

how to support value-minded shopping

by Ariëla van Elteren



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Enable customers to act according to values in line with the food transition
when online grocery shopping at Picnic

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"...consumer food choice is a break point in the chain. Consumers can reward more sustainable food production by their choices, and similarly punish less sustainable alternatives."

Grunert (2011)

Abstract

A transition towards a sustainable food system needs to happen to ensure people can live a healthy life on this planet. Picnic as a retailer in the food system is the bridge between producers and consumers of food products. Many people hold values which are in line with the food transition, which means they care for others, the environment, and their health. During the purchase of food however, these values are not always acted upon. This can be described as a value-action gap. There is an opportunity for Picnic to support customers in closing the value-action gap for food-transition friendly grocery shopping.

There is a knowledge gap around what the values are that are important to Dutch customers when online grocery shopping, and which hurdles are present in the service of Picnic to foster the food transition. An exploratory study amongst Picnic customers shows the hurdles are formed by a lack consideration, confidence, and information. Furthermore, other values can be more important and there can be hesitancy towards change. To overcome these, dedicated moments should be created in the shopping journey to consider values. The design statement therefore is:

I want to design an experience for Picnic customers who have values in line with the food transition but do not fully act upon them, by providing them with a moment to reflect and adapt so they can become proud of their actions.

To design an experience for Picnic customers that allows for the desired behaviour, an iterative design process is used. During this process, four design guidelines are uncovered: interventions for reflection on food decisions should be controlled, specific, goal-oriented, and quick.

The final proposed intervention is a *Betere Boodschappen* functionality, where customers get control over their shopping environment. They reflect on their values through answering three questions and based on those answers get personal suggestions for functionalities that can help them pay more attention to their values. A mixed method study, consisting of a quantitative between-group study and qualitative interviews, is used to test the effect of the intervention. There is a positive significant effect on behaviour and behavioural control over buying sustainable groceries. Customers furthermore indicate that doing better groceries is made easier for them through the functionality, and the store feels more personal. A plan for implementation of the functionality in steps is proposed, and recommendations are made to others designing for transitions inside a business.

Keywords: values, online groceries, reflection, sustainable consumer behaviour, food transition, perceived behavioural control



Figure 1 - My quick, easy, healthy vegetarian dinner

Preface

my five-year old self would agree

I have always been interested in how people make the choices for the food they eat and the products they buy. If you see every purchase you make as an investment, you suddenly have a lot of power in your hands when doing grocery shopping. I personally have decided to become a vegetarian when I was 5 years old because I did not want animals to die for my food. My parents supported me in this and adapted their cooking to suit this. Especially my mother, having a background in nutrition science, was keen to experiment for my meals with legumes, nuts, and eggs. At that time there were only a few ready-made meat substitutes available. When vegetarianism started to gain more popularity the number of options grew. Nowadays there are many options, and prices are getting lower too.

Besides animal welfare, other aspects like health benefits and sustainability have become important for me in the choices I make for my food. I was used to scanning labels already for ingredients, but now I want more info: protein count, sodium, origin of the product, way of processing, packaging material. A lot to consider! I have tried plastic free living, only eating locally grown vegetables, plant-based eating, no waste cooking... so I was personally learning a lot about food (see figure 1 for my cooking!), but before my internship at a medical nutrition company I had not had the chance to design for food products yet.

During my internship I did an explorative research and design study on a plant-based drink for toddlers. There I found that using both my user research and interaction design skills in the field of food products worked well! I liked doing research and translating it into insights and designs. For my graduation I wanted to continue in this direction.

Picnic, the client of this project, is a tech-driven young company focused on efficiency. So far, I have perceived it as a dynamic company with enthusiastic and smart employees. I can learn a lot from various fields while graduating at Picnic, and I can bring my personal interests and design education together in this graduation topic. The project is focused on enabling customers to shop in a way that is positive for the planet and themselves, by looking at the values they have.

Looking back, I think my five-year old self would be proud to see what I am working on.

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Figure 2 - Creative session at the office for sustainable initiatives

Introduction

Summary

Picnic is interested in exploring what supporting a sustainable food system could look like while staying relevant for their customers. The desired outcome of this 20-week project is that, through the final design, customers are supported in taking in to account their values and can act on them while doing grocery shopping.

Content

This chapter starts with the design brief, which provides the goals as well as the scope of the project. Then the approach is discussed, with the overall report structure as well as the methodology that is used.

1.1 Design brief

Picnic Technologies is a company that started out as a start-up in Amersfoort six years ago, delivering groceries to people's houses. Since their launch, Picnic has been focused mainly on proving their concept as an online grocery retailer. They were the first fully online grocery retailer in the Netherlands, and the only service not charging a delivery fee. Currently Picnic is expanding to Germany and France and has the largest percentage of revenue from grocery deliveries in the Netherlands. It is safe to say that the concept of "the modern milkman", as Picnic strives to be, has been proven.

The role of Picnic in the green transition

Now that Picnic is starting to get a larger market share in the retail world, they also have a bigger stake in the food system. To be able to meet COP26 sustainability goals there needs to be a shift in the way we eat: a transition towards a more sustainable food system. This is explained further in chapter 2. Picnic is interested what this transition could look like and how it will shape the needs for customers and has therefore agreed on supporting this graduation project to discover this further. The focus of this thesis is using research and design to support people that have values in line with the food transition, but do not act upon them while grocery shopping. Consumer interactions with Picnic will be the scope for this project, because of the expertise I as a Design for Interaction student have for designing interactions.

The solution space can exist of (re) designs or additions in any interaction between the consumer and Picnic. By changing the interactions in customer touchpoints, other processes within the company might also need changes as well. Suggestions can be made for this to the teams responsible but will not be the focus of this project.

The research question therefore is:

How is supporting more action according to values, and thereby fostering the transition towards sustainable food consumption, possible through design in an online supermarket environment?

Project Goals

- Explore the role of Picnic as a retailer in creating a sustainable food system.
- Research how values affect decision making in grocery shopping.
- Design an interaction for Picnic consumers that supports them in doing groceries in line with the food transition, without compromising other values.

Final deliverables

- A framework for insights in the values that are important when doing grocery shopping, and the gap between value and behaviour for food-transition-friendly values.
- A user interface (UI) for the Picnic Store app that supports different people in fulfilling doing groceries by their values.
- Guidelines for designers, derived from the process, that help support consumers making decisions in line with their values.



Figure 3 - 'Peter Picnic' image created for Picnic by N=5

Effect of research & design

The desirable effect is a design intervention that supports behaviour change: the customer feels like they have been supported in taking in to account their values and can act on this while doing grocery shopping. This could reinforce positive feelings towards Picnic and the individual. Further effects could be in the actual changes in products bought which can start a shift on the production side, and motivation for current and future Picnic employees which will ensure the further growth of the company. These effects fit with the Design for our Future mission of the faculty Industrial Design Engineering, taking in account effects for the Organisation, Human and Technology.

The customer focus: People who want to make a change but do not act upon it

The customer scope will be Dutch shoppers using Picnic (first-time or longer-time users), age category not defined. Dutch consumers are chosen for practical reasons, Picnic has channels to interview and co-create with customers from all over the Netherlands. Although both food and non-food items can be bought through Picnic, the focus lies on food items.

The people to reach are the ones whose current behaviour when shopping for food items is different from what they value. A gap exists between favourable attitudes and intentions coming from personal values on the one hand and actual purchase behaviour on the other hand (Vermeir & Verbeke, 2006). Customers could either be aware or unaware that their actions and values don't align. The goal is not to change their values, but to ensure they can act on them.

> The next sections shows the approach to reach the project goals.

1.2 Project approach

This project has a duration of 20 weeks and uses a research and design approach. In this project there is a role of design in realising desired consequences in the social realm, through the means of a business. The method Social Implication Design (SID) (Tromp & Hekkert, 2014) has been developed to help designers with exploiting a positive influence of design to realize social benefit and will therefore be used as a guide to shape the approach. To achieve a fitting design to the business, this method is combined with methods used in the product development process of Picnic.

SID consists of five steps, which help the designer to "frame the project (step 1), to define a desired social effect (step 2), to focus on a particular behaviour to reach this effect (step 3), to define what user concerns to address, i.e., the strategy (step 4), that leads to a particular concept (step 5)."

Chapter 2 covers the current context: a deconstruction of the food system and its problems, Picnic's role in this system, framing what a sustainable food system means and what the desired behaviour would be.

Chapter 3 delves into why this problem exists: the literature concerning values, behaviour, and the gap between the two.

Chapter 4 covers a study with customers to explore what this gap looks like when grocery shopping with Picnic. From this, opportunities are identified for which

concerns to address, and the design statement for what effect to reach is presented in chapter 5.

Chapter 6 shows the product development process, where the design is created in three iterations. In this process the phases are based on principles of the basic design cycle (Roozenburg & Eekels) of defining, ideation, prototyping and validating.

In chapters 7 and 8 the implementation of the concept is discussed, and conclusions and recommendations are made.

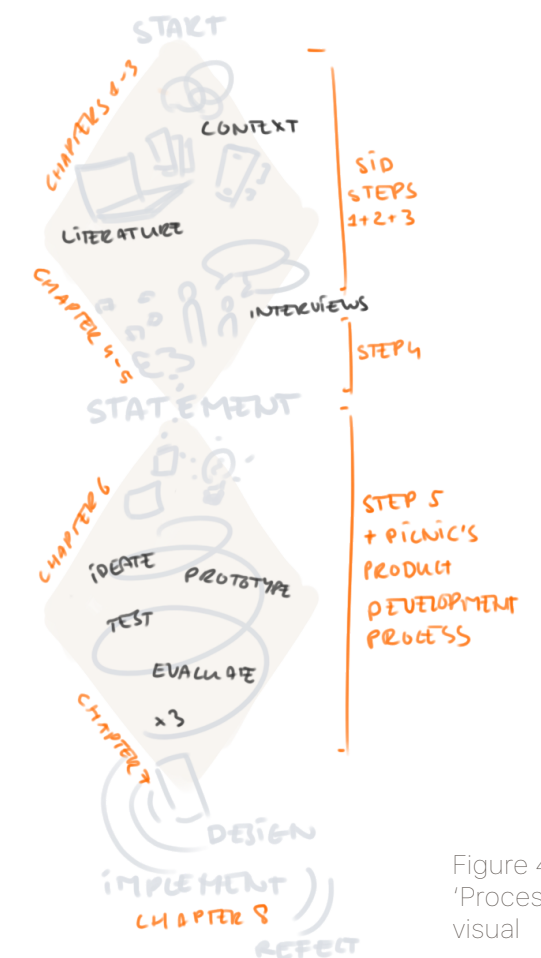


Figure 4 - 'Process visual

chapter 2



Figure 5 -
Photo by Markus Spiske
on Unsplash

Context

Summary

A transition towards a fair, healthy and environmentally friendly food system needs to happen to ensure people can live a healthy life on this planet. The opportunity is identified to support the food transition from the consumer side, while staying relevant to the range of different people that shop at Picnic.

Content

This chapter starts with explaining the need for this project by looking at the current food system, and Picnic's role as a retailer in this system. The second part goes deeper into Picnic's current design and services.

2.1 The food system

Our current food system has a large negative environmental and health impact. Climate change is happening fast, and loss of biodiversity can disrupt our food security. A transition needs to happen to make the food system fair, healthy and environmentally friendly. There are many stakeholders at play. Picnic as a retailer has an interesting position between producers and consumers.

2.1.1 Impact of food on the planet

The way we are currently living will not hold for generations to come. To keep planet earth habitable changes are inevitable. At the United Nations Climate Change Conference in 2021 the goal was set to stave off climate change and limit global warming to 1,5 °C by 2030 (COP26, n.d.). At the current rate, according to the MMCCarbon Clock in January 2021,

this will take about 7,5 years (MMC, n.d.). And while this is already time pressing, besides CO2 and its effect on climate change there are more planetary boundaries to consider (Rockström et al., 2009) that are being crossed (Figure 6).

While climate change is happening fast, the loss of biodiversity might be seen as the most disruptive planetary boundary because it can gravely affect food security. These boundaries can also affect each other, which means a positive intervention for one can have possible negative effects on other dimensions. An example of this is that the use of biofuels to fight climate change can put more pressure on land use, and therefore negatively affect biodiversity (DenkWerk, 2022).

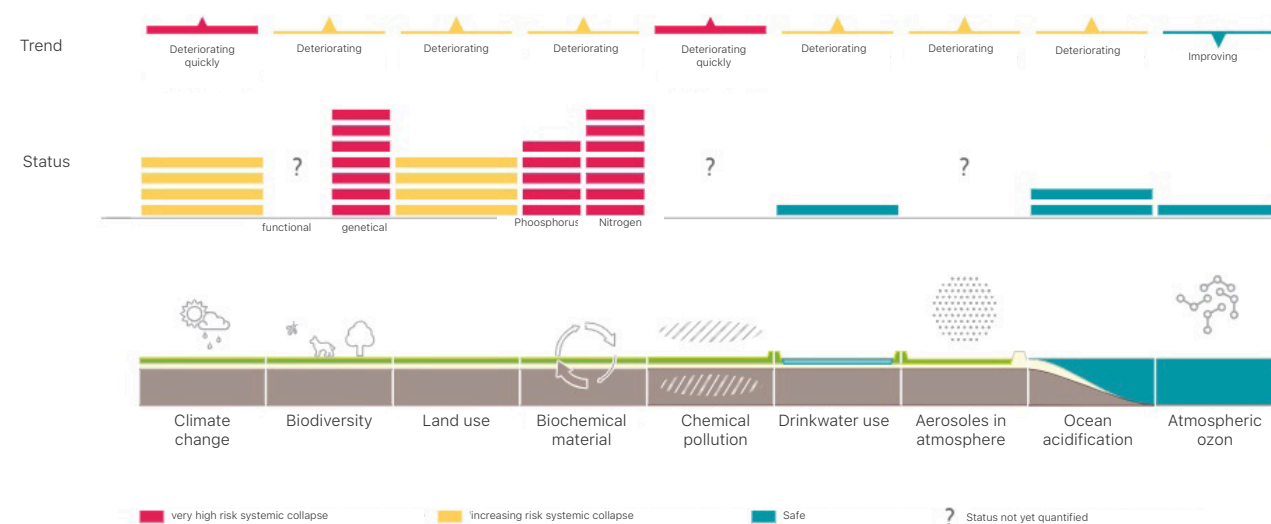


Figure 6 - Planetary boundaries (translated, from DenkWerk, 2022) shows that climate change, biodiversity, land use, biochemical materials, chemical pollution, freshwater use, aerosols in the atmosphere, and ocean pollution are all on a trend of deterioration

Looking at the consumption footprint of the Netherlands, food supply and consumer goods together hold a large part of the footprint across all planetary boundaries (Figure 7). There is a challenge in making this footprint smaller for the whole of our consumption impact, and not just what we produce in the Netherlands.

DenkWerk, an independent Thinktank, proposes three transitions to support this change:

- The **food transition**: changing food production and consumption from a cause of ecological problems to part of the solution. The biggest challenge is reaching the social will to change.
- The **energy transition**: changing the use of fossil energy sources for renewable sources. The biggest challenge is transitioning to the necessary scale quickly enough.
- The **material transition**: changing material use from linear extraction of raw material and wasting it, to a circular use chain. Currently the material choice is too dependent on price.

They also propose three leverages to make this happen:

- **Technical** changes: changing production methods, using different technologies like electrical vehicles, innovating in materials.
- **Behaviour** changes: changing consumption patterns, like eating less meat or flying less.
- **Restorative** measures: recovering the already crossed boundaries, for example by reforestation.

There are opportunities in all three leverages which could work from a grocery retailer perspective. From the three proposed transitions, Picnic's position as a grocery retailer is most intertwined with the food transition. Although both energy and materials play a role in the products and operations of Picnic, the main impact is in the food products that are being sold. The food transition is linked strongly to the other transitions, with changes in one affecting the others. **For this project, the focus is on fostering the food transition.**

At the EU level, there is much focus on the food transition. The Farm to Fork strategy (European Union, 2020), which is part of the European Green Deal, defines the transition as accelerating towards a food system that:

- Has a neutral or positive environmental impact
- Helps to mitigate climate change and adapt to its impacts
- Reverses the loss of biodiversity
- Ensures food security, nutrition, and public health, making sure that everyone has access to sufficient, safe, nutritious, sustainable food
- Preserves affordability of food while generating fairer economic returns, fostering competitiveness of the EU supply sector, and promoting fair trade

Takeaway

It is necessary to accelerate the transition towards a sustainable food system.

2.1.2 A Sustainable Food System

A way of consuming that is in line with the food transition, what does that look like in the Netherlands?

Defining a sustainable food system

As introduced, a transition is necessary for the food system to change from having a negative impact to a neutral or positive impact where everyone has access to sufficient, nutritious, sustainable food. Weinrich (2018) describes four drivers for this transition:

- The environment
- Public health
- Animal welfare
- A fair agricultural economy

Throughout this report all four of these drivers are considered as being part of the transition. Even though animal welfare was not mentioned in the definition of the Farm to Fork strategy, it is important to consider since animals play such a large role in the current system. I will refer to the future food system as a sustainable food system. There are many definitions for sustainability (Moore et al., 2017), with the UN's Our Common Future definition of 'meeting needs of the present without compromising the ability of future generations to meet their own needs' being the most well-known. Note here that this definition is written implicitly from a human perspective by referring to 'future generations', but the lives and future of animals should be integrated in this definition too for this project.

The transition towards a sustainable food system therefore will need to contain:

The environment

A food system which is good for the environment ensures that planetary boundaries are not being crossed. Restorative, technical, and behavioural changes are needed to ensure what has been damaged will be rebuilt and regrown and will be made resilient for the future (DenkWerk, 2022).

Public Health

A food system that optimizes for health. Being healthy can be defined as being in a state of complete physical, mental, and social well-being. It is not just the absence of disease (EAT Lancet Commission, 2019). Diet is one of the most important influences on health in our society (Katz & Meller, 2014). The foods we eat, the amount of different micro- and macronutrients we get from it, and whether we get enough or too much food in general is all part of how healthy we are. The connectivity and cultural meaning food brings also has health implications for social well-being.

Animal welfare

A food system in which the non-human animals are treated respectfully. Where welfare is not just a way to add value to a product, but where there is an actual ethical connectivity with humans and animals (Buller & Roe, 2012).

A fair agricultural economy

A food system in which there is food security and food safety for everyone, where products are ethically sourced and producers get fair prices for what they sell (Barrientos & Dolan, 2006).

Besides these four drivers, there is an interplay of the food system with the energy and the material system. Both energy and materials are being used in many parts of the food production, preservation, and transportation chain. Transitions in the food system will also have an influence in other systems, and it should be considered that these influences should not be harmful.

Takeaway

Sustainable food system encompasses being good for the environment, public health, animal welfare and a fair agricultural economy.

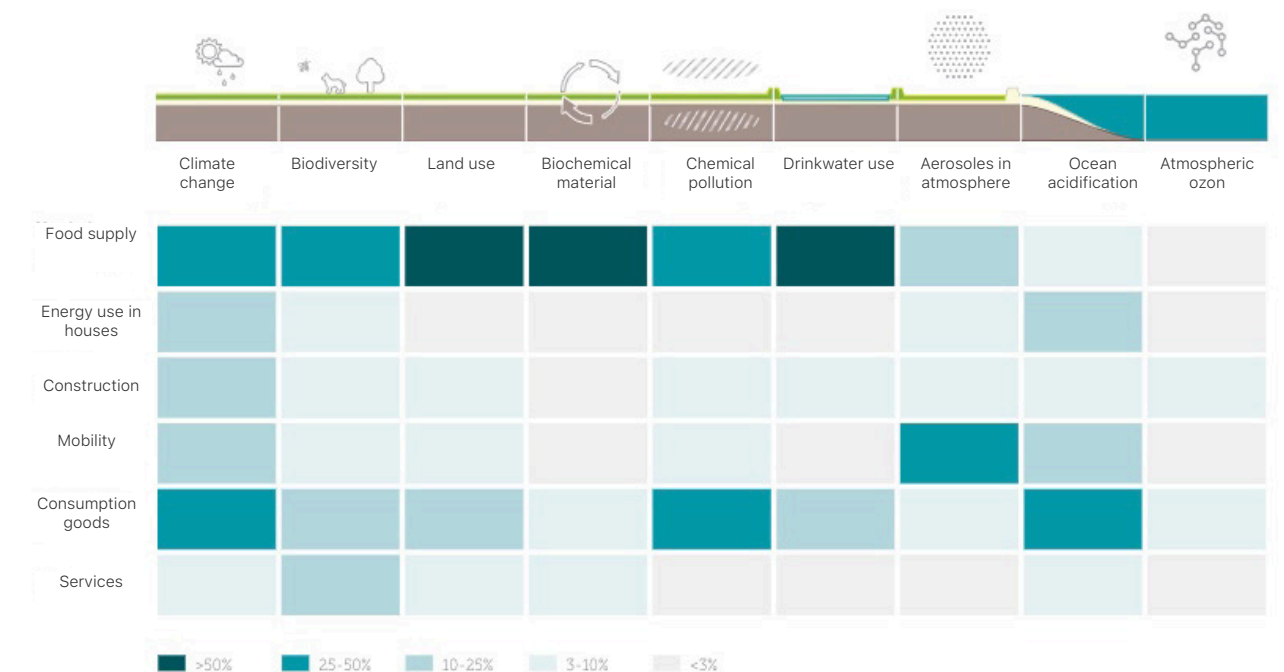


Figure 7- (translated, from Denkwerk, 2022) – Dutch consumption footprint for each planetary boundary from Milieucentraal

Diets that fit the sustainable food system

With all these impacts to consider, there is no simple conclusion as to what the best way is to eat to support the food transition. What is best might change together with the innovations in the agricultural sector. To support the food transition as a retailer it is therefore interesting to stay up to date with the science on which product categories to promote for a sustainable way of eating.

Planetary Health Diet

The dietary guidelines for a Planetary Health Diet from EAT Lancet (2019) focus on the environment (including all planetary boundaries) and human health, and therefore seems a good guideline. Choosing for products that support animal welfare and a fair agricultural economy within these guidelines can help to incorporate all aspects of the transition.

Sustainable Dutch diet

As EAT is a global initiative, a more culturally accurate diet for supporting food transition in the Netherlands can be the one proposed by Broekema et al. (2020), who have modelled a diet to meet the 2030 greenhouse gas emissions (GHGE) requirements based on the current eating patterns in the Netherlands. Their results suggest that "reducing consumption of beef, pork, poultry, cheese, butter, and snacks and increasing consumption of legumes, fish and shellfish, peanuts, tree nuts, vegetables, soy foods, and soy drinks are critical to achieve GHGE targets while maintaining a healthy eating pattern". They however question the acceptability of this diet by the Dutch population and note that satisfying 2050 food system

GHGE targets will require additional research in consumer preferences as well as innovations in food production and processing. What can be questioned furthermore is that they only focus on GHGE and not on all planetary boundaries.

Dutch Centre of Nutrition

An accepted source of nutrition advice for general population is the Dutch Centre of Nutrition. On their website they also give advice on how to eat more sustainable. Their suggestions are in line with the above but less specific; they advise on increasing vegetables, fruit, whole grains, and legumes and decreasing the intake of meat, alcohol, and snacks. Furthermore, they advise on wasting less food.

Takeaway

For supporting a sustainable diet in the Netherlands, there should be more consumption of the following product categories:

Fruit, vegetables, whole grains, legumes including soy foods and soy drinks, fish and shellfish, nuts.

And less consumption of the following product categories:

Meat like beef, pork and poultry, cheese, butter, snacks, and alcohol.

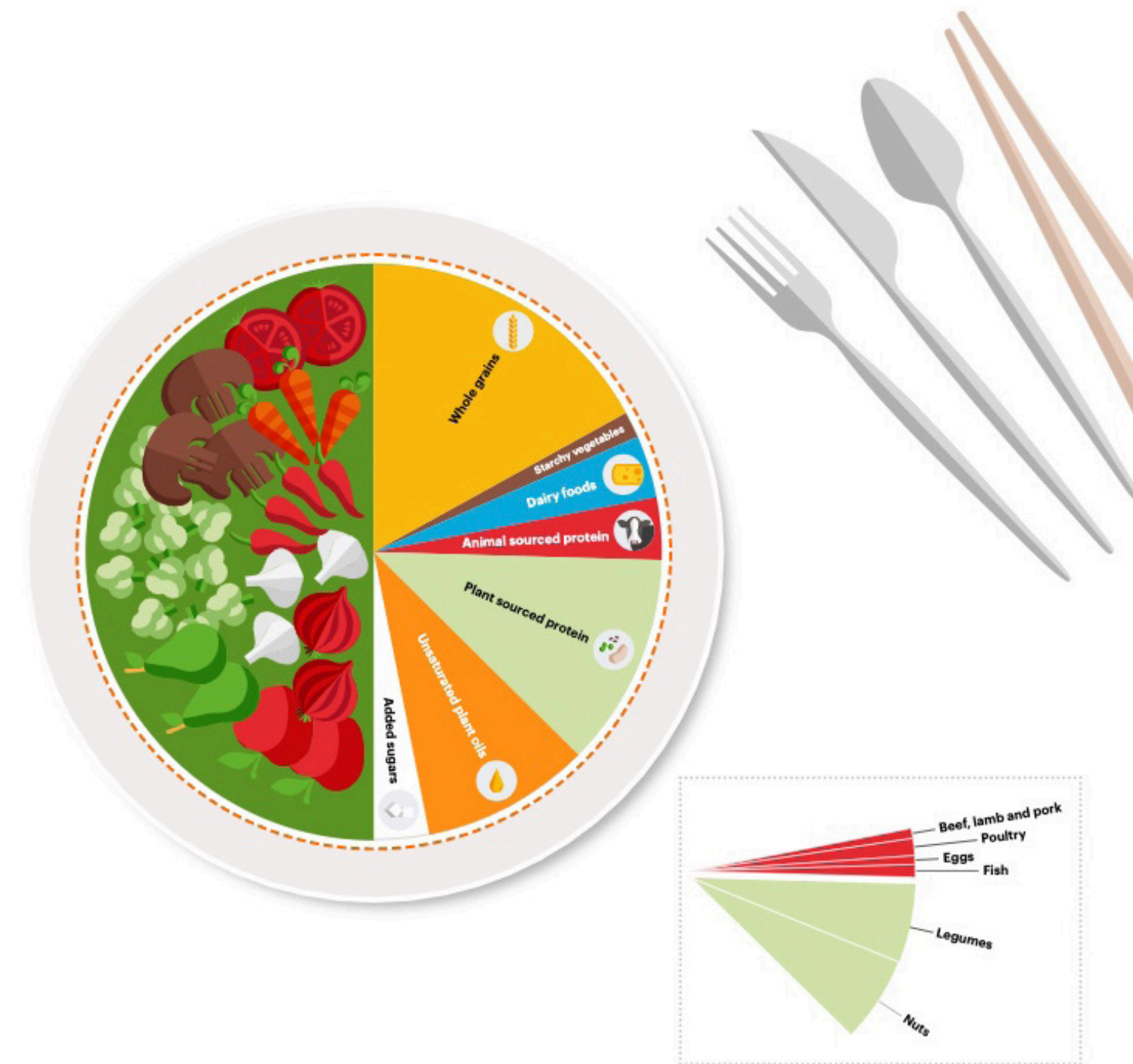


Figure 8 - percentage of food groups for a planetary health diet from EAT Lancet (2019)

2.1.3 Stakeholders: Everyone Needs Groceries

People need to eat to survive, and ideally to live a long and healthy life they need a diet with sufficient nutrients. There are different ways as a consumer to get food, like preparing it at home, eating out, ordering in, or eating on the go. The ingredients for food prepared at home can come from supermarkets, stores, grocery delivery services or informal channels like growing it at home.

Food retail

Food Service Instituut Nederland (FSIN) makes the distinction between food service like horeca, catering, convenience and food retail like new retail, supermarkets, and speciality shops. An analysis of 500 food companies by FSIN show that 76% of the total revenue is in food retail, and the remaining 24% is food service (FSIN Food500, 2018).

As a part of food retail, the revenue of online groceries delivery is growing. In 2021 the online retail market share has grown 30% compared to 2020 (NielsenIQ, 2021). Especially with the Covid-19 pandemic, online grocery retail is growing to become an influential part of the food system because it minimises virus transmission risk. Picnic's turnover increased by 95% in 2020 compared to the previous year. This cannot fully be attributed to the pandemic because Picnic was on a strong growth path in the year before that too (Baarsma & Groenewegen, 2021).

Picnic as a retailer can be simply described as the bridge between suppliers and consumers, and is a part of the food environment for customers. (Figure 9) (van Berkum & Ruben, 2018)

Relations with stakeholders

The stakeholders closest to food retail are the customers who consume the food, the suppliers who do food processing and transformation, and the people who work for the retailer. To understand the scope of the project, it is important to consider how Picnic is related to each of these stakeholders.

Customer relation

Affordability and inclusivity are important to what Picnic stands for, to be "the supermarket that everyone can afford". Affordability here means for the products to be cheap enough for people to buy, and the fact that Picnic does not charge a delivery fee. The current target customers are families, but there is a wide variety of people that use the service. For Picnic customers it should be simple and delightful to do their groceries. The service can also be regarded as inclusive and offering food security through this affordability, and it caters for people who are bound to the house, have visual imparity, or do not have transport available to get their groceries. Picnic ensures the food is fresh and safe to consume.

