done in two ways that cannot be decided on yet which way is the best. The first way to do it is by looking if it is possible to identify a relation between moods, motivation and the progress (i.e. collecting behaviour) and to identify what incentives influence this relation. So for example when the user does not have to do groceries for a week, he is not making progress. This means progress is standing still and therefore it would be interesting to see if motivation would decrease as well. If so, it could be that these aspects possibly influence each other. In this analysis it will be examined if a significant

amount of people in the research study show these types of behaviour.

The second way of analysing the data could be looking at the collecting behaviour (i.e. progress) and the answers on the bonus stamp questions, and so identify the level of commitment, emotions (appraisal components) and moods experienced during the collecting period. In other words trying to identify the conceptual framework in actual behavior and form groups accordingly. Probably after conducting the user research study it will be clear which of the two methods is best to do the analysis with. This because it is not sure yet if relations between moods, motivation and progress can be clearly identified.

Statement card analysis

For the statement card analysis the DIKW method will be used. The abbreviation stands for data, information, knowledge and wisdom (Ackoff, 1989) and is a guideline to deal with data in these different levels.

The data level exists of evidence that has been selected or recorded by the researcher (Sanders & Stappers, 2013) and it is obtained by observations, interviews, etc. The information level is the interpretation of the data by the researcher. Data can possibly have multiple interpretations, which can all be valid. The next step would be to find patterns in the interpretations (e.g. using methods like sorting and counting). These patterns are theories and these form the level of knowledge. It is generalized and abstracted from the individual data and, if done correctly, it can predict further events. Lastly, the level of wisdom exists of decisions on how to deal with the knowledge that was gained.

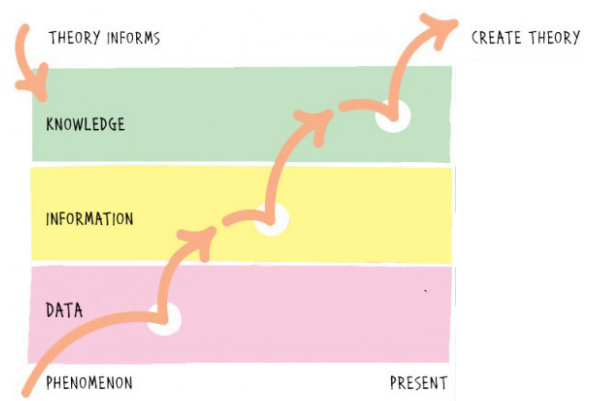Figure 3.7 visualises the layers explained above and the steps that can be made in the

Figure 3.7 A simple model to guide analysis, based on Ackoff's DIKW scheme (Sanders & Stappers, 2013)

analysis.

One of the biggest advantages of using this method is that the researcher will not lose track of the actual data. In this way in all stages it will be possible to examine how valid the conclusions of the researcher are, so it builds up to a solid story. This means the method helps to avoid confusions about data, interpretations, theories etc.

Another value of this method is that it can help to structure and how to deal with data gathering and analysis.

In this analysis statement cards will be created which will help to go through the DIKW-layers. The cards will exists of the selected quotes of the user (i.e. data layer), followed by an explanation of the interpretation by the researcher (i.e. information layer) and every card will have a title. Then patterns will be searched for by grouping the statement cards (i.e. knowledge layer). And the wisdom layer (i.e. apply the knowledge found in the analysis) will be done in the design phase of this project. The citations of participants will be selected from the collecting behaviour overview, bonus question overview and the interviews. Whereafter the content analysis described above is applied.

3.4 **Results**

The Whatsapp study was conducted from 30 September 2015 to 22 September 2015. In Figure 3.8 to 3.10 some examples of the chats with participants are shown. In the Figure 3.8 it is shown how people sent their receipts. In Figure 3.9 it is shown how people received their stamps. And in Figure 3.10 how they redeemed an item by sending the message 'REDEEM Option 1'.

Collecting behaviour overviews

From the collecting behaviour of the participants overviews were created, for an example see Figure 3.11. In this overview the following information is incorporated:

First, in the right upper corner the age and family composition are visualised.

Second, in the upper part of the overview the collecting behaviour is visualised in a graph. The blue bars stand for the balance of the user, black stands for earning stamps (by doing groceries, green stands for answering bonus questions and purple stands for receiving stamps from others. Above this graph a bar is

visualised whererin the cumulative progress is visualised. It shows how fast the user collected for no, 1, 2 or 3 stamp sheets. Around these visualisations the emotions are placed, corresponding with the day of the emotion report.

In the middle part the motivation reported by the user is visualised. When they told the reason this is also visualised.

Fourth, in the lower part of the overview the moods are visualised. Two graphs are created in order to create the clearest illustration according to positive and negative moods. The complete collection of the overviews can be found in Appendix D.
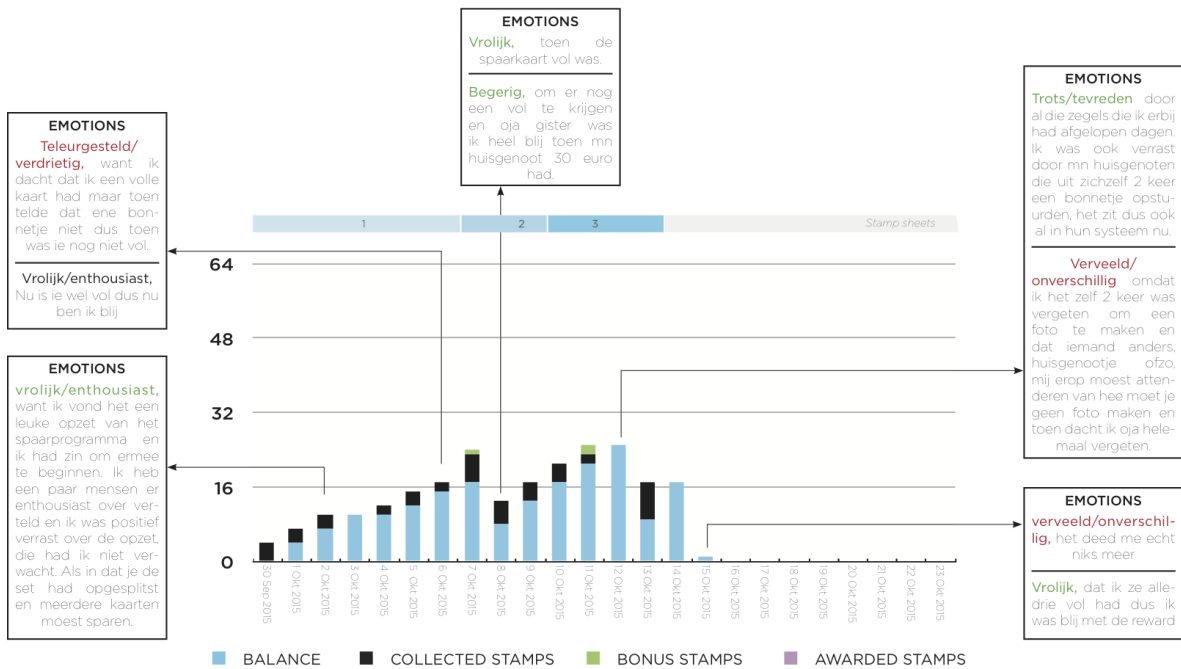
Bonus question overview

For every user an overview of the answers on the bonus stamp questions is created, see Appendix E.. In these overviews the answers are visualised per question, including pictures that were sent via Whatsapp. It differed per user how many bonus questions were answered. For example, user 22 answered 5 bonus questions, whereas user 8 only answered 2 questions in total.
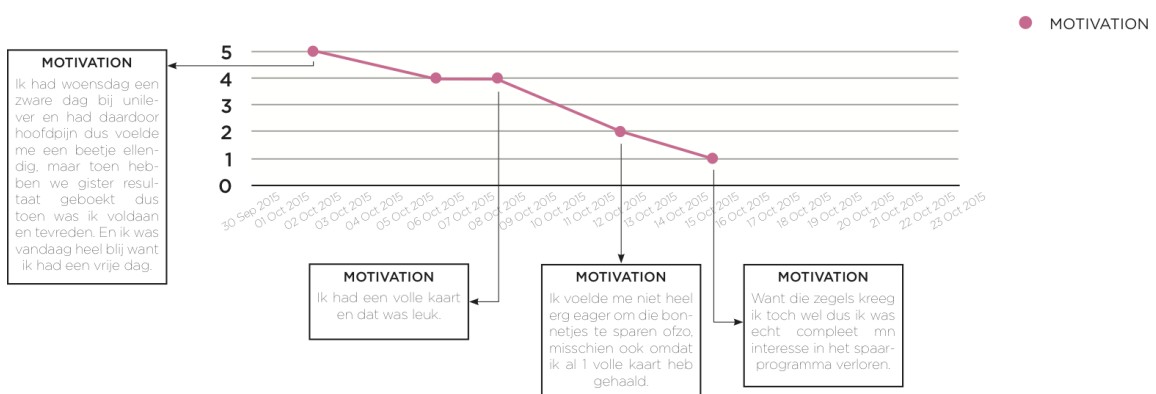

Figure 3.8 Participant sending receipt

Figure 3.9 Example of sending stamps to a participant

Figure 3.10 Example of participant who redeems an item

EMOTIONS

EMOTIONS

Vrolijk, toen de spaarkaart vol was.

Begerig, om er nog een vol te krijgen en oja gister was ik heel blij toen mn huisgenoot 30 euro had.

EMOTIONS

Teleurgesteld/ verdrietig, want ik dacht dat ik een volle kaart had maar toen telde dat ene bonnetje niet dus toen was ie nog niet vol.

Vrolijk/enthousiast, Nu is ie wel vol dus nu ben ik blij

EMOTIONS

Trots/tevreden door al die zegels die ik erbij had afgelopen dagen. Ik was ook verrast door mn huisgenoten die uit zichzelf 2 keer een bonnetje opstuurden, het zit dus ook al in hun systeem nu.

Verveeld/ onverschillig omdat ik het zelf 2 keer was vergeten om een foto te maken en dat iemand anders, huisgenootje ofzo, mij erop moest attenderen van hee moet je geen foto maken en toen dacht ik oja helemaal vergeten.

EMOTIONS

vrolijk/enthousiast, want ik vond het een leuke opzet van het spaarprogramma en ik had zin om ermee te beginnen. Ik heb een paar mensen er enthousiast over verteld en ik was positief verrast over de opzet, die had ik niet verwacht. Als in dat je de set had opgesplitst en meerdere kaarten moest sparen.

EMOTIONS

verveeld/onverschillig, het deed me echt niks meer

Vrolijk, dat ik ze alledrie vol had dus ik was blij met de reward

Bars: Stamp sheets 1, 2, 3

Y-axis: 64, 48, 32, 16, 0

X-axis: 30 Sep 2015, 1 Okt 2015, 2 Okt 2015, 3 Okt 2015, 4 Okt 2015, 5 Okt 2015, 6 Okt 2015, 7 Okt 2015, 8 Okt 2015, 9 Okt 2015, 10 Okt 2015, 11 Okt 2015, 12 Okt 2015, 13 Okt 2015, 14 Okt 2015, 15 Okt 2015, 16 Okt 2015, 17 Okt 2015, 18 Okt 2015, 19 Okt 2015, 20 Okt 2015, 21 Okt 2015, 22 Okt 2015, 23 Okt 2015

Legend: ■ BALANCE ■ COLLECTED STAMPS ■ BONUS STAMPS ■ AWARDED STAMPS

MOTIVATION

● MOTIVATION

MOTIVATION

Ik had woensdag een zware dag bij unilever en had daardoor hoofdpijn dus voelde me een beetje ellendig, maar toen hebben we gister resultaat geboekt dus toen was ik voldaan en tevreden. En ik was vandaag heel blij want ik had een vrije dag.

Y-axis: 5, 4, 3, 2, 1, 0

X-axis: 30 Sep 2015, 01 Oct 2015, 02 Oct 2015, 03 Oct 2015, 04 Oct 2015, 05 Oct 2015, 06 Oct 2015, 07 Oct 2015, 08 Oct 2015, 09 Oct 2015, 10 Oct 2015, 11 Oct 2015, 12 Oct 2015, 13 Oct 2015, 14 Oct 2015, 15 Oct 2015, 16 Oct 2015, 17 Oct 2015, 18 Oct 2015, 19 Oct 2015, 20 Oct 2015, 21 Oct 2015, 22 Oct 2015, 23 Oct 2015

MOTIVATION

Ik had een volle kaart en dat was leuk.

MOTIVATION

Ik voelde me niet heel erg eager om die bonnetjes te sparen ofzo, misschien ook omdat ik al 1 volle kaart heb gehaald.

MOTIVATION

Want die zegels kreeg ik toch wel dus ik was echt compleet mn interesse in het spaarprogramma verloren.

MOODS

Legend: ● PLEASED ● HAPPY ● CONTENT

Y-axis: 5, 4, 3, 2, 1, 0

X-axis: 30 Sep 2015, 1 Okt 2015, 2 Okt 2015, 3 Okt 2015, 4 Okt 2015, 5 Okt 2015, 6 Okt 2015, 7 Okt 2015, 8 Okt 2015, 9 Okt 2015, 10 Okt 2015, 11 Okt 2015, 12 Okt 2015, 13 Okt 2015, 14 Okt 2015, 15 Okt 2015, 16 Okt 2015, 17 Okt 2015, 18 Okt 2015, 19 Okt 2015, 20 Okt 2015, 21 Okt 2015, 22 Okt 2015, 23 Okt 2015

Legend: ● TROUBLED ● UNHAPPY ● MISERABLE

Y-axis: 5, 4, 3, 2, 1, 0

X-axis: 30 Sep 2015, 1 Okt 2015, 2 Okt 2015, 3 Okt 2015, 4 Okt 2015, 5 Okt 2015, 6 Okt 2015, 7 Okt 2015, 8 Okt 2015, 9 Okt 2015, 10 Okt 2015, 11 Okt 2015, 12 Okt 2015, 13 Okt 2015, 14 Okt 2015, 15 Okt 2015, 16 Okt 2015, 17 Okt 2015, 18 Okt 2015, 19 Okt 2015, 20 Okt 2015, 21 Okt 2015, 22 Okt 2015, 23 Okt 2015
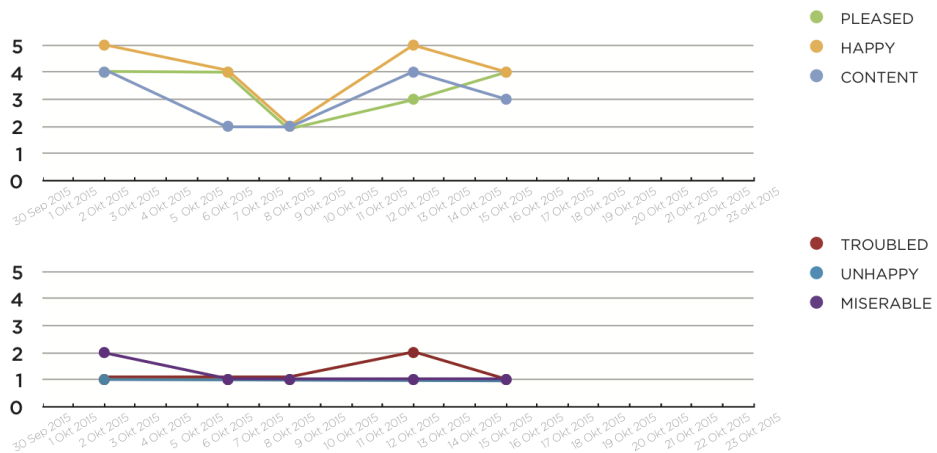
Figure 3.11 Collecting behaviour overview

Interviews

Afterwards 6 interviews were held. The following users were selected: 1, 3, 7, 10, 27, 30. These users differed significantly in the way they collected (willing to do something extra, emotions that they experienced, etc.) and the progress they made during the whatsapp loyalty program (small or big spenders). It was really interesting to talk to them in order to get deeper insights on the collecting behaviour that was observed during the Whatsapp study. So for example why they behave in a specific way, e.g. why they do not want to do something extra or why they were not motivated during the program. For the answers to the interview questions refer to Appendix F.

3.5 Analysis

After processing all the data into the overviews and statement cards, the analysis phase was started. In this analysis phase the researcher tried to find out how the motivation was influenced during the program via Whatsapp and if groups based on motivation could be formed (i.e. research goals). All from the actual data of the user research study.

Analysis statement cards

First the statement card analysis was accomplished, using the method explained in the setup of the analysis (Chapter 3.3). In Figure 3.12 some statement cards are shown. As can be seen the card exists of a title, followed by the interpretation of the researcher and lastly, the quote of the user. In Figure 3.13 it is shown how patterns are identified by clustering the statement cards and thus how knowledge is gained. The most interesting insights that are found in this process will be summed up beneath according to the factors described in the literature framework.The complete list of findings of the statement cards analysis can be found in Appendix G.

In the DIKW method it is important to communicate findings by touching upon all levels in the DIKW scheme (Sanders & Stappers, 2013). So the findings will be presented by explaining the patterns that were found followed by the interpretation of the researcher and finally the actual quote of the user.

Progress

First some conclusions were drawn according to how the user perceived their own progress and how users experienced the phenomena of stuck in the middle and goal gradient. First a transition point was found according to the phenomena of stuck in the middle and goal gradient. Second, the process of TOTE (test-operate-test-exit) was recognised in the collecting behaviour. Third, the approach towards the program differs a lot amongst
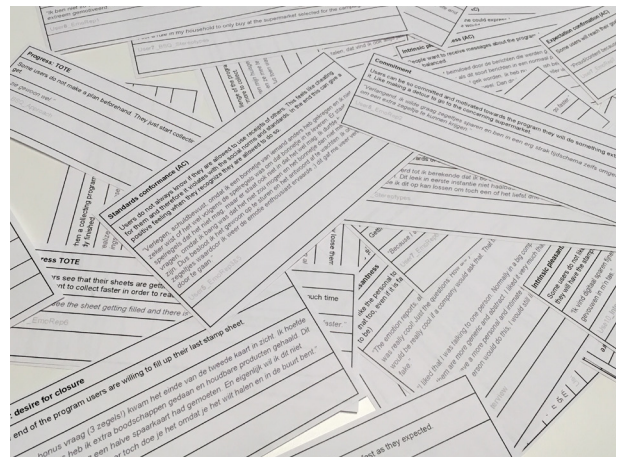
Figure 3.12 A part of the collecting of the statement cards
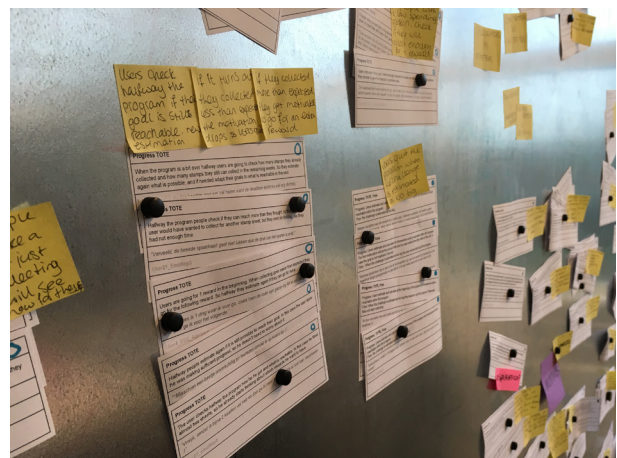
Figure 3.13 Clustering the statement cards

users. These three findings will be explained beneath.

There is a transition point in relation to the amount of stamps that are collected. When too much stamps have to be collected for a full stamp sheet, users will decide halfway to quit the program (refer to the phenomenon stuck in the middle). And when only a few stamps are left, they decide to fill it up and sometimes do something extra for it (refer to the phenomenon goal gradient).

> *"Haha, when I realised that I can possibly fill up one more stamp sheet (and therefore the rewards will be of more value than when I could only fill up one stamp sheet) I fanatically started to lobby for receipts to my room mates." (user 30)*

Users check at the begin, halfway and at the end of the program if they are making sufficient progress.
There are three moments of verification in the process of collecting (refer to the theory of TOTE). The first is at the beginning of the program when users estimate if they will reach it or not. This is sometimes essential for the decision of taking part in the program.

> *"Immediately checking the reward and in which price. An example: AH has this program for cutlery. But the price is far too high in relation to what you get in return. So I do not participate." (user 6)*

The second moment is halfway the program. Users will check if they are still on track and they will make a new estimation if it is reachable. When they collected less stamps than they expected, the motivation drops and users will decide to quit more quickly. When they collected more stamps than they expected they are more willing and motivated to go for an extra reward.

> *"Usually I choose one reward where I will collect for, as the red wine glasses at the AH. If I collect fast with sufficient progress I will decide to go for the following*

> *reward." (user 4)*

And a last moment, at the end of the program when the deadline is approaching users check if they are still on track to fill up their last stamp sheet and/or if they will reach the goal they had in mind.

> *"There is little time left but I would like to collect for the glasses. So I have to participate a bit more active." (user 10)*

When users decide to join a loyalty campaign they have different approaches towards it. Some users set a goal and stick to that the entire program.

> *"We are creating a planning, this amount of red wine glasses and this amount of white wine glasses compared to the average budget. That means collecting a few weeks and a collecting period of time. Is this period of time too short than we will activate family of friends for help." (user 16)*

And some users just start collecting and will see along the way how far they will come.

> *"If my goal is reachable depends on doing groceries. Therefore I first had to see how fast I collect with my spending pattern." (user 27)*

Commitment

Commitment is influenced by four factors that together determine the level of commitment. Two of these factors are based on the intrinsic motivation of the user, namely if the users have interest in the reward and if they like the activity of collecting. The other two factors are based on the behaviour (according to commitment), namely if the user pays attention to the program and if the user does something extra to reach the goal. These factors will be explained in detail beneath.

The first factor that is based on the intrinsic motivation of the user is, if users have interest in the reward. They are committed to the

program when the reward is useful and/or interesting to them.

"So it is what I would like to have. We still have a big vegetable garden on the balcony. And the wine glasses are very beautiful too and if we use it than I really like it. Really beautiful glasses. I think that it is nice to collect for chique products. So that you can get chique products at a low price." (user 1)

But they will not be committed when they do not have interest in the reward at all. Secondly, the intrinsic motivation is also based on if users like the activity of collecting. When they really like the activity of collecting they can create their own commitment by setting a goal. When users know exactly where they are collecting for they will be extremely committed to reach it.

"This is the same in normal programs. I exactly know where I am collecting for. This works best for me because I exactly get what I want! And not get in the situation wherein I would collect too little and that I would not have the most important reward (the carafe in this case)!" (user 13)

When they do not like the activity of collecting, they will be less committed.

Besides the intrinsic motivation, also the behaviour of the user is influencing commitment.
The first factor that is based on the collecting behaviour of the user is, if the user pays attention to the program. When users pay attention to the program they will be more committed. Sometimes they forget this because they are busy at work or with their leisure activities. Or they just forget that they are collecting. An action towards the program (refer to the corresponding theory) can help to become more committed again.

"Time goes fast and I have had no time these days to do groceries, so if I finally did this (last night) and I notice that I am motivated." (user 8)

The second factors is if the user does something extra to reach his/her goal. Users are more committed when they do something extra for the program. These extra activities exists of making a detour to the concerning supermarket, buy extra storage products and asking others for help.

"Desirous, I want to collect stamps and I made a detour on my bike in a very tight schedule to earn an extra stamp." (user 5).

Sometimes users do not want to do something extra, unless they are making sufficient progress and only have to do a little bit extra to fill up their last stamp sheet (refers to the theory of desire for closure).

"Because of the last bonus question (3 stamps!) the end of the final sheet is in sight. There were 3 stamps left so I did groceries and grabbed some storage products. I would never do this if I still had to fill up half a stamp sheet. And I do not want to take extra groceries, but you do it because you want to reach it and you are so close" (User 10)

Motives

Several motives are influencing the users' definite decision to join a collecting program. These are the positive characteristics of the reward, the reachability and the routine.

The reward of the program is a really important aspect for the decision of taking part in the campaign. The product should be interesting, useful, appealing and above all chique. To collect for something expensive and cheap for little money is appreciated.

"So it is what I would like to have. We still have a big vegetable garden on the balcony. And the wine glasses are very beautiful too and if we use it than I really like it. Really beautiful glasses. I think that it is nice to collect for chique products. So that you can get chique products at a low

price." (user 1)

Another important aspect is the reachability. The decision about joining a program is often a combination between interest in the reward and if users think the goal is reachable.

"I start collecting in a loyalty program when I somehow need the reward. I decide to fully participate when I see that I make sufficient progress and when I think I will be able to collect enough for the product." (user 4)

Some users have the opinion that they do not want to change their routines for the loyalty program. They want to do their groceries as they normally do and they see collecting as something extra.

"I go on with my groceries as usual (there is a budget for that) and see what I get from it. The reason for this decision is that I want the saving to be an added plus, not my focus. If I get something extra from my normal grocery shopping that's great but I do not think I should go out of my routine for it." (User 7)

Pleasantness

There are several aspects that play a role in relation to what extent the program is pleasant to the user, these will be described beneath.

It is most pleasant if the program fits into the user's' daily life and if they do not have to pay a lot of attention to it:

"Normally we only participate when we can get something out of it and when it takes not too much energy." (user 16)

Users like the feeling of getting their reward. It is a present for their good work and feels as an accomplishment:

"When there is something I can gain from my pre-established budget and keeping receipts then I feel like it's a nice bonus, like I'm being rewarded for my good organization. The feeling of completing a sheet is really related to that aspect of being organized and enjoying seeing things in their right place. I feel accomplishment if I finish such an assignment." (user 7)

And others like to collect the reward for others, if they are not interested in it theirselves:

"Mostly I collect to give the reward as a gift to someone else. I just like it because these are things that usually are not easily available." (user 15)

Users do not like it when they have to pay extra money for the reward. It can be that they decide not to join the program more easily:

"What I think is negative is that when there is a loyalty program, like at the Albert Heijn at the moment, that you have to pay extra. Sometimes it is about a large sum of money and at the moment I want to redeem I sometimes just do not have enough money and then I think: Oh! Leave it." (user 25)

Some users lose their paper stamps. Therefore they would really appreciate the digital approach:

"I like digital collecting over paper collecting. I always loose all my stamps or they are somewhere in my bag and come out folded." (user 10)

Users liked the personal messages from this research study a lot. They reminded them of the program and accordingly they did not forget that they were collecting. However, they don't know if they would have reacted when a big company would have send them. The frequency of the messages should

not be too much and they should not be sent when the user is not committed to the program:

"The emotion reports, although they were too extensive (could have been simplified), I thought it was really cool! Just the questions: How are you doing so far? Are you enjoying it? etc. That would be really cool if a company would ask that. That they are interested in you, even if it is fake." (user 7)

Expectation confirmation

Users can have a certain expectation of the program according to the collecting behaviour and the rewards.

Users can have certain expectations of their collecting behaviour. Some users will collect as much as they expected themselves to collect at the start of the program.

"Proud/content because I got the minimum I had aimed for." (user 7)

Others collected more than they aimed for, but they can also collect less than they thought they would.

"Content, after all I handed in 3 receipts more than I expected." (user 29)

On the other hand users can have certain expectations towards the rewards of the program. If it is not what they expected they will be disappointed and accordingly their motivation decreases:

"Disappointed, when I went to the shop and I saw the pots. The pots were very tiny. I hoped to store tea in it, but now I discovered that it won't fit. Now I am thinking about another purpose for the pots. But this is why I am less motivated." (user 5)

Users can also get more excited when they receive the reward halfway and they like to use these products:

"My son hit the roof when the reward

was delivered. Due to this I got more enthusiastic!" (user 4)

Coping potential

For the collecting program it is important that users can cope with the negative situations. Otherwise they will quit the program. Some users thought they would reach the threshold and see halfway that they are not going as fast as they should to reach it. But they try to solve this by thinking of other ways to reach their goal in order to be sure they will reach it. These other ways can be asking others for help or buying extra storage products:

"If we notice that we are collecting too slowly, we will buy extra products. Like toilet paper, so things that you need but can story for a while.. we will see for which rewards we choose as soon as we have a full stamp sheet." (user 21)

Analysis collecting behaviour

The second analysis that was done, was the analysis concerning the collecting behaviour. From all the collecting behaviour overviews it was analysed if groups could be formed. In Figure 3.14 it is shown how all overviews were hang up and with post it's (in the form of arrows) interesting behaviour was indicated. By creating this overview it was tried to find groups defined on the collecting behaviour. From this analysis general findings were found and different type of collectors could be identified (after choosing the correct method for the analysis). Both are described beneath.

General findings

Before diving into the analysis of the collecting behaviour, some interesting insights will be discussed. By observing the collecting behaviour overviews some important findings that are applicable on all collectors were examined. These are: Everyone makes the decision to join a campaign when the reward is interesting to

Figure 3.14 analysing collecting behaviour overviews

them.
When negative moods of an user increase the motivation decreases (15 out of 30 participants). The negative moods will increase due to stress at work or because people are busy in their leisure time. This means they do not have time to pay attention to the program and they will not make progress. So indirectly moods affect the progress of the user via the decrease of motivation.

On the other hand, if people have to do groceries, so they have an action towards the program, their motivation increases because they are making progress and they will come closer to their goal (8 out of 30 users). Motivation increases at the end of the campaign because people are making the final sprint to fill up their stamp sheets and they get motivated to reach their goals (7 out of 30 participants).

When people reach their goal before the end of the program, the motivation drops because their challenge is gone at that moment (4 out of 8 participants who reach the threshold of the whole set).

If people do not like the activity of collecting, their motivation is low in any case (2 out of 3 participants that do not like the activity of collecting)

Identifying groups
The main purpose of the analysis of the collecting behaviour is to identify groups based on the data that was gathered during the user research study. As explained in the analysis setup there were two approaches that can be used to identify groups. Because beforehand it was difficult to say which of the approaches was best it will explained beneath what approach will be chosen.

On of the two approaches for identifying groups was to find a relation between the collecting behaviour (progress), motivation and/or moods of the user and to identify what incentives influence this relation.
For example, if it could be seen that if the motivation of the user decreases, the moods also decreases. Or if the progress increases the motivation also increases. However, this seems not possible from the collecting behaviour overviews.

As described above, the only relation that could be identified is that when negative moods increase, the motivation of the user decreases. Mainly, this was caused by being to busy at work or in their leisure time. Furthermore, no relations were identified. What was noticed is that the motivation of the user is influenced by many aspects. As described in the conceptual literature framework the motivation of the user is interconnected with commitment, progress, emotions and moods. This explains why it is not possible to find a direct relation between motivation & moods, motivation & progress or moods & progress.

Also from the statement cards analysis it became clear that the collecting behaviour is not only highly influenced by progress, the level of moods and the level of motivation, but also by the level of commitment and the appraisal components.

Therefore the other approach, whereby groups are identified on the basis of all aspects that were mentioned in the literature framework, will be chosen for this analysis. By looking at the collecting behaviour (i.e. progress) and the answers on the bonus stamp questions, the level of commitment, emotions (appraisal components) and moods experienced during the collecting period can be identified and it can be seen if groups can be formed on the basis of these facts.

The identification of the groups will be done in two steps. First, from the statement cards analysis it is concluded that progress and commitment are influencing each other.
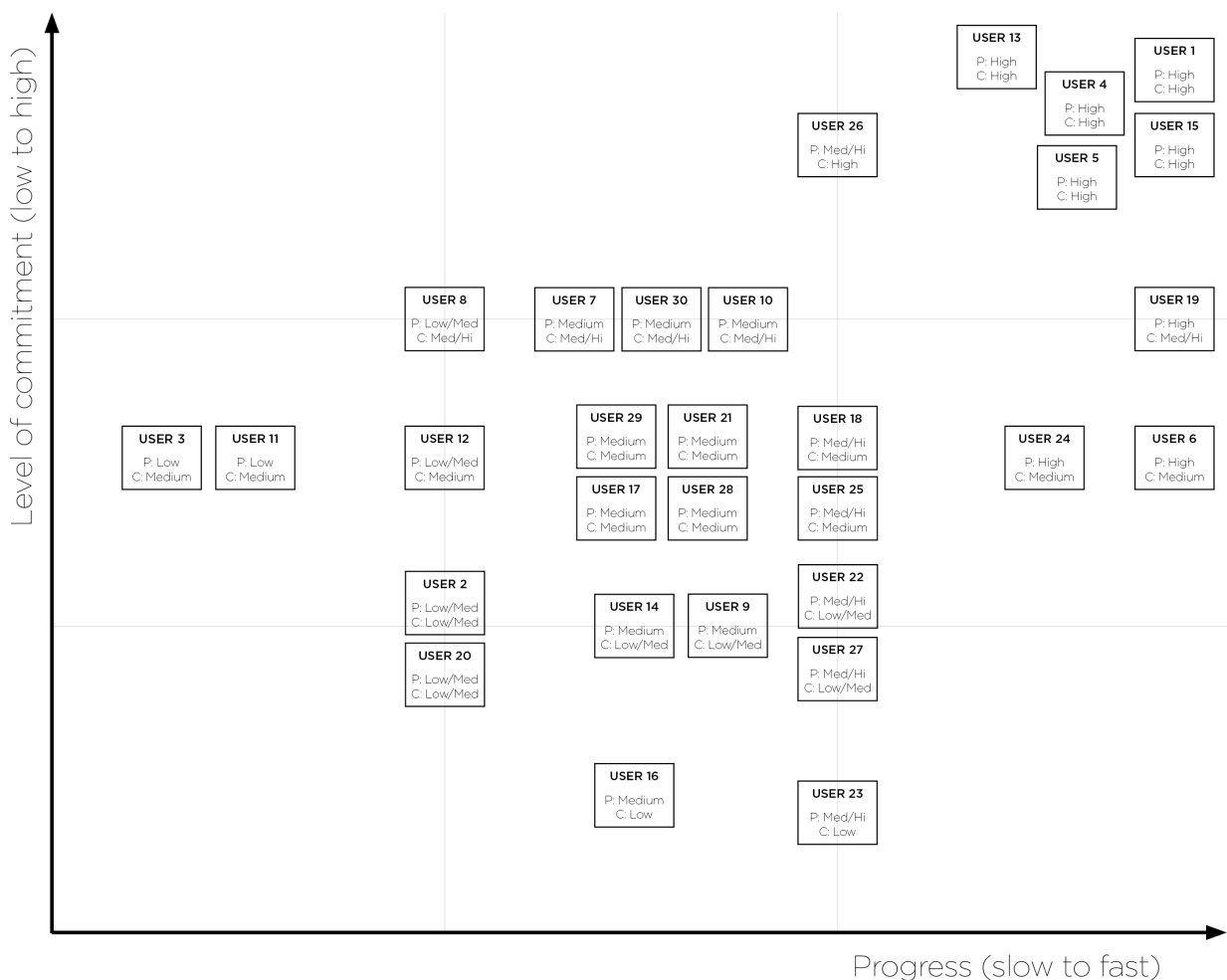
Figure 3.15 Relationship between commitment and progress for all participants

When progress is better than expected, the commitment of the user can increase. And the other way around: if the commitment increases, the user is more willing to do something extra for it and so the progress will increase. This indicates that there is a relationship between commitment and progress. To see how this relationship affects the participants, for everyone the level of progress and commitment should be determined. Therefore for both aspects it was decided if it was low, medium or high. For progress this was done by comparing all users and order them from a low threshold (less than 1 reward) to a big threshold (3 rewards). For commitment this was done according to the four aspects that have influence on it (found in the statement cards analysis), namely if the user has interest in the reward, if he pays attention to the program, if he does something extra for it and if he likes the activity of collecting. If the participant experiences all four aspects positively the commitment was indicated as high, if he experienced none of them low and otherwise it was in between.

After this all participants were plotted in a graph with on the vertical axis the level of commitment and the horizontal axis the level of the overall progress. With this knowledge all users are plotted on a graph that will visualise the relation between the commitment and progress,see Figure 3.15.

From this graph it is still hard to identify groups, therefore the second step is applied. The idea is to use the appraisal components in order to make the final selection of the groups. This because some groups of people are opposite each other. For example, some people have the motive that the program should fit in their routine and that they do not have to do something extra for it. Other people really like collecting (intrinsic pleasantness) and are therefore willing to do something extra for it. So the users can be grouped by their motives, concerns,

expectations, intrinsic pleasantness (i.e. appraisal components). This will lead to a clear distinction between groups.

By analyzing all the data of the user study 6 type of collectors were found. All experiencing different motives, emotions, level of commitment and level of progress. These groups with their own characteristics help to understand what aspects motivate them (or not) in the collecting program. The following 6 groups were identified:

- Maximizers (user 1, 4, 13, 15)
- I will see'ers   (user 17, 20, 27)
- Hesitators (user 2, 3, 11, 8, 29, 5)
- Calculators (user 6, 9, 12, 23, 24, 26)
- Routine stickers (user 7, 14, 16, 18, 19)
- Cheaters (10, 22, 25, 30)

The characteristics of the six groups can be seen in Figure 3.16 to 3.21 on the following pages. in Figure 3.22 the graph with the relation between progress and commitment wherein the users were plotted is shown. The colours in this graph refer to the groups that were identified.

MAXIMIZERS

| LOVE collecting | High goal: whole set | Do anything to reach their goal |

The maximizers love the activity of collecting. They start collecting with the highest goal, in mind. They will constantly check their progress. When this is sufficient they will continue collecting in the same way. When it is not they will do anything to make sure they will reach their goal. However, when they see they will reach their goal or if the goal is reached before the program ended, the challenge is gone.

BEHAVIOUR:

DRIVERS
Affinity for collecting + Desire for the whole set

→ Set a goal → Constantly check progress →

- Progress ok → Continue collecting
- Progress too slow → Do anything extra to reach it

→ Redeem the whole set

PROGRESS: HIGH

AMOUNT OF REWARDS:

🎁 🎁 🎁

3 rewards

COMMITMENT: HIGH

COMMITTED BECAUSE:

Interest in reward: ●●   Paying attention : ●●
Like collecting : ●●   Doing something extra : ●●

EMOTIONS:

Proud/content about a full stamp sheet and reaching the goal

Happy/enthusiastic when receiving extra stamps, goal is in sight and the stamp sheet is full.

Desirous/attracted especially to a full stamp sheet, but also towards the rewards.

Bored/indifferent when the goal is reached before the end of the program because the challenge is gone

Sad/disappointed when the reward is not what they expected and when they turned in the receipt too late.

Figure 3.16 Maximizers

I WILL SEE'ERS

| Only interested in reward | Passive collectors | Only checking progress at the end |

The I will see'ers will just start collecting because they like the reward. During the campaign they do not really pay attention towards it, and even will forget about it. After a while they will thake a look at their progress and redeem when it is possible. When they did not reach the threshold they will quit.

BEHAVIOUR:

DRIVER
Joins when interested in reward

→ Just start collecting ∿ Looses attention and forgets about it ∿ Continues collecting → Check if threshold is reached →

- Redeem: threshold reached
- Quit: threshold not reached

PROGRESS: MEDIUM

AMOUNT OF REWARDS:

🎁 🎁 🎁

1 to 2 rewards

COMMITMENT: MEDIUM

COMMITTED BECAUSE:

Interest in reward: ●○   Paying attention : ●○
Like collecting : ●○   Doing something extra : ○○

EMOTIONS:

Proud/content about a full stamp sheet, think about the program themselves and the outcome of the program.

Happy/enthusiastic when reaching a full stamp sheet.

Bored/indifferent when there is no time to pay attention to the program.

Figure 3.17 I will see'ers

HESITATORS

Constantly doubting about the threshold	Constantly checking progress	Low spending pattern

This group has a low spending pattern so they are not sure if they will reach the threshold. However, they are excited about the reward and therefore they decide to join the collecting program. They will start collecting and test with their spending pattern how fast they will collect and if they will reach a full stamp sheet. When they make sufficient progress towards the end they will do something extra to reach the threshold, otherwise they will possibly quit the program.

BEHAVIOUR:

DRIVER Joins when interested in reward → Just start collecting → Check progress →

- Progress is higher than expected → Willing to do something extra → Reach threshold and get reward
- Progress is lower than expected → Not willing to do something extra → Still reach threshold or slowly quit.
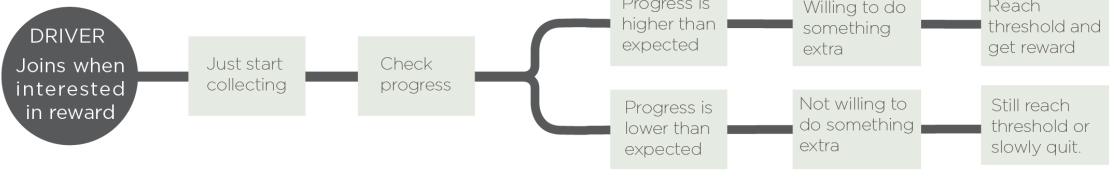
PROGRESS: LOW TO MEDIUM

AMOUNT OF REWARDS:
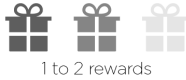
1 to 2 rewards

COMMITMENT: MEDIUM

COMMITTED BECAUSE:

Interest in reward: ●●	Paying attention : ●○
Like collecting : ●○	Doing something extra : ●○

EMOTIONS:

- **Proud/content** about making progress.
- **Happy/enthusiastic** when users are making progress and reach full stamp sheet.
- **Desirous/attracted** to reach the threshold.
- **Bored/indifferent** when there is no time to think about the program.
- **Frightened/anxious** if the threshold is reachable.
- **Angry/frustrated** and **sad/disappointed** when the threshold is not reached

Figure 3.18 Hesitators

CALCULATORS

Estimate reachability beforehand	Can I reach the threshold?	Only join when reachable

The Calculators are behaving similar as the hesitators. So they are also dealing with the concern if they will reach the threshold. However, at the beginning of the program they will only decide to join when they think that the program is reachable for them.

BEHAVIOUR:
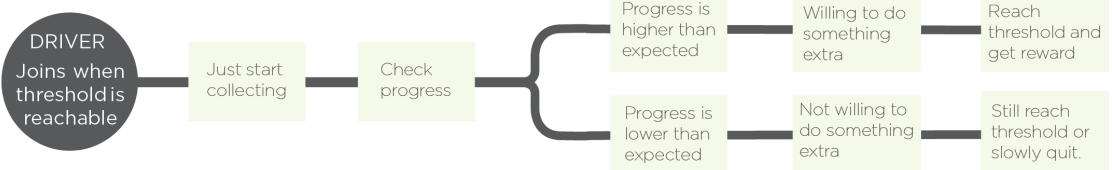
DRIVER Joins when threshold is reachable → Just start collecting → Check progress →

- Progress is higher than expected → Willing to do something extra → Reach threshold and get reward
- Progress is lower than expected → Not willing to do something extra → Still reach threshold or slowly quit.

PROGRESS: MEDIUM TO HIGH

AMOUNT OF REWARDS:

1 to 3 rewards

COMMITMENT: MEDIUM

COMMITTED BECAUSE:

Interest in reward: ●○	Paying attention : ●○
Like collecting : ●○	Doing something extra : ●○

EMOTIONS:

- **Proud/content** about making progress, the outcome at the end of the program, thinking of taking the receipt and getting a full stamp sheet.
- **Happy/enthusiastic** users are making progress.
- **Desirous/attracted** to fill up the stamp sheet.
- **Bored/indifferent** if there is no time to think about the program.
- **Sad/disappointed** if the user was not able to collect the whole set in the time of the program.

Figure 3.19 Calculators

ROUTINE STICKERS

Don't want to change their routine	The program should fit into their lifestyle	Medium to big spending pattern

The routine stickers collect when they are interested in the reward. They just start collecting or set a non-specific goal (like one or two stamp sheets). They do not want to change their normal shopping routines for the program and it should fit into their lifetsyle. They see the reward as a present for their loyalty to the supermarket. When they do not reach the threshold they are not disappointed, but proud that they were not influenced by the program.

BEHAVIOUR:

DRIVER Joins when interested in reward

- Set a (non-specific) goal → Check progress halfway → Redeem when stamp sheet is full
- Just start collecting → Looses attention and forgets about it → Redeems at the end
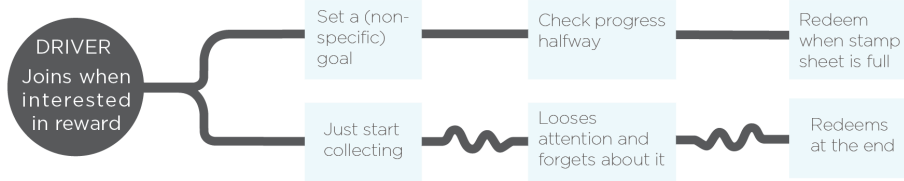
PROGRESS: MEDIUM TO HIGH

AMOUNT OF REWARDS:

🎁 🎁 🎁

2 to 3 rewards

COMMITMENT: MEDIUM

COMMITTED BECAUSE:

Interest in reward: ●○	Paying attention : ○○
Like collecting : ●○	Doing something extra : ●○

EMOTIONS:

Proud/content about staying true to theirselves, making progress and to get reward

Happy/enthusiastic when the stamp sheet is full

Desirous/attracted to a full stamp sheet and the rewards

Sad/disappointed because the end of the program was already there.

Figure 3.20 Routine stickers

CHEATERS

Don't want to change their routine	Change routine when stamp sheet is alsmost full	Final sprint

The cheaters collect when they are interested in the reward, but they do not want to change their routine. They just start collecting and halfway the program they will check if they make sufficient progress. If they do and at the end of the campaign their stamps sheet is almost full they will do something extra to fill it up. They are making the final sprint. But if the sheet is half full or less they will not do this and quit the program.

BEHAVIOUR:

DRIVER Joins when interested in reward → Just start collecting → Check progress halfway

- Stamp sheet almost full → Do something little extra → Redeem stamps and receive reward
- Stamp sheet half full or less → Quit program
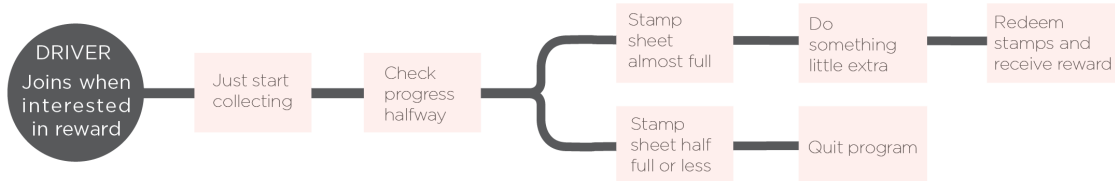
PROGRESS: MEDIUM

AMOUNT OF REWARDS:

🎁 🎁 🎁

2 rewards

COMMITMENT: MEDIUM TO HIGH

COMMITTED BECAUSE:

Interest in reward: ●○	Paying attention : ●●
Like collecting : ●○	Doing something extra : ●○

EMOTIONS:

Proud/content about making progress and to finally receive the reward.

Happy/enthusiastic when the stamp sheet is almost full and when receiving the reward.

Frightened/anxious if the threshold is reachable.

Sad/disappointed when the progress halfway is less than expected and when they eventually deviate from their routine.

Figure 3.21 Cheaters
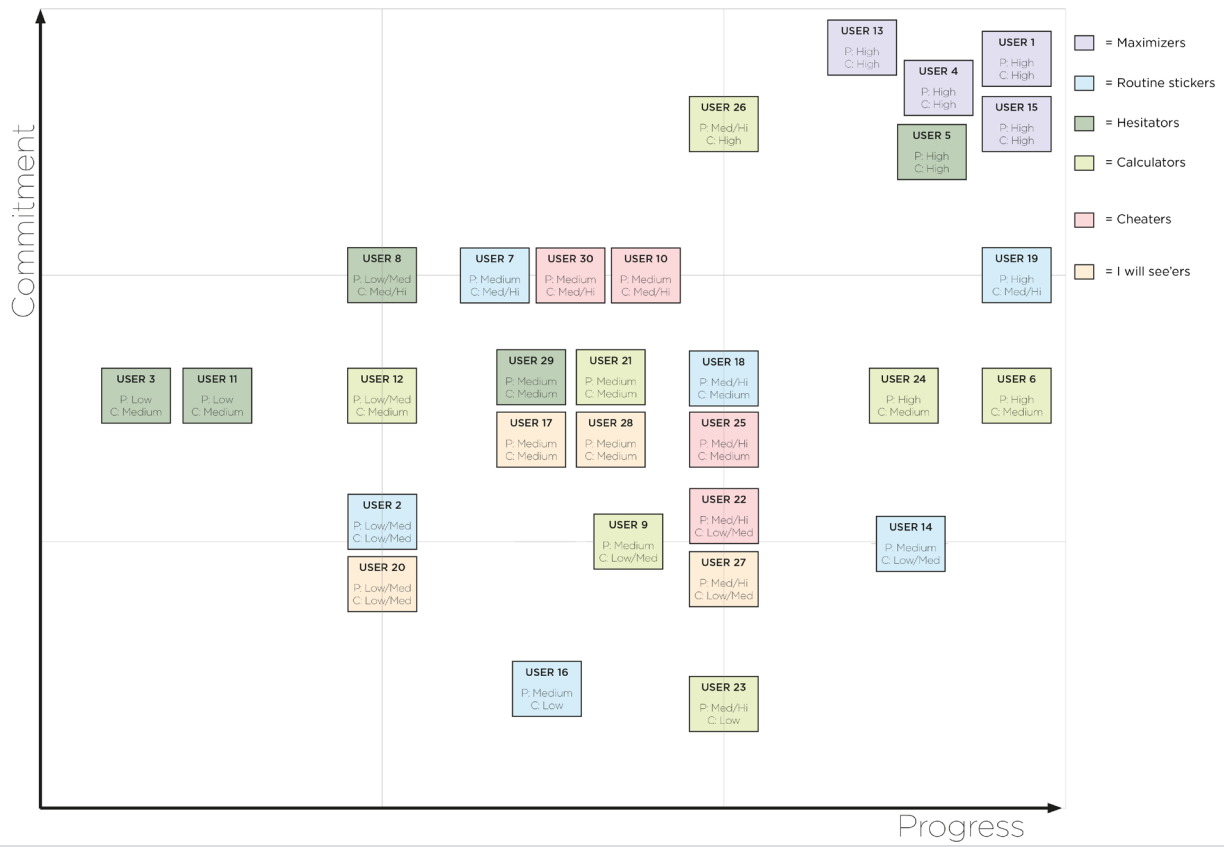
Figure 3.22 Relationship between commitment and progress for all participants and groups indicated

3.6 Discussion

When analysing this research study some aspects should be taken into account that could have influenced the results.

For most people this was the first time they collected with a digital approach. So it was already a different approach than collecting paper stamps. Also the study was conducted via Whatsapp. This was an easy way to reach people. The downside from this is that it feels personal because participants know I am sending the messages. That is why people sometimes started to talk to me like if it was a normal chat. However, some people said they liked this personal approach. They thought it would be nice if a company would make the application more personal.
Because participants knew the study was for my graduation study and that I was behind it, they were more willing to answer the bonus question and to do their best to collect. So in this way their behaviour could deviate from their normal collecting behaviour. However, it is negligible because everyone shows a regular collecting behaviour, i.e. everyone collects for the rewards and do groceries as normally.
Another cause of my personal influence is that I did sent a lot of messages. Almost every day people received either an update of their stamp sheet or an emotion report or a bonus question. This could have had the impact that people cannot forget the program, because I reminded them about it all the time. Some of the people even mentioned this. However, still a lot of people were able to pay less attention to the program.
Despite of these personal influences, the results show collecting behaviour that is similar to the behaviour in a real campaign. Therefore the results can be used. However, these influences should not be forgotten when drawing conclusions from the results.

3.7 Conclusions

There were three research goals that were presented in the setup of the research. In this chapter conclusions will be drawn from the analysis of the research study in relation to the research goals.

Literature framework
The first research goal was to find out how the motivation of the user is influenced by direct and indirect factors that influence it, presented in the conceptual literature framework. This includes:
Commitment influenced by the desire for closure, motives of the user and the actions towards the program.
Progress influenced by the process of TOTE, stuck in the middle and goal gradient effect.
Emotions influenced by the process of appraisal.
Moods which can be positive or negative.

Figure 3.23 shows the conceptual literature framework presented in Chapter 2. In addition the blue arrows, lines and numbers indicate which factors that influence motivation are found in the user research study. The numbers in the picture link to the text beneath where all findings will be explained step by step.
The user experiences several emotions in the loyalty campaign, but particularly the following: proud/content, happy/enthusiastic, desirous/attracted, bored/indifferent, sad/disappointed and frightened/anxious.
The appraisal of a specific situation has influence on the emotions that people feel. Therefore the motives, intrinsic pleasantness, expectations, concerns play a big role because these are the fundamentals of how people decide to join or not to join the program.
Indirectly moods influence the progress of the user. From the collecting behaviour overview it was seen that negative moods of an user are caused by being stressed,
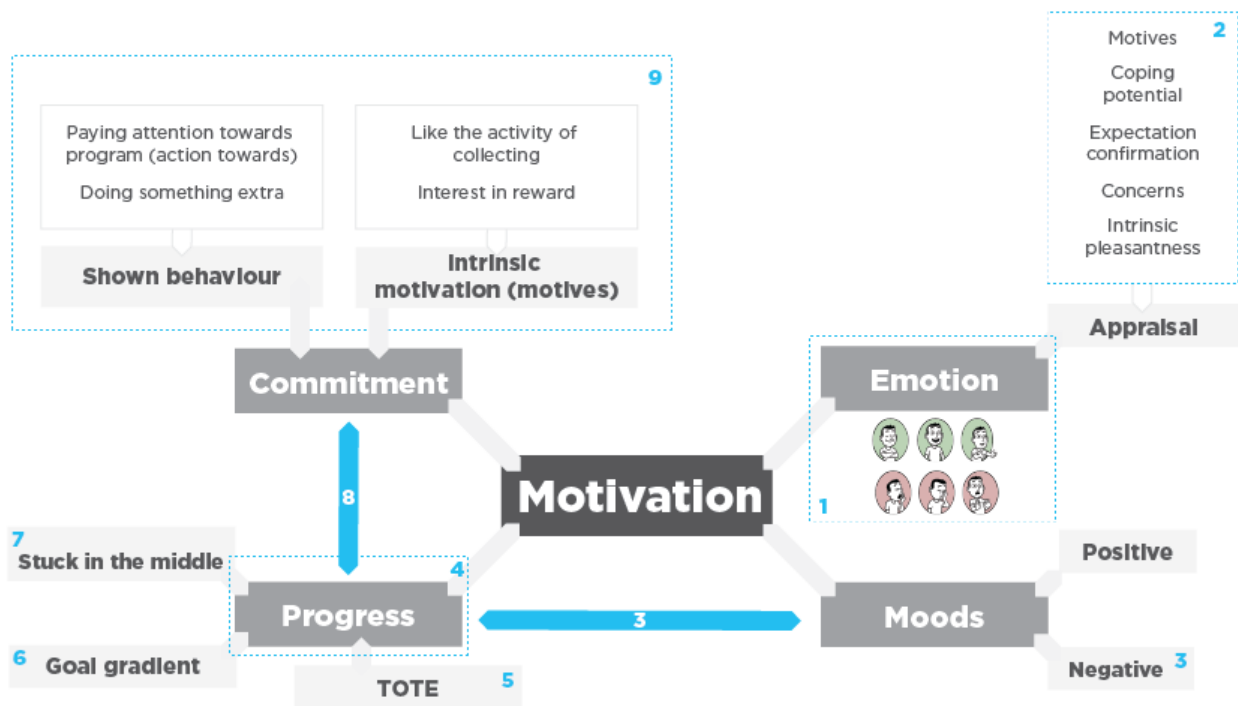
Figure 3.23 Relationship between commitment and progress for all participants

whether this is because they are too busy at work or in their leisure time. This results in the fact that a user has no time for doing groceries and therefore the user cannot make any progress. Finally, the motivation will drop because of this.