Supplier relation

Picnic used to buy its products through Boni supermarket. When they began as a start-up 6 years ago in Amersfoort their volumes were still small. While growing, their volumes became large enough to become a member of SuperUnie, and

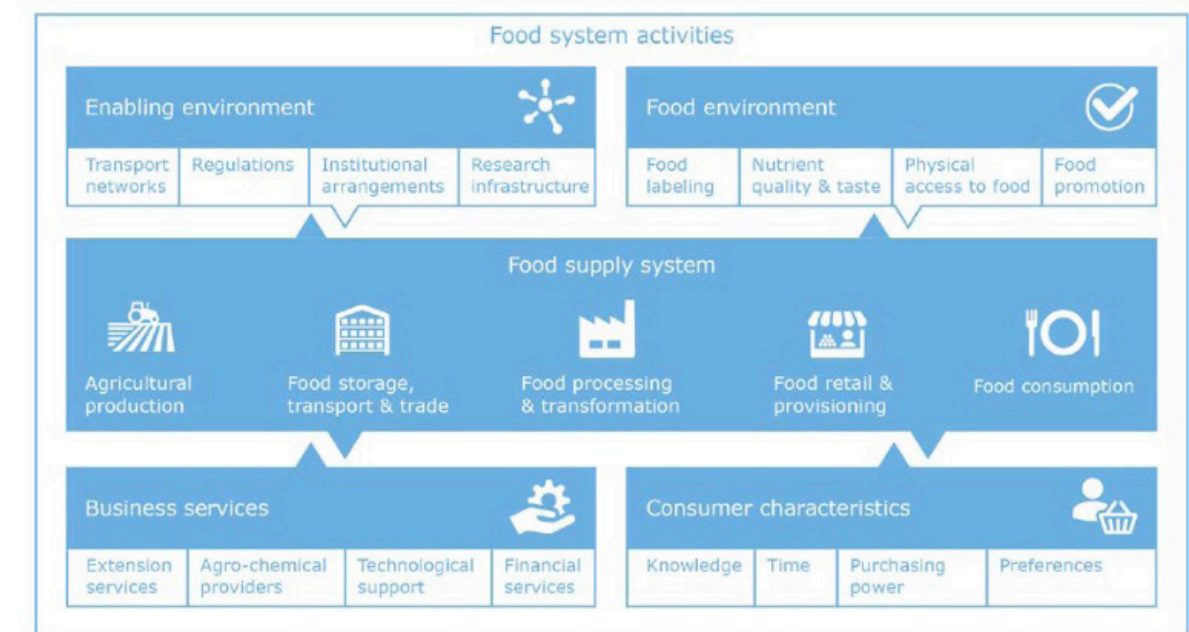


Figure 9 – Food system activities (van Berkum & Ruben, 2018)

after that Edeka, instead of purchasing through Boni. SuperUnie and Edeka are purchasing organisations that represent multiple retailers in and outside of the Netherlands.

Currently Picnic is making their own contacts with suppliers, which is possible because of the continued growth. The suppliers who are in direct contact with Picnic differ in size. Some are small, sometimes with single products only available through the Picnic app in certain regions. Sometimes they are smaller farmers, or innovative start-ups. Other suppliers are large, a few examples are Unilever, Kraft Heinz, Danone, Procter & Gamble, Nestle, Heineken and FrieslandCampina. Picnic is a platform for these retailers to sell their products. They make agreements about purchase prices. An interview carried out with a category manager during this project gives insight into Picnic's current awareness of the position they have in the food supply system (Appendix 1). In this interview it became apparent that Picnic's assortment is trend driven and dependent on demand, but suppliers can push a product forward too if they want to.

Employee relation

Picnic employees are also an important stakeholder who shape the company. Besides the founders of Picnic, employees have their own visions, missions, and reasons to join the company. Gathered from conversations with the design team, colleagues share the thought that they like to design for a product that makes people's lives easier, while it is not a luxury product. From conversations with different teams, I have learned that, for many of the operations, the bottleneck for growth is having enough employees. Therefore, the way (future) employees feel about Picnic matters.

Takeaway

The stakeholders closest to food retail are the customers who consume the food, the suppliers who do food processing and transformation, and the people who work for the retailer.

> This section has introduced the problems with the current food system, Picnic's position in it, and the most important stakeholders for this project. The next section dives deeper in Picnic's operations.

2.2 Picnic's current way of operating

Picnic has a different model than traditional supermarkets, so the service, the interaction, and the products can be designed in a different way. I first explain what Picnic offers and then deconstruct the design to show the current interactions, and which societal change it currently enables.

2.2.1 What Picnic offers

Traditional supermarkets have brick-and-mortar stores, where people come and pick up their own groceries from the shelves. They can walk through the aisles, pick up between multiple products, use multiple senses to judge product qualities, and fill up their basket or trolley. The groceries are brought to the supermarkets from distribution centres. Some supermarkets in the Netherlands have both physical and online stores, where groceries can either be picked up or delivered at home. This service usually comes with a delivery fee and a minimum order value.

Since Picnic is a fully online retailer, it does not have any brick-and-mortar stores. Instead, it works with distribution

centres, fulfilment centres and local hubs (figure 10) which are all designed with the focus on efficiency. Groceries are ordered through a mobile application with a minimum order value of 35 euro's. This 2D digital environment does not have scents, sounds, and products cannot be touched. Scrolling and searching can be done from any location like on the go, in front of the fridge, or while walking the dog. There are set times and routes for deliveries, and there is no delivery fee. The A-brand product prices are compared and adjusted daily to three of the largest Dutch supermarkets (AH, Jumbo, Plus) to ensure the lowest price for the customer.

The service Picnic delivers consists of the following touchpoints with customers:

- Store: the phone application
- Website: frequently asked questions
- Customer service
- Runner (delivery person)
- EPV (Electric Picnic Vehicle, the delivery vehicle)
- Newsletters and emails
- Products in assortment, including Private Label products
- Welcome to Picnic booklet

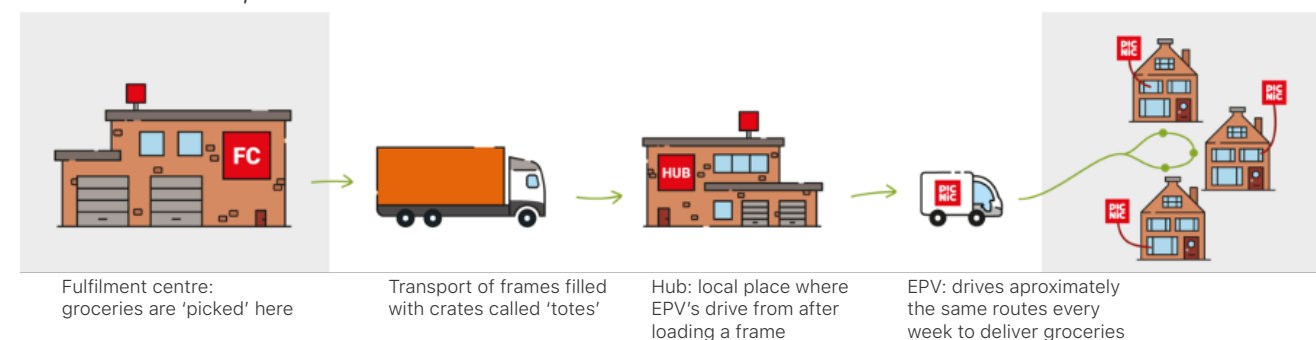


Figure 10 – Picnic supply chain simplified; image from Picnic

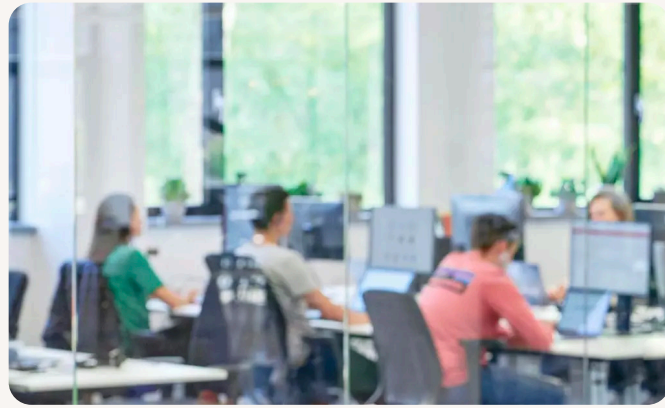
Picnic has introduced and is expanding its range of Private Label products, which can be designed in a different way than traditional supermarket products. They do not have to be on a physical shelf, so there is room for changes to the design like:

- Less air in packages: the package does not need to look large and attract attention on a shelf, but can be made to take up less space for delivery
- **Room for visuals:** the brand and details do not need to take up space on the front of the package since people can read these in the app; there is more room for engaging visuals
- Crossover digital/physical: some package illustrations are made to move in the store app
- Re-buy QR code: a scannable label on the package to add the product to your basket in the store app

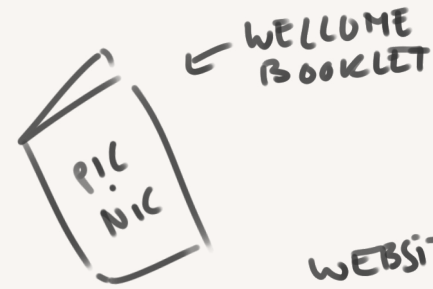


Figure 11 – Picnic Packaging

CUSTOMER SERVICE →

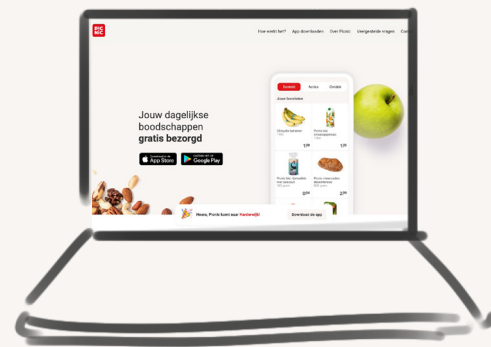


PRODUCTS →



← WELCOME BOOKLET

← WEBSITE



← RUNNER



THE APP →

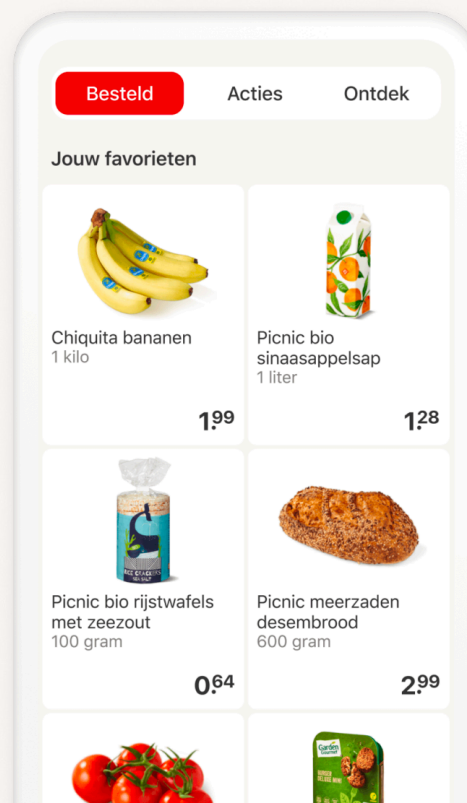


Figure 12 – Customer touchpoints
Images from Picnic website

2.2.2 Deconstruction

To further understand the workings of the current Picnic service and app, the Vision in Product Design (ViP) (Hekkert & van Dijk, 2014) approach to deconstruction of the service is used. To understand the effect Picnic currently has in the world, transition frame ingredients (Peeters, n.d.) are analysed.

Why is the current design the way it is?

The product proposition: Affordable and fresh groceries delivered to your home with ease, for everyone. The company is designed for efficiency, and many of the innovations are technology based.

The existing interactions with the customer touchpoints can be described as:

- Store (the phone application): Mostly use friendly, intuitive, guiding, price-oriented, simple (See full breakdown in Appendix 2)
- Website: Gateway to app; answers frequently asked questions
- Customer service: Helpful, problem solving
- Runner (delivery person): Friendly
- EPV (electric delivery vehicle): Sustainable, quirky, remarkable, efficient
- Newsletters and emails: Call to action
- Products in assortment, including Private Label products: Expanding, sometimes one-sided
- Welcome to Picnic booklet: Informative
- Service altogether: Inclusive, efficient, easy, time saving

According to the in-house designers, Picnic's customer facing products are based on the vision of striving to be 'the modern milkman'. They have captured a set of challenges that they try to overcome and interaction qualities they strive for in their documentation. This is used as the basis for many design decisions.

Challenges the designers foresee are:

- Planning
- Loss of senses
- Lack of instant gratification
- Missing a collective experience
- Building trust

Interaction Qualities designers aim for are:

- Surprisingly simple
- Sincerely caring
- Delightfully rewarding

One of the future goals also captured in this documentation is that in the long run they aim to award loyal users with app elements fuelled by personal data, but are still figuring out how to do this exactly.

Currently Picnic's designers are working on expanding offering meal solutions and making it easier to discover more products in a new homepage.

Takeaway

The final concept of this thesis should fit with the already existing interaction qualities and can either be in an already existing or not yet existing customer touchpoint. A focus on personalisation and sustainability would fit with the future vision of Picnic

Grocery revolution: The frame of the Picnic innovation

My thesis mentor Anna Peeters is working on analysing how transitions work and what role designers can have in this. Transitions focus on creating a new future by enabling a certain desired behaviour. Working towards a desired behaviour can be done in many ways; therefore, the ingredients of a frame draw the boundary around what problem is going to be addressed. Figure 13 shows the basic ingredients of such a frame. Deconstructing the current frame of Picnic with the frame ingredients therefore helps to get a grip on in what way Picnic could enable the food transition (see Appendix 3).

When analysing the different elements, it seems the desired behaviour of the current design is ordering groceries online. There is a twofold of effects:

- On the system side, the unique supply chain of Picnic creates room for efficiency that sets a new standard for other companies.
- On the customer side, it creates accessibility of online grocery deliveries for people who would otherwise have no access to it.

This is done from a worldview where technology is the answer to many problems. The systemic change mechanisms that are used are 'technology' and 'economy', and the behaviour change mechanisms are enablement and communication/marketing.

Possibilities for the Future

Picnic could enable affordable, fresh, and sustainable groceries for people that can be delivered to their homes with ease, while taking into account the responsibility that comes with this. The desired behaviour which is aimed for with this project is **for people to eat in a way which helps the transition towards sustainable food consumption**, while they can still consider everything that they find important.

There are different worldviews possible of how this could be reached and mechanisms which can be used to accelerate the desired outcome. For the ideation phase of this project, it will be useful to consider there are many different world views and change mechanisms but also know that the company in its essence is technology driven.

Takeaway: Picnic's innovations are mostly technology and efficiency driven.

> This section has given insight into Picnic's current operations. The next section shows the opportunities for sustainable consumption through online shopping.

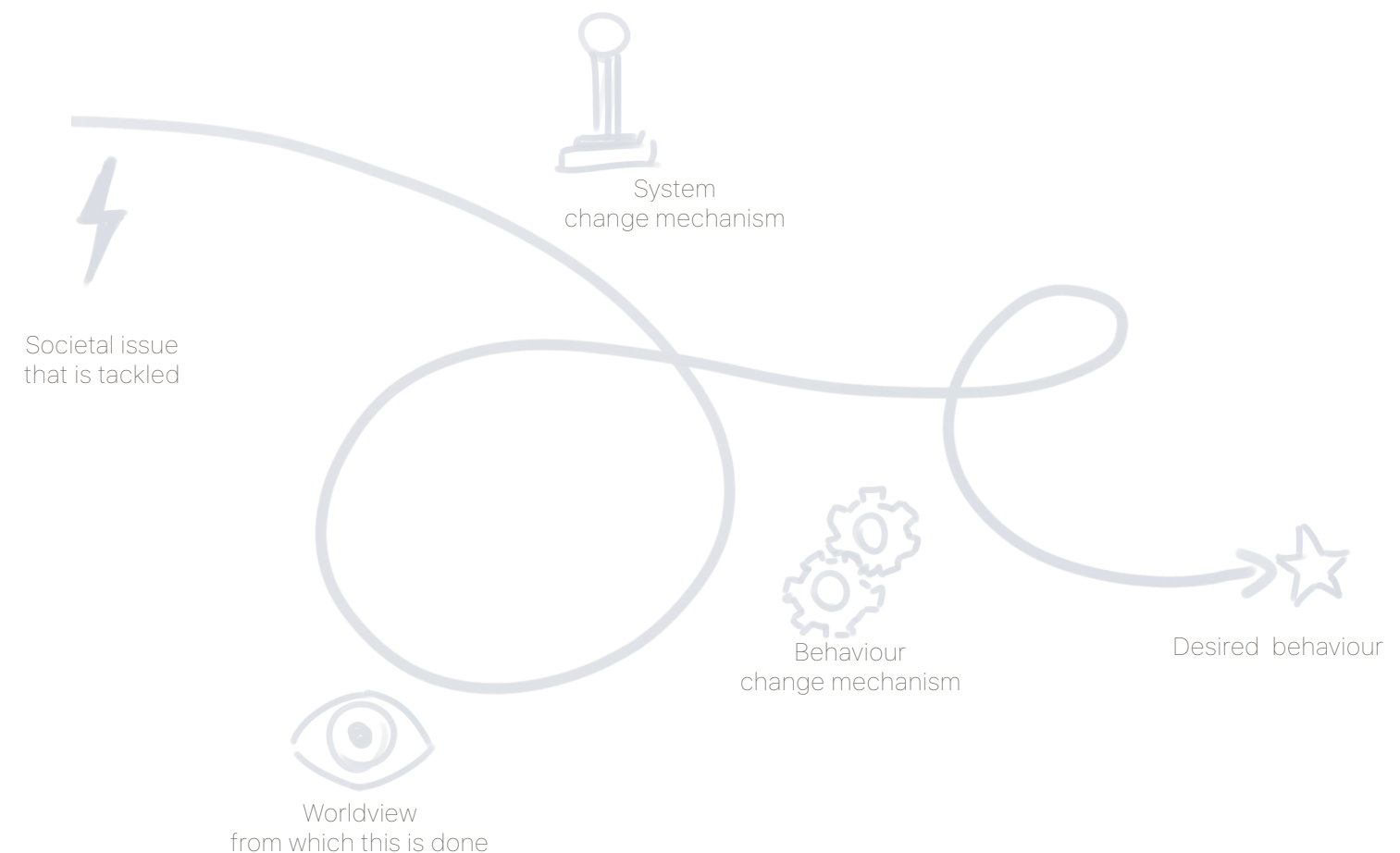


Figure 13 - Transition frame ingredients

2.3 Sustainability through online grocery shopping

As shown in the previous section, how Picnic operates is different from brick-and-mortar supermarkets. This brings opportunities for supporting sustainable consumption. There is however some friction in wanting to support more sustainable consumption, but also upholding the current company values.

2.3.1 Opportunities

There are already some aspects about Picnic's way of working that seem inherently more sustainable than getting groceries through brick-and-mortar stores because Picnic is efficiency driven. Although official numbers are not present to quantify this, systems like the deliveries along smart routes with electric vehicles, predictive models of orders, and only baking the amount of bread that is ordered, all contribute to minimizing wasting food and energy. Efforts are also made to fully close the material loop for the plastic bags that are being used to deliver the groceries in. Furthermore, there is an experiment with a food forest being planted by Picnic which supports a different way growing produce than traditional monocrop farming.

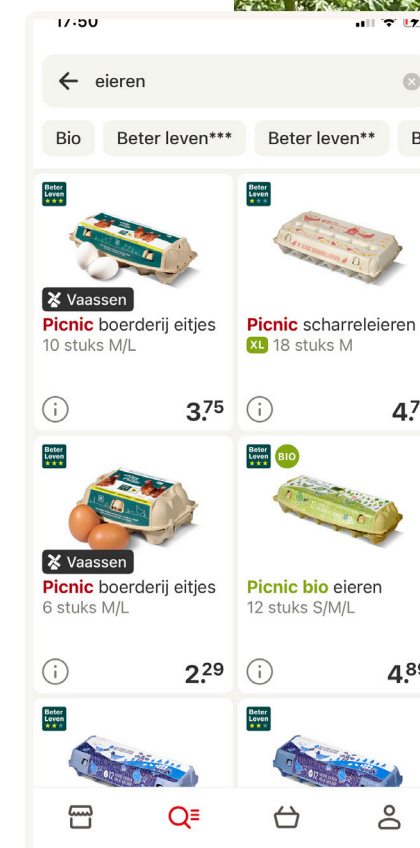
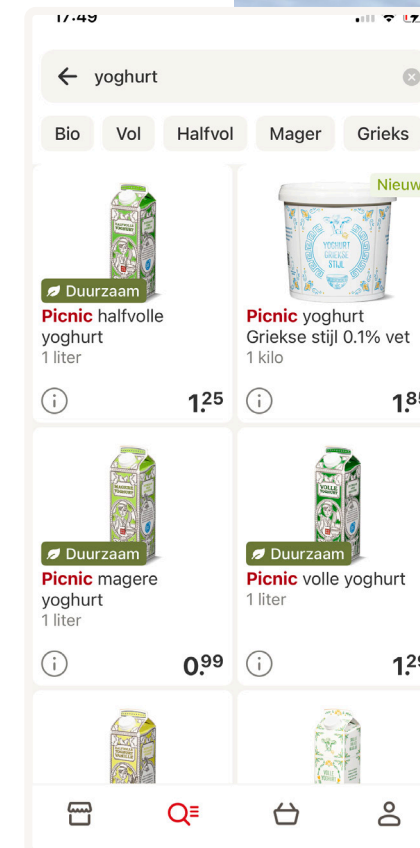
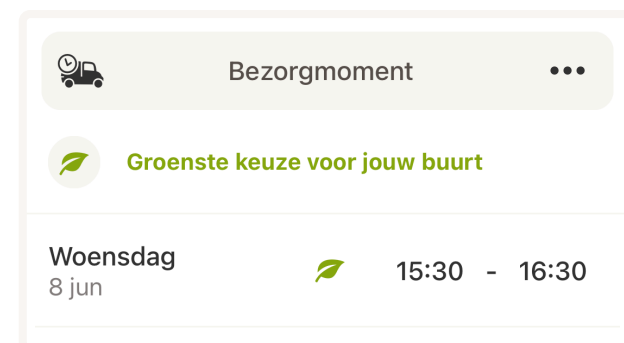
These examples show there are some efforts to support the drivers of food transition of animal welfare and the environment. The initiatives that are currently in place are worthwhile, but they are mostly on the production and supply side. Creating more initiatives for consumer food choices could therefore be an interesting opportunity. As Grunert

(2011) states: "...consumer food choice is a break point in the chain. Consumers can reward more sustainable food production by their choices, and similarly punish less sustainable alternatives."

The currently existing consumer initiatives from Picnic are:

- incentive to return plastic bags: get paid money back
- easy to find categories of Dutch fruit and vegetable produce
- a tab for vegetarian and vegan products
- labels to recognize organic and Beter Leven products
- selecting a more sustainable delivery slot

More initiatives could be imagined and are also necessary to comply with the earlier mentioned Farm to Fork strategy (European Union, 2020). Besides that, supporting the food transition can also help attract, motivate, and keep employees and improve customer loyalty and a positive company image (Berns et al., 2009).



Figs 14, 15, 16 - Order moment, eggs and yoghurt (in the Picnic app)

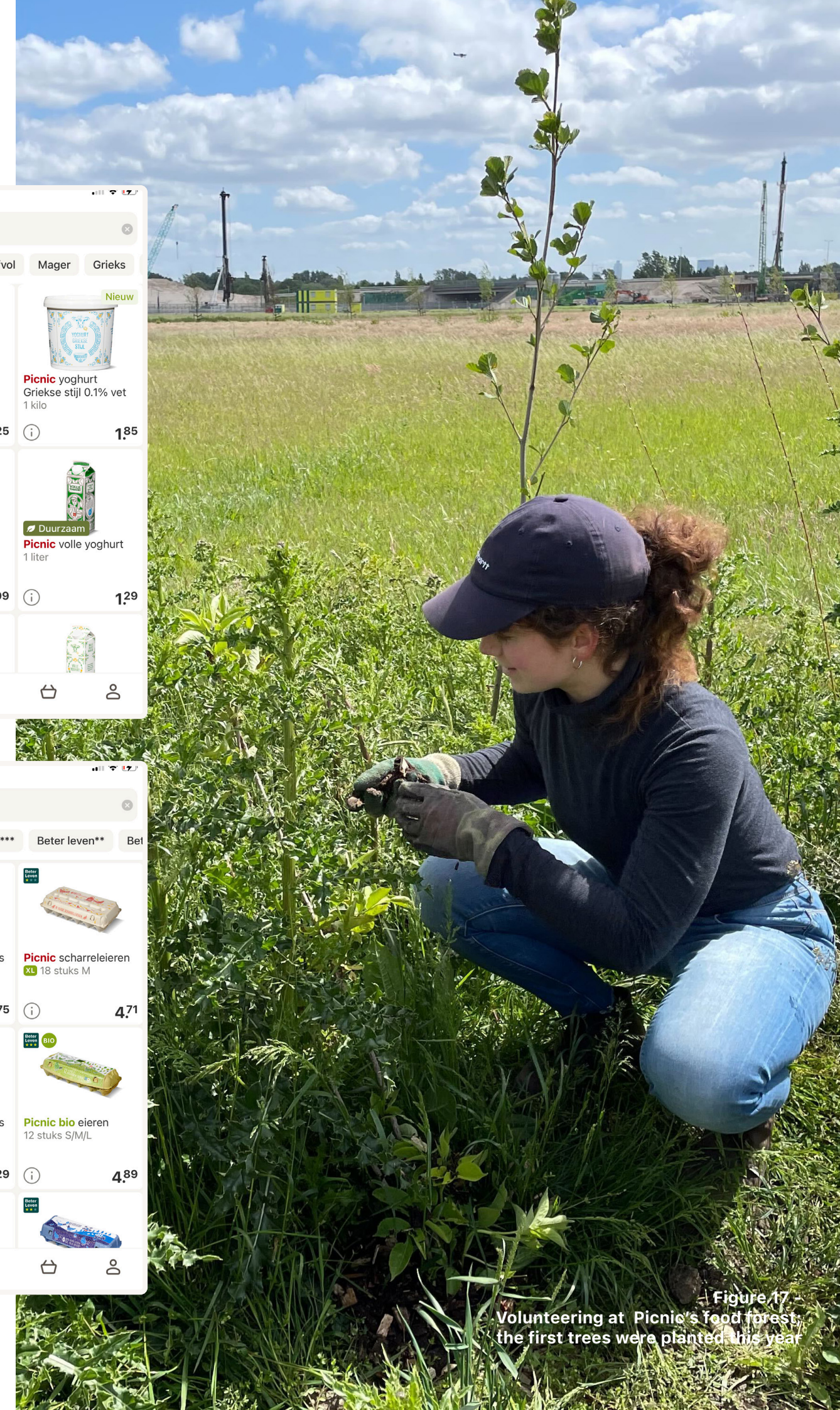


Figure 17 - Volunteering at Picnic's food forest, the first trees were planted this year

In a study amongst Dutch citizens by the EU, **96% of participants indicated to find the environment important**. The same study shows that 38% of the participants says to have changed their diet to more sustainable food (European Commission, 2019). This still leaves a large percentage of people who could make changes, and it is not specified what types of changes were made. Sustainability means something different for many people, and even when they are wary about the concept of sustainability, they can have a positive attitude to central components of sustainability, like preserving the environment (Grunert, 2011).

As there is an opportunity with multiple positive business effects, it is interesting to explore what could be unique about Picnic's position as an online retailer in supporting the food transition but also what could stand in the way of this transition. I have captured my first

assumptions on how Picnic is different from after the deconstruction (see figure 18).

These differences are all important to consider during the design phase. Especially the opportunity for an **personal shopping experience** could help to support people on an individual level in the transition towards a more sustainable way of eating. There are many degrees of freedom to design with, and shopping data can easily be connected and analysed. This must be done in a way that takes note of the position Picnic currently has, and what customers expect of Picnic.

Takeaway

Many people find the environment important. There is an opportunity for supporting them on a personal level in the transition towards a more sustainable way of eating.

- Personal shopping experiences possible
- Analyse, link, and compare data which cannot be done in store
- Products designed for at home and in use
 - Planning is involved
- grocery shopping can be done everywhere
- Information can be presented in a different way
- There are possibilities for messaging customers during shopping
- Less connection to the products that are bought and where they come from
 - The social aspect of grocery shopping is limited
- Kids might be involved less in the process
- There are less possibilities of getting the exact amount of produce

Figure 18 - Thoughts on how Picnic is different from a brick-and-mortar supermarket

2.3.2 Friction

Picnic's current website carries the slogan "De online supermarket die iedereen kan betalen", which translates to "The online supermarket that everyone can afford." When wanting to support the food transition and choosing for example organic produce instead of regular produce, price is the major perceived barrier (Aschemann-Witzel & Zielke, 2017). When discussing this project within multiple employees within Picnic, friction became apparent between on the one side wanting to act, but on the other hand not wanting to impose any values on customers. However, every decision that is made to run the company is value laden. The assortment that is shown, which products appear first when searching, the 'previously bought' page, which promotions are offered. All these affect what products are being bought because the exposure online increases the likeliness of buying (Jilcott Pitts et al., 2018).

Takeaway

There is friction around the topic of sustainability because the assumption that supporting sustainability might result in having to impose values on customers, while Picnic wants to stay available for everyone.

> To further understand how to be able to deal with this friction, the next chapter consists of a dive into the literature where the concept of values and how they play a role when grocery shopping is explored.

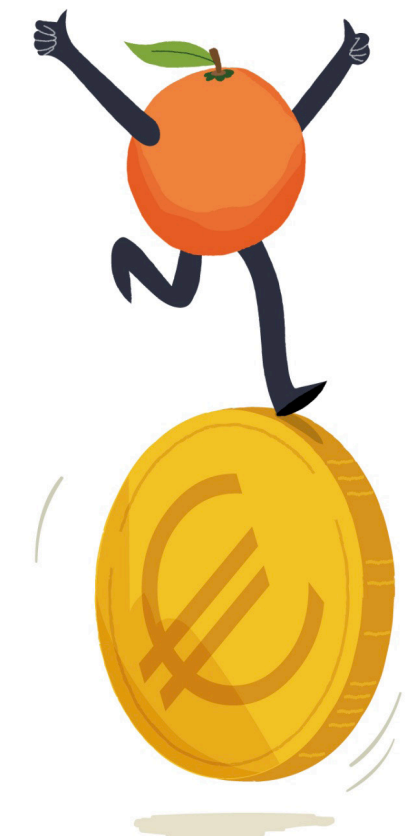


Figure 19 - Affordability is an important part of Picnic (illustration from Picnic by N=5)



chapter 3

Literature

Values in grocery shopping and overcoming the value-action gap

Summary

Values that individuals hold can be described as “guiding principles”, they are ideals that are strived for. Many people hold values which are in line with the food transition, which means they care for others, the environment, and their health. During the purchase of food however, these values are not always acted upon. This can be described as a value-action or intention-action gap (Kennedy et al., 2009). There are multiple reasons for this: a low cognitive capacity for deliberate decision making when doing groceries because of its habitual nature and the intrusive context factors that are present, low perceived control specifically over sustainability issues, and unclear social norms. There is an opportunity for Picnic to attempt to close the value-action gap for sustainable grocery shopping. This can lead to more satisfaction, repurchase intention and a positive word of mouth about Picnic.

Content

First, the aim of the literature study is shown. Then, the concept of value and the process of decision making when doing grocery shopping is explained, and the value-action gap is introduced. Finally, the role of online grocery shopping in overcoming the value-action gap is explored.

Figure 20 -
A different context: fruits and
vegetables from a horse carrier.
Photo from Nationaal Archief

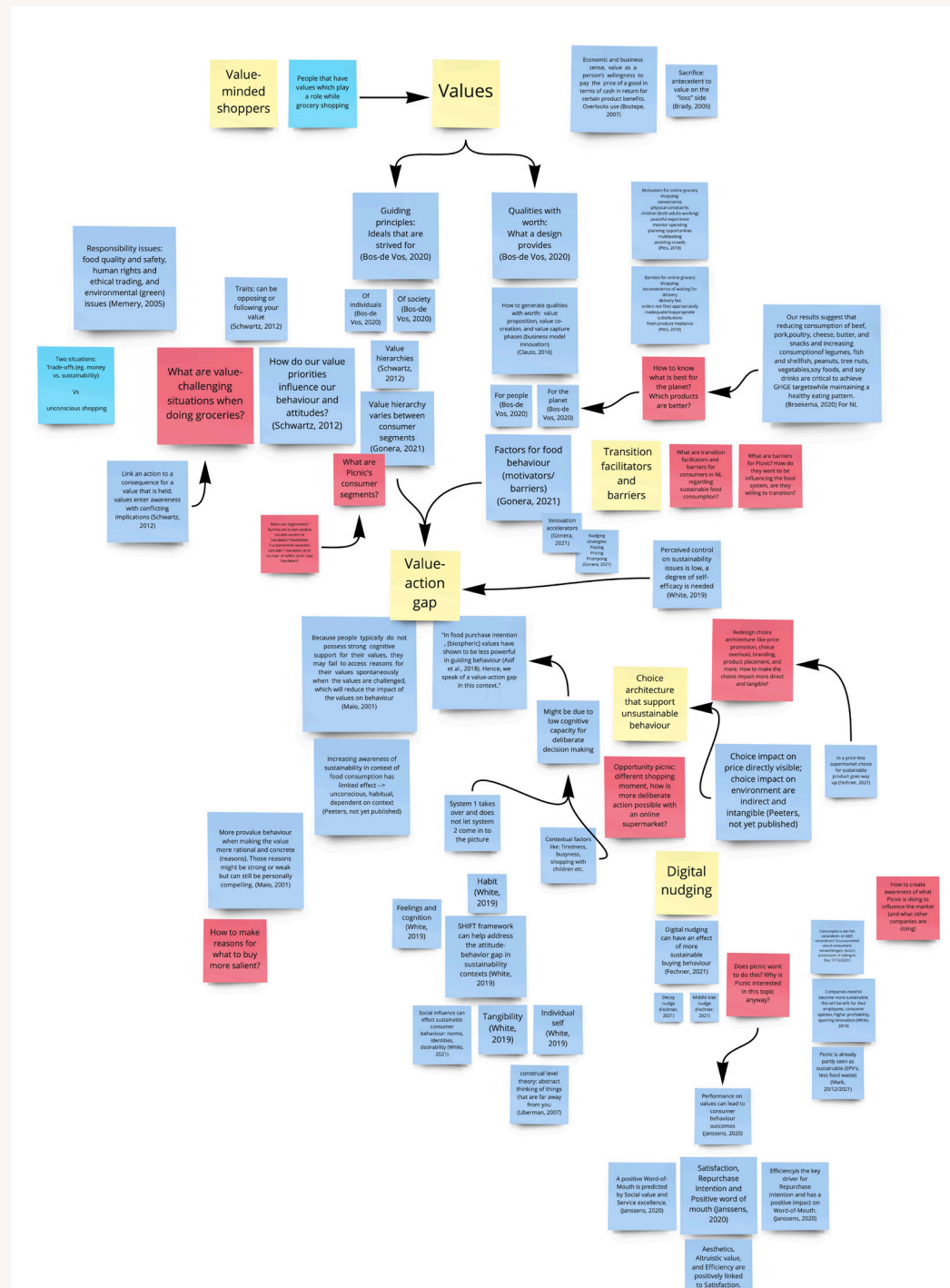


Figure 21 - For illustration, an image of my process of extracting insights from literature and linking these to each other to find a literature gap

Literature research: The "Ham" Questions

The aim of this literature study is to form an understanding of the current knowledge about decision making in grocery shopping, and how to use this knowledge to support transitions in the food system. The foundational theories that are focused on are Schwartz' Theory of basic Values (Schwartz, 2012) and Ajzen's Theory of Planned Behaviour (Ajzen, 1991). The term values can be used in different ways and contexts. For this thesis the focus lies on understanding human values within the context of grocery shopping. Further literature can come from the fields of psychology, design, ecology, and consumer science.

The questions to answer from this literature study are:

1. What influence do values have on food-transition behaviour in the context of grocery shopping?
2. What is currently known about online grocery shopping to support the transition towards a sustainable food system?

To answer these questions, combinations of the following search terms were used in Google Scholar:

Values, values in design, values and grocery shopping, sustainability grocery shopping, online grocery shopping, sustainable food system, value-action gap

Articles were selected on relevancy with the following criteria:

Peer-reviewed and relevant to the topic.

Additional articles were advised by colleagues, graduation mentor and graduation chair. Relevant news articles used were published before or during the time of graduation and shared by peers and colleagues or otherwise stumbled upon.

Figure 21 shows how I linked research insights with each other to understand this complex matter of values.

3.1 Decision making when grocery shopping

There are two types of values: values as guiding principles and values as qualities with worth. The relative importance of multiple values guides action, but people are not always aware of them. When going grocery shopping there can be multiple reasons not to act according to health and sustainability related values. This section explores the concept of values, how they influence intentions when grocery shopping, and the value-action gap.

3.1.1 Values and value hierarchies

The term value, or it's plural values, is one that is "widely used but barely understood" (den Ouden, 2012). In day-to-day discussions usually no distinctions are made in the definition, but in literature there are two main perspectives towards values. These perspectives are 'values as ideals' versus 'values as worth' (Martinsuo et al., 2019). To make the distinction, (Boradkar, 2010) links the plural form 'values' to ideals versus the singular form 'value' to worth. As a designer it is important to consider both because designers are usually in a process in which they design for divergent values (Bos-de Vos, 2020). The integrative values framework proposed by Bos-de Vos serves as a theoretically informed basis to understand values from different fields of study.

Values as guiding principles

Considering values as guiding principles of individuals and groups, they are the things which are important to us in life. The importance of each value can be

different to individuals. In his original Theory of Basic Values, Schwartz (1992, 2006a, 2012) describes six main features of values:

1. Values are beliefs that are linked to **affect** (feelings)
2. Values refer to **desirable goals**, they motivate action to pursue these goals
3. Values **transcend specific actions and situations**, and are therefore relevant in multiple situations
4. Values serve as **standards or criteria**; people can guide decisions based on the consequences to their values
5. Values are **ordered** by importance relative to one another
6. The **relative importance** of multiple values guides action

So, values influence an action when they are relevant in the context, and important to the actor. Values can compete, and in many situations form a trade-off. Therefore, an action might be in line with one value, but competing with another. In this way value hierarchy guides attitudes (positive or negative views of something) and behaviours (Schwartz, 2017).

Value as a quality with worth

Considering value as a quality with worth, it entails that which a design provides. For people this can be use value, social value, and economic value. For the planet this can be ecological or environmental value (Bos-de Vos, 2020). It seems odd to consider value for the planet not to be something that brings value to people as well. Traditional product design usually is

aimed at creating use and economic value for customers, investors, employees, and partners, but sustainable business models should also consider the environment and society as stakeholders (Bocken et al., 2013). In the process of creation of value, other value can also be destroyed. Environmental damage and negative social impacts are examples of destroyed value in a sustainability context (Bocken et al., 2013).

Values influencing action

For the context of food shopping, both values as guiding principles and value as a quality with worth can be considered. Values as guiding principles are important to understand because they can influence action. Some of the motivational goals listed by Bos-de Vos seem, at first glance, not to relate to the decision for a food product. The value examples help to put these in situational perspective. Let's take the example of embeddedness. A value example given there is respect for tradition, which in the case of food consumption might translate to not wanting to change a recipe from your grandmother, or always eating turkey when celebrating Christmas. Although

people might base many of their attitudes on their values, they might not be able to explain well why it is important to them. This is supported by the concept of seeing values as truisms: beliefs that are rarely questioned (Maio & Olson, 1998).

Apart from being rarely questioned, people are also not always aware of their values. Values enter awareness with conflicting implications (Schwartz, 2017) so in situations where the consequence of an action might support one cherished value but counteract another (figure 22). Cognitive dissonance can occur in specific situations, when being aware of choosing to act on a value that contradicts another value (Steele, 1988). This is a displeasing feeling that people generally try to avoid.

To summarize, values influence an action when they are relevant in the context and enter awareness with conflicting implications.

Takeaway

Values exist in a hierarchy, where some values are stronger than others in certain contexts.



Figure 22 - Value conflict example; plastic wrapped bio or non-wrapped non-bio product

3.1.2 Intentions when grocery shopping

What is known about which values are relevant in the context of grocery shopping? Grocery shopping is a way to meet food consumption needs by acquiring products in exchange for money. As shown in chapter 1, a large part of what Dutch people eat is bought through food retailers. Most groceries are bought in brick-and-mortar stores, which hold many different products to choose from. Some customers come prepared and know exactly what to get, others decide inside the store. Besides the practical aspect of meeting food consumption needs, grocery shopping can also add to people's sense of self and identity, by choosing where to shop and what to buy (Woodruffe-Burton & Wakenshaw, 2011).

Theory of planned behaviour

When making choices for products at the retailer, there can be many aspects to consider and only a short amount of time available to do so. Multiple decisions need to be made, once or multiple times per week. The theory of planned behaviour (Ajzen, 1991) can help to understand how people develop the intention to perform an action or behaviour. The stronger the intention, the more likely the behaviour will be performed. What influences the intention under consideration are the **salience of the attitudes** towards the behaviour (does it yield a favourable or unfavourable outcome?), **subjective norms** (what do others think about it?), and **perceived control** over the behaviour (can I do something about it?). The following paragraphs explore each of these in the context of groceries.

Attitude toward the behaviour

Attitudes are usually guided by values. Because people typically do not possess strong cognitive support for their values (Maio & Olson, 1998), they may fail to access reasons for why they have a certain attitude spontaneously when it is challenged, which will reduce the impact of the value on the behaviour.

More behaviour according to values can normally be supported by making the value more rational and concrete with reasons. Those reasons might be strong or weak but if they are personally compelling, they can be effective (Maio et al., 2001). Increasing awareness of sustainability in the context of food consumption however has limited effect on more sustainable shopping. Many people do groceries after their working day, or together with young children, and such situations indicate a low capacity to engage with deliberate decision-making processes (Baumeister, 2002) (Figure 24). Furthermore, the busy context of a

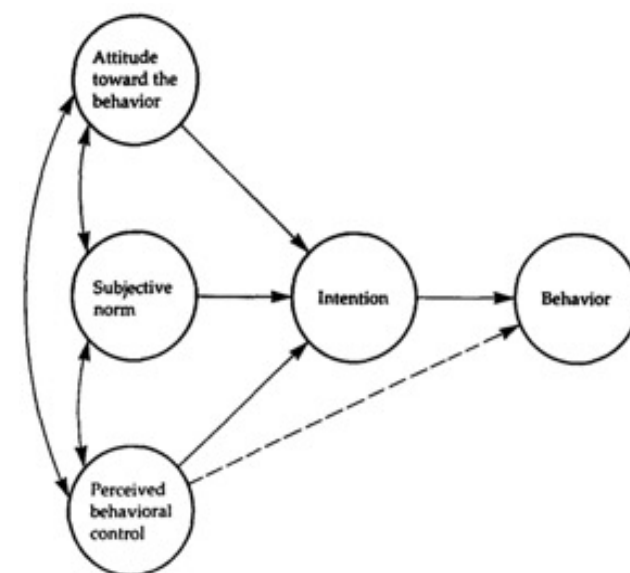


Figure 23 - Value conflict in supermarket; plastic wrapped bio or non-wrapped non-bio product



Figure 24 - Busy supermarket context. Especially during the pandemic, people do not want to stay there for long. Photo by Herman Stover

store plays a role in stress experienced when grocery shopping (Aylott & Mitchell, 1998). In brick-and-mortar stores, decisions for buying food products are influenced by this context.

Assessment on whether a product meets the shoppers needs can be made on multiple aspects, but rely mostly on quick, automatic thinking with little mental effort, also called System 1 thinking. It steers for habitual decision-making, where people rely on contextual cues and heuristics (Kahneman, 2011). The contextual cues and heuristics used for decisions made by System 1 could be altered to impact behaviour (figure 25). An alteration of the contextual cues could for example be a redesign of the choice architecture like price promotion, number of choices, branding, product placement, and more. Room could also be made for System 2 thinking, which is more analytical and thorough (Kahneman, 2011).

Subjective norms

Normative beliefs are the perceived social pressure to perform or not to perform the behaviour. They are set by the belief of whether important others in someone's life would approve or disapprove of their performing a given behaviour (Ajzen, 1991.) Subjective norms can be split into descriptive norms and social norms. Descriptive norms, otherwise called group norms, are behaviours and activities that others are undertaking. Social norms, or otherwise called injunctive norms, are what an individual perceives as how others expect them to behave (Ham et al., 2015).

Both descriptive and social norms have been found to significantly influence whether people intend to make more

green food purchases (Ham et al., 2015) and sustainable and organic food purchases (Vermeir & Verbeke, 2006). These are however not always explicit or apparent when grocery shopping.

Perceived behavioural control

The more resources and opportunities individuals believe they have, and the fewer obstacles that are anticipated, the greater should be their perceived control over the behaviour (Ajzen, 1991). Money is the most important resource for buying groceries in store, but the amount of time available, the offer of the store and access to stores can also influence the perceived control people have over what they can buy.

When looking at sustainable groceries, perceived control here can mean whether people can identify what is more sustainable, as well as whether they have the money to pay for them. Furthermore, the perceived control on sustainability issues is generally low (White et al., 2019), which influences the self-efficacy people feel over these issues. Self-efficacy is described as the perceived ability to achieve desired outcomes through actions (Hanss et al., 2016). This means that it can feel as if one's purchasing decisions do not impact what they find important. When studying self-efficacy in this context, Hanss (2016) found that believing one can have an impact on other consumers is a strong motivator for buying sustainable products.

Takeaways

- A lot of shopping behaviour is habitual: customers can be supported in forming new habits
- It can help to adapt the context of the store to show the right information fitting with the desired behaviour, so customers can still rely on heuristics
- Finding a different moment for customers to consider reasons for their values other than during the busy moment of shopping can help
- Communicating about the norm of behaviour during grocery shopping can be effective
- Believing one can have an impact on others can be a strong motivator for acting sustainably



Figure 25 - Context alteration at AH to appeal to the value of benevolence (fairness, equality)

"DANKJEWEL!"
WARM GLOW
EFFECT



SELF-AFFIRMING
"HERO"

Figure 26 - Holle bolle Gijs thanks kids for throwing away trash. Image by Efteling
Figure 27 - Holie granola regreens land, and makes the customer the hero. Image by Holie

3.1.3 The value-action gap

A value-action gap or intention-action gap can exist in the context of sustainable grocery shopping because of the low capacity for decision making and the low perceived control people have mentioned in the previous section. Therefore, people can simultaneously value the environment and their health but might not always support this in the actions they undertake. To create room for more pro-value behaviour therefore, steps can be taken to overcome this gap.

SHIFT (White et al., 2019), a framework for shifting consumer behaviour to be more sustainable, proposes that consumers are more inclined to engage in pro-environmental behaviours when the message or context leverages the following psychological factors: Social influence, Habit formation, Individual self, Feelings and cognition, and Tangibility. For all these factors they propose strategies to use.

They further suggest that before using the framework, **understanding must be gained about the behaviour, context, intended target and the barriers and benefits associated with the behaviour.** This approach will be especially useful for the research and design phase of this project.

Takeaways

The presence of SHIFT factors make consumers more inclined to perform sustainable behaviour.

Especially interesting might be:

- Grocery shopping involves many choices: Reward small milestones to avoid green fatigue
- Changes can be made when creating a new habit altogether (first-time customers)
- Create immediate warm glow feelings of positive affect: right after performing a behaviour (Figure 26)
- Highlighting the self-affirming concept of grocery shopping: what do your products say about you? (Figure 27)

> The insights from this section are mostly on shopping in general. The next section dives into the opportunities there are for overcoming the value-action gap specifically for online grocery shopping.

3.2 The position of online groceries in overcoming the value-action gap

As illustrated in the introduction, the fact that Picnic is an online grocery store already brings many differences in the design and operations. The following subchapter explores what is known in literature about buying intentions and behaviours for sustainable grocery shopping specifically for online grocery stores. Thereafter, some studies and what can be learned from them on interventions in the online grocery domain are discussed. They give some direction as to effective and ineffective ways of enabling Picnic's customers towards a food-transition-friendly way of eating. Further research into the potential of supporting the food transition through online grocery shopping specifically for the Dutch Picnic customers will be necessary to design effective interventions.

3.2.1 The experience of grocery shopping

Not everyone has adopted online grocery shopping yet. It provides a different experience from going to a brick-and-mortar grocery store. As explained by Brand et. al (2020) "shoppers might be attracted to or repelled from online shopping for reasons of convenience, perceived benefits, costs and risks, technology affect, time pressures and fit into daily schedules (perceived behavioural control), as well as social and environmental dimensions of personal norms and beliefs." A distinction is made by Pitts et. al. (2018) in motivators and barriers for online grocery shopping:

Takeaways

Motivators for online grocery shopping:

- convenience
- physical constraints
- children (both adults working)
- peaceful experience
- monitor spending
- planning opportunities
- multitasking
- avoiding crowds

Barriers for online grocery shopping:

- inconvenience of waiting for delivery
- delivery fee
- orders not filed appropriately
- inadequate/inappropriate substitutions
- fresh produce hesitance

These motivators and barriers already show some potential for overcoming the sustainable grocery value-action gap like a peaceful experience, but also pitfalls for enlarging the gap like hesitance over fresh produce. Digital technologies for food provisioning are often proposed as solutions to developing a more sustainable food system (Heidenstrøm & Hebrok, 2022), but there is limited information in literature on how the difference of doing online groceries influences the value-action gap for acting in line with all aspects of the food transition. There is a still need to better understand the potential as well as the problems (Choi & Graham, 2014).

There are however some promising insights from both a health and sustainability point of view. A few studies have already been done around

interventions in online buying behaviour. The following section shows some of these studies.

3.2.2 Takeaways from studies on promoting healthy and sustainable online shopping

Ways to change behaviour that have been tested in research setups are on decoy nudges, middle bias nudges, descriptive norms, tailored messages, salience nudges, basket carbon goal setting, and labelling. Many more interventions are possible, these studies provide some founded knowledge on a few interventions in this domain.

Health studies

Labelling strategies

According to Pitts et. al. (2018), reduced unhealthy impulse purchases might be possible. Nutrition labelling strategies for healthy food could be supportive in making healthy choices, as well as overcoming food access limitations for less mobile people. They also outline some downsides like the hesitance to purchase fresh produce online, unhealthy prompting from the previous purchases page (buy once as treat, see more often, and build an unhealthy habit), and the grocery shopping ease which could lead to over purchasing and therefore overconsumption. Furthermore, they show the impact of shopping through a screen. First-screen products online are more likely to be selected, and customers are more likely to purchase food items that are closer in proximity to focal items.

Takeaway: Nutrition labelling strategies are promising, unhealthy prompting should be tackled

Targeted messaging

Adaji et al. (2021) researched targeted messages to make consumers buy healthier products, as part of a game. Adaji's research showed that players change their behaviours effectively when reading messages that were tailored to them. After the participants filled out questions on their personality and their previous shopping behaviour, they were characterized. People who like authority were provided with a message that would be from the Ministry of Health, whereas people who value their friend's opinions were presented with recommendations based on their friends' choices. The study found that the targeted messages were twice as effective as more traditional messages about healthy eating.

Takeaway: Personality targeted messages are effective

Attention and price nudging

Hoenink et al. (2020) researched salience nudging and pricing effects in a randomized trial with a virtual supermarket in the Netherlands. Salience nudges are nudges that draw an individual's attention towards a particular option. The combined effect of salient price increases for non-healthy products and discounts for healthy products increased the percentage of healthy food purchases. The effects were not modified by social-economic positions. Nudging and non-salient pricing strategies alone did not statistically significantly increase healthy food purchases.

Takeaway: Salient price increase for non-healthy products and discount for healthy products increase healthy purchases

Sustainability studies

Alternatives nudging

A study from the Radboud University (Fechner & Herder, 2021) explores digital nudging for more ecological supermarket purchases. Digital nudging means to steer consumer behaviour in a direction through the user interface. They show that digital nudging can have an effect of more sustainable buying behaviour in the context of meat and meat alternatives. The digital nudges used are a decoy nudge and a middle bias nudge. A decoy nudge is where two options are presented, and the addition of a third option makes one of the others much more attractive. A middle bias nudge is where three options are provided, where there is one that is in the middle of two extremes. The results show the effectiveness of direct comparison and pro-active suggestions in the moment of choosing. Another interesting insight from this paper is that removing price from the equation makes people steer towards more sustainable alternatives without nudges. In the price-less situation, the middle-option nudge managed to convince participants to choose an even more ecological, vegetarian alternative.

Takeaway: Message timing is important, direct comparison and proactive suggestions are effective, price is a hurdle for sustainable shopping

Social norms

Demarque et al. (2015) researched how descriptive norms can be used to enhance pro-environmental behaviour in an online shopping environment. Nudging was achieved through using eco-labels, which are based on social norms. The research showed that when participants were presented with strong formulations

of descriptive norms, they purchased more eco-labelled products than participants from the control group. These descriptive norms looked like: "For your information, 70% of previous participants purchased at least one ecological product" The outcome suggests that green consumption can be described in a way that sustainable consumption in an online shopping environment can be stimulated.

Takeaway: Social norms descriptions can stimulate sustainable consumption

Goals and labelling

Kanay et al. (2021) have researched multiple carbon labelling strategies in online grocery purchase simulation. Their outcomes suggest that basket goal setting techniques with feedback can reduce the carbon footprint of online shopping baskets and facilitate learning about product carbon footprint. Numerical or graphical carbon labels without goal setting did not have a significant effect. The use carbon footprint in the basket suggests that "mental accounts" can be constructed for decision making that enable consumers to manage their carbon budget. They do this for example by compensating high carbon footprint options with low ones.

Takeaway: The basket is an effective place for setting goals, learning can happen with repeated use of online grocery shopping

3.2.3 Implications for this project

To summarize this literature exploration, grocery shopping is a highly habitual practice where people do not always act on their biospheric values: this is called a value-action gap. The theory of planned behaviour shows this could be because of low cognitive support in the busy supermarket context and low perceived control.

Online grocery shopping already is more thoughtful because it calls for planned behaviour. It can therefore however become cognitively more challenging than going to a brick-and-mortar store. It might also be harder to make changes, since repurchases are promoted through the "previously bought" page. The ease of delivery might also cause more buying and therefore more consumption. Planning groceries can however help to reduce impulse buying.

The takeaways from studies in this field give some direction for different ways of enabling Picnic's customers towards a food-transition-friendly way of eating. These takeaways will be used in the idea generation phase.

Further research amongst Dutch Picnic customers is still necessary to understand all the values that are at play when grocery shopping online, and which hurdles are present in the service to foster the food transition. There are also currently no design guidelines to be found to support designing for this transition in this context.

A direction for this research exploration can be taken from Heidenstrøm &

Hebrok (2022), who have studied the sustainability potential of digital food provisioning in Norway. They conclude that it has the potential to change household food consumption in a more sustainable direction, but that in their current form they are not fulfilling this change potential in a significant way. They suggest **focusing on values that are important to consumers** such as convenience and efficiency, acknowledging the interrelatedness of food handling practices (e.g., planning, storage, cooking) and improving existing scripts (set interactions) and interfaces of the services. This is in line with the focus of this graduation project.

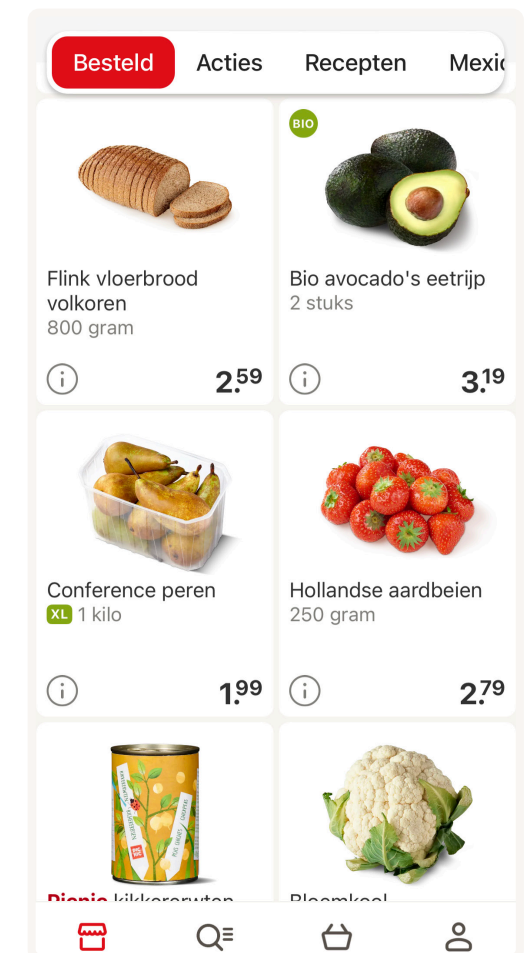


Figure 28 - Enforcing habitual behaviour: Picnic's "besteld" or previously ordered page

chapter 4

Exploration of grocery values

Summary

An exploratory study is conducted to get an understanding of what values play a role when online grocery shopping. The aim of this study is to uncover these values, what the value-action gap looks like for sustainable grocery shopping, and to grasp what needs to be done to overcome this gap. There are hurdles that stand in the way of acting according to the values, and opportunities in those hurdles that are specifically interesting for Picnic. By looking at the values in-depth and analysing what other companies do to cater for these values, an approach is chosen to overcome the hurdles.

Content

The chapter starts with an introduction to the research setup, analysis, and results. The results are then presented in two frameworks: one with hurdles, and one with values when grocery shopping. Finally, an approach to overcome these hurdles is suggested that is used as a basis for the design statement in the following chapter.

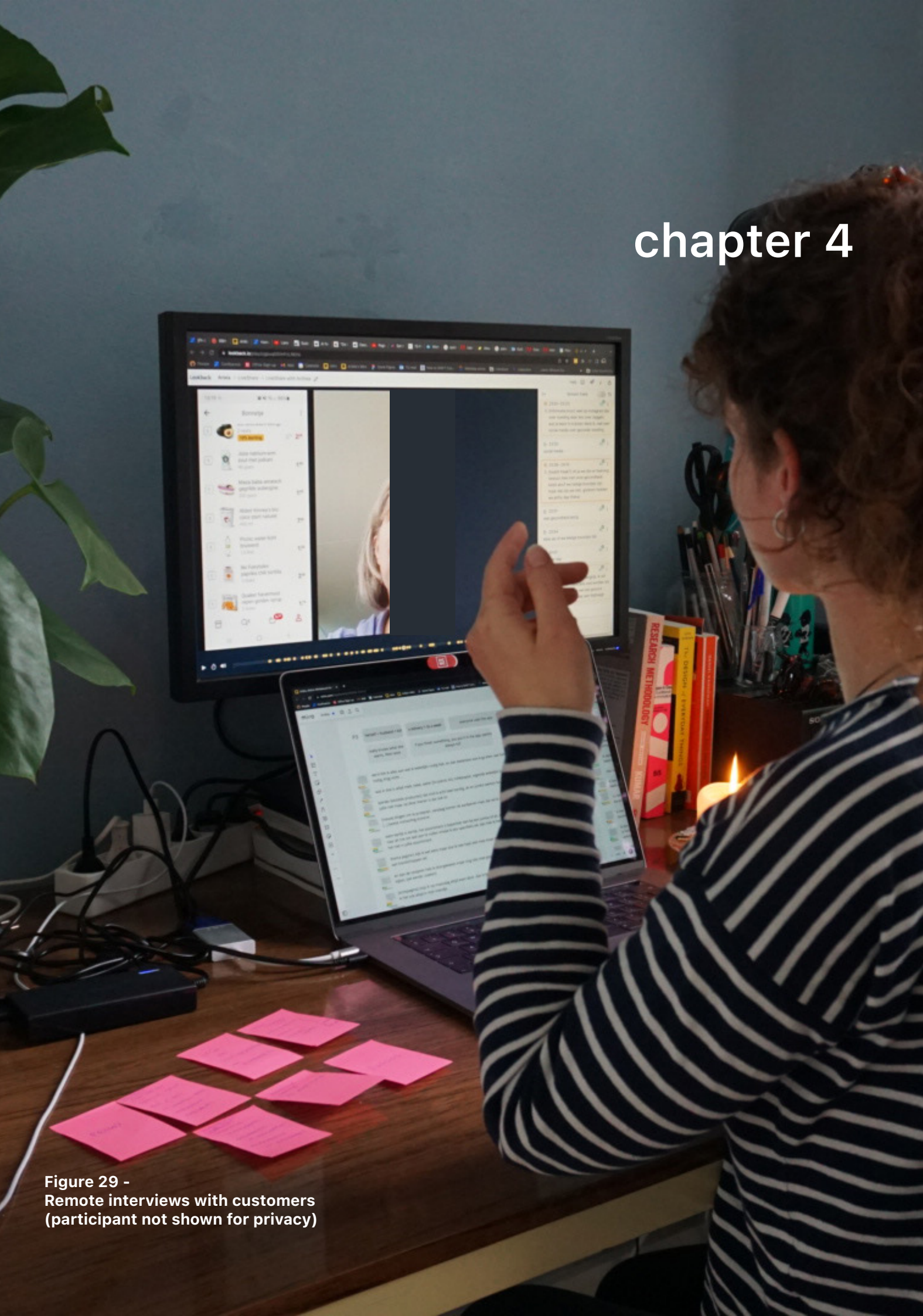


Figure 29 - Remote interviews with customers (participant not shown for privacy)

4.1 Explorative research

This explorative research is carried out to answer the following questions:

1. What values and attitudes do customers currently have when grocery shopping?
2. What kind of challenging decisive situations do customers currently face?
3. Which hurdles do customers face in acting in line with sustainability values?