Progress has an influence on motivation. When people have an action towards the program it means they will make progress and this is important to people to stay motivated. When the progress is sufficient it will be more likely that a user will collect further. When they are not making sufficient progress the chance exists that he will quit. People tend to check in the beginning of the program, halfway and at the end whether they are making sufficient progress or not. This can be referred to the phenomenon of TOTE. People estimate if they are able to reach the threshold (test), then they try to actually do this (operate), then they check halfway or towards the end if they are succeeding (test) and finally they decide to go further (with sometimes small behavioral changes) or to quit.

When only a few stamps are needed to fill up a stamp sheet when the program is ending, users sometimes decide to fill it up and do something extra for it (refer to the phenomenon goal gradient).

When the program is ending and users have to collect half a stamp sheet to fill it up, users will decide (halfway) to quit the program (refer to the phenomenon stuck in the middle).

Progress and commitment can influence each other. When the progress is higher than expected, people are more willing to do something extra, so they get more committed to the program. But when the progress is lower than expected, people are less willing to do something extra and paying less attention, so they will be less committed. Commitment influences the motivation as well. It is dependant on two main factors, namely shown behaviour which exists of the fact that users are willing to do something extra and if the user is paying attention to the program. The other factor is intrinsic motivation (motives) which consists of if the user likes the activity of collecting and if the user has interest in the reward.

When all of these four aspects are positive, the commitment will be high. When all of these four aspects will be negative, the commitment will be low. But it can also be a bit in between.

High commitment leads to the fact that people ensure they will make sufficient progress. Whether a low commitment results in collecting by only doing groceries and not doing anything extra.

In general moods do have an influence on the motivation of the participant (as described above), but I decided to leave them out from now on. This because it it is hard to capture what influence moods have exactly on the motivation of the user, because moods are influenced by so many different factors that it is hard to tell. On the other hand the program cannot influence the mood of the user. So moods are more an external factor and therefore it should not be taken into account anymore.

Identifying groups

The second research goal was to find out if it is possible to form groups based on motivation and collecting behaviour and if this is possible find out what groups can be identified.

In the analysis groups were formed based on the appraisal components (see Chapter X), so there are similarities between the motives of people in relation to a loyalty campaign and the collecting behaviour itself. Also relations were found between commitment and progress.

Emotions

The third, and last, research goal was to find out, if it is possible to identify groups, if there are group specific emotions. So if users experience different emotions in different groups.

Overall, some emotions are similar in every group, namely happy/enthusiastic and proud/content. People experience these

emotions when they are making sufficient progress, reaching a full stamp sheet and receiving the rewards.

Other emotions differ per group and are specifically linked to their characteristics. In order to conclude what kind of emotions and concerns people encounter during a loyalty campaign this will be discussed per group. In the descriptions only the most important emotions of that group will be highlighted.

Maximizers

Maximizers really know what they want. They do everything to reach their goal so they will feel happy/enthusiastic when they reach it. However, they get bored/indifferent when the goal is in sight or reached early. In Figure 3.24 these emotions are shown with the explanation why maximizers felt these emotions.

Happy/enthusiastic when receiving extra stamps, goal is in sight and the stamp sheet is full.

Bored/indifferent when the goal is reached before the end of the program because the challenge is gone
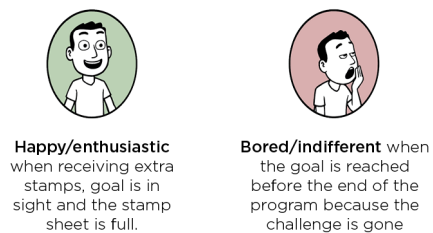
Figure 3.24 Emotions experienced by maximizers

I will see'ers

The I will see'ers do not pay attention to the program and therefore the amount of experienced emotions is rather low compared to the other groups. What stands out is that people will feel proud/content when they thought of taking the receipt themselves and that they are bored/indifferent when they do not think of the program.

In Figure 3.25 the emotions experienced by the I will see'ers are visualised together with an explanation why they experience this specific emotion.
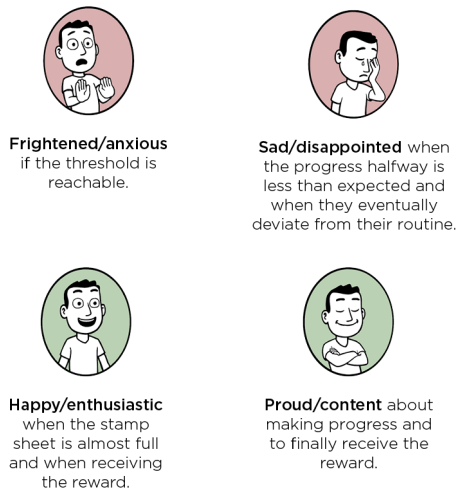
Proud/content about a full stamp sheet, think about the program themselves and the outcome of the program.

Bored/indifferent when there is no time to pay attention to the program.

Figure 3.25 Emotions experienced by the I will see'ers

Desirous/attracted to fill up the stamp sheet.

Sad/disappointed if the user was not able to collect the whole set in the time of the program.

Figure 3.27 Emotions experienced by the I will see'ers

Hesitators

The hesitators constantly have to deal with the concern of reachability (i.e. they do not know if they will collect fast enough to reach a full stamp sheet). Obviously, they experience much more negative emotions in comparison with the other groups. This is because they are frightened/anxious all the time if they will reach the threshold and they are really angry/frustrated and sad/disappointed when the threshold is not reached after all. The positive emotion that keeps them going is that they feel desirous/attracted towards the rewards.

In Figure 3.26 the emotions experienced by the Hesitators are visualised together with an explanation why they experience this specific emotion.

Routine stickers

The routine stickers experience a lot of positive emotions. This because they see it as something extra and a present for their loyalty towards the supermarket. And because they will not do something extra for it, they will not feel a negative emotion when they do not reach it. They will feel proud/content about it because they stayed true to themselves. The only negative experience can be that they are disappointed when they discover too late that the program is ended. In Figure 3.28 the overview of the emotions experienced by the Routine Stickers are visualised together with an explanation why they experience this specific emotion

Desirous/attracted to reach the threshold.

Frightened/anxious if the threshold is reachable.

Angry/frustrated and **sad/disappointed** when the threshold is not reached

Figure 3.26 Emotions experienced by the Hesitators

Proud/content about staying true to theirselves, making progress and to get reward

Sad/disappointed because the end of the program was already there.

Figure 3.28 Emotions experienced by the Routine stickers

Calculators

The calculators deal with the same concern as the hesitators. They are also experiencing the emotions desirous/attracted and sad/disappointed. However, they have a less negative experience than the hesitators when they do not reach the threshold. Because they thought more thoroughly of the reachability in the beginning.

In Figure 3.27 the overview of the emotions experienced by the Calculators are visualised together with an explanation why they experience this specific emotion.

Cheaters

Halfway the cheaters will deal with the concern if the threshold is still reachable for them. When it is they have to deal with the concern if they will be influenced by the program (i.e. do something extra for it) at the end. They will feel frightened/anxious because they do not know if the threshold is reachable. And they will feel sad/disappointed when the progress is halfway less than expected and when they deviate from their routine (because they did not stay true to themselves). On the other

hand they will be proud/content and happy/ enthusiastic if they reach the threshold in the end.

In Figure 3.29 the overview of the emotions experienced by the Cheaters are visualised together with an explanation why they experience this specific emotion.

Frightened/anxious if the threshold is reachable.

Sad/disappointed when the progress halfway is less than expected and when they eventually deviate from their routine.

Happy/enthusiastic when the stamp sheet is almost full and when receiving the reward.

Proud/content about making progress and to finally receive the reward.

Figure 3.29 Emotions experienced by the Cheaters

3.8 Design goal

After this extensive analysis a design direction should be chosen in order to specify what will be designed in the next phase. This direction should be focused on helping and keeping the users motivated for the loyalty program during the entire collecting period, as this is the goal of the project. In this chapter the reasoning behind the design direction will be discussed and the design goal will be presented at the end of this chapter.

Groups applied on reversal theory

To help the users enjoy the loyalty program more, for some of them the behaviour should be (slightly) changed. As mentioned in the literature research reversal theory could be used to get an understanding about how the behaviour of the users can be positively changed. In reversal theory the user is experiencing a specific metamotivational state and then there are two variables that should be taken into account, namely arousal and hedonic tone.

Metamotivational states

The 6 groups that were identified in the analysis phase experienced different metamotivational states during the research study. Namely:

- The hesitators and calculators experienced the motivational states of serious, conforming, mastery and self. Because they are focused on if they will reach the threshold (i.e. goals), they are following the rules and collecting by and for themselves.
- The routine stickers and I will see'ers experienced the motivational states of playful, conforming, sympathy and self. Because they see the program purely as something extra (i.e. playful), they ask receipts from others (i.e. rebellious) and they collect by themselves but could give the reward to others.
- The maximizers and cheaters experienced the motivational states of playful, rebellious, mastery and self. Because they will do anything extra to reach their goal (i.e. playful and rebellious) and they collect by and for themselves.

In Figure 3.30 an overview of which group experienced what state is shown.

Now it is interesting to indicate which users should change their motivational state in order to collect in a more pleasant way. One by one it will be discussed which states are interesting to focus on and finally it will come to a decision.

First, the metamotivational state of self and other should not be focused on. Obviously everyone experiences the state of self because someone is always collecting individually. Therefore it makes no sense to change their motivational state into the other state.

Second, the state of mastery and sympathy is not that interesting as well. This because
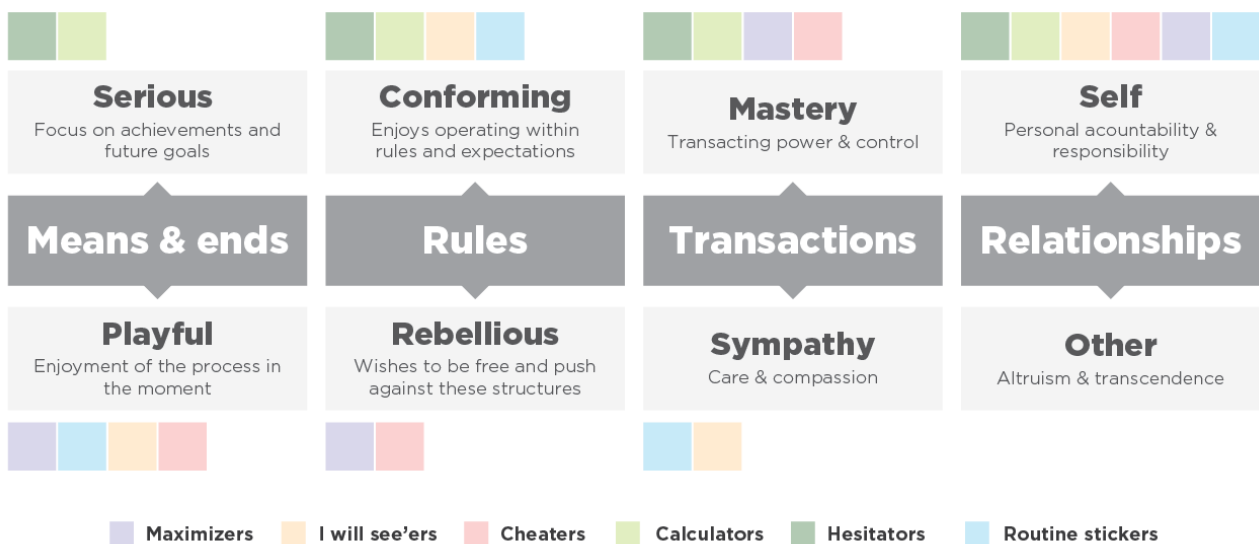
Figure 3.30 Groups divided in motivational states

some users who collect for others or collectors that hold everyone but themselves responsible for collecting (routine stickers and I will see'ers) are experiencing the sympathy state. But most of the collectors are in the mastery state because they have control over collecting themselves. To change the behaviour of mastery to sympathy is not desired, because then people will let go of focusing on the program. To change the behaviour from sympathy to mastery will not work, because these groups just want to collect and don't want to pay more attention to the program.

Then there is the motivational state of conforming and rebellious. Only the maximizers and cheaters are rebellious. This because they always find a way to 'trick the system' and therefore collect faster. So they are the people that do something extra and ask others to collect for them. The other collectors are collecting by following the rules strictly. To change the behaviour from rebellious to conforming will not work, because the groups that are rebellious are having fun by behaving like this. And by making the groups more rebellious than conforming would result in the situation that people are going to search for the boundaries wherein they can act. This would

not be an advantage for the program Lastly, the motivational domain of serious and playful. Some of the users are behaving in a playful way, because they do something extra and they see it sometimes as a game to fill up their sheet. However, two groups (hesitators and calculators) are very serious and only focus on the achievement (i.e. the reward they want to have). It would not be interesting to change the behaviour from playful to serious, because the people who already collect in the desired way are behaving playful. So obviously this works well for them. Therefore it would be interesting to change the behaviour from serious to playful and creating more enjoyment in the moment instead of the focus on the achievements.

Spectrum serious to playful

If you take a closer look to the spectrum of serious and playful it can be seen that the groups are a bit more divided than shown in the previous paragraph. In Figure 3.31 it is shown for all the groups how serious or how playful they are. It can be seen that the hesitators and calculators are acting very seriously in a collecting program. This because they estimate if they will reach the threshold and during the collecting process they are all the time doubting (i.e. anxious) if they will reach it. Whereas the maximizers

see it as a game and if they do not succeed they will do anything to make sure they will reach it in the end. In other words the hesitators and calculators are focused on the end goal, whereas the maximizers focus on the moment itself. This is a big difference between those groups and it triggers the idea of helping the users that are serious to be a bit more playful in the program. Besides this the routine stickers and I will see'ers are positioned in the middle, because they do not really focus on the program (focus on future goals), but also do not do something extra for it (being playful). The cheaters are a bit more playful than they are because they are triggered towards the end of the program to do something extra (i.e. to be more playful).
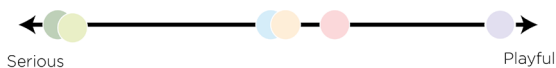
Figure 3.31 Spectrum serious to playful according to groups

Arousal and hedonic tone

Then the two other variables, arousal and hedonic tone, should be taken into account. First take a look at the relationship between arousal and the metamotivational state of means & ends.

In Figure 3.32 the graph, that visualises the relationship between the metamotivational state of serious and playful and arousal, is shown. On the horizontal axis the metamotivational state (serious to playful) is plotted and on the vertical axis the level of arousal (low to high) is plotted. For all groups it is shown how they currently experience these two variables in the loyalty program (visualised by the closed circles) and what the desired level of both variables would be (visualised by the open circles in the graph). The grey area in the graph shows what the ideal level of arousal would be according to reversal theory, namely neither extremely high nor extremely low. For the legend corresponding to the graph consult
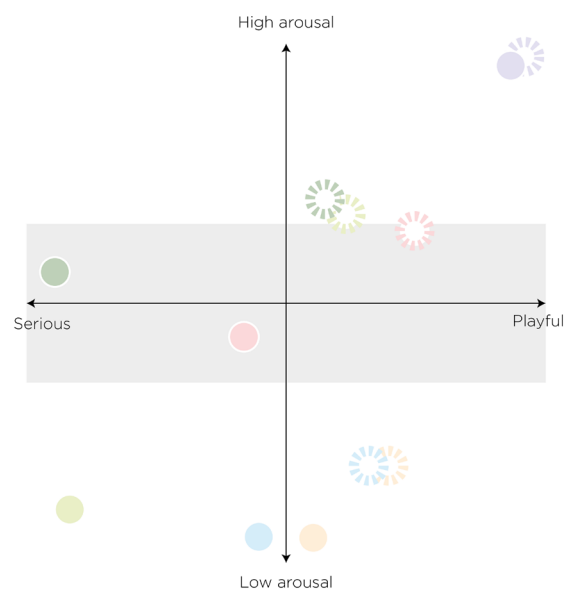
Figure 3.32 Relationship between arousal and metamotivational state of means & ends

Figure 3.33 Legend of the graphs

Figure 3.33. In this image it is illustrated what symbols are used and corresponding colour to the group is clarified.

As can be seen from the graph, looking at the current situation (i.e. solid circles), the calculators, routine stickers and I will see'ers experience a low level of arousal. So the emotions they experience (like proud/content and bored/indifferent) are not that intense. Whereas the maximizers experience a high level of arousal because they are feeling a deep desire towards the rewards and are enthusiastic to collect all the time. The hesitators and the cheaters are a bit in the middle, because they do not really experience intense positive emotions as they are just collecting for the program. But they experience more intense negative emotions such as anxiety for reaching the threshold.

The open circles indicate what level of arousal and what state (serious or playful) would be ideal for the specific groups. So this is the change in behaviour that should be established. The maximizers are already behaving in the desired way, so therefore they do not have to change their behaviour. It is difficult to change the behaviour of the routine stickers and the I will see'ers, because they do not want to be influenced by the program. Therefore it is concluded that they might be influenced a bit by the design that will be developed, but it is not the group that should be primarily focused on. It might be that the cheaters can be influenced a bit as well, as they showed a bit of the desired behaviour already in the research study in their final sprint. However, the main focus should be on the hesitators and calculators as they are very serious in collecting and experiencing low arousal. When their behaviour can become more playful (i.e. experience more enjoyment in the moment) and experience a bit more arousal in a pleasant way, they can be triggered to be more motivated for the program.

In Figure 3.34 the graph, that visualises the relationship between the metamotivational state of serious and playful and hedonic tone, is shown. On the horizontal axis the metamotivational state (serious to playful) is plotted and on the vertical axis the hedonic tone (unpleasant to pleasant) is plotted. For all groups it is shown how they currently experience these two variables in the loyalty program (visualised by the closed circles) and what the desired level of both variables would be (visualised by the open circles in the graph). The grey area in the graph shows what the ideal level of hedonic would be according to reversal theory, namely in the pleasant area. For the legend corresponding to the graph consult Figure 3.32. In this image it is illustrated what symbols are used and corresponding colour to the group is clarified.
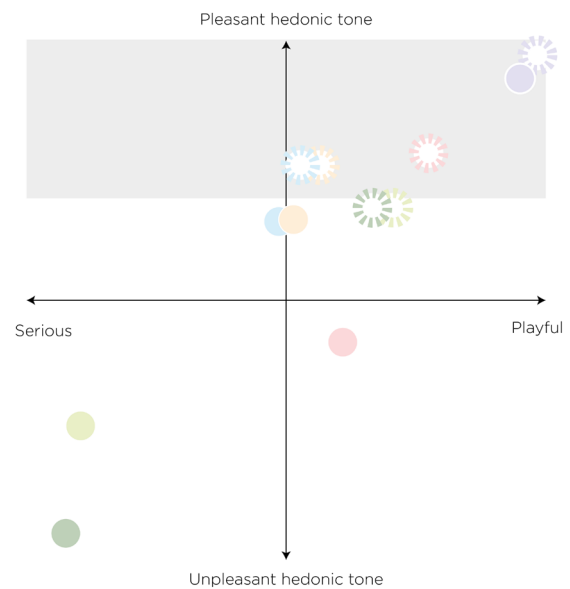
Figure 3.34 Relationship between hedonic tone and metamotivational state of means & end

For the relationship between hedonic tone and the metamotivational state of means & ends the same reasoning is done. According to the graph it is ideal, obviously, that the hedonic tone is as pleasant as possible. As showed the maximizers already experience this. The routine stickers and I will see'ers could still improve a bit on the level of the hedonic tone, but it will be difficult to get them there because they have their own routine and find it annoying when they are disturbed by the app or supermarket. The cheaters, calculators and hesitators are the three groups that are experiencing unpleasant emotions during the period of collecting. This mainly includes the emotion of anxiety towards the reachability of the program. The cheaters only experience this towards the end of the program, but the calculators, and especially the hesitators experience this during the entire collecting period. Therefore they should be helped to experience more positive emotions (i.e. pleasant hedonic tone).

Overall it becomes clear that the groups that are taking the loyalty program serious and experience an unpleasant hedonic tone should be helped to change their

behaviour from serious to playful and thereby experiencing more arousal in a pleasant hedonic tone. This could be described as they should focus more on the enjoyment in the moment (i.e. more playful than serious) by feeling less anxiety (i.e. high arousal but unpleasant hedonic tone) and more excitement (i.e. high arousal but pleasant hedonic tone).

When helping the groups that show this behaviour the most, the hesitators and calculators, other groups could be positively influenced as well.

Solution applicable on app of IceMobile
Before the design goal can be formulated, one important aspect should still be discussed. Namely, that the solution that will be developed should be directly applicable on the application of IceMobile. If the solution is focused on changing the rules of the program it will be harder to implement it. This because the company BrandLoyalty is making decisions about it and it is a larger company so it would take a lot of time to get approval for the idea. And also because IceMobile is more focused and stands more open for innovation.

Design direction
So the design direction of the project is shown in the grey box beneath.

Design direction

"To help the users, who mainly focus on the achievement/reachability in the loyalty program and experience negative emotions in it, to be more **excited** and less anxious about collecting stamps by creating **enjoyment in the moment**. Solutions should be directly applicable on the **existing application** of IceMobile."

Conclusion: user research study

The purpose of the user research study was to observe actual collecting behaviour. In total there were three research goals, namely:
- Find out how the motivation of the user is influenced by the four main factors that influence motivation, namely commitment, progress, emotions and moods. Plus the aspects that influence these factors.
- Find out if it is possible to form groups based on motivation and collecting behaviour and if it is possible find out what groups can be identified.
- To find out, if it is possible to identify groups, if there are group specific emotions.

To be able to give an answer to these research goals an user research study was conducted. Most important was to observe the collecting behaviour of the user. Because the duration of a normal loyalty program (15 weeks) is too long, in relation to the period of time that is assigned to this project, it was chosen to do a self-setup loyalty program via Whatsapp.

To include all type of collectors in this self-setup program it was chosen to conduct the study with 30 participants who have a different situation in households (difference in small and big spending levels). The duration of the Whatsapp program was 3 weeks. Participants could send the receipt of their groceries (of a supermarket of choice) and in exchange they would get a stamp for every 5 euro. For 16 stamps the participant was able to redeem an

item. One set was existing of three parts. Sometimes, the participant would receive a bonus question wherewith an extra stamp could be earned. Next to this, every three days the participants would receive an emotion report in order to get knowledge about what emotions, moods and level of motivation they experience.

To analyse all the data gathered in this research study, two types of analyses were done. First, to find out which factors (mentioned in the conceptual framework) influence motivation, a statement card analysis, according to the method of DIKW (Ackoff, 1989), was done. Second, overviews of the collecting behaviour were made, including the transaction data (i.e. a graph that includes the balance of stamps, increase in stamps, moment of redemption, etc.), level of motivation and moods and emotions reported throughout the program.

From these analyses all the direct and indirect factors of the conceptual literature framework were identified. For example, it was found that if participants are not making progress, i.e. have no actions towards the program, the motivation will decrease. Another example is that the appraisal component motive consistency was identified. Some collectors do not want to be influenced by the program and follow this rule strictly, i.e. it is their motive. Next to these conclusions, groups could be identified based on the level of progress, commitment and emotions experienced during the program. These groups are:

- Maximizers: big spenders who will do anything to reach their goal, the whole set.
- I will see'ers: medium to big spenders who do not have a goal and will collect without checking their balance. Towards the end of the program they will check if they collected enough.
- Routine stickers: medium to big spenders who want to collect, but do not want to be influenced by the program.
- Cheaters: low to medium spending level and the same behaviour as routine stickers. Except when they almost filled up a stamp sheet towards the end of the program, then they are willing to do something extra.
- Hesitators: small spenders who are hesitating throughout the collecting period if they will reach the threshold.
- Calculators: small spenders and same behaviour as hesitators. Except for the fact that these users will calculate beforehand if they can reach it (e.g. 50 stamps for a stamp sheet, 10 euro per stamp, is 500 euro per stamp sheet).

By consulting reversal theory (Apter, 2006) it could be examined what behaviour should be adjusted and how this could be done. This showed that users could be helped to be more playful (i.e. enjoyment in the moment) than serious (i.e. Focus on achievement and future goals). Besides this, reversal theory explained that the user should experience positive emotions that are not too intense. This leaded to the following design goal: "To help the users, who mainly focus on the achievement/reachability in the loyalty program and experience negative emotions in it, to be more excited and less anxious about collecting stamps by creating enjoyment in the moment. Solutions should be directly applicable on the existing application of IceMobile."

In the following chapter it will be explained how ideas were generated according to the design goal described above.

PART 03
Design

In this part the exploration for all possible solutions, the selection process will be described. Finishing with a detailed description of the final concept

CHAPTER 4
Concept generation

With the design goal in mind the concept generation was started. In this phase feasible solutions will be generated that fit the design goal best. In this chapter this process will be described. Starting with the ideation phase, wherein a lot of ideas will be generated. Finally three final directions will be chosen which will be further developed into concepts.

4.1 Ideation

In the ideation phase all possible solutions will be explored in order to be sure the best solution will be developed eventually. In this chapter the ideas that were generated and the process behind it will be described.

In Figure 4.1 an overview of the idea generation process is visualised. The blocks
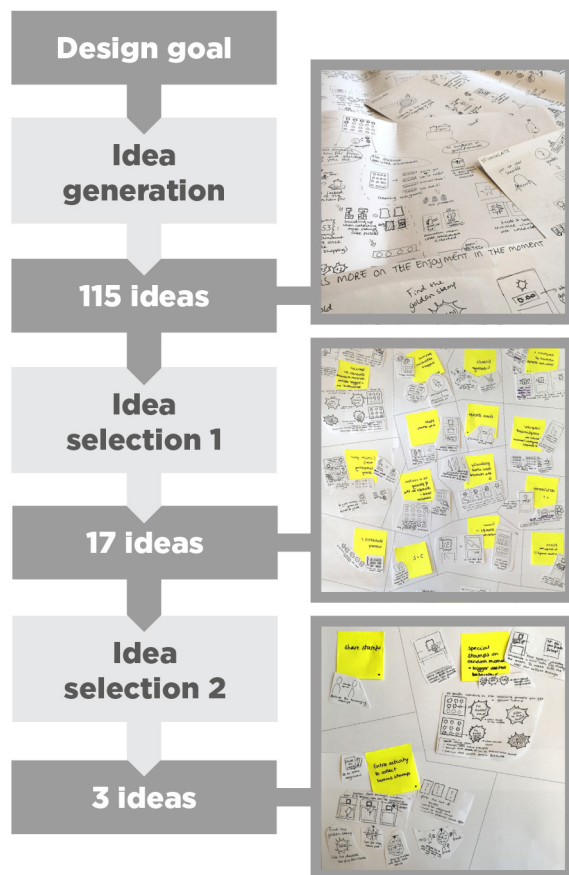
Figure 4.1 Overview of idea generation and idea selection proces

on the left tell what steps were taken in the design process. The light grey boxes explain the activity in the design process and the dark grey boxes explain the outcome of it. Furthermore the blocks on the right, with the photos, show a visualization of the outcome. As can be seen the starting point of the process was the design goal. From there the idea generation was started, which existed of two idea generations using different methods. This resulted in 115 ideas in total, some sketches of these can be seen in the first picture on the right of the visual. From all these ideas two selection sessions were held. In the first session the 17 most interesting ideas were chosen, which can be seen in the second image in the visual. In the second session three final design directions were chosen, which can be seen in the third image in the illustration.

Beneath this whole process will be explained more in detail.