I first considered a co-shopping experience in different brick-and-mortar shops to answer these questions, with the assumption that it is easier to see moments of hesitation in a real-life environment. This is a method that has been used before (Reichs, 2003, Wingert, 2014) to analyse decision making in supermarkets. After running a trial with a friend, I made the decision not to use this method. My physical presence during the trial made the participant reconsider decisions instead of acting intuitively.

Furthermore, in the discussion after the co-shopping, the participant did not flag their own behaviour of buying packaged food while voicing an aversion for plastic packaging. In conclusion, to understand the current buying behaviours, co-shopping in a physical store might have too much effect on natural behaviour. However, shopping together with someone might be a tactic of slowing down the decision-making process to allow for more value-based choices.

The research is therefore held with Picnic customers through an online interview tool. This format enables seeing natural behaviour without being physically present.

Assumptions present before starting the research are that consumers in most situations do not consciously experience doing groceries as value-challenging because they are driven by habit, but some decisions might have value trade-offs which can uncover the underlying values. Some values might act as requirements which have to be met, while others are more like wishes which are preferred but not necessary.

To ensure a complete overview of what values could be at play, a list of aspects considered important when purchasing food by Gonera et al. (2021) is used as a checklist. These aspects are:

- Great taste
- Price
- Fresh
- Healthy
- Nutritious
- Easy and fast preparation
- Familiarity
- From the Netherlands
- New / exciting flavour
- Animal welfare
- Locally produced
- Long shelf life
- Environment / climate
- Organic

4.1.1 Method

Six semi-structured interviews are conducted of 45 minutes with informal use of the laddering technique, a semi-structured research technique that can be used to uncover values (Miles & Rowe, 2008). The interviews are held remotely on a time when customers would usually do their shopping, through a software called Lookback. In this way, participants screen, audio and camera can be recorded. I ask participants to introduce themselves, then do their normal shopping while thinking aloud. I then go into questions about specific choices, previously bought items, and the checklist of possible values.

The first interview is approached as a pilot to judge the invasiveness of the method. Shopping along in this situation indeed seems less invasive than in a physical supermarket, because the participant does not see the researcher while doing their shopping. The pilot can be included in the results because no changes had to be made to the interview guide. See Appendix 4 for the full interview guide.

4.1.2 Analysis

The steps of the analysis of insights:

1. Rewatch and transcribe in the Lookback software. Highlight for interesting moments and quotes.
2. All highlighted quotes are collected on post-it's on a Miro board, labelled (according to which value they describe, whether they describe a product or service attribute, whether they pose a dilemma, what type of quote it is and respondent number)
3. All post-it's are clustered according to their labels and mapped out on relatedness by proximity of clusters.
4. All clusters have been sub-clustered with descriptions. All clusters that do not explicitly describe a value have been linked to one or multiple values.
5. Clusters and sub-clusters have been linked, and hurdles have been identified for acting in line with these values from a customer perspective.

For privacy reasons, participant details are hidden in the results.

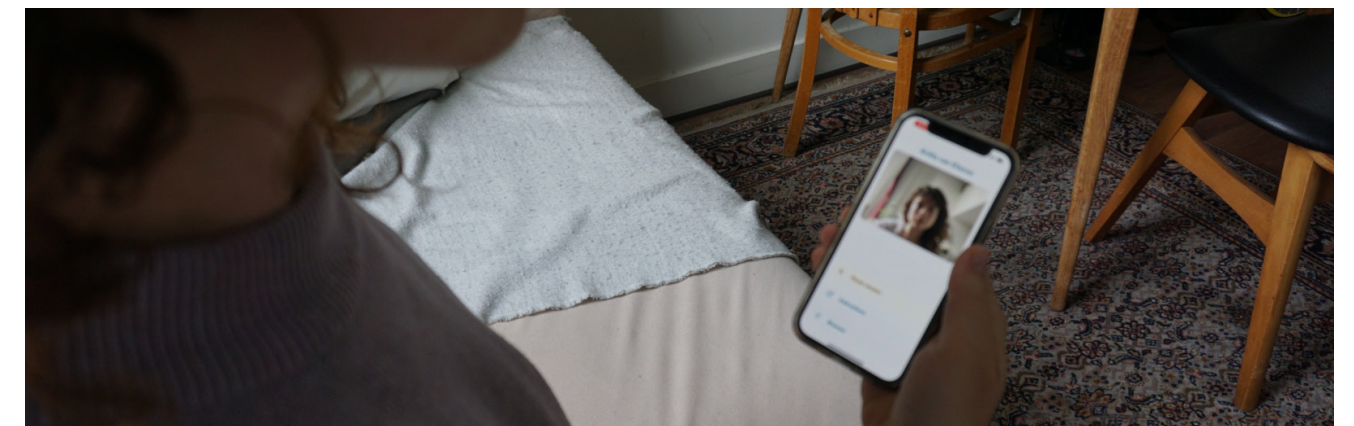


Figure 30 - Customers can participate on their phone and walk through their own Picnic app

4.1.3 Results: hurdles to overcome

All interviewed participants are in some way working on either their health, the environment, animal welfare or fair production. Some seem more proactive in this, where they actively search for information, and some are more reactive, where they sometimes try something new or make small changes.

When looking at their overall basket, and seeing this confirms what they want to accomplish, the participants talk about this in a positive way (e.g., A basket of someone that wants to eat healthy that does not contain any sweets). When there was a mismatch, participants tried to explain this and make up for it (e.g., A basket with little fresh produce, where the customer was explaining that it's not usually like that).

On product level, important aspects for basing decisions on are packaging, ingredients, labels (like organic, animal welfare etc.), price, size, quality, origin, taste, brand, naturalness, health, and freshness. On service level, important aspects are convenience, ease, availability, information, inspiration, excitement, reflection, and promotion.

Dilemmas occur when there are conflicts in values. This can occur with for example plastic wrapped bio products, healthy/tasty products, unavailable products, doubts as to what is the best product, and expensive sustainable or more affordable non-sustainable products.

The hurdles that I have identified from the explorative research that stand in the way of acting according to their sustainability

values are grouped as follows and illustrated with translated quotes:

Lack of information

"It takes a lot of steps to compare products"
 "I don't have all the information"
 "I don't know what the quality label means"

Lack of confidence

"I don't know what is best"

Lack of consideration

"I never stop to think about it"
 "I don't always want to think about it"

Furthermore, there are some more fundamental blockages of doing more sustainable groceries. One is in the case of conflicting values, where sustainability values are hierarchized much lower than other values. Furthermore, a hesitancy towards change can inhibit people from having a strong positive attitude towards sustainability.

Other values more important

"I think it is important but other things come first"
 "I don't want to pay too much for it"

Hesitancy towards change

"Is it really that bad?"
 "I would rather stick with what I know"

These hurdles will not encompass all the hurdles that are present in the whole population of Picnic customers, and not every customer experiences every hurdle. They do provide a good basis for design, as tackling one or more of these hurdles will already be helpful in overcoming the value-action gap.

Figure 31 shows these insights in a framework to understand the value-action gap.

What opportunities are there specifically for online grocery shopping, and the strengths of Picnic, to overcome these hurdles?

And how to categorize the values important to grocery shopping in a higher-order values system, so they can be hierarchized and translated into design requirements?

The next two sections will go into these questions.

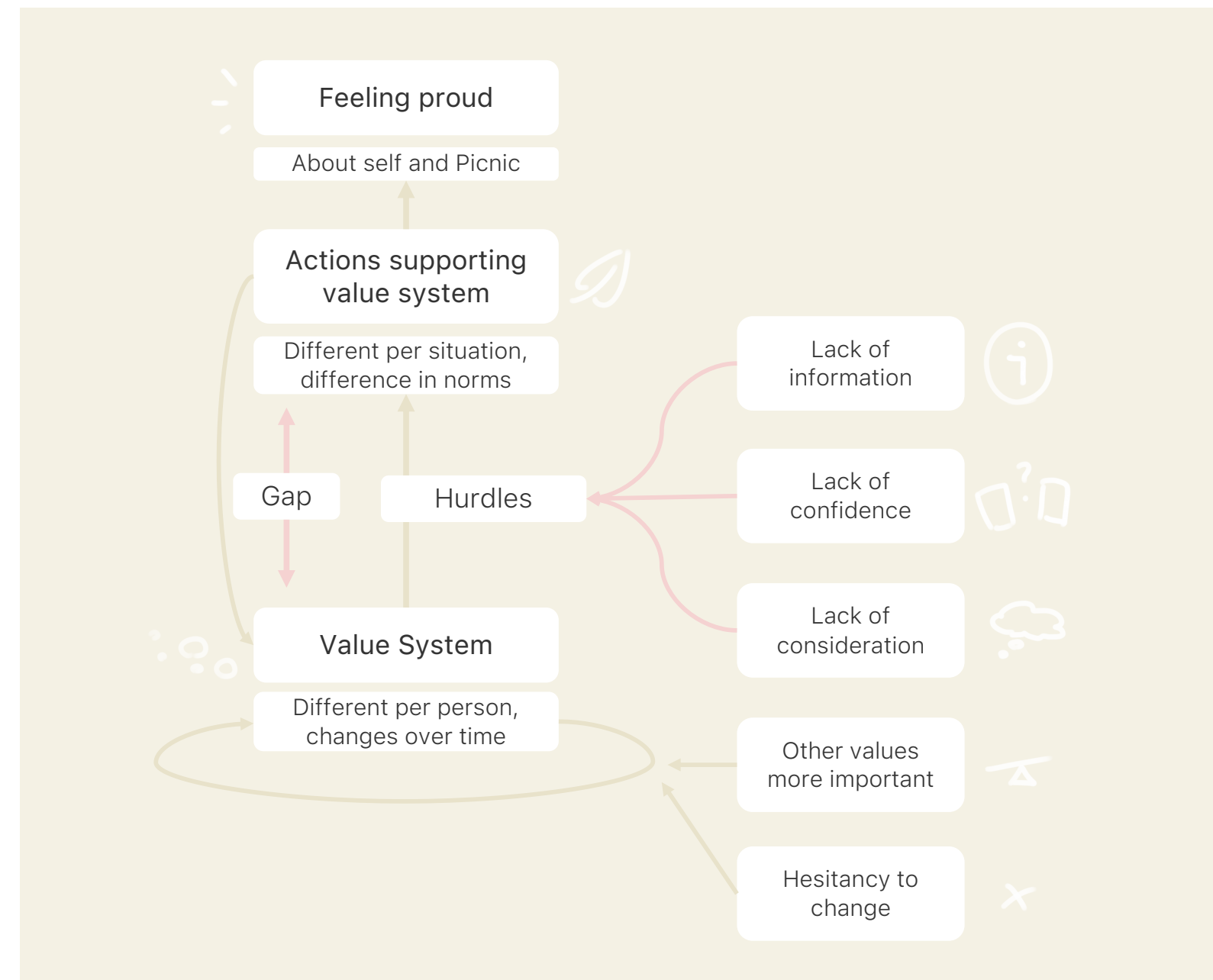


Figure 31 - Value-action gap framework

4.2 Opportunities for overcoming hurdles

Helping customers overcome these hurdles can let them perform actions supporting their value system, which can lead to feeling proud about what they contribute to with their groceries. The takeaways from the literature study and knowledge about Picnic help to make opportunities of these hurdles.

4.2.1 From hurdle to opportunity

Hurdle (rephrased as need) + an advantage of Picnic (being an online supermarket) + takeaways from research that support this = opportunity



Lack of information

A need for reliable and easily understandable and findable information that is applicable to the situation and comparable to other sources.

Advantage

It is easy to change what information to show in the app; many ways to apply and showcase information. The product database is all in one place. Private label products packaging information can be shaped.

Opportunity

Provide information, for example by helping customers to compare products effectively on attributes they value, or by setting a clear and transparent standard for products; 'the Picnic standard'.

These opportunities are used in a discussion with internal stakeholder at Picnic to understand their view on the feasibility of these opportunities. The main outcome from this session is that **there is an interest in finding opportunities that are feasible in the nearest future**, and the task therefore is to assess which of these opportunities fits that requirement.

Literature

- At-home context is different than in the supermarket: more rest to check information. It is a more peaceful experience (Jilcott Pitts et al., 2018)
- SHIFT (White et al., 2019) cognitive route for eco-labelling: attention, easy understandable, consistent across categories
- Lower the extrinsic mental effort: effort to extract the information and memorising (so change how is information presented) (Hollender et al., 2010)



Lack of confidence

A need for confidence in the self and in others, about what action a customer can undertake and which outcome it has for the future.

Advantage

Personalized communication and experience is possible; the store can be shaped to fit the user.

Opportunity

Provide appealing storytelling, for example by making the experience of shopping personal to individuals.

Literature

- Believing one can have an impact on other consumers is a strong motivator for buying sustainable products. (Hanss, 2016)
- SHIFT (White et al., 2019) Create immediate warm glow feelings of positive affect: right after performing a behaviour
- SHIFT (White et al., 2019) Highlighting the self-affirming concept of grocery shopping: what do your products say about you?



Lack of consideration

A need for a moment to consider sustainability values and be able to reflect on them, but on a designated calmer moment and not all the time.

Advantage

The app is always in the customers pocket and has possibilities for interaction at different moments. Certain features in the app can be switched on/off which is not possible in a physical supermarket.

Opportunity

Provide a moment for to consideration, for example by enabling setting goals before shopping and reflecting on grocery shopping and allowing for different levels of involvement.

Literature

- SHIFT (White et al., 2019) create tangibility by adding local and proximal impact: immediate consequences in the right environment
- Message timing is important, direct comparison and proactive suggestions are effective (Fechner & Herder, 2021)
- The basket is an effective place for setting goals, learning can happen with repeated use of online grocery shopping (Kanay et al., 2021)
- The busy context of a store plays a role in stress experienced when grocery shopping (Aylott & Mitchell, 1998).



Other values more important

A need for a way to close the conflict.

Advantage

It is possible to change what information to show and which products to highlight. Price discounts can be given.

Opportunity

Provide alternative ways to choose, for example by approaching the choice architecture differently to better reflect values instead of price, or by investing in making the most sustainable products the cheapest as well.

Literature

- SHIFT (White et al., 2019) Habit formation incentives: Pricing strategies help sell sustainable products
- Without considering cost, sustainable alternatives are selected. Price is a hurdle for sustainable shopping (Fechner & Herder, 2021)
- Unhealthy prompting should be tackled (Pitts et. al. 2018)



Hesitancy towards change

A need for a safe context in which a customer can experience something new, and what the change is like, so they feel like they can belong in the changed norm.

Advantage

Product database can allow for smart suggestions and swaps within someone's comfort. Information of buying behaviour by others available. There is room to provide background stories (from producers), recipes.

Opportunity

Provide comfort, for example by enabling customers to try new things easily, or by contextualizing products, recipes, or decisions.

Literature

- SHIFT (White et al., 2019) create SHIFT (White et al., 2019) Social identity match: Sense of identity from group, do what others do in a group
- SHIFT (White et al., 2019) Encourage desire for intangibles: not just what the product is but what it can bring you
- Experience goods can be harder to buy online, like fresh produce (barrier for online grocery shopping) (Julcott Pitts et al., 2018)
- Social norms descriptions can stimulate sustainable consumption (Demarque et al. 2015)

opportunity cards

1 Approach the choice architecture differently to better reflect values instead of price

Opportunity for conflicting values

Hurdles

- I think it is important but other things come first
- I don't want to pay too much for it

Picnic's advantages

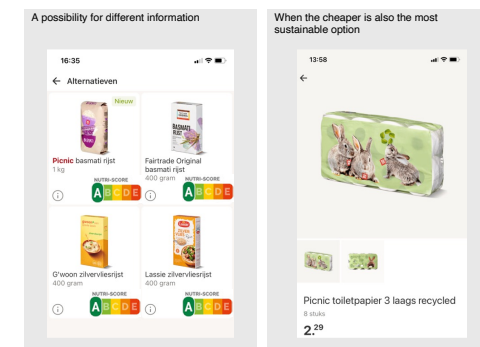
- It is easy to change what information to show on tile

Needs

- I feel good about choosing a (sustainable) product

Literature/Phenomena

- Pricing strategies help sell sustainable products
- Without considering cost, sustainable alternatives are selected
- Simplifying arithmetic activity (calculations) makes perceived cognitive load less



2 Enable setting goals and reflecting on grocery shopping

Opportunity for lack of awareness

Hurdles

- I never stop to think about it
- I think it is important but other things come first

Picnic's advantages

- Notification possibilities at the right moments

Needs

- I can reach my goals
- I can support [a value] through Picnic

Literature/Phenomena

- SHIFT to more sustainable behavior: Actionable, in control, takes it to now instead of far away, feedback possible

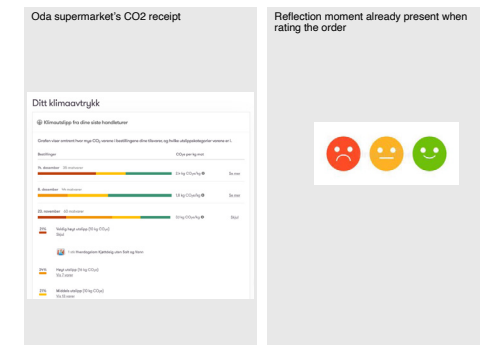


Figure 32 - Opportunity cards; for every hurdle I have created one or more examples

FIND ALL 8 CARDS IN THE APPENDIX

5 Enable trying new things

Opportunity for hesitancy towards change

Hurdles

- I would rather stick with what I know

Picnic's advantages

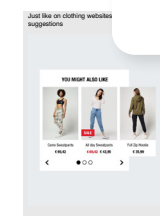
- Product database can allow for smart suggestions and swaps

Needs

- Picnic enables me to try something new

Literature/Phenomena

- SHIFT: habit formation disruption, make it easy



7 Help consumers compare products attributes they value

Opportunity for lack of information

Hurdles

- It takes a lot of steps to compare products

Picnic's advantages

- Product database all in one place
- Presenting information can be different

Needs

- I can find all the information I need
- I can easily compare products

Literature/Phenomena

- At home context is different than in the supermarket: more rest, quiet
- Intrinsic mental effort: complexity of the task
- Extrinsic mental effort: effort to extract the information (how is information presented)



4.2.2 Approach to overcome hurdles

The opportunities for overcoming the hurdles for acting according to values which support the food transition would all be useful to tackle. However, since this graduation project has limited time, a focus should be appointed to make sure there is enough time to make a good design.

To make the decision where to put the focus, the opportunities are considered on a timeline to indicate what can happen first. As much information on sustainability and health of products is currently not in the product database of Picnic, this still needs to be collected. Storytelling can be applied around that information, and comfort can come with storytelling. **These can all get a place in the shopping journey when provided with a moment to consider your values.**

This way of thinking helps to understand the starting point, but it also becomes apparent that information, storytelling, and comfort are intertwined. Therefore, they can be viewed to all come after providing the moment to consider values in the grocery shopping journey, without a time order.

Takeaway

The design direction decision therefore is to start by providing a moment, and make sure foundation is there so the other gaps can be overcome as well in time.



4.3 Value framework

To better understand the values when grocery shopping in relation to value theory, research from Van de Poel (2013) is used. He explains there are three basic layers in a value hierarchy: values, norms, and design requirements (figure 33). On the highest level are the intrinsic values. Norms can be properties, attributes, objectives, capabilities, etc. Design requirements are the most concrete layer. The layers are related in a way that lower layers are there for the sake of the higher layer. An example in chicken farming could be:

Value: animal welfare.
 Norm: enough living space.
 Requirement: 1100 cm² area per hen.

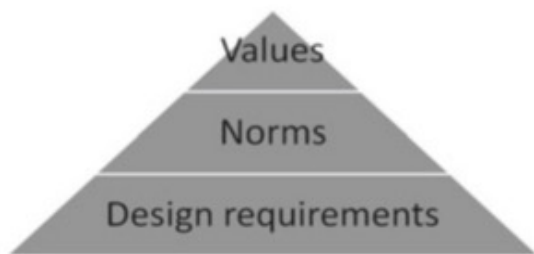


Figure 33 - Basic value hierarchy by Van de Poel (2013)

4.3.1 Specification of the grocery value hierarchy and design requirements

As found in the exploratory research, there are multiple aspects important for online grocery shopping both on product and service level. On product level, important aspects for basing decisions on are packaging, ingredients, labels (like organic, animal welfare etc.), price, size,

quality, origin, taste, brand, naturality, health, and freshness. On service level, important aspects are convenience, ease, availability, information, inspiration, excitement, reflection, and promotion.

Using the structure of Van de Poel about relating specification and for the sake of, the theory of basic human values (Schwartz, 2012) and the aspects found in the exploratory research, I have created a visual of the overview I currently have on values for grocery shopping (figure 34). Note that, as Van de Poel explains about this method, the exercise of creating this specification is value laden. This means that if someone else would create the overview, it would probably look different.

This framework shows an overview of different requirements that customers can have when shopping for grocery products, and under which basic value they fall. The values for a sustainable food future are mostly universalism, benevolence, self direction but also security. The values are presented in a circle, where opposing sides are opposing values (example: openness to change vs. conservation).

Takeaway

What can be concluded from this framework is that these opposing values can play a role when grocery shopping. When wanting to give more space to self-transcendent values, it is important to take away fear of losses on the self-enhancement side. The part of the value system which is relied most heavily upon differs per decision.

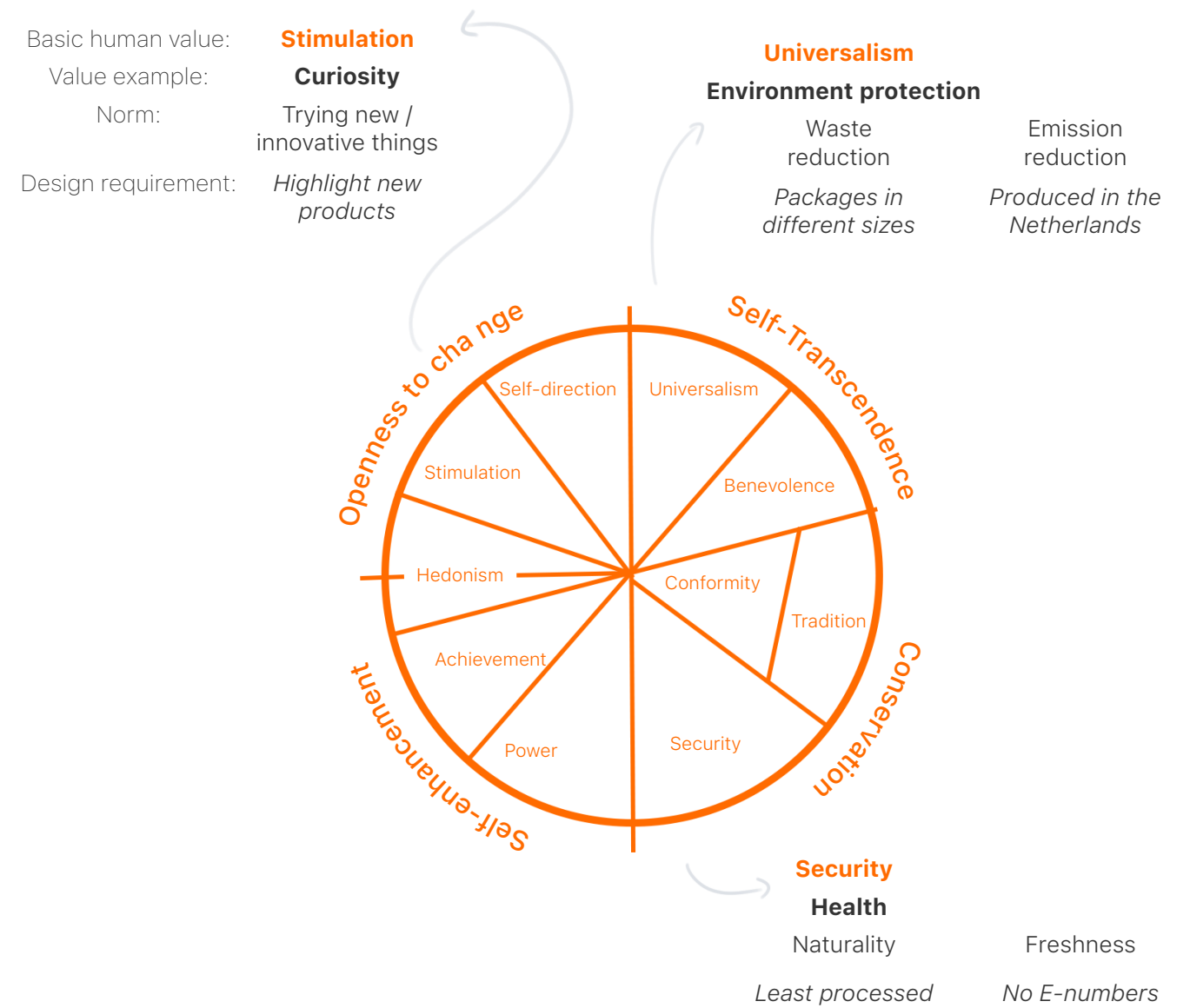


Figure 34 - Image of the value framework with a few examples / find the full framework in Appendix 6.

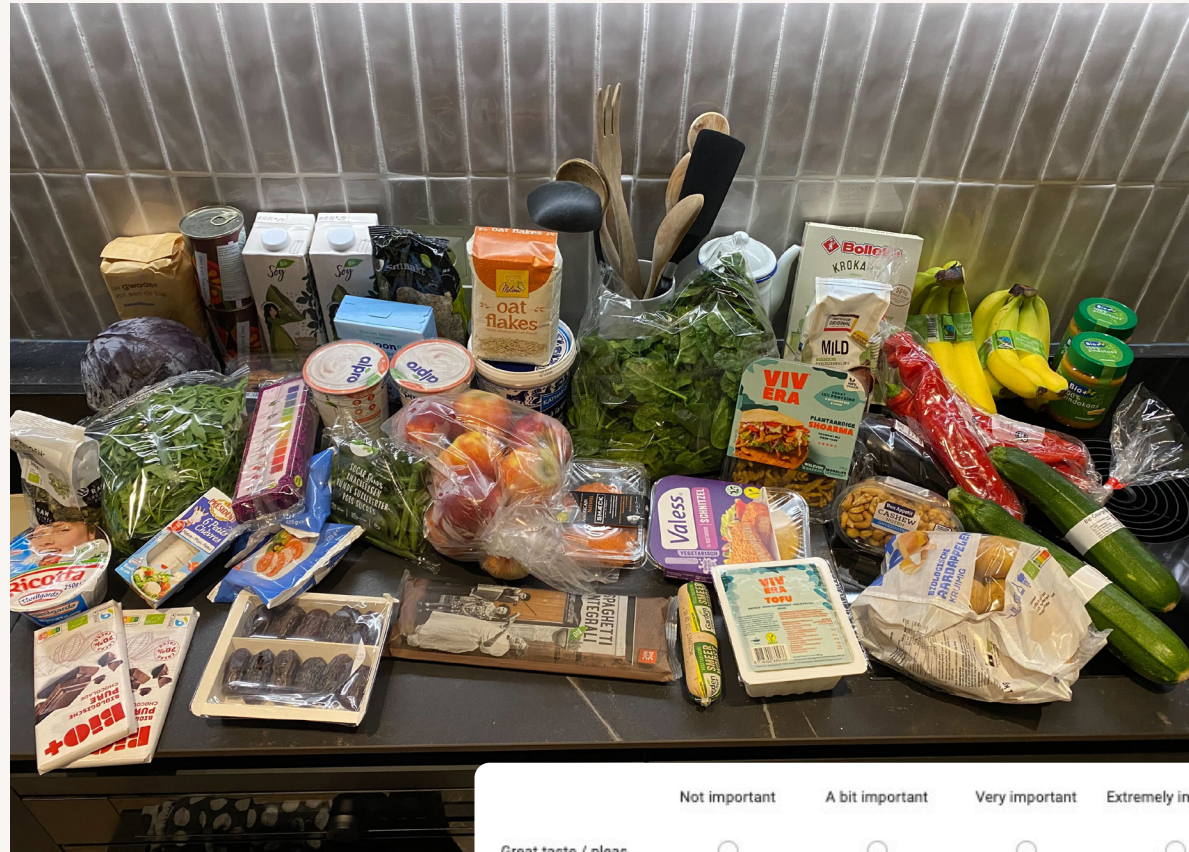


Figure 35 - Grocery delivery and google form

	Not important	A bit important	Very important	Extremely important
Great taste / pleas...	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Price / affordability	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Fresh	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Healthy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Nutritious	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Easy/fast preparati...	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Familiar products/...	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Produced in NL	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
New/exciting	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Animal welfare	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Locally produced	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Long shelf life	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Environment	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Organically produc...	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Creativity	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Status	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Fair production	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

4.3.2 Exercise of judging someone else's grocery cart

A fun team exercise with Picnic's UX design team is used to have a trial with some of these value descriptions. The goal is to find unclarities in the words used to describe grocery values and twofold it is an activation exercise to keep them involved in this project. The team is presented with one picture of an order of one of their team member's groceries, and one screenshot of another team member's grocery basket. Although the photo was meant to be anonymous, some team members had strong inclinations to whom the order belonged.