Idea generation

So the process started with the idea generation. The goal of the idea generation was to come up with 100 ideas. This because the best idea might not come in the first 20. Also, the first 20 ideas will be the most obvious solutions for the problems. Normally in idea generation more radical ideas will come up after generating a substantial amount of them. From these radical ideas a more feasible solution, suiting the problem statement, can be developed and so new,
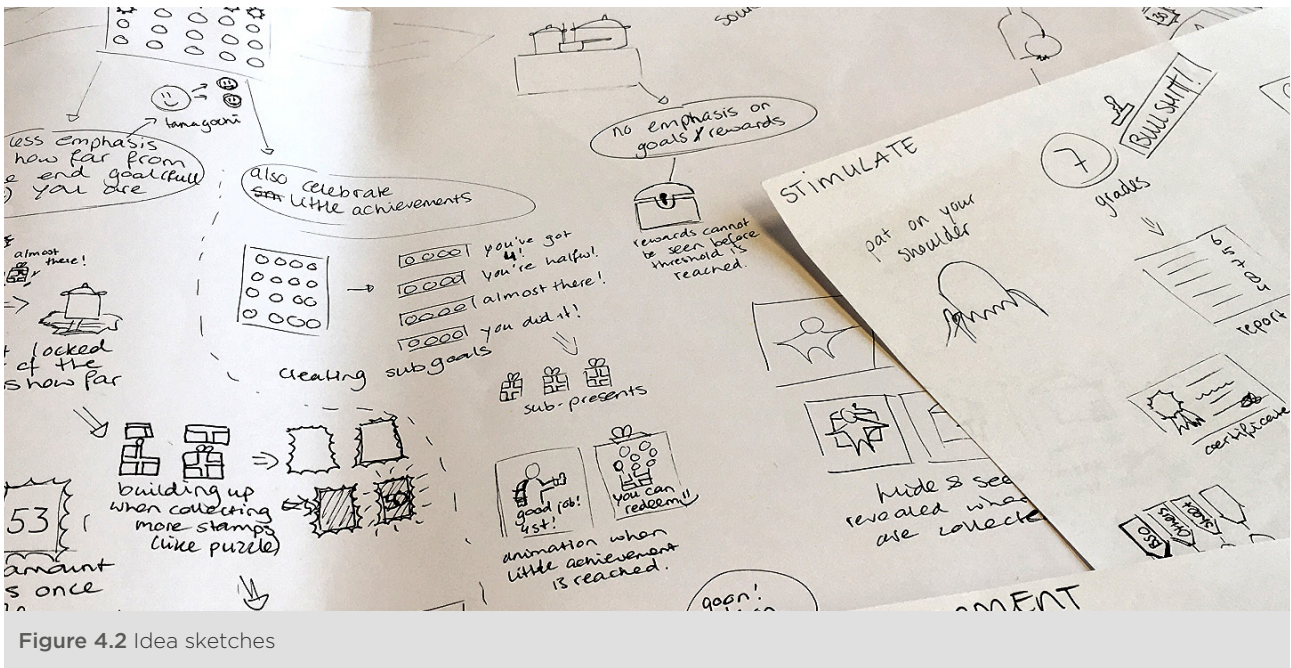
Figure 4.2 Idea sketches

possibly more innovative ideas can be generated.

The idea generation existed of two parts wherein different methods were used. The first part of the idea generation began with sketching the ideas that were thought of based on the design goal and the knowledge that is available of the six identified user groups. In this way solutions will be created that fit the goals of the project and that will eventually help the users best. In the other part of the idea generation some associative methods were used to trigger the designer to think about other solution spaces and thus come up with new and perhaps some innovative ideas.

First the method of random stimuli (Tassoul, 2009) was used, whereby a random word is selected (e.g. gold, bike, etc.) and ideas are generated based on this term. Also the method called Matec (Tassoul, 2009) was used. In this method a great number of associations around some of the terms of the problem statement (i.e. design goal) are generated. Then some of the terms are randomly connected and new ideas can be generated based on this.

In Figure 4.2 some sketches of the ideas are shown.

To give an idea of what kind of ideas were generated in this phase, some will be explained. One idea arose whereby the user would play roulette with a couple of friends. Everyone should put in some stamps and by turning the wheel it is decided who the stamps will get. A visualisation of this can be found in Figure 4.3. Another idea was to adjust the visualisation of the rewards in the app according to the amount of stamps the user collected. So in the beginning of the collecting process the rewards would be almost invisible and when the user fills up the full stamp sheet the rewards grow accordingly, so finally the user can see the image fully. This also includes the fact that in
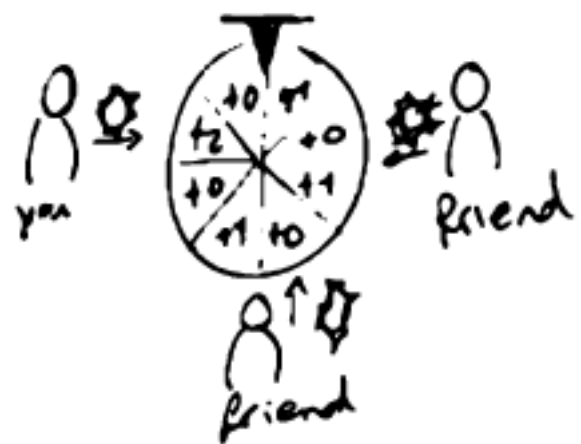
Figure 4.3 Idea of playing roulette with friends

Figure 4.4 Idea of increasing visibility of reward according to amount of stamps collected

Figure 4.5 Idea of unlocking rewards only when threshold is reached

the beginning the app is less focused on the rewards (more enjoyment in the moment) and when the user has enough stamps he can focus on the rewards because they are clearly visible then. This is visualised in Figure 4.4, whereby four stages in the collecting process are shown whereof the first screen is the state of an empty stamp sheet and the last screen the state of a full stamp sheet. This idea could also be executed more radically. Then the rewards would be invisible until the threshold of a reward is reached. Then the reward will be unlocked. This idea is illustrated in Figure 4.5, whereby the left screen shows the situation wherein the reward is locked and the right screen the reward is unlocked.

Off course this is only a very small selection of all the ideas that were generated in this phase of the design process. For an overview of all the 115 ideas consult Appendix H.

Idea selection

The following step is the idea selection. To come to three concept directions the most interesting and valuable ideas should be chosen out of the 115 that were generated. This is done in two sessions.

Idea selection: session 1

In the first idea selection session two industrial design master students were invited at IceMobile to help to reduce the ideas. This was done in a two hour session by going through them one by one and deciding which ideas fitted the selected criteria best. This means that the selected idea should:

- Meet the requirements of the design goal
- Motivate the user to keep collecting
- Be easy applicable to the Stamps app
- Be enjoyable over a longer period of time
- Offer the possibility to variate in content

The two master students were invited because the UX researchers and designers of IceMobile were not sure if they could do this, being too involved in the development of the Stamps application. They already know a lot about loyalty (programs) and they were afraid their judgement would be clouded. Another advantage of inviting these students is that they can really focus on what ideas fit the criteria best. Whereas the designer would possibly have kept some ideas because it would have been hard to ditch them (or is also biased by the Whatsapp research study), these students can make a rational decision.

So in this selection session 17 ideas were selected of the 115. In Appendix I an overview of these 17 ideas is given.

Idea selection: session 2

In the second session the 17 ideas were reduced to 3 concept directions. This was done with an UX researcher and an UX designer of IceMobile who are highly involved in the development of the Stamps application. This because in this step it is not only important to know what ideas fit the criteria created in the first session, but above all it is important that the ideas correspond with the vision of IceMobile. Therefore some criteria are added to the list above mentioned, so the selected idea should also:

- be feasible for IceMobile to implement in

the app
- be applicable to all loyalty programs that IceMobile supports

So in the on hour session session the 17 ideas were presented to the UX designer and researcher, by the designer, followed by a short discussion about some ideas to clarify the purpose and meaning. After this every person chose three most interesting ideas. Again the decisions were based on which ideas fit the criteria best. The three ideas

with the highest score are the final concept directions, which are:
- The possibility to share stamps
- Offering special stamps (related to a special activity) on a random moment
- Offering an extra activity wherewith the user can earn an extra stamp

The sketches of these three directions can be seen in Figure 4,6. Why these concepts were seen as most promising and how they can be integrated in the app, is explained in the blue box on the following page.
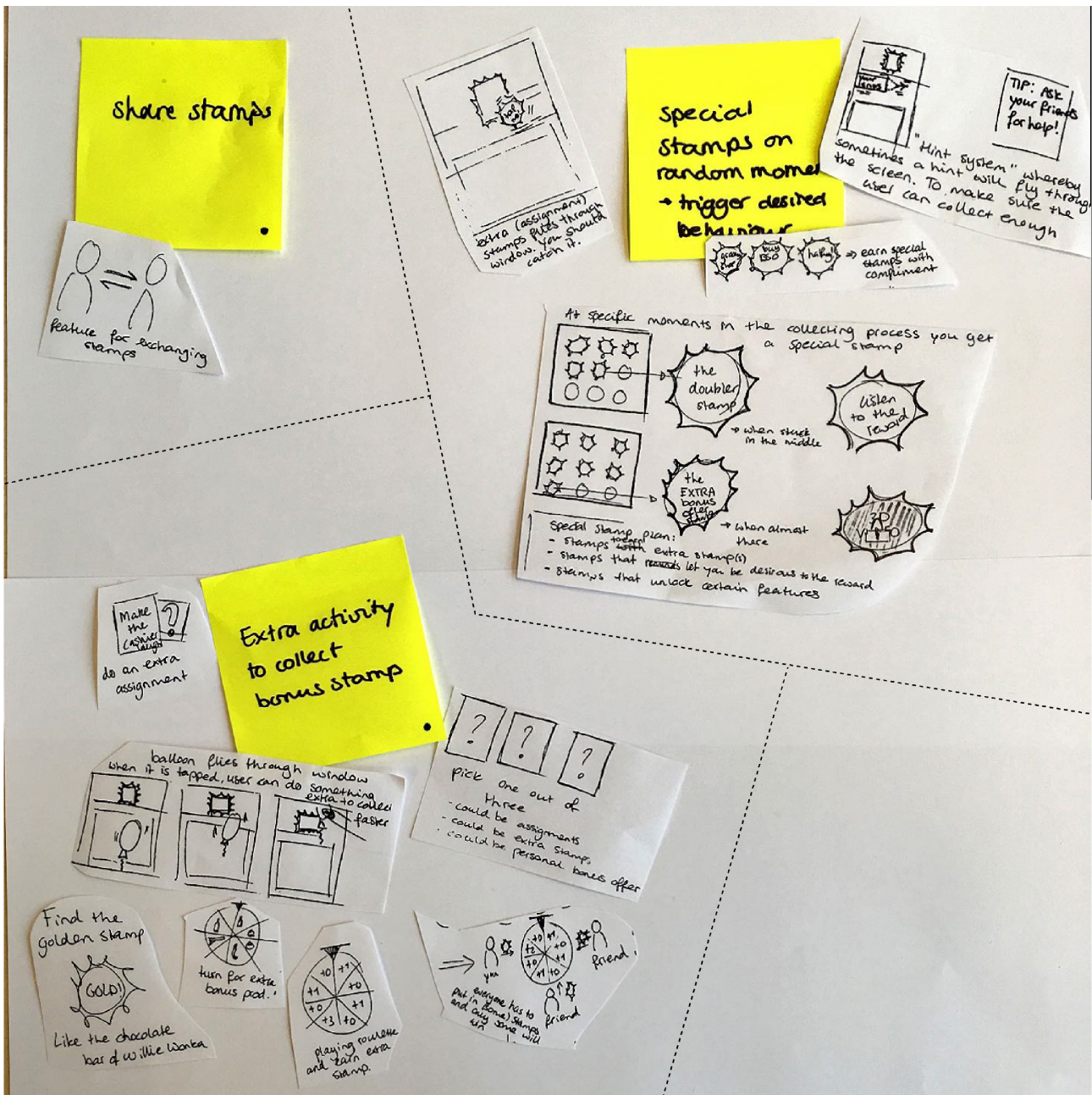
Figure 4.6 The three concept directions with combined ideas that fit into the direction

Three final design directions

What?	Why?	How?
Implementing the possibility to share stamps in the application	The research study showed that users share stamps a lot and if users are not collecting themselves they like to help others. The users that are not always able to reach the threshold, are doing so by getting extra stamps from others. In this way they get excited about the program.	The stamps could be shared in several ways. For example by connecting mobile devices or send stamps digitally.
Offer special stamps, that exist of an extra activity to help the user with collecting (e.g. extra bonus offer, feature for looking at reward), on random moments.	These stamps are giving the user extra possibilities to collect faster and to have more fun with collecting. Especially it would help to offer them an activity on the moments users struggle. These moments of struggle can be identified in the user research study.	The special stamps could include several things, namely, offering an extra bonus offer, 3D video of the reward, compliments etc.
The third idea exists of offering a game-based activity wherewith the user can earn an extra stamp.	A game element in the application could help to make collecting more fun and it could be designed in such a way that it stays fun to play it over time.	This idea could be worked out in different ways. Namely, play roulette with friends, let the user find the golden stamp (there is only one in the whole program) or by letting a balloon fly through the screen and the user should catch it. Then he receives an extra stamp.

4.2 **From idea to concept**

The three ideas that were chosen in the previously were still a bit unclear in what they implied. Therefore some iterations were needed to develop the ideas into concepts. An overview of this process is visualised in Figure 4.7. The blocks on the left tell what steps were taken in the design process (light grey are the design steps and dark grey the outcomes). The blocks on the right, with the photos, show a visualization of the outcome. As can be seen the process began with a first iteration which resulted in new, more detailed descriptions, sketches and goals of every concept. Then a second iteration was held in order to apply these new descriptions and goals and deepen the reasoning behind the concepts even more. This process will be explained in detail beneath.

In the first iteration the three ideas were further developed. The goal of this iteration was to detail and deepen the reasoning behind it, because the descriptions until now were still vague. Taking this step will ensure that the ideas can be further developed into concepts. Detailing the

ideas was done by sketching solutions for all the aspects of each concept. For example, the concept whereby special stamps are offered to the user. In this concept several aspects will ensure that the concept will work as intended, i.e. that it will help the user indirectly with collecting and something is given at random moments. Therefore solutions were created for both aspects. As can be seen in Figure 4.8 sketching involved coming up with solutions according to what type of special stamps could be given to the user. One type that was thought of was a compliment stamp, whereby the user would receive a message like 'good job!' or 'keep it up!'. Another type of stamp that was thought of was the quiz stamp, whereby the user would receive a question like *what do you want to get out of the program?'.*
On the other hand solutions were also

Figure 4.7 Overview of the design process from idea to concept
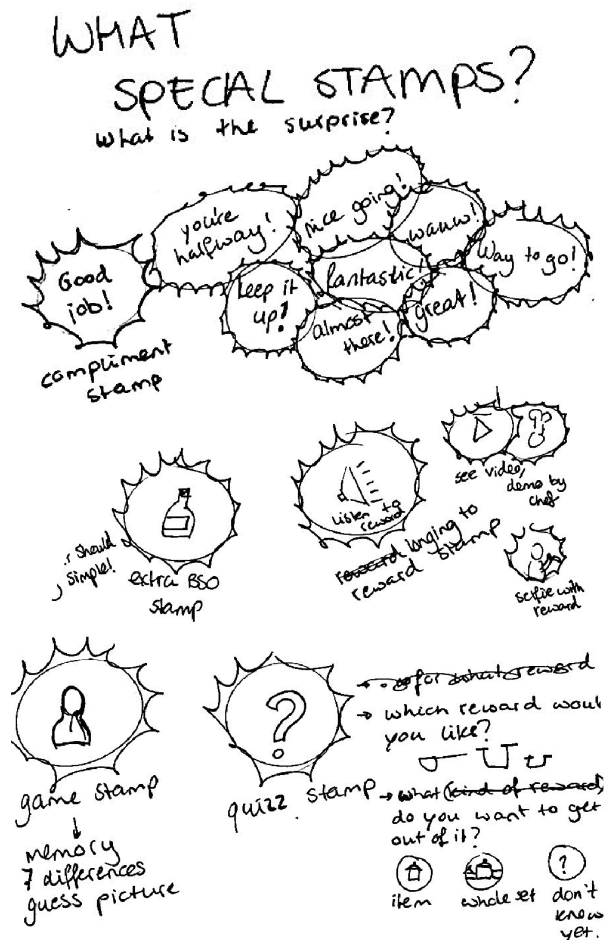
Figure 4.8 Sketches of solutions for types of special stamps

generated for when the user would get a special stamp in order to create the surprise moment that is desired in this concept. As can be seen in Figure 4.9, it was thought of when the user would receive a special stamp. In the first sketch it was thought of to give the user a stamp in the beginning of the process to make the user enthusiastic about collecting. Then he would receive a stamp in the middle, to forecome stuck in the middle. And he would receive a special stamp at the
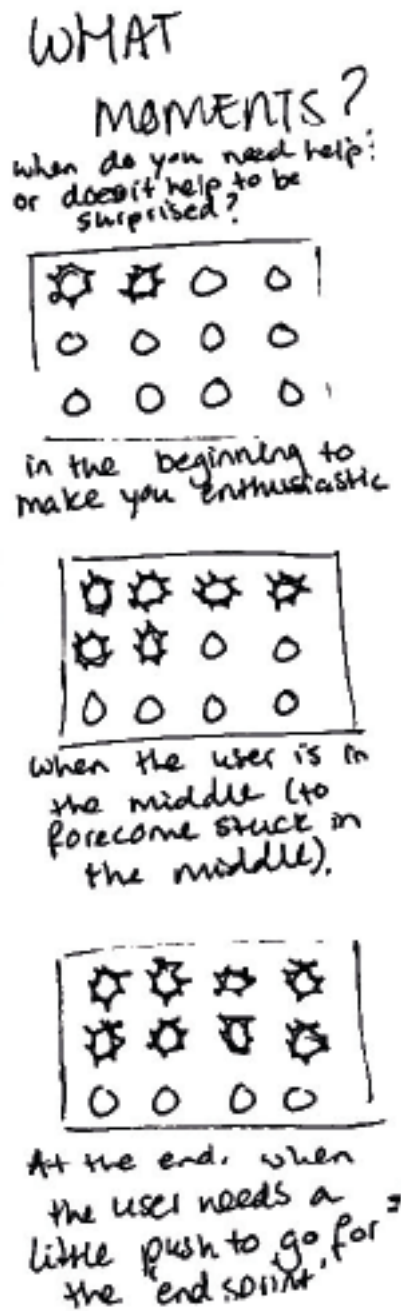
end of the collecting period, to trigger an end sprint. All these moments are based on triggering the desired behaviour, according to the results of the user study.
For the other design direction solutions were generated in the same way. For an overview of all the sketches that were made during this iteration, consult Appendix J.

From the small idea generations in this iteration, it became clear that it was not clear yet what characteristics exactly distinguishes the concepts from each other. During sketching and developing the solutions, this became clear bit by bit. Finally, goals and improved descriptions for every concept were made to define in what aspects the concepts differ from each other.
For the first concept about sharing stamps the description will be '*make it possible to share stamps within the application*'. And the goals of this concept are:

- It should only be possible to share stamps when users are physically present (so that the interaction stays the same as it is in a program with paper stamps. This to forecome that everyone is going to exchange stamps with everyone else).
- Therefore the interaction should be really fun, because this concept is strongly focused on the moment wherein users are sharing the stamps.

For the second concept about special actitivities on random moments, the description will be '*guiding the user through the process by revealing special stamps on moments they can use it, but in a way that it feels random to them (trigger desired behaviour). These special stamps could contain questions, compliments, small games, etc. (focused on bonus products and rewards) or the possibility to earn an extra stamp*'. The goals of this concept will be:

- This concept is dependant on the amount of stamps that the user has collected.

Figure 4.9 Sketches of solutions for moments of receiving stamps

- It should be a surprise when you receive a special activity/game (so it is not always available in the app).
- There should be multiple activities/games so it stays a surprise what you will get and it will feel as if you get something new every time you receive a special activity/game.
- The concept should indirectly help the user through the process of collecting.
- The concept should give the user the feeling that he gets help during the process of collecting.

For the third concept about game activities the description will be '*make the process of collecting more fun by offering games (focused on rewards and bonus products) throughout the process of collecting. In contrast to the previous concept this one will always be available because it should trigger the user to open the app more often. Not only for checking the balance and rewards, but also because the app is becoming more fun and there is more to do in the app. However, the concept should stay interesting over time*'. The goals for this concept are:

- This concept is dependant on the duration of the program.
- This concept is always available in the app.
- The games should make users aware of the possibilities within the program.
- The concept should trigger the user to open the app regularly.

These descriptions and goals distinguish the concepts from each other and are used for a better understanding about this difference for the following iteration.

After this, a second iteration followed. The goal of this iteration was to apply the descriptions and goals of the previous iteration correctly. This was done by making even more exact sketches than in the first iteration for every concept.

To give an example of this, it will be explained according to the special stamp concept. As can be seen in Figure 4.10, it was decided on which types of activities will be available within this concept. Every type of activity has its own purpose. For example, the question stamps have the purpose to trigger the user to think about the program, whereas the compliments should trigger the user to think positively about collecting. On the other hand it was decided on when the user would receive what activity. In Figure 4.11 this is visualised on a timeline. The numerators (1/2, 3/5, etc.) indicate the progress of the user, i.e. 1/2 indicates that the user is halfway of filling up the stamp sheet. The cards that are visualised beneath this timeline
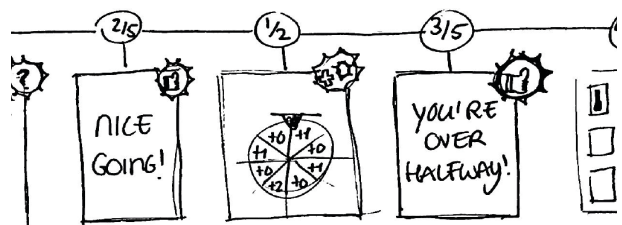
Figure 4.11 Second iteration: decide on when the user receives an activity
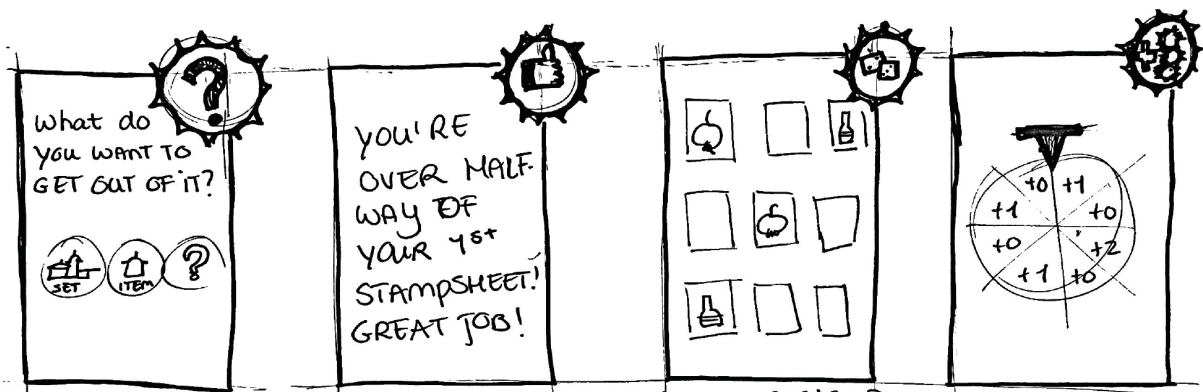
Figure 4.10 Second iteration: decide on type of activities

are connected to these specific moments, all with their own purpose (which will be explained further ahead). So in this way it is clear what this concept implies.

The same process was followed for the other concepts. For the complete overview of all sketches of this iteration, refer to Appendix K.

4.3 Concepts

In two iterations the ideas were developed into concepts. In this chapter the three concept directions that were developed in several iterations will be described in detail.

SwipeShare

So this concept enables users to share their stamps via the application when they are physically present. In Figure 4.12 to 4.14 a short scenario is shown of how this concept works. In Figure 4.12 the paper prototype of this concept is shown. It exists of two phones that can be connected and some paper stamps that can be shared. The idea is that

the user decides first how many stamps he wants to share. After this he connects his phone with the phone of the user who wants to receive the stamps. In Figure 4.132 it is shown how the pones are connected and the stamps are placed in the phone so that they can be shared. This can be done by sliding the stamps to the other phone, this can be seen in Figure 4.14. This swiping can be done in different ways. Namely by swiping one stamp at the time, using more fingers to swipe more stamps at the time or by grabbing a bunch of stamps with all of the fingers and swipe it to the other side.

Surpris
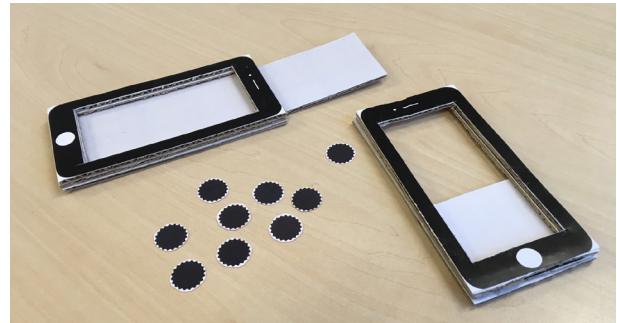
Figure 4.12 Paper prototype SwipeShare
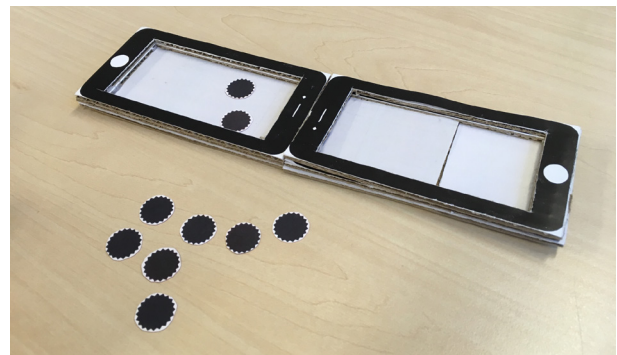
Figure 4.13 Paper prototype SwipeShare: two phones connected
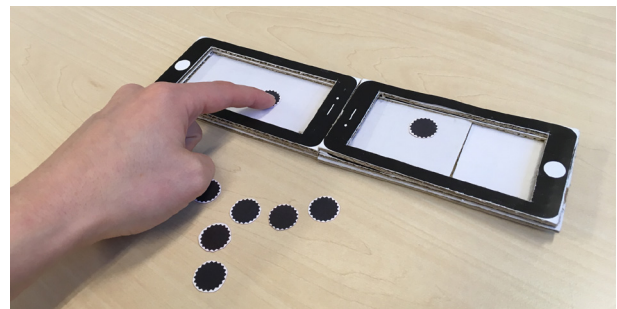
Figure 4.14 Paper prototype SwipeShare: swipe stamps to the other phone

Swipeshare

Description: implement the possibility to share stamps within the application.

Goals:
- It should only be possible to share stamps when users are physically present so that the interaction stays the same as it is in a program with paper stamps. This to forecome that everyone is going to exchange stamps with everyone else (as this was the reason BrandLoyalty and IceMobile did not integrate this feature).
- Therefore the interaction should be really fun, because this concept is strongly focused on the moment wherein users are sharing the stamps

This concept consists of different activities and games that are offered to the user to help him through the process. So this concept is not always visible in the app, but it is a surprise for the user when he will receive an activity. There are four types of activities that all have their own purpose.

The first type of activity is a question. In Figure 4.15 an example is shown wherein the user is asked what he wants to get out of the program. The purpose of the questions is to help the user think about decisions that he has to make in the program, so it triggers the user to think about these decisions. He will get this activity at moments he has to make a certain decision.

The second type of activity is a compliment. In Figure 4.16 an example is shown wherein the user get the compliment that he is on the right track. The compliments help the user to stay motivated and to think positive about the collecting process. The user receives this in between other activities and when encouragement is needed.

The third type of activity are games. In Figure 4.17 an example is shown wherein the user has to find the reward between the bonus products. The purpose of the games is to help the user to experience fun and enjoyment during the program. They are focused on the rewards and bonus products of the program. He will receive this when he needs a trigger to buy bonus products (and earn extra stamps) or when he is (almost) ready to redeem a reward.

And the fourth type of activity is the wheel of fortune, wherewith the user can earn an extra stamp. In Figure 4.18 an example is shown. The wheel of fortune will help the user earning an extra stamp when he is stuck in the process. It is only possible to win this stamp several times on a moment that he really needs it. This means when he is stuck in the middle or when he collected no stamps for several weeks.