Takeaway

Generalized assumptions on someone's grocery cart can be made intuitively. Judging what someone else values from given values from a list takes more effort.

All team members were asked to, based on the grocery order, estimate how important a certain value was to the person whose groceries they were looking at. The results were collected in a google form.

In the discussion afterwards, the team indicated that for some values it was hard to judge their importance based on the groceries. Some were seen as overlapping (healthy/nutritious, local/produced in NL).

Furthermore, many conclusions were made in the discussion afterwards like "this person has a sporty lifestyle" and "this person is lazy" based on some individual products from the cart. This is similar to findings from famous research from the 1950's on projective tests, where people project parts of themselves and their thoughts when they try to make sense of something they see (Haire, 1950).

chapter 5

Design statement and interaction vision

Summary

With the chosen design direction, and more knowledge on values when grocery shopping, a design statement can be formed that describes what will be designed, for whom, and which type of behaviour and feeling the design should communicate. The interaction vision defines what interaction is needed between the user and the product, so the desired behaviour can follow.

Content

First, the design statement is described. Then, the interaction vision is illustrated with images.

5.1 Design statement

The design statement for this project encompasses multiple aspects: a change to be made in society, the behaviour that is needed to accomplish this change, and the feeling this behaviour will induce. Therefore, I will first describe these separately before they come together in the statement.

Social statement

I want to help enable a faster food transition, and therefore I want people to do their groceries more according to their values that support this. These are values concerning sustainability, health, animal welfare and fair agricultural economy.

Behaviour

Provide a moment for awareness for personal values and the link to groceries, by enabling defining those as intentions and reflecting on them at moments of grocery shopping.

Feeling

When acting more according to values, a good or even proud feeling can exist of someone's achievements, and people can express their identity better through acting on what they think is important.

Therefore, the design statement is as follows:

“ I want to design an experience for Picnic customers who have values in line with the food transition but do not fully act upon them, by providing them with a moment to reflect and adapt so they can become proud of their actions.

5.2 Interaction vision

This moment to reflect and adapt should not be forced into every moment of the shopping journey, just as you don't constantly consider your goals in your life. To shape this interaction more, an analogy is proposed to consider what the interaction should feel like.

Analogy

Like celebrating the new year and setting resolutions

The analogy is chosen to show an overall moment of reflection and celebration that is always welcome. It's a moment to look back and forward and celebrate what you have achieved, usually in the company of friends or relatives whom you trust and make you feel welcome. Of course, this moment is something that happens only once a year, but the interaction vision does not limit but only inspires the design interaction.

Interaction qualities

The interaction qualities that can be taken from this are:

- Cheerful
- Rewarding
- Refreshing
- Welcoming

This design statement and these interaction qualities will be the starting point for the iterative design process which is explained in the following chapter.

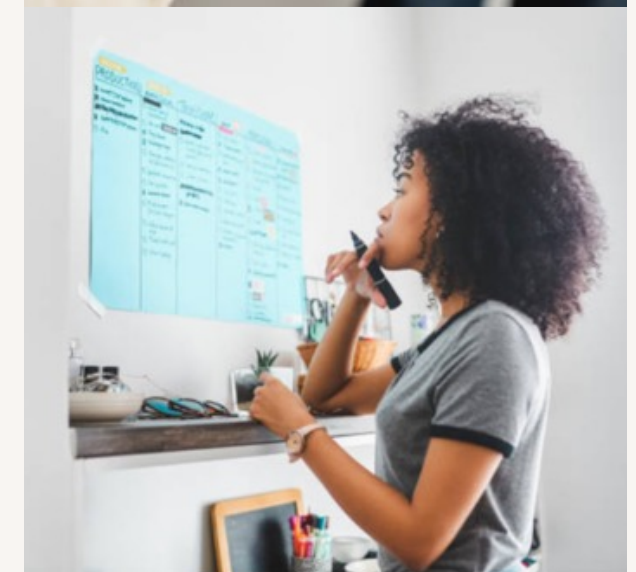


Figure 36 - Images that fit the analogy (from Unsplash)

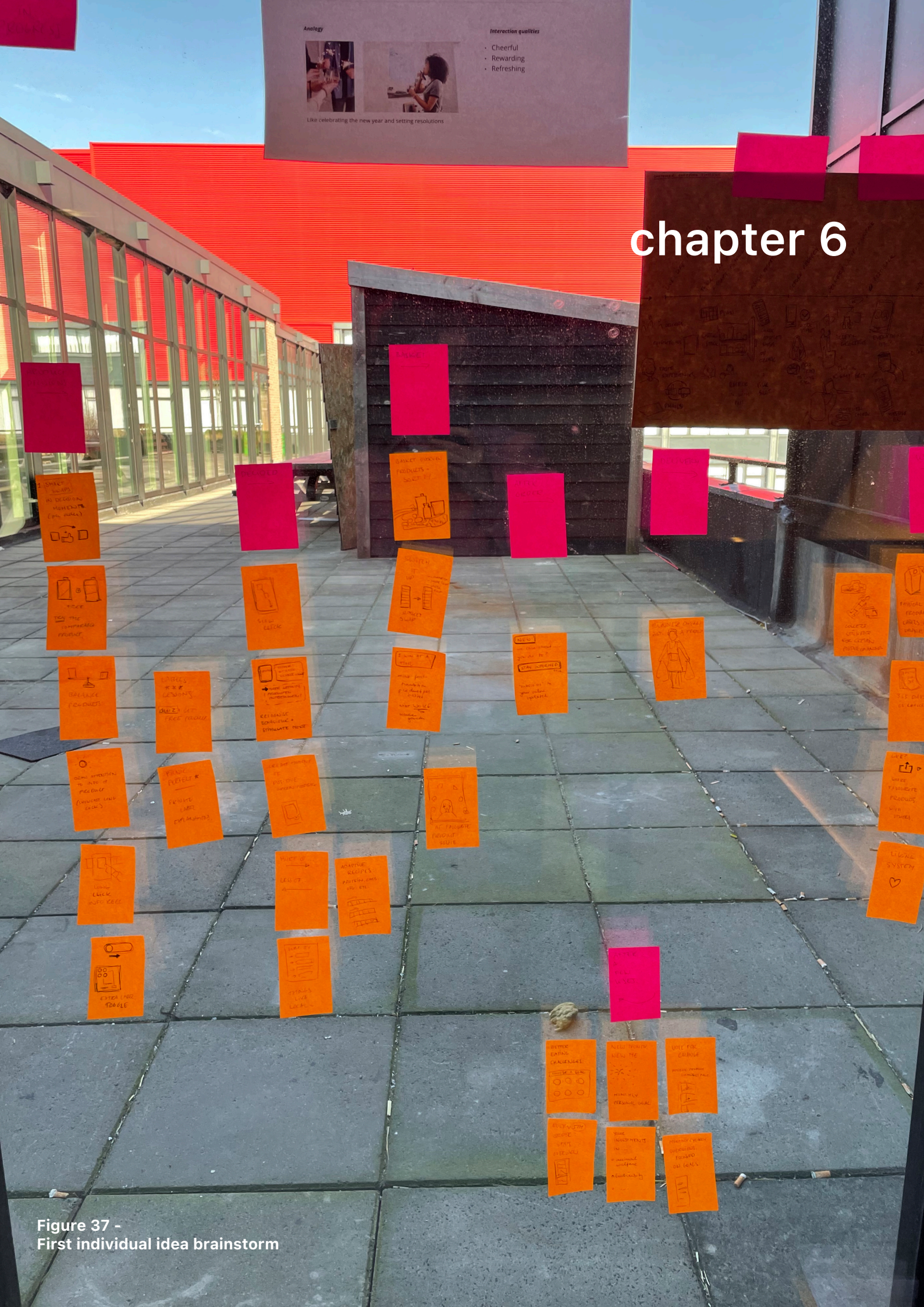


Figure 37 -
First individual idea brainstorm

chapter 6

Iterative design process

Summary

To design an experience for Picnic customers that allows for the desired behaviour an iterative design process is used. This process consists of three cycles of synthesis, simulation, evaluation, and decision. In the first cycle, there are still many ideas to learn about how design interventions in this field could work. In the second cycle, there is a focus on one design flow where a goal can be set. In the final cycle, this flow and concept are perfected to best fit the expectations of the customer and the integration within the existing user touchpoints.

Content

The chapter contains three subchapters which correspond with the three design cycles.

6.1 Iteration 1 / Many ideas

First, a few best practices from other companies on sustainable consumption are shown. Then the ideation phase, where I generated many ideas along different points of the shopping journey. I have clustered these and selected which to work out further. 14 ideas remained, which are worked out as visuals and used as provocative stimuli to learn from. Some design guidelines are drawn from these.



- Setting standards for the basic products; more sustainable is but not more expensive at IKEA (veggie dog is cheaper than the hotdog)



- Rechtstreek: where customers can also become part of the movement by opening their own pick-up locations

6.1.1 Best practices from other companies

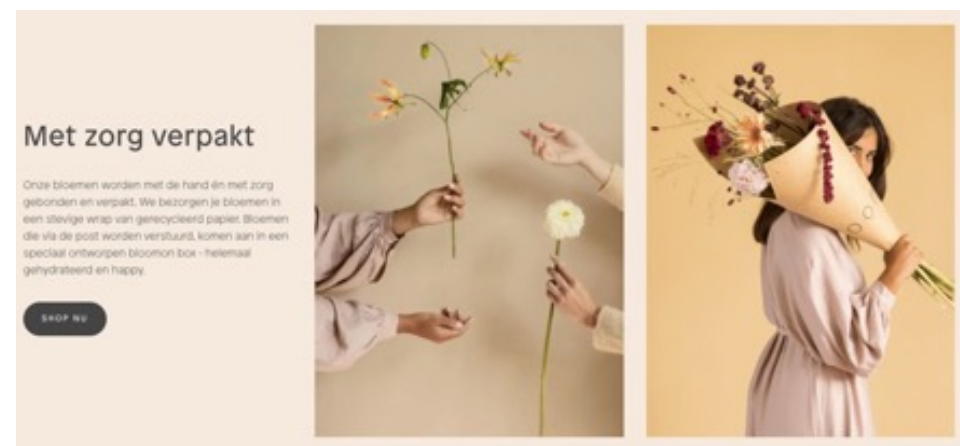
Sustainability can be part of a broader transition of eating "better", purchasing more "conscious", being more "responsible" or "natural". These are multi-interpretable and can therefore appeal to more people. Green colour markers are usually used to distinct sustainable options, unless the company is sustainable from the offset. These choose earth tones and light tones throughout.

Takeaway

Make sustainability communication appeal to many people by making it multi-interpretable and easy to see.



- Providing tools to find the right products like sorting mechanisms, filters, and special categories at AH



- Easy to understand impact, like Pieter Pot with a friendly graph about their packaging



- Getting certifications like B-corp certification of Bloomon; a downside is that not everyone might know what it stands for



Figure 38 - Best practices

6.1.2 Idea generation

Two idea generation sessions are held: one alone and one with a designer and researcher from Picnic. In this way, both ideas from within and outside the company are represented. Inspiration is used from the exploration of other companies, and takeaways from the literature study.

After both generation sessions I have clustered all ideas, placed these on a customer shopping timeline, and made a selection to include as many different ideas as possible to work out as stimuli. I chose to work them out as static images of how these ideas could possibly look and made them as realistic as possible to be able to show to customers (figure 40).

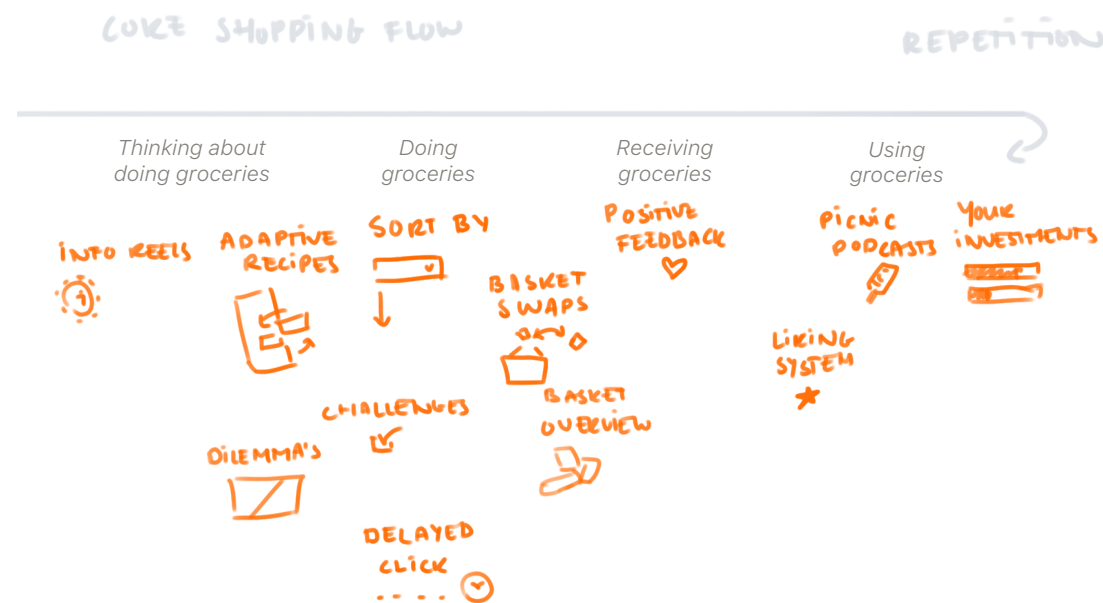


Figure 39 - Ideas on grocery shopping timeline

idea stimuli

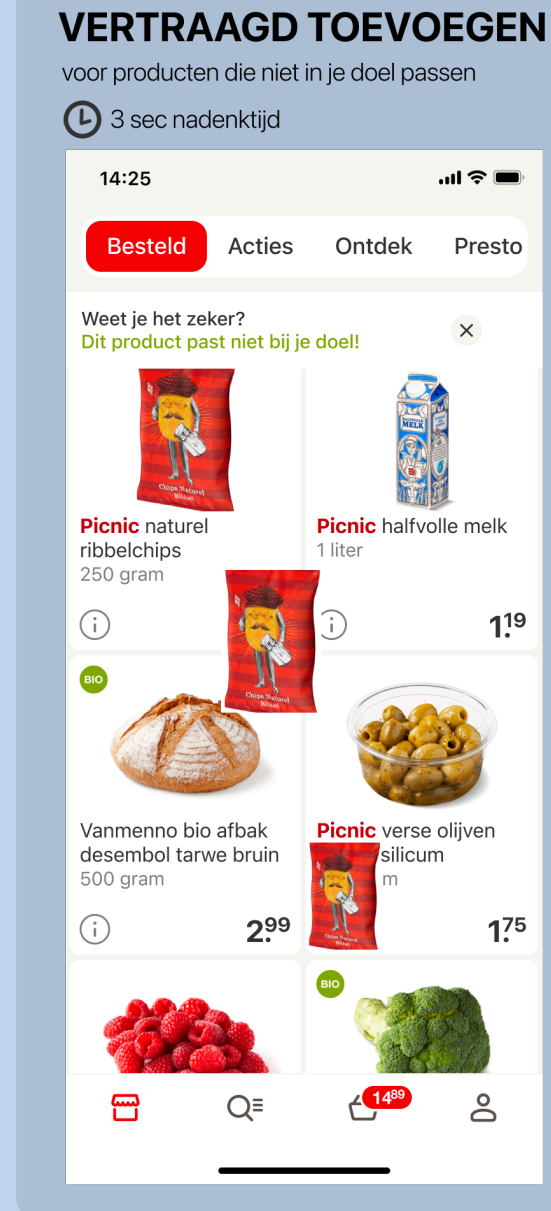
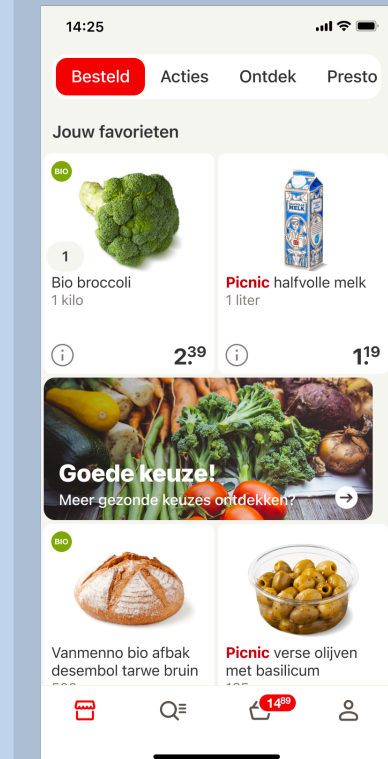


Figure 40 - A few of the stimuli

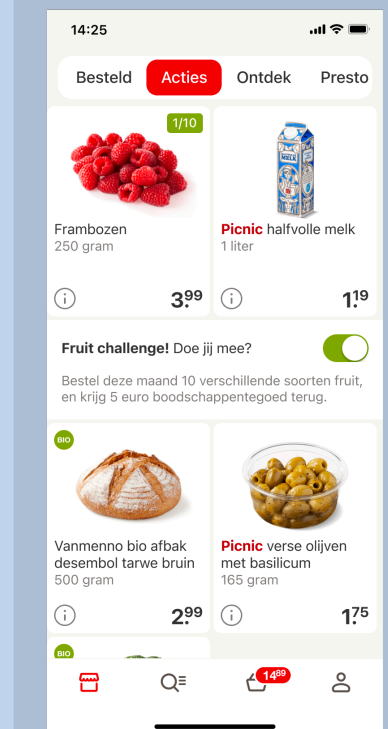
POSITIEVE FEEDBACK

meer producten die een goede keuze zijn



CHALLENGES

waar je aan mee kan doen voor voordeel



find all 14 ideas in the appendix

6.1.3 Ideas and test

The purpose of showing the stimuli to Picnic customers is to learn about what aspects of the ideas will help them work towards doing groceries more in line with their values.

I first held a pilot interview to test the setup, and then conducted 5 interviews of 45 minutes with Picnic customers. All the interviews are held through Lookback, an online interview software. The tasks were set up on a Miro board.

Study setup

Some methods from the Convivial Toolbox (Stappers) are used here, like going back in past behaviour to find what future behaviour could look like. Full interview guide in Appendix 8.

I first asked participants to, from a collection of images, point out which had something to do with reflection. They then talked through their day of yesterday and highlighted at which moments they reflected. After that, they described what they ate on that day.

The two topics of reflection and nutrition decisions were thereafter combined in an exercise of reflecting on whether they had been eating more, less, or equal amounts of certain foods (e.g., meat, fish, fruits, sustainable products).

I then asked what they would like to take in to account more when deciding for food products. Lastly, I presented them with each of the 14 ideas in turn and they shared whether the idea would help them reflect on their food choices.

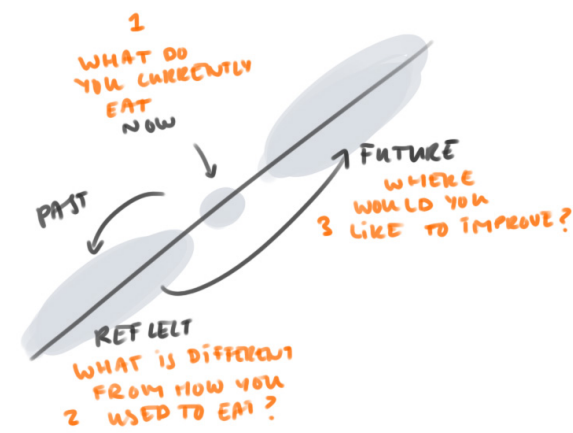
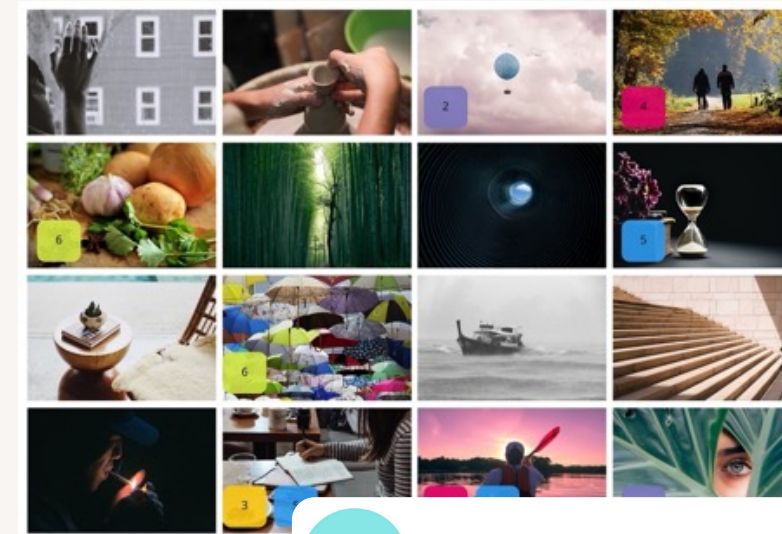


Figure 41 - Interview steps



STIMULI TO TALK ABOUT REFLECTION

DIET CHANGE REFLECTION

5 Wat zijn veranderingen die je gemaakt hebt op gebied van eten? Meer of minder van...

	Minder	Gelijk	Meer		
Groentes		4 6	2 3 5	Healthier	Healthier after covid
Fruit		2 4 6	3 5	More out of ease than because it is vegetarian	
Vlees	4 5 6	2 3		Would like to eat less meat and trying more fish; for environment	
Vis	2 5	4	3		
Zuivel & ei	5	2 4 6	3		
Bonen & noten		4 6	2 3 5	Bio too expensive, but I'd like it because it contains less crap, healthier, grown better	Happy pigs
Biologische producten		2 3 6	4 5		
Vegetarisch eten	6	2 3 4	5	Sustainable or brand does not matter	Good food is important
Keurmerk producten (bijv. beter leven)		2 3 4 5 6		Less CO2 "it's on there right?" + packaging material	Packaging not leading, but thinks about it
Duurzame producten		3 6	2 4 5		
Suikerrijke producten	3	4			
Potjes en blikken	4			Less healthy	
Local / from NL / in season			4	Produce from far: Flights, not good for environment	
Pirce			6	A-brand or B-brand; not for everything	

REASONS WHY

IDEA STIMULI

Figure 42 - Some of the collected answers

6.1.4 Design guidelines

The interviews with customers resulted in interesting conversations on reflection on groceries, and the role of the retailer in decision making. I analysed the interviews by rewatching each in turn and collecting all relevant reactions on the Miro board exercises. The key insights from showing the idea stimuli can be used as design guidelines for the next iteration.

Interventions for reflection on food decisions should be:

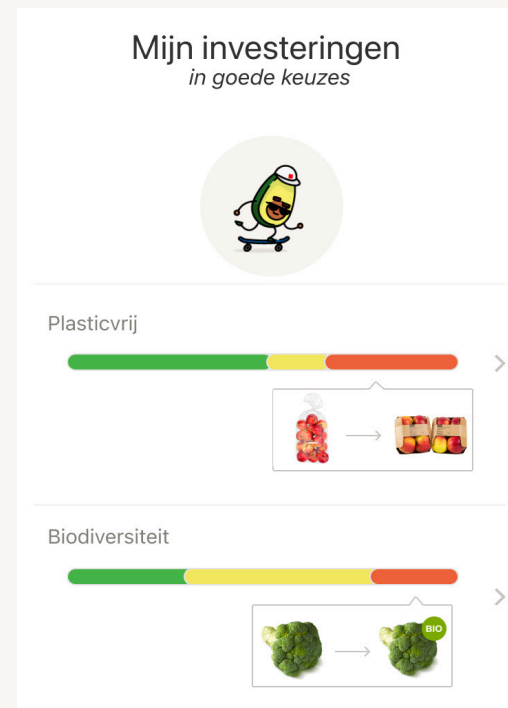


Figure 44 - My investments idea

In control

Allow users to feel in control of their choices.

"It gives me a feeling of being controlled. We talked about it, we should all eat less meat. But now it is being pushed." #1

"If you are done with it you should be able to turn it off again" #3

"It should not be hidden advertisement" #4

Quick

Support easy shopping; don't make it slower.

"Quickly reading some background info, that is fine. Then I am already doing my groceries. But I would not listen to a podcast about nutrition while doing the laundry" #2

"You'd think there is a bug in the machine." #5

Specific

Specific and simple information, in a positive way.

"You are presented with the facts. This is in red, but if you choose the other one you can be in the yellow or green." #5

"Should not create a feeling of punishment." #1

"I would like to see the information beforehand so I can make a choice." #4

Goal-oriented

Achievable and applicable to the situation and goal.

It should be linked to something. If I'd get a timer with everything I would stop to order." #4

"A system that can do this... if you set a goal and it reminds you of your goal. I think that is really good." #3

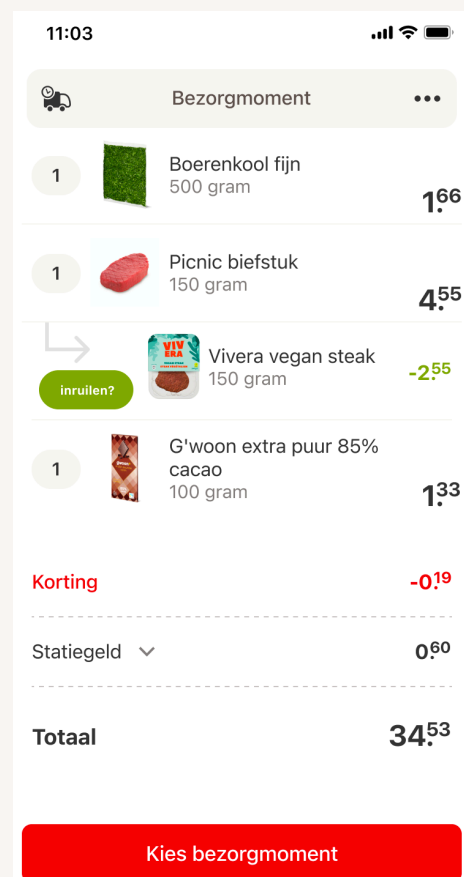


Figure 43 - Basket swap idea



Figure 45 - Slow add idea

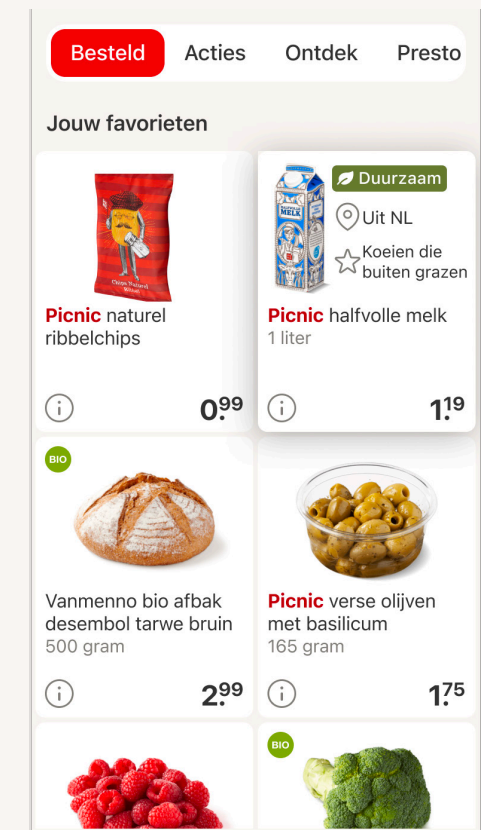


Figure 46 - Long-press info tile idea

Conclusion

For all the stimuli it seemed important that the customer can **set a goal** themselves. A logical way for this is to use the Picnic app, therefore the following design will be for the app. Since the notion of **control** also seems so important in this, more focus will be put in the next iteration in this step of goal setting. The fact that there was a **dialogue** with the customers now helped them to consider their food choices, but this dialogue should also be stimulated in the design in a way. To make the design specific and applicable to the customer, it can be presented more like a **service** to them. All the while keeping in mind that it should not take up time at the wrong moment.

The next subchapter describes the second iteration, based on the conclusions from this iteration.

6.2 Iteration 2 / Goal setting, adjusting, reflecting

To stimulate thinking about groceries, what could be goals concerning groceries, how to adjust to them and to reflect on them, a new flow is designed. The focus here is on considering the design guidelines as well as creating a dialogue to set a goal. To design this flow, first some inspiration is drawn from coaching apps and other interfaces where values are important.