Surpris

Description: guiding the user through the process by revealing special stamps on moments they can use it, but in a way that it feels random to them (trigger desired behaviour). These special stamps could contain questions, compliments, small games, etc. (focused on bonus products and rewards) or the possibility to earn an extra stamp.

Goals:
- This concept is dependant on the amount of stamps that the user has collected.
- It should be a surprise to the user when he receives a special activity, so it is not always available in the app.
- There should be multiple activities, so it stays a surprise what you will get and it will feel as if you get something new every time you receive a special one.
- The concept should give the user the feeling that he gets help during the process of collecting
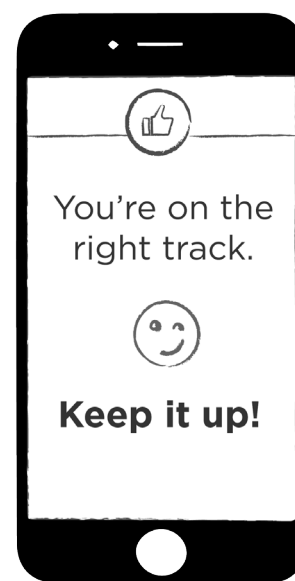

Figure 4.15 Example of question activity

Figure 4.16 Example of compliment activity
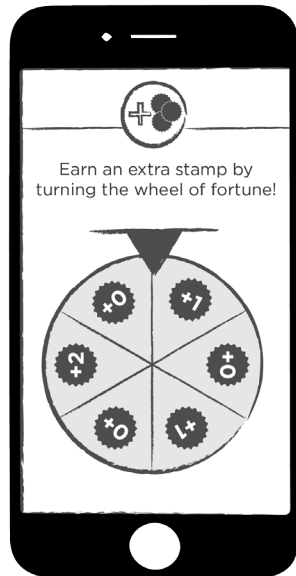
Figure 4.17 Example of game activity

Figure 4.18 Example of wheel of fortune

To give an example of this concept in a collecting period it is visualised in Figure 4.19 when the user will get an special activity. In this example the user needs 16 stamps for a full stamp sheet and an activity is unlocked by collecting a specific amount of stamps. So what this picture shows is that the user will receive a question when he collected 1 stamp and a compliment when he reaches the threshold of 4 stamps.

Every activity or game that is presented to the user has the intention to trigger a certain behaviour. A few examples:

- The first question ("What do you want to get out of this program? A whole set, several items, one item or I don't know?") is asked to trigger the user to think about the goal for this program.
- The wheel of fortune (wherein the user can earn 1 or 2 extra stamps) is presented to to the user to help him over the middle (to forecome stuck in the middle).
- The game (finding the hidden casserole between the bonus products) is presented to trigger the user to buy some bonus products so he will fill up his stamp sheet faster.

There are activities that the user always gets and some that he only will get when he collects slowly. For example, the compliment that is not fully visible in Figure 4.19, is only given to the user when he collects slowly. This to help him a bit further in the process. It is not shown to a user who collects faster because they do not need extra help when the collecting process is going well.
Off course the user can collect further after a
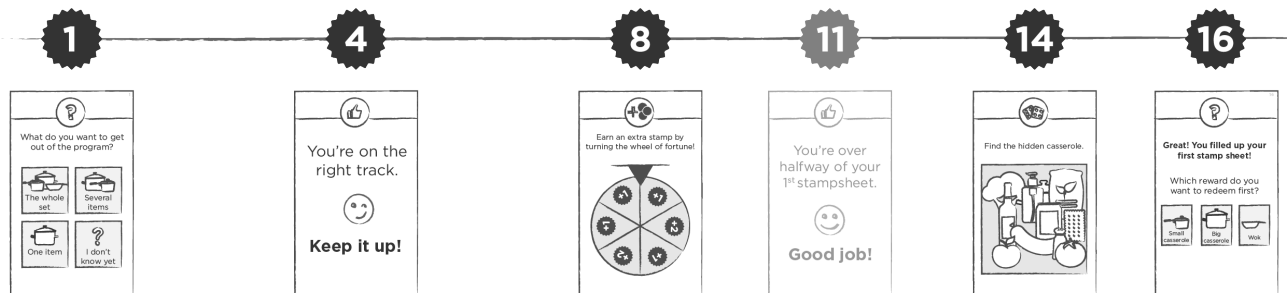
Figure 4.19 Example of how the concept would work in a collecting period for the first stamp
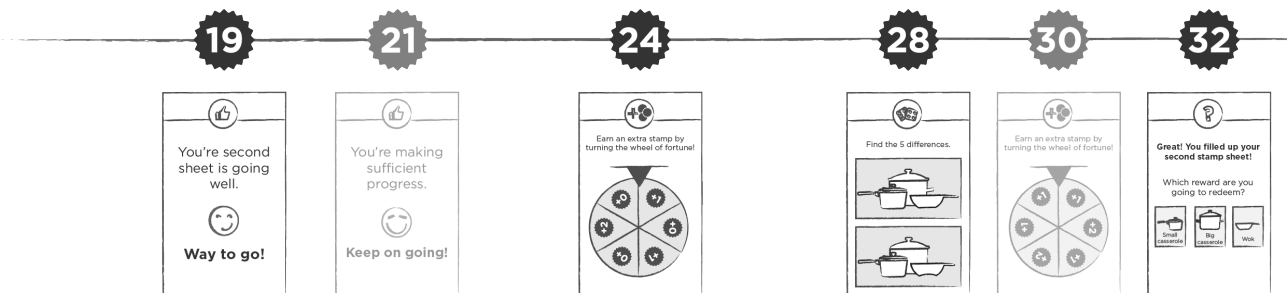
Figure 4.20 Example of how the concept would work in a collecting period for the second stamp sheet

first stamp sheet. In Figure 4.20 an example for the second sheet is shown. The second stamp sheet will have a different rhythm in offering the special activities. As you can see the user will not receive an activity every 3/4 stamps, but every 4/5 stamps. This to make sure it stays a surprise when users receive an activity and that they cannot recognise these moments.

Memo

This concept exists of a game that will get harder every week. In contrast to Surpris, this game is always accessible in the app, so the user can play it as many times as he wants. The game is fully focused on the bonus products to make the user aware which products he can buy to earn extra stamps. Every week new bonus products are introduced and together with this introduction the game will get harder, except when the level is too hard for the user. The game is actually a memory game, for a visualisation of this refer to Figure 4.21 to 4.24. As can be seen in FIgure 4.21 the user will first get a start screen with an explanation of the game. When he presses start some products will pass by on a belt, see Figure 4.22. The user needs to remember all the products that he sees. When all products are out of

Memo

Description: Making the process of collecting more fun by offering games throughout the process of collecting. The games should be focused on the rewards and bonus products of the program to trigger the user to think about it or to buy the products. In contrast to the previous concept this one will always be available because it should trigger the user to open the app more often and it should make the app more fun. However, the concept should stay interesting over time.

Goals:
- This concept is dependant on the duration of the program.
- This concept is always available in the app.
- The games should make users aware of the possibilities within the program.
- The concept should trigger the user to open the app regularly.

Figure 4.21 Start screen Memo
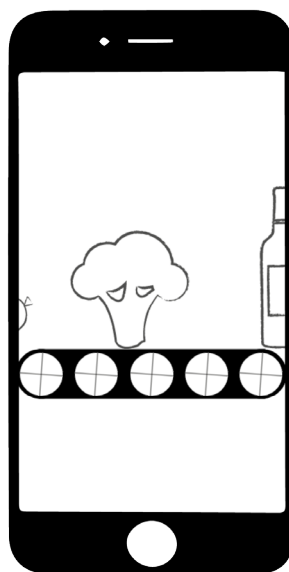
Figure 4.22 Products passing by

Figure 4.23 Guess which products are seen

Figure 4.24 Wrongly guessed, game over

sight a screen will appear wherein the user can indicate which products he has seen. When he guesses right he will see a green checkmark on the product, which is shown in Figure 4.23. And when the user guesses wrong he will be game over and he will see this pop up in the screen, see Figure 4.24. Game over means that the game has ended and he can try again. If he guesses all the products correctly he won and he can also play the game again, until it gets harder the other week.

As mentioned before every week, together with the introduction of new bonus products, the difficulty of the game will increase. This to make sure that the game will stay fun over time. There are several variables that can be played with. Think of the amount of belts, amount of products, speed of products,
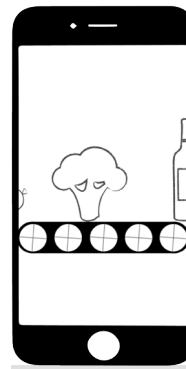
Figure 4.25
One belt
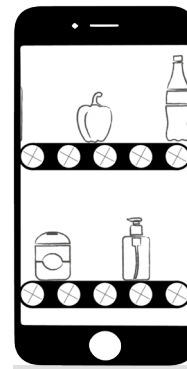
Figure 4.26
Two belts
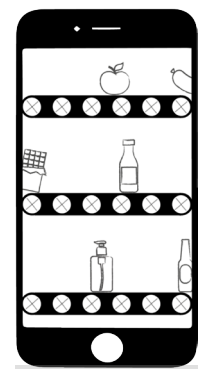
Figure 4.27
Three belts

products that swap belts etc. In Figure 4.45 to 4.27 an example is shown of how you can vary the content by varying in the amount of belts. In Figure 4.25 only one belt is used, in Figure 4.26 two belts are used and in Figure 4.27 three belts are used. As can be seen from these pictures an increase in belts means an increase in products which will make the game harder to win.

Conclusion: concept generation

The design goal was the starting point for the concept generation. All possible solutions were explored by using idea generation techniques as Matec (Tassoul, 2009) and the method of random stimuli (Tassoul, 2009). This resulted in 115 ideas. In two sessions, one with two master students and one with two interaction designers of IceMobile, three final design directions were chosen based on which ideas fitted the design goal best, stay most interesting over time and are most feasible to implement in the app of IceMobile. In several iterations, wherein detailed sketches were created and descriptions were made, the ideas were developed into concepts. The three concepts are:

- Swipeshare: Implementing the possibility to share stamps in the application
- Surpris: guiding the user through the process by revealing special stamps on moments they can use it, but in a way that it feels random to them (trigger desired behaviour). These special stamps could contain questions, compliments, small games, etc. (focused on bonus products and rewards) or the possibility to earn an extra stamp.
- Memo: Making the process of collecting more fun by offering games throughout the process of collecting. The games should be focused on the rewards and bonus products of the program to trigger the user to think about it or to buy the products. In contrast to the previous concept this one will always be available because it should trigger the user to open the app more often and it should make the app more fun. However, the concept should stay interesting over time.
- To be able to make a decision of which of the directions should be developed into the final concept, it should be tested which of the directions fit the design goal best and triggers the desired collecting behaviour. Because this is highly dependant on user behaviour concept evaluation tests will be held as a next step.

CHAPTER 5
Final design direction

To be able to make a well considered choice for the final design direction, concept evaluation tests were conducted. In this chapter begins with describing the setup, results and analysis of the test in detail. Followed by the conclusions of the test that will lead to a definitive choice of the final design direction.

5.1 Concept evaluation study

The goal of the concept evaluation study is to find out which of the three concepts show great potential according to the design goal. The choice was made to do small and quick tests because it seemed more useful to make a quick decision about the final design direction and to do an elaborate test with that.

Setup

Only one concept will be tested in a session. If you would test two or three concepts in one session and the participants have to give a preference, it is likely that they will always choose the first concept instead of making a well-considered choice about which concept they like most. Therefore it was chosen to test only one concept per session, so three sessions in total. In this way the facilitator can listen to the arguments users give why they like it or not and make a well-considered choice himself.

Since it will be a quick test wherein the concepts according to the collecting process should be tested, it was decided to use a scenario that could be acted out. That is why people should be able to sympathize with the environments they usually collect in. Therefore the supermarket environment and the home environment were created in Lego. Also the paper prototypes of the concepts as shown in Chapter 4.3 are used. It was chosen to use two different scenarios.

One that is the same as a normal collecting program, namely doing groceries, collecting stamps for it and redeem when the participant has enough stamps. The second scenario included one of the three concepts. See the grey boxes beneath how the scenario is acted out.

Scenario 1

Step one: doing groceries and stop at cashier desk
Step two: throw the dice
Step three: receive correct amount of stamps from facilitator
Step four: when participants collected 16 stamps they could mention when they wanted to redeem
Participants had to shop 8 times in total, so the scenario above was repeated for 8 times.

Scenario 2

Beside the four steps of scenario 1, this scenario will go through an extra step.
Step five: concept dependent actions
- SwipeShare: participants had to use the paper prototype when they wanted to share stamps
- Surpris: Facilitator handed out special activity in time.
- Memo: participants received a game after their first, third, fifth and seventh turn.

Figure 5.1 Supplies for the concept evaluation test, in this case for Surpris

In Figure 5.1 the supplies for the test are shown. As can be seen from this picture it existed of the supermarket and home environment of Lego, the paper prototypes of the concepts, the paper prototype of the app of IceMobile (to indicate the amount of stamps) and two dices for collecting the stamps.
To find out what the arguments of the participants are why they liked a concept or not, a small interview was held afterwards. The questions that were asked were:
- Which scenario did you like best? Why did you like that scenario most?
- What aspects could be improved about the second scenario to make it more excited?

Participants
For the test 14 participants were recruited. Which means at least four participants per concept to be sure the biggest issues will be found.
The participants are employees of IceMobile who are not involved in the Stamps project. All of them were familiar with the rules of a loyalty program and they were different types of collectors.

Division of sessions
In total six sessions were held, so two sessions for each concept. This because in separate sessions you will find different

results and these should be covered. So in every session there were two participants, except for the SwipeShare session. In that session there were 3 particpants each time, because sharing stamps makes more sense when you are with more than two people.

Results & analysis
By observations of the facilitator and by asking questions to participants it became clear what participants liked about the concepts and what the downsides are. Beneath for each concept the advantages (i.e. what they liked) and the disadvantages (i.e. downsides) are listed.

SwipeShare
In Figure 5.2 to 5.5 it can be seen how users were interacting with the prototypes. In Figure 5.2 and 5.3 it is shown how the first group of participants connected the phones and were sharing the stamps by using gravity. In Figure 5.4 and 5.5 it is shown how the second group of participants were preparing

Figure 5.2 Evaluation test of SwipeShare with first group of particpants

Figure 5.3 Evaluation test of SwipeShare with first group of participants

for sharing the stamps.

The advantages mentioned by the participants were:

- Participants liked that they had something to do together.
- Participants reached a higher threshold than collecting individual, which makes them often happy.
- Participants were using the gravity while sharing stamps (they found a new kind of interaction themselves)

The disadvantages mentioned by the participants were:

- The focus is more on the end of the collecting program when someones knows how much stamps are left. Participants were only sharing if they knew for sure they would not make it anymore.
- Participants thought it is too much hassle when you have to make an appointment with friends to share stamps. Why not via facebook?

Surpris

In Figure 5.6 and 5.7 the two different groups of participants joining the tests are shown. In Figure 5.6 the participant is throwing the dice to collect stamps and in Figure 5.7 the participants is acting out that he is walking through the supermarket.

The advantages mentioned by the participants were:

- Participants were surprised every time they got a special activity or game.
- Participants get curious what activity or game they will get next.
- Participants like the variety of activities (and the variety within the activities).
- Participants thought they were helped a lot in the process of collecting. When they looked back they actually were surprised they only got 1 stamp extra.
- After seeing the wheel of fortune participants are hoping all the time they will get it again.

The disadvantages mentioned by the

Figure 5.4 Evaluation test of SwipeShare with second group of participants

Figure 5.6 Evaluation test of Surpris with first group of participants

Figure 5.5 Evaluation test of SwipeShare with second group of participants

Figure 5.7 Evaluation test of Surpris with second group of participants

Figure 5.8 Evaluation test of Memo with first group of participants

Figure 5.9 Evaluation test of Memo with second group of participants

participants were:

- The purpose of the games is not really clear to participants, might be better to mention the products are bonus products. When mentioning this they understand the purpose better.

Memo

In Figure 5.8 and 5.9 both groups of participants are shown wherewith this test was conducted. In both photos you can see the participants playing the game, so they are watching the products that come by on the belts.

The advantages mentioned by the participants were:

- Participants liked the game, because games are always fun.
- Participants were excited by playing the game

The disadvantages mentioned by the participants were:

- Participants would expect a real reward for playing the game. For example: revealing new bonus products or earning extra stamps by playing the game.
- Participants would expect the possibility to earn an extra stamp by playing the game.
- Participants did not understand that all the products that were shown were bonus products.

5.2 **Final design direction**

In this paragraph the choice for the final

design direction will be made. By looking at which concept suits the design goal best, based on the concept evaluation test results. So the conclusions that can be drawn from these tests will lead to the choice of the final design direction. Therefore, first the most important findings will be presented, followed by the choice for the final design direction.

Findings concept evaluation

There were some major findings from the concept evaluation tests.

First, sharing stamps would be mainly focused on the end of the collecting program. Then users can make an estimation if they are going to reach the threshold. If not, they will share their stamps. Off course there are also users that decide from the beginning of the program to collect for others, but still it is something that will possibly happen.

Second, participants liked Surpris because of the great variety of the activities (i.e. questions, games, compliments and wheel of fortune). This made them think they were helped in the process, while they actually did not get a lot of extra, free stamps. So mentally this concept can give participants the feeling they are helped through the process by it.

Third, participants liked to play the Memo game, but they were still missing a higher purpose of the game itself. As an example it was mentioned that the game could help the user select some the bonus products wherewith the user can make dinner. Then something useful comes out of the game

and then it would be more clear to the user why he is playing it. This also shows that users did not always understand the purpose of the games that were focused on bonus products.

Additional, participants doubted if a game would stay fun over such a long time when it is all the time the same game that only gets harder.

Also, if games are involved participants expect that they will get a reward for it. Often they think they will receive an extra stamp when they won the game.

Choice for final design direction

From the findings mentioned above, conclusions can be drawn and a choice can be made for the final design direction. This choice is again focused on a few criteria, namely the design goal, if the concept stays interesting over a long time and if it offers the possibility to vary the content.

Most promising is the concept Surpris because it suits the design goal best. People get excited by it, because their curiosity is triggered by the different type of activities. As it is a surprise when the user gets an activity and as there is a variety of activities (as well the variety within every type of activity) it will stay interesting over a longer period of time. At last, this concept can mentally help users with collecting, as they intuitively have the idea this concept is helping them through this process.

The concept Memo is less promising. In relation to the design goal it is a proper solution because people like to play games and get excited by them. By creating a game that gets harder every week it creates a moment of enjoyment. However, comparing this concept to Surpris shows that this concept will be limited in variety as only the game content can be adjusted. Another disadvantage is that when people do not like this type of game, they will not play it.

The concept SwipeShare is also less promising. Off course the possibility to share digitally is an appropriate solution for the design goal, as people are already showing this behaviour already in a lot of loyalty programs. However, this concept has the least variety of all three because the activity of sharing stays the same every time. Also, the variety in this concept is incorporated in how people share the stamps (like one or more stamps at the time or grabbing the whole bunch and send it to the other person) and there will be only a limited amount of options for different interactions. Another important finding is that possibly this concept is focused mainly at the end of the program because a lot of people then make their final decision if they will reach the threshold and thus if they can share the stamps or not. Off course there are also people who decide from the beginning that

Design goal

"To help the users, who mainly focus on the achievements and reachability in the loyalty program and experience negative emotions in it, to be more **excited** and less anxious about collecting stamps by creating **enjoyment in the moment**. Solutions should be directly applicable on the **existing application** of IceMobile."

they want to share stamps, but still a lot of
people will wait to the end of the program.
As the goal of this project is to help people
in their motivation through the entire process
this concept will not be the best choice.

So therefore the choice for the final design
direction is Surpris.

Conclusion: concept generation

The design goal was the starting point for the concept generation. All possible solutions
were explored by using idea generation techniques as Matec (Tassoul, 2009) and the
method of random stimuli (Tassoul, 2009). This resulted in 115 ideas. In two sessions, one
with two master students and one with two interaction designers of IceMobile, three final
design directions were chosen based on which ideas fitted the design goal best, stay
most interesting over time and are most feasible to implement in the app of IceMobile. In
several iterations, wherein detailed sketches were created and descriptions were made,
the ideas were developed into concepts. The three concepts are:
  • Swipeshare: Implementing the possibility to share stamps in the application
  • Surpris: guiding the user through the process by revealing special stamps on moments
    they can use it, but in a way that it feels random to them (trigger desired behaviour).
    These special stamps could contain questions, compliments, small games, etc.
    (focused on bonus products and rewards) or the possibility to earn an extra stamp.
  • Memo: Making the process of collecting more fun by offering games throughout
    the process of collecting. The games should be focused on the rewards and bonus
    products of the program to trigger the user to think about it or to buy the products.
    In contrast to the previous concept this one will always be available because it should
    trigger the user to open the app more often and it should make the app more fun.
    However, the concept should stay interesting over time.
  • To be able to make a decision of which of the directions should be developed into the
    final concept, it should be tested which of the directions fit the design goal best and
    triggers the desired collecting behaviour. Because this is highly dependant on user
    behaviour concept evaluation tests will be held as a next step.

CHAPTER 6
Detailing the concept

To develop the concept into the final design, several iterations were done. Some iterations were focused on the content of the cards. And some iterations were focused on optimising the storyline of the design and the system that decided when the user would receive a card.

In the infographic in Figure 6.1 this part of the design process is visualised. Also in this visualisation the blocks on the left tell what steps were taken in the design process (light grey are the steps taken and the dark grey boxes are the outcomes). Furthermore the blocks on the right, with the photos, show a visualization of the outcome
As can be seen from the visualisation in the first two iterations the storyline of cards (i.e.

activities offered to the user) was optimised. This implies extending the amount of cards available. When the collection of cards was considered complete, it was applied on transaction data (next step in process) to see if the system, were it was based on, worked as intended. And to see if it could be further improved. The whole design process will be described in more detail beneath.

6.1 **First iteration**

In the first iteration the goal was to extend the amount of cards and improve the storyline, i.e. define the exact order and specify the moments wherein the user will receive an activity. In addition the storyline will be created for three stamp sheets in total. between the 25 and 60 stamps that normally a sheet consists of.
In total cards are generated for three stamp sheets, because the user can collect up to as many stamp sheets as possible in the collecting period. Therefore it is important to get an idea what the difference is between stamp sheets. And also because messages in a further sheet can be different from messages in the very beginning of the collecting process. Off course in loyalty programs people can collect for more than three sheets. But adding a fourth sheet will not show significant new insights.
Besides this, the amount of cards (i.e. activities) will be based on stamp sheets that exist of 25--80 stamps. This is normally the amount of stamps per sheet in actual loyalty
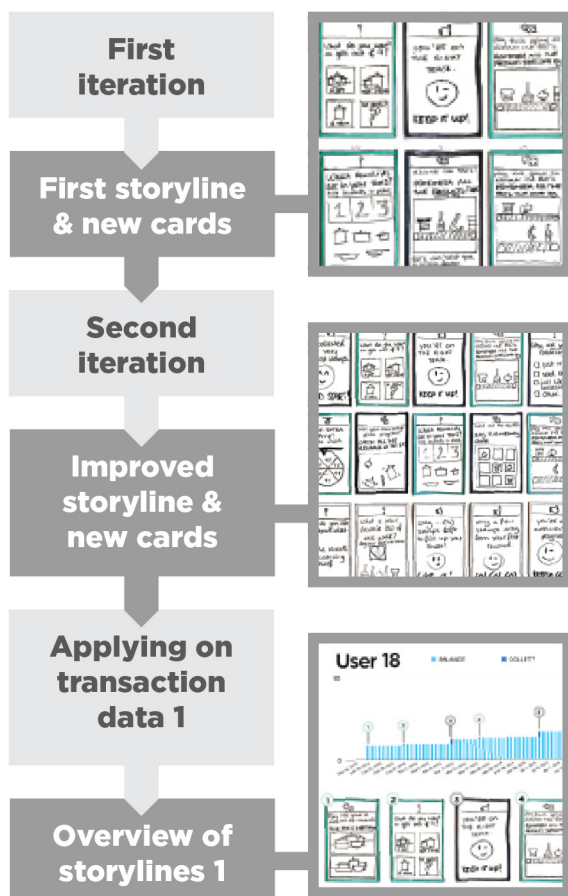

Figure 6.1 Overview of the process from concept to final design

programs.

To reach these goals sketches were made of all the activities that were thought of. These were put on separate cards (of paper). Then the cards were put in an specific order to create the ideal storyline. To give an example, the overview that was made of the storyline of cards of the first stamp sheet is shown in Figure 6.2. As can be seen the storyline exists of 14 cards in total. Every card exists of an activity. The type of activity is indicated in the top part of the card with an icon. The cards itself explain what the purpose of it is and what the users' action should be (if needed). The edges of the cards have different colours because the characteristics of these cards differ, the reason for this will be explained beneath. Lastly, the cards are put in the right order (from the top left to the bottom right) of the storyline that was created. For an overview of the storylines of the second and third sheet, refer to Appendix L.

Some improvements that were made in this process were of great importance, namely:

- The amount of cards per stamp sheet was extended to cover a stamp sheet of 25 stamps as well as a stamp sheet of 80 stamps.
- Every card is placed at a moment in the storyline where it most likely will trigger the desired behaviour. For example, The BSO game is shown to the user towards the end of the sheet (see third card from the end in Figure 6.2). In the first research study it was noticed that people who have only a few stamps left are more willing to do something extra to fill up their sheet. Therefore this card should be shown to the user towards the end of the collecting process.
- Master and minor cards were introduced. In Flgure 6.2 the cards with a blue edge are master cards, whereas the cards with a black edge are minor cards. The difference between these cards is that master cards will always be shown to the user, whereas the minor cards are only shown if the user collects slowly and thus reaches lower thresholds than a fast collector.
- It is introduced per stamp sheet the pace of receiving cards will be different. This because it should stay a surprise to the user when he gets a card. If this moment is the same every stamp sheet the user can eventually guess when he gets it. And the users that will reach the threshold of 2 or 3 stamp sheets are doing well in the collecting process and need therefore less help than the slow collectors. Therefore it is decided that the user will receive a master card for every 6
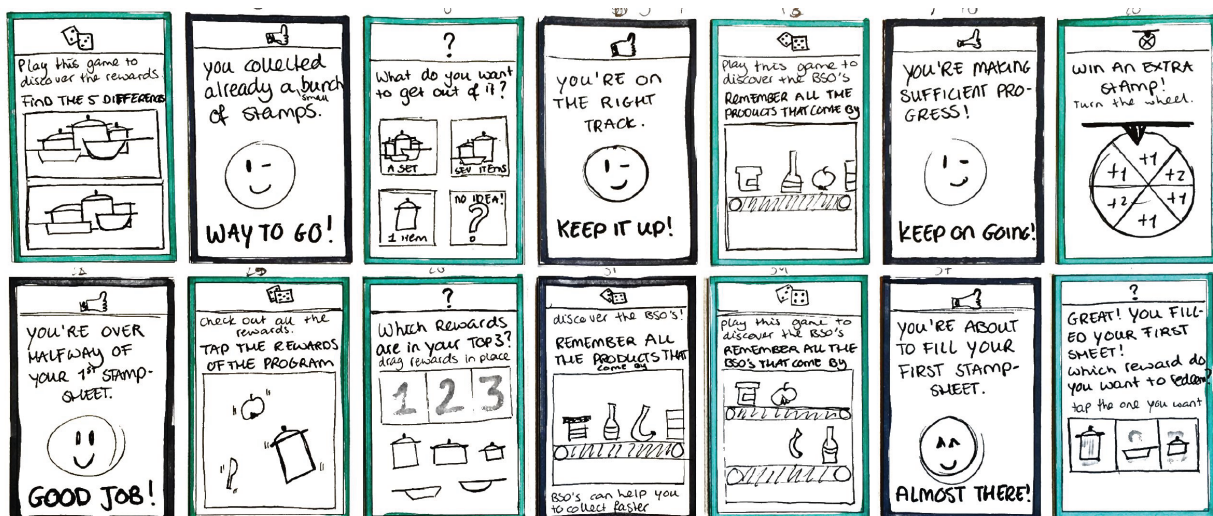

Figure 6.2 First iteration: cards (in the correct sequence) of first sheet

stamps (assuming a stamp sheet would exist of 40 stamps) and a minor card if the threshold of 3 stamps within these 6 stamps is reached.