6.2.1 Inspiration for the UI

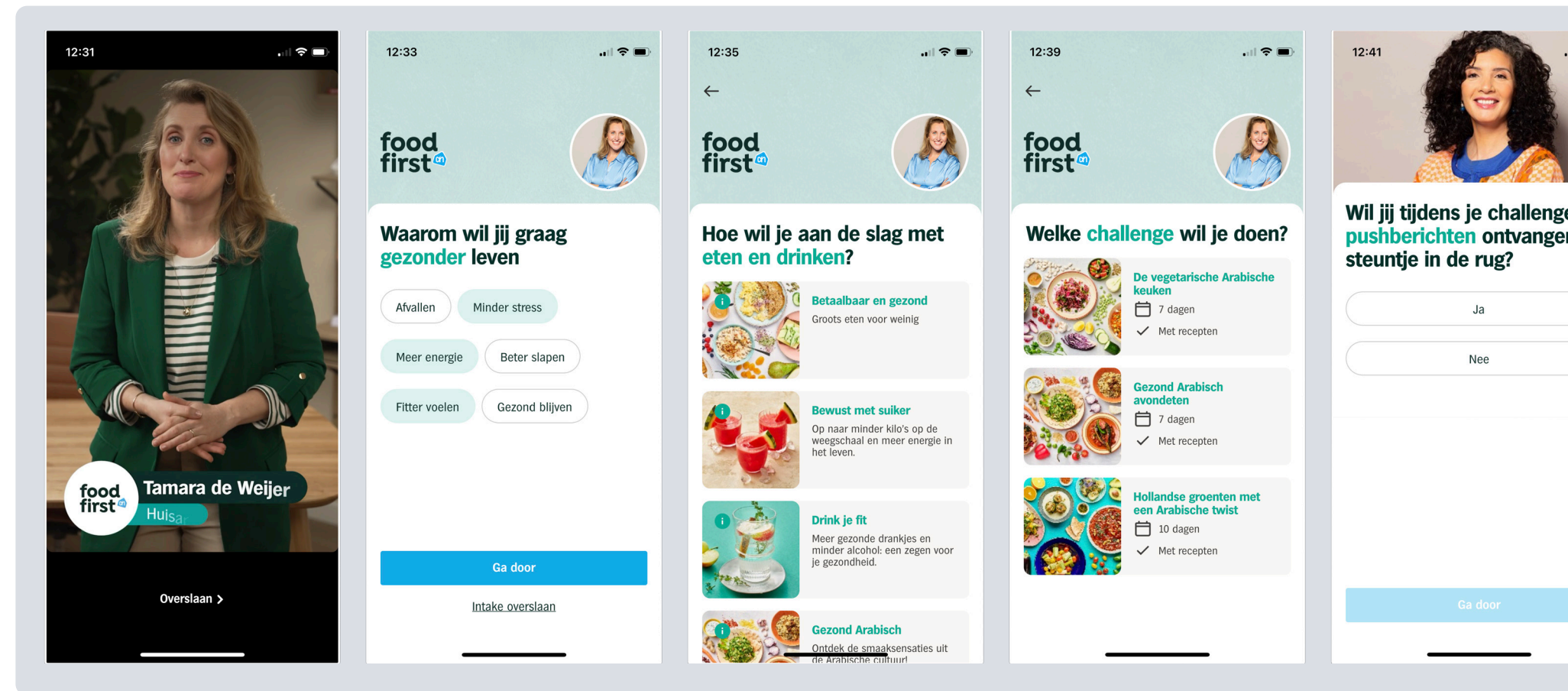
Examples come from AH's app FoodFirst, questionnaire from the Voedingscentrum, the StemWijzer, Wakuli's coffee selector, and the calorie counting Food app from Virtuagym.

Takeaways

A **personal** experience can be created by adding a face to the experience, some wait-time for processing the perfect suggestion, and directing the setup as questions, and giving suggestions.

An **easy** experience can be created by making few questions that are easy to answer, no repetition, using visuals, and having the option to skip.

Adherence to coaching apps can become low when there are many messages, many options, and when the app is not integrated in another practice.



AH's Food First

- + Personal because of intake & human faces
- + Easy to answer questions (options)
- + Possible to preview what you sign up for before you choose
- Extra app besides the AH app
- A lot of challenge options
- What happens with shared information?
- How long will intake take?
- Many messages after installation

Stemwijzer

- + Clear amount of questions
- + Option to skip
- + Adding weight to questions
- Can give outcomes that do not seem logical; a lot of reading to do to uncover why you get that outcome

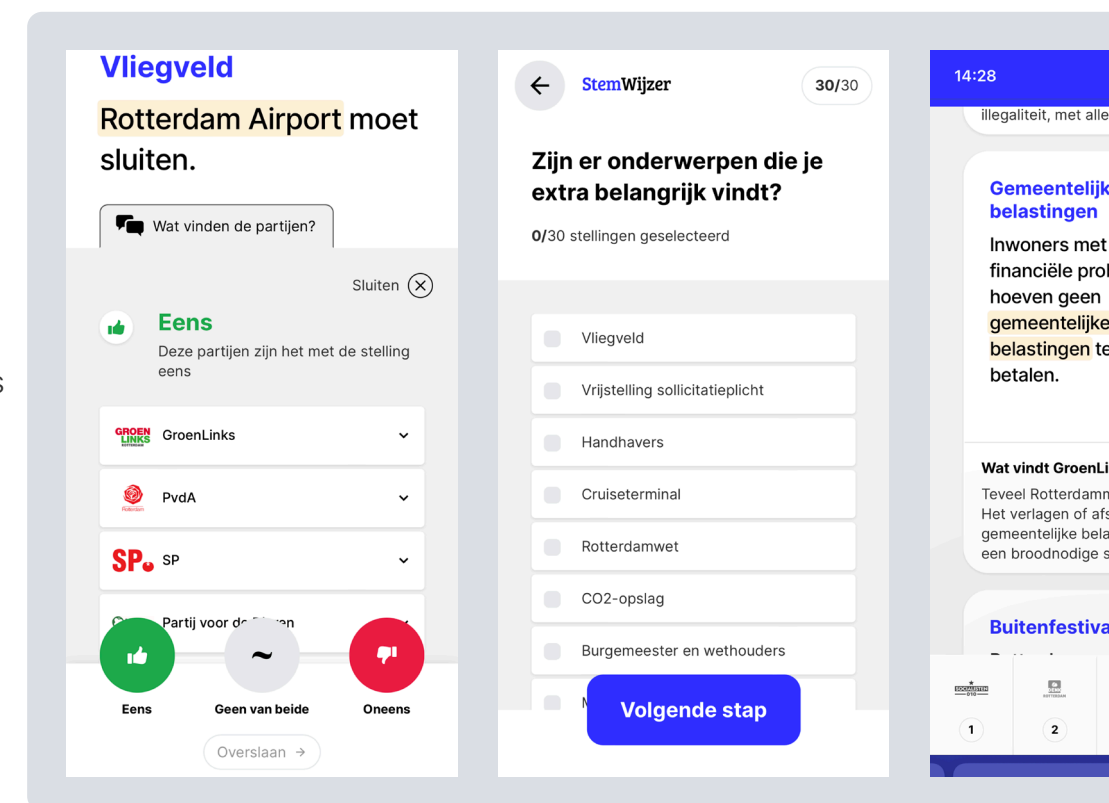
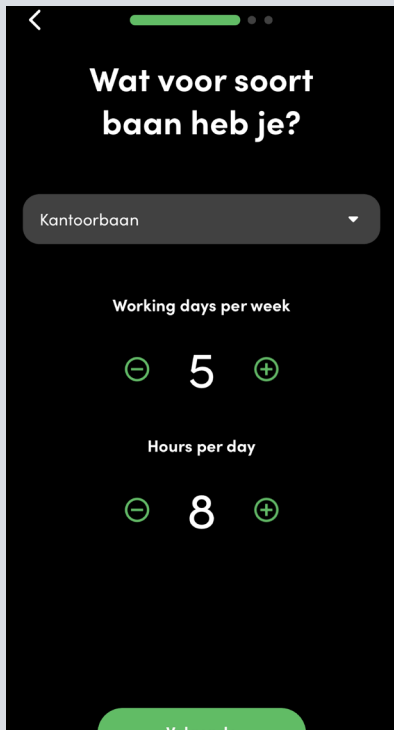


Figure 47 - screenshots from AH and Stemwijzer



Food by Virtuagym

- + Update after x time
- + Personal feeling; wait-time to create plan
- + Few options to choose from
- General questions are repeated when updating plan

Voedingscentrum questionnaire

- + Visual is growing with information (but I don't know how the info and question are tied together)
- + Specific action points



Je voedselafdruk is 1,1 hectare landbouwgrond.

Dat is meer dan de 0,9 hectare die voor elke wereldbewoner beschikbaar is.

Je waterafdruk is 2161 liter per dag.

Dat is heel wat minder dan de 2740 liter die er per wereldbewoner beschikbaar is.

Omdat voeding een belangrijk deel van je totale voetafdruk inneemt, kun je door bewuster te kiezen veel besparen.

Welke uitdaging ga jij aan om je voedselafdruk te verlagen?

Minder snoep, koek, & snacks
daarmee bespaar ik 4%

Minder alcoholische dranken
daarmee bespaar ik 5%

Minder voedsel verspillen
daarmee bespaar ik 12%

Figure 48- screenshots from Virtuagym and Voedingscentrum

6.2.2 Design of functionality

After trying many different designs of paper prototyping and prototyping in Figma, I have designed a flow for a service called *Betere Boodschappen*. Customers answer a few questions, and then are suggested to use a few functionalities to work towards their goal. After a few weeks of using this goal, they are presented with an overview of how they have improved.

Why questions?

I choose to ask questions explicitly instead of implicitly trying to deduce values from someone's grocery shopping behaviour for multiple reasons. In this way they can communicate what they would like to do, **future behaviour**, as well. Furthermore, as having **control** over the grocery cart seems to be important to customers, I think it is good for them to know this functionality is not just guessing and assuming things about them. By answering questions they are involved in the process.

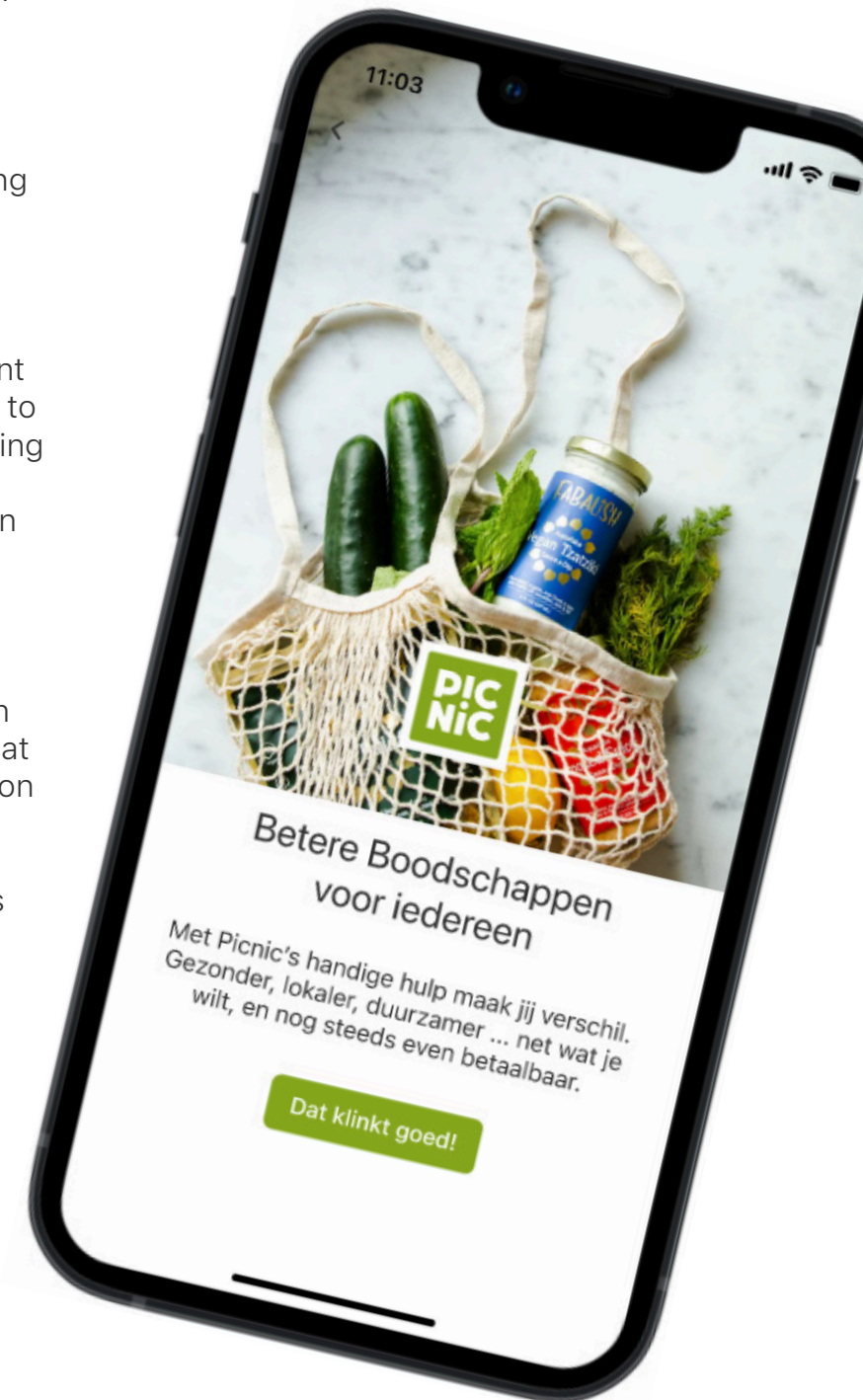
Why the overview?

The overview of how customer have improved is meant as a moment to learn about their behaviour and reflect on what they thought about paying more attention to their values.

You can try the Figma prototype for this test here:



SCAN TO TRY!



Betere Boodschappen Flow

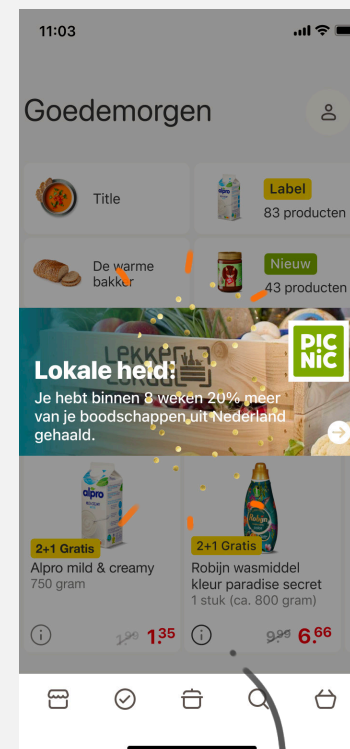
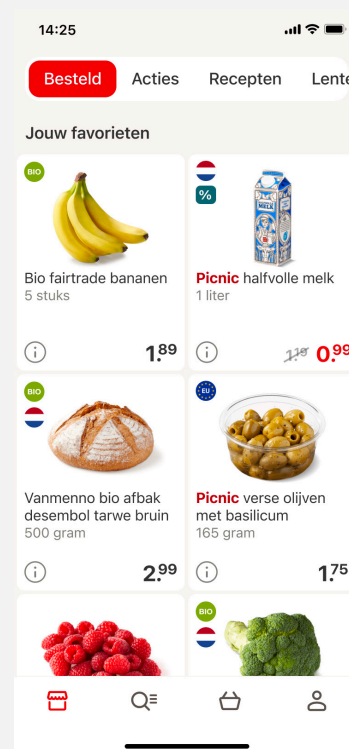
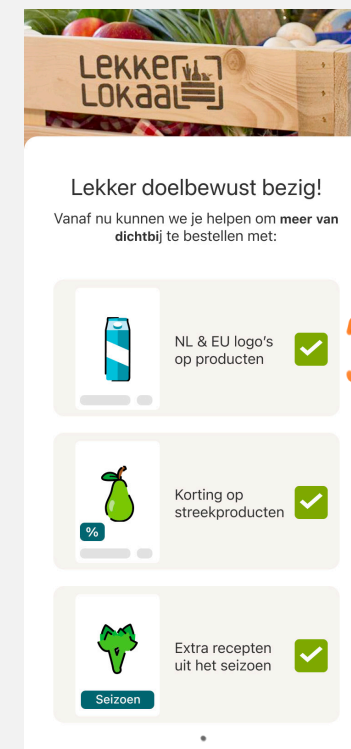
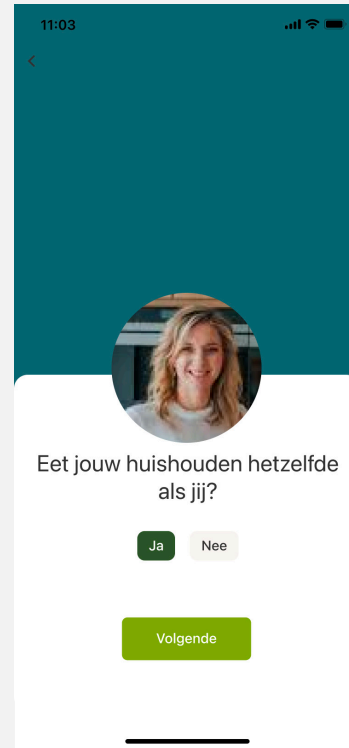
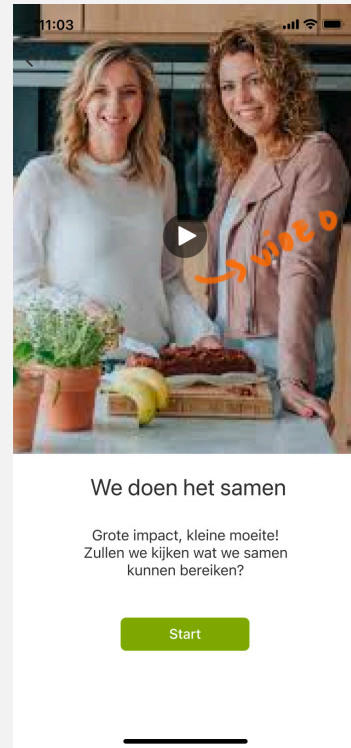
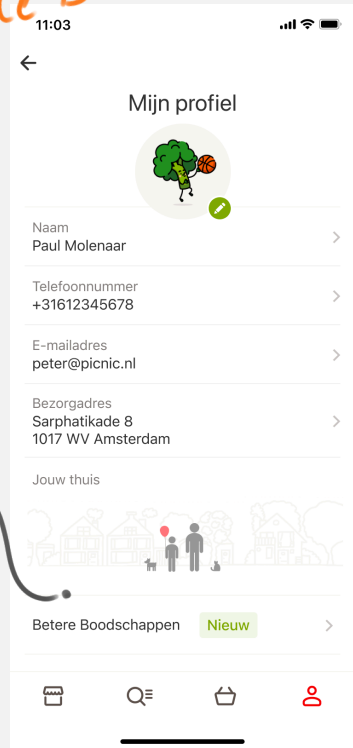
Showcasing different benefits are possible; excitement, refreshing

Friendly, trustworthy, cheerful, personal, like a conversation

All positive; easy to choose one or multiple, none is also an option

Goal-oriented

Entry point next to other services; new service highlighted



Hierarchize goals

More personal outcome with this question

Wait-time so a personalized plan can be made

Control over the suggestions by on/off button

Celebration

Time to reflect; both on outcome and on experience

6.2.3 Test and results

Test goals: find whether the intentions that are behind the screens are clear, which expectations are set, and how to improve.

This flow is tested with 5 Picnic customers in 30-minute remote interviews where I can see both the customer and the actions they perform on their screens (Interview guide Appendix 9). This helps find whether the intentions that are behind the screens are clear, which expectations are set, and how to improve this flow. The insights from this study are:

Reflection feels like celebrating

Reflecting on accomplished progress feels like a celebration for the participants. It is easy for them to answer setup questions, the actionable interventions help taking more conscious choices, and the initiative "brings together company's and customer's values" as one participant points out.

"This is nice! A message after 8 weeks or 1 month is fine."

Hierarchising feels artificial

A question that arises is what to do with multiple selected goals. Right now, a hierarchising question is built in where customers can select what would be their first, second and third most important selected goal. It appears that hierarchising does not cover all cases, because some participants select all goals, and others share they find everything they have selected equally important.

"Hierarchising feels artificial. I have already selected this from multiple

options. These are both important in different moments."

Unclear benefits on first screen

A problem that arises is that the benefit of the Betere Boodschappen initiative is not clear during the start and while filling out the questions. Customers feel like they are answering these questions for Picnic. This could be a result of the test setup, but it's not possible to say that exactly. Since they are participating in an interview, they are already in the mindset of helping Picnic with the development of a new feature. Therefore, this might not be the first thing on their mind in a use scenario.

"Curious where it will go. I think it is for you to see why we choose certain things."

"I don't mind doing this for you."

A different entry point

The profile page is not visited often, so using this as entry point does not help to bring the attention to this feature. A different entry point would be better but should not come across as a commercial. "I never look at this page."

Unclear how selection affects outcome

Participants wonder whether if they change the selection, the outcome will also differ. One participant mentions that for some surveys they tend to give socially desirable answers, thinking about what 'they want to hear' more so than what they think themselves. This person indicates that in these questions it is not the case.

Furthermore, multiple participants expect the answers to also influence the order of products that are suggested. They

however do not want to be limited only to products which fit this goal. "I don't know what outcome this will have"

"I don't want to get stuck in these kind of products."

Consider data privacy

One of the participants was exceptionally sensitive to which data is being kept and used. They however indicated that when they know it is used for a functionality that gives them benefit, it is fine. A clear data privacy policy is useful in this case.

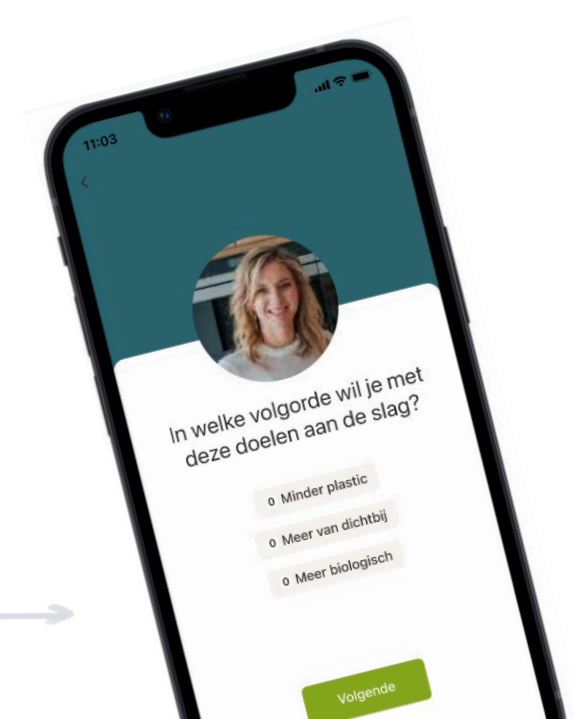
Conclusion

What is found is that in the current design the benefit to the customer is not clear at first, but when presented with the functionalities it does become clear.

There is a need for more control over the outcome, to 'not get stuck' in only seeing products belonging to the selected goal.

The reflection after time has passed is received well and has the intended effect. Insights from this study can be applied in designing the final flow.

"I don't mind doing this for you."



6.3 Iteration 3 / Betere Boodschappen Hulp

This iteration focusses on communicating the benefits of the Betere Boodschappen Hulp functionality more, and integrating other problems and opportunities found in the previous cycle. In a mixed method study it is tested whether the intervention significantly helps with overcoming the value-action gap compared to the app without this functionality.

6.3.1 Flow update

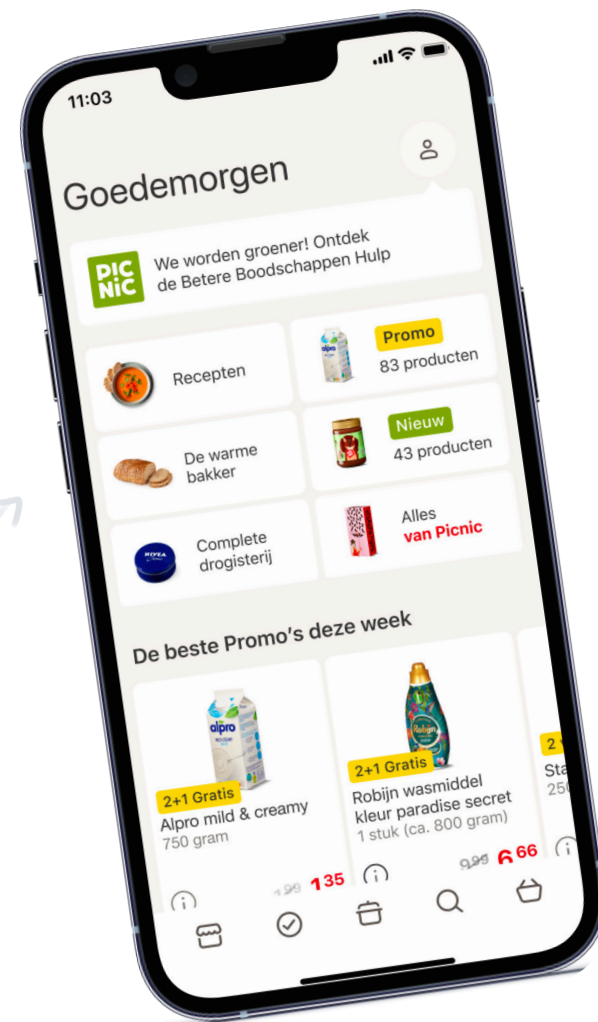
Redesigns are made in the new design of Picnic that will be launched this year with a discovery page, which is the first page where customers land on when they open the Picnic app. The redesign for this page is focussed more on discovering new things, products, recipes, and other features. The way of interacting with this design is also different, with the bottom navigation bar now including five different pages, and the top tab bar removed.

This new page lends itself well for entry to the functionality because there are multiple opportunities as an entry point, for example different banners, tiles, and stories on product detail pages.

Further updates to the flow contain: more focus on user benefits, simplifications, single goal setting, more control over functions and more actionable information.



→ SCAN TO TRY!



IN PICNIC'S NEW STYLE



VISUAL REPRESENTATION OF CUSTOMER BENEFITS

→ CLEARER COPY

Beter Boodschappen Hulp

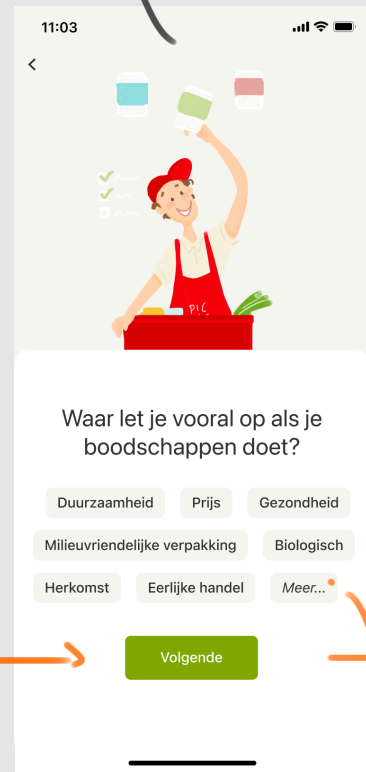
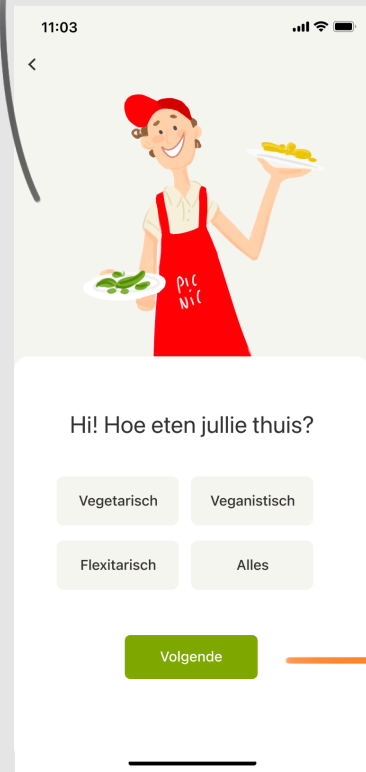
- Linked to profile page

- Condensed to four most common ways of eating
- Peter Picnic (character) is a friendly 'help' in this function

- Illustrations help to show the topic of the question

- Goals that most customers might have; none of these is also an option, then the functionality can be adapted to help make it easier to pay attention to what you already do

- Multiple entry points



- "Beter" is multi-interpetable
- Price concerns can be a blockage for perceived control over sustainable behaviour (Fechner, Herder 2021)
- Clear function benefits
- Health as personal benefits can help to make non-personal benefits more attractive too (opposing basic human values)

- Difference in question and formulation of current behaviour and future behaviour to make distinction clear
- Current behaviour is easier to answer before thinking about future goals
- 'vooral' so mostly, but not always, to be flexible
- Because behaviours are selected by the participants they are likely intrinsically rewarding (Lally et al. 2009)

-Personalized messaging is more effective for sustainable behaviour (Adaji et al., 2021)

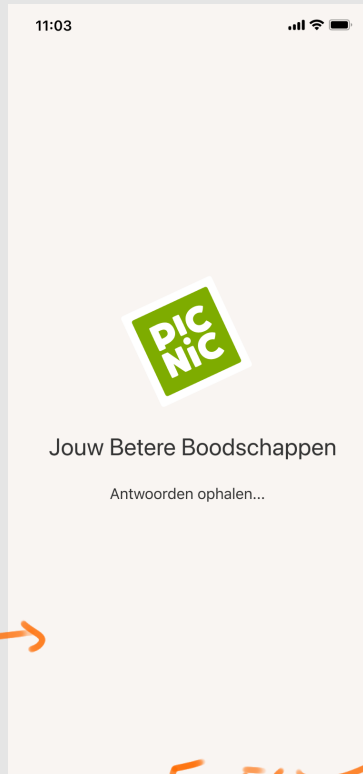
→ NEXT PAGE

part 2

- Option to get more information about every functionality (need for specific information)
- Option for Picnic to add more functionalities over time

- Three options already selected based on questions to not make it overwhelming

- Information most effective in moments of purchase for disrupting habitual behaviour



5 SEC

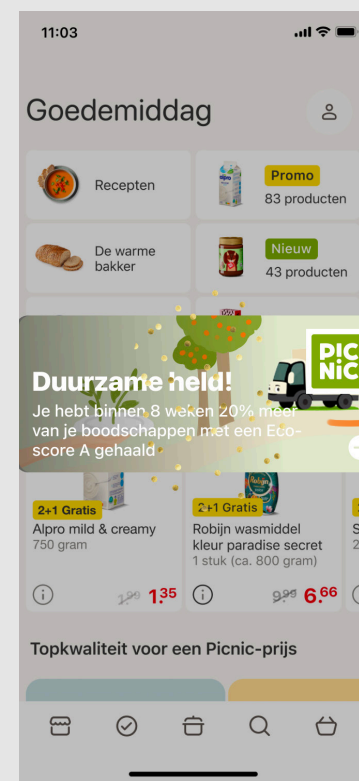
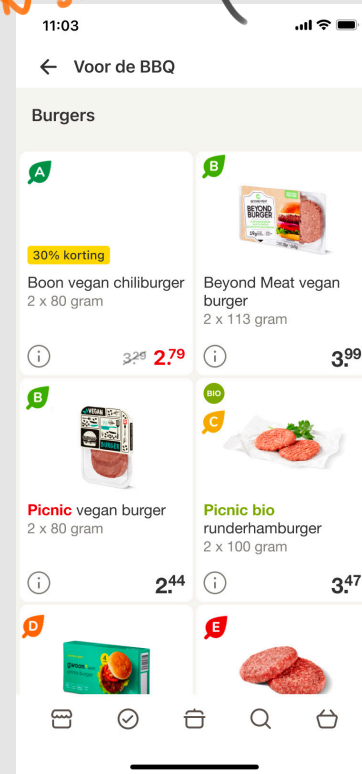
- Search suggestion hirarchy is something that customers expected in previous research



STORE



IN STORE



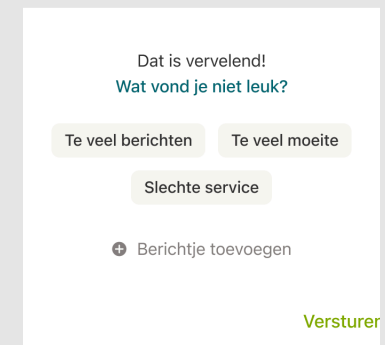
AFTER 8 WEEKS

- Use for 8 weeks allows for habit formation

- Gives customers control over the functions so they don't feel like they are being pushed



- After time habit formation reaches a plateau; time for a new goal (Lally et al. 2010)



Versturer

6.3.2 Mixed methods test

A mixed methods approach is proposed to enhance accuracy of the findings of this final study. The quantitative study focuses on studying whether the behaviour and attitudes change when grocery shopping with the intervention design. The qualitative study further gives insight into what might cause these changes and how people view the design.