When taking a closer look at the storyline it is noticed that there are some aspects of the concepts that can still be improved, namely:

- Sometimes the user receives a lot of the same type of activities in one stamp sheet or two activities in a row (if the user only would receive master cards). For example in the first sheet, almost all minor cards exists of the same activity, namely compliments. To receive a lot of the same activities can result in boredom, which is a negative emotion, and therefore it should be improved.
- It was noticed that some cards depend on other collecting behaviour than only progress. For example, the compliment about redeeming should not be part of the storyline, because it is dependant on when the user redeems an item. So some cards should be created for collecting

behaviour other than collecting stamps and these should be given to the user when such a specific situation occurs.

- The wheel of fortune was put in the middle of every stamp sheet to forecome stuck in the middle. However, if it is given to the user every sheet on the same moment it becomes predictable when they will receive it. That is why the wheels of fortune should be given at different moments in every sheet.

These aspects can be optimized in and are input for the following iteration.

6.2 Second iteration

The goal of the second iteration was to improve the storyline and the content of the cards even more according to the aspects that were highlighted above and that still need some improvements. To accomplish this the storyline was adjusted and some new cards were added.

To give an example, in Figure 6.3 the improved storyline with all the cards of the

Figure 6.3 Second iteration: storyline of cards of the first sheet

first stamp sheet is shown. Again all the cards indicate what type of activity the cards exists of and it explains to the user what the purpose is and what action should be taken. Still the master cards have a blue edge and the minor cards a black edge. And the cards are shown in the right order, from top left to bottom right. For an overview of all three stamp sheets, refer to Appendix M.

The improvements that were made in this iteration are:
- Activities equally divided, e.g. not all minor cards on the first sheet are compliments anymore. As you can see the two last cards of the storyline still exist of two of the same activities. However, this is sometimes unavoidable when creating a storyline wherein it should be a surprise what the user will get. Therefore the following rule comes into practice: There cannot be more than two of the same activities in a row be shown to the user.
- Cards that are based on other behaviour than collecting stamps are created, i.e. the exceptional cards. In Figure 6.4 an exceptional card is shown that the user will receive when he buys a BSO. Another example would be a card that compliments the user redeeming an reward. For an complete overview of all the exceptional cards refer to Appendix

N.
- A new aspect was introduced, namely the extra cards. These could be used in case someone is an extreme slow collector and need more cards in between. Especially for loyalty programs with stamp sheets of more than 50 stamps this would be useful because users have to reach a bigger threshold to receive an activity than loyalty programs with a lower amount of stamps on the stamp sheet. These cards do not differ a lot in content from the master and minor cards because, as the name says, it are just extra cards. For an overview of all the extra cards refer to Appendix M (the extra cards are visualised with a light grey edge).

Also in this iteration there are still some things that could be improved, namely:
- The cards about redeeming can be left out. This because in the application there is already an animation for this, so it would be double when it is included in this concept as well.
- To help the hesitators it should be implemented that users who are absent for a while will receive an extra game or fortune wheel in between the collecting moments. This to trigger the user to keep collecting.

The first shortcoming was improved and because it is so straightforward it is not further explained. The second shortcoming will be highlighted in the next paragraphs.

6.3 **Applying concept on transaction data**

To get a better understanding about the functioning of the concept in a real loyalty program and if the rules as they are set now are valid, the concept is compared with the transaction history of some users in finished loyalty programs. The main goal is to see if the storyline works as intended and if the

Figure 6.4 Exceptional card for buying a BSO

Figure 6.5 Exceptional card for redeeming

user gets enough cards in the collecting process.

The transaction data that will be used is derived from two different loyalty campaigns which are already finished. Two of them are chosen to analyse because every program is different in the amount of stamps per sheet and the value of the stamps. The two chosen programs differ in this a lot, so it is interesting to see if the rules of the design are valid for both.

The first loyalty program is for Coop Superbrugsen in Denmark that was held from February 2014 until June 2014. Stamp sheets existed of 60 stamps and the value of one stamp is 6,70 euro. The other program is for RT Mart in Taiwan held from from May 2014 until October 2014. Here a stamp sheet existed of 30 stamps and each stamp had the value of 10 euro.

For both programs three users are selected to analyse. For every program three of the same type of users are chosen, namely:
- a user who collects slowly and does not reach the threshold
- a user who collect quite slow but reaches the threshold
- a user who collects fast and reaches the threshold multiple times

The first two are chosen because the project is mainly focused on helping hesitators. The last one is chosen to see how it works for people who collect fast. In other words to see if the slow collectors get the most help, but the quick collectors get something as well. The rules of the concept are that the user will get stamps for a certain threshold that is reached. As mentioned above the amount of stamps per stamp sheet per program differ. This means that the user of the Coop loyalty program will receive a master card for every 9 stamps (amount of stamps per sheet divided by the amount of master cards) and a minor card for every 4 stamps in between. The user in the RT Mart loyalty program will receive a master card for every 4 stamps and a minor card for every 2 stamps.

To give an example how the concept was applied on transaction data consult Figure 6.6. In this figure a graph of the transaction data of a slow collector of Coop is shown. The light blue bars are representing the balance of the user (i.e. how many stamps he collected so far). The dark blue bars represent the amount of stamps the user collects when doing groceries. The figure also shows how the concept would be applied in a normal collecting program. It is shown when the user got a master or minor card and which activity it was. The balloons on top of the graph represent the moment they will receive a card. The balloons with the
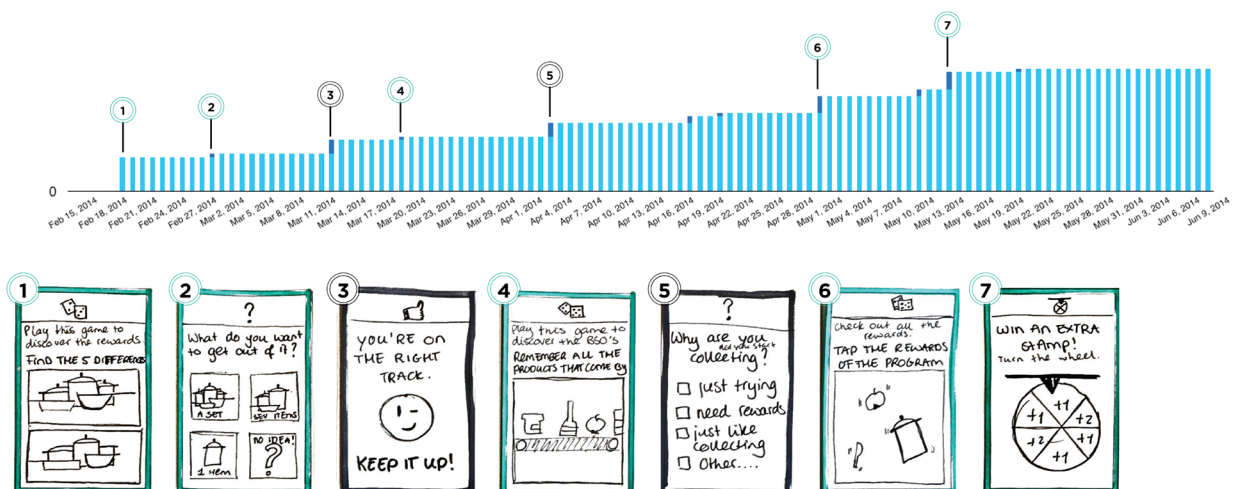

Figure 6.6 Concept applied on transaction history of user 4 participating in the Coop

blue lines represent a master card and the balloons with a black line represent the minor cards. The icons tell which type of activity the user got. The numbers in the balloons correspond to the cards shown underneath the graph. The cards show the storyline that the user will receive during the collecting period. For a complete overview of all the six transaction graphs of Coop and RT Mart consult Appendix O.

In Figure 6.6. the graph of a slow collector was shown. To show the difference between a slow and a fast collecter a visualisation of a fast collector of Coop is shown in Figure 6.7. In this graph the transaction data is shown in the similar to the graph in Figure 6.6 However, in this graph the decrease in the balance means the user has redeemed an item.

Looking at all the graphs (but using the two graphs shown on this page as an example) some striking shortcomings of the concept can be noticed. Not about the content of the cards, but mostly about how it is applied in the collecting process. The most important are:

- The most striking fact is that the fast

collectors receive the most cards. This shows that the way the cards are given to the user at the moment works better for quick collectors than for the slow collectors. The one who is collecting the most (i.e. reaching the threshold the fastest) will receive the most activities. This is not the goal of this project and it will definitely not work for the slow collectors (i.e. hesitators) because their difficulty is to fill up their sheet.

- The user does not receive the complete storyline as it was intended. The idea was that people would always get all the master cards. However, the user sometimes collects a big bunch of stamps and therefore some cards are skipped and so it is not clear if the user will receive the cards in the right order. This has two disadvantages. First, the skipped cards will always be there, but will never used and thus shown to the user. Secondly, when cards are skipped the chance exists that the user will receive the same type of activity three times in a row. This should be prevented because the rule was that the user could
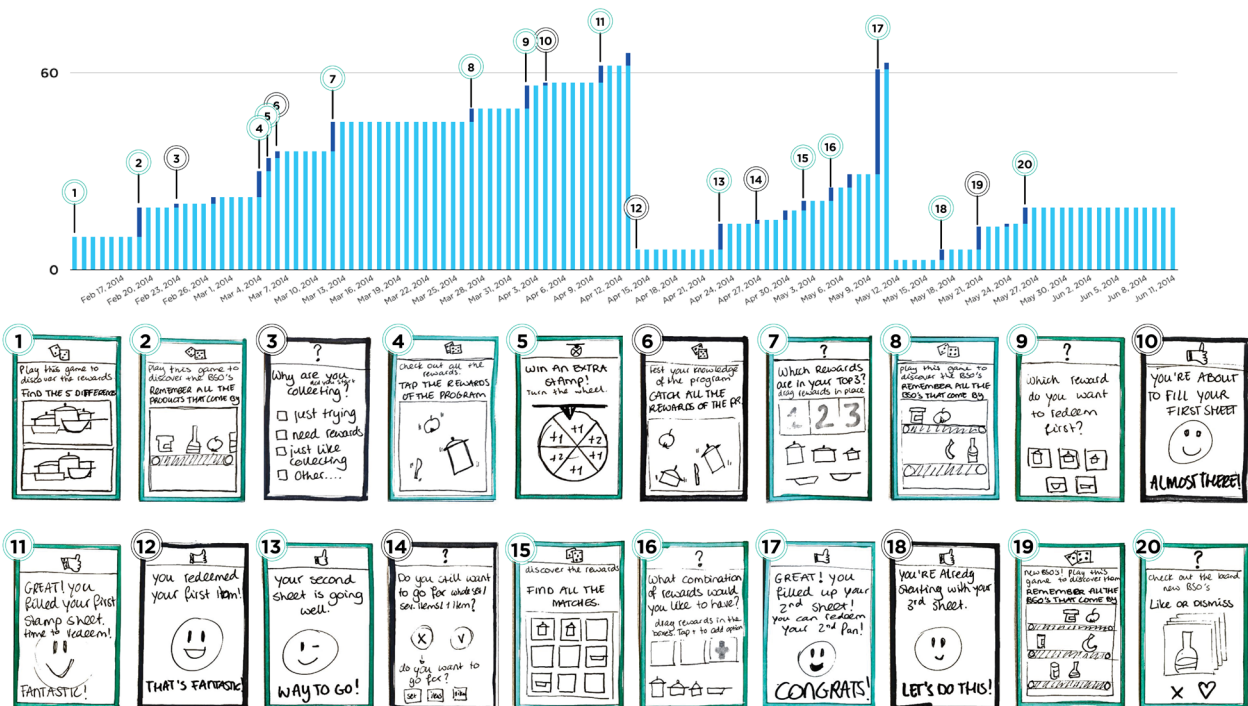

Figure 6.7 Concept applied on transaction history of user 4 participating in the Coop

not receive more than two of the same activities in a row.
- Some users always receive an activity when they are doing groceries. This because they always reach the lower threshold of the minor cards. This is a shortcoming because the user then probably thinks he will receive something every time he is doing grocery shopping. This has a negative influence on the surprise effect of the concept and therefore the user should also experience some collecting moments wherein he does not get anything.

The conclusion of this short analysis is that the system that was created did not work as intended. Therefore a system should be created wherein the hesitators have an advantage above the quick collectors. The following aspects should be taken into account:
- Cards should be available until they are shown to the user.
- There are some cards that should be shown at specific moments to trigger the desired behaviour. This should still be implemented in such a way these cards cannot be skipped.
- The user cannot receive an identical activity more than two times in a row.
- The user should also experience collecting moments wherein he receives nothing, to make sure it stays a surprise when he gets something.
- There should be some rules that make sure that slow collectors have more advantages than quick collectors.

In the following step of the design process a new system will be developed that will meet the requirements described above. This will also lead to the final design, so therefore this new system is explained in the following chapter.

Conclusion: detailing the concept

So in this chapter it is described how the concept was developed into the final design. In the first two iterations the amount of cards was extended and the storyline of cards was optimised based on stamp sheets of 25 to 80 stamps. This optimization means that cards were put in a place where it would most likely would trigger the desired collecting behaviour. Also master and minor cards were introduced. Master cards are always shown to users and minor cards are shown to slow collectors (when they reach a threshold in between two master cards). From this first iteration it was noticed that the storyline still existed of too much of the same activities. And it was noticed that some activities were based on different behaviour than only collecting. Therefore these aspects were improved in a following iteration that included of developing extra cards (i.e. the cards based on different collecting behaviour) and the storyline was further optimised. After this, the collection of cards was considered complete. To get an idea how real users would experience this concept, it was applied on transaction data of two user that participated in two different loyalty programs (Coop and RT Mart). This to see if the system, were it was based on, worked as intended. This system was based on the threshold that the user would reach, i.e. for a certain amount of stamps the user would receive an activity. It turned out that the fast collectors took the most advantage of this system, whereas the goal of this concept is to help the slow collectors. Therefore the system needs improvements and a new system will be developed that will be described in the following chapter.

CHAPTER 7
Final concept

This chapter will describe the final concept in detail. A description of the concept, how it is visualised in the app, how the system behind it works and a first indication on real user behaviour will be shown.

7.1 Description

The final concept is a feature in the stamps application of IceMobile that gives activities to the user the collecting period. These activities are given on moments users can use it best, but in a way that receiving the activity still feels like a surprise to them in order to increase the feeling of enjoyment in the moment. If the user will receive an activity depends on the amount of collecting moments, sometimes he will receive an activity and sometimes he will not. The feature is only available in the app when an activity is offered to the user, it will stay available until the user opens the activity. In all other cases it will not be visible in the app. The goal of this feature is to mentally help the user through the collecting process and so motivate him to keep collecting. Besides, activities are offered to the user on specific moments and therefore try to trigger desired collecting behaviour, e.g. buying BSO's, immediate redeem, etc.

There are four different types of special activities that can be given to the user, namely questions, games, compliments and wheels of fortune. Every activity has its' own purpose. In Figure 7.1 an example is shown of a question card that can be given to the user. In this example the question is *'what do you want to get out of the program?'*. The goal of this question is to trigger the user to think about the goal he wants to achieve. So the purpose of the questions will be to help the user think about decisions that he has to make in the loyalty program, so it triggers him to think about these decisions. This question activity is given to the user at moments he has to make a certain decision.

In Figure 7.2 an example of a compliment card is shown. This compliment says 'you're on the right track. Keep it up!'. As this

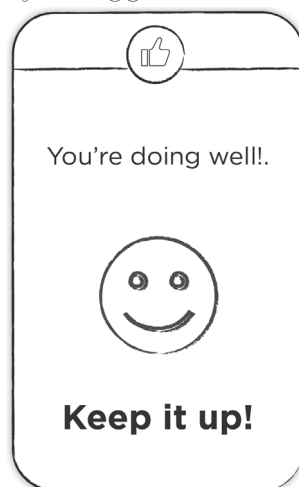**Figure 7.1** Example of question card

Figure 7.2 Example of compliment card
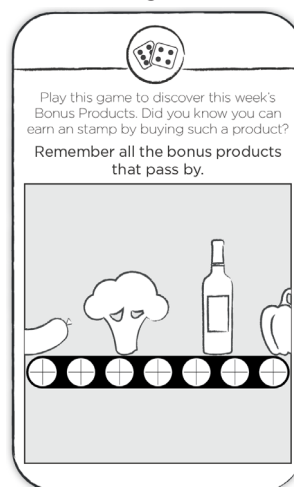

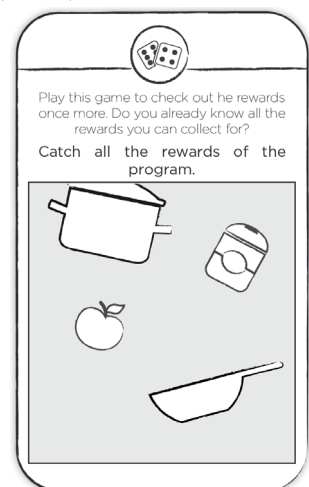**Figure 7.3** Example of game card (BSO game)

Figure 7.4 Example of game card (reward game)

compliment implies it's purpose is to help the user to stay motivated and to think positive about the collecting process. The user receives this activity in between other activities.

In Figure 7.3 an example of a game card is shown. In this game some BSO's will pass by and the user need to remember all of them. Afterwards he has to guess which ones he has seen. When correctly answered he will win the game and receive a higher level next time, when guessed wrong he will stay at the same level. The games are focused on the rewards and BSO's of the program. Next to this game, there is a similar game focused on rewards, also existing of different levels. See Figure 7.4 for a visualisation of this game. As can be seen in this game all kind of rewards will fall through the screen and the user has to catch only the rewards of the program Besides this, also simple memory games or games wherein the user has to find the 5 differences exist. The games will help the user to experience fun and enjoyment during the program. The user will receive this activity when he needs a trigger to buy bonus products (and earn extra stamps) or when it is useful to think about the rewards.

In Figure 7.5 a wheel of fortune card is shown. As can be seen the wheel of fortune can be turned by the user and there will be a chance to earn 1 or 2 stamps (in this case). The wheel

We would like to help you with collecting.

Win an extra stamp by turning this wheel!
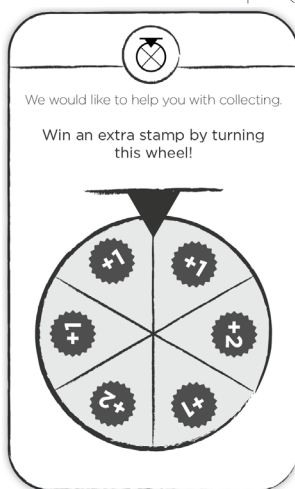
Figure 7.5 Example of wheel of fortune

of fortune will help the user earning an extra stamp when he is stuck in the process. It is only possible to win this stamp several times on a moment that he really needs it, because it is not possible to give away a lot of stamps (i.e. not preferred by BrandLoyalty

and IceMobile to give away a big amount of stamps for free). So the user will receive this activity when he is stuck in the middle or when he collected no stamps for several weeks.

Furthermore within every type of activity there are multiple cards available. In total there are 16 question cards, 15 compliment cards, 6 game cards (excluding the 4 other levels of the BSO and reward game) and 4 wheels of fortune. For a complete overview of all the cards that are available, refer to Appendix P.

The surprise element is of great importance in this concept, because it hopefully creates a feeling of curiosity for the user what he will get next. In this way a moment where the user will focus on is created which could increase the enjoyment in the moment (which was part of the design goal).

To assure this surprise effect, two aspects are taken into account. The first aspect is that the moment the user will receive an activity is dependant on the collecting moments of the user. This means that sometimes the user will receive an activity, but there are also occasions when he receives nothing. In this way it is a surprise to the user when he gets an activity, because it differs every time after how many collecting moments he will receive an activity. Second, it will differ what type of activity is given to the user. This because the rule 'the user cannot receive two of the same activities in a row' is applied. This means that at least every two cards the type of activity differs. Besides this, there are a lot of different cards within a category of activities, so even if the user will receive sometimes two of the same activities in a row it will be still interesting for them.

These two factors assure that it will be hard for the user to guess what card he will receive and when he will receive a card and so the surprise effect is guaranteed.

A system is developed that will decide if the user will receive a card and it will choose the specific card that the user will receive. How this system exactly operates will be explained in Chapter 7.2. Nevertheless it is important to get an idea of what cards will be given to the user when he is collecting for the first stamp sheet and in which order he will receive it. Therefore an example is given beneath.

In Figure 7.6 a possible storyline is shown. In this case the user would receive the first card at the beginning of the collecting phase, basically when he registered to collect digitally. It includes a game wherein the user has to find 5 differences between two pictures, this to get to know the rewards of the program. The second card is given to the user when he started to collect. This includes the question *'what do you want to get out of the program?'* with the purpose of triggering the user to think about the goal he wants to achieve in the program. When the user is collecting further he will receive a compliment (the third card) when he is reaching the threshold of 1/4 of the stamp sheet. This to encourage the collecting behaviour. When the user is reaching the middle of his stamp sheet he will receive a wheel of fortune and thus the possibility to earn an extra stamp, which will hopefully help him over the middle. Then the user will collect further and will reach the end phase of the stamp sheet. If he only has to make a last sprint to fill it up he will receive a BSO-related game. The purpose of this is to let the user get familiar with the BSO products

that are available and to trigger him to buy those. When the user filled up his sheet he will receive the last card, shown in Figure 7.6, to trigger him to think about what he wants to redeem.

In this example every card fits into the moment wherein the user is collecting and all cards together create a logical and fun storyline for the user, so the order of the cards form a logical and fun story. This is the reason why this is implemented in the system that is developed and that will select the cards (this will be explained ahead in Chapter 7.2).

The concept should be a mental help for the user. Like some participants said in the concept evaluation study that it feels that you are helped by the concept, but if you look back you did not receive a lot of extra stamps. This effect should be maintained, or reinforced if possible, in the way it is communicated in the app.

Because it is a mental help to the user it might be the best way to really explain to the user why he gets something at a specific time. In this way he will understand it best and it will feel as if someone is helping and guiding him through the process. By only receiving the game and little
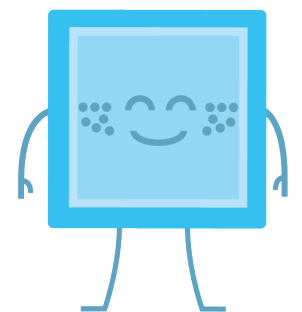

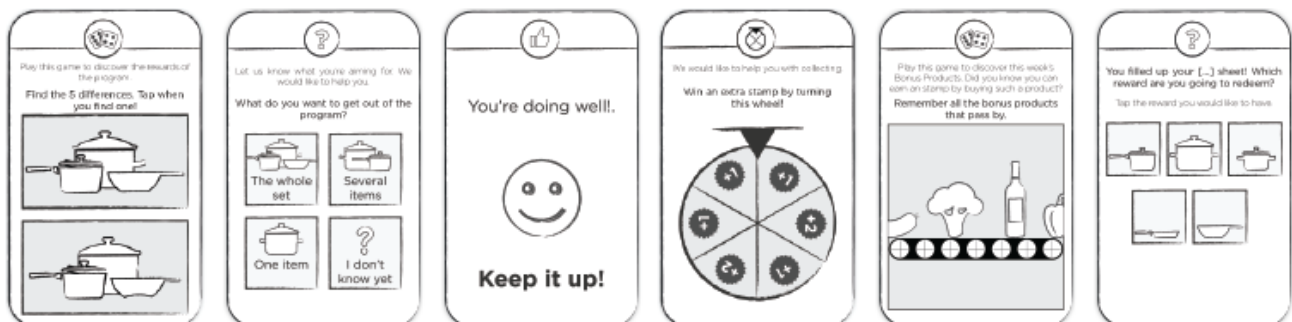**Figure 7.7** Visualisation of Stampie

Figure 7.6 Possible storyline in relation to the system that was developed

explanation the purpose would be less clear to the user. As also said in the concept evaluation test: when the purpose of the activity is clear, users understand it and therefore enjoy it more.

At the same time one of the visual designers of IceMobile created a character called Stampie (a character in the form of a stamp), see Figure 7.7. Stampie was developed with the idea to explain the user why he sees a certain error state in the app (e.g. when there is no internet connection). IceMobile heard from their clients that the app was too serious, so the main goal of Stampie is to make the app a bit more fun instead.

That is how the idea arose to use Stampie as the character that will guide the user through the collecting process. Stampie could explain why he is there and why the user gets a certain activity. He could also explain what the user has to do in the activity (e.g. the rules of the game).

In Figure 7.8 to 7.11 it is visualised how Stampie will communicate to the user what kind of activity he has gotten. In Figure 7.8 it is shown how Stampie will appear in the app when the system chose to give the user an activity. He will stand there and sometimes

wave at the user to attract the attention. When the user taps on Stampie a popup screen will be opened, which can be seen in Figure 7.9. In this step Stampie will explain what activity the user received and why. Underneath this explanation the activity is already shown. So in this example the user got the question *what do you want to get out of the program'* and the user is able to answer it. When the user did this the last screen appears wherein Stampie thanks the user and says 'see you next time', see Figure 7.10. Afterwards stampie will disappear (see Figure 7.11) and will only appear when he has a new activity for the user.

To show how the concept will be used in its' context this is visualised in Figure 7.12 to 7.14. In Figure 7.12 it is shown that the user is doing groceries and in exchange he will receive stamps. After doing this, the user will likely open the app to check the balance, which is shown in Figure 7.13. If it was decided that the user will receive an activity, he will either see this when he opens the app or when he receives a push message that says that Stampie has a new message for the user (see Figure 7.14). This push message should trigger him to open the app and to see what Stampie has to offer.
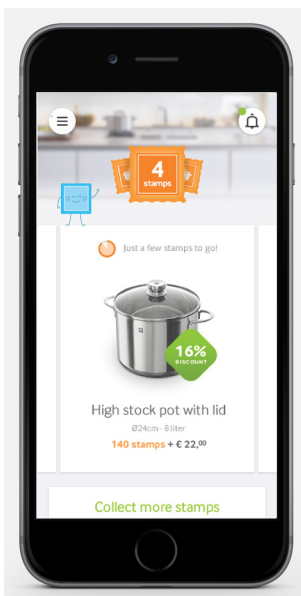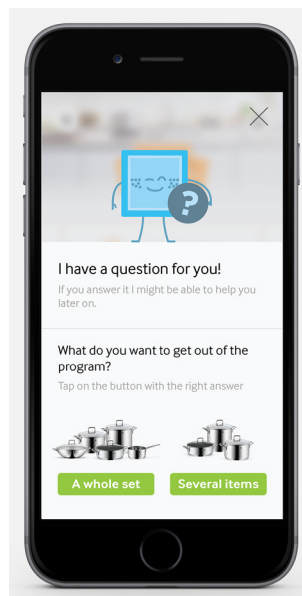

Figure 7.8 Stampie appears in app
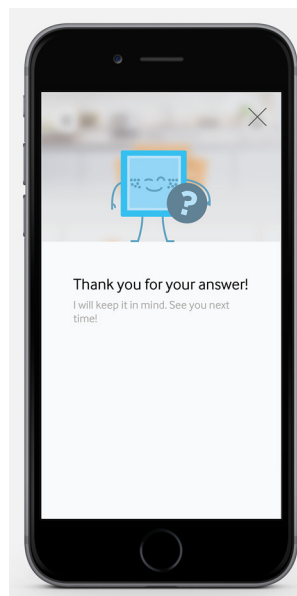
Figure 7.9 Stampie explains activity

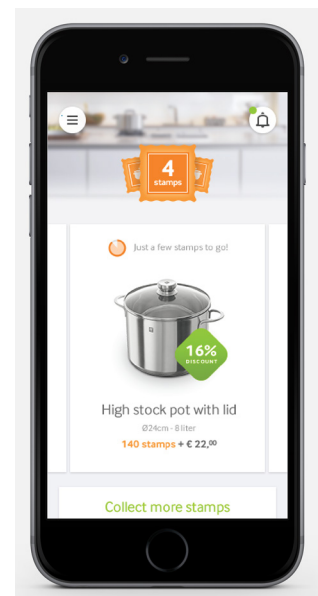**Figure 7.10** Stampie says goodbye

Figure 7.11 Stampie disappeared
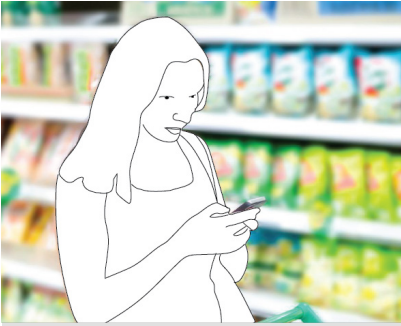
Figure 7.12 User scenario: doing groceries

Figure 7.13 User scenario: checking app

Figure 7.14 User scenario: receive push message

7.2 **System behind the concept**

In order to decide when and what the user will receive a system is designed that can decide which card should be given best to the user in a certain moment. In other words a system that is able to choose a card itself.