Quantitative study

The design statement was:

I want to design an experience for Picnic customers who have values in line with the food transition but do not fully **act upon them**, by providing them with a moment to reflect and adapt so they can **become proud** of their actions.

Following the design statement and its implications, the intervention should result in the following:

1. More action in line with values.
2. Positive feeling; feeling of pride & ultimately a positive attitude towards the company without becoming too challenging

Ways to measure whether this has been achieved compared to a control group would be:

1. Action over a longer period would be ideal to measure. Since that is not doable in the timeframe of this graduation project, there are two possibilities which can be used both:
 - a. Draw a conclusion of change of action from a shopping task (e.g., choosing a vegan burger vs. buying a meat burger)
 - b. Measure feeling of how well one thinks they can act according to values by looking at attitude towards the intervention on goal achievement and perceived control over buying sustainable groceries
2. Measure feeling of pride/self-affirmation about performance of activity, the attitude towards the company and the customer effort

Hypotheses

These two ways of measuring the effect of the intervention contain multiple metrics. The hypotheses for this study for each metric separately therefore will be:

H1a: Grocery shoppers using the Betere Boordschappen functionality more often **choose a vegan burger over a meat burger** than shoppers without the functionality.

H1b: Grocery shoppers using the Betere Boordschappen functionality have a more **positive attitude towards goal achievement** than shoppers without the functionality.

H1c: Grocery shoppers using the Betere Boordschappen functionality have more **perceived behavioural control** over grocery shopping than shoppers without the functionality.

H1d: Grocery shoppers using the Betere Boordschappen functionality have more **perceived behavioural control over buying sustainable groceries** than shoppers without the functionality.

H2a: Grocery shoppers using the Betere Boordschappen functionality have a better **attitude toward Picnic (the company's) social responsibility** than shoppers without the functionality.

H2b: Grocery shoppers using the Betere Boordschappen functionality have a higher **feeling of pride** about what they can achieve with grocery shopping than shoppers without the functionality.

H2c: Grocery shoppers using the Betere Boordschappen functionality do not perceive buying a product to take more **effort** than shoppers without the functionality.

Survey setup

An experimental study with a control-group design through an online survey is proposed. The survey is made on the online platform UsabilityHub (app.usabilityhub.com), can be filled in both on desktop and mobile devices and is pre-tested by Picnic colleagues.

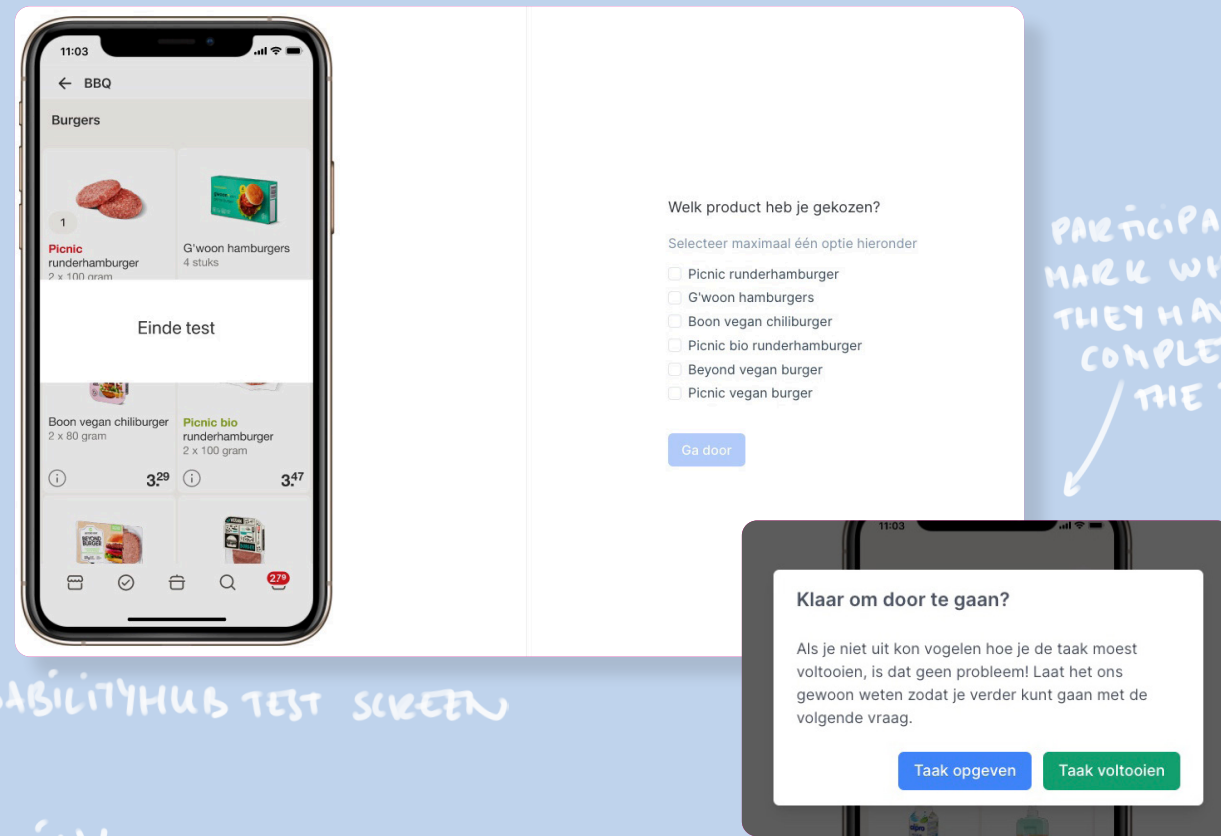
The survey is sent out to a random selection of 850 customers who use Picnic regularly, meaning they have at least ordered once a week the last 8 weeks with and their order value is higher than 65 euros. The customers are divided in two approximately equal groups, where each group is presented with a different variant of the Picnic app prototyped in Figma. The incentive is a free package of Oreo cookies in their shopping basket for their next order.

Group 0, the control group, sees the Picnic app without the Betere Boordschappen Hulp functionality.

Group 1 sees the Picnic app with the Betere Boordschappen Hulp functionality.

To be able to study the different behaviour between the groups, participants are asked to perform a shopping task of buying a food product. The chosen food product in this setup is a hamburger for on the barbeque because this is a product where there are both vegan and meat options. Choosing the vegan burger is the food-transition friendly option as this fits with the transition from animal to plant-based protein. From the 26 burgers that are offered in the Picnic store, 6 burgers are chosen: three vegan and three meat burgers with varying prices.



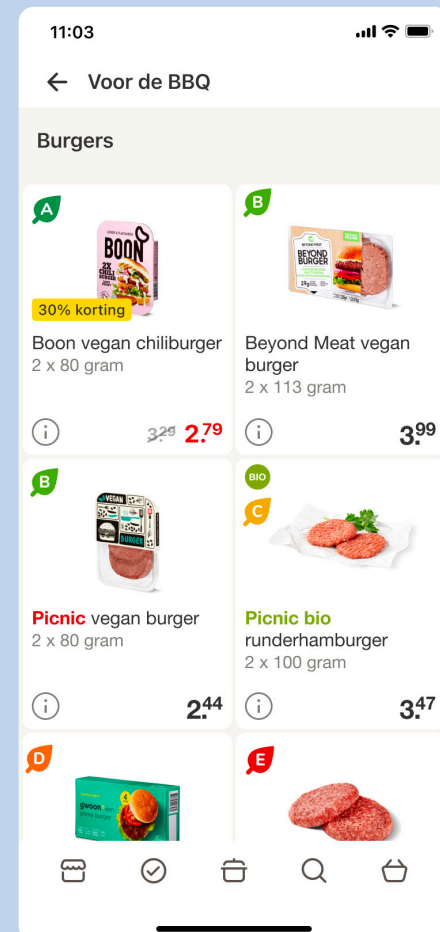
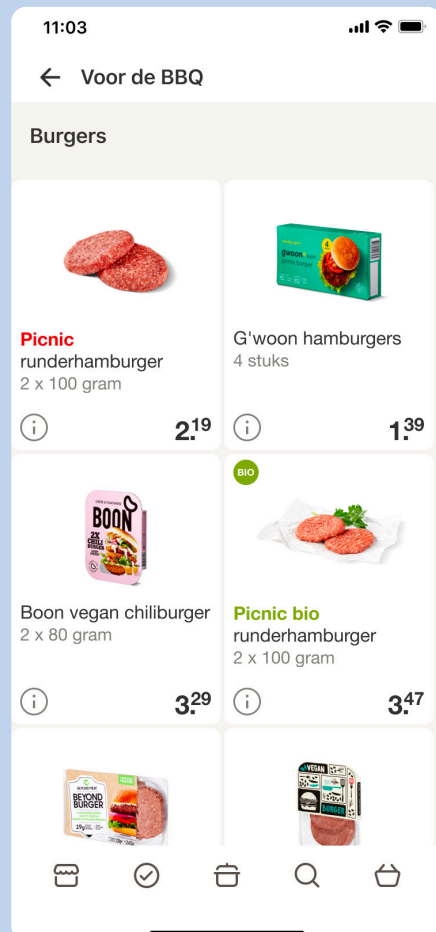


PARTICIPANTS MARK WHETHER THEY HAVE COMPLETED THE TASK

USABILITYHUB TEST SCREEN

SHOPPING TASK CONTROL

INTERVENTION



1) ECO-LABELS ADDED
2) HIERARCHIZED ON ECO SCORE

Figure 49 - Parts from the quantitative test

The control group is asked to perform the task straight away. The intervention group first goes through the functionality's setup and gets functions for eating 'more sustainable' before performing this task. This means the burgers are labelled with an Eco-score and are presented in an order where the highest Eco-score (A) is on top.

The measuring scales that can be used to measure feelings after performing the task are obtained from the Marketing Scales Handbooks vol. 5 and 7 (Bruner, 2009, 2013), all adapted to the task and reduced to max. 3 items per metric and translated to Dutch for the survey (See Appendix 10).

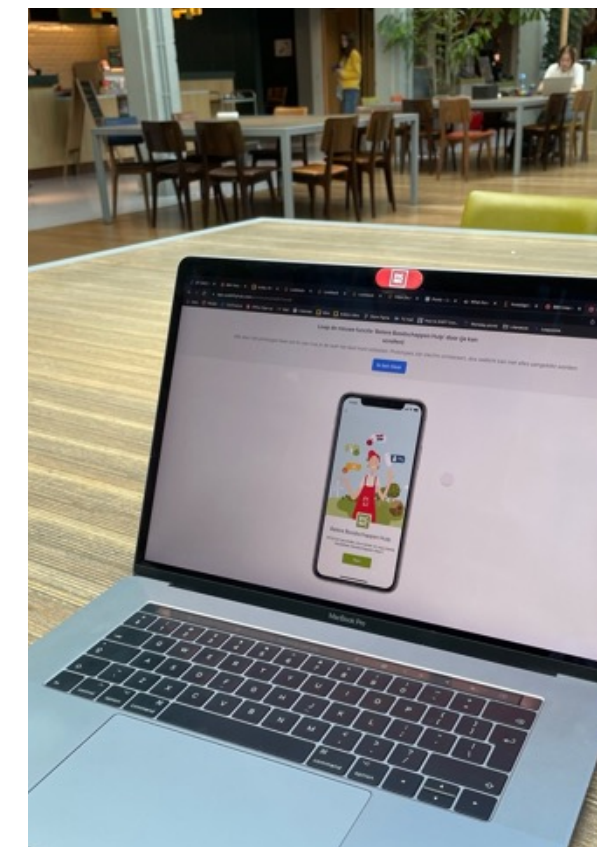


Figure 50 - Quantitative study; participation by phone or computer

1b: The measurement statements are the following (7-point Likert-type scales):

Goal achievement (attitude towards product) & Goal attainment (Bosmans & Baumgartner, 2005; Dellande et al., 2004)

- This design can help me to achieve my ideals and dreams.
- I think that I will achieve my goals with this design.
- I am making progress towards goals I have with this design.

Behavioural control (Nysveen et al., 2005) (choice freedom over groceries)

- I feel free to buy the kind of groceries I like to with this design.

Behavioural control over buying sustainable groceries (Nysveen et al., 2005)

- Buying sustainable groceries is entirely within my control with this design.
- I have the necessary means to buy sustainable groceries with this design.

2: The measurement statements are the following (7-point Likert-type scale & 7-point semantic differentials):

Attitude toward the company (**responsibility**) (Folse et al., 2010) **Brand ethicality** (Brunk, 2012)

- I think Picnic has a legitimate interest in sustainability causes with this design.
- I think Picnic respects ethical standards with this design.
- I think Picnic is a socially responsible company with this design.

Pride (Laverie et al., 2002)

When I think of what I can do through shopping at Picnic with this design I feel...

1. Pride: No pride / A lot of pride
2. Self-esteem: No self-esteem / a lot of self-esteem
3. Self-confidence: No self-confidence / a lot of self-confidence

CES customer **effort** score (de Haan et al., 2015)
How easy was it to buy a burger?

- Very easy / very difficult



Results of the quantitative study

N=66 respondents completed the control group survey and N=65 respondents completed the intervention group survey.

Of the intervention group, 69% of participants completed the first task (N=43) and from these 68% completed the second task (N=28). Only the 28 participants who completed both tasks will be analysed.

Of the control group, 86% completed the task (N=54). Only the 54 participants who completed the task will be analysed.

All data that is collected, except for which burger that is chosen, is ordinal data from Likert-type scales. The two groups are with different (unique) participants.

To test whether parametric tests can be used, a Shapiro-Wilk test for testing Normality is performed on all the (mean computed multi-item or single-item) variables. For each variable, this test shows that the data for either or both groups is not normally distributed, which is one of the assumptions that need to be met for parametric tests. I conclude from this that non-parametric tests should be used. However, it is to be expected that Likert-type scale data is not normally distributed, and a parametric test like the independent sample t-test could also be used which might allow for increased interpretability of results (DeWees et al., 2020). Because of this, I have performed both tests for all the measurement statements.

Find the details of the statistical analysis in Appendix 11 and the open field answers in Appendix 12.

H1a: accepted

Pearson Chi-square test shows significance (p=0.002) that the outcomes of the two groups (control and intervention) are related to the meat vs. no meat burger and Phi=0.364 shows a moderate association. This suggests there is a relationship between the intervention and the type of burger chosen. The observed count for buying a no-meat burger is twice as high as expected in the intervention group, so customers with the Betere Boodschappen functionality more often choose a vegan burger over a meat burger than shoppers without the functionality.

H1d: accepted

There is a statistical difference between the groups (Mann-Whitney U = 510, p=0.034). Furthermore, the mean rank of the intervention group is higher than the mean rank of the control group. (Mean control = 5.1; mean intervention = 5.6). This suggests the intervention group has higher perceived behavioural control over buying sustainable groceries than the control group.

H2c: accepted

The Customer Effort Score in the intervention group is not significantly higher than in the control group Mann-Whitney (U = 674, p=0.393). Therefore, the hypothesis can be accepted. (Mean control = 6.1; mean intervention = 6.0)

The other hypotheses show no significant differences and therefore need to be rejected.

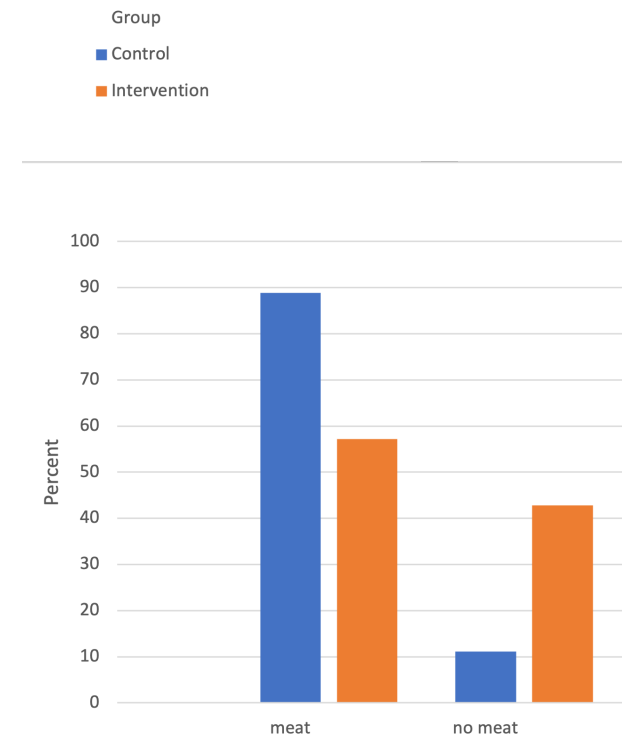


Figure 51 - To get an understanding of the difference in choices, here are the two groups and (in %) whether they chose a meat or a no meat burger

For reference

The number of unique customers that have bought the burgers used in the test in the past six months (data retrieved on May 18th, 2022). Clearly, the 'runderhamburger' is sold the most.

Picnic vegan burger	4,819
Boon vegan chiliberger	5,504
Beyond Meat vegan burger	13,922
G'woon hamburgers	3,315
Picnic bio runderhamburger	10,860
Picnic runderhamburger	63,094

Discussion of the setup

Many people in the intervention group did not complete both tasks. The fact that this is higher than the control group can be attributed to the control task being much shorter. When checking the results, many people who did not finish it marked it as completed as soon as they could and did not or hardly try to click any screen. I assume they were just focussed on getting the reward, because they also did not leave comments on faults in the test. This feels like a shortcoming of the testing software, that participants can indicate themselves whether they think they are done rather than reaching a goal screen. Luckily I can still draw conclusions from this sample.

Discussion accepted hypotheses

The intervention group chooses vegan burgers over meat burgers more often than the control group, they report to have more perceived behavioural control over choosing sustainable groceries than the control group and completing the shopping task is not perceived as taking more effort.

Behaviour change

The moderate association between introducing the intervention and more often choosing a vegetarian burger in the shopping task is a promising insight on the effect of the design. Which part has caused this change is not clear. The BBH setup questions, the sustainability labels (A-E) and the different order of the products might have affected this change individually or cumulatively. A disadvantage to this study is that the product selection took place in a test environment with no real expenditure of money nor of receiving the products and consuming them. Participants might have weighed other values like affordability and taste less heavily than they normally would in grocery shopping, so the actual effect might be smaller. Whether

the effect can be translated to other products, product categories or recipes is also unclear.

Behavioural control over sustainable groceries

The higher mean score on behavioural control over sustainable groceries in the intervention group is again not easy to attribute to a certain part or the combined effect of the design, but is an important insight, nonetheless. As behavioural control is a predictor of behaviour (Ajzen, 1991), increasing this feeling might therefore lead to more behaviour change towards sustainable options. This is in line with the findings of the shopping task. Limitations to this insight are that in the real shopping environment, many more choices need to be made. Whether this effect will stay when making many more decisions, and when it has been longer ago since the BBH setup has been filled in, is unclear. The more general measure for behavioural control does not show a statistically significant difference between groups. This might be because the BBH in this prototype only showed the functionalities for eating more sustainable groceries and not the other goals.

Customer effort

The fact that the customer effort score mean of the intervention group was not significantly higher than in the intervention group is a helpful insight. Even though the test for this group took slightly longer and more steps needed to be completed in the prototype, buying the product did not become more difficult. Possibly, in a real shopping environment, the perceived effort when using the BBH compared to not using it might even be lower because it only needs to be filled in once every so often.

Discussion rejected hypotheses

There is no statistically significant difference in the feeling whether goals

can be achieved through grocery shopping, general perceived behavioural control, feeling proud and the attitude towards Picnic's social responsibility.

Achieving goals and feeling proud

Both in the intervention and control group, comments from the survey show participants do not feel like some questions fit to the task they have just performed. Five of the twenty comments were about the questions being "weird questions" "pompous questions for the task" or "over the top questions" specifically on the constructs of self-worth, pride, self-confidence, dreams, and ideals. In hindsight, these comments make sense. The change this design should bring is more subtle than the tone of these questions, and the effect more cumulative over time. One sustainable decision does not make you an activist. If the reflective part (Figure 52) after eight weeks of use of the BBH would have been included in the test, a different outcome might have been observable here. I however chose to leave it out because the tasks were already longer for the intervention group, and discuss it more in the qualitative study.

Attitude towards Picnic's responsibility

The small difference in means between the two groups for how responsible they perceive Picnic to be through this design is not statistically significant. Although effort has been made to make these questions focus on the design that had just been tested, it might be that participants have filled this question out thinking more of the company as they know it than on what they had just seen which might have mitigated the results. The interviews held with customers can be used to get more insight in this, where customers can use their own words to describe the intervention.

The next section shows the insights from the qualitative study.

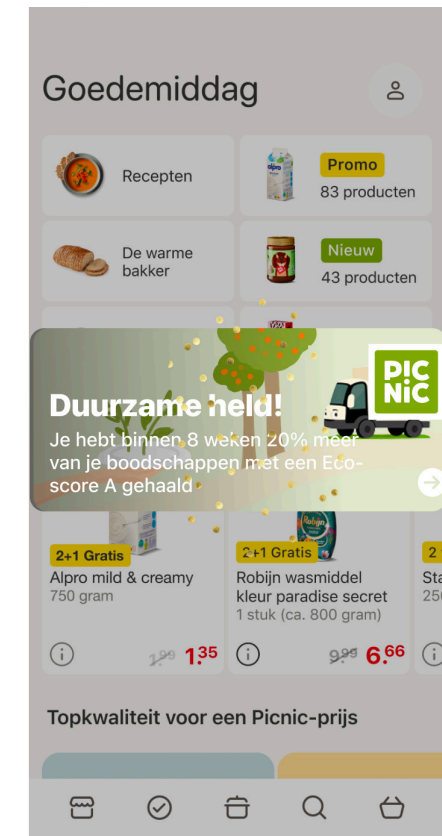


Figure 52 - 8 week pop-up

THIS PART WAS NOT INCLUDED IN THE STUDY

Qualitative study

Qualitative research with 5 participants is carried out in the form of interviews. In this way people can express in their own words what they think of the functionality, and it can serve as communication purpose about the final design towards the client and in presenting the project. These interviews can also give a better understanding which part of the Betere Boodschappen Hulp might have the most effect.

Study goals:

1. Collect descriptions of the design and what value it brings in customers' own words.
2. Get a feeling for what is behind the metrics and hypotheses.
3. Start a discussion on the implications of this design. For example: What if insights are negative? Should Picnic be responsible to do this? Are there any other ways to achieve positive changes?

The interview guide for this study can be found in Appendix 13.

Pilot study with UX Expert Arnold Vermeeren

To ensure a quality interview, the setup, and the questions to ask to the participants were piloted with the help of Picnic customer and user experience expert Arnold Vermeeren. He coordinates the course User Experience Assessment in Design at IDE. After this pilot, small changes have been made to the question setup and issues in the prototype.

Customer interviews with five Picnic customers:

The invitation to participate in the interview is sent out to a random selection of 150 Dutch customers who use Picnic regularly, meaning they have at least ordered once a week the last 8 weeks and their order value is higher than 65 euros. They can subscribe to a timeslot of 30 minutes which suits them, and they receive an incentive of 12,50 euros in grocery discount for their next Picnic order. All quotes from this study are translated to English.



Figure 53 - Friends who use Picnic testing the concept

"You get insights into things you know that are important, but you don't pause to think about. Because of this you can make a more conscious choice, like with those leaves. Then you see **you can make a difference by simply buying a burger.**"

"Get more **personalized products easier in view.** At Picnic it stays difficult in the app to bring new products towards you. [...] Useful for new users, or for longer users to find new items. "

"I think people will become **more aware of the choices** they are making with their groceries, and that in that way it also becomes a challenge to get a better score."

"The whole thing of Picnic is that it is easy. I would say it is **an easy way of doing better**, easier than the supermarket because there you need to look at every product."

"Picnic is continuously developing. With this functionality, which you don't have to take part in, but if you like it, **it will make doing groceries easier** again based on your needs."



Figure 54 - Overview of customer quotes how they would describe the functionality to a friend

Positive aspects

Customers are especially positive about the personal aspect of this functionality. It is perceived as easy, user friendly and they do not feel judged:

Smiles "Sustainable superhero, I think that is nice those personal messages."

"Easy and use friendly, it is already adapted based on your answers and you don't have to look for it yourself."

"You get feedback without it being pushy. It is not good or bad, I like that."

"It gives a kind of personal touch to a general supermarket. A kind of personal shopper idea, where the store is set up specially for you."

Issues

There are some issues around the personality question in the setup, and about what the Eco-label means when the information icon is not clicked. There is an expectation of being able to click a label on a product tile to receive more information on it. It is also not clear that selecting what you want to pay attention to is a goal

"I think this question is a bit vague, if I can say that."

"I do not know what the eco-label means."

"Ah, so you can actually set a goal here."



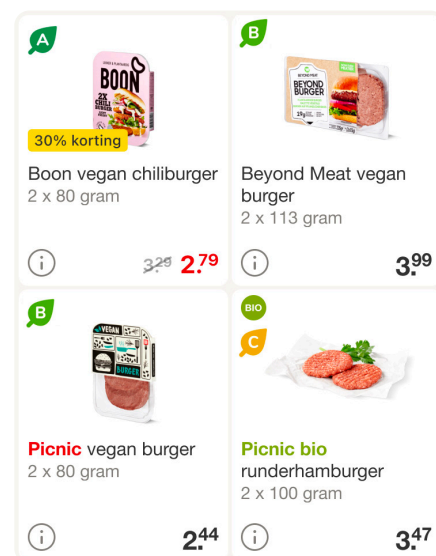
Welke uitspraak past er het beste bij jou?

Ik laat me graag verrassen

Ik ben altijd op zoek naar het beste

Ik laat me graag adviseren

Ik zie wel hoe het loopt



Stel een nieuw doel

Blijf bij dit doel

Stop Betere Boodschappen

Opposing opinions: Technology as support vs. free choice

I asked what customers thought if the advice for functions would be based on their shopping behaviour instead of a set of questions. For one, technology can play more of a leading role than for the others.

"Quite some information can be deduced from my choices, some things can also be based on that. I am a fan of algorithms."

"If I have not specifically asked for it, then it is not a conscious choice. But that is maybe what is already happening, because the data exists. It is about the feeling of being on control, instead of big brother is watching you."

Opposing opinions: Positive Insight vs. Pressure of Achievements

Presenting insights in dashboards seemed motivating for some to stick to the behaviour, while it made others a bit uneasy. As long as it would not be constantly in the screen or pushed upon them it seemed fine however.

"It's fun to see that you are doing well, now you get this in the app instead of in the email."

"I would want to know how my actions influence how I am doing so I know how to improve."

"The whole Eco-score and achievements, I don't know if that makes everyone happy."

"I would not want to see this every time I do groceries."



Kies nu een doel voor je boodschappen
Waar wil je nog beter op letten?

Meer van dichtbij

Gezonder eten

Minder plastic

Meer biologisch

Eerlijkere producten

Duurzamer eten

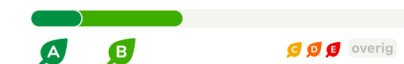
Geen van deze

Volgende



Lekker duurzaam bezig!

Jouw oude Eco-score:



Jouw Eco-score met Betere Boodschappen:



We verleggen samen de grens, op naar een duurzame wereld.

Discussion points

In multiple interviews the *optionality* of this feature is seen as something important. That you don't have to use it, but you can. Therefore it will be important that it is easy to find back.

"It is important that you can choose yourself whether you want to use something or not."

A risk for *including many focus points* would be that people would want them all, as one customer mentioned, and this might create frustration if that is not possible.

"I want all of these."

This functionality is not meant to drive up the costs for the customer, but a customer does mention seeing you have a positive influence on the world might make up for possible extra costs.

"I think this is about feelings, that you feel good about your groceries. That makes up for the higher expenses."



6.3.3 Conclusion and discussion of mixed methods validation

Set-up helps to personalize

The design seems to appeal both to people who already pay attention to their food-transition friendly values in their grocery shopping, e.g. "I am a fan of organic products" and who do less of it right now, e.g., to "See where I can improve". It's clear that it is a helpful function, and the questions serve as a set-up to personalize it. The personality question does not currently have a clear link to the outcome of the BBH and therefore leads to confusion. It would be better to remove it.

Change goal to focus

It might also be better to refer not to setting a 'goal' but to put a 'focus' or 'intention' forward. A goal implies there is a certain level to be reached, and that it can also not be met which might lead to negative communication. Talking about a focus point or intention gives more room to the learning effect that can also occur over a longer period.

Different interactions with insights

The celebration moment after eight weeks of use brings a smile to the faces of the customers, and the insights they get to see afterwards can be interesting to see. Some customers will just want to see them now and again, others want more details and really learn what has made it so and how to improve. They link the insights to other insights they currently receive, like the order confirmation screen and emails.

Expectations of functionality

Customers can foresee lightweight

or more elaborate versions of this functionality where you also get the control over which functionalities there are. There is a need for more information on the labels and what they mean; this information is missing in the current app as well. Overall, the functionality is found to be in line with what customers expect of Picnic and are happy to see that Picnic is exploring better eating even more.

Being in control

There are opposing views on whether it is accepted to use technologies like algorithms to make the shopping process better. Some people have fully accepted this aspect of technology and trust this system to work in a good way, while others want to be sure they know what is happening. Using questions and giving controls over functions satisfies the need of being in control.

Better shopping made easier

Overall, the BBH is associated with explorations and trying new things, a personal shopping experience and it being even easier than in a traditional supermarket to make better choices because of the features in the store. This is in line with the finding of more perceived behavioural control over sustainable groceries in the quantitative study.

Final changes

Based on these insights, I suggest some last changes to the design like removing the personality question, talking about a focus point instead of a goal, and adding moments for lightweight communication.

Key takeaways

The BBH makes shopping better products easy because it is:

- **personalized** and gives advice just for you
- **controlled** because you select your own focus
- **undemanding** because it is customizable and optional
- **insightful** without judgement
- **inspiring** in making customers explore new products

“It’s like the supermarket is reshuffled especially for me. The best products for me would be on top. That is something that you could never do in a normal supermarket.”

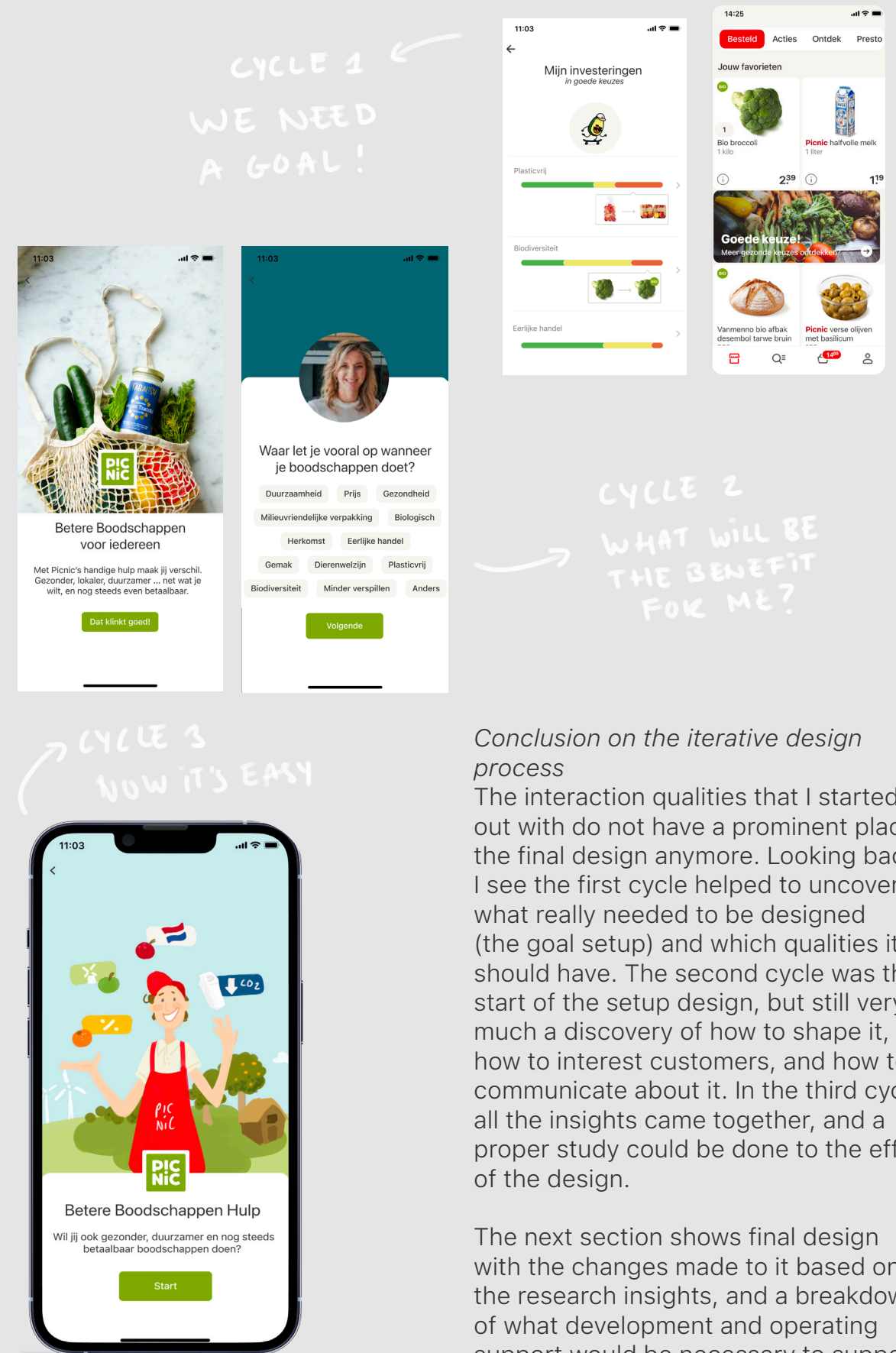


Figure 55 - Images from all three cycles; how much the prototype has improved!

Conclusion on the iterative design process

The interaction qualities that I started out with do not have a prominent place in the final design anymore. Looking back, I see the first cycle helped to uncover what really needed to be designed (the goal setup) and which qualities it should have. The second cycle was the start of the setup design, but still very much a discovery of how to shape it, how to interest customers, and how to communicate about it. In the third cycle, all the insights came together, and a proper study could be done to the effects of the design.

The next section shows final design with the changes made to it based on the research insights, and a breakdown of what development and operating support would be necessary to support the design. Based on this, some advice is given how to phase the implementation of the design.

chapter 7

Final design

Implementation, effect, and recommendations

Summary

The final design is called *Betere Boodschappen Hulp*, the easiest way of doing better groceries. The design consists of four parts: setup, control functions, shopping features, and feedback. The minimum viable product would be some form of setup, one or two shopping features and control over them. Setting up questions will take a high developmental workload, but there is a need for it from other parts of the business as well. The design can have positive effects for both the business and towards a sustainable food system. The recommendation is to further research how the recipes feature can be more a part of the *Betere Boodschappen Hulp*, and to look at more entryways into the functionality.

Content

Based on the insights from the mixed method study, some last changes can be made to the *Betere Boodschappen Hulp* design. In this chapter, first, the final design is presented. The design is then divided in blocks and a roadmap fitting with Picnic's way of working prepares the internal stakeholders for the path that could be taken towards development and implementation. After that, the effect the design could have on the short and long term is discussed. Finally, recommendations are given how to proceed.



Figure 56 -
Betere Boodschappen Hulp

7.1 Final design and requirements

This is the final design for the Betere Boodschappen Hulp, the easiest way of doing better groceries.

The design consists of four parts: a setup that allows customers to reflect on their values and what they would like to focus on, control functions that customers can use to personalise their shopping environment based, shopping functionalities that affect the store environment, and way to receive feedback on the set focus point.

Find an overview of the flow, as well as possible additions that Picnic can use to complement the design, in the flow overview map.

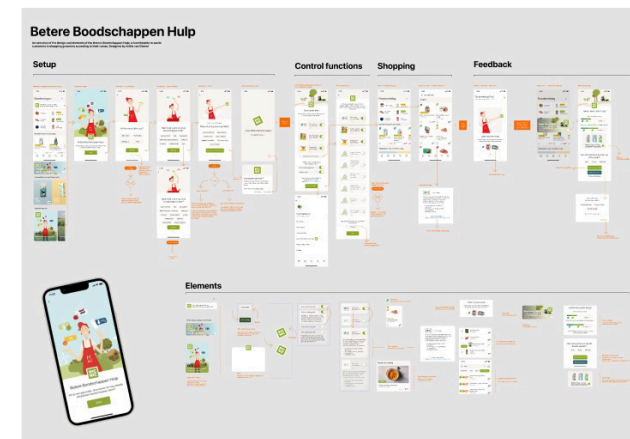


Figure 57 - Flow overview map (find as Attachment 1)

7.1.1 Building blocks for succes

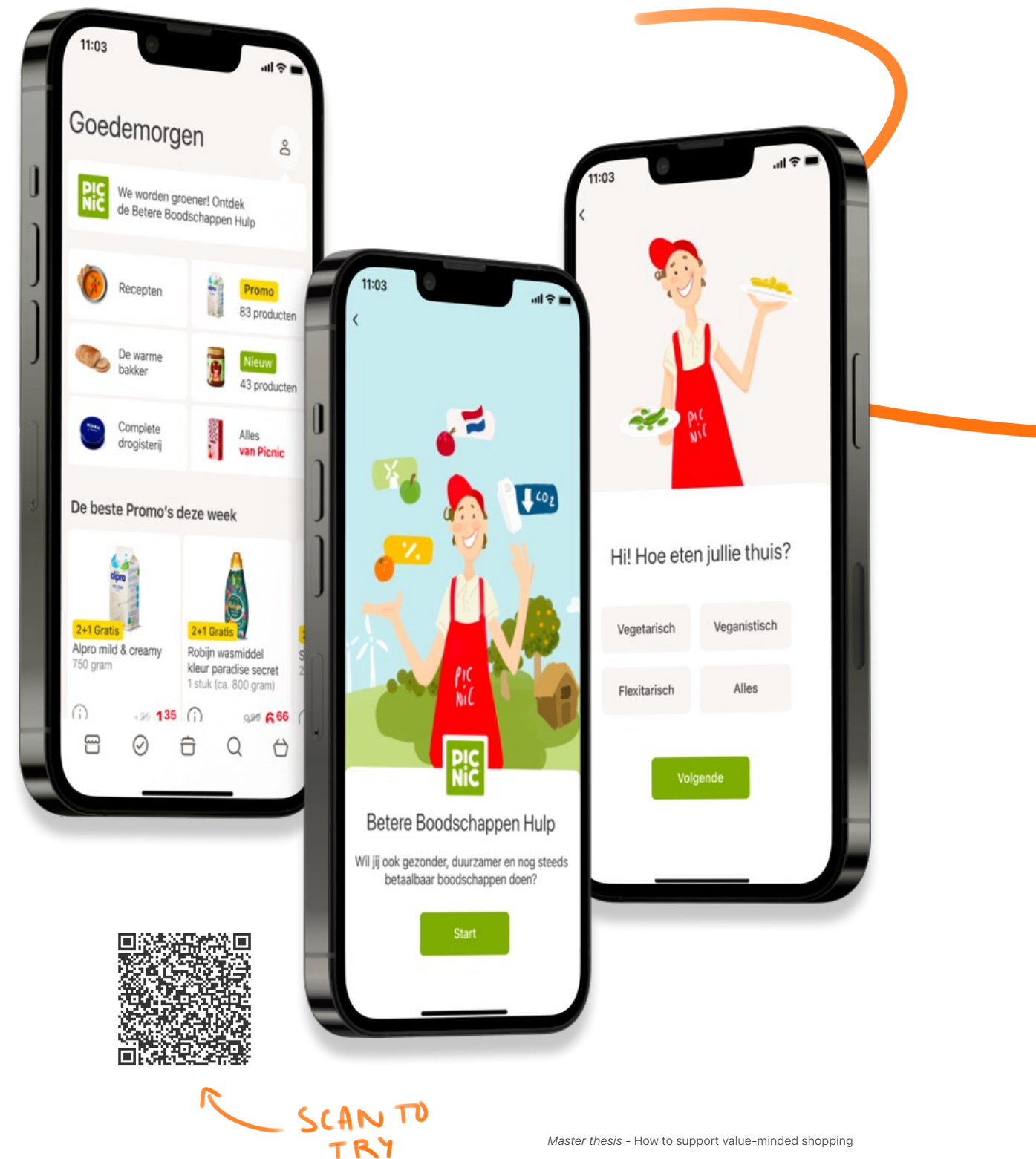
In software development, an iterative way of working is often used where a feature is first released in a minimally viable way (the MVP or minimal viable product) (Lenarduzzi & Taibi, 2016). This means a start is made with a minimum set of features and minimum effort, from which initial customer feedback can be gathered. The concept can then be built upon and made complete in steps.

For the Betere Boodschappen Hulp, there are multiple blocks of front-end and back-end development that need to be done. There is also information that needs to be gathered by the commercial team, and ownership needs to be appointed to a person or team to steer the further development of this feature. I suggest starting with an MVP and adding building blocks that further shape the Betere Boodschappen Hulp after learning even more about the customers and their values.

The initial metrics to measure the success of the functionality would be:

- A larger percent of sales that are sustainable, fair, healthy and support animal welfare.
- A more personal customer connection where customers see the advantages of shopping all their products and meals through Picnic.

the easiest way of doing better groceries



7.1.2 Requirements for the MVP and building blocks

The MVP should let customers set a focus point according to their values, see what functionalities are available, have control over them, and at least one function available. Therefore the requirements are:

MVP

Setup

- As a user, I want to communicate my values.
- As a user, I want to know what happens with the information I share.
- As a user, I want control over functions that influence what I see in the store.

Initial functions

- As a user, I want products to be hierarchized based on my values.
- As a user, I want to control the labels I see on product tiles.

Or recipes

- As a user, I want recipes to better fit my family's values and way of eating.

Operator requirements

- As an operator, I want to test and discover which functionalities work best for which customer.
- As an operator, I want to analyse collected answers together with shopping data.
- As an operator, I want to communicate about new features in the BBH.
- As an operator, I want to be able to publish new information and features in the BBH.

Building Blocks

When the initial functions are set up, expansion of the BBH is possible with multiple building blocks. These could consist of:

Search

Filter opportunities, personalized categories

Personalized promotions

Personal discounts based on focus that stand out from other promotions

Label detail page

Click-through pages for information on labels and ethical and sustainability standards

Time-bound messaging

Suggest switching focus after certain achievement / time

Performance statistics

Dashboard about focus, analysis of dashboard, in-app messaging on performance

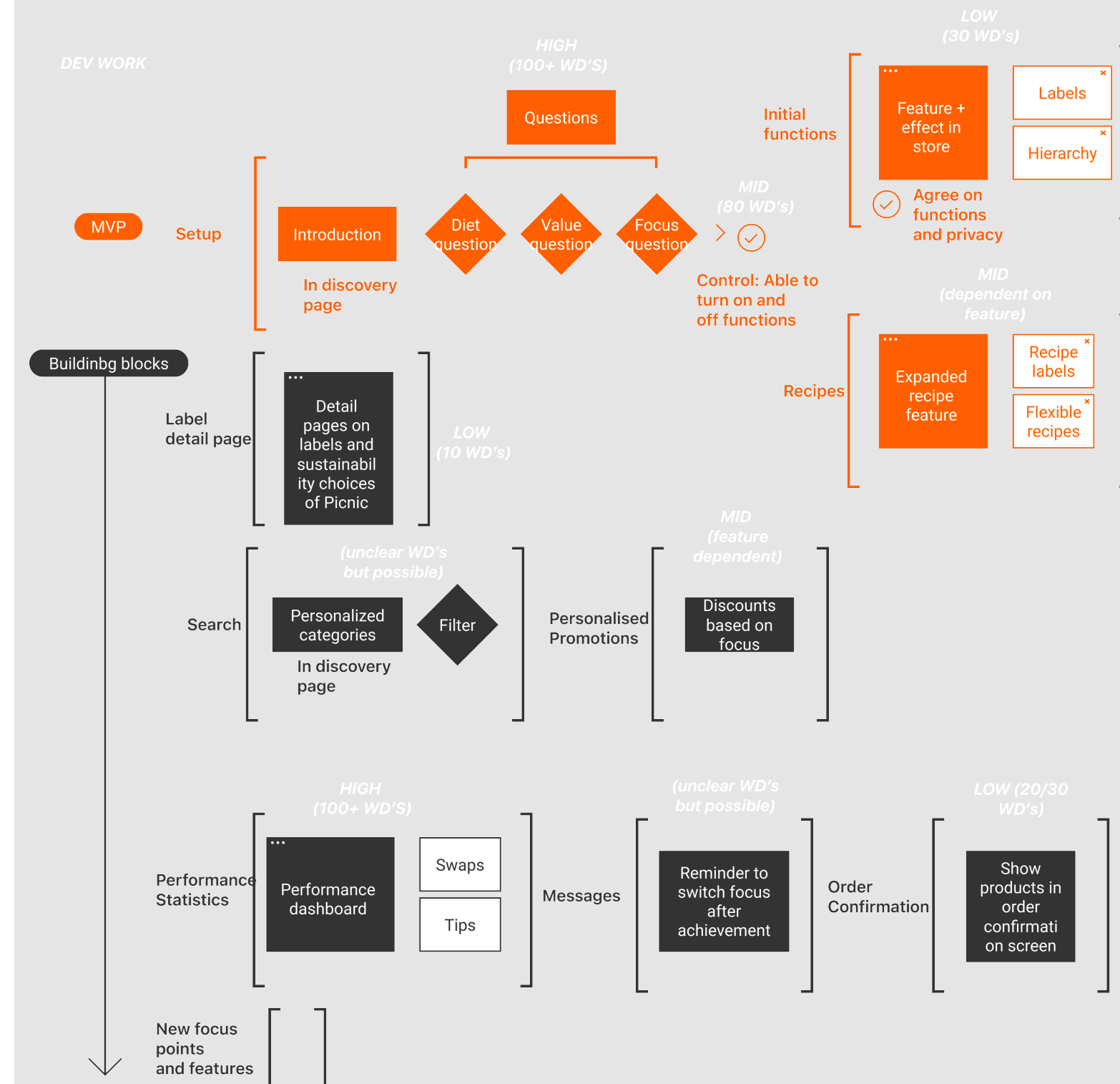


Figure 58 - Phases of releasing the design and an estimation of the amount of development work

7.2 Steps to implementation

Since this design is made for the Store app, an estimation is needed of how much work it will cost to develop. Besides the development, there is other workload to consider before the design can be launched. A discussion is held with internal stakeholders to discuss in what way parts of this design can be included in the roadmap of the company.

7.2.1 Development workload

Together with Bastien, tech lead for the development of services, an estimation is made as to how much effort it would take to develop the software for different parts of this design. Estimations on effort are described as being low, medium, or high and specified in workdays (WD's), a commonly used way of measuring resources of the development team.

The questions block, controls block, and performance stats block are estimated to take the most development work. Positive is that there is currently the need from various parts of the company to have the possibility to ask questions. It is likely that this will therefore be developed in a scalable way, even though it will take some development power. The possibility to give more control over functions in the app to the customer is also an option that could be used for other processes, and therefore has a realistic chance of being made.

The last high effort block of showing statistics to customers is expected to have less priority. Although it can work

with similar techniques as are being used for the new discovery page (the 'homepage') of using a template and letting it be filled by chosen data sources (either by an operator or conditional statements), getting this to work well and making it scalable will take a lot of work.

The communication between some of the designed blocks is also important for development. The answers to the setup questions must generate a certain outcome in the next part of the process, and therefore data needs to be stored, retrieved, and analyzed quickly. The same holds for showing in the order confirmation which products have positively added to the chosen focus. Some changes might therefore be necessary about which information is stored and retrieved at these moments.

Overall, the proposed order of implementation works well with the development effort it will take but is dependent on how much priority this feature would get in the planning.

7.2.2 Other workload

Besides the development of features and the time it will cost to make them, there is a need for information as well as operation capacity to maintain the BBH, and legally some steps need to be taken to be allowed to store this information.

Labelling and hierarchy

From conversations with analysts concerning labelling and promotions it has become clear that a bottleneck for which labels could be shown or how products could be hierarchised is the information that the supplier provides. Asking for additional information besides what is currently available needs to be substantiated. Besides the mandatory product package information like ingredients lists, caloric information, product name and producers, additional product information that could be good to provide might be hard to obtain. Sometimes calculations on sustainability of products can be made with averages and comparisons to data available from studies but doing this in-house would not be realistic. An option would be to talk to brand database companies that hold information on products and discuss what opportunities there would be for the near future.

Operational work

Responsibility for getting the right content for the BBH functions must be placed either with already existing roles within Picnic, or new roles need to be created. The work would be mainly on knowledge, content, category management and analysis and is dependent on which functionality will be launched first. Keeping up with knowledge on the food

transition and translating this into relevant content, correct labels, and initiatives, shaping functions, analysing interactions and results, communicating with the process side (category managers, producers, farmers).

Legal

Because user data should be stored for this functionality, a legal advisor from Picnic has been consulted to check what measures need to be taken. An agreement that the data will only be used to make the app function better for the customer will suffice, along with the addition of this in the privacy statement and frequently asked question. Important for the users is that there is also an option to delete this data again.

7.2.2 Roadmap

From a discussion with Mark, Product Owner of service products, the current company focus points are:

- Selling more meals; people buying all their groceries at Picnic
- Selling more promotions
- Minimize unavailability (not in scope of results with this design)

In this case, first the functionalities for meals should be developed before supporting a generalized labelling and ranking over all products for multiple values. The personalised promotions can also be considered as one of the first building blocks after that.

7.3 Effect of the design on Picnic & the Planet

Since the proposal is to introduce this addition to the Picnic Store app in steps, and repeated use of the Betere Boodschappen Hulp can have added effect, a distinction can be made in effects on the short term and effects in the long term.

7.3.1 Short-term effects

Decision making

When implementing the minimal viable product, information can be gathered about the current values of customers. Analysts at Picnic have tried to draw conclusions from anonymous customer sales data on for example their diet but hearing the intentions from customers first-hand will give much more direction to this analysis. This information can be used to improve and position products better in the private label, and directions can be chosen for where to expand next.

Customer effect: bonding between Picnic and the customer

The first functionalities can also be launched for some of the customer goals. Looking at the outcome from the quantitative study on behaviour change, effect in which products are being sold within categories could be perceived quickly after launching labels and hierarchy. This means customers can experience more behavioural control over the values they cherish. This can positively reinforce the bond there is between Picnic and its customers, where they feel their grocery choices are a true reflection of what they stand

for. Learning can start to happen about products and their effects, and shopping can be perceived as more delightful and easier. Launching personalised meals and promotions suggestions, the effect could be more turnover of promotion products and more meals being sold.

Enthusiastic employees working on realising this project

Working on creating a more sustainable supermarket through building this feature is expected to give positive energy to many employees at Picnic. There has been much personal interest in this project from colleagues.

7.3.1 Short-term effects

Customer transition: norm change, expanding values

After longer or repeated use of the design and getting more accustomed to explicitly focusing on values when grocery shopping, the norm could change for what is considered to be a 'good' grocery product. Customers might get more accustomed to voicing their wishes and having control over the shopping environment. If Picnic can continue to have a dialogue with customers and answer to these evolving wishes in a swift way, the company will stay relevant to the customers. Customers have the opportunity to shape their shopping environment to fit what they find important, and Picnic can be pioneering in this as a supermarket in having a larger percent of sales that are sustainable, fair, healthy and support animal welfare.

Planetary effects

Ultimately the changing norm and change in the products that are bought can affect the prices of products that have a positive effect on the food transition. When there is more demand for sustainable or healthy products, there is also motivation to shift the production towards these products. Hopefully Picnic can have a positive role in this shift by staying close to the customer, and sustainable and affordable groceries can then become available and affordable for more people.



Figure 59 - Healthy, sustainable food for everyone provided by Picnic (image from Picnic by N=5)

7.4 Recommendations

To follow up on this project, steps could be taken to build parts of the design and start to gather information on the values of a larger group of Picnic customers. In this project, the focus has mostly been on individual product choices. The new recipe feature that is available gives many more opportunities of viewing multiple food choices together. It would be a good exercise to translate the insights from this project to the recipe feature of the app and explore how it can contribute to facilitating sustainable grocery shopping.

More ways might need to be explored to introduce customers to the functionality. I have not tested a lot of different ways of entering the functionality, and with the current design customers who do not enter it will not get the benefits. With the development of this feature, I would think about how to still provide the shopping functionalities to customers who do not click the feature, for example by adding it to a more prominent control screen in the profile page.

This design has also only been focussed on the Netherlands, and since Picnic is active in Germany and France too an understanding of this market and how it differs from the Netherlands concerning sustainability will be important.

I recommend Picnic to continue to experiment with the role they fulfil in the lives of people as an online supermarket. It is inspiring to see the enthusiasm with which Picnic employees work on their projects, how everything is made and designed in-house. I would keep that energy by continuously checking in with both customers and colleagues on what they find important. With experimentation, an even stronger view on the responsibility the company takes towards facilitating the future of food can also be formed. One that is based on communication with customers, but also producers, and other stakeholders. I am curious to see how Picnic will evolve in the coming years.

chapter 8

Conclusion and reflection

Summary

The design for the Beterre Boodschappen Hulp is as much an outcome of the project as it has been a mechanism to learn about facilitating designing for a transition lead by customer values.

Content

First, a conclusion is drawn on the feasibility, desirability, and viability of the design. Secondly, a reflection on the project shows how designing for societal change has felt to be a balancing act between the desired societal outcome, business goals and personal convictions. Finally, recommendations are given for the follow up of this project.



Figure 60 - Creative session at Picnic

8.1 Conclusion about design

Feasibility – can it be done?

Feasibility has been addressed in this design by using existing design patterns in the app. The design is technically possible, and assumptions as to how long it will take to create have been made. The conclusion is therefore that this design is feasible, since some information would still need to be collected or created not every part will be feasible right away.

Desirability – does it address the user’s values and needs?

The main focus throughout this project has been desirability since willingness from customers is necessary to adopt changes towards a sustainable food future. Participating in the design is a voluntary action, therefore it is important that customers want to use it and that it contributes to their overall shopping experience. As seen in the results of the final study, customers see the added benefit of this function as it becoming even easier still to find the right products for them once they start to use it. As making life easier is one of the main reasons to start to shop with Picnic, this confirms the design fits the users’ needs. The design furthermore adds a personal experience to shopping and allows customers to be in control of buying better groceries.

Viability – will it survive on a longer term?

The design requires some content creation and additional responsibilities

from Picnic, as well as continued engagement from customers. Apps that “coach” behaviour can often struggle with this continued engagement. By integrating this design in an already existing app and practice while keeping it quick to set up and undemanding during use, engagement can hopefully be kept. The addition of places to leave feedback and suggestions, and conditions to not show insights if they are negative, will help towards managing unhappy flows.

Conclusion

It would be arrogant of me say this is the only or the best way to support the food transition. I don’t think it is. In this project I have explored a possible way of giving Picnic customers the opportunity to bridge the gap between their groceries and their values, and I have gathered insights in the process.

This design shows that there does not need to be friction between customer values and a company’s aim for sustainability, because these can be aligned.

There are many other ways towards this goal. Still, I do believe in what I designed. I think the design fits Picnic because it is about technology that makes life easier, and it has room for the customer to express who they are.

8.2 Reflection on project

The first part of this reflection covers what other designers can learn from this project. The second part is on the method used. The last part covers what went well and what was difficult about attaining the learning goals that were set at the start of the project.

Takeaways for other designers

Designing to foster a more sustainable future seems to be something many design students want to do. What I have learned during this project is that: Firstly, it is important to not try and solve such a big problem in one project, but rather to understand what it is that you can influence.

Secondly, it is not realistic to aim for a perfect outcome. Not everyone needs to eat 100% sustainable and healthy right away. It is more effective to use design to start the motion of change towards the right direction, and then assess what else needs to happen.

And finally, designing inside a growing company for sustainability issues is a balance of aligning your personal convictions and the desired societal outcome with outcomes fitting to the business. However great an idea might be, if it does not bring the business forward it will not be implemented.

Method

Throughout this project I have used multiple methods to come to the desired end. The method Societal Implication Design has been a useful tool at the start

of the project. I have combined this with Picnic’s product development process towards the end of the project, working in the rhythm of sprints. Those sprints took longer than they normally would at Picnic since I was fulfilling the roles of both the designer and researcher. I have learned a great deal about how to work together with Product Owners, developers, analysts, and team leads.

Learning goals

At times I have struggled with the scope that I had set for myself. I wanted to learn about values, food transition, systemic design, online grocery shopping, behaviour change, interface prototyping, and do multiple types of research while generating insights on all these topics. Especially after a month or two into the project I found it difficult that it never felt like I knew enough to make the best decisions. I have also never had such thorough and interesting conversations and questions during any other project. It sometimes left me wondering whether I was doing the right thing but looking back at the goals I had set for myself at the start of the project I do feel like I have been able to grow in every aspect.

Additional learning:

Discussions with Picnic’s chef on how to create a menu for the office and initiating a food-transition friendly eating week. Participating in shaping the Picnic Green program, and volunteering in the food forest.

A word of thanks

Graduating has truly been an experience. When applying for a graduation internship position at Picnic, I was asked whether I am a researcher or a designer. Well, I hope I have shown now that I can become a nutrition expert, experience designer, environmental activist, social researcher, and data analyst, whatever the project needs in the moment. And I will continue to give my best effort to achieve the right outcome for something that I am passionate about.

My best goes out to Picnic and all the great people there that have supported me in this project. To Eva for being an involved mentor and sparring partner, to Jip for all his statistically significant support, to Mark for all the thesis survival talks, and all other colleagues for their continuous jokes, help, snack breaks, pep talks, discussions, and laughs.

I would also like to thank my graduation committee. To Anna, who has inspired me with her empathy and who mentored me with much enthusiasm up until her maternity leave. To Paul, who has made me laugh and learn much from his anecdotes and view on my role as a designer. And to Lise, who has continuously shared her knowledge, kindness, and considerations on sustainability issues with me.

Aniela



♥ Figure 61 - Definitely recommend graduating here !
Look at all these wonderful people



Figure 62 -
Image from Eos-wetenschap



Figure 63 -
Image from Picnic

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how to support value-minded shopping

A.E.W. van Elteren
Master thesis