The system sees all the activities as three piles of cards. The first pile of cards exists of exceptional cards, which are cards that are based on behaviour other than collecting (i.e. redeem, convert, etc.). The second pile of cards exists of fixed cards, these are cards that should be given to the user at a specific moment (e.g. a card about goal setting should be given in the beginning of the collecting period, so that the user will set a goal for the whole program). The third pile exists of all the other cards and is called normal cards. Every activity in this last pile will be identified by a set of characteristics. When the system knows what characteristics and rules are required for a specific moment, it can randomly choose a card from the big pile itself.

In this way all cards can be used in the collecting process and there are no more cards that are not used anymore. Besides this, this system would ensure the surprise factor. Almost all cards will be randomly chosen by the system, so not every user would receive the same cards in the same order, so it will definitely be a surprise when the user gets what. For an overview of which cards are in the big pile, consult Appendix P.

The most important aspects of the system will be described a bit more detailed.
First, the system is dependant on the amount of collecting moments of the user instead of a threshold-based system. This to forecome that the fast collectors have more benefits than the slow collectors. It means that the system will randomly choose to give the user a card after 1, 2 or 3 collecting moments for the first stamp sheet, 2,3 or 4 collect moments for the second sheet and for the third sheet it is 3 or 4 collect moments. This to ensure that there are also collect moments that the user will get nothing and to make sure the amount of collecting moments whereafter the user will get a card is different every time (not always after 2 collect moments). The different pace in the stamp sheet, as described as an important rule in chaper 6.1, is also applied in this way.
Second, the system sees the cards as three piles of cards instead of a storyline that should be given to the user in a specific order. The three types of cards are normal cards, fixed cards and exceptional cards.
As explained before the exceptional cards are the ones that will be shown when the user is showing a specific type of behaviour (e.g. converting stamps).
The fixed cards are cards that are shown at a particular moment to the user when it is considered to trigger desired collecting behaviour. Also they sometimes serve as cards that should be given to create a better storyline for the user. For example, the question *'what do you want to get out of*

it?' should be asked in the beginning of the program to trigger the user thinking about the goal he wants to achieve. In Figure 7.6 it is shown that this card is given first to the user, because of this reason. In Figure 7.15 an overview of the fixed cards is given and at what moment these cards should be given to the user. In the top line the table explains for which stamp sheet the user is collecting and in the left column it explains in which phase of the stamp sheet the user is. Furthermore, the numbers (like G1 or Q1) refer to the number of the cards shown in Appendix P. So for example card Q1 is the goal setting question explained above and as you can read from the table it should be given to the user in the startup phase, i.e. when the user has collect only 0-10% of the total amount of stamps of a stamp sheet, of the first sheet.

The last pile of card exists of normal cards, those are the cards that remain when the fixed and exceptional cards are extracted from it. From this last pile, cards can be randomly chosen to give it to the user. By giving each card some characteristics, the system can choose a card that fits the situation best. The characteristics that are assigned to the cards are:

- Type of activity: game, question, compliment or wheel of fortune
- The subject of the activity: reward or BSO related activity
- The stamp sheet: first, second, third, etc.
- The phase of the stamp sheet: begin (0-10%), begin to middle (10-45%), middle (45-55%), middle to end (55-85%), end (85-100%)
- Maximum amount of use: one, two or three times.

The combination of characteristics tell about the situation wherein the specific card can be given to the user best. For example, a card could have the characteristics of a game, focused on BSO's and should be given in the middle-end of the stamp sheet. Probably this card is focused on triggering the user to buy some BSO's to fill up the stamp sheet. For a complete overview of all the cards and which characteristics are assigned to it, refer to Appendix P. And for a elaborate explanation about the reason why these characteristics are important for the system, refer to Appendix Q.
In order to let the system decide which card should be given to the user, not only the characteristics of these cards should be taken into account, but also several rules. Namely:

- The user may not receive two of the same

	1st stamp sheet	2nd stamp sheet	3rd stamp sheet
Startup phase (0-10% of stamp sheet)	G1 reward game & Q1 Goal setting	C1 First stamps	
Begin phase (10-45% of stamp sheet)		Q8 Goal setting repeat (several items)	
Middle phase (45-55% of stamp sheet)	W1 Wheel of fortune		
Over the middle (55-85% of stamp sheet)	Reward-related activity	BSO-related activity & W3 Wheel of fortune	Q9 goal setting repeat (whole set)
End phase (85-100% of stamp sheet)	Q7 goal setting repeat (1 item) & c15 Filled up sheet	Reward-related activity & Q13 redeem choice	C14 Time to redeem

Figure 7.15 Table that explains when fixed cards are given to the user

activities in a row
- First check if the user would receive a fixed or exceptional card, before a normal card is randomly chosen.
- If the user is absent for 8 days (this is based on the fact that people go at least one time per week for grocery shopping) he should receive an extra activity in order to motivate him to collect further. If he does not respond to this and is absent

for 16 days in total, the system will not send anything anymore until he collects further.

All the rules explained above were all brought together in two flowcharts, namely one that checks the absence of the user and one that checks whether the user will receive an activity and what type of activity.
In Figure 7.16 the flowchart that will check the
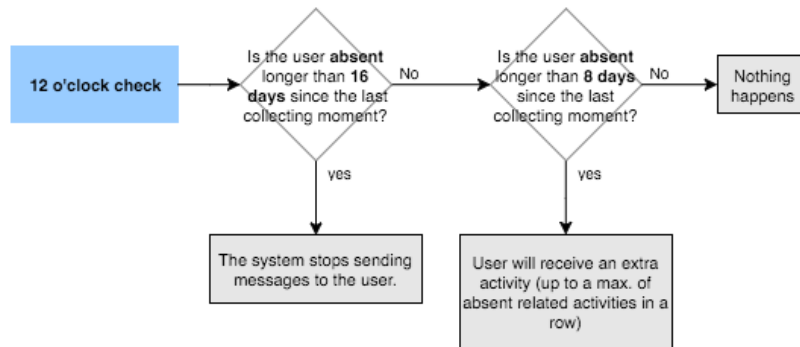
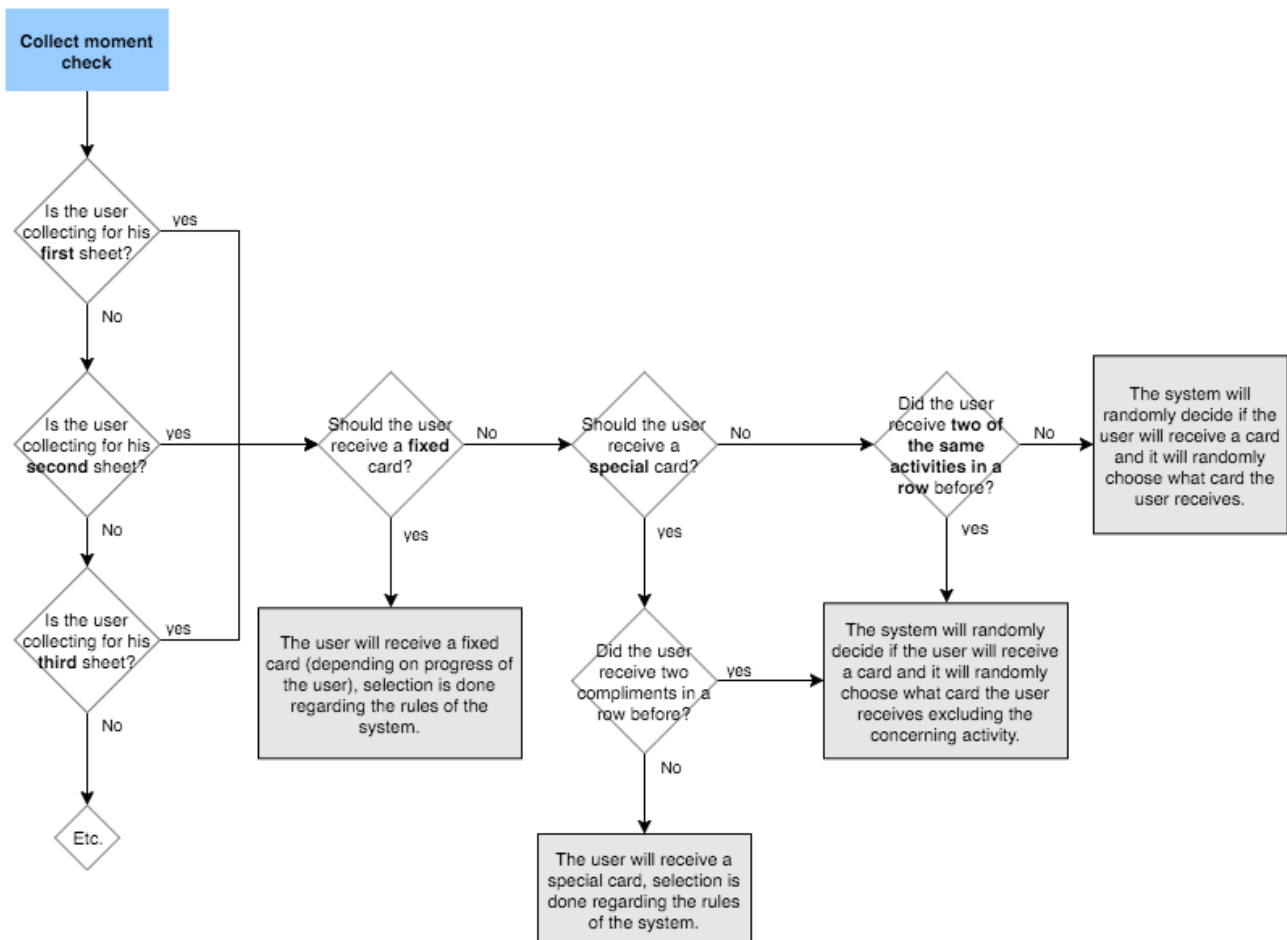**Figure 7.16** Flowchart of every day's 12 o'clock check

Figure 7.17 Flowchart of collect moment check

absence of the user is shown. This is done by the system checking everyday at 12 o'clock whether the user has been absent for 8 or 16 days. As can be seen from the flowchart, if the user is absent for 8 days the system will give an extra activity to the user with a maximum of 2 activities based on absence in a row. If absent for 16 days the user will not receive any messages anymore until he start to collect again. And if the user is absent less than 8 days nothing happens.

In Figure 7.17 the other flowchart is shown which checks on every collect moment of the user if he will receive an activity. As can be seen, the system has to make a decision on four aspects. First, the system checks for which stamp sheet the user is collecting, because the fixed cards are based on progress. After this, the system checks if the user will receive a fixed or special card. If the user will receive one of these, the system decides, based on collecting behaviour, which card the user will receive. And if the user will receive a special card it is first checked if he received two compliments in a row before, because almost all the special cards exist of compliment cards. When the user will not receive these cards the system checks if the user received the same type of activity two times in a row before. When this is the case the system will first choose if the user will receive a card (based on how many collecting moments before he got the last card). If so the system will pick a card randomly by excluding the type of activity the user already got two times before. When the user did not receive two of the same activities in a row before the system will also choose first if he will receive a card (based on the amount of collecting moments the user received a card before). If so the system will randomly choose which card will be given to the user.

The flowcharts shown here are simplified versions. When interested in a more detailed version, consult Appendix R. In this version you will find more information, for example

which fixed cards exactly are given on what moments.

7.3 Comparison with actual user behaviour

To check how the new system will work in an actual loyalty program, and if it is actually better than the previous system, once more an analysis on the transactional data of a loyalty program will be done. This analysis will be identical to the previous one in Chapter 6.3.

New system applied on transaction data

The new system will be applied to the transaction data. This means that for every user the flowcharts are consulted and via this it will be decided when the user will get what. The aspects whereby something should be chosen randomly is now done by hand. The users that were chosen for this analysis are the same as in Chapter 6.3, when the concept was first applied to the transaction data. This to make it possible to compare both analyses.

In Figure 7.18 an example is given of the new system applied on the transaction graph of a slow collector of the loyalty program of Coop. The threshold of a stamp sheet in this program was 60 stamps. The numbers in the balloons above the graph correspond to the number of the cards beneath the graph. The icons on the tail of the balloons tell which type of activity the user got. For the complete overview of all the six graphs and for a better readable version, that were shown to the user refer to Appendix S. To show the difference between a slow and a fast collecter a visualisation of a fast collector of Coop is shown in Figure 7.19.

Comparison old and new system applied on transaction data
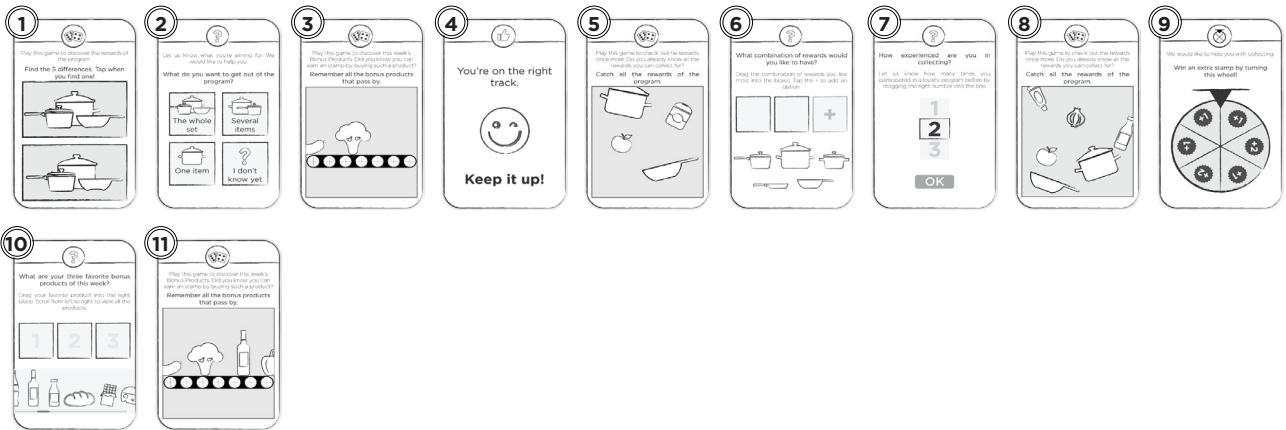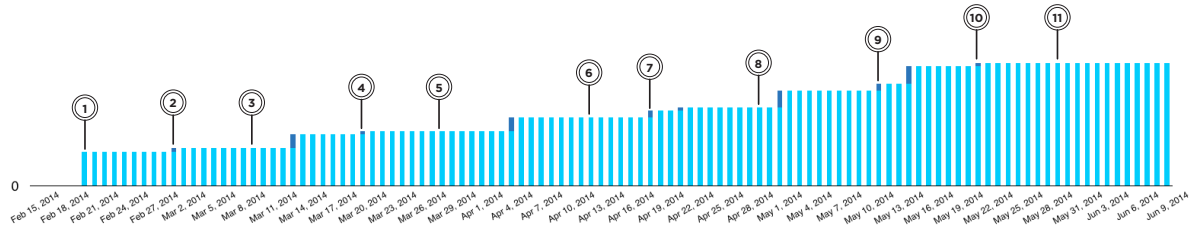
To get a proper overview of what the

Figure 7.18 New system applied on transaction history of user 4 participating in the Coop program
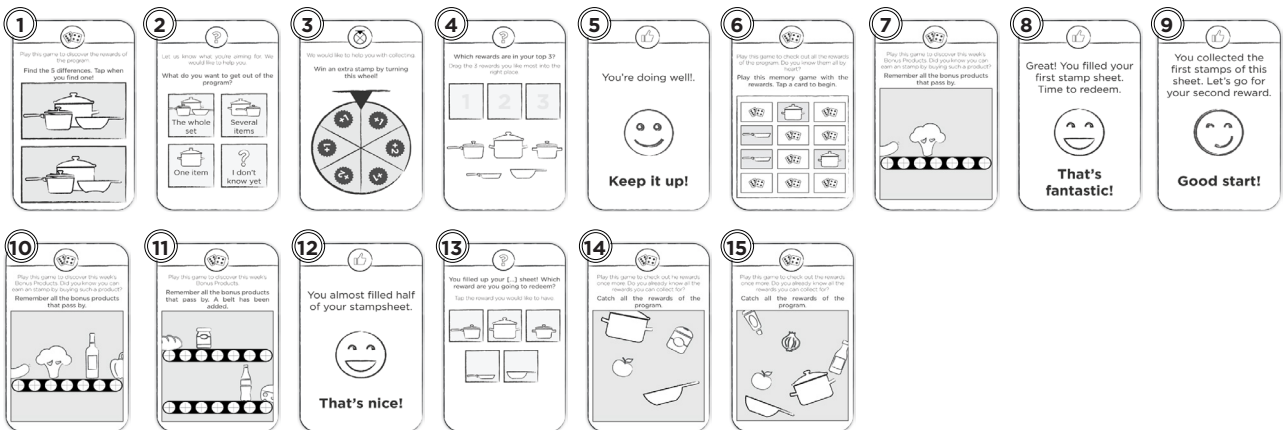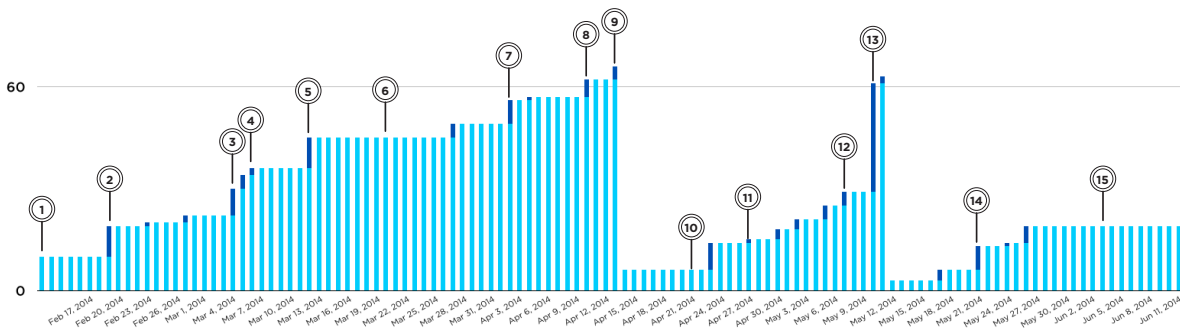

Figure 7.19 New system applied on transaction history of user 6 participating in the Coop program

difference is between the new and previous system and if the improvements are actually better, they are compared on the basis of the transaction graphs. The goal of this comparison is to see if the new system improved the shortcomings of the previous system. Thereby several aspects are important, namely if the amount of activities (especially for the slow collectors) are increased and if the storyline, which is now generated by the system according to some rules, is varied and does not lead to boredom. To reach these goals the transaction data of both loyalty programs for a slow and a fast collector are compared. This because this concept should help the slow collectors most and the fast collectors the least. However, in the previous system the slow collectors were at a disadvantage. So beneath the transaction graphs of Coop are compared.

In Figure 7.20 and 7.21 the two transaction data graphs of user 4 of the Coop program are shown next to each other. Figure 7.20X shows the transaction data with the previous system applied to it and Figure 7.21 shows the data whereon the new system is applied.

As you can see the slow collectors will receive more activities (i.e. 11 instead of 7 activities) when the new system is applied, so these collectors have more interactions with the program and will be helped more. Besides this, the activities are more equally divided over the whole collecting process. Although it seems that the user will receive an activity very often in the new system, almost always there is a week in between two activities. It is suggested that this is a good rhythm so that the user feels the concept is helping him. If the user would get an activity in a higher rhythm (e.g. every half week) it can be annoying because he had no time to anticipate on the previous activity. And if the rhythm would be lower the user could lose his attention for the program.
Lastly, the type of activities show substantial variation. It might seem that the user receives a lot of games. But if you take a look at the storyline that is shown in Appendix S you will see that there is a lot of variety within the type of games. And sometimes it is not really bad when the user receives two of the same games, because they will get a new level of it. So the variety within the type of activities
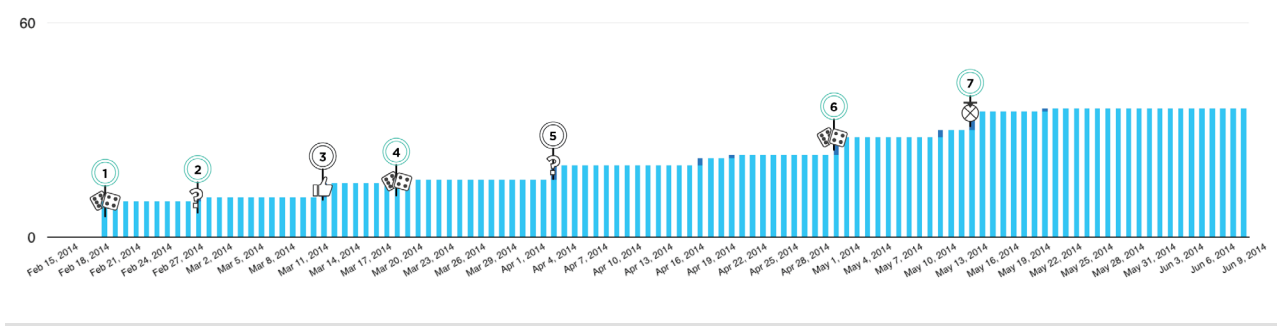

Figure 7.20 Previous system (Chapter 6.3) applied on transaction history of user 4 participating in the Coop program
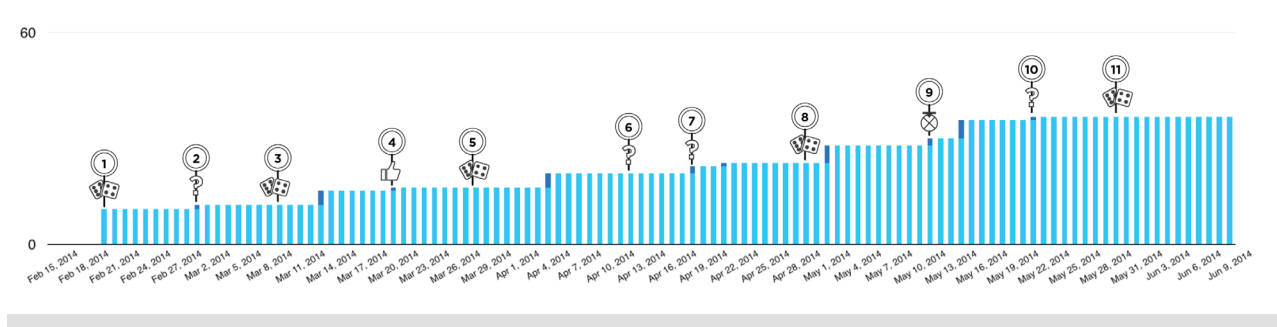

Figure 7.21 New system applied on transaction history of user 4 participating in the Coop program

is also guaranteed, which means that the storyline of the cards is interesting for the user.

If you do the same comparison for the fast collectors there are no big differences between the previous and the current system. In Figure 7.22 and 7.23 the transaction data graphs of user 6 (fast collector) participating in the Coop program are shown. In Figure 7.22 the graph with the old system applied to it is shown and in Figure 7.23 the graph with the new system applied to it is shown.

Striking is that the amount of activities are more or less the same. However, the moments the user receives an activity is more equally divided over the whole collecting process. Instead of the fact that several activities followed up very quickly, now more time is in between the activities. Instead of several activities that were followed up quickly in the first system (i.e. one to three collecting moments in a row), they are now given to the user in a constant rhythm.

So, as seen from the analysis above, for every user the activities are more spreaded over the whole collecting process. And for the slow collectors the amount of activities increased (which will help them more) whereas this is not the case for the fast collectors. As these aspects were the most important factors that should be improved with the new system, it can be concluded that the new system is valid.
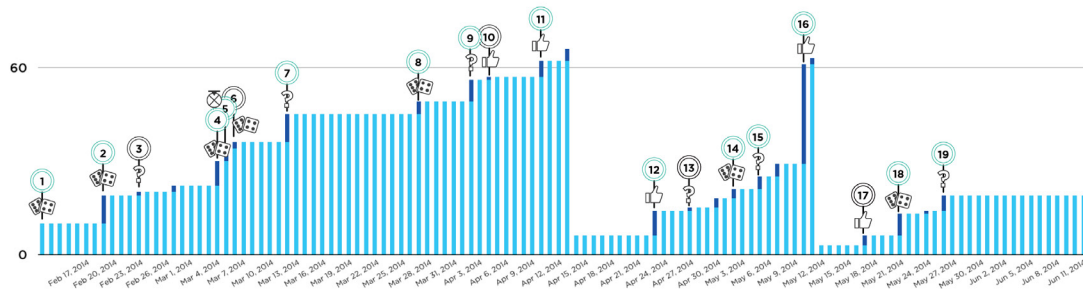

Figure 7.22 Previous system (Chapter 6.3) applied on transaction history of user 6 participating in the Coop program
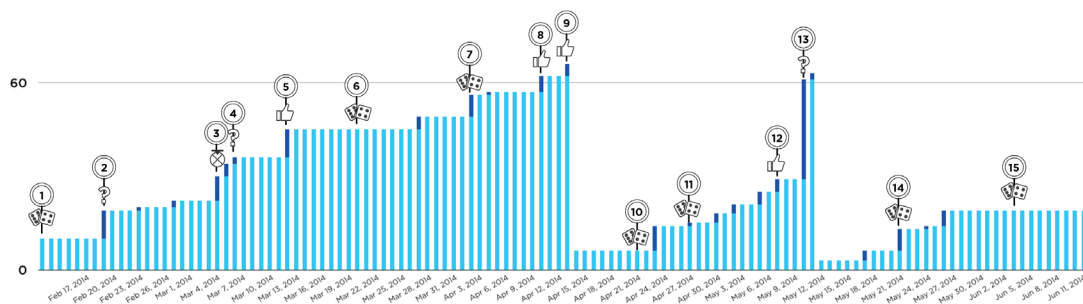

Figure 7.23 New system applied on transaction history of user 6 participating in the Coop program

Conclusion: final concept

The final concept is a feature in the application that gives special activities to the user the collecting period. These activities are given on moments users can use it best, but in a way that receiving the activity still feels like a surprise to them. If the user will receive an activity depends on the amount of collecting moments, sometimes he will receive an activity and sometimes he will not. The feature is only available in the app when an activity is offered to the user, otherwise it disappears. The goal of this feature is to mentally help the user through the collecting process and so motivate him to keep collecting. Besides, activities are offered to the user on specific moments and therefore try to trigger the desired collecting behaviour, e.g. buying BSO's, immediate redeem, etc. There are four types of activities which have all their own purpose, namely questions (trigger to let the user think about certain topics), compliments (trigger to think positively), games (to make collecting more fun) and wheel of fortunes (to forecome Stuck in the middle (Bonezzi, Brendl & De Angelis, 2011)).

The concept is communicated by Stampie, a character in the form of a stamp. Because the concept should be a mental help to the user, it is chosen to let Stampie explain everything. In this way he becomes the character that helps the collector during the entire collecting process.

The surprise element of the concept is of great importance. Two factors play an important role in this, namely if the user does not know when he will receive an activity and if he does not know what type of activity he will get. To assure these two factors a system behind the concept is created. To assure that the user will not know when he receives an activity the system chooses randomly if the user will receive a card after 1, 2 or 3 collecting moments (for the first stamp sheet). To assure that the user does not know what he will get, the system can randomly select an activity. This works as follows, the system

Has identified three types of activities, namely fixed activities (i.e. activities given at specific moments), exceptional activities (ie. activities based on other behaviour than collecting) and all other activities are normal activities. If it is decided if the user will receive an activity it will be checked first if the user should receive a fixedo r exceptional activity. If not, the system will randomly choose a normal activity. These type of activities are seen as a big pile of cards with each their own characteristics (e.g. type of activity, stamp sheet, collecting phase, maximum amount of use, etc.). By comparing the characteristics that are needed for the user (e.g. he is in the begin phase of collecting, on his first stamp sheet, etc.) with the normal activities and taking some rules into account (e.g. do not give two of the same type of activities in a row), the system is able to select one randomly.

To gain insights about a first indication on actual user behaviour, this system was applied on transaction data of the loyalty programs that were already finished (the same transaction data as in Chapter 6). From this short analysis it was concluded that the system is valid.

The last step is to test what influence the final concept has on actual behaviour. To gain insights a last evaluation study will be held.

PART 04
Discussion

In this part the evaluation of the concept is described, which will result in recommendations and improvements. To conclude the project a reflection focused on the project is given.

CHAPTER 8
Concept evaluation

To gather insights about what influence the concept has on real users and if it works like intended according to the description of the final design, a user evaluation study is conducted. This user study will be as much as possible similar to the first user study, i.e. loyalty program via Whatsapp, to be able to notice the difference in behaviour.

8.1 Research goal

The goal of this project is to help people maintaining their motivation for the loyalty program. This by letting them experience less negative emotions and by focussing more on the collecting process itself instead of the reachability. Therefore the following research goals will be examined:

- To find out if people maintain their motivation when the design is included in the Whatsapp loyalty program.
- To find out if people experience less negative emotions when the design is included in the Whatsapp loyalty program.
- To find out if the activities the users receive have the effect as intended.

The main goal of the research study is thus to get insights about what influence the different activities have on the collecting behaviour of the user.

8.2 Setup user evaluation study

Beneath the setup of this user study will be described in relation to which aspects are the same as the first user study and which aspects differ.

Participants

This time the research study will be less extensive than last time. This because this test is more a verification if the design works like intended than doing research about all type of collectors that are out there. This means that 10-12 people will participate in this test (instead of the 30 people that participated last time).

However, it is necessary to include some of the groups I identified in the beginning of the project. Because the design should help the hesitations and calculators mostly and the other collectors a bit, it is decided that at least 4 of the participants should be hesitators or calculators. In this way it can be seen from the test if the design works as intended for them. Hopefully, some of the other groups are covered in the rest of the participants. So also for them it can be seen if the design works as intended.

The hesitators and calculators will be identified by asking some questions beforehand. These questions are based on the information that is known about them. The hesitators and calculators can be recognised in certain behaviour, namely that they do not have a big spending pattern, they are not always participating in loyalty programs, that they do not always reach their goal (doubting if they will reach it) and if they check their progress during the collecting process. Therefore the following questions will be asked to the user before they participate in the Whatsapp program:

- Do you often participate in loyalty programs?
- What goal do you normally have (e.g.

item, several items, whole set)? And do you reach it?
- How do you hold track of your progress?
- What is your family setting?

Setup Whatsapp campaign

The Whatsapp campaign should be as similar as possible to the previous Whatsapp campaign. Therefore the aspects shown in the blue box beneath will stay exactly the same, as they worked properly in the last research study.

Setup

Duration: 3 weeks
Earning stamps: sent in receipts of one supermarket by choice
Threshold: 1 stamp is 5 euro and a stamp sheet exists of 16 stamps
Redeem: User can send text message with REDEEM ON Option 1, 2 or 3.

For the other aspects (i.e. the rewards and bonus stamps) the setup will slightly change.

Bonus stamps

In the previous research study users could earn bonus stamps, as these in a normal campaign can be earned by buying bonus products. For this research study it is chosen to leave out these bonus stamps. This because there are several reasons it could have a big influence on the research outcomes.

First, it is difficult to decide what a good bonus product is. It should not always be a product that people regularly buy, but it should also not be a product people really refuse to buy. Besides this, it is always a specific brand that offers their products as a bonus product. But for the research study people can choose their own supermarket and therefore it is harder to come up with bonus products that suits everyone. Another reason is that the collecting

behaviour can change a lot. When people are able to buy more bonus products they can collect more stamps. This means that the amount of stamps on a sheet possibly should be adjusted. But it is hard to indicate in which way it should be adjusted and it would be a pity because the amount of stamps and the value of the stamps resulted in similar collecting behaviour as a normal campaign.

Also, to integrate all the type of activities, the reward-related and BSO-related activities is too much to realise (see explanation in next paragraph of how the design is applied in the research study).

Finally, in some real campaigns bonus stamps are left out as well. So these are the reasons that it is chosen not to use bonus stamps in the Whatsapp campaign.

Rewards

Because goal setting is an important aspect in this study, as this is the first activity the participant will receive, it is chosen to offer the rewards as 9 parts whereof participants can choose. So there are still 3 different sets of products (the Carafe, the wine saver and the bowls) of which each is divided in three parts. Participants can collect for all of the parts up to a maximum of 4 parts. In this way they have more choice for what they want to collect, which makes the goal setting for this campaign more interesting. The three sets, already divided in parts, that are offered to the user are shown in Figure 8.1 (on the following page).

Emotion report

The emotion report will also slightly change. In the first research study it was mentioned by a lot of participants that the emotion report was too extensive. It was also seen that the question about moods do not really give rich information to the researcher. Therefore it was chosen to leave this out. However, the questions about motivation and the emotions resulted in extremely rich

Figure 8.1 Redeem options user evaluation study

information. What was seen is that it was very important to ask, besides the likert scale, why people are motivated or not. Therefore this question will be added. For an overview of the questions asked to participants consult the blue box on the right.

The emotion report will be sent to people as many times as in the previous research study (so 7 times in total).

Concept applied in the research study

Because the duration of the user research study is 3 weeks, instead of 15 of a normal campaign, applying the design onto the user behaviour will work a bit differently than explained in the previous chapter.

First, not all cards can be tested because there are too much of them. From the previous research study it is seen that people have around 4 to 10 collecting moments in three weeks, with some outliers here and there. This means it makes no sense to apply the rules of the design as it would be in a

normal program. Namely, the rules that the rhythm of the cards will change accordingly to the stamp sheet the user is collecting for and the rule of the fixed cards whereby the user would receive a reward game in the first collecting moment and the goal setting card in the second. Besides, it is important to know what influence the type of activities have on the collecting behaviour, as this is the goal of this research study.

Therefore the design will be applied as follows. There will be a selection of 9 cards, which cover all collecting situations, for this research study whereof a selection will be given to the participant. This selection should include all activities and some of them are given at a fixed moment.

The very first card the participant will receive is the question card shown in Figure 8.2, asking *what do you want to get out of this program?*.

After this, it will depend on the collecting behaviour which card is send to participants. When they are in the middle of the sheet (or

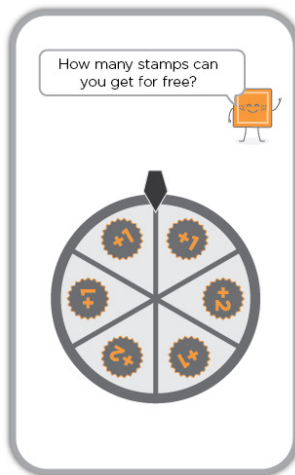**Figure 8.2** First question card send to participants
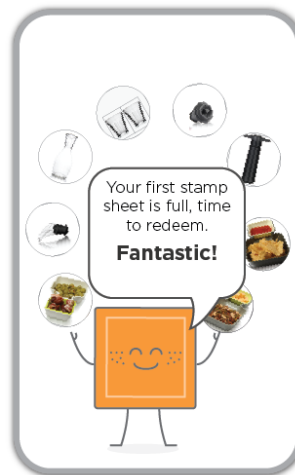

Figure 8.3 Wheel of fortune send to participants

Figure 8.4 Compliment for filling up sheet

Figure 8.5 Reward game send to participants

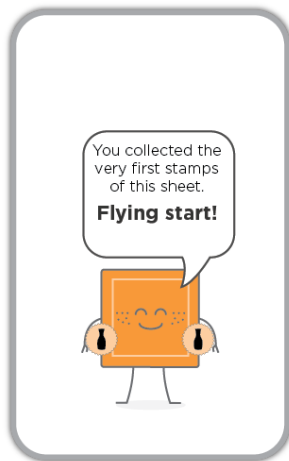**Figure 8.6** Compliment for collecting first stamps

Figure 8.7 Compliment for sufficient progress

Figure 8.8 Compliment for last sprint

sometimes absent for a longer than 4 days) they will receive a wheel of fortune. In Figure 8.3 an example of this is shown whereby the participant can earn one or two stamps if he turns the wheel. And when they fill up their sheet, they will receive a compliment that informs them that they can redeem their reward. This card is shown in Figure 8.4.

For all the other situations, collecting moments and absence, there is a collection of cards that can be used. These cards exists of games and compliments. This to make the process a bit more fun and to encourage the participants for collecting.
The game that participants can receive is the one shown in Figure 8.5. In this game

people should look for the 5 differences and therefore get more familiar with the rewards. The user could receive a compliment at the beginning of the sheet that compliments him with earning the first stamps of the sheet, see Figure 8.6. Also, somewhere in the process he can receive a compliment for making sufficient progress, see Figure 8.7. Or if he almost filled up his sheet he can receive a compliment that should trigger him to fill it up, see Figure 8.8.

Before the actual activity is send to the user Stampie will explain why the user received this activity. In Figure 8.9 an example is given wherein Stampie explains why the user received the game wherein the five

Figure 8.9 Explanation of activity by Stampie

differences should be found.

The system that chooses cards randomly, explained in the previous chapter, was introduced to make sure it will be a surprise what and when the user will get. Because the users do not know the cards beforehand, a fixed selection can be used. But to ensure it still will be a surprise when the user gets a card it will be decided if the user will get one after 0,1 or 2 collecting moments. The amount of collecting moments is lower than formulated in the flowcharts, presented in the previous chapter, this is because the collecting period is much shorter in this research study.

Then there was also a rule of absence. As stated in the previous chapter, this rule was that the user will receive an extra activity when he was absent for longer than 8 days. This will be too much for this program, therefore it will be half a week (4 days) for the Whatsapp campaign.

When the loyalty program will be finished some last questions will be asked to the user to gain more insights about collecing with

Stampie. The following questions are asked:
- What is your opinion if you compare this program with a normal program wherein you collect paper stamps?
- Did you look back to the messages send earlier in the program? If yes, can you explain which messages and why you looked back?
- Can you tell me 3 positive experiences about collecting with Stampie?
- Can you tell me 3 negative experiences about collecting with Stampie?

8.3 **Results & outcomes**

This Whatsapp study was conducted from 14 March 2016 to 1 April 2016. Consult Appendix T for an overview of the collecting behaviour of participants (i.e. graph with transaction data).

In Figure 8.10 and 8.11 some examples of the chats with participants are shown whereby they received an activity. In Figure 8.10 it is shown how Stampie explained the purpose of the activity. In Figure 8.11 an example is shown of a question activity. This was sent as a picture and in the text beneath it it was explained why they should answer it or why they got it. This gives an indication of how the messages were communicated to the user. The fortune wheel was sent as a video because it was not possible to create an

Figure 8.10 Stampie explaining activity

Figure 8.11 Question sent to participants

Figure 8.12 Immediate redeem

Figure 8.13 Participant asks how to redeem

Figure 8.14 Participant asks when it ends

Figure 8.15 Positive reaction on wheel

interactive prototype that could be send to participants.

Beneath the outcomes of the study will be briefly explained. First, according to the research goals and after that there are some general outcomes that will be described. The research goals were to find out if motivation is maintained, less negative emotions are experienced and if the activities work as intended in the Whatsapp loyalty program wherein the concept was integrated. From the activities that were given to the participants some worked as intended and some not. For each activity an example will be given. The compliments were experienced positively:

> "It was fun to get the wheel of fortune and every time that I saw my stamp sheet I got the messages that I was doing great." (user 3)

This implies that users think positively when they will receive a compliment. Another aspect of the compliments that worked really well was the compliment that says *great! Your stamp sheet is full, time to redeem!'*. As can be seen in Figure 8.12 the participant immediately redeemed after this message. In Figure 8.13 the participant asked how she could redeem, because she forgot how to do it. And in Figure 8.14 it triggered the

participant to think about the time that was left to collect and if it was possible to fill up another stamp sheet. This indicated that this compliment triggers the desired behaviour for the participants.

The wheel of fortune was experienced positively as well. People said in the emotion report that they liked it and got excited by it. In Figure 8.15 and 8.16 screenshots are shown whereby the users reacted positively to the wheel of fortunes.

The game activity was a bit vague for some people. As can be seen in Figure 8.17 participants ask if they really have to say what the differences are in the picture. Later on in the questions asked at the end of the study a participant said:

Figure 8.16 Participant asks when it ends

Figure 8.17 Positive reaction on wheel

"The find the differences, I thought do I really have to do this?" (user 5)

About the questions nothing was explicitly said. So therefore no conclusions can be drawn from this. Nevertheless, everyone answered the questions when they were asked.

So some of the activities already work as intended, like the compliments and the wheels of fortune, but for the games the purpose of it is still a bit vague. About the question activity little can be said.

For the emotions and motivation it is hard to draw conclusions. This because the reason behind the emotions and motivation that participants mentioned were still linked to the main factors of the program and not to the concept. For the emotions often it was said that people were proud/content when they were filling up their sheet quickly or that they were bored/indifferent because they had no time for doing groceries. These examples were the same as found in the first research study, but do not imply how the concept influences them. However, there were some participants that mentioned they were helped by the wheel of fortune, one user said

"The movie made me excited" (user 2)

And with the movie she refers to the wheel of fortune. For motivation the same happened. In the study people always indicated that a decrease in motivation was the cause of being to busy at work or in their leisure time. An increase in motivation was caused by the fact that the stamp sheets were almost full or that they had time to do groceries and thus earn extra stamps. In that sense the concept did not really help the users to keep their motivation, because this is influenced by major factors that cannot be changed by Stampie. However, Stampie did help to remind them of the program by sending messages once in a while and participants mentioned that Stampie informed them about the program what they otherwise would have forgotten. Like one user said

"Stampie is always positive and happy, you immediately receive an overview of your stamps and he explains the duration of the collecting period (things that I would have forgotten)" (user 2)

They are happy with Stampie because the information that he gives is useful for them, but it will not have a major impact on the motivation.

Another goal of this research study was to see if slow collectors are influenced by the concept, because it should help them mostly. However, this is hard to conclude. First of all because some hesitators quitted the study in the beginning or did not answer anymore. And some people whereof it was thought before they would be hesitators, turned out to be bigger spenders. In total there were three hesitators that actively collected. It is remarkable they are the ones that actually mention that they like Stampie. For example, like one participant said

"Every time that I saw my stamp sheet I got the messages that I was doing great." (user 3)

"I liked the wheel of fortune a lot!" (user 5)

From this it cannot be concluded that the concept works better for hesitators and calculators, but it is striking that they are the ones that say something positive about Stampie.

In general, Stampie was appreciated as a character by the participants. Some quotes above already mention this, but other participants mentioned:

"Stampie looks nice. The character is what I like most, it shows cheerfulness." (user 10)

"I am back in the Netherlands and I got 'moestuintjes' from others. That reminds me of collecting with stampie." (user 8)

This implies that Stampie as a character is appreciated a lot.

8.4 Discussion

There are some aspects that could have influenced the results of this research study in such a way that it was hard to draw conclusions according to the research goals.

Striking was that people did not really mention Stampie a lot throughout the collecting program. One reason for this could be that Stampie was seen as a part of the program by all participants. From the last two questions asked at the end of the loyalty program this became clear. This was the question about the positive and negative experiences according to collecting with Stampie. Almost all participants mentioned only positive and negative aspects about the loyalty program in general. For example a user said:

> "It was positive for me because I chose the supermarket where I needed to buy my products. The advantage of this way of collecting is that I did not loose my stamps and it was nice that there was enough choice between rewards, just like the cutlery sets." (user 8)

Another user mentioned:

> "Stampie is always positive and happy, you immediately receive an overview of your stamps and he explains the duration of the collecting period (things that I would have forgotten)" (user 2)

The first quote implies that collecting via Whatsapp, i.e. in a digital way, was already something new for them. The second quote tells that users think that Stampie informed them about the duration of the program, while it was the researcher that communicated this type of information to them. In general, all the messages in Whatsapp (update of stamp sheets and stampie) were given to the user in the same chat, so it could easily be interpreted as the same type of messages. This implies that it could be that participants see Stampie as

part of the loyalty program, instead of seeing Stampie as an extra part of the program that helps with collecting.

Adding to this, it could be a big difference to test the concept in Whatsapp or in the actual app. This has to reasons. First, in the app it is easier to communicate Stampie as an extra feature. As can be seen in the pictures of the final concept, stampie has its' own place and thus it is more clear that he does not communicate the amount of stamps. Second, in Whatsapp Stampie was a static character and he was implemented in pictures. In the app there is the possibility that Stampie can be brought to life. So he could wave at the participant when he is there, explain the activities himself, etc. Like one of the participants said:

> "Stampie was more decoration than that I saw him as a mascotte. When he would be integrated in an app and he would talk all the time, then I would see him as a mascotte." (user 8)

So how the participants experienced the concept in this study, could deviate considerably from the actual use in the app. Therefore conclusions cannot be drawn strictly in terms of the concept works (i.e. fulfills design goal) or not.

Another big influence was the amount of hesitators that participated in the study. This because some hesitators quitted the study in the beginning or did not answer anymore throughout the program. And some people whereof it was thought beforehand they would be hesitators, turned out to be bigger spenders. In total there were three hesitators that actively collected. One of these three collectors was only collecting in the end of the program, because he was on holidays before. So also not strict conclusions can be drawn according to slow and fast collectors because there were to little slow collectors. As already mentioned in the outcomes, the purpose of the game was not always clear.

Also here it applied that the experience could differ a lot by communicating a static game, communicated as an image, or communicating a game with moving elements with which the user can interact with.

8.5 Recommendations and improvements

The main purpose of the research study was to indicate on what aspects the concept could still be improved. As described in the discussion, it is hard to draw clear conclusions from the research study which implies it is hard to indicate what should be improved next. Nevertheless, some recommendations and improvements will be given.

First, from the discussion it became clear that the user experience in a whatsapp study can differ a lot from the actual experience. This because in the app it is more clear what the difference is between Stampie, the amount of stamps, the information about the rewards, etc, than it is in Whatsapp. Furthermore, Stampie can be brought to life in the app and function more like a mascotte. Because of this, the recommendation would be to test the concept again, but then in the actual app or in another way that is almost similar to the experience of the app.

Second, the purpose behind the games could be improved. As mentioned before people do not always understand the purpose of the games. Nevertheless, it should be tested first if this is also the case with the games that include moving elements and that acquire interaction. When doing this, it would be important to include the BSO-games in order to see if people understand the purpose behind this in contrast to the reward-games.
When this is tested and the purpose is still

not clear to people, this can be because people always expect a reward at the end of the game. A few examples of how a reward could be integrated:
• Communicate more clearly in that the user will receive a higher level of the game next time.
• Reveal something extra when the user succeeded in the game. For example, reveal an extra bonus product when the user won the game.

Third, when the purpose of the current activities are not clear enough, this could be improved by slightly changing the topics that Stampie communicates (e.g. instead of communicating about BSO's and rewards, communicate about the duration of the program). Like one of the participants said:
"Stampie is always positive and happy, you immediately receive an overview of your stamps and he explains the duration of the collecting period (things that I would have forgotten)" (user 2)
Stampie could also communicate more about other information of the program, as people indicate they like to be more aware of the rules of the program. Some examples of how Stampie could adjust the communication to the user:
• Adding a game wherein the user has to convert paper stamps into digital stamps. In this way the user can learn that it is possible to convert stamps and learn how to do this.
• Adding a new activity, namely tips. Which can respond to the questions that are asked to the user. For example, if the user was asked in the beginning of the program what he wants to get out of it and he answered a whole set. Stampie could give tips, according to the collecting time that is left, if the user is realistic in setting this goal. So maybe Stampie could eventually say something like "*You wanted to go for a set, but keep*

in mind that you have only one week left to collect!'.

As these recommendations imply the final concept should be developed further before it is implemented. Because the study did not show significant results in relation to the research goals this should be further investigated.

Conclusion: concept evaluation

To gain insights about how the concept works in an actual loyalty program, an evaluation study was conducted. This study was as similar as possible to the first Whatsapp loyalty program. The main differences were that there were 10 participants (whereof at least 4 hesitators and calculators) in this study, no bonus stamps to earn and more options for the rewards. The goal of the study was to find out if participants maintain their motivation, experience less negative emotions and if the activities have the effect as intended. Besides, the goal is to see if hesitators and calculators are helped by the concept. The activities that are given to the participants existed of a fixed selection of all types of activities.

The results showed that the compliment and wheel of fortune activities work as intended, but the purpose of the game activity is not always clear. And for the question activity this cannot be concluded, because nothing is said about it. The same emotions as in the first research study were mentioned, however nothing was said about the concept in relation to emotions. Except for two participants that mentioned they got excited by the wheel of fortune. For motivation the results were the same. The reason for an increase or decrease was the same, namely that they were too busy at work or in their leisure time to spend time collecting. Also, a conclusion if the hesitators and calculators are helped by the concept cannot be drawn. This because some participants quitted the study early on and some could only collect from the beginning. Striking was that all the hesitators and calculators mentioned positive things in relation to the concept. Also, in general Stampie was appreciated because it is a cheerful character.

Probably the study was influenced by several factors. One of them is that the study via Whatsapp is a total different experience than in the actual app. In the app it is an apart feature and in the study it was seen as a unity with the other aspects of the program (i.e. stamp sheets). And the amount of participants that were hesitators and calculators turned out to be less than expected, because some participants quitted the program. Although the study did not show significant results according to the research goals, some improvements and recommendations can still be given, namely:

- Another evaluation test in the actual app or a test whereby the user experience of the app is as equal as possible. Most important is to test if Stampie will be seen more as a help when he is animated (i.e. when he will stand in your screen and wave to attract attention)
- The purpose behind the games can be improved because this was not totally clear yet.
- Stampie could also communicate about other topics than BSO's and rewards, like how to convert, the duration of the program, etc.

These recommendations show that the final concept should still be further developed before it is actually implemented.

CHAPTER 9
Reflection

To conclude this graduation project I would like to look back to it and reflect on the process I have been through. From the project there are some key take-aways, i.e. biggest learnings of this project.

To begin the project at IceMobile was ideal for me, because I already knew the company from the internship that I did a year before. This leaded to the situation that I did not have to put effort into getting acquainted with the company and the people of IceMobile. So I could start right away. Also, with big projects (that seem to matter most) I can feel stressed from the beginning. Returning at a company that I am familiar with helps to feel less stressed about it because I did not have to prove myself entirely.

I started the project by doing a literature study. However, I experienced some startup problems. As with every design project in the begin phase it is still a bit vague what the exact direction will be and therefore hard to decide where to begin. This feeling of chaos is one that returns during a design project multiple times (e.g. in the ideation phase) and it is one I do not prefer. I am someone who likes to know what the goal is and to work towards it. However, in a project these phases of chaos are part of the deal. That is why I experienced it is better to start anyway than to procrastinate. That is why I started to search for papers that were focused on theories linked with motivation. And so, piece by piece I found interesting papers that together leaded to an approach for the project. As this implies I learned to deal with chaos by dividing the problem in little pieces and so working towards solving the big problem.

At some point in setting up the research study I found out that asking users about past experienced emotions would not provide valid findings, whereas asking about current experienced emotions would be. Therefore I needed to conduct a research study focused on an existing loyalty program, nevertheless this was impossible in terms of the duration of such a program (i.e. 15 weeks). Therefore I came up with the idea to set up a loyalty program myself. From this I learned two things. First, be not only creative in the idea generation, but also in all other phases of the design process whereby you purely focus on the goal you want to achieve in that phase (e.g. what emotions do people experience in a loyalty program?). I learned to come up with my own idea of a research study instead of following a familiar method (like a context mapping study). This builds up to the second thing I learned from this approach, namely that accepting such a challenge, whereof it is not certain what the result will be, is like balancing on the edge of a knife but can lead to surprising results and is therefore worthwhile.

In the idea generation phase I also experienced that accepting challenges in the design process is helpful. This because an interaction designer of IceMobile gave me the assignment to come up with at least 100 ideas in order to open up the idea space. At first I thought I would not be able to reach this amount of ideas, because I am convinced that I am more a converging type

(i.e. making decisions in the design process to come to a solution) than a diverging type (i.e. generate as much ideas as possible). However, in the end I reached the number of 115 ideas. So the challenge again contributed to surprising results.

Nonetheless, I experienced the biggest dip of my graduation project soon after the idea generation. The graduation project was asking a lot of my skills as an individual designer, whereas I prefer to work in a team. This was the moment I really started to miss another team mate as a sounding board. This because I recognised that as a designer I like the process wherein you come up with an idea and the other builds upon that and by doing this back and forth the ideas are developed further. I solved this by telling some of my ideas to the designers at IceMobile and they would help me with it. Besides this, there was another reason for the dip in my graduation project. I recognised that I was afraid to take final decisions. In this phase of the project decisions should be taken on the design directions and aspects in the development of the concepts. Suddenly these decisions felt as the most important ones in the project, because one of the three directions I was working on would be developed in the final concept and for the graduation project it has to be good. This leaded to the fact that I was procrastinating these decisions. By talking to my supervisor of the company and friends who were also working on their graduation project, I realised it would be better to make some choices and make little steps forward than to do nothing.

After this dip in the process I became motivated to take some steps in the project to finish it. After I decided on a final design direction, several iterations were done to make sure all aspects of the design were well-thought of. These iterations helped to deepen the reasoning behind the concept and to improve the shortcomings of it. During

an iteration the concept is improved, but by taking a step back afterwards and being critical it can be decided if the concept is good enough or should be improved even more. Especially, taking a step back helps to identify the shortcomings of the concept. Otherwise, when the designer would continue the design process all the time, he would be too involved to see the shortcomings. In this way this approach helped me in developing the concept into the final design without overlooking important aspects.

In general it helped to write down all the decisions that were made and activities that were done in order to keep an overview of the project. Every 1 or 2 weeks I wrote down what was done in the previous weeks. In this way I created in between deadlines for myself, which forced me to work out the parts of the project in detail already. This helped to keep an overview of what was done and as said before by taking a step back (after everything was written down) helped to see what the next step would be. By writing these aspects down also shortcomings were noticed earlier in the process, whereas it normally is chaos in my head and these shortcomings are noticed later on. Another big advantage is that by the time that I needed to write a report (after 3 months) I could look back to the weekly updates and see what the most important decisions were. Whereas I normally had to think deeply about what decisions were made a few months before. Lastly, by sending an update to all my supervisors (of the TU Delft & IceMobile), they could follow my process easier.

Conclusion: reflection

To conclude my reflection I will give five key take-aways that are the biggest learnings from this project. These are:

- Be creative in EVERYthing. Not only in the idea generation, but also in conducting user research studies (e.g. apply concepts on transaction data), etc.
- Iterate, iterate, iterate, to deepen the concept and to see shortcomings early in the process.
- Create weekly updates, so that every decision in the project is documented.
- Accept challenges you normally would refuse. You cannot know beforehand if the challenge will be a success (at the utmost you can estimate if it is a good decision), but in most cases it will be worthwhile.
- Divide a big problem into smaller pieces and solve them one by one. It is better to take little steps than to procrastinate because you think the problem is unsolvable.

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